



NORTHEASTERN UNIVERSITY

Boston Campus

Institutional Master Plan

Transportation Appendix

Submitted to
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201

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Detailed Roadway Descriptions

Huntington Avenue, an urban principal arterial, runs east-west from Copley Square to the Riverway/Jamaicaway. Within the study area, Huntington Avenue is a divided roadway with two travel lanes in each direction and on-street parking in some locations. Bus stops are located at regular intervals on both sides of the roadway. The tracks of the E Branch of the MBTA Green Line light-rail service emerge from underground on Huntington Avenue southwest of Gainsborough Street and run in the median of the roadway. Northeast of Gainsborough Street, a four-lane underpass allows Huntington Avenue traffic to bypass Massachusetts Avenue. On either side of the underpass, Huntington Avenue is one lane wide with an adjacent parking lane between the entrance to the underpass and Massachusetts Avenue. Northeast of the underpass, the parking lane is a designated tour bus parking area. Huntington Avenue is a major pedestrian route, bounded by dense retail and institutional use within the study area. Wide, decorative crosswalks up to 17 feet in width are provided frequently along the corridor. Sidewalks are generally brick and range in width from eight to 12 feet, but trees, waste receptacles, light poles, sign posts, and other obstructions limit the effective sidewalk width to as little as 4.5 feet within the study area.

Forsyth Street, an urban local, runs north-south from Hemenway Street to Ruggles Station, where it ends in a cul-de-sac. Forsyth Street provides one travel in each direction. Bike lanes are provided in both directions from the intersection with Hemenway Street until just south of the intersection with Huntington Avenue. On-street, metered parking is provided along both sides of the roadway from Huntington Avenue to Hemenway Street. There is no parking on Forsyth Street south of Huntington Avenue. However, it was observed that many vehicles illegally park along both sides of Forsyth Street and no regulation is enforced. Sidewalks along both sides range in width from eight to 10 feet. During Northeastern class-change periods, there are high pedestrian volumes crossing Forsyth Street in the east-west direction that momentarily stop traffic. During these times, sidewalks become overcrowded with pedestrians and many elect to walk within the roadway.

Opera Place, an urban local street, runs south from Spear Place on Northeastern University's campus and St. Stephen Street to Huntington Avenue. Opera Place is one lane southbound with on-street, metered parking provided along both sides. Brick sidewalks provided on along both sides of the roadway range in width from eight to 12 feet.

Camden Street, an urban local, runs north-south from the Southwest Corridor railway, where a pedestrian-only overpass continues across the tracks to Shawmut Avenue. Camden Street provides one travel lane in each direction with on-street parking along both sides of the roadway. Sidewalks on each side range in width from eight to 11 feet.

Burke Street, an urban local, runs south from Columbus Avenue to Tremont Street. Burke Street provides one southbound lane with on-street parking along the west side of the roadway. Sidewalks are provided along both sides of the roadway range in width from five to seven feet.

Cunard Street, an urban local, runs south from Columbus Avenue to Tremont Street. Cunard Street provides one southbound travel lane with on-street, resident parking along the west side and two-hour parking along the east side of the roadway. Sidewalks on each side of the road are approximately eight feet wide.

Columbus Avenue, an urban principal arterial, runs east-west from Melnea Cass Boulevard to Arlington Street. Within the study area, Columbus Avenue provided one travel lane in each direction. Columbus Avenue is separated by a cobblestone median approximately seven feet wide. On-street parking is provided on both side of the roadway near the study area. Sidewalks on each side range in width from eight to 28 feet.

Ruggles Street, an urban minor arterial, runs north-south from Huntington Avenue to Tremont Street. Ruggles Street generally consists of two lanes northbound and one lane southbound. There is no on-street parking provided on either side of the roadway. There are three MBTA bus stops located along Ruggles Street. Sidewalks provided along both sides of the roadway range in width from eight to 12 feet.

Louis Prang Street, an urban minor arterial, runs north-south from Fenway to Huntington Avenue. Louis Prang provides two northbound travel lanes and one southbound travel lane. There is no on-street parking along either side of the roadway. Two MBTA bus stops are located along Louis Prang Street. Sidewalks provided along both sides of the roadway range in width from nine to 13 feet.

Forsyth Way, an urban minor arterial, runs north-south from Fenway to Huntington Avenue. Forsyth Way provides one lane in each direction. On-street, metered parking and bikes lanes are provided along both sides of the roadway. Sidewalks provided along both sides of the roadway are approximately six to 13 feet wide. The pavement markings in the vicinity of the study area are new.

Whittier Street, an urban local, runs north from Cabot Street to Tremont Street. Whittier Street provides one northbound lane with on-street parking along both sides of the roadway. Near the intersection with Tremont Street, Whittier Street consists of two lanes with on-street parking provided only on the west side. Sidewalks along both sides of the road are approximately eight feet wide.

Massachusetts Avenue, an urban principal arterial, runs north–south from Cambridge and the northwestern part of the Boston metropolitan area to Columbia Road to the southeast. Within the study area, Massachusetts Avenue provides two travel lanes in each direction. Massachusetts Avenue is separated by a raised median southeast of St. Botolph Street. On-street parking is provided on both sides of the roadway near St. Botolph Street. Bus stops are located regularly on both sides of Massachusetts Avenue. Sidewalks on each side range in width from seven to 23 feet. Massachusetts Avenue carries about 40,000 vehicles total in both directions on an average weekday.

Gainsborough Street, an urban local street, runs north-south from Hemenway Street to the Southwest Corridor railway, where a pedestrian-only overpass continues across the tracks. North of Huntington Avenue, Gainsborough consists of one northbound travel lane with on-street

parking along both sides of the roadway. South of Huntington Avenue, Gainsborough Street provides one travel lane in each direction between Huntington Avenue and the southern extent of the roadway with on-street parking along the east side of the roadway. Vehicular traffic is modest along Gainsborough Street, but the sidewalks on each side accommodate significant pedestrian volumes. The sidewalks range in width from eight to 11 feet, though trees and light poles limit the effective sidewalk width to as little as five feet in some locations. An exit to the center platform serving both inbound and outbound trains serving the Massachusetts Avenue Orange Line Station is located on the pedestrian overpass south of Gainsborough Street. No station entrance is provided at this location.

St. Botolph Street, a local street, runs east-west from Harcourt Street to the Northeastern University, where it meets a pedestrian-only path on the Northeastern University campus. In the study area, St. Botolph Street runs two-way with one travel lane in each direction. A combination of on-street metered parking and resident parking are found on both sides of the roadway northeast of Gainsborough Street and on portions of the southeast side southwest of Gainsborough Street. Sidewalks provided on both sides of the street in the study area are approximately eight to 16 feet wide.

Westland Avenue, an urban minor arterial, runs north-south from Fenway to Massachusetts Avenue. Westland Avenue provides one travel lane in each direction. Westland Avenue provides on-street parking on the west side of the street from Massachusetts Avenue to Edgerly Road. On-street parking is provided along both sides of the road from Edgerly Road to Hemenway Street. No on-street parking is provided along Westland Avenue from Hemenway Street to Fenway. Sidewalks provided along both sides of the roadway range in width from eight to 23 feet.

St. Stephen Street, an urban local street, runs one-way westbound from Massachusetts Avenue to Opera Place. At Opera Place, the roadway has been closed to vehicular traffic, renamed as Spear Place, and incorporated into the Northeastern campus. The roadway consists of one travel lane with on-street parking along each side. An 8-foot sidewalk is provided on each side of the roadway.

Hemenway Street, an urban local street, runs east-west from Boylston Street to Forsyth Way. North of Westland Avenue, Hemenway Street is one-way northbound with one travel lane. South of Westland Avenue, Hemenway Street consists of one travel lane in each direction. Hemenway Street is approximately 35 to 40 feet wide, with parking on both sides of the roadway. Sidewalks provided along both sides of the roadway vary in width from nine to 14 feet.

Melnea Cass Boulevard extends from Massachusetts Avenue to Columbus Avenue in the South End of Boston. Across Massachusetts Avenue, Melnea Cass Boulevard connects to the “Massachusetts Avenue Connector,” which provides access to I-93 northbound and southbound and I-90 eastbound and westbound. Classified as an urban principal arterial street under control of the City of Boston, Melnea Cass Boulevard provides two lanes in each direction with additional left turn lanes at Tremont Street, Washington Street, Harrison Avenue, Hampden Street, and Massachusetts Avenue. All of the intersections along the street are signalized, except the intersection with Northampton Street (Crosstown Drive). While varying in width from block to block, the roadway is generally 55-foot wide, with 7-foot sidewalks on either side. On-street

parking is prohibited along the entire roadway. Massachusetts Bay Transportation Authority (MBTA) Buses 8, 19, 43, and 47 run along Melnea Cass Boulevard within the study area. On the north side of the street, a 40-foot wide easement has been provided to accommodate Urban Ring public transportation. Today this easement is planted with a pedestrian/bicycle path, the South Bay Harbor Trail (SBHT), running through it. Sidewalks provided along both sides of the roadway in the vicinity of the study area are approximately seven feet wide.

Tremont Street, an urban principal arterial, extends from Huntington Avenue in Mission Hill to Cambridge Street in Downtown Boston. Tremont Street runs primarily east-west in the vicinity of the study area. In the study area, Tremont Street provides two lanes in each direction with additional turning lanes at Massachusetts Avenue, Columbus Avenue, and Ruggles Street. Near Massachusetts Avenue there is on-street parking provided along both sides of the roadway; however, there is no parking near any other intersection in the vicinity of the study area. Sidewalks provided along both sides of the street range in width from nine to 24 feet.

St. Cyprians Place, an urban local street, runs one-way northbound from Tremont Street to Columbus Avenue. Whittier Street provides one northbound lane with on-street parking along both sides of the roadway for residents or 2 hour parking. At the intersection with Columbus Avenue, St. Cyprians Place is a three leg intersection with a crosswalk along the south leg. The north leg the Columbus Parking lot has been closed to vehicular traffic. Sidewalks along both sides of the road are approximately five feet wide.

Coventry Street, an urban local street, runs one-way northbound from Tremont Street to Columbus Avenue. At Columbus Avenue, the roadway is a three leg intersection with crosswalks along the east and south legs. The roadway consists of one travel lane with on-street parking along the west side and no-parking allowed on the east side. A five foot sidewalk is provided on each side of the roadway.

Detailed Intersection Descriptions

Signalized intersections

Huntington Avenue/Gainsborough Street is a four-way, signalized intersection. The eastbound approach on Huntington Avenue consists of a 10-foot left turn lane, an 11-foot through lane, and a 13-foot through/right lane. The right lane accommodates an eight-foot adjacent metered parking lane and an MBTA bus stop. The westbound approach on Huntington Avenue is 34-feet with no visible pavement markings but acts as one shared left-turn/through lane and one shared through/right-turn lane with adjacent metered parking followed by a cab stand. There is an MBTA bus stop on the far side of the Huntington Avenue westbound approach. The westbound approach of the intersection is fed by traffic from two approaches, the intersection with Massachusetts Avenue, and the underpass that returns to street level about 200 feet before the intersection. On the north side of the intersection, Gainsborough Street is one-way northbound, with metered parking on both sides of the road. The northbound approach on Gainsborough Street is a 10-foot travel lane alongside an on-street parking lane.

Sidewalks, crosswalks, and handicapped-accessible curb ramps are provided at all approaches. The curb ramps do not have truncated domes. Sidewalks along Gainsborough Street are concrete, ranging in width from eight to 11 feet. Sidewalks along Huntington Avenue are mostly brick, ranging in width from nine to 20 feet near the intersection. The crosswalks, approximately 17 feet in width, are composed of both pavement markings and fading decorative, in-ground print. Talking pedestrian signals and pushbuttons are provided in each direction. Slight sidewalk bulb-outs are present at all corners of the intersection except the southwest corner, shortening crossing distances required for pedestrians to clear the intersection. Crosswalks are generally well marked, though some of the lane markings, stop bars, and other striping at the intersection are in poor condition.

Huntington Avenue/Opera Place is a three-way signalized intersection. The Huntington Avenue eastbound approach consists of two 12-foot through lanes. The Huntington Avenue westbound approach consists of an 11-foot through lane and a 12-foot through lane. Metered parking is provided on the westbound approach. The Huntington Avenue eastbound and westbound travel lanes are separated by a raised median and MBTA subway tracks that is approximately 37-foot wide. The Opera Place one-way southbound approach consists of one 30-foot right-turn lane. North of the intersection, there is metered parking along both sides of Opera Place until the road narrows to one right-turn lane. There are bus stops along both sides to the west Huntington Avenue at the intersection.

It was observed in the field that MBTA buses stopping at the far side of the intersection can block the crosswalk on the Huntington Avenue westbound approach. Just west of the intersection, along Huntington Avenue, is the MBTA Green Line Northeastern University stop. “Share the road” symbols to bring attention to cyclists are marked on all Huntington Avenue approaches. Brick sidewalks are provided along both sides of Huntington Avenue and Opera Place. Sidewalks on Opera Place range in width from eight to 10 feet. Sidewalks on Huntington Avenue range in width from 11 to 18 feet in the vicinity of the intersection. Crosswalks, handicap-accessible ramps, and count-down pedestrian signal indications are provided across Opera Place and Huntington Avenue. Crosswalks are approximately 17-foot wide. Pavement markings are generally in poor condition with some crosswalk pavement markings badly worn.

Huntington Avenue/Forsyth Street is a four-way, signalized intersection. The Huntington Avenue eastbound approach consists of a 13-foot through lane and a 13-foot shared through/right-turn lane. Left-turns are prohibited at this approach. The Huntington Avenue westbound approach consists of a 12-foot shared left-turn/through lane and an approximately 13-foot shared through/right-turn lane. The Huntington Avenue eastbound and westbound travel lanes are separated by a raised median with MBTA trolley tracks running through the middle that is approximately 42 to 44-foot wide. The Forsyth Street northbound approach consists of one approximately 12-foot shared left-turn/through/right-turn lane and a five-foot bike lane. The Forsyth Street southbound approach consists of one approximately 14-foot lane, a five-foot bike lane and a 10-foot metered parking lane that narrows to a 14-foot shared left-turn/through/right-turn lane and a five-foot bike lane near the intersection. Right-turn-on-red is prohibited on all approaches of this intersection. There is a MBTA bus stop located at the northeast corner of the intersection as well as the Northeastern University stop on the MBTA Green Line along

Huntington Avenue to the east of the intersection. Bike parking is provided along the Huntington Avenue westbound approach sidewalk.

Brick sidewalks are provided along both sides of Huntington Avenue and Forsyth Street. Sidewalks along Huntington Avenue range in width from approximately eight to 15-feet in the vicinity of the intersection. Sidewalks along Forsyth Street range in width from approximately eight to 10-feet. Crosswalks, handicap-accessible ramps, and count-down pedestrian signal indications are provided across all of the intersection approaches. Crosswalks are approximately 17-feet wide. Bike boxes are provided across the Forsyth Street northbound and southbound approaches. Pavement markings are generally in good condition but crosswalk pavement markings are in poor condition.

Huntington Avenue/Parker Street/Forsyth Way is a four-way, signalized intersection. The Huntington Avenue eastbound approach consists of a 12-foot through lane and a 13-foot shared through/right-turn lane. Left-turns are prohibited at this approach. The Huntington Avenue westbound approach consists of a left-turn lane with 100 feet of storage, a through lane, and a shared through/right-turn lane. The Huntington Avenue eastbound and westbound travel lanes are separated by a raised median and MBTA trolley tracks that are approximately 35-feet wide. The Parker Street northbound approach consists of one approximately 33-foot shared left-turn/through/right-turn lane. Metered parking begins approximately 100 feet south of the intersection on the Parker Street northbound approach. The Forsyth Way southbound approach consists of a 12-foot shared left-turn/through lane and an approximately 23-foot right-turn lane with 175 feet of storage. The Forsyth Way northbound and southbound travel lanes are separated by a raised island approximately eight-feet wide in the vicinity of the intersection. Farther north of the intersection, Forsyth Way has metered parking along both sides of the road. There is an emergency vehicles only driveway located on the northeast corner of the intersection.

Share the road symbols are marked on both Huntington Avenue approaches as well as the Forsyth Way southbound approach. Bicycle parking is provided along the Huntington Avenue westbound approach. Sidewalks are provided along both sides of Huntington Avenue, Forsyth Way, and Parker Street in the vicinity of the intersection. Huntington Avenue sidewalks range in width from approximately nine-feet to 28-feet. Forsyth way sidewalks range in width from approximately seven-feet to 13-feet. Parker Street sidewalks range in width from eight-feet to 18-feet. Crosswalks, handicap-accessible ramps, and count-down pedestrian signal indications are provided across the Huntington Avenue eastbound approach, the Parker Street, and Forsyth Way. Crosswalks are approximately 11 to 21-feet wide. Pavement markings along Huntington Avenue and Parker Street are in poor condition with some crosswalk pavement markings badly worn. The pavement on the Huntington Avenue eastbound approach is in poor condition.

Huntington Avenue/Louis Prang Street/Ruggles Street is a four-way, signalized intersection. The Huntington Avenue eastbound approach consists of a 10-foot left-turn lane with 135 feet of storage, a 10-foot through lane, and an 11-foot shared through/right-turn lane. Right-turn-on-red is prohibited at this approach. The Huntington Avenue westbound approach consists of a 13-foot through lane and a 12-foot shared through/right-turn lane. The Huntington Avenue eastbound and westbound travel lanes are separated by a raised median and MBTA trolley tracks that are

approximately 40 to 46-feet wide. The Ruggles Street northbound approach consists of a left-turn lane with 200 feet of storage and a 10-foot shared through/right-turn lane. Right turn on red is prohibited at this approach. The Louis Prang Street southbound approach consists of a 13-foot left-turn lane with 70 feet of storage and an approximately 12-foot shared through/right-turn lane.

MBTA bus stops are located on all approaches except for the Huntington Avenue eastbound approach. The Museum of Fine Arts stop on the MBTA Green Line is located just east of the intersection on Huntington Avenue. A Boston Fire Department station with two driveways is located just west of the intersection on Huntington Avenue. Share the road symbols are marked on Huntington Avenue and Ruggles Street in the vicinity of the intersection.

Concrete sidewalks are provided on both sides of Huntington Avenue, Louis Prang Street, and Ruggles Street in the vicinity of the intersection. Sidewalks on Huntington Avenue range in width from approximately nine to 14-feet. Sidewalks on Louis Prang Street range in width from eight to 11-feet. Sidewalks along Ruggles Street range in width from eight to 19-feet. Crosswalks, handicap-accessible ramps, and count-down pedestrian signal indications are located on all of the intersection approaches. Crosswalks are approximately 19 to 23-feet wide. Pavement markings are in good to poor condition, with the crosswalk markings are badly worn.

Ruggles Street/Parker Street is a four-way signalized intersection. The Parker Street eastbound approach consists of one 17-foot wide multi-use lane with no pavement markings. It was observed in the field that motorists typically form two lanes here, including a shared left-turn/through lane and a right-turn lane. There is unrestricted on-street parking further down Parker Street on the east side of the road. The Parker Street westbound approach consists of a nine-foot shared left-turn/through/right-turn lane and an eight-foot adjacent unmarked metered parking lane. The Ruggles Street northbound approach consists of a 10-foot shared left-turn/through lane and a 10-foot shared through/right-turn lane; this approach accommodates an MBTA bus stop. The Ruggles Street southbound approach consists of one 15-foot shared left-turn/through/right-turn lane. There are share the road symbols on all Ruggles Street approaches.

Approximately eight-foot wide sidewalks are provided along both sides of Ruggles Street and Parker Street in the vicinity of the intersection. Pavement markings are in fair to poor condition, with some crosswalk and centerline pavement markings badly worn. Crosswalks, handicap-accessible ramps, and count-down pedestrian signal indications are provided on all of the intersection approaches. Crosswalks are all approximately 10-feet wide.

Ruggles Street/Leon Street is a three-way signalized intersection. The Leon Street westbound approach consists of a 10-foot left-turn lane and a 13-foot right-turn lane. Both lanes have 135 feet of storage. The Ruggles Street northbound approach consists of an 11-foot shared through/right-turn lane and a five-foot bicycle lane. The Ruggles Street southbound approach consists of an 11-foot shared left-turn/through lane and a 13-foot through lane. The Ruggles Street southbound approach contains the share the road symbol north of the intersection. Albert Street is located on the west side of Ruggles Street 45 feet south of the intersection. The Ryder surface parking lot driveway is located soon after the intersection on the east side of Leon Street. Concrete sidewalks are provided along both side of Ruggles Street and Leon Street. Sidewalks range in width from seven to nine feet. Crosswalks, handicap-accessible ramps, and count-down

pedestrian signals are provided at all of the intersection approaches. Pavement markings are in good condition.

Ruggles Street/MBTA Exit is a signalized intersection with three approaches. The Ruggles Station Driveway one-way westbound approach consists of one 41-foot wide multi-use lane with no pavement markings. The road is private and may be used by MBTA vehicles only. The Ruggles Street northbound approach consists of one 13-foot through lane and a five-foot bicycle lane. It was observed in the field that buses typically form two lanes, including a left-turn lane and a right-turn lane. The Ruggles Street southbound approach consists of two approximately 11-foot through lanes and a six-foot bicycle lane.

There is a restricted MBTA one-way entrance driveway located 140 feet north of the intersection on the east side of Ruggles Street. The Southwest Corridor runs east to west across the intersection and consists of dual paths. Concrete sidewalks are provided along both sides of Ruggles Street and the north side of Ruggles Station Driveway in the vicinity of the intersection. Sidewalks are approximately 10-feet wide. Crosswalks, handicap-accessible ramps, and count-down pedestrian signal indications are provided on all Ruggles Street approaches. The handicap ramps are very narrow and do not adequately accommodate the high volume of cyclists traveling through the Southwest Corridor. The Ruggles Station Driveway provides a crosswalk but there is no handicap-accessible ramp on the south side. Crosswalk pavement markings are in good to poor condition, varying from approximately 10 to 15-feet wide.

Tremont Street/Ruggles Street/Whittier Street is a four-way signalized intersection. The Tremont Street eastbound approach consists of an 11-foot left-turn lane with 190 feet of storage and three approximately 11-foot through lanes. The Tremont Street westbound approach consists of two approximately 11-foot through lanes and one 12-foot right-turn lane; the pavement markings along this approach are very faded. At the far side of intersection, along Tremont Street westbound, there is an 11-foot marked parking lane reserved for the Boston Police Department. The Tremont Street eastbound and westbound travel lanes are separated by an approximately 4 to 12-foot wide raised median. The one-way northbound Whittier Street approach consists of one approximately 30-foot wide multi-use lane with no visible pavement markings. It was observed in the field that motorists typically form two lanes, including a left-turn lane and a through/right-turn lane. Unrestricted on-street parking is provided along the west side of Whittier Street just south of the intersection approach that narrows the travel lane to approximately 22 feet. The Ruggles Street southbound approach consists of two approximately 11-12-foot wide left-turn lanes with approximately 270 feet of storage, a five-foot bicycle lane, and a 12-foot right-turn lane.

Concrete sidewalks are provided along both sides of Ruggles Street, Tremont Street, and Whittier Street in the vicinity of the intersection. Sidewalks range in width from seven feet to 24 feet. Crosswalks, handicap accessible ramps, and count-down pedestrian signal indications are provided across all of the intersection approaches. Pavement markings are in fair to poor condition with some crosswalk markings badly worn.

Tremont Street/Columbus Avenue/Ruggles Street is a signalized intersection with three approaches. The Tremont Street eastbound approach consists of two approximately 10 to 12-foot

through lanes and an 11-foot shared through/right-turn lane. The Tremont Street eastbound through/right-turn lane also accommodates a MBTA bus stop. The Tremont Street westbound approach consists of two approximately 11 to 12-foot through lanes, and a 13-foot right-turn lane. The Tremont Street westbound right-turn lane storage is the entire block long. The Columbus Avenue one-way southbound approach consists of one 25-foot right-turn lane. It was observed that the Tremont Street approaches only receive a red light when there is a vehicle detected at the Columbus Avenue southbound approach or a pedestrian call is made. When Tremont Street does receive a red light, many cars do not stop and simply drive through the red light.

Sidewalks are provided along both sides of Tremont Street, Ruggles Street, and Columbus Avenue, ranging in width from eight to 21 feet. Crosswalks, handicap-accessible ramps, and count-down pedestrian signals are provided across the Tremont Street westbound approach and the Columbus Avenue southbound approach. Crosswalks are approximately 11-feet wide.

Tremont Street/Melnea Cass Boulevard is a four-way signalized intersection. The Tremont Street eastbound approach consists of a 12-foot shared left-turn/through lane, a nine-foot through lane, and a 24-foot channelized right-turn lane. The Tremont Street eastbound right-turn lane is channelized by a 16-foot long and 10-foot wide raised island. At the far side of the intersection, along Tremont Street eastbound, there is a MBTA bus stop. The Tremont Street westbound approach consists of an 11-foot shared left-turn/through lane and an 18-foot shared through/right-turn lane. The Melnea Cass Boulevard northbound approach consists of a 14-foot left turn lane with 325 feet of storage, a 12-foot shared left-turn/through lane with 350 feet of storage, and a 17-foot shared through/right-turn lane. The Melnea Cass Boulevard southbound approach consists of an 11-foot shared left-turn/through lane and a 13-foot shared through/right-turn lane. The Melnea Cass Boulevard northbound and southbound travel lanes are separated by an approximately six to seven foot wide raised median in the vicinity of the intersection. Right-turn-on-red is not permitted for the Tremont Street eastbound approach or the Melnea Cass Boulevard northbound approach.

Parking is prohibited along all legs of the intersection. Concrete sidewalks ranging from six to 12 feet in width are provided along both sides of Tremont Street and Melnea Cass Boulevard. Crosswalks, handicap-accessible ramps, and count-down pedestrian signal indications are located at all approaches of the intersection, although field observations noted that the pedestrian signal was out of order. Crosswalks are approximately 10 to 11-feet wide. Pavement markings are in good condition.

Melnea Cass Boulevard/Columbus Avenue/ MBTA Ruggles Station Driveway is a four-way signalized intersection. The Columbus Avenue eastbound approach consists of one 23-foot shared left-turn/through/right-turn lane. The Columbus Avenue westbound approach consists of an 11-foot shared left-turn/through/right-turn lane, a four-foot bicycle lane, and an eight-foot parking lane. The Columbus Avenue westbound through movement does not permit through traffic, trucks and through traffic must turn left. A seven-foot wide cobblestone median separate the eastbound and westbound Columbus Avenue travel lanes east of the intersection. Parking along Columbus Avenue in the vicinity of the intersection is resident permit or two-hour parking from 8:00 a.m. until 6:00 p.m. from Monday through Friday. The Melnea Cass Boulevard

northbound approach consists of a 14-foot shared left-turn/through lane, and a 14-foot shared through/right-turn lane. The northbound and southbound travel lanes are separated by an approximately seven-foot wide raised median in the vicinity of the intersection. The MBTA Ruggles Station Driveway southbound approach consists of one 16-foot shared left-turn/through/right-turn lane. The MBTA Ruggles Station Driveway's use is restricted to MBTA vehicles.

Sidewalks ranging in width from seven to 28 feet are provided along both sides of Columbus Avenue, Melnea Cass Boulevard, and the MBTA Private Driveway. The Southwest Corridor's dual paths run along the north side Columbus Avenue. Crosswalks, handicap-accessible ramps, and pedestrian signal indications are provided across all approaches of the intersection. Crosswalks are approximately 10-feet wide. The pavement markings on Columbus Avenue west of the intersection are very faded. Field observations noted heavy ponding at the wheel chair ramp located on the northeast corner of the intersection.

Tremont Street/Massachusetts Avenue is a four-way signalized intersection. The Tremont Street eastbound approach consists of a 10-foot left-turn lane with 150 feet of storage, an 11-foot through lane, an 11-foot shared through/right-turn lane, and an eight-foot metered parking lane. The westbound approach consists of a 10-foot left-turn lane with 150 feet of storage, an 11-foot through lane, a 10-foot shared through/right-turn lane, and an eight-foot metered parking lane. The eastbound and westbound travel lanes are separated by an approximately four-foot wide raised median. The Massachusetts Avenue northbound approach consists of a 10-foot left-turn lane with 100 feet of storage, a 10-foot through lane, an 11-foot shared through/right-turn lane, a four-foot bicycle lane, and an eight-foot metered parking lane. The northbound and southbound travel lanes are separated by a raised median that begins 150 feet away from the intersection. The southbound approach consists of a 10-foot left-turn lane with 100 feet of storage, a 10-foot through lane, a 12-foot shared through/right-turn lane, a four-foot bicycle lane, and an eight-foot metered parking lane. MBTA bus stops are located on every approach except for the Tremont Street eastbound approach.

Brick sidewalks are provided along both sides of Massachusetts Avenue and Tremont Street in the vicinity of the intersection. Sidewalks range in width from approximately eight feet to 16 feet. Sidewalk bulb-outs are present at all corners of the intersection shortening crossing distances required for pedestrians to clear the intersection. Crosswalks, handicap-accessible ramps, and count-down pedestrian signals are provided at all of the intersection approaches. Crosswalks are 14-feet wide and composed of both pavement markings and decorative, in-ground paint.

Massachusetts Avenue/Columbus Avenue is a four-way signalized intersection. The Columbus Avenue eastbound approach consists of a 10-foot left-turn lane with approximately 175 feet of storage, an 11-foot through lane, and a 10-foot shared through/right-turn lane. The Columbus Avenue westbound approach consists of an 11-foot left-turn lane with 160 feet of storage, a 12-foot shared through/right-turn lane, and a 12-foot unrestricted parking lane. The eastbound and westbound travel lanes are separated by a four-foot wide cobblestone median. The Massachusetts Avenue northbound approach consists of a 10-foot left-turn lane with 100 feet of storage, an 11-

foot through lane, an 11-foot shared through/right turn-lane, and a six-foot bicycle lane. The Massachusetts Avenue northbound and southbound travel lanes are separated by a median that narrows to four-feet wide in the vicinity of the intersection. The Massachusetts Avenue southbound approach consists of a 10-foot left-turn lane with 100 feet of storage, an 11-foot through lane, an 11-foot shared through/right-turn lane, and a four-foot bicycle lane. The northbound and southbound approaches also accommodate MBTA bus stops. A Shell Gas Station located on the southwest corner of the intersection has driveways on both Columbus Avenue and Massachusetts Avenue.

Brick sidewalks ranging from eight to 13 feet in width are provided along both sides of Columbus Avenue and Massachusetts Avenue in the vicinity of the intersection. Crosswalks, handicap-accessible ramps, and count-down pedestrian signal indications are provided at all of the intersection approaches. Crosswalks are approximately 14-feet wide and composed of both pavement markings and decorative, in-ground paint.

Massachusetts Avenue/St. Botolph Street is a four-way, signalized intersection. The St. Botolph Street eastbound approach consists of a 12-foot shared left-turn/through/right-turn lane and an adjacent unmarked metered parking lane. The St. Botolph Street westbound approach features a 10-foot shared left-turn/through/right-turn lane with Back Bay resident parking along the curb. The Massachusetts Avenue northbound approach consists of an 11-foot exclusive left-turn lane, an 11-foot through lane, a 13-foot through/right-turn lane, and an eight-foot resident parking lane. On the far side of the intersection there is an MBTA bus stop on the northbound side. The Massachusetts Avenue southbound approach consists of a 10-foot exclusive left-turn lane, a 10-foot through lane, and a 12-foot shared through/right-turn lane. The left-turn lane has a storage length of approximately 50 feet. There is also an eight-foot resident parking lane on the southbound side, south of the intersection.

Sidewalks, crosswalks, and handicapped-accessible curb ramps are provided at all approaches. Pedestrian pushbuttons and pedestrian signals are provided for all crossings. All sidewalks approaching this intersection are concrete, with the exception of brick walkways along St. Botolph Street east of Massachusetts Avenue. The sidewalks are generally in good condition, ranging in width from 10 to 16 feet. Well-marked crosswalks at this intersection are 10 to 14 feet wide.

Huntington Avenue/Massachusetts Avenue is a four-way, signalized intersection. At this location, Huntington Avenue through traffic is grade-separated, crossing under Massachusetts Avenue. The Huntington Avenue eastbound approach consists of an 11-foot through lane and an 11-foot right-turn lane. Huntington Avenue west of the intersection consists of one lane with adjacent metered parking along the curb until approximately 50 feet from the intersection, where it widens to two lanes. The Huntington Avenue westbound approach consists of a 12-foot shared left-turn/through lane and an 11-foot right-turn lane. Huntington Avenue features a wide slip U-turn lane at either approach to the intersection. The eastbound and westbound travel lanes are separated by a raised median approximately 47-feet wide. The Massachusetts Avenue northbound approach consists of a 12-foot through lane and a 14-foot right-turn lane. The southbound approach consists of two approximately 10-foot through lanes and a 10-foot right-turn lane with

approximately 70 feet of storage. Left-turns from either direction are not permitted on Massachusetts Avenue.

Sidewalks, crosswalks, and handicapped-accessible curb ramps are provided at all approaches. Brick sidewalks on Huntington Avenue vary in width between 9 feet and 18 feet (but are only four feet wide at the entrance to Symphony Hall). On Massachusetts Avenue, concrete sidewalks vary between 11 and 23 feet in width. The painted crosswalks are approximately eight to 11-feet wide. Pedestrian signals are provided for crossing Massachusetts Avenue, but not Huntington Avenue. However, the large refuge islands, about 13 feet wide and 47 feet long, on each side of Huntington Avenue make the crosswalks across each direction of traffic relatively short (23 feet maximum). The crosswalks are worn but still visible. Lane markings are completely worn on all Huntington Avenue approaches. Entrances to the Symphony MBTA Green Line station are located at three of the four corners of this intersection.

Massachusetts Avenue/Westland Avenue/St. Stephen Street/Private Drive is a signalized intersection with four approaches. The Private Drive unsignalized, westbound approach consists of a single 33-foot lane that provides access to all four other legs of the intersection. The Massachusetts Avenue northbound approach consists of a nine-foot left-turn lane with 12 feet of storage, a 12-foot through lane, and an 11-foot shared through/right-turn lane. The Massachusetts Avenue southbound approach consists of an 11-foot shared left-turn/through lane, an 11-foot shared through/right-turn lane, a five-foot bicycle lane, and an eight-foot metered parking lane. The Westland Avenue southeast bound approach consists of a 19-foot right-turn lane with an eight-foot metered parking lane. Left turns are prohibited from this approach. West of the intersection, St. Stephen Street is one-way westbound with parking along both sides of the street.

Sidewalks are provided along both sides of Massachusetts Avenue, St. Stephen Street, and Westland Avenue, but on only one side of the Private Drive. Sidewalks along Massachusetts Avenue range in width from 11-feet to 50-feet. Sidewalks along St. Stephen Street range are approximately eight-feet wide. Sidewalks along Westland Avenue range in width from eight to 13-feet. The sidewalk along the Private Drive is approximately nine-feet wide. Crosswalks with handicap-accessible ramps are provided across the Private Drive, the Massachusetts Avenue northern leg, Westland Avenue, and St. Stephen Street. Count-down pedestrian signal indications are located at every crosswalk except for the crossing of St. Stephen Street. There is no crosswalk or pedestrian signal indication across the Massachusetts Avenue northbound approach. Crosswalks are approximately eight to 11-feet wide. While the pavement on St. Stephen Street and Massachusetts Avenue is in poor condition, the pavement markings are generally in good to fair condition.

Westland Avenue/Hemenway Street is a signalized intersection with three approaches. The Hemenway Street eastbound approach consists of a 12-foot shared left-turn/through/right-turn lane and an unmarked eight-foot Resident parking lane. East of the intersection, Hemenway Street is one-way eastbound. The Westland Avenue northbound approach consists of an 18-foot shared left-turn/through/right-turn lane with an adjacent eight-foot two-hour parking lane. The Westland Avenue southbound approach consists of a 21-foot shared left-turn/through/right-turn lane. This approach was observed to operate generally as a single shared lane, but also as a left-

turn lane plus through/right-turn lane. Parking is permitted on all approaches to the intersection excluding the southbound approach of Westland Avenue.

Concrete sidewalks are provided along all approaches to this intersection, as are crosswalks with handicapped ramps. Sidewalks range in width from ten to 23 feet. Count-down pedestrian signals are present at both ends of all four crosswalks. Crosswalks are approximately 11-feet wide. Pavement at this intersection is in good condition, but pavement markings are in poor condition with some crosswalk and centerline markings badly worn.

Unsignalized intersections

Gainsborough Street/St. Stephen Street is an unsignalized intersection with two approaches. The St. Stephen Street one-way westbound approach consists of one 18-foot shared through/left-turn lane with on-street resident parking provided along both sides of the roadway. The St. Stephen Street westbound approach is stop-controlled with flashing red lights. The Gainsborough Street one-way northbound approach consists of one 18-foot shared left-turn/through lane with Resident parking provided along both sides of the roadway. The Gainsborough Street northbound approach has cautionary flashing yellow lights. Both intersection approaches are free of pavement markings.

Sidewalks are provided along both approaches to this intersection. The sidewalks are approximately eight feet wide; however, trees limit the effective width of the sidewalk. Crosswalks are provided across both approaches with a handicapped-accessible ramp provided at every corner. Crosswalks are approximately 10 to 11 feet width and in fair condition, but the pavement is in poor condition.

Hemenway Street/Gainsborough Street is an unsignalized intersection with three approaches. The Hemenway Street eastbound approach and the Hemenway Street westbound approach both consist of one 12-foot through lane with adjacent resident parking. The Gainsborough Street one-way northbound approach consists of one 17-foot left-turn/right-turn with adjacent on-street parking along both sides of the roadway. Parking along the east side of the Gainsborough Street is two hour parking from 8:00 AM until 6:00 PM, Monday through Friday. Parking along the west side of Gainsborough Street is resident or two hour parking from 8:00 AM until 6:00 PM Monday through Friday.

Sidewalks are provided on all approaches. Sidewalks along Hemenway Street vary from 15 to 10 feet wide on the north and south sides, respectively. Sidewalks provided along both sides of Gainsborough Street are approximately eight feet in width. Trees, utility poles, and signs limit the effective width of the sidewalks. Sidewalks are in fair to poor condition. Both Hemenway Street and Gainsborough Street are free of pavement markings in the vicinity of the intersection. There is a handicapped-accessible ramp on the south side of Hemenway Street on both the eastbound and westbound intersection approaches. There are no marked crosswalks provided.

Hemenway Street/Forsyth Street is an unsignalized intersection with three approaches. The Hemenway Street eastbound approach is 20-feet wide and has no pavement markings. It was observed that motorists typically form one 20-foot shared through/right-turn lane. The

Hemenway Street westbound approach consists of one 20-foot shared left-turn/through lane. The Forsyth Street northbound approach consists of a 15-foot shared left-turn/right-turn lane, a five-foot bicycle lane, and a 10-foot metered parking lane. The Forsyth Street northbound travel lanes are separated by a seven-foot wide raised median. All three approaches to the intersection are stop-controlled. There is a 14-foot wide loading driveway located on the north side of the intersection along Hemenway Street. Brick and concrete sidewalks ranging from seven to ten feet wide are provided along both sides of Hemenway Street and Forsyth Street in the vicinity of the intersection. Crosswalks with handicap-accessible ramps are located across the Forsyth Street northbound approach and the Hemenway Street eastbound approach. Pavement markings vary from good to poor condition.

Hemenway Street/Forsyth Way is an unsignalized intersection with three approaches. The Hemenway Street westbound approach consists of a 20-foot shared left-turn/right-turn lane with an unmarked metered parking lane ending prior to the intersection. The Forsyth Way northbound approach consists of a 10-foot shared through/right-turn lane and a metered parking lane. The Forsyth Way southbound approach consists of an 11-foot shared left-turn/through lane, a five-foot bicycle lane, and a seven-foot metered parking lane. The Hemenway Street westbound approach is stop-controlled. Sidewalks ranging in width from six to ten feet are provided along both sides of Hemenway Street and Forsyth Way. There is a raised crosswalk across the Hemenway Street westbound approach that is 11-feet wide and 40-feet long.

Forsyth Street/Greenleaf Street/World Series Way is an unsignalized intersection with three approaches. The World Series Way westbound approach is unmarked and approximately 10 feet wide. World Series Way usually functions as a pedestrian-only area, which is blocked to vehicles. However, service vehicles may use it as necessary. The Greenleaf Street western leg of the intersection is one-way westbound. The Forsyth Street northbound and southbound approaches consist of one approximately 17-foot shared left-turn/through/right-turn lane. Parking is prohibited along all intersection approaches.

Seven to eight foot sidewalks are provided along all approaches to the intersection. Crosswalks are provided across both Forsyth Street approaches.

Ruggles Street/Field Street is an unsignalized intersection with three approaches. The Field Street westbound approach consists of a 13-foot shared left-turn/right-turn lane. The Ruggles Street northbound approach consists of a 10-foot through lane and a 10-foot shared through/right-turn lane. The Ruggles Street southbound approach consists of a 14-foot shared left-turn/through lane. The northbound and southbound approaches have share the road symbols. Concrete sidewalks about eight feet wide are provided along both sides of Ruggles Street. There are no crosswalks, stop-controls, or pedestrian signal indications.

Ruggles Street/Albert Street is an unsignalized intersection with three approaches. The stop-controlled Albert Street one-way eastbound approach consists of 10-foot shared left-turn/right-turn lane. The Ruggles Street northbound approach consists of one 13-foot through lane. The southbound approach consists of two 11-foot through lanes. Both Ruggles Street approaches are free movements. There are five-foot bike lanes along both sides of Ruggles Street. Parking is prohibited along all intersection approaches. Sidewalks are provided along all approaches.

Sidewalks along Ruggles Street and Albert Street are approximately nine and five feet wide, respectively. There is a 30-foot long crosswalk provided across the Albert Street eastbound approach with handicap-accessible ramps provided at both ends.

Ruggles Street/MBTA Entrance is an unsignalized intersection with two approaches. The MBTA entrance, located at the eastern leg of the intersection, is approximately 25-foot wide and one-way eastbound. The Ruggles Street northbound approach consists of one 11-foot shared through/right-turn lane. The Ruggles Street southbound approach consists of a 12-foot shared left-turn/through lane and a 14-foot through lane. Both Ruggles Street approaches are free movements. There are five-foot bike lanes along both sides.

Parking is prohibited along all intersection approaches. Sidewalks are provided along both sides of Ruggles Street. In the vicinity of the intersection, sidewalks are provided along both sides of the MBTA Entrance; however the sidewalk along the north side ends approximately 50 feet from the intersection. Sidewalks range in width from approximately nine to 10 feet. Ten foot wide crosswalks are provided across the Ruggles Street northbound approach and the MBTA Entrance. The crosswalks across Ruggles Street and the MBTA Entrance are approximately 55 and 40 feet long, respectively. Handicapped-ramps are provided at both corners on the east side of the intersection but not on the west side of Ruggles Street.

Columbus Avenue/Cunard Street is an unsignalized intersection with three approaches. The Columbus Avenue eastbound approach consists of a shared left-turn/through/right-turn lane, a bicycle lane, and an eight-foot parking lane. The westbound approach consists of an 11-foot shared left-turn/through/right-turn lane, a five-foot bicycle lane, and an eight-foot parking lane. The eastbound and westbound travel lanes are separated by a seven-foot cobblestone median. The Columbus Surface Parking Lot southbound approach consists of one approximately 20-foot shared left-turn/through/right-turn lane. South of the intersection, Cunard Street runs one-way southbound with resident parking along the west side and two-hour parking along the east side. Sidewalks are provided along both sides of both streets. Parking along Columbus Avenue is resident or two-hour parking from 8:00 a.m. until 6:00 p.m. Monday through Friday.

Sidewalks range in width from approximately eight feet to 13 feet. On the north side of Columbus Avenue the Southwest Corridor dual paths approximately 26 feet wide run parallel to the street. Crosswalks and handicap-accessible ramps are provided across the Columbus Avenue westbound approach, Cunard Street, and the Columbus Surface Parking Lot.

Columbus Avenue/Burke Street/Columbus Garage Driveway is an unsignalized intersection with two approaches. The Columbus Avenue eastbound approach consists of an 11-foot shared left-turn/through/right-turn lane, a four-foot bicycle lane, and an eight-foot parking lane. The Columbus Avenue westbound approach consists of a 10-foot shared left-turn/through/right-turn lane, a five-foot bicycle lane, and a seven-foot parking lane. Parking along Columbus Avenue is resident parking or two-hour parking from 8:00 a.m. until 6:00 p.m. Monday through Friday. The Southwest Corridor eight-foot multi-use path runs along the north side of Columbus Avenue. The Columbus Avenue eastbound and westbound travel lanes are separated by a seven-foot cobblestone median in the vicinity of the intersection.

Brick and concrete sidewalks ranging in width from five to 19 feet are provided on both sides of Columbus Avenue and Burke Street. There are 10-11-foot wide crosswalks and handicap-accessible ramps across Burke Street and the Columbus Avenue eastbound approach. There is unmarked, unrestricted parking along the west side of Burke Street.

Columbus Avenue/Camden Street is a four-way unsignalized intersection. The Columbus Avenue eastbound approach consists of a 10-foot shared left-turn/through/right-turn lane, a four-foot bicycle lane, and an eight-foot parking lane. The westbound approach consists of an 11-foot shared left-turn/through/right-turn lane, a four-foot bicycle lane, and an eight-foot parking lane. The eastbound and westbound travel lanes are separated by a seven-foot wide cobblestone median. Parking along Columbus Avenue in the vicinity of the intersection is resident parking or two hour parking Monday through Friday from 8:00 a.m. until 6:00 p.m. The Camden Street northbound approach is stop-controlled, consisting of one 13-foot shared left-turn/through/right-turn lane with an adjacent parking lane. The southbound approach consists of one 15-foot shared left-turn/through/right-turn lane with an adjacent parking lane. Parking along Camden Street in the vicinity of the intersection is all unmarked and unrestricted.

There are slight sidewalk bulb-outs on all Camden Street approaches. Concrete and brick sidewalks ranging from eight to 34 feet are provided along both side of Columbus Avenue and Camden Street. Ten-foot wide crosswalks and handicap-accessible ramps are provided across all of the intersection approaches. Pavement markings along Camden Street are in poor condition.

St. Botolph Street/Gainsborough Street is an unsignalized, four-way intersection. The St. Botolph Street eastbound approach is 16-feet wide, with one shared left-turn/through/right-turn lane and an unmarked metered parking lane. The St. Botolph Street westbound approach is 16-feet wide, with one shared left-turn/through/right-turn lane and an unmarked parking lane. The Gainsborough Street northbound approach consists of one 12-foot shared left-turn/through/right-turn lane and an eight-foot metered parking lane. The Gainsborough Street southbound approach consists of one 17-foot shared left-turn/through/right-turn lane. All four approaches are stop-controlled.

Eight to ten-foot wide concrete sidewalks are provided along both sides of St. Botolph Street and Gainsborough Street in the vicinity of the intersection. Nine-foot wide crosswalks and handicap-accessible ramps are provided across all approaches. Pavement markings along both roads are in poor condition. There is a parking garage on the southwest leg of the intersection with driveways on both St. Botolph Street and Gainsborough Street.

Columbus Avenue/St. Cyprians Place is an unsignalized intersection with three approaches. The Columbus Avenue eastbound approach consists of a 10-foot shared left-turn/through/right-turn lane, a four-foot bicycle lane, and an eight-foot parking lane. The westbound approach consists of an 11-foot shared left-turn/through/right-turn lane, a four-foot bicycle lane, and an eight-foot parking lane. The eastbound and westbound travel lanes are separated by a seven-foot wide cobblestone median. Parking along Columbus Avenue in the vicinity of the intersection is resident parking or two hour parking Monday through Friday from 8:00 a.m. until 6:00 p.m. St. Cyprians Place northbound approach consists of a 12-foot through lane with approximately eight foot parking on both sides of the roadway. Parking along St. Cyprians Place in the vicinity of the

intersection is all marked residential and 2 hour restricted. The southbound approach is currently closed to vehicular access to the Columbus Parking lot.

Concrete and brick sidewalks ranging from eight to 34 feet are provided along both side of Columbus Avenue and five feet along St. Cyprians Place. Ten-foot wide crosswalks and handicap-accessible ramps are provided across the east and south legs of the intersection approaches. Pavement markings along St. Cyprians Place are in poor condition, along with both crosswalks. There are no stop-controls, or pedestrian signal indications.

Columbus Avenue/Coventry Street is an unsignalized intersection with three approaches. The Columbus Avenue eastbound approach consists of a 10-foot shared left-turn/through/right-turn lane, a four-foot bicycle lane, and an eight-foot parking lane. The westbound approach consists of an 11-foot shared left-turn/through/right-turn lane, a four-foot bicycle lane, and an eight-foot parking lane. The eastbound and westbound travel lanes are separated by a seven-foot wide cobblestone median. Parking along Columbus Avenue in the vicinity of the intersection is resident parking or two hour parking Monday through Friday from 8:00 a.m. until 6:00 p.m. St. Cyprians Place northbound approach consists of a 12-foot through lane with approximately eight foot parking on both sides of the roadway. Parking along Coventry Street in the vicinity of the intersection is all marked unrestricted on the west side and no parking on the east side of the roadway.

Concrete and brick sidewalks ranging from eight to 34 feet are provided along both side of Columbus Avenue and five feet along Coventry Street. Ten-foot wide crosswalks and handicap-accessible ramps are provided across the east and south legs of the intersection approaches. Pavement markings along Coventry Street are in poor condition, along with both crosswalks. There are no stop-controls, or pedestrian signal indications.



PRECISION
D A T A
INDUSTRIES, LLC

P.O.Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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N/S: Gainsborough Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 K
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Gainsborough Street From North			Huntington Avenue From East				Gainsborough Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	0	0	0	3	100	4	1	5	1	22	13	97	9	2	257
07:15 AM	0	0	0	8	141	10	4	7	4	30	12	112	4	2	334
07:30 AM	0	0	0	6	146	2	1	3	5	26	14	143	8	1	355
07:45 AM	0	0	0	3	138	6	2	8	4	22	9	141	6	1	340
Total	0	0	0	20	525	22	8	23	14	100	48	493	27	6	1286
08:00 AM	0	0	0	6	116	8	3	5	4	21	9	161	10	5	348
08:15 AM	0	0	0	4	127	5	6	1	7	22	18	158	14	2	364
08:30 AM	0	0	0	2	129	7	4	2	1	19	8	154	11	1	338
08:45 AM	0	0	0	8	135	7	4	6	5	21	10	144	7	3	350
Total	0	0	0	20	507	27	17	14	17	83	45	617	42	11	1400
09:00 AM	0	0	0	7	122	4	2	5	4	14	6	124	7	0	295
09:15 AM	0	0	0	6	136	3	5	1	3	7	10	126	5	2	304
09:30 AM	0	0	0	13	154	6	2	4	3	15	9	121	13	9	349
09:45 AM	0	0	0	10	129	8	2	4	3	12	14	125	6	3	316
Total	0	0	0	36	541	21	11	14	13	48	39	496	31	14	1264
10:00 AM	0	0	0	6	122	4	3	6	7	10	11	113	5	5	292
10:15 AM	0	0	0	8	97	6	2	10	8	13	13	122	7	5	291
10:30 AM	0	0	0	8	122	3	4	3	5	16	12	132	9	7	321
10:45 AM	0	0	0	11	109	6	4	4	6	19	10	129	4	6	308
Total	0	0	0	33	450	19	13	23	26	58	46	496	25	23	1212
11:00 AM	0	0	0	7	120	4	3	4	5	17	12	120	8	5	305
11:15 AM	0	0	0	11	95	6	4	3	6	8	22	117	10	8	290
11:30 AM	0	0	0	8	113	5	3	7	6	13	12	142	12	7	328
11:45 AM	0	0	0	8	102	9	7	9	8	16	11	136	12	2	320
Total	0	0	0	34	430	24	17	23	25	54	57	515	42	22	1243
12:00 PM	0	0	0	5	111	2	3	4	5	12	14	152	8	6	322
12:15 PM	0	0	0	6	91	1	6	6	7	18	12	133	12	6	298
12:30 PM	0	0	0	10	100	1	3	2	6	17	15	134	10	7	305
12:45 PM	0	0	0	4	115	3	2	3	2	16	13	128	12	4	302
Total	0	0	0	25	417	7	14	15	20	63	54	547	42	23	1227
01:00 PM	0	0	0	7	102	2	1	6	4	12	10	136	8	3	291
01:15 PM	0	0	0	5	126	4	3	3	4	16	8	131	11	6	317
01:30 PM	0	0	0	8	110	5	3	6	4	13	4	140	12	5	310
01:45 PM	0	0	0	13	112	4	2	3	7	15	6	143	14	1	320
Total	0	0	0	33	450	15	9	18	19	56	28	550	45	15	1238
02:00 PM	0	0	0	9	109	4	4	12	8	13	14	139	8	5	325
02:15 PM	0	0	0	4	127	1	5	3	6	18	18	120	6	2	310
02:30 PM	0	0	0	4	111	10	3	4	14	16	10	136	12	2	322
02:45 PM	0	0	0	8	121	4	3	6	9	22	20	149	5	1	348
Total	0	0	0	25	468	19	15	25	37	69	62	544	31	10	1305
03:00 PM	0	0	0	3	100	2	4	6	12	21	14	168	10	7	347
03:15 PM	0	0	0	9	107	4	6	8	9	14	9	158	7	1	332
03:30 PM	0	0	0	5	118	5	3	7	7	1	11	144	11	2	314
03:45 PM	0	0	0	8	102	4	2	9	5	14	16	140	15	5	320
Total	0	0	0	25	427	15	15	30	33	50	50	610	43	15	1313
04:00 PM	0	0	0	12	111	4	1	9	7	16	22	138	11	2	333
04:15 PM	0	0	0	6	115	3	5	7	6	13	18	137	8	2	320



PRECISION
D A T A
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N/S: Gainsborough Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 K
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Page No : 2

Groups Printed- Cars - Heavy Vehicles

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:30 PM	0	0	0		10	97	3	2	6	10	21		22	171	12	4	358
04:45 PM	0	0	0		7	134	7	5	8	9	22		13	145	15	5	370
Total	0	0	0	0	35	457	17	13	30	32	72	0	75	591	46	13	1381
05:00 PM	0	0	0		15	132	8	4	8	3	25		27	164	14	1	401
05:15 PM	0	0	0		5	158	4	0	6	13	17		23	148	13	4	391
05:30 PM	0	0	0		11	142	3	4	6	5	22		22	158	14	2	389
05:45 PM	0	0	0		16	136	4	2	3	8	18		20	155	14	1	377
Total	0	0	0	0	47	568	19	10	23	29	82	0	92	625	55	8	1558
Grand Total	0	0	0	0	333	5240	205	142	238	265	735	0	596	6084	429	160	14427
Apprch %	0	0	0		5.6	88.5	3.5	2.4	19.2	21.4	59.4		8.2	83.7	5.9	2.2	
Total %	0	0	0		2.3	36.3	1.4	1	1.6	1.8	5.1		4.1	42.2	3	1.1	
Cars	0	0	0		312	4938	198	135	218	252	667		555	5643	417	157	13492
% Cars	0	0	0		93.7	94.2	96.6	95.1	91.6	95.1	90.7		93.1	92.8	97.2	98.1	93.5
Heavy Vehicles	0	0	0		21	302	7	7	20	13	68		41	441	12	3	935
% Heavy Vehicles	0	0	0		6.3	5.8	3.4	4.9	8.4	4.9	9.3		6.9	7.2	2.8	1.9	6.5

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	0	0	0	0	6	146	2	1	155	3	5	26	34	14	143	8	1	166	355
07:45 AM	0	0	0	0	3	138	6	2	149	8	4	22	34	9	141	6	1	157	340
08:00 AM	0	0	0	0	6	116	8	3	133	5	4	21	30	9	161	10	5	185	348
08:15 AM	0	0	0	0	4	127	5	6	142	1	7	22	30	18	158	14	2	192	364
Total Volume	0	0	0	0	19	527	21	12	579	17	20	91	128	50	603	38	9	700	1407
% App. Total	0	0	0	0	3.3	91	3.6	2.1		13.3	15.6	71.1		7.1	86.1	5.4	1.3		
PHF	.000	.000	.000	.000	.792	.902	.656	.500	.934	.531	.714	.875	.941	.694	.936	.679	.450	.911	.966
Cars	0	0	0	0	16	488	20	12	536	15	17	78	110	48	563	36	9	656	1302
% Cars	0	0	0	0	84.2	92.6	95.2	100	92.6	88.2	85.0	85.7	85.9	96.0	93.4	94.7	100	93.7	92.5
Heavy Vehicles	0	0	0	0	3	39	1	0	43	2	3	13	18	2	40	2	0	44	105
% Heavy Vehicles	0	0	0	0	15.8	7.4	4.8	0	7.4	11.8	15.0	14.3	14.1	4.0	6.6	5.3	0	6.3	7.5

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 11:30 AM																			
11:30 AM	0	0	0	0	8	113	5	3	129	7	6	13	26	12	142	12	7	173	328
11:45 AM	0	0	0	0	8	102	9	7	126	9	8	16	33	11	136	12	2	161	320
12:00 PM	0	0	0	0	5	111	2	3	121	4	5	12	21	14	152	8	6	180	322
12:15 PM	0	0	0	0	6	91	1	6	104	6	7	18	31	12	133	12	6	163	298
Total Volume	0	0	0	0	27	417	17	19	480	26	26	59	111	49	563	44	21	677	1268
% App. Total	0	0	0	0	5.6	86.9	3.5	4		23.4	23.4	53.2		7.2	83.2	6.5	3.1		
PHF	.000	.000	.000	.000	.844	.923	.472	.679	.930	.722	.813	.819	.841	.875	.926	.917	.750	.940	.966
Cars	0	0	0	0	23	393	17	17	450	23	24	54	101	44	524	43	20	631	1182
% Cars	0	0	0	0	85.2	94.2	100	89.5	93.8	88.5	92.3	91.5	91.0	89.8	93.1	97.7	95.2	93.2	93.2
Heavy Vehicles	0	0	0	0	4	24	0	2	30	3	2	5	10	5	39	1	1	46	86
% Heavy Vehicles	0	0	0	0	14.8	5.8	0	10.5	6.3	11.5	7.7	8.5	9.0	10.2	6.9	2.3	4.8	6.8	6.8



PRECISION
D A T A
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N/S: Gainsborough Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 K
Site Code : TBA
Start Date : 5/10/2011
Page No : 3

Start Time	Gainsborough Street From North				Huntington Avenue From East					Gainsborough Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 05:00 PM																			
05:00 PM	0	0	0	0	15	132	8	4	159	8	3	25	36	27	164	14	1	206	401
05:15 PM	0	0	0	0	5	158	4	0	167	6	13	17	36	23	148	13	4	188	391
05:30 PM	0	0	0	0	11	142	3	4	160	6	5	22	33	22	158	14	2	196	389
05:45 PM	0	0	0	0	16	136	4	2	158	3	8	18	29	20	155	14	1	190	377
Total Volume	0	0	0	0	47	568	19	10	644	23	29	82	134	92	625	55	8	780	1558
% App. Total	0	0	0	0	7.3	88.2	3	1.6		17.2	21.6	61.2		11.8	80.1	7.1	1		
PHF	.000	.000	.000	.000	.734	.899	.594	.625	.964	.719	.558	.820	.931	.852	.953	.982	.500	.947	.971
Cars	0	0	0	0	46	550	19	10	625	21	29	79	129	91	600	54	8	753	1507
% Cars	0	0	0	0	97.9	96.8	100	100	97.0	91.3	100	96.3	96.3	98.9	96.0	98.2	100	96.5	96.7
Heavy Vehicles	0	0	0	0	1	18	0	0	19	2	0	3	5	1	25	1	0	27	51
% Heavy Vehicles	0	0	0	0	2.1	3.2	0	0	3.0	8.7	0	3.7	3.7	1.1	4.0	1.8	0	3.5	3.3



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Page No : 1

Groups Printed- Cars

Start Time	Gainsborough Street From North			Huntington Avenue From East				Gainsborough Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	0	0	0	2	88	4	1	5	1	21	11	84	8	2	227
07:15 AM	0	0	0	7	131	9	4	5	4	27	12	95	4	2	300
07:30 AM	0	0	0	5	135	2	1	3	4	24	13	134	7	1	329
07:45 AM	0	0	0	1	130	6	2	7	4	18	9	130	6	1	314
Total	0	0	0	15	484	21	8	20	13	90	45	443	25	6	1170
08:00 AM	0	0	0	6	107	7	3	5	3	19	8	149	9	5	321
08:15 AM	0	0	0	4	116	5	6	0	6	17	18	150	14	2	338
08:30 AM	0	0	0	2	119	7	4	2	1	18	7	140	11	1	312
08:45 AM	0	0	0	7	126	7	4	6	4	19	9	130	7	3	322
Total	0	0	0	19	468	26	17	13	14	73	42	569	41	11	1293
09:00 AM	0	0	0	5	112	3	2	5	4	12	5	105	6	0	259
09:15 AM	0	0	0	6	127	3	5	0	3	5	8	110	5	2	274
09:30 AM	0	0	0	12	143	6	2	3	2	14	8	107	13	9	319
09:45 AM	0	0	0	10	119	8	2	2	3	11	13	112	4	3	287
Total	0	0	0	33	501	20	11	10	12	42	34	434	28	14	1139
10:00 AM	0	0	0	6	108	4	3	5	7	9	11	102	5	5	265
10:15 AM	0	0	0	8	89	6	2	8	8	13	13	114	7	5	273
10:30 AM	0	0	0	8	116	3	3	3	5	12	11	121	9	7	298
10:45 AM	0	0	0	10	105	6	3	4	6	19	8	117	4	6	288
Total	0	0	0	32	418	19	11	20	26	53	43	454	25	23	1124
11:00 AM	0	0	0	6	114	4	3	4	5	16	11	108	8	3	282
11:15 AM	0	0	0	11	88	5	3	3	6	8	20	104	10	8	266
11:30 AM	0	0	0	7	109	5	3	7	6	11	11	132	12	7	310
11:45 AM	0	0	0	5	92	9	5	8	6	14	10	124	11	1	285
Total	0	0	0	29	403	23	14	22	23	49	52	468	41	19	1143
12:00 PM	0	0	0	5	103	2	3	2	5	11	13	143	8	6	301
12:15 PM	0	0	0	6	89	1	6	6	7	18	10	125	12	6	286
12:30 PM	0	0	0	10	97	1	3	2	6	14	14	128	10	7	292
12:45 PM	0	0	0	4	109	3	2	3	2	13	12	118	12	4	282
Total	0	0	0	25	398	7	14	13	20	56	49	514	42	23	1161
01:00 PM	0	0	0	7	99	2	1	5	4	10	9	129	8	3	277
01:15 PM	0	0	0	5	118	4	3	3	4	15	7	124	11	6	300
01:30 PM	0	0	0	7	103	5	3	6	4	12	3	130	12	5	290
01:45 PM	0	0	0	13	108	3	2	2	6	13	5	135	14	1	302
Total	0	0	0	32	428	14	9	16	18	50	24	518	45	15	1169
02:00 PM	0	0	0	9	101	4	4	12	8	13	14	128	7	5	305
02:15 PM	0	0	0	4	121	1	5	3	6	17	17	114	5	2	295
02:30 PM	0	0	0	4	108	10	3	4	13	12	9	129	12	2	306
02:45 PM	0	0	0	5	113	3	2	4	8	21	19	138	5	1	319
Total	0	0	0	22	443	18	14	23	35	63	59	509	29	10	1225
03:00 PM	0	0	0	3	95	2	4	6	12	19	12	159	9	7	328
03:15 PM	0	0	0	9	101	4	6	8	9	12	7	148	7	1	312
03:30 PM	0	0	0	5	112	5	3	7	6	0	10	136	11	2	297
03:45 PM	0	0	0	8	95	4	2	9	4	13	16	129	15	5	300
Total	0	0	0	25	403	15	15	30	31	44	45	572	42	15	1237
04:00 PM	0	0	0	11	107	4	1	9	7	15	21	131	11	2	319
04:15 PM	0	0	0	6	111	3	5	7	5	13	17	132	8	2	309



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N/S: Gainsborough Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 K
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Cars

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:30 PM	0	0	0		10	93	3	2	6	10	20		21	159	12	4	340
04:45 PM	0	0	0		7	131	6	4	8	9	20		12	140	14	5	356
Total	0	0	0		34	442	16	12	30	31	68		71	562	45	13	1324
05:00 PM	0	0	0		15	128	8	4	7	3	23		27	157	14	1	387
05:15 PM	0	0	0		5	154	4	0	6	13	17		23	144	13	4	383
05:30 PM	0	0	0		11	137	3	4	5	5	22		21	154	13	2	377
05:45 PM	0	0	0		15	131	4	2	3	8	17		20	145	14	1	360
Total	0	0	0		46	550	19	10	21	29	79		91	600	54	8	1507
Grand Total	0	0	0		312	4938	198	135	218	252	667		555	5643	417	157	13492
Apprch %	0	0	0		5.6	88.4	3.5	2.4	19.2	22.2	58.7		8.2	83.3	6.2	2.3	
Total %	0	0	0		2.3	36.6	1.5	1	1.6	1.9	4.9		4.1	41.8	3.1	1.2	

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru		Left	U-Turn
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	0	0	0	0	5	135	2	1	143	3	4	24	31	13	134	7	1	155	329
07:45 AM	0	0	0	0	1	130	6	2	139	7	4	18	29	9	130	6	1	146	314
08:00 AM	0	0	0	0	6	107	7	3	123	5	3	19	27	8	149	9	5	171	321
08:15 AM	0	0	0	0	4	116	5	6	131	0	6	17	23	18	150	14	2	184	338
Total Volume	0	0	0	0	16	488	20	12	536	15	17	78	110	48	563	36	9	656	1302
% App. Total	0	0	0	0	3	91	3.7	2.2		13.6	15.5	70.9		7.3	85.8	5.5	1.4		
PHF	.000	.000	.000	.000	.667	.904	.714	.500	.937	.536	.708	.813	.887	.667	.938	.643	.450	.891	.963

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru		Left	U-Turn
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 11:30 AM																			
11:30 AM	0	0	0	0	7	109	5	3	124	7	6	11	24	11	132	12	7	162	310
11:45 AM	0	0	0	0	5	92	9	5	111	8	6	14	28	10	124	11	1	146	285
12:00 PM	0	0	0	0	5	103	2	3	113	2	5	11	18	13	143	8	6	170	301
12:15 PM	0	0	0	0	6	89	1	6	102	6	7	18	31	10	125	12	6	153	286
Total Volume	0	0	0	0	23	393	17	17	450	23	24	54	101	44	524	43	20	631	1182
% App. Total	0	0	0	0	5.1	87.3	3.8	3.8		22.8	23.8	53.5		7	83	6.8	3.2		
PHF	.000	.000	.000	.000	.821	.901	.472	.708	.907	.719	.857	.750	.815	.846	.916	.896	.714	.928	.953

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru		Left	U-Turn
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 05:00 PM																			
05:00 PM	0	0	0	0	15	128	8	4	155	7	3	23	33	27	157	14	1	199	387
05:15 PM	0	0	0	0	5	154	4	0	163	6	13	17	36	23	144	13	4	184	383
05:30 PM	0	0	0	0	11	137	3	4	155	5	5	22	32	21	154	13	2	190	377
05:45 PM	0	0	0	0	15	131	4	2	152	3	8	17	28	20	145	14	1	180	360
Total Volume	0	0	0	0	46	550	19	10	625	21	29	79	129	91	600	54	8	753	1507
% App. Total	0	0	0	0	7.4	88	3	1.6		16.3	22.5	61.2		12.1	79.7	7.2	1.1		
PHF	.000	.000	.000	.000	.767	.893	.594	.625	.959	.750	.558	.859	.896	.843	.955	.964	.500	.946	.974



PRECISION
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N/S: Gainsborough Street
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Client: Jacobs/ A. Fernandes

File Name : 112503 K
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Gainsborough Street From North			Huntington Avenue From East				Gainsborough Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	0	0	0	1	12	0	0	0	0	1	2	13	1	0	30
07:15 AM	0	0	0	1	10	1	0	2	0	3	0	17	0	0	34
07:30 AM	0	0	0	1	11	0	0	0	1	2	1	9	1	0	26
07:45 AM	0	0	0	2	8	0	0	1	0	4	0	11	0	0	26
Total	0	0	0	5	41	1	0	3	1	10	3	50	2	0	116
08:00 AM	0	0	0	0	9	1	0	0	1	2	1	12	1	0	27
08:15 AM	0	0	0	0	11	0	0	1	1	5	0	8	0	0	26
08:30 AM	0	0	0	0	10	0	0	0	0	1	1	14	0	0	26
08:45 AM	0	0	0	1	9	0	0	0	1	2	1	14	0	0	28
Total	0	0	0	1	39	1	0	1	3	10	3	48	1	0	107
09:00 AM	0	0	0	2	10	1	0	0	0	2	1	19	1	0	36
09:15 AM	0	0	0	0	9	0	0	1	0	2	2	16	0	0	30
09:30 AM	0	0	0	1	11	0	0	1	1	1	1	14	0	0	30
09:45 AM	0	0	0	0	10	0	0	2	0	1	1	13	2	0	29
Total	0	0	0	3	40	1	0	4	1	6	5	62	3	0	125
10:00 AM	0	0	0	0	14	0	0	1	0	1	0	11	0	0	27
10:15 AM	0	0	0	0	8	0	0	2	0	0	0	8	0	0	18
10:30 AM	0	0	0	0	6	0	1	0	0	4	1	11	0	0	23
10:45 AM	0	0	0	1	4	0	1	0	0	0	2	12	0	0	20
Total	0	0	0	1	32	0	2	3	0	5	3	42	0	0	88
11:00 AM	0	0	0	1	6	0	0	0	0	1	1	12	0	2	23
11:15 AM	0	0	0	0	7	1	1	0	0	0	2	13	0	0	24
11:30 AM	0	0	0	1	4	0	0	0	0	2	1	10	0	0	18
11:45 AM	0	0	0	3	10	0	2	1	2	2	1	12	1	1	35
Total	0	0	0	5	27	1	3	1	2	5	5	47	1	3	100
12:00 PM	0	0	0	0	8	0	0	2	0	1	1	9	0	0	21
12:15 PM	0	0	0	0	2	0	0	0	0	0	2	8	0	0	12
12:30 PM	0	0	0	0	3	0	0	0	0	3	1	6	0	0	13
12:45 PM	0	0	0	0	6	0	0	0	0	3	1	10	0	0	20
Total	0	0	0	0	19	0	0	2	0	7	5	33	0	0	66
01:00 PM	0	0	0	0	3	0	0	1	0	2	1	7	0	0	14
01:15 PM	0	0	0	0	8	0	0	0	0	1	1	7	0	0	17
01:30 PM	0	0	0	1	7	0	0	0	0	1	1	10	0	0	20
01:45 PM	0	0	0	0	4	1	0	1	1	2	1	8	0	0	18
Total	0	0	0	1	22	1	0	2	1	6	4	32	0	0	69
02:00 PM	0	0	0	0	8	0	0	0	0	0	0	11	1	0	20
02:15 PM	0	0	0	0	6	0	0	0	0	1	1	6	1	0	15
02:30 PM	0	0	0	0	3	0	0	0	1	4	1	7	0	0	16
02:45 PM	0	0	0	3	8	1	1	2	1	1	1	11	0	0	29
Total	0	0	0	3	25	1	1	2	2	6	3	35	2	0	80
03:00 PM	0	0	0	0	5	0	0	0	0	2	2	9	1	0	19
03:15 PM	0	0	0	0	6	0	0	0	0	2	2	10	0	0	20
03:30 PM	0	0	0	0	6	0	0	0	1	1	1	8	0	0	17
03:45 PM	0	0	0	0	7	0	0	0	1	1	0	11	0	0	20
Total	0	0	0	0	24	0	0	0	2	6	5	38	1	0	76
04:00 PM	0	0	0	1	4	0	0	0	0	1	1	7	0	0	14
04:15 PM	0	0	0	0	4	0	0	0	1	0	1	5	0	0	11



PRECISION
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File Name : 112503 K
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Page No : 2

Groups Printed- Heavy Vehicles

Start Time	Gainsborough Street From North			Huntington Avenue From East				Gainsborough Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
04:30 PM	0	0	0	0	4	0	0	0	0	1	1	12	0	0	18
04:45 PM	0	0	0	0	3	1	1	0	0	2	1	5	1	0	14
Total	0	0	0	1	15	1	1	0	1	4	4	29	1	0	57
05:00 PM	0	0	0	0	4	0	0	1	0	2	0	7	0	0	14
05:15 PM	0	0	0	0	4	0	0	0	0	0	0	4	0	0	8
05:30 PM	0	0	0	0	5	0	0	1	0	0	1	4	1	0	12
05:45 PM	0	0	0	1	5	0	0	0	0	1	0	10	0	0	17
Total	0	0	0	1	18	0	0	2	0	3	1	25	1	0	51
Grand Total	0	0	0	21	302	7	7	20	13	68	41	441	12	3	935
Apprch %	0	0	0	6.2	89.6	2.1	2.1	19.8	12.9	67.3	8.2	88.7	2.4	0.6	
Total %	0	0	0	2.2	32.3	0.7	0.7	2.1	1.4	7.3	4.4	47.2	1.3	0.3	

Start Time	Gainsborough Street From North				Huntington Avenue From East					Gainsborough Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 09:00 AM																			
09:00 AM	0	0	0	0	2	10	1	0	13	0	0	2	2	1	19	1	0	21	36
09:15 AM	0	0	0	0	0	9	0	0	9	1	0	2	3	2	16	0	0	18	30
09:30 AM	0	0	0	0	1	11	0	0	12	1	1	1	3	1	14	0	0	15	30
09:45 AM	0	0	0	0	0	10	0	0	10	2	0	1	3	1	13	2	0	16	29
Total Volume	0	0	0	0	3	40	1	0	44	4	1	6	11	5	62	3	0	70	125
% App. Total	0	0	0	0	6.8	90.9	2.3	0		36.4	9.1	54.5		7.1	88.6	4.3	0		
PHF	.000	.000	.000	.000	.375	.909	.250	.000	.846	.500	.250	.750	.917	.625	.816	.375	.000	.833	.868

Start Time	Gainsborough Street From North				Huntington Avenue From East					Gainsborough Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 11:00 AM																			
11:00 AM	0	0	0	0	1	6	0	0	7	0	0	1	1	1	12	0	2	15	23
11:15 AM	0	0	0	0	0	7	1	1	9	0	0	0	0	2	13	0	0	15	24
11:30 AM	0	0	0	0	1	4	0	0	5	0	0	2	2	1	10	0	0	11	18
11:45 AM	0	0	0	0	3	10	0	2	15	1	2	2	5	1	12	1	1	15	35
Total Volume	0	0	0	0	5	27	1	3	36	1	2	5	8	5	47	1	3	56	100
% App. Total	0	0	0	0	13.9	75	2.8	8.3		12.5	25	62.5		8.9	83.9	1.8	5.4		
PHF	.000	.000	.000	.000	.417	.675	.250	.375	.600	.250	.250	.625	.400	.625	.904	.250	.375	.933	.714

Start Time	Gainsborough Street From North				Huntington Avenue From East					Gainsborough Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 02:45 PM																			
02:45 PM	0	0	0	0	3	8	1	1	13	2	1	1	4	1	11	0	0	12	29
03:00 PM	0	0	0	0	0	5	0	0	5	0	0	2	2	2	9	1	0	12	19
03:15 PM	0	0	0	0	0	6	0	0	6	0	0	2	2	2	10	0	0	12	20
03:30 PM	0	0	0	0	0	6	0	0	6	0	1	1	2	1	8	0	0	9	17
Total Volume	0	0	0	0	3	25	1	1	30	2	2	6	10	6	38	1	0	45	85
% App. Total	0	0	0	0	10	83.3	3.3	3.3		20	20	60		13.3	84.4	2.2	0		
PHF	.000	.000	.000	.000	.250	.781	.250	.250	.577	.250	.500	.750	.625	.750	.864	.250	.000	.938	.733



PRECISION
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N/S: Gainsborough Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 K
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	17	1	2	0	29	0	0	0	12	0	1	0	11	73
07:15 AM	0	0	0	25	0	1	1	27	0	0	0	11	0	2	0	16	83
07:30 AM	0	0	1	29	0	1	0	43	0	0	0	25	1	5	0	23	128
07:45 AM	0	1	1	43	0	3	0	28	0	0	0	31	0	2	0	25	134
Total	0	1	2	114	1	7	1	127	0	0	0	79	1	10	0	75	418
08:00 AM	0	1	0	48	0	4	0	32	2	0	1	19	0	0	0	29	136
08:15 AM	0	0	0	58	0	3	0	51	0	0	1	17	0	4	0	29	163
08:30 AM	0	0	0	60	0	3	0	28	0	5	0	24	0	4	0	26	150
08:45 AM	1	0	1	54	0	2	0	45	0	1	1	15	0	4	0	33	157
Total	1	1	1	220	0	12	0	156	2	6	3	75	0	12	0	117	606
09:00 AM	0	2	0	68	0	3	0	77	0	0	0	31	0	4	1	40	226
09:15 AM	0	0	0	46	1	3	0	35	0	2	1	23	0	1	1	26	139
09:30 AM	0	0	0	82	0	4	1	27	0	0	0	41	0	3	0	37	195
09:45 AM	0	0	0	66	0	1	0	61	0	2	1	41	0	2	1	56	231
Total	0	2	0	262	1	11	1	200	0	4	2	136	0	10	3	159	791
10:00 AM	0	0	0	74	0	2	0	51	0	1	0	36	0	2	0	29	195
10:15 AM	0	0	0	49	0	0	0	32	0	2	0	22	1	2	0	14	122
10:30 AM	0	0	0	53	0	2	0	28	0	0	0	24	3	1	0	33	144
10:45 AM	0	0	1	56	0	2	0	49	0	0	0	35	0	1	0	31	175
Total	0	0	1	232	0	6	0	160	0	3	0	117	4	6	0	107	636
11:00 AM	0	0	0	102	1	2	1	43	0	0	0	31	0	1	1	52	234
11:15 AM	0	0	0	58	0	4	1	47	0	0	2	27	1	3	0	42	185
11:30 AM	0	0	0	103	0	3	0	46	0	1	1	45	0	2	0	31	232
11:45 AM	0	1	0	92	0	0	0	58	0	0	0	43	0	4	1	46	245
Total	0	1	0	355	1	9	2	194	0	1	3	146	1	10	2	171	896
12:00 PM	0	0	0	134	0	2	0	76	0	0	1	63	0	1	0	69	346
12:15 PM	0	0	2	125	0	2	1	77	0	0	0	44	0	2	0	47	300
12:30 PM	0	0	0	148	0	3	0	65	0	0	2	50	0	0	0	72	340
12:45 PM	1	0	0	151	1	3	0	79	0	0	0	51	0	3	0	29	318
Total	1	0	2	558	1	10	1	297	0	0	3	208	0	6	0	217	1304
01:00 PM	0	0	0	116	0	2	0	62	0	1	0	64	0	1	0	44	290
01:15 PM	0	0	0	137	0	1	0	53	0	0	0	47	0	2	0	37	277
01:30 PM	0	1	0	125	0	2	0	67	0	0	0	61	1	4	0	68	329
01:45 PM	0	0	0	129	0	1	0	52	0	0	0	31	0	2	1	45	261
Total	0	1	0	507	0	6	0	234	0	1	0	203	1	9	1	194	1157
02:00 PM	0	0	0	113	0	0	0	59	0	0	0	23	0	9	1	40	245
02:15 PM	0	0	0	98	0	0	0	64	0	2	0	41	0	4	0	46	255
02:30 PM	0	1	0	95	0	1	0	52	0	0	0	54	0	5	0	43	251
02:45 PM	0	2	0	127	0	1	0	82	3	0	1	63	0	2	0	67	348
Total	0	3	0	433	0	2	0	257	3	2	1	181	0	20	1	196	1099
03:00 PM	1	1	1	120	0	4	1	83	0	1	1	63	0	1	0	60	337
03:15 PM	0	0	0	138	0	3	0	72	0	0	0	50	0	4	1	48	316
03:30 PM	0	0	0	103	0	2	0	65	0	0	0	59	0	2	0	52	283
03:45 PM	0	0	0	122	0	3	1	70	0	1	0	47	1	3	2	44	294
Total	1	1	1	483	0	12	2	290	0	2	1	219	1	10	3	204	1230
04:00 PM	0	0	1	97	0	4	0	61	0	1	0	58	0	3	0	54	279
04:15 PM	0	0	0	107	1	9	0	56	0	2	0	56	0	4	0	53	288



PRECISION
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Client: Jacobs/ A. Fernandes

File Name : 112503 K
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Peds and Bicycles

Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:30 PM	0	0	0	106	2	2	0	51	0	1	0	57	0	10	1	46	276
04:45 PM	0	1	0	135	0	0	1	87	1	0	0	56	1	4	0	65	351
Total	0	1	1	445	3	15	1	255	1	4	0	227	1	21	1	218	1194
05:00 PM	0	0	1	133	0	5	1	70	2	2	1	37	2	7	0	64	325
05:15 PM	0	0	0	100	0	7	0	78	0	2	0	81	0	4	0	53	325
05:30 PM	0	1	0	113	0	6	0	100	1	0	2	51	0	2	1	48	325
05:45 PM	0	1	0	113	1	6	0	67	1	2	0	58	1	3	1	70	324
Total	0	2	1	459	1	24	1	315	4	6	3	227	3	16	2	235	1299
Grand Total	3	13	9	4068	8	114	9	2485	10	29	16	1818	12	130	13	1893	10630
Apprch %	0.1	0.3	0.2	99.4	0.3	4.4	0.3	95	0.5	1.5	0.9	97.1	0.6	6.3	0.6	92.4	
Total %	0	0.1	0.1	38.3	0.1	1.1	0.1	23.4	0.1	0.3	0.2	17.1	0.1	1.2	0.1	17.8	

Start Time	Gainsborough Street From North					Huntington Avenue From East					Gainsborough Street From South					Huntington Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 09:00 AM																					
09:00 AM	0	2	0	68	70	0	3	0	77	80	0	0	0	31	31	0	4	1	40	45	226
09:15 AM	0	0	0	46	46	1	3	0	35	39	0	2	1	23	26	0	1	1	26	28	139
09:30 AM	0	0	0	82	82	0	4	1	27	32	0	0	0	41	41	0	3	0	37	40	195
09:45 AM	0	0	0	66	66	0	1	0	61	62	0	2	1	41	44	0	2	1	56	59	231
Total Volume	0	2	0	262	264	1	11	1	200	213	0	4	2	136	142	0	10	3	159	172	791
% App. Total	0	0.8	0	99.2		0.5	5.2	0.5	93.9		0	2.8	1.4	95.8		0	5.8	1.7	92.4		
PHF	.000	.250	.000	.799	.805	.250	.688	.250	.649	.666	.000	.500	.500	.829	.807	.000	.625	.750	.710	.729	.856

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	0	0	134	134	0	2	0	76	78	0	0	1	63	64	0	1	0	69	70	346
12:15 PM	0	0	2	125	127	0	2	1	77	80	0	0	0	44	44	0	2	0	47	49	300
12:30 PM	0	0	0	148	148	0	3	0	65	68	0	0	2	50	52	0	0	0	72	72	340
12:45 PM	1	0	0	151	152	1	3	0	79	83	0	0	0	51	51	0	3	0	29	32	318
Total Volume	1	0	2	558	561	1	10	1	297	309	0	0	3	208	211	0	6	0	217	223	1304
% App. Total	0.2	0	0.4	99.5		0.3	3.2	0.3	96.1		0	0	1.4	98.6		0	2.7	0	97.3		
PHF	.250	.000	.250	.924	.923	.250	.833	.250	.940	.931	.000	.000	.375	.825	.824	.000	.500	.000	.753	.774	.942

Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	1	0	135	136	0	0	1	87	88	1	0	0	56	57	1	4	0	65	70	351
05:00 PM	0	0	1	133	134	0	5	1	70	76	2	2	1	37	42	2	7	0	64	73	325
05:15 PM	0	0	0	100	100	0	7	0	78	85	0	2	0	81	83	0	4	0	53	57	325
05:30 PM	0	1	0	113	114	0	6	0	100	106	1	0	2	51	54	0	2	1	48	51	325
Total Volume	0	2	1	481	484	0	18	2	335	355	4	4	3	225	236	3	17	1	230	251	1326
% App. Total	0	0.4	0.2	99.4		0	5.1	0.6	94.4		1.7	1.7	1.3	95.3		1.2	6.8	0.4	91.6		
PHF	.000	.500	.250	.891	.890	.000	.643	.500	.838	.837	.500	.500	.375	.694	.711	.375	.607	.250	.885	.860	.944



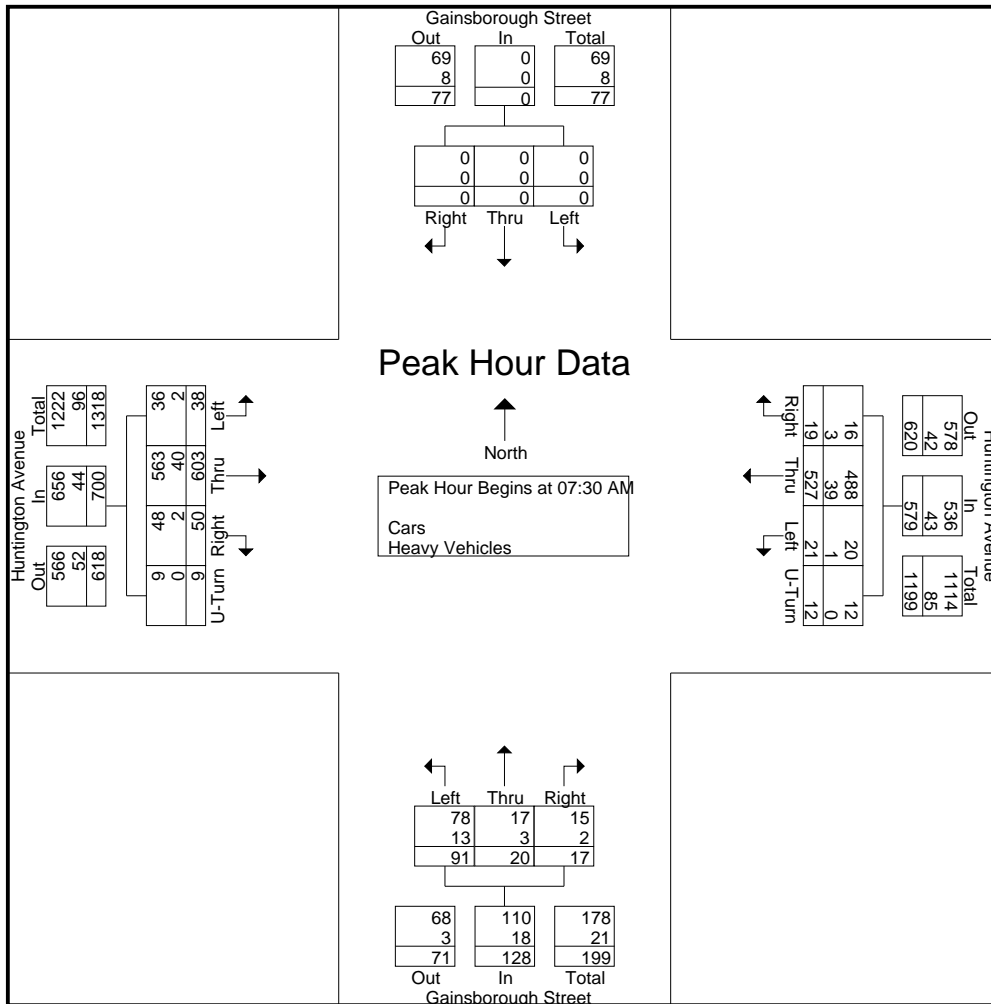
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Start Time	Gainsborough Street From North				Huntington Avenue From East					Gainsborough Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	0	0	0	0	6	146	2	1	155	3	5	26	34	14	143	8	1	166	355
07:45 AM	0	0	0	0	3	138	6	2	149	8	4	22	34	9	141	6	1	157	340
08:00 AM	0	0	0	0	6	116	8	3	133	5	4	21	30	9	161	10	5	185	348
08:15 AM	0	0	0	0	4	127	5	6	142	1	7	22	30	18	158	14	2	192	364
Total Volume	0	0	0	0	19	527	21	12	579	17	20	91	128	50	603	38	9	700	1407
% App. Total	0	0	0	0	3.3	91	3.6	2.1		13.3	15.6	71.1		7.1	86.1	5.4	1.3		
PHF	.000	.000	.000	.000	.792	.902	.656	.500	.934	.531	.714	.875	.941	.694	.936	.679	.450	.911	.966
Cars	0	0	0	0	16	488	20	12	536	15	17	78	110	48	563	36	9	656	1302
% Cars	0	0	0	0	84.2	92.6	95.2	100	92.6	88.2	85.0	85.7	85.9	96.0	93.4	94.7	100	93.7	92.5
Heavy Vehicles	0	0	0	0	3	39	1	0	43	2	3	13	18	2	40	2	0	44	105
% Heavy Vehicles	0	0	0	0	15.8	7.4	4.8	0	7.4	11.8	15.0	14.3	14.1	4.0	6.6	5.3	0	6.3	7.5





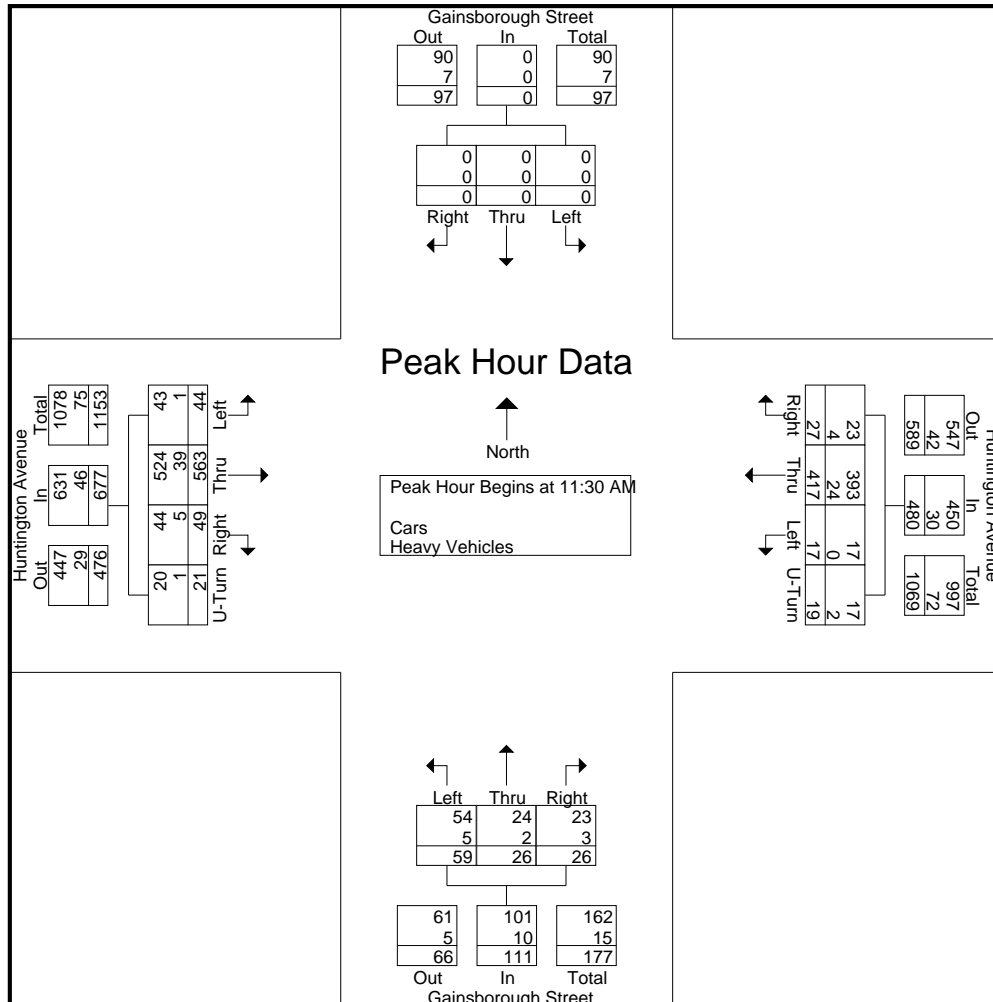
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Start Time	Gainsborough Street From North				Huntington Avenue From East				Gainsborough Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 11:30 AM																			
11:30 AM	0	0	0	0	8	113	5	3	129	7	6	13	26	12	142	12	7	173	328
11:45 AM	0	0	0	0	8	102	9	7	126	9	8	16	33	11	136	12	2	161	320
12:00 PM	0	0	0	0	5	111	2	3	121	4	5	12	21	14	152	8	6	180	322
12:15 PM	0	0	0	0	6	91	1	6	104	6	7	18	31	12	133	12	6	163	298
Total Volume	0	0	0	0	27	417	17	19	480	26	26	59	111	49	563	44	21	677	1268
% App. Total	0	0	0	0	5.6	86.9	3.5	4		23.4	23.4	53.2		7.2	83.2	6.5	3.1		
PHF	.000	.000	.000	.000	.844	.923	.472	.679	.930	.722	.813	.819	.841	.875	.926	.917	.750	.940	.966
Cars	0	0	0	0	23	393	17	17	450	23	24	54	101	44	524	43	20	631	1182
% Cars	0	0	0	0	85.2	94.2	100	89.5	93.8	88.5	92.3	91.5	91.0	89.8	93.1	97.7	95.2	93.2	93.2
Heavy Vehicles	0	0	0	0	4	24	0	2	30	3	2	5	10	5	39	1	1	46	86
% Heavy Vehicles	0	0	0	0	14.8	5.8	0	10.5	6.3	11.5	7.7	8.5	9.0	10.2	6.9	2.3	4.8	6.8	6.8





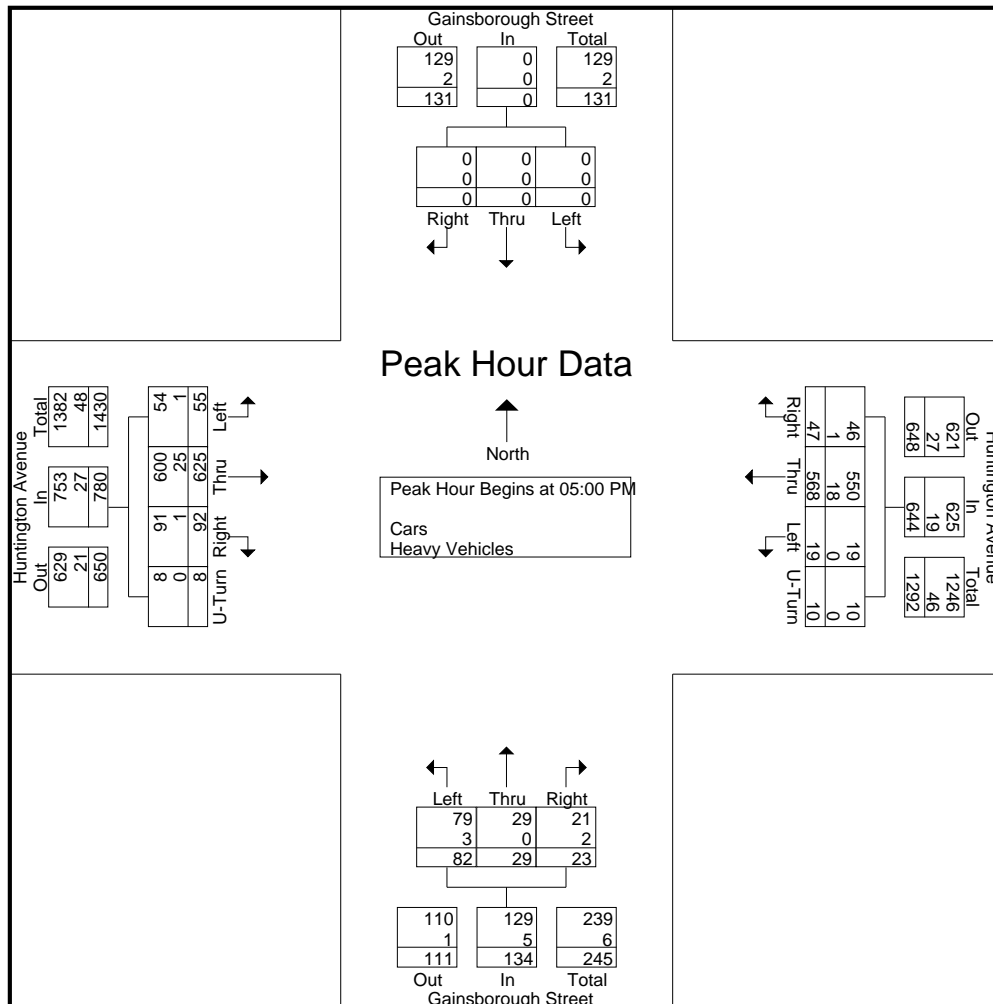
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Start Time	Gainsborough Street From North				Huntington Avenue From East					Gainsborough Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 05:00 PM																			
05:00 PM	0	0	0	0	15	132	8	4	159	8	3	25	36	27	164	14	1	206	401
05:15 PM	0	0	0	0	5	158	4	0	167	6	13	17	36	23	148	13	4	188	391
05:30 PM	0	0	0	0	11	142	3	4	160	6	5	22	33	22	158	14	2	196	389
05:45 PM	0	0	0	0	16	136	4	2	158	3	8	18	29	20	155	14	1	190	377
Total Volume	0	0	0	0	47	568	19	10	644	23	29	82	134	92	625	55	8	780	1558
% App. Total	0	0	0	0	7.3	88.2	3	1.6		17.2	21.6	61.2		11.8	80.1	7.1	1		
PHF	.000	.000	.000	.000	.734	.899	.594	.625	.964	.719	.558	.820	.931	.852	.953	.982	.500	.947	.971
Cars	0	0	0	0	46	550	19	10	625	21	29	79	129	91	600	54	8	753	1507
% Cars	0	0	0	0	97.9	96.8	100	100	97.0	91.3	100	96.3	96.3	98.9	96.0	98.2	100	96.5	96.7
Heavy Vehicles	0	0	0	0	1	18	0	0	19	2	0	3	5	1	25	1	0	27	51
% Heavy Vehicles	0	0	0	0	2.1	3.2	0	0	3.0	8.7	0	3.7	3.7	1.1	4.0	1.8	0	3.5	3.3





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N: Opera Place
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 J
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Opera Place From North		Huntington Avenue From East		Huntington Avenue From West		Int. Total
	Right	Left	Right	Thru	Thru	Left	
07:00 AM	14	0	0	123	118	0	255
07:15 AM	15	0	0	163	138	0	316
07:30 AM	26	0	0	168	165	0	359
07:45 AM	22	0	0	159	159	0	340
Total	77	0	0	613	580	0	1270
08:00 AM	28	0	0	151	181	0	360
08:15 AM	21	0	0	143	194	0	358
08:30 AM	19	0	0	151	168	0	338
08:45 AM	20	0	0	157	159	0	336
Total	88	0	0	602	702	0	1392
09:00 AM	17	0	0	134	141	0	292
09:15 AM	23	0	0	150	145	0	318
09:30 AM	24	0	0	169	154	0	347
09:45 AM	17	0	0	145	154	0	316
Total	81	0	0	598	594	0	1273
10:00 AM	20	0	0	135	132	0	287
10:15 AM	27	0	0	110	151	0	288
10:30 AM	18	0	0	145	162	0	325
10:45 AM	22	0	0	140	148	0	310
Total	87	0	0	530	593	0	1210
11:00 AM	24	0	0	137	156	0	317
11:15 AM	25	0	0	110	176	0	311
11:30 AM	22	0	0	134	180	0	336
11:45 AM	29	0	0	114	154	0	297
Total	100	0	0	495	666	0	1261
12:00 PM	19	0	0	125	178	0	322
12:15 PM	20	0	0	120	164	0	304
12:30 PM	25	0	0	129	172	0	326
12:45 PM	19	0	0	140	159	0	318
Total	83	0	0	514	673	0	1270
01:00 PM	14	0	0	120	160	0	294
01:15 PM	23	0	0	158	150	0	331
01:30 PM	24	0	0	145	155	0	324
01:45 PM	22	0	0	121	171	0	314
Total	83	0	0	544	636	0	1263
02:00 PM	27	0	0	120	172	0	319
02:15 PM	35	0	0	149	158	0	342
02:30 PM	19	0	0	129	155	0	303
02:45 PM	24	0	0	155	176	0	355
Total	105	0	0	553	661	0	1319
03:00 PM	26	0	0	129	203	0	358
03:15 PM	25	0	0	128	183	0	336
03:30 PM	21	0	0	125	170	0	316
03:45 PM	23	0	0	130	176	0	329
Total	95	0	0	512	732	0	1339
04:00 PM	22	0	0	143	177	0	342
04:15 PM	27	0	0	146	181	0	354



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File Name : 112503 J
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Page No : 2

Groups Printed- Cars - Heavy Vehicles

Start Time	Opera Place From North		Huntington Avenue From East			Huntington Avenue From West		Int. Total
	Right	Left	Right	Thru	Thru	Left		
04:30 PM	23	0	0	135	206	0	364	
04:45 PM	31	0	0	154	184	0	369	
Total	103	0	0	578	748	0	1429	
05:00 PM	33	0	0	154	215	0	402	
05:15 PM	35	0	0	171	205	0	411	
05:30 PM	36	0	0	175	203	0	414	
05:45 PM	39	0	0	146	191	0	376	
Total	143	0	0	646	814	0	1603	
Grand Total	1045	0	0	6185	7399	0	14629	
Apprch %	100	0	0	100	100	0		
Total %	7.1	0	0	42.3	50.6	0		
Cars	997	0	0	5828	6930	0	13755	
% Cars	95.4	0	0	94.2	93.7	0	94	
Heavy Vehicles	48	0	0	357	469	0	874	
% Heavy Vehicles	4.6	0	0	5.8	6.3	0	6	

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	26	0	26	0	168	168	165	0	165	359
07:45 AM	22	0	22	0	159	159	159	0	159	340
08:00 AM	28	0	28	0	151	151	181	0	181	360
08:15 AM	21	0	21	0	143	143	194	0	194	358
Total Volume	97	0	97	0	621	621	699	0	699	1417
% App. Total	100	0	100	0	100	100	100	0	100	
PHF	.866	.000	.866	.000	.924	.924	.901	.000	.901	.984
Cars	93	0	93	0	567	567	658	0	658	1318
% Cars	95.9	0	95.9	0	91.3	91.3	94.1	0	94.1	93.0
Heavy Vehicles	4	0	4	0	54	54	41	0	41	99
% Heavy Vehicles	4.1	0	4.1	0	8.7	8.7	5.9	0	5.9	7.0

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 10:45 AM										
10:45 AM	22	0	22	0	140	140	148	0	148	310
11:00 AM	24	0	24	0	137	137	156	0	156	317
11:15 AM	25	0	25	0	110	110	176	0	176	311
11:30 AM	22	0	22	0	134	134	180	0	180	336
Total Volume	93	0	93	0	521	521	660	0	660	1274
% App. Total	100	0	100	0	100	100	100	0	100	
PHF	.930	.000	.930	.000	.930	.930	.917	.000	.917	.948
Cars	89	0	89	0	499	499	608	0	608	1196
% Cars	95.7	0	95.7	0	95.8	95.8	92.1	0	92.1	93.9
Heavy Vehicles	4	0	4	0	22	22	52	0	52	78
% Heavy Vehicles	4.3	0	4.3	0	4.2	4.2	7.9	0	7.9	6.1



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File Name : 112503 J
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Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	33	0	33	0	154	154	215	0	215	402
05:15 PM	35	0	35	0	171	171	205	0	205	411
05:30 PM	36	0	36	0	175	175	203	0	203	414
05:45 PM	39	0	39	0	146	146	191	0	191	376
Total Volume	143	0	143	0	646	646	814	0	814	1603
% App. Total	100	0	100	0	100	100	100	0	100	100
PHF	.917	.000	.917	.000	.923	.923	.947	.000	.947	.968
Cars	142	0	142	0	628	628	787	0	787	1557
% Cars	99.3	0	99.3	0	97.2	97.2	96.7	0	96.7	97.1
Heavy Vehicles	1	0	1	0	18	18	27	0	27	46
% Heavy Vehicles	0.7	0	0.7	0	2.8	2.8	3.3	0	3.3	2.9



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Page No : 1

Groups Printed- Cars

Start Time	Opera Place From North		Huntington Avenue From East		Huntington Avenue From West		Int. Total
	Right	Left	Right	Thru	Thru	Left	
07:00 AM	14	0	0	109	104	0	227
07:15 AM	13	0	0	151	122	0	286
07:30 AM	25	0	0	154	154	0	333
07:45 AM	21	0	0	145	149	0	315
Total	73	0	0	559	529	0	1161
08:00 AM	26	0	0	140	168	0	334
08:15 AM	21	0	0	128	187	0	336
08:30 AM	17	0	0	141	152	0	310
08:45 AM	19	0	0	148	144	0	311
Total	83	0	0	557	651	0	1291
09:00 AM	16	0	0	123	124	0	263
09:15 AM	22	0	0	139	128	0	289
09:30 AM	23	0	0	158	140	0	321
09:45 AM	15	0	0	134	138	0	287
Total	76	0	0	554	530	0	1160
10:00 AM	19	0	0	119	122	0	260
10:15 AM	23	0	0	103	144	0	270
10:30 AM	15	0	0	136	152	0	303
10:45 AM	22	0	0	134	134	0	290
Total	79	0	0	492	552	0	1123
11:00 AM	23	0	0	130	143	0	296
11:15 AM	25	0	0	106	161	0	292
11:30 AM	19	0	0	129	170	0	318
11:45 AM	28	0	0	102	138	0	268
Total	95	0	0	467	612	0	1174
12:00 PM	18	0	0	115	169	0	302
12:15 PM	19	0	0	118	155	0	292
12:30 PM	24	0	0	124	165	0	313
12:45 PM	19	0	0	131	149	0	299
Total	80	0	0	488	638	0	1206
01:00 PM	13	0	0	115	151	0	279
01:15 PM	20	0	0	148	143	0	311
01:30 PM	24	0	0	138	145	0	307
01:45 PM	21	0	0	116	161	0	298
Total	78	0	0	517	600	0	1195
02:00 PM	24	0	0	113	161	0	298
02:15 PM	32	0	0	141	151	0	324
02:30 PM	19	0	0	121	147	0	287
02:45 PM	23	0	0	148	164	0	335
Total	98	0	0	523	623	0	1244
03:00 PM	26	0	0	122	192	0	340
03:15 PM	23	0	0	121	172	0	316
03:30 PM	20	0	0	118	162	0	300
03:45 PM	22	0	0	122	166	0	310
Total	91	0	0	483	692	0	1266
04:00 PM	22	0	0	138	168	0	328
04:15 PM	26	0	0	143	177	0	346



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File Name : 112503 J
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Start Date : 5/10/2011
Page No : 2

Groups Printed- Cars

Start Time	Opera Place From North		Huntington Avenue From East		Huntington Avenue From West		Int. Total
	Right	Left	Right	Thru	Thru	Left	
04:30 PM	23	0	0	129	194	0	346
04:45 PM	31	0	0	150	177	0	358
Total	102	0	0	560	716	0	1378
05:00 PM	32	0	0	148	208	0	388
05:15 PM	35	0	0	167	200	0	402
05:30 PM	36	0	0	171	197	0	404
05:45 PM	39	0	0	142	182	0	363
Total	142	0	0	628	787	0	1557
Grand Total	997	0	0	5828	6930	0	13755
Apprch %	100	0	0	100	100	0	
Total %	7.2	0	0	42.4	50.4	0	

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	25	0	25	0	154	154	154	0	154	333
07:45 AM	21	0	21	0	145	145	149	0	149	315
08:00 AM	26	0	26	0	140	140	168	0	168	334
08:15 AM	21	0	21	0	128	128	187	0	187	336
Total Volume	93	0	93	0	567	567	658	0	658	1318
% App. Total	100	0		0	100		100	0		
PHF	.894	.000	.894	.000	.920	.920	.880	.000	.880	.981

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 12:00 PM										
12:00 PM	18	0	18	0	115	115	169	0	169	302
12:15 PM	19	0	19	0	118	118	155	0	155	292
12:30 PM	24	0	24	0	124	124	165	0	165	313
12:45 PM	19	0	19	0	131	131	149	0	149	299
Total Volume	80	0	80	0	488	488	638	0	638	1206
% App. Total	100	0		0	100		100	0		
PHF	.833	.000	.833	.000	.931	.931	.944	.000	.944	.963

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	32	0	32	0	148	148	208	0	208	388
05:15 PM	35	0	35	0	167	167	200	0	200	402
05:30 PM	36	0	36	0	171	171	197	0	197	404
05:45 PM	39	0	39	0	142	142	182	0	182	363
Total Volume	142	0	142	0	628	628	787	0	787	1557
% App. Total	100	0		0	100		100	0		
PHF	.910	.000	.910	.000	.918	.918	.946	.000	.946	.963



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Groups Printed- Heavy Vehicles

Start Time	Opera Place From North		Huntington Avenue From East		Huntington Avenue From West		Int. Total
	Right	Left	Right	Thru	Thru	Left	
07:00 AM	0	0	0	14	14	0	28
07:15 AM	2	0	0	12	16	0	30
07:30 AM	1	0	0	14	11	0	26
07:45 AM	1	0	0	14	10	0	25
Total	4	0	0	54	51	0	109
08:00 AM	2	0	0	11	13	0	26
08:15 AM	0	0	0	15	7	0	22
08:30 AM	2	0	0	10	16	0	28
08:45 AM	1	0	0	9	15	0	25
Total	5	0	0	45	51	0	101
09:00 AM	1	0	0	11	17	0	29
09:15 AM	1	0	0	11	17	0	29
09:30 AM	1	0	0	11	14	0	26
09:45 AM	2	0	0	11	16	0	29
Total	5	0	0	44	64	0	113
10:00 AM	1	0	0	16	10	0	27
10:15 AM	4	0	0	7	7	0	18
10:30 AM	3	0	0	9	10	0	22
10:45 AM	0	0	0	6	14	0	20
Total	8	0	0	38	41	0	87
11:00 AM	1	0	0	7	13	0	21
11:15 AM	0	0	0	4	15	0	19
11:30 AM	3	0	0	5	10	0	18
11:45 AM	1	0	0	12	16	0	29
Total	5	0	0	28	54	0	87
12:00 PM	1	0	0	10	9	0	20
12:15 PM	1	0	0	2	9	0	12
12:30 PM	1	0	0	5	7	0	13
12:45 PM	0	0	0	9	10	0	19
Total	3	0	0	26	35	0	64
01:00 PM	1	0	0	5	9	0	15
01:15 PM	3	0	0	10	7	0	20
01:30 PM	0	0	0	7	10	0	17
01:45 PM	1	0	0	5	10	0	16
Total	5	0	0	27	36	0	68
02:00 PM	3	0	0	7	11	0	21
02:15 PM	3	0	0	8	7	0	18
02:30 PM	0	0	0	8	8	0	16
02:45 PM	1	0	0	7	12	0	20
Total	7	0	0	30	38	0	75
03:00 PM	0	0	0	7	11	0	18
03:15 PM	2	0	0	7	11	0	20
03:30 PM	1	0	0	7	8	0	16
03:45 PM	1	0	0	8	10	0	19
Total	4	0	0	29	40	0	73
04:00 PM	0	0	0	5	9	0	14
04:15 PM	1	0	0	3	4	0	8



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Groups Printed- Heavy Vehicles

Start Time	Opera Place From North		Huntington Avenue From East			Huntington Avenue From West		Int. Total
	Right	Left	Right	Thru	Thru	Left		
04:30 PM	0	0	0	6	12	0	18	
04:45 PM	0	0	0	4	7	0	11	
Total	1	0	0	18	32	0	51	
05:00 PM	1	0	0	6	7	0	14	
05:15 PM	0	0	0	4	5	0	9	
05:30 PM	0	0	0	4	6	0	10	
05:45 PM	0	0	0	4	9	0	13	
Total	1	0	0	18	27	0	46	
Grand Total	48	0	0	357	469	0	874	
Apprch %	100	0	0	100	100	0		
Total %	5.5	0	0	40.8	53.7	0		

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 09:00 AM										
09:00 AM	1	0	1	0	11	11	17	0	17	29
09:15 AM	1	0	1	0	11	11	17	0	17	29
09:30 AM	1	0	1	0	11	11	14	0	14	26
09:45 AM	2	0	2	0	11	11	16	0	16	29
Total Volume	5	0	5	0	44	44	64	0	64	113
% App. Total	100	0		0	100		100	0		
PHF	.625	.000	.625	.000	1.000	1.000	.941	.000	.941	.974

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 10:00 AM										
10:00 AM	1	0	1	0	16	16	10	0	10	27
10:15 AM	4	0	4	0	7	7	7	0	7	18
10:30 AM	3	0	3	0	9	9	10	0	10	22
10:45 AM	0	0	0	0	6	6	14	0	14	20
Total Volume	8	0	8	0	38	38	41	0	41	87
% App. Total	100	0		0	100		100	0		
PHF	.500	.000	.500	.000	.594	.594	.732	.000	.732	.806

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:00 PM										
02:00 PM	3	0	3	0	7	7	11	0	11	21
02:15 PM	3	0	3	0	8	8	7	0	7	18
02:30 PM	0	0	0	0	8	8	8	0	8	16
02:45 PM	1	0	1	0	7	7	12	0	12	20
Total Volume	7	0	7	0	30	30	38	0	38	75
% App. Total	100	0		0	100		100	0		
PHF	.583	.000	.583	.000	.938	.938	.792	.000	.792	.893



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N: Opera Place
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 J
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
07:00 AM	1	0	11	0	3	0	0	0	26	41
07:15 AM	0	0	23	0	1	1	3	0	31	59
07:30 AM	0	0	34	0	1	3	6	0	55	99
07:45 AM	1	0	34	0	3	9	4	0	100	151
Total	2	0	102	0	8	13	13	0	212	350
08:00 AM	0	0	27	0	0	4	0	0	39	70
08:15 AM	0	0	27	0	0	7	4	0	40	78
08:30 AM	1	0	30	0	1	7	4	0	50	93
08:45 AM	1	0	23	0	3	2	3	0	60	92
Total	2	0	107	0	4	20	11	0	189	333
09:00 AM	0	0	45	0	3	4	4	0	53	109
09:15 AM	0	0	34	0	2	5	3	0	59	103
09:30 AM	1	0	53	0	4	3	1	0	127	189
09:45 AM	1	0	44	0	1	8	1	0	127	182
Total	2	0	176	0	10	20	9	0	366	583
10:00 AM	0	0	37	0	2	2	3	0	52	96
10:15 AM	0	0	45	0	1	5	1	0	60	112
10:30 AM	0	0	44	0	2	9	2	0	42	99
10:45 AM	1	0	42	0	2	3	0	0	60	108
Total	1	0	168	0	7	19	6	0	214	415
11:00 AM	0	0	36	0	3	2	2	0	49	92
11:15 AM	0	0	33	0	2	4	2	0	89	130
11:30 AM	0	0	62	0	2	8	2	0	103	177
11:45 AM	0	0	61	0	1	9	1	0	90	162
Total	0	0	192	0	8	23	7	0	331	561
12:00 PM	2	0	75	0	3	2	0	0	115	197
12:15 PM	0	0	64	0	2	1	3	0	84	154
12:30 PM	0	0	84	0	2	3	1	0	93	183
12:45 PM	0	0	103	0	3	1	1	0	116	224
Total	2	0	326	0	10	7	5	0	408	758
01:00 PM	0	0	86	0	0	10	1	0	101	198
01:15 PM	0	0	103	0	0	7	1	0	156	267
01:30 PM	0	0	97	0	0	6	4	0	92	199
01:45 PM	0	0	70	0	1	8	1	0	72	152
Total	0	0	356	0	1	31	7	0	421	816
02:00 PM	0	0	88	0	0	2	4	0	118	212
02:15 PM	0	0	88	0	0	4	2	0	83	177
02:30 PM	0	0	78	0	1	5	4	0	85	173
02:45 PM	0	0	81	0	2	4	3	0	113	203
Total	0	0	335	0	3	15	13	0	399	765
03:00 PM	2	0	81	0	7	9	1	0	150	250
03:15 PM	0	0	107	0	4	7	2	0	124	244
03:30 PM	1	0	91	0	6	10	2	0	79	189
03:45 PM	0	0	103	0	5	14	2	0	106	230
Total	3	0	382	0	22	40	7	0	459	913
04:00 PM	1	0	86	0	2	5	3	0	88	185
04:15 PM	0	0	92	0	2	17	3	0	107	221



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N: Opera Place
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 J
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Peds and Bicycles

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	
04:30 PM	1	0	110	0	1	18	3	0	127	260
04:45 PM	1	0	90	0	2	4	2	0	82	181
Total	3	0	378	0	7	44	11	0	404	847
05:00 PM	1	0	116	0	6	6	2	0	140	271
05:15 PM	1	0	78	0	4	3	1	0	114	201
05:30 PM	1	0	113	0	7	18	2	0	110	251
05:45 PM	0	0	78	0	6	5	3	0	102	194
Total	3	0	385	0	23	32	8	0	466	917
Grand Total	18	0	2907	0	103	264	97	0	3869	7258
Apprch %	0.6	0	99.4	0	28.1	71.9	2.4	0	97.6	
Total %	0.2	0	40.1	0	1.4	3.6	1.3	0	53.3	

Start Time	Opera Place From North				Huntington Avenue From East				Huntington Avenue From West				Int. Total
	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 09:00 AM													
09:00 AM	0	0	45	45	0	3	4	7	4	0	53	57	109
09:15 AM	0	0	34	34	0	2	5	7	3	0	59	62	103
09:30 AM	1	0	53	54	0	4	3	7	1	0	127	128	189
09:45 AM	1	0	44	45	0	1	8	9	1	0	127	128	182
Total Volume	2	0	176	178	0	10	20	30	9	0	366	375	583
% App. Total	1.1	0	98.9		0	33.3	66.7		2.4	0	97.6		
PHF	.500	.000	.830	.824	.000	.625	.625	.833	.563	.000	.720	.732	.771

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 12:45 PM													
12:45 PM	0	0	103	103	0	3	1	4	1	0	116	117	224
01:00 PM	0	0	86	86	0	0	10	10	1	0	101	102	198
01:15 PM	0	0	103	103	0	0	7	7	1	0	156	157	267
01:30 PM	0	0	97	97	0	0	6	6	4	0	92	96	199
Total Volume	0	0	389	389	0	3	24	27	7	0	465	472	888
% App. Total	0	0	100		0	11.1	88.9		1.5	0	98.5		
PHF	.000	.000	.944	.944	.000	.250	.600	.675	.438	.000	.745	.752	.831

Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	0	92	92	0	2	17	19	3	0	107	110	221
04:30 PM	1	0	110	111	0	1	18	19	3	0	127	130	260
04:45 PM	1	0	90	91	0	2	4	6	2	0	82	84	181
05:00 PM	1	0	116	117	0	6	6	12	2	0	140	142	271
Total Volume	3	0	408	411	0	11	45	56	10	0	456	466	933
% App. Total	0.7	0	99.3		0	19.6	80.4		2.1	0	97.9		
PHF	.750	.000	.879	.878	.000	.458	.625	.737	.833	.000	.814	.820	.861



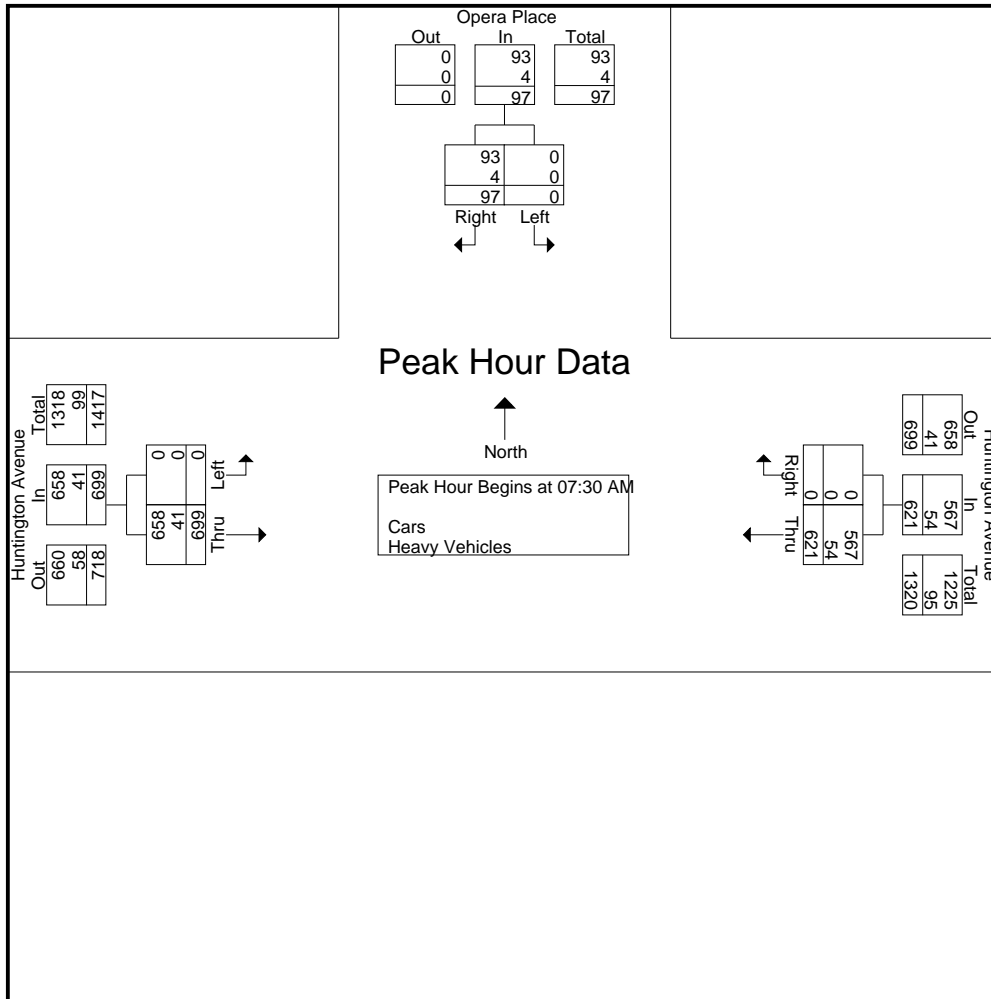
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Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	26	0	26	0	168	168	165	0	165	359
07:45 AM	22	0	22	0	159	159	159	0	159	340
08:00 AM	28	0	28	0	151	151	181	0	181	360
08:15 AM	21	0	21	0	143	143	194	0	194	358
Total Volume	97	0	97	0	621	621	699	0	699	1417
% App. Total	100	0		0	100		100	0		
PHF	.866	.000	.866	.000	.924	.924	.901	.000	.901	.984
Cars	93	0	93	0	567	567	658	0	658	1318
% Cars	95.9	0	95.9	0	91.3	91.3	94.1	0	94.1	93.0
Heavy Vehicles	4	0	4	0	54	54	41	0	41	99
% Heavy Vehicles	4.1	0	4.1	0	8.7	8.7	5.9	0	5.9	7.0





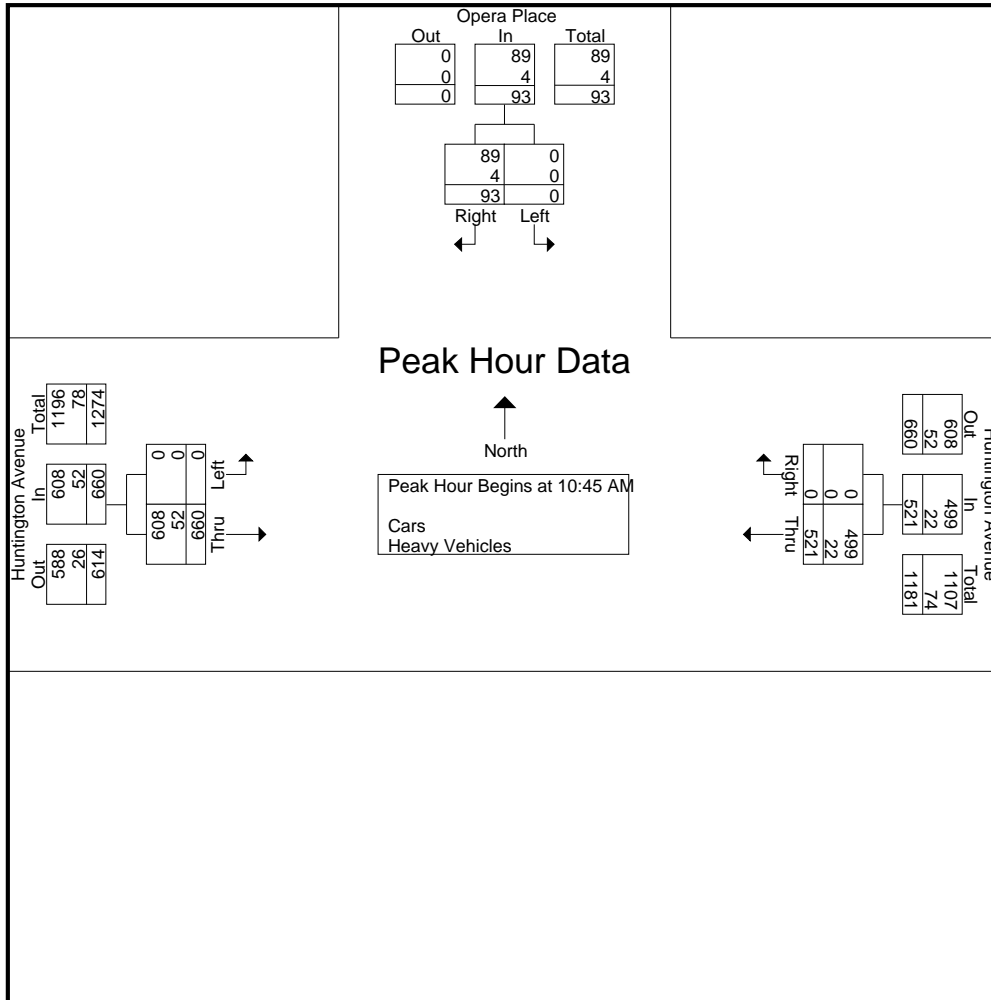
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File Name : 112503 J
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Page No : 2

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 10:45 AM										
10:45 AM	22	0	22	0	140	140	148	0	148	310
11:00 AM	24	0	24	0	137	137	156	0	156	317
11:15 AM	25	0	25	0	110	110	176	0	176	311
11:30 AM	22	0	22	0	134	134	180	0	180	336
Total Volume	93	0	93	0	521	521	660	0	660	1274
% App. Total	100	0		0	100		100	0		
PHF	.930	.000	.930	.000	.930	.930	.917	.000	.917	.948
Cars	89	0	89	0	499	499	608	0	608	1196
% Cars	95.7	0	95.7	0	95.8	95.8	92.1	0	92.1	93.9
Heavy Vehicles	4	0	4	0	22	22	52	0	52	78
% Heavy Vehicles	4.3	0	4.3	0	4.2	4.2	7.9	0	7.9	6.1





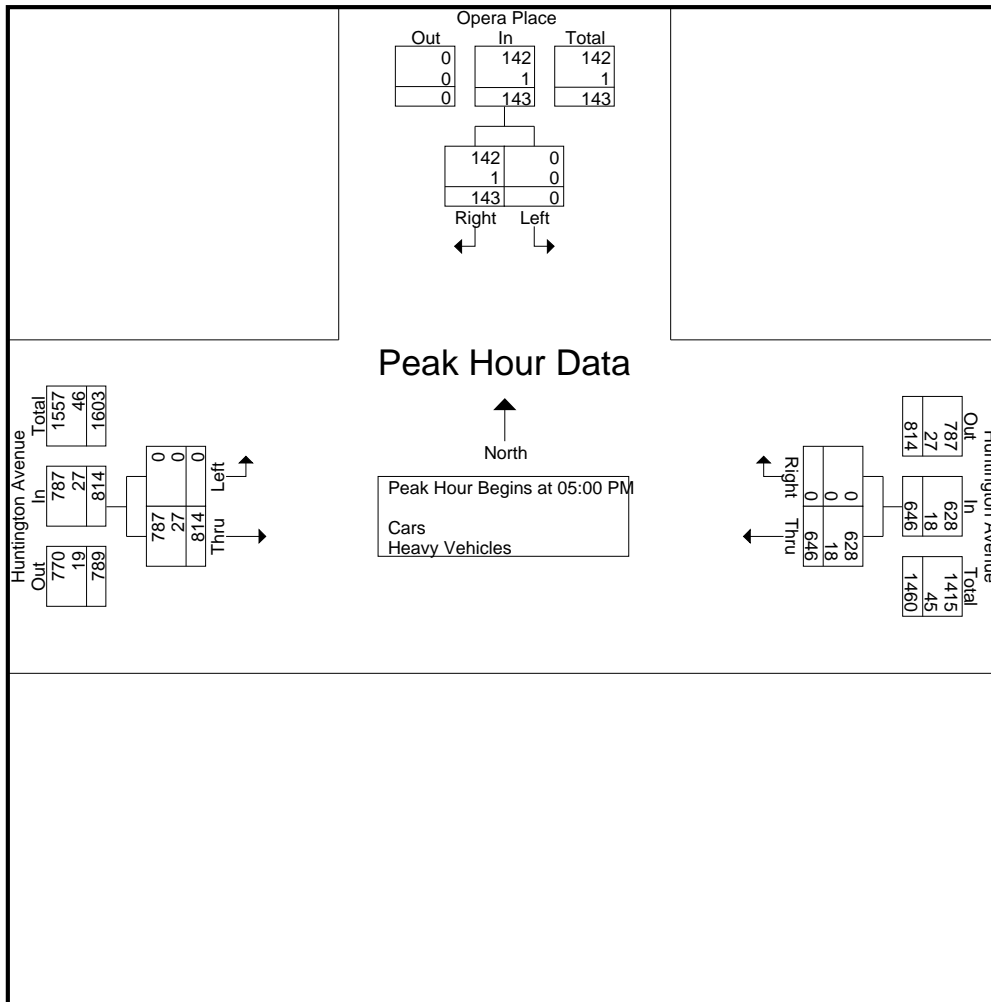
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File Name : 112503 J
Site Code : TBA
Start Date : 5/10/2011
Page No : 3

Start Time	Opera Place From North			Huntington Avenue From East			Huntington Avenue From West			Int. Total
	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	33	0	33	0	154	154	215	0	215	402
05:15 PM	35	0	35	0	171	171	205	0	205	411
05:30 PM	36	0	36	0	175	175	203	0	203	414
05:45 PM	39	0	39	0	146	146	191	0	191	376
Total Volume	143	0	143	0	646	646	814	0	814	1603
% App. Total	100	0	100	0	100	100	100	0	100	100
PHF	.917	.000	.917	.000	.923	.923	.947	.000	.947	.968
Cars	142	0	142	0	628	628	787	0	787	1557
% Cars	99.3	0	99.3	0	97.2	97.2	96.7	0	96.7	97.1
Heavy Vehicles	1	0	1	0	18	18	27	0	27	46
% Heavy Vehicles	0.7	0	0.7	0	2.8	2.8	3.3	0	3.3	2.9





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File Name : 123026 M
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Forsyth Street From North				Huntington Avenue (Route 9) From East				Forsyth Street From South				Huntington Avenue (Route 9) From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	10	9	3	1	4	120	6	8	2	7	4	0	8	121	0	0	303
07:15 AM	8	14	5	0	7	139	2	5	4	0	6	0	9	123	0	0	322
07:30 AM	6	12	11	0	9	125	8	9	1	9	8	0	11	187	0	0	396
07:45 AM	10	12	12	0	9	148	13	6	9	8	8	0	11	166	0	0	412
Total	34	47	31	1	29	532	29	28	16	24	26	0	39	597	0	0	1433
08:00 AM	10	21	4	0	7	169	4	12	4	5	7	0	10	156	1	1	411
08:15 AM	8	22	2	0	10	140	9	3	4	3	7	1	11	143	0	0	363
08:30 AM	7	15	5	0	5	152	11	4	5	8	6	0	9	163	0	0	390
08:45 AM	11	14	10	0	6	152	12	6	4	6	3	0	6	178	1	0	409
Total	36	72	21	0	28	613	36	25	17	22	23	1	36	640	2	1	1573
Grand Total	70	119	52	1	57	1145	65	53	33	46	49	1	75	1237	2	1	3006
Apprch %	28.9	49.2	21.5	0.4	4.3	86.7	4.9	4	25.6	35.7	38	0.8	5.7	94.1	0.2	0.1	
Total %	2.3	4	1.7	0	1.9	38.1	2.2	1.8	1.1	1.5	1.6	0	2.5	41.2	0.1	0	
Cars	67	104	45	1	52	1065	55	51	28	37	18	1	42	1149	2	1	2718
% Cars	95.7	87.4	86.5	100	91.2	93	84.6	96.2	84.8	80.4	36.7	100	56	92.9	100	100	90.4
Heavy Vehicles	3	15	7	0	5	80	10	2	5	9	31	0	33	88	0	0	288
% Heavy Vehicles	4.3	12.6	13.5	0	8.8	7	15.4	3.8	15.2	19.6	63.3	0	44	7.1	0	0	9.6

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	12	11	0	29	9	125	8	9	151	1	9	8	0	18	11	187	0	0	198	396
07:45 AM	10	12	12	0	34	9	148	13	6	176	9	8	8	0	25	11	166	0	0	177	412
08:00 AM	10	21	4	0	35	7	169	4	12	192	4	5	7	0	16	10	156	1	1	168	411
08:15 AM	8	22	2	0	32	10	140	9	3	162	4	3	7	1	15	11	143	0	0	154	363
Total Volume	34	67	29	0	130	35	582	34	30	681	18	25	30	1	74	43	652	1	1	697	1582
% App. Total	26.2	51.5	22.3	0		5.1	85.5	5	4.4		24.3	33.8	40.5	1.4		6.2	93.5	0.1	0.1		
PHF	.850	.761	.604	.000	.929	.875	.861	.654	.625	.887	.500	.694	.938	.250	.740	.977	.872	.250	.250	.880	.960
Cars	32	58	25	0	115	31	540	30	29	630	17	20	13	1	51	26	612	1	1	640	1436
% Cars	94.1	86.6	86.2	0	88.5	88.6	92.8	88.2	96.7	92.5	94.4	80.0	43.3	100	68.9	60.5	93.9	100	100	91.8	90.8
Heavy Vehicles	2	9	4	0	15	4	42	4	1	51	1	5	17	0	23	17	40	0	0	57	146
% Heavy Vehicles	5.9	13.4	13.8	0	11.5	11.4	7.2	11.8	3.3	7.5	5.6	20.0	56.7	0	31.1	39.5	6.1	0	0	8.2	9.2



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File Name : 123026 M
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Forsyth Street From North				Huntington Avenue (Route 9) From East				Forsyth Street From South				Huntington Avenue (Route 9) From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	10	8	3	1	4	111	5	7	0	6	1	0	4	113	0	0	273
07:15 AM	8	11	4	0	6	133	2	5	3	0	2	0	4	110	0	0	288
07:30 AM	5	11	11	0	9	119	8	9	1	8	5	0	6	178	0	0	370
07:45 AM	10	10	10	0	8	138	11	6	8	7	4	0	6	153	0	0	371
Total	33	40	28	1	27	501	26	27	12	21	12	0	20	554	0	0	1302
08:00 AM	10	17	2	0	7	155	2	12	4	2	2	0	7	145	1	1	367
08:15 AM	7	20	2	0	7	128	9	2	4	3	2	1	7	136	0	0	328
08:30 AM	7	13	5	0	5	142	11	4	5	6	1	0	5	155	0	0	359
08:45 AM	10	14	8	0	6	139	7	6	3	5	1	0	3	159	1	0	362
Total	34	64	17	0	25	564	29	24	16	16	6	1	22	595	2	1	1416
Grand Total	67	104	45	1	52	1065	55	51	28	37	18	1	42	1149	2	1	2718
Apprch %	30.9	47.9	20.7	0.5	4.3	87.1	4.5	4.2	33.3	44	21.4	1.2	3.5	96.2	0.2	0.1	
Total %	2.5	3.8	1.7	0	1.9	39.2	2	1.9	1	1.4	0.7	0	1.5	42.3	0.1	0	

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	5	11	11	0	27	9	119	8	9	145	1	8	5	0	14	6	178	0	0	184	370
07:45 AM	10	10	10	0	30	8	138	11	6	163	8	7	4	0	19	6	153	0	0	159	371
08:00 AM	10	17	2	0	29	7	155	2	12	176	4	2	2	0	8	7	145	1	1	154	367
08:15 AM	7	20	2	0	29	7	128	9	2	146	4	3	2	1	10	7	136	0	0	143	328
Total Volume	32	58	25	0	115	31	540	30	29	630	17	20	13	1	51	26	612	1	1	640	1436
% App. Total	27.8	50.4	21.7	0		4.9	85.7	4.8	4.6		33.3	39.2	25.5	2		4.1	95.6	0.2	0.2		
PHF	.800	.725	.568	.000	.958	.861	.871	.682	.604	.895	.531	.625	.650	.250	.671	.929	.860	.250	.250	.870	.968



PRECISION
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File Name : 123026 M
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Forsyth Street From North				Huntington Avenue (Route 9) From East				Forsyth Street From South				Huntington Avenue (Route 9) From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	0	1	0	0	0	9	1	1	2	1	3	0	4	8	0	0	30
07:15 AM	0	3	1	0	1	6	0	0	1	0	4	0	5	13	0	0	34
07:30 AM	1	1	0	0	0	6	0	0	0	1	3	0	5	9	0	0	26
07:45 AM	0	2	2	0	1	10	2	0	1	1	4	0	5	13	0	0	41
Total	1	7	3	0	2	31	3	1	4	3	14	0	19	43	0	0	131
08:00 AM	0	4	2	0	0	14	2	0	0	3	5	0	3	11	0	0	44
08:15 AM	1	2	0	0	3	12	0	1	0	0	5	0	4	7	0	0	35
08:30 AM	0	2	0	0	0	10	0	0	0	2	5	0	4	8	0	0	31
08:45 AM	1	0	2	0	0	13	5	0	1	1	2	0	3	19	0	0	47
Total	2	8	4	0	3	49	7	1	1	6	17	0	14	45	0	0	157
Grand Total	3	15	7	0	5	80	10	2	5	9	31	0	33	88	0	0	288
Apprch %	12	60	28	0	5.2	82.5	10.3	2.1	11.1	20	68.9	0	27.3	72.7	0	0	
Total %	1	5.2	2.4	0	1.7	27.8	3.5	0.7	1.7	3.1	10.8	0	11.5	30.6	0	0	

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	4	2	0	6	0	14	2	0	16	0	3	5	0	8	3	11	0	0	14	44
08:15 AM	1	2	0	0	3	3	12	0	1	16	0	0	5	0	5	4	7	0	0	11	35
08:30 AM	0	2	0	0	2	0	10	0	0	10	0	2	5	0	7	4	8	0	0	12	31
08:45 AM	1	0	2	0	3	0	13	5	0	18	1	1	2	0	4	3	19	0	0	22	47
Total Volume	2	8	4	0	14	3	49	7	1	60	1	6	17	0	24	14	45	0	0	59	157
% App. Total	14.3	57.1	28.6	0		5	81.7	11.7	1.7		4.2	25	70.8	0		23.7	76.3	0	0		
PHF	.500	.500	.500	.000	.583	.250	.875	.350	.250	.833	.250	.500	.850	.000	.750	.875	.592	.000	.000	.670	.835



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File Name : 123026 M
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Forsyth Street From North				Huntington Avenue (Route 9) From East				Forsyth Street From South				Huntington Avenue (Route 9) From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	18	0	0	0	84	0	2	0	15	0	6	0	19	144
07:15 AM	0	2	1	19	0	1	0	113	0	3	0	29	0	4	1	22	195
07:30 AM	0	1	0	25	0	1	1	163	0	1	0	41	0	5	0	27	265
07:45 AM	1	1	2	54	0	0	0	338	1	0	0	144	0	12	0	71	624
Total	1	4	3	116	0	2	1	698	1	6	0	229	0	27	1	139	1228
08:00 AM	0	0	1	26	0	0	1	142	0	1	0	58	0	10	0	40	279
08:15 AM	0	0	0	50	0	0	0	112	0	0	0	33	0	11	0	45	251
08:30 AM	0	0	0	44	0	0	1	106	0	1	0	36	0	8	0	30	226
08:45 AM	0	0	0	51	0	0	0	121	0	2	0	40	1	5	0	44	264
Total	0	0	1	171	0	0	2	481	0	4	0	167	1	34	0	159	1020
Grand Total	1	4	4	287	0	2	3	1179	1	10	0	396	1	61	1	298	2248
Apprch %	0.3	1.4	1.4	97	0	0.2	0.3	99.6	0.2	2.5	0	97.3	0.3	16.9	0.3	82.5	
Total %	0	0.2	0.2	12.8	0	0.1	0.1	52.4	0	0.4	0	17.6	0	2.7	0	13.3	

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	1	0	25	26	0	1	1	163	165	0	1	0	41	42	0	5	0	27	32	265
07:45 AM	1	1	2	54	58	0	0	0	338	338	1	0	0	144	145	0	12	0	71	83	624
08:00 AM	0	0	1	26	27	0	0	1	142	143	0	1	0	58	59	0	10	0	40	50	279
08:15 AM	0	0	0	50	50	0	0	0	112	112	0	0	0	33	33	0	11	0	45	56	251
Total Volume	1	2	3	155	161	0	1	2	755	758	1	2	0	276	279	0	38	0	183	221	1419
% App. Total	0.6	1.2	1.9	96.3		0	0.1	0.3	99.6		0.4	0.7	0	98.9		0	17.2	0	82.8		
PHF	.250	.500	.375	.718	.694	.000	.250	.500	.558	.561	.250	.500	.000	.479	.481	.000	.792	.000	.644	.666	.569



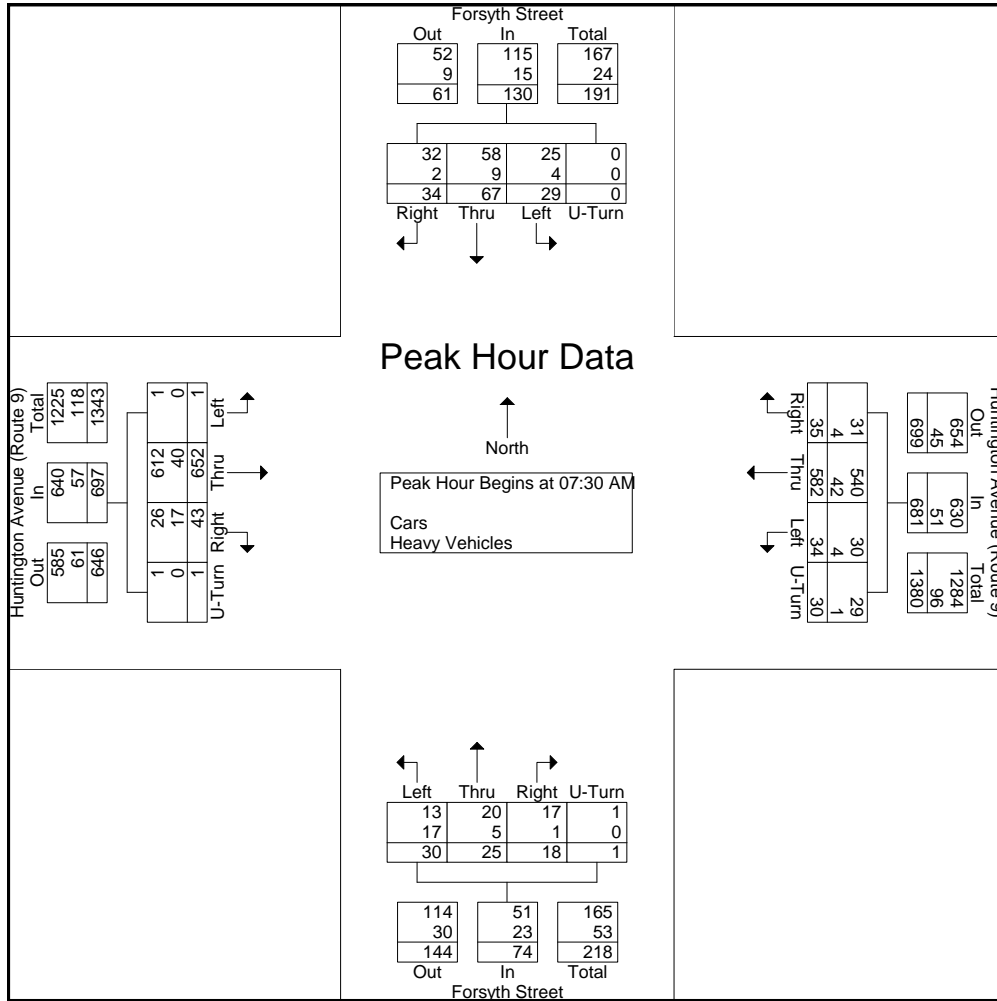
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File Name : 123026 M
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	12	11	0	29	9	125	8	9	151	1	9	8	0	18	11	187	0	0	198	396
07:45 AM	10	12	12	0	34	9	148	13	6	176	9	8	8	0	25	11	166	0	0	177	412
08:00 AM	10	21	4	0	35	7	169	4	12	192	4	5	7	0	16	10	156	1	1	168	411
08:15 AM	8	22	2	0	32	10	140	9	3	162	4	3	7	1	15	11	143	0	0	154	363
Total Volume	34	67	29	0	130	35	582	34	30	681	18	25	30	1	74	43	652	1	1	697	1582
% App. Total	26.2	51.5	22.3	0		5.1	85.5	5	4.4		24.3	33.8	40.5	1.4		6.2	93.5	0.1	0.1		
PHF	.850	.761	.604	.000	.929	.875	.861	.654	.625	.887	.500	.694	.938	.250	.740	.977	.872	.250	.250	.880	.960
Cars	32	58	25	0	115	31	540	30	29	630	17	20	13	1	51	26	612	1	1	640	1436
% Cars	94.1	86.6	86.2	0	88.5	88.6	92.8	88.2	96.7	92.5	94.4	80.0	43.3	100	68.9	60.5	93.9	100	100	91.8	90.8
Heavy Vehicles	2	9	4	0	15	4	42	4	1	51	1	5	17	0	23	17	40	0	0	57	146
% Heavy Vehicles	5.9	13.4	13.8	0	11.5	11.4	7.2	11.8	3.3	7.5	5.6	20.0	56.7	0	31.1	39.5	6.1	0	0	8.2	9.2





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N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 MM
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Forsyth Street From North				Huntington Avenue (Route 9) From East				Forsyth Street From South				Huntington Avenue (Route 9) From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	11	22	9	0	11	140	6	7	7	4	2	0	6	190	0	0	415
04:15 PM	7	11	6	0	9	150	5	8	7	3	6	0	5	167	0	0	384
04:30 PM	8	15	9	0	7	141	8	8	3	2	8	0	9	210	0	0	428
04:45 PM	9	22	8	0	4	121	7	10	6	6	4	0	9	166	0	0	372
Total	35	70	32	0	31	552	26	33	23	15	20	0	29	733	0	0	1599
05:00 PM	13	25	10	0	9	174	11	11	10	5	8	0	7	163	1	0	447
05:15 PM	10	13	7	0	11	193	13	7	3	4	8	0	9	163	0	1	442
05:30 PM	14	28	12	0	12	194	5	10	11	6	6	0	10	189	0	1	498
05:45 PM	7	20	10	0	24	208	6	18	5	4	7	1	7	182	1	1	501
Total	44	86	39	0	56	769	35	46	29	19	29	1	33	697	2	3	1888
Grand Total	79	156	71	0	87	1321	61	79	52	34	49	1	62	1430	2	3	3487
Apprch %	25.8	51	23.2	0	5.6	85.3	3.9	5.1	38.2	25	36	0.7	4.1	95.5	0.1	0.2	
Total %	2.3	4.5	2	0	2.5	37.9	1.7	2.3	1.5	1	1.4	0	1.8	41	0.1	0.1	
Cars	79	133	67	0	82	1278	56	79	51	26	27	1	54	1374	2	3	3312
% Cars	100	85.3	94.4	0	94.3	96.7	91.8	100	98.1	76.5	55.1	100	87.1	96.1	100	100	95
Heavy Vehicles	0	23	4	0	5	43	5	0	1	8	22	0	8	56	0	0	175
% Heavy Vehicles	0	14.7	5.6	0	5.7	3.3	8.2	0	1.9	23.5	44.9	0	12.9	3.9	0	0	5

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	13	25	10	0	48	9	174	11	11	205	10	5	8	0	23	7	163	1	0	171	447
05:15 PM	10	13	7	0	30	11	193	13	7	224	3	4	8	0	15	9	163	0	1	173	442
05:30 PM	14	28	12	0	54	12	194	5	10	221	11	6	6	0	23	10	189	0	1	200	498
05:45 PM	7	20	10	0	37	24	208	6	18	256	5	4	7	1	17	7	182	1	1	191	501
Total Volume	44	86	39	0	169	56	769	35	46	906	29	19	29	1	78	33	697	2	3	735	1888
% App. Total	26	50.9	23.1	0		6.2	84.9	3.9	5.1		37.2	24.4	37.2	1.3		4.5	94.8	0.3	0.4		
PHF	.786	.768	.813	.000	.782	.583	.924	.673	.639	.885	.659	.792	.906	.250	.848	.825	.922	.500	.750	.919	.942
Cars	44	78	37	0	159	53	742	34	46	875	29	14	16	1	60	28	674	2	3	707	1801
% Cars	100	90.7	94.9	0	94.1	94.6	96.5	97.1	100	96.6	100	73.7	55.2	100	76.9	84.8	96.7	100	100	96.2	95.4
Heavy Vehicles	0	8	2	0	10	3	27	1	0	31	0	5	13	0	18	5	23	0	0	28	87
% Heavy Vehicles	0	9.3	5.1	0	5.9	5.4	3.5	2.9	0	3.4	0	26.3	44.8	0	23.1	15.2	3.3	0	0	3.8	4.6



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Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Forsyth Street From North				Huntington Avenue (Route 9) From East				Forsyth Street From South				Huntington Avenue (Route 9) From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	11	18	8	0	11	138	6	7	7	2	1	0	4	180	0	0	393
04:15 PM	7	8	6	0	7	145	3	8	7	3	3	0	5	161	0	0	363
04:30 PM	8	11	9	0	7	136	7	8	2	1	5	0	8	201	0	0	403
04:45 PM	9	18	7	0	4	117	6	10	6	6	2	0	9	158	0	0	352
Total	35	55	30	0	29	536	22	33	22	12	11	0	26	700	0	0	1511
05:00 PM	13	24	10	0	8	166	11	11	10	5	2	0	6	158	1	0	425
05:15 PM	10	11	6	0	10	185	13	7	3	2	5	0	7	161	0	1	421
05:30 PM	14	25	11	0	11	189	5	10	11	3	4	0	9	180	0	1	473
05:45 PM	7	18	10	0	24	202	5	18	5	4	5	1	6	175	1	1	482
Total	44	78	37	0	53	742	34	46	29	14	16	1	28	674	2	3	1801
Grand Total	79	133	67	0	82	1278	56	79	51	26	27	1	54	1374	2	3	3312
Apprch %	28.3	47.7	24	0	5.5	85.5	3.7	5.3	48.6	24.8	25.7	1	3.8	95.9	0.1	0.2	
Total %	2.4	4	2	0	2.5	38.6	1.7	2.4	1.5	0.8	0.8	0	1.6	41.5	0.1	0.1	

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	13	24	10	0	47	8	166	11	11	196	10	5	2	0	17	6	158	1	0	165	425
05:15 PM	10	11	6	0	27	10	185	13	7	215	3	2	5	0	10	7	161	0	1	169	421
05:30 PM	14	25	11	0	50	11	189	5	10	215	11	3	4	0	18	9	180	0	1	190	473
05:45 PM	7	18	10	0	35	24	202	5	18	249	5	4	5	1	15	6	175	1	1	183	482
Total Volume	44	78	37	0	159	53	742	34	46	875	29	14	16	1	60	28	674	2	3	707	1801
% App. Total	27.7	49.1	23.3	0		6.1	84.8	3.9	5.3		48.3	23.3	26.7	1.7		4	95.3	0.3	0.4		
PHF	.786	.780	.841	.000	.795	.552	.918	.654	.639	.879	.659	.700	.800	.250	.833	.778	.936	.500	.750	.930	.934



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Groups Printed- Heavy Vehicles

Start Time	Forsyth Street From North				Huntington Avenue (Route 9) From East				Forsyth Street From South				Huntington Avenue (Route 9) From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	4	1	0	0	2	0	0	0	2	1	0	2	10	0	0	22
04:15 PM	0	3	0	0	2	5	2	0	0	0	3	0	0	6	0	0	21
04:30 PM	0	4	0	0	0	5	1	0	1	1	3	0	1	9	0	0	25
04:45 PM	0	4	1	0	0	4	1	0	0	0	2	0	0	8	0	0	20
Total	0	15	2	0	2	16	4	0	1	3	9	0	3	33	0	0	88
05:00 PM	0	1	0	0	1	8	0	0	0	0	6	0	1	5	0	0	22
05:15 PM	0	2	1	0	1	8	0	0	0	2	3	0	2	2	0	0	21
05:30 PM	0	3	1	0	1	5	0	0	0	3	2	0	1	9	0	0	25
05:45 PM	0	2	0	0	0	6	1	0	0	0	2	0	1	7	0	0	19
Total	0	8	2	0	3	27	1	0	0	5	13	0	5	23	0	0	87
Grand Total	0	23	4	0	5	43	5	0	1	8	22	0	8	56	0	0	175
Apprch %	0	85.2	14.8	0	9.4	81.1	9.4	0	3.2	25.8	71	0	12.5	87.5	0	0	
Total %	0	13.1	2.3	0	2.9	24.6	2.9	0	0.6	4.6	12.6	0	4.6	32	0	0	

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	4	1	0	5	0	2	0	0	2	0	2	1	0	3	2	10	0	0	12	22
04:15 PM	0	3	0	0	3	2	5	2	0	9	0	0	3	0	3	0	6	0	0	6	21
04:30 PM	0	4	0	0	4	0	5	1	0	6	1	1	3	0	5	1	9	0	0	10	25
04:45 PM	0	4	1	0	5	0	4	1	0	5	0	0	2	0	2	0	8	0	0	8	20
Total Volume	0	15	2	0	17	2	16	4	0	22	1	3	9	0	13	3	33	0	0	36	88
% App. Total	0	88.2	11.8	0		9.1	72.7	18.2	0		7.7	23.1	69.2	0		8.3	91.7	0	0		
PHF	.000	.938	.500	.000	.850	.250	.800	.500	.000	.611	.250	.375	.750	.000	.650	.375	.825	.000	.000	.750	.880



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
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File Name : 123026 MM
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Forsyth Street From North				Huntington Avenue (Route 9) From East				Forsyth Street From South				Huntington Avenue (Route 9) From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	2	0	7	0	3	0	176	0	1	0	75	0	2	0	58	324
04:15 PM	0	6	0	0	0	2	0	160	0	3	0	94	0	7	0	85	357
04:30 PM	1	0	0	0	0	1	0	172	0	5	0	128	0	6	0	72	385
04:45 PM	0	1	0	2	0	0	0	216	0	1	0	116	0	6	0	63	405
Total	1	9	0	9	0	6	0	724	0	10	0	413	0	21	0	278	1471
05:00 PM	0	0	0	82	0	1	0	428	1	0	0	175	0	8	0	190	885
05:15 PM	0	0	0	155	0	4	0	387	0	0	0	126	0	4	0	141	817
05:30 PM	0	1	0	117	0	2	0	386	0	0	0	153	0	10	0	119	788
05:45 PM	0	3	1	154	0	2	0	315	0	0	0	159	0	6	0	122	762
Total	0	4	1	508	0	9	0	1516	1	0	0	613	0	28	0	572	3252
Grand Total	1	13	1	517	0	15	0	2240	1	10	0	1026	0	49	0	850	4723
Apprch %	0.2	2.4	0.2	97.2	0	0.7	0	99.3	0.1	1	0	98.9	0	5.5	0	94.5	
Total %	0	0.3	0	10.9	0	0.3	0	47.4	0	0.2	0	21.7	0	1	0	18	

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	82	82	0	1	0	428	429	1	0	0	175	176	0	8	0	190	198	885
05:15 PM	0	0	0	155	155	0	4	0	387	391	0	0	0	126	126	0	4	0	141	145	817
05:30 PM	0	1	0	117	118	0	2	0	386	388	0	0	0	153	153	0	10	0	119	129	788
05:45 PM	0	3	1	154	158	0	2	0	315	317	0	0	0	159	159	0	6	0	122	128	762
Total Volume	0	4	1	508	513	0	9	0	1516	1525	1	0	0	613	614	0	28	0	572	600	3252
% App. Total	0	0.8	0.2	99		0	0.6	0	99.4		0.2	0	0	99.8		0	4.7	0	95.3		
PHF	.000	.333	.250	.819	.812	.000	.563	.000	.886	.889	.250	.000	.000	.876	.872	.000	.700	.000	.753	.758	.919



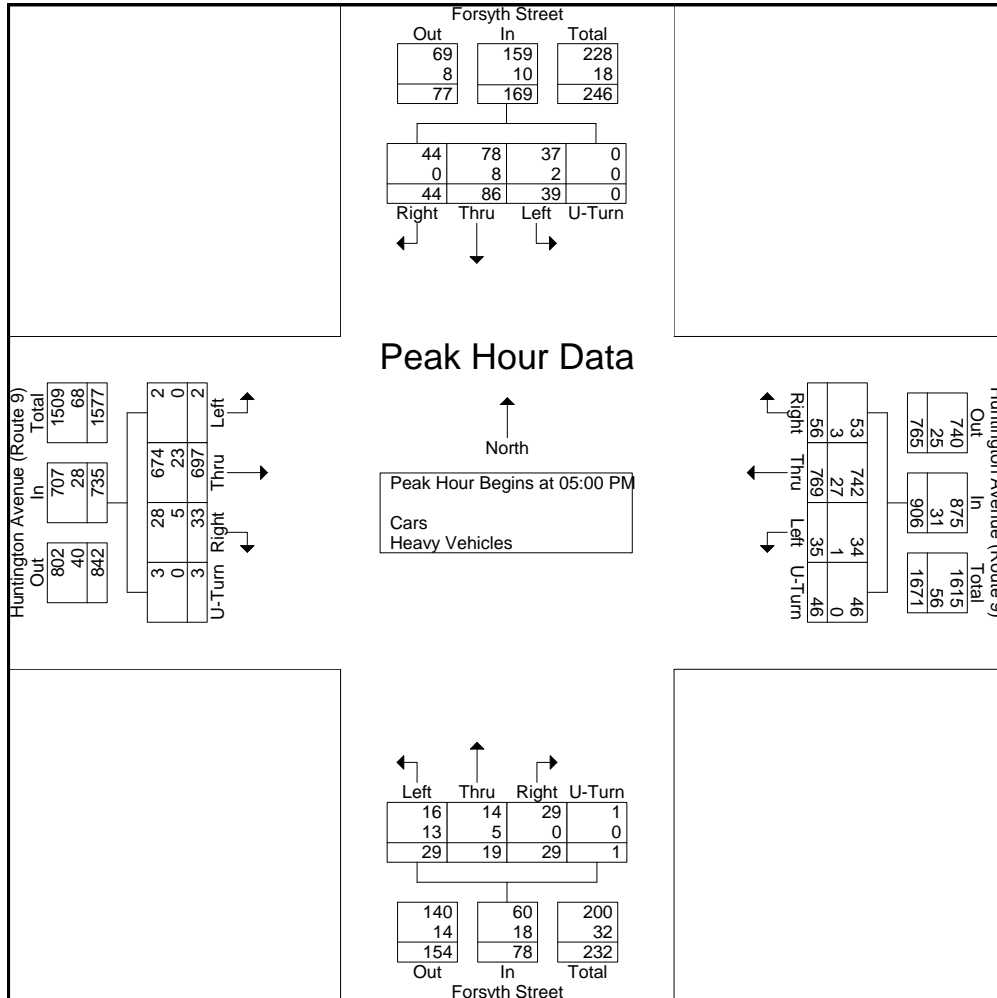
PRECISION
D A T A
INDUSTRIES, LLC

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N/S: Forsyth Street
E/W: Huntington Avenue (Route 9)
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 MM
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Start Time	Forsyth Street From North					Huntington Avenue (Route 9) From East					Forsyth Street From South					Huntington Avenue (Route 9) From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	13	25	10	0	48	9	174	11	11	205	10	5	8	0	23	7	163	1	0	171	447
05:15 PM	10	13	7	0	30	11	193	13	7	224	3	4	8	0	15	9	163	0	1	173	442
05:30 PM	14	28	12	0	54	12	194	5	10	221	11	6	6	0	23	10	189	0	1	200	498
05:45 PM	7	20	10	0	37	24	208	6	18	256	5	4	7	1	17	7	182	1	1	191	501
Total Volume	44	86	39	0	169	56	769	35	46	906	29	19	29	1	78	33	697	2	3	735	1888
% App. Total	26	50.9	23.1	0		6.2	84.9	3.9	5.1		37.2	24.4	37.2	1.3		4.5	94.8	0.3	0.4		
PHF	.786	.768	.813	.000	.782	.583	.924	.673	.639	.885	.659	.792	.906	.250	.848	.825	.922	.500	.750	.919	.942
Cars	44	78	37	0	159	53	742	34	46	875	29	14	16	1	60	28	674	2	3	707	1801
% Cars	100	90.7	94.9	0	94.1	94.6	96.5	97.1	100	96.6	100	73.7	55.2	100	76.9	84.8	96.7	100	100	96.2	95.4
Heavy Vehicles	0	8	2	0	10	3	27	1	0	31	0	5	13	0	18	5	23	0	0	28	87
% Heavy Vehicles	0	9.3	5.1	0	5.9	5.4	3.5	2.9	0	3.4	0	26.3	44.8	0	23.1	15.2	3.3	0	0	3.8	4.6





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N/S: Forsythe Way/ Parker Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Forsythe Way From North			Huntington Avenue From East				Parker Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	29	53	1	2	109	21	0	23	44	1	1	92	0	0	376
07:15 AM	23	46	4	3	174	22	0	17	69	1	0	106	0	0	465
07:30 AM	35	43	5	3	163	26	0	24	79	2	0	133	0	0	513
07:45 AM	43	51	9	2	156	35	0	22	65	8	0	134	0	0	525
Total	130	193	19	10	602	104	0	86	257	12	1	465	0	0	1879
08:00 AM	43	45	2	3	133	28	2	24	70	2	0	148	0	0	500
08:15 AM	46	61	3	1	129	16	1	27	73	3	0	135	0	0	495
08:30 AM	35	45	4	2	150	20	1	29	68	3	2	131	0	0	490
08:45 AM	55	58	3	4	134	30	0	17	58	4	3	124	0	0	490
Total	179	209	12	10	546	94	4	97	269	12	5	538	0	0	1975
09:00 AM	36	49	4	1	139	23	0	14	48	5	0	121	0	0	440
09:15 AM	31	46	1	1	141	20	2	16	41	3	2	118	1	0	423
09:30 AM	25	35	1	1	149	38	4	22	31	0	1	103	0	0	410
09:45 AM	33	23	2	4	158	24	5	17	31	2	3	126	0	2	430
Total	125	153	8	7	587	105	11	69	151	10	6	468	1	2	1703
10:00 AM	35	42	0	1	140	21	1	18	27	4	2	112	0	1	404
10:15 AM	39	25	1	2	103	22	2	17	23	2	1	104	0	0	341
10:30 AM	39	30	4	2	128	15	3	19	29	3	0	113	0	1	386
10:45 AM	28	23	4	4	122	22	1	16	29	2	0	122	0	0	373
Total	141	120	9	9	493	80	7	70	108	11	3	451	0	2	1504
11:00 AM	31	28	2	6	138	26	2	11	20	2	1	126	0	1	394
11:15 AM	28	35	3	0	112	20	1	21	23	2	1	124	0	2	372
11:30 AM	31	16	5	4	127	21	0	15	23	3	3	137	2	0	387
11:45 AM	28	30	5	5	105	24	1	15	26	2	3	113	2	0	359
Total	118	109	15	15	482	91	4	62	92	9	8	500	4	3	1512
12:00 PM	27	33	4	3	132	19	1	19	18	4	4	138	1	2	405
12:15 PM	41	21	3	4	119	14	0	18	27	1	5	130	0	0	383
12:30 PM	32	30	5	3	131	18	1	16	18	3	1	141	0	0	399
12:45 PM	35	25	6	2	131	17	2	21	23	5	4	110	0	1	382
Total	135	109	18	12	513	68	4	74	86	13	14	519	1	3	1569
01:00 PM	35	39	5	3	102	17	0	17	20	3	1	122	0	0	364
01:15 PM	41	32	4	5	160	24	2	13	28	4	1	112	2	0	428
01:30 PM	37	32	7	4	128	21	0	15	33	3	2	118	1	0	401
01:45 PM	21	33	5	4	112	13	1	16	30	1	4	137	1	2	380
Total	134	136	21	16	502	75	3	61	111	11	8	489	4	2	1573
02:00 PM	26	43	5	2	117	22	3	24	56	3	1	115	0	0	417
02:15 PM	27	46	7	2	146	23	3	26	45	3	2	116	0	0	446
02:30 PM	32	57	5	1	126	23	3	16	35	3	4	121	2	0	428
02:45 PM	30	54	6	5	149	41	3	21	48	1	2	143	1	2	506
Total	115	200	23	10	538	109	12	87	184	10	9	495	3	2	1797
03:00 PM	21	53	6	3	124	22	1	26	39	1	2	151	3	1	453
03:15 PM	29	64	9	4	107	30	1	18	46	2	3	135	0	0	448
03:30 PM	24	55	2	3	119	26	5	17	54	2	0	129	1	0	437
03:45 PM	33	57	4	4	121	32	1	23	49	5	0	127	0	1	457
Total	107	229	21	14	471	110	8	84	188	10	5	542	4	2	1795
04:00 PM	25	56	7	2	140	30	1	17	49	6	3	130	0	1	467
04:15 PM	17	53	3	2	125	33	3	28	55	1	1	135	1	1	458



PRECISION
D A T A
INDUSTRIES, LLC

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N/S: Forsythe Way/ Parker Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Cars - Heavy Vehicles

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left		Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
04:30 PM	21	52	3		2	105	36	2	26	54	0	1	153	0	2	457
04:45 PM	35	89	4		5	139	40	0	26	49	1	2	141	1	1	533
Total	98	250	17		11	509	139	6	97	207	8	7	559	2	5	1915
05:00 PM	21	59	7		5	138	45	0	37	75	2	0	141	3	0	533
05:15 PM	19	96	3		6	160	37	0	25	60	5	0	150	0	1	562
05:30 PM	19	65	5		7	155	44	1	23	68	1	1	151	1	0	541
05:45 PM	22	59	3		2	141	43	0	25	33	1	1	154	1	0	485
Total	81	279	18		20	594	169	1	110	236	9	2	596	5	1	2121
Grand Total	1363	1987	181		134	5837	1144	60	897	1889	115	68	5622	24	22	19343
Apprch %	38.6	56.3	5.1		1.9	81.4	15.9	0.8	30.9	65.1	4	1.2	98	0.4	0.4	
Total %	7	10.3	0.9		0.7	30.2	5.9	0.3	4.6	9.8	0.6	0.4	29.1	0.1	0.1	
Cars	1339	1953	159		125	5459	1087	57	844	1858	109	68	5213	24	22	18317
% Cars	98.2	98.3	87.8		93.3	93.5	95	95	94.1	98.4	94.8	100	92.7	100	100	94.7
Heavy Vehicles	24	34	22		9	378	57	3	53	31	6	0	409	0	0	1026
% Heavy Vehicles	1.8	1.7	12.2		6.7	6.5	5	5	5.9	1.6	5.2	0	7.3	0	0	5.3

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	35	43	5	83	3	163	26	0	192	24	79	2	105	0	133	0	0	133	513
07:45 AM	43	51	9	103	2	156	35	0	193	22	65	8	95	0	134	0	0	134	525
08:00 AM	43	45	2	90	3	133	28	2	166	24	70	2	96	0	148	0	0	148	500
08:15 AM	46	61	3	110	1	129	16	1	147	27	73	3	103	0	135	0	0	135	495
Total Volume	167	200	19	386	9	581	105	3	698	97	287	15	399	0	550	0	0	550	2033
% App. Total	43.3	51.8	4.9		1.3	83.2	15	0.4		24.3	71.9	3.8		0	100	0	0		
PHF	.908	.820	.528	.877	.750	.891	.750	.375	.904	.898	.908	.469	.950	.000	.929	.000	.000	.929	.968
Cars	163	197	17	377	7	520	98	3	628	91	283	15	389	0	511	0	0	511	1905
% Cars	97.6	98.5	89.5	97.7	77.8	89.5	93.3	100	90.0	93.8	98.6	100	97.5	0	92.9	0	0	92.9	93.7
Heavy Vehicles	4	3	2	9	2	61	7	0	70	6	4	0	10	0	39	0	0	39	128
% Heavy Vehicles	2.4	1.5	10.5	2.3	22.2	10.5	6.7	0	10.0	6.2	1.4	0	2.5	0	7.1	0	0	7.1	6.3

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 12:45 PM																			
12:45 PM	35	25	6	66	2	131	17	2	152	21	23	5	49	4	110	0	1	115	382
01:00 PM	35	39	5	79	3	102	17	0	122	17	20	3	40	1	122	0	0	123	364
01:15 PM	41	32	4	77	5	160	24	2	191	13	28	4	45	1	112	2	0	115	428
01:30 PM	37	32	7	76	4	128	21	0	153	15	33	3	51	2	118	1	0	121	401
Total Volume	148	128	22	298	14	521	79	4	618	66	104	15	185	8	462	3	1	474	1575
% App. Total	49.7	43	7.4		2.3	84.3	12.8	0.6		35.7	56.2	8.1		1.7	97.5	0.6	0.2		
PHF	.902	.821	.786	.943	.700	.814	.823	.500	.809	.786	.788	.750	.907	.500	.947	.375	.250	.963	.920
Cars	146	126	19	291	13	495	75	4	587	60	100	14	174	8	433	3	1	445	1497
% Cars	98.6	98.4	86.4	97.7	92.9	95.0	94.9	100	95.0	90.9	96.2	93.3	94.1	100	93.7	100	100	93.9	95.0
Heavy Vehicles	2	2	3	7	1	26	4	0	31	6	4	1	11	0	29	0	0	29	78
% Heavy Vehicles	1.4	1.6	13.6	2.3	7.1	5.0	5.1	0	5.0	9.1	3.8	6.7	5.9	0	6.3	0	0	6.1	5.0



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Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 3

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	35	89	4	128	5	139	40	0	184	26	49	1	76	2	141	1	1	145	533
05:00 PM	21	59	7	87	5	138	45	0	188	37	75	2	114	0	141	3	0	144	533
05:15 PM	19	96	3	118	6	160	37	0	203	25	60	5	90	0	150	0	1	151	562
05:30 PM	19	65	5	89	7	155	44	1	207	23	68	1	92	1	151	1	0	153	541
Total Volume	94	309	19	422	23	592	166	1	782	111	252	9	372	3	583	5	2	593	2169
% App. Total	22.3	73.2	4.5		2.9	75.7	21.2	0.1		29.8	67.7	2.4		0.5	98.3	0.8	0.3		
PHF	.671	.805	.679	.824	.821	.925	.922	.250	.944	.750	.840	.450	.816	.375	.965	.417	.500	.969	.965
Cars	93	307	16	416	23	568	165	1	757	109	251	9	369	3	565	5	2	575	2117
% Cars	98.9	99.4	84.2	98.6	100	95.9	99.4	100	96.8	98.2	99.6	100	99.2	100	96.9	100	100	97.0	97.6
Heavy Vehicles	1	2	3	6	0	24	1	0	25	2	1	0	3	0	18	0	0	18	52
% Heavy Vehicles	1.1	0.6	15.8	1.4	0	4.1	0.6	0	3.2	1.8	0.4	0	0.8	0	3.1	0	0	3.0	2.4



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City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Cars

Start Time	Forsythe Way From North			Huntington Avenue From East				Parker Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	29	53	1	2	95	20	0	19	42	1	1	77	0	0	340
07:15 AM	23	45	3	3	159	21	0	14	68	1	0	93	0	0	430
07:30 AM	35	43	5	2	146	24	0	23	76	2	0	124	0	0	480
07:45 AM	41	50	8	1	139	32	0	20	65	8	0	126	0	0	490
Total	128	191	17	8	539	97	0	76	251	12	1	420	0	0	1740
08:00 AM	41	43	2	3	118	27	2	22	69	2	0	134	0	0	463
08:15 AM	46	61	2	1	117	15	1	26	73	3	0	127	0	0	472
08:30 AM	33	44	3	2	133	19	1	28	68	2	2	115	0	0	450
08:45 AM	54	57	2	3	123	29	0	13	58	4	3	109	0	0	455
Total	174	205	9	9	491	90	4	89	268	11	5	485	0	0	1840
09:00 AM	35	48	3	1	125	20	0	11	46	5	0	101	0	0	395
09:15 AM	30	46	1	1	129	18	2	13	41	3	2	106	1	0	393
09:30 AM	25	33	1	0	139	37	4	19	31	0	1	90	0	0	380
09:45 AM	30	22	1	3	148	22	4	17	31	2	3	111	0	2	396
Total	120	149	6	5	541	97	10	60	149	10	6	408	1	2	1564
10:00 AM	35	40	0	1	125	19	1	17	26	4	2	107	0	1	378
10:15 AM	39	25	1	2	94	20	2	16	23	2	1	96	0	0	321
10:30 AM	39	30	4	2	124	11	3	18	27	3	0	104	0	1	366
10:45 AM	27	22	3	2	116	22	1	15	29	2	0	113	0	0	352
Total	140	117	8	7	459	72	7	66	105	11	3	420	0	2	1417
11:00 AM	30	27	2	6	132	25	2	10	20	2	1	116	0	1	374
11:15 AM	28	35	3	0	108	20	1	21	21	1	1	111	0	2	352
11:30 AM	31	16	4	4	121	18	0	14	20	2	3	128	2	0	363
11:45 AM	27	30	4	5	95	21	1	14	25	2	3	100	2	0	329
Total	116	108	13	15	456	84	4	59	86	7	8	455	4	3	1418
12:00 PM	27	33	4	3	124	18	1	18	18	4	4	129	1	2	386
12:15 PM	41	20	3	4	115	13	0	18	25	1	5	123	0	0	368
12:30 PM	32	26	5	3	126	18	1	15	17	3	1	134	0	0	381
12:45 PM	35	24	5	2	123	17	2	18	22	5	4	102	0	1	360
Total	135	103	17	12	488	66	4	69	82	13	14	488	1	3	1495
01:00 PM	34	38	4	3	97	17	0	16	19	3	1	113	0	0	345
01:15 PM	40	32	4	5	150	23	2	12	27	3	1	108	2	0	409
01:30 PM	37	32	6	3	125	18	0	14	32	3	2	110	1	0	383
01:45 PM	21	33	5	4	107	12	1	16	30	1	4	130	1	2	367
Total	132	135	19	15	479	70	3	58	108	10	8	461	4	2	1504
02:00 PM	26	42	5	2	113	18	2	24	55	3	1	104	0	0	395
02:15 PM	27	44	5	2	138	22	3	25	44	3	2	111	0	0	426
02:30 PM	31	56	5	1	119	22	3	16	35	2	4	113	2	0	409
02:45 PM	28	53	5	4	142	40	2	19	47	1	2	134	1	2	480
Total	112	195	20	9	512	102	10	84	181	9	9	462	3	2	1710
03:00 PM	21	49	6	3	117	21	1	26	39	1	2	140	3	1	430
03:15 PM	29	64	9	4	103	28	1	16	46	2	3	127	0	0	432
03:30 PM	24	54	2	3	111	23	5	17	53	2	0	122	1	0	417
03:45 PM	32	56	3	4	113	30	1	23	49	5	0	118	0	1	435
Total	106	223	20	14	444	102	8	82	187	10	5	507	4	2	1714
04:00 PM	25	56	5	2	132	30	1	17	49	6	3	121	0	1	448
04:15 PM	17	53	3	2	120	33	3	28	54	0	1	131	1	1	447



PRECISION
D A T A
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N/S: Forsythe Way/ Parker Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Cars

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
04:30 PM	20	52	3		2	96	36	2	23	54	0	1	144	0	2	435
04:45 PM	35	88	3		5	133	39	0	25	49	1	2	136	1	1	518
Total	97	249	14		11	481	138	6	93	206	7	7	532	2	5	1848
05:00 PM	21	58	6		5	130	45	0	37	75	2	0	137	3	0	519
05:15 PM	19	96	3		6	154	37	0	25	59	5	0	143	0	1	548
05:30 PM	18	65	4		7	151	44	1	22	68	1	1	149	1	0	532
05:45 PM	21	59	3		2	134	43	0	24	33	1	1	146	1	0	468
Total	79	278	16		20	569	169	1	108	235	9	2	575	5	1	2067
Grand Total	1339	1953	159		125	5459	1087	57	844	1858	109	68	5213	24	22	18317
Apprch %	38.8	56.6	4.6		1.9	81.1	16.2	0.8	30	66.1	3.9	1.3	97.9	0.5	0.4	
Total %	7.3	10.7	0.9		0.7	29.8	5.9	0.3	4.6	10.1	0.6	0.4	28.5	0.1	0.1	

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	35	43	5	83	2	146	24	0	172	23	76	2	101	0	124	0	0	124	480
07:45 AM	41	50	8	99	1	139	32	0	172	20	65	8	93	0	126	0	0	126	490
08:00 AM	41	43	2	86	3	118	27	2	150	22	69	2	93	0	134	0	0	134	463
08:15 AM	46	61	2	109	1	117	15	1	134	26	73	3	102	0	127	0	0	127	472
Total Volume	163	197	17	377	7	520	98	3	628	91	283	15	389	0	511	0	0	511	1905
% App. Total	43.2	52.3	4.5		1.1	82.8	15.6	0.5		23.4	72.8	3.9		0	100	0	0		
PHF	.886	.807	.531	.865	.583	.890	.766	.375	.913	.875	.931	.469	.953	.000	.953	.000	.000	.953	.972

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 01:00 PM																			
01:00 PM	34	38	4	76	3	97	17	0	117	16	19	3	38	1	113	0	0	114	345
01:15 PM	40	32	4	76	5	150	23	2	180	12	27	3	42	1	108	2	0	111	409
01:30 PM	37	32	6	75	3	125	18	0	146	14	32	3	49	2	110	1	0	113	383
01:45 PM	21	33	5	59	4	107	12	1	124	16	30	1	47	4	130	1	2	137	367
Total Volume	132	135	19	286	15	479	70	3	567	58	108	10	176	8	461	4	2	475	1504
% App. Total	46.2	47.2	6.6		2.6	84.5	12.3	0.5		33	61.4	5.7		1.7	97.1	0.8	0.4		
PHF	.825	.888	.792	.941	.750	.798	.761	.375	.788	.906	.844	.833	.898	.500	.887	.500	.250	.867	.919

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	35	88	3	126	5	133	39	0	177	25	49	1	75	2	136	1	1	140	518
05:00 PM	21	58	6	85	5	130	45	0	180	37	75	2	114	0	137	3	0	140	519
05:15 PM	19	96	3	118	6	154	37	0	197	25	59	5	89	0	143	0	1	144	548
05:30 PM	18	65	4	87	7	151	44	1	203	22	68	1	91	1	149	1	0	151	532
Total Volume	93	307	16	416	23	568	165	1	757	109	251	9	369	3	565	5	2	575	2117
% App. Total	22.4	73.8	3.8		3	75	21.8	0.1		29.5	68	2.4		0.5	98.3	0.9	0.3		
PHF	.664	.799	.667	.825	.821	.922	.917	.250	.932	.736	.837	.450	.809	.375	.948	.417	.500	.952	.966



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N/S: Forsythe Way/ Parker Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Forsythe Way From North			Huntington Avenue From East				Parker Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	0	0	0	0	14	1	0	4	2	0	0	15	0	0	36
07:15 AM	0	1	1	0	15	1	0	3	1	0	0	13	0	0	35
07:30 AM	0	0	0	1	17	2	0	1	3	0	0	9	0	0	33
07:45 AM	2	1	1	1	17	3	0	2	0	0	0	8	0	0	35
Total	2	2	2	2	63	7	0	10	6	0	0	45	0	0	139
08:00 AM	2	2	0	0	15	1	0	2	1	0	0	14	0	0	37
08:15 AM	0	0	1	0	12	1	0	1	0	0	0	8	0	0	23
08:30 AM	2	1	1	0	17	1	0	1	0	1	0	16	0	0	40
08:45 AM	1	1	1	1	11	1	0	4	0	0	0	15	0	0	35
Total	5	4	3	1	55	4	0	8	1	1	0	53	0	0	135
09:00 AM	1	1	1	0	14	3	0	3	2	0	0	20	0	0	45
09:15 AM	1	0	0	0	12	2	0	3	0	0	0	12	0	0	30
09:30 AM	0	2	0	1	10	1	0	3	0	0	0	13	0	0	30
09:45 AM	3	1	1	1	10	2	1	0	0	0	0	15	0	0	34
Total	5	4	2	2	46	8	1	9	2	0	0	60	0	0	139
10:00 AM	0	2	0	0	15	2	0	1	1	0	0	5	0	0	26
10:15 AM	0	0	0	0	9	2	0	1	0	0	0	8	0	0	20
10:30 AM	0	0	0	0	4	4	0	1	2	0	0	9	0	0	20
10:45 AM	1	1	1	2	6	0	0	1	0	0	0	9	0	0	21
Total	1	3	1	2	34	8	0	4	3	0	0	31	0	0	87
11:00 AM	1	1	0	0	6	1	0	1	0	0	0	10	0	0	20
11:15 AM	0	0	0	0	4	0	0	0	2	1	0	13	0	0	20
11:30 AM	0	0	1	0	6	3	0	1	3	1	0	9	0	0	24
11:45 AM	1	0	1	0	10	3	0	1	1	0	0	13	0	0	30
Total	2	1	2	0	26	7	0	3	6	2	0	45	0	0	94
12:00 PM	0	0	0	0	8	1	0	1	0	0	0	9	0	0	19
12:15 PM	0	1	0	0	4	1	0	0	2	0	0	7	0	0	15
12:30 PM	0	4	0	0	5	0	0	1	1	0	0	7	0	0	18
12:45 PM	0	1	1	0	8	0	0	3	1	0	0	8	0	0	22
Total	0	6	1	0	25	2	0	5	4	0	0	31	0	0	74
01:00 PM	1	1	1	0	5	0	0	1	1	0	0	9	0	0	19
01:15 PM	1	0	0	0	10	1	0	1	1	1	0	4	0	0	19
01:30 PM	0	0	1	1	3	3	0	1	1	0	0	8	0	0	18
01:45 PM	0	0	0	0	5	1	0	0	0	0	0	7	0	0	13
Total	2	1	2	1	23	5	0	3	3	1	0	28	0	0	69
02:00 PM	0	1	0	0	4	4	1	0	1	0	0	11	0	0	22
02:15 PM	0	2	2	0	8	1	0	1	1	0	0	5	0	0	20
02:30 PM	1	1	0	0	7	1	0	0	0	1	0	8	0	0	19
02:45 PM	2	1	1	1	7	1	1	2	1	0	0	9	0	0	26
Total	3	5	3	1	26	7	2	3	3	1	0	33	0	0	87
03:00 PM	0	4	0	0	7	1	0	0	0	0	0	11	0	0	23
03:15 PM	0	0	0	0	4	2	0	2	0	0	0	8	0	0	16
03:30 PM	0	1	0	0	8	3	0	0	1	0	0	7	0	0	20
03:45 PM	1	1	1	0	8	2	0	0	0	0	0	9	0	0	22
Total	1	6	1	0	27	8	0	2	1	0	0	35	0	0	81
04:00 PM	0	0	2	0	8	0	0	0	0	0	0	9	0	0	19
04:15 PM	0	0	0	0	5	0	0	0	1	1	0	4	0	0	11



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N/S: Forsythe Way/ Parker Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Heavy Vehicles

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
04:30 PM	1	0	0		0	9	0	0	3	0	0	0	9	0	0	22
04:45 PM	0	1	1		0	6	1	0	1	0	0	0	5	0	0	15
Total	1	1	3		0	28	1	0	4	1	1	0	27	0	0	67
05:00 PM	0	1	1		0	8	0	0	0	0	0	0	4	0	0	14
05:15 PM	0	0	0		0	6	0	0	0	1	0	0	7	0	0	14
05:30 PM	1	0	1		0	4	0	0	1	0	0	0	2	0	0	9
05:45 PM	1	0	0		0	7	0	0	1	0	0	0	8	0	0	17
Total	2	1	2		0	25	0	0	2	1	0	0	21	0	0	54
Grand Total	24	34	22		9	378	57	3	53	31	6	0	409	0	0	1026
Apprch %	30	42.5	27.5		2	84.6	12.8	0.7	58.9	34.4	6.7	0	100	0	0	
Total %	2.3	3.3	2.1		0.9	36.8	5.6	0.3	5.2	3	0.6	0	39.9	0	0	

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru		Left	U-Turn
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 08:30 AM																			
08:30 AM	2	1	1	4	0	17	1	0	18	1	0	1	2	0	16	0	0	16	40
08:45 AM	1	1	1	3	1	11	1	0	13	4	0	0	4	0	15	0	0	15	35
09:00 AM	1	1	1	3	0	14	3	0	17	3	2	0	5	0	20	0	0	20	45
09:15 AM	1	0	0	1	0	12	2	0	14	3	0	0	3	0	12	0	0	12	30
Total Volume	5	3	3	11	1	54	7	0	62	11	2	1	14	0	63	0	0	63	150
% App. Total	45.5	27.3	27.3		1.6	87.1	11.3	0		78.6	14.3	7.1		0	100	0	0		
PHF	.625	.750	.750	.688	.250	.794	.583	.000	.861	.688	.250	.250	.700	.000	.788	.000	.000	.788	.833

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru		Left	U-Turn
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 11:00 AM																			
11:00 AM	1	1	0	2	0	6	1	0	7	1	0	0	1	0	10	0	0	10	20
11:15 AM	0	0	0	0	0	4	0	0	4	0	2	1	3	0	13	0	0	13	20
11:30 AM	0	0	1	1	0	6	3	0	9	1	3	1	5	0	9	0	0	9	24
11:45 AM	1	0	1	2	0	10	3	0	13	1	1	0	2	0	13	0	0	13	30
Total Volume	2	1	2	5	0	26	7	0	33	3	6	2	11	0	45	0	0	45	94
% App. Total	40	20	40		0	78.8	21.2	0		27.3	54.5	18.2		0	100	0	0		
PHF	.500	.250	.500	.625	.000	.650	.583	.000	.635	.750	.500	.500	.550	.000	.865	.000	.000	.865	.783

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru		Left	U-Turn
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 02:15 PM																			
02:15 PM	0	2	2	4	0	8	1	0	9	1	1	0	2	0	5	0	0	5	20
02:30 PM	1	1	0	2	0	7	1	0	8	0	0	1	1	0	8	0	0	8	19
02:45 PM	2	1	1	4	1	7	1	1	10	2	1	0	3	0	9	0	0	9	26
03:00 PM	0	4	0	4	0	7	1	0	8	0	0	0	0	0	11	0	0	11	23
Total Volume	3	8	3	14	1	29	4	1	35	3	2	1	6	0	33	0	0	33	88
% App. Total	21.4	57.1	21.4		2.9	82.9	11.4	2.9		50	33.3	16.7		0	100	0	0		
PHF	.375	.500	.375	.875	.250	.906	1.000	.250	.875	.375	.500	.250	.500	.000	.750	.000	.000	.750	.846



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City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	8	0	2	0	4	0	0	0	9	0	1	0	4	28
07:15 AM	0	0	0	13	0	2	0	5	0	0	0	13	0	0	0	6	39
07:30 AM	2	0	0	17	0	0	0	4	0	0	0	14	0	4	0	8	49
07:45 AM	2	0	0	16	1	3	0	36	1	1	0	22	0	5	0	14	101
Total	4	0	0	54	1	7	0	49	1	1	0	58	0	10	0	32	217
08:00 AM	0	0	0	21	0	4	0	7	0	1	0	16	0	2	0	10	61
08:15 AM	0	0	0	23	0	5	1	5	0	1	0	15	0	2	0	7	59
08:30 AM	0	0	0	18	0	1	1	2	0	0	0	20	0	2	1	6	51
08:45 AM	1	0	0	27	0	4	1	5	0	4	0	17	0	4	0	7	70
Total	1	0	0	89	0	14	3	19	0	6	0	68	0	10	1	30	241
09:00 AM	0	2	1	16	0	2	0	4	0	4	0	22	0	7	1	11	70
09:15 AM	0	0	0	23	0	4	0	3	1	2	0	19	0	5	0	1	58
09:30 AM	0	0	1	25	0	3	0	8	0	2	0	17	0	3	0	1	60
09:45 AM	0	1	0	26	0	2	0	9	0	1	0	21	0	4	0	5	69
Total	0	3	2	90	0	11	0	24	1	9	0	79	0	19	1	18	257
10:00 AM	1	0	0	35	0	2	0	0	1	1	0	12	0	0	0	12	64
10:15 AM	0	0	0	21	0	1	0	0	0	0	0	12	0	6	0	7	47
10:30 AM	0	0	0	14	0	3	0	2	0	0	0	21	0	5	0	5	50
10:45 AM	0	1	0	25	0	3	0	4	0	0	0	9	0	0	0	6	48
Total	1	1	0	95	0	9	0	6	1	1	0	54	0	11	0	30	209
11:00 AM	0	0	0	39	0	2	0	2	0	0	0	27	0	0	0	18	88
11:15 AM	0	0	1	33	0	3	1	1	0	2	0	24	0	1	0	8	74
11:30 AM	0	0	0	27	0	3	0	8	0	2	0	16	0	1	0	9	66
11:45 AM	0	1	0	38	0	1	0	0	0	0	0	38	0	1	1	10	90
Total	0	1	1	137	0	9	1	11	0	4	0	105	0	3	1	45	318
12:00 PM	1	0	0	44	1	5	0	1	0	1	0	26	0	1	0	13	93
12:15 PM	0	0	0	59	0	2	0	4	0	0	0	19	0	3	0	8	95
12:30 PM	0	0	0	70	0	3	0	3	1	0	0	15	0	3	0	11	106
12:45 PM	0	0	1	56	0	4	0	5	0	2	0	30	0	2	0	18	118
Total	1	0	1	229	1	14	0	13	1	3	0	90	0	9	0	50	412
01:00 PM	0	0	1	62	0	2	1	2	0	0	0	25	0	1	0	12	106
01:15 PM	0	1	0	53	0	2	0	8	0	0	0	27	0	1	0	19	111
01:30 PM	0	0	0	50	0	3	0	8	1	1	0	18	0	0	0	14	95
01:45 PM	0	0	0	62	0	0	0	16	0	0	0	28	0	1	0	23	130
Total	0	1	1	227	0	7	1	34	1	1	0	98	0	3	0	68	442
02:00 PM	0	1	0	74	0	2	0	6	0	0	0	16	0	0	0	9	108
02:15 PM	0	0	0	60	0	0	0	9	0	0	0	25	0	1	0	21	116
02:30 PM	1	1	0	71	0	1	1	29	0	0	0	47	0	2	0	34	187
02:45 PM	2	0	0	78	0	2	0	7	0	0	0	41	0	1	0	19	150
Total	3	2	0	283	0	5	1	51	0	0	0	129	0	4	0	83	561
03:00 PM	0	0	0	62	0	5	1	18	0	1	0	26	0	2	0	13	128
03:15 PM	0	2	0	59	0	9	0	6	0	2	0	36	0	3	0	16	133
03:30 PM	0	1	0	57	0	8	0	23	0	0	0	22	0	2	0	9	122
03:45 PM	1	0	0	63	0	4	0	9	1	2	0	16	0	1	0	17	114
Total	1	3	0	241	0	26	1	56	1	5	0	100	0	8	0	55	497
04:00 PM	0	1	0	84	0	1	0	5	0	0	0	27	0	1	0	29	148
04:15 PM	0	2	0	35	0	3	0	9	0	1	0	24	0	4	0	16	94



PRECISION
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N/S: Forsythe Way/ Parker Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Peds and Bicycles

Start Time	Forsythe Way From North				Huntington Avenue From East				Parker Street From South				Huntington Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:30 PM	0	0	0	61	0	2	0	8	1	2	0	29	0	1	0	21	125
04:45 PM	0	0	0	86	0	2	0	5	0	0	0	21	0	2	0	22	138
Total	0	3	0	266	0	8	0	27	1	3	0	101	0	8	0	88	505
05:00 PM	0	1	0	54	0	6	0	4	0	0	0	23	0	1	0	20	109
05:15 PM	0	3	0	58	0	3	1	5	0	2	0	21	0	1	0	7	101
05:30 PM	0	0	0	52	0	7	1	5	0	0	0	23	0	0	0	23	111
05:45 PM	0	0	0	36	0	4	2	6	0	0	1	18	0	2	0	11	80
Total	0	4	0	200	0	20	4	20	0	2	1	85	0	4	0	61	401
Grand Total	11	18	5	1911	2	130	11	310	7	35	1	967	0	89	3	560	4060
Apprch %	0.6	0.9	0.3	98.3	0.4	28.7	2.4	68.4	0.7	3.5	0.1	95.7	0	13.7	0.5	85.9	
Total %	0.3	0.4	0.1	47.1	0	3.2	0.3	7.6	0.2	0.9	0	23.8	0	2.2	0.1	13.8	

Start Time	Forsythe Way From North					Huntington Avenue From East					Parker Street From South					Huntington Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	2	0	0	16	18	1	3	0	36	40	1	1	0	22	24	0	5	0	14	19	101
08:00 AM	0	0	0	21	21	0	4	0	7	11	0	1	0	16	17	0	2	0	10	12	61
08:15 AM	0	0	0	23	23	0	5	1	5	11	0	1	0	15	16	0	2	0	7	9	59
08:30 AM	0	0	0	18	18	0	1	1	2	4	0	0	0	20	20	0	2	1	6	9	51
Total Volume	2	0	0	78	80	1	13	2	50	66	1	3	0	73	77	0	11	1	37	49	272
% App. Total	2.5	0	0	97.5		1.5	19.7	3	75.8		1.3	3.9	0	94.8		0	22.4	2	75.5		
PHF	.250	.000	.000	.848	.870	.250	.650	.500	.347	.413	.250	.750	.000	.830	.802	.000	.550	.250	.661	.645	.673

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 01:00 PM																					
01:00 PM	0	0	1	62	63	0	2	1	2	5	0	0	0	25	25	0	1	0	12	13	106
01:15 PM	0	1	0	53	54	0	2	0	8	10	0	0	0	27	27	0	1	0	19	20	111
01:30 PM	0	0	0	50	50	0	3	0	8	11	1	1	0	18	20	0	0	0	14	14	95
01:45 PM	0	0	0	62	62	0	0	0	16	16	0	0	0	28	28	0	1	0	23	24	130
Total Volume	0	1	1	227	229	0	7	1	34	42	1	1	0	98	100	0	3	0	68	71	442
% App. Total	0	0.4	0.4	99.1		0	16.7	2.4	81		1	1	0	98		0	4.2	0	95.8		
PHF	.000	.250	.250	.915	.909	.000	.583	.250	.531	.656	.250	.250	.000	.875	.893	.000	.750	.000	.739	.740	.850

Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:30 PM																					
02:30 PM	1	1	0	71	73	0	1	1	29	31	0	0	0	47	47	0	2	0	34	36	187
02:45 PM	2	0	0	78	80	0	2	0	7	9	0	0	0	41	41	0	1	0	19	20	150
03:00 PM	0	0	0	62	62	0	5	1	18	24	0	1	0	26	27	0	2	0	13	15	128
03:15 PM	0	2	0	59	61	0	9	0	6	15	0	2	0	36	38	0	3	0	16	19	133
Total Volume	3	3	0	270	276	0	17	2	60	79	0	3	0	150	153	0	8	0	82	90	598
% App. Total	1.1	1.1	0	97.8		0	21.5	2.5	75.9		0	2	0	98		0	8.9	0	91.1		
PHF	.375	.375	.000	.865	.863	.000	.472	.500	.517	.637	.000	.375	.000	.798	.814	.000	.667	.000	.603	.625	.799



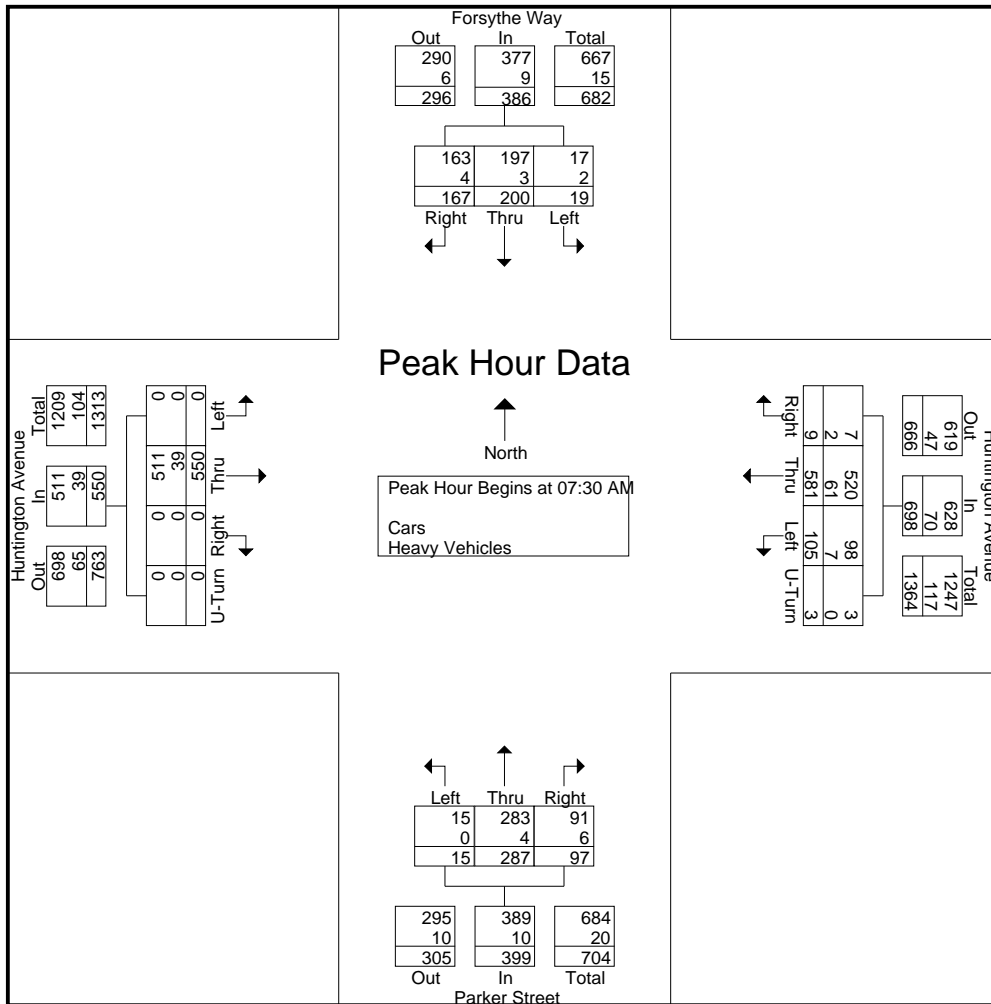
PRECISION
D A T A
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N/S: Forsythe Way/ Parker Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Start Time	Forsythe Way From North				Huntington Avenue From East					Parker Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:30 AM																			
07:30 AM	35	43	5	83	3	163	26	0	192	24	79	2	105	0	133	0	0	133	513
07:45 AM	43	51	9	103	2	156	35	0	193	22	65	8	95	0	134	0	0	134	525
08:00 AM	43	45	2	90	3	133	28	2	166	24	70	2	96	0	148	0	0	148	500
08:15 AM	46	61	3	110	1	129	16	1	147	27	73	3	103	0	135	0	0	135	495
Total Volume	167	200	19	386	9	581	105	3	698	97	287	15	399	0	550	0	0	550	2033
% App. Total	43.3	51.8	4.9		1.3	83.2	15	0.4		24.3	71.9	3.8		0	100	0	0		
PHF	.908	.820	.528	.877	.750	.891	.750	.375	.904	.898	.908	.469	.950	.000	.929	.000	.000	.929	.968
Cars	163	197	17	377	7	520	98	3	628	91	283	15	389	0	511	0	0	511	1905
% Cars	97.6	98.5	89.5	97.7	77.8	89.5	93.3	100	90.0	93.8	98.6	100	97.5	0	92.9	0	0	92.9	93.7
Heavy Vehicles	4	3	2	9	2	61	7	0	70	6	4	0	10	0	39	0	0	39	128
% Heavy Vehicles	2.4	1.5	10.5	2.3	22.2	10.5	6.7	0	10.0	6.2	1.4	0	2.5	0	7.1	0	0	7.1	6.3





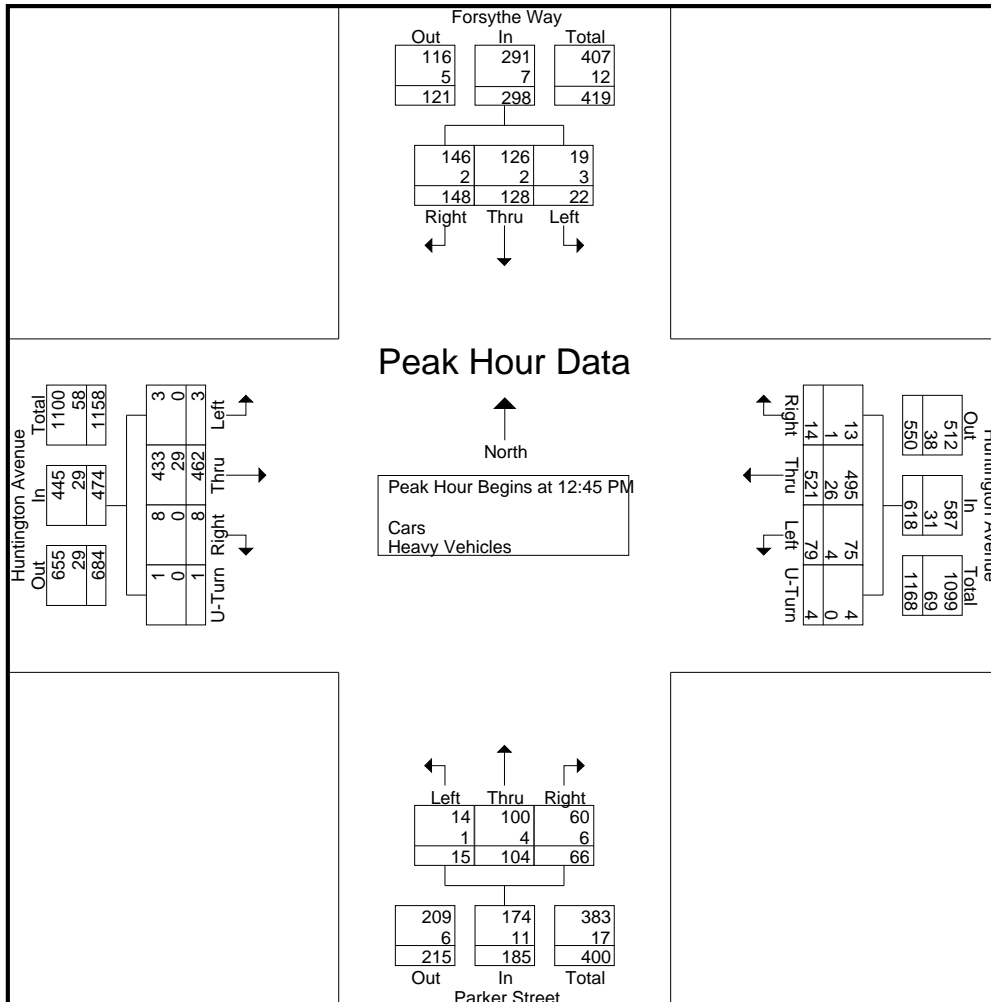
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File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Start Time	Forsythe Way From North				Huntington Avenue From East					Parker Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 12:45 PM																			
12:45 PM	35	25	6	66	2	131	17	2	152	21	23	5	49	4	110	0	1	115	382
01:00 PM	35	39	5	79	3	102	17	0	122	17	20	3	40	1	122	0	0	123	364
01:15 PM	41	32	4	77	5	160	24	2	191	13	28	4	45	1	112	2	0	115	428
01:30 PM	37	32	7	76	4	128	21	0	153	15	33	3	51	2	118	1	0	121	401
Total Volume	148	128	22	298	14	521	79	4	618	66	104	15	185	8	462	3	1	474	1575
% App. Total	49.7	43	7.4		2.3	84.3	12.8	0.6		35.7	56.2	8.1		1.7	97.5	0.6	0.2		
PHF	.902	.821	.786	.943	.700	.814	.823	.500	.809	.786	.788	.750	.907	.500	.947	.375	.250	.963	.920
Cars	146	126	19	291	13	495	75	4	587	60	100	14	174	8	433	3	1	445	1497
% Cars	98.6	98.4	86.4	97.7	92.9	95.0	94.9	100	95.0	90.9	96.2	93.3	94.1	100	93.7	100	100	93.9	95.0
Heavy Vehicles	2	2	3	7	1	26	4	0	31	6	4	1	11	0	29	0	0	29	78
% Heavy Vehicles	1.4	1.6	13.6	2.3	7.1	5.0	5.1	0	5.0	9.1	3.8	6.7	5.9	0	6.3	0	0	6.1	5.0





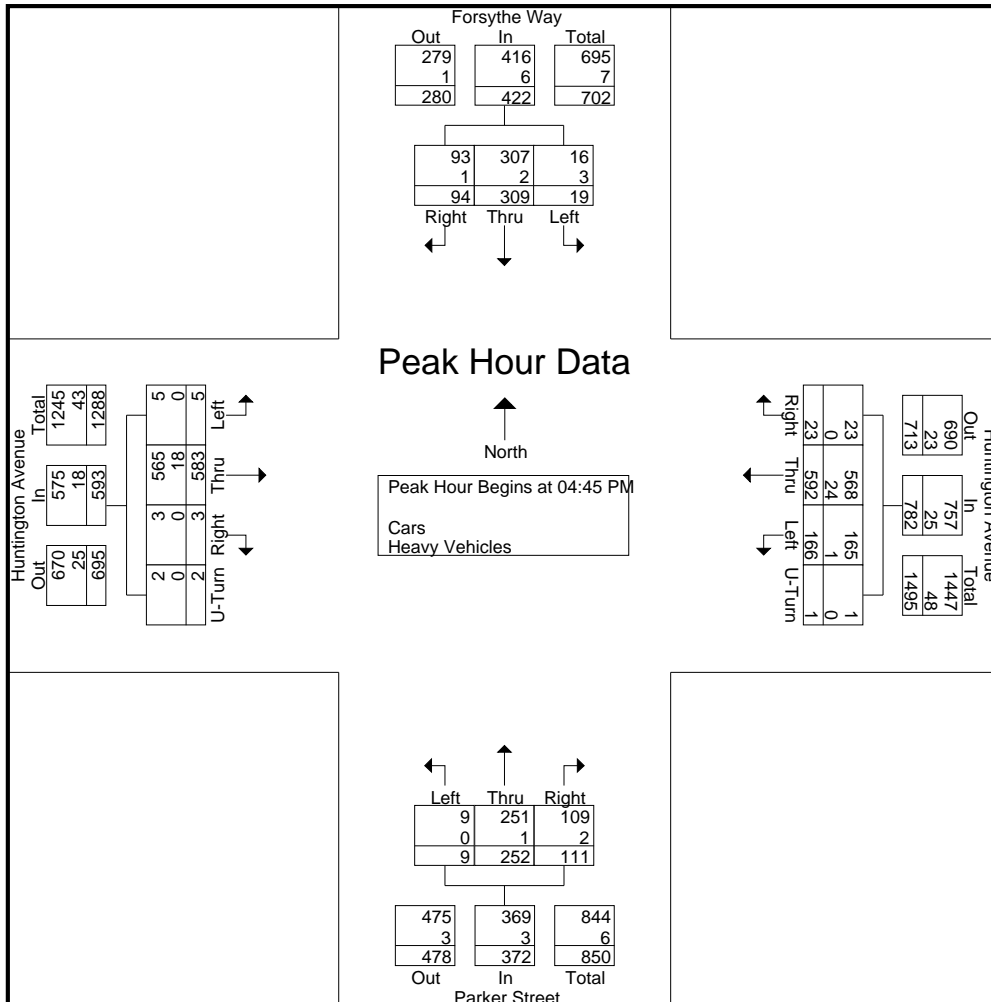
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N/S: Forsythe Way/ Parker Street
E/W: Huntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 H
Site Code : TBA
Start Date : 5/10/2011
Page No : 3

Start Time	Forsythe Way From North				Huntington Avenue From East					Parker Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	35	89	4	128	5	139	40	0	184	26	49	1	76	2	141	1	1	145	533
05:00 PM	21	59	7	87	5	138	45	0	188	37	75	2	114	0	141	3	0	144	533
05:15 PM	19	96	3	118	6	160	37	0	203	25	60	5	90	0	150	0	1	151	562
05:30 PM	19	65	5	89	7	155	44	1	207	23	68	1	92	1	151	1	0	153	541
Total Volume	94	309	19	422	23	592	166	1	782	111	252	9	372	3	583	5	2	593	2169
% App. Total	22.3	73.2	4.5		2.9	75.7	21.2	0.1		29.8	67.7	2.4		0.5	98.3	0.8	0.3		
PHF	.671	.805	.679	.824	.821	.925	.922	.250	.944	.750	.840	.450	.816	.375	.965	.417	.500	.969	.965
Cars	93	307	16	416	23	568	165	1	757	109	251	9	369	3	565	5	2	575	2117
% Cars	98.9	99.4	84.2	98.6	100	95.9	99.4	100	96.8	98.2	99.6	100	99.2	100	96.9	100	100	97.0	97.6
Heavy Vehicles	1	2	3	6	0	24	1	0	25	2	1	0	3	0	18	0	0	18	52
% Heavy Vehicles	1.1	0.6	15.8	1.4	0	4.1	0.6	0	3.2	1.8	0.4	0	0.8	0	3.1	0	0	3.0	2.4





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N/S: Louis Prang Street/ Ruggles Street
E/W: HUntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Louis Prang Street From North			Huntington Avenue From East				Ruggles Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	1	57	6	36	80	0	1	2	97	76	44	88	6	1	495
07:15 AM	1	73	9	50	135	0	0	0	113	48	57	103	12	1	602
07:30 AM	3	103	13	46	123	0	0	1	124	63	77	120	18	3	694
07:45 AM	1	75	5	38	142	0	0	2	108	60	55	136	22	0	644
Total	6	308	33	170	480	0	1	5	442	247	233	447	58	5	2435
08:00 AM	2	88	5	47	135	0	1	0	101	51	61	131	22	0	644
08:15 AM	2	57	11	31	107	1	0	0	116	52	40	131	13	0	561
08:30 AM	2	71	10	40	132	1	0	0	103	57	36	136	21	0	609
08:45 AM	3	68	7	39	127	0	0	0	101	63	37	115	12	0	572
Total	9	284	33	157	501	2	1	0	421	223	174	513	68	0	2386
09:00 AM	5	74	5	28	118	0	0	2	92	49	33	110	14	0	530
09:15 AM	3	63	10	44	126	0	0	2	89	63	46	109	14	0	569
09:30 AM	4	60	7	30	97	0	0	4	91	51	36	84	6	1	471
09:45 AM	5	75	11	31	156	2	0	1	76	65	46	121	10	1	600
Total	17	272	33	133	497	2	0	9	348	228	161	424	44	2	2170
10:00 AM	6	52	9	17	120	0	0	1	72	55	45	93	6	2	478
10:15 AM	2	59	5	16	96	0	0	3	67	54	43	105	5	0	455
10:30 AM	6	53	6	24	118	0	0	5	70	71	40	117	5	1	516
10:45 AM	3	49	4	28	88	0	0	1	89	52	40	104	13	0	471
Total	17	213	24	85	422	0	0	10	298	232	168	419	29	3	1920
11:00 AM	7	46	7	23	93	1	0	5	82	52	53	108	8	2	487
11:15 AM	5	62	8	23	95	0	0	4	58	44	55	116	14	2	486
11:30 AM	2	60	20	28	106	0	0	3	72	43	57	112	12	1	516
11:45 AM	1	41	10	22	96	1	0	0	60	48	49	109	19	0	456
Total	15	209	45	96	390	2	0	12	272	187	214	445	53	5	1945
12:00 PM	4	60	7	21	122	0	0	2	76	45	57	147	8	0	549
12:15 PM	5	60	14	21	108	0	0	1	71	74	47	113	13	1	528
12:30 PM	3	42	10	28	105	0	0	3	72	43	59	116	18	2	501
12:45 PM	10	61	10	19	128	0	0	2	67	52	60	98	12	1	520
Total	22	223	41	89	463	0	0	8	286	214	223	474	51	4	2098
01:00 PM	5	62	11	23	90	0	0	8	65	43	45	96	9	0	457
01:15 PM	4	55	7	25	139	0	1	6	49	43	60	119	6	1	515
01:30 PM	6	63	9	22	136	0	0	1	74	50	57	109	16	2	545
01:45 PM	2	58	13	30	106	1	0	5	75	40	48	118	13	0	509
Total	17	238	40	100	471	1	1	20	263	176	210	442	44	3	2026
02:00 PM	3	66	9	23	103	0	0	2	75	48	64	101	17	1	512
02:15 PM	6	83	5	30	126	0	0	4	85	49	63	105	15	1	572
02:30 PM	4	84	21	39	114	0	0	3	91	52	63	100	22	1	594
02:45 PM	5	80	17	26	123	0	0	3	87	44	51	126	30	0	592
Total	18	313	52	118	466	0	0	12	338	193	241	432	84	3	2270
03:00 PM	4	72	14	26	114	0	0	5	96	61	52	126	17	0	587
03:15 PM	4	84	9	28	127	0	0	3	74	47	71	127	13	0	587
03:30 PM	5	81	10	28	125	0	0	2	79	55	55	122	12	2	576
03:45 PM	2	79	7	16	125	0	1	3	104	53	65	118	15	5	593
Total	15	316	40	98	491	0	1	13	353	216	243	493	57	7	2343
04:00 PM	3	77	11	33	117	0	1	2	80	44	52	119	13	1	553
04:15 PM	1	82	19	22	141	0	0	2	82	41	45	123	18	2	578



PRECISION
D A T A
INDUSTRIES, LLC

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N/S: Louis Prang Street/ Ruggles Street
E/W: HUntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Cars - Heavy Vehicles

Start Time	Louis Prang Street From North				Huntington Avenue From East				Ruggles Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left		Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
04:30 PM	5	71	19		28	89	0	0	3	86	45	56	137	8	0	547
04:45 PM	2	92	7		36	148	0	0	2	89	52	54	139	10	0	631
Total	11	322	56		119	495	0	1	9	337	182	207	518	49	3	2309
05:00 PM	1	87	4		38	134	0	0	1	79	43	52	127	16	2	584
05:15 PM	0	82	18		34	160	0	0	3	105	50	57	127	13	1	650
05:30 PM	2	81	14		33	138	0	0	1	80	43	47	131	13	0	583
05:45 PM	8	60	10		25	135	0	0	4	86	40	43	145	9	0	565
Total	11	310	46		130	567	0	0	9	350	176	199	530	51	3	2382
Grand Total	158	3008	443		1295	5243	7	5	107	3708	2274	2273	5137	588	38	24284
Apprch %	4.4	83.3	12.3		19.8	80	0.1	0.1	1.8	60.9	37.3	28.3	63.9	7.3	0.5	
Total %	0.7	12.4	1.8		5.3	21.6	0	0	0.4	15.3	9.4	9.4	21.2	2.4	0.2	
Cars	150	2768	413		1204	4954	7	4	100	3385	2120	2076	4786	569	34	22570
% Cars	94.9	92	93.2		93	94.5	100	80	93.5	91.3	93.2	91.3	93.2	96.8	89.5	92.9
Heavy Vehicles	8	240	30		91	289	0	1	7	323	154	197	351	19	4	1714
% Heavy Vehicles	5.1	8	6.8		7	5.5	0	20	6.5	8.7	6.8	8.7	6.8	3.2	10.5	7.1

Start Time	Louis Prang Street From North				Huntington Avenue From East					Ruggles Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	1	73	9	83	50	135	0	0	185	0	113	48	161	57	103	12	1	173	602
07:30 AM	3	103	13	119	46	123	0	0	169	1	124	63	188	77	120	18	3	218	694
07:45 AM	1	75	5	81	38	142	0	0	180	2	108	60	170	55	136	22	0	213	644
08:00 AM	2	88	5	95	47	135	0	1	183	0	101	51	152	61	131	22	0	214	644
Total Volume	7	339	32	378	181	535	0	1	717	3	446	222	671	250	490	74	4	818	2584
% App. Total	1.9	89.7	8.5		25.2	74.6	0	0.1		0.4	66.5	33.1		30.6	59.9	9	0.5		
PHF	.583	.823	.615	.794	.905	.942	.000	.250	.969	.375	.899	.881	.892	.812	.901	.841	.333	.938	.931
Cars	6	307	28	341	166	488	0	1	655	3	404	202	609	230	455	69	3	757	2362
% Cars	85.7	90.6	87.5	90.2	91.7	91.2	0	100	91.4	100	90.6	91.0	90.8	92.0	92.9	93.2	75.0	92.5	91.4
Heavy Vehicles	1	32	4	37	15	47	0	0	62	0	42	20	62	20	35	5	1	61	222
% Heavy Vehicles	14.3	9.4	12.5	9.8	8.3	8.8	0	0	8.6	0	9.4	9.0	9.2	8.0	7.1	6.8	25.0	7.5	8.6

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 12:00 PM

12:00 PM	4	60	7	71	21	122	0	0	143	2	76	45	123	57	147	8	0	212	549
12:15 PM	5	60	14	79	21	108	0	0	129	1	71	74	146	47	113	13	1	174	528
12:30 PM	3	42	10	55	28	105	0	0	133	3	72	43	118	59	116	18	2	195	501
12:45 PM	10	61	10	81	19	128	0	0	147	2	67	52	121	60	98	12	1	171	520
Total Volume	22	223	41	286	89	463	0	0	552	8	286	214	508	223	474	51	4	752	2098
% App. Total	7.7	78	14.3		16.1	83.9	0	0		1.6	56.3	42.1		29.7	63	6.8	0.5		
PHF	.550	.914	.732	.883	.795	.904	.000	.000	.939	.667	.941	.723	.870	.929	.806	.708	.500	.887	.955
Cars	21	214	41	276	86	441	0	0	527	7	269	200	476	211	447	49	3	710	1989
% Cars	95.5	96.0	100	96.5	96.6	95.2	0	0	95.5	87.5	94.1	93.5	93.7	94.6	94.3	96.1	75.0	94.4	94.8
Heavy Vehicles	1	9	0	10	3	22	0	0	25	1	17	14	32	12	27	2	1	42	109
% Heavy Vehicles	4.5	4.0	0	3.5	3.4	4.8	0	0	4.5	12.5	5.9	6.5	6.3	5.4	5.7	3.9	25.0	5.6	5.2



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Client: Jacobs/ A. Fernandes

File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 3

Start Time	Louis Prang Street From North				Huntington Avenue From East					Ruggles Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	2	92	7	101	36	148	0	0	184	2	89	52	143	54	139	10	0	203	631
05:00 PM	1	87	4	92	38	134	0	0	172	1	79	43	123	52	127	16	2	197	584
05:15 PM	0	82	18	100	34	160	0	0	194	3	105	50	158	57	127	13	1	198	650
05:30 PM	2	81	14	97	33	138	0	0	171	1	80	43	124	47	131	13	0	191	583
Total Volume	5	342	43	390	141	580	0	0	721	7	353	188	548	210	524	52	3	789	2448
% App. Total	1.3	87.7	11		19.6	80.4	0	0		1.3	64.4	34.3		26.6	66.4	6.6	0.4		
PHF	.625	.929	.597	.965	.928	.906	.000	.000	.929	.583	.840	.904	.867	.921	.942	.813	.375	.972	.942
Cars	5	323	42	370	132	561	0	0	693	7	316	184	507	195	505	52	3	755	2325
% Cars	100	94.4	97.7	94.9	93.6	96.7	0	0	96.1	100	89.5	97.9	92.5	92.9	96.4	100	100	95.7	95.0
Heavy Vehicles	0	19	1	20	9	19	0	0	28	0	37	4	41	15	19	0	0	34	123
% Heavy Vehicles	0	5.6	2.3	5.1	6.4	3.3	0	0	3.9	0	10.5	2.1	7.5	7.1	3.6	0	0	4.3	5.0



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File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Cars

Start Time	Louis Prang Street From North			Huntington Avenue From East				Ruggles Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	1	48	5	31	74	0	1	2	86	69	39	75	6	0	437
07:15 AM	1	68	7	47	125	0	0	0	102	44	51	91	12	0	548
07:30 AM	3	98	12	44	109	0	0	1	116	58	74	115	17	3	650
07:45 AM	1	64	5	35	129	0	0	2	95	55	50	130	19	0	585
Total	6	278	29	157	437	0	1	5	399	226	214	411	54	3	2220
08:00 AM	1	77	4	40	125	0	1	0	91	45	55	119	21	0	579
08:15 AM	2	48	11	27	98	1	0	0	107	50	37	123	13	0	517
08:30 AM	1	66	9	34	122	1	0	0	93	55	29	121	21	0	552
08:45 AM	2	56	5	36	114	0	0	0	92	52	30	103	12	0	502
Total	6	247	29	137	459	2	1	0	383	202	151	466	67	0	2150
09:00 AM	4	63	5	23	110	0	0	1	86	44	26	92	13	0	467
09:15 AM	3	55	9	40	115	0	0	2	81	59	41	98	13	0	516
09:30 AM	4	50	4	28	93	0	0	4	83	48	27	76	5	1	423
09:45 AM	5	65	9	27	148	2	0	1	68	62	44	111	9	0	551
Total	16	233	27	118	466	2	0	8	318	213	138	377	40	1	1957
10:00 AM	5	47	8	15	108	0	0	1	63	54	41	86	6	2	436
10:15 AM	2	53	5	15	87	0	0	3	62	47	39	96	5	0	414
10:30 AM	5	49	6	23	116	0	0	3	63	70	37	110	5	1	488
10:45 AM	3	44	4	26	82	0	0	0	81	44	37	95	13	0	429
Total	15	193	23	79	393	0	0	7	269	215	154	387	29	3	1767
11:00 AM	7	45	7	23	89	1	0	4	78	46	45	102	8	2	457
11:15 AM	5	54	8	22	94	0	0	4	54	39	51	102	14	2	449
11:30 AM	2	56	20	28	102	0	0	3	67	40	53	105	12	1	489
11:45 AM	1	39	9	22	88	1	0	0	59	43	46	98	19	0	425
Total	15	194	44	95	373	2	0	11	258	168	195	407	53	5	1820
12:00 PM	4	58	7	20	115	0	0	2	69	41	55	139	7	0	517
12:15 PM	5	57	14	21	103	0	0	1	69	73	45	107	13	1	509
12:30 PM	2	40	10	26	102	0	0	2	67	40	55	110	18	1	473
12:45 PM	10	59	10	19	121	0	0	2	64	46	56	91	11	1	490
Total	21	214	41	86	441	0	0	7	269	200	211	447	49	3	1989
01:00 PM	5	60	9	23	84	0	0	8	60	38	39	90	9	0	425
01:15 PM	4	53	7	23	130	0	1	6	41	42	57	112	6	1	483
01:30 PM	5	56	9	22	132	0	0	1	70	50	52	105	14	2	518
01:45 PM	2	57	13	28	103	1	0	5	73	35	42	110	12	0	481
Total	16	226	38	96	449	1	1	20	244	165	190	417	41	3	1907
02:00 PM	3	61	8	23	98	0	0	1	70	43	57	93	17	1	475
02:15 PM	6	77	5	29	121	0	0	4	81	45	59	100	15	1	543
02:30 PM	4	77	18	37	108	0	0	3	84	49	60	95	22	1	558
02:45 PM	5	72	16	25	119	0	0	3	81	44	49	119	29	0	562
Total	18	287	47	114	446	0	0	11	316	181	225	407	83	3	2138
03:00 PM	4	68	14	24	112	0	0	5	80	59	49	115	16	0	546
03:15 PM	4	79	8	28	121	0	0	3	70	45	63	122	12	0	555
03:30 PM	5	77	9	24	121	0	0	2	65	51	54	118	12	2	540
03:45 PM	2	74	7	16	114	0	0	3	97	50	59	111	15	5	553
Total	15	298	38	92	468	0	0	13	312	205	225	466	55	7	2194
04:00 PM	3	73	11	30	111	0	1	2	71	42	48	111	11	1	515
04:15 PM	1	78	18	20	137	0	0	2	72	39	41	119	18	2	547



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File Name : 112503 G
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Page No : 2

Groups Printed- Cars

Start Time	Louis Prang Street From North				Huntington Avenue From East				Ruggles Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
04:30 PM	5	68	17		24	84	0	0	3	81	43	51	127	8	0	511
04:45 PM	2	87	7		34	144	0	0	2	77	51	51	135	10	0	600
Total	11	306	53		108	476	0	1	9	301	175	191	492	47	3	2173
05:00 PM	1	83	4		36	128	0	0	1	71	41	48	121	16	2	552
05:15 PM	0	77	17		31	156	0	0	3	95	50	53	121	13	1	617
05:30 PM	2	76	14		31	133	0	0	1	73	42	43	128	13	0	556
05:45 PM	8	56	9		24	129	0	0	4	77	37	38	139	9	0	530
Total	11	292	44		122	546	0	0	9	316	170	182	509	51	3	2255
Grand Total	150	2768	413		1204	4954	7	4	100	3385	2120	2076	4786	569	34	22570
Apprch %	4.5	83.1	12.4		19.5	80.3	0.1	0.1	1.8	60.4	37.8	27.8	64.1	7.6	0.5	
Total %	0.7	12.3	1.8		5.3	21.9	0	0	0.4	15	9.4	9.2	21.2	2.5	0.2	

Start Time	Louis Prang Street From North				Huntington Avenue From East				Ruggles Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	1	68	7	76	47	125	0	0	172	0	102	44	146	51	91	12	0	154	548
07:30 AM	3	98	12	113	44	109	0	0	153	1	116	58	175	74	115	17	3	209	650
07:45 AM	1	64	5	70	35	129	0	0	164	2	95	55	152	50	130	19	0	199	585
08:00 AM	1	77	4	82	40	125	0	1	166	0	91	45	136	55	119	21	0	195	579
Total Volume	6	307	28	341	166	488	0	1	655	3	404	202	609	230	455	69	3	757	2362
% App. Total	1.8	90	8.2		25.3	74.5	0	0.2		0.5	66.3	33.2		30.4	60.1	9.1	0.4		
PHF	.500	.783	.583	.754	.883	.946	.000	.250	.952	.375	.871	.871	.870	.777	.875	.821	.250	.906	.908

Start Time	Louis Prang Street From North				Huntington Avenue From East				Ruggles Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 12:00 PM																			
12:00 PM	4	58	7	69	20	115	0	0	135	2	69	41	112	55	139	7	0	201	517
12:15 PM	5	57	14	76	21	103	0	0	124	1	69	73	143	45	107	13	1	166	509
12:30 PM	2	40	10	52	26	102	0	0	128	2	67	40	109	55	110	18	1	184	473
12:45 PM	10	59	10	79	19	121	0	0	140	2	64	46	112	56	91	11	1	159	490
Total Volume	21	214	41	276	86	441	0	0	527	7	269	200	476	211	447	49	3	710	1989
% App. Total	7.6	77.5	14.9		16.3	83.7	0	0		1.5	56.5	42		29.7	63	6.9	0.4		
PHF	.525	.907	.732	.873	.827	.911	.000	.000	.941	.875	.975	.685	.832	.942	.804	.681	.750	.883	.962

Start Time	Louis Prang Street From North				Huntington Avenue From East				Ruggles Street From South				Huntington Avenue From West				Int. Total		
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left		U-Turn	App. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	2	87	7	96	34	144	0	0	178	2	77	51	130	51	135	10	0	196	600
05:00 PM	1	83	4	88	36	128	0	0	164	1	71	41	113	48	121	16	2	187	552
05:15 PM	0	77	17	94	31	156	0	0	187	3	95	50	148	53	121	13	1	188	617
05:30 PM	2	76	14	92	31	133	0	0	164	1	73	42	116	43	128	13	0	184	556
Total Volume	5	323	42	370	132	561	0	0	693	7	316	184	507	195	505	52	3	755	2325
% App. Total	1.4	87.3	11.4		19	81	0	0		1.4	62.3	36.3		25.8	66.9	6.9	0.4		
PHF	.625	.928	.618	.964	.917	.899	.000	.000	.926	.583	.832	.902	.856	.920	.935	.813	.375	.963	.942



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Groups Printed- Heavy Vehicles

Start Time	Louis Prang Street From North			Huntington Avenue From East				Ruggles Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
07:00 AM	0	9	1	5	6	0	0	0	11	7	5	13	0	1	58
07:15 AM	0	5	2	3	10	0	0	0	11	4	6	12	0	1	54
07:30 AM	0	5	1	2	14	0	0	0	8	5	3	5	1	0	44
07:45 AM	0	11	0	3	13	0	0	0	13	5	5	6	3	0	59
Total	0	30	4	13	43	0	0	0	43	21	19	36	4	2	215
08:00 AM	1	11	1	7	10	0	0	0	10	6	6	12	1	0	65
08:15 AM	0	9	0	4	9	0	0	0	9	2	3	8	0	0	44
08:30 AM	1	5	1	6	10	0	0	0	10	2	7	15	0	0	57
08:45 AM	1	12	2	3	13	0	0	0	9	11	7	12	0	0	70
Total	3	37	4	20	42	0	0	0	38	21	23	47	1	0	236
09:00 AM	1	11	0	5	8	0	0	1	6	5	7	18	1	0	63
09:15 AM	0	8	1	4	11	0	0	0	8	4	5	11	1	0	53
09:30 AM	0	10	3	2	4	0	0	0	8	3	9	8	1	0	48
09:45 AM	0	10	2	4	8	0	0	0	8	3	2	10	1	1	49
Total	1	39	6	15	31	0	0	1	30	15	23	47	4	1	213
10:00 AM	1	5	1	2	12	0	0	0	9	1	4	7	0	0	42
10:15 AM	0	6	0	1	9	0	0	0	5	7	4	9	0	0	41
10:30 AM	1	4	0	1	2	0	0	2	7	1	3	7	0	0	28
10:45 AM	0	5	0	2	6	0	0	1	8	8	3	9	0	0	42
Total	2	20	1	6	29	0	0	3	29	17	14	32	0	0	153
11:00 AM	0	1	0	0	4	0	0	1	4	6	8	6	0	0	30
11:15 AM	0	8	0	1	1	0	0	0	4	5	4	14	0	0	37
11:30 AM	0	4	0	0	4	0	0	0	5	3	4	7	0	0	27
11:45 AM	0	2	1	0	8	0	0	0	1	5	3	11	0	0	31
Total	0	15	1	1	17	0	0	1	14	19	19	38	0	0	125
12:00 PM	0	2	0	1	7	0	0	0	7	4	2	8	1	0	32
12:15 PM	0	3	0	0	5	0	0	0	2	1	2	6	0	0	19
12:30 PM	1	2	0	2	3	0	0	1	5	3	4	6	0	1	28
12:45 PM	0	2	0	0	7	0	0	0	3	6	4	7	1	0	30
Total	1	9	0	3	22	0	0	1	17	14	12	27	2	1	109
01:00 PM	0	2	2	0	6	0	0	0	5	5	6	6	0	0	32
01:15 PM	0	2	0	2	9	0	0	0	8	1	3	7	0	0	32
01:30 PM	1	7	0	0	4	0	0	0	4	0	5	4	2	0	27
01:45 PM	0	1	0	2	3	0	0	0	2	5	6	8	1	0	28
Total	1	12	2	4	22	0	0	0	19	11	20	25	3	0	119
02:00 PM	0	5	1	0	5	0	0	1	5	5	7	8	0	0	37
02:15 PM	0	6	0	1	5	0	0	0	4	4	4	5	0	0	29
02:30 PM	0	7	3	2	6	0	0	0	7	3	3	5	0	0	36
02:45 PM	0	8	1	1	4	0	0	0	6	0	2	7	1	0	30
Total	0	26	5	4	20	0	0	1	22	12	16	25	1	0	132
03:00 PM	0	4	0	2	2	0	0	0	16	2	3	11	1	0	41
03:15 PM	0	5	1	0	6	0	0	0	4	2	8	5	1	0	32
03:30 PM	0	4	1	4	4	0	0	0	14	4	1	4	0	0	36
03:45 PM	0	5	0	0	11	0	1	0	7	3	6	7	0	0	40
Total	0	18	2	6	23	0	1	0	41	11	18	27	2	0	149
04:00 PM	0	4	0	3	6	0	0	0	9	2	4	8	2	0	38
04:15 PM	0	4	1	2	4	0	0	0	10	2	4	4	0	0	31



PRECISION
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N/S: Louis Prang Street/ Ruggles Street
E/W: HUntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Heavy Vehicles

Start Time	Louis Prang Street From North			Huntington Avenue From East				Ruggles Street From South			Huntington Avenue From West				Int. Total
	Right	Thru	Left	Right	Thru	Left	U-Turn	Right	Thru	Left	Right	Thru	Left	U-Turn	
04:30 PM	0	3	2	4	5	0	0	0	5	2	5	10	0	0	36
04:45 PM	0	5	0	2	4	0	0	0	12	1	3	4	0	0	31
Total	0	16	3	11	19	0	0	0	36	7	16	26	2	0	136
05:00 PM	0	4	0	2	6	0	0	0	8	2	4	6	0	0	32
05:15 PM	0	5	1	3	4	0	0	0	10	0	4	6	0	0	33
05:30 PM	0	5	0	2	5	0	0	0	7	1	4	3	0	0	27
05:45 PM	0	4	1	1	6	0	0	0	9	3	5	6	0	0	35
Total	0	18	2	8	21	0	0	0	34	6	17	21	0	0	127
Grand Total	8	240	30	91	289	0	1	7	323	154	197	351	19	4	1714
Apprch %	2.9	86.3	10.8	23.9	75.9	0	0.3	1.4	66.7	31.8	34.5	61.5	3.3	0.7	
Total %	0.5	14	1.8	5.3	16.9	0	0.1	0.4	18.8	9	11.5	20.5	1.1	0.2	

Start Time	Louis Prang Street From North				Huntington Avenue From East					Ruggles Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 08:30 AM																			
08:30 AM	1	5	1	7	6	10	0	0	16	0	10	2	12	7	15	0	0	22	57
08:45 AM	1	12	2	15	3	13	0	0	16	0	9	11	20	7	12	0	0	19	70
09:00 AM	1	11	0	12	5	8	0	0	13	1	6	5	12	7	18	1	0	26	63
09:15 AM	0	8	1	9	4	11	0	0	15	0	8	4	12	5	11	1	0	17	53
Total Volume	3	36	4	43	18	42	0	0	60	1	33	22	56	26	56	2	0	84	243
% App. Total	7	83.7	9.3		30	70	0	0		1.8	58.9	39.3		31	66.7	2.4	0		
PHF	.750	.750	.500	.717	.750	.808	.000	.000	.938	.250	.825	.500	.700	.929	.778	.500	.000	.808	.868

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 10:00 AM																			
10:00 AM	1	5	1	7	2	12	0	0	14	0	9	1	10	4	7	0	0	11	42
10:15 AM	0	6	0	6	1	9	0	0	10	0	5	7	12	4	9	0	0	13	41
10:30 AM	1	4	0	5	1	2	0	0	3	2	7	1	10	3	7	0	0	10	28
10:45 AM	0	5	0	5	2	6	0	0	8	1	8	8	17	3	9	0	0	12	42
Total Volume	2	20	1	23	6	29	0	0	35	3	29	17	49	14	32	0	0	46	153
% App. Total	8.7	87	4.3		17.1	82.9	0	0		6.1	59.2	34.7		30.4	69.6	0	0		
PHF	.500	.833	.250	.821	.750	.604	.000	.000	.625	.375	.806	.531	.721	.875	.889	.000	.000	.885	.911

Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 03:00 PM																			
03:00 PM	0	4	0	4	2	2	0	0	4	0	16	2	18	3	11	1	0	15	41
03:15 PM	0	5	1	6	0	6	0	0	6	0	4	2	6	8	5	1	0	14	32
03:30 PM	0	4	1	5	4	4	0	0	8	0	14	4	18	1	4	0	0	5	36
03:45 PM	0	5	0	5	0	11	0	1	12	0	7	3	10	6	7	0	0	13	40
Total Volume	0	18	2	20	6	23	0	1	30	0	41	11	52	18	27	2	0	47	149
% App. Total	0	90	10		20	76.7	0	3.3		0	78.8	21.2		38.3	57.4	4.3	0		
PHF	.000	.900	.500	.833	.375	.523	.000	.250	.625	.000	.641	.688	.722	.563	.614	.500	.000	.783	.909



PRECISION
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E/W: HUntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Louis Prang Street From North				Huntington Avenue From East				Ruggles Street From South				Huntington Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	2	0	1	1	1	0	20	0	2	0	7	0	1	0	6	41
07:15 AM	0	2	0	18	0	1	0	28	0	1	0	11	0	2	0	40	103
07:30 AM	0	1	0	13	0	2	0	31	0	2	0	26	0	0	1	13	89
07:45 AM	0	1	0	14	0	3	0	47	0	4	0	28	0	2	1	13	113
Total	0	6	0	46	1	7	0	126	0	9	0	72	0	5	2	72	346
08:00 AM	0	0	0	27	0	4	0	48	0	2	1	16	2	1	0	16	117
08:15 AM	0	1	0	32	1	2	0	33	0	2	0	14	1	2	0	14	102
08:30 AM	0	0	1	24	1	0	0	49	2	1	1	22	0	4	0	11	116
08:45 AM	0	0	0	20	0	2	0	22	0	2	0	26	1	1	0	8	82
Total	0	1	1	103	2	8	0	152	2	7	2	78	4	8	0	49	417
09:00 AM	0	1	0	27	0	0	0	31	0	1	1	13	0	6	0	11	91
09:15 AM	0	1	1	28	0	1	0	37	0	1	2	17	0	1	1	5	95
09:30 AM	0	1	0	9	0	0	0	23	0	2	0	21	0	0	0	2	58
09:45 AM	0	2	0	17	0	3	0	15	0	2	0	10	0	3	0	5	57
Total	0	5	1	81	0	4	0	106	0	6	3	61	0	10	1	23	301
10:00 AM	0	0	0	27	0	2	0	29	0	0	0	10	1	1	0	8	78
10:15 AM	0	1	0	12	0	1	0	17	0	1	1	15	0	3	0	6	57
10:30 AM	0	1	0	12	0	0	0	23	0	2	1	17	0	6	0	4	66
10:45 AM	0	2	0	19	1	1	0	22	0	2	0	7	0	0	0	6	60
Total	0	4	0	70	1	4	0	91	0	5	2	49	1	10	0	24	261
11:00 AM	0	1	0	13	0	0	0	12	0	1	0	7	0	0	0	4	38
11:15 AM	0	0	0	24	1	3	0	15	0	0	0	15	0	0	0	4	62
11:30 AM	0	0	0	15	0	2	0	16	0	0	0	4	0	1	0	5	43
11:45 AM	0	0	0	17	0	0	0	23	0	0	0	9	0	2	0	8	59
Total	0	1	0	69	1	5	0	66	0	1	0	35	0	3	0	21	202
12:00 PM	0	0	0	30	0	4	0	26	0	2	0	31	0	4	0	10	107
12:15 PM	0	1	1	23	0	1	0	21	0	0	0	15	0	1	0	4	67
12:30 PM	0	0	1	27	0	4	0	31	0	1	0	27	0	4	0	12	107
12:45 PM	0	1	0	29	0	1	0	36	0	1	0	26	0	1	0	14	109
Total	0	2	2	109	0	10	0	114	0	4	0	99	0	10	0	40	390
01:00 PM	0	1	0	42	0	1	0	32	0	1	0	17	0	3	0	3	100
01:15 PM	0	1	0	29	0	1	0	27	0	0	0	31	0	3	0	11	103
01:30 PM	0	1	0	26	0	0	0	32	0	0	0	24	1	3	0	2	89
01:45 PM	0	2	0	26	0	0	0	24	0	1	1	20	0	1	0	26	101
Total	0	5	0	123	0	2	0	115	0	2	1	92	1	10	0	42	393
02:00 PM	0	3	0	25	0	1	0	44	1	1	1	29	0	2	0	9	116
02:15 PM	0	0	0	33	1	2	0	35	1	2	0	26	0	1	0	20	121
02:30 PM	0	1	1	36	0	3	0	23	0	1	0	23	0	1	0	37	126
02:45 PM	0	2	0	40	1	3	0	31	0	3	0	28	0	2	0	19	129
Total	0	6	1	134	2	9	0	133	2	7	1	106	0	6	0	85	492
03:00 PM	0	2	0	26	2	5	0	39	0	0	1	25	1	3	0	14	118
03:15 PM	0	4	0	27	0	8	0	26	0	3	2	32	1	6	0	10	119
03:30 PM	0	1	0	29	1	11	0	43	0	2	0	36	1	1	0	37	162
03:45 PM	0	1	0	34	0	3	0	44	0	5	0	18	0	1	0	16	122
Total	0	8	0	116	3	27	0	152	0	10	3	111	3	11	0	77	521
04:00 PM	0	2	0	35	0	1	0	37	0	0	1	23	0	2	1	15	117
04:15 PM	0	2	1	48	0	2	0	34	0	2	0	12	0	1	0	17	119



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N/S: Louis Prang Street/ Ruggles Street
E/W: HUntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Peds and Bicycles

Start Time	Louis Prang Street From North				Huntington Avenue From East				Ruggles Street From South				Huntington Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:30 PM	0	4	0	49	0	2	0	50	0	2	0	26	0	2	0	27	162
04:45 PM	0	2	1	79	0	5	0	50	0	3	0	24	0	1	1	18	184
Total	0	10	2	211	0	10	0	171	0	7	1	85	0	6	2	77	582
05:00 PM	0	5	1	70	0	6	0	65	0	1	0	37	0	2	0	30	217
05:15 PM	0	2	0	72	0	2	0	46	0	1	2	28	0	2	0	22	177
05:30 PM	0	3	0	45	0	6	0	60	0	1	2	52	1	1	0	18	189
05:45 PM	0	3	0	40	0	5	0	44	0	0	0	18	1	3	0	10	124
Total	0	13	1	227	0	19	0	215	0	3	4	135	2	8	0	80	707
Grand Total	0	61	8	1289	10	105	0	1441	4	61	17	923	11	87	5	590	4612
Apprch %	0	4.5	0.6	94.9	0.6	6.7	0	92.6	0.4	6.1	1.7	91.8	1.6	12.6	0.7	85.1	
Total %	0	1.3	0.2	27.9	0.2	2.3	0	31.2	0.1	1.3	0.4	20	0.2	1.9	0.1	12.8	

Start Time	Louis Prang Street From North					Huntington Avenue From East					Ruggles Street From South					Huntington Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	1	0	14	15	0	3	0	47	50	0	4	0	28	32	0	2	1	13	16	113
08:00 AM	0	0	0	27	27	0	4	0	48	52	0	2	1	16	19	2	1	0	16	19	117
08:15 AM	0	1	0	32	33	1	2	0	33	36	0	2	0	14	16	1	2	0	14	17	102
08:30 AM	0	0	1	24	25	1	0	0	49	50	2	1	1	22	26	0	4	0	11	15	116
Total Volume	0	2	1	97	100	2	9	0	177	188	2	9	2	80	93	3	9	1	54	67	448
% App. Total	0	2	1	97		1.1	4.8	0	94.1		2.2	9.7	2.2	86		4.5	13.4	1.5	80.6		
PHF	.000	.500	.250	.758	.758	.500	.563	.000	.903	.904	.250	.563	.500	.714	.727	.375	.563	.250	.844	.882	.957

Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	0	1	27	28	0	4	0	31	35	0	1	0	27	28	0	4	0	12	16	107
12:45 PM	0	1	0	29	30	0	1	0	36	37	0	1	0	26	27	0	1	0	14	15	109
01:00 PM	0	1	0	42	43	0	1	0	32	33	0	1	0	17	18	0	3	0	3	6	100
01:15 PM	0	1	0	29	30	0	1	0	27	28	0	0	0	31	31	0	3	0	11	14	103
Total Volume	0	3	1	127	131	0	7	0	126	133	0	3	0	101	104	0	11	0	40	51	419
% App. Total	0	2.3	0.8	96.9		0	5.3	0	94.7		0	2.9	0	97.1		0	21.6	0	78.4		
PHF	.000	.750	.250	.756	.762	.000	.438	.000	.875	.899	.000	.750	.000	.815	.839	.000	.688	.000	.714	.797	.961

Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	2	1	79	82	0	5	0	50	55	0	3	0	24	27	0	1	1	18	20	184
05:00 PM	0	5	1	70	76	0	6	0	65	71	0	1	0	37	38	0	2	0	30	32	217
05:15 PM	0	2	0	72	74	0	2	0	46	48	0	1	2	28	31	0	2	0	22	24	177
05:30 PM	0	3	0	45	48	0	6	0	60	66	0	1	2	52	55	1	1	0	18	20	189
Total Volume	0	12	2	266	280	0	19	0	221	240	0	6	4	141	151	1	6	1	88	96	767
% App. Total	0	4.3	0.7	95		0	7.9	0	92.1		0	4	2.6	93.4		1	6.2	1	91.7		
PHF	.000	.600	.500	.842	.854	.000	.792	.000	.850	.845	.000	.500	.500	.678	.686	.250	.750	.250	.733	.750	.884



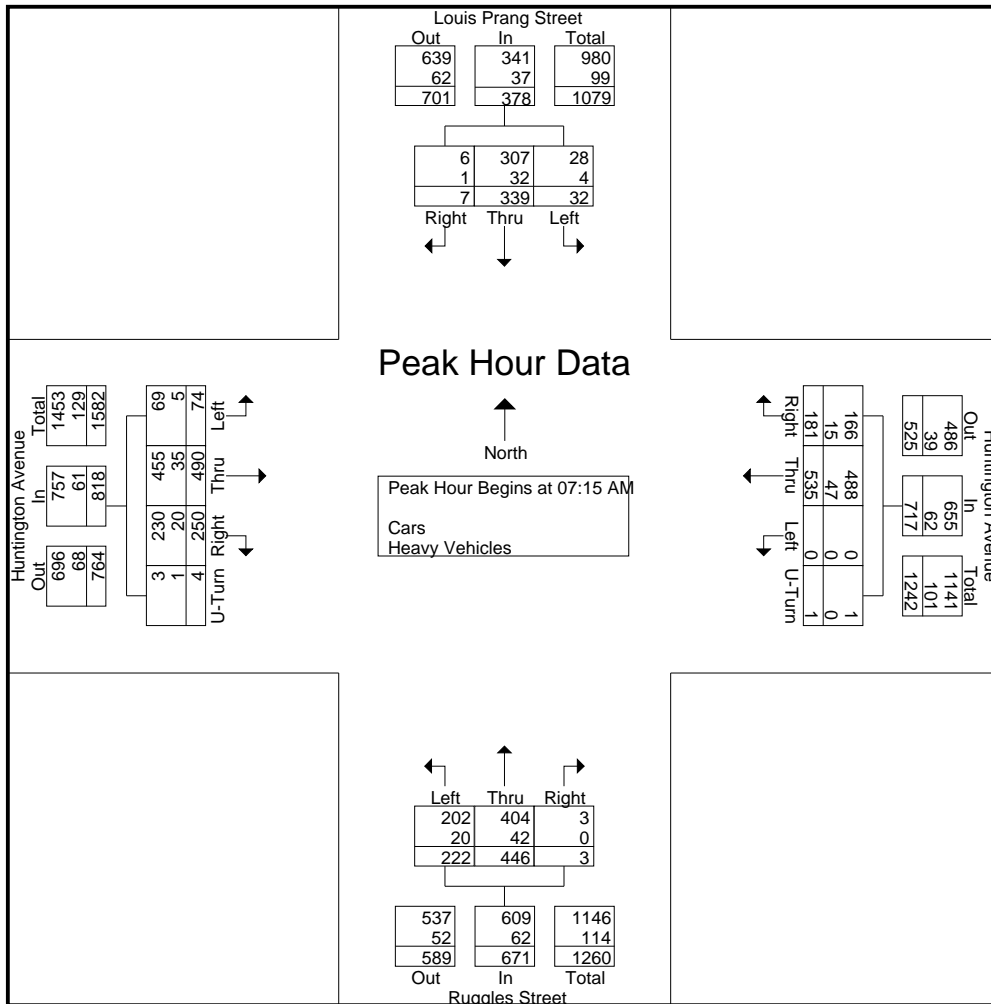
PRECISION
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Start Time	Louis Prang Street From North				Huntington Avenue From East					Ruggles Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:15 AM																			
07:15 AM	1	73	9	83	50	135	0	0	185	0	113	48	161	57	103	12	1	173	602
07:30 AM	3	103	13	119	46	123	0	0	169	1	124	63	188	77	120	18	3	218	694
07:45 AM	1	75	5	81	38	142	0	0	180	2	108	60	170	55	136	22	0	213	644
08:00 AM	2	88	5	95	47	135	0	1	183	0	101	51	152	61	131	22	0	214	644
Total Volume	7	339	32	378	181	535	0	1	717	3	446	222	671	250	490	74	4	818	2584
% App. Total	1.9	89.7	8.5		25.2	74.6	0	0.1		0.4	66.5	33.1		30.6	59.9	9	0.5		
PHF	.583	.823	.615	.794	.905	.942	.000	.250	.969	.375	.899	.881	.892	.812	.901	.841	.333	.938	.931
Cars	6	307	28	341	166	488	0	1	655	3	404	202	609	230	455	69	3	757	2362
% Cars	85.7	90.6	87.5	90.2	91.7	91.2	0	100	91.4	100	90.6	91.0	90.8	92.0	92.9	93.2	75.0	92.5	91.4
Heavy Vehicles	1	32	4	37	15	47	0	0	62	0	42	20	62	20	35	5	1	61	222
% Heavy Vehicles	14.3	9.4	12.5	9.8	8.3	8.8	0	0	8.6	0	9.4	9.0	9.2	8.0	7.1	6.8	25.0	7.5	8.6





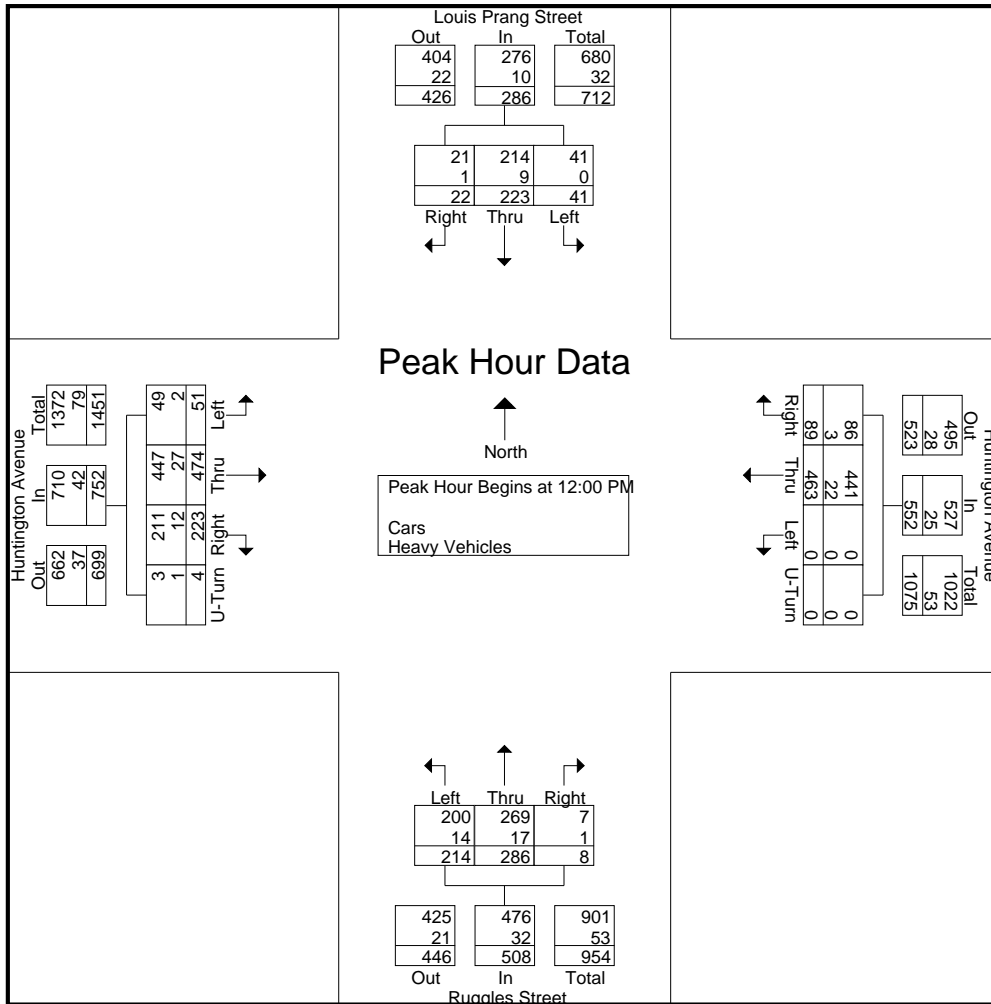
PRECISION
D A T A
INDUSTRIES, LLC

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Office: 508.481.3999 Fax: 508.545.1234
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N/S: Louis Prang Street/ Ruggles Street
E/W: HUntington Avenue
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Start Time	Louis Prang Street From North				Huntington Avenue From East					Ruggles Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 12:00 PM																			
12:00 PM	4	60	7	71	21	122	0	0	143	2	76	45	123	57	147	8	0	212	549
12:15 PM	5	60	14	79	21	108	0	0	129	1	71	74	146	47	113	13	1	174	528
12:30 PM	3	42	10	55	28	105	0	0	133	3	72	43	118	59	116	18	2	195	501
12:45 PM	10	61	10	81	19	128	0	0	147	2	67	52	121	60	98	12	1	171	520
Total Volume	22	223	41	286	89	463	0	0	552	8	286	214	508	223	474	51	4	752	2098
% App. Total	7.7	78	14.3		16.1	83.9	0	0		1.6	56.3	42.1		29.7	63	6.8	0.5		
PHF	.550	.914	.732	.883	.795	.904	.000	.000	.939	.667	.941	.723	.870	.929	.806	.708	.500	.887	.955
Cars	21	214	41	276	86	441	0	0	527	7	269	200	476	211	447	49	3	710	1989
% Cars	95.5	96.0	100	96.5	96.6	95.2	0	0	95.5	87.5	94.1	93.5	93.7	94.6	94.3	96.1	75.0	94.4	94.8
Heavy Vehicles	1	9	0	10	3	22	0	0	25	1	17	14	32	12	27	2	1	42	109
% Heavy Vehicles	4.5	4.0	0	3.5	3.4	4.8	0	0	4.5	12.5	5.9	6.5	6.3	5.4	5.7	3.9	25.0	5.6	5.2





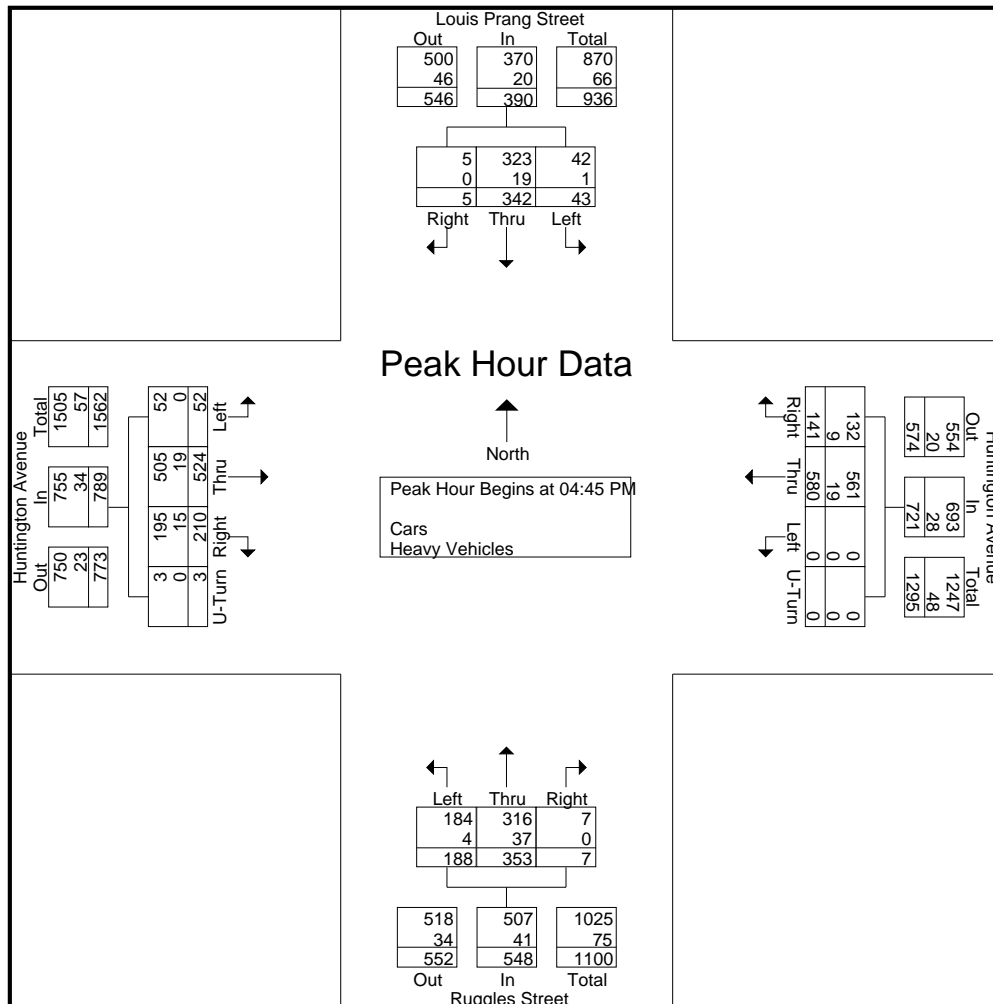
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File Name : 112503 G
Site Code : TBA
Start Date : 5/10/2011
Page No : 3

Start Time	Louis Prang Street From North				Huntington Avenue From East					Ruggles Street From South				Huntington Avenue From West					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	2	92	7	101	36	148	0	0	184	2	89	52	143	54	139	10	0	203	631
05:00 PM	1	87	4	92	38	134	0	0	172	1	79	43	123	52	127	16	2	197	584
05:15 PM	0	82	18	100	34	160	0	0	194	3	105	50	158	57	127	13	1	198	650
05:30 PM	2	81	14	97	33	138	0	0	171	1	80	43	124	47	131	13	0	191	583
Total Volume	5	342	43	390	141	580	0	0	721	7	353	188	548	210	524	52	3	789	2448
% App. Total	1.3	87.7	11		19.6	80.4	0	0		1.3	64.4	34.3		26.6	66.4	6.6	0.4		
PHF	.625	.929	.597	.965	.928	.906	.000	.000	.929	.583	.840	.904	.867	.921	.942	.813	.375	.972	.942
Cars	5	323	42	370	132	561	0	0	693	7	316	184	507	195	505	52	3	755	2325
% Cars	100	94.4	97.7	94.9	93.6	96.7	0	0	96.1	100	89.5	97.9	92.5	92.9	96.4	100	100	95.7	95.0
Heavy Vehicles	0	19	1	20	9	19	0	0	28	0	37	4	41	15	19	0	0	34	123
% Heavy Vehicles	0	5.6	2.3	5.1	6.4	3.3	0	0	3.9	0	10.5	2.1	7.5	7.1	3.6	0	0	4.3	5.0





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E/W: Parker Street
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North			Parker Street From East			Ruggles Street From South			Parker Street From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	9	97	0	2	57	9	14	146	12	4	58	16	424
07:15 AM	5	119	1	2	47	17	17	152	11	5	53	15	444
07:30 AM	10	146	1	6	55	16	17	146	8	8	82	24	519
07:45 AM	12	107	0	2	60	20	22	151	8	10	70	19	481
Total	36	469	2	12	219	62	70	595	39	27	263	74	1868
08:00 AM	7	123	0	6	44	19	22	149	13	11	72	14	480
08:15 AM	7	92	2	3	57	15	24	146	19	12	70	19	466
08:30 AM	14	98	1	2	46	15	23	142	14	4	72	20	451
08:45 AM	3	100	0	6	53	27	24	141	12	8	56	18	448
Total	31	413	3	17	200	76	93	578	58	35	270	71	1845
09:00 AM	4	87	1	3	44	20	19	123	7	6	40	6	360
09:15 AM	6	92	3	3	53	19	13	129	11	10	39	15	393
09:30 AM	12	81	1	4	36	22	10	125	14	7	30	12	354
09:45 AM	10	87	2	2	42	13	10	128	11	10	37	10	362
Total	32	347	7	12	175	74	52	505	43	33	146	43	1469
10:00 AM	7	82	2	3	29	16	8	107	11	6	27	12	310
10:15 AM	8	75	3	2	22	11	11	99	13	8	21	9	282
10:30 AM	16	70	4	0	32	7	24	129	10	7	25	10	334
10:45 AM	8	79	3	1	21	18	17	127	8	2	29	12	325
Total	39	306	12	6	104	52	60	462	42	23	102	43	1251
11:00 AM	12	96	2	2	34	17	19	123	5	3	13	11	337
11:15 AM	11	123	0	3	38	19	18	104	10	8	26	8	368
11:30 AM	6	105	1	3	23	11	12	95	10	1	25	2	294
11:45 AM	9	88	2	3	33	15	15	103	11	8	25	10	322
Total	38	412	5	11	128	62	64	425	36	20	89	31	1321
12:00 PM	11	105	5	1	34	9	18	115	15	5	16	8	342
12:15 PM	8	110	4	2	29	13	17	112	8	7	22	29	361
12:30 PM	8	98	2	3	34	14	11	100	9	10	31	8	328
12:45 PM	10	107	4	2	24	17	18	111	10	4	15	5	327
Total	37	420	15	8	121	53	64	438	42	26	84	50	1358
01:00 PM	9	84	2	0	25	15	12	87	6	7	12	9	268
01:15 PM	7	89	0	1	47	15	12	86	12	7	21	7	304
01:30 PM	8	117	4	8	30	14	17	105	8	5	30	10	356
01:45 PM	8	107	2	4	34	11	16	109	10	3	37	5	346
Total	32	397	8	13	136	55	57	387	36	22	100	31	1274
02:00 PM	10	123	3	5	38	13	21	104	16	6	43	10	392
02:15 PM	11	131	2	1	50	16	25	123	10	7	44	7	427
02:30 PM	16	149	2	1	48	30	12	124	17	6	43	14	462
02:45 PM	14	98	2	1	60	29	14	115	8	6	52	18	417
Total	51	501	9	8	196	88	72	466	51	25	182	49	1698
03:00 PM	7	121	5	3	52	17	11	137	13	8	45	12	431
03:15 PM	9	153	2	2	50	18	10	118	17	8	36	6	429
03:30 PM	8	121	1	4	47	15	15	104	11	6	51	14	397
03:45 PM	8	134	0	5	52	19	11	119	11	7	42	11	419
Total	32	529	8	14	201	69	47	478	52	29	174	43	1676
04:00 PM	4	107	3	3	63	20	13	98	26	7	47	12	403
04:15 PM	12	120	0	1	67	15	21	120	27	12	58	9	462



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E/W: Parker Street
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North			Parker Street From East			Ruggles Street From South			Parker Street From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:30 PM	5	139	2	3	63	14	28	132	19	11	49	5	470
04:45 PM	7	129	3	6	62	27	20	108	17	13	38	18	448
Total	28	495	8	13	255	76	82	458	89	43	192	44	1783
05:00 PM	14	119	4	4	74	26	41	101	15	8	67	13	486
05:15 PM	10	134	1	1	95	30	32	136	23	15	52	15	544
05:30 PM	8	119	5	2	81	18	26	124	12	11	61	10	477
05:45 PM	10	103	5	3	64	17	17	120	10	11	35	7	402
Total	42	475	15	10	314	91	116	481	60	45	215	45	1909
Grand Total	398	4764	92	124	2049	758	777	5273	548	328	1817	524	17452
Apprch %	7.6	90.7	1.8	4.2	69.9	25.9	11.8	79.9	8.3	12.3	68.1	19.6	
Total %	2.3	27.3	0.5	0.7	11.7	4.3	4.5	30.2	3.1	1.9	10.4	3	
Cars	376	4350	87	122	1999	721	721	4801	512	305	1772	503	16269
% Cars	94.5	91.3	94.6	98.4	97.6	95.1	92.8	91	93.4	93	97.5	96	93.2
Heavy Vehicles	22	414	5	2	50	37	56	472	36	23	45	21	1183
% Heavy Vehicles	5.5	8.7	5.4	1.6	2.4	4.9	7.2	9	6.6	7	2.5	4	6.8

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	10	146	1	157	6	55	16	77	17	146	8	171	8	82	24	114	519
07:45 AM	12	107	0	119	2	60	20	82	22	151	8	181	10	70	19	99	481
08:00 AM	7	123	0	130	6	44	19	69	22	149	13	184	11	72	14	97	480
08:15 AM	7	92	2	101	3	57	15	75	24	146	19	189	12	70	19	101	466
Total Volume	36	468	3	507	17	216	70	303	85	592	48	725	41	294	76	411	1946
% App. Total	7.1	92.3	0.6		5.6	71.3	23.1		11.7	81.7	6.6		10	71.5	18.5		
PHF	.750	.801	.375	.807	.708	.900	.875	.924	.885	.980	.632	.959	.854	.896	.792	.901	.937
Cars	36	415	2	453	17	207	68	292	77	527	45	649	36	290	74	400	1794
% Cars	100	88.7	66.7	89.3	100	95.8	97.1	96.4	90.6	89.0	93.8	89.5	87.8	98.6	97.4	97.3	92.2
Heavy Vehicles	0	53	1	54	0	9	2	11	8	65	3	76	5	4	2	11	152
% Heavy Vehicles	0	11.3	33.3	10.7	0	4.2	2.9	3.6	9.4	11.0	6.3	10.5	12.2	1.4	2.6	2.7	7.8

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:30 AM																	
10:30 AM	16	70	4	90	0	32	7	39	24	129	10	163	7	25	10	42	334
10:45 AM	8	79	3	90	1	21	18	40	17	127	8	152	2	29	12	43	325
11:00 AM	12	96	2	110	2	34	17	53	19	123	5	147	3	13	11	27	337
11:15 AM	11	123	0	134	3	38	19	60	18	104	10	132	8	26	8	42	368
Total Volume	47	368	9	424	6	125	61	192	78	483	33	594	20	93	41	154	1364
% App. Total	11.1	86.8	2.1		3.1	65.1	31.8		13.1	81.3	5.6		13	60.4	26.6		
PHF	.734	.748	.563	.791	.500	.822	.803	.800	.813	.936	.825	.911	.625	.802	.854	.895	.927
Cars	47	332	8	387	5	123	57	185	69	435	33	537	19	88	39	146	1255
% Cars	100	90.2	88.9	91.3	83.3	98.4	93.4	96.4	88.5	90.1	100	90.4	95.0	94.6	95.1	94.8	92.0
Heavy Vehicles	0	36	1	37	1	2	4	7	9	48	0	57	1	5	2	8	109
% Heavy Vehicles	0	9.8	11.1	8.7	16.7	1.6	6.6	3.6	11.5	9.9	0	9.6	5.0	5.4	4.9	5.2	8.0



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Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	7	129	3	139	6	62	27	95	20	108	17	145	13	38	18	69	448
05:00 PM	14	119	4	137	4	74	26	104	41	101	15	157	8	67	13	88	486
05:15 PM	10	134	1	145	1	95	30	126	32	136	23	191	15	52	15	82	544
05:30 PM	8	119	5	132	2	81	18	101	26	124	12	162	11	61	10	82	477
Total Volume	39	501	13	553	13	312	101	426	119	469	67	655	47	218	56	321	1955
% App. Total	7.1	90.6	2.4		3.1	73.2	23.7		18.2	71.6	10.2		14.6	67.9	17.4		
PHF	.696	.935	.650	.953	.542	.821	.842	.845	.726	.862	.728	.857	.783	.813	.778	.912	.898
Cars	37	468	13	518	13	310	101	424	117	431	66	614	45	217	56	318	1874
% Cars	94.9	93.4	100	93.7	100	99.4	100	99.5	98.3	91.9	98.5	93.7	95.7	99.5	100	99.1	95.9
Heavy Vehicles	2	33	0	35	0	2	0	2	2	38	1	41	2	1	0	3	81
% Heavy Vehicles	5.1	6.6	0	6.3	0	0.6	0	0.5	1.7	8.1	1.5	6.3	4.3	0.5	0	0.9	4.1



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Page No : 1

Groups Printed- Cars

Start Time	Ruggles Street From North			Parker Street From East			Ruggles Street From South			Parker Street From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	8	86	0	2	57	8	10	133	8	4	55	16	387
07:15 AM	5	105	1	2	46	16	16	137	10	5	51	15	409
07:30 AM	10	138	0	6	54	16	16	131	6	8	81	23	489
07:45 AM	12	92	0	2	56	20	19	132	7	8	69	19	436
Total	35	421	1	12	213	60	61	533	31	25	256	73	1721
08:00 AM	7	105	0	6	40	18	19	131	13	10	71	13	433
08:15 AM	7	80	2	3	57	14	23	133	19	10	69	19	436
08:30 AM	12	86	1	2	45	15	23	131	13	4	71	20	423
08:45 AM	3	85	0	6	51	26	22	123	10	8	52	16	402
Total	29	356	3	17	193	73	87	518	55	32	263	68	1694
09:00 AM	4	72	1	3	42	19	18	112	6	5	40	6	328
09:15 AM	5	79	3	3	51	18	9	116	9	9	38	15	355
09:30 AM	12	64	1	4	36	19	8	112	13	7	29	12	317
09:45 AM	10	76	2	2	41	12	9	118	11	9	36	10	336
Total	31	291	7	12	170	68	44	458	39	30	143	43	1336
10:00 AM	7	72	2	3	29	15	7	97	11	6	25	12	286
10:15 AM	8	67	3	2	22	8	10	86	12	8	21	9	256
10:30 AM	16	63	4	0	31	5	21	122	10	7	22	9	310
10:45 AM	8	71	2	1	21	17	16	110	8	2	29	12	297
Total	39	273	11	6	103	45	54	415	41	23	97	42	1149
11:00 AM	12	88	2	2	33	16	17	109	5	3	13	10	310
11:15 AM	11	110	0	2	38	19	15	94	10	7	24	8	338
11:30 AM	6	98	0	3	20	10	11	84	10	1	22	2	267
11:45 AM	9	82	2	2	30	14	15	91	10	7	25	9	296
Total	38	378	4	9	121	59	58	378	35	18	84	29	1211
12:00 PM	11	100	4	1	33	9	17	104	13	4	16	8	320
12:15 PM	7	104	4	2	27	10	15	109	6	7	22	29	342
12:30 PM	7	95	2	3	34	11	10	93	9	10	28	7	309
12:45 PM	9	101	4	2	24	16	16	101	9	4	15	5	306
Total	34	400	14	8	118	46	58	407	37	25	81	49	1277
01:00 PM	8	75	2	0	25	15	12	78	5	7	12	9	248
01:15 PM	7	85	0	1	47	14	11	81	12	7	20	7	292
01:30 PM	5	106	4	8	28	13	15	101	7	5	28	9	329
01:45 PM	7	100	2	4	32	10	14	103	10	3	36	5	326
Total	27	366	8	13	132	52	52	363	34	22	96	30	1195
02:00 PM	9	113	3	5	36	12	18	92	15	5	43	9	360
02:15 PM	11	121	1	1	48	16	25	114	10	7	44	7	405
02:30 PM	16	137	2	1	46	29	11	113	16	6	43	13	433
02:45 PM	13	90	2	1	59	28	14	112	7	6	52	17	401
Total	49	461	8	8	189	85	68	431	48	24	182	46	1599
03:00 PM	6	114	5	3	50	15	11	120	12	7	45	12	400
03:15 PM	8	137	2	2	50	18	9	109	16	7	36	5	399
03:30 PM	8	118	1	4	43	14	14	94	8	4	49	10	367
03:45 PM	7	124	0	5	51	19	10	112	11	6	41	9	395
Total	29	493	8	14	194	66	44	435	47	24	171	36	1561
04:00 PM	3	101	3	3	63	20	13	90	24	7	47	12	386
04:15 PM	10	114	0	1	66	15	21	109	27	9	57	8	437



PRECISION
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N/S: Ruggles Street
E/W: Parker Street
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Cars

Start Time	Ruggles Street From North			Parker Street From East			Ruggles Street From South			Parker Street From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:30 PM	5	131	2	3	63	14	27	124	18	10	47	5	449
04:45 PM	6	119	3	6	61	27	20	95	16	11	37	18	419
Total	24	465	8	13	253	76	81	418	85	37	188	43	1691
05:00 PM	13	112	4	4	73	26	40	92	15	8	67	13	467
05:15 PM	10	125	1	1	95	30	32	129	23	15	52	15	528
05:30 PM	8	112	5	2	81	18	25	115	12	11	61	10	460
05:45 PM	10	97	5	3	64	17	17	109	10	11	31	6	380
Total	41	446	15	10	313	91	114	445	60	45	211	44	1835
Grand Total	376	4350	87	122	1999	721	721	4801	512	305	1772	503	16269
Apprch %	7.8	90.4	1.8	4.3	70.3	25.4	11.9	79.6	8.5	11.8	68.7	19.5	
Total %	2.3	26.7	0.5	0.7	12.3	4.4	4.4	29.5	3.1	1.9	10.9	3.1	

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	10	138	0	148	6	54	16	76	16	131	6	153	8	81	23	112	489
07:45 AM	12	92	0	104	2	56	20	78	19	132	7	158	8	69	19	96	436
08:00 AM	7	105	0	112	6	40	18	64	19	131	13	163	10	71	13	94	433
08:15 AM	7	80	2	89	3	57	14	74	23	133	19	175	10	69	19	98	436
Total Volume	36	415	2	453	17	207	68	292	77	527	45	649	36	290	74	400	1794
% App. Total	7.9	91.6	0.4		5.8	70.9	23.3		11.9	81.2	6.9		9	72.5	18.5		
PHF	.750	.752	.250	.765	.708	.908	.850	.936	.837	.991	.592	.927	.900	.895	.804	.893	.917

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	11	100	4	115	1	33	9	43	17	104	13	134	4	16	8	28	320
12:15 PM	7	104	4	115	2	27	10	39	15	109	6	130	7	22	29	58	342
12:30 PM	7	95	2	104	3	34	11	48	10	93	9	112	10	28	7	45	309
12:45 PM	9	101	4	114	2	24	16	42	16	101	9	126	4	15	5	24	306
Total Volume	34	400	14	448	8	118	46	172	58	407	37	502	25	81	49	155	1277
% App. Total	7.6	89.3	3.1		4.7	68.6	26.7		11.6	81.1	7.4		16.1	52.3	31.6		
PHF	.773	.962	.875	.974	.667	.868	.719	.896	.853	.933	.712	.937	.625	.723	.422	.668	.933

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	6	119	3	128	6	61	27	94	20	95	16	131	11	37	18	66	419
05:00 PM	13	112	4	129	4	73	26	103	40	92	15	147	8	67	13	88	467
05:15 PM	10	125	1	136	1	95	30	126	32	129	23	184	15	52	15	82	528
05:30 PM	8	112	5	125	2	81	18	101	25	115	12	152	11	61	10	82	460
Total Volume	37	468	13	518	13	310	101	424	117	431	66	614	45	217	56	318	1874
% App. Total	7.1	90.3	2.5		3.1	73.1	23.8		19.1	70.2	10.7		14.2	68.2	17.6		
PHF	.712	.936	.650	.952	.542	.816	.842	.841	.731	.835	.717	.834	.750	.810	.778	.903	.887



PRECISION
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City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North			Parker Street From East			Ruggles Street From South			Parker Street From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	1	11	0	0	0	1	4	13	4	0	3	0	37
07:15 AM	0	14	0	0	1	1	1	15	1	0	2	0	35
07:30 AM	0	8	1	0	1	0	1	15	2	0	1	1	30
07:45 AM	0	15	0	0	4	0	3	19	1	2	1	0	45
Total	1	48	1	0	6	2	9	62	8	2	7	1	147
08:00 AM	0	18	0	0	4	1	3	18	0	1	1	1	47
08:15 AM	0	12	0	0	0	1	1	13	0	2	1	0	30
08:30 AM	2	12	0	0	1	0	0	11	1	0	1	0	28
08:45 AM	0	15	0	0	2	1	2	18	2	0	4	2	46
Total	2	57	0	0	7	3	6	60	3	3	7	3	151
09:00 AM	0	15	0	0	2	1	1	11	1	1	0	0	32
09:15 AM	1	13	0	0	2	1	4	13	2	1	1	0	38
09:30 AM	0	17	0	0	0	3	2	13	1	0	1	0	37
09:45 AM	0	11	0	0	1	1	1	10	0	1	1	0	26
Total	1	56	0	0	5	6	8	47	4	3	3	0	133
10:00 AM	0	10	0	0	0	1	1	10	0	0	2	0	24
10:15 AM	0	8	0	0	0	3	1	13	1	0	0	0	26
10:30 AM	0	7	0	0	1	2	3	7	0	0	3	1	24
10:45 AM	0	8	1	0	0	1	1	17	0	0	0	0	28
Total	0	33	1	0	1	7	6	47	1	0	5	1	102
11:00 AM	0	8	0	0	1	1	2	14	0	0	0	1	27
11:15 AM	0	13	0	1	0	0	3	10	0	1	2	0	30
11:30 AM	0	7	1	0	3	1	1	11	0	0	3	0	27
11:45 AM	0	6	0	1	3	1	0	12	1	1	0	1	26
Total	0	34	1	2	7	3	6	47	1	2	5	2	110
12:00 PM	0	5	1	0	1	0	1	11	2	1	0	0	22
12:15 PM	1	6	0	0	2	3	2	3	2	0	0	0	19
12:30 PM	1	3	0	0	0	3	1	7	0	0	3	1	19
12:45 PM	1	6	0	0	0	1	2	10	1	0	0	0	21
Total	3	20	1	0	3	7	6	31	5	1	3	1	81
01:00 PM	1	9	0	0	0	0	0	9	1	0	0	0	20
01:15 PM	0	4	0	0	0	1	1	5	0	0	1	0	12
01:30 PM	3	11	0	0	2	1	2	4	1	0	2	1	27
01:45 PM	1	7	0	0	2	1	2	6	0	0	1	0	20
Total	5	31	0	0	4	3	5	24	2	0	4	1	79
02:00 PM	1	10	0	0	2	1	3	12	1	1	0	1	32
02:15 PM	0	10	1	0	2	0	0	9	0	0	0	0	22
02:30 PM	0	12	0	0	2	1	1	11	1	0	0	1	29
02:45 PM	1	8	0	0	1	1	0	3	1	0	0	1	16
Total	2	40	1	0	7	3	4	35	3	1	0	3	99
03:00 PM	1	7	0	0	2	2	0	17	1	1	0	0	31
03:15 PM	1	16	0	0	0	0	1	9	1	1	0	1	30
03:30 PM	0	3	0	0	4	1	1	10	3	2	2	4	30
03:45 PM	1	10	0	0	1	0	1	7	0	1	1	2	24
Total	3	36	0	0	7	3	3	43	5	5	3	7	115
04:00 PM	1	6	0	0	0	0	0	8	2	0	0	0	17
04:15 PM	2	6	0	0	1	0	0	11	0	3	1	1	25



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City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North			Parker Street From East			Ruggles Street From South			Parker Street From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:30 PM	0	8	0	0	0	0	1	8	1	1	2	0	21
04:45 PM	1	10	0	0	1	0	0	13	1	2	1	0	29
Total	4	30	0	0	2	0	1	40	4	6	4	1	92
05:00 PM	1	7	0	0	1	0	1	9	0	0	0	0	19
05:15 PM	0	9	0	0	0	0	0	7	0	0	0	0	16
05:30 PM	0	7	0	0	0	0	1	9	0	0	0	0	17
05:45 PM	0	6	0	0	0	0	0	11	0	0	4	1	22
Total	1	29	0	0	1	0	2	36	0	0	4	1	74
Grand Total	22	414	5	2	50	37	56	472	36	23	45	21	1183
Apprch %	5	93.9	1.1	2.2	56.2	41.6	9.9	83.7	6.4	25.8	50.6	23.6	
Total %	1.9	35	0.4	0.2	4.2	3.1	4.7	39.9	3	1.9	3.8	1.8	

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	14	0	14	0	1	1	2	1	15	1	17	0	2	0	2	35
07:30 AM	0	8	1	9	0	1	0	1	1	15	2	18	0	1	1	2	30
07:45 AM	0	15	0	15	0	4	0	4	3	19	1	23	2	1	0	3	45
08:00 AM	0	18	0	18	0	4	1	5	3	18	0	21	1	1	1	3	47
Total Volume	0	55	1	56	0	10	2	12	8	67	4	79	3	5	2	10	157
% App. Total	0	98.2	1.8		0	83.3	16.7		10.1	84.8	5.1		30	50	20		
PHF	.000	.764	.250	.778	.000	.625	.500	.600	.667	.882	.500	.859	.375	.625	.500	.833	.835

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:45 AM																	
10:45 AM	0	8	1	9	0	0	1	1	1	17	0	18	0	0	0	0	28
11:00 AM	0	8	0	8	0	1	1	2	2	14	0	16	0	0	1	1	27
11:15 AM	0	13	0	13	1	0	0	1	3	10	0	13	1	2	0	3	30
11:30 AM	0	7	1	8	0	3	1	4	1	11	0	12	0	3	0	3	27
Total Volume	0	36	2	38	1	4	3	8	7	52	0	59	1	5	1	7	112
% App. Total	0	94.7	5.3		12.5	50	37.5		11.9	88.1	0		14.3	71.4	14.3		
PHF	.000	.692	.500	.731	.250	.333	.750	.500	.583	.765	.000	.819	.250	.417	.250	.583	.933

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	1	7	0	8	0	2	2	4	0	17	1	18	1	0	0	1	31
03:15 PM	1	16	0	17	0	0	0	0	1	9	1	11	1	0	1	2	30
03:30 PM	0	3	0	3	0	4	1	5	1	10	3	14	2	2	4	8	30
03:45 PM	1	10	0	11	0	1	0	1	1	7	0	8	1	1	2	4	24
Total Volume	3	36	0	39	0	7	3	10	3	43	5	51	5	3	7	15	115
% App. Total	7.7	92.3	0		0	70	30		5.9	84.3	9.8		33.3	20	46.7		
PHF	.750	.563	.000	.574	.000	.438	.375	.500	.750	.632	.417	.708	.625	.375	.438	.469	.927



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Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	6	0	1	0	12	0	2	0	7	0	1	0	12	41
07:15 AM	0	1	0	16	0	0	0	17	0	3	0	8	0	1	0	18	64
07:30 AM	0	2	0	9	0	0	0	32	0	3	0	15	0	1	0	11	73
07:45 AM	0	2	1	6	0	0	0	23	0	5	0	30	1	2	1	10	81
Total	0	5	1	37	0	1	0	84	0	13	0	60	1	5	1	51	259
08:00 AM	0	3	0	9	1	0	0	7	0	3	0	11	1	2	0	17	54
08:15 AM	0	1	0	6	0	1	1	19	0	2	0	5	0	0	0	15	50
08:30 AM	0	0	0	14	0	1	0	31	0	5	0	12	0	4	0	14	81
08:45 AM	0	3	0	4	0	0	0	18	0	0	0	3	0	2	0	6	36
Total	0	7	0	33	1	2	1	75	0	10	0	31	1	8	0	52	221
09:00 AM	0	2	0	7	0	2	0	22	2	2	0	12	1	2	0	12	64
09:15 AM	0	2	0	10	0	0	0	23	0	2	0	52	1	5	0	7	102
09:30 AM	0	0	0	4	0	0	0	17	1	2	0	33	0	6	0	9	72
09:45 AM	0	1	0	6	0	0	0	11	0	2	0	16	0	4	0	10	50
Total	0	5	0	27	0	2	0	73	3	8	0	113	2	17	0	38	288
10:00 AM	0	0	0	10	0	0	0	15	0	1	0	11	0	2	0	12	51
10:15 AM	0	0	0	5	0	1	0	9	0	1	2	7	0	1	0	6	32
10:30 AM	0	1	0	5	0	0	1	5	0	3	0	5	0	0	0	5	25
10:45 AM	0	2	0	6	1	1	0	12	0	1	0	7	0	3	0	3	36
Total	0	3	0	26	1	2	1	41	0	6	2	30	0	6	0	26	144
11:00 AM	0	1	0	3	0	0	0	11	0	1	0	9	0	0	0	11	36
11:15 AM	0	0	0	2	0	0	1	7	0	0	0	6	0	3	0	5	24
11:30 AM	0	1	0	14	0	0	1	15	0	1	1	21	0	5	0	9	68
11:45 AM	0	0	0	10	0	1	0	13	0	0	2	40	0	0	0	7	73
Total	0	2	0	29	0	1	2	46	0	2	3	76	0	8	0	32	201
12:00 PM	1	0	0	11	0	0	0	8	0	2	1	7	0	0	0	6	36
12:15 PM	0	1	0	6	0	0	0	5	0	0	0	8	0	1	0	1	22
12:30 PM	0	1	0	11	0	0	0	18	0	1	0	8	0	2	0	4	45
12:45 PM	0	3	0	5	0	1	0	11	1	1	0	10	2	3	0	8	45
Total	1	5	0	33	0	1	0	42	1	4	1	33	2	6	0	19	148
01:00 PM	0	1	0	3	0	1	0	9	0	1	1	2	0	4	1	5	28
01:15 PM	0	0	0	3	0	1	0	9	0	1	0	17	0	3	0	10	44
01:30 PM	0	5	0	9	0	1	0	11	2	1	2	12	0	3	0	4	50
01:45 PM	0	2	0	15	0	1	0	16	1	1	0	7	0	2	0	5	50
Total	0	8	0	30	0	4	0	45	3	4	3	38	0	12	1	24	172
02:00 PM	0	2	1	21	0	3	0	23	0	2	0	3	0	5	1	4	65
02:15 PM	0	1	0	14	0	2	1	35	0	2	1	5	0	1	1	9	72
02:30 PM	0	3	0	21	0	1	0	24	0	1	0	22	0	0	0	32	104
02:45 PM	0	1	0	3	0	1	0	24	0	4	1	17	0	0	1	17	69
Total	0	7	1	59	0	7	1	106	0	9	2	47	0	6	3	62	310
03:00 PM	0	2	0	10	0	5	0	28	0	2	2	9	0	1	0	8	67
03:15 PM	0	4	0	4	0	4	0	16	0	2	0	14	1	1	0	11	57
03:30 PM	0	0	0	11	0	0	0	18	0	3	0	13	0	0	0	9	54
03:45 PM	0	1	0	6	0	0	0	13	0	2	0	7	0	0	0	5	34
Total	0	7	0	31	0	9	0	75	0	9	2	43	1	2	0	33	212
04:00 PM	0	1	0	8	1	1	0	22	0	1	1	3	0	1	0	10	49
04:15 PM	0	2	0	20	0	0	1	39	0	1	0	10	0	0	0	13	86



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File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Groups Printed- Peds and Bicycles

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:30 PM	0	5	0	2	0	0	0	30	0	1	0	9	1	2	1	9	60
04:45 PM	0	2	0	8	0	1	0	35	0	0	0	10	0	0	1	16	73
Total	0	10	0	38	1	2	1	126	0	3	1	32	1	3	2	48	268
05:00 PM	2	1	0	14	0	1	0	66	2	1	1	24	0	0	0	21	133
05:15 PM	0	5	0	15	0	4	1	61	0	5	0	11	0	1	0	22	125
05:30 PM	0	3	0	10	0	5	0	32	0	5	1	13	1	2	0	7	79
05:45 PM	0	5	0	14	0	2	0	29	0	1	0	19	1	1	0	11	83
Total	2	14	0	53	0	12	1	188	2	12	2	67	2	4	0	61	420
Grand Total	3	73	2	396	3	43	7	901	9	80	16	570	10	77	7	446	2643
Apprch %	0.6	15.4	0.4	83.5	0.3	4.5	0.7	94.4	1.3	11.9	2.4	84.4	1.9	14.3	1.3	82.6	
Total %	0.1	2.8	0.1	15	0.1	1.6	0.3	34.1	0.3	3	0.6	21.6	0.4	2.9	0.3	16.9	

Start Time	Ruggles Street From North					Parker Street From East					Ruggles Street From South					Parker Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 09:00 AM																					
09:00 AM	0	2	0	7	9	0	2	0	22	24	2	2	0	12	16	1	2	0	12	15	64
09:15 AM	0	2	0	10	12	0	0	0	23	23	0	2	0	52	54	1	5	0	7	13	102
09:30 AM	0	0	0	4	4	0	0	0	17	17	1	2	0	33	36	0	6	0	9	15	72
09:45 AM	0	1	0	6	7	0	0	0	11	11	0	2	0	16	18	0	4	0	10	14	50
Total Volume	0	5	0	27	32	0	2	0	73	75	3	8	0	113	124	2	17	0	38	57	288
% App. Total	0	15.6	0	84.4		0	2.7	0	97.3		2.4	6.5	0	91.1		3.5	29.8	0	66.7		
PHF	.000	.625	.000	.675	.667	.000	.250	.000	.793	.781	.375	1.000									

Start Time	Ruggles Street From North					Parker Street From East					Ruggles Street From South					Parker Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	0	1	0	3	4	0	0	0	11	11	0	1	0	9	10	0	0	0	11	11	36
11:15 AM	0	0	0	2	2	0	0	1	7	8	0	0	0	6	6	0	3	0	5	8	24
11:30 AM	0	1	0	14	15	0	0	1	15	16	0	1	1	21	23	0	5	0	9	14	68
11:45 AM	0	0	0	10	10	0	1	0	13	14	0	0	2	40	42	0	0	0	7	7	73
Total Volume	0	2	0	29	31	0	1	2	46	49	0	2	3	76	81	0	8	0	32	40	201
% App. Total	0	6.5	0	93.5		0	2	4.1	93.9		0	2.5	3.7	93.8		0	20	0	80		
PHF	.000	.500	.000	.518	.517	.000	.250	.500	.767	.766	.000	.500	.375	.475	.482	.000	.400	.000	.727	.714	.688

Start Time	Ruggles Street From North					Parker Street From East					Ruggles Street From South					Parker Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	2	1	0	14	17	0	1	0	66	67	2	1	1	24	28	0	0	0	21	21	133
05:15 PM	0	5	0	15	20	0	4	1	61	66	0	5	0	11	16	0	1	0	22	23	125
05:30 PM	0	3	0	10	13	0	5	0	32	37	0	5	1	13	19	1	2	0	7	10	79
05:45 PM	0	5	0	14	19	0	2	0	29	31	0	1	0	19	20	1	1	0	11	13	83
Total Volume	2	14	0	53	69	0	12	1	188	201	2	12	2	67	83	2	4	0	61	67	420
% App. Total	2.9	20.3	0	76.8		0	6	0.5	93.5		2.4	14.5	2.4	80.7		3	6	0	91		
PHF	.250	.700	.000	.883	.863	.000	.600	.250	.712	.750	.250	.600	.500	.698	.741	.500	.500	.000	.693	.728	.789



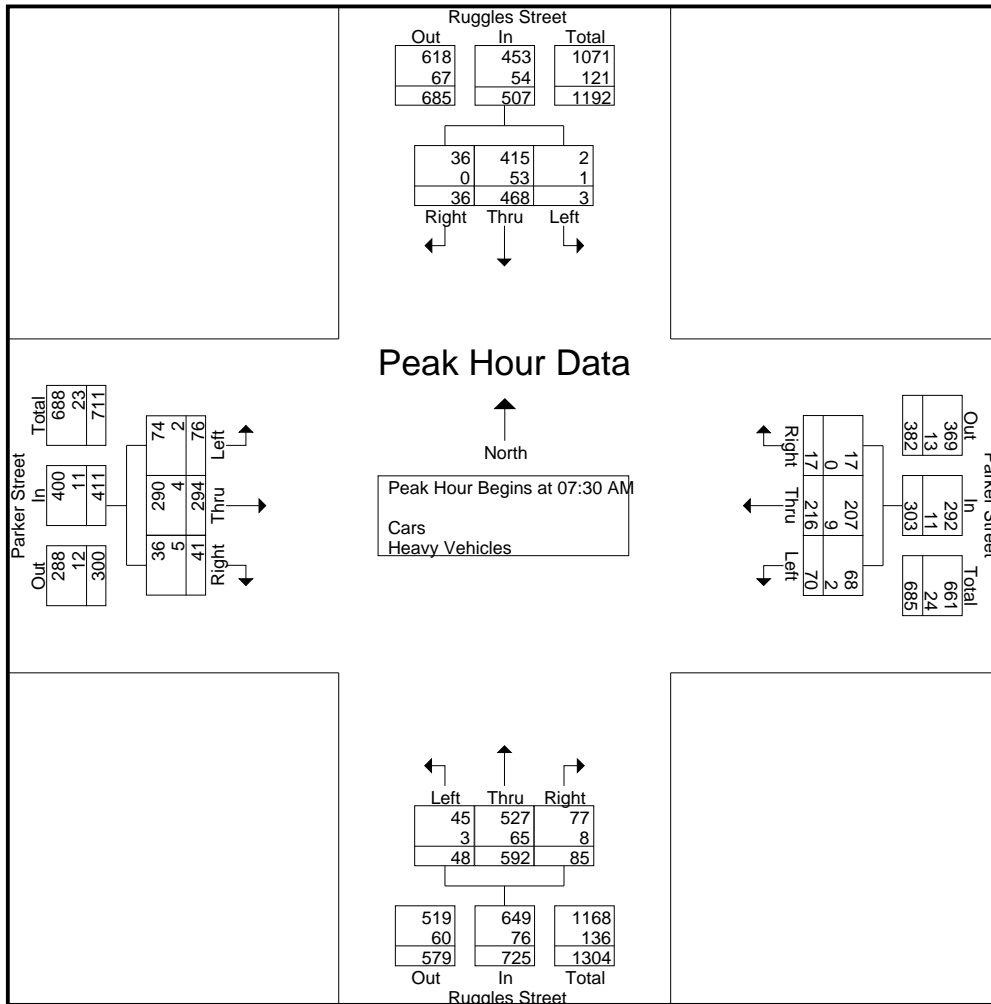
PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
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N/S: Ruggles Street
E/W: Parker Street
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 1

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	10	146	1	157	6	55	16	77	17	146	8	171	8	82	24	114	519
07:45 AM	12	107	0	119	2	60	20	82	22	151	8	181	10	70	19	99	481
08:00 AM	7	123	0	130	6	44	19	69	22	149	13	184	11	72	14	97	480
08:15 AM	7	92	2	101	3	57	15	75	24	146	19	189	12	70	19	101	466
Total Volume	36	468	3	507	17	216	70	303	85	592	48	725	41	294	76	411	1946
% App. Total	7.1	92.3	0.6		5.6	71.3	23.1		11.7	81.7	6.6		10	71.5	18.5		
PHF	.750	.801	.375	.807	.708	.900	.875	.924	.885	.980	.632	.959	.854	.896	.792	.901	.937
Cars	36	415	2	453	17	207	68	292	77	527	45	649	36	290	74	400	1794
% Cars	100	88.7	66.7	89.3	100	95.8	97.1	96.4	90.6	89.0	93.8	89.5	87.8	98.6	97.4	97.3	92.2
Heavy Vehicles	0	53	1	54	0	9	2	11	8	65	3	76	5	4	2	11	152
% Heavy Vehicles	0	11.3	33.3	10.7	0	4.2	2.9	3.6	9.4	11.0	6.3	10.5	12.2	1.4	2.6	2.7	7.8





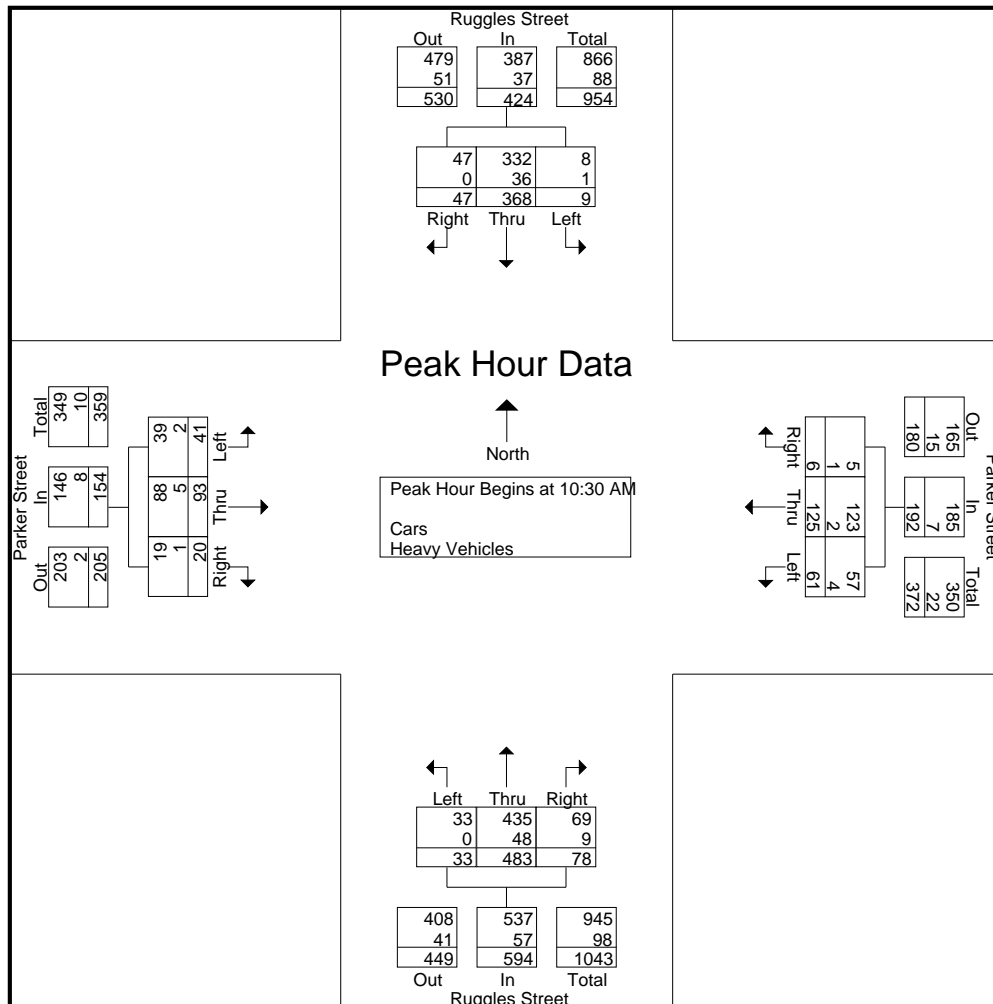
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N/S: Ruggles Street
E/W: Parker Street
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 2

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 10:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:30 AM																	
10:30 AM	16	70	4	90	0	32	7	39	24	129	10	163	7	25	10	42	334
10:45 AM	8	79	3	90	1	21	18	40	17	127	8	152	2	29	12	43	325
11:00 AM	12	96	2	110	2	34	17	53	19	123	5	147	3	13	11	27	337
11:15 AM	11	123	0	134	3	38	19	60	18	104	10	132	8	26	8	42	368
Total Volume	47	368	9	424	6	125	61	192	78	483	33	594	20	93	41	154	1364
% App. Total	11.1	86.8	2.1		3.1	65.1	31.8		13.1	81.3	5.6		13	60.4	26.6		
PHF	.734	.748	.563	.791	.500	.822	.803	.800	.813	.936	.825	.911	.625	.802	.854	.895	.927
Cars	47	332	8	387	5	123	57	185	69	435	33	537	19	88	39	146	1255
% Cars	100	90.2	88.9	91.3	83.3	98.4	93.4	96.4	88.5	90.1	100	90.4	95.0	94.6	95.1	94.8	92.0
Heavy Vehicles	0	36	1	37	1	2	4	7	9	48	0	57	1	5	2	8	109
% Heavy Vehicles	0	9.8	11.1	8.7	16.7	1.6	6.6	3.6	11.5	9.9	0	9.6	5.0	5.4	4.9	5.2	8.0





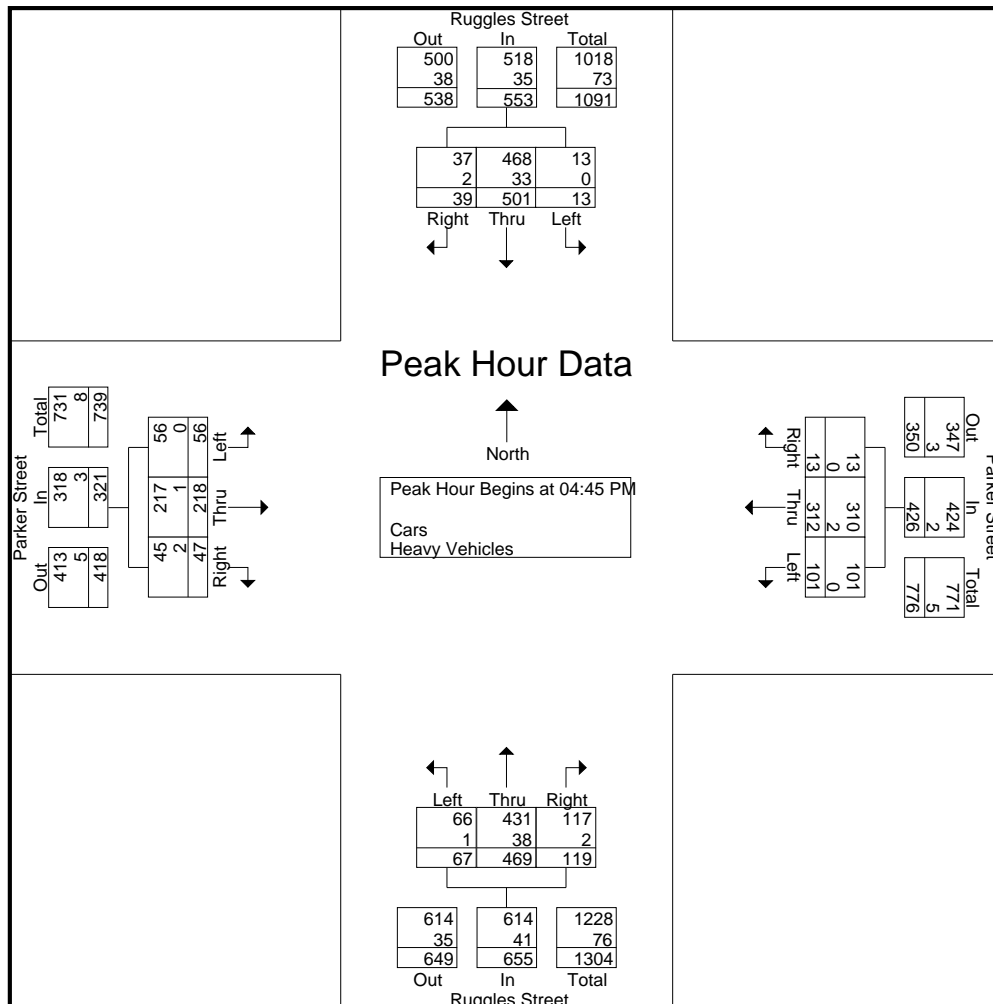
PRECISION
DATA
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N/S: Ruggles Street
E/W: Parker Street
City, State: Boston, MA
Client: Jacobs/ A. Fernandes

File Name : 112503 M
Site Code : TBA
Start Date : 5/10/2011
Page No : 3

Start Time	Ruggles Street From North				Parker Street From East				Ruggles Street From South				Parker Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	7	129	3	139	6	62	27	95	20	108	17	145	13	38	18	69	448
05:00 PM	14	119	4	137	4	74	26	104	41	101	15	157	8	67	13	88	486
05:15 PM	10	134	1	145	1	95	30	126	32	136	23	191	15	52	15	82	544
05:30 PM	8	119	5	132	2	81	18	101	26	124	12	162	11	61	10	82	477
Total Volume	39	501	13	553	13	312	101	426	119	469	67	655	47	218	56	321	1955
% App. Total	7.1	90.6	2.4		3.1	73.2	23.7		18.2	71.6	10.2		14.6	67.9	17.4		
PHF	.696	.935	.650	.953	.542	.821	.842	.845	.726	.862	.728	.857	.783	.813	.778	.912	.898
Cars	37	468	13	518	13	310	101	424	117	431	66	614	45	217	56	318	1874
% Cars	94.9	93.4	100	93.7	100	99.4	100	99.5	98.3	91.9	98.5	93.7	95.7	99.5	100	99.1	95.9
Heavy Vehicles	2	33	0	35	0	2	0	2	2	38	1	41	2	1	0	3	81
% Heavy Vehicles	5.1	6.6	0	6.3	0	0.6	0	0.5	1.7	8.1	1.5	6.3	4.3	0.5	0	0.9	4.1





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File Name : 123026 B
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	0	112	3	0	2	0	2	0	5	183	0	0	1	0	1	0	309
07:15 AM	0	148	4	0	1	0	4	0	5	177	0	0	5	0	0	0	344
07:30 AM	0	158	6	0	0	0	6	0	4	195	0	0	9	0	4	0	382
07:45 AM	0	142	11	0	4	0	3	0	9	171	1	0	7	1	2	0	351
Total	0	560	24	0	7	0	15	0	23	726	1	0	22	1	7	0	1386
08:00 AM	0	123	9	0	3	0	6	0	1	143	0	0	4	0	0	0	289
08:15 AM	0	95	8	0	2	0	4	0	10	145	0	0	6	0	1	0	271
08:30 AM	0	116	7	0	4	0	6	0	2	158	0	0	2	0	0	0	295
08:45 AM	0	108	6	0	2	0	1	0	7	174	0	0	1	0	0	0	299
Total	0	442	30	0	11	0	17	0	20	620	0	0	13	0	1	0	1154
Grand Total	0	1002	54	0	18	0	32	0	43	1346	1	0	35	1	8	0	2540
Apprch %	0	94.9	5.1	0	36	0	64	0	3.1	96.8	0.1	0	79.5	2.3	18.2	0	
Total %	0	39.4	2.1	0	0.7	0	1.3	0	1.7	53	0	0	1.4	0	0.3	0	
Cars	0	885	53	0	16	0	30	0	41	1228	1	0	34	1	8	0	2297
% Cars	0	88.3	98.1	0	88.9	0	93.8	0	95.3	91.2	100	0	97.1	100	100	0	90.4
Heavy Vehicles	0	117	1	0	2	0	2	0	2	118	0	0	1	0	0	0	243
% Heavy Vehicles	0	11.7	1.9	0	11.1	0	6.2	0	4.7	8.8	0	0	2.9	0	0	0	9.6

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	112	3	0	115	2	0	2	0	4	5	183	0	0	188	1	0	1	0	2	309
07:15 AM	0	148	4	0	152	1	0	4	0	5	5	177	0	0	182	5	0	0	0	5	344
07:30 AM	0	158	6	0	164	0	0	6	0	6	4	195	0	0	199	9	0	4	0	13	382
07:45 AM	0	142	11	0	153	4	0	3	0	7	9	171	1	0	181	7	1	2	0	10	351
Total Volume	0	560	24	0	584	7	0	15	0	22	23	726	1	0	750	22	1	7	0	30	1386
% App. Total	0	95.9	4.1	0		31.8	0	68.2	0		3.1	96.8	0.1	0		73.3	3.3	23.3	0		
PHF	.000	.886	.545	.000	.890	.438	.000	.625	.000	.786	.639	.931	.250	.000	.942	.611	.250	.438	.000	.577	.907
Cars	0	504	23	0	527	6	0	14	0	20	21	664	1	0	686	21	1	7	0	29	1262
% Cars	0	90.0	95.8	0	90.2	85.7	0	93.3	0	90.9	91.3	91.5	100	0	91.5	95.5	100	100	0	96.7	91.1
Heavy Vehicles	0	56	1	0	57	1	0	1	0	2	2	62	0	0	64	1	0	0	0	1	124
% Heavy Vehicles	0	10.0	4.2	0	9.8	14.3	0	6.7	0	9.1	8.7	8.5	0	0	8.5	4.5	0	0	0	3.3	8.9



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File Name : 123026 B
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	0	92	2	0	2	0	2	0	4	166	0	0	1	0	1	0	270
07:15 AM	0	136	4	0	1	0	4	0	5	159	0	0	5	0	0	0	314
07:30 AM	0	150	6	0	0	0	5	0	4	181	0	0	9	0	4	0	359
07:45 AM	0	126	11	0	3	0	3	0	8	158	1	0	6	1	2	0	319
Total	0	504	23	0	6	0	14	0	21	664	1	0	21	1	7	0	1262
08:00 AM	0	111	9	0	3	0	6	0	1	130	0	0	4	0	0	0	264
08:15 AM	0	79	8	0	2	0	3	0	10	125	0	0	6	0	1	0	234
08:30 AM	0	102	7	0	3	0	6	0	2	148	0	0	2	0	0	0	270
08:45 AM	0	89	6	0	2	0	1	0	7	161	0	0	1	0	0	0	267
Total	0	381	30	0	10	0	16	0	20	564	0	0	13	0	1	0	1035
Grand Total	0	885	53	0	16	0	30	0	41	1228	1	0	34	1	8	0	2297
Apprch %	0	94.3	5.7	0	34.8	0	65.2	0	3.2	96.7	0.1	0	79.1	2.3	18.6	0	
Total %	0	38.5	2.3	0	0.7	0	1.3	0	1.8	53.5	0	0	1.5	0	0.3	0	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	92	2	0	94	2	0	2	0	4	4	166	0	0	170	1	0	1	0	2	270
07:15 AM	0	136	4	0	140	1	0	4	0	5	5	159	0	0	164	5	0	0	0	5	314
07:30 AM	0	150	6	0	156	0	0	5	0	5	4	181	0	0	185	9	0	4	0	13	359
07:45 AM	0	126	11	0	137	3	0	3	0	6	8	158	1	0	167	6	1	2	0	9	319
Total Volume	0	504	23	0	527	6	0	14	0	20	21	664	1	0	686	21	1	7	0	29	1262
% App. Total	0	95.6	4.4	0		30	0	70	0		3.1	96.8	0.1	0		72.4	3.4	24.1	0		
PHF	.000	.840	.523	.000	.845	.500	.000	.700	.000	.833	.656	.917	.250	.000	.927	.583	.250	.438	.000	.558	.879



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File Name : 123026 B
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
07:00 AM	0	20	1	0	0	0	0	0	1	17	0	0	0	0	0	0	0	39
07:15 AM	0	12	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	30
07:30 AM	0	8	0	0	0	0	1	0	0	14	0	0	0	0	0	0	0	23
07:45 AM	0	16	0	0	1	0	0	0	1	13	0	0	1	0	0	0	0	32
Total	0	56	1	0	1	0	1	0	2	62	0	0	1	0	0	0	0	124
08:00 AM	0	12	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	25
08:15 AM	0	16	0	0	0	0	1	0	0	20	0	0	0	0	0	0	0	37
08:30 AM	0	14	0	0	1	0	0	0	0	10	0	0	0	0	0	0	0	25
08:45 AM	0	19	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	32
Total	0	61	0	0	1	0	1	0	0	56	0	0	0	0	0	0	0	119
Grand Total	0	117	1	0	2	0	2	0	2	118	0	0	1	0	0	0	0	243
Apprch %	0	99.2	0.8	0	50	0	50	0	1.7	98.3	0	0	100	0	0	0	0	
Total %	0	48.1	0.4	0	0.8	0	0.8	0	0.8	48.6	0	0	0.4	0	0	0	0	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	20	1	0	21	0	0	0	0	0	1	17	0	0	18	0	0	0	0	0	39
07:15 AM	0	12	0	0	12	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	30
07:30 AM	0	8	0	0	8	0	0	1	0	1	0	14	0	0	14	0	0	0	0	0	23
07:45 AM	0	16	0	0	16	1	0	0	0	1	1	13	0	0	14	1	0	0	0	1	32
Total Volume	0	56	1	0	57	1	0	1	0	2	2	62	0	0	64	1	0	0	0	1	124
% App. Total	0	98.2	1.8	0		50	0	50	0		3.1	96.9	0	0		100	0	0	0		
PHF	.000	.700	.250	.000	.679	.250	.000	.250	.000	.500	.500	.861	.000	.000	.889	.250	.000	.000	.000	.250	.795



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File Name : 123026 B
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	1	0	2	1	0	0	35	3	3	0	3	0	0	0	18	66
07:15 AM	0	5	0	4	0	0	0	47	2	3	1	10	0	0	0	13	85
07:30 AM	0	5	1	11	0	0	0	80	3	3	0	5	0	0	0	17	125
07:45 AM	0	4	5	3	0	0	0	73	1	11	0	10	0	0	0	31	138
Total	0	15	6	20	1	0	0	235	9	20	1	28	0	0	0	79	414
08:00 AM	0	5	2	2	0	0	0	43	1	9	0	9	0	0	0	16	87
08:15 AM	0	0	0	0	0	0	0	38	6	7	0	8	0	0	0	11	70
08:30 AM	0	8	0	2	0	0	0	37	6	13	0	10	0	0	0	12	88
08:45 AM	0	5	0	5	0	0	0	64	14	19	0	7	0	0	0	12	126
Total	0	18	2	9	0	0	0	182	27	48	0	34	0	0	0	51	371
Grand Total	0	33	8	29	1	0	0	417	36	68	1	62	0	0	0	130	785
Apprch %	0	47.1	11.4	41.4	0.2	0	0	99.8	21.6	40.7	0.6	37.1	0	0	0	100	
Total %	0	4.2	1	3.7	0.1	0	0	53.1	4.6	8.7	0.1	7.9	0	0	0	16.6	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	5	0	4	9	0	0	0	47	47	2	3	1	10	16	0	0	0	13	13	85
07:30 AM	0	5	1	11	17	0	0	0	80	80	3	3	0	5	11	0	0	0	17	17	125
07:45 AM	0	4	5	3	12	0	0	0	73	73	1	11	0	10	22	0	0	0	31	31	138
08:00 AM	0	5	2	2	9	0	0	0	43	43	1	9	0	9	19	0	0	0	16	16	87
Total Volume	0	19	8	20	47	0	0	0	243	243	7	26	1	34	68	0	0	0	77	77	435
% App. Total	0	40.4	17	42.6		0	0	0	100		10.3	38.2	1.5	50		0	0	0	100		
PHF	.000	.950	.400	.455	.691	.000	.000	.000	.759	.759	.583	.591	.250	.850	.773	.000	.000	.000	.621	.621	.788



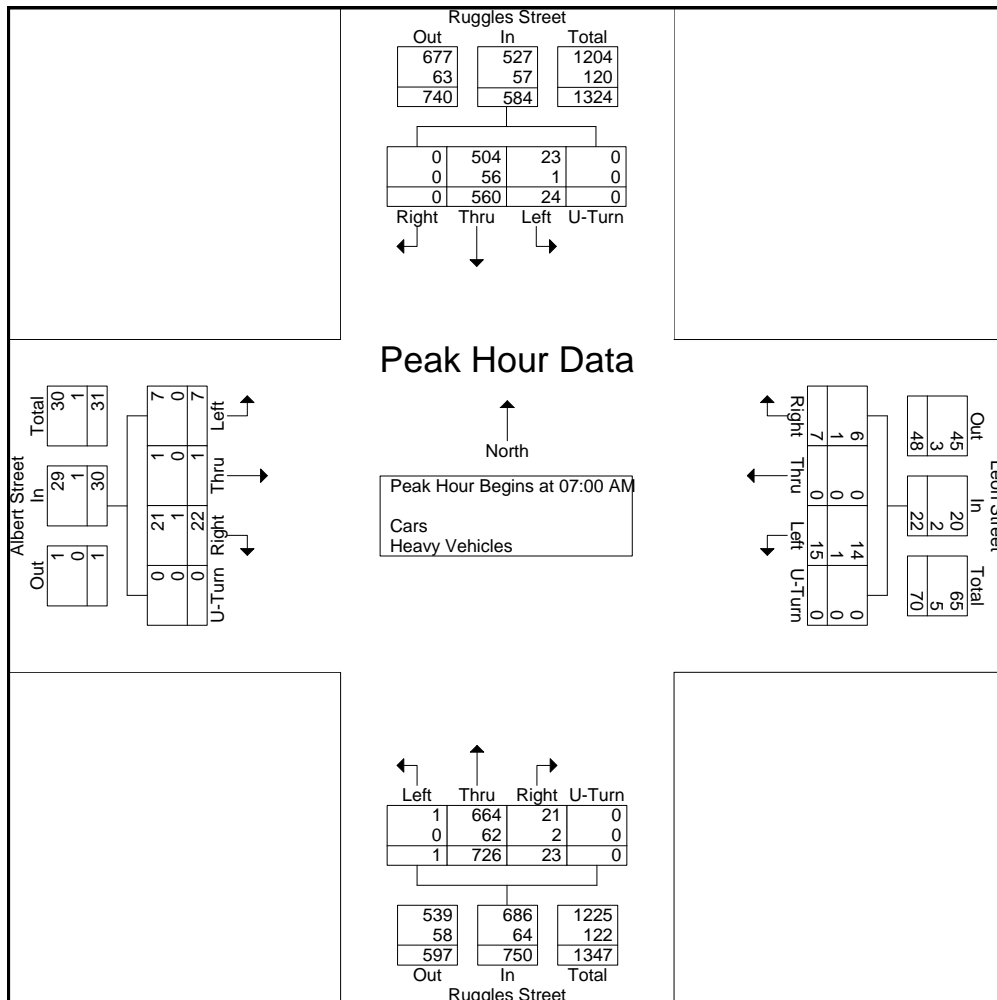
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N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	112	3	0	115	2	0	2	0	4	5	183	0	0	188	1	0	1	0	2	309
07:15 AM	0	148	4	0	152	1	0	4	0	5	5	177	0	0	182	5	0	0	0	5	344
07:30 AM	0	158	6	0	164	0	0	6	0	6	4	195	0	0	199	9	0	4	0	13	382
07:45 AM	0	142	11	0	153	4	0	3	0	7	9	171	1	0	181	7	1	2	0	10	351
Total Volume	0	560	24	0	584	7	0	15	0	22	23	726	1	0	750	22	1	7	0	30	1386
% App. Total	0	95.9	4.1	0		31.8	0	68.2	0		3.1	96.8	0.1	0		73.3	3.3	23.3	0		
PHF	.000	.886	.545	.000	.890	.438	.000	.625	.000	.786	.639	.931	.250	.000	.942	.611	.250	.438	.000	.577	.907
Cars	0	504	23	0	527	6	0	14	0	20	21	664	1	0	686	21	1	7	0	29	1262
% Cars	0	90.0	95.8	0	90.2	85.7	0	93.3	0	90.9	91.3	91.5	100	0	91.5	95.5	100	100	0	96.7	91.1
Heavy Vehicles	0	56	1	0	57	1	0	1	0	2	2	62	0	0	64	1	0	0	0	1	124
% Heavy Vehicles	0	10.0	4.2	0	9.8	14.3	0	6.7	0	9.1	8.7	8.5	0	0	8.5	4.5	0	0	0	3.3	8.9





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N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	167	4	0	18	0	14	0	1	153	0	0	8	0	0	0	365
04:15 PM	0	162	3	0	12	0	16	0	0	150	0	0	1	0	1	0	345
04:30 PM	0	134	6	0	6	0	18	0	0	172	0	0	4	0	1	0	341
04:45 PM	0	140	4	0	13	0	29	0	8	172	0	0	8	1	1	0	376
Total	0	603	17	0	49	0	77	0	9	647	0	0	21	1	3	0	1427
05:00 PM	0	146	1	0	19	0	18	0	3	168	0	0	3	0	0	0	358
05:15 PM	0	153	0	0	18	0	22	0	6	171	0	0	7	0	1	0	378
05:30 PM	0	146	0	0	12	0	21	0	5	191	0	0	2	0	0	0	377
05:45 PM	0	140	0	0	20	0	18	0	5	169	0	0	12	0	1	0	365
Total	0	585	1	0	69	0	79	0	19	699	0	0	24	0	2	0	1478
Grand Total	0	1188	18	0	118	0	156	0	28	1346	0	0	45	1	5	0	2905
Apprch %	0	98.5	1.5	0	43.1	0	56.9	0	2	98	0	0	88.2	2	9.8	0	
Total %	0	40.9	0.6	0	4.1	0	5.4	0	1	46.3	0	0	1.5	0	0.2	0	
Cars	0	1097	17	0	116	0	152	0	28	1246	0	0	45	1	5	0	2707
% Cars	0	92.3	94.4	0	98.3	0	97.4	0	100	92.6	0	0	100	100	100	0	93.2
Heavy Vehicles	0	91	1	0	2	0	4	0	0	100	0	0	0	0	0	0	198
% Heavy Vehicles	0	7.7	5.6	0	1.7	0	2.6	0	0	7.4	0	0	0	0	0	0	6.8

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	140	4	0	144	13	0	29	0	42	8	172	0	0	180	8	1	1	0	10	376
05:00 PM	0	146	1	0	147	19	0	18	0	37	3	168	0	0	171	3	0	0	0	3	358
05:15 PM	0	153	0	0	153	18	0	22	0	40	6	171	0	0	177	7	0	1	0	8	378
05:30 PM	0	146	0	0	146	12	0	21	0	33	5	191	0	0	196	2	0	0	0	2	377
Total Volume	0	585	5	0	590	62	0	90	0	152	22	702	0	0	724	20	1	2	0	23	1489
% App. Total	0	99.2	0.8	0		40.8	0	59.2	0		3	97	0	0		87	4.3	8.7	0		
PHF	.000	.956	.313	.000	.964	.816	.000	.776	.000	.905	.688	.919	.000	.000	.923	.625	.250	.500	.000	.575	.985
Cars	0	546	5	0	551	62	0	88	0	150	22	661	0	0	683	20	1	2	0	23	1407
% Cars	0	93.3	100	0	93.4	100	0	97.8	0	98.7	100	94.2	0	0	94.3	100	100	100	0	100	94.5
Heavy Vehicles	0	39	0	0	39	0	0	2	0	2	0	41	0	0	41	0	0	0	0	0	82
% Heavy Vehicles	0	6.7	0	0	6.6	0	0	2.2	0	1.3	0	5.8	0	0	5.7	0	0	0	0	0	5.5



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File Name : 123026 BB
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	153	4	0	18	0	14	0	1	135	0	0	8	0	0	0	333
04:15 PM	0	143	2	0	12	0	14	0	0	132	0	0	1	0	1	0	305
04:30 PM	0	124	6	0	5	0	18	0	0	160	0	0	4	0	1	0	318
04:45 PM	0	127	4	0	13	0	28	0	8	163	0	0	8	1	1	0	353
Total	0	547	16	0	48	0	74	0	9	590	0	0	21	1	3	0	1309
05:00 PM	0	135	1	0	19	0	17	0	3	155	0	0	3	0	0	0	333
05:15 PM	0	147	0	0	18	0	22	0	6	161	0	0	7	0	1	0	362
05:30 PM	0	137	0	0	12	0	21	0	5	182	0	0	2	0	0	0	359
05:45 PM	0	131	0	0	19	0	18	0	5	158	0	0	12	0	1	0	344
Total	0	550	1	0	68	0	78	0	19	656	0	0	24	0	2	0	1398
Grand Total	0	1097	17	0	116	0	152	0	28	1246	0	0	45	1	5	0	2707
Apprch %	0	98.5	1.5	0	43.3	0	56.7	0	2.2	97.8	0	0	88.2	2	9.8	0	
Total %	0	40.5	0.6	0	4.3	0	5.6	0	1	46	0	0	1.7	0	0.2	0	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	127	4	0	131	13	0	28	0	41	8	163	0	0	171	8	1	1	0	10	353
05:00 PM	0	135	1	0	136	19	0	17	0	36	3	155	0	0	158	3	0	0	0	3	333
05:15 PM	0	147	0	0	147	18	0	22	0	40	6	161	0	0	167	7	0	1	0	8	362
05:30 PM	0	137	0	0	137	12	0	21	0	33	5	182	0	0	187	2	0	0	0	2	359
Total Volume	0	546	5	0	551	62	0	88	0	150	22	661	0	0	683	20	1	2	0	23	1407
% App. Total	0	99.1	0.9	0		41.3	0	58.7	0		3.2	96.8	0	0		87	4.3	8.7	0		
PHF	.000	.929	.313	.000	.937	.816	.000	.786	.000	.915	.688	.908	.000	.000	.913	.625	.250	.500	.000	.575	.972



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N/S: Ruggles Street
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City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	3	1	10	0	0	2	56	2	7	0	2	1	0	0	17	101
04:15 PM	0	7	0	8	0	0	7	72	0	6	0	10	0	0	0	12	122
04:30 PM	0	7	1	11	1	0	4	95	0	4	0	15	0	0	0	16	154
04:45 PM	0	8	0	4	2	0	5	133	2	5	0	15	0	1	1	13	189
Total	0	25	2	33	3	0	18	356	4	22	0	42	1	1	1	58	566
05:00 PM	0	10	0	13	0	0	2	120	1	1	0	13	1	0	0	19	180
05:15 PM	0	10	0	10	3	1	3	98	2	7	0	4	0	0	0	26	164
05:30 PM	0	8	0	8	0	0	5	77	0	7	0	9	0	0	0	7	121
05:45 PM	0	9	0	9	3	0	1	50	2	5	0	7	0	0	1	23	110
Total	0	37	0	40	6	1	11	345	5	20	0	33	1	0	1	75	575
Grand Total	0	62	2	73	9	1	29	701	9	42	0	75	2	1	2	133	1141
Apprch %	0	45.3	1.5	53.3	1.2	0.1	3.9	94.7	7.1	33.3	0	59.5	1.4	0.7	1.4	96.4	
Total %	0	5.4	0.2	6.4	0.8	0.1	2.5	61.4	0.8	3.7	0	6.6	0.2	0.1	0.2	11.7	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	7	1	11	19	1	0	4	95	100	0	4	0	15	19	0	0	0	16	16	154
04:45 PM	0	8	0	4	12	2	0	5	133	140	2	5	0	15	22	0	1	1	13	15	189
05:00 PM	0	10	0	13	23	0	0	2	120	122	1	1	0	13	15	1	0	0	19	20	180
05:15 PM	0	10	0	10	20	3	1					7	0	4	13	0	0	0	26	26	
Total Volume	0	35	1	38	74	6	1	14	446	467	5	17	0	47	69	1	1	1	74	77	687
% App. Total	0	47.3	1.4	51.4		1.3	0.2	3	95.5		7.2	24.6	0	68.1		1.3	1.3	1.3	96.1		
PHF	.000	.875	.250	.731	.804	.500	.250	.700	.838	.834	.625	.607	.000	.783	.784	.250	.250	.250	.712	.740	.909



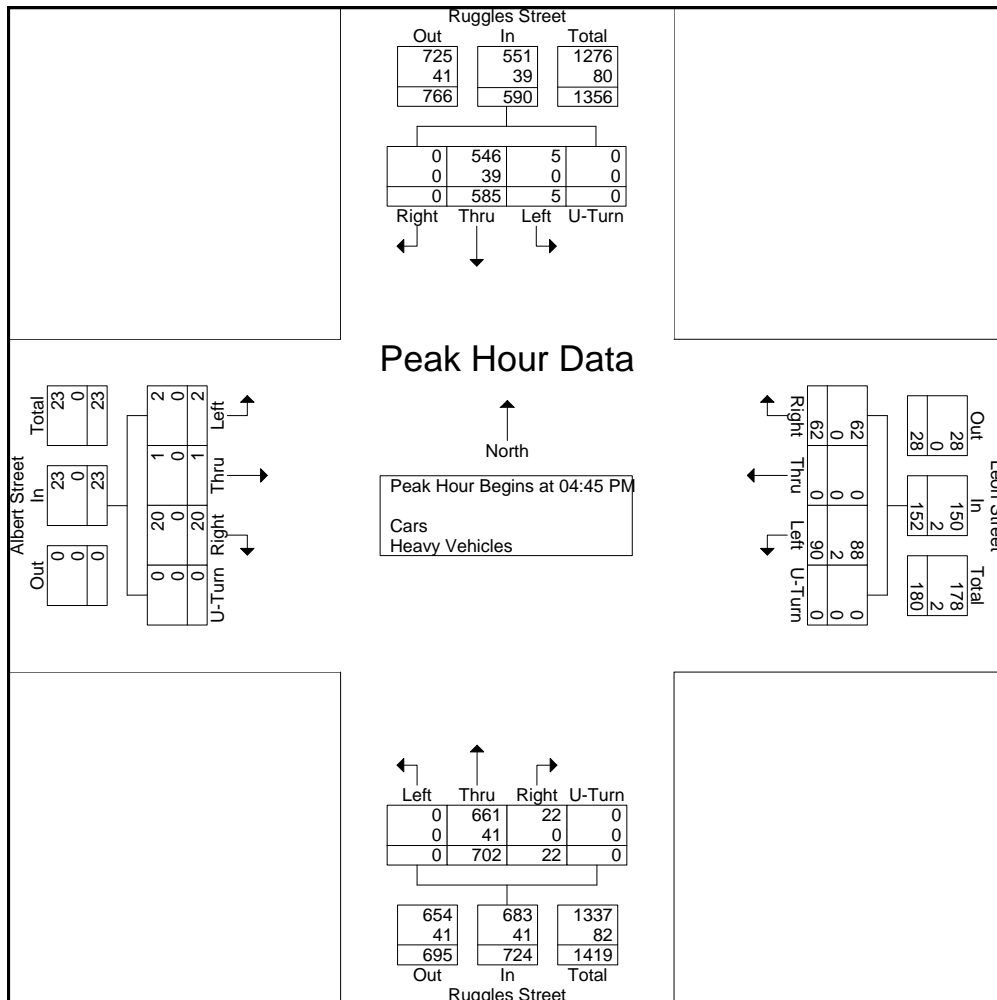
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Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	140	4	0	144	13	0	29	0	42	8	172	0	0	180	8	1	1	0	10	376
05:00 PM	0	146	1	0	147	19	0	18	0	37	3	168	0	0	171	3	0	0	0	3	358
05:15 PM	0	153	0	0	153	18	0	22	0	40	6	171	0	0	177	7	0	1	0	8	378
05:30 PM	0	146	0	0	146	12	0	21	0	33	5	191	0	0	196	2	0	0	0	2	377
Total Volume	0	585	5	0	590	62	0	90	0	152	22	702	0	0	724	20	1	2	0	23	1489
% App. Total	0	99.2	0.8	0		40.8	0	59.2	0		3	97	0	0		87	4.3	8.7	0		
PHF	.000	.956	.313	.000	.964	.816	.000	.776	.000	.905	.688	.919	.000	.000	.923	.625	.250	.500	.000	.575	.985
Cars	0	546	5	0	551	62	0	88	0	150	22	661	0	0	683	20	1	2	0	23	1407
% Cars	0	93.3	100	0	93.4	100	0	97.8	0	98.7	100	94.2	0	0	94.3	100	100	100	0	100	94.5
Heavy Vehicles	0	39	0	0	39	0	0	2	0	2	0	41	0	0	41	0	0	0	0	0	82
% Heavy Vehicles	0	6.7	0	0	6.6	0	0	2.2	0	1.3	0	5.8	0	0	5.7	0	0	0	0	0	5.5





PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
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File Name : 123026 D redo
Site Code : 2011046
Start Date : 10/23/2012
Page No : 1

N/S: Ruggles Street
E/W: MBTA Bus Exit/ SW Corridor Path
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles - Bicycles on Road

Start Time	Ruggles Street From North				MBTA Bus Exit From East				Ruggles Street From South				SW Corridor Path From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
07:00 AM	0	118	0	0	5	0	19	0	0	182	0	0	0	0	0	0	0	324
07:15 AM	0	153	0	0	8	0	18	0	0	210	0	0	0	0	0	0	0	389
07:30 AM	0	139	0	0	3	0	15	0	0	216	0	0	0	0	0	0	0	373
07:45 AM	0	158	0	0	8	0	20	0	0	186	0	0	0	0	0	0	0	372
Total	0	568	0	0	24	0	72	0	0	794	0	0	0	0	0	0	0	1458
08:00 AM	0	136	0	0	6	0	19	0	0	165	0	0	0	0	0	0	0	326
08:15 AM	0	103	0	0	6	0	11	0	0	204	0	0	0	0	0	0	0	324
08:30 AM	0	127	0	0	6	0	23	0	0	178	0	0	0	0	0	0	0	334
08:45 AM	0	104	0	0	6	0	13	0	0	192	0	0	0	0	0	0	0	315
Total	0	470	0	0	24	0	66	0	0	739	0	0	0	0	0	0	0	1299
Grand Total	0	1038	0	0	48	0	138	0	0	1533	0	0	0	0	0	0	0	2757
Apprch %	0	100	0	0	25.8	0	74.2	0	0	100	0	0	0	0	0	0	0	
Total %	0	37.6	0	0	1.7	0	5	0	0	55.6	0	0	0	0	0	0	0	
Cars	0	935	0	0	7	0	5	0	0	1324	0	0	0	0	0	0	0	2271
% Cars	0	90.1	0	0	14.6	0	3.6	0	0	86.4	0	0	0	0	0	0	0	82.4
Heavy Vehicles	0	94	0	0	40	0	133	0	0	193	0	0	0	0	0	0	0	460
% Heavy Vehicles	0	9.1	0	0	83.3	0	96.4	0	0	12.6	0	0	0	0	0	0	0	16.7
Bicycles on Road	0	9	0	0	1	0	0	0	0	16	0	0	0	0	0	0	0	26
% Bicycles on Road	0	0.9	0	0	2.1	0	0	0	0	1	0	0	0	0	0	0	0	0.9

Start Time	Ruggles Street From North					MBTA Bus Exit From East					Ruggles Street From South					SW Corridor Path From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	153	0	0	153	8	0	18	0	26	0	210	0	0	210	0	0	0	0	0	389
07:30 AM	0	139	0	0	139	3	0	15	0	18	0	216	0	0	216	0	0	0	0	0	373
07:45 AM	0	158	0	0	158	8	0	20	0	28	0	186	0	0	186	0	0	0	0	0	372
08:00 AM	0	136	0	0	136	6	0	19	0	25	0	165	0	0	165	0	0	0	0	0	326
Total Volume	0	586	0	0	586	25	0	72	0	97	0	777	0	0	777	0	0	0	0	0	1460
% App. Total	0	100	0	0		25.8	0	74.2	0		0	100	0	0		0	0	0	0	0	
PHF	.000	.927	.000	.000	.927	.781	.000	.900	.000	.866	.000	.899	.000	.000	.899	.000	.000	.000	.000	.000	.938
Cars	0	541	0	0	541	3	0	3	0	6	0	678	0	0	678	0	0	0	0	0	1225
% Cars	0	92.3	0	0	92.3	12.0	0	4.2	0	6.2	0	87.3	0	0	87.3	0	0	0	0	0	83.9
Heavy Vehicles	0	40	0	0	40	22	0	69	0	91	0	94	0	0	94	0	0	0	0	0	225
% Heavy Vehicles	0	6.8	0	0	6.8	88.0	0	95.8	0	93.8	0	12.1	0	0	12.1	0	0	0	0	0	15.4
Bicycles on Road	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10
% Bicycles on Road	0	0.9	0	0	0.9	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0.7



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N/S: Ruggles Street
E/W: MBTA Bus Exit/ SW Corridor Path
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 D redo
Site Code : 2011046
Start Date : 10/23/2012
Page No : 1

Groups Printed- Bicycles in Crosswalk

Start Time	Ruggles Street From North					MBTA Bus Exit From East					Ruggles Street From South					SW Corridor Path From West					Int. Total
	Right	Thru	Left	Bikes CW	Bikes CCW	Right	Thru	Left	Bikes CW	Bikes CCW	Right	Thru	Left	Bikes CW	Bikes CCW	Right	Thru	Left	Bikes CW	Bikes CCW	
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	14	0	0	0	3	0	21
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	29	0	0	0	2	1	35
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	4	21	0	0	0	6	1	34
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	30	0	0	0	6	1	40
Total	0	0	0	0	0	0	0	0	0	3	0	0	0	13	94	0	0	0	17	3	130
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	42	0	0	0	10	0	53
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	48	0	0	0	9	2	64
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	45	0	0	0	12	4	65
08:45 AM	0	0	0	0	0	0	0	0	2	0	0	0	0	9	57	0	0	0	18	0	86
Total	0	0	0	0	0	0	0	0	2	0	0	0	0	19	192	0	0	0	49	6	268
Grand Total	0	0	0	0	0	0	0	0	2	3	0	0	0	32	286	0	0	0	66	9	398
Apprch %	0	0	0	0	0	0	0	0	40	60	0	0	0	10.1	89.9	0	0	0	88	12	
Total %	0	0	0	0	0	0	0	0	0.5	0.8	0	0	0	8	71.9	0	0	0	16.6	2.3	

Start Time	Ruggles Street From North						MBTA Bus Exit From East						Ruggles Street From South						SW Corridor Path From West						Int. Total
	Right	Thru	Left	Bikes CW	Bikes CCW	App. Total	Right	Thru	Left	Bikes CW	Bikes CCW	App. Total	Right	Thru	Left	Bikes CW	Bikes CCW	App. Total	Right	Thru	Left	Bikes CW	Bikes CCW	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 08:00 AM																									
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	42	43	0	0	0	10	0	10	53
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	48	53	0	0	0	9	2	11	64
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	45	49	0	0	0	12	4	16	65
08:45 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	9	57	66	0	0	0	18	0	18	86
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	19	192	211	0	0	0	49	6	55	268
% App. Total	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	9	91	0	0	0	89.1	10.9			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.528	.842	.799	.000	.000	.000	.681	.375	.764	.779



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E/W: MBTA Bus Exit/ SW Corridor Path
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 D redo
Site Code : 2011046
Start Date : 10/23/2012
Page No : 1

Groups Printed- Pedestrians

Start Time	Ruggles Street From North					MBTA Bus Exit From East					Ruggles Street From South					SW Corridor Path From West					Int. Total
	Right	Thru	Left	Peds CW	Peds CCW	Right	Thru	Left	Peds CW	Peds CCW	Right	Thru	Left	Peds CW	Peds CCW	Right	Thru	Left	Peds CW	Peds CCW	
07:00 AM	0	0	0	0	4	0	0	0	0	4	0	0	0	2	4	0	0	0	4	4	22
07:15 AM	0	0	0	4	3	0	0	0	1	0	0	0	0	1	6	0	0	0	4	4	23
07:30 AM	0	0	0	2	6	0	0	0	0	4	0	0	0	1	3	0	0	0	3	5	24
07:45 AM	0	0	0	2	6	0	0	0	2	18	0	0	0	8	3	0	0	0	4	10	53
Total	0	0	0	8	19	0	0	0	3	26	0	0	0	12	16	0	0	0	15	23	122
08:00 AM	0	0	0	1	9	0	0	0	2	5	0	0	0	7	2	0	0	0	5	8	39
08:15 AM	0	0	0	4	5	0	0	0	3	4	0	0	0	2	5	0	0	0	6	10	39
08:30 AM	0	0	0	2	5	0	0	0	1	3	0	0	0	8	10	0	0	0	6	8	43
08:45 AM	0	0	0	2	7	0	0	0	1	7	0	0	0	4	7	0	0	0	6	14	48
Total	0	0	0	9	26	0	0	0	7	19	0	0	0	21	24	0	0	0	23	40	169
Grand Total	0	0	0	17	45	0	0	0	10	45	0	0	0	33	40	0	0	0	38	63	291
Apprch %	0	0	0	27.4	72.6	0	0	0	18.2	81.8	0	0	0	45.2	54.8	0	0	0	37.6	62.4	
Total %	0	0	0	5.8	15.5	0	0	0	3.4	15.5	0	0	0	11.3	13.7	0	0	0	13.1	21.6	

Start Time	Ruggles Street From North						MBTA Bus Exit From East						Ruggles Street From South						SW Corridor Path From West						Int. Total
	Right	Thru	Left	Peds CW	Peds CCW	App. Total	Right	Thru	Left	Peds CW	Peds CCW	App. Total	Right	Thru	Left	Peds CW	Peds CCW	App. Total	Right	Thru	Left	Peds CW	Peds CCW	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 07:45 AM																									
07:45 AM	0	0	0	2	6	8	0	0	0	2	18	20	0	0	0	8	3	11	0	0	0	4	10	14	53
08:00 AM	0	0	0	1	9	10	0	0	0	2	5	7	0	0	0	7	2	9	0	0	0	5	8	13	39
08:15 AM	0	0	0	4	5	9	0	0	0	3	4	7	0	0	0	2	5	7	0	0	0	6	10	16	39
08:30 AM	0	0	0	2	5	7	0	0	0	1	3	4	0	0	0	8	10	18	0	0	0	6	8	14	43
Total Volume	0	0	0	9	25	34	0	0	0	8	30	38	0	0	0	25	20	45	0	0	0	21	36	57	174
% App. Total	0	0	0	26.5	73.5	0	0	0	21.1	78.9	0	0	0	55.6	44.4	0	0	0	36.8	63.2					
PHF	.000	.000	.000	.563	.694	.850	.000	.000	.000	.667	.417	.475	.000	.000	.000	.781	.500	.625	.000	.000	.000	.875	.900	.891	.821



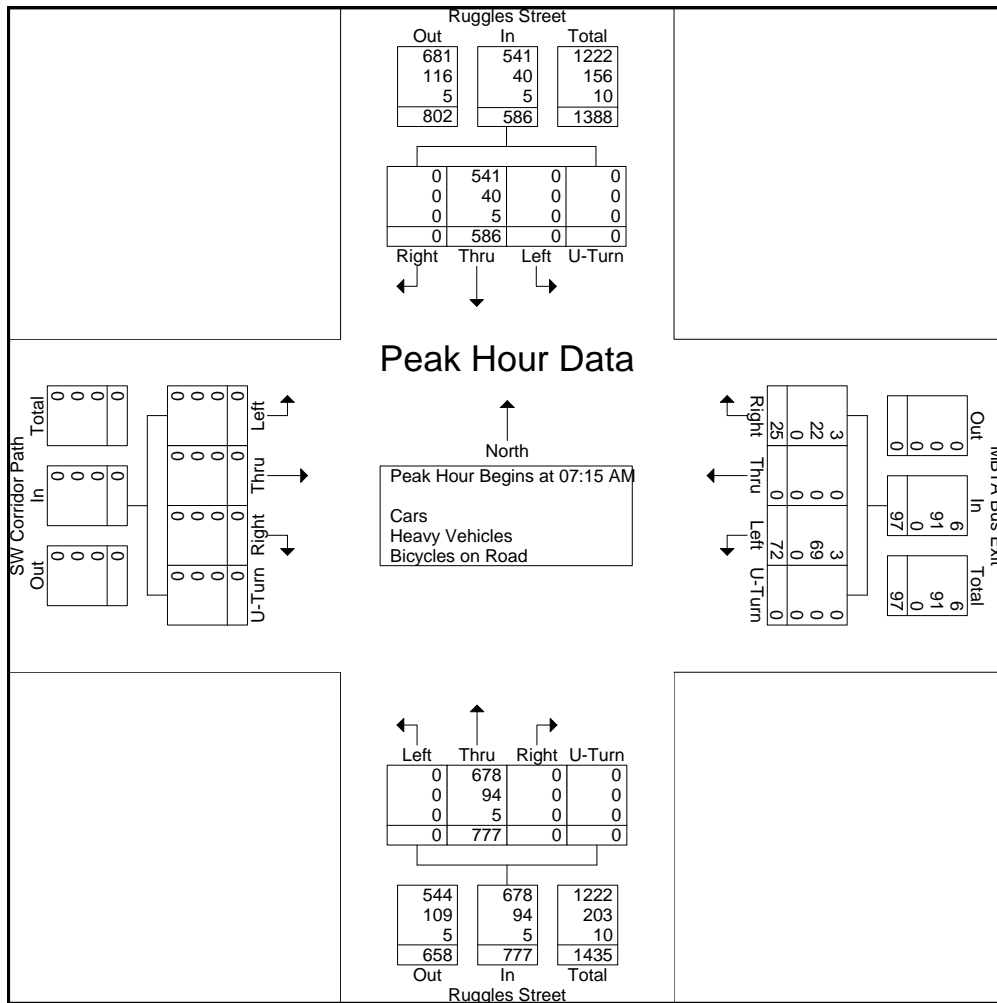
PRECISION
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N/S: Ruggles Street
E/W: MBTA Bus Exit/ SW Corridor Path
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 D redo
Site Code : 2011046
Start Date : 10/23/2012
Page No : 1

Start Time	Ruggles Street From North					MBTA Bus Exit From East					Ruggles Street From South					SW Corridor Path From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	153	0	0	153	8	0	18	0	26	0	210	0	0	210	0	0	0	0	0	389
07:30 AM	0	139	0	0	139	3	0	15	0	18	0	216	0	0	216	0	0	0	0	0	373
07:45 AM	0	158	0	0	158	8	0	20	0	28	0	186	0	0	186	0	0	0	0	0	372
08:00 AM	0	136	0	0	136	6	0	19	0	25	0	165	0	0	165	0	0	0	0	0	326
Total Volume	0	586	0	0	586	25	0	72	0	97	0	777	0	0	777	0	0	0	0	0	1460
% App. Total	0	100	0	0		25.8	0	74.2	0		0	100	0	0		0	0	0	0		
PHF	.000	.927	.000	.000	.927	.781	.000	.900	.000	.866	.000	.899	.000	.000	.899	.000	.000	.000	.000	.000	.938
Cars	0	541	0	0	541	3	0	3	0	6	0	678	0	0	678	0	0	0	0	0	1225
% Cars	0	92.3	0	0	92.3	12.0	0	4.2	0	6.2	0	87.3	0	0	87.3	0	0	0	0	0	83.9
Heavy Vehicles	0	40	0	0	40	22	0	69	0	91	0	94	0	0	94	0	0	0	0	0	225
% Heavy Vehicles	0	6.8	0	0	6.8	88.0	0	95.8	0	93.8	0	12.1	0	0	12.1	0	0	0	0	0	15.4
Bicycles on Road	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10
% Bicycles on Road	0	0.9	0	0	0.9	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0.7





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N/S: Ruggles Street
E/W: MBTA Bus Exit/ SW Corridor Path
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 DD redo
Site Code : 2011046
Start Date : 10/23/2012
Page No : 1

Groups Printed- Cars - Heavy Vehicles - Bicycles

Start Time	Ruggles Street From North				MBTA Bus Exit From East				Ruggles Street From South				SW Corridor Path From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	173	0	0	8	0	14	0	1	160	0	0	0	0	0	0	356
04:15 PM	0	180	0	0	10	0	20	0	0	156	0	0	0	0	0	0	366
04:30 PM	0	188	0	0	5	0	15	0	0	137	0	0	0	0	0	0	345
04:45 PM	0	179	0	0	9	0	12	0	0	171	0	0	0	0	0	0	371
Total	0	720	0	0	32	0	61	0	1	624	0	0	0	0	0	0	1438
05:00 PM	0	170	0	0	4	0	23	0	0	156	0	0	0	0	0	0	353
05:15 PM	0	204	0	0	6	0	15	0	0	174	0	0	0	0	0	0	399
05:30 PM	0	184	0	0	5	0	17	0	0	170	0	0	0	0	0	0	376
05:45 PM	0	171	0	0	5	0	15	0	0	162	0	0	0	0	0	0	353
Total	0	729	0	0	20	0	70	0	0	662	0	0	0	0	0	0	1481
Grand Total	0	1449	0	0	52	0	131	0	1	1286	0	0	0	0	0	0	2919
Apprch %	0	100	0	0	28.4	0	71.6	0	0.1	99.9	0	0	0	0	0	0	
Total %	0	49.6	0	0	1.8	0	4.5	0	0	44.1	0	0	0	0	0	0	
Cars	0	1390	0	0	10	0	16	0	0	1143	0	0	0	0	0	0	2559
% Cars	0	95.9	0	0	19.2	0	12.2	0	0	88.9	0	0	0	0	0	0	87.7
Heavy Vehicles	0	42	0	0	42	0	114	0	1	131	0	0	0	0	0	0	330
% Heavy Vehicles	0	2.9	0	0	80.8	0	87	0	100	10.2	0	0	0	0	0	0	11.3
Bicycles	0	17	0	0	0	0	1	0	0	12	0	0	0	0	0	0	30
% Bicycles	0	1.2	0	0	0	0	0.8	0	0	0.9	0	0	0	0	0	0	1

Start Time	Ruggles Street From North					MBTA Bus Exit From East					Ruggles Street From South					SW Corridor Path From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	179	0	0	179	9	0	12	0	21	0	171	0	0	171	0	0	0	0	0	371
05:00 PM	0	170	0	0	170	4	0	23	0	27	0	156	0	0	156	0	0	0	0	0	353
05:15 PM	0	204	0	0	204	6	0	15	0	21	0	174	0	0	174	0	0	0	0	0	399
05:30 PM	0	184	0	0	184	5	0	17	0	22	0	170	0	0	170	0	0	0	0	0	376
Total Volume	0	737	0	0	737	24	0	67	0	91	0	671	0	0	671	0	0	0	0	0	1499
% App. Total	0	100	0	0		26.4	0	73.6	0		0	100	0	0		0	0	0	0	0	
PHF	.000	.903	.000	.000	.903	.667	.000	.728	.000	.843	.000	.964	.000	.000	.964	.000	.000	.000	.000	.000	.939
Cars	0	706	0	0	706	6	0	10	0	16	0	603	0	0	603	0	0	0	0	0	1325
% Cars	0	95.8	0	0	95.8	25.0	0	14.9	0	17.6	0	89.9	0	0	89.9	0	0	0	0	0	88.4
Heavy Vehicles	0	20	0	0	20	18	0	56	0	74	0	63	0	0	63	0	0	0	0	0	157
% Heavy Vehicles	0	2.7	0	0	2.7	75.0	0	83.6	0	81.3	0	9.4	0	0	9.4	0	0	0	0	0	10.5
Bicycles	0	11	0	0	11	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	17
% Bicycles	0	1.5	0	0	1.5	0	0	1.5	0	1.1	0	0.7	0	0	0.7	0	0	0	0	0	1.1



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E/W: MBTA Bus Exit/ SW Corridor Path
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 DD redo
Site Code : 2011046
Start Date : 10/23/2012
Page No : 1

Groups Printed- Bicycles in Crosswalk

Start Time	Ruggles Street From North					MBTA Bus Exit From East					Ruggles Street From South					SW Corridor Path From West					Int. Total
	Right	Thru	Left	Bikes CW	Bikes CCW	Right	Thru	Left	Bikes CW	Bikes CCW	Right	Thru	Left	Bikes CW	Bikes CCW	Right	Thru	Left	Bikes CW	Bikes CCW	
04:00 PM	0	0	0	0	0	0	0	0	4	1	0	0	0	8	2	0	0	0	1	4	20
04:15 PM	0	0	0	0	0	0	0	0	4	4	0	0	0	17	9	0	0	0	2	5	41
04:30 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	18	7	0	0	0	0	5	34
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	32	11	0	0	0	6	8	59
Total	0	0	0	0	0	0	0	0	10	9	0	0	0	75	29	0	0	0	9	22	154
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	36	10	0	0	0	3	7	57
05:15 PM	0	0	0	0	1	0	0	0	3	5	0	0	0	47	7	0	0	0	3	5	71
05:30 PM	0	0	0	0	3	0	0	0	1	2	0	0	0	45	10	0	0	0	3	7	71
05:45 PM	0	0	0	0	1	0	0	0	1	1	0	0	0	41	7	0	0	0	2	6	59
Total	0	0	0	0	5	0	0	0	5	9	0	0	0	169	34	0	0	0	11	25	258
Grand Total	0	0	0	0	5	0	0	0	15	18	0	0	0	244	63	0	0	0	20	47	412
Apprch %	0	0	0	0	100	0	0	0	45.5	54.5	0	0	0	79.5	20.5	0	0	0	29.9	70.1	
Total %	0	0	0	0	1.2	0	0	0	3.6	4.4	0	0	0	59.2	15.3	0	0	0	4.9	11.4	

Start Time	Ruggles Street From North						MBTA Bus Exit From East						Ruggles Street From South						SW Corridor Path From West						Int. Total
	Right	Thru	Left	Bikes CW	Bikes CCW	App. Total	Right	Thru	Left	Bikes CW	Bikes CCW	App. Total	Right	Thru	Left	Bikes CW	Bikes CCW	App. Total	Right	Thru	Left	Bikes CW	Bikes CCW	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:45 PM																									
04:45 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	32	11	43	0	0	0	6	8	14	59
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	36	10	46	0	0	0	3	7	10	57
05:15 PM	0	0	0	0	1	1	0	0	0	3	5	8	0	0	0	47	7	54	0	0	0	3	5	8	71
05:30 PM	0	0	0	0	3	3	0	0	0	1	2	3	0	0	0	45	10	55	0	0	0	3	7	10	71
Total Volume	0	0	0	0	4	4	0	0	0	4	10	14	0	0	0	160	38	198	0	0	0	15	27	42	258
% App. Total	0	0	0	0	100	0	0	0	28.6	71.4	0	0	0	80.8	19.2	0	0	0	35.7	64.3					
PHF	.000	.000	.000	.000	.333	.333	.000	.000	.000	.333	.500	.438	.000	.000	.000	.851	.864	.900	.000	.000	.000	.625	.844	.750	.908



PRECISION
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INDUSTRIES, LLC

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N/S: Ruggles Street
E/W: MBTA Bus Exit/ SW Corridor Path
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 DD redo
Site Code : 2011046
Start Date : 10/23/2012
Page No : 1

Groups Printed- Pedestrians

Start Time	Ruggles Street From North					MBTA Bus Exit From East					Ruggles Street From South					SW Corridor Path From West					Int. Total
	Right	Thru	Left	Peds CW	Peds CCW	Right	Thru	Left	Peds CW	Peds CCW	Right	Thru	Left	Peds CW	Peds CCW	Right	Thru	Left	Peds CW	Peds CCW	
04:00 PM	0	0	0	19	6	0	0	0	3	6	0	0	0	2	12	0	0	0	19	9	76
04:15 PM	0	0	0	10	5	0	0	0	7	11	0	0	0	8	2	0	0	0	11	4	58
04:30 PM	0	0	0	10	2	0	0	0	5	10	0	0	0	6	5	0	0	0	18	2	58
04:45 PM	0	0	0	7	3	0	0	0	7	7	0	0	0	4	7	0	0	0	6	9	50
Total	0	0	0	46	16	0	0	0	22	34	0	0	0	20	26	0	0	0	54	24	242
05:00 PM	0	0	0	13	4	0	0	0	19	19	0	0	0	7	10	0	0	0	9	7	88
05:15 PM	0	0	0	7	3	0	0	0	6	18	0	0	0	8	4	0	0	0	7	4	57
05:30 PM	0	0	0	2	1	0	0	0	22	9	0	0	0	5	5	0	0	0	2	10	56
05:45 PM	0	0	0	2	2	0	0	0	10	5	0	0	0	6	11	0	0	0	6	3	45
Total	0	0	0	24	10	0	0	0	57	51	0	0	0	26	30	0	0	0	24	24	246
Grand Total	0	0	0	70	26	0	0	0	79	85	0	0	0	46	56	0	0	0	78	48	488
Apprch %	0	0	0	72.9	27.1	0	0	0	48.2	51.8	0	0	0	45.1	54.9	0	0	0	61.9	38.1	
Total %	0	0	0	14.3	5.3	0	0	0	16.2	17.4	0	0	0	9.4	11.5	0	0	0	16	9.8	

Start Time	Ruggles Street From North						MBTA Bus Exit From East						Ruggles Street From South						SW Corridor Path From West						Int. Total
	Right	Thru	Left	Peds CW	Peds CCW	App. Total	Right	Thru	Left	Peds CW	Peds CCW	App. Total	Right	Thru	Left	Peds CW	Peds CCW	App. Total	Right	Thru	Left	Peds CW	Peds CCW	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 04:15 PM																									
04:15 PM	0	0	0	10	5	15	0	0	0	7	11	18	0	0	0	8	2	10	0	0	0	11	4	15	58
04:30 PM	0	0	0	10	2	12	0	0	0	5	10	15	0	0	0	6	5	11	0	0	0	18	2	20	58
04:45 PM	0	0	0	7	3	10	0	0	0	7	7	14	0	0	0	4	7	11	0	0	0	6	9	15	50
05:00 PM	0	0	0	13	4	17	0	0	0	19	19	38	0	0	0	7	10	17	0	0	0	9	7	16	88
Total Volume	0	0	0	40	14	54	0	0	0	38	47	85	0	0	0	25	24	49	0	0	0	44	22	66	254
% App. Total	0	0	0	74.1	25.9	0	0	0	44.7	55.3	0	0	0	51	49	0	0	0	66.7	33.3					
PHF	.000	.000	.000	.769	.700	.794	.000	.000	.000	.500	.618	.559	.000	.000	.000	.781	.600	.721	.000	.000	.000	.611	.611	.825	.722



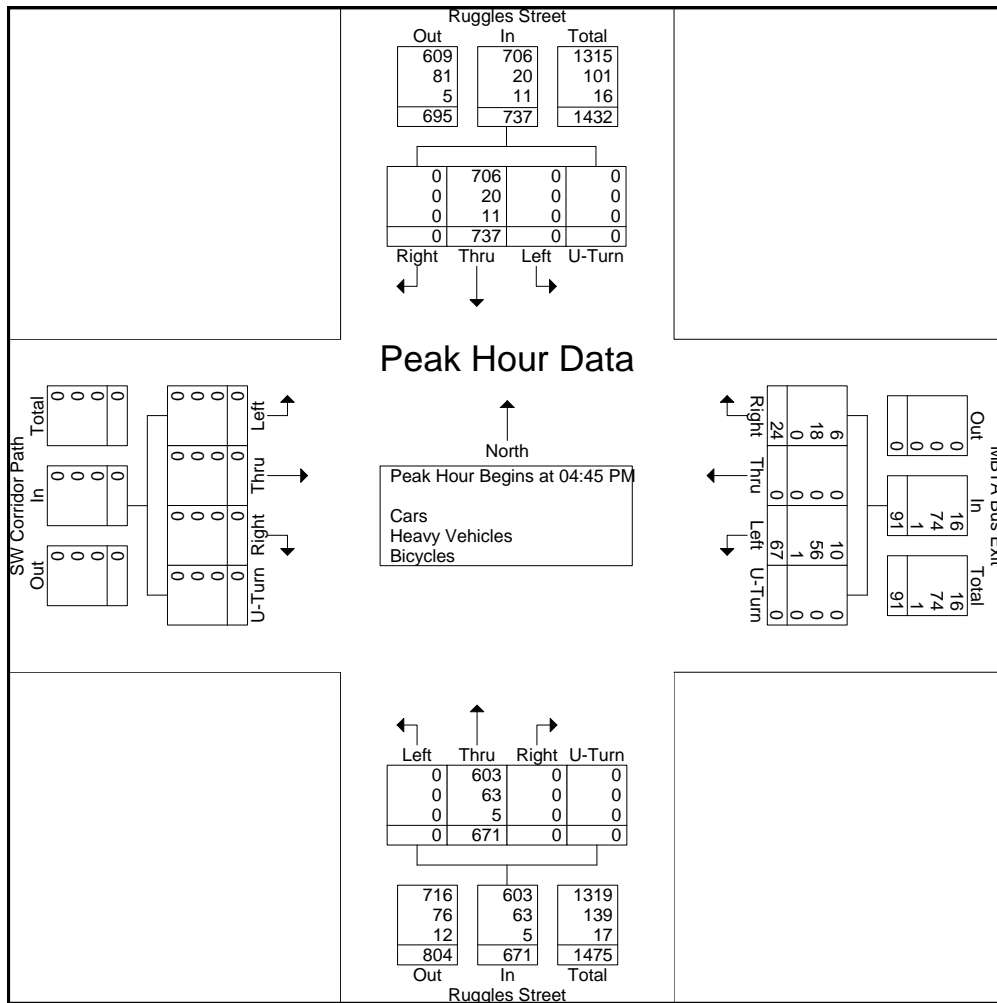
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N/S: Ruggles Street
E/W: MBTA Bus Exit/ SW Corridor Path
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 DD redo
Site Code : 2011046
Start Date : 10/23/2012
Page No : 1

Start Time	Ruggles Street From North					MBTA Bus Exit From East					Ruggles Street From South					SW Corridor Path From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	179	0	0	179	9	0	12	0	21	0	171	0	0	171	0	0	0	0	0	371
05:00 PM	0	170	0	0	170	4	0	23	0	27	0	156	0	0	156	0	0	0	0	0	353
05:15 PM	0	204	0	0	204	6	0	15	0	21	0	174	0	0	174	0	0	0	0	0	399
05:30 PM	0	184	0	0	184	5	0	17	0	22	0	170	0	0	170	0	0	0	0	0	376
Total Volume	0	737	0	0	737	24	0	67	0	91	0	671	0	0	671	0	0	0	0	0	1499
% App. Total	0	100	0	0		26.4	0	73.6	0		0	100	0	0		0	0	0	0		
PHF	.000	.903	.000	.000	.903	.667	.000	.728	.000	.843	.000	.964	.000	.000	.964	.000	.000	.000	.000	.000	.939
Cars	0	706	0	0	706	6	0	10	0	16	0	603	0	0	603	0	0	0	0	0	1325
% Cars	0	95.8	0	0	95.8	25.0	0	14.9	0	17.6	0	89.9	0	0	89.9	0	0	0	0	0	88.4
Heavy Vehicles	0	20	0	0	20	18	0	56	0	74	0	63	0	0	63	0	0	0	0	0	157
% Heavy Vehicles	0	2.7	0	0	2.7	75.0	0	83.6	0	81.3	0	9.4	0	0	9.4	0	0	0	0	0	10.5
Bicycles	0	11	0	0	11	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	17
% Bicycles	0	1.5	0	0	1.5	0	0	1.5	0	1.1	0	0.7	0	0	0.7	0	0	0	0	0	1.1





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N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 E
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars

Start Time	Ruggles Street From North				Tremont Street From East				Whittier Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	8	0	92	0	120	147	0	1	4	8	6	0	0	247	37	0	670
07:15 AM	27	0	111	0	126	157	0	0	3	8	9	0	0	298	33	0	772
07:30 AM	23	0	145	0	142	186	0	4	4	11	5	0	0	293	30	0	843
07:45 AM	14	0	120	0	111	161	0	0	1	8	13	0	0	323	36	0	787
Total	72	0	468	0	499	651	0	5	12	35	33	0	0	1161	136	0	3072
08:00 AM	11	0	103	0	99	183	0	0	9	2	4	0	0	338	47	0	796
08:15 AM	16	0	70	0	97	145	0	3	5	3	4	0	0	325	23	0	691
08:30 AM	13	0	87	0	93	158	0	3	4	7	7	0	0	319	48	1	740
08:45 AM	11	0	87	0	115	166	0	0	3	3	11	0	0	298	48	0	742
Total	51	0	347	0	404	652	0	6	21	15	26	0	0	1280	166	1	2969
Grand Total	123	0	815	0	903	1303	0	11	33	50	59	0	0	2441	302	1	6041
Apprch %	13.1	0	86.9	0	40.7	58.8	0	0.5	23.2	35.2	41.5	0	0	89	11	0	
Total %	2	0	13.5	0	14.9	21.6	0	0.2	0.5	0.8	1	0	0	40.4	5	0	

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	27	0	111	0	138	126	157	0	0	283	3	8	9	0	20	0	298	33	0	331	772
07:30 AM	23	0	145	0	168	142	186	0	4	332	4	11	5	0	20	0	293	30	0	323	843
07:45 AM	14	0	120	0	134	111	161	0	0	272	1	8	13	0	22	0	323	36	0	359	787
08:00 AM	11	0	103	0	114	99	183	0	0	282	9					0	338	47	0	385	
Total Volume	75	0	479	0	554	478	687	0	4	1169	17	29	31	0	77	0	1252	146	0	1398	3198
% App. Total																					
PHF	.694	.000	.826	.000	.824	.842	.923	.000	.250	.880	.472	.659	.596	.000	.875	.000	.926	.777	.000	.908	.948



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N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 E
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North				Tremont Street From East				Whittier Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	11	0	16	0	14	18	0	0	0	1	0	0	0	20	12	0	92
07:15 AM	16	0	10	0	8	15	0	0	0	2	0	0	0	12	16	0	79
07:30 AM	12	0	12	0	11	15	0	0	0	1	2	0	0	16	9	0	78
07:45 AM	12	0	15	0	8	16	0	0	0	0	1	0	0	11	15	0	78
Total	51	0	53	0	41	64	0	0	0	4	3	0	0	59	52	0	327
08:00 AM	10	0	10	0	7	13	0	0	2	0	0	0	0	13	13	0	68
08:15 AM	13	0	17	0	16	13	0	0	0	0	0	0	0	16	10	0	85
08:30 AM	14	0	13	0	6	12	0	0	1	0	1	0	0	20	16	0	83
08:45 AM	12	0	18	0	6	14	0	1	0	1	1	0	0	12	12	0	77
Total	49	0	58	0	35	52	0	1	3	1	2	0	0	61	51	0	313
Grand Total	100	0	111	0	76	116	0	1	3	5	5	0	0	120	103	0	640
Apprch %	47.4	0	52.6	0	39.4	60.1	0	0.5	23.1	38.5	38.5	0	0	53.8	46.2	0	
Total %	15.6	0	17.3	0	11.9	18.1	0	0.2	0.5	0.8	0.8	0	0	18.8	16.1	0	

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
07:00 AM	11	0	16	0	27	14	18	0	0	32	0	1	0	0	1	0	20	12	0	32	92
07:15 AM	16	0	10	0	26	8	15	0	0	23	0	2	0	0	2	0	12	16	0	28	79
07:30 AM	12	0	12	0	24	11	15	0	0	26	0	1	2	0	3	0	16	9	0	25	78
07:45 AM	12	0	15	0	27	8	16	0	0	24	0	0	1	0	1	0	11	15	0	26	78
Total Volume	51	0	53	0	104	41	64	0	0	105	0	4	3	0	7	0	59	52	0	111	327
% App. Total	49	0	51	0		39	61	0	0		0	57.1	42.9	0		0	53.2	46.8	0		
PHF	.797	.000	.828	.000	.963	.732	.889	.000	.000	.820	.000	.500	.375	.000	.583	.000	.738	.813	.000	.867	.889

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:00 AM



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File Name : 123026 E
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Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North				Tremont Street From East				Whittier Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	2	0	1	0	1	0	0	0	10	0	1	0	3	18
07:15 AM	0	0	1	0	1	0	0	4	0	0	0	8	0	2	0	0	16
07:30 AM	0	0	1	3	1	0	0	1	0	0	0	3	0	2	1	1	13
07:45 AM	0	0	2	8	0	0	0	6	0	0	0	10	0	3	0	3	32
Total	0	0	4	13	2	1	0	12	0	0	0	31	0	8	1	7	79
08:00 AM	0	0	2	0	2	0	0	2	0	0	0	3	0	0	0	0	9
08:15 AM	0	0	0	1	0	0	0	6	0	0	0	11	0	3	1	0	22
08:30 AM	0	0	4	0	0	1	0	0	0	1	0	2	0	3	1	0	12
08:45 AM	0	0	3	0	0	0	0	3	0	1	0	11	0	7	0	0	25
Total	0	0	9	1	2	1	0	11	0	2	0	27	0	13	2	0	68
Grand Total	0	0	13	14	4	2	0	23	0	2	0	58	0	21	3	7	147
Apprch %	0	0	48.1	51.9	13.8	6.9	0	79.3	0	3.3	0	96.7	0	67.7	9.7	22.6	
Total %	0	0	8.8	9.5	2.7	1.4	0	15.6	0	1.4	0	39.5	0	14.3	2	4.8	

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	2	2	0	1	0	1	2	0	0	0	10	10	0	1	0	3	4	18
07:15 AM	0	0	1	0	1	1	0	0	4	5	0	0	0	8	8	0	2	0	0	2	16
07:30 AM	0	0	1	3	4	1	0	0	1	2	0	0	0	3	3	0	2	1	1	4	13
07:45 AM	0	0	2	8	10	0	0	0	6	6						3				6	32
Total Volume	0	0	4	13	17	2	1	0	12	15	0	0	0	31	31	0	8	1	7	16	79
% App. Total	0	0	23.5	76.5		13.3	6.7	0	80		0	0	0	100		0	50	6.2	43.8		
PHF	.000	.000	.500	.406	.425	.500	.250	.000	.500	.625	.000	.000	.000	.775	.775	.000	.667	.250	.583	.667	.617



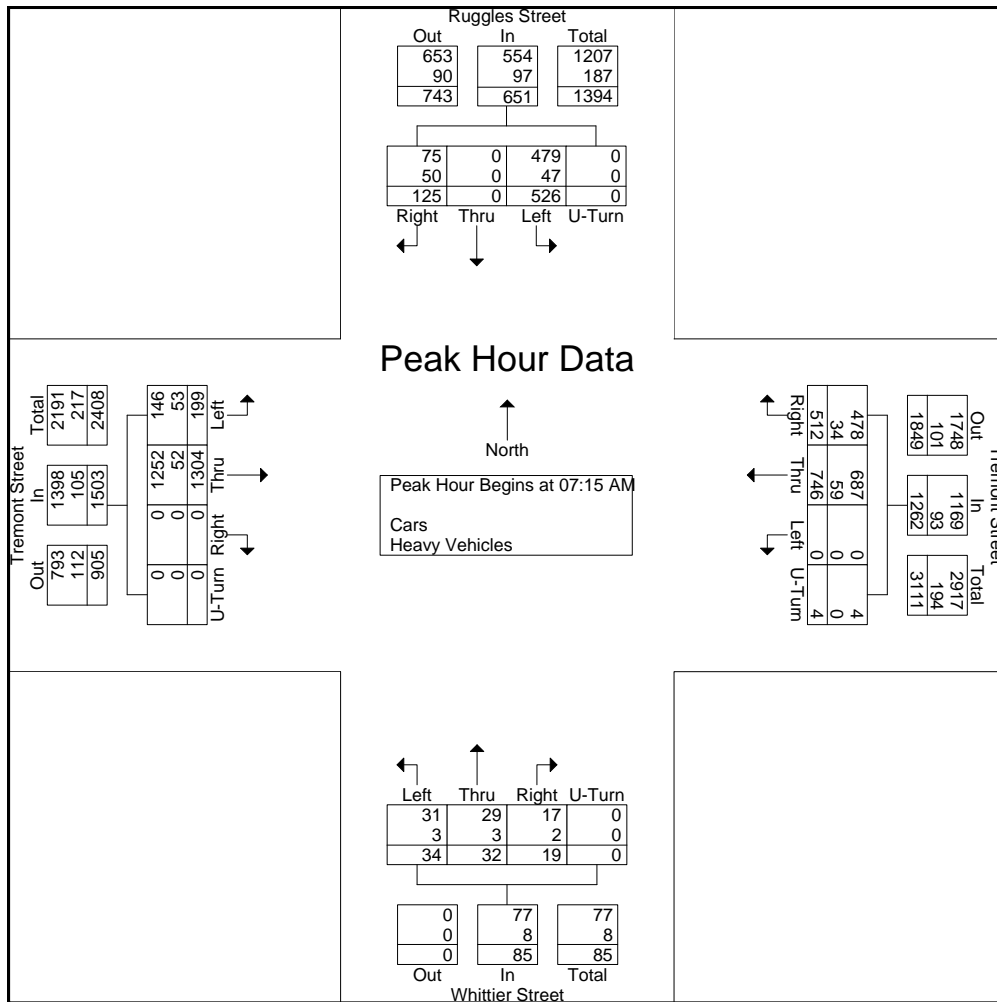
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File Name : 123026 E
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Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	43	0	121	0	164	134	172	0	0	306	3	10	9	0	22	0	310	49	0	359	851
07:30 AM	35	0	157	0	192	153	201	0	4	358	4	12	7	0	23	0	309	39	0	348	921
07:45 AM	26	0	135	0	161	119	177	0	0	296	1	8	14	0	23	0	334	51	0	385	865
08:00 AM	21	0	113	0	134	106	196	0	0	302	11	2	4	0	17	0	351	60	0	411	864
Total Volume	125	0	526	0	651	512	746	0	4	1262	19	32	34	0	85	0	1304	199	0	1503	3501
% App. Total	.727	.000	.838	.000	.848	.837	.928	.000	.250	.881	.432	.667	.607	.000	.924	.000	.929	.829	.000	.914	.950
PHF																					
Cars	75	0	479	0	554	478	687	0	4	1169	17	29	31	0	77	0	1252	146	0	1398	3198
% Cars	60.0	0	91.1	0	85.1	93.4	92.1	0	100	92.6	89.5	90.6	91.2	0	90.6	0	96.0	73.4	0	93.0	91.3
Heavy Vehicles																					
% Heavy Vehicles	40.0	0	8.9	0	14.9	6.6	7.9	0	0	7.4	10.5	9.4	8.8	0	9.4	0	4.0	26.6	0	7.0	8.7





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File Name : 123026 EE
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North				Tremont Street From East				Whittier Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	61	0	131	0	141	206	0	2	9	3	7	0	0	307	15	0	882
04:15 PM	23	0	156	0	114	195	0	0	7	1	14	0	0	282	39	0	831
04:30 PM	41	0	129	0	122	168	0	0	13	4	6	0	0	280	42	0	805
04:45 PM	34	0	143	0	147	181	0	1	6	5	10	0	0	264	30	0	821
Total	159	0	559	0	524	750	0	3	35	13	37	0	0	1133	126	0	3339
05:00 PM	33	0	126	0	99	179	0	2	9	3	5	0	0	266	58	0	780
05:15 PM	64	0	125	0	137	222	0	3	9	2	18	0	0	301	39	0	920
05:30 PM	27	0	142	0	158	200	0	1	12	9	24	0	0	262	34	0	869
05:45 PM	47	0	110	0	139	222	0	0	6	5	15	0	0	275	23	0	842
Total	171	0	503	0	533	823	0	6	36	19	62	0	0	1104	154	0	3411
Grand Total	330	0	1062	0	1057	1573	0	9	71	32	99	0	0	2237	280	0	6750
Apprch %	23.7	0	76.3	0	40.1	59.6	0	0.3	35.1	15.8	49	0	0	88.9	11.1	0	
Total %	4.9	0	15.7	0	15.7	23.3	0	0.1	1.1	0.5	1.5	0	0	33.1	4.1	0	
Cars	330	0	978	0	981	1540	0	9	67	32	98	0	0	2132	280	0	6447
% Cars	100	0	92.1	0	92.8	97.9	0	100	94.4	100	99	0	0	95.3	100	0	95.5
Heavy Vehicles	0	0	84	0	76	33	0	0	4	0	1	0	0	105	0	0	303
% Heavy Vehicles	0	0	7.9	0	7.2	2.1	0	0	5.6	0	1	0	0	4.7	0	0	4.5

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total	
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 05:00 PM																						
05:00 PM	33	0	126	0	159	99	179	0	2	280	9	3	5	0	17	0	266	58	0	324	780	
05:15 PM	64	0	125	0	189	137	222	0	3	362	9	2	18	0	29	0	301	39	0	340	920	
05:30 PM	27	0	142	0	169	158	200	0	1	359	12	9	24	0	45	0	262	34	0	296	869	
05:45 PM	47	0	110	0	157	139	222	0	0	361	6	5	15	0	26	0	275	23	0	298	842	
Total Volume	171	0	503	0	674	533	823	0	6	1362	36	19	62	0	117	0	1104	154	0	1258	3411	
% App. Total	PHF	.668	.000	.886	.000	.892	.843	.927	.000	.500	.941	.750	.528	.646	.000	.650	.000	.917	.664	.000	.925	.927
Cars	171	0	468	0	639	502	812	0	6	1320	35	19	61	0	115	0	1062	154	0	1216	3290	
% Cars	100	0	93.0	0	94.8	94.2	98.7	0	100	96.9	97.2	100	98.4	0	98.3	0	96.2	100	0	96.7	96.5	
Heavy Vehicles	0	0	7.0	0	5.2	5.8	1.3	0	0	3.1	2.8	0	1.6	0	1.7	0	3.8	0	0	3.3	3.5	
% Heavy Vehicles	0	0	7.0	0	5.2	5.8	1.3	0	0	3.1	2.8	0	1.6	0	1.7	0	3.8	0	0	3.3	3.5	



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File Name : 123026 EE
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Ruggles Street From North				Tremont Street From East				Whittier Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	61	0	122	0	125	201	0	2	8	3	7	0	0	288	15	0	832
04:15 PM	23	0	141	0	101	188	0	0	7	1	14	0	0	270	39	0	784
04:30 PM	41	0	119	0	111	163	0	0	11	4	6	0	0	266	42	0	763
04:45 PM	34	0	128	0	142	176	0	1	6	5	10	0	0	246	30	0	778
Total	159	0	510	0	479	728	0	3	32	13	37	0	0	1070	126	0	3157
05:00 PM	33	0	115	0	90	173	0	2	9	3	5	0	0	257	58	0	745
05:15 PM	64	0	119	0	129	218	0	3	9	2	18	0	0	291	39	0	892
05:30 PM	27	0	132	0	152	199	0	1	11	9	23	0	0	248	34	0	836
05:45 PM	47	0	102	0	131	222	0	0	6	5	15	0	0	266	23	0	817
Total	171	0	468	0	502	812	0	6	35	19	61	0	0	1062	154	0	3290
Grand Total	330	0	978	0	981	1540	0	9	67	32	98	0	0	2132	280	0	6447
Apprch %	25.2	0	74.8	0	38.8	60.9	0	0.4	34	16.2	49.7	0	0	88.4	11.6	0	
Total %	5.1	0	15.2	0	15.2	23.9	0	0.1	1	0.5	1.5	0	0	33.1	4.3	0	

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	33	0	115	0	148	90	173	0	2	265	9	3	5	0	17	0	257	58	0	315	745
05:15 PM	64	0	119	0	183	129	218	0	3	350	9	2	18	0	29	0	291	39	0	330	892
05:30 PM	27	0	132	0	159	152	199	0	1	352	11	9	23	0	43	0	248	34	0	282	836
05:45 PM	47	0	102	0	149	131	222	0	0	353	6	5	15	0	115	0	266	23	0	1216	3290
Total Volume	171	0	468	0	639	502	812	0	6	1320	35	19	61	0	115	0	1062	154	0	1216	3290
% App. Total																					
PHF	.668	.000	.886	.000	.873	.826	.914	.000	.500	.935	.795	.528	.663	.000	.669	.000	.912	.664	.000	.921	.922



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Page No : 1

N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North				Tremont Street From East				Whittier Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	0	9	0	16	5	0	0	1	0	0	0	0	19	0	0	50
04:15 PM	0	0	15	0	13	7	0	0	0	0	0	0	0	12	0	0	47
04:30 PM	0	0	10	0	11	5	0	0	2	0	0	0	0	14	0	0	42
04:45 PM	0	0	15	0	5	5	0	0	0	0	0	0	0	18	0	0	43
Total	0	0	49	0	45	22	0	0	3	0	0	0	0	63	0	0	182
05:00 PM	0	0	11	0	9	6	0	0	0	0	0	0	0	9	0	0	35
05:15 PM	0	0	6	0	8	4	0	0	0	0	0	0	0	10	0	0	28
05:30 PM	0	0	10	0	6	1	0	0	1	0	1	0	0	14	0	0	33
05:45 PM	0	0	8	0	8	0	0	0	0	0	0	0	0	9	0	0	25
Total	0	0	35	0	31	11	0	0	1	0	1	0	0	42	0	0	121
Grand Total	0	0	84	0	76	33	0	0	4	0	1	0	0	105	0	0	303
Apprch %	0	0	100	0	69.7	30.3	0	0	80	0	20	0	0	100	0	0	
Total %	0	0	27.7	0	25.1	10.9	0	0	1.3	0	0.3	0	0	34.7	0	0	

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	9	0	9	16	5	0	0	21	1	0	0	0	1	0	19	0	0	19	50
04:15 PM	0	0	15	0	15	13	7	0	0	20	0	0	0	0	0	0	12	0	0	12	47
04:30 PM	0	0	10	0	10	11	5	0	0	16	2	0	0	0	2	0	14	0	0	14	42
04:45 PM	0	0	15	0	15	5	5	0	0	10	0	0	0	0	0	0	18	0	0	18	43
Total Volume	0	0	49	0	49	45	22	0	0	67	3	0	0	0	3	0	63	0	0	63	182
% App. Total	0	0	100	0		67.2	32.8	0	0		100	0	0	0		0	100	0	0		
PHF	.000	.000	.817	.000	.817	.703	.786	.000	.000	.798	.375	.000	.000	.000	.375	.000	.829	.000	.000	.829	.910



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N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North				Tremont Street From East				Whittier Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	4	0	2	0	8	0	0	1	21	0	2	0	2	40
04:15 PM	1	0	0	0	0	0	0	1	0	0	0	12	0	1	0	4	19
04:30 PM	1	0	1	0	0	0	0	2	0	0	1	16	0	2	0	6	29
04:45 PM	1	0	3	0	0	0	0	4	0	0	0	16	0	0	0	11	35
Total	3	0	4	4	0	2	0	15	0	0	2	65	0	5	0	23	123
05:00 PM	1	0	2	0	0	1	0	8	2	0	0	11	0	2	0	4	31
05:15 PM	0	0	3	1	0	3	0	5	0	1	0	14	0	2	0	9	38
05:30 PM	1	0	3	0	0	0	0	15	0	0	0	19	0	2	0	3	43
05:45 PM	0	0	0	0	1	5	0	37	0	0	0	14	0	2	0	4	63
Total	2	0	8	1	1	9	0	65	2	1	0	58	0	8	0	20	175
Grand Total	5	0	12	5	1	11	0	80	2	1	2	123	0	13	0	43	298
Apprch %	22.7	0	54.5	22.7	1.1	12	0	87	1.6	0.8	1.6	96.1	0	23.2	0	76.8	
Total %	1.7	0	4	1.7	0.3	3.7	0	26.8	0.7	0.3	0.7	41.3	0	4.4	0	14.4	

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	0	2	0	3	0	1	0	8	9	2	0	0	11	13	0	2	0	4	6	31
05:15 PM	0	0	3	1	4	0	3	0	5	8	0	1	0	14	15	0	2	0	9	11	38
05:30 PM	1	0	3	0	4	0	0	0	15	15	0	0	0	19	19	0	2	0	3	5	43
05:45 PM	0	0	0	0	0	1	5	0	37	43	0	0	0	0	0	0	0	0	0	0	63
Total Volume	2	0	8	1	11	1	9	0	65	75	2	1	0	58	61	0	8	0	20	28	175
% App. Total	18.2	0	72.7	9.1		1.3	12	0	86.7		3.3	1.6	0	95.1		0	28.6	0	71.4		
PHF	.500	.000	.667	.250	.688	.250	.450	.000	.439	.436	.250	.250	.000	.763	.803	.000	1.00	.000	.556	.636	.694



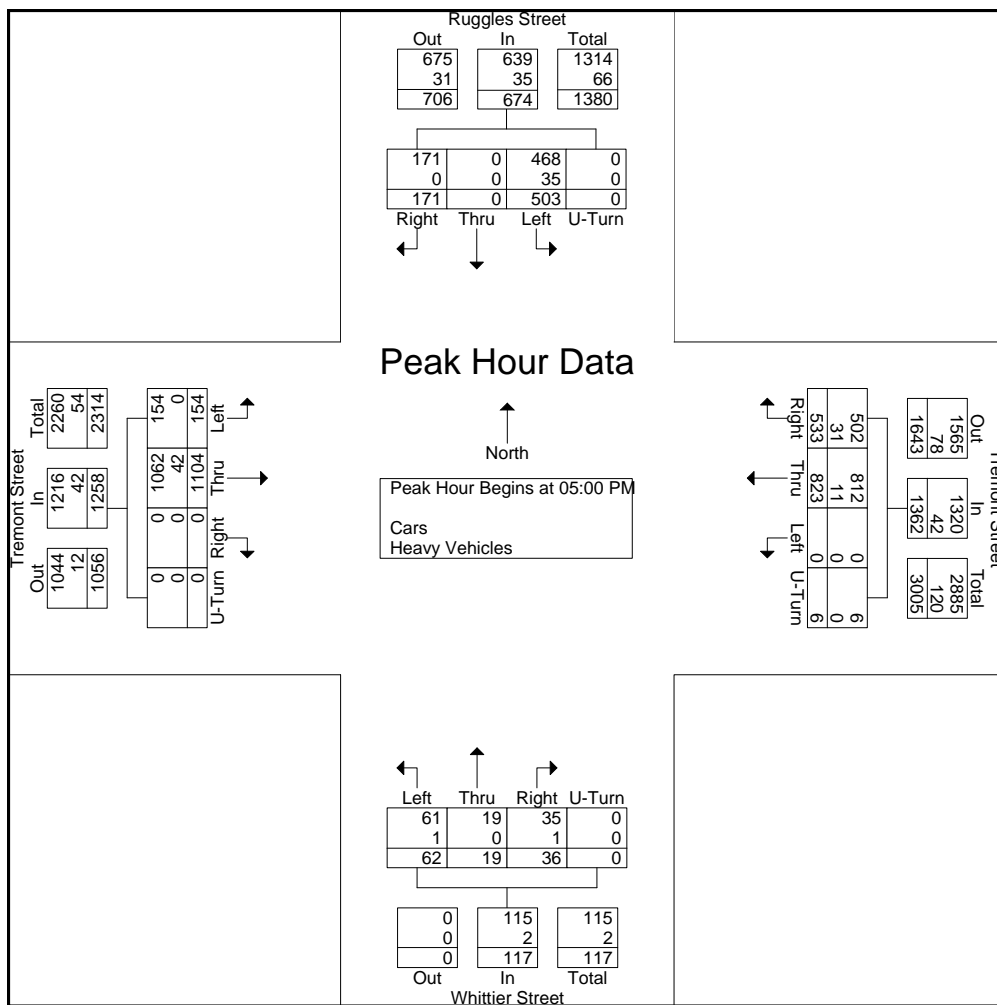
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File Name : 123026 EE
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Page No : 1

N/S: Ruggles Street/ Whittier Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North					Tremont Street From East					Whittier Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	33	0	126	0	159	99	179	0	2	280	9	3	5	0	17	0	266	58	0	324	780
05:15 PM	64				189	137	222		3	362							301		340	920	
05:30 PM	27	0	142	0	169	158	200	0	1	359	12	9	24	0	45	0	262	34	0	296	869
05:45 PM	47	0	110	0	157	139	222	0	0	361	6	5	15	0	26	0	275	23	0	298	842
Total Volume	171	0	503	0	674	533	823	0	6	1362	36	19	62	0	117	0	1104	154	0	1258	3411
% App. Total	.668	.000	.886	.000	.892	.843	.927	.000	.500	.941	.750	.528	.646	.000	.650	.000	.917	.664	.000	.925	.927
PHF																					
Cars	171	0	468	0	639	502	812	0	6	1320	35	19	61	0	115	0	1062	154	0	1216	3290
% Cars	100	0	93.0	0	94.8	94.2	98.7	0	100	96.9	97.2	100	98.4	0	98.3	0	96.2	100	0	96.7	96.5
Heavy Vehicles																					
% Heavy Vehicles	0	0	7.0	0	5.2	5.8	1.3	0	0	3.1	2.8	0	1.6	0	1.7	0	3.8	0	0	3.3	3.5





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File Name : 123026 F
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Columbus Avenue/ Ruggles Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Columbus Avenue From North				Tremont Street From East				Ruggles Street From South				Tremont Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
07:00 AM	4	0	0	0	0	282	0	0	0	0	0	0	0	23	325	0	0	634
07:15 AM	9	0	0	0	0	287	0	0	0	0	0	0	0	31	360	0	0	687
07:30 AM	7	0	0	0	0	321	0	0	0	0	0	0	0	26	431	0	0	785
07:45 AM	7	0	0	0	0	267	0	0	0	0	0	0	0	24	427	0	0	725
Total	27	0	0	0	0	1157	0	0	0	0	0	0	0	104	1543	0	0	2831
08:00 AM	12	0	0	0	0	248	0	0	0	0	0	0	0	28	443	0	0	731
08:15 AM	5	0	0	0	0	252	0	0	0	0	0	0	0	27	382	0	0	666
08:30 AM	5	0	0	0	0	264	0	0	0	0	0	0	0	28	364	0	0	661
08:45 AM	7	0	0	0	0	291	0	0	0	0	0	0	0	17	390	0	0	705
Total	29	0	0	0	0	1055	0	0	0	0	0	0	0	100	1579	0	0	2763
Grand Total	56	0	0	0	0	2212	0	0	0	0	0	0	0	204	3122	0	0	5594
Apprch %	100	0	0	0	0	100	0	0	0	0	0	0	0	6.1	93.9	0	0	
Total %	1	0	0	0	0	39.5	0	0	0	0	0	0	0	3.6	55.8	0	0	

Start Time	Columbus Avenue From North					Tremont Street From East					Ruggles Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	9	0	0	0	9	0	287	0	0	287	0	0	0	0	0	31	360	0	0	391	687
07:30 AM	7	0	0	0	7	0	321	0	0	321	0	0	0	0	0	24	427	0	0	451	725
07:45 AM	7	0	0	0	7	0	267	0	0	267	0	0	0	0	0	24	427	0	0	451	725
08:00 AM	12	0	0	0	12	0	248	0	0	248	0	0	0	0	0	28	443	0	0	471	731
Total Volume	35	0	0	0	35	0	1123	0	0	1123	0	0	0	0	0	109	1661	0	0	1770	2928
% App. Total																					
PHF	.729	.000	.000	.000	.729	.000	.875	.000	.000	.875	.000	.000	.000	.000	.000	.879	.937	.000	.000	.939	.932



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N/S: Columbus Avenue/ Ruggles Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 F
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Columbus Avenue From North				Tremont Street From East				Ruggles Street From South				Tremont Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
07:00 AM	3	0	0	0	0	26	0	0	0	0	0	0	0	7	30	0	0	66
07:15 AM	2	0	0	0	0	16	0	0	0	0	0	0	0	4	17	0	0	39
07:30 AM	3	0	0	0	0	23	0	0	0	0	0	0	0	4	24	0	0	54
07:45 AM	2	0	0	0	0	25	0	0	0	0	0	0	0	4	19	0	0	50
Total	10	0	0	0	0	90	0	0	0	0	0	0	0	19	90	0	0	209
08:00 AM	1	0	0	0	0	17	0	0	0	0	0	0	0	5	20	0	0	43
08:15 AM	3	0	0	0	0	23	0	0	0	0	0	0	0	3	29	0	0	58
08:30 AM	4	0	0	0	0	15	0	0	0	0	0	0	0	5	22	0	0	46
08:45 AM	4	0	0	0	0	25	0	0	0	0	0	0	0	7	27	0	0	63
Total	12	0	0	0	0	80	0	0	0	0	0	0	0	20	98	0	0	210
Grand Total	22	0	0	0	0	170	0	0	0	0	0	0	0	39	188	0	0	419
Apprch %	100	0	0	0	0	100	0	0	0	0	0	0	0	17.2	82.8	0	0	
Total %	5.3	0	0	0	0	40.6	0	0	0	0	0	0	0	9.3	44.9	0	0	

Start Time	Columbus Avenue From North					Tremont Street From East					Ruggles Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	0	0	1	0	17	0	0	17	0	0	0	0	0	5	20	0	0	25	43
08:15 AM	3	0	0	0	3	0	23	0	0	23	0	0	0	0	0	3	29	0	0	32	58
08:30 AM	4	0	0	0	4	0	15	0	0	15	0	0	0	0	0	5	22	0	0	27	46
08:45 AM	4	0	0	0	4	0	25	0	0	25	0	0	0	0	0	7	27	0	0	34	63
Total Volume	12	0	0	0	12	0	80	0	0	80	0	0	0	0	0	20	98	0	0	118	210
% App. Total	100	0	0	0		0	100	0	0		0	0	0	0		16.9	83.1	0	0		
PHF	.750	.000	.000	.000	.750	.000	.800	.000	.000	.800	.000	.000	.000	.000	.000	.714	.845	.000	.000	.868	.833



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File Name : 123026 F
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Columbus Avenue/ Ruggles Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Columbus Avenue From North				Tremont Street From East				Ruggles Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	7	0	2	0	36	0	0	0	7	0	1	0	3	56
07:15 AM	0	0	0	5	0	2	0	28	0	0	0	6	0	3	0	5	49
07:30 AM	0	0	0	3	0	1	0	13	0	0	0	3	1	2	0	3	26
07:45 AM	1	0	0	8	0	0	0	22	0	0	0	8	0	6	0	4	49
Total	1	0	0	23	0	5	0	99	0	0	0	24	1	12	0	15	180
08:00 AM	0	0	0	9	0	1	0	38	0	0	0	0	0	3	0	5	56
08:15 AM	0	0	0	5	0	1	0	31	0	0	0	5	0	3	0	0	45
08:30 AM	0	0	0	7	0	0	0	24	0	0	0	0	1	6	0	0	38
08:45 AM	0	0	0	12	0	0	0	18	0	0	0	0	0	12	0	0	42
Total	0	0	0	33	0	2	0	111	0	0	0	5	1	24	0	5	181
Grand Total	1	0	0	56	0	7	0	210	0	0	0	29	2	36	0	20	361
Apprch %	1.8	0	0	98.2	0	3.2	0	96.8	0	0	0	100	3.4	62.1	0	34.5	
Total %	0.3	0	0	15.5	0	1.9	0	58.2	0	0	0	8	0.6	10	0	5.5	

Start Time	Columbus Avenue From North					Tremont Street From East					Ruggles Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	1	0	0	8	9	0	0	0	22	22	0	0	0	8	8	0	6	0	4	10	49
08:00 AM	0	0	0	9	9	0	1	0	38	39	0	0	0	0	0	0	3	0	5	8	56
08:15 AM	0	0	0	5	5	0	1	0	31	32	0	0	0	5	5	0	3	0	0	3	45
08:30 AM	0	0	0	7	7	0	0	0	24	24	0	0	0	0	0	1	6	0	0	7	38
Total Volume	1	0	0	29	30	0	2	0	115	117	0	0	0	13	13	1	18	0	9	28	188
% App. Total	3.3	0	0	96.7		0	1.7	0	98.3		0	0	0	100		3.6	64.3	0	32.1		
PHF	.250	.000	.000	.806	.833	.000	.500	.000	.757	.750	.000	.000	.000	.406	.406	.250	.750	.000	.450	.700	.839



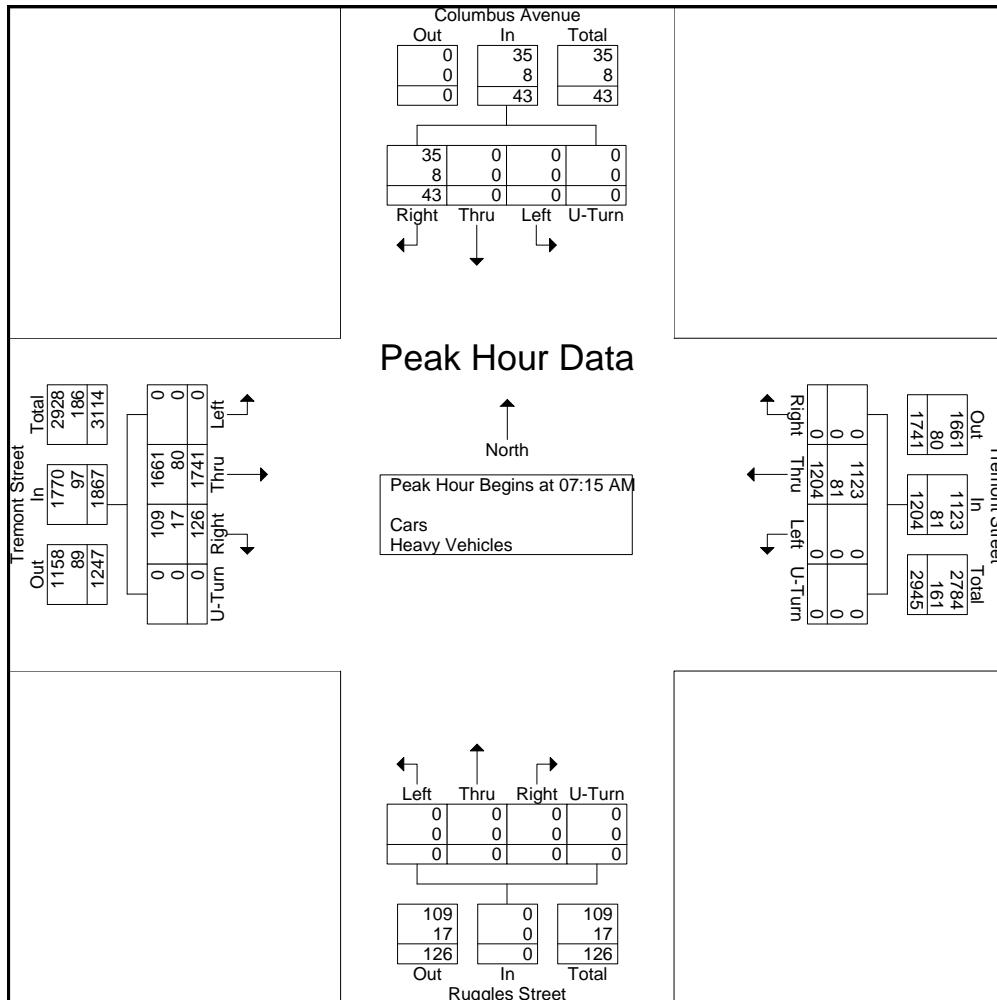
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Site Code : 2011046_
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Page No : 1

N/S: Columbus Avenue/ Ruggles Street
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Columbus Avenue From North					Tremont Street From East					Ruggles Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	11	0	0	0	11	0	303	0	0	303	0	0	0	0	0	35	377	0	0	412	726
07:30 AM	10	0	0	0	10	0	344	0	0	344	0	0	0	0	0	28	446	0	0	474	839
07:45 AM	9	0	0	0	9	0	292	0	0	292	0	0	0	0	0	28	446	0	0	474	775
08:00 AM	13	0	0	0	13	0	265	0	0	265	0	0	0	0	0	33	463	0	0	496	774
Total Volume	43	0	0	0	43	0	1204	0	0	1204	0	0	0	0	0	126	1741	0	0	1867	3114
% App. Total	.827	.000	.000	.000	.827	.000	.875	.000	.000	.875	.000	.000	.000	.000	.000	.900	.940	.000	.000	.941	.928
PHF	.827	.000	.000	.000	.827	.000	.875	.000	.000	.875	.000	.000	.000	.000	.000	.900	.940	.000	.000	.941	.928
Cars	35	0	0	0	35	0	1123	0	0	1123	0	0	0	0	0	109	1661	0	0	1770	2928
% Cars	81.4	0	0	0	81.4	0	93.3	0	0	93.3	0	0	0	0	0	86.5	95.4	0	0	94.8	94.0
Heavy Vehicles	18.6	0	0	0	18.6	0	6.7	0	0	6.7	0	0	0	0	0	13.5	4.6	0	0	5.2	6.0
% Heavy Vehicles	18.6	0	0	0	18.6	0	6.7	0	0	6.7	0	0	0	0	0	13.5	4.6	0	0	5.2	6.0





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Client: HSH/ J. SanClemente

File Name : 123026 FF
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars

Start Time	Columbus Avenue From North				Tremont Street From East				Ruggles Street From South				Tremont Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
04:00 PM	17	0	0	0	0	255	0	0	0	0	0	0	0	62	359	0	0	693
04:15 PM	14	0	0	0	0	256	0	0	0	0	0	0	0	48	387	0	0	705
04:30 PM	24	0	0	0	0	247	0	0	0	0	0	0	0	39	351	0	0	661
04:45 PM	22	0	0	0	0	291	0	0	0	0	0	0	0	43	352	0	0	708
Total	77	0	0	0	0	1049	0	0	0	0	0	0	0	192	1449	0	0	2767
05:00 PM	21	0	0	0	0	262	0	0	0	0	0	0	0	51	340	0	0	674
05:15 PM	30	0	0	0	0	287	0	0	0	0	0	0	0	65	380	0	0	762
05:30 PM	28	0	0	0	0	314	0	0	0	0	0	0	0	59	333	0	0	734
05:45 PM	27	0	0	0	0	266	0	0	0	0	0	0	0	38	337	0	0	668
Total	106	0	0	0	0	1129	0	0	0	0	0	0	0	213	1390	0	0	2838
Grand Total	183	0	0	0	0	2178	0	0	0	0	0	0	0	405	2839	0	0	5605
Apprch %	100	0	0	0	0	100	0	0	0	0	0	0	0	12.5	87.5	0	0	
Total %	3.3	0	0	0	0	38.9	0	0	0	0	0	0	0	7.2	50.7	0	0	

Start Time	Columbus Avenue From North					Tremont Street From East					Ruggles Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	22	0	0	0	22	0	291	0	0	291	0	0	0	0	0	43	352	0	0	395	708
05:00 PM	21	0	0	0	21	0	262	0	0	262	0	0	0	0	0	51	340	0	0	391	674
05:15 PM	30	0	0	0	30	0	287	0	0	287	0	0	0	0	0	65	380	0	0	445	762
05:30 PM	28	0	0	0	28	0	314	0	0	314	0	0	0	0	0	59	333	0	0	392	734
Total Volume	101	0	0	0	101	0	1154	0	0	1154	0	0	0	0	0	218	1405	0	0	1623	2878
% App. Total																					
PHF	.842	.000	.000	.000	.842	.000	.919	.000	.000	.919	.000	.000	.000	.000	.000	.838	.924	.000	.000	.912	.944



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N/S: Columbus Avenue/ Ruggles Street
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Groups Printed- Heavy Vehicles

Start Time	Columbus Avenue From North				Tremont Street From East				Ruggles Street From South				Tremont Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
04:00 PM	3	0	0	0	0	17	0	0	0	0	0	0	0	4	24	0	0	48
04:15 PM	5	0	0	0	0	16	0	0	0	0	0	0	0	3	20	0	0	44
04:30 PM	3	0	0	0	0	14	0	0	0	0	0	0	0	5	23	0	0	45
04:45 PM	2	0	0	0	0	9	0	0	0	0	0	0	0	3	29	0	0	43
Total	13	0	0	0	0	56	0	0	0	0	0	0	0	15	96	0	0	180
05:00 PM	4	0	0	0	0	10	0	0	0	0	0	0	0	1	19	0	0	34
05:15 PM	5	0	0	0	0	8	0	0	0	0	0	0	0	5	12	0	0	30
05:30 PM	4	0	0	0	0	4	0	0	0	0	0	0	0	3	22	0	0	33
05:45 PM	3	0	0	0	0	5	0	0	0	0	0	0	0	0	16	0	0	24
Total	16	0	0	0	0	27	0	0	0	0	0	0	0	9	69	0	0	121
Grand Total	29	0	0	0	0	83	0	0	0	0	0	0	0	24	165	0	0	301
Apprch %	100	0	0	0	0	100	0	0	0	0	0	0	0	12.7	87.3	0	0	
Total %	9.6	0	0	0	0	27.6	0	0	0	0	0	0	0	8	54.8	0	0	

Start Time	Columbus Avenue From North					Tremont Street From East					Ruggles Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	3	0	0	0	3	0	17	0	0	17	0	0	0	0	0	4	24	0	0	28	48
04:15 PM	5	0	0	0	5	0	16	0	0	16	0	0	0	0	0	3	20	0	0	23	44
04:30 PM	3	0	0	0	3	0	14	0	0	14	0	0	0	0	0	5	23	0	0	28	45
04:45 PM	2	0	0	0	2	0	9	0	0	9	0	0	0	0	0	3	29	0	0	32	
Total Volume	13	0	0	0	13	0	56	0	0	56	0	0	0	0	0	15	96	0	0	111	180
% App. Total	100	0	0	0		0	100	0	0		0	0	0	0		13.5	86.5	0	0		
PHF	.650	.000	.000	.000	.650	.000	.824	.000	.000	.824	.000	.000	.000	.000	.000	.750	.828	.000	.000	.867	.938



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N/S: Columbus Avenue/ Ruggles Street
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Groups Printed- Peds and Bikes

Start Time	Columbus Avenue From North				Tremont Street From East				Ruggles Street From South				Tremont Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	0	0	3	0	32	0	0	0	10	0	0	0	3	48
04:15 PM	1	0	0	0	0	0	0	66	0	0	0	14	0	2	0	4	87
04:30 PM	0	0	0	0	0	0	0	37	0	0	0	5	0	2	0	2	46
04:45 PM	0	0	0	0	0	0	0	44	0	0	0	6	0	2	0	0	52
Total	1	0	0	0	0	3	0	179	0	0	0	35	0	6	0	9	233
05:00 PM	0	0	0	0	0	1	0	39	0	0	0	16	0	2	0	4	62
05:15 PM	2	0	0	0	0	4	0	44	0	0	0	17	0	4	0	9	80
05:30 PM	0	0	0	0	0	0	0	34	0	0	0	11	2	3	0	12	62
05:45 PM	0	0	0	2	0	2	0	29	0	0	0	16	0	2	0	8	59
Total	2	0	0	2	0	7	0	146	0	0	0	60	2	11	0	33	263
Grand Total	3	0	0	2	0	10	0	325	0	0	0	95	2	17	0	42	496
Apprch %	60	0	0	40	0	3	0	97	0	0	0	100	3.3	27.9	0	68.9	
Total %	0.6	0	0	0.4	0	2	0	65.5	0	0	0	19.2	0.4	3.4	0	8.5	

Start Time	Columbus Avenue From North					Tremont Street From East					Ruggles Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	0	1	0	39	40	0	0	0	16	16	0	2	0	4	6	62
05:15 PM	2	0	0	0	2	0	4	0	44	48	0	0	0	17	17	0	4	0	9	13	80
05:30 PM	0	0	0	0	0	0	0	0	34	34	0	0	0	11	11	2	3	0	12	17	62
05:45 PM	0	0	0	2	2	0	2	0	29	31	0	0	0	16	16	0	2	0	8	10	59
Total Volume	2	0	0	2	4	0	7	0	146	153	0	0	0	60	60	2	11	0	33	46	263
% App. Total	50	0	0	50		0	4.6	0	95.4		0	0	0	100		4.3	23.9	0	71.7		
PHF	.250	.000	.000	.250	.500	.000	.438	.000	.830	.797	.000	.000	.000	.882	.882	.250	.688	.000	.688	.676	.822



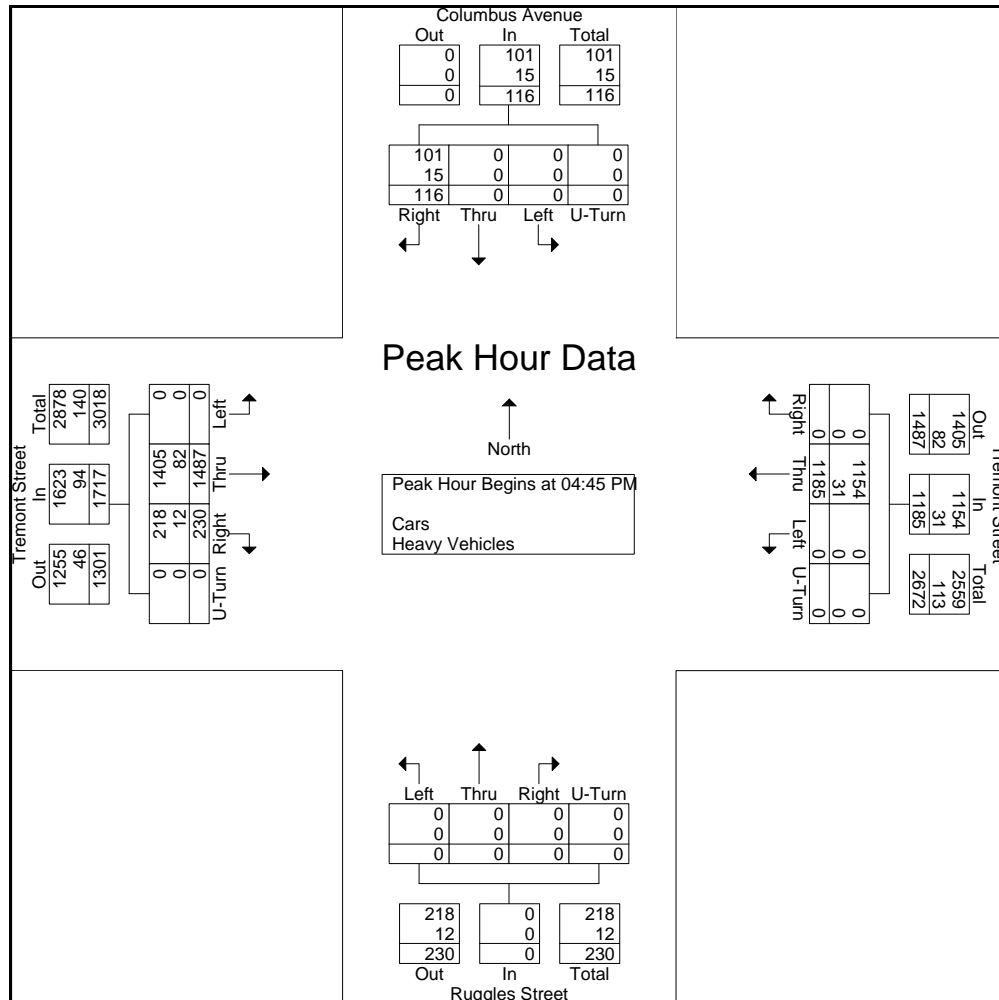
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Start Time	Columbus Avenue From North					Tremont Street From East					Ruggles Street From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	24	0	0	0	24	0	300	0	0	300	0	0	0	0	0	46	381	0	0	427	751
05:00 PM	25	0	0	0	25	0	272	0	0	272	0	0	0	0	0	52	359	0	0	411	708
05:15 PM	35	0	0	0	35	0	295	0	0	295	0	0	0	0	0	70	392	0	0	462	792
05:30 PM	32	0	0	0	32	0	318	0	0	318	0	0	0	0	0	62	355	0	0	417	767
Total Volume	116	0	0	0	116	0	1185	0	0	1185	0	0	0	0	0	230	1487	0	0	1717	3018
% App. Total																					
PHF	.829	.000	.000	.000	.829	.000	.932	.000	.000	.932	.000	.000	.000	.000	.000	.821	.948	.000	.000	.929	.953
Cars	101	0	0	0	101	0	1154	0	0	1154	0	0	0	0	0	218	1405	0	0	1623	2878
% Cars	87.1	0	0	0	87.1	0	97.4	0	0	97.4	0	0	0	0	0	94.8	94.5	0	0	94.5	95.4
Heavy Vehicles																					
% Heavy Vehicles	12.9	0	0	0	12.9	0	2.6	0	0	2.6	0	0	0	0	0	5.2	5.5	0	0	5.5	4.6



Accurate Counts

978-664-2565

N/S Street : Tremont Street
 E/W Street: Melnea Cass Boulevard
 City/State : Boston, MA
 Weather : Clear

File Name : 01410002
 Site Code : 01410002
 Start Date : 9/21/2011
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	8	84	6	0	174	62	8	0	62	86	209	0	1	14	36	1	751
07:15	3	70	1	0	212	47	3	0	61	98	221	0	1	20	39	0	776
07:30	5	69	2	0	206	60	18	0	88	93	229	1	3	12	40	0	826
07:45	9	79	1	0	181	50	9	0	95	150	221	0	1	11	42	0	849
Total	25	302	10	0	773	219	38	0	306	427	880	1	6	57	157	1	3202
08:00	14	76	2	0	203	43	15	0	89	139	274	0	0	12	52	0	919
08:15	11	74	4	0	180	64	7	0	89	153	192	0	0	11	33	0	818
08:30	6	98	2	0	184	86	11	0	81	145	182	0	3	21	32	0	851
08:45	6	86	1	0	195	44	8	0	82	129	206	0	1	13	19	0	790
Total	37	334	9	0	762	237	41	0	341	566	854	0	4	57	136	0	3378
09:00	3	87	1	0	144	52	8	0	71	139	210	0	0	14	23	0	752
09:15	8	77	3	0	165	33	10	0	60	128	207	0	0	7	38	0	736
09:30	6	70	4	0	218	29	9	0	54	88	197	0	1	8	34	0	718
09:45	10	64	6	0	179	40	15	0	60	99	176	0	2	18	41	0	710
Total	27	298	14	0	706	154	42	0	245	454	790	0	3	47	136	0	2916
10:00	11	65	1	0	165	39	11	0	58	110	195	0	0	8	34	0	697
10:15	3	65	1	0	189	33	8	0	39	94	188	0	1	6	31	0	658
10:30	3	49	4	0	178	17	10	0	27	87	190	0	0	12	32	0	609
10:45	3	62	0	0	192	26	13	0	20	93	176	0	1	5	17	0	608
Total	20	241	6	0	724	115	42	0	144	384	749	0	2	31	114	0	2572
11:00	10	49	6	0	198	31	13	0	38	75	194	0	1	7	29	0	651
11:15	8	72	3	0	168	33	6	0	34	92	167	0	0	14	31	0	628
11:30	9	71	1	0	133	35	11	0	35	89	193	0	1	10	34	1	623
11:45	17	64	4	0	182	30	12	0	32	92	223	0	2	15	43	1	717
Total	44	256	14	0	681	129	42	0	139	348	777	0	4	46	137	2	2619
12:00	7	76	1	0	165	25	16	0	21	102	196	0	1	17	37	0	664
12:15	13	78	1	0	177	15	7	0	39	88	204	0	1	9	43	0	675
12:30	10	81	2	0	196	21	12	0	46	106	226	0	0	10	46	0	756
12:45	16	131	4	0	181	60	14	0	44	142	194	0	0	26	38	0	850
Total	46	366	8	0	719	121	49	0	150	438	820	0	2	62	164	0	2945
13:00	9	85	1	0	180	21	8	0	39	91	194	0	2	20	38	0	688
13:15	9	53	9	0	180	23	7	0	46	79	210	0	0	15	39	0	670
13:30	5	52	3	0	185	25	6	1	32	69	192	0	3	15	42	0	630
13:45	15	63	5	0	179	20	10	0	30	112	233	0	1	22	39	0	729
Total	38	253	18	0	724	89	31	1	147	351	829	0	6	72	158	0	2717
14:00	9	66	4	0	184	25	8	0	43	91	262	0	1	15	36	0	744
14:15	10	76	2	0	182	22	12	0	49	91	257	0	2	24	28	0	755
14:30	17	63	1	0	182	27	22	0	44	91	260	1	1	17	54	0	780
14:45	14	78	0	0	167	14	11	0	41	126	223	0	1	23	54	0	752
Total	50	283	7	0	715	88	53	0	177	399	1002	1	5	79	172	0	3031
15:00	9	66	2	0	185	21	12	0	42	103	214	0	2	25	52	0	733
15:15	13	92	2	0	184	23	11	0	33	120	239	0	1	23	52	0	793
15:30	11	84	3	0	156	20	20	1	46	108	224	0	2	37	53	0	765
15:45	10	84	4	0	174	25	5	0	52	142	200	0	4	37	62	0	799
Total	43	326	11	0	699	89	48	1	173	473	877	0	9	122	219	0	3090
16:00	7	60	3	0	174	24	9	0	41	115	207	0	4	28	68	1	741
16:15	6	112	9	0	162	22	17	0	40	144	198	0	4	22	52	0	788
16:30	13	96	3	0	203	24	18	0	49	146	220	0	3	41	55	2	873
16:45	12	79	5	0	183	17	18	0	51	126	201	0	5	34	55	1	787
Total	38	347	20	0	722	87	62	0	181	531	826	0	16	125	230	4	3189
17:00	10	95	4	0	200	16	12	0	56	143	148	0	6	46	50	0	786
17:15	14	74	2	0	221	14	12	0	47	134	172	0	4	31	51	0	776

Accurate Counts

978-664-2565

N/S Street : Tremont Street
 E/W Street: Melnea Cass Boulevard
 City/State : Boston, MA
 Weather : Clear

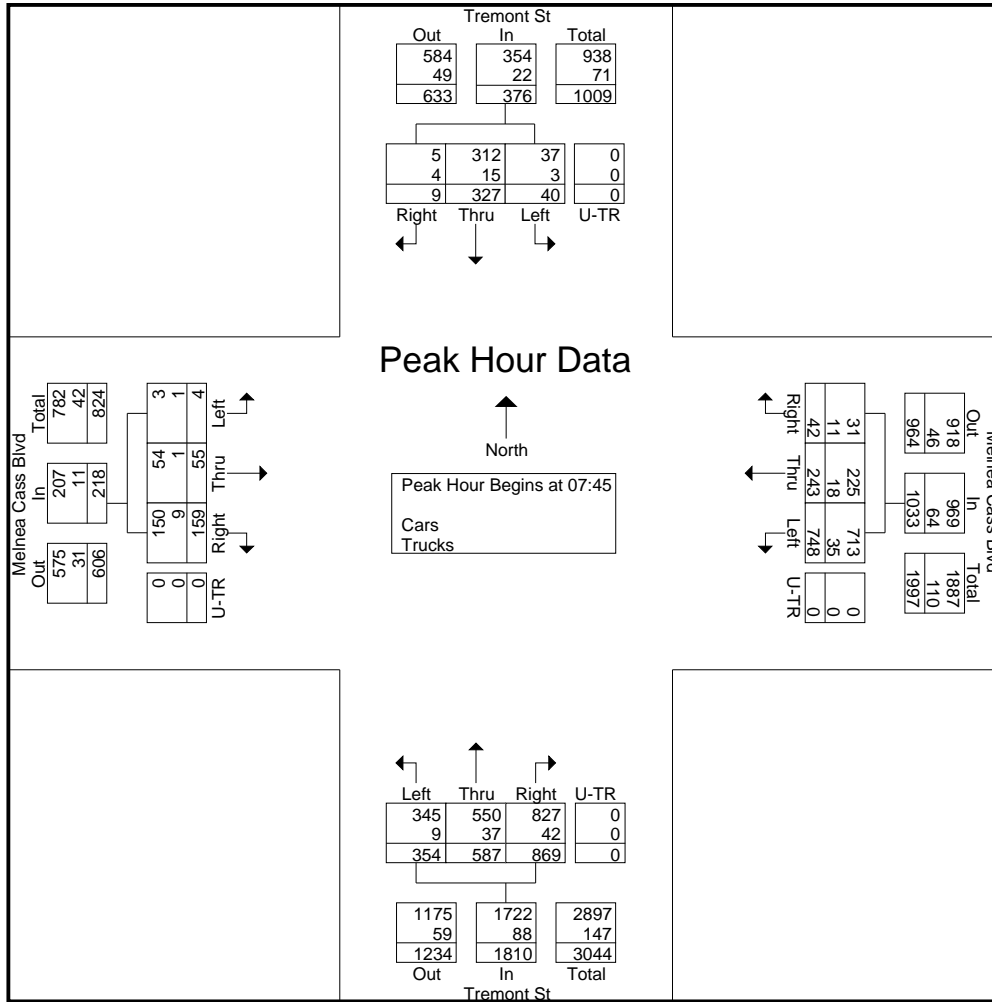
File Name : 01410002
 Site Code : 01410002
 Start Date : 9/21/2011
 Page No : 2

Groups Printed- Cars - Trucks

Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
17:30	6	128	1	0	226	11	13	0	61	146	223	0	6	54	56	0	931
17:45	23	101	8	0	216	22	18	0	61	119	198	0	3	57	59	0	885
Total	53	398	15	0	863	63	55	0	225	542	741	0	19	188	216	0	3378
Grand Total	421	3404	132	0	8088	1391	503	2	2228	4913	9145	2	76	886	1839	7	33037
Apprch %	10.6	86	3.3	0	81	13.9	5	0	13.7	30.2	56.1	0	2.7	31.6	65.5	0.2	
Total %	1.3	10.3	0.4	0	24.5	4.2	1.5	0	6.7	14.9	27.7	0	0.2	2.7	5.6	0	
Cars	391	3237	87	0	7848	1214	460	2	2159	4673	8797	2	71	832	1769	6	31548
% Cars	92.9	95.1	65.9	0	97	87.3	91.5	100	96.9	95.1	96.2	100	93.4	93.9	96.2	85.7	95.5
Trucks	30	167	45	0	240	177	43	0	69	240	348	0	5	54	70	1	1489
% Trucks	7.1	4.9	34.1	0	3	12.7	8.5	0	3.1	4.9	3.8	0	6.6	6.1	3.8	14.3	4.5

Start Time	Tremont St From North					Melnea Cass Blvd From East					Tremont St From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	9	79	1	0	89	181	50	9	0	240	95	150	221	0	466	1	11	42	0	54	849
08:00	14	76	2	0	92	203	43	15	0	261	89	139	274	0	502	0	12	52	0	64	919
08:15	11	74	4	0	89	180	64	7	0	251	89	153	192	0	434	0	11	33	0	44	818
08:30	6	98	2	0	106	184	86	11	0	281	81	145	182	0	408	3	21	32	0	56	851
Total Volume	40	327	9	0	376	748	243	42	0	1033	354	587	869	0	1810	4	55	159	0	218	3437
% App. Total	10.6	87	2.4	0		72.4	23.5	4.1	0		19.6	32.4	48	0		1.8	25.2	72.9	0		
PHF	.714	.834	.563	.000	.887	.921	.706	.700	.000	.919	.932	.959	.793	.000	.901	.333	.655	.764	.000	.852	.935
Cars	37	312	5	0	354	713	225	31	0	969	345	550	827	0	1722	3	54	150	0	207	3252
% Cars	92.5	95.4	55.6	0	94.1	95.3	92.6	73.8	0	93.8	97.5	93.7	95.2	0	95.1	75.0	98.2	94.3	0	95.0	94.6
Trucks	3	15	4	0	22	35	18	11	0	64	9	37	42	0	88	1	1	9	0	11	185
% Trucks	7.5	4.6	44.4	0	5.9	4.7	7.4	26.2	0	6.2	2.5	6.3	4.8	0	4.9	25.0	1.8	5.7	0	5.0	5.4

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

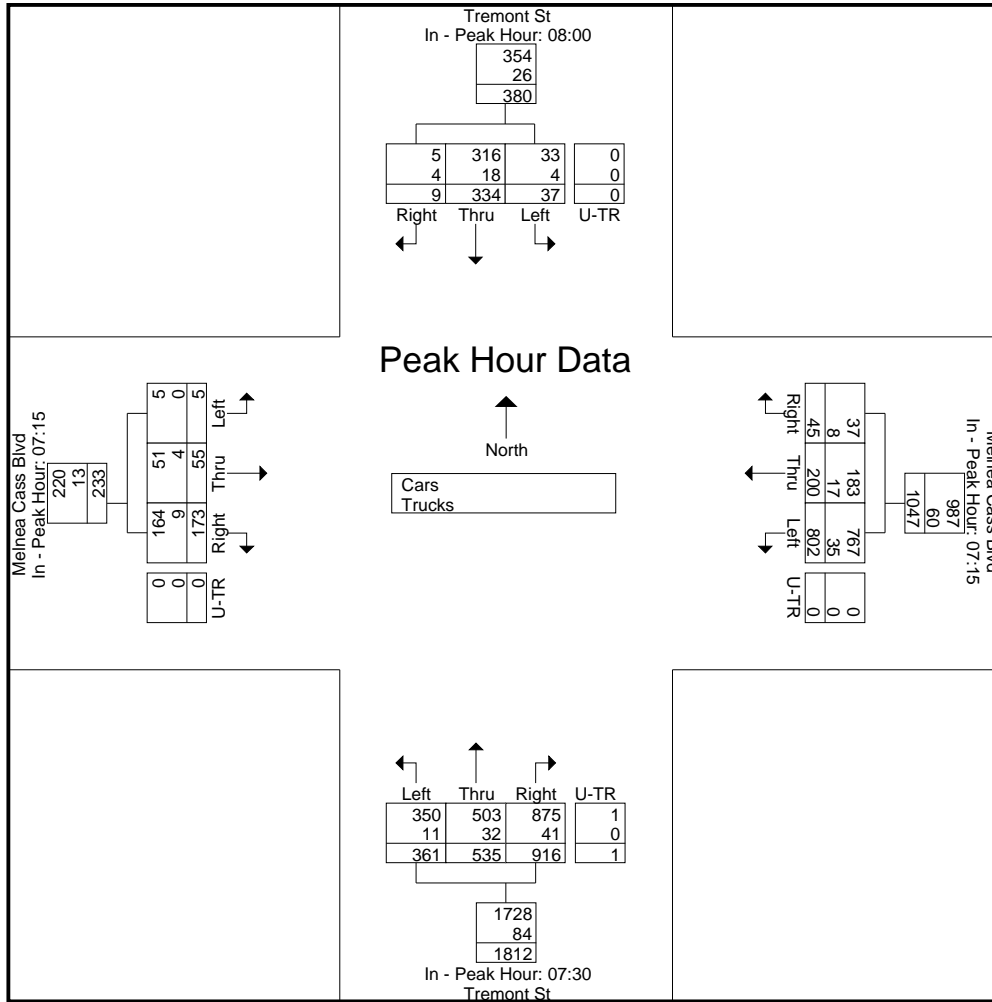


Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00					07:15					07:30					07:15				
+0 mins.	14	76	2	0	92	212	47	3	0	262	88	93	229	1	411	1	20	39	0	60
+15 mins.	11	74	4	0	89	206	60	18	0	284	95	150	221	0	466	3	12	40	0	55
+30 mins.	6	98	2	0	106	181	50	9	0	240	89	139	274	0	502	1	11	42	0	54
+45 mins.	6	86	1	0	93	203	43	15	0	261	89	153	192	0	434	0	12	52	0	64
Total Volume	37	334	9	0	380	802	200	45	0	1047	361	535	916	1	1813	5	55	173	0	233
% App. Total	9.7	87.9	2.4	0		76.6	19.1	4.3	0		19.9	29.5	50.5	0.1		2.1	23.6	74.2	0	
PHF	.661	.852	.563	.000	.896	.946	.833	.625	.000	.922	.950	.874	.836	.250	.903	.417	.688	.832	.000	.910
Cars	33	316	5	0	354	767	183	37	0	987	350	503	875	1	1729	5	51	164	0	220
% Cars	89.2	94.6	55.6	0	93.2	95.6	91.5	82.2	0	94.3	97	94	95.5	100	95.4	100	92.7	94.8	0	94.4
Trucks	4	18	4	0	26	35	17	8	0	60	11	32	41	0	84	0	4	9	0	13
% Trucks	10.8	5.4	44.4	0	6.8	4.4	8.5	17.8	0	5.7	3	6	4.5	0	4.6	0	7.3	5.2	0	5.6

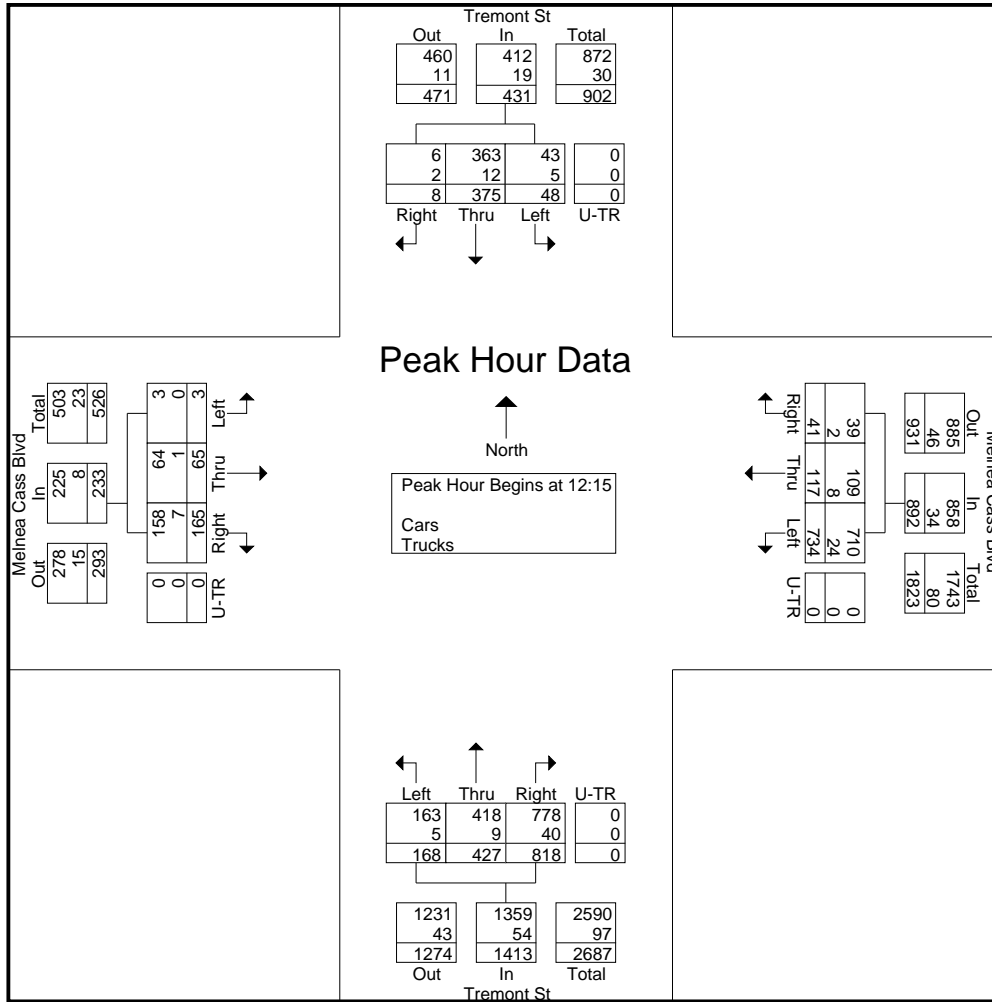
N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 12:15

12:15	13	78	1	0	92	177	15	7	0	199	39	88	204	0	331	1	9	43	0	53	675
12:30	10	81	2	0	93	196	21	12	0	229	46	106	226	0	378	0	10	46	0	56	756
12:45	16	131	4	0	151	181	60	14	0	255	44	142	194	0	380	0	26	38	0	64	850
13:00	9	85	1	0	95	180	21	8	0	209	39	91	194	0	324	2	20	38	0	60	688
Total Volume	48	375	8	0	431	734	117	41	0	892	168	427	818	0	1413	3	65	165	0	233	2969
% App. Total	11.1	87	1.9	0		82.3	13.1	4.6	0		11.9	30.2	57.9	0		1.3	27.9	70.8	0		
PHF	.750	.716	.500	.000	.714	.936	.488	.732	.000	.875	.913	.752	.905	.000	.930	.375	.625	.897	.000	.910	.873
Cars	43	363	6	0	412	710	109	39	0	858	163	418	778	0	1359	3	64	158	0	225	2854
% Cars	89.6	96.8	75.0	0	95.6	96.7	93.2	95.1	0	96.2	97.0	97.9	95.1	0	96.2	100	98.5	95.8	0	96.6	96.1
Trucks	5	12	2	0	19	24	8	2	0	34	5	9	40	0	54	0	1	7	0	8	115
% Trucks	10.4	3.2	25.0	0	4.4	3.3	6.8	4.9	0	3.8	3.0	2.1	4.9	0	3.8	0	1.5	4.2	0	3.4	3.9

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

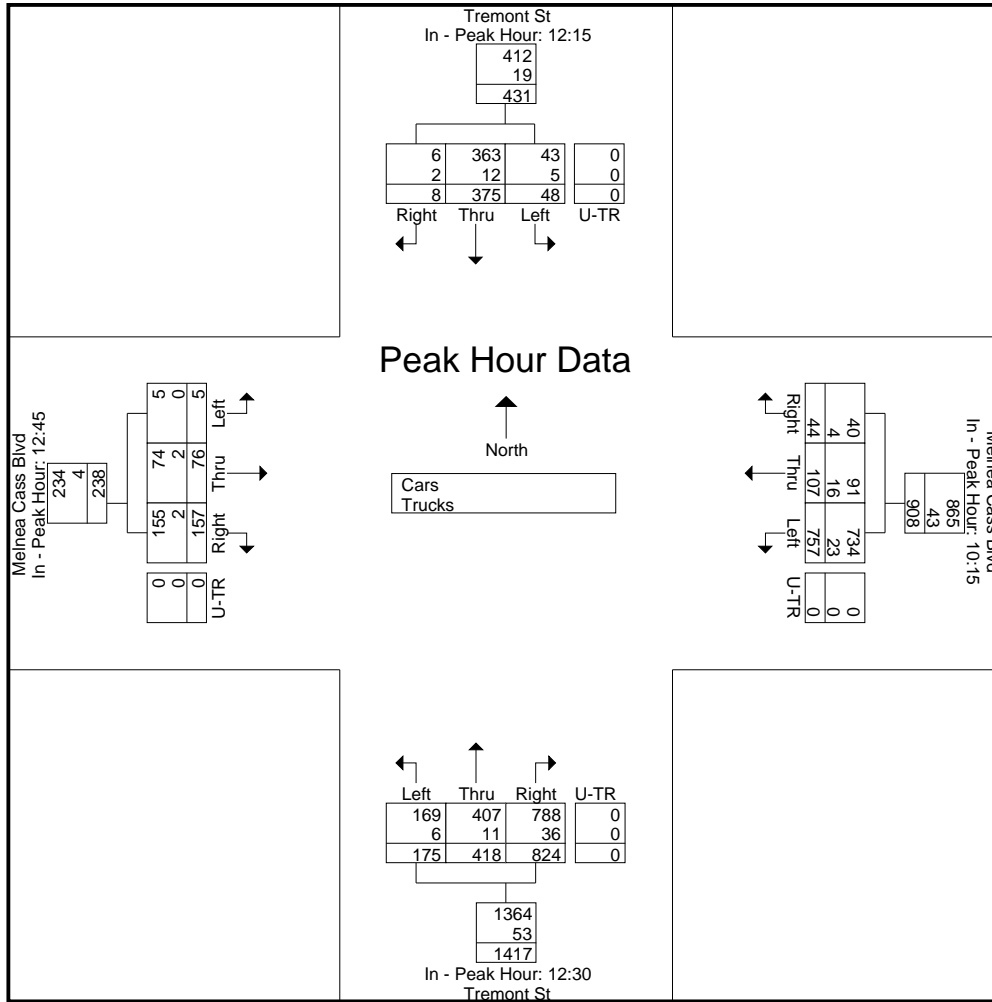


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:15					10:15					12:30					12:45				
+0 mins.	13	78	1	0	92	189	33	8	0	230	46	106	226	0	378	0	26	38	0	64
+15 mins.	10	81	2	0	93	178	17	10	0	205	44	142	194	0	380	2	20	38	0	60
+30 mins.	16	131	4	0	151	192	26	13	0	231	39	91	194	0	324	0	15	39	0	54
+45 mins.	9	85	1	0	95	198	31	13	0	242	46	79	210	0	335	3	15	42	0	60
Total Volume	48	375	8	0	431	757	107	44	0	908	175	418	824	0	1417	5	76	157	0	238
% App. Total	11.1	87	1.9	0		83.4	11.8	4.8	0		12.4	29.5	58.2	0		2.1	31.9	66	0	
PHF	.750	.716	.500	.000	.714	.956	.811	.846	.000	.938	.951	.736	.912	.000	.932	.417	.731	.935	.000	.930
Cars	43	363	6	0	412	734	91	40	0	865	169	407	788	0	1364	5	74	155	0	234
% Cars	89.6	96.8	75	0	95.6	97	85	90.9	0	95.3	96.6	97.4	95.6	0	96.3	100	97.4	98.7	0	98.3
Trucks	5	12	2	0	19	23	16	4	0	43	6	11	36	0	53	0	2	2	0	4
% Trucks	10.4	3.2	25	0	4.4	3	15	9.1	0	4.7	3.4	2.6	4.4	0	3.7	0	2.6	1.3	0	1.7

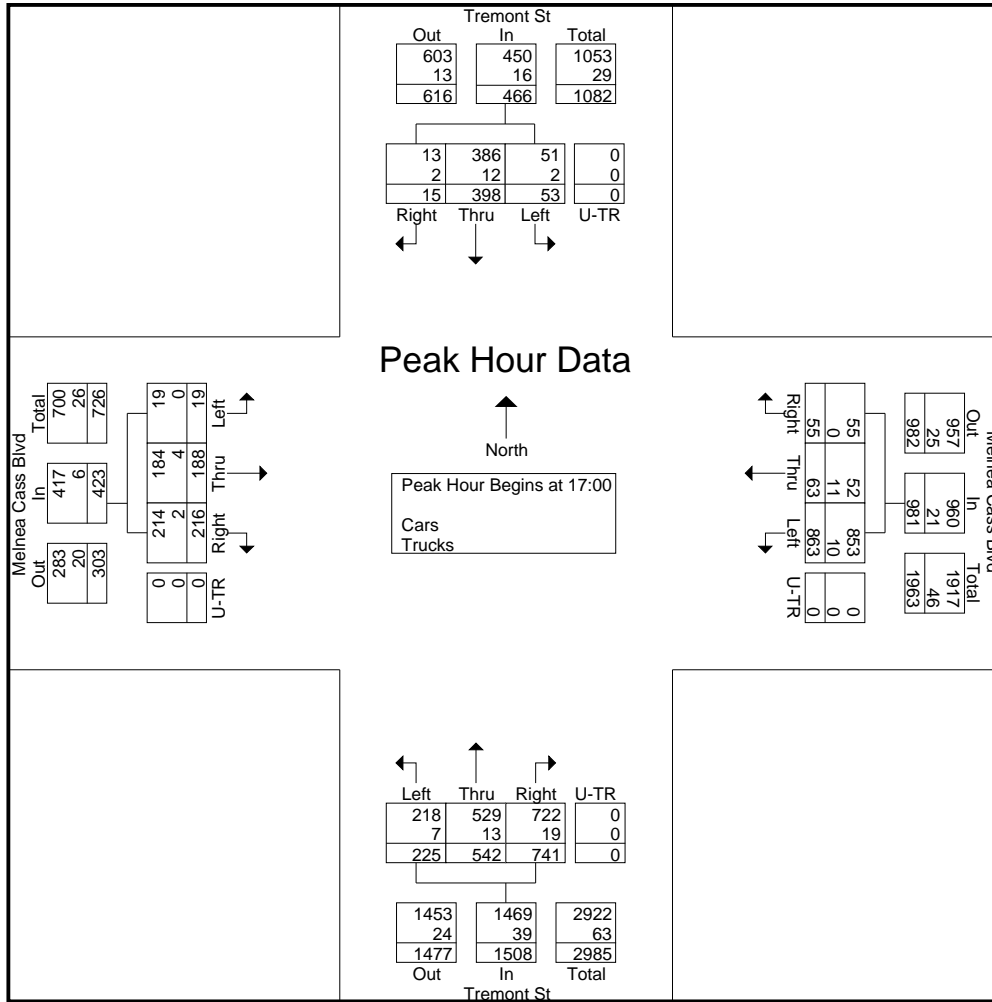
N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	10	95	4	0	109	200	16	12	0	228	56	143	148	0	347	6	46	50	0	102	786
17:15	14	74	2	0	90	221	14	12	0	247	47	134	172	0	353	4	31	51	0	86	776
17:30	6	128	1	0	135	226	11	13	0	250	61	146	223	0	430	6	54	56	0	116	931
17:45	23	101	8	0	132	216	22	18	0	256	61	119	198	0	378	3	57	59	0	119	885
Total Volume	53	398	15	0	466	863	63	55	0	981	225	542	741	0	1508	19	188	216	0	423	3378
% App. Total	11.4	85.4	3.2	0		88	6.4	5.6	0		14.9	35.9	49.1	0		4.5	44.4	51.1	0		
PHF	.576	.777	.469	.000	.863	.955	.716	.764	.000	.958	.922	.928	.831	.000	.877	.792	.825	.915	.000	.889	.907
Cars	51	386	13	0	450	853	52	55	0	960	218	529	722	0	1469	19	184	214	0	417	3296
% Cars	96.2	97.0	86.7	0	96.6	98.8	82.5	100	0	97.9	96.9	97.6	97.4	0	97.4	100	97.9	99.1	0	98.6	97.6
Trucks	2	12	2	0	16	10	11	0	0	21	7	13	19	0	39	0	4	2	0	6	82
% Trucks	3.8	3.0	13.3	0	3.4	1.2	17.5	0	0	2.1	3.1	2.4	2.6	0	2.6	0	2.1	0.9	0	1.4	2.4

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

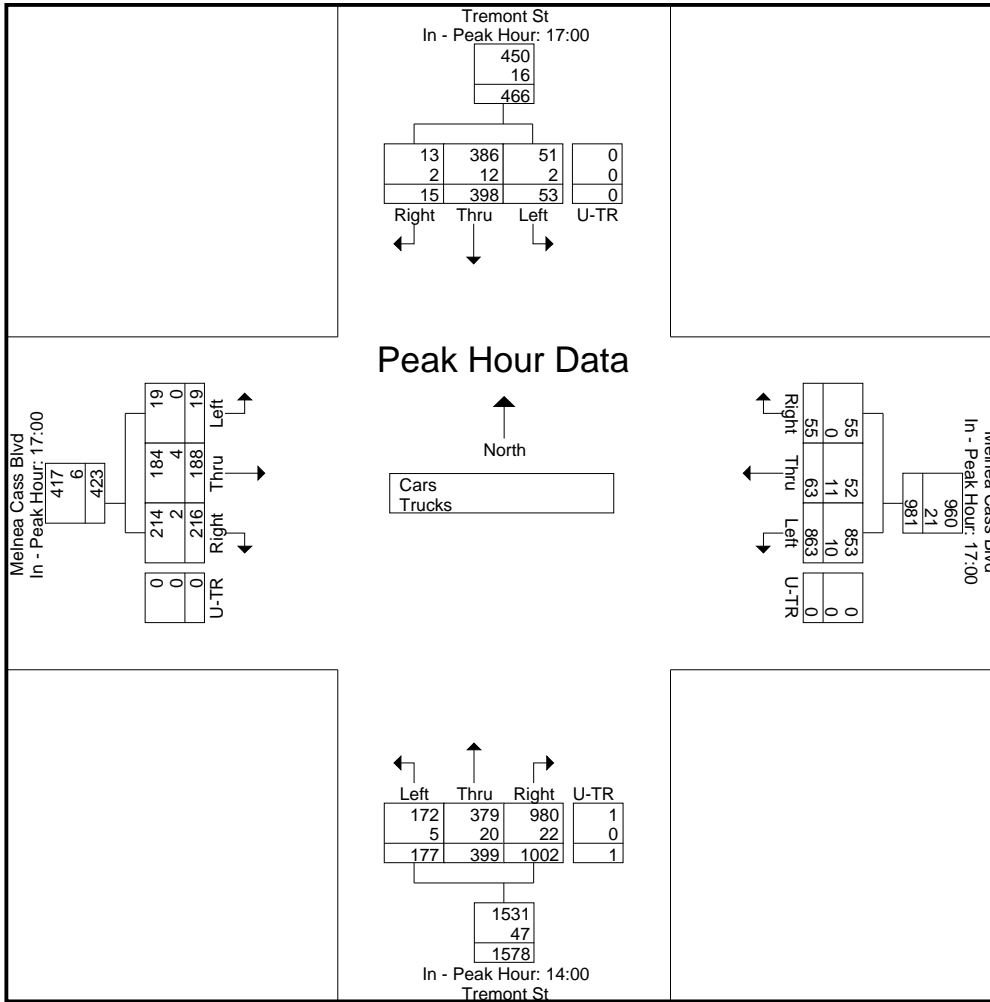


Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	17:00					17:00					14:00					17:00				
+0 mins.	10	95	4	0	109	200	16	12	0	228	43	91	262	0	396	6	46	50	0	102
+15 mins.	14	74	2	0	90	221	14	12	0	247	49	91	257	0	397	4	31	51	0	86
+30 mins.	6	128	1	0	135	226	11	13	0	250	44	91	260	1	396	6	54	56	0	116
+45 mins.	23	101	8	0	132	216	22	18	0	256	41	126	223	0	390	3	57	59	0	119
Total Volume	53	398	15	0	466	863	63	55	0	981	177	399	1002	1	1579	19	188	216	0	423
% App. Total	11.4	85.4	3.2	0		88	6.4	5.6	0		11.2	25.3	63.5	0.1		4.5	44.4	51.1	0	
PHF	.576	.777	.469	.000	.863	.955	.716	.764	.000	.958	.903	.792	.956	.250	.994	.792	.825	.915	.000	.889
Cars	51	386	13	0	450	853	52	55	0	960	172	379	980	1	1532	19	184	214	0	417
% Cars	96.2	97	86.7	0	96.6	98.8	82.5	100	0	97.9	97.2	95	97.8	100	97	100	97.9	99.1	0	98.6
Trucks	2	12	2	0	16	10	11	0	0	21	5	20	22	0	47	0	4	2	0	6
% Trucks	3.8	3	13.3	0	3.4	1.2	17.5	0	0	2.1	2.8	5	2.2	0	3	0	2.1	0.9	0	1.4

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Accurate Counts

978-664-2565

N/S Street : Tremont Street
 E/W Street: Melnea Cass Boulevard
 City/State : Boston, MA
 Weather : Clear

File Name : 01410002
 Site Code : 01410002
 Start Date : 9/21/2011
 Page No : 1

Groups Printed- Cars

Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	7	73	5	0	171	54	6	0	58	82	201	0	1	13	34	1	706
07:15	2	64	0	0	203	43	3	0	58	93	216	0	1	18	36	0	737
07:30	4	65	1	0	196	54	16	0	86	88	219	1	3	11	39	0	783
07:45	9	75	0	0	178	44	6	0	91	140	212	0	1	10	39	0	805
Total	22	277	6	0	748	195	31	0	293	403	848	1	6	52	148	1	3031
08:00	14	72	0	0	190	42	12	0	86	131	261	0	0	12	50	0	870
08:15	8	71	4	0	173	58	4	0	87	144	183	0	0	11	31	0	774
08:30	6	94	1	0	172	81	9	0	81	135	171	0	2	21	30	0	803
08:45	5	79	0	0	191	42	8	0	81	121	195	0	0	10	19	0	751
Total	33	316	5	0	726	223	33	0	335	531	810	0	2	54	130	0	3198
09:00	1	83	1	0	138	48	6	0	70	134	199	0	0	11	21	0	712
09:15	8	72	1	0	159	28	6	0	59	121	195	0	0	5	37	0	691
09:30	6	62	2	0	208	28	9	0	52	83	183	0	1	6	31	0	671
09:45	9	61	5	0	174	36	15	0	60	88	161	0	1	14	39	0	663
Total	24	278	9	0	679	140	36	0	241	426	738	0	2	36	128	0	2737
10:00	11	60	1	0	160	34	11	0	57	106	184	0	0	6	32	0	662
10:15	3	58	0	0	183	28	7	0	38	89	177	0	1	5	29	0	618
10:30	3	48	2	0	173	12	8	0	27	84	185	0	0	10	32	0	584
10:45	3	62	0	0	188	23	12	0	20	88	168	0	1	4	16	0	585
Total	20	228	3	0	704	97	38	0	142	367	714	0	2	25	109	0	2449
11:00	9	45	3	0	190	28	13	0	35	70	179	0	1	6	29	0	608
11:15	6	71	3	0	163	30	6	0	34	86	157	0	0	13	31	0	600
11:30	9	70	1	0	127	31	10	0	35	85	180	0	1	10	33	1	593
11:45	17	60	3	0	177	26	12	0	31	87	217	0	2	13	41	1	687
Total	41	246	10	0	657	115	41	0	135	328	733	0	4	42	134	2	2488
12:00	6	74	1	0	159	21	16	0	21	100	190	0	1	17	36	0	642
12:15	11	73	0	0	170	14	7	0	39	86	196	0	1	9	40	0	646
12:30	10	78	1	0	189	19	11	0	44	105	216	0	0	9	43	0	725
12:45	15	130	4	0	177	58	13	0	43	139	181	0	0	26	38	0	824
Total	42	355	6	0	695	112	47	0	147	430	783	0	2	61	157	0	2837
13:00	7	82	1	0	174	18	8	0	37	88	185	0	2	20	37	0	659
13:15	9	51	8	0	179	14	7	0	45	75	206	0	0	14	39	0	647
13:30	5	51	2	0	182	17	6	1	30	62	188	0	3	14	41	0	602
13:45	13	56	1	0	174	16	10	0	30	104	227	0	1	19	37	0	688
Total	34	240	12	0	709	65	31	1	142	329	806	0	6	67	154	0	2596
14:00	8	62	3	0	181	19	8	0	42	83	254	0	0	14	32	0	706
14:15	9	72	1	0	174	19	11	0	48	88	253	0	2	23	24	0	724
14:30	16	58	0	0	175	24	20	0	41	86	255	1	1	15	53	0	745
14:45	14	74	0	0	164	10	9	0	41	122	218	0	1	21	52	0	726
Total	47	266	4	0	694	72	48	0	172	379	980	1	4	73	161	0	2901
15:00	9	65	1	0	175	18	10	0	40	95	208	0	2	22	51	0	696
15:15	10	91	1	0	178	15	11	0	32	111	237	0	0	22	52	0	760
15:30	11	79	2	0	155	17	17	1	42	103	219	0	2	34	49	0	731
15:45	10	78	1	0	169	20	5	0	49	137	192	0	4	35	59	0	759
Total	40	313	5	0	677	70	43	1	163	446	856	0	8	113	211	0	2946
16:00	7	56	3	0	165	22	8	0	38	109	202	0	4	28	67	1	710
16:15	6	108	7	0	159	16	16	0	38	136	194	0	4	22	49	0	755
16:30	13	92	2	0	202	20	15	0	48	139	215	0	3	41	53	1	844
16:45	11	76	2	0	180	15	18	0	47	121	196	0	5	34	54	1	760
Total	37	332	14	0	706	73	57	0	171	505	807	0	16	125	223	3	3069
17:00	10	90	4	0	199	12	12	0	55	139	143	0	6	45	50	0	765
17:15	13	70	1	0	218	11	12	0	46	129	168	0	4	31	50	0	753

Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

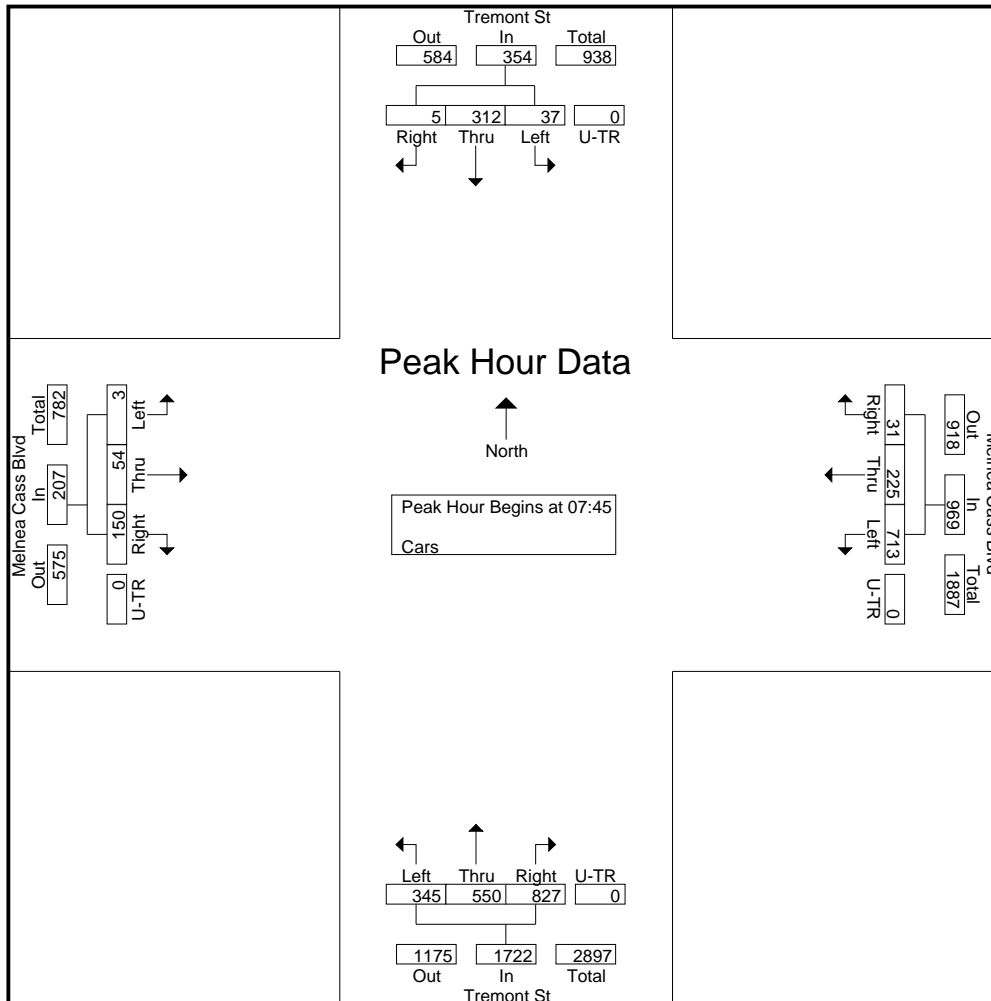
File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 2

Groups Printed- Cars

Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
17:30	6	127	1	0	223	10	13	0	58	143	218	0	6	54	56	0	915
17:45	22	99	7	0	213	19	18	0	59	118	193	0	3	54	58	0	863
Total	51	386	13	0	853	52	55	0	218	529	722	0	19	184	214	0	3296
Grand Total	391	3237	87	0	7848	1214	460	2	2159	4673	8797	2	71	832	1769	6	31548
Apprch %	10.5	87.1	2.3	0	82.4	12.7	4.8	0	13.8	29.9	56.3	0	2.7	31.1	66.1	0.2	
Total %	1.2	10.3	0.3	0	24.9	3.8	1.5	0	6.8	14.8	27.9	0	0.2	2.6	5.6	0	

Start Time	Tremont St From North					Melnea Cass Blvd From East					Tremont St From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
07:45	9	75	0	0	84	178	44	6	0	228	91	140	212	0	443	1	10	39	0	50	805
08:00	14	72	0	0	86	190	42	12	0	244	86	131	261	0	478	0	12	50	0	62	870
08:15	8	71	4	0	83	173	58	4	0	235	87	144	183	0	414	0	11	31	0	42	774
08:30	6	94	1	0	101	172	81	9	0	262	81	135	171	0	387	2	21	30	0	53	803
Total Volume	37	312	5	0	354	713	225	31	0	969	345	550	827	0	1722	3	54	150	0	207	3252
% App. Total	10.5	88.1	1.4	0		73.6	23.2	3.2	0		20	31.9	48	0		1.4	26.1	72.5	0		
PHF	.661	.830	.313	.000	.876	.938	.694	.646	.000	.925	.948	.955	.792	.000	.901	.375	.643	.750	.000	.835	.934

Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:45

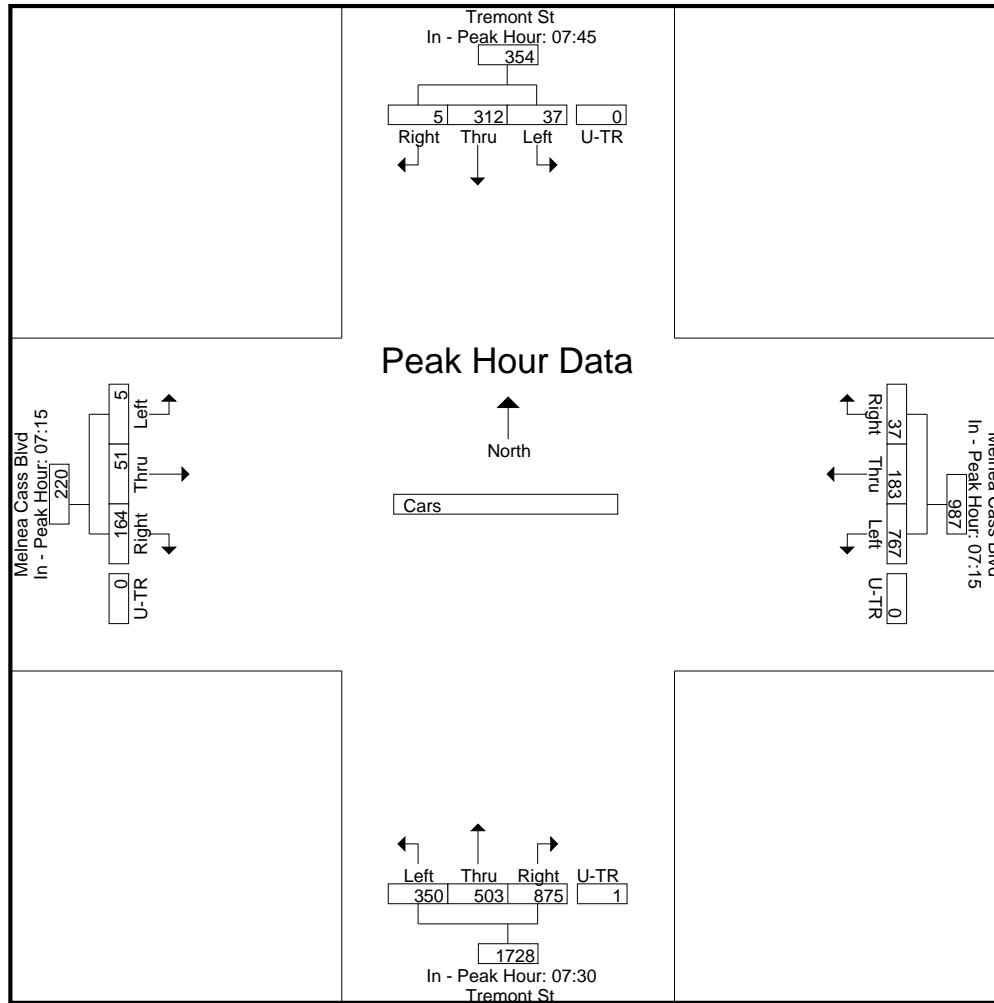


Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 3

Start Time	Tremont St From North					Melnea Cass Blvd From East					Tremont St From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:45					07:15					07:30					07:15					
+0 mins.	9	75	0	0	84	203	43	3	0	249	86	88	219	1	394	1	18	36	0	55	
+15 mins.	14	72	0	0	86	196	54	16	0	266	91	140	212	0	443	3	11	39	0	53	
+30 mins.	8	71	4	0	83	178	44	6	0	228	86	131	261	0	478	1	10	39	0	50	
+45 mins.	6	94	1	0	101	190	42	12	0	244	87	144	183	0	414	0	12	50	0	62	
Total Volume	37	312	5	0	354	767	183	37	0	987	350	503	875	1	1729	5	51	164	0	220	
% App. Total	10.5	88.1	1.4	0		77.7	18.5	3.7	0		20.2	29.1	50.6	0.1		2.3	23.2	74.5	0		
PHF	.661	.830	.313	.000	.876	.945	.847	.578	.000	.928	.962	.873	.838	.250	.904	.417	.708	.820	.000	.887	

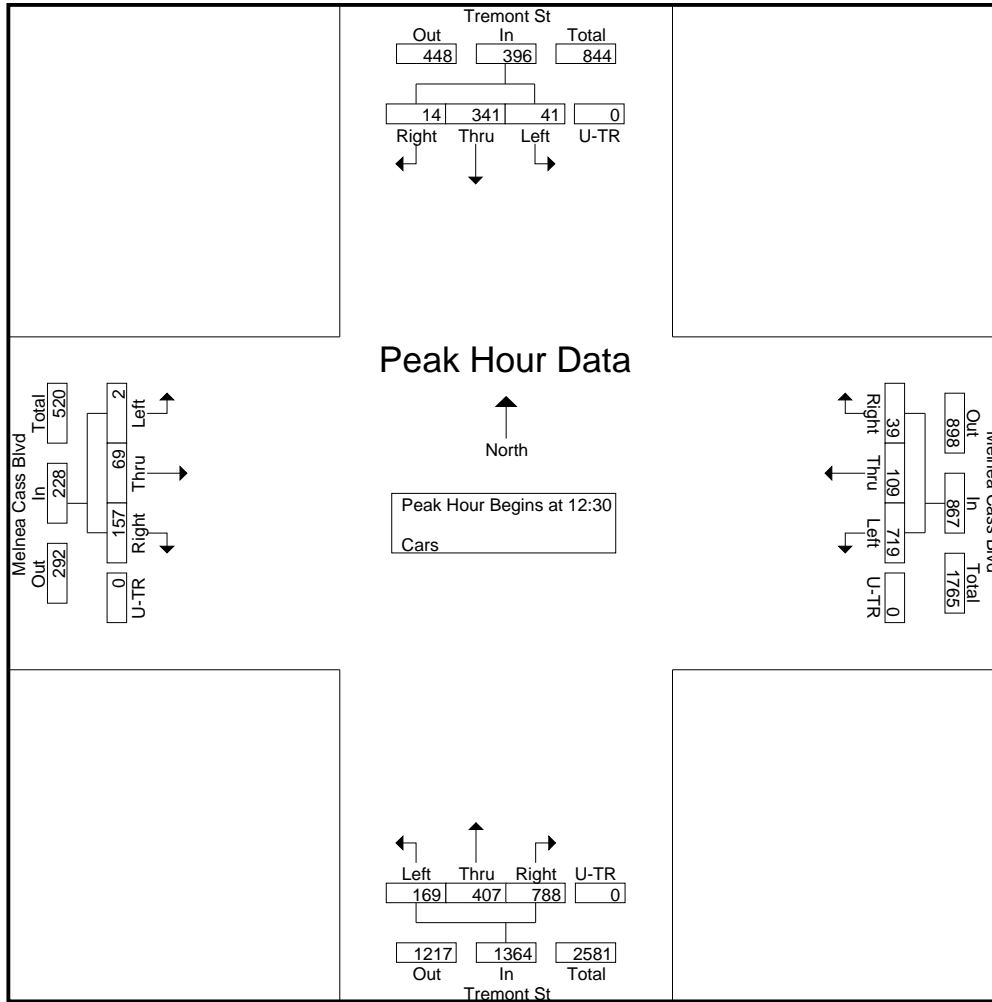


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 12:30

12:30	10	78	1	0	89	189	19	11	0	219	44	105	216	0	365	0	9	43	0	52	725
12:45	15	130	4	0	149	177	58	13	0	248	43	139	181	0	363	0	26	38	0	64	824
13:00	7	82	1	0	90	174	18	8	0	200	37	88	185	0	310	2	20	37	0	59	659
13:15	9	51	8	0	68	179	14	7	0	200	45	75	206	0	326	0	14	39	0	53	647
Total Volume	41	341	14	0	396	719	109	39	0	867	169	407	788	0	1364	2	69	157	0	228	2855
% App. Total	10.4	86.1	3.5	0		82.9	12.6	4.5	0		12.4	29.8	57.8	0		0.9	30.3	68.9	0		
PHF	.683	.656	.438	.000	.664	.951	.470	.750	.000	.874	.939	.732	.912	.000	.934	.250	.663	.913	.000	.891	.866

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 4

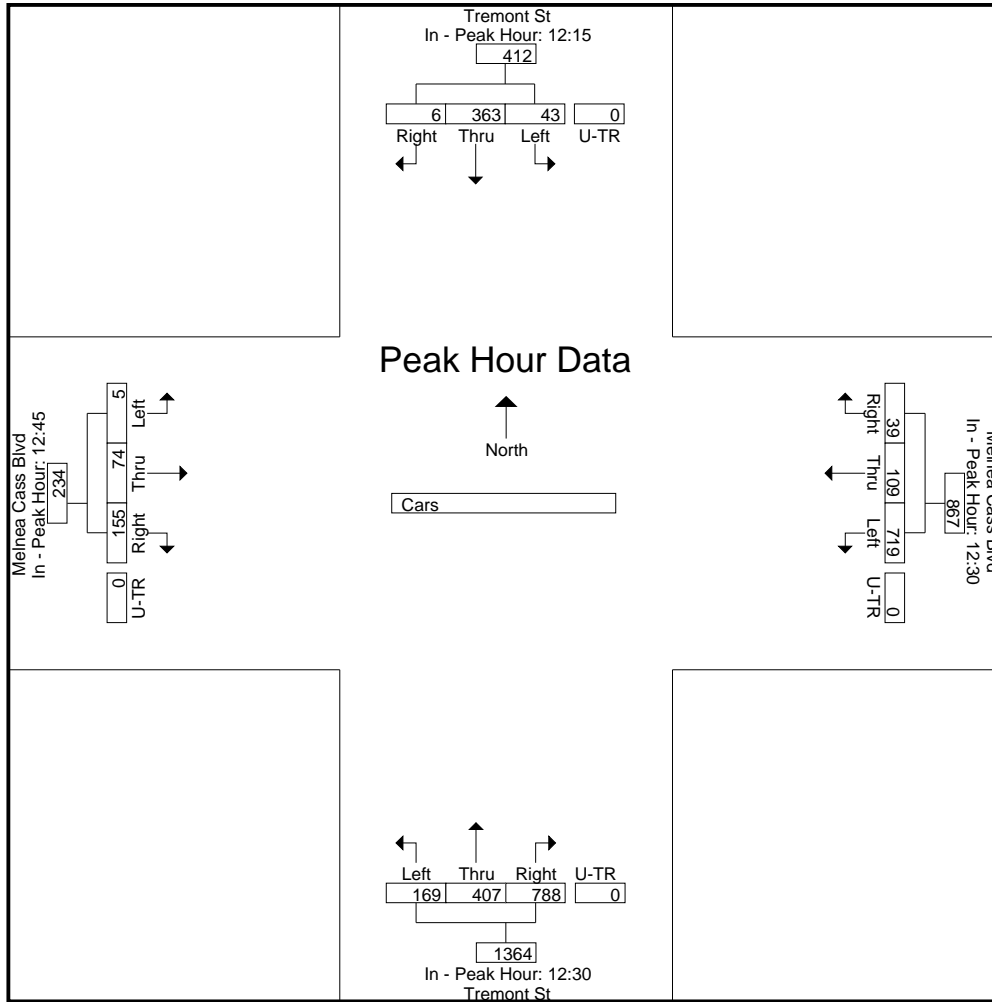


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	12:15					12:30					12:30					12:45				
+0 mins.	11	73	0	0	84	189	19	11	0	219	44	105	216	0	365	0	26	38	0	64
+15 mins.	10	78	1	0	89	177	58	13	0	248	43	139	181	0	363	2	20	37	0	59
+30 mins.	15	130	4	0	149	174	18	8	0	200	37	88	185	0	310	0	14	39	0	53
+45 mins.	7	82	1	0	90	179	14	7	0	200	45	75	206	0	326	3	14	41	0	58
Total Volume	43	363	6	0	412	719	109	39	0	867	169	407	788	0	1364	5	74	155	0	234
% App. Total	10.4	88.1	1.5	0		82.9	12.6	4.5	0		12.4	29.8	57.8	0		2.1	31.6	66.2	0	
PHF	.717	.698	.375	.000	.691	.951	.470	.750	.000	.874	.939	.732	.912	.000	.934	.417	.712	.945	.000	.914

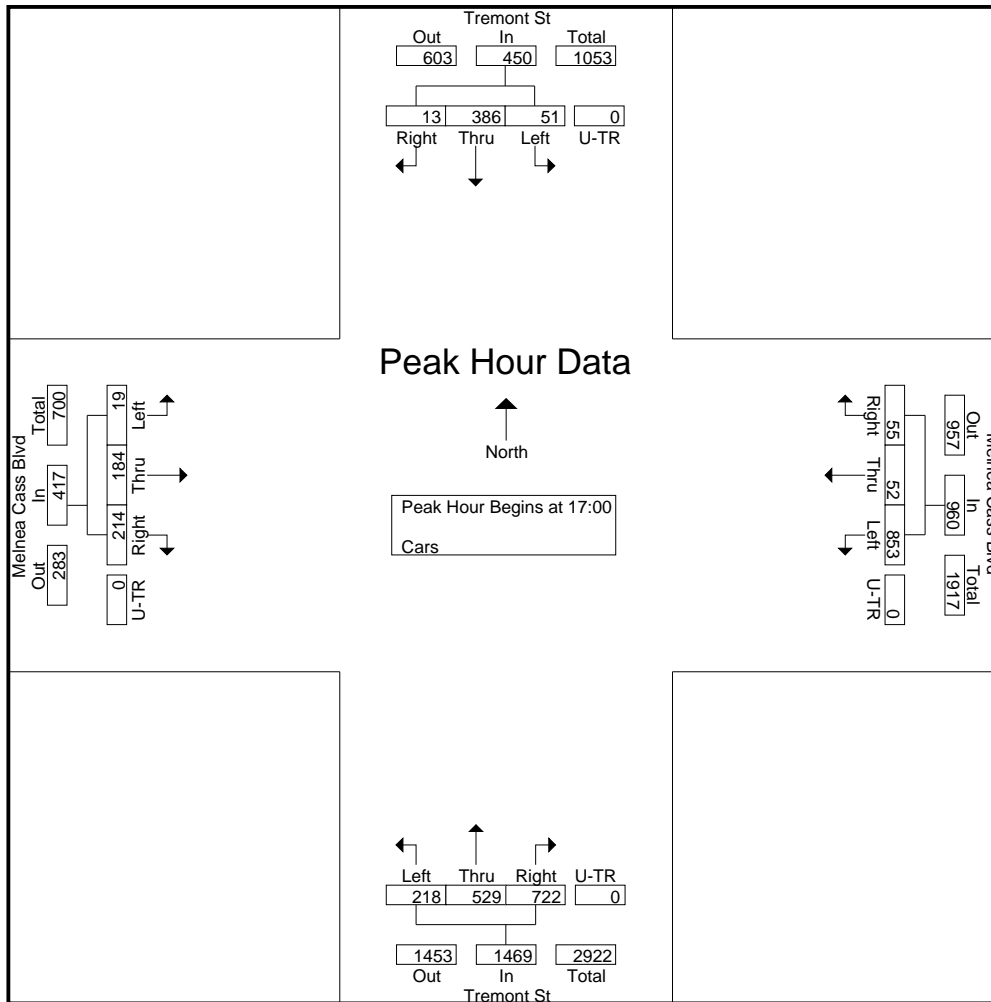
N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	10	90	4	0	104	199	12	12	0	223	55	139	143	0	337	6	45	50	0	101	765
17:15	13	70	1	0	84	218	11	12	0	241	46	129	168	0	343	4	31	50	0	85	753
17:30	6	127	1	0	134	223	10	13	0	246	58	143	218	0	419	6	54	56	0	116	915
17:45	22	99	7	0	128	213	19	18	0	250	59	118	193	0	370	3	54	58	0	115	863
Total Volume	51	386	13	0	450	853	52	55	0	960	218	529	722	0	1469	19	184	214	0	417	3296
% App. Total	11.3	85.8	2.9	0		88.9	5.4	5.7	0		14.8	36	49.1	0		4.6	44.1	51.3	0		
PHF	.580	.760	.464	.000	.840	.956	.684	.764	.000	.960	.924	.925	.828	.000	.876	.792	.852	.922	.000	.899	.901

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



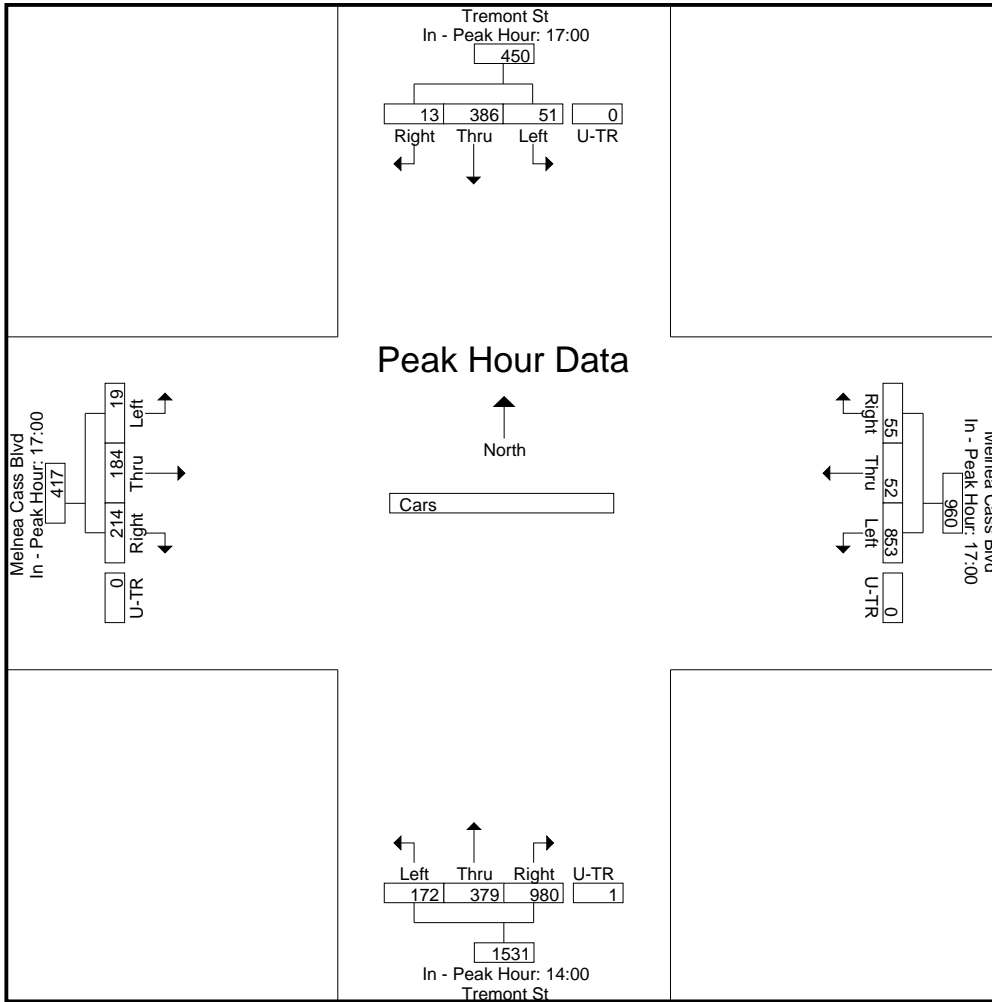
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	17:00					17:00					14:00					17:00				
+0 mins.	10	90	4	0	104	199	12	12	0	223	42	83	254	0	379	6	45	50	0	101
+15 mins.	13	70	1	0	84	218	11	12	0	241	48	88	253	0	389	4	31	50	0	85
+30 mins.	6	127	1	0	134	223	10	13	0	246	41	86	255	1	383	6	54	56	0	116
+45 mins.	22	99	7	0	128	213	19	18	0	250	41	122	218	0	381	3	54	58	0	115
Total Volume	51	386	13	0	450	853	52	55	0	960	172	379	980	1	1532	19	184	214	0	417
% App. Total	11.3	85.8	2.9	0		88.9	5.4	5.7	0		11.2	24.7	64	0.1		4.6	44.1	51.3	0	
PHF	.580	.760	.464	.000	.840	.956	.684	.764	.000	.960	.896	.777	.961	.250	.985	.792	.852	.922	.000	.899

Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 7



Accurate Counts

978-664-2565

N/S Street : Tremont Street
 E/W Street: Melnea Cass Boulevard
 City/State : Boston, MA
 Weather : Clear

File Name : 01410002
 Site Code : 01410002
 Start Date : 9/21/2011
 Page No : 1

Groups Printed- Trucks

Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	1	11	1	0	3	8	2	0	4	4	8	0	0	1	2	0	45
07:15	1	6	1	0	9	4	0	0	3	5	5	0	0	2	3	0	39
07:30	1	4	1	0	10	6	2	0	2	5	10	0	0	1	1	0	43
07:45	0	4	1	0	3	6	3	0	4	10	9	0	0	1	3	0	44
Total	3	25	4	0	25	24	7	0	13	24	32	0	0	5	9	0	171
08:00	0	4	2	0	13	1	3	0	3	8	13	0	0	0	2	0	49
08:15	3	3	0	0	7	6	3	0	2	9	9	0	0	0	2	0	44
08:30	0	4	1	0	12	5	2	0	0	10	11	0	1	0	2	0	48
08:45	1	7	1	0	4	2	0	0	1	8	11	0	1	3	0	0	39
Total	4	18	4	0	36	14	8	0	6	35	44	0	2	3	6	0	180
09:00	2	4	0	0	6	4	2	0	1	5	11	0	0	3	2	0	40
09:15	0	5	2	0	6	5	4	0	1	7	12	0	0	2	1	0	45
09:30	0	8	2	0	10	1	0	0	2	5	14	0	0	2	3	0	47
09:45	1	3	1	0	5	4	0	0	0	11	15	0	1	4	2	0	47
Total	3	20	5	0	27	14	6	0	4	28	52	0	1	11	8	0	179
10:00	0	5	0	0	5	5	0	0	1	4	11	0	0	2	2	0	35
10:15	0	7	1	0	6	5	1	0	1	5	11	0	0	1	2	0	40
10:30	0	1	2	0	5	5	2	0	0	3	5	0	0	2	0	0	25
10:45	0	0	0	0	4	3	1	0	0	5	8	0	0	1	1	0	23
Total	0	13	3	0	20	18	4	0	2	17	35	0	0	6	5	0	123
11:00	1	4	3	0	8	3	0	0	3	5	15	0	0	1	0	0	43
11:15	2	1	0	0	5	3	0	0	0	6	10	0	0	1	0	0	28
11:30	0	1	0	0	6	4	1	0	0	4	13	0	0	0	1	0	30
11:45	0	4	1	0	5	4	0	0	1	5	6	0	0	2	2	0	30
Total	3	10	4	0	24	14	1	0	4	20	44	0	0	4	3	0	131
12:00	1	2	0	0	6	4	0	0	0	2	6	0	0	0	1	0	22
12:15	2	5	1	0	7	1	0	0	0	2	8	0	0	0	3	0	29
12:30	0	3	1	0	7	2	1	0	2	1	10	0	0	1	3	0	31
12:45	1	1	0	0	4	2	1	0	1	3	13	0	0	0	0	0	26
Total	4	11	2	0	24	9	2	0	3	8	37	0	0	1	7	0	108
13:00	2	3	0	0	6	3	0	0	2	3	9	0	0	0	1	0	29
13:15	0	2	1	0	1	9	0	0	1	4	4	0	0	1	0	0	23
13:30	0	1	1	0	3	8	0	0	2	7	4	0	0	1	1	0	28
13:45	2	7	4	0	5	4	0	0	0	8	6	0	0	3	2	0	41
Total	4	13	6	0	15	24	0	0	5	22	23	0	0	5	4	0	121
14:00	1	4	1	0	3	6	0	0	1	8	8	0	1	1	4	0	38
14:15	1	4	1	0	8	3	1	0	1	3	4	0	0	1	4	0	31
14:30	1	5	1	0	7	3	2	0	3	5	5	0	0	2	1	0	35
14:45	0	4	0	0	3	4	2	0	0	4	5	0	0	2	2	0	26
Total	3	17	3	0	21	16	5	0	5	20	22	0	1	6	11	0	130
15:00	0	1	1	0	10	3	2	0	2	8	6	0	0	3	1	0	37
15:15	3	1	1	0	6	8	0	0	1	9	2	0	1	1	0	0	33
15:30	0	5	1	0	1	3	3	0	4	5	5	0	0	3	4	0	34
15:45	0	6	3	0	5	5	0	0	3	5	8	0	0	2	3	0	40
Total	3	13	6	0	22	19	5	0	10	27	21	0	1	9	8	0	144
16:00	0	4	0	0	9	2	1	0	3	6	5	0	0	0	1	0	31
16:15	0	4	2	0	3	6	1	0	2	8	4	0	0	0	3	0	33
16:30	0	4	1	0	1	4	3	0	1	7	5	0	0	0	2	1	29
16:45	1	3	3	0	3	2	0	0	4	5	5	0	0	0	1	0	27
Total	1	15	6	0	16	14	5	0	10	26	19	0	0	0	7	1	120
17:00	0	5	0	0	1	4	0	0	1	4	5	0	0	1	0	0	21
17:15	1	4	1	0	3	3	0	0	1	5	4	0	0	0	1	0	23

Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

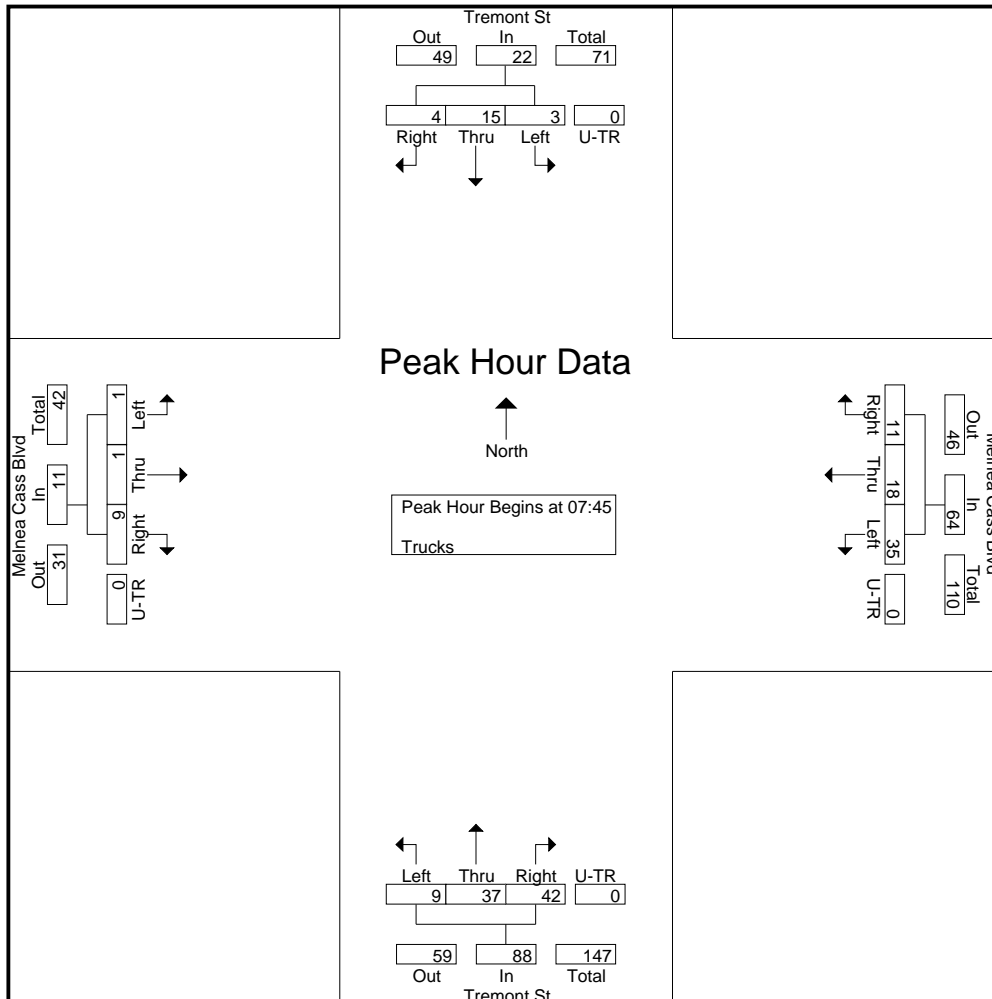
File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 2

Groups Printed- Trucks

Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Int. Total	
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR		
17:30	0	1	0	0	3	1	0	0	3	3	5	0	0	0	0	0	0	16
17:45	1	2	1	0	3	3	0	0	2	1	5	0	0	3	1	0	0	22
Total	2	12	2	0	10	11	0	0	7	13	19	0	0	4	2	0	82	
Grand Total	30	167	45	0	240	177	43	0	69	240	348	0	5	54	70	1	1489	
Apprch %	12.4	69	18.6	0	52.2	38.5	9.3	0	10.5	36.5	53	0	3.8	41.5	53.8	0.8		
Total %	2	11.2	3	0	16.1	11.9	2.9	0	4.6	16.1	23.4	0	0.3	3.6	4.7	0.1		

Start Time	Tremont St From North					Melnea Cass Blvd From East					Tremont St From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
07:45	0	4	1	0	5	3	6	3	0	12	4	10	9	0	23	0	1	3	0	4	44
08:00	0	4	2	0	6	13	1	3	0	17	3	8	13	0	24	0	0	2	0	2	49
08:15	3	3	0	0	6	7	6	3	0	16	2	9	9	0	20	0	0	2	0	2	44
08:30	0	4	1	0	5	12	5	2	0	19	0	10	11	0	21	1	0	2	0	3	48
Total Volume	3	15	4	0	22	35	18	11	0	64	9	37	42	0	88	1	1	9	0	11	185
% App. Total	13.6	68.2	18.2	0		54.7	28.1	17.2	0		10.2	42	47.7	0		9.1	9.1	81.8	0		
PHF	.250	.938	.500	.000	.917	.673	.750	.917	.000	.842	.563	.925	.808	.000	.917	.250	.250	.750	.000	.688	.944

Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:45

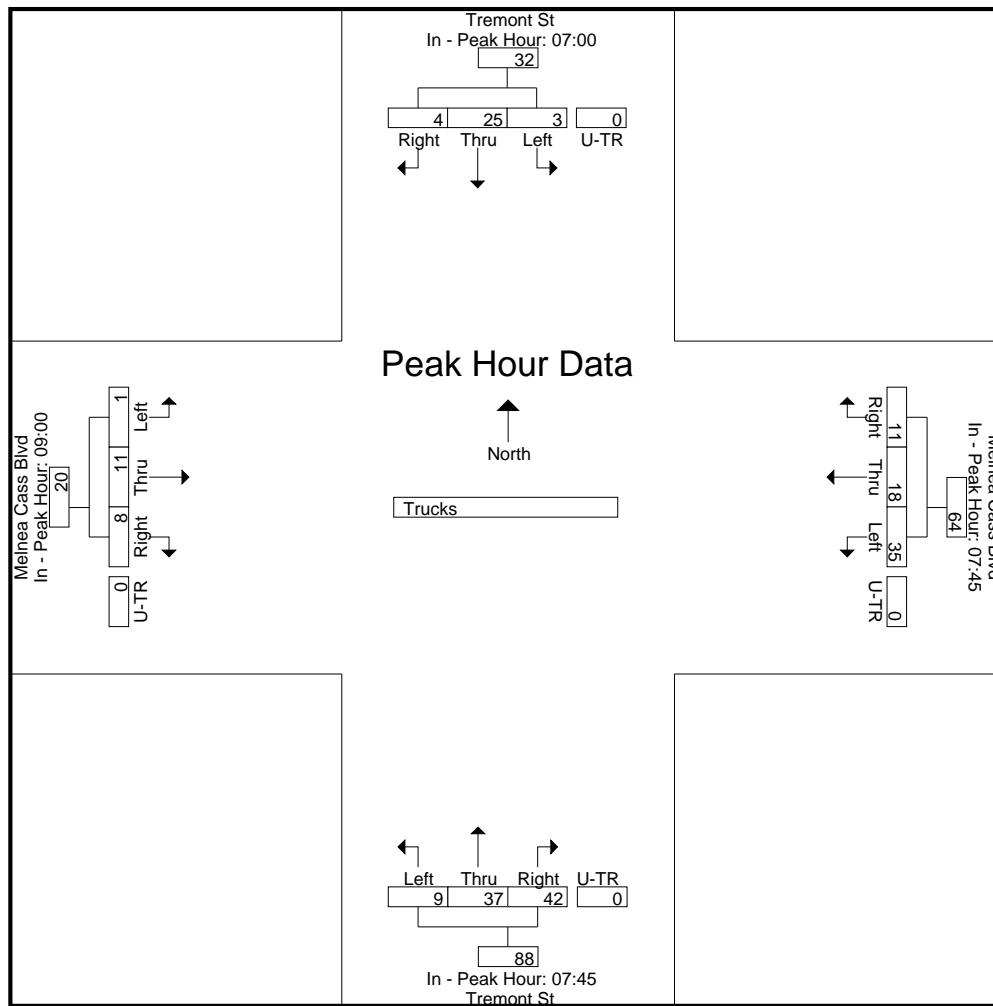


Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 3

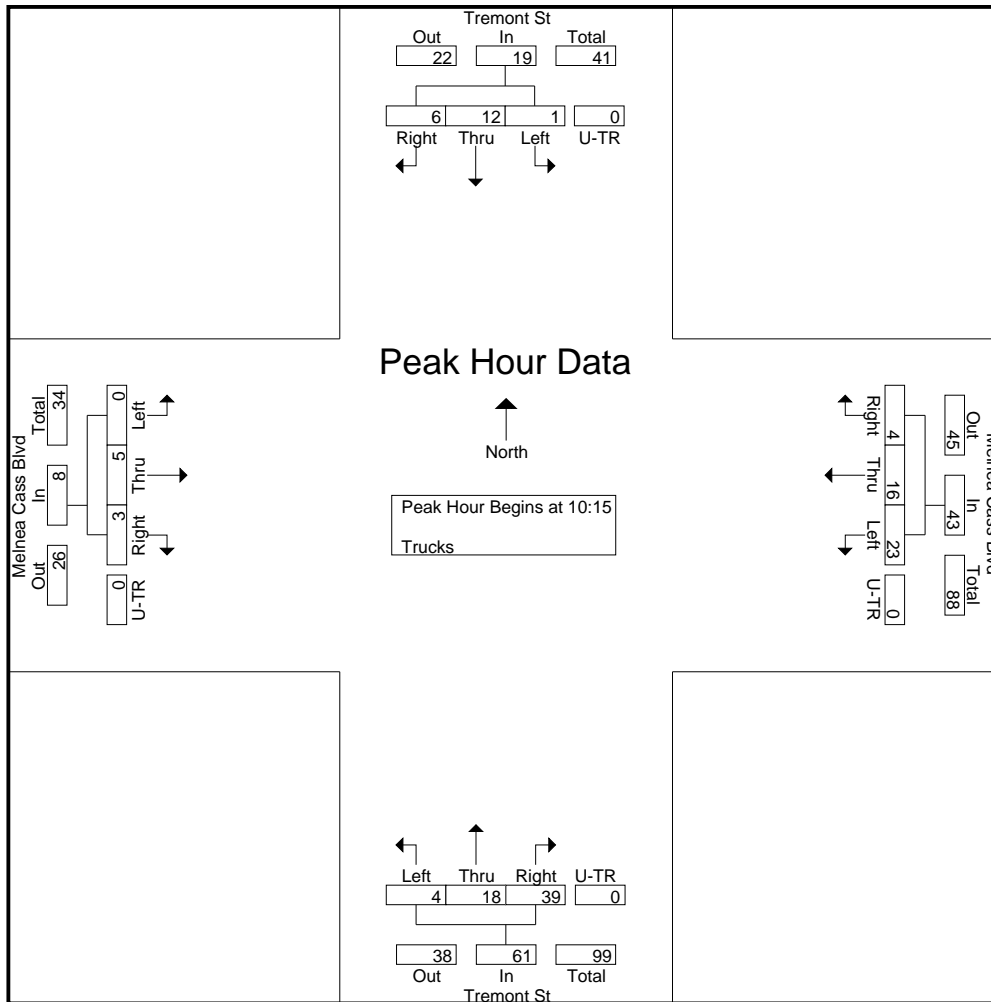
Start Time	Tremont St From North					Melnea Cass Blvd From East					Tremont St From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:00					07:45					07:45					09:00					
+0 mins.	1	11	1	0	13	3	6	3	0	12	4	10	9	0	23	0	3	2	0	5	
+15 mins.	1	6	1	0	8	13	1	3	0	17	3	8	13	0	24	0	2	1	0	3	
+30 mins.	1	4	1	0	6	7	6	3	0	16	2	9	9	0	20	0	2	3	0	5	
+45 mins.	0	4	1	0	5	12	5	2	0	19	0	10	11	0	21	1	4	2	0	7	
Total Volume	3	25	4	0	32	35	18	11	0	64	9	37	42	0	88	1	11	8	0	20	
% App. Total	9.4	78.1	12.5	0		54.7	28.1	17.2	0		10.2	42	47.7	0		5	55	40	0		
PHF	.750	.568	1.000	.000	.615	.673	.750	.917	.000	.842	.563	.925	.808	.000	.917	.250	.688	.667	.000	.714	



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 10:15

10:15	0	7	1	0	8	6	5	1	0	12	1	5	11	0	17	0	1	2	0	3	40
10:30	0	1	2	0	3	5	5	2	0	12	0	3	5	0	8	0	2	0	0	2	25
10:45	0	0	0	0	0	4	3	1	0	8	0	5	8	0	13	0	1	1	0	2	23
11:00	1	4	3	0	8	8	3	0	0	11	3	5	15	0	23	0	1	0	0	1	43
Total Volume	1	12	6	0	19	23	16	4	0	43	4	18	39	0	61	0	5	3	0	8	131
% App. Total	5.3	63.2	31.6	0		53.5	37.2	9.3	0		6.6	29.5	63.9	0		0	62.5	37.5	0		
PHF	.250	.429	.500	.000	.594	.719	.800	.500	.000	.896	.333	.900	.650	.000	.663	.000	.625	.375	.000	.667	.762

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

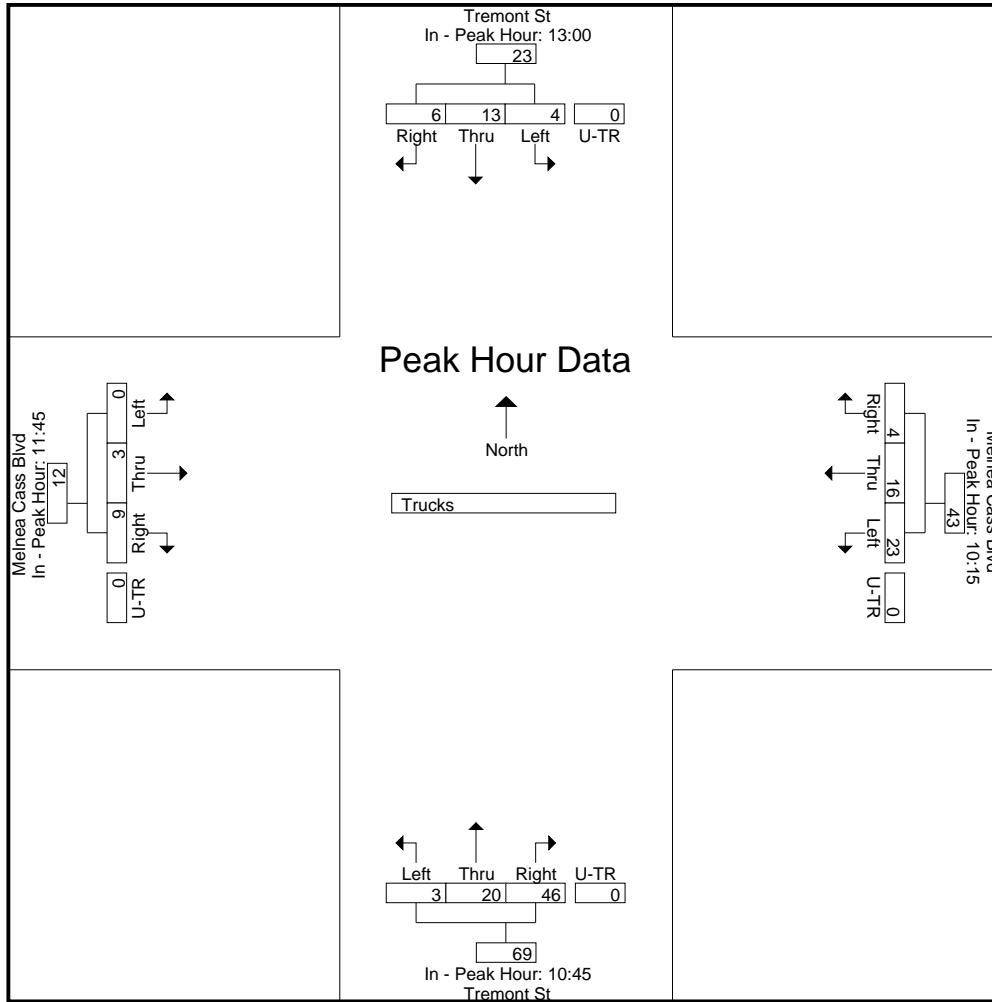


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	13:00					10:15					10:45					11:45				
+0 mins.	2	3	0	0	5	6	5	1	0	12	0	5	8	0	13	0	2	2	0	4
+15 mins.	0	2	1	0	3	5	5	2	0	12	3	5	15	0	23	0	0	1	0	1
+30 mins.	0	1	1	0	2	4	3	1	0	8	0	6	10	0	16	0	0	3	0	3
+45 mins.	2	7	4	0	13	8	3	0	0	11	0	4	13	0	17	0	1	3	0	4
Total Volume	4	13	6	0	23	23	16	4	0	43	3	20	46	0	69	0	3	9	0	12
% App. Total	17.4	56.5	26.1	0		53.5	37.2	9.3	0		4.3	29	66.7	0		0	25	75	0	
PHF	.500	.464	.375	.000	.442	.719	.800	.500	.000	.896	.250	.833	.767	.000	.750	.000	.375	.750	.000	.750

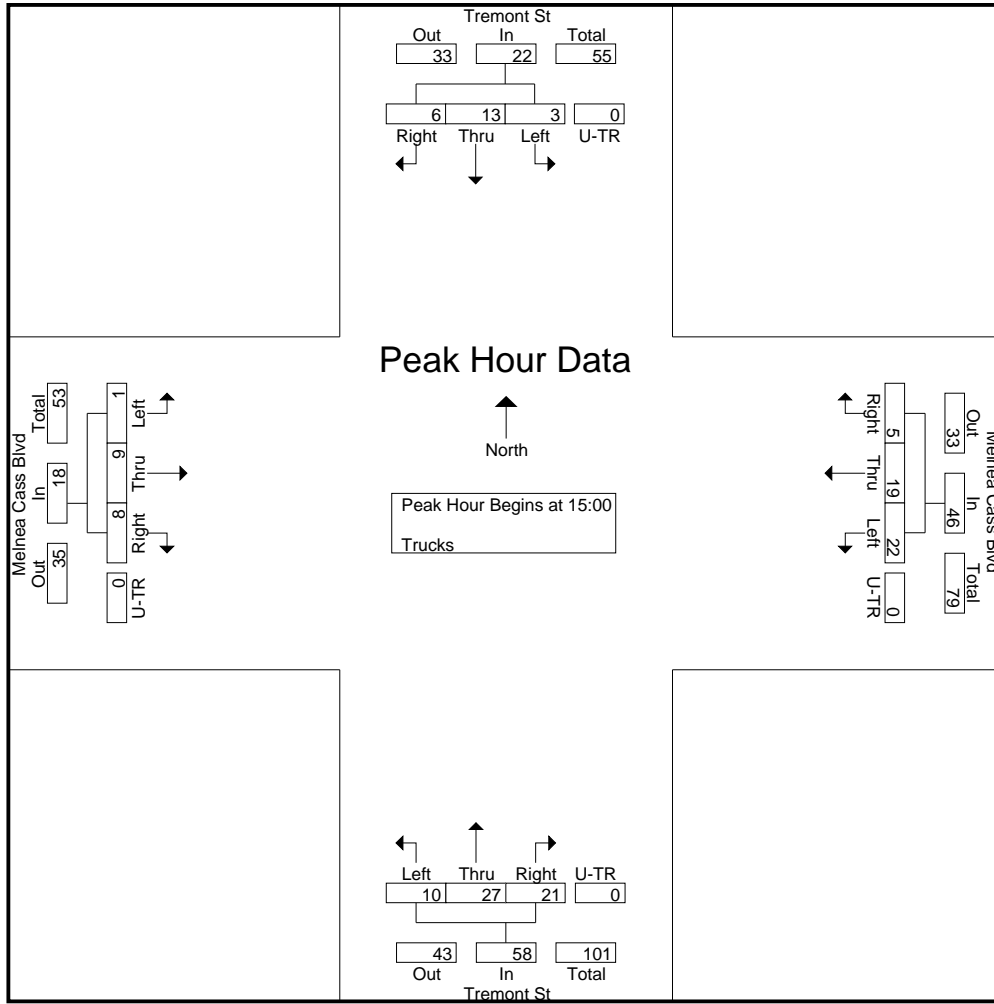
N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 15:00

15:00	0	1	1	0	2	10	3	2	0	15	2	8	6	0	16	0	3	1	0	4	37
15:15	3	1	1	0	5	6	8	0	0	14	1	9	2	0	12	1	1	0	0	2	33
15:30	0	5	1	0	6	1	3	3	0	7	4	5	5	0	14	0	3	4	0	7	34
15:45	0	6	3	0	9	5	5	0	0	10	3	5	8	0	16	0	2	3	0	5	40
Total Volume	3	13	6	0	22	22	19	5	0	46	10	27	21	0	58	1	9	8	0	18	144
% App. Total	13.6	59.1	27.3	0	47.8	41.3	10.9	0	0	17.2	46.6	36.2	0	0	5.6	50	44.4	0	0	0	0
PHF	.250	.542	.500	.000	.611	.550	.594	.417	.000	.767	.625	.750	.656	.000	.906	.250	.750	.500	.000	.643	.900

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1

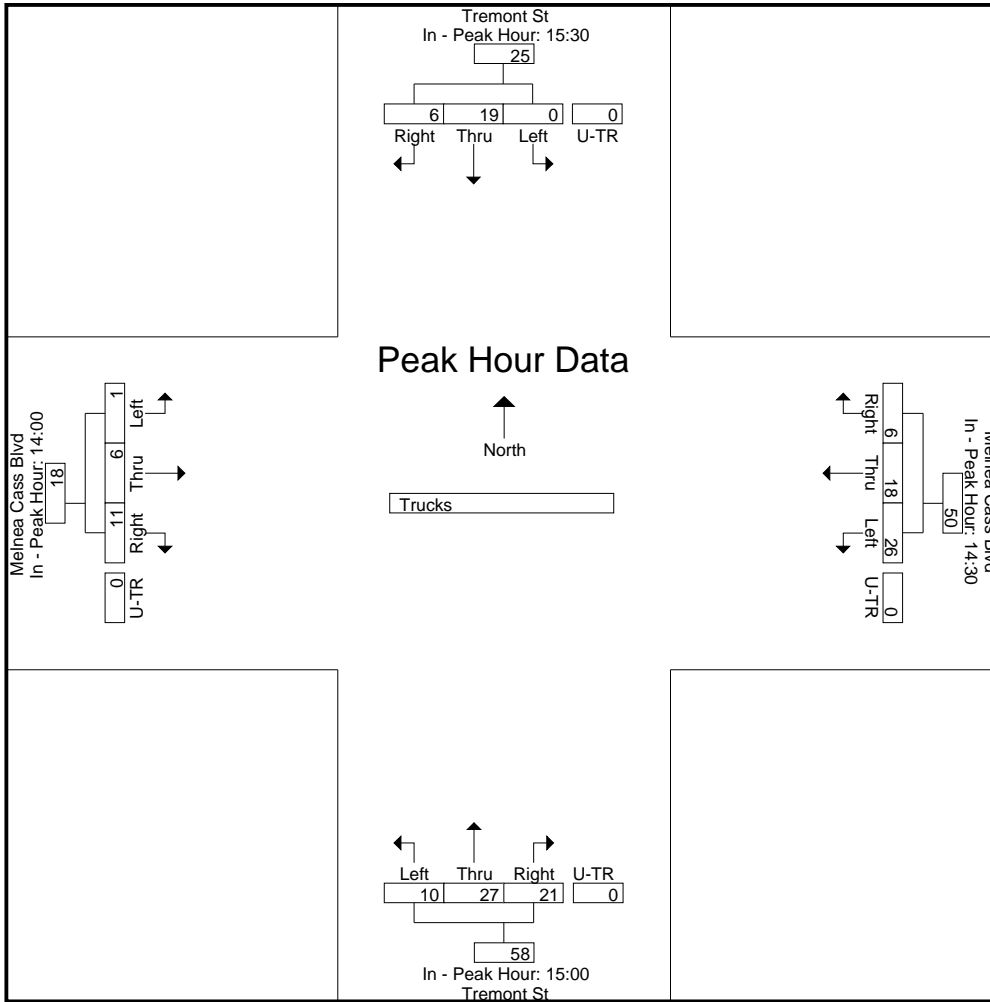
Peak Hour for Each Approach Begins at:

	15:30					14:30					15:00					14:00				
+0 mins.	0	5	1	0	6	7	3	2	0	12	2	8	6	0	16	1	1	4	0	6
+15 mins.	0	6	3	0	9	3	4	2	0	9	1	9	2	0	12	0	1	4	0	5
+30 mins.	0	4	0	0	4	10	3	2	0	15	4	5	5	0	14	0	2	1	0	3
+45 mins.	0	4	2	0	6	6	8	0	0	14	3	5	8	0	16	0	2	2	0	4
Total Volume	0	19	6	0	25	26	18	6	0	50	10	27	21	0	58	1	6	11	0	18
% App. Total	0	76	24	0		52	36	12	0		17.2	46.6	36.2	0		5.6	33.3	61.1	0	
PHF	.000	.792	.500	.000	.694	.650	.563	.750	.000	.833	.625	.750	.656	.000	.906	.250	.750	.688	.000	.750

Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 7



Accurate Counts
978-664-2565

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 1

N/S Street : Tremont Street
E/W Street : Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

Groups Printed- Bikes Peds

Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00	0	1	1	1	0	0	0	2	0	0	0	0	0	1	0	5	8	3	11
07:15	0	1	0	9	0	1	0	2	0	2	2	4	0	0	0	7	22	6	28
07:30	0	0	0	3	0	1	0	5	0	2	0	3	1	3	0	8	19	7	26
07:45	0	0	0	2	2	0	0	1	0	0	0	0	2	1	0	8	11	5	16
Total	0	2	1	15	2	2	0	10	0	4	2	7	3	5	0	28	60	21	81
08:00	0	0	0	4	0	0	0	7	0	0	0	3	0	1	0	3	17	1	18
08:15	0	4	0	3	0	0	0	3	0	2	2	4	0	1	1	8	18	10	28
08:30	0	0	0	3	0	0	0	4	0	0	0	2	0	2	0	6	15	2	17
08:45	0	1	0	1	0	0	0	3	0	2	0	2	0	1	0	10	16	4	20
Total	0	5	0	11	0	0	0	17	0	4	2	11	0	5	1	27	66	17	83
09:00	0	0	0	0	0	1	0	3	0	2	1	1	1	3	0	10	14	8	22
09:15	0	0	0	5	0	2	0	5	0	1	0	0	0	2	0	6	16	5	21
09:30	0	0	0	0	0	1	0	1	0	2	0	1	0	2	0	2	4	5	9
09:45	0	1	0	2	1	1	0	2	0	0	0	0	0	0	0	4	8	3	11
Total	0	1	0	7	1	5	0	11	0	5	1	2	1	7	0	22	42	21	63
10:00	0	1	0	3	0	0	0	0	0	1	0	2	0	1	0	2	7	3	10
10:15	0	1	0	3	0	1	0	1	0	0	0	3	1	1	0	5	12	4	16
10:30	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	10	14	1	15
10:45	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0	10	12	3	15
Total	0	4	0	10	0	1	0	1	0	3	0	7	1	2	0	27	45	11	56
11:00	0	0	0	1	0	0	0	2	0	2	0	0	0	0	0	7	10	2	12
11:15	0	0	0	2	0	1	0	2	0	0	0	2	0	0	0	12	18	1	19
11:30	0	0	0	4	0	3	0	0	0	2	2	3	0	0	0	5	12	7	19
11:45	0	0	0	3	0	1	0	0	0	2	0	1	0	0	0	7	11	3	14
Total	0	0	0	10	0	5	0	4	0	6	2	6	0	0	0	31	51	13	64
12:00	0	3	0	7	0	0	0	1	0	1	0	0	0	1	1	6	14	6	20
12:15	0	1	0	3	0	0	0	1	1	0	1	0	0	2	0	12	16	5	21
12:30	0	0	1	3	0	0	0	1	0	0	1	3	1	0	0	8	15	3	18
12:45	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	6	0	6
Total	0	4	1	14	0	0	0	5	1	1	2	3	1	3	1	29	51	14	65
13:00	0	0	0	3	0	4	0	2	0	0	0	1	0	3	0	20	26	7	33
13:15	0	0	0	4	0	0	0	9	0	0	0	1	0	0	0	15	29	0	29
13:30	0	2	0	1	0	2	0	8	0	0	0	2	0	0	0	4	15	4	19
13:45	1	2	1	3	0	4	0	3	0	0	0	1	0	2	0	9	16	10	26
Total	1	4	1	11	0	10	0	22	0	0	0	5	0	5	0	48	86	21	107
14:00	0	2	0	0	0	0	0	1	0	2	0	1	0	0	0	21	23	4	27
14:15	0	2	0	3	0	0	0	3	0	0	0	0	0	0	0	4	10	2	12
14:30	0	0	0	1	0	0	0	6	0	0	0	3	0	0	0	12	22	0	22
14:45	0	1	0	2	0	1	0	1	0	0	0	0	0	0	0	8	11	2	13
Total	0	5	0	6	0	1	0	11	0	2	0	4	0	0	0	45	66	8	74
15:00	0	1	0	4	1	2	0	1	0	0	0	0	0	2	0	13	18	6	24
15:15	0	0	0	0	1	1	0	2	0	1	0	2	0	0	0	1	5	3	8
15:30	0	0	0	2	0	0	0	5	0	1	0	3	0	1	0	5	15	2	17
15:45	0	0	0	4	0	4	0	8	0	2	1	3	9	0	0	14	29	16	45
Total	0	1	0	10	2	7	0	16	0	4	1	8	9	3	0	33	67	27	94
16:00	0	0	0	2	0	1	0	0	0	0	0	0	2	0	0	5	7	3	10
16:15	0	0	0	1	0	3	0	5	0	2	0	0	0	1	0	8	14	6	20
16:30	0	2	0	1	0	0	0	4	0	1	0	2	0	0	0	10	17	3	20
16:45	0	0	9	2	0	3	0	0	0	2	0	1	0	0	1	9	12	15	27
Total	0	2	9	6	0	7	0	9	0	5	0	3	2	1	1	32	50	27	77
17:00	0	0	0	1	0	5	0	0	0	0	0	2	0	1	0	11	14	6	20
17:15	0	1	4	7	1	3	0	6	0	0	0	5	0	0	0	14	32	9	41
17:30	0	0	0	9	0	5	0	1	0	1	0	0	0	1	1	16	26	8	34
17:45	0	6	0	4	0	1	0	13	0	1	0	0	0	1	0	9	26	9	35
Total	0	7	4	21	1	14	0	20	0	2	0	7	0	3	1	50	98	32	130

Accurate Counts
978-664-2565

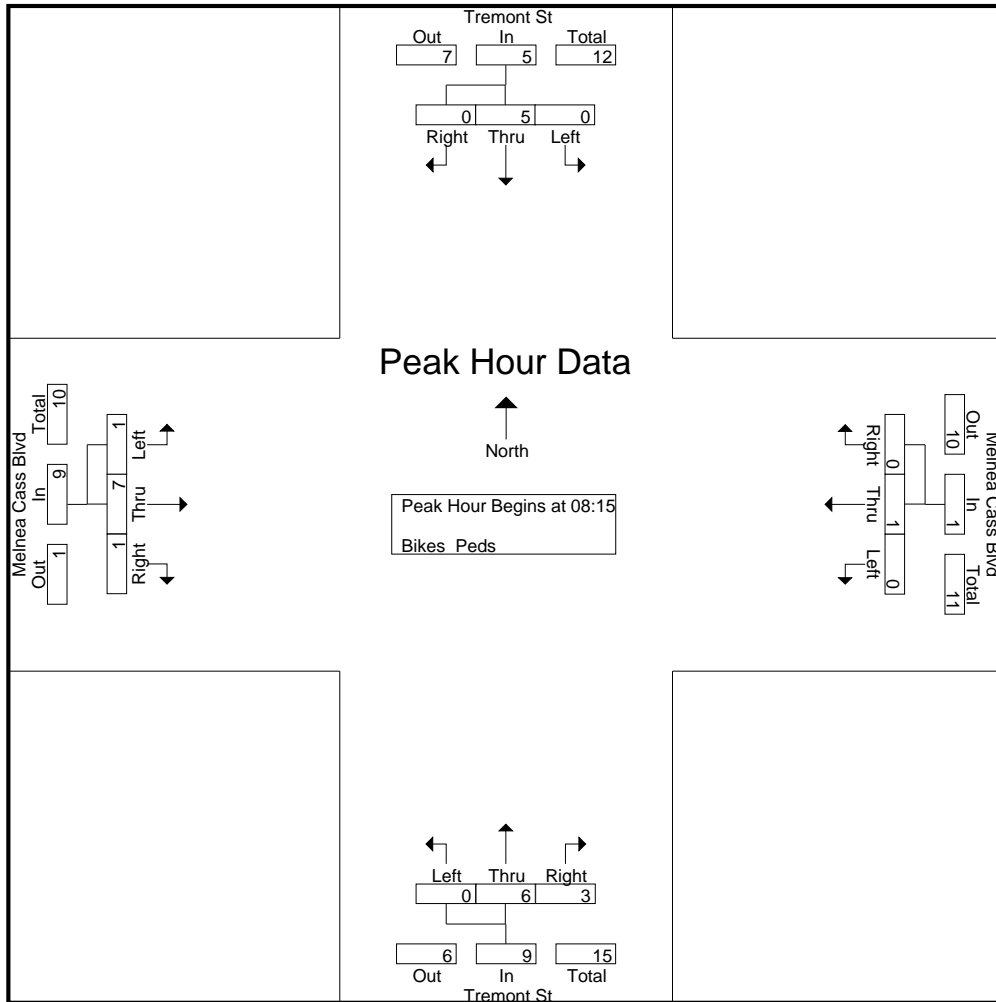
N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 2

Groups Printed- Bikes Peds

	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
Grand Total	1	35	16	121	6	52	0	126	1	36	10	63	17	34	4	372	682	212	894
Apprch %	1.9	67.3	30.8		10.3	89.7	0		2.1	76.6	21.3		30.9	61.8	7.3				
Total %	0.5	16.5	7.5		2.8	24.5	0		0.5	17	4.7		8	16	1.9		76.3	23.7	

Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:15																	
08:15	0	4	0	4	0	0	0	0	0	2	2	4	0	1	1	2	10
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:45	0	1	0	1	0	0	0	0	0	2	0	2	0	1	0	1	4
09:00	0	0	0	0	0	1	0	1	0	2	1	3	1	3	0	4	8
Total Volume	0	5	0	5	0	1	0	1	0	6	3	9	1	7	1	9	24
% App. Total	0	100	0		0	100	0		0	66.7	33.3		11.1	77.8	11.1		
PHF	.000	.313	.000	.313	.000	.250	.000	.250	.000	.750	.375	.563	.250	.583	.250	.563	.600

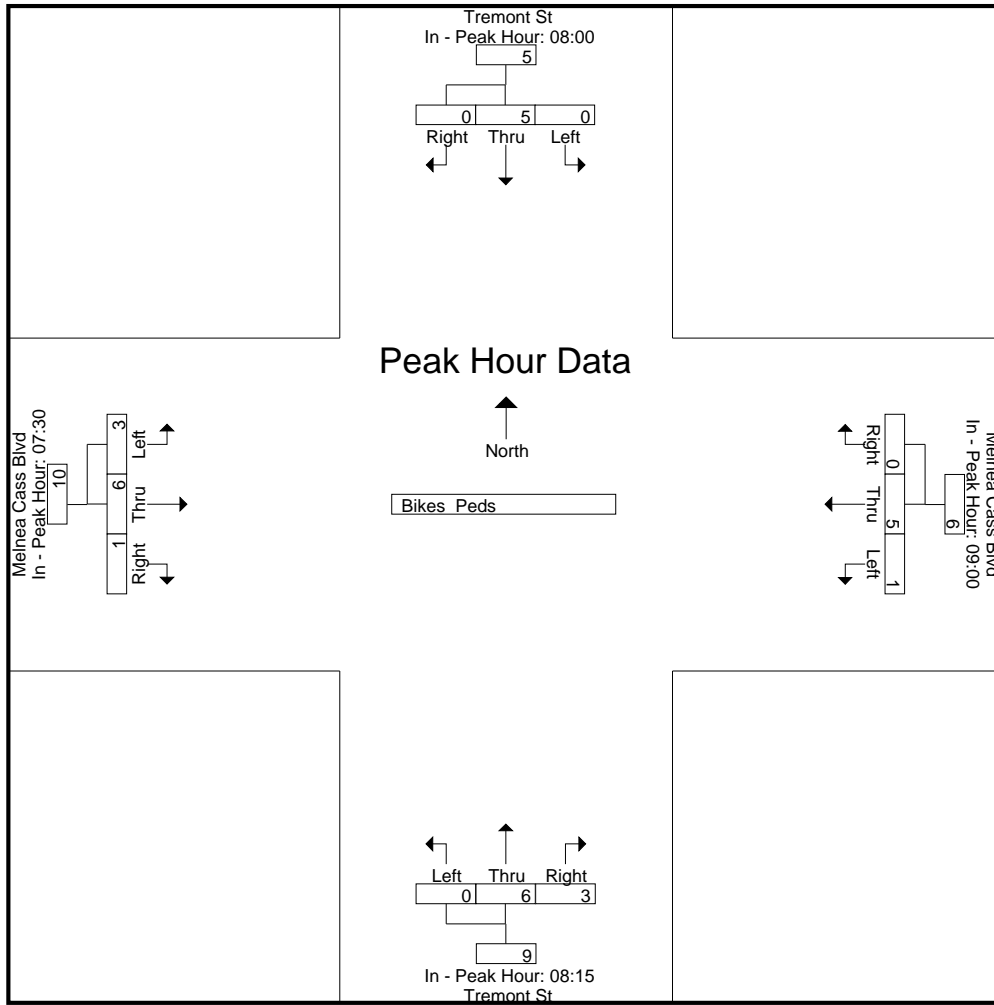


Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 3

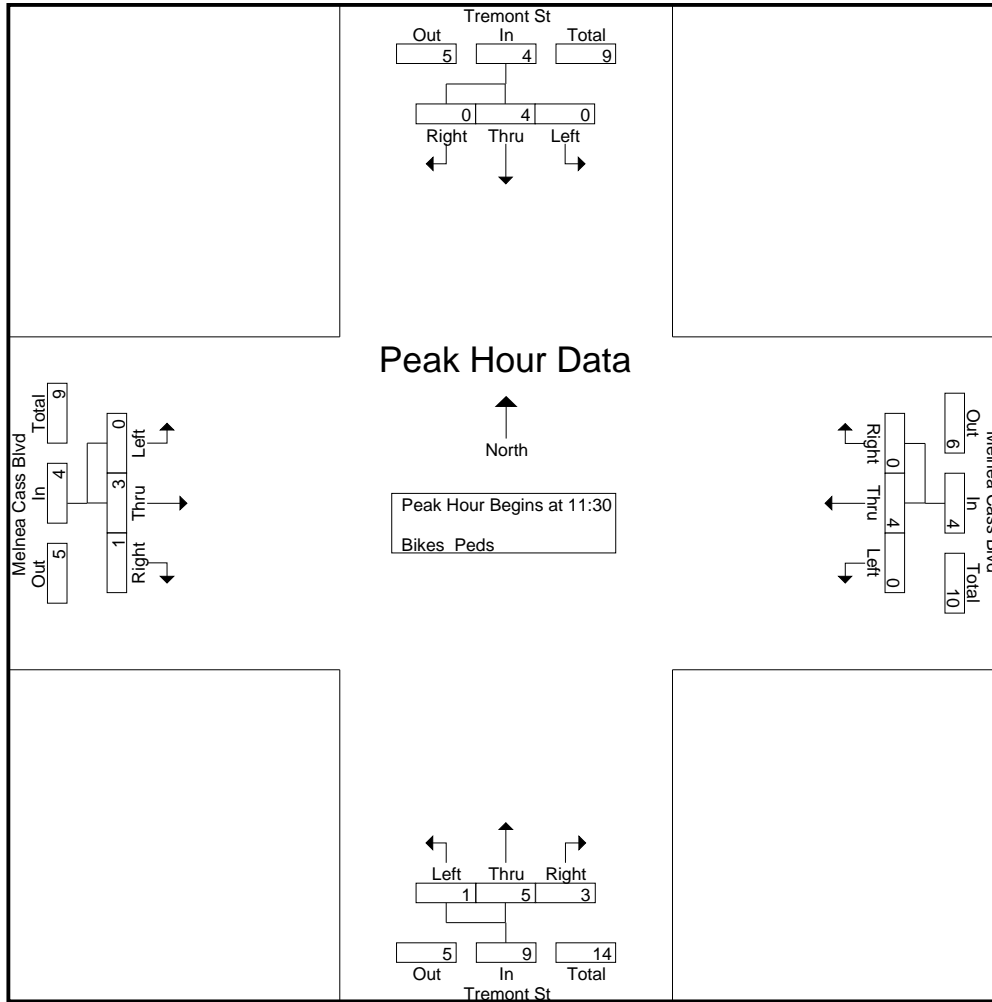
Start Time	Tremont St From North				Melnea Cass Blvd From East				Tremont St From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	08:00				09:00				08:15				07:30				
+0 mins.	0	0	0	0	0	1	0	1	0	2	2	4	1	3	0	4	
+15 mins.	0	4	0	4	0	2	0	2	0	0	0	0	2	1	0	3	
+30 mins.	0	0	0	0	0	1	0	1	0	2	0	2	0	1	0	1	
+45 mins.	0	1	0	1	1	1	0	2	0	2	1	3	0	1	1	2	
Total Volume	0	5	0	5	1	5	0	6	0	6	3	9	3	6	1	10	
% App. Total	0	100	0		16.7	83.3	0		0	66.7	33.3		30	60	10		
PHF	.000	.313	.000	.313	.250	.625	.000	.750	.000	.750	.375	.563	.375	.500	.250	.625	



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 11:30

11:30	0	0	0	0	0	3	0	3	0	2	2	4	0	0	0	0	7
11:45	0	0	0	0	0	1	0	1	0	2	0	2	0	0	0	0	3
12:00	0	3	0	3	0	0	0	0	0	1	0	1	0	1	1	2	6
12:15	0	1	0	1	0	0	0	0	1	0	1	2	0	2	0	2	5
Total Volume	0	4	0	4	0	4	0	4	1	5	3	9	0	3	1	4	21
% App. Total	0	100	0		0	100	0		11.1	55.6	33.3		0	75	25		
PHF	.000	.333	.000	.333	.000	.333	.000	.333	.250	.625	.375	.563	.000	.375	.250	.500	.750

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

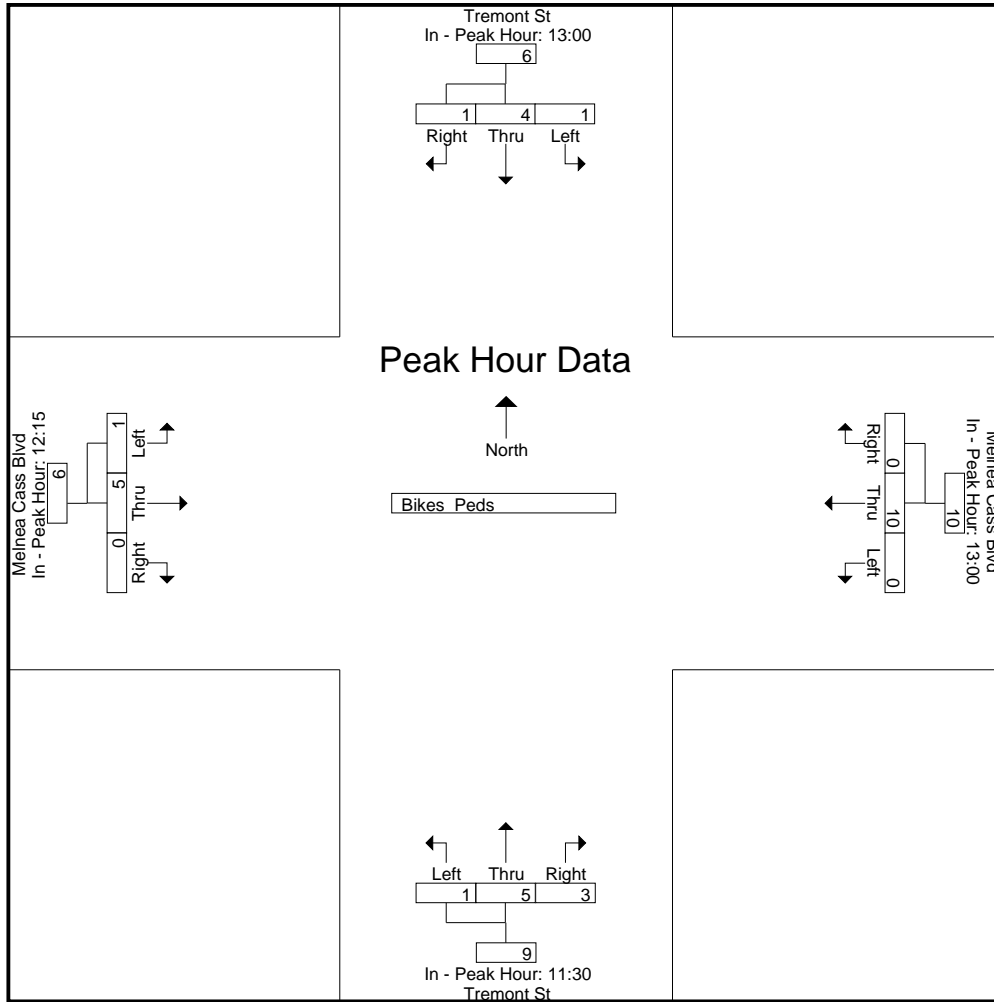


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	13:00				13:00				11:30				12:15			
+0 mins.	0	0	0	0	0	4	0	4	0	2	2	4	0	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	1
+30 mins.	0	2	0	2	0	2	0	2	0	1	0	1	0	0	0	0
+45 mins.	1	2	1	4	0	4	0	4	1	0	1	2	0	3	0	3
Total Volume	1	4	1	6	0	10	0	10	1	5	3	9	1	5	0	6
% App. Total	16.7	66.7	16.7		0	100	0		11.1	55.6	33.3		16.7	83.3	0	
PHF	.250	.500	.250	.375	.000	.625	.000	.625	.250	.625	.375	.563	.250	.417	.000	.500

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



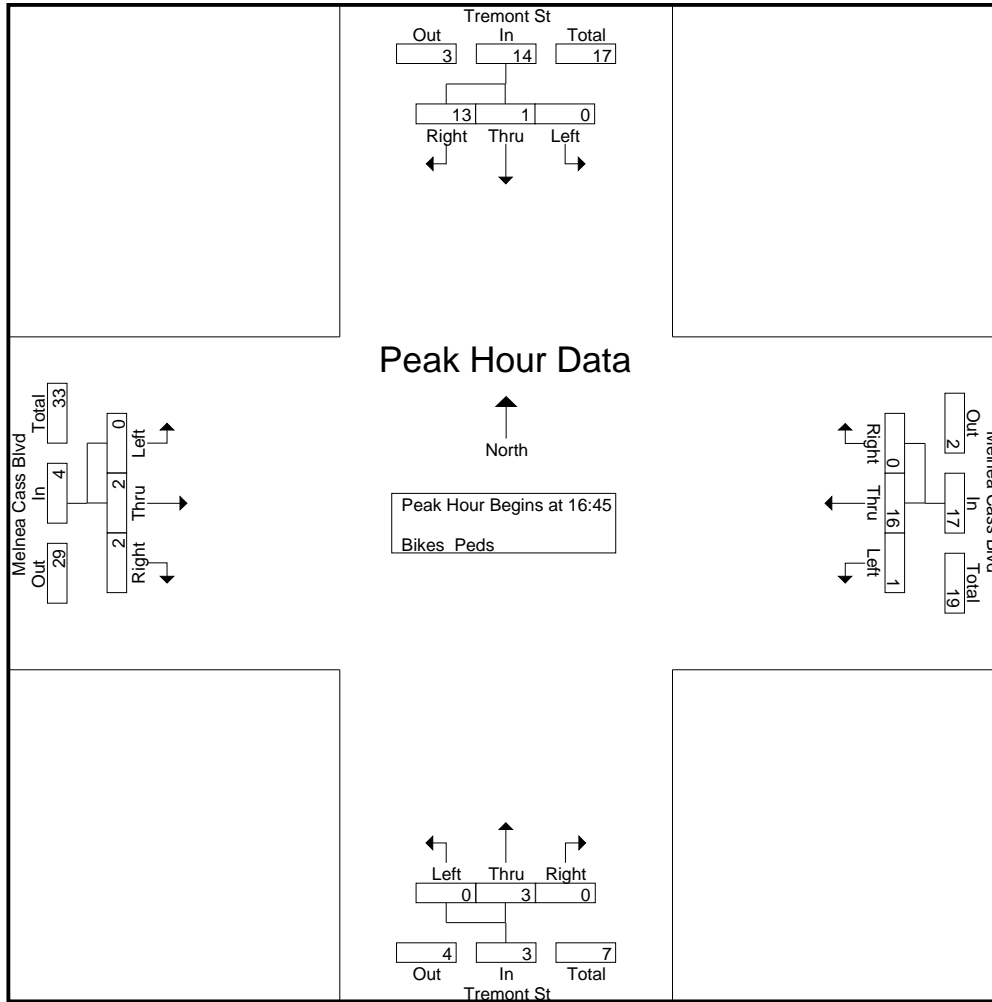
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:45

16:45	0	0	9	9	0	3	0	3	0	2	0	2	0	0	1	1	15
17:00	0	0	0	0	0	5	0	5	0	0	0	0	0	1	0	1	6
17:15	0	1	4	5	1	3	0	4	0	0	0	0	0	0	0	0	9
17:30	0	0	0	0	0	5	0	5	0	1	0	1	0	1	1	2	8
Total Volume	0	1	13	14	1	16	0	17	0	3	0	3	0	2	2	4	38
% App. Total	0	7.1	92.9		5.9	94.1	0		0	100	0		0	50	50		
PHF	.000	.250	.361	.389	.250	.800	.000	.850	.000	.375	.000	.375	.000	.500	.500	.500	.633

Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 6



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1

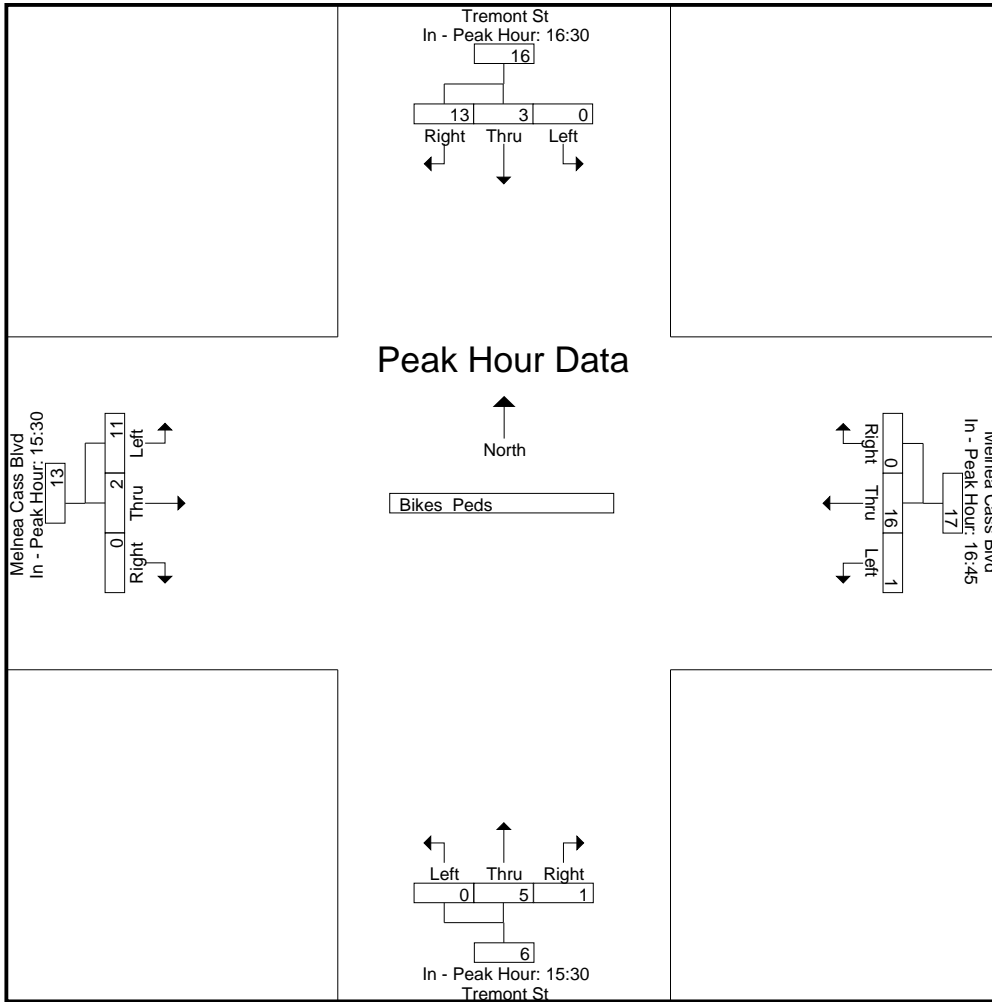
Peak Hour for Each Approach Begins at:

	16:30				16:45				15:30				15:30			
+0 mins.	0	2	0	2	0	3	0	3	0	1	0	1	0	1	0	1
+15 mins.	0	0	9	9	0	5	0	5	0	2	1	3	9	0	0	9
+30 mins.	0	0	0	0	1	3	0	4	0	0	0	0	2	0	0	2
+45 mins.	0	1	4	5	0	5	0	5	0	2	0	2	0	1	0	1
Total Volume	0	3	13	16	1	16	0	17	0	5	1	6	11	2	0	13
% App. Total	0	18.8	81.2		5.9	94.1	0		0	83.3	16.7		84.6	15.4	0	
PHF	.000	.375	.361	.444	.250	.800	.000	.850	.000	.625	.250	.500	.306	.500	.000	.361

Accurate Counts
978-664-2565

N/S Street : Tremont Street
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410002
Site Code : 01410002
Start Date : 9/21/2011
Page No : 7



Accurate Counts

978-664-2565

N/S Street : Columbus Avenue
 E/W Street: Melnea Cass Boulevard
 City/State : Boston, MA
 Weather : Clear

File Name : 01410001
 Site Code : 01410001
 Start Date : 9/21/2011
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Columbus Ave From North				Melnea Cass Blvd From East				Columbus Ave From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	49	13	0	0	54	2	68	1	0	5	4	0	0	0	0	0	196
07:15	55	15	0	0	43	4	69	0	0	9	4	0	0	0	0	0	199
07:30	46	1	0	0	64	4	79	1	0	2	7	0	0	1	0	0	205
07:45	46	15	1	0	45	3	93	0	0	5	9	0	1	0	0	0	218
Total	196	44	1	0	206	13	309	2	0	21	24	0	1	1	0	0	818
08:00	60	13	0	0	50	2	80	3	0	6	4	0	0	0	0	0	218
08:15	38	15	1	0	43	4	107	2	0	3	6	0	0	0	0	0	219
08:30	46	13	1	0	44	2	125	1	0	4	7	0	0	1	0	0	244
08:45	32	9	0	0	41	0	85	1	0	2	2	0	0	0	0	0	172
Total	176	50	2	0	178	8	397	7	0	15	19	0	0	1	0	0	853
09:00	37	17	0	0	20	1	101	3	0	4	1	0	0	0	0	0	184
09:15	40	14	0	0	24	3	66	1	0	4	4	0	0	1	0	0	157
09:30	39	7	0	0	15	1	66	2	0	3	3	0	0	0	0	0	136
09:45	55	15	2	0	30	4	72	2	0	6	5	0	0	1	0	0	192
Total	171	53	2	0	89	9	305	8	0	17	13	0	0	2	0	0	669
10:00	38	11	2	0	17	3	75	3	0	6	4	0	0	0	1	0	160
10:15	36	11	0	0	13	3	60	0	0	1	3	0	0	0	0	0	127
10:30	40	6	0	0	6	2	37	1	0	4	3	0	0	0	0	0	99
10:45	20	7	0	0	16	0	32	1	0	4	3	0	0	2	0	0	85
Total	134	35	2	0	52	8	204	5	0	15	13	0	0	2	1	0	471
11:00	33	4	0	0	16	5	51	1	0	4	2	0	0	1	0	0	117
11:15	38	10	0	0	15	2	51	2	0	4	6	0	1	0	0	0	129
11:30	42	10	0	0	14	3	52	3	0	8	5	0	0	0	0	0	137
11:45	57	15	0	0	15	3	46	0	0	5	4	0	0	0	1	0	146
Total	170	39	0	0	60	13	200	6	0	21	17	0	1	1	1	0	529
12:00	50	14	0	0	8	3	36	1	0	7	5	0	0	0	0	0	124
12:15	50	4	0	0	7	2	54	2	0	1	3	0	0	0	0	0	123
12:30	52	8	0	0	18	2	38	1	0	3	5	0	2	0	0	0	129
12:45	53	11	0	0	24	3	72	2	0	6	10	0	0	0	0	0	181
Total	205	37	0	0	57	10	200	6	0	17	23	0	2	0	0	0	557
13:00	52	13	0	0	13	2	48	4	0	5	5	0	0	0	0	0	142
13:15	49	17	0	0	16	6	48	4	0	11	5	0	0	1	0	0	157
13:30	53	5	2	0	17	3	40	0	0	6	7	0	1	0	0	0	134
13:45	50	5	3	0	11	2	41	1	0	7	10	0	0	0	0	0	130
Total	204	40	5	0	57	13	177	9	0	29	27	0	1	1	0	0	563
14:00	38	17	0	1	19	3	56	2	0	9	14	0	1	2	0	0	162
14:15	43	8	2	0	12	0	52	0	0	5	11	0	1	0	0	0	134
14:30	63	14	1	1	12	4	50	6	0	8	7	0	0	1	1	0	168
14:45	68	13	0	0	14	3	35	4	0	5	9	0	0	1	0	0	152
Total	212	52	3	2	57	10	193	12	0	27	41	0	2	4	1	0	616
15:00	64	15	0	0	15	4	45	1	0	5	12	1	0	1	0	0	163
15:15	66	8	0	0	21	3	33	0	0	8	11	0	1	0	0	0	151
15:30	72	18	0	1	29	2	33	3	0	19	19	1	0	0	0	0	197
15:45	81	12	0	0	18	3	58	0	0	18	17	4	0	0	0	0	211
Total	283	53	0	1	83	12	169	4	0	50	59	6	1	1	0	0	722
16:00	63	16	1	0	13	1	57	0	0	15	20	0	0	1	0	0	187
16:15	78	21	0	0	19	4	42	4	0	11	16	0	0	0	0	0	195
16:30	97	15	1	0	15	1	60	1	0	13	12	0	0	0	0	0	215
16:45	79	10	1	0	16	3	52	1	0	26	17	0	1	0	0	0	206
Total	317	62	3	0	63	9	211	6	0	65	65	0	1	1	0	0	803
17:00	86	24	1	0	22	2	47	5	0	17	23	1	0	0	0	0	228
17:15	76	24	0	0	12	2	47	0	0	21	16	0	1	1	0	0	200
17:30	91	44	1	0	28	4	37	4	0	23	22	0	0	0	1	0	255
17:45	98	32	0	0	27	3	57	2	0	20	16	0	0	0	1	0	256
Total	351	124	2	0	89	11	188	11	0	81	77	1	1	1	2	0	939
Grand Total	2419	589	20	3	991	116	2553	76	0	358	378	7	10	15	5	0	7540
Apprch %	79.8	19.4	0.7	0.1	26.5	3.1	68.3	2	0	48.2	50.9	0.9	33.3	50	16.7	0	
Total %	32.1	7.8	0.3	0	13.1	1.5	33.9	1	0	4.7	5	0.1	0.1	0.2	0.1	0	

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

Groups Printed- Cars - Trucks

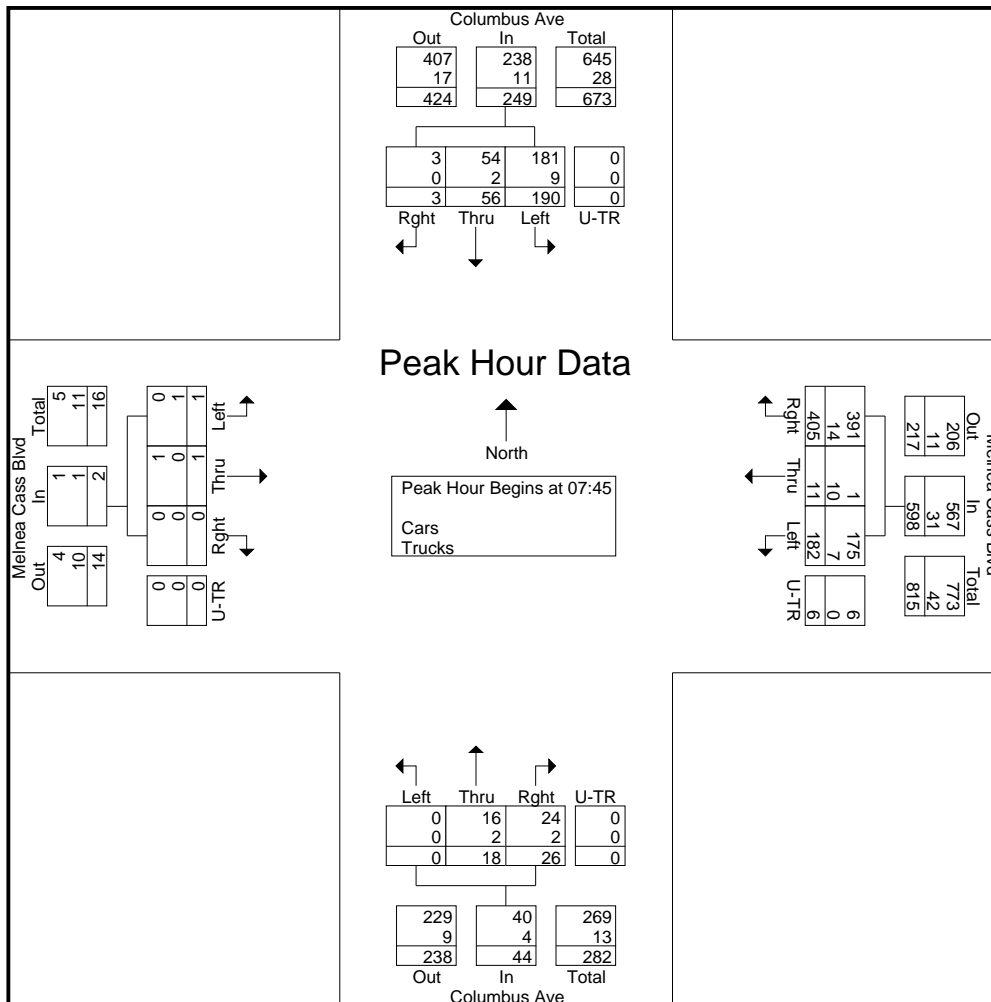
	Columbus Ave From North				Melnea Cass Blvd From East				Columbus Ave From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
Cars	2295	574	15	3	907	19	2448	76	0	348	372	7	9	14	5	0	7092
% Cars	94.9	97.5	75	100	91.5	16.4	95.9	100	0	97.2	98.4	100	90	93.3	100	0	94.1
Trucks	124	15	5	0	84	97	105	0	0	10	6	0	1	1	0	0	448
% Trucks	5.1	2.5	25	0	8.5	83.6	4.1	0	0	2.8	1.6	0	10	6.7	0	0	5.9

Start Time	Columbus Ave From North					Melnea Cass Blvd From East					Columbus Ave From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	

Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45

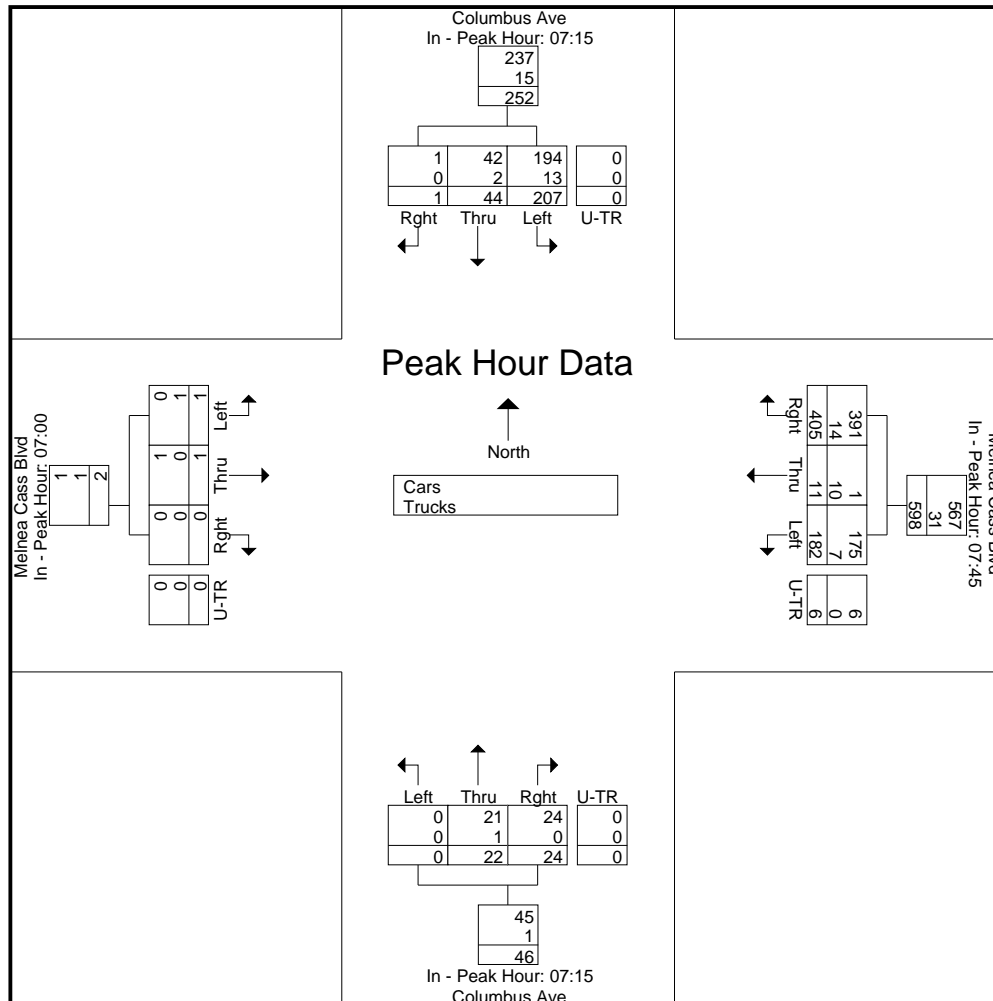
07:45	46	15	1	0	62	45	3	93	0	141	0	5	9	0	14	1	0	0	0	1	218
08:00	60	13	0	0	73	50	2	80	3	135	0	6	4	0	10	0	0	0	0	0	218
08:15	38	15	1	0	54	43	4	107	2	156	0	3	6	0	9	0	0	0	0	0	219
08:30	46	13	1	0	60	44	2	125	1	172	0	4	7	0	11	0	1	0	0	1	244
Total Volume	190	56	3	0	249	182	11	405	6	604	0	18	26	0	44	1	1	0	0	2	899
% App. Total	.792	.933	.750	.000	.853	.910	.688	.810	.500	.878	.000	.750	.722	.000	.786	.250	.250	.000	.000	.500	.921
PHF	.792	.933	.750	.000	.853	.910	.688	.810	.500	.878	.000	.750	.722	.000	.786	.250	.250	.000	.000	.500	.921
Cars	181	54	3	0	238	175	1	391	6	573	0	16	24	0	40	0	1	0	0	1	852
% Cars	95.3	96.4	100	0	95.6	96.2	9.1	96.5	100	94.9	0	88.9	92.3	0	90.9	0	100	0	0	50.0	94.8
Trucks	9	2	0	0	11	7	10	14	0	31	0	2	2	0	4	1	0	0	0	1	47
% Trucks	4.7	3.6	0	0	4.4	3.8	90.9	3.5	0	5.1	0	11.1	7.7	0	9.1	100	0	0	0	50.0	5.2



N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

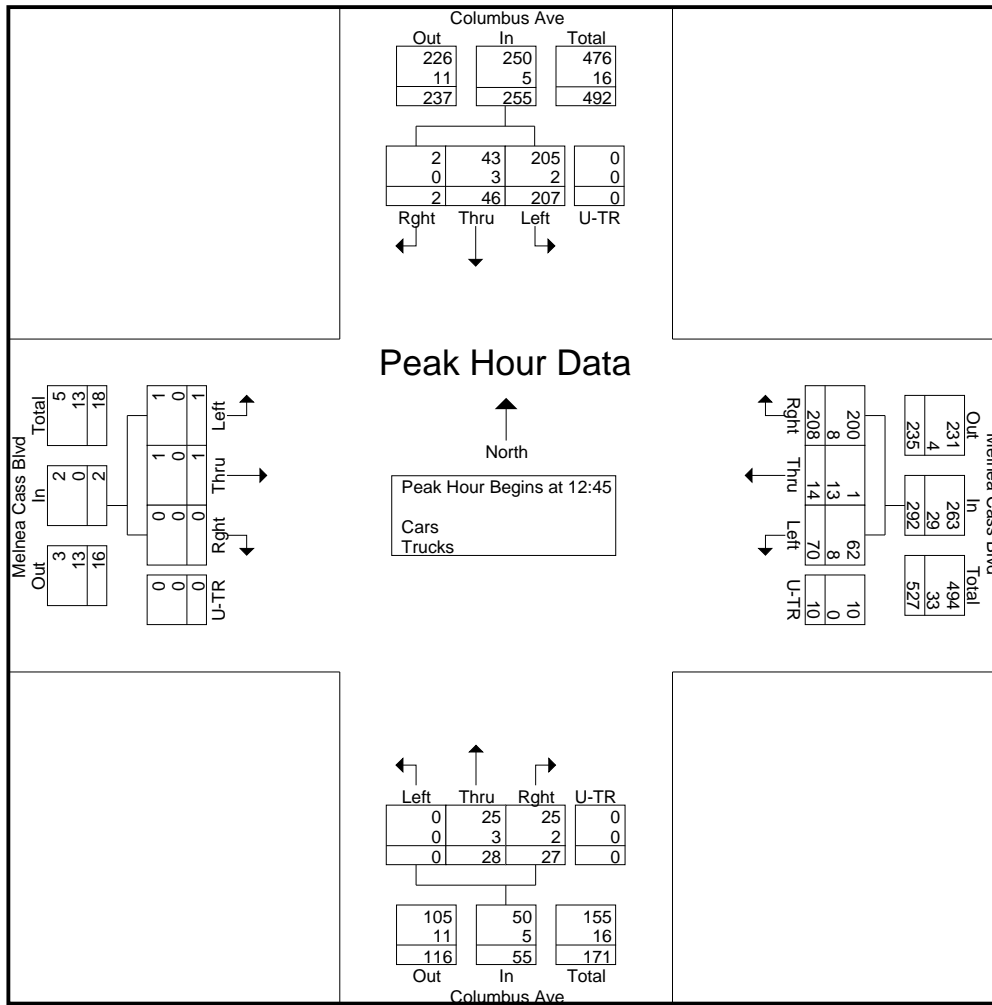
File Name : 01410001
Site Code : 01410001
Start Date : 9/21/2011
Page No : 3

Start Time	Columbus Ave From North					Melnea Cass Blvd From East					Columbus Ave From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:15					07:45					07:15					07:00					
+0 mins.	55	15	0	0	70	45	3	93	0	141	0	9	4	0	13	0	0	0	0	0	0
+15 mins.	46	1	0	0	47	50	2	80	3	135	0	2	7	0	9	0	0	0	0	0	0
+30 mins.	46	15	1	0	62	43	4	107	2	156	0	5	9	0	14	0	1	0	0	0	1
+45 mins.	60	13	0	0	73	44	2	125	1	172	0	6	4	0	10	1	0	0	0	0	1
Total Volume	207	44	1	0	252	182	11	405	6	604	0	22	24	0	46	1	1	0	0	0	2
% App. Total	.863	.733	.250	.000	.863	.910	.688	.810	.500	.878	.000	.611	.667	.000	.821	.250	.250	.000	.000	.500	
PHF	.863	.733	.250	.000	.863	.910	.688	.810	.500	.878	.000	.611	.667	.000	.821	.250	.250	.000	.000	.500	
Cars	194	42	1	0	237	175	1	391	6	573	0	21	24	0	45	0	1	0	0	0	1
% Cars	93.7	95.5	100	0	94	96.2	9.1	96.5	100	94.9	0	95.5	100	0	97.8	0	100	0	0	0	50
Trucks	13	2	0	0	15	7	10	14	0	31	0	1	0	0	1	1	0	0	0	0	1
% Trucks	6.3	4.5	0	0	6	3.8	90.9	3.5	0	5.1	0	4.5	0	0	2.2	100	0	0	0	0	50



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:45																					
12:45	53	11	0	0	64	24	3	72	2	101	0	6	10	0	16	0	0	0	0	0	181
13:00	52	13	0	0	65	13	2	48	4	67	0	5	5	0	10	0	0	0	0	0	142
13:15	49	17	0	0	66	16	6	48	4	74	0	11	5	0	16	0	1	0	0	0	157
13:30	53	5	2	0	60	17	3	40	0	60	0	6	7	0	13	1	0	0	0	0	134
Total Volume	207	46	2	0	255	70	14	208	10	302	0	28	27	0	55	1	1	0	0	0	614
% App. Total	.976	.676	.250	.000	.966	.729	.583	.722	.625	.748	.000	.636	.675	.000	.859	.250	.250	.000	.000	.500	
PHF	.976	.676	.250	.000	.966	.729	.583	.722	.625	.748	.000	.636	.675	.000	.859	.250	.250	.000	.000	.500	.848
Cars	205	43	2	0	250	62	1	200	10	273	0	25	25	0	50	1	1	0	0	0	575
% Cars	99.0	93.5	100	0	98.0	88.6	7.1	96.2	100	90.4	0	89.3	92.6	0	90.9	100	100	0	0	100	93.6
Trucks	2	3	0	0	5	8	13	8	0	29	0	3	2	0	5	0	0	0	0	0	39
% Trucks	1.0	6.5	0	0	2.0	11.4	92.9	3.8	0	9.6	0	10.7	7.4	0	9.1	0	0	0	0	0	6.4

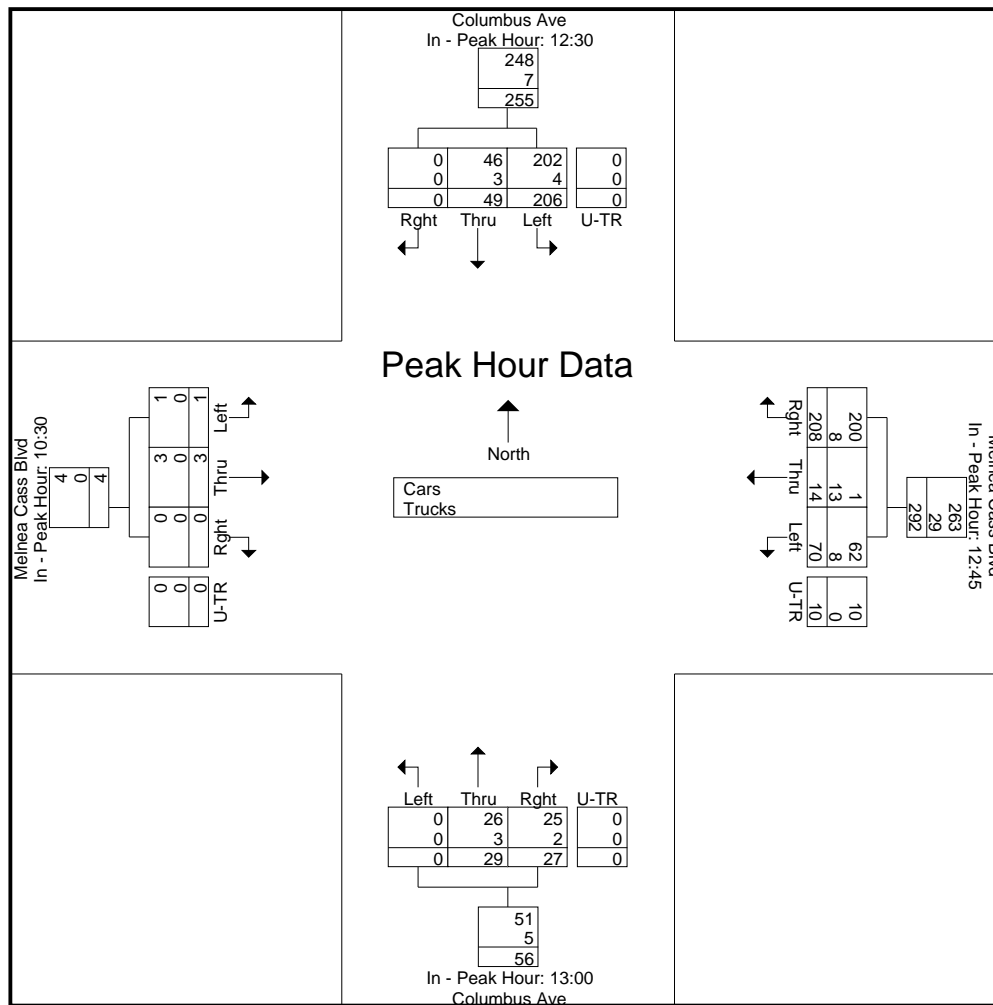
N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:30					12:45					13:00					10:30				
+0 mins.	52	8	0	0	60	24	3	72	2	101	0	5	5	0	10	0	0	0	0	0
+15 mins.	53	11	0	0	64	13	2	48	4	67	0	11	5	0	16	0	2	0	0	2
+30 mins.	52	13	0	0	65	16	6	48	4	74	0	6	7	0	13	0	1	0	0	1
+45 mins.	49	17	0	0	66	17	3	40	0	60	0	7	10	0	17	1	0	0	0	1
Total Volume	206	49	0	0	255	70	14	208	10	302	0	29	27	0	56	1	3	0	0	4
% App. Total																				
PHF	.972	.721	.000	.000	.966	.729	.583	.722	.625	.748	.000	.659	.675	.000	.824	.250	.375	.000	.000	.500
Cars	202	46	0	0	248	62	1	200	10	273	0	26	25	0	51	1	3	0	0	4
% Cars	98.1	93.9	0	0	97.3	88.6	7.1	96.2	100	90.4	0	89.7	92.6	0	91.1	100	100	0	0	100
Trucks	4	3	0	0	7	8	13	8	0	29	0	3	2	0	5	0	0	0	0	0
% Trucks	1.9	6.1	0	0	2.7	11.4	92.9	3.8	0	9.6	0	10.3	7.4	0	8.9	0	0	0	0	0

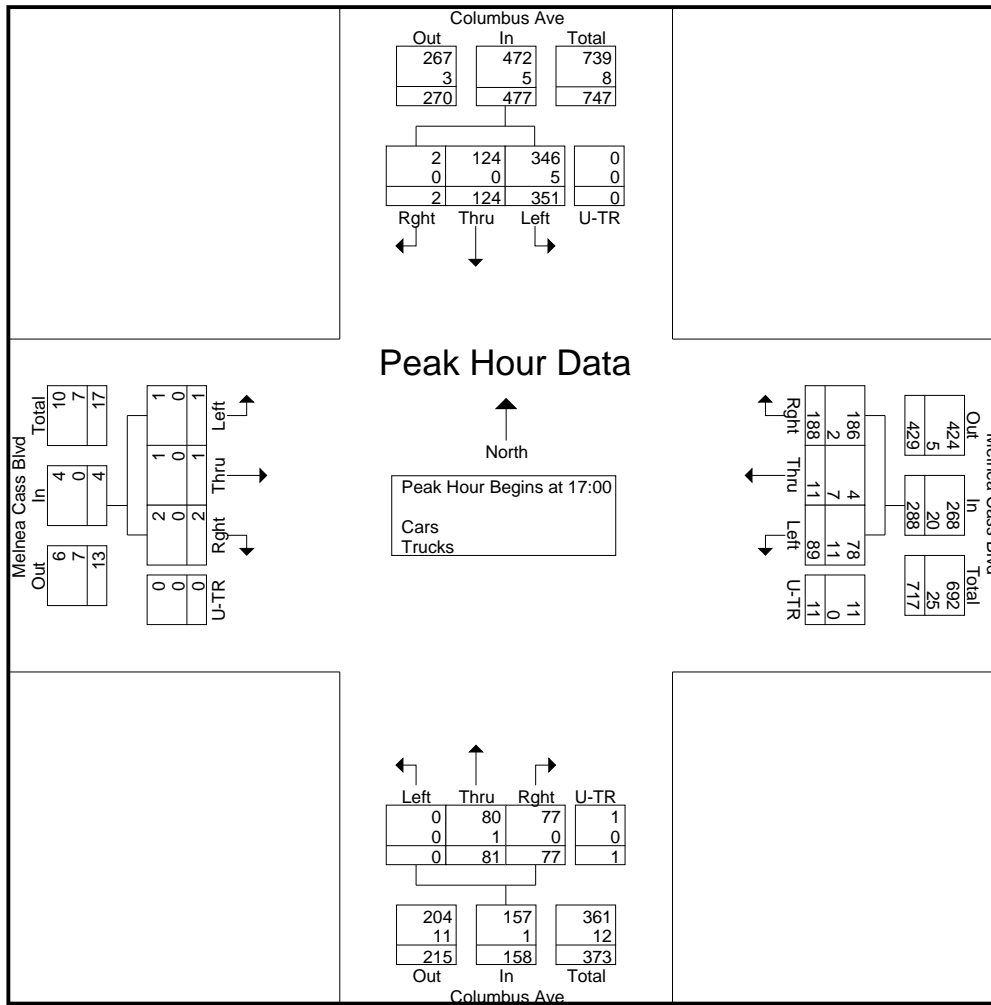
N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

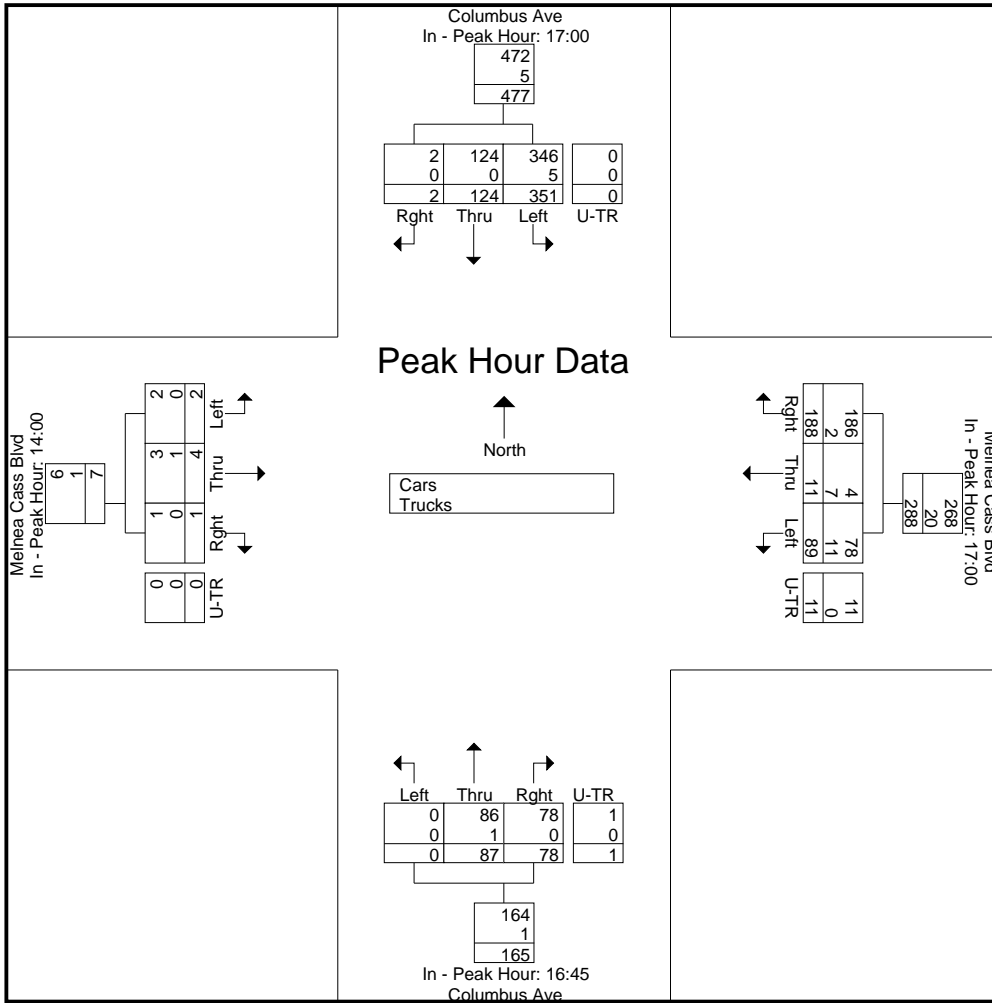
17:00	86	24	1	0	111	22	2	47	5	76	0	17	23	1	41	0	0	0	0	0	228
17:15	76	24	0	0	100	12	2	47	0	61	0	21	16	0	37	1	1	0	0	2	200
17:30	91	44	1	0	136	28	4	37	4	73	0	23	22	0	45	0	0	1	0	1	255
17:45	98	32	0	0	130	27	3	57	2	89	0	20	16	0	36	0	0	1	0	1	256
Total Volume	351	124	2	0	477	89	11	188	11	299	0	81	77	1	159	1	1	2	0	4	939
% App. Total	.895	.705	.500	.000	.877	.795	.688	.825	.550	.840	.000	.880	.837	.250	.883	.250	.250	.500	.000	.500	.917
PHF	.895	.705	.500	.000	.877	.795	.688	.825	.550	.840	.000	.880	.837	.250	.883	.250	.250	.500	.000	.500	.917
Cars	346	124	2	0	472	78	4	186	11	279	0	80	77	1	158	1	1	2	0	4	913
% Cars	98.6	100	100	0	99.0	87.6	36.4	98.9	100	93.3	0	98.8	100	100	99.4	100	100	100	0	100	97.2
Trucks	5	0	0	0	5	11	7	2	0	20	0	1	0	0	1	0	0	0	0	0	26
% Trucks	1.4	0	0	0	1.0	12.4	63.6	1.1	0	6.7	0	1.2	0	0	0.6	0	0	0	0	0	2.8

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	17:00					17:00					16:45					14:00				
+0 mins.	86	24	1	0	111	22	2	47	5	76	0	26	17	0	43	1	2	0	0	3
+15 mins.	76	24	0	0	100	12	2	47	0	61	0	17	23	1	41	1	0	0	0	1
+30 mins.	91	44	1	0	136	28	4	37	4	73	0	21	16	0	37	0	1	1	0	2
+45 mins.	98	32	0	0	130	27	3	57	2	89	0	23	22	0	45	0	1	0	0	1
Total Volume	351	124	2	0	477	89	11	188	11	299	0	87	78	1	166	2	4	1	0	7
% App. Total																				
PHF	.895	.705	.500	.000	.877	.795	.688	.825	.550	.840	.000	.837	.848	.250	.922	.500	.500	.250	.000	.583
Cars	346	124	2	0	472	78	4	186	11	279	0	86	78	1	165	2	3	1	0	6
% Cars	98.6	100	100	0	99	87.6	36.4	98.9	100	93.3	0	98.9	100	100	99.4	100	75	100	0	85.7
Trucks	5	0	0	0	5	11	7	2	0	20	0	1	0	0	1	0	1	0	0	1
% Trucks	1.4	0	0	0	1	12.4	63.6	1.1	0	6.7	0	1.1	0	0	0.6	0	25	0	0	14.3



Accurate Counts

978-664-2565

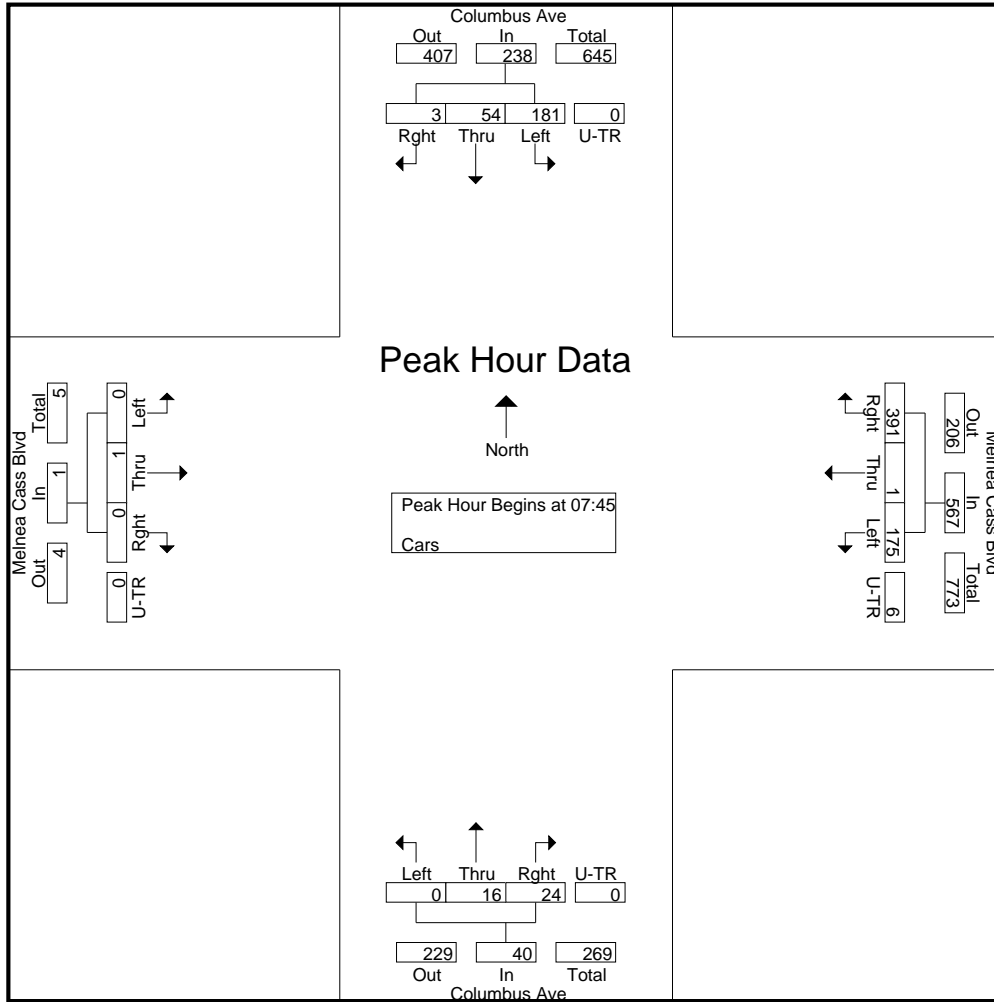
N/S Street : Columbus Avenue
 E/W Street: Melnea Cass Boulevard
 City/State : Boston, MA
 Weather : Clear

File Name : 01410001
 Site Code : 01410001
 Start Date : 9/21/2011
 Page No : 1

Groups Printed- Cars

Start Time	Columbus Ave From North				Melnea Cass Blvd From East				Columbus Ave From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	45	12	0	0	51	0	62	1	0	5	4	0	0	0	0	0	180
07:15	50	15	0	0	41	1	66	0	0	9	4	0	0	0	0	0	186
07:30	44	1	0	0	62	0	76	1	0	2	7	0	0	1	0	0	194
07:45	42	14	1	0	43	0	87	0	0	4	9	0	0	0	0	0	200
Total	181	42	1	0	197	1	291	2	0	20	24	0	0	1	0	0	760
08:00	58	12	0	0	47	0	79	3	0	6	4	0	0	0	0	0	209
08:15	37	15	1	0	42	1	103	2	0	3	5	0	0	0	0	0	209
08:30	44	13	1	0	43	0	122	1	0	3	6	0	0	1	0	0	234
08:45	28	8	0	0	39	0	83	1	0	2	2	0	0	0	0	0	163
Total	167	48	2	0	171	1	387	7	0	14	17	0	0	1	0	0	815
09:00	32	16	0	0	19	0	98	3	0	3	1	0	0	0	0	0	172
09:15	37	14	0	0	22	1	62	1	0	4	4	0	0	1	0	0	146
09:30	34	7	0	0	13	0	64	2	0	2	3	0	0	0	0	0	125
09:45	48	14	2	0	29	1	71	2	0	6	5	0	0	1	0	0	179
Total	151	51	2	0	83	2	295	8	0	15	13	0	0	2	0	0	622
10:00	34	11	1	0	16	1	72	3	0	6	4	0	0	0	1	0	149
10:15	33	11	0	0	12	0	57	0	0	1	3	0	0	0	0	0	117
10:30	38	6	0	0	4	0	34	1	0	4	3	0	0	0	0	0	90
10:45	19	7	0	0	14	0	31	1	0	4	2	0	0	2	0	0	80
Total	124	35	1	0	46	1	194	5	0	15	12	0	0	2	1	0	436
11:00	32	4	0	0	15	2	47	1	0	4	2	0	0	1	0	0	108
11:15	37	10	0	0	14	0	51	2	0	4	6	0	1	0	0	0	125
11:30	40	10	0	0	14	0	51	3	0	8	5	0	0	0	0	0	131
11:45	53	14	0	0	14	0	44	0	0	5	4	0	0	0	1	0	135
Total	162	38	0	0	57	2	193	6	0	21	17	0	1	1	1	0	499
12:00	48	13	0	0	8	1	34	1	0	7	5	0	0	0	0	0	117
12:15	48	3	0	0	7	0	54	2	0	1	3	0	0	0	0	0	118
12:30	49	8	0	0	17	0	36	1	0	3	5	0	2	0	0	0	121
12:45	53	11	0	0	24	0	72	2	0	6	10	0	0	0	0	0	178
Total	198	35	0	0	56	1	196	6	0	17	23	0	2	0	0	0	534
13:00	52	13	0	0	12	0	46	4	0	5	4	0	0	0	0	0	136
13:15	48	14	0	0	13	1	45	4	0	10	5	0	0	1	0	0	141
13:30	52	5	2	0	13	0	37	0	0	4	6	0	1	0	0	0	120
13:45	45	5	2	0	7	0	39	1	0	7	10	0	0	0	0	0	116
Total	197	37	4	0	45	1	167	9	0	26	25	0	1	1	0	0	513
14:00	32	17	0	1	16	0	54	2	0	9	14	0	1	2	0	0	148
14:15	38	8	0	0	10	0	49	0	0	4	11	0	1	0	0	0	121
14:30	61	14	0	1	11	1	47	6	0	8	7	0	0	0	1	0	157
14:45	64	13	0	0	12	1	35	4	0	5	9	0	0	1	0	0	144
Total	195	52	0	2	49	2	185	12	0	26	41	0	2	3	1	0	570
15:00	61	13	0	0	14	0	44	1	0	5	11	1	0	1	0	0	151
15:15	64	7	0	0	18	1	29	0	0	8	11	0	1	0	0	0	139
15:30	65	18	0	1	23	0	33	3	0	19	19	1	0	0	0	0	182
15:45	76	12	0	0	15	0	53	0	0	17	17	4	0	0	0	0	194
Total	266	50	0	1	70	1	159	4	0	49	58	6	1	1	0	0	666
16:00	61	16	1	0	11	1	54	0	0	15	20	0	0	1	0	0	180
16:15	75	21	0	0	16	2	37	4	0	11	16	0	0	0	0	0	182
16:30	95	15	1	0	14	0	56	1	0	13	12	0	0	0	0	0	207
16:45	77	10	1	0	14	0	48	1	0	26	17	0	1	0	0	0	195
Total	308	62	3	0	55	3	195	6	0	65	65	0	1	1	0	0	764
17:00	86	24	1	0	20	0	46	5	0	17	23	1	0	0	0	0	223
17:15	75	24	0	0	9	1	47	0	0	21	16	0	1	1	0	0	195
17:30	90	44	1	0	25	2	37	4	0	22	22	0	0	0	1	0	248
17:45	95	32	0	0	24	1	56	2	0	20	16	0	0	0	1	0	247
Total	346	124	2	0	78	4	186	11	0	80	77	1	1	1	2	0	913
Grand Total	2295	574	15	3	907	19	2448	76	0	348	372	7	9	14	5	0	7092
Apprch %	79.5	19.9	0.5	0.1	26.3	0.6	71	2.2	0	47.9	51.2	1	32.1	50	17.9	0	
Total %	32.4	8.1	0.2	0	12.8	0.3	34.5	1.1	0	4.9	5.2	0.1	0.1	0.2	0.1	0	

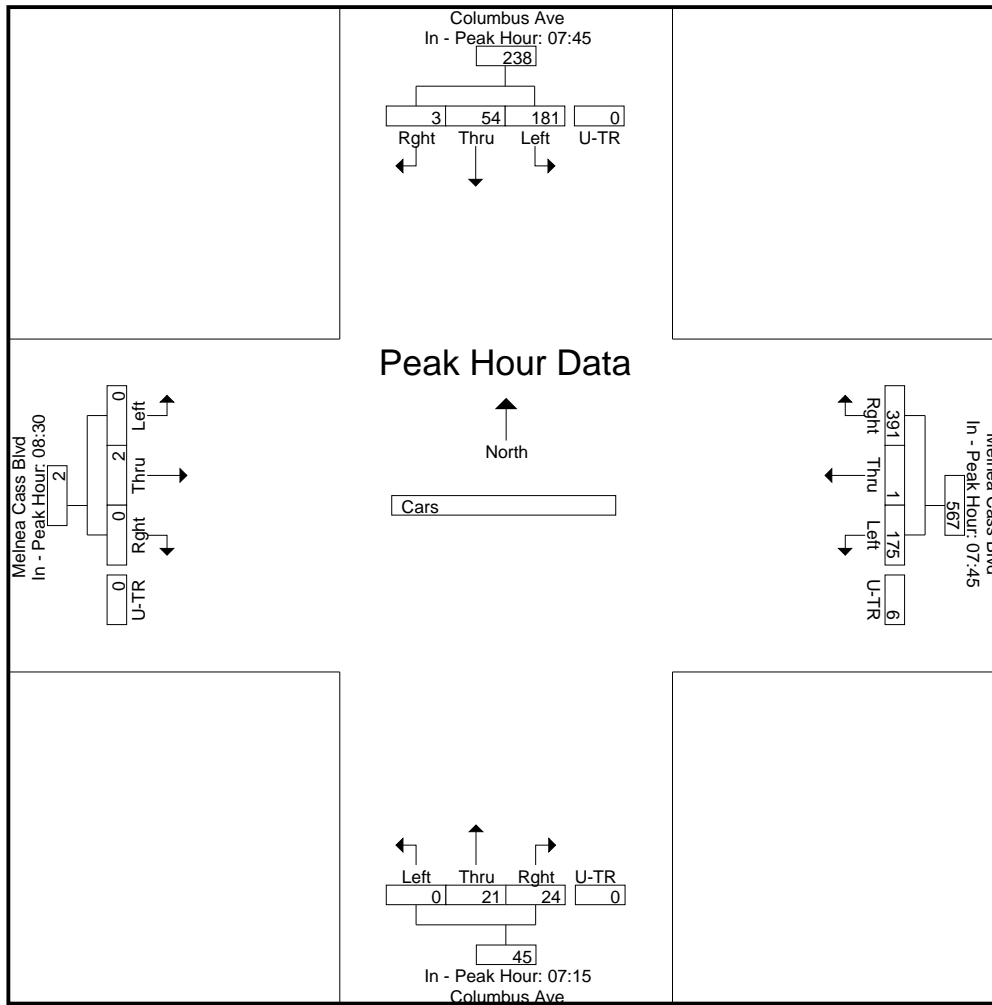
Start Time	Columbus Ave From North					Melnea Cass Blvd From East					Columbus Ave From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	42	14	1	0	57	43	0	87	0	130	0	4	9	0	13	0	0	0	0	0	200
08:00	58	12	0	0	70	47	0	79	3	129	0	6	4	0	10	0	0	0	0	0	209
08:15	37	15	1	0	53	42	1	103	2	148	0	3	5	0	8	0	0	0	0	0	209
08:30	44	13	1	0	58	43	0	122	1	166	0	3	6	0	9	0	1	0	0	1	234
Total Volume	181	54	3	0	238	175	1	391	6	573	0	16	24	0	40	0	1	0	0	1	852
% App. Total																					
PHF	.780	.900	.750	.000	.850	.931	.250	.801	.500	.863	.000	.667	.667	.000	.769	.000	.250	.000	.000	.250	.910



Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45					07:45					07:15					08:30					
+0 mins.	42	14	1	0	57	43	0	87	0	130	0	9	4	0	13	0	1	0	0	0	1
+15 mins.	58	12	0	0	70	47	0	79	3	129	0	2	7	0	9	0	0	0	0	0	0
+30 mins.	37	15	1	0	53	42	1	103	2	148	0	4	9	0	13	0	0	0	0	0	0
+45 mins.	44	13	1	0	58	43	0	122	1	166	0	6	4	0	10	0	1	0	0	0	1
Total Volume	181	54	3	0	238	175	1	391	6	573	0	21	24	0	45	0	2	0	0	0	2
% App. Total																					
PHF	.780	.900	.750	.000	.850	.931	.250	.801	.500	.863	.000	.583	.667	.000	.865	.000	.500	.000	.000	.500	

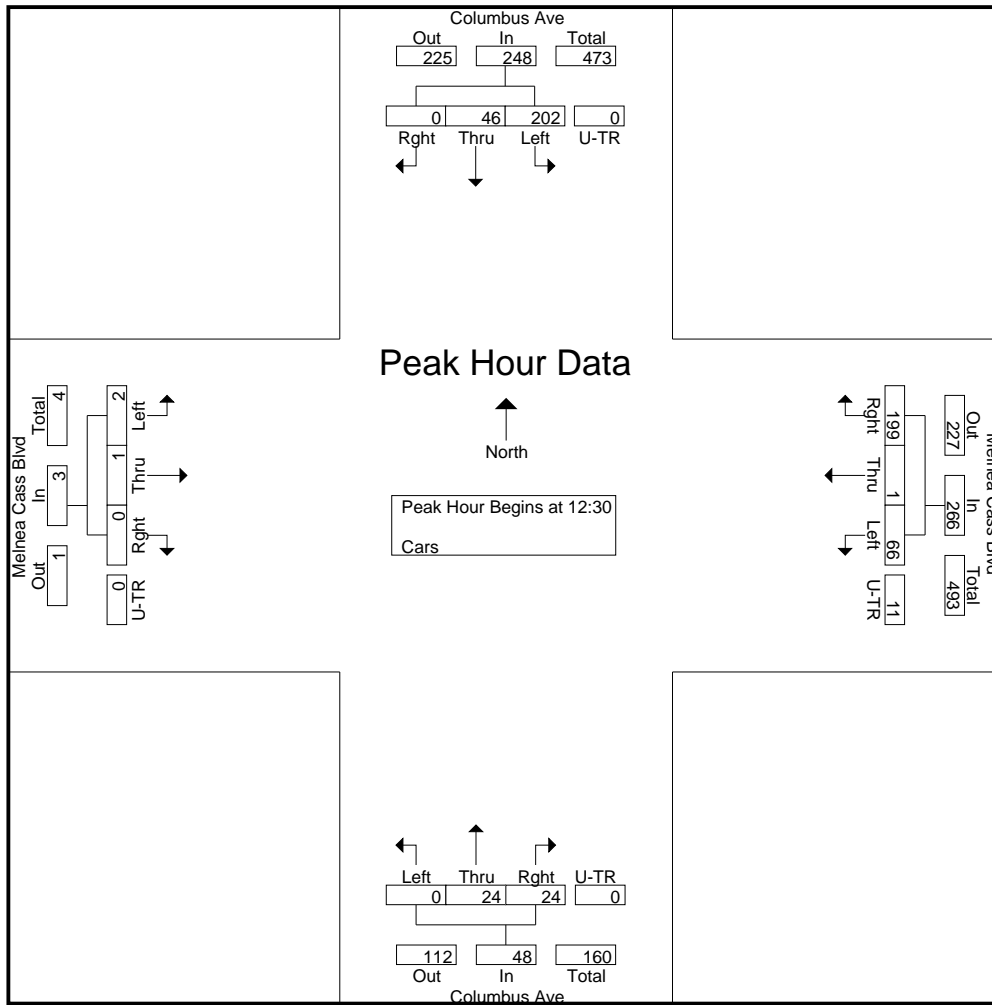
N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 12:30

12:30	49	8	0	0	57	17	0	36	1	54	0	3	5	0	8	2	0	0	0	2	121	
12:45	53	11	0	0	64	24	0	72	2	98	0	6	10	0	16	0	0	0	0	0	178	
13:00	52	13	0	0	65	12	0	46	4	62	0	5	4	0	9	0	0	0	0	0	136	
13:15	48	14	0	0	62	13	1	45	4	63	0	10	5	0	15	0	1	0	0	1	141	
Total Volume	202	46	0	0	248	66	1	199	11	277	0	24	24	0	48	2	1	0	0	3	576	
% App. Total	PHF	.953	.821	.000	.000	.954	.688	.250	.691	.688	.707	.000	.600	.600	.000	.750	.250	.250	.000	.000	.375	.809

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



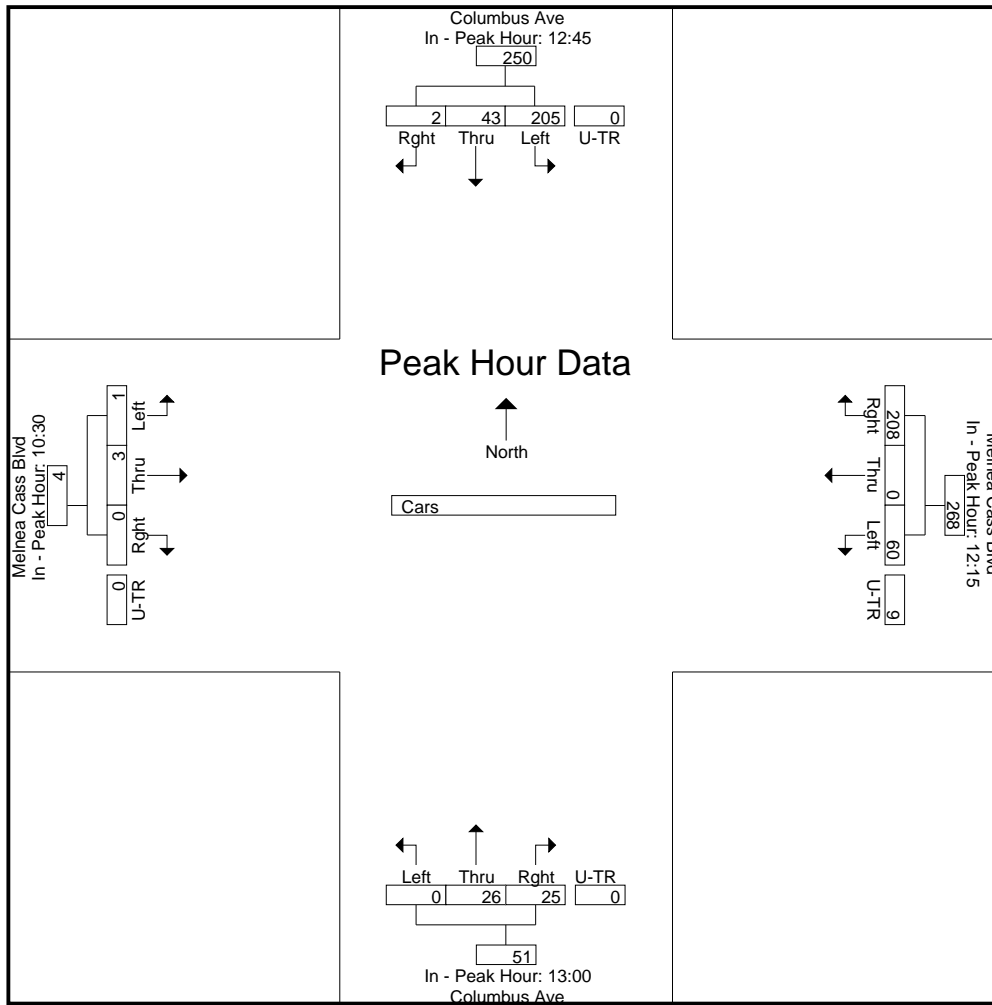
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:45					12:15					13:00					10:30				
+0 mins.	53	11	0	0	64	7	0	54	2	63	0	5	4	0	9	0	0	0	0	0
+15 mins.	52	13	0	0	65	17	0	36	1	54	0	10	5	0	15	0	2	0	0	2
+30 mins.	48	14	0	0	62	24	0	72	2	98	0	4	6	0	10	0	1	0	0	1
+45 mins.	52	5	2	0	59	12	0	46	4	62	0	7	10	0	17	1	0	0	0	1
Total Volume	205	43	2	0	250	60	0	208	9	277	0	26	25	0	51	1	3	0	0	4
% App. Total																				
PHF	.967	.768	.250	.000	.962	.625	.000	.722	.563	.707	.000	.650	.625	.000	.750	.250	.375	.000	.000	.500

Accurate Counts
978-664-2565

File Name : 01410001
Site Code : 01410001
Start Date : 9/21/2011
Page No : 5

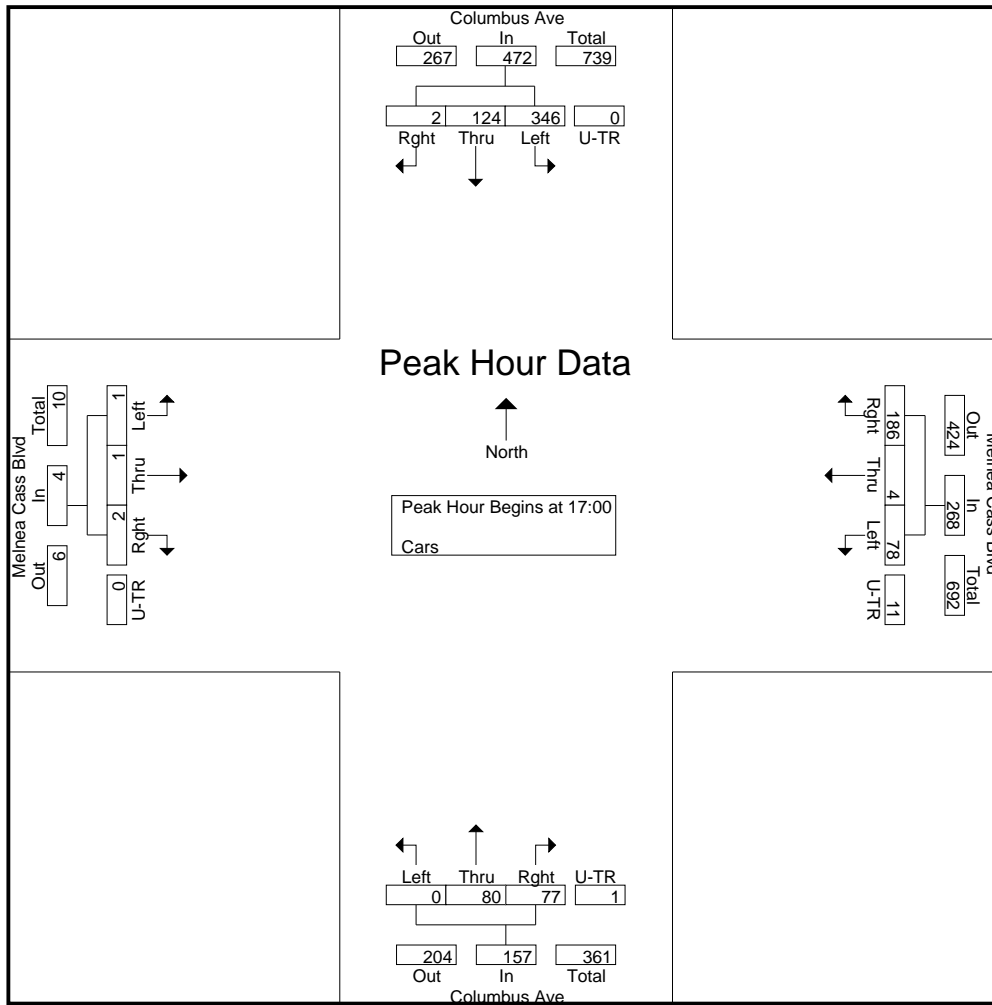
N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	86	24	1	0	111	20	0	46	5	71	0	17	23	1	41	0	0	0	0	0	223	
17:15	75	24	0	0	99	9	1	47	0	57	0	21	16	0	37	1	1	0	0	2	195	
17:30	90	44	1	0	135	25	2	37	4	68	0	22	22	0	44	0	0	1	0	1	248	
17:45	95	32	0	0	127	24	1	56	2	83	0	20	16	0	36	0	0	1	0	1	247	
Total Volume	346	124	2	0	472	78	4	186	11	279	0	80	77	1	158	1	1	2	0	4	913	
% App. Total	PHF	.911	.705	.500	.000	.874	.780	.500	.830	.550	.840	.000	.909	.837	.250	.898	.250	.250	.500	.000	.500	.920

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



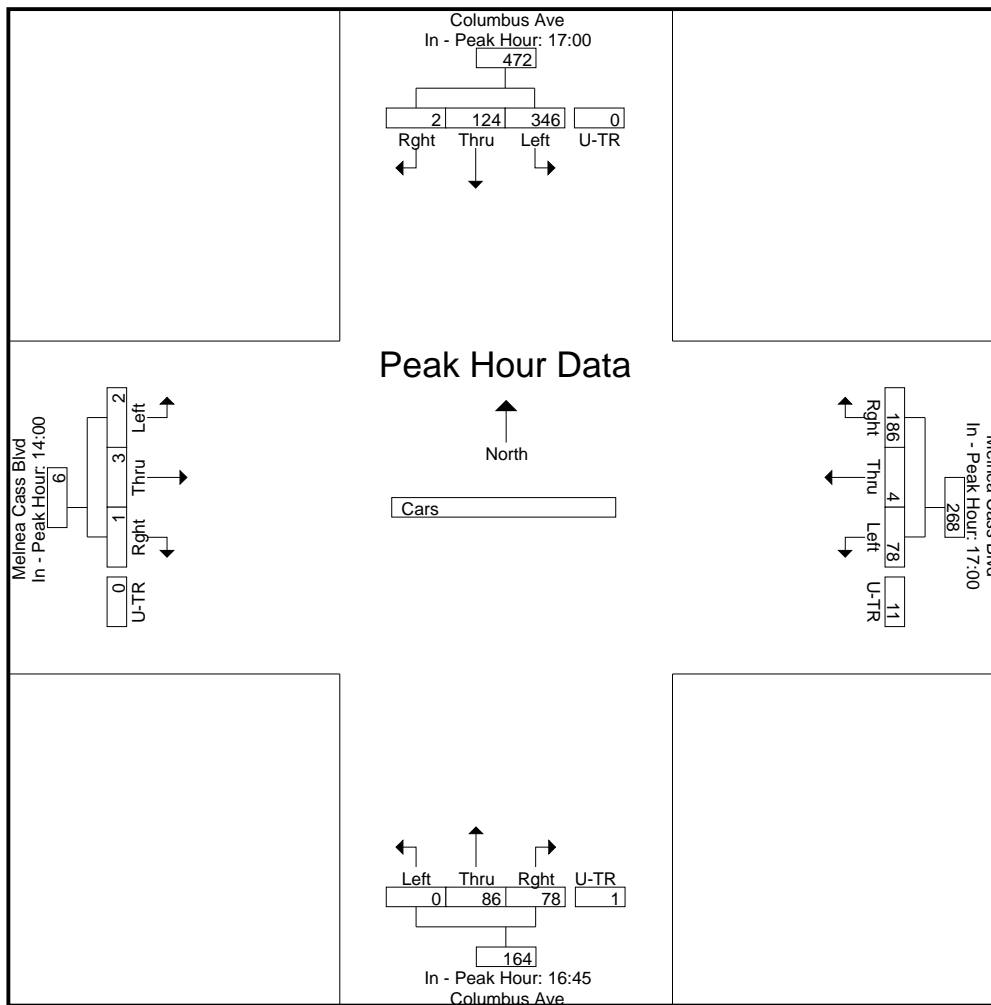
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	17:00					17:00					16:45					14:00				
+0 mins.	86	24	1	0	111	20	0	46	5	71	0	26	17	0	43	1	2	0	0	3
+15 mins.	75	24	0	0	99	9	1	47	0	57	0	17	23	1	41	1	0	0	0	1
+30 mins.	90	44	1	0	135	25	2	37	4	68	0	21	16	0	37	0	0	1	0	1
+45 mins.	95	32	0	0	127	24	1	56	2	83	0	22	22	0	44	0	1	0	0	1
Total Volume	346	124	2	0	472	78	4	186	11	279	0	86	78	1	165	2	3	1	0	6
% App. Total																				
PHF	.911	.705	.500	.000	.874	.780	.500	.830	.550	.840	.000	.827	.848	.250	.938	.500	.375	.250	.000	.500

Accurate Counts
978-664-2565

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410001
Site Code : 01410001
Start Date : 9/21/2011
Page No : 7



Accurate Counts

978-664-2565

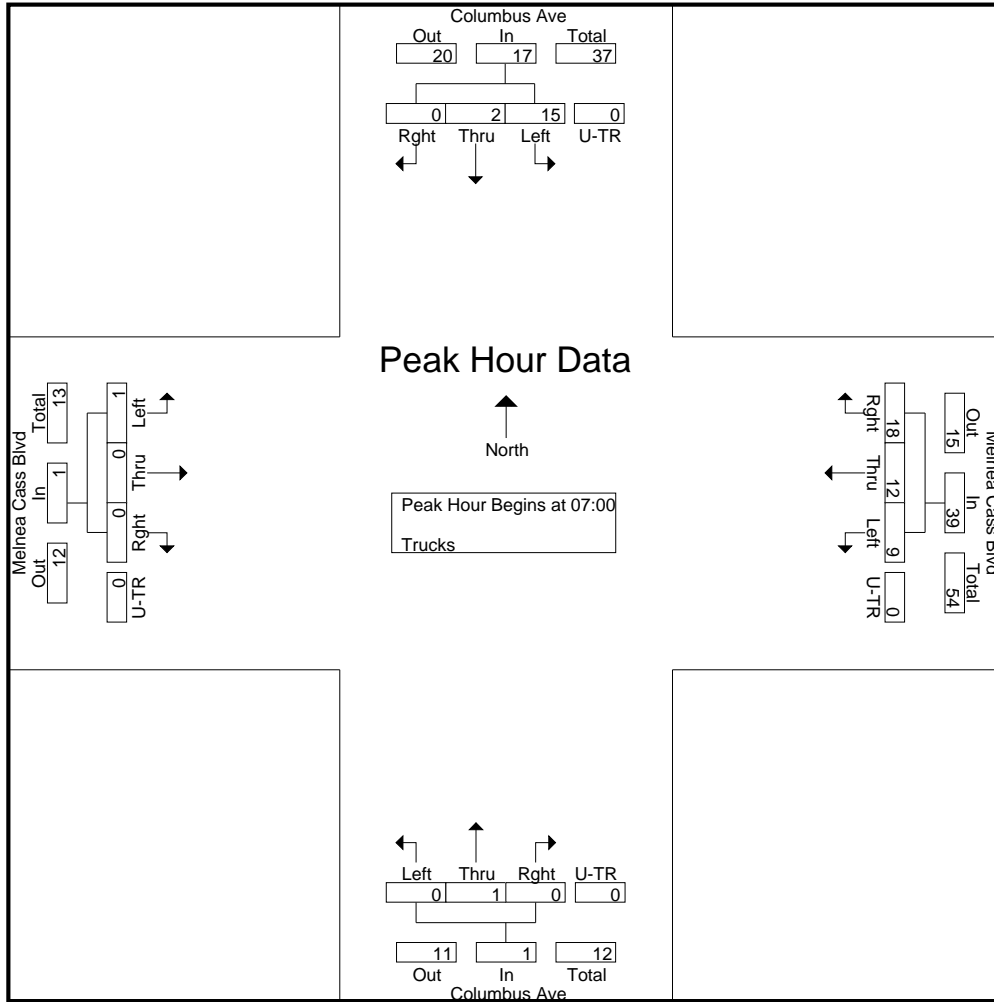
N/S Street : Columbus Avenue
 E/W Street: Melnea Cass Boulevard
 City/State : Boston, MA
 Weather : Clear

File Name : 01410001
 Site Code : 01410001
 Start Date : 9/21/2011
 Page No : 1

Groups Printed- Trucks

Start Time	Columbus Ave From North				Melnea Cass Blvd From East				Columbus Ave From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	4	1	0	0	3	2	6	0	0	0	0	0	0	0	0	0	16
07:15	5	0	0	0	2	3	3	0	0	0	0	0	0	0	0	0	13
07:30	2	0	0	0	2	4	3	0	0	0	0	0	0	0	0	0	11
07:45	4	1	0	0	2	3	6	0	0	1	0	0	1	0	0	0	18
Total	15	2	0	0	9	12	18	0	0	1	0	0	1	0	0	0	58
08:00	2	1	0	0	3	2	1	0	0	0	0	0	0	0	0	0	9
08:15	1	0	0	0	1	3	4	0	0	0	1	0	0	0	0	0	10
08:30	2	0	0	0	1	2	3	0	0	1	1	0	0	0	0	0	10
08:45	4	1	0	0	2	0	2	0	0	0	0	0	0	0	0	0	9
Total	9	2	0	0	7	7	10	0	0	1	2	0	0	0	0	0	38
09:00	5	1	0	0	1	1	3	0	0	1	0	0	0	0	0	0	12
09:15	3	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	11
09:30	5	0	0	0	2	1	2	0	0	1	0	0	0	0	0	0	11
09:45	7	1	0	0	1	3	1	0	0	0	0	0	0	0	0	0	13
Total	20	2	0	0	6	7	10	0	0	2	0	0	0	0	0	0	47
10:00	4	0	1	0	1	2	3	0	0	0	0	0	0	0	0	0	11
10:15	3	0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	10
10:30	2	0	0	0	2	2	3	0	0	0	0	0	0	0	0	0	9
10:45	1	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	5
Total	10	0	1	0	6	7	10	0	0	0	1	0	0	0	0	0	35
11:00	1	0	0	0	1	3	4	0	0	0	0	0	0	0	0	0	9
11:15	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4
11:30	2	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	6
11:45	4	1	0	0	1	3	2	0	0	0	0	0	0	0	0	0	11
Total	8	1	0	0	3	11	7	0	0	0	0	0	0	0	0	0	30
12:00	2	1	0	0	0	2	2	0	0	0	0	0	0	0	0	0	7
12:15	2	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
12:30	3	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	8
12:45	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
Total	7	2	0	0	1	9	4	0	0	0	0	0	0	0	0	0	23
13:00	0	0	0	0	1	2	2	0	0	0	1	0	0	0	0	0	6
13:15	1	3	0	0	3	5	3	0	0	1	0	0	0	0	0	0	16
13:30	1	0	0	0	4	3	3	0	0	2	1	0	0	0	0	0	14
13:45	5	0	1	0	4	2	2	0	0	0	0	0	0	0	0	0	14
Total	7	3	1	0	12	12	10	0	0	3	2	0	0	0	0	0	50
14:00	6	0	0	0	3	3	2	0	0	0	0	0	0	0	0	0	14
14:15	5	0	2	0	2	0	3	0	0	1	0	0	0	0	0	0	13
14:30	2	0	1	0	1	3	3	0	0	0	0	0	0	1	0	0	11
14:45	4	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	8
Total	17	0	3	0	8	8	8	0	0	1	0	0	0	1	0	0	46
15:00	3	2	0	0	1	4	1	0	0	0	1	0	0	0	0	0	12
15:15	2	1	0	0	3	2	4	0	0	0	0	0	0	0	0	0	12
15:30	7	0	0	0	6	2	0	0	0	0	0	0	0	0	0	0	15
15:45	5	0	0	0	3	3	5	0	0	1	0	0	0	0	0	0	17
Total	17	3	0	0	13	11	10	0	0	1	1	0	0	0	0	0	56
16:00	2	0	0	0	2	0	3	0	0	0	0	0	0	0	0	0	7
16:15	3	0	0	0	3	2	5	0	0	0	0	0	0	0	0	0	13
16:30	2	0	0	0	1	1	4	0	0	0	0	0	0	0	0	0	8
16:45	2	0	0	0	2	3	4	0	0	0	0	0	0	0	0	0	11
Total	9	0	0	0	8	6	16	0	0	0	0	0	0	0	0	0	39
17:00	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	5
17:15	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	5
17:30	1	0	0	0	3	2	0	0	0	1	0	0	0	0	0	0	7
17:45	3	0	0	0	3	2	1	0	0	0	0	0	0	0	0	0	9
Total	5	0	0	0	11	7	2	0	0	1	0	0	0	0	0	0	26
Grand Total	124	15	5	0	84	97	105	0	0	10	6	0	1	1	0	0	448
Apprch %	86.1	10.4	3.5	0	29.4	33.9	36.7	0	0	62.5	37.5	0	50	50	0	0	
Total %	27.7	3.3	1.1	0	18.8	21.7	23.4	0	0	2.2	1.3	0	0.2	0.2	0	0	

Start Time	Columbus Ave From North					Melnea Cass Blvd From East					Columbus Ave From South					Melnea Cass Blvd From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	4	1	0	0	5	3	2	6	0	11	0	0	0	0	0	0	0	0	0	0	16
07:15	5	0	0	0	5	2	3	3	0	8	0	0	0	0	0	0	0	0	0	0	13
07:30	2	0	0	0	2	2	4	3	0	9	0	0	0	0	0	0	0	0	0	0	11
07:45	4	1	0	0	5	2	3	6	0	11	0	1	0	0	1	1	0	0	0	1	18
Total Volume	15	2	0	0	17	9	12	18	0	39	0	1	0	0	1	1	0	0	0	1	58
% App. Total																					
PHF	.750	.500	.000	.000	.850	.750	.750	.750	.000	.886	.000	.250	.000	.000	.250	.250	.000	.000	.000	.250	.806

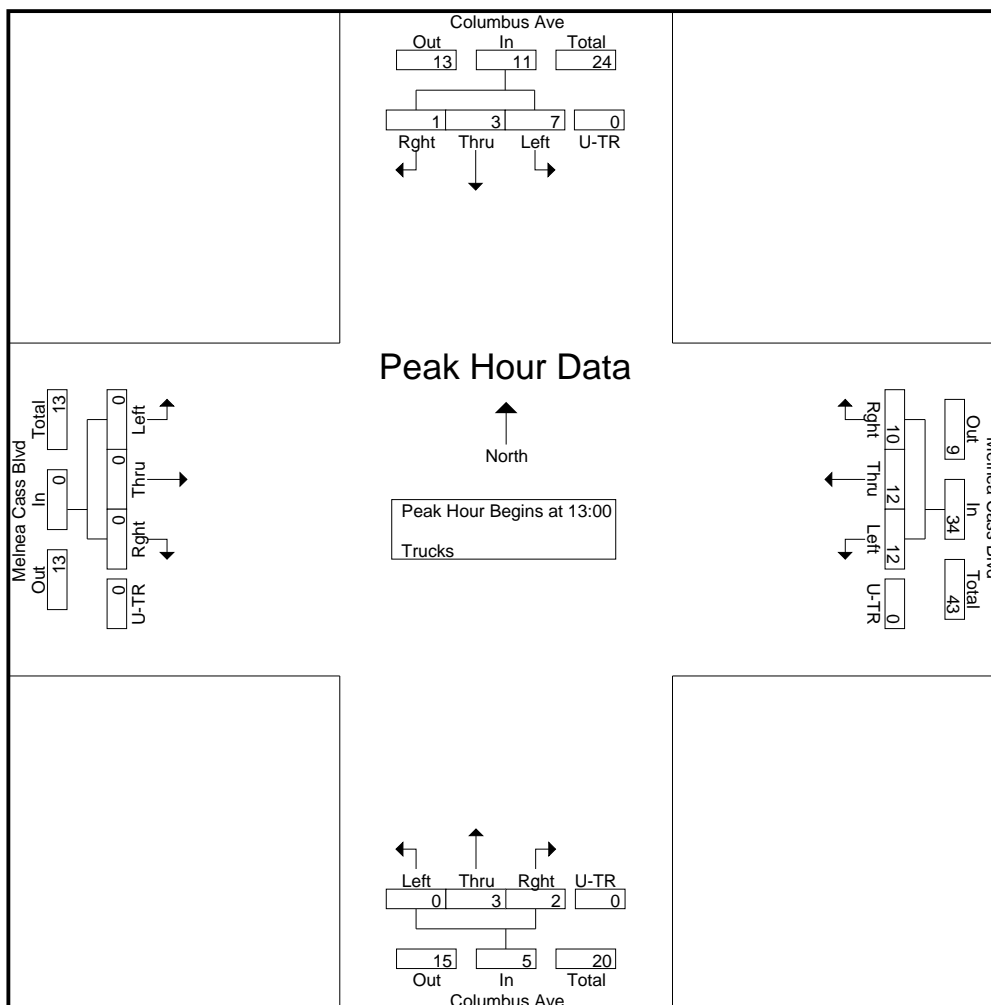


Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	09:00					07:00					07:45					07:00					
+0 mins.	5	1	0	0	6	3	2	6	0	11	0	1	0	0	1	0	0	0	0	0	0
+15 mins.	3	0	0	0	3	2	3	3	0	8	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	5	0	0	0	5	2	4	3	0	9	0	0	1	0	1	0	0	0	0	0	0
+45 mins.	7	1	0	0	8	2	3	6	0	11	0	1	1	0	2	1	0	0	0	0	1
Total Volume	20	2	0	0	22	9	12	18	0	39	0	2	2	0	4	1	0	0	0	0	1
% App. Total																					
PHF	.714	.500	.000	.000	.688	.750	.750	.750	.000	.886	.000	.500	.500	.000	.500	.250	.000	.000	.000	.250	

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

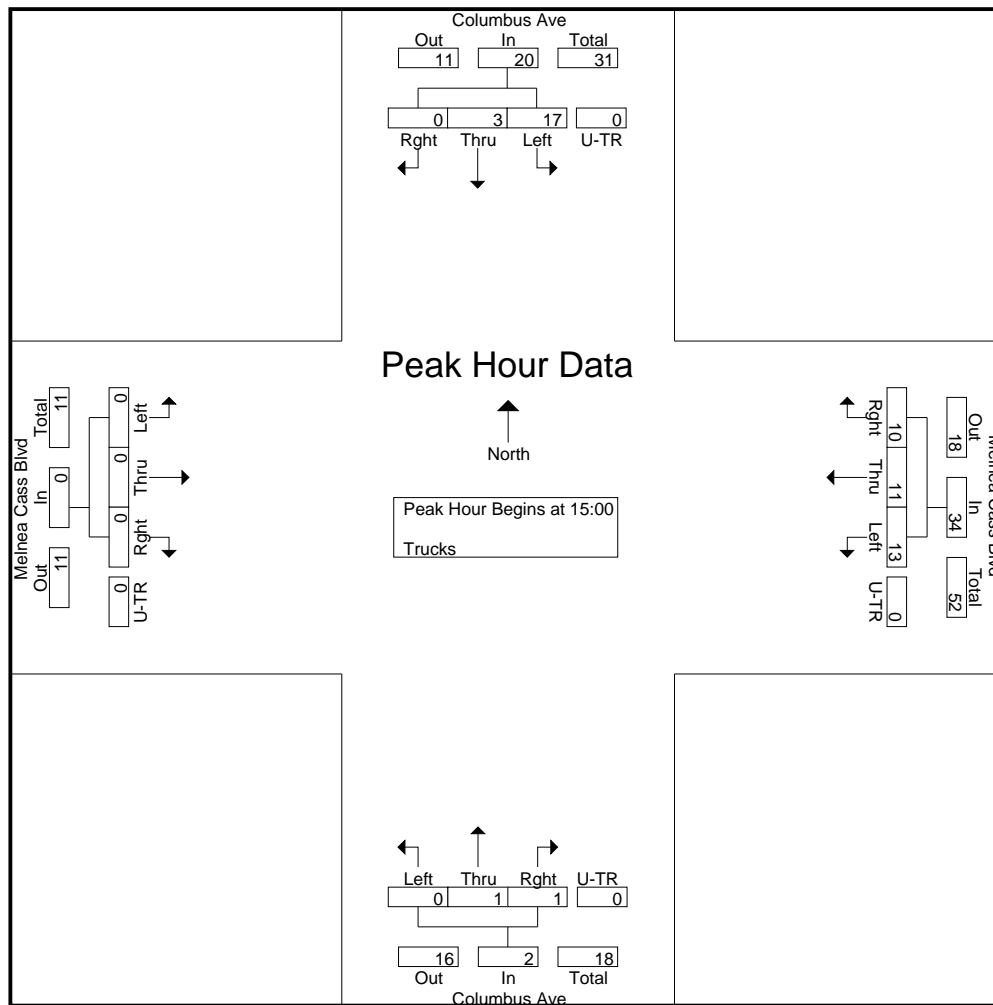
File Name : 01410001
Site Code : 01410001
Start Date : 9/21/2011
Page No : 4



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:45					13:00					12:45					10:00				
+0 mins.	4	1	0	0	5	1	2	2	0	5	0	0	0	0	0	0	0	0	0	0
+15 mins.	2	1	0	0	3	3	5	3	0	11	0	0	1	0	1	0	0	0	0	0
+30 mins.	2	1	0	0	3	4	3	3	0	10	0	1	0	0	1	0	0	0	0	0
+45 mins.	3	0	0	0	3	4	2	2	0	8	0	2	1	0	3	0	0	0	0	0
Total Volume	11	3	0	0	14	12	12	10	0	34	0	3	2	0	5	0	0	0	0	0
% App. Total																				
PHF	.688	.750	.000	.000	.700	.750	.600	.833	.000	.773	.000	.375	.500	.000	.417	.000	.000	.000	.000	.000

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



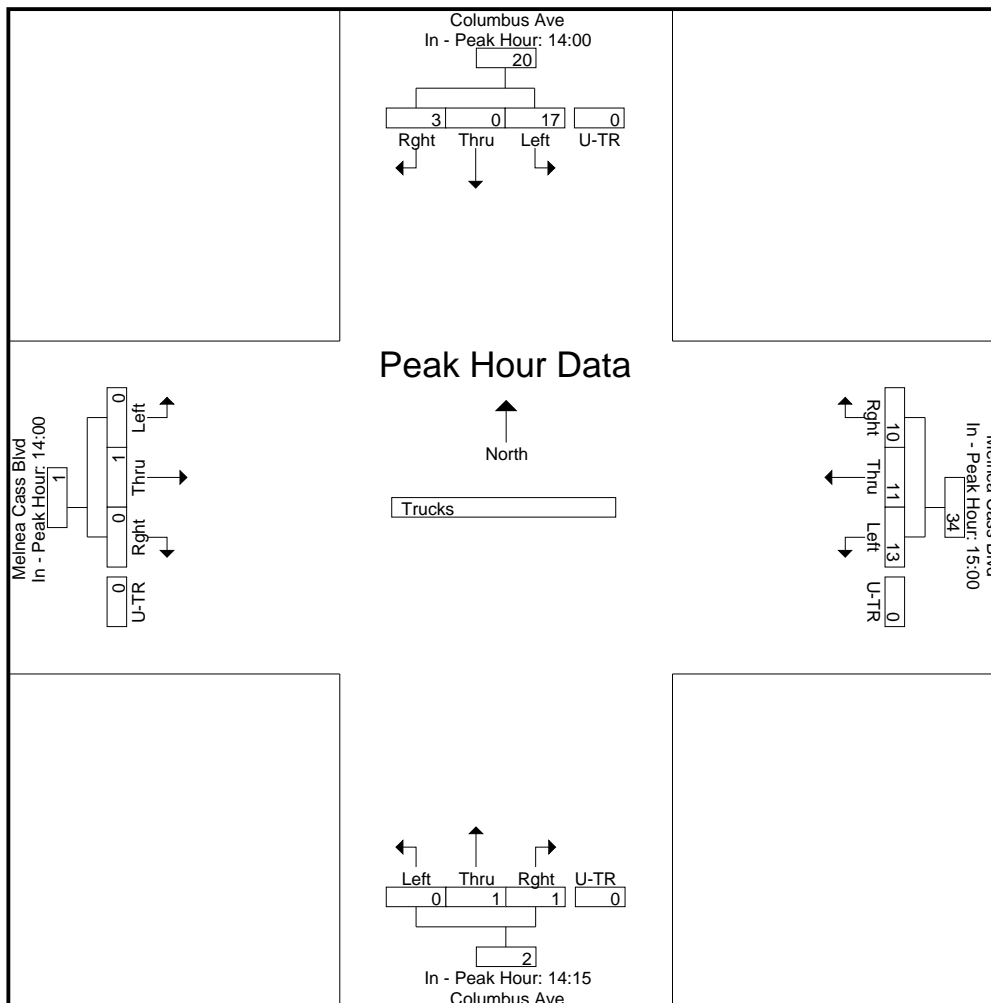
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	14:00					15:00					14:15					14:00				
+0 mins.	6	0	0	0	6	1	4	1	0	6	0	1	0	0	1	0	0	0	0	0
+15 mins.	5	0	2	0	7	3	2	4	0	9	0	0	0	0	0	0	0	0	0	0
+30 mins.	2	0	1	0	3	6	2	0	0	8	0	0	0	0	0	0	1	0	0	1
+45 mins.	4	0	0	0	4	3	3	5	0	11	0	0	1	0	1	0	0	0	0	0
Total Volume	17	0	3	0	20	13	11	10	0	34	0	1	1	0	2	0	1	0	0	1
% App. Total																				
PHF	.708	.000	.375	.000	.714	.542	.688	.500	.000	.773	.000	.250	.250	.000	.500	.000	.250	.000	.000	.250

Accurate Counts
978-664-2565

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410001
Site Code : 01410001
Start Date : 9/21/2011
Page No : 7



Accurate Counts
978-664-2565

File Name : 01410001
Site Code : 01410001
Start Date : 9/21/2011
Page No : 1

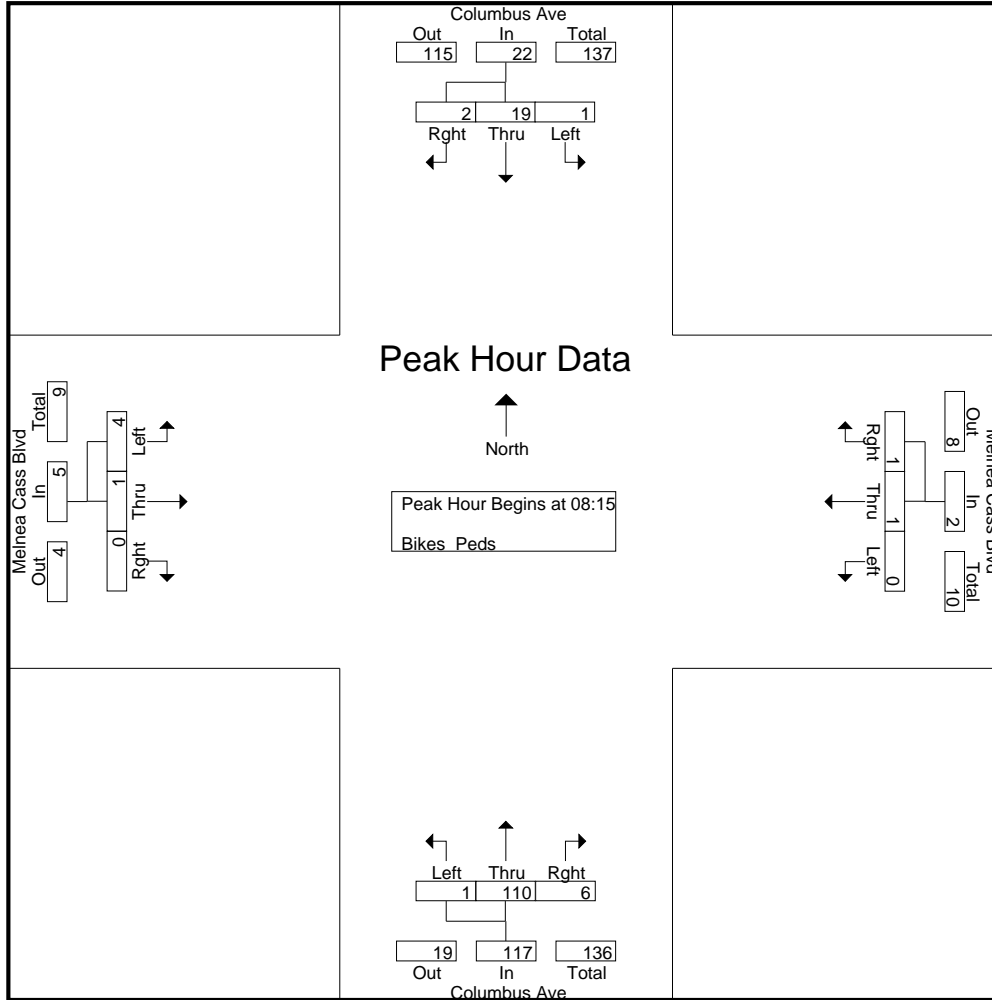
N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

Groups Printed- Bikes Peds

Start Time	Columbus Ave From North				Melnea Cass Blvd From East				Columbus Ave From South				Melnea Cass Blvd From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00	0	2	0	5	1	0	0	7	0	6	1	1	0	0	1	1	14	11	25
07:15	0	3	0	9	3	0	1	13	0	13	0	11	0	0	0	7	40	20	60
07:30	0	5	0	0	2	0	0	4	0	13	1	8	1	0	0	4	16	22	38
07:45	0	2	1	5	0	0	0	10	0	13	2	5	2	0	0	11	31	20	51
Total	0	12	1	19	6	0	1	34	0	45	4	25	3	0	1	23	101	73	174
08:00	0	3	0	6	0	0	0	12	0	11	2	5	3	0	1	11	34	20	54
08:15	1	6	0	7	0	0	0	9	0	33	2	5	3	0	0	6	27	45	72
08:30	0	5	1	12	0	0	1	15	0	27	0	8	0	0	0	3	38	34	72
08:45	0	6	0	6	0	0	0	11	1	34	2	9	1	0	0	5	31	44	75
Total	1	20	1	31	0	0	1	47	1	105	6	27	7	0	1	25	130	143	273
09:00	0	2	1	0	0	1	0	35	0	16	2	17	0	1	0	3	55	23	78
09:15	0	4	1	8	2	0	0	13	0	12	2	4	1	0	0	1	26	22	48
09:30	0	3	0	5	0	0	1	13	0	17	1	2	1	0	0	3	23	23	46
09:45	0	1	0	5	0	0	4	9	0	12	0	0	1	0	0	2	16	18	34
Total	0	10	2	18	2	1	5	70	0	57	5	23	3	1	0	9	120	86	206
10:00	0	4	0	5	1	0	0	11	0	7	1	4	0	0	0	2	22	13	35
10:15	0	5	0	14	0	0	1	31	0	9	3	8	0	0	0	5	58	18	76
10:30	0	2	0	5	1	0	2	26	0	4	1	2	1	0	0	8	41	11	52
10:45	0	3	0	2	0	0	1	15	0	2	0	0	1	0	0	1	18	7	25
Total	0	14	0	26	2	0	4	83	0	22	5	14	2	0	0	16	139	49	188
11:00	0	5	0	4	1	0	0	14	0	3	1	5	0	0	0	5	28	10	38
11:15	0	3	1	5	1	0	0	20	0	4	0	4	1	0	0	9	38	10	48
11:30	1	8	0	12	2	2	0	28	0	8	0	4	0	0	0	16	60	21	81
11:45	0	3	0	8	0	1	0	30	0	4	0	3	1	0	0	17	58	9	67
Total	1	19	1	29	4	3	0	92	0	19	1	16	2	0	0	47	184	50	234
12:00	0	2	0	7	0	0	0	27	0	6	0	5	0	1	0	17	56	9	65
12:15	0	2	0	4	1	0	0	17	0	1	1	3	0	1	1	3	27	7	34
12:30	0	1	0	15	1	0	0	27	0	9	1	3	0	0	1	7	52	13	65
12:45	0	2	0	5	1	0	0	10	0	4	0	3	0	0	0	10	28	7	35
Total	0	7	0	31	3	0	0	81	0	20	2	14	0	2	2	37	163	36	199
13:00	0	1	0	9	2	0	0	15	0	2	0	3	1	2	0	5	32	8	40
13:15	0	7	0	10	1	1	1	18	0	4	0	8	0	1	1	1	37	16	53
13:30	0	2	0	4	0	1	2	8	0	5	0	5	1	0	0	0	17	11	28
13:45	1	2	3	4	4	0	0	12	0	8	0	2	0	0	0	0	18	18	36
Total	1	12	3	27	7	2	3	53	0	19	0	18	2	3	1	6	104	53	157
14:00	2	7	0	10	1	0	1	11	0	0	0	2	1	0	0	3	26	12	38
14:15	0	3	0	16	0	0	0	8	0	3	0	1	2	1	0	2	27	9	36
14:30	1	5	1	8	0	0	0	24	1	6	0	13	0	1	2	0	45	17	62
14:45	0	7	0	1	1	0	1	27	0	7	1	4	2	0	1	0	32	20	52
Total	3	22	1	35	2	0	2	70	1	16	1	20	5	2	3	5	130	58	188
15:00	0	3	0	7	0	3	0	19	0	1	0	3	1	0	0	2	31	8	39
15:15	0	3	0	3	1	0	1	12	0	5	0	2	0	0	0	0	17	10	27
15:30	0	9	1	10	5	2	1	11	0	2	0	7	1	1	0	0	28	22	50
15:45	0	5	0	2	0	1	0	10	1	8	8	5	0	0	0	0	17	23	40
Total	0	20	1	22	6	6	2	52	1	16	8	17	2	1	0	2	93	63	156
16:00	0	11	0	5	1	0	1	15	2	5	1	3	0	1	0	4	27	22	49
16:15	2	12	1	12	2	1	3	15	0	14	3	6	4	1	0	0	33	43	76
16:30	0	14	0	2	1	0	0	8	0	5	0	3	0	0	0	0	13	20	33
16:45	1	7	1	6	13	0	0	18	0	4	0	2	0	0	0	0	26	26	52
Total	3	44	2	25	17	1	4	56	2	28	4	14	4	2	0	4	99	111	210
17:00	1	18	0	2	8	0	2	5	0	3	0	6	1	1	0	0	13	34	47
17:15	1	25	0	2	2	2	0	3	1	8	1	3	1	0	1	2	10	42	52
17:30	0	29	0	5	2	0	0	13	0	8	1	0	0	0	0	0	18	40	58
17:45	0	13	0	4	2	0	0	10	0	4	1	3	0	0	0	0	17	20	37
Total	2	85	0	13	14	2	2	31	1	23	3	12	2	1	1	2	58	136	194
Grand Total	11	265	12	276	63	15	24	669	6	370	39	200	32	12	9	176	1321	858	2179
Apprch %	3.8	92	4.2		61.8	14.7	23.5		1.4	89.2	9.4		60.4	22.6	17				
Total %	1.3	30.9	1.4		7.3	1.7	2.8		0.7	43.1	4.5		3.7	1.4	1		60.6	39.4	

Start Time	Columbus Ave From North				Melnea Cass Blvd From East				Columbus Ave From South				Melnea Cass Blvd From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:15	1	6	0	7	0	0	0	0	0	33	2	35	3	0	0	3	45
08:30	0	5	1	6	0	0	1	1	0	27	0	27	0	0	0	0	34
08:45	0	6	0	6	0	0	0	0	1	34	2	37	1	0	0	1	44
09:00	0	2	1	3	0	1	0	1	0	16	2	18	0	1	0	1	23
Total Volume	1	19	2	22	0	1	1	2	1	110	6	117	4	1	0	5	146
% App. Total	4.5	86.4	9.1		0	50	50		0.9	94	5.1		80	20	0		
PHF	.250	.792	.500	.786	.000	.250	.250	.500	.250	.809	.750	.791	.333	.250	.000	.417	.811

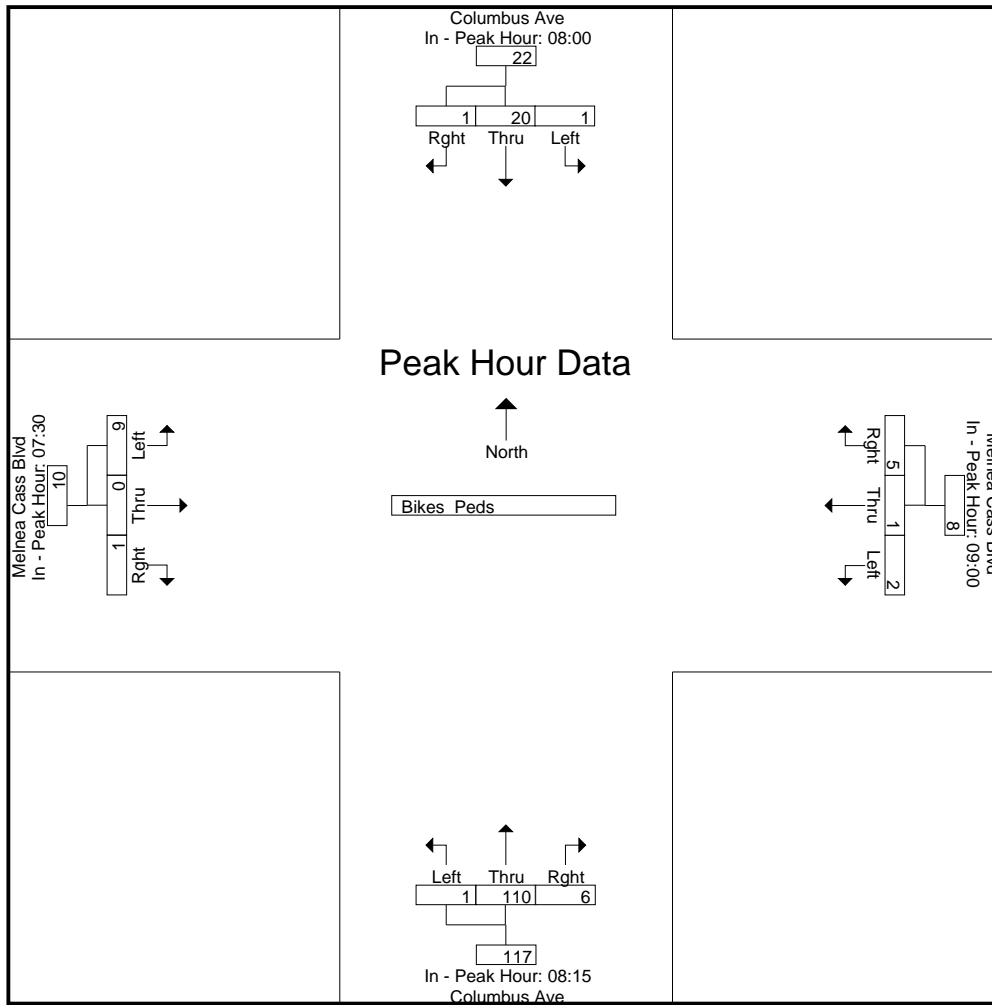
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 08:15



Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00				09:00				08:15				07:30			
+0 mins.	0	3	0	3	0	1	0	1	0	33	2	35	1	0	0	1
+15 mins.	1	6	0	7	2	0	0	2	0	27	0	27	2	0	0	2
+30 mins.	0	5	1	6	0	0	1	1	1	34	2	37	3	0	1	4
+45 mins.	0	6	0	6	0	0	4	4	0	16	2	18	3	0	0	3
Total Volume	1	20	1	22	2	1	5	8	1	110	6	117	9	0	1	10
% App. Total	4.5	90.9	4.5		25	12.5	62.5		0.9	94	5.1		90	0	10	
PHF	.250	.833	.250	.786	.250	.250	.313	.500	.250	.809	.750	.791	.750	.000	.250	.625

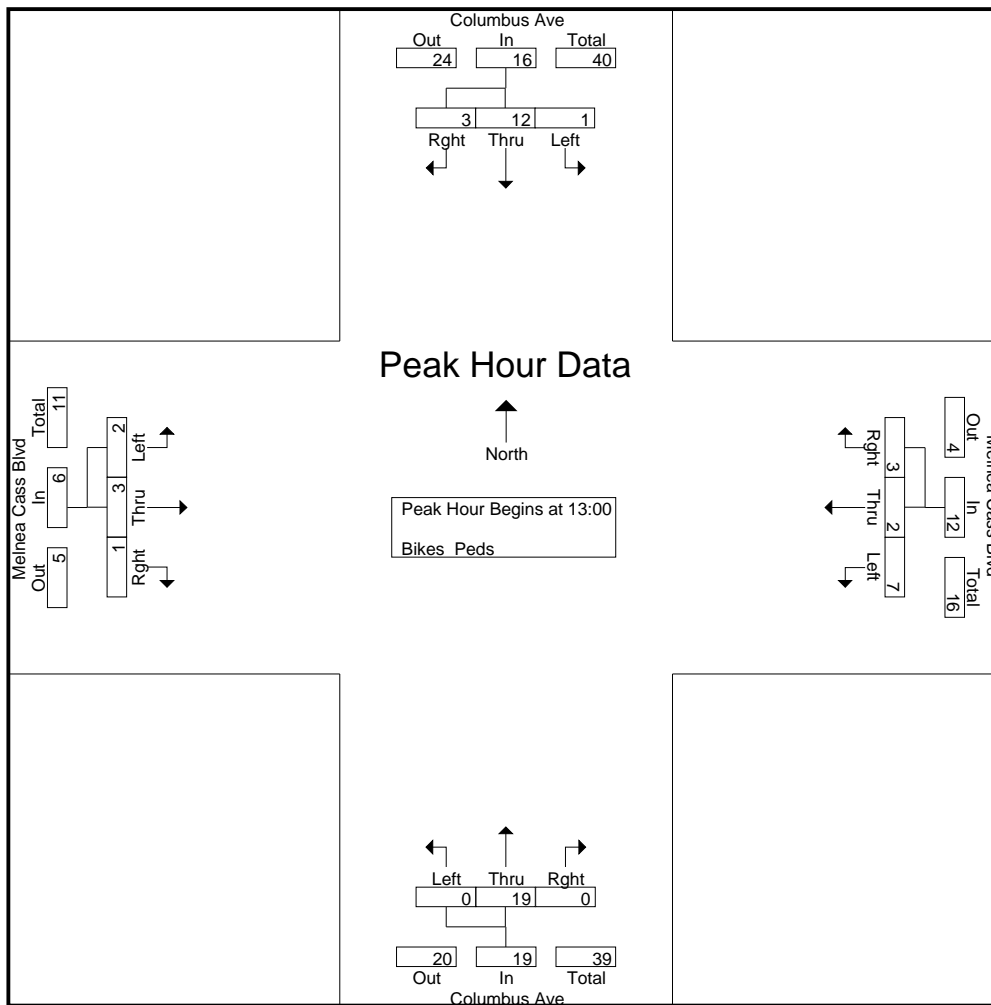
N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 13:00

13:00	0	1	0	1	2	0	0	2	0	2	0	2	1	2	0	3	8
13:15	0	7	0	7	1	1	1	3	0	4	0	4	0	1	1	2	16
13:30	0	2	0	2	0	1	2	3	0	5	0	5	1	0	0	1	11
13:45	1	2	3	6	4	0	0	4	0	8	0	8	0	0	0	0	18
Total Volume	1	12	3	16	7	2	3	12	0	19	0	19	2	3	1	6	53
% App. Total	6.2	75	18.8		58.3	16.7	25		0	100	0		33.3	50	16.7		
PHF	.250	.429	.250	.571	.438	.500	.375	.750	.000	.594	.000	.594	.500	.375	.250	.500	.736

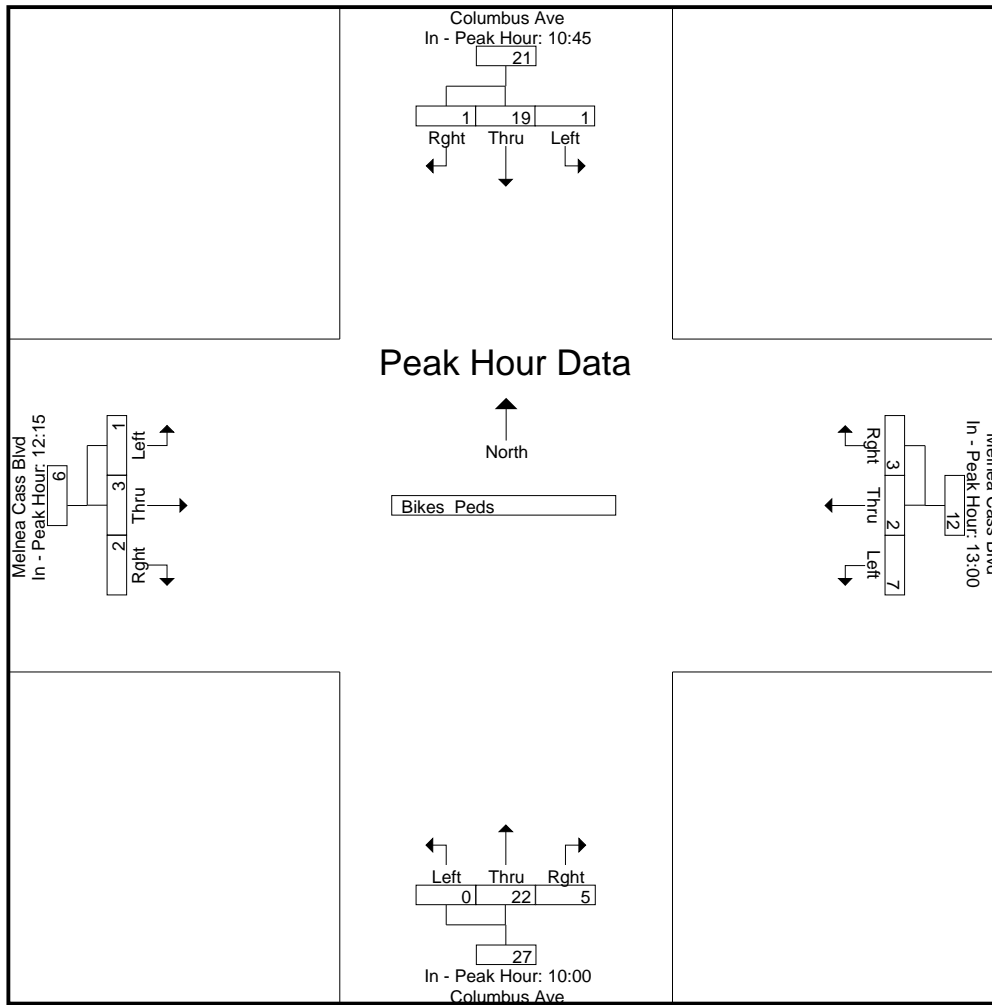
N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	10:45				13:00				10:00				12:15			
+0 mins.	0	3	0	3	2	0	0	2	0	7	1	8	0	1	1	2
+15 mins.	0	5	0	5	1	1	1	3	0	9	3	12	0	0	1	1
+30 mins.	0	3	1	4	0	1	2	3	0	4	1	5	0	0	0	0
+45 mins.	1	8	0	9	4	0	0	4	0	2	0	2	1	2	0	3
Total Volume	1	19	1	21	7	2	3	12	0	22	5	27	1	3	2	6
% App. Total	4.8	90.5	4.8		58.3	16.7	25		0	81.5	18.5		16.7	50	33.3	
PHF	.250	.594	.250	.583	.438	.500	.375	.750	.000	.611	.417	.563	.250	.375	.500	.500

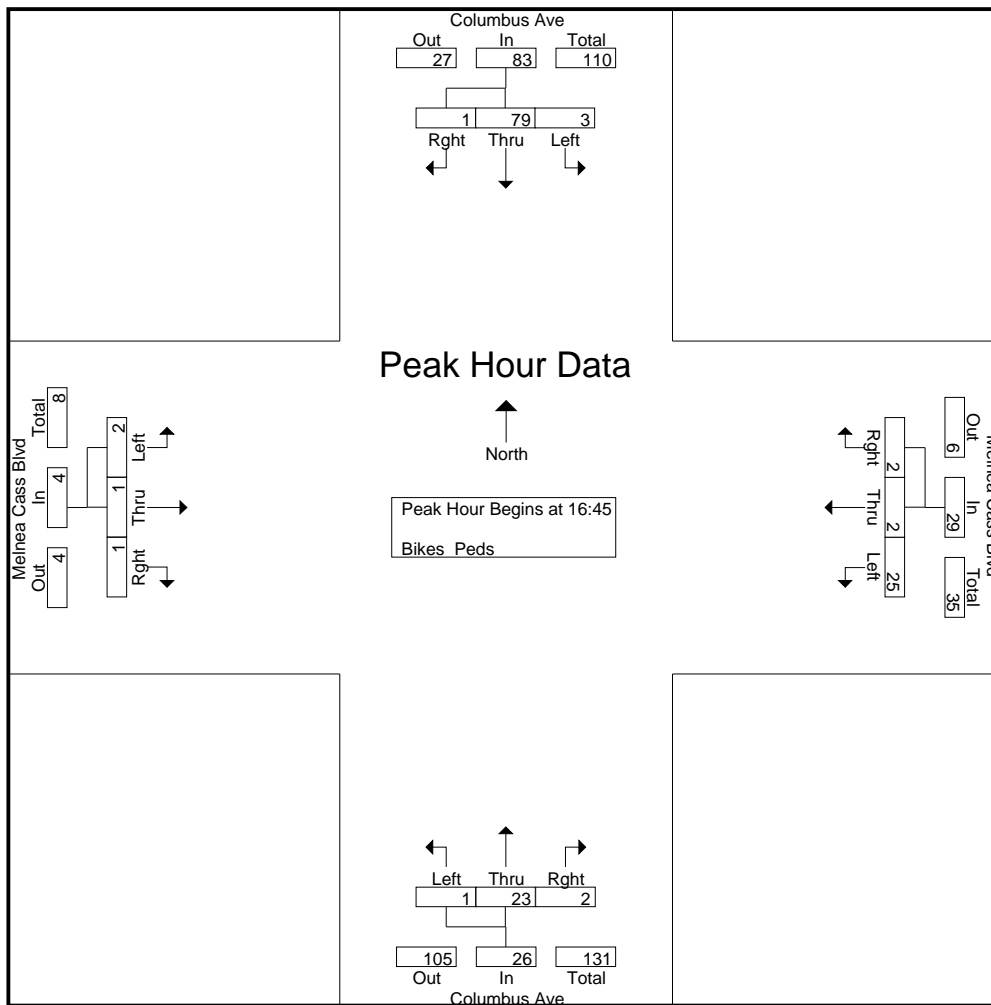
N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:45

16:45	1	7	1	9	13	0	0	13	0	4	0	4	0	0	0	0	26
17:00	1	18	0	19	8	0	2	10	0	3	0	3	1	1	0	2	34
17:15	1	25	0	26	2	2	0	4	1	8	1	10	1	0	1	2	42
17:30	0	29	0	29	2	0	0	2	0	8	1	9	0	0	0	0	40
Total Volume	3	79	1	83	25	2	2	29	1	23	2	26	2	1	1	4	142
% App. Total	3.6	95.2	1.2		86.2	6.9	6.9		3.8	88.5	7.7		50	25	25		
PHF	.750	.681	.250	.716	.481	.250	.250	.558	.250	.719	.500	.650	.500	.250	.250	.500	.845

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear



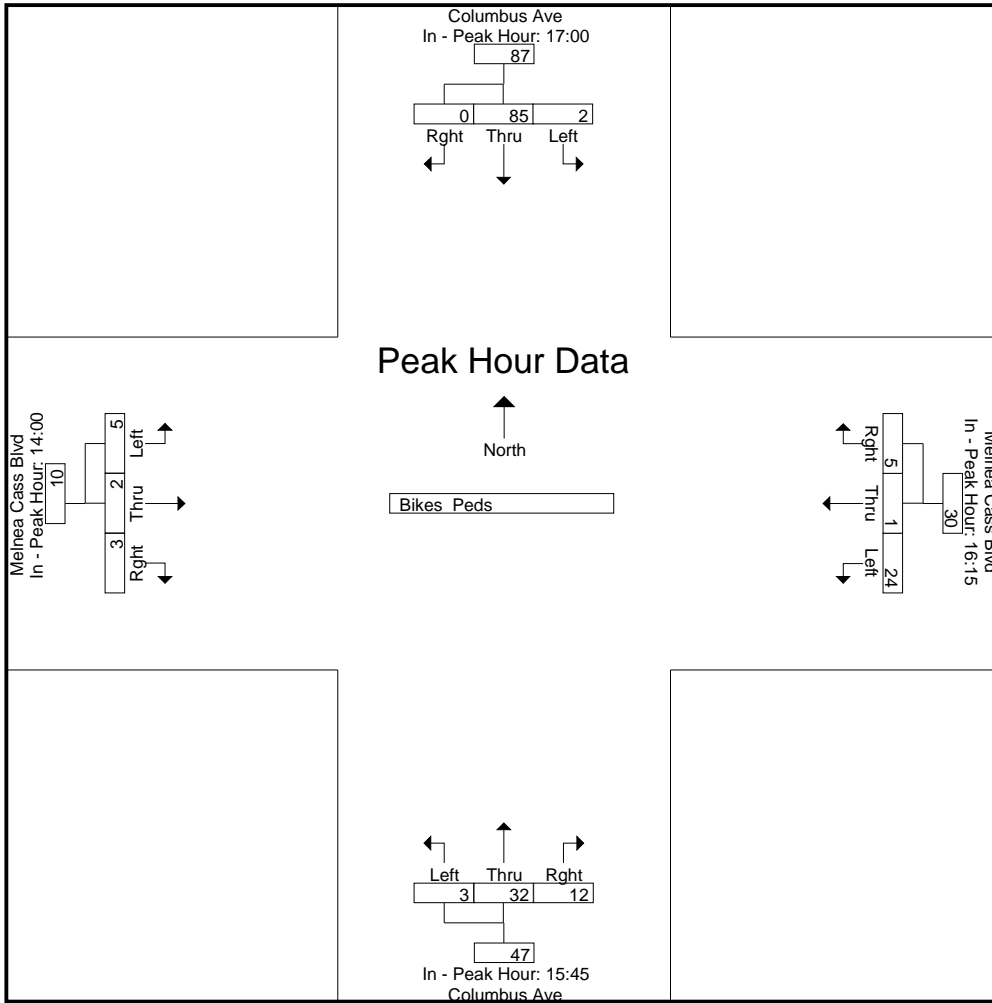
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	17:00				16:15				15:45				14:00			
+0 mins.	1	18	0	19	2	1	3	6	1	8	8	17	1	0	0	1
+15 mins.	1	25	0	26	1	0	0	1	2	5	1	8	2	1	0	3
+30 mins.	0	29	0	29	13	0	0	13	0	14	3	17	0	1	2	3
+45 mins.	0	13	0	13	8	0	2	10	0	5	0	5	2	0	1	3
Total Volume	2	85	0	87	24	1	5	30	3	32	12	47	5	2	3	10
% App. Total	2.3	97.7	0		80	3.3	16.7		6.4	68.1	25.5		50	20	30	
PHF	.500	.733	.000	.750	.462	.250	.417	.577	.375	.571	.375	.691	.625	.500	.375	.833

Accurate Counts
978-664-2565

N/S Street : Columbus Avenue
E/W Street: Melnea Cass Boulevard
City/State : Boston, MA
Weather : Clear

File Name : 01410001
Site Code : 01410001
Start Date : 9/21/2011
Page No : 7





PRECISION
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INDUSTRIES, LLC

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Office: 508.481.3999 Fax: 508.545.1234
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File Name : 123026 J
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Massachusetts Avenue From North				Tremont Street From East				Massachusetts Avenue From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	2	165	12	0	16	49	20	0	35	167	14	1	27	69	25	0	602
07:15 AM	10	167	19	1	9	50	19	0	40	205	23	0	31	83	22	0	679
07:30 AM	9	185	11	0	19	58	22	2	23	176	24	0	13	90	22	0	654
07:45 AM	10	179	18	0	17	53	16	0	32	206	10	1	27	99	25	0	693
Total	31	696	60	1	61	210	77	2	130	754	71	2	98	341	94	0	2628
08:00 AM	13	167	7	0	17	59	24	0	35	164	11	0	19	130	24	0	670
08:15 AM	7	159	15	0	9	68	24	0	43	176	17	0	17	135	28	0	698
08:30 AM	13	164	16	0	11	51	17	0	37	209	18	0	17	111	28	0	692
08:45 AM	14	135	16	0	9	48	21	1	30	202	9	1	18	122	21	0	647
Total	47	625	54	0	46	226	86	1	145	751	55	1	71	498	101	0	2707
Grand Total	78	1321	114	1	107	436	163	3	275	1505	126	3	169	839	195	0	5335
Apprch %	5.2	87.3	7.5	0.1	15.1	61.5	23	0.4	14.4	78.8	6.6	0.2	14	69.7	16.2	0	
Total %	1.5	24.8	2.1	0	2	8.2	3.1	0.1	5.2	28.2	2.4	0.1	3.2	15.7	3.7	0	
Cars	72	1214	107	1	99	396	147	3	249	1339	118	3	155	783	182	0	4868
% Cars	92.3	91.9	93.9	100	92.5	90.8	90.2	100	90.5	89	93.7	100	91.7	93.3	93.3	0	91.2
Heavy Vehicles	6	107	7	0	8	40	16	0	26	166	8	0	14	56	13	0	467
% Heavy Vehicles	7.7	8.1	6.1	0	7.5	9.2	9.8	0	9.5	11	6.3	0	8.3	6.7	6.7	0	8.8

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	10	179	18	0	207	17	53	16	0	86	32	206	10	1	249	27	99	25	0	151	693
08:00 AM	13							24	0	100	35	164	11	0	210	19	130	24	0	173	670
08:15 AM	7	159	15	0	181	9	68			101	43					135	28	0	180	698	
08:30 AM	13	164	16	0	193	11	51	17	0	79	37	209	18	0	264	17	111	28	0	156	692
Total Volume	43	669	56	0	768	54	231	81	0	366	147	755	56	1	959	80	475	105	0	660	2753
% App. Total	5.6	87.1	7.3	0		14.8	63.1	22.1	0		15.3	78.7	5.8	0.1		12.1	72	15.9	0		
PHF	.827	.934	.778	.000	.928	.794	.849	.844	.000	.906	.855	.903	.778	.250	.908	.741	.880	.938	.000	.917	.986
Cars	38	620	52	0	710	49	212	74	0	335	138	680	53	1	872	74	445	97	0	616	2533
% Cars	88.4	92.7	92.9	0	92.4	90.7	91.8	91.4	0	91.5	93.9	90.1	94.6	100	90.9	92.5	93.7	92.4	0	93.3	92.0
Heavy Vehicles	5	49	4	0	58	5	19	7	0	31	9	75	3	0	87	6	30	8	0	44	220
% Heavy Vehicles	11.6	7.3	7.1	0	7.6	9.3	8.2	8.6	0	8.5	6.1	9.9	5.4	0	9.1	7.5	6.3	7.6	0	6.7	8.0



PRECISION
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N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 J
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars

Start Time	Massachusetts Avenue From North				Tremont Street From East				Massachusetts Avenue From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	2	147	11	0	14	47	17	0	31	136	13	1	24	62	24	0	529
07:15 AM	10	153	18	1	9	45	17	0	35	190	21	0	30	79	21	0	629
07:30 AM	9	174	11	0	18	51	19	2	19	156	23	0	11	85	20	0	598
07:45 AM	9	169	16	0	16	49	14	0	31	181	9	1	24	95	21	0	635
Total	30	643	56	1	57	192	67	2	116	663	66	2	89	321	86	0	2391
08:00 AM	13	154	7	0	15	55	22	0	32	150	11	0	17	123	23	0	622
08:15 AM	6	144	13	0	8	61	24	0	40	160	17	0	17	124	27	0	641
08:30 AM	10	153	16	0	10	47	14	0	35	189	16	0	16	103	26	0	635
08:45 AM	13	120	15	0	9	41	20	1	26	177	8	1	16	112	20	0	579
Total	42	571	51	0	42	204	80	1	133	676	52	1	66	462	96	0	2477
Grand Total	72	1214	107	1	99	396	147	3	249	1339	118	3	155	783	182	0	4868
Apprch %	5.2	87.1	7.7	0.1	15.3	61.4	22.8	0.5	14.6	78.3	6.9	0.2	13.8	69.9	16.2	0	
Total %	1.5	24.9	2.2	0	2	8.1	3	0.1	5.1	27.5	2.4	0.1	3.2	16.1	3.7	0	

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	9	169	16	0	194	16	49	14	0	79	31	181	9	1	222	24	95	21	0	140	635
08:00 AM	13					8	61	24	0	93	40	160	17	0	217	17	124	27	0	168	641
08:15 AM	6	144	13	0	163	8	61	24	0	93	40	160	17	0	217	17	124	27	0	168	641
08:30 AM	10	153	16	0	179	10	47	14	0	71	35	189	16	0	240	16	103	26	0	145	635
Total Volume	38	620	52	0	710	49	212	74	0	335	138	680	53	1	872	74	445	97	0	616	2533
% App. Total	5.4	87.3	7.3	0		14.6	63.3	22.1	0		15.8	78	6.1	0.1		12	72.2	15.7	0		
PHF	.731	.917	.813	.000	.915	.766	.869	.771	.000	.901	.863	.899	.779	.250	.908	.771	.897	.898	.000	.917	.988



PRECISION
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File Name : 123026 J
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Massachusetts Avenue From North				Tremont Street From East				Massachusetts Avenue From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	0	18	1	0	2	2	3	0	4	31	1	0	3	7	1	0	73
07:15 AM	0	14	1	0	0	5	2	0	5	15	2	0	1	4	1	0	50
07:30 AM	0	11	0	0	1	7	3	0	4	20	1	0	2	5	2	0	56
07:45 AM	1	10	2	0	1	4	2	0	1	25	1	0	3	4	4	0	58
Total	1	53	4	0	4	18	10	0	14	91	5	0	9	20	8	0	237
08:00 AM	0	13	0	0	2	4	2	0	3	14	0	0	2	7	1	0	48
08:15 AM	1	15	2	0	1	7	0	0	3	16	0	0	0	11	1	0	57
08:30 AM	3	11	0	0	1	4	3	0	2	20	2	0	1	8	2	0	57
08:45 AM	1	15	1	0	0	7	1	0	4	25	1	0	2	10	1	0	68
Total	5	54	3	0	4	22	6	0	12	75	3	0	5	36	5	0	230
Grand Total	6	107	7	0	8	40	16	0	26	166	8	0	14	56	13	0	467
Apprch %	5	89.2	5.8	0	12.5	62.5	25	0	13	83	4	0	16.9	67.5	15.7	0	
Total %	1.3	22.9	1.5	0	1.7	8.6	3.4	0	5.6	35.5	1.7	0	3	12	2.8	0	

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	18	1	0	19	2	2	3	0	7	4	31	1	0	36	3	7	1	0	11	73
07:15 AM	0	14	1	0	15	0	5	2	0	7	5	15	2	0	22	1	4	1	0	6	50
07:30 AM	0	11	0	0	11	1	7	3	0	11	4	20	1	0	25	2	5	2	0	9	56
07:45 AM	1	10	2	0	13	1	4	2	0	7	1	25	1	0	27	3	4	4	0	11	58
Total Volume	1	53	4	0	58	4	18	10	0	32	14	91	5	0	110	9	20	8	0	37	237
% App. Total	1.7	91.4	6.9	0		12.5	56.2	31.2	0		12.7	82.7	4.5	0		24.3	54.1	21.6	0		
PHF	.250	.736	.500	.000	.763	.500	.643	.833	.000	.727	.700	.734	.625	.000	.764	.750	.714	.500	.000	.841	.812



PRECISION
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File Name : 123026 J
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Massachusetts Avenue From North				Tremont Street From East				Massachusetts Avenue From South				Tremont Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	1	0	15	1	1	0	23	1	6	0	5	0	0	0	23	76
07:15 AM	0	8	0	11	1	0	0	22	0	7	0	8	1	0	0	17	75
07:30 AM	0	8	0	11	0	1	0	33	0	5	0	9	0	2	1	23	93
07:45 AM	0	20	0	12	0	1	0	40	0	3	0	20	0	3	0	23	122
Total	0	37	0	49	2	3	0	118	1	21	0	42	1	5	1	86	366
08:00 AM	0	18	0	8	2	1	0	30	0	2	0	11	0	4	1	31	108
08:15 AM	0	8	2	7	0	0	0	44	0	7	0	28	0	4	0	47	147
08:30 AM	0	16	0	11	1	1	0	37	0	10	0	27	0	1	1	38	143
08:45 AM	0	22	0	12	3	0	1	49	0	13	0	17	0	8	2	36	163
Total	0	64	2	38	6	2	1	160	0	32	0	83	0	17	4	152	561
Grand Total	0	101	2	87	8	5	1	278	1	53	0	125	1	22	5	238	927
Apprch %	0	53.2	1.1	45.8	2.7	1.7	0.3	95.2	0.6	29.6	0	69.8	0.4	8.3	1.9	89.5	
Total %	0	10.9	0.2	9.4	0.9	0.5	0.1	30	0.1	5.7	0	13.5	0.1	2.4	0.5	25.7	

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	18	0	8	26	2	1	0	30	33	0	2	0	11	13	0	4	1	31	36	108
08:15 AM	0	8	2	7	17	0	0	0	44	44	0	7	0	28	35	0	4	0	47	51	147
08:30 AM	0	16	0	11	27	1	1	0	37	39	0	10	0	27	37	0	1	1	38	40	143
08:45 AM	0	22	0	12	34	3	0	1	49	53	0	13	0	17	30	0	8	2	36	46	163
Total Volume	0	64	2	38	104	6	2	1	160	169	0	32	0	83	115	0	17	4	152	173	561
% App. Total	0	61.5	1.9	36.5		3.6	1.2	0.6	94.7		0	27.8	0	72.2		0	9.8	2.3	87.9		
PHF	.000	.727	.250	.792	.765	.500	.500	.250	.816	.797	.000	.615	.000	.741	.777	.000	.531	.500	.809	.848	.860



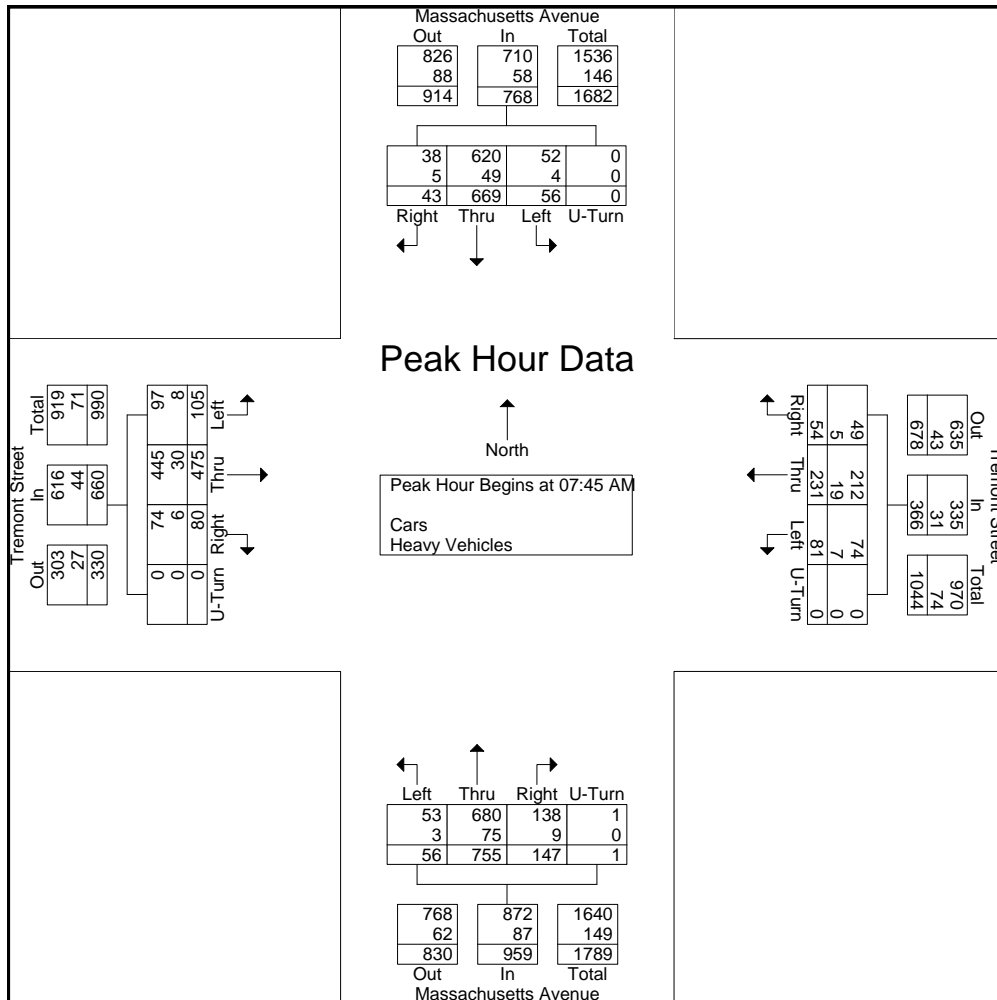
PRECISION
D A T A
INDUSTRIES, LLC

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File Name : 123026 J
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Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	10	179	18	0	207	17	53	16	0	86	32	206	10	1	249	27	99	25	0	151	693
08:00 AM	13								24	100	35	164	11	0	210	19	130	24	0	173	670
08:15 AM	7	159	15	0	181	9	68			101	43					135	28	0	180	698	
08:30 AM	13	164	16	0	193	11	51	17	0	79	37	209	18	0	264	17	111	28	0	156	692
Total Volume	43	669	56	0	768	54	231	81	0	366	147	755	56	1	959	80	475	105	0	660	2753
% App. Total	5.6	87.1	7.3	0		14.8	63.1	22.1	0		15.3	78.7	5.8	0.1		12.1	72	15.9	0		
PHF	.827	.934	.778	.000	.928	.794	.849	.844	.000	.906	.855	.903	.778	.250	.908	.741	.880	.938	.000	.917	.986
Cars	38	620	52	0	710	49	212	74	0	335	138	680	53	1	872	74	445	97	0	616	2533
% Cars	88.4	92.7	92.9	0	92.4	90.7	91.8	91.4	0	91.5	93.9	90.1	94.6	100	90.9	92.5	93.7	92.4	0	93.3	92.0
Heavy Vehicles	5	49	4	0	58	5	19	7	0	31	9	75	3	0	87	6	30	8	0	44	220
% Heavy Vehicles	11.6	7.3	7.1	0	7.6	9.3	8.2	8.6	0	8.5	6.1	9.9	5.4	0	9.1	7.5	6.3	7.6	0	6.7	8.0





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File Name : 123026 JJ
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N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Massachusetts Avenue From North				Tremont Street From East				Massachusetts Avenue From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	13	196	18	0	14	62	23	0	25	155	9	0	52	96	33	0	696
04:15 PM	12	195	11	0	17	74	24	1	27	176	14	0	28	82	23	0	684
04:30 PM	14	201	21	0	13	64	33	0	20	188	19	0	15	81	23	0	692
04:45 PM	17	192	17	0	11	71	16	1	29	172	21	0	23	93	30	1	694
Total	56	784	67	0	55	271	96	2	101	691	63	0	118	352	109	1	2766
05:00 PM	18	194	20	1	17	78	25	1	20	188	12	0	26	95	26	0	721
05:15 PM	18	199	28	0	18	75	19	0	20	204	18	0	31	103	22	0	755
05:30 PM	12	193	20	0	13	78	29	0	22	182	25	0	32	101	19	0	726
05:45 PM	22	205	20	0	14	63	21	1	16	196	22	0	19	70	33	0	702
Total	70	791	88	1	62	294	94	2	78	770	77	0	108	369	100	0	2904
Grand Total	126	1575	155	1	117	565	190	4	179	1461	140	0	226	721	209	1	5670
Apprch %	6.8	84.8	8.3	0.1	13.4	64.5	21.7	0.5	10.1	82.1	7.9	0	19.5	62.3	18.1	0.1	
Total %	2.2	27.8	2.7	0	2.1	10	3.4	0.1	3.2	25.8	2.5	0	4	12.7	3.7	0	
Cars	124	1500	151	1	116	545	174	4	174	1403	134	0	213	692	203	1	5435
% Cars	98.4	95.2	97.4	100	99.1	96.5	91.6	100	97.2	96	95.7	0	94.2	96	97.1	100	95.9
Heavy Vehicles	2	75	4	0	1	20	16	0	5	58	6	0	13	29	6	0	235
% Heavy Vehicles	1.6	4.8	2.6	0	0.9	3.5	8.4	0	2.8	4	4.3	0	5.8	4	2.9	0	4.1

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	18	194	20	1	233	17	78	25	1	121	20	188	12	0	220	26	95	26	0	147	721
05:15 PM	18	199	28	0	245	18	75	19	0	112	20	204	18	0	242	31	103	22	0	156	755
05:30 PM	12	193	20	0	225	13	78	29	0	120	22	182	25	0	229	32	101	19	0	152	726
05:45 PM	22	205	20	0	247	14	63	21	1	99	16	196	22	0	234	19	70	33	0	122	702
Total Volume	70	791	88	1	950	62	294	94	2	452	78	770	77	0	925	108	369	100	0	577	2904
% App. Total	7.4	83.3	9.3	0.1		13.7	65	20.8	0.4		8.4	83.2	8.3	0		18.7	64	17.3	0		
PHF	.795	.965	.786	.250	.962	.861	.942	.810	.500	.934	.886	.944	.770	.000	.956	.844	.896	.758	.000	.925	.962
Cars	69	750	86	1	906	61	285	87	2	435	76	746	75	0	897	104	354	97	0	555	2793
% Cars	98.6	94.8	97.7	100	95.4	98.4	96.9	92.6	100	96.2	97.4	96.9	97.4	0	97.0	96.3	95.9	97.0	0	96.2	96.2
Heavy Vehicles	1	41	2	0	44	1	9	7	0	17	2	24	2	0	28	4	15	3	0	22	111
% Heavy Vehicles	1.4	5.2	2.3	0	4.6	1.6	3.1	7.4	0	3.8	2.6	3.1	2.6	0	3.0	3.7	4.1	3.0	0	3.8	3.8



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
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File Name : 123026 JJ
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Massachusetts Avenue From North				Tremont Street From East				Massachusetts Avenue From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	13	189	18	0	14	58	21	0	25	148	9	0	50	92	33	0	670
04:15 PM	11	184	10	0	17	72	22	1	25	164	14	0	26	80	22	0	648
04:30 PM	14	191	20	0	13	62	29	0	19	182	18	0	13	75	23	0	659
04:45 PM	17	186	17	0	11	68	15	1	29	163	18	0	20	91	28	1	665
Total	55	750	65	0	55	260	87	2	98	657	59	0	109	338	106	1	2642
05:00 PM	17	186	20	1	17	75	22	1	19	181	10	0	26	93	25	0	693
05:15 PM	18	187	26	0	17	73	17	0	19	196	18	0	29	97	22	0	719
05:30 PM	12	183	20	0	13	76	28	0	22	179	25	0	31	96	19	0	704
05:45 PM	22	194	20	0	14	61	20	1	16	190	22	0	18	68	31	0	677
Total	69	750	86	1	61	285	87	2	76	746	75	0	104	354	97	0	2793
Grand Total	124	1500	151	1	116	545	174	4	174	1403	134	0	213	692	203	1	5435
Apprch %	7	84.5	8.5	0.1	13.8	65	20.7	0.5	10.2	82	7.8	0	19.2	62.4	18.3	0.1	
Total %	2.3	27.6	2.8	0	2.1	10	3.2	0.1	3.2	25.8	2.5	0	3.9	12.7	3.7	0	

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	17	186	20	1	224	17	75	22	1	115	19	181	10	0	210	26	93	25	0	144	693
05:15 PM	18	187	26	0	215	13	76	28	0	117	22	196	18	0	233	29	97	19	0	148	719
05:30 PM	12	183	20	0	215	13	76	28	0	117	22	179	25	0	226	31	96	19	0	146	704
05:45 PM	22	194	20	0	236	14	61	20	1	96	16	190	22	0	228	18	68	31	0	117	677
Total Volume	69	750	86	1	906	61	285	87	2	435	76	746	75	0	897	104	354	97	0	555	2793
% App. Total	7.6	82.8	9.5	0.1		14	65.5	20	0.5		8.5	83.2	8.4	0		18.7	63.8	17.5	0		
PHF	.784	.966	.827	.250	.960	.897	.938	.777	.500	.929	.864	.952	.750	.000	.962	.839	.912	.782	.000	.938	.971



PRECISION
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File Name : 123026 JJ
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Massachusetts Avenue From North				Tremont Street From East				Massachusetts Avenue From South				Tremont Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	7	0	0	0	4	2	0	0	7	0	0	2	4	0	0	26
04:15 PM	1	11	1	0	0	2	2	0	2	12	0	0	2	2	1	0	36
04:30 PM	0	10	1	0	0	2	4	0	1	6	1	0	2	6	0	0	33
04:45 PM	0	6	0	0	0	3	1	0	0	9	3	0	3	2	2	0	29
Total	1	34	2	0	0	11	9	0	3	34	4	0	9	14	3	0	124
05:00 PM	1	8	0	0	0	3	3	0	1	7	2	0	0	2	1	0	28
05:15 PM	0	12	2	0	1	2	2	0	1	8	0	0	2	6	0	0	36
05:30 PM	0	10	0	0	0	2	1	0	0	3	0	0	1	5	0	0	22
05:45 PM	0	11	0	0	0	2	1	0	0	6	0	0	1	2	2	0	25
Total	1	41	2	0	1	9	7	0	2	24	2	0	4	15	3	0	111
Grand Total	2	75	4	0	1	20	16	0	5	58	6	0	13	29	6	0	235
Apprch %	2.5	92.6	4.9	0	2.7	54.1	43.2	0	7.2	84.1	8.7	0	27.1	60.4	12.5	0	
Total %	0.9	31.9	1.7	0	0.4	8.5	6.8	0	2.1	24.7	2.6	0	5.5	12.3	2.6	0	

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	1	11	1	0	13	0	2	2	0	4	2	12	0	0	14	2	2	1	0	5	36
04:30 PM	0	10	1	0	11	0	2	4	0	6	1	6	1	0	8	2	6	0	0	8	33
04:45 PM	0	6	0	0	6	0	3	1	0	4	0	9	3	0	12	3	2	2	0	7	29
05:00 PM	1	8	0	0	9	0	3	3	0	6	1	7	2	0	10	0	2	1	0	3	28
Total Volume	2	35	2	0	39	0	10	10	0	20	4	34	6	0	44	7	12	4	0	23	126
% App. Total	5.1	89.7	5.1	0		0	50	50	0		9.1	77.3	13.6	0		30.4	52.2	17.4	0		
PHF	.500	.795	.500	.000	.750	.000	.833	.625	.000	.833	.500	.708	.500	.000	.786	.583	.500	.500	.000	.719	.875



PRECISION
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File Name : 123026 JJ
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Massachusetts Avenue From North				Tremont Street From East				Massachusetts Avenue From South				Tremont Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	1	5	0	16	0	1	0	28	0	9	0	23	1	3	0	42	129
04:15 PM	0	3	2	27	0	2	0	49	0	4	0	16	1	0	0	43	147
04:30 PM	0	6	2	14	1	1	0	46	0	11	0	18	0	1	0	44	144
04:45 PM	0	6	1	17	0	3	1	25	0	16	0	15	0	0	0	35	119
Total	1	20	5	74	1	7	1	148	0	40	0	72	2	4	0	164	539
05:00 PM	0	9	0	16	0	3	1	36	1	24	0	9	0	3	2	39	143
05:15 PM	1	19	1	20	0	9	0	38	0	26	0	20	0	1	0	47	182
05:30 PM	0	13	0	21	0	4	0	51	1	27	0	29	0	6	0	51	203
05:45 PM	0	11	2	24	0	4	0	25	0	9	0	25	0	3	0	41	144
Total	1	52	3	81	0	20	1	150	2	86	0	83	0	13	2	178	672
Grand Total	2	72	8	155	1	27	2	298	2	126	0	155	2	17	2	342	1211
Apprch %	0.8	30.4	3.4	65.4	0.3	8.2	0.6	90.9	0.7	44.5	0	54.8	0.6	4.7	0.6	94.2	
Total %	0.2	5.9	0.7	12.8	0.1	2.2	0.2	24.6	0.2	10.4	0	12.8	0.2	1.4	0.2	28.2	

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	9	0	16	25	0	3	1	36	40	1	24	0	9	34	0	3	2	39	44	143
05:15 PM	1	19	1	20	41	0	9	0	51	55	1	27	0	29	57	0	6	0	51	57	203
05:30 PM	0	13	0	21	34	0	4	0	25	29	0	9	0	25	34	0	3	0	41	44	144
05:45 PM	0	11	2	24	37	0	4	0	25	29	0	9	0	25	34	0	3	0	41	44	144
Total Volume	1	52	3	81	137	0	20	1	150	171	2	86	0	83	171	0	13	2	178	193	672
% App. Total	0.7	38	2.2	59.1		0	11.7	0.6	87.7		1.2	50.3	0	48.5		0	6.7	1	92.2		
PHF	.250	.684	.375	.844	.835	.000	.556	.250	.735	.777	.500	.796	.000	.716	.750	.000	.542	.250	.873	.846	.828



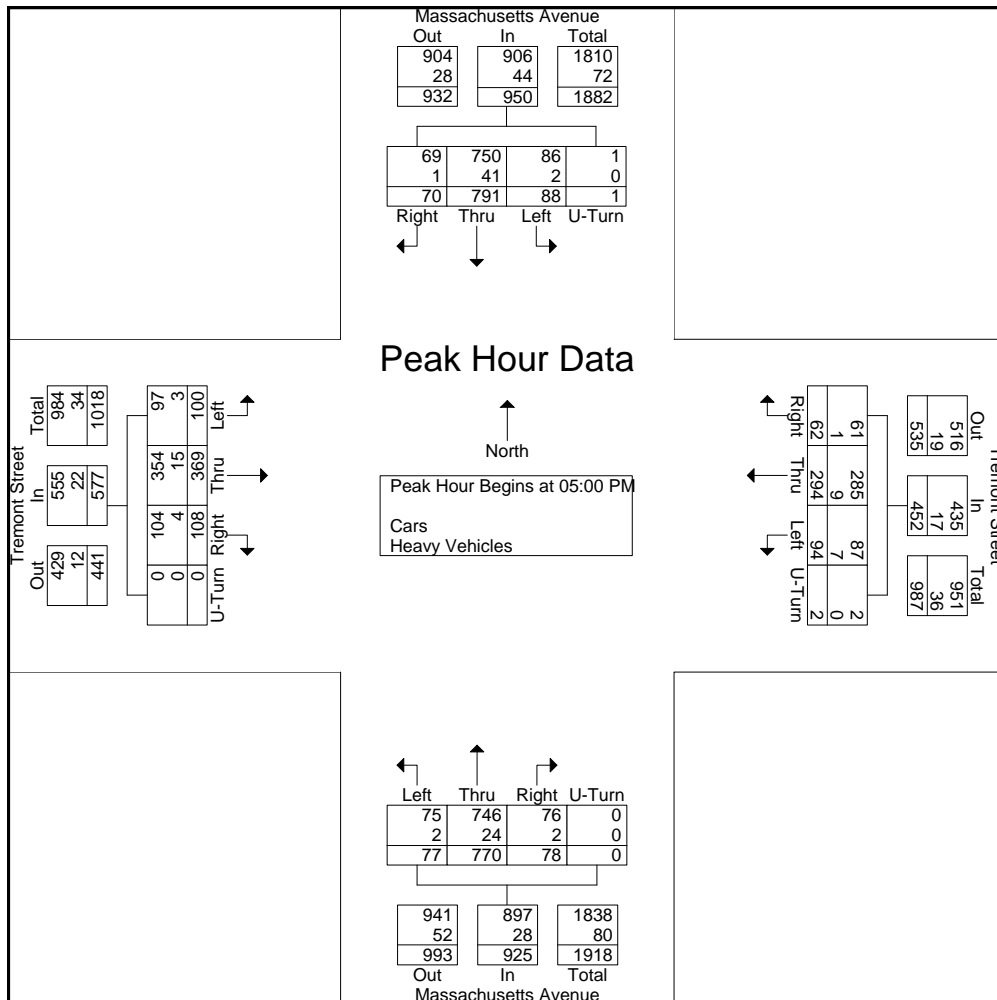
PRECISION
D A T A
INDUSTRIES, LLC

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Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 123026 JJ
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Tremont Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Massachusetts Avenue From North					Tremont Street From East					Massachusetts Avenue From South					Tremont Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	18	194	20	1	233	17	78	25	1	121	20	188	12	0	220	26	95	26	0	147	721
05:15 PM	18	199	28	0	245	18	75	19	0	112	20	204	18	0	242	31	103	22	0	156	755
05:30 PM	12	193	20	0	225	13	78	29	0	120	22	182	25	0	229	32	101	19	0	152	726
05:45 PM	22	205	20	0	247	14	63	21	1	99	16	196	22	0	234	19	70	33	0	122	702
Total Volume	70	791	88	1	950	62	294	94	2	452	78	770	77	0	925	108	369	100	0	577	2904
% App. Total	7.4	83.3	9.3	0.1		13.7	65	20.8	0.4		8.4	83.2	8.3	0		18.7	64	17.3	0		
PHF	.795	.965	.786	.250	.962	.861	.942	.810	.500	.934	.886	.944	.770	.000	.956	.844	.896	.758	.000	.925	.962
Cars	69	750	86	1	906	61	285	87	2	435	76	746	75	0	897	104	354	97	0	555	2793
% Cars	98.6	94.8	97.7	100	95.4	98.4	96.9	92.6	100	96.2	97.4	96.9	97.4	0	97.0	96.3	95.9	97.0	0	96.2	96.2
Heavy Vehicles	1	41	2	0	44	1	9	7	0	17	2	24	2	0	28	4	15	3	0	22	111
% Heavy Vehicles	1.4	5.2	2.3	0	4.6	1.6	3.1	7.4	0	3.8	2.6	3.1	2.6	0	3.0	3.7	4.1	3.0	0	3.8	3.8





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File Name : 123026 K
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Massachusetts Avenue From North				Columbus Avenue From East				Massachusetts Avenue From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	30	153	15	0	22	31	23	0	19	164	8	1	3	27	56	0	552
07:15 AM	39	163	11	0	22	32	24	0	14	197	13	1	9	27	62	0	614
07:30 AM	41	169	14	0	15	24	27	0	18	197	11	1	9	47	71	0	644
07:45 AM	49	168	9	0	29	35	26	0	23	196	9	0	14	52	58	0	668
Total	159	653	49	0	88	122	100	0	74	754	41	3	35	153	247	0	2478
08:00 AM	44	145	18	1	14	40	34	0	20	185	8	0	7	38	75	0	629
08:15 AM	36	162	9	0	16	31	31	0	33	175	7	3	3	41	52	0	599
08:30 AM	42	161	8	0	13	49	22	0	28	210	8	3	4	51	41	0	640
08:45 AM	38	136	5	0	19	31	21	0	27	188	4	0	5	44	52	0	570
Total	160	604	40	1	62	151	108	0	108	758	27	6	19	174	220	0	2438
Grand Total	319	1257	89	1	150	273	208	0	182	1512	68	9	54	327	467	0	4916
Apprch %	19.1	75.5	5.3	0.1	23.8	43.3	33	0	10.3	85.4	3.8	0.5	6.4	38.6	55.1	0	
Total %	6.5	25.6	1.8	0	3.1	5.6	4.2	0	3.7	30.8	1.4	0.2	1.1	6.7	9.5	0	
Cars	307	1147	77	1	140	253	192	0	161	1340	66	9	52	309	453	0	4507
% Cars	96.2	91.2	86.5	100	93.3	92.7	92.3	0	88.5	88.6	97.1	100	96.3	94.5	97	0	91.7
Heavy Vehicles	12	110	12	0	10	20	16	0	21	172	2	0	2	18	14	0	409
% Heavy Vehicles	3.8	8.8	13.5	0	6.7	7.3	7.7	0	11.5	11.4	2.9	0	3.7	5.5	3	0	8.3

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	39	163	11	0	213	22	32	24	0	78	14	197	13	1	225	9	27	62	0	98	614
07:30 AM	41	169	14	0	224	15	24	27	0	66	18	197	11	1	227	9	47	71	0	127	644
07:45 AM	49	168	9	0	226	29	35	26	0	90	23	196	9	0	228	14	52	58	0	124	668
08:00 AM	44	145	18	1	208	14	40	34	0	88	20	185	8	0	213	7	38	75	0	120	629
Total Volume	173	645	52	1	871	80	131	111	0	322	75	775	41	2	893	39	164	266	0	469	2555
% App. Total	19.9	74.1	6	0.1		24.8	40.7	34.5	0		8.4	86.8	4.6	0.2		8.3	35	56.7	0		
PHF	.883	.954	.722	.250	.963	.690	.819	.816	.000	.894	.815	.984	.788	.500	.979	.696	.788	.887	.000	.923	.956
Cars	169	600	44	1	814	76	125	102	0	303	67	692	40	2	801	39	152	258	0	449	2367
% Cars	97.7	93.0	84.6	100	93.5	95.0	95.4	91.9	0	94.1	89.3	89.3	97.6	100	89.7	100	92.7	97.0	0	95.7	92.6
Heavy Vehicles	4	45	8	0	57	4	6	9	0	19	8	83	1	0	92	0	12	8	0	20	188
% Heavy Vehicles	2.3	7.0	15.4	0	6.5	5.0	4.6	8.1	0	5.9	10.7	10.7	2.4	0	10.3	0	7.3	3.0	0	4.3	7.4



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N/S: Massachusetts Avenue
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Massachusetts Avenue From North				Columbus Avenue From East				Massachusetts Avenue From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	28	135	12	0	21	28	21	0	17	132	8	1	2	26	53	0	484
07:15 AM	39	149	10	0	21	31	24	0	13	179	13	1	9	23	60	0	572
07:30 AM	40	160	9	0	13	23	26	0	15	175	10	1	9	43	69	0	593
07:45 AM	46	158	9	0	29	33	23	0	19	172	9	0	14	48	58	0	618
Total	153	602	40	0	84	115	94	0	64	658	40	3	34	140	240	0	2267
08:00 AM	44	133	16	1	13	38	29	0	20	166	8	0	7	38	71	0	584
08:15 AM	35	144	9	0	15	28	30	0	31	161	7	3	3	41	51	0	558
08:30 AM	38	146	8	0	12	45	21	0	24	190	7	3	4	49	41	0	588
08:45 AM	37	122	4	0	16	27	18	0	22	165	4	0	4	41	50	0	510
Total	154	545	37	1	56	138	98	0	97	682	26	6	18	169	213	0	2240
Grand Total	307	1147	77	1	140	253	192	0	161	1340	66	9	52	309	453	0	4507
Apprch %	20	74.9	5	0.1	23.9	43.2	32.8	0	10.2	85	4.2	0.6	6.4	38	55.7	0	
Total %	6.8	25.4	1.7	0	3.1	5.6	4.3	0	3.6	29.7	1.5	0.2	1.2	6.9	10.1	0	

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	39	149	10	0	198	21	31	24	0	76	13	179	13	1	206	9	23	60	0	92	572
07:30 AM	40	160	9	0	209	13	23	26	0	62	15	175	10	1	201	9	43	69	0	121	
07:45 AM	46	158	9	0	213	29	33	23	0	85	19	172	9	0	200	14	48	58	0	120	618
08:00 AM	44	133	16	1	194	13	38	29	0	80	20	166	8	0	194	7	38	71	0	116	584
Total Volume	169	600	44	1	814	76	125	102	0	303	67	692	40	2	801	39	152	258	0	449	2367
% App. Total	20.8	73.7	5.4	0.1		25.1	41.3	33.7	0		8.4	86.4	5	0.2		8.7	33.9	57.5	0		
PHF	.918	.938	.688	.250	.955	.655	.822	.879	.000	.891	.838	.966	.769	.500	.972	.696	.792	.908	.000	.928	.958



PRECISION
D A T A
INDUSTRIES, LLC

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File Name : 123026 K
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Massachusetts Avenue From North				Columbus Avenue From East				Massachusetts Avenue From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	2	18	3	0	1	3	2	0	2	32	0	0	1	1	3	0	68
07:15 AM	0	14	1	0	1	1	0	0	1	18	0	0	0	4	2	0	42
07:30 AM	1	9	5	0	2	1	1	0	3	22	1	0	0	4	2	0	51
07:45 AM	3	10	0	0	0	2	3	0	4	24	0	0	0	4	0	0	50
Total	6	51	9	0	4	7	6	0	10	96	1	0	1	13	7	0	211
08:00 AM	0	12	2	0	1	2	5	0	0	19	0	0	0	0	4	0	45
08:15 AM	1	18	0	0	1	3	1	0	2	14	0	0	0	0	1	0	41
08:30 AM	4	15	0	0	1	4	1	0	4	20	1	0	0	2	0	0	52
08:45 AM	1	14	1	0	3	4	3	0	5	23	0	0	1	3	2	0	60
Total	6	59	3	0	6	13	10	0	11	76	1	0	1	5	7	0	198
Grand Total	12	110	12	0	10	20	16	0	21	172	2	0	2	18	14	0	409
Apprch %	9	82.1	9	0	21.7	43.5	34.8	0	10.8	88.2	1	0	5.9	52.9	41.2	0	
Total %	2.9	26.9	2.9	0	2.4	4.9	3.9	0	5.1	42.1	0.5	0	0.5	4.4	3.4	0	

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	2	18	3	0	23	1	3	2	0	6	2	32	0	0	34	1	1	3	0	5	68
07:15 AM	0	14	1	0	15	1	1	0	0	2	1	18	0	0	19	0	4	2	0	6	42
07:30 AM	1	9	5	0	15	2	1	1	0	4	3	22	1	0	26	0	4	2	0	6	51
07:45 AM	3	10	0	0	13	0	2	3	0	5	4	24	0	0	28	0	4	0	0	4	50
Total Volume	6	51	9	0	66	4	7	6	0	17	10	96	1	0	107	1	13	7	0	21	211
% App. Total	9.1	77.3	13.6	0		23.5	41.2	35.3	0		9.3	89.7	0.9	0		4.8	61.9	33.3	0		
PHF	.500	.708	.450	.000	.717	.500	.583	.500	.000	.708	.625	.750	.250	.000	.787	.250	.813	.583	.000	.875	.776



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File Name : 123026 K
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Massachusetts Avenue From North				Columbus Avenue From East				Massachusetts Avenue From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	2	2	0	12	2	0	0	22	0	7	1	10	1	5	4	19	87
07:15 AM	2	9	0	20	1	5	0	31	1	8	0	14	0	11	8	22	132
07:30 AM	1	10	1	14	1	3	1	38	0	10	1	24	0	15	7	32	158
07:45 AM	1	13	4	22	2	3	1	39	0	9	2	24	0	32	6	41	199
Total	6	34	5	68	6	11	2	130	1	34	4	72	1	63	25	114	576
08:00 AM	0	9	3	28	1	2	0	35	0	6	0	9	0	18	1	45	157
08:15 AM	0	5	1	38	0	2	1	40	0	9	0	19	1	36	4	53	209
08:30 AM	0	6	2	30	0	1	0	46	0	9	0	30	4	36	1	44	209
08:45 AM	0	10	0	38	0	2	0	51	1	12	0	27	0	48	3	43	235
Total	0	30	6	134	1	7	1	172	1	36	0	85	5	138	9	185	810
Grand Total	6	64	11	202	7	18	3	302	2	70	4	157	6	201	34	299	1386
Apprch %	2.1	22.6	3.9	71.4	2.1	5.5	0.9	91.5	0.9	30	1.7	67.4	1.1	37.2	6.3	55.4	
Total %	0.4	4.6	0.8	14.6	0.5	1.3	0.2	21.8	0.1	5.1	0.3	11.3	0.4	14.5	2.5	21.6	

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	9	3	28	40	1	2	0	35	38	0	6	0	9	15	0	18	1	45	64	157
08:15 AM	0	5	1	38	44	0	2	1	40	43	0	9	0	19	28	1	36	4	53	94	209
08:30 AM	0	6	2	30	38	0	1	0	46	47	0	9	0	30	39	4	36	1	44	85	209
08:45 AM	0	10	0	38	48	0	2	0	51	53	1	12	0	27	40	0	48				235
Total Volume	0	30	6	134	170	1	7	1	172	181	1	36	0	85	122	5	138	9	185	337	810
% App. Total	0	17.6	3.5	78.8		0.6	3.9	0.6	95		0.8	29.5	0	69.7		1.5	40.9	2.7	54.9		
PHF	.000	.750	.500	.882	.885	.250	.875	.250	.843	.854	.250	.750	.000	.708	.763	.313	.719	.563	.873	.896	.862



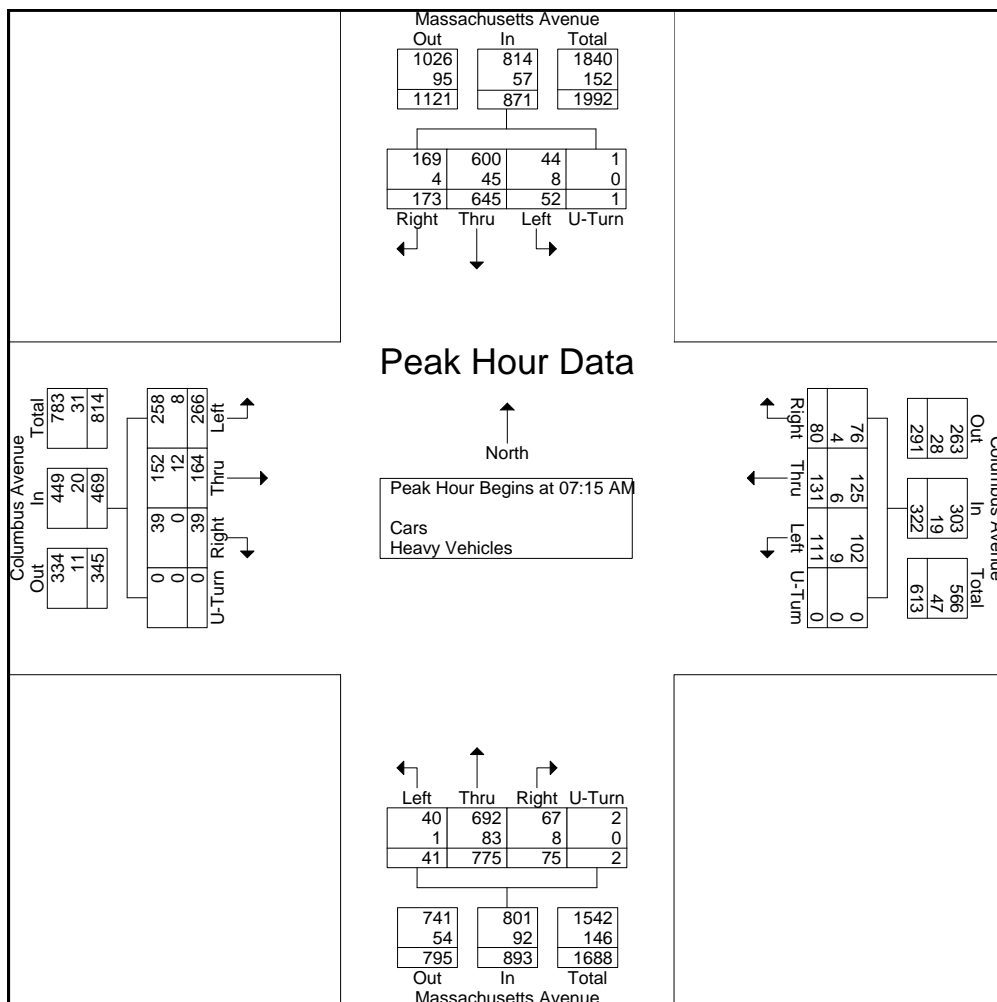
PRECISION
D A T A
INDUSTRIES, LLC

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File Name : 123026 K
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Massachusetts Avenue
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	39	163	11	0	213	22	32	24	0	78	14	197	13	1	225	9	27	62	0	98	614
07:30 AM	41	169	14	0	224	15	24	27	0	66	18	197	11	1	227	9	47	71	0	127	644
07:45 AM	49	168	9	0	226	29	35	26	0	90	23	196	9	0	228	14	52	58	0	124	668
08:00 AM	44	145	18	1	208	14	40	34	0	88	20	185	8	0	213	7	38	75	0	120	629
Total Volume	173	645	52	1	871	80	131	111	0	322	75	775	41	2	893	39	164	266	0	469	2555
% App. Total	19.9	74.1	6	0.1		24.8	40.7	34.5	0		8.4	86.8	4.6	0.2		8.3	35	56.7	0		
PHF	.883	.954	.722	.250	.963	.690	.819	.816	.000	.894	.815	.984	.788	.500	.979	.696	.788	.887	.000	.923	.956
Cars	169	600	44	1	814	76	125	102	0	303	67	692	40	2	801	39	152	258	0	449	2367
% Cars	97.7	93.0	84.6	100	93.5	95.0	95.4	91.9	0	94.1	89.3	89.3	97.6	100	89.7	100	92.7	97.0	0	95.7	92.6
Heavy Vehicles	4	45	8	0	57	4	6	9	0	19	8	83	1	0	92	0	12	8	0	20	188
% Heavy Vehicles	2.3	7.0	15.4	0	6.5	5.0	4.6	8.1	0	5.9	10.7	10.7	2.4	0	10.3	0	7.3	3.0	0	4.3	7.4





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N/S: Massachusetts Avenue
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City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 KK
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Massachusetts Avenue From North				Columbus Avenue From East				Massachusetts Avenue From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	43	195	24	0	21	51	24	0	22	169	9	3	19	35	38	0	653
04:15 PM	60	198	15	0	17	37	22	0	16	188	7	1	14	33	58	0	666
04:30 PM	51	204	18	0	14	50	20	0	23	178	8	1	15	45	69	0	696
04:45 PM	41	208	23	0	16	46	28	0	17	164	13	3	12	48	71	0	690
Total	195	805	80	0	68	184	94	0	78	699	37	8	60	161	236	0	2705
05:00 PM	55	186	12	0	15	53	42	0	23	203	7	2	5	47	66	0	716
05:15 PM	47	208	6	0	16	55	28	0	20	182	11	1	18	51	53	0	696
05:30 PM	57	179	22	0	15	60	42	0	21	216	8	2	16	50	57	0	745
05:45 PM	52	190	16	0	17	49	33	0	20	189	10	2	13	42	52	0	685
Total	211	763	56	0	63	217	145	0	84	790	36	7	52	190	228	0	2842
Grand Total	406	1568	136	0	131	401	239	0	162	1489	73	15	112	351	464	0	5547
Apprch %	19.2	74.3	6.4	0	17	52	31	0	9.3	85.6	4.2	0.9	12.1	37.9	50.1	0	
Total %	7.3	28.3	2.5	0	2.4	7.2	4.3	0	2.9	26.8	1.3	0.3	2	6.3	8.4	0	
Cars	400	1490	131	0	127	393	223	0	156	1431	72	15	111	343	462	0	5354
% Cars	98.5	95	96.3	0	96.9	98	93.3	0	96.3	96.1	98.6	100	99.1	97.7	99.6	0	96.5
Heavy Vehicles	6	78	5	0	4	8	16	0	6	58	1	0	1	8	2	0	193
% Heavy Vehicles	1.5	5	3.7	0	3.1	2	6.7	0	3.7	3.9	1.4	0	0.9	2.3	0.4	0	3.5

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	41	208	23	0	272	16	46	28	0	90	17	164	13	3	197	12	48	71	0	131	690
05:00 PM	55	186	12	0	253	15	53	42	0	110	23	203	7	2	235	5	47	66	0	118	716
05:15 PM	47	208	6	0	261	16	55	28	0	99	20	182	11	1	214	18	51	53	0	122	696
05:30 PM	57	179	22	0	258	15	60	42	0	117	21	216	8	2	247	16	50	57	0	123	745
Total Volume	200	781	63	0	1044	62	214	140	0	416	81	765	39	8	893	51	196	247	0	494	2847
% App. Total	19.2	74.8	6	0		14.9	51.4	33.7	0		9.1	85.7	4.4	0.9		10.3	39.7	50	0		
PHF	.877	.939	.685	.000	.960	.969	.892	.833	.000	.889	.880	.885	.750	.667	.904	.708	.961	.870	.000	.943	.955
Cars	199	743	62	0	1004	60	209	132	0	401	79	734	39	8	860	50	195	246	0	491	2756
% Cars	99.5	95.1	98.4	0	96.2	96.8	97.7	94.3	0	96.4	97.5	95.9	100	100	96.3	98.0	99.5	99.6	0	99.4	96.8
Heavy Vehicles	1	38	1	0	40	2	5	8	0	15	2	31	0	0	33	1	1	1	0	3	91
% Heavy Vehicles	0.5	4.9	1.6	0	3.8	3.2	2.3	5.7	0	3.6	2.5	4.1	0	0	3.7	2.0	0.5	0.4	0	0.6	3.2



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N/S: Massachusetts Avenue
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City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 KK
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars

Start Time	Massachusetts Avenue From North				Columbus Avenue From East				Massachusetts Avenue From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	42	184	22	0	21	50	20	0	21	162	8	3	19	30	37	0	619
04:15 PM	58	186	14	0	16	36	21	0	16	178	7	1	14	32	58	0	637
04:30 PM	49	195	17	0	14	50	17	0	21	174	8	1	15	45	69	0	675
04:45 PM	41	198	23	0	15	45	26	0	16	154	13	3	11	48	71	0	664
Total	190	763	76	0	66	181	84	0	74	668	36	8	59	155	235	0	2595
05:00 PM	54	179	11	0	15	52	40	0	23	194	7	2	5	46	66	0	694
05:15 PM	47	197	6	0	15	54	27	0	19	175	11	1	18	51	53	0	674
05:30 PM	57	169	22	0	15	58	39	0	21	211	8	2	16	50	56	0	724
05:45 PM	52	182	16	0	16	48	33	0	19	183	10	2	13	41	52	0	667
Total	210	727	55	0	61	212	139	0	82	763	36	7	52	188	227	0	2759
Grand Total	400	1490	131	0	127	393	223	0	156	1431	72	15	111	343	462	0	5354
Apprch %	19.8	73.7	6.5	0	17.1	52.9	30	0	9.3	85.5	4.3	0.9	12.1	37.4	50.4	0	
Total %	7.5	27.8	2.4	0	2.4	7.3	4.2	0	2.9	26.7	1.3	0.3	2.1	6.4	8.6	0	

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	54	179	11	0	244	15	52	40	0	107	23	194	7	2	226	5	46	66	0	117	694
05:15 PM	47	197	6	0	250	15	54	27	0	96	19	175	11			18	51			122	
05:30 PM	57	169	22	0	248	15	58	39	0	112	21	211	8	2	242	16	50	56	0	122	724
05:45 PM	52	182	16	0	250	16	48	33	0	97	19	183	10	2	214	13	41	52	0	106	667
Total Volume	210	727	55	0	992	61	212	139	0	412	82	763	36	7	888	52	188	227	0	467	2759
% App. Total	21.2	73.3	5.5	0		14.8	51.5	33.7	0		9.2	85.9	4.1	0.8		11.1	40.3	48.6	0		
PHF	.921	.923	.625	.000	.992	.953	.914	.869	.000	.920	.891	.904	.818	.875	.917	.722	.922	.860	.000	.957	.953



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Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Massachusetts Avenue From North				Columbus Avenue From East				Massachusetts Avenue From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	1	11	2	0	0	1	4	0	1	7	1	0	0	5	1	0	34
04:15 PM	2	12	1	0	1	1	1	0	0	10	0	0	0	1	0	0	29
04:30 PM	2	9	1	0	0	0	3	0	2	4	0	0	0	0	0	0	21
04:45 PM	0	10	0	0	1	1	2	0	1	10	0	0	1	0	0	0	26
Total	5	42	4	0	2	3	10	0	4	31	1	0	1	6	1	0	110
05:00 PM	1	7	1	0	0	1	2	0	0	9	0	0	0	1	0	0	22
05:15 PM	0	11	0	0	1	1	1	0	1	7	0	0	0	0	0	0	22
05:30 PM	0	10	0	0	0	2	3	0	0	5	0	0	0	0	1	0	21
05:45 PM	0	8	0	0	1	1	0	0	1	6	0	0	0	1	0	0	18
Total	1	36	1	0	2	5	6	0	2	27	0	0	0	2	1	0	83
Grand Total	6	78	5	0	4	8	16	0	6	58	1	0	1	8	2	0	193
Apprch %	6.7	87.6	5.6	0	14.3	28.6	57.1	0	9.2	89.2	1.5	0	9.1	72.7	18.2	0	
Total %	3.1	40.4	2.6	0	2.1	4.1	8.3	0	3.1	30.1	0.5	0	0.5	4.1	1	0	

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	11	2	0	14	0	1	4	0	5	1	7	1	0	9	0	5	1	0	6	34
04:15 PM	2	12	1	0	15	1	1	1	0	3	0	10	0	0	10	0	1	0	0	1	29
04:30 PM	2	9	1	0	12	0	0	3	0	3	2	4	0	0	6	0	0	0	0	0	21
04:45 PM	0	10	0	0	10	1	1	2	0	4	1	10	0	0	11	1	0	0	0	1	26
Total Volume	5	42	4	0	51	2	3	10	0	15	4	31	1	0	36	1	6	1	0	8	110
% App. Total	9.8	82.4	7.8	0		13.3	20	66.7	0		11.1	86.1	2.8	0		12.5	75	12.5	0		
PHF	.625	.875	.500	.000	.850	.500	.750	.625	.000	.750	.500	.775	.250	.000	.818	.250	.300	.250	.000	.333	.809



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

N/S: Massachusetts Avenue
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 KK
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Peds and Bikes

Start Time	Massachusetts Avenue From North				Columbus Avenue From East				Massachusetts Avenue From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	3	5	21	0	8	0	33	0	11	1	8	0	3	2	43	138
04:15 PM	0	5	0	38	0	6	0	50	0	9	1	19	0	7	3	54	192
04:30 PM	0	8	0	33	0	9	1	47	0	12	0	16	0	8	1	53	188
04:45 PM	0	10	0	25	0	4	0	39	0	13	4	18	0	6	4	32	155
Total	0	26	5	117	0	27	1	169	0	45	6	61	0	24	10	182	673
05:00 PM	3	9	1	26	2	23	0	35	0	23	2	17	1	6	0	46	194
05:15 PM	2	17	1	48	0	31	2	72	0	25	2	35	0	8	3	81	327
05:30 PM	2	11	1	31	1	32	0	58	0	24	3	20	1	6	3	81	274
05:45 PM	2	7	2	45	2	27	3	43	0	8	1	20	0	7	9	78	254
Total	9	44	5	150	5	113	5	208	0	80	8	92	2	27	15	286	1049
Grand Total	9	70	10	267	5	140	6	377	0	125	14	153	2	51	25	468	1722
Apprch %	2.5	19.7	2.8	75	0.9	26.5	1.1	71.4	0	42.8	4.8	52.4	0.4	9.3	4.6	85.7	
Total %	0.5	4.1	0.6	15.5	0.3	8.1	0.3	21.9	0	7.3	0.8	8.9	0.1	3	1.5	27.2	

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	3	9	1	26	39	2	23	0	35	60	0	23	2	17	42	1	6	0	46	53	194
05:15 PM	2	17	1	48	68	0	31	2	72	105	0	25	2	35	62	0	8	3	81	92	327
05:30 PM	2	11	1	31	45	1	32	0	58	91	0	24	3	20	47	1	6	3	81	91	274
05:45 PM	2	7	2	45	56	2	27	3	43	75	0	8	1	20	29	0	7	9	78	94	254
Total Volume	9	44	5	150	208	5	113	5	208	331	0	80	8	92	180	2	27	15	286	330	1049
% App. Total	4.3	21.2	2.4	72.1		1.5	34.1	1.5	62.8		0	44.4	4.4	51.1		0.6	8.2	4.5	86.7		
PHF	.750	.647	.625	.781	.765	.625	.883	.417	.722	.788	.000	.800	.667	.657	.726	.500	.844	.417	.883	.878	.802



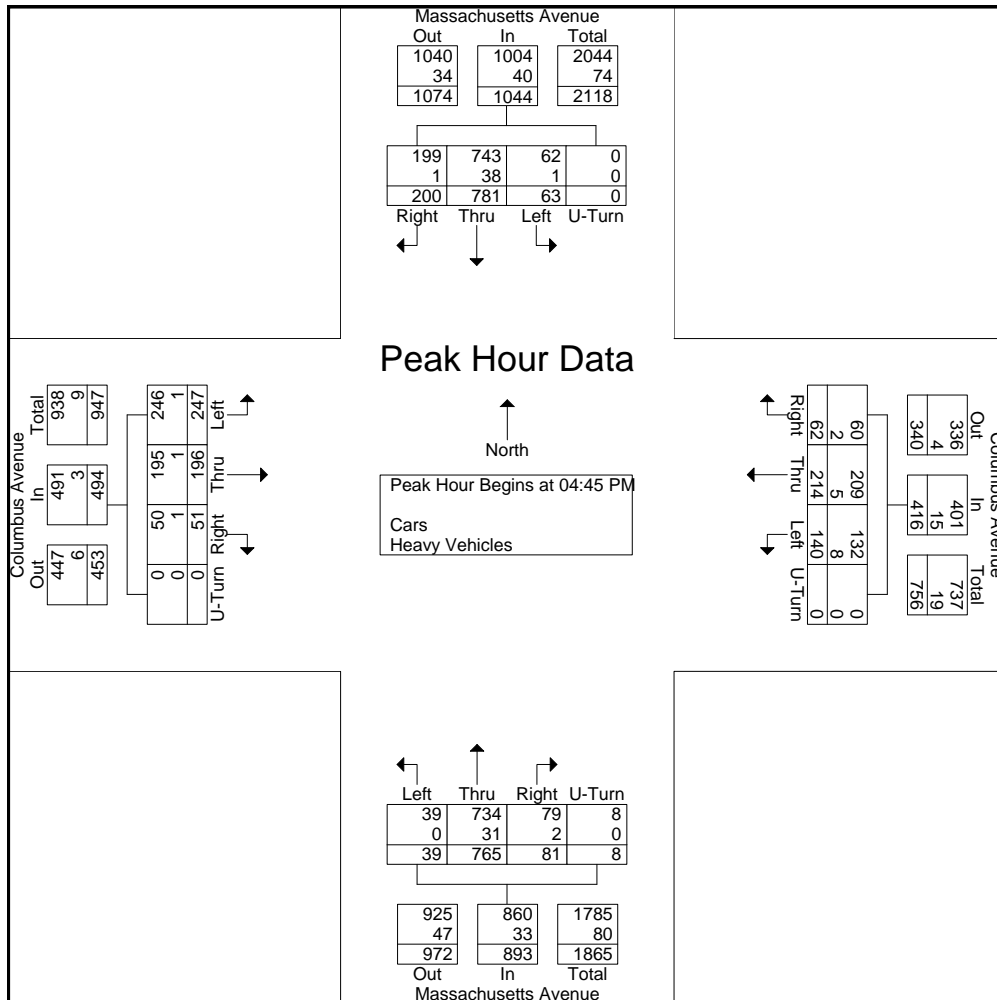
PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

N/S: Massachusetts Avenue
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 KK
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Start Time	Massachusetts Avenue From North					Columbus Avenue From East					Massachusetts Avenue From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	41	208	23	0	272	16	46	28	0	90	17	164	13	3	197	12	48	71	0	131	690
05:00 PM	55	186	12	0	253	15	53	42	0	110	23	203	7	2	235	5	47	66	0	118	716
05:15 PM	47	208	6	0	261	16	55	28	0	99	20	182	11	1	214	18	51	53	0	122	696
05:30 PM	57	179	22	0	258	15	60	42	0	117	21	216	8	2	247	16	50	57	0	123	745
Total Volume	200	781	63	0	1044	62	214	140	0	416	81	765	39	8	893	51	196	247	0	494	2847
% App. Total	19.2	74.8	6	0		14.9	51.4	33.7	0		9.1	85.7	4.4	0.9		10.3	39.7	50	0		
PHF	.877	.939	.685	.000	.960	.969	.892	.833	.000	.889	.880	.885	.750	.667	.904	.708	.961	.870	.000	.943	.955
Cars	199	743	62	0	1004	60	209	132	0	401	79	734	39	8	860	50	195	246	0	491	2756
% Cars	99.5	95.1	98.4	0	96.2	96.8	97.7	94.3	0	96.4	97.5	95.9	100	100	96.3	98.0	99.5	99.6	0	99.4	96.8
Heavy Vehicles	1	38	1	0	40	2	5	8	0	15	2	31	0	0	33	1	1	1	0	3	91
% Heavy Vehicles	0.5	4.9	1.6	0	3.8	3.2	2.3	5.7	0	3.6	2.5	4.1	0	0	3.7	2.0	0.5	0.4	0	0.6	3.2



Accurate Counts

978-664-2565

N/S Street : St. Botolph Street
 E/W Street: Massachusetts Avenue
 City/State : Boston, MA
 Weather : Overcast

File Name : 82050002
 Site Code : 82050002
 Start Date : 10/19/2011
 Page No : 1

Groups Printed- Cars - Trucks

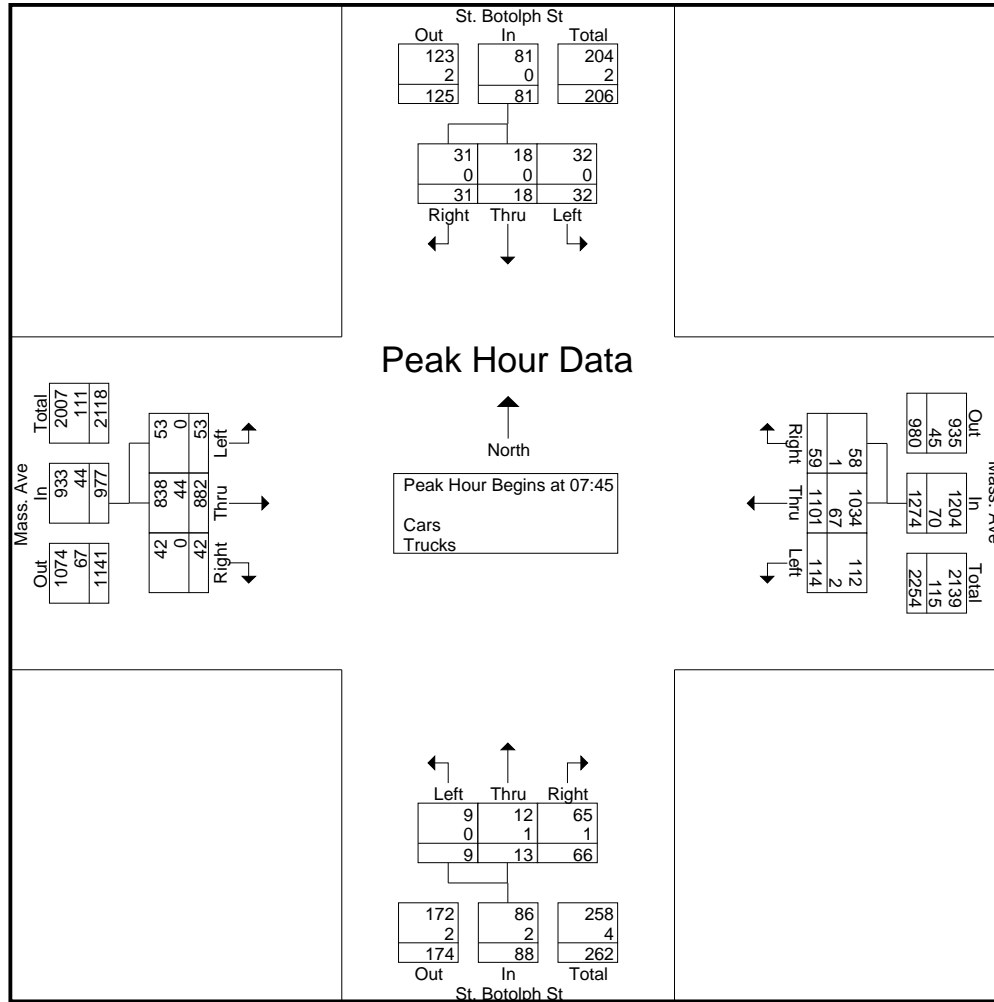
Start Time	St. Botolph St From North			Mass. Ave From East			St. Botolph St From South			Mass. Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	11	1	5	34	187	6	0	1	12	1	164	5	427
07:15	5	2	8	38	208	14	2	0	11	5	197	6	496
07:30	4	4	9	28	259	6	5	0	8	5	183	10	521
07:45	9	5	7	23	294	12	1	2	6	12	228	7	606
Total	29	12	29	123	948	38	8	3	37	23	772	28	2050
08:00	6	7	10	22	265	19	7	5	13	15	210	12	591
08:15	5	2	8	30	271	12	1	3	16	19	269	9	645
08:30	12	4	6	39	271	16	0	3	31	7	175	14	578
08:45	7	7	9	35	224	15	5	3	14	11	211	20	561
Total	30	20	33	126	1031	62	13	14	74	52	865	55	2375
Grand Total	59	32	62	249	1979	100	21	17	111	75	1637	83	4425
Apprch %	38.6	20.9	40.5	10.7	85	4.3	14.1	11.4	74.5	4.2	91.2	4.6	
Total %	1.3	0.7	1.4	5.6	44.7	2.3	0.5	0.4	2.5	1.7	37	1.9	
Cars	57	31	62	245	1858	99	21	16	110	75	1556	83	4213
% Cars	96.6	96.9	100	98.4	93.9	99	100	94.1	99.1	100	95.1	100	95.2
Trucks	2	1	0	4	121	1	0	1	1	0	81	0	212
% Trucks	3.4	3.1	0	1.6	6.1	1	0	5.9	0.9	0	4.9	0	4.8

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45																	
07:45	9	5	7	21	23	294	12	329	1	2	6	9	12	228	7	247	606
08:00	6	7	10	23	22	265	19	306	7	5	13	25	15	210	12	237	591
08:15	5	2	8	15	30	271	12	313	1	3	16	20	19	269	9	297	645
08:30	12	4	6	22	39	271	16	326	0	3	31	34	7	175	14	196	578
Total Volume	32	18	31	81	114	1101	59	1274	9	13	66	88	53	882	42	977	2420
% App. Total	39.5	22.2	38.3		8.9	86.4	4.6		10.2	14.8	75		5.4	90.3	4.3		
PHF	.667	.643	.775	.880	.731	.936	.776	.968	.321	.650	.532	.647	.697	.820	.750	.822	.938
Cars	32	18	31	81	112	1034	58	1204	9	12	65	86	53	838	42	933	2304
% Cars	100	100	100	100	98.2	93.9	98.3	94.5	100	92.3	98.5	97.7	100	95.0	100	95.5	95.2
Trucks	0	0	0	0	2	67	1	70	0	1	1	2	0	44	0	44	116
% Trucks	0	0	0	0	1.8	6.1	1.7	5.5	0	7.7	1.5	2.3	0	5.0	0	4.5	4.8

Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 2



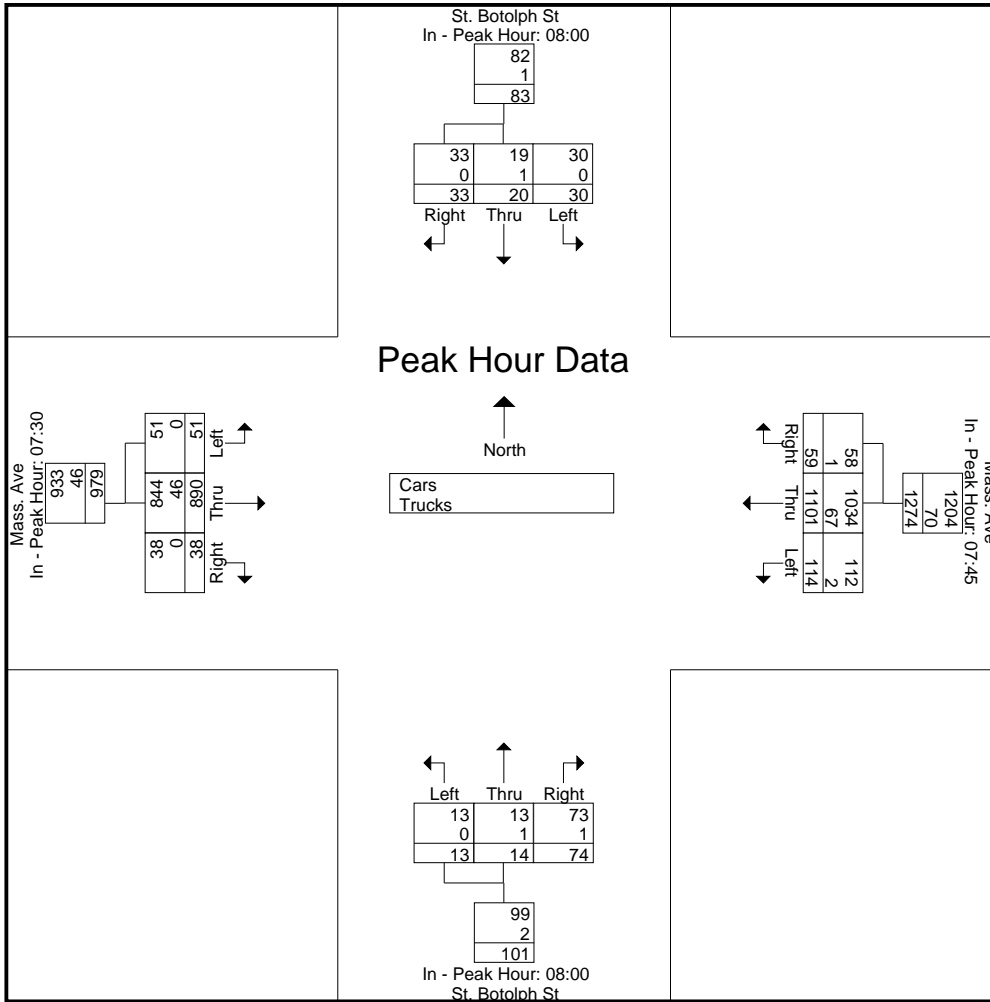
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00				07:45				08:00				07:30			
+0 mins.	6	7	10	23	23	294	12	329	7	5	13	25	5	183	10	198
+15 mins.	5	2	8	15	22	265	19	306	1	3	16	20	12	228	7	247
+30 mins.	12	4	6	22	30	271	12	313	0	3	31	34	15	210	12	237
+45 mins.	7	7	9	23	39	271	16	326	5	3	14	22	19	269	9	297
Total Volume	30	20	33	83	114	1101	59	1274	13	14	74	101	51	890	38	979
% App. Total	36.1	24.1	39.8		8.9	86.4	4.6		12.9	13.9	73.3		5.2	90.9	3.9	
PHF	.625	.714	.825	.902	.731	.936	.776	.968	.464	.700	.597	.743	.671	.827	.792	.824
Cars	30	19	33	82	112	1034	58	1204	13	13	73	99	51	844	38	933
% Cars	100	95	100	98.8	98.2	93.9	98.3	94.5	100	92.9	98.6	98	100	94.8	100	95.3
Trucks	0	1	0	1	2	67	1	70	0	1	1	2	0	46	0	46
% Trucks	0	5	0	1.2	1.8	6.1	1.7	5.5	0	7.1	1.4	2	0	5.2	0	4.7

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 3



Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 1

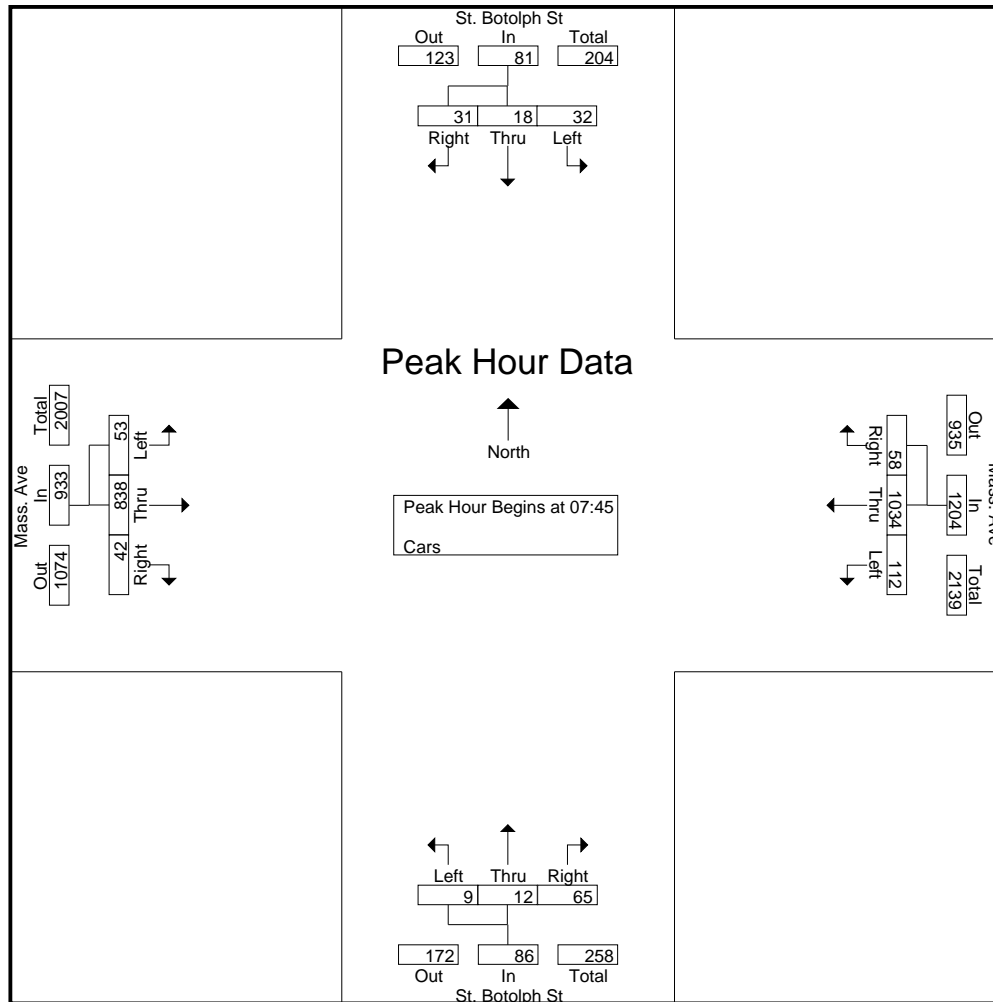
Groups Printed- Cars

Start Time	St. Botolph St From North			Mass. Ave From East			St. Botolph St From South			Mass. Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	10	1	5	34	166	6	0	1	12	1	157	5	398
07:15	4	2	8	37	199	14	2	0	11	5	191	6	479
07:30	4	4	9	28	246	6	5	0	8	5	176	10	501
07:45	9	5	7	23	273	11	1	2	6	12	216	7	572
Total	27	12	29	122	884	37	8	3	37	23	740	28	1950
08:00	6	7	10	22	248	19	7	5	12	15	195	12	558
08:15	5	2	8	30	259	12	1	2	16	19	257	9	620
08:30	12	4	6	37	254	16	0	3	31	7	170	14	554
08:45	7	6	9	34	213	15	5	3	14	11	194	20	531
Total	30	19	33	123	974	62	13	13	73	52	816	55	2263
Grand Total	57	31	62	245	1858	99	21	16	110	75	1556	83	4213
Apprch %	38	20.7	41.3	11.1	84.4	4.5	14.3	10.9	74.8	4.4	90.8	4.8	
Total %	1.4	0.7	1.5	5.8	44.1	2.3	0.5	0.4	2.6	1.8	36.9	2	

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45																	
07:45	9	5	7	21	23	273	11	307	1	2	6	9	12	216	7	235	572
08:00	6	7	10	23	22	248	19	289	7	5	12	24	15	195	12	222	558
08:15	5	2	8	15	30	259	12	301	1	2	16	19	19	257	9	285	620
08:30	12	4	6	22	37	254	16	307	0	3	31	34	7	170	14	191	554
Total Volume	32	18	31	81	112	1034	58	1204	9	12	65	86	53	838	42	933	2304
% App. Total	39.5	22.2	38.3		9.3	85.9	4.8		10.5	14	75.6		5.7	89.8	4.5		
PHF	.667	.643	.775	.880	.757	.947	.763	.980	.321	.600	.524	.632	.697	.815	.750	.818	.929

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 2



Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

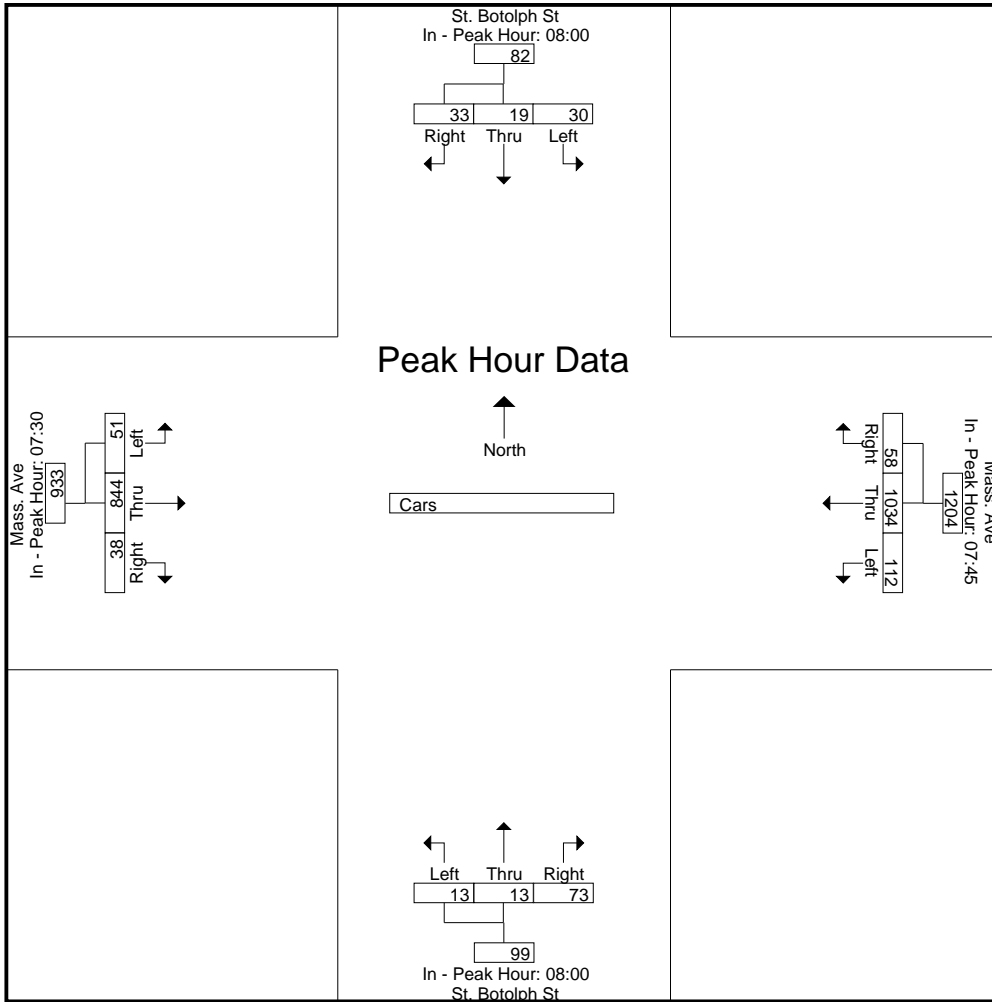
Peak Hour for Each Approach Begins at:

	08:00				07:45				08:00				07:30			
+0 mins.	6	7	10	23	23	273	11	307	7	5	12	24	5	176	10	191
+15 mins.	5	2	8	15	22	248	19	289	1	2	16	19	12	216	7	235
+30 mins.	12	4	6	22	30	259	12	301	0	3	31	34	15	195	12	222
+45 mins.	7	6	9	22	37	254	16	307	5	3	14	22	19	257	9	285
Total Volume	30	19	33	82	112	1034	58	1204	13	13	73	99	51	844	38	933
% App. Total	36.6	23.2	40.2		9.3	85.9	4.8		13.1	13.1	73.7		5.5	90.5	4.1	
PHF	.625	.679	.825	.891	.757	.947	.763	.980	.464	.650	.589	.728	.671	.821	.792	.818

Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 3



Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 1

Groups Printed- Trucks

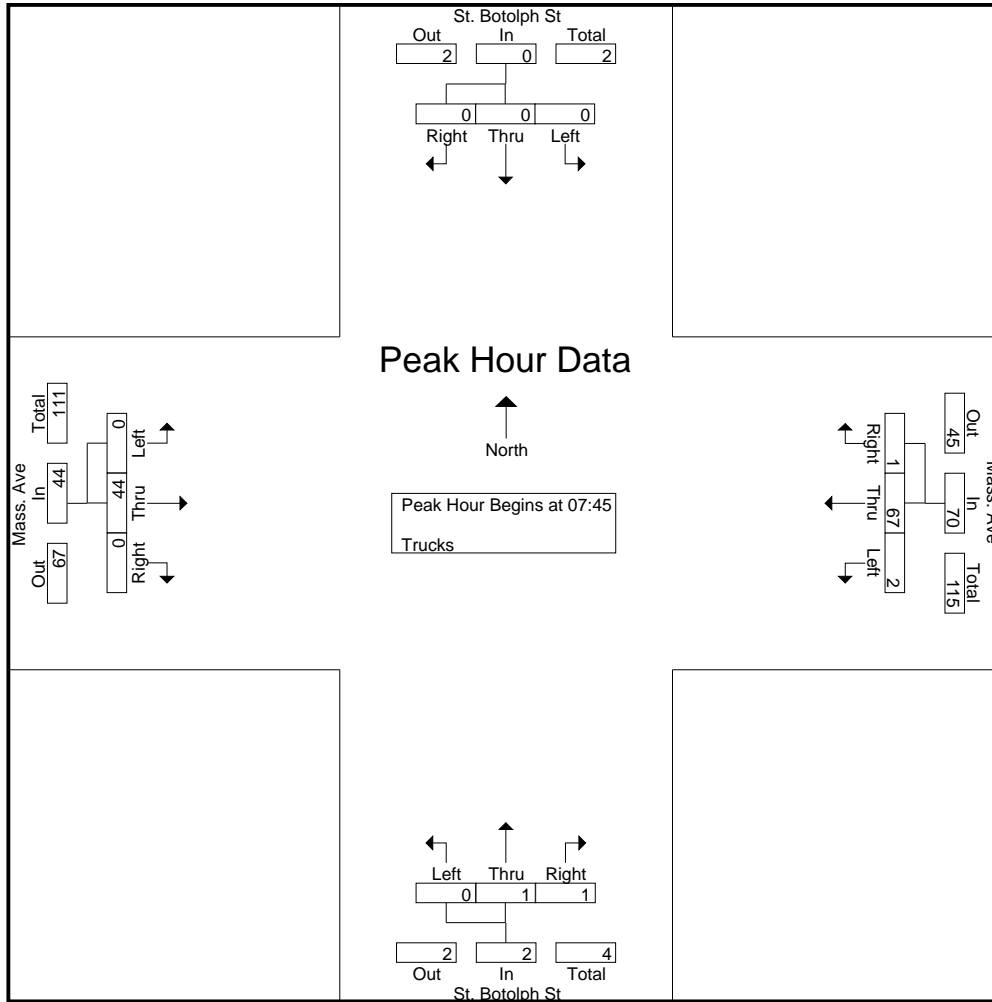
Start Time	St. Botolph St From North			Mass. Ave From East			St. Botolph St From South			Mass. Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	1	0	0	0	21	0	0	0	0	7	0	0	29
07:15	1	0	0	1	9	0	0	0	0	6	0	0	17
07:30	0	0	0	0	13	0	0	0	0	7	0	0	20
07:45	0	0	0	0	21	1	0	0	0	12	0	0	34
Total	2	0	0	1	64	1	0	0	0	32	0	0	100
08:00	0	0	0	0	17	0	0	0	1	15	0	0	33
08:15	0	0	0	0	12	0	0	1	0	12	0	0	25
08:30	0	0	0	2	17	0	0	0	0	5	0	0	24
08:45	0	1	0	1	11	0	0	0	0	17	0	0	30
Total	0	1	0	3	57	0	0	1	1	49	0	0	112
Grand Total	2	1	0	4	121	1	0	1	1	81	0	0	212
Apprch %	66.7	33.3	0	3.2	96	0.8	0	50	50	100	0	0	
Total %	0.9	0.5	0	1.9	57.1	0.5	0	0.5	0.5	38.2	0	0	

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45	0	0	0	0	0	21	1	22	0	0	0	0	0	12	0	12	34
08:00	0	0	0	0	0	17	0	17	0	0	1	1	0	15	0	15	33
08:15	0	0	0	0	0	12	0	12	0	1	0	1	0	12	0	12	25
08:30	0	0	0	0	2	17	0	19	0	0	0	0	0	5	0	5	24
Total Volume	0	0	0	0	2	67	1	70	0	1	1	2	0	44	0	44	116
% App. Total	0	0	0		2.9	95.7	1.4		0	50	50		0	100	0		
PHF	.000	.000	.000	.000	.250	.798	.250	.795	.000	.250	.250	.500	.000	.733	.000	.733	.853

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:45

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 2



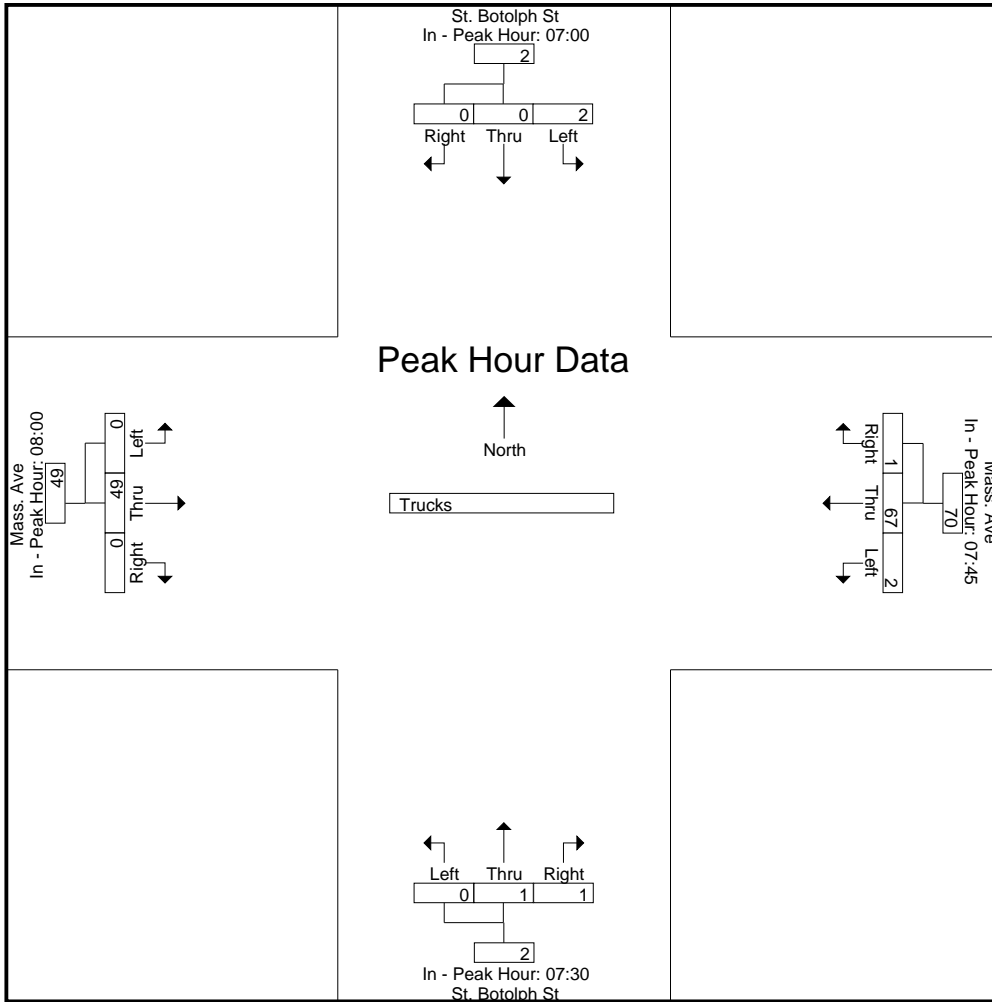
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00				07:45				07:30				08:00			
+0 mins.	1	0	0	1	0	21	1	22	0	0	0	0	0	15	0	15
+15 mins.	1	0	0	1	0	17	0	17	0	0	0	0	0	12	0	12
+30 mins.	0	0	0	0	0	12	0	12	0	0	1	1	0	5	0	5
+45 mins.	0	0	0	0	2	17	0	19	0	1	0	1	0	17	0	17
Total Volume	2	0	0	2	2	67	1	70	0	1	1	2	0	49	0	49
% App. Total	100	0	0		2.9	95.7	1.4		0	50	50		0	100	0	
PHF	.500	.000	.000	.500	.250	.798	.250	.795	.000	.250	.250	.500	.000	.721	.000	.721

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 3



Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 1

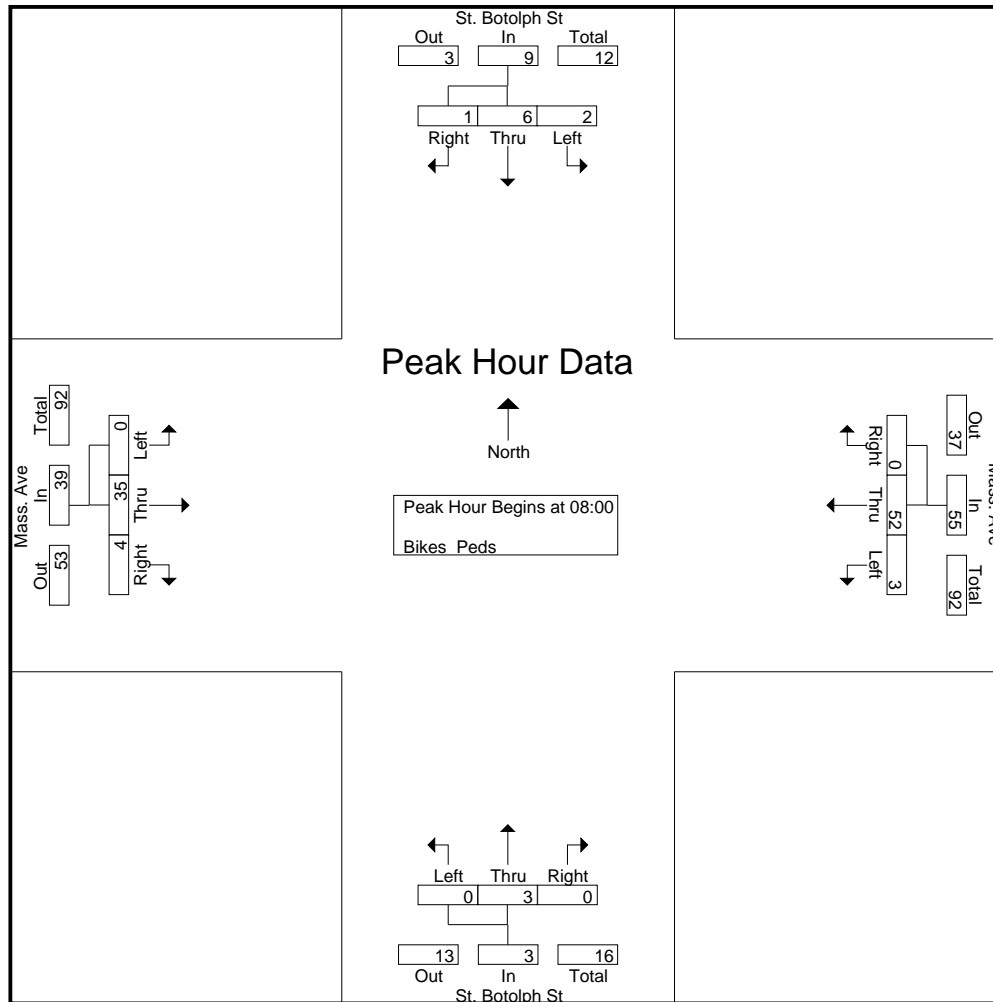
Groups Printed- Bikes Peds

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00	0	0	0	25	0	5	0	10	0	0	0	54	0	2	0	7	96	7	103
07:15	0	0	0	30	0	9	0	10	0	0	0	76	0	6	0	11	127	15	142
07:30	0	0	0	43	0	11	0	18	0	0	0	77	0	3	0	10	148	14	162
07:45	0	0	0	56	2	5	0	24	0	2	0	101	0	7	0	16	197	16	213
Total	0	0	0	154	2	30	0	62	0	2	0	308	0	18	0	44	568	52	620
08:00	0	2	0	61	0	11	0	21	0	0	0	88	0	3	0	36	206	16	222
08:15	0	1	0	77	1	8	0	7	0	1	0	115	0	10	1	16	215	22	237
08:30	0	2	1	57	0	14	0	22	0	0	0	124	0	8	0	22	225	25	250
08:45	2	1	0	60	2	19	0	19	0	2	0	123	0	14	3	24	226	43	269
Total	2	6	1	255	3	52	0	69	0	3	0	450	0	35	4	98	872	106	978
Grand Total	2	6	1	409	5	82	0	131	0	5	0	758	0	53	4	142	1440	158	1598
Apprch %	22.2	66.7	11.1		5.7	94.3	0		0	100	0		0	93	7				
Total %	1.3	3.8	0.6		3.2	51.9	0		0	3.2	0		0	33.5	2.5		90.1	9.9	

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	0	2	0	2	0	11	0	11	0	0	0	0	0	3	0	3	16
08:15	0	1	0	1	1	8	0	9	0	1	0	1	0	10	1	11	22
08:30	0	2	1	3	0	14	0	14	0	0	0	0	0	8	0	8	25
08:45	2	1	0	3	2	19	0	21	0	2	0	2	0	14	3	17	43
Total Volume	2	6	1	9	3	52	0	55	0	3	0	3	0	35	4	39	106
% App. Total	22.2	66.7	11.1		5.5	94.5	0		0	100	0		0	89.7	10.3		
PHF	.250	.750	.250	.750	.375	.684	.000	.655	.000	.375	.000	.375	.000	.625	.333	.574	.616

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
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Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

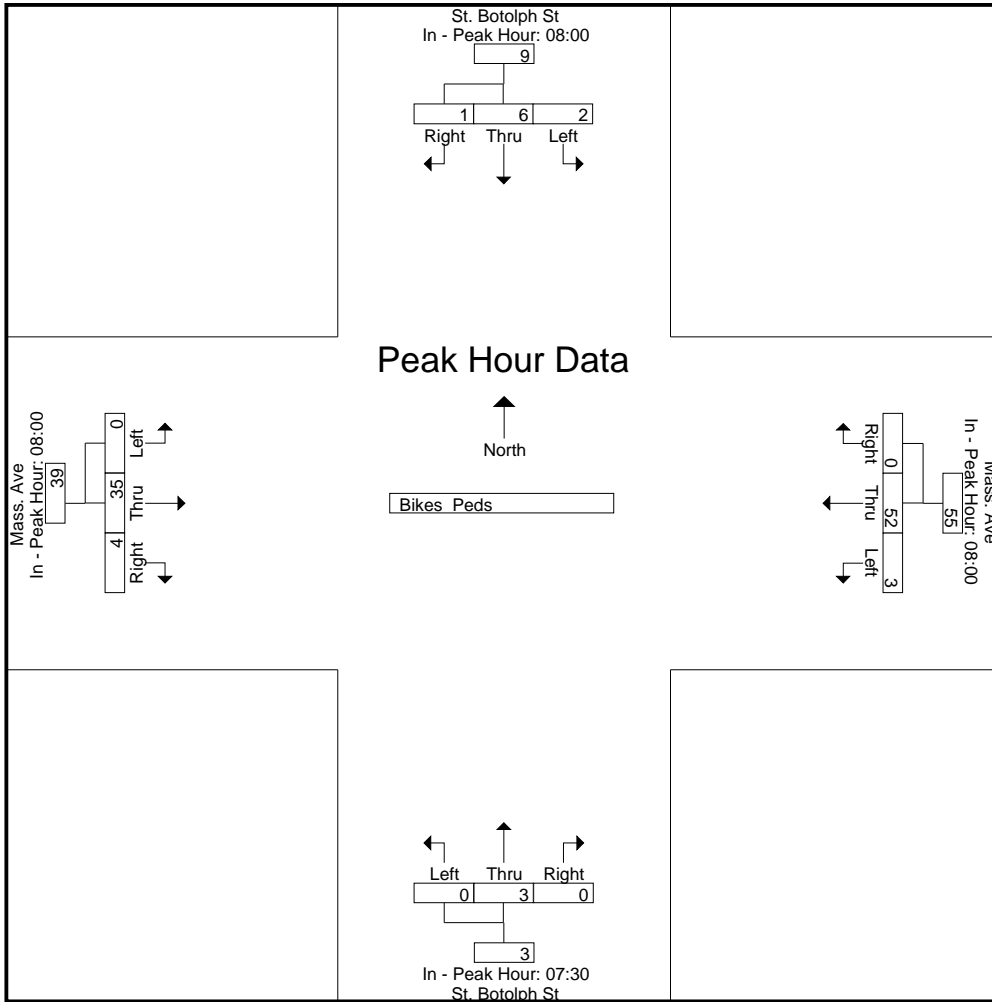
Peak Hour for Each Approach Begins at:

	08:00				08:00				07:30				08:00			
+0 mins.	0	2	0	2	0	11	0	11	0	0	0	0	0	3	0	3
+15 mins.	0	1	0	1	1	8	0	9	0	2	0	2	0	10	1	11
+30 mins.	0	2	1	3	0	14	0	14	0	0	0	0	0	8	0	8
+45 mins.	2	1	0	3	2	19	0	21	0	1	0	1	0	14	3	17
Total Volume	2	6	1	9	3	52	0	55	0	3	0	3	0	35	4	39
% App. Total	22.2	66.7	11.1		5.5	94.5	0		0	100	0		0	89.7	10.3	
PHF	.250	.750	.250	.750	.375	.684	.000	.655	.000	.375	.000	.375	.000	.625	.333	.574

Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 3



Accurate Counts

978-664-2565

N/S Street : St. Botolph Street
 E/W Street: Massachusetts Avenue
 City/State : Boston, MA
 Weather : Rain

File Name : 82050002
 Site Code : 82050002
 Start Date : 10/19/2011
 Page No : 1

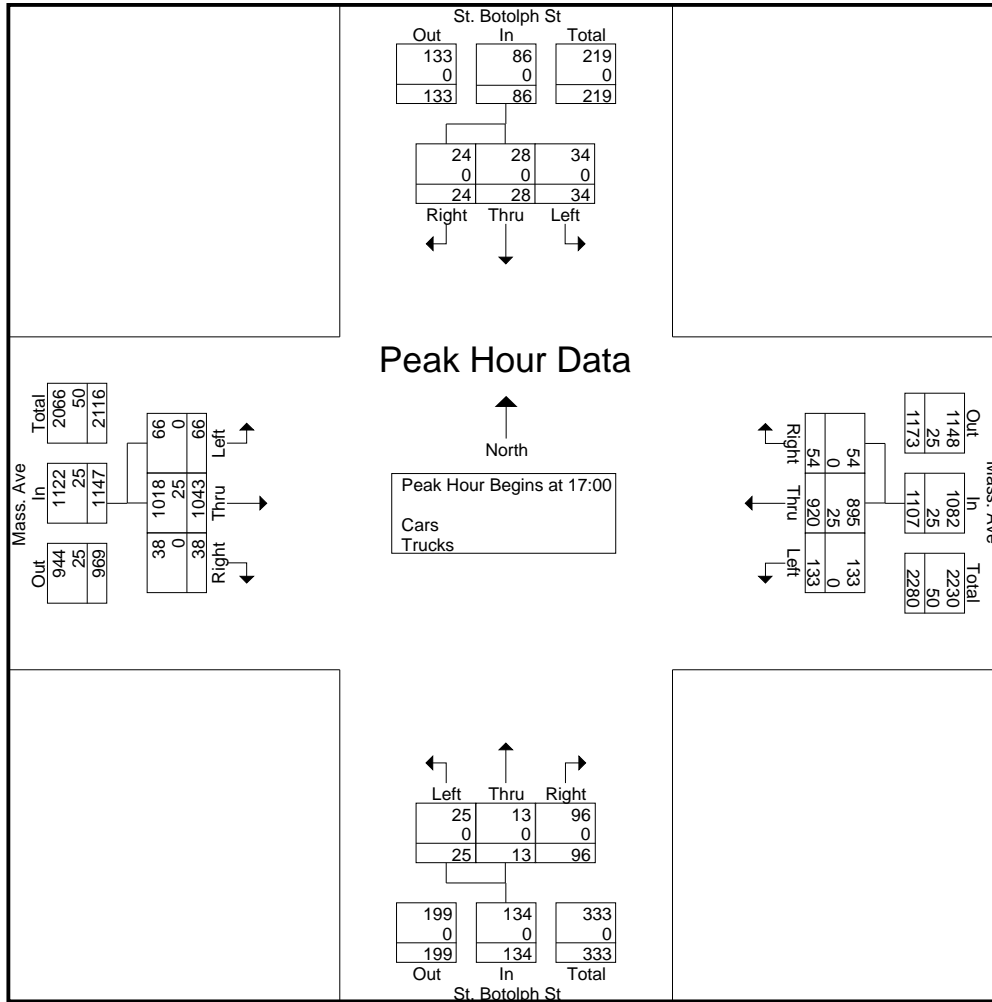
Groups Printed- Cars - Trucks

Start Time	St. Botolph St From North			Mass. Ave From East			St. Botolph St From South			Mass. Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	14	6	5	20	211	14	11	5	23	12	246	4	571
16:15	7	5	3	30	218	12	8	2	17	10	271	5	588
16:30	12	3	4	38	216	15	9	6	14	15	241	6	579
16:45	7	3	6	29	242	11	3	2	33	15	244	9	604
Total	40	17	18	117	887	52	31	15	87	52	1002	24	2342
17:00	3	12	10	39	234	6	6	2	32	16	260	10	630
17:15	8	7	6	27	217	14	5	4	16	10	269	8	591
17:30	10	5	6	27	243	15	5	4	23	19	255	13	625
17:45	13	4	2	40	226	19	9	3	25	21	259	7	628
Total	34	28	24	133	920	54	25	13	96	66	1043	38	2474
Grand Total	74	45	42	250	1807	106	56	28	183	118	2045	62	4816
Apprch %	46	28	26.1	11.6	83.5	4.9	21	10.5	68.5	5.3	91.9	2.8	
Total %	1.5	0.9	0.9	5.2	37.5	2.2	1.2	0.6	3.8	2.5	42.5	1.3	
Cars	73	45	42	249	1758	106	56	28	182	118	1990	62	4709
% Cars	98.6	100	100	99.6	97.3	100	100	100	99.5	100	97.3	100	97.8
Trucks	1	0	0	1	49	0	0	0	1	0	55	0	107
% Trucks	1.4	0	0	0.4	2.7	0	0	0	0.5	0	2.7	0	2.2

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	3	12	10	25	39	234	6	279	6	2	32	40	16	260	10	286	630
17:15	8	7	6	21	27	217	14	258	5	4	16	25	10	269	8	287	591
17:30	10	5	6	21	27	243	15	285	5	4	23	32	19	255	13	287	625
17:45	13	4	2	19	40	226	19	285	9	3	25	37	21	259	7	287	628
Total Volume	34	28	24	86	133	920	54	1107	25	13	96	134	66	1043	38	1147	2474
% App. Total	39.5	32.6	27.9		12	83.1	4.9		18.7	9.7	71.6		5.8	90.9	3.3		
PHF	.654	.583	.600	.860	.831	.947	.711	.971	.694	.813	.750	.838	.786	.969	.731	.999	.982
Cars	34	28	24	86	133	895	54	1082	25	13	96	134	66	1018	38	1122	2424
% Cars	100	100	100	100	100	97.3	100	97.7	100	100	100	100	100	97.6	100	97.8	98.0
Trucks	0	0	0	0	0	25	0	25	0	0	0	0	0	25	0	25	50
% Trucks	0	0	0	0	0	2.7	0	2.3	0	0	0	0	0	2.4	0	2.2	2.0

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 2



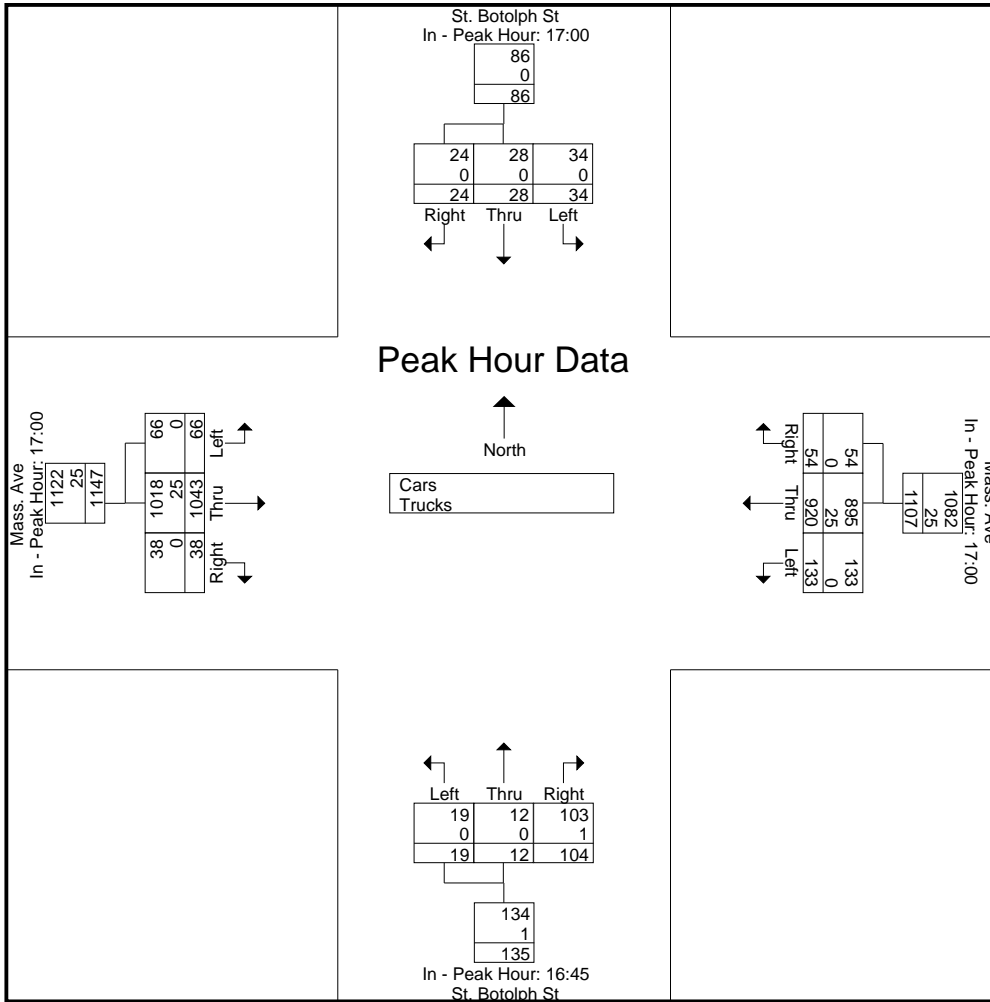
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	17:00				17:00				16:45				17:00			
+0 mins.	3	12	10	25	39	234	6	279	3	2	33	38	16	260	10	286
+15 mins.	8	7	6	21	27	217	14	258	6	2	32	40	10	269	8	287
+30 mins.	10	5	6	21	27	243	15	285	5	4	16	25	19	255	13	287
+45 mins.	13	4	2	19	40	226	19	285	5	4	23	32	21	259	7	287
Total Volume	34	28	24	86	133	920	54	1107	19	12	104	135	66	1043	38	1147
% App. Total	39.5	32.6	27.9		12	83.1	4.9		14.1	8.9	77		5.8	90.9	3.3	
PHF	.654	.583	.600	.860	.831	.947	.711	.971	.792	.750	.788	.844	.786	.969	.731	.999
Cars	34	28	24	86	133	895	54	1082	19	12	103	134	66	1018	38	1122
% Cars	100	100	100	100	100	97.3	100	97.7	100	100	99	99.3	100	97.6	100	97.8
Trucks	0	0	0	0	0	25	0	25	0	0	1	1	0	25	0	25
% Trucks	0	0	0	0	0	2.7	0	2.3	0	0	1	0.7	0	2.4	0	2.2

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 3



Accurate Counts

978-664-2565

N/S Street : St. Botolph Street
 E/W Street: Massachusetts Avenue
 City/State : Boston, MA
 Weather : Rain

File Name : 82050002
 Site Code : 82050002
 Start Date : 10/19/2011
 Page No : 1

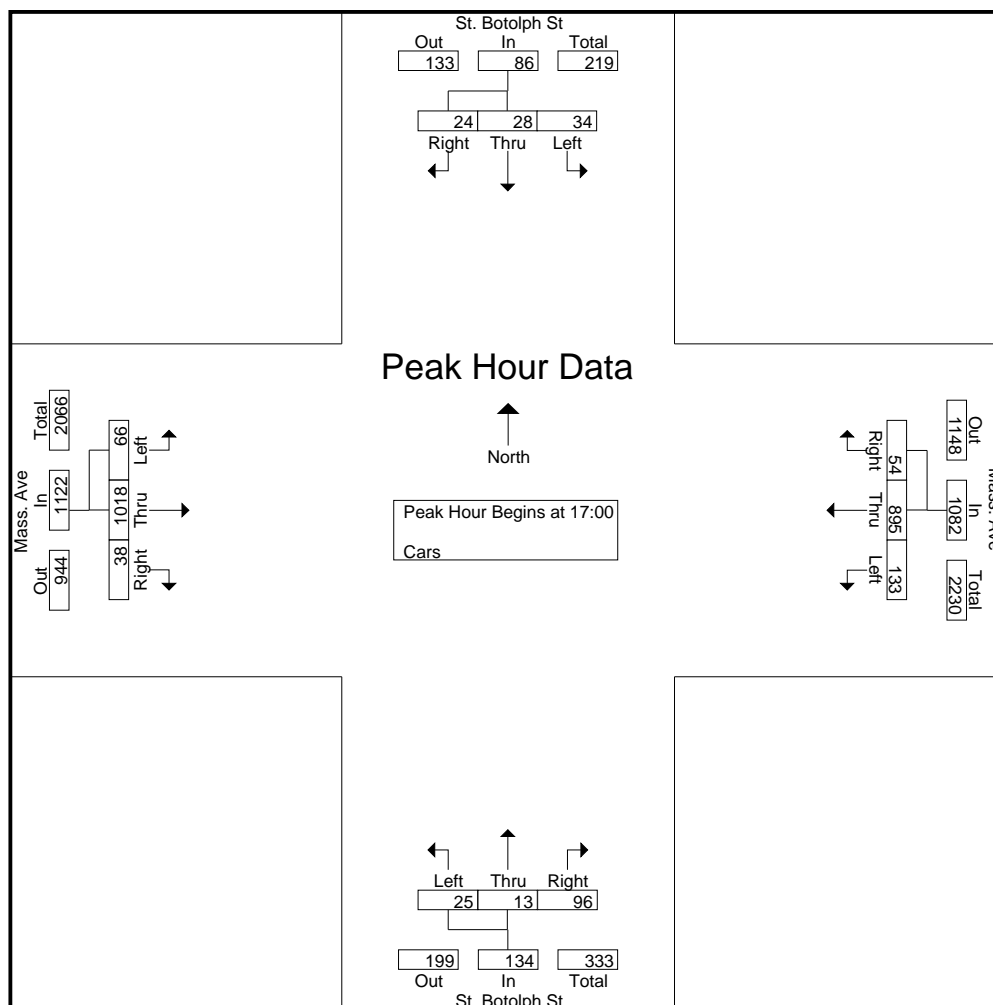
Groups Printed- Cars

Start Time	St. Botolph St From North			Mass. Ave From East			St. Botolph St From South			Mass. Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	14	6	5	19	206	14	11	5	23	12	239	4	558
16:15	7	5	3	30	212	12	8	2	17	10	262	5	573
16:30	12	3	4	38	207	15	9	6	14	15	234	6	563
16:45	6	3	6	29	238	11	3	2	32	15	237	9	591
Total	39	17	18	116	863	52	31	15	86	52	972	24	2285
17:00	3	12	10	39	230	6	6	2	32	16	251	10	617
17:15	8	7	6	27	209	14	5	4	16	10	265	8	579
17:30	10	5	6	27	239	15	5	4	23	19	248	13	614
17:45	13	4	2	40	217	19	9	3	25	21	254	7	614
Total	34	28	24	133	895	54	25	13	96	66	1018	38	2424
Grand Total	73	45	42	249	1758	106	56	28	182	118	1990	62	4709
Apprch %	45.6	28.1	26.2	11.8	83.2	5	21.1	10.5	68.4	5.4	91.7	2.9	
Total %	1.6	1	0.9	5.3	37.3	2.3	1.2	0.6	3.9	2.5	42.3	1.3	

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	3	12	10	25	39	230	6	275	6	2	32	40	16	251	10	277	617
17:15	8	7	6	21	27	209	14	250	5	4	16	25	10	265	8	283	579
17:30	10	5	6	21	27	239	15	281	5	4	23	32	19	248	13	280	614
17:45	13	4	2	19	40	217	19	276	9	3	25	37	21	254	7	282	614
Total Volume	34	28	24	86	133	895	54	1082	25	13	96	134	66	1018	38	1122	2424
% App. Total	39.5	32.6	27.9		12.3	82.7	5		18.7	9.7	71.6		5.9	90.7	3.4		
PHF	.654	.583	.600	.860	.831	.936	.711	.963	.694	.813	.750	.838	.786	.960	.731	.991	.982

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
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Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

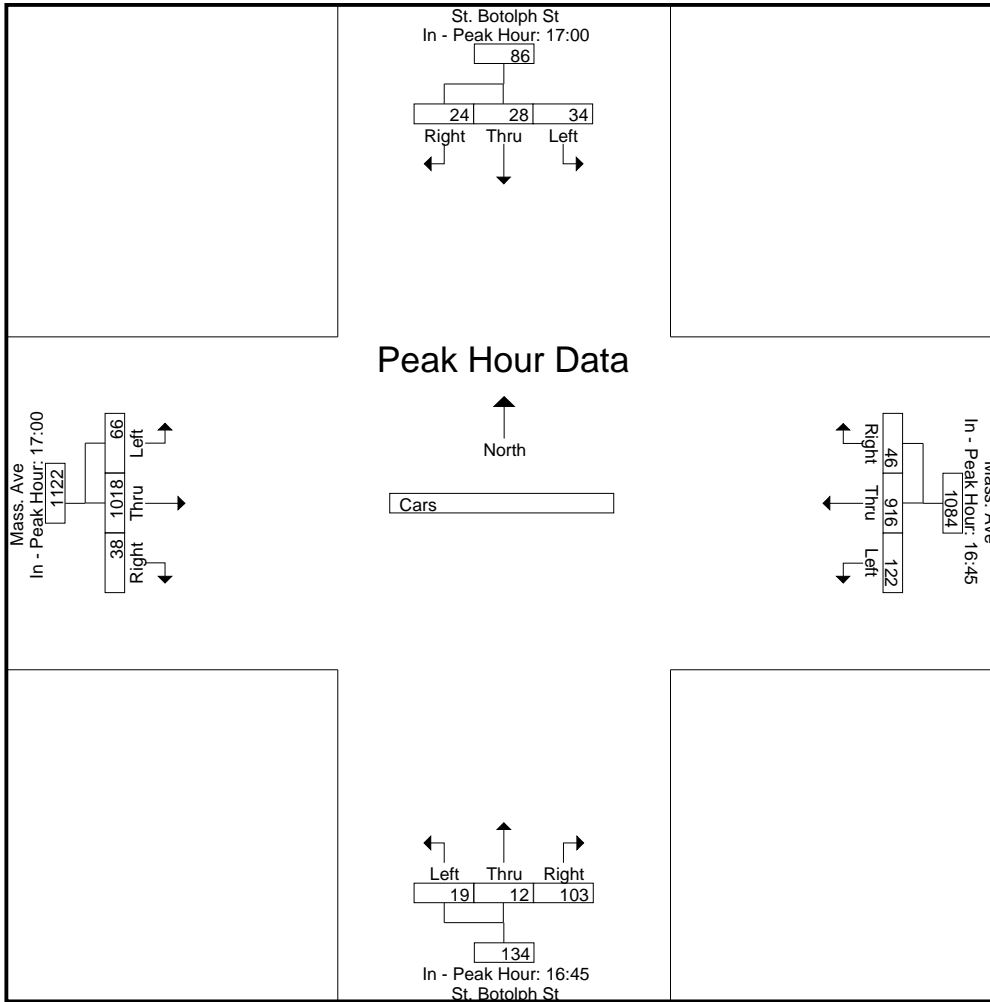
Peak Hour for Each Approach Begins at:

	17:00				16:45				16:45				17:00			
+0 mins.	3	12	10	25	29	238	11	278	3	2	32	37	16	251	10	277
+15 mins.	8	7	6	21	39	230	6	275	6	2	32	40	10	265	8	283
+30 mins.	10	5	6	21	27	209	14	250	5	4	16	25	19	248	13	280
+45 mins.	13	4	2	19	27	239	15	281	5	4	23	32	21	254	7	282
Total Volume	34	28	24	86	122	916	46	1084	19	12	103	134	66	1018	38	1122
% App. Total	39.5	32.6	27.9		11.3	84.5	4.2		14.2	9	76.9		5.9	90.7	3.4	
PHF	.654	.583	.600	.860	.782	.958	.767	.964	.792	.750	.805	.838	.786	.960	.731	.991

Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
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Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
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Groups Printed- Trucks

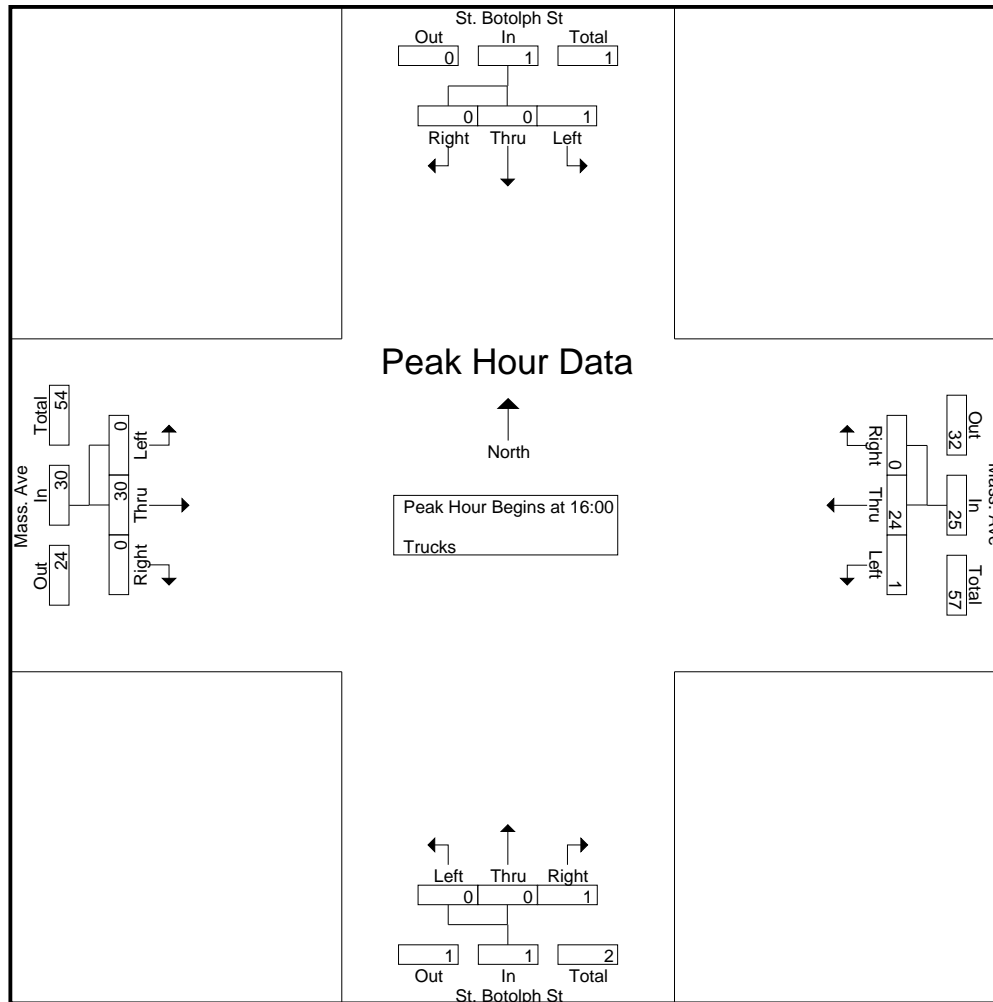
Start Time	St. Botolph St From North			Mass. Ave From East			St. Botolph St From South			Mass. Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	0	0	1	5	0	0	0	0	0	7	0	13
16:15	0	0	0	0	6	0	0	0	0	0	9	0	15
16:30	0	0	0	0	9	0	0	0	0	0	7	0	16
16:45	1	0	0	0	4	0	0	0	1	0	7	0	13
Total	1	0	0	1	24	0	0	0	1	0	30	0	57
17:00	0	0	0	0	4	0	0	0	0	0	9	0	13
17:15	0	0	0	0	8	0	0	0	0	0	4	0	12
17:30	0	0	0	0	4	0	0	0	0	0	7	0	11
17:45	0	0	0	0	9	0	0	0	0	0	5	0	14
Total	0	0	0	0	25	0	0	0	0	0	25	0	50
Grand Total	1	0	0	1	49	0	0	0	1	0	55	0	107
Apprch %	100	0	0	2	98	0	0	0	100	0	100	0	
Total %	0.9	0	0	0.9	45.8	0	0	0	0.9	0	51.4	0	

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:00	0	0	0	0	1	5	0	6	0	0	0	0	0	7	0	7	13
16:15	0	0	0	0	0	6	0	6	0	0	0	0	0	9	0	9	15
16:30	0	0	0	0	0	9	0	9	0	0	0	0	0	7	0	7	16
16:45	1	0	0	1	0	4	0	4	0	0	1	1	0	7	0	7	13
Total Volume	1	0	0	1	1	24	0	25	0	0	1	1	0	30	0	30	57
% App. Total	100	0	0	0	4	96	0	0	0	0	100	0	0	100	0	0	0
PHF	.250	.000	.000	.250	.250	.667	.000	.694	.000	.000	.250	.250	.000	.833	.000	.833	.891

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:00

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
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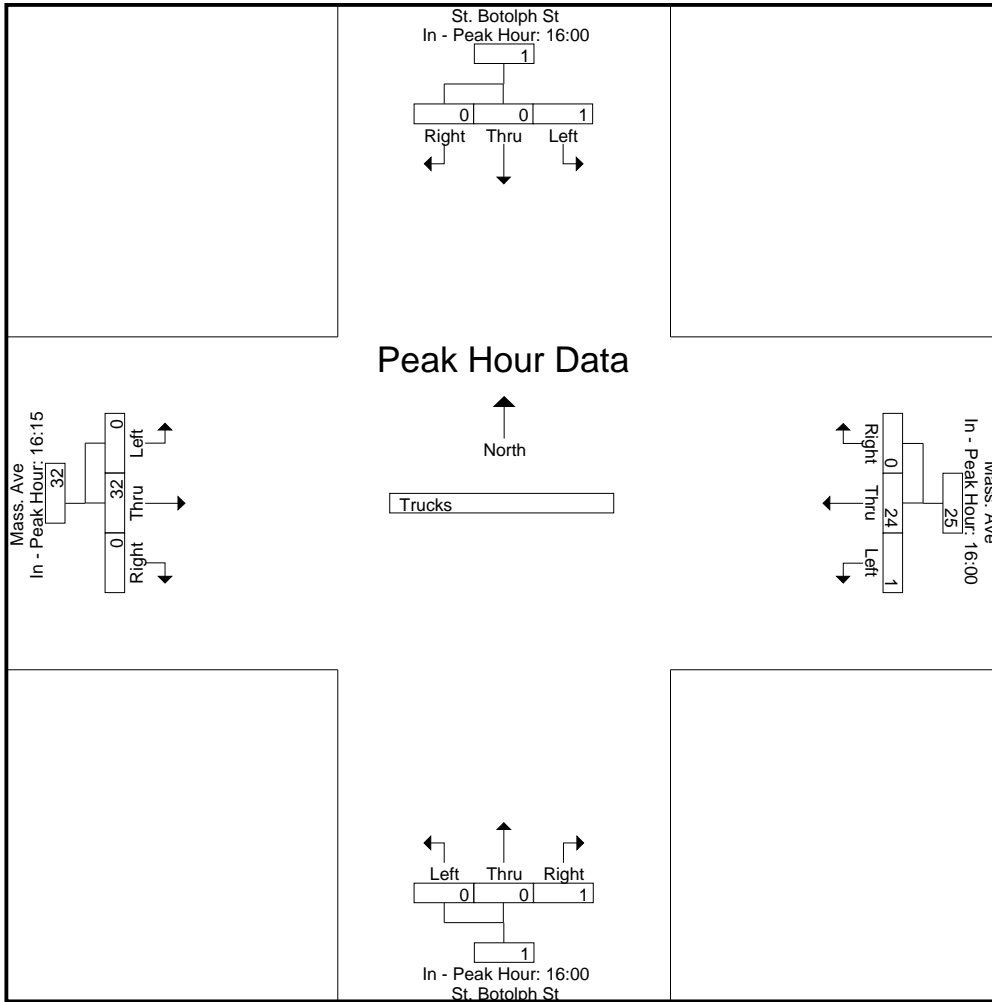
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	16:00				16:00				16:00				16:15			
+0 mins.	0	0	0	0	1	5	0	6	0	0	0	0	0	9	0	9
+15 mins.	0	0	0	0	0	6	0	6	0	0	0	0	0	7	0	7
+30 mins.	0	0	0	0	0	9	0	9	0	0	0	0	0	7	0	7
+45 mins.	1	0	0	1	0	4	0	4	0	0	1	1	0	9	0	9
Total Volume	1	0	0	1	1	24	0	25	0	0	1	1	0	32	0	32
% App. Total	100	0	0	100	4	96	0	100	0	0	100	100	0	100	0	100
PHF	.250	.000	.000	.250	.250	.667	.000	.694	.000	.000	.250	.250	.000	.889	.000	.889

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
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Accurate Counts
978-664-2565

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
Page No : 1

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

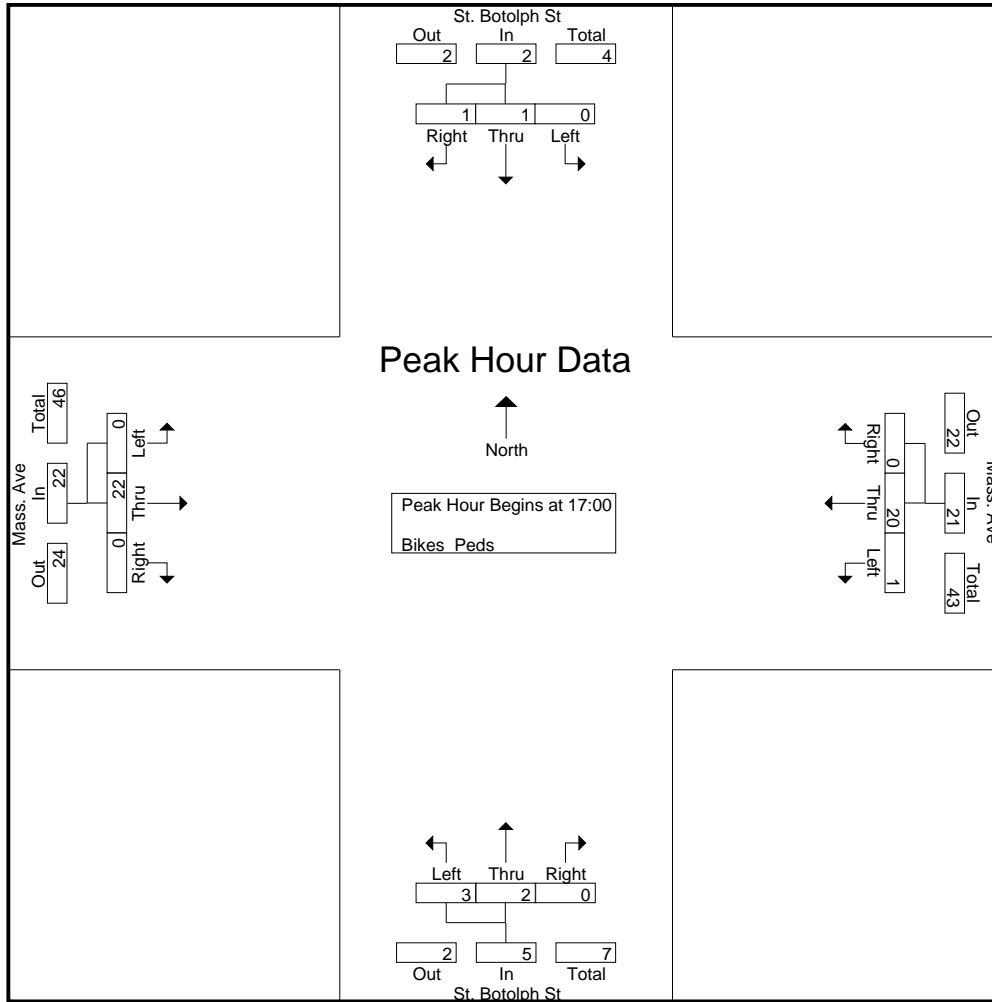
Groups Printed- Bikes Peds

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
16:00	0	0	0	31	0	3	0	6	0	0	0	63	0	2	0	15	115	5	120
16:15	0	1	1	39	0	3	0	15	0	0	0	86	0	2	0	6	146	7	153
16:30	0	0	0	43	0	4	0	6	0	1	0	72	0	6	0	18	139	11	150
16:45	0	0	0	69	0	1	0	16	0	0	0	79	0	2	0	19	183	3	186
Total	0	1	1	182	0	11	0	43	0	1	0	300	0	12	0	58	583	26	609
17:00	0	0	0	52	0	3	0	23	0	0	0	108	0	3	0	32	215	6	221
17:15	0	0	0	41	0	7	0	28	1	1	0	109	0	5	0	14	192	14	206
17:30	0	1	0	48	0	8	0	10	0	1	0	79	0	6	0	26	163	16	179
17:45	0	0	1	49	1	2	0	18	2	0	0	80	0	8	0	17	164	14	178
Total	0	1	1	190	1	20	0	79	3	2	0	376	0	22	0	89	734	50	784
Grand Total	0	2	2	372	1	31	0	122	3	3	0	676	0	34	0	147	1317	76	1393
Apprch %	0	50	50		3.1	96.9	0		50	50	0		0	100	0				
Total %	0	2.6	2.6		1.3	40.8	0		3.9	3.9	0		0	44.7	0		94.5	5.5	

Start Time	St. Botolph St From North				Mass. Ave From East				St. Botolph St From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
17:15	0	0	0	0	0	7	0	7	1	1	0	2	0	5	0	5	14
17:30	0	1	0	1	0	8	0	8	0	1	0	1	0	6	0	6	16
17:45	0	0	1	1	1	2	0	3	2	0	0	2	0	8	0	8	14
Total Volume	0	1	1	2	1	20	0	21	3	2	0	5	0	22	0	22	50
% App. Total	0	50	50		4.8	95.2	0		60	40	0		0	100	0		
PHF	.000	.250	.250	.500	.250	.625	.000	.656	.375	.500	.000	.625	.000	.688	.000	.688	.781

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
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Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

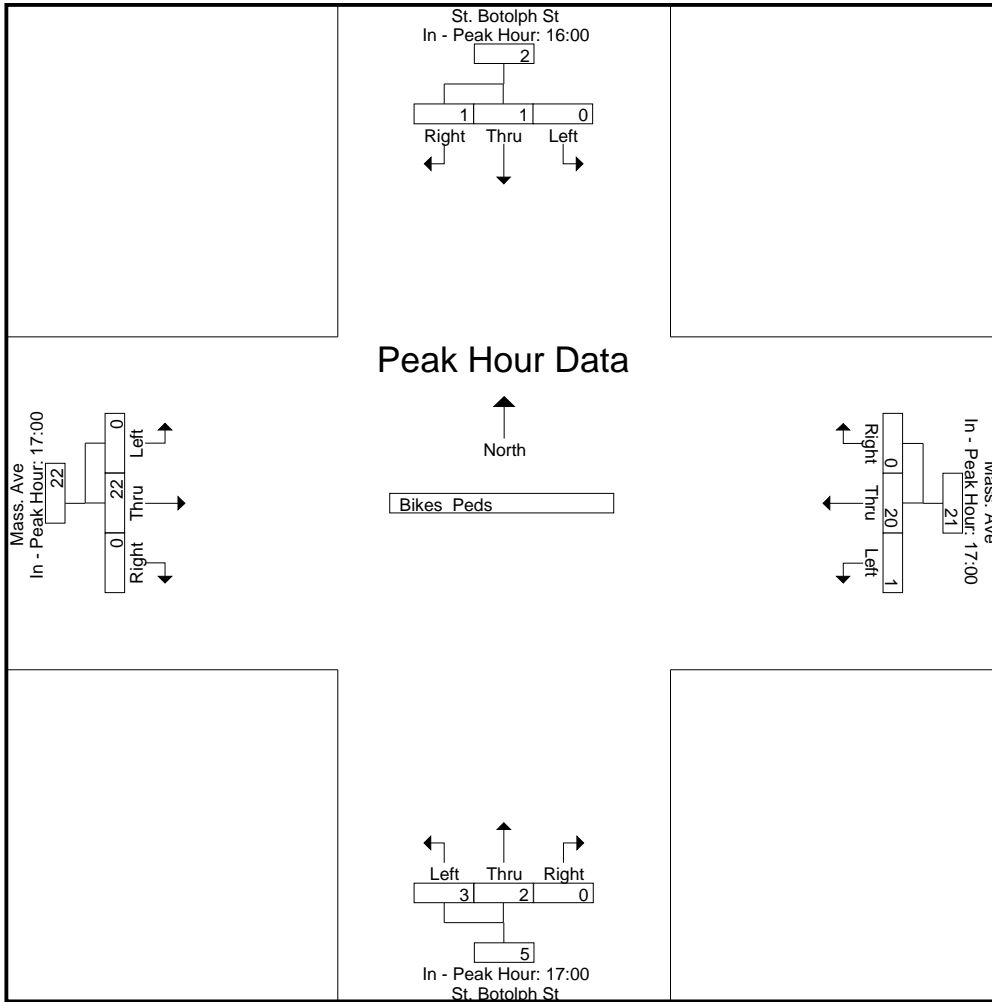
Peak Hour for Each Approach Begins at:

	16:00				17:00				17:00				17:00			
+0 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3
+15 mins.	0	1	1	2	0	7	0	7	1	1	0	2	0	5	0	5
+30 mins.	0	0	0	0	0	8	0	8	0	1	0	1	0	6	0	6
+45 mins.	0	0	0	0	1	2	0	3	2	0	0	2	0	8	0	8
Total Volume	0	1	1	2	1	20	0	21	3	2	0	5	0	22	0	22
% App. Total	0	50	50		4.8	95.2	0		60	40	0		0	100	0	
PHF	.000	.250	.250	.250	.250	.625	.000	.656	.375	.500	.000	.625	.000	.688	.000	.688

Accurate Counts
978-664-2565

N/S Street : St. Botolph Street
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050002
Site Code : 82050002
Start Date : 10/19/2011
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Accurate Counts

978-664-2565

N/S Street : Huntington Avenue
 E/W Street: Massachusetts Avenue
 City/State : Boston, MA
 Weather : Overcast

File Name : 82050001
 Site Code : 82050001
 Start Date : 10/19/2011
 Page No : 1

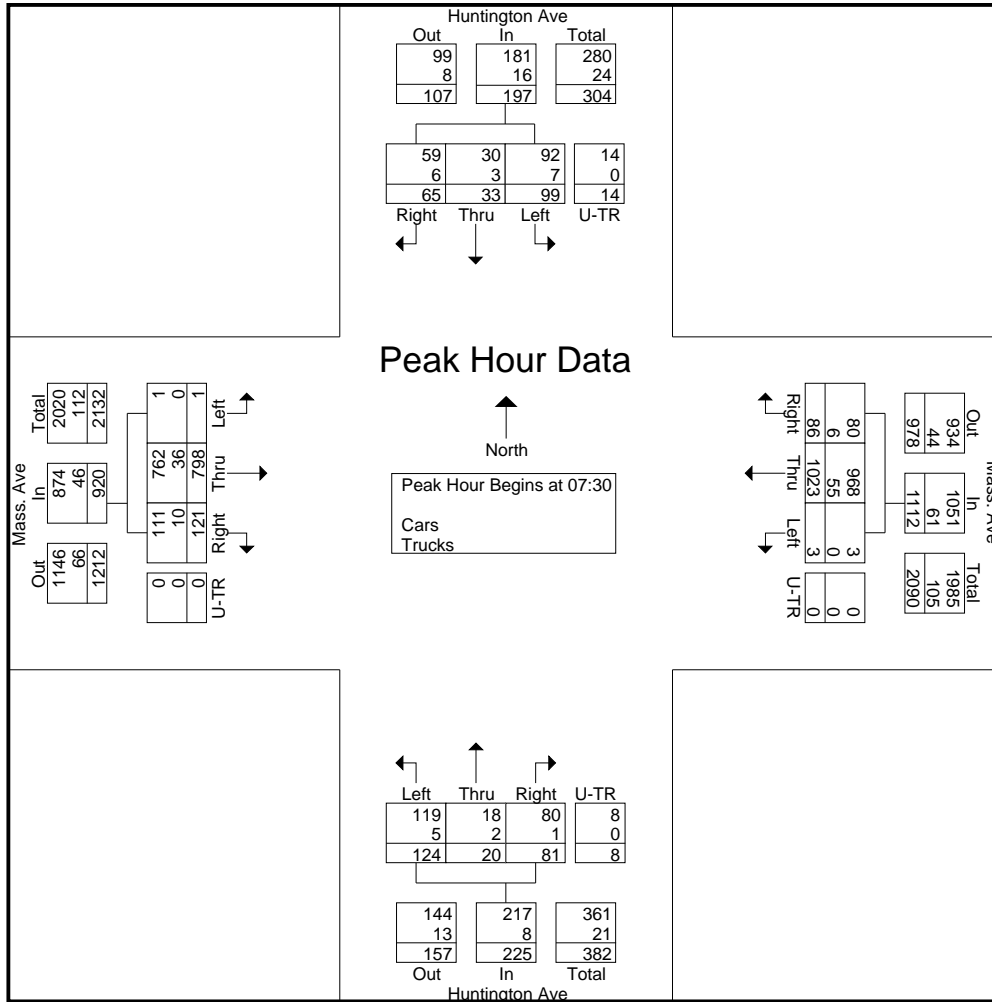
Groups Printed- Cars - Trucks

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	19	2	9	4	4	160	10	0	23	4	10	1	0	135	21	0	402
07:15	22	6	7	6	0	208	17	0	22	2	15	2	1	185	27	0	520
07:30	20	9	13	2	0	244	20	0	34	4	18	2	0	162	27	0	555
07:45	22	6	21	6	1	273	13	0	31	5	23	2	0	206	32	0	641
Total	83	23	50	18	5	885	60	0	110	15	66	7	1	688	107	0	2118
08:00	33	10	19	1	2	259	25	0	27	5	14	4	1	187	31	0	618
08:15	24	8	12	5	0	247	28	0	32	6	26	0	0	243	31	0	662
08:30	23	2	27	3	1	238	23	0	21	4	18	3	0	163	28	0	554
08:45	27	9	23	2	0	226	18	0	30	7	16	2	0	204	21	0	585
Total	107	29	81	11	3	970	94	0	110	22	74	9	1	797	111	0	2419
Grand Total	190	52	131	29	8	1855	154	0	220	37	140	16	2	1485	218	0	4537
Apprch %	47.3	12.9	32.6	7.2	0.4	92	7.6	0	53.3	9	33.9	3.9	0.1	87.1	12.8	0	
Total %	4.2	1.1	2.9	0.6	0.2	40.9	3.4	0	4.8	0.8	3.1	0.4	0	32.7	4.8	0	
Cars	182	48	124	27	8	1743	143	0	210	34	135	16	2	1419	203	0	4294
% Cars	95.8	92.3	94.7	93.1	100	94	92.9	0	95.5	91.9	96.4	100	100	95.6	93.1	0	94.6
Trucks	8	4	7	2	0	112	11	0	10	3	5	0	0	66	15	0	243
% Trucks	4.2	7.7	5.3	6.9	0	6	7.1	0	4.5	8.1	3.6	0	0	4.4	6.9	0	5.4

Start Time	Huntington Ave From North					Mass. Ave From East					Huntington Ave From South					Mass. Ave From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	20	9	13	2	44	0	244	20	0	264	34	4	18	2	58	0	162	27	0	189	555
07:45	22	6	21	6	55	1	273	13	0	287	31	5	23	2	61	0	206	32	0	238	641
08:00	33	10	19	1	63	2	259	25	0	286	27	5	14	4	50	1	187	31	0	219	618
08:15	24	8	12	5	49	0	247	28	0	275	32	6	26	0	64	0	243	31	0	274	662
Total Volume	99	33	65	14	211	3	1023	86	0	1112	124	20	81	8	233	1	798	121	0	920	2476
% App. Total	46.9	15.6	30.8	6.6		0.3	92	7.7	0		53.2	8.6	34.8	3.4		0.1	86.7	13.2	0		
PHF	.750	.825	.774	.583	.837	.375	.937	.768	.000	.969	.912	.833	.779	.500	.910	.250	.821	.945	.000	.839	.935
Cars	92	30	59	14	195	3	968	80	0	1051	119	18	80	8	225	1	762	111	0	874	2345
% Cars	92.9	90.9	90.8	100	92.4	100	94.6	93.0	0	94.5	96.0	90.0	98.8	100	96.6	100	95.5	91.7	0	95.0	94.7
Trucks	7	3	6	0	16	0	55	6	0	61	5	2	1	0	8	0	36	10	0	46	131
% Trucks	7.1	9.1	9.2	0	7.6	0	5.4	7.0	0	5.5	4.0	10.0	1.2	0	3.4	0	4.5	8.3	0	5.0	5.3

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
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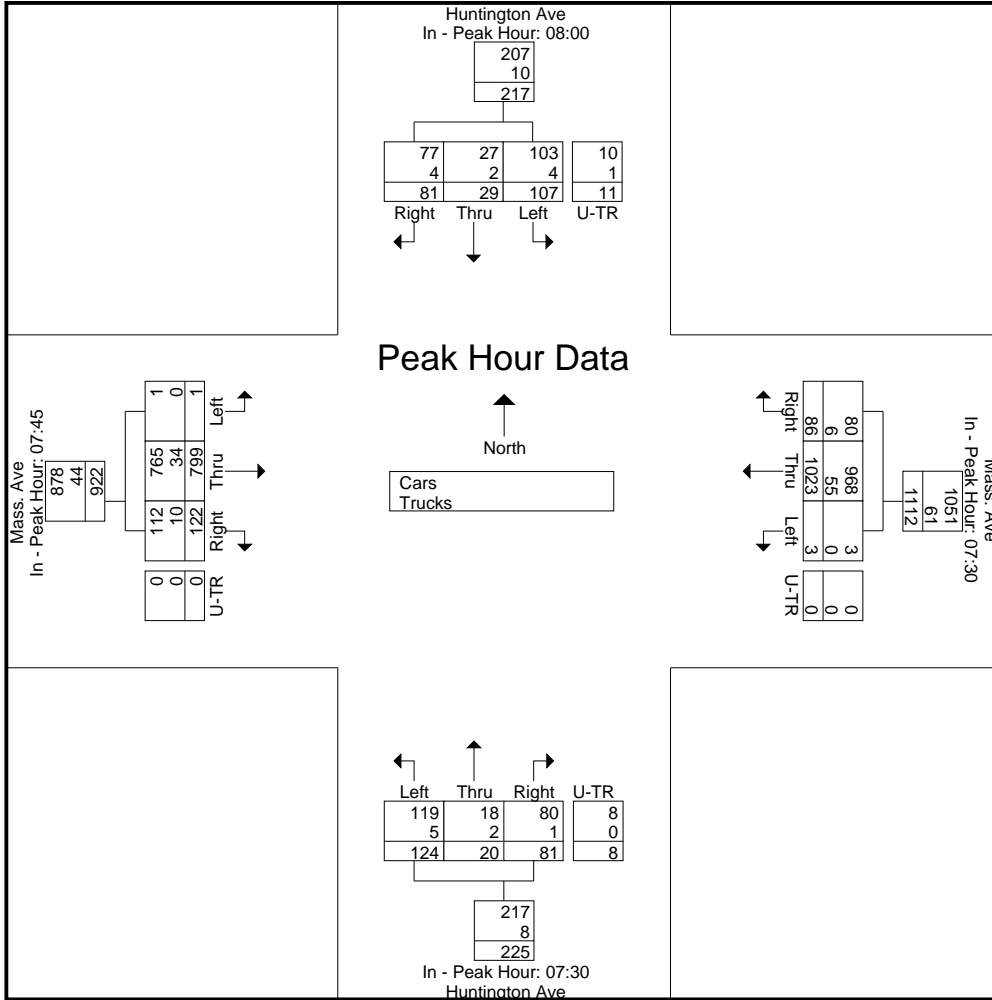
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00					07:30					07:30					07:45				
+0 mins.	33	10	19	1	63	0	244	20	0	264	34	4	18	2	58	0	206	32	0	238
+15 mins.	24	8	12	5	49	1	273	13	0	287	31	5	23	2	61	1	187	31	0	219
+30 mins.	23	2	27	3	55	2	259	25	0	286	27	5	14	4	50	0	243	31	0	274
+45 mins.	27	9	23	2	61	0	247	28	0	275	32	6	26	0	64	0	163	28	0	191
Total Volume	107	29	81	11	228	3	1023	86	0	1112	124	20	81	8	233	1	799	122	0	922
% App. Total	46.9	12.7	35.5	4.8		0.3	92	7.7	0		53.2	8.6	34.8	3.4		0.1	86.7	13.2	0	
PHF	.811	.725	.750	.550	.905	.375	.937	.768	.000	.969	.912	.833	.779	.500	.910	.250	.822	.953	.000	.841
Cars	103	27	77	10	217	3	968	80	0	1051	119	18	80	8	225	1	765	112	0	878
% Cars	96.3	93.1	95.1	90.9	95.2	100	94.6	93	0	94.5	96	90	98.8	100	96.6	100	95.7	91.8	0	95.2
Trucks	4	2	4	1	11	0	55	6	0	61	5	2	1	0	8	0	34	10	0	44
% Trucks	3.7	6.9	4.9	9.1	4.8	0	5.4	7	0	5.5	4	10	1.2	0	3.4	0	4.3	8.2	0	4.8

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
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Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 1

Groups Printed- Cars

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	19	2	9	4	4	141	8	0	22	4	9	1	0	127	21	0	371
07:15	22	6	7	5	0	198	16	0	21	2	14	2	1	180	26	0	500
07:30	19	7	13	2	0	232	19	0	32	3	18	2	0	157	26	0	530
07:45	19	6	18	6	1	255	11	0	30	5	22	2	0	198	29	0	602
Total	79	21	47	17	5	826	54	0	105	14	63	7	1	662	102	0	2003
08:00	32	10	16	1	2	242	24	0	26	5	14	4	1	175	28	0	580
08:15	22	7	12	5	0	239	26	0	31	5	26	0	0	232	28	0	633
08:30	23	2	27	3	1	222	22	0	20	3	17	3	0	160	27	0	530
08:45	26	8	22	1	0	214	17	0	28	7	15	2	0	190	18	0	548
Total	103	27	77	10	3	917	89	0	105	20	72	9	1	757	101	0	2291
Grand Total	182	48	124	27	8	1743	143	0	210	34	135	16	2	1419	203	0	4294
Apprch %	47.8	12.6	32.5	7.1	0.4	92	7.6	0	53.2	8.6	34.2	4.1	0.1	87.4	12.5	0	
Total %	4.2	1.1	2.9	0.6	0.2	40.6	3.3	0	4.9	0.8	3.1	0.4	0	33	4.7	0	

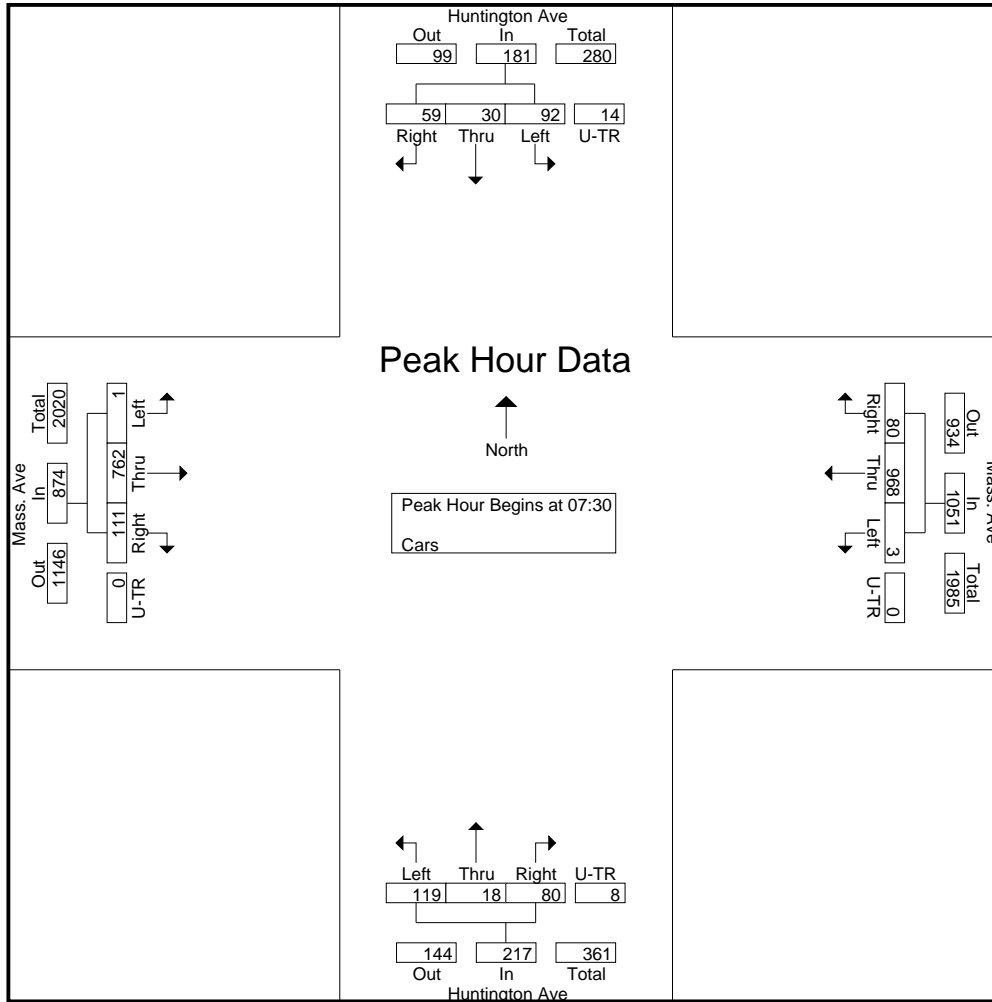
Start Time	Huntington Ave From North					Mass. Ave From East					Huntington Ave From South					Mass. Ave From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
07:30	19	7	13	2	41	0	232	19	0	251	32	3	18	2	55	0	157	26	0	183	530
07:45	19	6	18	6	49	1	255	11	0	267	30	5	22	2	59	0	198	29	0	227	602
08:00	32	10	16	1	59	2	242	24	0	268	26	5	14	4	49	1	175	28	0	204	580
08:15	22	7	12	5	46	0	239	26	0	265	31	5	26	0	62	0	232	28	0	260	633
Total Volume	92	30	59	14	195	3	968	80	0	1051	119	18	80	8	225	1	762	111	0	874	2345
% App. Total	47.2	15.4	30.3	7.2		0.3	92.1	7.6	0		52.9	8	35.6	3.6		0.1	87.2	12.7	0		
PHF	.719	.750	.819	.583	.826	.375	.949	.769	.000	.980	.930	.900	.769	.500	.907	.250	.821	.957	.000	.840	.926

Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
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Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

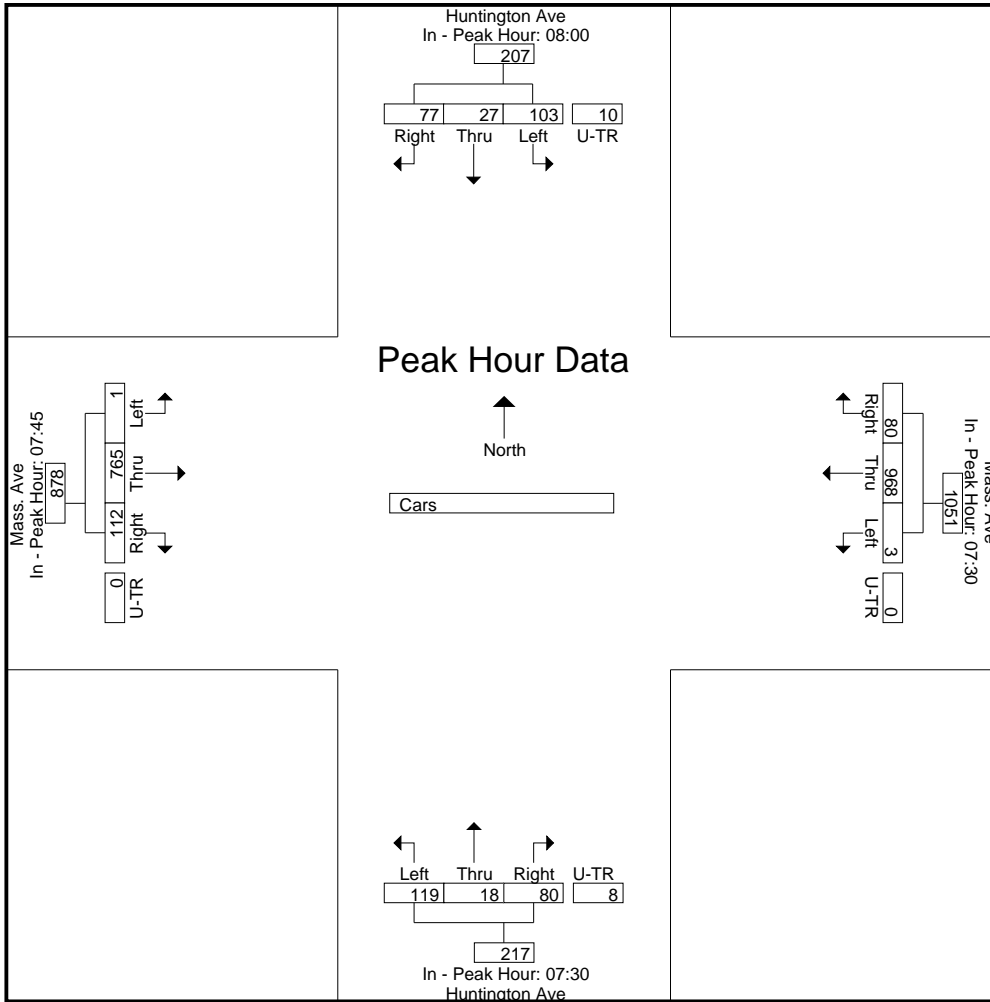
Peak Hour for Each Approach Begins at:

	08:00					07:30					07:30					07:45				
+0 mins.	32	10	16	1	59	0	232	19	0	251	32	3	18	2	55	0	198	29	0	227
+15 mins.	22	7	12	5	46	1	255	11	0	267	30	5	22	2	59	1	175	28	0	204
+30 mins.	23	2	27	3	55	2	242	24	0	268	26	5	14	4	49	0	232	28	0	260
+45 mins.	26	8	22	1	57	0	239	26	0	265	31	5	26	0	62	0	160	27	0	187
Total Volume	103	27	77	10	217	3	968	80	0	1051	119	18	80	8	225	1	765	112	0	878
% App. Total	47.5	12.4	35.5	4.6		0.3	92.1	7.6	0		52.9	8	35.6	3.6		0.1	87.1	12.8	0	
PHF	.805	.675	.713	.500	.919	.375	.949	.769	.000	.980	.930	.900	.769	.500	.907	.250	.824	.966	.000	.844

Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
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Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 1

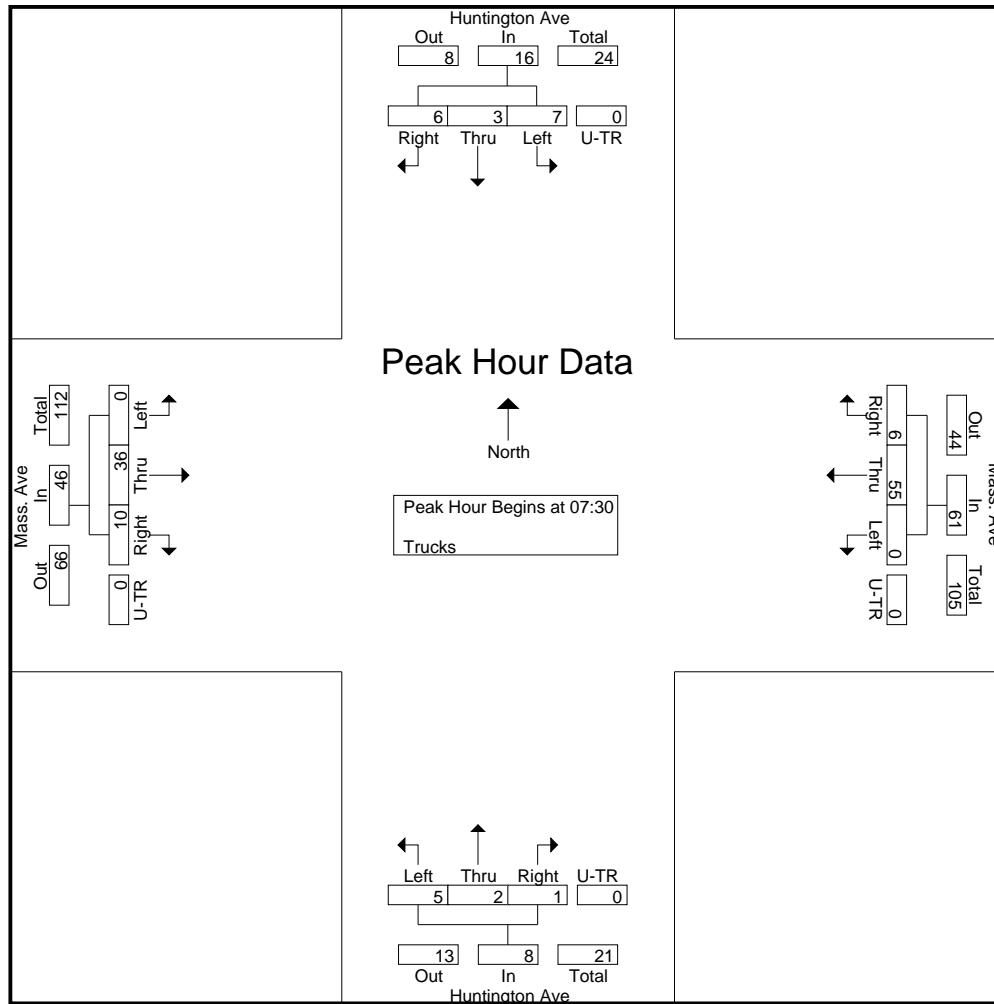
Groups Printed- Trucks

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
07:00	0	0	0	0	0	19	2	0	1	0	1	0	0	8	0	0	31
07:15	0	0	0	1	0	10	1	0	1	0	1	0	0	5	1	0	20
07:30	1	2	0	0	0	12	1	0	2	1	0	0	0	5	1	0	25
07:45	3	0	3	0	0	18	2	0	1	0	1	0	0	8	3	0	39
Total	4	2	3	1	0	59	6	0	5	1	3	0	0	26	5	0	115
08:00	1	0	3	0	0	17	1	0	1	0	0	0	0	12	3	0	38
08:15	2	1	0	0	0	8	2	0	1	1	0	0	0	11	3	0	29
08:30	0	0	0	0	0	16	1	0	1	1	1	0	0	3	1	0	24
08:45	1	1	1	1	0	12	1	0	2	0	1	0	0	14	3	0	37
Total	4	2	4	1	0	53	5	0	5	2	2	0	0	40	10	0	128
Grand Total	8	4	7	2	0	112	11	0	10	3	5	0	0	66	15	0	243
Apprch %	38.1	19	33.3	9.5	0	91.1	8.9	0	55.6	16.7	27.8	0	0	81.5	18.5	0	
Total %	3.3	1.6	2.9	0.8	0	46.1	4.5	0	4.1	1.2	2.1	0	0	27.2	6.2	0	

Start Time	Huntington Ave From North					Mass. Ave From East					Huntington Ave From South					Mass. Ave From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	1	2	0	0	3	0	12	1	0	13	2	1	0	0	3	0	5	1	0	6	25
07:45	3	0	3	0	6	0	18	2	0	20	1	0	1	0	2	0	8	3	0	11	39
08:00	1	0	3	0	4	0	17	1	0	18	1	0	0	0	1	0	12	3	0	15	38
08:15	2	1	0	0	3	0	8	2	0	10	1	1	0	0	2	0	11	3	0	14	29
Total Volume	7	3	6	0	16	0	55	6	0	61	5	2	1	0	8	0	36	10	0	46	131
% App. Total	43.8	18.8	37.5	0		0	90.2	9.8	0		62.5	25	12.5	0		0	78.3	21.7	0		
PHF	.583	.375	.500	.000	.667	.000	.764	.750	.000	.763	.625	.500	.250	.000	.667	.000	.750	.833	.000	.767	.840

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
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Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

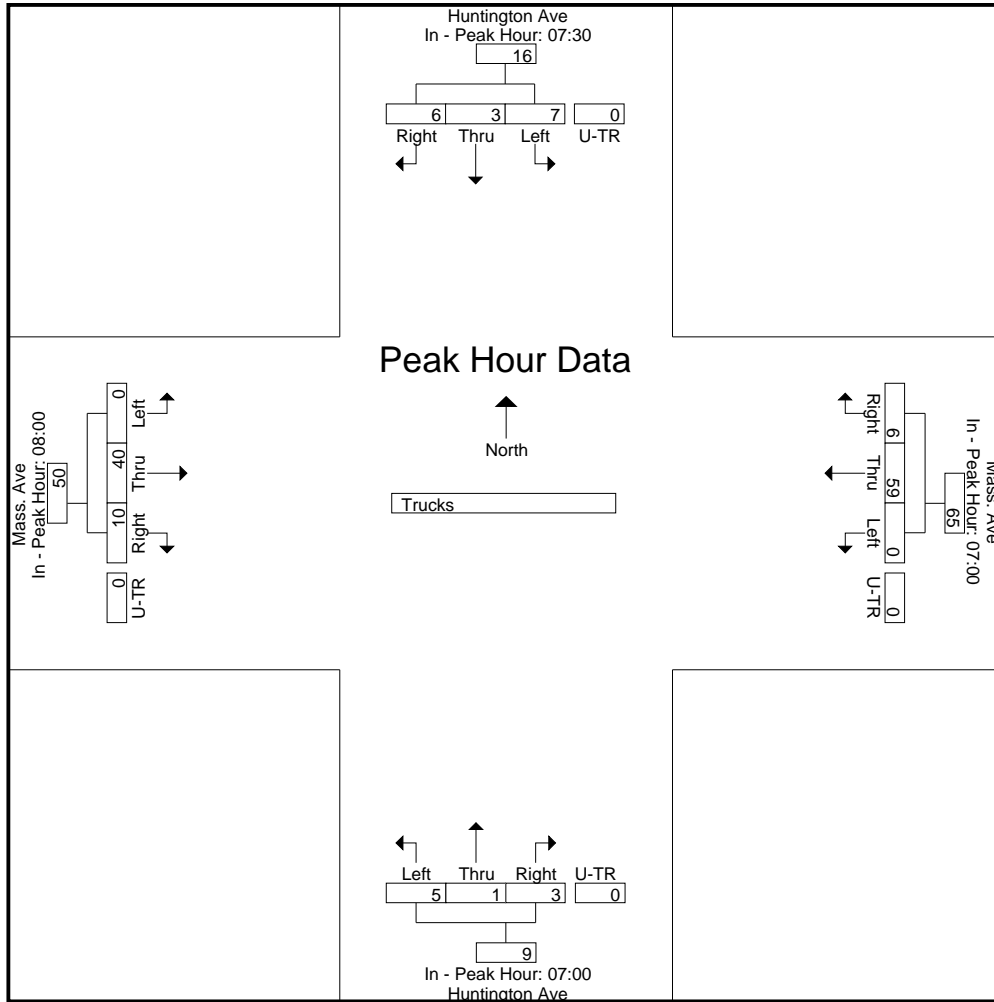
Peak Hour for Each Approach Begins at:

	07:30					07:00					07:00					08:00				
+0 mins.	1	2	0	0	3	0	19	2	0	21	1	0	1	0	2	0	12	3	0	15
+15 mins.	3	0	3	0	6	0	10	1	0	11	1	0	1	0	2	0	11	3	0	14
+30 mins.	1	0	3	0	4	0	12	1	0	13	2	1	0	0	3	0	3	1	0	4
+45 mins.	2	1	0	0	3	0	18	2	0	20	1	0	1	0	2	0	14	3	0	17
Total Volume	7	3	6	0	16	0	59	6	0	65	5	1	3	0	9	0	40	10	0	50
% App. Total	43.8	18.8	37.5	0		0	90.8	9.2	0		55.6	11.1	33.3	0		0	80	20	0	
PHF	.583	.375	.500	.000	.667	.000	.776	.750	.000	.774	.625	.250	.750	.000	.750	.000	.714	.833	.000	.735

Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 1

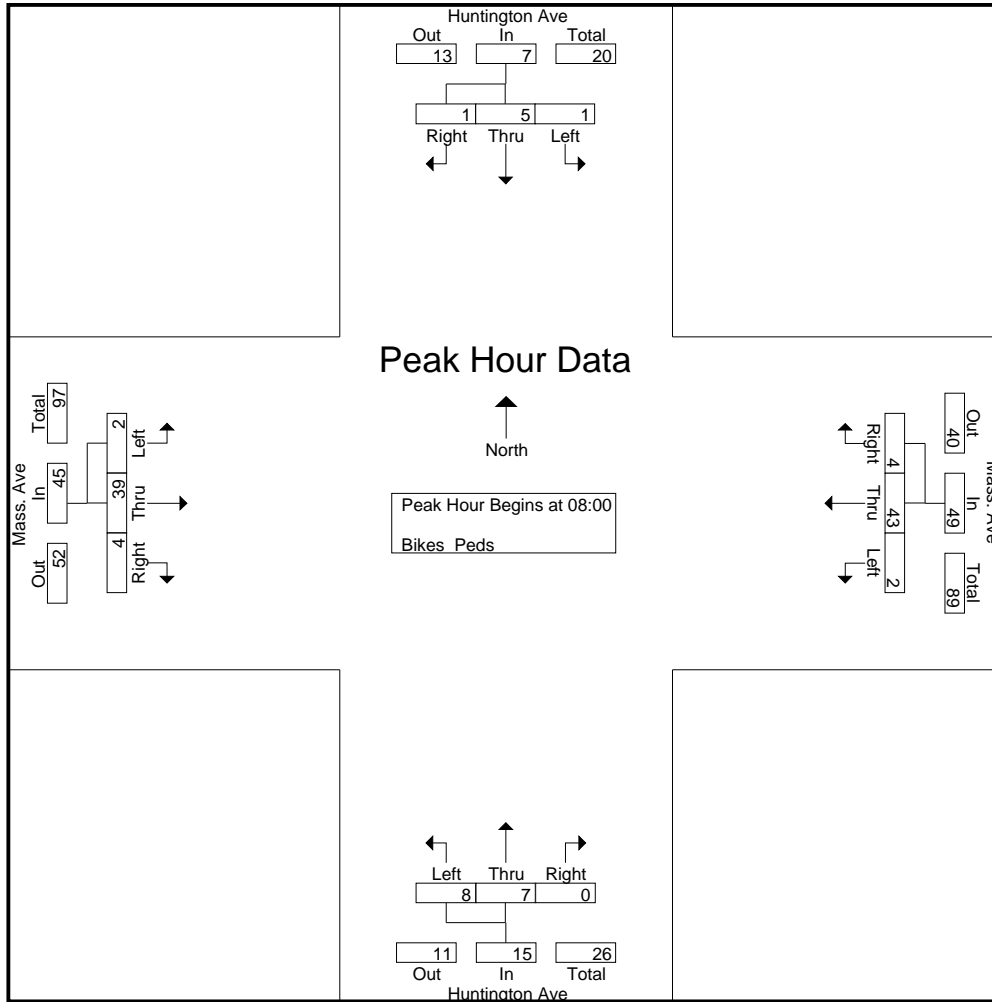
Groups Printed- Bikes Peds

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00	0	2	0	23	1	4	0	8	0	1	0	42	0	2	1	9	82	11	93
07:15	0	0	0	36	1	5	0	21	0	0	0	55	0	7	0	16	128	13	141
07:30	0	2	0	30	0	9	0	27	1	2	0	98	1	3	0	22	177	18	195
07:45	0	2	0	48	1	4	0	42	0	0	1	105	0	6	0	23	218	14	232
Total	0	6	0	137	3	22	0	98	1	3	1	300	1	18	1	70	605	56	661
08:00	0	1	0	62	0	7	1	24	0	1	0	106	1	5	0	39	231	16	247
08:15	0	1	0	69	0	6	1	28	1	0	0	142	0	11	0	44	283	20	303
08:30	1	2	1	60	0	13	1	35	2	1	0	141	0	6	0	43	279	27	306
08:45	0	1	0	85	2	17	1	47	5	5	0	163	1	17	4	52	347	53	400
Total	1	5	1	276	2	43	4	134	8	7	0	552	2	39	4	178	1140	116	1256
Grand Total	1	11	1	413	5	65	4	232	9	10	1	852	3	57	5	248	1745	172	1917
Apprch %	7.7	84.6	7.7		6.8	87.8	5.4		45	50	5		4.6	87.7	7.7				
Total %	0.6	6.4	0.6		2.9	37.8	2.3		5.2	5.8	0.6		1.7	33.1	2.9		91	9	

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	0	1	0	1	0	7	1	8	0	1	0	1	1	5	0	6	16
08:15	0	1	0	1	0	6	1	7	1	0	0	1	0	11	0	11	20
08:30	1	2	1	4	0	13	1	14	2	1	0	3	0	6	0	6	27
08:45	0	1	0	1	2	17	1	20	5	5	0	10	1	17	4	22	53
Total Volume	1	5	1	7	2	43	4	49	8	7	0	15	2	39	4	45	116
% App. Total	14.3	71.4	14.3		4.1	87.8	8.2		53.3	46.7	0		4.4	86.7	8.9		
PHF	.250	.625	.250	.438	.250	.632	1.000	.613	.400	.350	.000	.375	.500	.574	.250	.511	.547

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 2



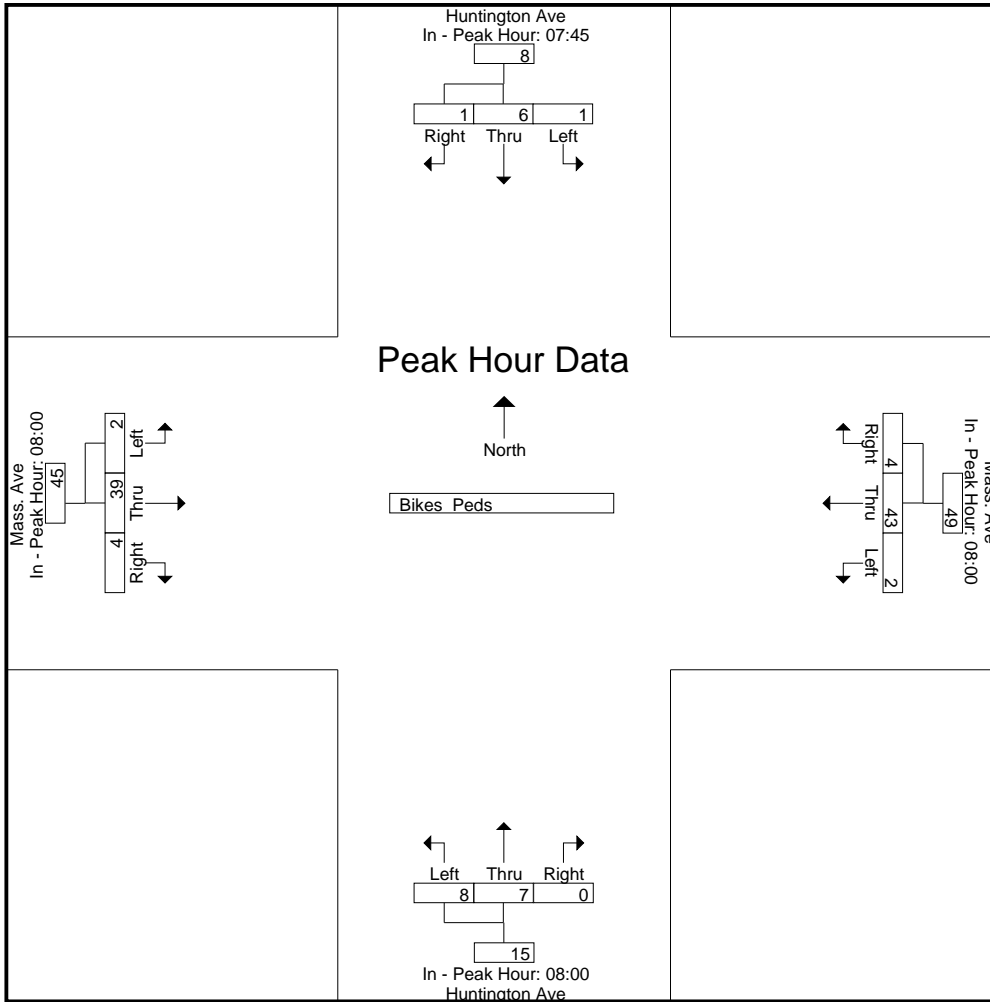
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45				08:00				08:00				08:00			
+0 mins.	0	2	0	2	0	7	1	8	0	1	0	1	1	5	0	6
+15 mins.	0	1	0	1	0	6	1	7	1	0	0	1	0	11	0	11
+30 mins.	0	1	0	1	0	13	1	14	2	1	0	3	0	6	0	6
+45 mins.	1	2	1	4	2	17	1	20	5	5	0	10	1	17	4	22
Total Volume	1	6	1	8	2	43	4	49	8	7	0	15	2	39	4	45
% App. Total	12.5	75	12.5		4.1	87.8	8.2		53.3	46.7	0		4.4	86.7	8.9	
PHF	.250	.750	.250	.500	.250	.632	1.000	.613	.400	.350	.000	.375	.500	.574	.250	.511

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Overcast

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 1

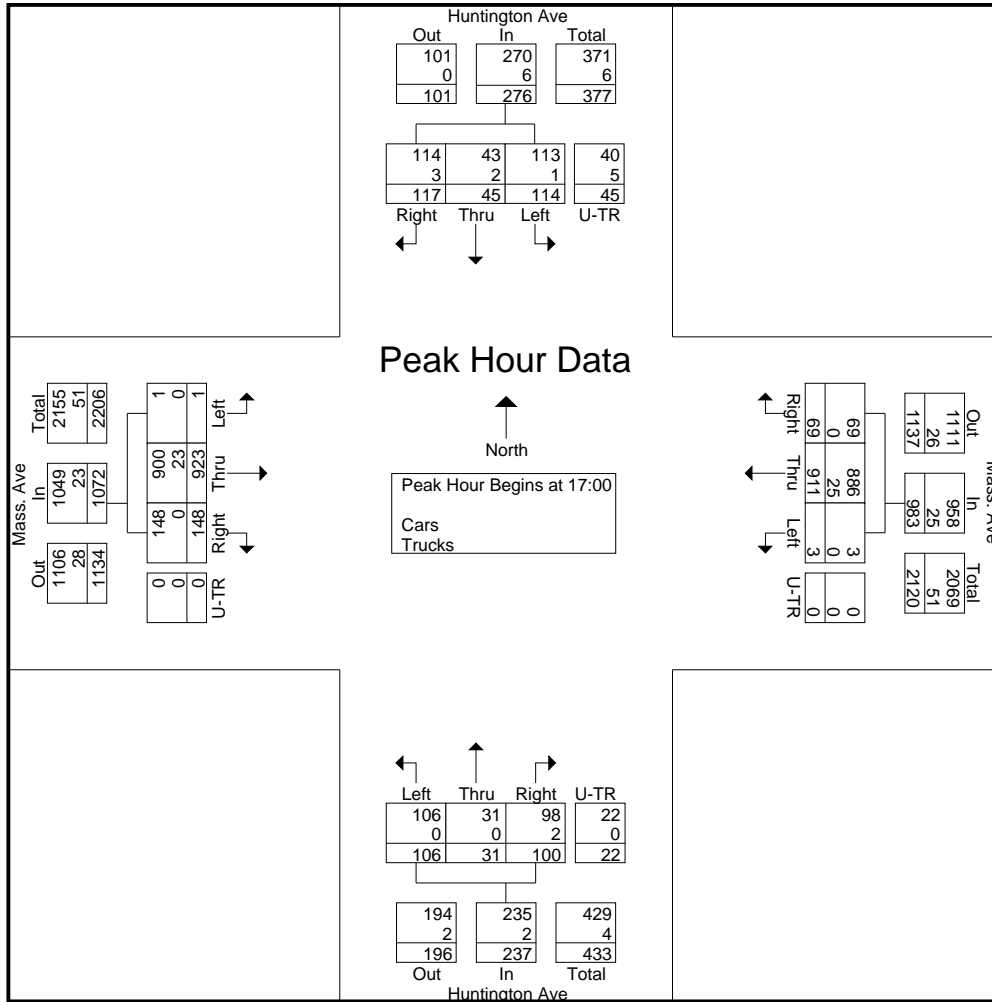
Groups Printed- Cars - Trucks

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
16:00	22	6	16	8	0	197	26	0	21	11	13	9	0	209	34	0	572
16:15	35	13	21	11	0	218	16	0	18	7	22	4	0	242	32	0	639
16:30	26	6	15	12	0	223	8	0	28	2	18	3	1	221	39	0	602
16:45	31	11	19	11	0	220	11	0	36	3	30	6	1	221	21	0	621
Total	114	36	71	42	0	858	61	0	103	23	83	22	2	893	126	0	2434
17:00	33	11	28	11	0	228	20	0	21	8	24	7	0	227	41	0	659
17:15	22	12	19	12	0	226	20	0	26	7	21	5	0	241	34	0	645
17:30	28	10	41	13	1	234	15	0	24	4	29	4	1	226	38	0	668
17:45	31	12	29	9	2	223	14	0	35	12	26	6	0	229	35	0	663
Total	114	45	117	45	3	911	69	0	106	31	100	22	1	923	148	0	2635
Grand Total	228	81	188	87	3	1769	130	0	209	54	183	44	3	1816	274	0	5069
Apprch %	39	13.9	32.2	14.9	0.2	93	6.8	0	42.7	11	37.3	9	0.1	86.8	13.1	0	
Total %	4.5	1.6	3.7	1.7	0.1	34.9	2.6	0	4.1	1.1	3.6	0.9	0.1	35.8	5.4	0	
Cars	223	79	183	73	3	1720	127	0	208	54	180	44	3	1770	271	0	4938
% Cars	97.8	97.5	97.3	83.9	100	97.2	97.7	0	99.5	100	98.4	100	100	97.5	98.9	0	97.4
Trucks	5	2	5	14	0	49	3	0	1	0	3	0	0	46	3	0	131
% Trucks	2.2	2.5	2.7	16.1	0	2.8	2.3	0	0.5	0	1.6	0	0	2.5	1.1	0	2.6

Start Time	Huntington Ave From North					Mass. Ave From East					Huntington Ave From South					Mass. Ave From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	33	11	28	11	83	0	228	20	0	248	21	8	24	7	60	0	227	41	0	268	659
17:15	22	12	19	12	65	0	226	20	0	246	26	7	21	5	59	0	241	34	0	275	645
17:30	28	10	41	13	92	1	234	15	0	250	24	4	29	4	61	1	226	38	0	265	668
17:45	31	12	29	9	81	2	223	14	0	239	35	12	26	6	79	0	229	35	0	264	663
Total Volume	114	45	117	45	321	3	911	69	0	983	106	31	100	22	259	1	923	148	0	1072	2635
% App. Total	35.5	14	36.4	14		0.3	92.7	7	0		40.9	12	38.6	8.5		0.1	86.1	13.8	0		
PHF	.864	.938	.713	.865	.872	.375	.973	.863	.000	.983	.757	.646	.862	.786	.820	.250	.957	.902	.000	.975	.986
Cars	113	43	114	40	310	3	886	69	0	958	106	31	98	22	257	1	900	148	0	1049	2574
% Cars	99.1	95.6	97.4	88.9	96.6	100	97.3	100	0	97.5	100	100	98.0	100	99.2	100	97.5	100	0	97.9	97.7
Trucks	1	2	3	5	11	0	25	0	0	25	0	0	2	0	2	0	23	0	0	23	61
% Trucks	0.9	4.4	2.6	11.1	3.4	0	2.7	0	0	2.5	0	0	2.0	0	0.8	0	2.5	0	0	2.1	2.3

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 2



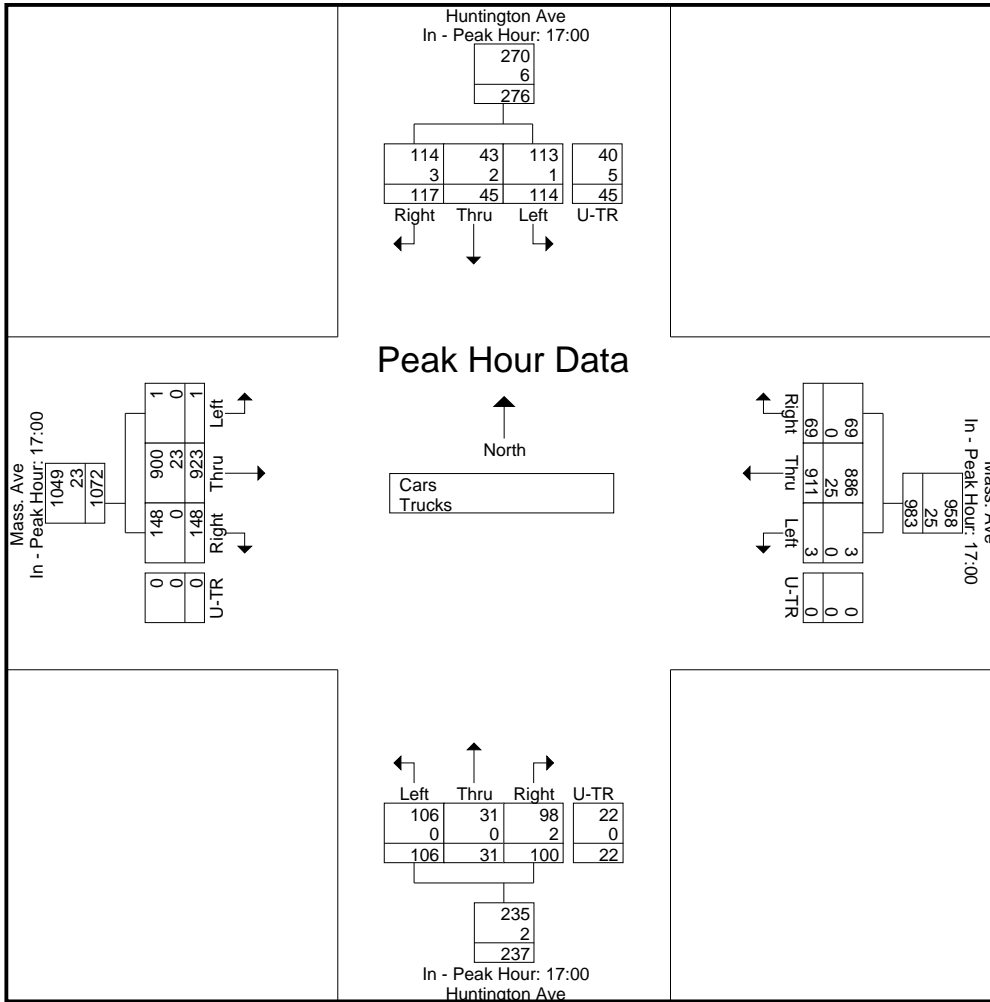
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	17:00					17:00					17:00					17:00				
+0 mins.	33	11	28	11	83	0	228	20	0	248	21	8	24	7	60	0	227	41	0	268
+15 mins.	22	12	19	12	65	0	226	20	0	246	26	7	21	5	59	0	241	34	0	275
+30 mins.	28	10	41	13	92	1	234	15	0	250	24	4	29	4	61	1	226	38	0	265
+45 mins.	31	12	29	9	81	2	223	14	0	239	35	12	26	6	79	0	229	35	0	264
Total Volume	114	45	117	45	321	3	911	69	0	983	106	31	100	22	259	1	923	148	0	1072
% App. Total	35.5	14	36.4	14		0.3	92.7	7	0		40.9	12	38.6	8.5		0.1	86.1	13.8	0	
PHF	.864	.938	.713	.865	.872	.375	.973	.863	.000	.983	.757	.646	.862	.786	.820	.250	.957	.902	.000	.975
Cars	113	43	114	40	310	3	886	69	0	958	106	31	98	22	257	1	900	148	0	1049
% Cars	99.1	95.6	97.4	88.9	96.6	100	97.3	100	0	97.5	100	100	98	100	99.2	100	97.5	100	0	97.9
Trucks	1	2	3	5	11	0	25	0	0	25	0	0	2	0	2	0	23	0	0	23
% Trucks	0.9	4.4	2.6	11.1	3.4	0	2.7	0	0	2.5	0	0	2	0	0.8	0	2.5	0	0	2.1

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 1

Groups Printed- Cars

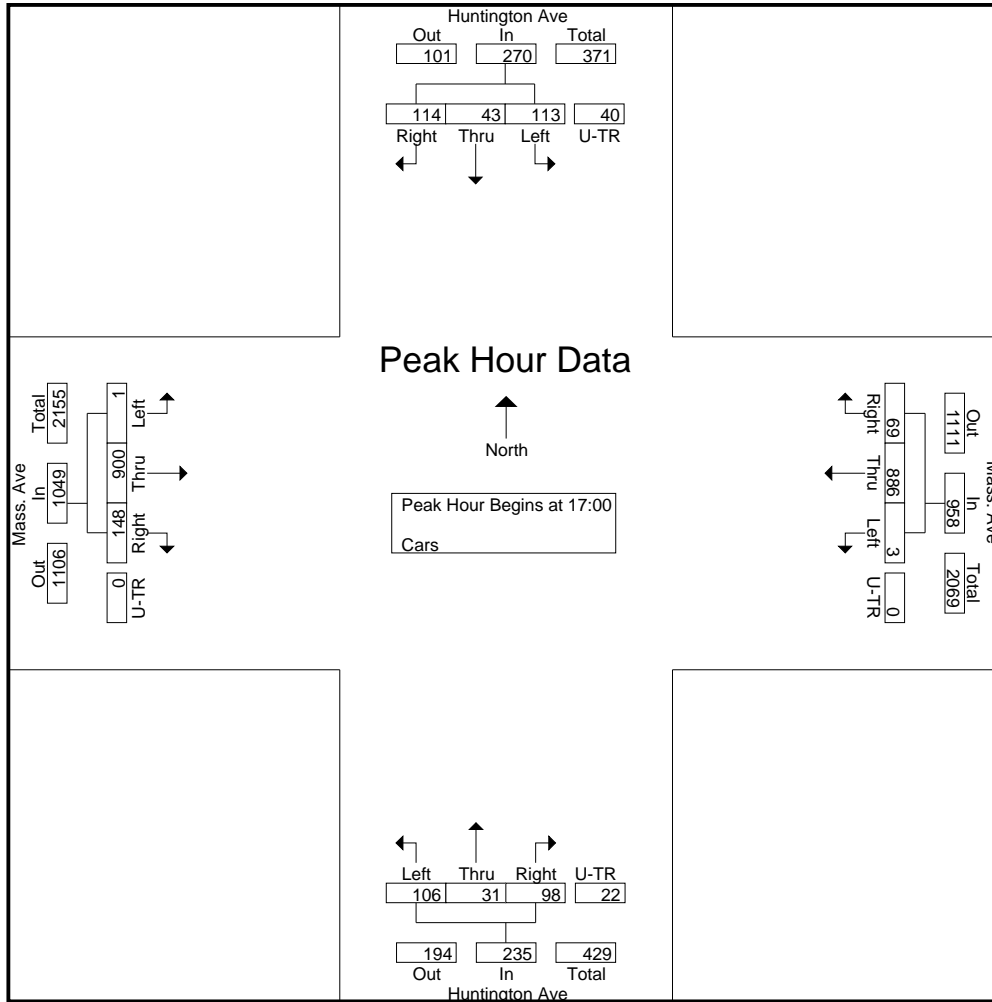
Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
16:00	21	6	16	7	0	190	26	0	21	11	13	9	0	204	34	0	558
16:15	32	13	20	9	0	214	15	0	17	7	22	4	0	236	31	0	620
16:30	26	6	14	9	0	214	7	0	28	2	17	3	1	216	39	0	582
16:45	31	11	19	8	0	216	10	0	36	3	30	6	1	214	19	0	604
Total	110	36	69	33	0	834	58	0	102	23	82	22	2	870	123	0	2364
17:00	33	10	28	9	0	225	20	0	21	8	23	7	0	219	41	0	644
17:15	22	12	19	10	0	220	20	0	26	7	20	5	0	237	34	0	632
17:30	28	9	39	13	1	225	15	0	24	4	29	4	1	219	38	0	649
17:45	30	12	28	8	2	216	14	0	35	12	26	6	0	225	35	0	649
Total	113	43	114	40	3	886	69	0	106	31	98	22	1	900	148	0	2574
Grand Total	223	79	183	73	3	1720	127	0	208	54	180	44	3	1770	271	0	4938
Apprch %	40	14.2	32.8	13.1	0.2	93	6.9	0	42.8	11.1	37	9.1	0.1	86.6	13.3	0	
Total %	4.5	1.6	3.7	1.5	0.1	34.8	2.6	0	4.2	1.1	3.6	0.9	0.1	35.8	5.5	0	

Start Time	Huntington Ave From North					Mass. Ave From East					Huntington Ave From South					Mass. Ave From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
16:00	21	6	16	7	50	0	190	26	0	216	21	11	13	9	54	0	204	34	0	248	558
16:15	32	13	20	9	74	0	214	15	0	229	17	7	22	4	58	0	236	31	0	267	620
16:30	26	6	14	9	60	0	214	7	0	221	28	2	17	3	58	1	216	39	0	255	582
16:45	31	11	19	8	69	0	216	10	0	226	36	3	30	6	75	1	214	19	0	233	604
Total	110	36	69	33	253	0	834	58	0	892	102	23	82	22	257	2	870	123	0	978	2364
17:00	33	10	28	9	80	0	225	20	0	245	21	8	23	7	59	0	219	41	0	260	644
17:15	22	12	19	10	63	0	220	20	0	240	26	7	20	5	58	0	237	34	0	271	632
17:30	28	9	39	13	89	1	225	15	0	241	24	4	29	4	61	1	219	38	0	258	649
17:45	30	12	28	8	78	2	216	14	0	232	35	12	26	6	79	0	225	35	0	260	649
Total	113	43	114	40	310	3	886	69	0	958	106	31	98	22	257	1	900	148	0	1049	2574
% App. Total	36.5	13.9	36.8	12.9		0.3	92.5	7.2	0		41.2	12.1	38.1	8.6		0.1	85.8	14.1	0		
PHF	.856	.896	.731	.769	.871	.375	.984	.863	.000	.978	.757	.646	.845	.786	.813	.250	.949	.902	.000	.968	.992

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

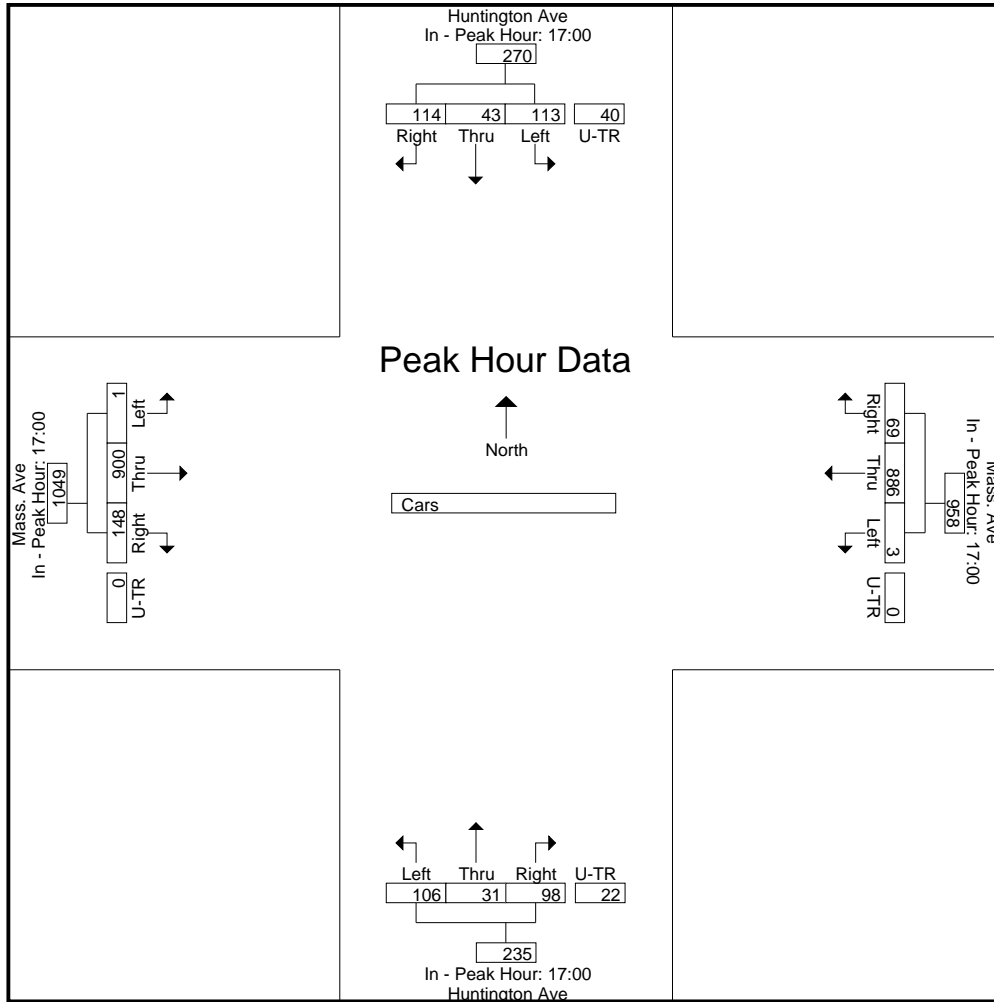
Peak Hour for Each Approach Begins at:

	17:00					17:00					17:00									
+0 mins.	33	10	28	9	80	0	225	20	0	245	21	8	23	7	59	0	219	41	0	260
+15 mins.	22	12	19	10	63	0	220	20	0	240	26	7	20	5	58	0	237	34	0	271
+30 mins.	28	9	39	13	89	1	225	15	0	241	24	4	29	4	61	1	219	38	0	258
+45 mins.	30	12	28	8	78	2	216	14	0	232	35	12	26	6	79	0	225	35	0	260
Total Volume	113	43	114	40	310	3	886	69	0	958	106	31	98	22	257	1	900	148	0	1049
% App. Total	36.5	13.9	36.8	12.9		0.3	92.5	7.2	0		41.2	12.1	38.1	8.6		0.1	85.8	14.1	0	
PHF	.856	.896	.731	.769	.871	.375	.984	.863	.000	.978	.757	.646	.845	.786	.813	.250	.949	.902	.000	.968

Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 1

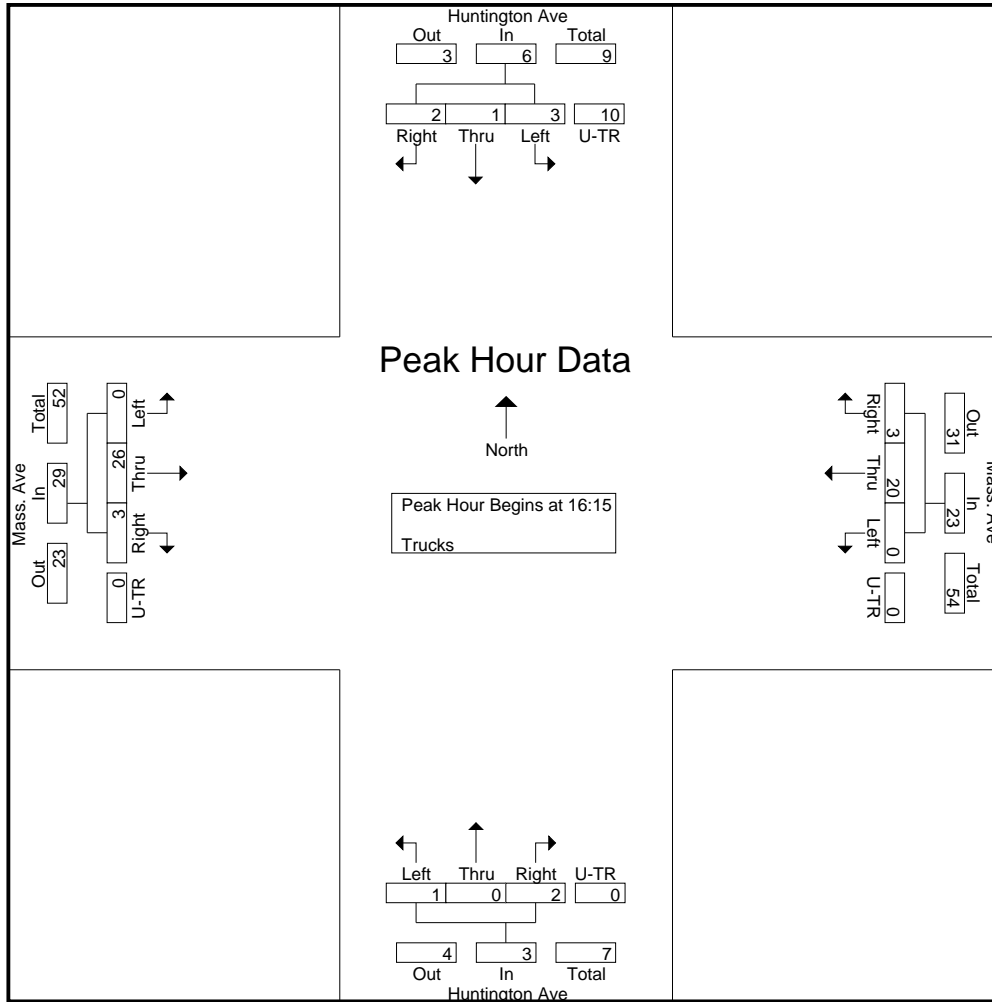
Groups Printed- Trucks

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	Left	Thru	Right	U-TR	
16:00	1	0	0	1	0	7	0	0	0	0	0	0	0	5	0	0	14
16:15	3	0	1	2	0	4	1	0	1	0	0	0	0	6	1	0	19
16:30	0	0	1	3	0	9	1	0	0	0	1	0	0	5	0	0	20
16:45	0	0	0	3	0	4	1	0	0	0	0	0	0	7	2	0	17
Total	4	0	2	9	0	24	3	0	1	0	1	0	0	23	3	0	70
17:00	0	1	0	2	0	3	0	0	0	0	1	0	0	8	0	0	15
17:15	0	0	0	2	0	6	0	0	0	0	1	0	0	4	0	0	13
17:30	0	1	2	0	0	9	0	0	0	0	0	0	0	7	0	0	19
17:45	1	0	1	1	0	7	0	0	0	0	0	0	0	4	0	0	14
Total	1	2	3	5	0	25	0	0	0	0	2	0	0	23	0	0	61
Grand Total	5	2	5	14	0	49	3	0	1	0	3	0	0	46	3	0	131
Apprch %	19.2	7.7	19.2	53.8	0	94.2	5.8	0	25	0	75	0	0	93.9	6.1	0	
Total %	3.8	1.5	3.8	10.7	0	37.4	2.3	0	0.8	0	2.3	0	0	35.1	2.3	0	

Start Time	Huntington Ave From North					Mass. Ave From East					Huntington Ave From South					Mass. Ave From West					Int. Total
	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	Left	Thru	Right	U-TR	App. Total	
16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	3	0	1	2	6	0	4	1	0	5	1	0	0	0	1	0	6	1	0	7	19
16:30	0	0	1	3	4	0	9	1	0	10	0	0	1	0	1	0	5	0	0	5	20
16:45	0	0	0	3	3	0	4	1	0	5	0	0	0	0	0	0	7	2	0	9	17
17:00	0	1	0	2	3	0	3	0	0	3	0	0	1	0	1	0	8	0	0	8	15
Total Volume	3	1	2	10	16	0	20	3	0	23	1	0	2	0	3	0	26	3	0	29	71
% App. Total	18.8	6.2	12.5	62.5		0	87	13	0		33.3	0	66.7	0		0	89.7	10.3	0		
PHF	.250	.250	.500	.833	.667	.000	.556	.750	.000	.575	.250	.000	.500	.000	.750	.000	.813	.375	.000	.806	.888

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1

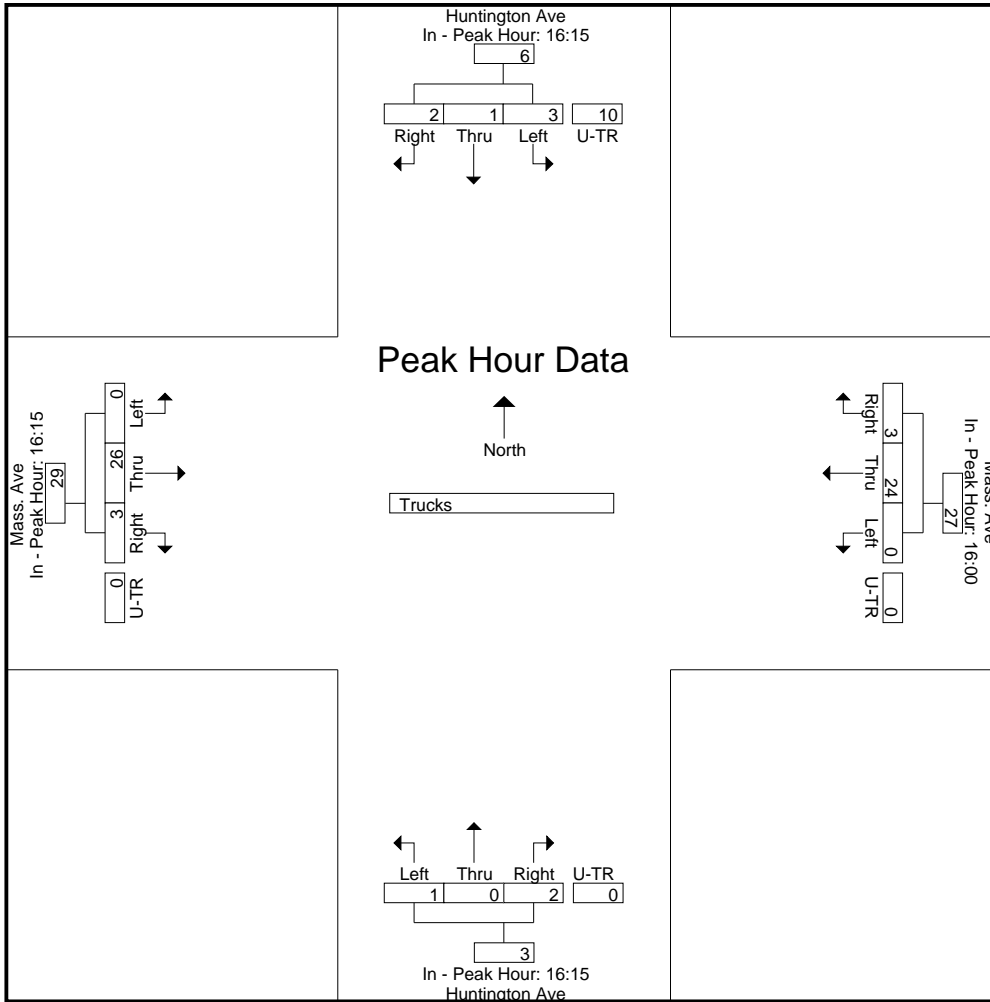
Peak Hour for Each Approach Begins at:

	16:15					16:00					16:15					16:15				
+0 mins.	3	0	1	2	6	0	7	0	0	7	1	0	0	0	1	0	6	1	0	7
+15 mins.	0	0	1	3	4	0	4	1	0	5	0	0	1	0	1	0	5	0	0	5
+30 mins.	0	0	0	3	3	0	9	1	0	10	0	0	0	0	0	0	7	2	0	9
+45 mins.	0	1	0	2	3	0	4	1	0	5	0	0	1	0	1	0	8	0	0	8
Total Volume	3	1	2	10	16	0	24	3	0	27	1	0	2	0	3	0	26	3	0	29
% App. Total	18.8	6.2	12.5	62.5		0	88.9	11.1	0		33.3	0	66.7	0		0	89.7	10.3	0	
PHF	.250	.250	.500	.833	.667	.000	.667	.750	.000	.675	.250	.000	.500	.000	.750	.000	.813	.375	.000	.806

Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 1

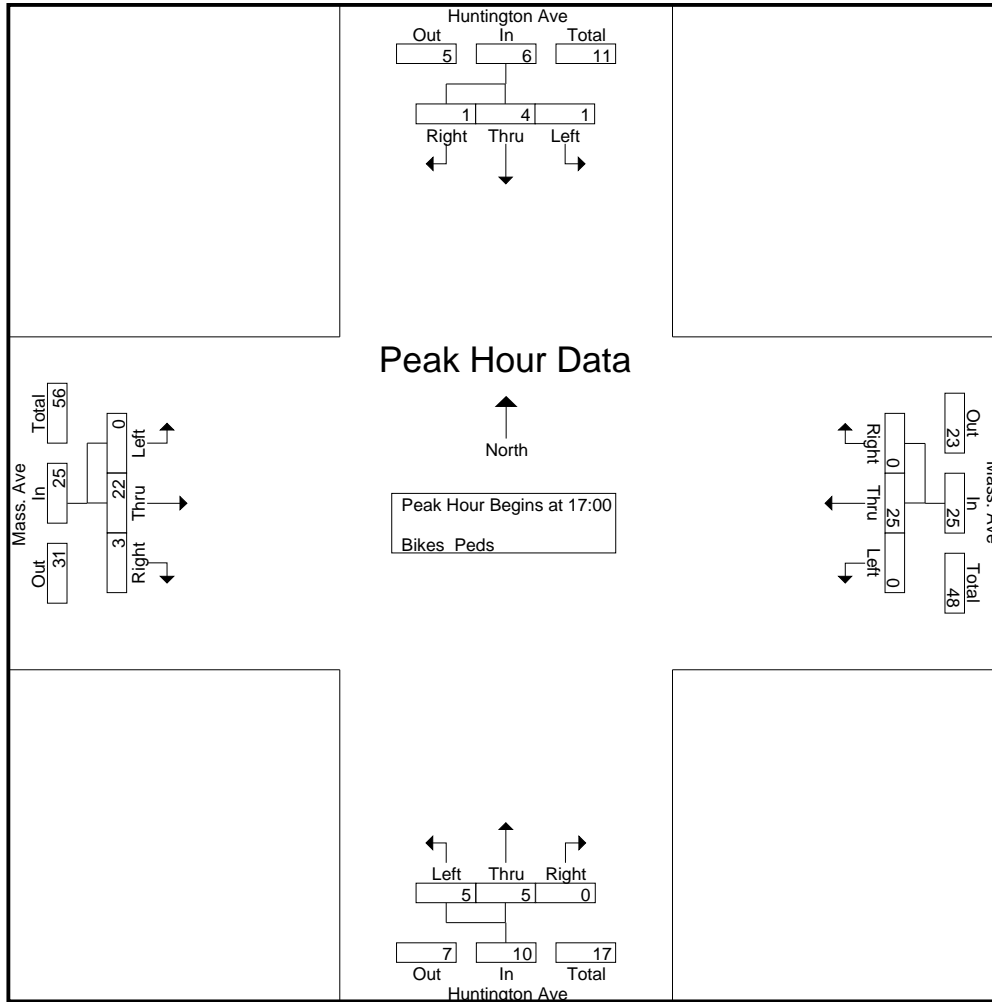
Groups Printed- Bikes Peds

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
16:00	0	1	0	43	0	2	0	51	2	0	0	94	0	3	0	34	222	8	230
16:15	0	0	0	75	0	5	0	52	1	1	0	96	0	1	2	28	251	10	261
16:30	1	0	0	77	0	4	0	45	1	1	0	88	0	2	0	27	237	9	246
16:45	0	1	1	71	0	0	0	39	1	2	0	121	0	3	1	39	270	9	279
Total	1	2	1	266	0	11	0	187	5	4	0	399	0	9	3	128	980	36	1016
17:00	0	0	0	79	0	3	0	43	1	3	0	152	0	5	1	34	308	13	321
17:15	0	2	0	56	0	8	0	37	0	0	0	145	0	3	0	51	289	13	302
17:30	0	1	1	69	0	9	0	43	3	0	0	112	0	7	1	47	271	22	293
17:45	1	1	0	53	0	5	0	39	1	2	0	127	0	7	1	36	255	18	273
Total	1	4	1	257	0	25	0	162	5	5	0	536	0	22	3	168	1123	66	1189
Grand Total	2	6	2	523	0	36	0	349	10	9	0	935	0	31	6	296	2103	102	2205
Apprch %	20	60	20		0	100	0		52.6	47.4	0		0	83.8	16.2				
Total %	2	5.9	2		0	35.3	0		9.8	8.8	0		0	30.4	5.9		95.4	4.6	

Start Time	Huntington Ave From North				Mass. Ave From East				Huntington Ave From South				Mass. Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	3	0	3	1	3	0	4	0	5	1	6	13
17:15	0	2	0	2	0	8	0	8	0	0	0	0	0	3	0	3	13
17:30	0	1	1	2	0	9	0	9	3	0	0	3	0	7	1	8	22
17:45	1	1	0	2	0	5	0	5	1	2	0	3	0	7	1	8	18
Total Volume	1	4	1	6	0	25	0	25	5	5	0	10	0	22	3	25	66
% App. Total	16.7	66.7	16.7		0	100	0		50	50	0		0	88	12		
PHF	.250	.500	.250	.750	.000	.694	.000	.694	.417	.417	.000	.625	.000	.786	.750	.781	.750

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 2



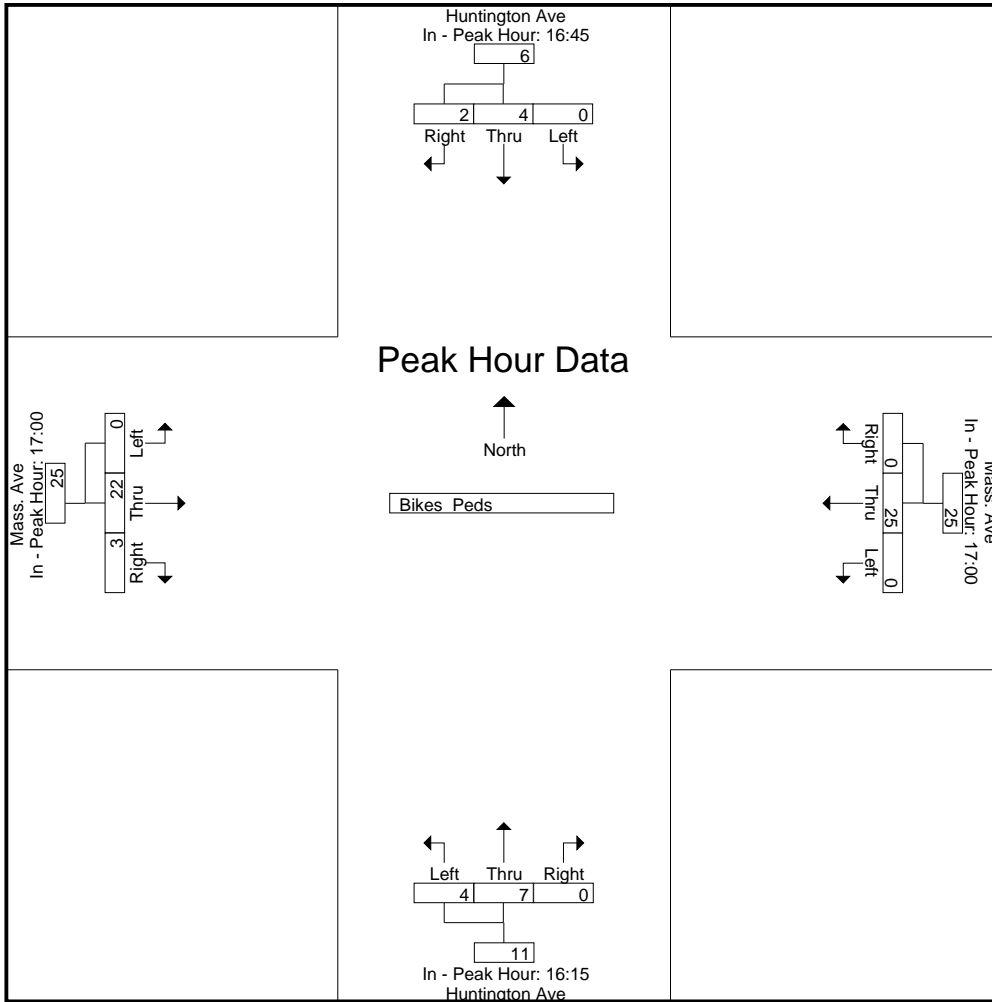
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	16:45				17:00				16:15				17:00			
+0 mins.	0	1	1	2	0	3	0	3	1	1	0	2	0	5	1	6
+15 mins.	0	0	0	0	0	8	0	8	1	1	0	2	0	3	0	3
+30 mins.	0	2	0	2	0	9	0	9	1	2	0	3	0	7	1	8
+45 mins.	0	1	1	2	0	5	0	5	1	3	0	4	0	7	1	8
Total Volume	0	4	2	6	0	25	0	25	4	7	0	11	0	22	3	25
% App. Total	0	66.7	33.3		0	100	0		36.4	63.6	0		0	88	12	
PHF	.000	.500	.500	.750	.000	.694	.000	.694	1.000	.583	.000	.688	.000	.786	.750	.781

Accurate Counts
978-664-2565

N/S Street : Huntington Avenue
E/W Street: Massachusetts Avenue
City/State : Boston, MA
Weather : Rain

File Name : 82050001
Site Code : 82050001
Start Date : 10/19/2011
Page No : 3





PRECISION
D A T A
INDUSTRIES, LLC

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Email: datarequests@pdillc.com

N/S/SW: Mass Ave (Rt 2A)/St. Stephens St
E/W: Christian Science Dwy/Westland Ave
City, State: Boston, MA
Client: Howard Stein-Hudson/ S. Kurpiel

File Name : 102240 A
Site Code : 10036.02
Start Date : 6/8/2010
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start	Massachusetts Avenue (Route 2A) From North				Christian Science Driveway From East				Massachusetts Avenue (Route 2A) From South				St. Stephen Street From Southwest				Westland Avenue From West				Int. Total
	Rig ht	Bear Right	Thru	Left	Right	Thru	Bear Left	Left	Right	Thru	Left	Hard Left	Hard Right	Bear Right	Bear Left	Hard Left	Hard Right	Right	Thru	Left	
07:00 AM	9	2	123	1	0	0	0	0	4	133	44	2	0	0	0	0	2	71	2	0	393
07:15 AM	10	2	111	4	0	0	0	0	5	142	63	5	0	0	0	0	1	55	1	0	399
07:30 AM	10	1	106	7	0	0	0	0	3	160	67	9	0	0	0	0	1	82	4	0	450
07:45 AM	12	0	117	3	0	0	0	0	3	163	63	3	0	0	0	0	6	84	1	1	456
Total	41	5	457	15	0	0	0	0	15	598	237	19	0	0	0	0	10	292	8	1	1698
08:00 AM	17	0	126	5	0	0	0	0	4	172	66	4	0	0	0	0	4	91	1	0	490
08:15 AM	16	2	104	6	0	0	0	0	4	136	57	6	0	0	0	0	6	64	1	1	403
08:30 AM	12	1	109	2	0	0	0	0	8	165	68	8	0	0	0	0	4	86	2	0	465
08:45 AM	14	0	121	1	1	0	0	0	8	155	78	5	0	0	0	0	4	54	2	0	443
Total	59	3	460	14	1	0	0	0	24	628	269	23	0	0	0	0	18	295	6	1	1801
Grand Total	100	8	917	29	1	0	0	0	39	1226	506	42	0	0	0	0	28	587	14	2	3499
Apprch %	9.5	0.8	87	2.8	100	0	0	0	2.2	67.6	27.9	2.3	0	0	0	0	4.4	93	2.2	0.3	
Total %	2.9	0.2	26.2	0.8	0	0	0	0	1.1	35	14.5	1.2	0	0	0	0	0.8	16.8	0.4	0.1	
Cars	78	6	811	29	1	0	0	0	38	1057	482	37	0	0	0	0	27	565	14	2	3147
% Cars	78	75	88.4	100	100	0	0	0	97.4	86.2	95.3	88.1	0	0	0	0	96.4	96.3	100	100	89.9
Heavy Vehicles	22	2	106	0	0	0	0	0	1	169	24	5	0	0	0	0	1	22	0	0	352
% Heavy Vehicles	22	25	11.6	0	0	0	0	0	2.6	13.8	4.7	11.9	0	0	0	0	3.6	3.7	0	0	10.1

Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total
	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:45 AM																										
07:45 AM	12	0	117	3	132	0	0	0	0	0	3	163	63	3	232	0	0	0	0	0	6	84	1	1	92	456
08:00 AM	17	0	126	5	148	0	0	0	0	0	4	172	66	4	246	0	0	0	0	0	4	91	1	0	96	490
08:15 AM	16	2	104	6								136	57	6	203	0	0	0	0	0	6	64	1	1	72	403
08:30 AM	12	1	109	2	124	0	0	0	0	0	8	165	68	8	249							2	0	92	465	
Total Volume	57	3	456	16	532	0	0	0	0	0	19	636	254	21	930	0	0	0	0	0	20	325	5	2	352	1814
% App. Total	10.7	0.6	85.7	3		0	0	0	0		2	68.4	27.3	2.3		0	0	0	0		5.7	92.3	1.4	0.6		
PHF	.838	.375	.905	.667	.899	.000	.000	.000	.000	.000	.594	.924	.934	.656		.000	.000	.000	.000	.000	.833	.893	.625	.500	.917	.926
Cars	42	3	399	16	460	0	0	0	0	0	18	561	244	19	842	0	0	0	0	0	19	313	5	2	339	1641
% Cars	73.7	100	87.5	100	86.5	0	0	0	0	0	94.7	88.2	96.1	90.5	90.5	0	0	0	0	0	95.0	96.3	100	100	96.3	90.5
Heavy Vehicles																										
% Heavy Vehicles	26.3	0	12.5	0	13.5	0	0	0	0	0	5.3	11.8	3.9	9.5	9.5	0	0	0	0	0	5.0	3.7	0	0	3.7	9.5



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

N/S/SW: Mass Ave (Rt 2A)/St. Stephens St
E/W: Christian Science Dwy/Westland Ave
City, State: Boston, MA
Client: Howard Stein-Hudson/ S. Kurpiel

File Name : 102240 A
Site Code : 10036.02
Start Date : 6/8/2010
Page No : 1

Groups Printed- Cars

Start	Massachusetts Avenue (Route 2A) From North				Christian Science Driveway From East				Massachusetts Avenue (Route 2A) From South				St. Stephen Street From Southwest				Westland Avenue From West				Int. Total
	Rig ht	Bear Right	Thru	Left	Right	Thru	Bear Left	Left	Right	Thru	Left	Hard Left	Hard Right	Bear Right	Bear Left	Hard Left	Hard Right	Right	Thru	Left	
07:00 AM	6	0	111	1	0	0	0	0	4	110	39	2	0	0	0	0	2	68	2	0	345
07:15 AM	10	2	101	4	0	0	0	0	5	116	60	5	0	0	0	0	1	52	1	0	357
07:30 AM	9	1	92	7	0	0	0	0	3	140	63	7	0	0	0	0	1	79	4	0	406
07:45 AM	10	0	102	3	0	0	0	0	3	143	61	3	0	0	0	0	5	82	1	1	414
Total	35	3	406	15	0	0	0	0	15	509	223	17	0	0	0	0	9	281	8	1	1522
08:00 AM	13	0	113	5	0	0	0	0	4	156	64	3	0	0	0	0	4	88	1	0	451
08:15 AM	12	2	90	6	0	0	0	0	3	120	55	5	0	0	0	0	6	61	1	1	362
08:30 AM	7	1	94	2	0	0	0	0	8	142	64	8	0	0	0	0	4	82	2	0	414
08:45 AM	11	0	108	1	1	0	0	0	8	130	76	4	0	0	0	0	4	53	2	0	398
Total	43	3	405	14	1	0	0	0	23	548	259	20	0	0	0	0	18	284	6	1	1625
Grand Total	78	6	811	29	1	0	0	0	38	1057	482	37	0	0	0	0	27	565	14	2	3147
Apprch %	8.4	0.6	87.8	3.1	100	0	0	0	2.4	65.5	29.9	2.3	0	0	0	0	4.4	92.9	2.3	0.3	
Total %	2.5	0.2	25.8	0.9	0	0	0	0	1.2	33.6	15.3	1.2	0	0	0	0	0.9	18	0.4	0.1	

Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total
	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:45 AM																										
07:45 AM	10	0	102	3	115	0	0	0	0	0	3	143	61	3	210	0	0	0	0	0	5	82	1	1	89	414
08:00 AM	13	0	113	5	131	0	0	0	0	0	4	156	64	3	227	0	0	0	0	0	4	88	1	0	93	451
08:15 AM	12	2	90	6								120	55	5	183	0	0	0	0	0	6					
08:30 AM	7	1	94	2	104	0	0	0	0	0	8	142	64	8	222	0	0	0	0	0	4	82	2	0	88	414
Total Volume	42	3	399	16	460	0	0	0	0	0	18	561	244	19	842	0	0	0	0	0	19	313	5	2	339	1641
% App. Total	9.1	0.7	86.7	3.5		0	0	0	0		2.1	66.6	29	2.3		0	0	0	0		5.6	92.3	1.5	0.6		
PHF	.808	.375	.883	.667	.878	.000	.000	.000	.000	.000	.563	.899	.953	.594		.000	.000	.000	.000	.000	.792	.889	.625	.500	.911	.910



PRECISION
D A T A
INDUSTRIES, LLC

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N/S/SW: Mass Ave (Rt 2A)/St. Stephens St
E/W: Christian Science Dwy/Westland Ave
City, State: Boston, MA
Client: Howard Stein-Hudson/ S. Kurpiel

File Name : 102240 A
Site Code : 10036.02
Start Date : 6/8/2010
Page No : 1

Groups Printed- Heavy Vehicles

Start	Massachusetts Avenue (Route 2A) From North				Christian Science Driveway From East				Massachusetts Avenue (Route 2A) From South				St. Stephen Street From Southwest				Westland Avenue From West				Int. Total	
	Rig ht	Bear Right	Thru	Left	Right	Thru	Bear Left	Left	Right	Thru	Left	Hard Left	Hard Right	Bear Right	Bear Left	Hard Left	Hard Right	Right	Thru	Left		
07:00 AM	3	2	12	0	0	0	0	0	0	23	5	0	0	0	0	0	0	0	3	0	0	48
07:15 AM	0	0	10	0	0	0	0	0	0	26	3	0	0	0	0	0	0	0	3	0	0	42
07:30 AM	1	0	14	0	0	0	0	0	0	20	4	2	0	0	0	0	0	0	3	0	0	44
07:45 AM	2	0	15	0	0	0	0	0	0	20	2	0	0	0	0	0	0	1	2	0	0	42
Total	6	2	51	0	0	0	0	0	0	89	14	2	0	0	0	0	0	1	11	0	0	176
08:00 AM	4	0	13	0	0	0	0	0	0	16	2	1	0	0	0	0	0	0	3	0	0	39
08:15 AM	4	0	14	0	0	0	0	0	1	16	2	1	0	0	0	0	0	0	3	0	0	41
08:30 AM	5	0	15	0	0	0	0	0	0	23	4	0	0	0	0	0	0	0	4	0	0	51
08:45 AM	3	0	13	0	0	0	0	0	0	25	2	1	0	0	0	0	0	0	1	0	0	45
Total	16	0	55	0	0	0	0	0	1	80	10	3	0	0	0	0	0	0	11	0	0	176
Grand Total	22	2	106	0	0	0	0	0	1	169	24	5	0	0	0	0	0	1	22	0	0	352
Apprch %	16.9	1.5	81.5	0	0	0	0	0	0.5	84.9	12.1	2.5	0	0	0	0	0	4.3	95.7	0	0	
Total %	6.2	0.6	30.1	0	0	0	0	0	0.3	48	6.8	1.4	0	0	0	0	0	0.3	6.2	0	0	

Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total	
	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																											
Peak Hour for Entire Intersection Begins at 07:00 AM																											
07:00 AM	3	2	12	0	17	0	0	0	0	0	0	23	5	0	28	0	0	0	0	0	0	0	3	0	0	3	48
07:15 AM	0	0	10	0	10	0	0	0	0	0	0	26	3	0	29	0	0	0	0	0	0	0	3	0	0	3	44
07:30 AM	1	0	14	0	15	0	0	0	0	0	0	20	4	2	26	0	0	0	0	0	0	0	3	0	0	3	44
07:45 AM	2	0	15	0	17	0	0	0	0	0	0	20	2	0	22	0	0	0	0	0	0	1	2	0	0	3	42
Total Volume	6	2	51	0	59	0	0	0	0	0	0	89	14	2	105	0	0	0	0	0	0	1	11	0	0	12	176
% App. Total	10.2	3.4	86.4	0		0	0	0	0		0	84.8	13.3	1.9		0	0	0	0		8.3	91.7	0	0			
PHF	.500	.250	.850	.000	.868	.000	.000	.000	.000	.000	.000	.856	.700	.250		.000	.000	.000	.000	.000		.250	.917	.000	.000	1.000	.917



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E/W: Christian Science Dwy/Westland Ave
City, State: Boston, MA
Client: Howard Stein-Hudson/ S. Kurpiel

File Name : 102240 A
Site Code : 10036.02
Start Date : 6/8/2010
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total
	Right	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds	
07:00 AM	0	0	5	0	20	0	0	0	0	6	0	4	0	0	0	0	0	0	0	23	0	4	0	0	9	71
07:15 AM	0	0	5	0	25	0	1	0	0	5	0	5	1	0	0	0	0	0	0	31	0	1	0	0	31	105
07:30 AM	3	0	8	0	28	0	0	0	0	5	0	10	2	0	0	0	0	0	0	35	0	0	0	0	41	132
07:45 AM	1	0	14	0	48	0	0	0	0	7	0	5	1	0	0	0	0	0	0	57	0	0	0	0	42	175
Total	4	0	32	0	121	0	1	0	0	23	0	24	4	0	0	0	0	0	0	146	0	5	0	0	123	483
08:00 AM	0	0	8	0	36	0	0	0	0	9	0	7	0	0	0	0	0	0	0	33	0	1	0	0	58	152
08:15 AM	0	0	7	0	41	0	0	0	0	9	0	10	3	0	0	0	0	0	0	31	0	1	0	0	46	148
08:30 AM	0	0	8	0	49	0	0	0	0	20	0	17	1	0	0	0	0	0	0	35	0	3	1	0	30	164
08:45 AM	1	0	5	0	66	0	1	0	0	9	0	12	2	0	0	0	0	0	0	41	0	4	0	0	59	200
Total	1	0	28	0	192	0	1	0	0	47	0	46	6	0	0	0	0	0	0	140	0	9	1	0	193	664
Grand Total	5	0	60	0	313	0	2	0	0	70	0	70	10	0	0	0	0	0	0	286	0	14	1	0	316	1147
Apprch %	1.3	0	15.9	0	82.8	0	2.8	0	0	97.2	0	87.5	12.5	0	0	0	0	0	0	100	0	4.2	0.3	0	95.5	
Total %	0.4	0	5.2	0	27.3	0	0.2	0	0	6.1	0	6.1	0.9	0	0	0	0	0	0	24.9	0	1.2	0.1	0	27.6	

Start Time	Massachusetts Avenue (Route 2A) From North						Christian Science Driveway From East						Massachusetts Avenue (Route 2A) From South						St. Stephen Street From Southwest						Westland Avenue From West						Int. Total	
	Right	Bear Right	Thru	Left	Peds	App. Total	Right	Thru	Bear Left	Left	Peds	App. Total	Right	Thru	Left	Hard Left	Peds	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																																
Peak Hour for Entire Intersection Begins at 08:00 AM																																
08:00 AM	0	0	8	0	36	44	0	0	0	0	9	9	0	7	0	0	0	7	0	0	0	0	33	33	0	1	0	0	58	59	152	
08:15 AM	0	0	7	0	41	48	0	0	0	0	9	9	0	10	3	0	0	13	0	0	0	0	31	31	0	1	0	0	46	47	148	
08:30 AM	0	0	8	0	49	57	0	0	0	0	20	20	0	17	1	0	0	18	0	0	0	0	35	35	0	3	1	0	30	34	164	
08:45 AM	1	0	5	0	66	72	0	1	0	0	9	10	0	12	2	0	0	14	0	0	0	0	41	41	0	4	0	0	59	63	200	
Total Volume	1	0	28	0	192	221	0	1	0	0	47	48	0	46	6	0	0	52	0	0	0	0	140	140	0	9	1	0	193	203	664	
% App. Total	0.5	0	12.7	0	86.9		0	2.1	0	0	97.9		0	88.5	11.5	0	0		0	0	0	0	100		0	4.4	0.5	0	95.1			
PHF	.250	.000	.875	.000	.727	.767	.000	.250	.000	.000	.588	.600	.000	.676	.500	.000	.722	.000	.000	.000	.000	.854	.854	.000	.563	.250	.000	.818	.806	.830		



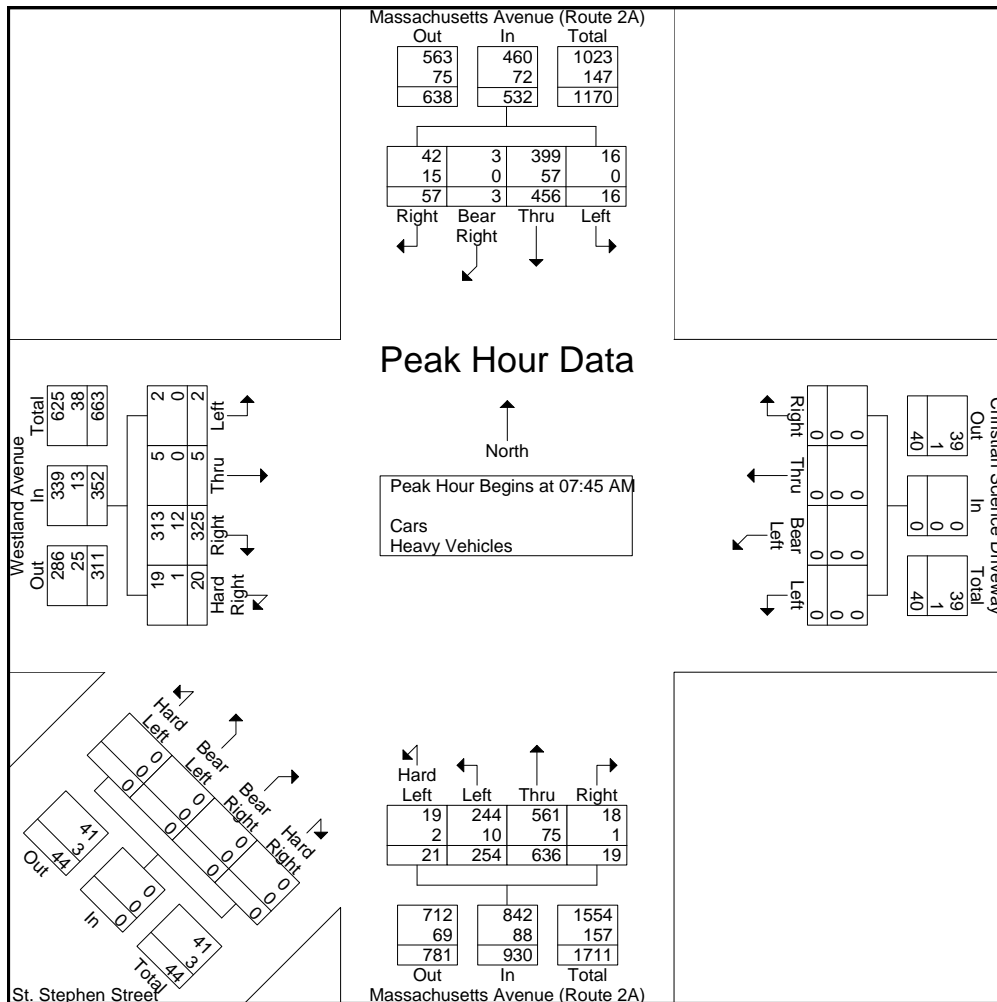
PRECISION
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N/S/SW: Mass Ave (Rt 2A)/St. Stephens St
E/W: Christian Science Dwy/Westland Ave
City, State: Boston, MA
Client: Howard Stein-Hudson/ S. Kurpiel

File Name : 102240 A
Site Code : 10036.02
Start Date : 6/8/2010
Page No : 1

Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total
	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:45 AM																										
07:45 AM	12	0	117	3	132	0	0	0	0	0	3	163	63	3	232	0	0	0	0	0	6	84	1	1	92	456
08:00 AM	17	0	126	5	148	0	0	0	0	0	4	172	66	4	246	0	0	0	0	0	4	91	1	0	96	490
08:15 AM	16	2	104	6								136	57	6	203	0	0	0	0	0	6	64	1	1	72	403
08:30 AM	12	1	109	2	124	0	0	0	0	0	8	165	68	8	249								2	0	92	465
Total Volume	57	3	456	16	532	0	0	0	0	0	19	636	254	21	930	0	0	0	0	0	20	325	5	2	352	1814
% App. Total	10.7	0.6	85.7	3							2	68.4	27.3	2.3		0	0	0	0	0	5.7	92.3	1.4	0.6		
PHF	.838	.375	.905	.667	.899	.000	.000	.000	.000	.000	.594	.924	.934	.656		.000	.000	.000	.000	.000	.833	.893	.625	.500	.917	.926
Cars	42	3	399	16	460	0	0	0	0	0	18	561	244	19	842	0	0	0	0	0	19	313	5	2	339	1641
% Cars	73.7	100	87.5	100	86.5	0	0	0	0	0	94.7	88.2	96.1	90.5	90.5	0	0	0	0	0	95.0	96.3	100	100	96.3	90.5
Heavy Vehicles																										
% Heavy Vehicles	26.3	0	12.5	0	13.5	0	0	0	0	0	5.3	11.8	3.9	9.5	9.5	0	0	0	0	0	5.0	3.7	0	0	3.7	9.5





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N/S/SW: Mass Ave (Rt 2A)/St. Stephens St
E/W: Christian Science Dwy/Westland Ave
City, State: Boston, MA
Client: Howard Stein-Hudson/ S. Kurpiel

File Name : 102240 AA
Site Code : 10036.02
Start Date : 6/8/2010
Page No : 1

Groups Printed- Cars

Start	Massachusetts Avenue (Route 2A) From North				Christian Science Driveway From East				Massachusetts Avenue (Route 2A) From South				St. Stephen Street From Southwest				Westland Avenue From West				Int. Total
	Right	Bear Right	Thru	Left	Right	Thru	Bear Left	Left	Right	Thru	Left	Hard Left	Hard Right	Bear Right	Bear Left	Hard Left	Hard Right	Right	Thru	Left	
04:00 PM	13	8	150	3	4	2	0	0	0	134	87	10	0	0	0	0	8	69	0	1	489
04:15 PM	7	10	149	0	8	0	0	0	0	151	74	7	0	0	0	0	3	75	1	0	485
04:30 PM	10	11	147	0	11	1	0	0	0	156	81	11	0	0	0	0	3	65	0	0	496
04:45 PM	12	9	133	0	7	0	0	0	0	156	96	8	0	0	0	0	0	61	1	0	483
Total	42	38	579	3	30	3	0	0	0	597	338	36	0	0	0	0	14	270	2	1	1953
05:00 PM	13	12	150	1	15	5	3	0	2	183	108	0	0	0	0	0	12	78	0	1	583
05:15 PM	13	10	183	0	5	3	0	0	1	201	106	9	0	0	0	0	1	58	1	2	593
05:30 PM	12	15	112	1	8	4	0	0	1	150	97	7	0	0	0	0	5	66	0	0	478
05:45 PM	7	8	154	2	7	3	0	0	4	166	106	8	0	0	0	0	4	48	0	1	518
Total	45	45	599	4	35	15	3	0	8	700	417	24	0	0	0	0	22	250	1	4	2172
Grand Total	87	83	1178	7	65	18	3	0	8	1297	755	60	0	0	0	0	36	520	3	5	4125
Apprch %	6.4	6.1	86.9	0.5	75.6	20.9	3.5	0	0.4	61.2	35.6	2.8	0	0	0	0	6.4	92.2	0.5	0.9	
Total %	2.1	2	28.6	0.2	1.6	0.4	0.1	0	0.2	31.4	18.3	1.5	0	0	0	0	0.9	12.6	0.1	0.1	

Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total
	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 05:00 PM																										
05:00 PM	13	12	150	1	176	15	5	3	0	23	2	183	108	0	293	0	0	0	0	0	12	78	0	1	91	583
05:15 PM	13	10	183	0	206	5	3	0	0	8	1	201	106	9	317	0	0	0	0	0	1	58	1	2	62	593
05:30 PM	12	15	112	1	140	8	4	0	0	12	1	150	97	7	255	0	0	0	0	0	5	66	0	0	71	478
05:45 PM	7	8	154	2		7	3	0	0		4	166	106	8	284	0	0	0	0	0	4	48	0	1	53	518
Total Volume			599	4	693	35	15	3	0	53	8	700	417	24	1149							250	1	4	277	2172
% App. Total	6.5	6.5	86.4	0.6		66	28.3	5.7	0		0.7	60.9	36.3	2.1		0	0	0	0		7.9	90.3	0.4	1.4		
PHF	.865	.750	.818	.500	.841	.583	.750	.250	.000	.576	.500	.871	.965	.667		.000	.000	.000	.000	.000	.458	.801	.250	.500	.761	.916



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E/W: Christian Science Dwy/Westland Ave
City, State: Boston, MA
Client: Howard Stein-Hudson/ S. Kurpiel

File Name : 102240 AA
Site Code : 10036.02
Start Date : 6/8/2010
Page No : 1

Groups Printed- Heavy Vehicles

Start	Massachusetts Avenue (Route 2A) From North				Christian Science Driveway From East				Massachusetts Avenue (Route 2A) From South				St. Stephen Street From Southwest				Westland Avenue From West				Int. Total
	Right	Bear Right	Thru	Left	Right	Thru	Bear Left	Left	Right	Thru	Left	Hard Left	Hard Right	Bear Right	Bear Left	Hard Left	Hard Right	Right	Thru	Left	
04:00 PM	0	1	9	0	0	0	0	0	0	13	1	0	0	0	0	0	0	7	0	0	31
04:15 PM	0	0	11	0	0	1	0	0	2	11	1	0	0	0	0	0	1	1	0	0	28
04:30 PM	0	0	12	0	0	0	0	0	0	4	2	0	0	0	0	0	0	3	0	0	21
04:45 PM	1	0	8	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	16
Total	1	1	40	0	0	1	0	0	2	35	4	0	0	0	0	0	1	11	0	0	96
05:00 PM	2	0	5	0	0	0	0	0	1	9	1	0	0	0	0	0	0	2	0	0	20
05:15 PM	0	0	8	0	0	0	0	0	0	5	2	0	0	0	0	0	0	1	1	0	17
05:30 PM	1	0	7	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	17
05:45 PM	0	0	6	0	0	0	0	0	1	4	1	0	0	0	0	0	0	2	0	0	14
Total	3	0	26	0	0	0	0	0	2	27	4	0	0	0	0	0	0	5	1	0	68
Grand Total	4	1	66	0	0	1	0	0	4	62	8	0	0	0	0	0	1	16	1	0	164
Apprch %	5.6	1.4	93	0	0	100	0	0	5.4	83.8	10.8	0	0	0	0	0	5.6	88.9	5.6	0	
Total %	2.4	0.6	40.2	0	0	0.6	0	0	2.4	37.8	4.9	0	0	0	0	0	0.6	9.8	0.6	0	

Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total
	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 04:00 PM																										
04:00 PM	0	1	9	0	10	0	0	0	0	0	0	13	1	0	14	0	0	0	0	0	0	7	0	0	7	31
04:15 PM	0	0	11	0	11	0	1	0	0	1	2	11	1	0	14	0	0	0	0	0	1	1	0	0	3	21
04:30 PM	0	0	12	0	12	0	0	0	0	0	0	4	2	0	6	0	0	0	0	0	0	3	0	0	3	21
04:45 PM	1	0	8	0	9	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	16
Total Volume	1	1	40	0	42	0	1	0	0	1	2	35	4	0	41	0	0	0	0	0	1	11	0	0	12	96
% App. Total	2.4	2.4	95.2	0		0	100	0	0		4.9	85.4	9.8	0		0	0	0	0		8.3	91.7	0	0		
PHF	.250	.250	.833	.000	.875	.000	.250	.000	.000	.250	.250	.673	.500	.000		.000	.000	.000	.000	.000	.250	.393	.000	.000	.429	.774



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E/W: Christian Science Dwy/Westland Ave
City, State: Boston, MA
Client: Howard Stein-Hudson/ S. Kurpiel

File Name : 102240 AA
Site Code : 10036.02
Start Date : 6/8/2010
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total	
	Right	Bear Right	Thru	Left	Peds	Right	Thru	Bear Left	Left	Peds	Right	Thru	Left	Hard Left	Peds	Hard Right	Bear Right	Bear Left	Hard Left	Peds	Hard Right	Right	Thru	Left	Peds		
04:00 PM	0	0	7	1	40	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	24	0	2	0	0	66	149
04:15 PM	0	0	5	0	67	0	0	0	0	21	0	5	1	0	0	0	0	0	0	36	0	0	0	0	76	211	
04:30 PM	0	0	4	0	65	0	3	0	0	4	0	9	1	0	0	0	0	0	0	50	0	1	0	1	82	220	
04:45 PM	0	0	8	0	80	0	0	0	0	19	0	14	0	0	0	0	0	0	0	48	0	10	0	0	87	266	
Total	0	0	24	1	252	0	3	0	0	44	0	37	2	0	0	0	0	0	0	158	0	13	0	1	311	846	
05:00 PM	6	0	9	0	67	1	2	0	0	25	0	15	1	0	0	0	0	0	0	40	0	3	0	0	74	243	
05:15 PM	8	0	18	0	70	1	3	0	0	27	0	17	4	0	0	0	0	0	0	36	0	0	0	0	75	259	
05:30 PM	0	0	11	0	96	0	0	0	0	24	0	12	1	0	0	0	0	0	0	17	0	0	0	0	42	203	
05:45 PM	0	0	7	0	73	0	1	0	0	24	0	8	0	0	0	0	0	0	0	23	0	0	0	0	25	161	
Total	14	0	45	0	306	2	6	0	0	100	0	52	6	0	0	0	0	0	0	116	0	3	0	0	216	866	
Grand Total	14	0	69	1	558	2	9	0	0	144	0	89	8	0	0	0	0	0	0	274	0	16	0	1	527	1712	
Apprch %	2.2	0	10.7	0.2	86.9	1.3	5.8	0	0	92.9	0	91.8	8.2	0	0	0	0	0	0	100	0	2.9	0	0.2	96.9		
Total %	0.8	0	4	0.1	32.6	0.1	0.5	0	0	8.4	0	5.2	0.5	0	0	0	0	0	0	16	0	0.9	0	0.1	30.8		

Start Time	Massachusetts Avenue (Route 2A) From North						Christian Science Driveway From East						Massachusetts Avenue (Route 2A) From South						St. Stephen Street From Southwest						Westland Avenue From West						Int. Total	
	Right	Bear Right	Thru	Left	Peds	App. Total	Right	Thru	Bear Left	Left	Peds	App. Total	Right	Thru	Left	Hard Left	Peds	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	Peds	App. Total	Hard Right	Right	Thru	Left	Peds	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																																
Peak Hour for Entire Intersection Begins at 04:30 PM																																
04:30 PM	0	0	4	0	65	69	0	3	0	0	4	7	0	9	1	0	0	10	0	0	0	0	50	50	0	1	0	1	82	84	220	
04:45 PM	0	0	8	0	80	88	0	0	0	0	19	19	0	14	0	0	0	14	0	0	0	0	48	48	0	10	0	0	87	97	266	
05:00 PM	6	0	9	0	67	82	1	2	0	0	25	28	0	15	1	0	0	16	0	0	0	0	40	40	0	3	0	0	74	77	243	
05:15 PM	8	0	18	0	70	96	1	3	0	0	27	31	0	17	4	0	0	21	0	0	0	0	174	174	0	14	0	1	318	333	259	
Total Volume	14	0	39	0	282	335	2	8	0	0	75	85	0	55	6	0	0	61	0	0	0	0	174	174	0	14	0	1	318	333	988	
% App. Total	4.2	0	11.6	0	84.2		2.4	9.4	0	0	88.2		0	90.2	9.8	0	0		0	0	0	0	100		0	4.2	0	0.3	95.5			
PHF	.438	.000	.542	.000	.881	.872	.500	.667	.000	.000	.694	.685	.000	.809	.375	.000	.000	.726	.000	.000	.000	.000	.870	.870	.000	.350	.000	.250	.914	.858	.929	



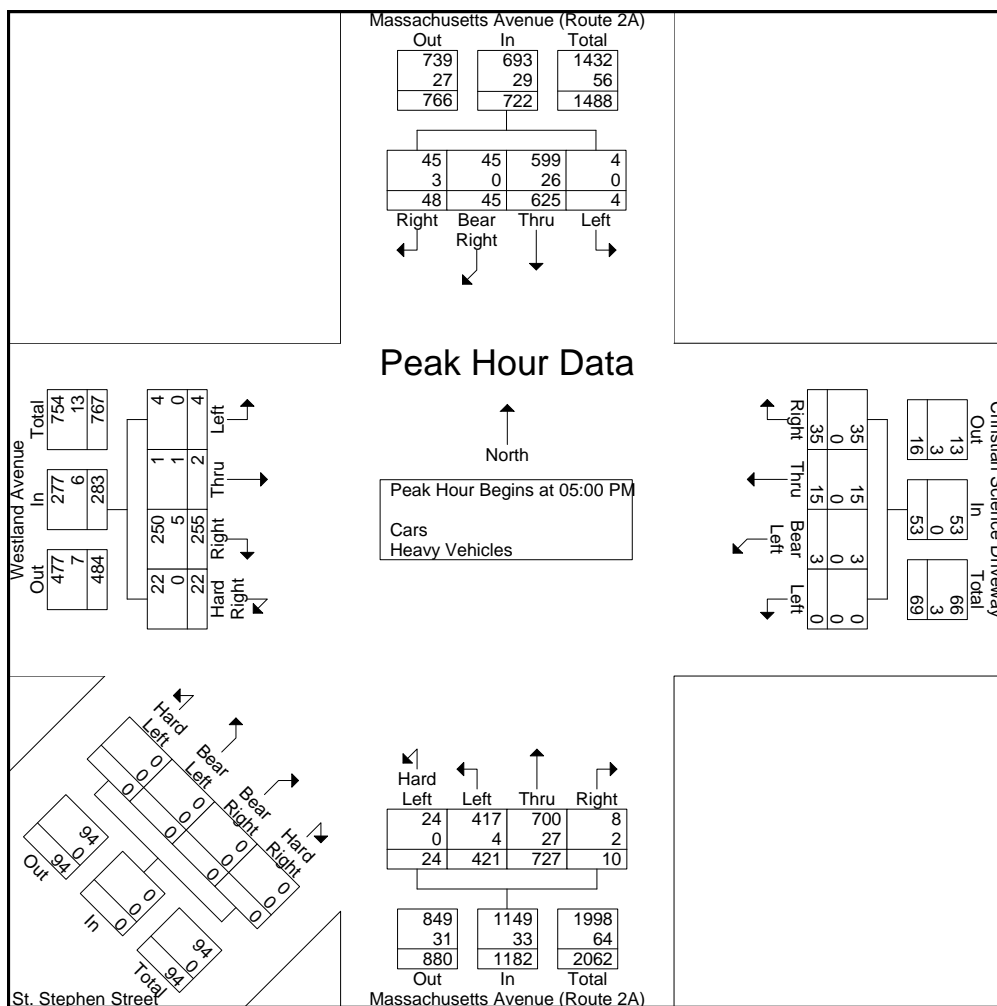
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Start Time	Massachusetts Avenue (Route 2A) From North					Christian Science Driveway From East					Massachusetts Avenue (Route 2A) From South					St. Stephen Street From Southwest					Westland Avenue From West					Int. Total
	Right	Bear Right	Thru	Left	App. Total	Right	Thru	Bear Left	Left	App. Total	Right	Thru	Left	Hard Left	App. Total	Hard Right	Bear Right	Bear Left	Hard Left	App. Total	Hard Right	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 05:00 PM																										
05:00 PM	15	12	155	1	183	15	5	3	0	23	3	192	109	0	304	0	0	0	0	0	12	80	0	1	93	603
05:15 PM	13	10	191	0	214	5	3	0	0	8	1	206	108	9	324	0	0	0	0	0	1	59	2	2	64	610
05:30 PM	13	15	119	1	148	8	4	0	0	12	1	159	97	7	264	0	0	0	0	0	5	66	0	0	71	495
05:45 PM	7	8	160	2							5	170	107	8	290	0	0	0	0	0	4	50	0	1	55	532
Total Volume			625	4	722	35	15	3	0	53	10	727	421	24	1182						255	2	4	283	2240	
% App. Total	6.6	6.2	86.6	0.6		66	28.3	5.7	0		0.8	61.5	35.6	2		0	0	0	0	7.8	90.1	0.7	1.4			
PHF	.800	.750	.818	.500	.843	.583	.750	.250	.000	.576	.500	.882	.966	.667		.000	.000	.000	.000	.000	.458	.797	.250	.500	.761	.918
Cars	45	45	599	4	693	35	15	3	0	53	8	700	417	24	1149						250	1	4	277	2172	
% Cars	93.8	100	95.8	100	96.0	100	100	100	0	100	80.0	96.3	99.0	100	97.2						100	98.0	50.0	100	97.9	97.0
Heavy Vehicles																										
% Heavy Vehicles	6.3	0	4.2	0	4.0	0	0	0	0	0	20.0	3.7	1.0	0	2.8	0	0	0	0	0	0	2.0	50.0	0	2.1	3.0





PRECISION
D A T A
INDUSTRIES, LLC

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N/S: Hemenway Street
E/W: Westland Avenue
City, State: Boston, MA
Client: Howard/Stein-Hudson/S. Kurpiel

File Name : 102301 C
Site Code : TBA
Start Date : 9/21/2010
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Hemenway Street From North			Westland Avenue From East			Hemenway Street From South			Westland Avenue From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	7	49	7	4	6	14	109	54	5	255
07:15 AM	0	0	0	7	47	6	7	11	15	111	93	6	303
07:30 AM	0	0	0	9	64	6	7	6	23	106	84	3	308
07:45 AM	0	0	0	13	69	5	7	11	28	117	66	11	327
Total	0	0	0	36	229	24	25	34	80	443	297	25	1193
08:00 AM	0	0	0	11	61	16	8	12	14	124	63	11	320
08:15 AM	0	0	0	13	56	15	3	20	18	133	84	16	358
08:30 AM	0	0	0	12	66	8	4	10	13	134	85	14	346
08:45 AM	0	0	0	8	59	9	12	20	17	132	71	14	342
Total	0	0	0	44	242	48	27	62	62	523	303	55	1366
Grand Total	0	0	0	80	471	72	52	96	142	966	600	80	2559
Apprch %	0	0	0	12.8	75.6	11.6	17.9	33.1	49	58.7	36.5	4.9	
Total %	0	0	0	3.1	18.4	2.8	2	3.8	5.5	37.7	23.4	3.1	
Cars	0	0	0	70	461	64	47	82	140	957	582	79	2482
% Cars	0	0	0	87.5	97.9	88.9	90.4	85.4	98.6	99.1	97	98.8	97
Heavy Vehicles	0	0	0	10	10	8	5	14	2	9	18	1	77
% Heavy Vehicles	0	0	0	12.5	2.1	11.1	9.6	14.6	1.4	0.9	3	1.2	3

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	11	61	16	88	8	12	14	34	124	63	11	198	320
08:15 AM	0	0	0	0	13	56	15	84	3	20	18	41	133	84	16	233	358
08:30 AM	0	0	0	0	12	66	8	86	4	10	13	27	134	85	14	233	346
08:45 AM	0	0	0	0	8	59	9	76	12	20	17	49	132	71	14	217	342
Total Volume	0	0	0	0	44	242	48	334	27	62	62	151	523	303	55	881	1366
% App. Total	0	0	0	0	13.2	72.5	14.4		17.9	41.1	41.1		59.4	34.4	6.2		
PHF	.000	.000	.000	.000	.846	.917	.750	.949	.563	.775	.861	.770	.976	.891	.859	.945	.954
Cars	0	0	0	0	38	241	44	323	23	52	62	137	518	293	55	866	1326
% Cars	0	0	0	0	86.4	99.6	91.7	96.7	85.2	83.9	100	90.7	99.0	96.7	100	98.3	97.1
Heavy Vehicles	0	0	0	0	6	1	4	11	4	10	0	14	5	10	0	15	40
% Heavy Vehicles	0	0	0	0	13.6	0.4	8.3	3.3	14.8	16.1	0	9.3	1.0	3.3	0	1.7	2.9



PRECISION
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N/S: Hemenway Street
E/W: Westland Avenue
City, State: Boston, MA
Client: Howard/Stein-Hudson/S. Kurpiel

File Name : 102301 C
Site Code : TBA
Start Date : 9/21/2010
Page No : 1

Groups Printed- Cars

Start Time	Hemenway Street From North			Westland Avenue From East			Hemenway Street From South			Westland Avenue From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	5	44	6	4	5	13	107	52	5	241
07:15 AM	0	0	0	7	45	5	7	9	15	110	91	5	294
07:30 AM	0	0	0	8	63	5	6	5	23	105	82	3	300
07:45 AM	0	0	0	12	68	4	7	11	27	117	64	11	321
Total	0	0	0	32	220	20	24	30	78	439	289	24	1156
08:00 AM	0	0	0	9	61	15	7	8	14	124	60	11	309
08:15 AM	0	0	0	11	56	14	3	17	18	130	83	16	348
08:30 AM	0	0	0	12	66	7	3	9	13	133	83	14	340
08:45 AM	0	0	0	6	58	8	10	18	17	131	67	14	329
Total	0	0	0	38	241	44	23	52	62	518	293	55	1326
Grand Total	0	0	0	70	461	64	47	82	140	957	582	79	2482
Apprch %	0	0	0	11.8	77.5	10.8	17.5	30.5	52	59.1	36	4.9	
Total %	0	0	0	2.8	18.6	2.6	1.9	3.3	5.6	38.6	23.4	3.2	

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	9	61	15	85	7	8	14	29	124	60	11	195	309
08:15 AM	0	0	0	0	11	56	14	81	3	17	18	38	130	83	16	229	348
08:30 AM	0	0	0	0	12	66	7	85	3	9	13	25	133	83	14	230	340
08:45 AM	0	0	0	0	6	58	8	72	10	18	17	45	131	67	14	212	329
Total Volume	0	0	0	0	38	241	44	323	23	52	62	137	518	293	55	866	1326
% App. Total	0	0	0	0	11.8	74.6	13.6		16.8	38	45.3		59.8	33.8	6.4		
PHF	.000	.000	.000	.000	.792	.913	.733	.950	.575	.722	.861	.761	.974	.883	.859	.941	.953



PRECISION
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E/W: Westland Avenue
City, State: Boston, MA
Client: Howard/Stein-Hudson/S. Kurpiel

File Name : 102301 C
Site Code : TBA
Start Date : 9/21/2010
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Hemenway Street From North			Westland Avenue From East			Hemenway Street From South			Westland Avenue From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	2	5	1	0	1	1	2	2	0	14
07:15 AM	0	0	0	0	2	1	0	2	0	1	2	1	9
07:30 AM	0	0	0	1	1	1	1	1	0	1	2	0	8
07:45 AM	0	0	0	1	1	1	0	0	1	0	2	0	6
Total	0	0	0	4	9	4	1	4	2	4	8	1	37
08:00 AM	0	0	0	2	0	1	1	4	0	0	3	0	11
08:15 AM	0	0	0	2	0	1	0	3	0	3	1	0	10
08:30 AM	0	0	0	0	0	1	1	1	0	1	2	0	6
08:45 AM	0	0	0	2	1	1	2	2	0	1	4	0	13
Total	0	0	0	6	1	4	4	10	0	5	10	0	40
Grand Total	0	0	0	10	10	8	5	14	2	9	18	1	77
Apprch %	0	0	0	35.7	35.7	28.6	23.8	66.7	9.5	32.1	64.3	3.6	
Total %	0	0	0	13	13	10.4	6.5	18.2	2.6	11.7	23.4	1.3	

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	2	0	1	3	1	4	0	5	0	3	0	3	11
08:15 AM	0	0	0	0	2	0	1	3	0	3	0	3	3	1	0	4	10
08:30 AM	0	0	0	0	0	0	1	1	1	1	0	2	1	2	0	3	6
08:45 AM	0	0	0	0	2	1	1	4	2	2	0	4	1	4	0	5	13
Total Volume	0	0	0	0	6	1	4	11	4	10	0	14	5	10	0	15	40
% App. Total	0	0	0		54.5	9.1	36.4		28.6	71.4	0		33.3	66.7	0		
PHF	.000	.000	.000	.000	.750	.250	1.000	.688	.500	.625	.000	.700	.417	.625	.000	.750	.769



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City, State: Boston, MA
Client: Howard/Stein-Hudson/S. Kurpiel

File Name : 102301 C
Site Code : TBA
Start Date : 9/21/2010
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	12	0	0	0	7	0	4	0	10	0	4	0	6	43
07:15 AM	0	3	0	8	0	2	0	19	0	1	2	10	0	3	0	8	56
07:30 AM	0	3	0	7	0	2	0	45	0	3	0	21	0	5	0	15	101
07:45 AM	2	2	0	27	1	2	2	49	0	7	1	13	0	5	0	21	132
Total	2	8	0	54	1	6	2	120	0	15	3	54	0	17	0	50	332
08:00 AM	0	2	0	17	1	3	0	25	0	6	0	22	0	4	1	18	99
08:15 AM	0	3	0	4	0	8	1	15	1	4	0	20	3	7	1	13	80
08:30 AM	0	3	0	10	1	6	2	34	2	9	0	26	3	4	1	20	121
08:45 AM	0	3	0	16	1	1	2	57	0	6	0	21	0	6	1	55	169
Total	0	11	0	47	3	18	5	131	3	25	0	89	6	21	4	106	469
Grand Total	2	19	0	101	4	24	7	251	3	40	3	143	6	38	4	156	801
Apprch %	1.6	15.6	0	82.8	1.4	8.4	2.4	87.8	1.6	21.2	1.6	75.7	2.9	18.6	2	76.5	
Total %	0.2	2.4	0	12.6	0.5	3	0.9	31.3	0.4	5	0.4	17.9	0.7	4.7	0.5	19.5	

Start Time	Hemenway Street From North					Westland Avenue From East					Hemenway Street From South					Westland Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	2	0	17	19	1	3	0	25	29	0	6	0	22	28	0	4	1	18	23	99
08:15 AM	0	3	0	4	7	0	8	1	15	24	1	4	0	20	25	3	7	1	13	24	80
08:30 AM	0	3	0	10	13	1	6	2	34	37	2	9	0	26	37	3	4	1	20	28	121
08:45 AM	0	3	0	16	19	1	1	2	57	61	0	6	0	21	27	0	6	1	55	62	169
Total Volume	0	11	0	47	58	3	18	5	131	157	3	25	0	89	117	6	21	4	106	137	469
% App. Total	0	19	0	81		1.9	11.5	3.2	83.4		2.6	21.4	0	76.1		4.4	15.3	2.9	77.4		
PHF	.000	.917	.000	.691	.763	.750	.563	.625	.575	.643	.375	.694	.000	.856	.791	.500	.750	1.000	.482	.552	.694



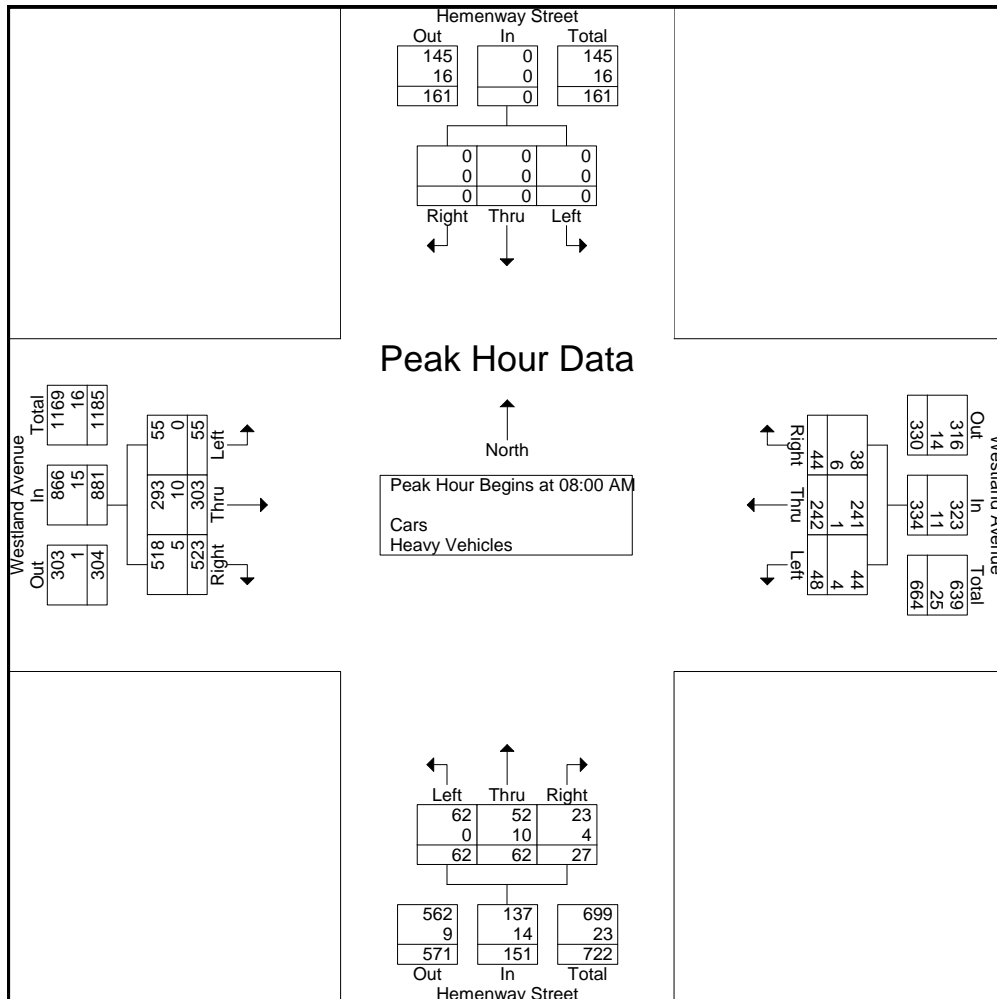
PRECISION
D A T A
INDUSTRIES, LLC

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N/S: Hemenway Street
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File Name : 102301 C
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Page No : 1

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	11	61	16	88	8	12	14	34	124	63	11	198	320
08:15 AM	0	0	0	0	13	56	15	84	3	20	18	41	133	84	16	233	358
08:30 AM	0	0	0	0	12	66	8	86	4	10	13	27	134	85	14	233	346
08:45 AM	0	0	0	0	8	59	9	76	12	20	17	49	132	71	14	217	342
Total Volume	0	0	0	0	44	242	48	334	27	62	62	151	523	303	55	881	1366
% App. Total	0	0	0	0	13.2	72.5	14.4		17.9	41.1	41.1		59.4	34.4	6.2		
PHF	.000	.000	.000	.000	.846	.917	.750	.949	.563	.775	.861	.770	.976	.891	.859	.945	.954
Cars	0	0	0	0	38	241	44	323	23	52	62	137	518	293	55	866	1326
% Cars	0	0	0	0	86.4	99.6	91.7	96.7	85.2	83.9	100	90.7	99.0	96.7	100	98.3	97.1
Heavy Vehicles	0	0	0	0	6	1	4	11	4	10	0	14	5	10	0	15	40
% Heavy Vehicles	0	0	0	0	13.6	0.4	8.3	3.3	14.8	16.1	0	9.3	1.0	3.3	0	1.7	2.9





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City, State: Boston, MA
Client: Howard/Stein-Hudson/S. Kurpiel

File Name : 102301 CC
Site Code : TBA
Start Date : 9/21/2010
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Hemenway Street From North			Westland Avenue From East			Hemenway Street From South			Westland Avenue From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	0	0	15	79	14	9	21	23	107	69	15	352
04:15 PM	0	0	0	19	64	9	16	13	24	120	76	11	352
04:30 PM	0	0	0	19	93	12	7	16	34	110	60	4	355
04:45 PM	0	0	0	27	68	22	7	9	28	152	88	7	408
Total	0	0	0	80	304	57	39	59	109	489	293	37	1467
05:00 PM	0	0	0	11	82	10	6	13	31	130	93	10	386
05:15 PM	0	0	0	20	115	11	7	16	36	86	63	8	362
05:30 PM	0	0	0	12	71	17	14	14	29	114	65	10	346
05:45 PM	0	0	0	15	79	22	18	18	26	131	65	8	382
Total	0	0	0	58	347	60	45	61	122	461	286	36	1476
Grand Total	0	0	0	138	651	117	84	120	231	950	579	73	2943
Apprch %	0	0	0	15.2	71.9	12.9	19.3	27.6	53.1	59.3	36.1	4.6	
Total %	0	0	0	4.7	22.1	4	2.9	4.1	7.8	32.3	19.7	2.5	
Cars	0	0	0	134	649	113	81	110	230	945	568	70	2900
% Cars	0	0	0	97.1	99.7	96.6	96.4	91.7	99.6	99.5	98.1	95.9	98.5
Heavy Vehicles	0	0	0	4	2	4	3	10	1	5	11	3	43
% Heavy Vehicles	0	0	0	2.9	0.3	3.4	3.6	8.3	0.4	0.5	1.9	4.1	1.5

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	19	93	12	124	7	16	34	57	110	60	4	174	355
04:45 PM	0	0	0	0	27	68	22	117	7	9	28	44	152	88	7	247	408
05:00 PM	0	0	0	0	11	82	10	103	6	13	31	50	130	93	10	233	386
05:15 PM	0	0	0	0	20	115	11	146	7	16	36	59	86	63	8	157	362
Total Volume	0	0	0	0	77	358	55	490	27	54	129	210	478	304	29	811	1511
% App. Total	0	0	0	0	15.7	73.1	11.2		12.9	25.7	61.4		58.9	37.5	3.6		
PHF	.000	.000	.000	.000	.713	.778	.625	.839	.964	.844	.896	.890	.786	.817	.725	.821	.926
Cars	0	0	0	0	75	358	54	487	26	48	129	203	476	298	29	803	1493
% Cars	0	0	0	0	97.4	100	98.2	99.4	96.3	88.9	100	96.7	99.6	98.0	100	99.0	98.8
Heavy Vehicles	0	0	0	0	2	0	1	3	1	6	0	7	2	6	0	8	18
% Heavy Vehicles	0	0	0	0	2.6	0	1.8	0.6	3.7	11.1	0	3.3	0.4	2.0	0	1.0	1.2



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File Name : 102301 CC
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Start Date : 9/21/2010
Page No : 1

Groups Printed- Cars

Start Time	Hemenway Street From North			Westland Avenue From East			Hemenway Street From South			Westland Avenue From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	0	0	14	79	12	9	19	23	105	69	14	344
04:15 PM	0	0	0	19	64	9	14	13	24	120	75	11	349
04:30 PM	0	0	0	18	93	12	7	13	34	109	58	4	348
04:45 PM	0	0	0	27	68	22	7	9	28	152	87	7	407
Total	0	0	0	78	304	55	37	54	109	486	289	36	1448
05:00 PM	0	0	0	11	82	10	5	12	31	129	92	10	382
05:15 PM	0	0	0	19	115	10	7	14	36	86	61	8	356
05:30 PM	0	0	0	11	71	16	14	14	29	113	63	8	339
05:45 PM	0	0	0	15	77	22	18	16	25	131	63	8	375
Total	0	0	0	56	345	58	44	56	121	459	279	34	1452
Grand Total	0	0	0	134	649	113	81	110	230	945	568	70	2900
Apprch %	0	0	0	15	72.4	12.6	19.2	26.1	54.6	59.7	35.9	4.4	
Total %	0	0	0	4.6	22.4	3.9	2.8	3.8	7.9	32.6	19.6	2.4	

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	18	93	12	123	7	13	34	54	109	58	4	171	348
04:45 PM	0	0	0	0	27	68	22	117	7	9	28	44	152	87	7	246	407
05:00 PM	0	0	0	0	11	82	10	103	5	12	31	48	129	92	10	231	382
05:15 PM	0	0	0	0	19	115	10	144	7	14	36	57	86	61	8	155	356
Total Volume	0	0	0	0	75	358	54	487	26	48	129	203	476	298	29	803	1493
% App. Total	0	0	0	0	15.4	73.5	11.1		12.8	23.6	63.5		59.3	37.1	3.6		
PHF	.000	.000	.000	.000	.694	.778	.614	.845	.929	.857	.896	.890	.783	.810	.725	.816	.917



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N/S: Hemenway Street
E/W: Westland Avenue
City, State: Boston, MA
Client: Howard/Stein-Hudson/S. Kurpiel

File Name : 102301 CC
Site Code : TBA
Start Date : 9/21/2010
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Hemenway Street From North			Westland Avenue From East			Hemenway Street From South			Westland Avenue From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	0	0	1	0	2	0	2	0	2	0	1	8
04:15 PM	0	0	0	0	0	0	2	0	0	0	1	0	3
04:30 PM	0	0	0	1	0	0	0	3	0	1	2	0	7
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	2	0	2	2	5	0	3	4	1	19
05:00 PM	0	0	0	0	0	0	1	1	0	1	1	0	4
05:15 PM	0	0	0	1	0	1	0	2	0	0	2	0	6
05:30 PM	0	0	0	1	0	1	0	0	0	1	2	2	7
05:45 PM	0	0	0	0	2	0	0	2	1	0	2	0	7
Total	0	0	0	2	2	2	1	5	1	2	7	2	24
Grand Total	0	0	0	4	2	4	3	10	1	5	11	3	43
Apprch %	0	0	0	40	20	40	21.4	71.4	7.1	26.3	57.9	15.8	
Total %	0	0	0	9.3	4.7	9.3	7	23.3	2.3	11.6	25.6	7	

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	1	1	0	2	4
05:15 PM	0	0	0	0	1	0	1	2	0	2	0	2	0	2	0	2	6
05:30 PM	0	0	0	0	1	0	1	2	0	0	0	0	1	2	2	5	7
05:45 PM	0	0	0	0	0	2	0	2	0	2	1	3	0	2	0	2	7
Total Volume	0	0	0	0	2	2	2	6	1	5	1	7	2	7	2	11	24
% App. Total	0	0	0	0	33.3	33.3	33.3	66.7	14.3	71.4	14.3	28.6	18.2	63.6	18.2	36.4	85.7
PHF	.000	.000	.000	.000	.500	.250	.500	.750	.250	.625	.250	.583	.500	.875	.250	.550	.857



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N/S: Hemenway Street
E/W: Westland Avenue
City, State: Boston, MA
Client: Howard/Stein-Hudson/S. Kurpiel

File Name : 102301 CC
Site Code : TBA
Start Date : 9/21/2010
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	3	2	29	0	4	1	82	3	3	3	35	1	4	0	35	205
04:15 PM	0	2	0	23	0	3	0	53	0	4	0	34	2	1	0	35	157
04:30 PM	0	1	0	21	0	3	3	78	3	4	0	37	1	4	1	32	188
04:45 PM	0	1	1	26	0	1	2	76	2	5	0	68	0	5	1	54	242
Total	0	7	3	99	0	11	6	289	8	16	3	174	4	14	2	156	792
05:00 PM	0	5	0	12	0	9	2	93	0	4	0	56	2	5	3	34	225
05:15 PM	0	9	0	24	0	8	1	96	0	6	1	47	0	10	0	36	238
05:30 PM	0	3	0	15	0	2	3	133	0	5	2	55	2	8	3	44	275
05:45 PM	0	4	0	44	0	5	1	106	3	5	0	31	1	3	1	30	234
Total	0	21	0	95	0	24	7	428	3	20	3	189	5	26	7	144	972
Grand Total	0	28	3	194	0	35	13	717	11	36	6	363	9	40	9	300	1764
Apprch %	0	12.4	1.3	86.2	0	4.6	1.7	93.7	2.6	8.7	1.4	87.3	2.5	11.2	2.5	83.8	
Total %	0	1.6	0.2	11	0	2	0.7	40.6	0.6	2	0.3	20.6	0.5	2.3	0.5	17	

Start Time	Hemenway Street From North					Westland Avenue From East					Hemenway Street From South					Westland Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	1	1	26	28	0	1	2	76	79	2	5	0	68	75	0	5	1	54	60	242
05:00 PM	0	5	0	12	17	0	9	1	96	105	0	6	1	47	54	2	10	0	36	46	238
05:15 PM	0	9	0	24	33	0	8	1	96	105	0	6	1	47	54	2	10	0	36	46	238
05:30 PM	0	3	0	15	18	0	2	3	133	138	0	5	2	55	62	2	8	3	44	57	275
Total Volume	0	18	1	77	96	0	20	8	398	426	2	20	3	226	251	4	28	7	168	207	980
% App. Total	0	18.8	1	80.2		0	4.7	1.9	93.4		0.8	8	1.2	90		1.9	13.5	3.4	81.2		
PHF	.000	.500	.250	.740	.727	.000	.556	.667	.748	.772	.250	.833	.375	.831	.837	.500	.700	.583	.778	.863	.891



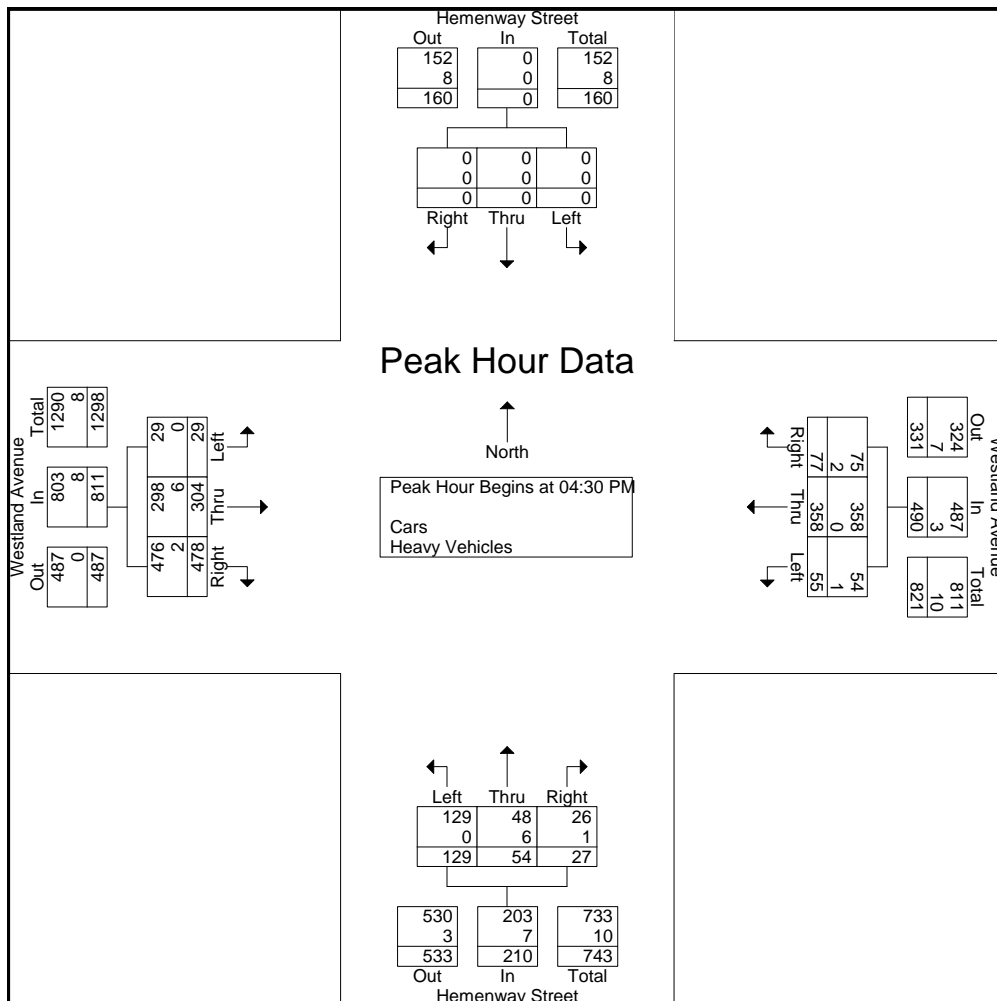
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N/S: Hemenway Street
E/W: Westland Avenue
City, State: Boston, MA
Client: Howard/Stein-Hudson/S. Kurpiel

File Name : 102301 CC
Site Code : TBA
Start Date : 9/21/2010
Page No : 1

Start Time	Hemenway Street From North				Westland Avenue From East				Hemenway Street From South				Westland Avenue From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	19	93	12	124	7	16	34	57	110	60	4	174	355
04:45 PM	0	0	0	0	27	68	22	117	7	9	28	44	152	88	7	247	408
05:00 PM	0	0	0	0	11	82	10	103	6	13	31	50	130	93	10	233	386
05:15 PM	0	0	0	0	20	115	11	146	7	16	36	59	86	63	8	157	362
Total Volume	0	0	0	0	77	358	55	490	27	54	129	210	478	304	29	811	1511
% App. Total	0	0	0	0	15.7	73.1	11.2		12.9	25.7	61.4		58.9	37.5	3.6		
PHF	.000	.000	.000	.000	.713	.778	.625	.839	.964	.844	.896	.890	.786	.817	.725	.821	.926
Cars	0	0	0	0	75	358	54	487	26	48	129	203	476	298	29	803	1493
% Cars	0	0	0	0	97.4	100	98.2	99.4	96.3	88.9	100	96.7	99.6	98.0	100	99.0	98.8
Heavy Vehicles	0	0	0	0	2	0	1	3	1	6	0	7	2	6	0	8	18
% Heavy Vehicles	0	0	0	0	2.6	0	1.8	0.6	3.7	11.1	0	3.3	0.4	2.0	0	1.0	1.2





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File Name : 123026 P
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: St. Stephen Street
E/W: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	St. Stephen Street From North				Gainsborough Street From East				St. Stephen Street From South				Gainsborough Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	3	0	7	0	0	0	7	0	0	0	11	0	1	0	8	37
07:15 AM	0	0	1	21	0	0	0	12	0	0	0	11	0	1	0	10	56
07:30 AM	0	3	0	34	1	1	0	11	1	0	0	22	0	0	0	19	92
07:45 AM	0	5	0	32	0	0	0	22	1	0	0	26	0	0	0	31	117
Total	0	11	1	94	1	1	0	52	2	0	0	70	0	2	0	68	302
08:00 AM	1	5	0	21	0	0	0	15	1	0	0	19	0	0	0	25	87
08:15 AM	0	2	0	26	0	0	2	16	0	1	0	16	0	2	0	19	84
08:30 AM	0	3	0	29	0	1	1	19	0	0	0	23	0	0	0	14	90
08:45 AM	0	7	0	18	0	1	0	20	0	0	0	18	0	0	0	24	88
Total	1	17	0	94	0	2	3	70	1	1	0	76	0	2	0	82	349
Grand Total	1	28	1	188	1	3	3	122	3	1	0	146	0	4	0	150	651
Apprch %	0.5	12.8	0.5	86.2	0.8	2.3	2.3	94.6	2	0.7	0	97.3	0	2.6	0	97.4	
Total %	0.2	4.3	0.2	28.9	0.2	0.5	0.5	18.7	0.5	0.2	0	22.4	0	0.6	0	23	

Start Time	St. Stephen Street From North					Gainsborough Street From East					St. Stephen Street From South					Gainsborough Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	3	0	34	37	1	1	0	11	13	1	0	0	22	23	0	0	0	19	19	92
07:45 AM	0	5	0	32	37	0	0	0	22	22	1	0	0	26	27	0	0	0	31	31	117
08:00 AM	1	5	0	21	27	0	0	0	15	15	1	0	0	19	20	0	0	0	25	25	87
08:15 AM	0	2	0	26	28	0	0	2	16	18	0	1	0	16	17	0	2	0	19	21	84
Total Volume	1	15	0	113	129	1	1	2	64	68	3	1	0	83	87	0	2	0	94	96	380
% App. Total	0.8	11.6	0	87.6		1.5	1.5	2.9	94.1		3.4	1.1	0	95.4		0	2.1	0	97.9		
PHF	.250	.750	.000	.831	.872	.250	.250	.250	.727	.773	.750	.250	.000	.798	.806	.000	.250	.000	.758	.774	.812



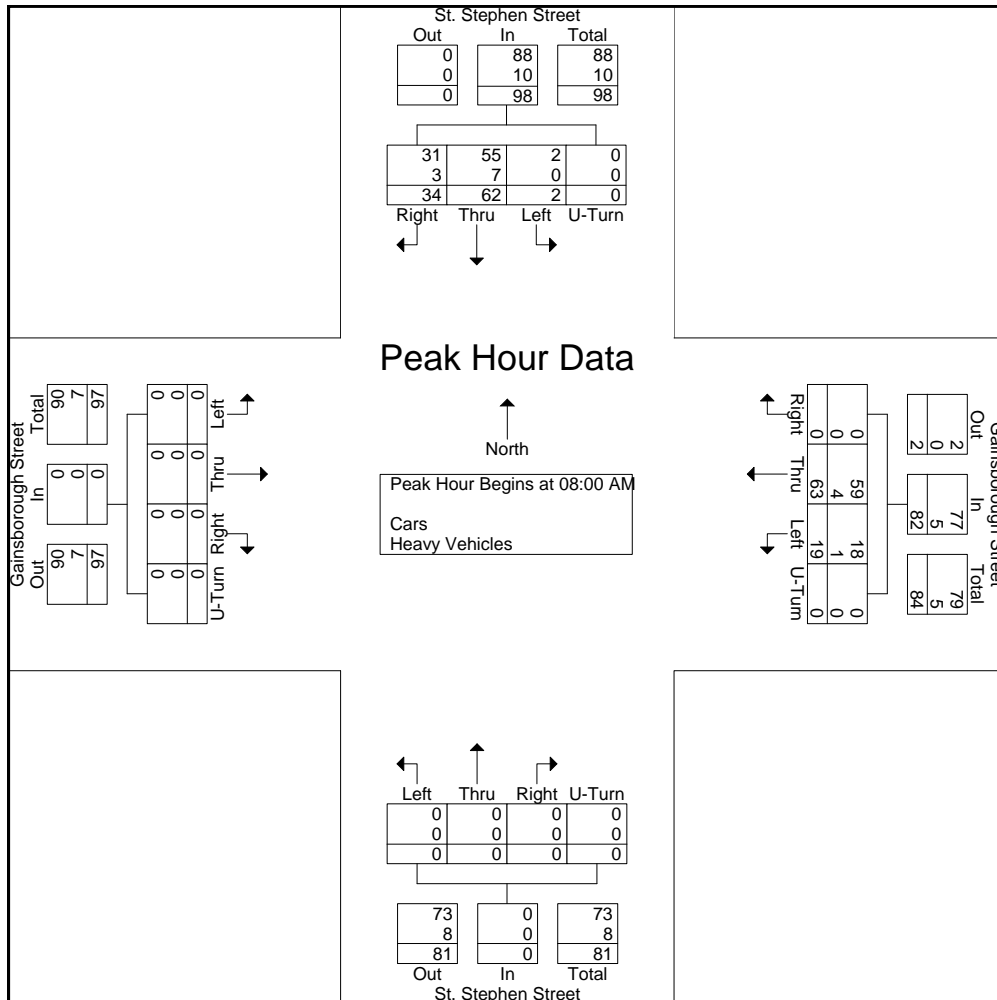
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File Name : 123026 P
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: St. Stephen Street
E/W: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	St. Stephen Street From North					Gainsborough Street From East					St. Stephen Street From South					Gainsborough Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	11	10	0	0	21	0	16	1	0	17	0	0	0	0	0	0	0	0	0	0	38
08:15 AM	8	13	0	0	21	0	15	5	0	20	0	0	0	0	0	0	0	0	0	0	41
08:30 AM	9	22	0	0	31	0	10	8	0	18	0	0	0	0	0	0	0	0	0	0	49
08:45 AM	6	17	2	0	25	0	22	0	0	22	0	0	0	0	0	0	0	0	0	0	52
Total Volume	34	62	2	0	98	0	63	19	0	82	0	0	0	0	0	0	0	0	0	0	180
% App. Total	34.7	63.3	2	0	98.8	0	76.8	23.2	0	93.9	0	0	0	0	0	0	0	0	0	0	91.7
PHF	.773	.705	.250	.000	.790	.000	.716	.594	.000	.759	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.865
Cars	31	55	2	0	88	0	59	18	0	77	0	0	0	0	0	0	0	0	0	0	165
% Cars	91.2	88.7	100	0	89.8	0	93.7	94.7	0	93.9	0	0	0	0	0	0	0	0	0	0	91.7
Heavy Vehicles	3	7	0	0	10	0	4	1	0	5	0	0	0	0	0	0	0	0	0	0	15
% Heavy Vehicles	8.8	11.3	0	0	10.2	0	6.3	5.3	0	6.1	0	0	0	0	0	0	0	0	0	0	8.3





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File Name : 123026 PP
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Start Date : 9/25/2012
Page No : 1

N/S: St. Stephen Street
E/W: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	St. Stephen Street From North				Gainsborough Street From East				St. Stephen Street From South				Gainsborough Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	1	7	0	35	0	0	1	20	0	0	0	25	0	1	0	33	123
04:15 PM	0	4	0	35	0	4	0	37	0	0	0	36	0	0	0	41	157
04:30 PM	1	4	0	32	0	2	0	26	0	0	0	35	0	0	0	32	132
04:45 PM	0	3	0	27	0	3	1	28	0	0	1	33	0	0	0	19	115
Total	2	18	0	129	0	9	2	111	0	0	1	129	0	1	0	125	527
05:00 PM	0	5	4	53	0	1	0	53	1	1	0	33	1	0	0	51	203
05:15 PM	0	7	1	54	0	2	1	43	0	2	0	45	0	0	0	80	235
05:30 PM	1	6	0	76	2	5	3	39	0	1	0	52	0	0	0	68	253
05:45 PM	0	7	2	45	1	2	4	44	0	0	0	43	0	0	0	66	214
Total	1	25	7	228	3	10	8	179	1	4	0	173	1	0	0	265	905
Grand Total	3	43	7	357	3	19	10	290	1	4	1	302	1	1	0	390	1432
Apprch %	0.7	10.5	1.7	87.1	0.9	5.9	3.1	90.1	0.3	1.3	0.3	98.1	0.3	0.3	0	99.5	
Total %	0.2	3	0.5	24.9	0.2	1.3	0.7	20.3	0.1	0.3	0.1	21.1	0.1	0.1	0	27.2	

Start Time	St. Stephen Street From North					Gainsborough Street From East					St. Stephen Street From South					Gainsborough Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	5	4	53	62	0	1	0	53	54	1	1	0	33	35	1	0	0	51	52	203
05:15 PM	0	7	1	54	62	0	2	1	43	46	0	2	0	45	47	0	0	0	80	80	
05:30 PM	1	6	0	76	83	2	5	3	39	49	0	1	0	52	53	0	0	0	68	68	253
05:45 PM	0	7	2	45	54	1	2	4	44	51	0	0	0	43	43	0	0	0	66	66	214
Total Volume	1	25	7	228	261	3	10	8	179	200	1	4	0	173	178	1	0	0	265	266	905
% App. Total	0.4	9.6	2.7	87.4		1.5	5	4	89.5		0.6	2.2	0	97.2		0.4	0	0	99.6		
PHF	.250	.893	.438	.750	.786	.375	.500	.500	.844	.926	.250	.500	.000	.832	.840	.250	.000	.000	.828	.831	.894



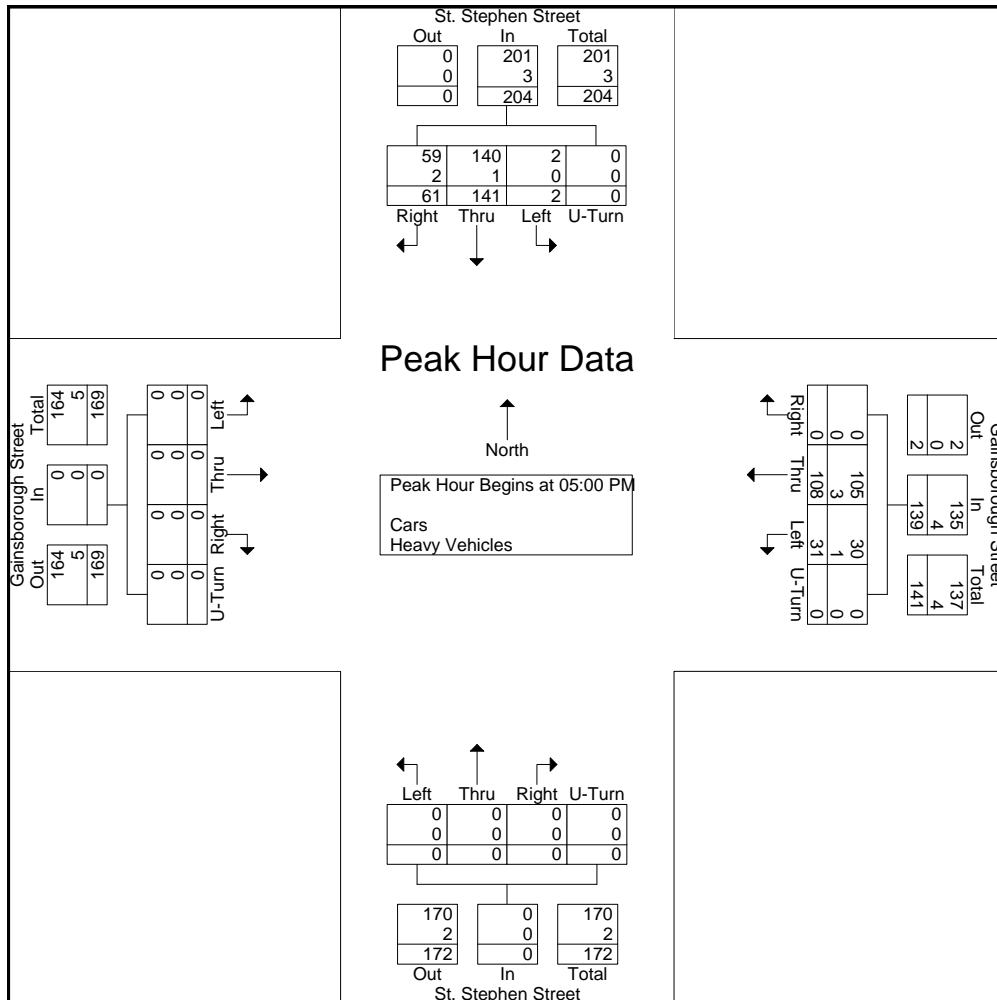
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File Name : 123026 PP
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N/S: St. Stephen Street
E/W: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	St. Stephen Street From North					Gainsborough Street From East					St. Stephen Street From South					Gainsborough Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	19	39	1	0	59	0	26	7	0	33	0	0	0	0	0	0	0	0	0	0	92
05:15 PM	8	56	1	0	65	0	29	10	0	39	0	0	0	0	0	0	0	0	0	0	104
05:30 PM	15	18	0	0	33	0	26	4	0	30	0	0	0	0	0	0	0	0	0	0	63
05:45 PM	19	28	0	0	47	0	27	10	0	37	0	0	0	0	0	0	0	0	0	0	84
Total Volume	61	141	2	0	204	0	108	31	0	139	0	0	0	0	0	0	0	0	0	0	343
% App. Total	29.9	69.1	1	0		0	77.7	22.3	0		0	0	0	0	0	0	0	0	0	0	
PHF	.803	.629	.500	.000	.785	.000	.931	.775	.000	.891	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.825
Cars	59	140	2	0	201	0	105	30	0	135	0	0	0	0	0	0	0	0	0	0	336
% Cars	96.7	99.3	100	0	98.5	0	97.2	96.8	0	97.1	0	0	0	0	0	0	0	0	0	0	98.0
Heavy Vehicles	2	1	0	0	3	0	3	1	0	4	0	0	0	0	0	0	0	0	0	0	7
% Heavy Vehicles	3.3	0.7	0	0	1.5	0	2.8	3.2	0	2.9	0	0	0	0	0	0	0	0	0	0	2.0





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N/S: Hemmenway Street
E: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Hemmenway Street From North			Gainsborough Street From East			Hemmenway Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	100	0	0	22	8	0	0	10	0	140
07:15 AM	97	0	0	17	7	0	0	18	0	139
07:30 AM	145	0	0	19	4	0	0	20	0	188
07:45 AM	99	0	0	10	4	0	0	26	0	139
Total	441	0	0	68	23	0	0	74	0	606
08:00 AM	89	0	0	30	5	0	0	33	0	157
08:15 AM	75	0	0	15	4	0	0	25	0	119
08:30 AM	65	0	0	21	10	0	0	24	0	120
08:45 AM	92	0	0	23	3	0	0	15	0	133
Total	321	0	0	89	22	0	0	97	0	529
Grand Total	762	0	0	157	45	0	0	171	0	1135
Apprch %	100	0	0	77.7	22.3	0	0	100	0	
Total %	67.1	0	0	13.8	4	0	0	15.1	0	
Cars	749	0	0	149	41	0	0	151	0	1090
% Cars	98.3	0	0	94.9	91.1	0	0	88.3	0	96
Heavy Vehicles	13	0	0	8	4	0	0	20	0	45
% Heavy Vehicles	1.7	0	0	5.1	8.9	0	0	11.7	0	4

Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	97	0	0	97	17	7	0	24	0	18	0	18	139
07:30 AM	145	0	0	145	19	4	0	23	0	20	0	20	188
07:45 AM	99	0	0	99	10	4	0	14	0	26	0	26	139
08:00 AM	89	0	0	89	30			35	0	33	0	33	157
Total Volume	430	0	0	430	76	20	0	96	0	97	0	97	623
% App. Total	100	0	0		79.2	20.8	0		0	100	0		
PHF	.741	.000	.000	.741	.633	.714	.000	.686	.000	.735	.000	.735	.828
Cars	424	0	0	424	71	19	0	90	0	86	0	86	600
% Cars	98.6	0	0	98.6	93.4	95.0	0	93.8	0	88.7	0	88.7	96.3
Heavy Vehicles	6	0	0	6	5	1	0	6	0	11	0	11	23
% Heavy Vehicles	1.4	0	0	1.4	6.6	5.0	0	6.3	0	11.3	0	11.3	3.7



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N/S: Hemmenway Street
E: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Hemmenway Street From North			Gainsborough Street From East			Hemmenway Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	99	0	0	21	7	0	0	9	0	136
07:15 AM	95	0	0	17	7	0	0	15	0	134
07:30 AM	143	0	0	17	4	0	0	19	0	183
07:45 AM	97	0	0	10	3	0	0	21	0	131
Total	434	0	0	65	21	0	0	64	0	584
08:00 AM	89	0	0	27	5	0	0	31	0	152
08:15 AM	74	0	0	14	4	0	0	23	0	115
08:30 AM	64	0	0	20	8	0	0	21	0	113
08:45 AM	88	0	0	23	3	0	0	12	0	126
Total	315	0	0	84	20	0	0	87	0	506
Grand Total	749	0	0	149	41	0	0	151	0	1090
Apprch %	100	0	0	78.4	21.6	0	0	100	0	
Total %	68.7	0	0	13.7	3.8	0	0	13.9	0	

Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	95	0	0	95	17	7	0	24	0	15	0	15	134
07:30 AM	143	0	0	143	17	4	0	21	0	19	0	19	183
07:45 AM	97	0	0	97	10	3	0	13	0	21	0	21	131
08:00 AM	89	0	0	89	27			32	0	31	0	31	152
Total Volume	424	0	0	424	71	19	0	90	0	86	0	86	600
% App. Total	100	0	0		78.9	21.1	0		0	100	0		
PHF	.741	.000	.000	.741	.657	.679	.000	.703	.000	.694	.000	.694	.820



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N/S: Hemmenway Street
E: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Hemmenway Street From North			Gainsborough Street From East			Hemmenway Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	1	0	0	1	1	0	0	1	0	4
07:15 AM	2	0	0	0	0	0	0	3	0	5
07:30 AM	2	0	0	2	0	0	0	1	0	5
07:45 AM	2	0	0	0	1	0	0	5	0	8
Total	7	0	0	3	2	0	0	10	0	22
08:00 AM	0	0	0	3	0	0	0	2	0	5
08:15 AM	1	0	0	1	0	0	0	2	0	4
08:30 AM	1	0	0	1	2	0	0	3	0	7
08:45 AM	4	0	0	0	0	0	0	3	0	7
Total	6	0	0	5	2	0	0	10	0	23
Grand Total	13	0	0	8	4	0	0	20	0	45
Apprch %	100	0	0	66.7	33.3	0	0	100	0	
Total %	28.9	0	0	17.8	8.9	0	0	44.4	0	

Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	2	0	0	2	0	1	0	1	0	5	0	5	8
08:00 AM	0	0	0	0	3	0	0	3	0	2	0	2	5
08:15 AM	1	0	0	1	1	0	0	1	0	2	0	2	4
08:30 AM	1	0	0	1	1	2	0	3	0	3	0	3	7
Total Volume	4	0	0	4	5	3	0	8	0	12	0	12	24
% App. Total	100	0	0		62.5	37.5	0		0	100	0		
PHF	.500	.000	.000	.500	.417	.375	.000	.667	.000	.600	.000	.600	.750



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N/S: Hemmenway Street
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City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Hemmenway Street From North			Gainsborough Street From East			Hemmenway Street From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00 AM	2	0	0	0	0	13	0	3	1	19
07:15 AM	2	0	0	0	0	16	0	1	1	20
07:30 AM	2	0	1	0	2	28	0	3	4	40
07:45 AM	3	1	0	0	0	59	0	4	6	73
Total	9	1	1	0	2	116	0	11	12	152
08:00 AM	4	0	0	1	1	30	0	4	0	40
08:15 AM	2	0	4	0	0	19	3	4	0	32
08:30 AM	1	0	2	0	1	19	0	10	4	37
08:45 AM	2	0	5	1	1	44	0	12	4	69
Total	9	0	11	2	3	112	3	30	8	178
Grand Total	18	1	12	2	5	228	3	41	20	330
Apprch %	58.1	3.2	38.7	0.9	2.1	97	4.7	64.1	31.2	
Total %	5.5	0.3	3.6	0.6	1.5	69.1	0.9	12.4	6.1	

Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	2	0	1	3	0	2	28	30	0	3	4	7	40
07:45 AM	3	1	0	4	0	0	59	59	0	4	6	10	73
08:00 AM	4	0	0	4	1								
08:15 AM	2	0	4	6	0	0	19	19	3	4	0	7	32
Total Volume	11	1	5	17	1	3	136	140	3	15	10	28	185
% App. Total	64.7	5.9	29.4		0.7	2.1	97.1		10.7	53.6	35.7		
PHF	.688	.250	.313	.708	.250	.375	.576	.593	.250	.938	.417	.700	.634



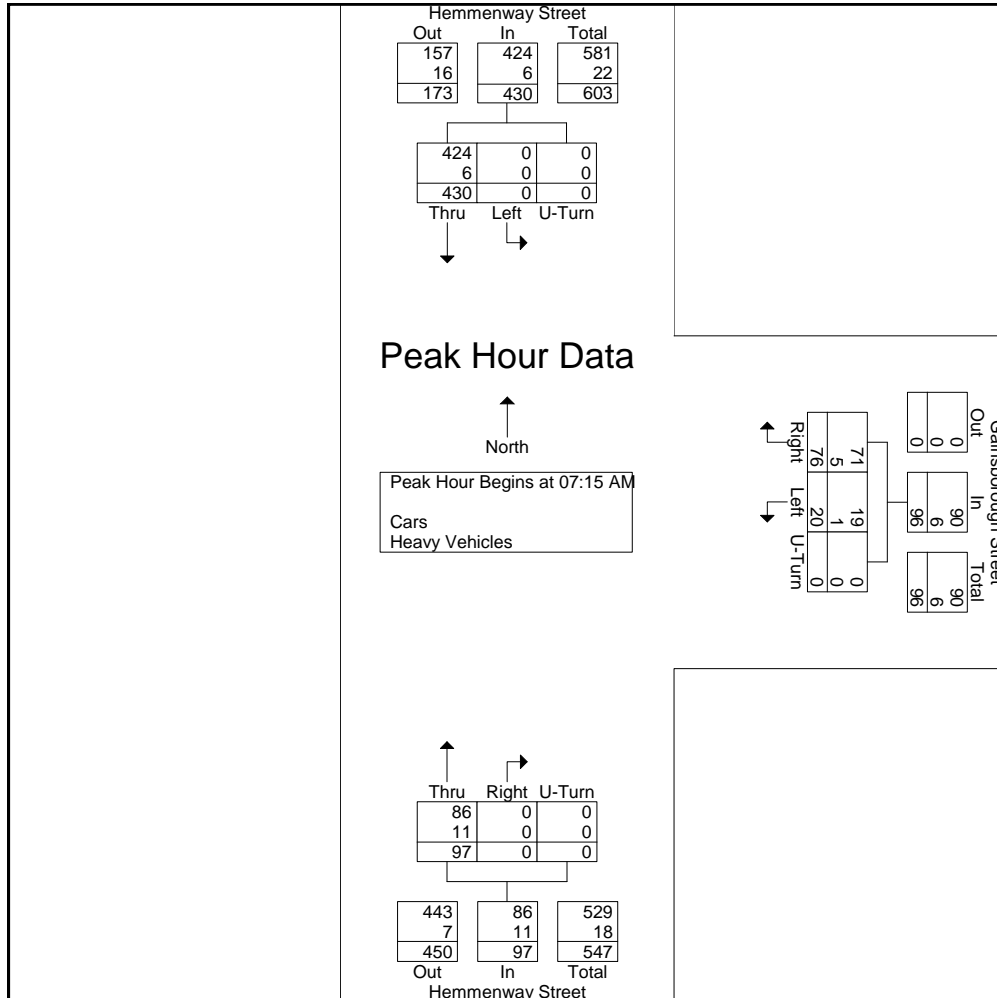
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Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	97	0	0	97	17	7	0	24	0	18	0	18	139
07:30 AM	145	0	0	145	19	4	0	23	0	20	0	20	188
07:45 AM	99	0	0	99	10	4	0	14	0	26	0	26	139
08:00 AM	89	0	0	89	30			35	0	33	0	33	157
Total Volume	430	0	0	430	76	20	0	96	0	97	0	97	623
% App. Total	100	0	0		79.2	20.8	0		0	100	0		
PHF	.741	.000	.000	.741	.633	.714	.000	.686	.000	.735	.000	.735	.828
Cars	424	0	0	424	71	19	0	90	0	86	0	86	600
% Cars	98.6	0	0	98.6	93.4	95.0	0	93.8	0	88.7	0	88.7	96.3
Heavy Vehicles	6	0	0	6	5	1	0	6	0	11	0	11	23
% Heavy Vehicles	1.4	0	0	1.4	6.6	5.0	0	6.3	0	11.3	0	11.3	3.7





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N/S: Hemmenway Street
E: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Hemmenway Street From North			Gainsborough Street From East			Hemmenway Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	115	0	0	30	6	0	0	22	0	173
04:15 PM	105	0	0	39	9	0	0	24	0	177
04:30 PM	118	0	0	43	4	0	0	29	0	194
04:45 PM	118	0	0	25	7	0	0	28	1	179
Total	456	0	0	137	26	0	0	103	1	723
05:00 PM	121	0	1	33	6	0	0	29	0	190
05:15 PM	112	0	0	39	5	0	0	25	0	181
05:30 PM	105	0	0	29	8	0	0	41	0	183
05:45 PM	113	0	0	43	1	0	0	27	0	184
Total	451	0	1	144	20	0	0	122	0	738
Grand Total	907	0	1	281	46	0	0	225	1	1461
Apprch %	99.9	0	0.1	85.9	14.1	0	0	99.6	0.4	
Total %	62.1	0	0.1	19.2	3.1	0	0	15.4	0.1	
Cars	893	0	1	272	43	0	0	215	1	1425
% Cars	98.5	0	100	96.8	93.5	0	0	95.6	100	97.5
Heavy Vehicles	14	0	0	9	3	0	0	10	0	36
% Heavy Vehicles	1.5	0	0	3.2	6.5	0	0	4.4	0	2.5

Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	118	0	0	118	43	4	0	47	0	29	0	29	194
04:45 PM	118	0	0	118	25	7	0	32	0	28	1	29	179
05:00 PM	121	0	1	122	33	6	0	39	0	29	0	29	190
05:15 PM	112	0	0	112	39	5	0	44	0	25	0	25	181
Total Volume	469	0	1	470	140	22	0	162	0	111	1	112	744
% App. Total	99.8	0	0.2		86.4	13.6	0		0	99.1	0.9		
PHF	.969	.000	.250	.963	.814	.786	.000	.862	.000	.957	.250	.966	.959
Cars	461	0	1	462	133	21	0	154	0	105	1	106	722
% Cars	98.3	0	100	98.3	95.0	95.5	0	95.1	0	94.6	100	94.6	97.0
Heavy Vehicles	8	0	0	8	7	1	0	8	0	6	0	6	22
% Heavy Vehicles	1.7	0	0	1.7	5.0	4.5	0	4.9	0	5.4	0	5.4	3.0



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City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Hemmenway Street From North			Gainsborough Street From East			Hemmenway Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	113	0	0	29	5	0	0	21	0	168
04:15 PM	104	0	0	39	9	0	0	23	0	175
04:30 PM	117	0	0	41	4	0	0	27	0	189
04:45 PM	117	0	0	25	6	0	0	27	1	176
Total	451	0	0	134	24	0	0	98	1	708
05:00 PM	117	0	1	32	6	0	0	27	0	183
05:15 PM	110	0	0	35	5	0	0	24	0	174
05:30 PM	104	0	0	29	7	0	0	39	0	179
05:45 PM	111	0	0	42	1	0	0	27	0	181
Total	442	0	1	138	19	0	0	117	0	717
Grand Total	893	0	1	272	43	0	0	215	1	1425
Apprch %	99.9	0	0.1	86.3	13.7	0	0	99.5	0.5	
Total %	62.7	0	0.1	19.1	3	0	0	15.1	0.1	

Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	104	0	0	104	39	9	0	48	0	23	0	23	175
04:30 PM	117	0	0	117	41	6	0	31	0	27	0	27	189
04:45 PM	117	0	0	117	25	6	0	31	0	27	1	28	176
05:00 PM	117	0	1	118	32	6	0	38	0	27	0	27	183
Total Volume	455	0	1	456	137	25	0	162	0	104	1	105	723
% App. Total	99.8	0	0.2		84.6	15.4	0		0	99	1		
PHF	.972	.000	.250	.966	.835	.694	.000	.844	.000	.963	.250	.938	.956



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Groups Printed- Heavy Vehicles

Start Time	Hemmenway Street From North			Gainsborough Street From East			Hemmenway Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	2	0	0	1	1	0	0	1	0	5
04:15 PM	1	0	0	0	0	0	0	1	0	2
04:30 PM	1	0	0	2	0	0	0	2	0	5
04:45 PM	1	0	0	0	1	0	0	1	0	3
Total	5	0	0	3	2	0	0	5	0	15
05:00 PM	4	0	0	1	0	0	0	2	0	7
05:15 PM	2	0	0	4	0	0	0	1	0	7
05:30 PM	1	0	0	0	1	0	0	2	0	4
05:45 PM	2	0	0	1	0	0	0	0	0	3
Total	9	0	0	6	1	0	0	5	0	21
Grand Total	14	0	0	9	3	0	0	10	0	36
Apprch %	100	0	0	75	25	0	0	100	0	
Total %	38.9	0	0	25	8.3	0	0	27.8	0	

Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	1	0	0	1	2	0	0	2	0	2	0	2	5
04:45 PM	1	0	0	1	0	1	0	1	0	1	0	1	3
05:00 PM	4	0	0	4	1	0	0	1	0	2	0	2	7
05:15 PM	2	0	0	2	4	0	0	4	0	1	0	1	7
Total Volume	8	0	0	8	7	1	0	8	0	6	0	6	22
% App. Total	100	0	0		87.5	12.5	0		0	100	0		
PHF	.500	.000	.000	.500	.438	.250	.000	.500	.000	.750	.000	.750	.786



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File Name : 123026 OO
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Hemmenway Street
E: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Hemmenway Street From North			Gainsborough Street From East			Hemmenway Street From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
04:00 PM	2	1	2	0	0	49	0	2	4	60
04:15 PM	4	0	7	5	1	54	0	7	2	80
04:30 PM	7	1	2	2	1	53	0	6	5	77
04:45 PM	4	0	9	1	1	55	2	6	9	87
Total	17	2	20	8	3	211	2	21	20	304
05:00 PM	3	0	4	1	0	66	1	6	5	86
05:15 PM	8	1	7	1	0	81	0	9	6	113
05:30 PM	9	0	8	3	0	79	0	3	2	104
05:45 PM	10	0	4	2	1	73	0	8	10	108
Total	30	1	23	7	1	299	1	26	23	411
Grand Total	47	3	43	15	4	510	3	47	43	715
Apprch %	50.5	3.2	46.2	2.8	0.8	96.4	3.2	50.5	46.2	
Total %	6.6	0.4	6	2.1	0.6	71.3	0.4	6.6	6	

Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	3	0	4	7	1	0	66	67	1	6	5	12	86
05:15 PM	8	1	7	16	1	0	81	82	0	9	6	15	113
05:30 PM	9	0	8	17	3								
05:45 PM	10	0	4	14	2	1	73	76	0	8	10	18	108
Total Volume	30	1	23	54	7	1	299	307	1	26	23	50	411
% App. Total	55.6	1.9	42.6		2.3	0.3	97.4		2	52	46		
PHF	.750	.250	.719	.794	.583	.250	.923	.936	.250	.722	.575	.694	.909



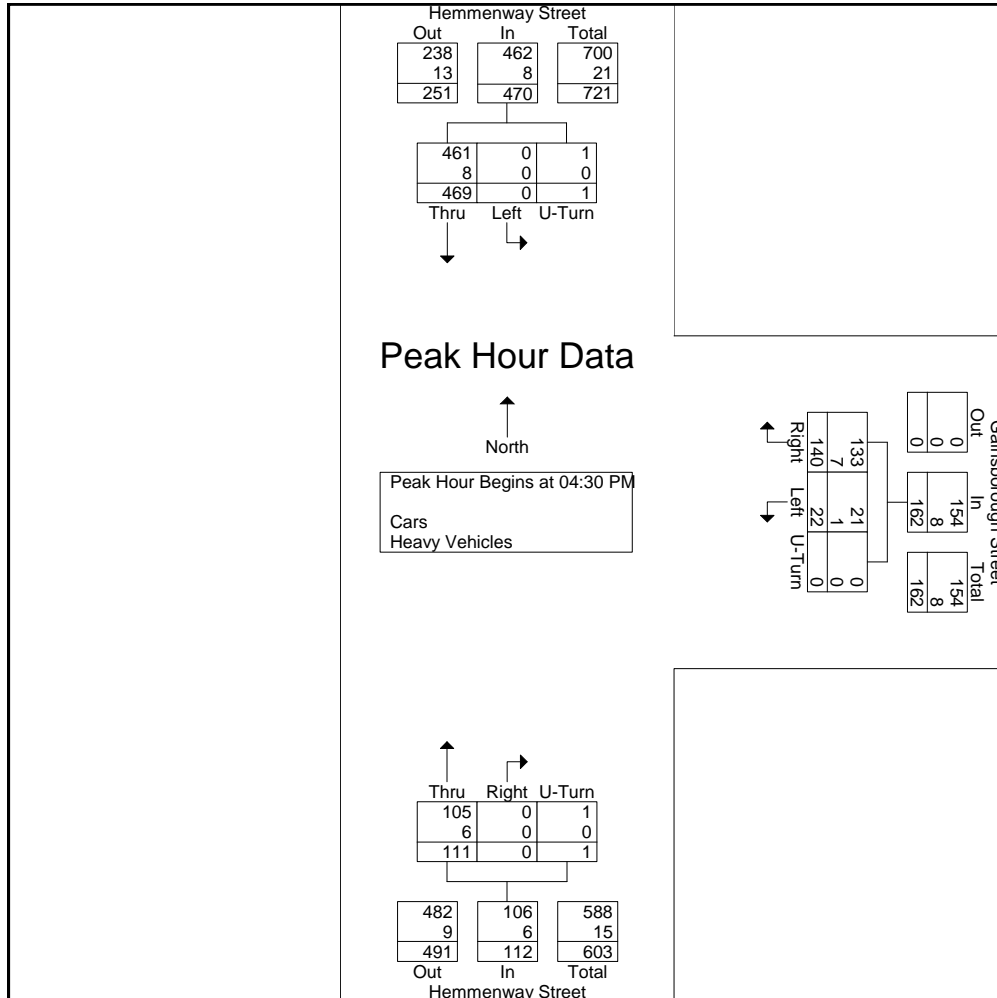
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N/S: Hemmenway Street
E: Gainsborough Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 OO
Site Code : 2011046_
Start Date : 9/25/2012
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Start Time	Hemmenway Street From North				Gainsborough Street From East				Hemmenway Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	118	0	0	118	43	4	0	47	0	29	0	29	194
04:45 PM	118	0	0	118	25	7	0	32	0	28	1	29	179
05:00 PM	121	0	1	122	33	6	0	39	0	29	0	29	190
05:15 PM	112	0	0	112	39	5	0	44	0	25	0	25	181
Total Volume	469	0	1	470	140	22	0	162	0	111	1	112	744
% App. Total	99.8	0	0.2		86.4	13.6	0		0	99.1	0.9		
PHF	.969	.000	.250	.963	.814	.786	.000	.862	.000	.957	.250	.966	.959
Cars	461	0	1	462	133	21	0	154	0	105	1	106	722
% Cars	98.3	0	100	98.3	95.0	95.5	0	95.1	0	94.6	100	94.6	97.0
Heavy Vehicles	8	0	0	8	7	1	0	8	0	6	0	6	22
% Heavy Vehicles	1.7	0	0	1.7	5.0	4.5	0	4.9	0	5.4	0	5.4	3.0





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File Name : 123026 L
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Page No : 1

S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Hemmenway Street From East			Forsyth Street From South			Hemmenway Street From West			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	88	18	1	4	2	0	1	6	0	120
07:15 AM	89	18	0	9	4	0	10	7	0	137
07:30 AM	110	30	0	12	3	0	7	9	0	171
07:45 AM	97	20	0	9	2	1	12	15	0	156
Total	384	86	1	34	11	1	30	37	0	584
08:00 AM	77	19	0	15	2	1	9	17	0	140
08:15 AM	63	20	0	5	1	0	6	19	0	114
08:30 AM	66	17	0	10	4	0	5	16	0	118
08:45 AM	67	24	0	6	4	0	4	10	0	115
Total	273	80	0	36	11	1	24	62	0	487
Grand Total	657	166	1	70	22	2	54	99	0	1071
Apprch %	79.7	20.1	0.1	74.5	23.4	2.1	35.3	64.7	0	
Total %	61.3	15.5	0.1	6.5	2.1	0.2	5	9.2	0	
Cars	651	156	1	59	19	2	44	90	0	1022
% Cars	99.1	94	100	84.3	86.4	100	81.5	90.9	0	95.4
Heavy Vehicles	6	10	0	11	3	0	10	9	0	49
% Heavy Vehicles	0.9	6	0	15.7	13.6	0	18.5	9.1	0	4.6

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	89	18	0	107	9	4	0	13	10	7	0	17	137
07:30 AM	110	30	0	140	12	3	0	15	7	9	0	16	171
07:45 AM	97	20	0	117	9	2	1	12	12	15	0	27	156
08:00 AM	77	19	0	96	15			18	9	17	0	26	140
Total Volume	373	87	0	460	45	11	2	58	38	48	0	86	604
% App. Total	81.1	18.9	0		77.6	19	3.4		44.2	55.8	0		
PHF	.848	.725	.000	.821	.750	.688	.500	.806	.792	.706	.000	.796	.883
Cars	371	80	0	451	40	9	2	51	30	43	0	73	575
% Cars	99.5	92.0	0	98.0	88.9	81.8	100	87.9	78.9	89.6	0	84.9	95.2
Heavy Vehicles	2	7	0	9	5	2	0	7	8	5	0	13	29
% Heavy Vehicles	0.5	8.0	0	2.0	11.1	18.2	0	12.1	21.1	10.4	0	15.1	4.8



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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Hemmenway Street From East			Forsyth Street From South			Hemmenway Street From West			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	88	18	1	3	2	0	1	6	0	119
07:15 AM	89	16	0	7	3	0	8	7	0	130
07:30 AM	110	28	0	11	3	0	6	9	0	167
07:45 AM	95	17	0	7	2	1	11	12	0	145
Total	382	79	1	28	10	1	26	34	0	561
08:00 AM	77	19	0	15	1	1	5	15	0	133
08:15 AM	63	19	0	4	1	0	5	18	0	110
08:30 AM	64	16	0	8	3	0	4	15	0	110
08:45 AM	65	23	0	4	4	0	4	8	0	108
Total	269	77	0	31	9	1	18	56	0	461
Grand Total	651	156	1	59	19	2	44	90	0	1022
Apprch %	80.6	19.3	0.1	73.8	23.8	2.5	32.8	67.2	0	
Total %	63.7	15.3	0.1	5.8	1.9	0.2	4.3	8.8	0	

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	89	16	0	105	7	3	0	10	8	7	0	15	130
07:30 AM	110	28	0	138	11	3	0	14	6	9	0	15	167
07:45 AM	95	17	0	112	7	2	1	10	11	12	0	23	145
08:00 AM	77	19	0	96	15			17	5	15	0	20	133
Total Volume	371	80	0	451	40	9	2	51	30	43	0	73	575
% App. Total	82.3	17.7	0		78.4	17.6	3.9		41.1	58.9	0		
PHF	.843	.714	.000	.817	.667	.750	.500	.750	.682	.717	.000	.793	.861



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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Hemmenway Street From East			Forsyth Street From South			Hemmenway Street From West			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	0	0	0	1	0	0	0	0	0	1
07:15 AM	0	2	0	2	1	0	2	0	0	7
07:30 AM	0	2	0	1	0	0	1	0	0	4
07:45 AM	2	3	0	2	0	0	1	3	0	11
Total	2	7	0	6	1	0	4	3	0	23
08:00 AM	0	0	0	0	1	0	4	2	0	7
08:15 AM	0	1	0	1	0	0	1	1	0	4
08:30 AM	2	1	0	2	1	0	1	1	0	8
08:45 AM	2	1	0	2	0	0	0	2	0	7
Total	4	3	0	5	2	0	6	6	0	26
Grand Total	6	10	0	11	3	0	10	9	0	49
Apprch %	37.5	62.5	0	78.6	21.4	0	52.6	47.4	0	
Total %	12.2	20.4	0	22.4	6.1	0	20.4	18.4	0	

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	2	3	0	5	2	0	0	2	1	3	0	4	11
08:00 AM	0	0	0	0	0	1	0	1	4	2	0	6	7
08:15 AM	0	1	0	1	1	0	0	1	1	1	0	2	4
08:30 AM	2	1	0	3	2	1	0	3	1	1	0	2	8
Total Volume	4	5	0	9	5	2	0	7	7	7	0	14	30
% App. Total	44.4	55.6	0		71.4	28.6	0		50	50	0		
PHF	.500	.417	.000	.450	.625	.500	.000	.583	.438	.583	.000	.583	.682



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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Hemmenway Street From East			Forsyth Street From South			Hemmenway Street From West			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00 AM	0	1	64	2	0	7	0	1	0	75
07:15 AM	0	2	81	1	0	6	2	2	3	97
07:30 AM	1	1	125	2	1	4	0	3	1	138
07:45 AM	2	1	132	0	0	28	2	4	0	169
Total	3	5	402	5	1	45	4	10	4	479
08:00 AM	1	4	58	2	0	8	1	4	0	78
08:15 AM	0	6	63	0	0	6	0	3	0	78
08:30 AM	0	2	54	1	1	13	0	7	0	78
08:45 AM	0	3	52	3	0	9	3	10	0	80
Total	1	15	227	6	1	36	4	24	0	314
Grand Total	4	20	629	11	2	81	8	34	4	793
Apprch %	0.6	3.1	96.3	11.7	2.1	86.2	17.4	73.9	8.7	
Total %	0.5	2.5	79.3	1.4	0.3	10.2	1	4.3	0.5	

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	2	81	83	1	0	6	7	2	2	3	7	97
07:30 AM	1	1	125	127	2	1	4	7	0	3	1	4	138
07:45 AM	2	1	132	135	0	0	28	28	2	4	0	6	169
08:00 AM	1	4	58	63	2	0	8	10	1	4	0	5	78
Total Volume	4	8	396	408	5	1	46	52	5	13	4	22	482
% App. Total	1	2	97.1		9.6	1.9	88.5		22.7	59.1	18.2		
PHF	.500	.500	.750	.756	.625	.250	.411	.464	.625	.813	.333	.786	.713



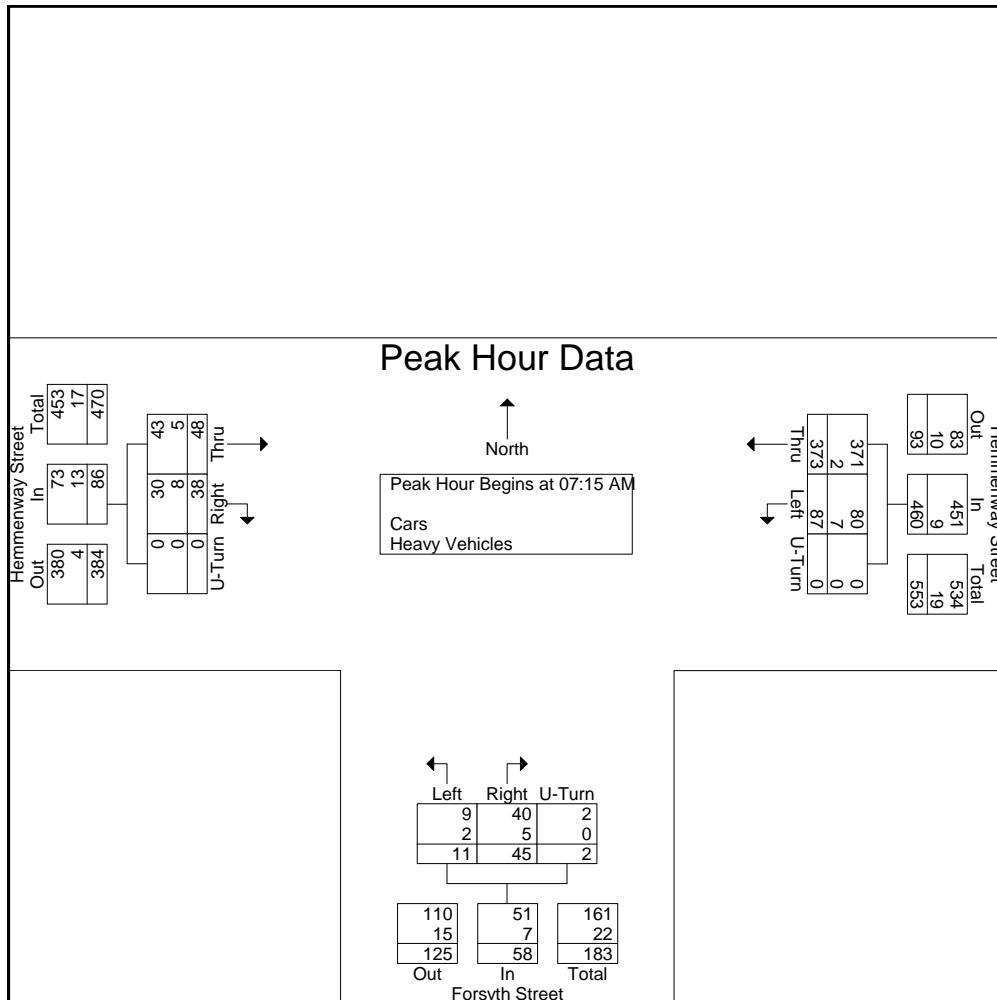
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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	89	18	0	107	9	4	0	13	10	7	0	17	137
07:30 AM	110	30	0	140	12	3	0	15	7	9	0	16	171
07:45 AM	97	20	0	117	9	2	1	12	12	15	0	27	156
08:00 AM	77	19	0	96	15			18	9	17	0	26	140
Total Volume	373	87	0	460	45	11	2	58	38	48	0	86	604
% App. Total	81.1	18.9	0		77.6	19	3.4		44.2	55.8	0		
PHF	.848	.725	.000	.821	.750	.688	.500	.806	.792	.706	.000	.796	.883
Cars	371	80	0	451	40	9	2	51	30	43	0	73	575
% Cars	99.5	92.0	0	98.0	88.9	81.8	100	87.9	78.9	89.6	0	84.9	95.2
Heavy Vehicles	2	7	0	9	5	2	0	7	8	5	0	13	29
% Heavy Vehicles	0.5	8.0	0	2.0	11.1	18.2	0	12.1	21.1	10.4	0	15.1	4.8





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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Hemmenway Street From East			Forsyth Street From South			Hemmenway Street From West			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	100	34	0	9	3	1	6	13	0	166
04:15 PM	95	22	1	9	3	0	7	14	0	151
04:30 PM	83	29	0	12	3	0	11	18	0	156
04:45 PM	84	35	0	12	3	0	7	12	0	153
Total	362	120	1	42	12	1	31	57	0	626
05:00 PM	82	34	0	14	1	1	12	13	0	157
05:15 PM	95	21	0	13	1	0	6	11	0	147
05:30 PM	90	35	0	12	5	1	9	27	0	179
05:45 PM	89	26	0	13	8	0	4	17	0	157
Total	356	116	0	52	15	2	31	68	0	640
Grand Total	718	236	1	94	27	3	62	125	0	1266
Apprch %	75.2	24.7	0.1	75.8	21.8	2.4	33.2	66.8	0	
Total %	56.7	18.6	0.1	7.4	2.1	0.2	4.9	9.9	0	
Cars	709	228	1	86	26	2	45	123	0	1220
% Cars	98.7	96.6	100	91.5	96.3	66.7	72.6	98.4	0	96.4
Heavy Vehicles	9	8	0	8	1	1	17	2	0	46
% Heavy Vehicles	1.3	3.4	0	8.5	3.7	33.3	27.4	1.6	0	3.6

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	82	34	0	116	14	1	1	16	12	13	0	25	157
05:15 PM	95	21	0	116	13	1	0	14	6	11	0	17	147
05:30 PM	90	35	0	125	12	5	1	18	9	27	0	36	179
05:45 PM	89	26	0	115	13	8	0	21	4	17	0	21	157
Total Volume	356	116	0	472	52	15	2	69	31	68	0	99	640
% App. Total	75.4	24.6	0		75.4	21.7	2.9		31.3	68.7	0		
PHF	.937	.829	.000	.944	.929	.469	.500	.821	.646	.630	.000	.688	.894
Cars	351	112	0	463	48	15	2	65	23	68	0	91	619
% Cars	98.6	96.6	0	98.1	92.3	100	100	94.2	74.2	100	0	91.9	96.7
Heavy Vehicles	5	4	0	9	4	0	0	4	8	0	0	8	21
% Heavy Vehicles	1.4	3.4	0	1.9	7.7	0	0	5.8	25.8	0	0	8.1	3.3



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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Hemmenway Street From East			Forsyth Street From South			Hemmenway Street From West			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	98	32	0	9	3	0	6	13	0	161
04:15 PM	94	22	1	6	2	0	3	13	0	141
04:30 PM	83	28	0	11	3	0	9	17	0	151
04:45 PM	83	34	0	12	3	0	4	12	0	148
Total	358	116	1	38	11	0	22	55	0	601
05:00 PM	81	32	0	13	1	1	10	13	0	151
05:15 PM	94	20	0	12	1	0	4	11	0	142
05:30 PM	89	34	0	10	5	1	8	27	0	174
05:45 PM	87	26	0	13	8	0	1	17	0	152
Total	351	112	0	48	15	2	23	68	0	619
Grand Total	709	228	1	86	26	2	45	123	0	1220
Apprch %	75.6	24.3	0.1	75.4	22.8	1.8	26.8	73.2	0	
Total %	58.1	18.7	0.1	7	2.1	0.2	3.7	10.1	0	

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	81	32	0	113	13	1	1	15	10	13	0	23	151
05:15 PM	94	20	0	114	12	1	0	13	4	11	0	15	142
05:30 PM	89	34	0	123	10	5	1	16	8	27	0	35	174
05:45 PM	87	26	0	113	13	8	0	21	1	17	0	18	152
Total Volume	351	112	0	463	48	15	2	65	23	68	0	91	619
% App. Total	75.8	24.2	0		73.8	23.1	3.1		25.3	74.7	0		
PHF	.934	.824	.000	.941	.923	.469	.500	.774	.575	.630	.000	.650	.889



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Start Date : 9/25/2012

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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Hemmenway Street From East			Forsyth Street From South			Hemmenway Street From West			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	2	2	0	0	0	1	0	0	0	5
04:15 PM	1	0	0	3	1	0	4	1	0	10
04:30 PM	0	1	0	1	0	0	2	1	0	5
04:45 PM	1	1	0	0	0	0	3	0	0	5
Total	4	4	0	4	1	1	9	2	0	25
05:00 PM	1	2	0	1	0	0	2	0	0	6
05:15 PM	1	1	0	1	0	0	2	0	0	5
05:30 PM	1	1	0	2	0	0	1	0	0	5
05:45 PM	2	0	0	0	0	0	3	0	0	5
Total	5	4	0	4	0	0	8	0	0	21
Grand Total	9	8	0	8	1	1	17	2	0	46
Apprch %	52.9	47.1	0	80	10	10	89.5	10.5	0	
Total %	19.6	17.4	0	17.4	2.2	2.2	37	4.3	0	

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	1	0	0	1	3	1	0	4	4	1	0	5	10
04:30 PM	0	1	0	1	1	0	0	1	2	1	0	3	5
04:45 PM	1	1	0	2	0	0	0	0	3	0	0	3	5
05:00 PM	1	2	0	3	1	0	0	1	2	0	0	2	6
Total Volume	3	4	0	7	5	1	0	6	11	2	0	13	26
% App. Total	42.9	57.1	0		83.3	16.7	0		84.6	15.4	0		
PHF	.750	.500	.000	.583	.417	.250	.000	.375	.688	.500	.000	.650	.650



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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Hemmenway Street From East			Forsyth Street From South			Hemmenway Street From West			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
04:00 PM	1	2	84	2	2	30	3	1	4	129
04:15 PM	5	1	91	3	2	24	2	2	7	137
04:30 PM	1	2	103	2	0	26	1	1	7	143
04:45 PM	2	1	95	1	0	27	3	4	2	135
Total	9	6	373	8	4	107	9	8	20	544
05:00 PM	3	0	147	2	2	26	2	2	0	184
05:15 PM	6	2	128	5	0	20	1	4	0	166
05:30 PM	4	3	106	0	1	25	0	3	0	142
05:45 PM	7	3	122	2	2	27	2	5	1	171
Total	20	8	503	9	5	98	5	14	1	663
Grand Total	29	14	876	17	9	205	14	22	21	1207
Apprch %	3.2	1.5	95.3	7.4	3.9	88.7	24.6	38.6	36.8	
Total %	2.4	1.2	72.6	1.4	0.7	17	1.2	1.8	1.7	

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	3	0	147	150	2	2	26	30	2	2	0	4	184
05:15 PM	6	2	128	136	5								
05:30 PM	4	3	106	113	0	1	25	26	0	3	0	3	142
05:45 PM	7	3	122	132	2	2	27	31	2	5	1	8	171
Total Volume	20	8	503	531	9	5	98	112	5	14	1	20	663
% App. Total	3.8	1.5	94.7		8	4.5	87.5		25	70	5		
PHF	.714	.667	.855	.885	.450	.625	.907	.903	.625	.700	.250	.625	.901



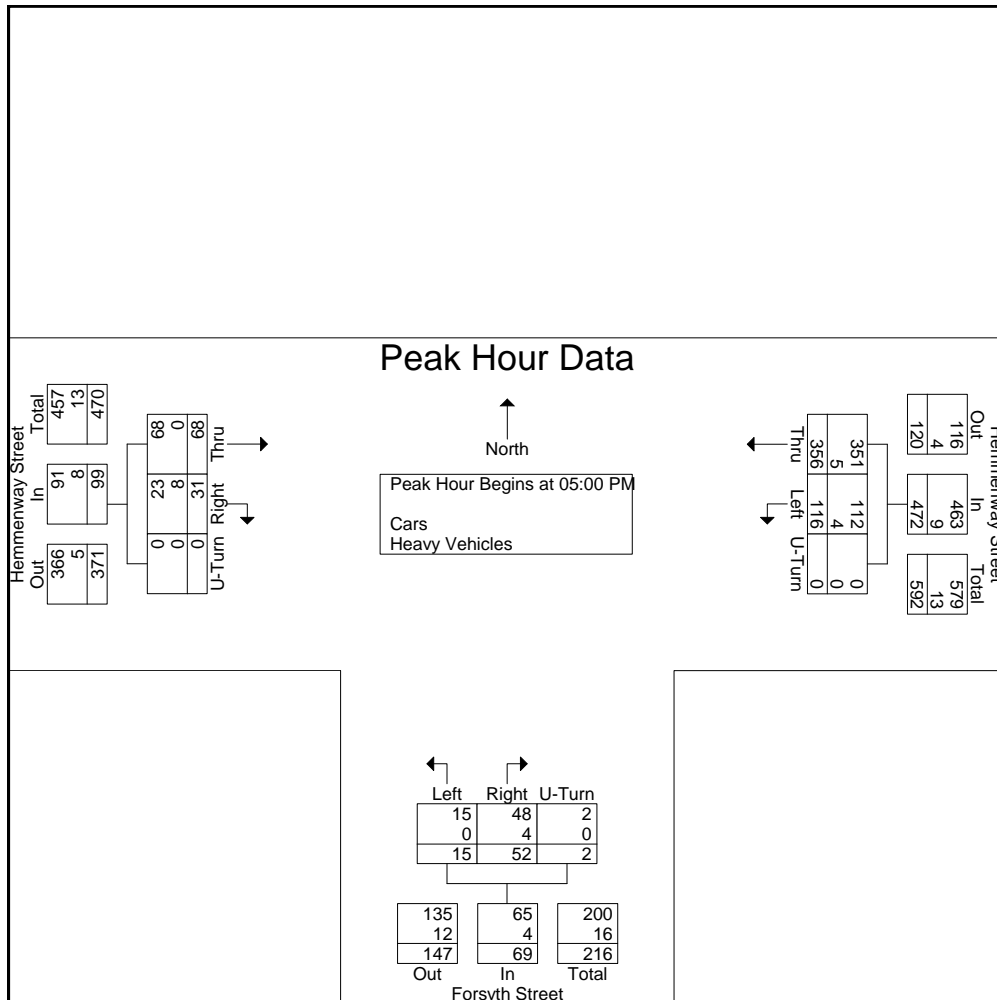
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S: Forsyth Street
E/W: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Hemmenway Street From East				Forsyth Street From South				Hemmenway Street From West				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	82	34	0	116	14	1	1	16	12	13	0	25	157
05:15 PM	95	21	0	116	13	1	0	14	6	11	0	17	147
05:30 PM	90	35	0	125	12	5	1	18	9	27	0	36	179
05:45 PM	89	26	0	115	13	8	0	21	4	17	0	21	157
Total Volume	356	116	0	472	52	15	2	69	31	68	0	99	640
% App. Total	75.4	24.6	0		75.4	21.7	2.9		31.3	68.7	0		
PHF	.937	.829	.000	.944	.929	.469	.500	.821	.646	.630	.000	.688	.894
Cars	351	112	0	463	48	15	2	65	23	68	0	91	619
% Cars	98.6	96.6	0	98.1	92.3	100	100	94.2	74.2	100	0	91.9	96.7
Heavy Vehicles	5	4	0	9	4	0	0	4	8	0	0	8	21
% Heavy Vehicles	1.4	3.4	0	1.9	7.7	0	0	5.8	25.8	0	0	8.1	3.3





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N/S: Forsyth Way
E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Forsyth Way From North			Hemmenway Street From East			Forsyth Way From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	9	4	0	2	83	0	10	58	0	166
07:15 AM	5	4	0	4	86	0	14	64	1	178
07:30 AM	9	4	0	2	104	0	10	61	0	190
07:45 AM	8	7	0	0	96	0	18	67	0	196
Total	31	19	0	8	369	0	52	250	1	730
08:00 AM	3	3	0	1	79	0	19	52	0	157
08:15 AM	5	3	0	3	61	0	19	75	0	166
08:30 AM	5	3	0	11	58	0	15	78	0	170
08:45 AM	4	0	0	2	64	0	11	52	0	133
Total	17	9	0	17	262	0	64	257	0	626
Grand Total	48	28	0	25	631	0	116	507	1	1356
Apprch %	63.2	36.8	0	3.8	96.2	0	18.6	81.2	0.2	
Total %	3.5	2.1	0	1.8	46.5	0	8.6	37.4	0.1	
Cars	38	20	0	24	622	0	110	503	1	1318
% Cars	79.2	71.4	0	96	98.6	0	94.8	99.2	100	97.2
Heavy Vehicles	10	8	0	1	9	0	6	4	0	38
% Heavy Vehicles	20.8	28.6	0	4	1.4	0	5.2	0.8	0	2.8

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	9	4	0	13	2	83	0	85	10	58	0	68	166
07:15 AM	5	4	0	9	4					1		79	178
07:30 AM	9	4	0	13	2	104	0	106	10	61	0	71	190
07:45 AM	8	7	0	15	0	96	0	96	18	67	0	85	196
Total Volume	31	19	0	50	8	369	0	377	52	250	1	303	730
% App. Total	62	38	0		2.1	97.9	0		17.2	82.5	0.3		
PHF	.861	.679	.000	.833	.500	.887	.000	.889	.722	.933	.250	.891	.931
Cars	26	16	0	42	8	366	0	374	49	249	1	299	715
% Cars	83.9	84.2	0	84.0	100	99.2	0	99.2	94.2	99.6	100	98.7	97.9
Heavy Vehicles	5	3	0	8	0	3	0	3	3	1	0	4	15
% Heavy Vehicles	16.1	15.8	0	16.0	0	0.8	0	0.8	5.8	0.4	0	1.3	2.1



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N/S: Forsyth Way
E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Forsyth Way From North			Hemmenway Street From East			Forsyth Way From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	7	3	0	2	82	0	10	58	0	162
07:15 AM	5	3	0	4	85	0	14	63	1	175
07:30 AM	6	4	0	2	104	0	8	61	0	185
07:45 AM	8	6	0	0	95	0	17	67	0	193
Total	26	16	0	8	366	0	49	249	1	715
08:00 AM	1	1	0	1	78	0	18	52	0	151
08:15 AM	5	1	0	2	61	0	18	74	0	161
08:30 AM	3	2	0	11	56	0	14	77	0	163
08:45 AM	3	0	0	2	61	0	11	51	0	128
Total	12	4	0	16	256	0	61	254	0	603
Grand Total	38	20	0	24	622	0	110	503	1	1318
Apprch %	65.5	34.5	0	3.7	96.3	0	17.9	81.9	0.2	
Total %	2.9	1.5	0	1.8	47.2	0	8.3	38.2	0.1	

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	7	3	0	10	2	82	0	84	10	58	0	68	162
07:15 AM	5	3	0	8	4	85	0	89	14	63	1	78	175
07:30 AM	6	4	0	10	2	104	0	106	8	61	0	69	185
07:45 AM	8	6	0	14	0	95	0	95	17	67	0	84	193
Total Volume	26	16	0	42	8	366	0	374	49	249	1	299	715
% App. Total	61.9	38.1	0		2.1	97.9	0		16.4	83.3	0.3		
PHF	.813	.667	.000	.750	.500	.880	.000	.882	.721	.929	.250	.890	.926



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N/S: Forsyth Way
E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Forsyth Way From North			Hemmenway Street From East			Forsyth Way From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	2	1	0	0	1	0	0	0	0	4
07:15 AM	0	1	0	0	1	0	0	1	0	3
07:30 AM	3	0	0	0	0	0	2	0	0	5
07:45 AM	0	1	0	0	1	0	1	0	0	3
Total	5	3	0	0	3	0	3	1	0	15
08:00 AM	2	2	0	0	1	0	1	0	0	6
08:15 AM	0	2	0	1	0	0	1	1	0	5
08:30 AM	2	1	0	0	2	0	1	1	0	7
08:45 AM	1	0	0	0	3	0	0	1	0	5
Total	5	5	0	1	6	0	3	3	0	23
Grand Total	10	8	0	1	9	0	6	4	0	38
Apprch %	55.6	44.4	0	10	90	0	60	40	0	
Total %	26.3	21.1	0	2.6	23.7	0	15.8	10.5	0	

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	2	2	0	4	0	1	0	1	1	0	0	1	6
08:15 AM	0	2	0	2	1	0	0	2	1	1	0	2	5
08:30 AM	2	1	0	3	0	2	0	2	1	1	0	2	7
08:45 AM	1	0	0	1	0	3	0	3	0	1	0	1	5
Total Volume	5	5	0	10	1	6	0	7	3	3	0	6	23
% App. Total	50	50	0		14.3	85.7	0		50	50	0		
PHF	.625	.625	.000	.625	.250	.500	.000	.583	.750	.750	.000	.750	.821



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N/S: Forsyth Way
E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Forsyth Way From North			Hemmenway Street From East			Forsyth Way From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00 AM	0	0	0	0	0	1	0	1	0	2
07:15 AM	0	2	3	0	0	6	2	0	0	13
07:30 AM	2	0	2	0	1	2	0	1	0	8
07:45 AM	1	2	1	1	3	2	1	3	1	15
Total	3	4	6	1	4	11	3	5	1	38
08:00 AM	1	0	0	0	1	3	3	5	0	13
08:15 AM	2	0	0	0	0	4	2	0	0	8
08:30 AM	4	1	0	0	0	5	3	3	0	16
08:45 AM	1	3	4	0	0	6	2	1	0	17
Total	8	4	4	0	1	18	10	9	0	54
Grand Total	11	8	10	1	5	29	13	14	1	92
Apprch %	37.9	27.6	34.5	2.9	14.3	82.9	46.4	50	3.6	
Total %	12	8.7	10.9	1.1	5.4	31.5	14.1	15.2	1.1	

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	1	0	0	1	0	1	3	4	3	5	0	8	13
08:15 AM	2	0	0	2	0	0	4	4	2	0	0	2	8
08:30 AM	4	1	0	5	0	0	5	5	3	3	0	6	16
08:45 AM	1	3	4	8	0	0	6	6	2	1	0	3	17
Total Volume	8	4	4	16	0	1	18	19	10	9	0	19	54
% App. Total	50	25	25		0	5.3	94.7		52.6	47.4	0		
PHF	.500	.333	.250	.500	.000	.250	.750	.792	.833	.450	.000	.594	.794



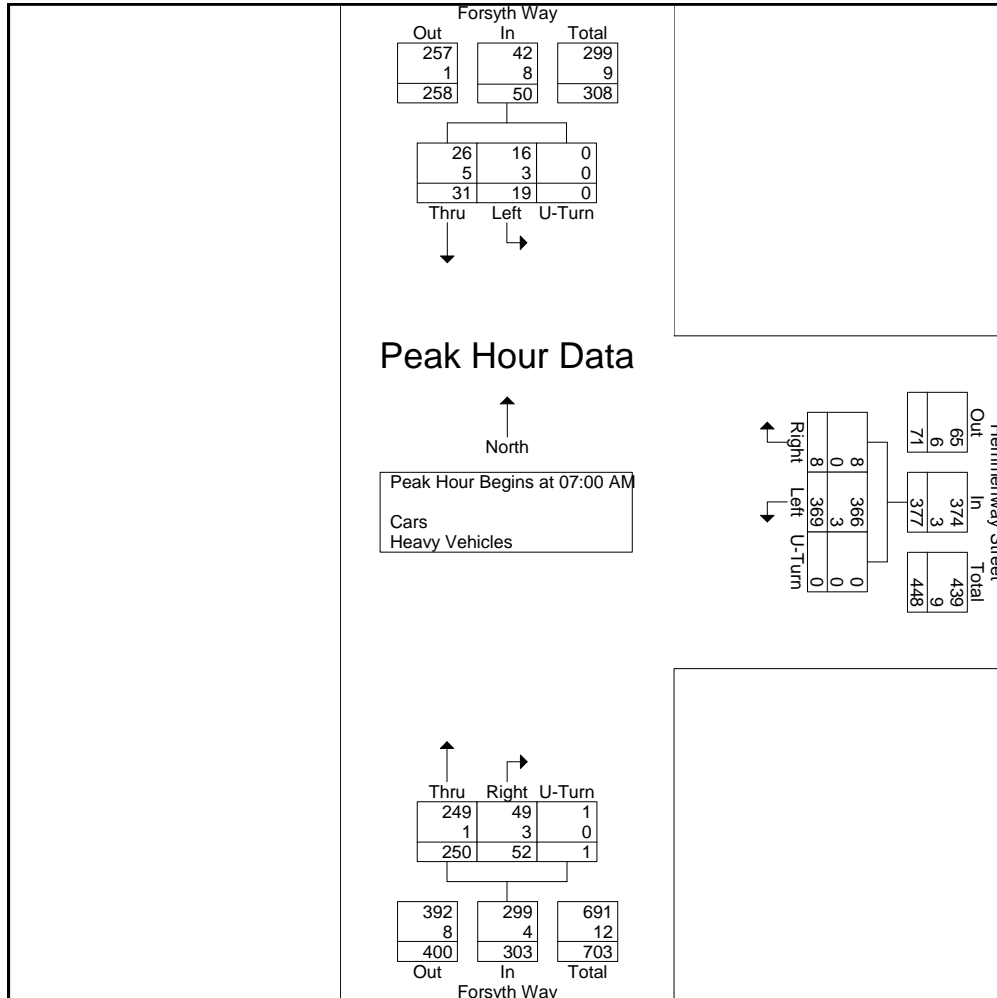
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Client: HSH/ J. SanClemente

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	9	4	0	13	2	83	0	85	10	58	0	68	166
07:15 AM	5	4	0	9	4					1			178
07:30 AM	9	4	0	13	2	104	0	106	10	61	0	71	190
07:45 AM	8	7	0	15	0	96	0	96	18	67	0	85	196
Total Volume	31	19	0	50	8	369	0	377	52	250	1	303	730
% App. Total	62	38	0		2.1	97.9	0		17.2	82.5	0.3		
PHF	.861	.679	.000	.833	.500	.887	.000	.889	.722	.933	.250	.891	.931
Cars	26	16	0	42	8	366	0	374	49	249	1	299	715
% Cars	83.9	84.2	0	84.0	100	99.2	0	99.2	94.2	99.6	100	98.7	97.9
Heavy Vehicles	5	3	0	8	0	3	0	3	3	1	0	4	15
% Heavy Vehicles	16.1	15.8	0	16.0	0	0.8	0	0.8	5.8	0.4	0	1.3	2.1





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N/S: Forsyth Way
E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Forsyth Way From North			Hemmenway Street From East			Forsyth Way From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	20	7	0	3	101	0	10	58	0	199
04:15 PM	11	6	0	6	93	0	9	42	0	167
04:30 PM	24	2	0	3	73	0	15	43	0	160
04:45 PM	10	5	0	7	81	1	11	47	1	163
Total	65	20	0	19	348	1	45	190	1	689
05:00 PM	29	7	0	2	74	0	15	41	0	168
05:15 PM	17	5	0	9	83	0	11	42	0	167
05:30 PM	9	5	0	8	85	0	27	48	0	182
05:45 PM	12	5	0	12	79	0	16	45	0	169
Total	67	22	0	31	321	0	69	176	0	686
Grand Total	132	42	0	50	669	1	114	366	1	1375
Apprch %	75.9	24.1	0	6.9	92.9	0.1	23.7	76.1	0.2	
Total %	9.6	3.1	0	3.6	48.7	0.1	8.3	26.6	0.1	
Cars	128	24	0	47	656	1	113	363	1	1333
% Cars	97	57.1	0	94	98.1	100	99.1	99.2	100	96.9
Heavy Vehicles	4	18	0	3	13	0	1	3	0	42
% Heavy Vehicles	3	42.9	0	6	1.9	0	0.9	0.8	0	3.1

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	20	7	0	27	3	101	0	104	10	58	0	68	199
04:15 PM	11	6	0	17	6	93	0	99	9	42	0	51	167
04:30 PM	24	2	0	26	3	73	0	76	15	43	0	58	160
04:45 PM	10	5	0	15	7	81	1	89	11	47	1	59	163
Total Volume	65	20	0	85	19	348	1	368	45	190	1	236	689
% App. Total	76.5	23.5	0		5.2	94.6	0.3		19.1	80.5	0.4		
PHF	.677	.714	.000	.787	.679	.861	.250	.885	.750	.819	.250	.868	.866
Cars	62	10	0	72	17	340	1	358	44	189	1	234	664
% Cars	95.4	50.0	0	84.7	89.5	97.7	100	97.3	97.8	99.5	100	99.2	96.4
Heavy Vehicles	3	10	0	13	2	8	0	10	1	1	0	2	25
% Heavy Vehicles	4.6	50.0	0	15.3	10.5	2.3	0	2.7	2.2	0.5	0	0.8	3.6



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File Name : 123026 NN
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Way
E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Forsyth Way From North			Hemmenway Street From East			Forsyth Way From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	20	5	0	3	99	0	10	58	0	195
04:15 PM	11	3	0	5	90	0	9	42	0	160
04:30 PM	21	1	0	3	71	0	14	43	0	153
04:45 PM	10	1	0	6	80	1	11	46	1	156
Total	62	10	0	17	340	1	44	189	1	664
05:00 PM	28	5	0	2	73	0	15	40	0	163
05:15 PM	17	3	0	8	82	0	11	41	0	162
05:30 PM	9	4	0	8	84	0	27	48	0	180
05:45 PM	12	2	0	12	77	0	16	45	0	164
Total	66	14	0	30	316	0	69	174	0	669
Grand Total	128	24	0	47	656	1	113	363	1	1333
Apprch %	84.2	15.8	0	6.7	93.2	0.1	23.7	76.1	0.2	
Total %	9.6	1.8	0	3.5	49.2	0.1	8.5	27.2	0.1	

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	28	5	0	33	2	73	0	75	15	40	0	55	163
05:15 PM	17	3	0	20	8	82	0	90	11	41	0	52	162
05:30 PM	9	4	0	13	8	84	0	92	27	48	0	75	180
05:45 PM	12	2	0	14	12								
Total Volume	66	14	0	80	30	316	0	346	69	174	0	243	669
% App. Total	82.5	17.5	0		8.7	91.3	0		28.4	71.6	0		
PHF	.589	.700	.000	.606	.625	.940	.000	.940	.639	.906	.000	.810	.929



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File Name : 123026 NN
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Forsyth Way
E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Forsyth Way From North			Hemmenway Street From East			Forsyth Way From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	0	2	0	0	2	0	0	0	0	4
04:15 PM	0	3	0	1	3	0	0	0	0	7
04:30 PM	3	1	0	0	2	0	1	0	0	7
04:45 PM	0	4	0	1	1	0	0	1	0	7
Total	3	10	0	2	8	0	1	1	0	25
05:00 PM	1	2	0	0	1	0	0	1	0	5
05:15 PM	0	2	0	1	1	0	0	1	0	5
05:30 PM	0	1	0	0	1	0	0	0	0	2
05:45 PM	0	3	0	0	2	0	0	0	0	5
Total	1	8	0	1	5	0	0	2	0	17
Grand Total	4	18	0	3	13	0	1	3	0	42
Apprch %	18.2	81.8	0	18.8	81.2	0	25	75	0	
Total %	9.5	42.9	0	7.1	31	0	2.4	7.1	0	

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	3	0	3	1	3	0	4	0	0	0	0	7
04:30 PM	3	1	0	4	0	2	0	2	1	0	0	1	7
04:45 PM	0	4	0	4	1	1	0	2	0	1	0	1	7
05:00 PM	1	2	0	3	0	1	0	1	0	1	0	1	5
Total Volume	4	10	0	14	2	7	0	9	1	2	0	3	26
% App. Total	28.6	71.4	0		22.2	77.8	0		33.3	66.7	0		
PHF	.333	.625	.000	.875	.500	.583	.000	.563	.250	.500	.000	.750	.929



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N/S: Forsyth Way
E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 NN
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Peds and Bikes

Start Time	Forsyth Way From North			Hemmenway Street From East			Forsyth Way From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
04:00 PM	4	0	2	1	0	3	0	2	2	14
04:15 PM	0	3	2	2	3	15	1	0	0	26
04:30 PM	1	0	4	0	1	10	0	2	0	18
04:45 PM	1	0	5	0	2	16	1	2	0	27
Total	6	3	13	3	6	44	2	6	2	85
05:00 PM	5	4	0	2	2	7	0	5	1	26
05:15 PM	3	1	1	0	6	16	2	2	0	31
05:30 PM	0	0	9	4	6	9	1	3	1	33
05:45 PM	2	2	4	2	3	14	1	3	0	31
Total	10	7	14	8	17	46	4	13	2	121
Grand Total	16	10	27	11	23	90	6	19	4	206
Apprch %	30.2	18.9	50.9	8.9	18.5	72.6	20.7	65.5	13.8	
Total %	7.8	4.9	13.1	5.3	11.2	43.7	2.9	9.2	1.9	

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	5	4	0	9	2	2	7	11	0	5	1	6	26
05:15 PM	3	1	1	5	0	6	16	22	2	2	0	4	31
05:30 PM	0	0	9	9	4								33
05:45 PM	2	2	4	8	2	3	14	19	1	3	0	4	31
Total Volume	10	7	14	31	8	17	46	71	4	13	2	19	121
% App. Total	32.3	22.6	45.2		11.3	23.9	64.8		21.1	68.4	10.5		
PHF	.500	.438	.389	.861	.500	.708	.719	.807	.500	.650	.500	.792	.917



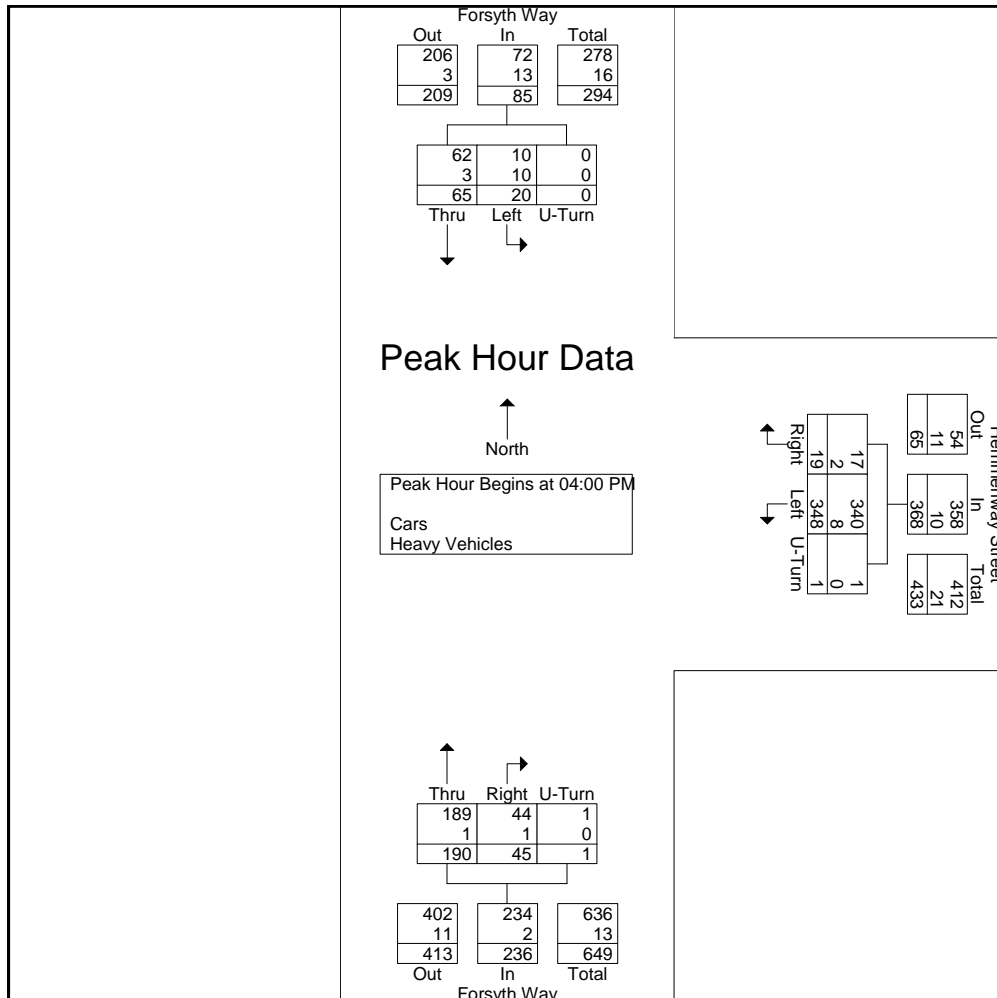
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E: Hemmenway Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 NN
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Start Time	Forsyth Way From North				Hemmenway Street From East				Forsyth Way From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	20	7	0	27	3	101	0	104	10	58	0	68	199
04:15 PM	11	6	0	17	6	93	0	99	9	42	0	51	167
04:30 PM	24	2	0	26	3	73	0	76	15	43	0	58	160
04:45 PM	10	5	0	15	7		1	89	11	47	1	59	163
Total Volume	65	20	0	85	19	348	1	368	45	190	1	236	689
% App. Total	76.5	23.5	0		5.2	94.6	0.3		19.1	80.5	0.4		
PHF	.677	.714	.000	.787	.679	.861	.250	.885	.750	.819	.250	.868	.866
Cars	62	10	0	72	17	340	1	358	44	189	1	234	664
% Cars	95.4	50.0	0	84.7	89.5	97.7	100	97.3	97.8	99.5	100	99.2	96.4
Heavy Vehicles	3	10	0	13	2	8	0	10	1	1	0	2	25
% Heavy Vehicles	4.6	50.0	0	15.3	10.5	2.3	0	2.7	2.2	0.5	0	0.8	3.6





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N/S: Forsyth Street
E/W: World Series Way/ Greenleaf Street
City, State: Boston, MA
Client: Howard/Stein-Hudson / J. Lizza

File Name : 123083 A
Site Code : 2011046
Start Date : 10/17/2012
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Forsyth Street From North				World Series Way From East				Forsyth Street From South				Greenleaf Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
07:00 AM	9	18	0	1	0	0	0	0	0	6	3	0	0	0	0	0	0	37
07:15 AM	6	13	0	1	0	0	0	0	0	17	3	0	1	0	0	0	0	41
07:30 AM	12	20	0	0	0	0	0	0	0	22	1	0	0	0	0	0	0	55
07:45 AM	11	22	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	47
Total	38	73	0	2	0	0	0	0	0	59	7	0	1	0	0	0	0	180
08:00 AM	13	15	0	0	1	0	0	0	0	13	1	0	0	0	0	0	0	43
08:15 AM	12	10	0	2	0	0	0	0	0	12	2	0	0	0	0	0	0	38
08:30 AM	20	23	0	1	0	0	0	0	0	17	1	0	0	0	0	0	0	62
08:45 AM	16	15	0	1	0	0	0	0	0	17	3	0	0	0	1	0	0	53
Total	61	63	0	4	1	0	0	0	0	59	7	0	0	0	1	0	0	196
Grand Total	99	136	0	6	1	0	0	0	0	118	14	0	1	0	1	0	0	376
Apprch %	41.1	56.4	0	2.5	100	0	0	0	0	89.4	10.6	0	50	0	50	0	0	
Total %	26.3	36.2	0	1.6	0.3	0	0	0	0	31.4	3.7	0	0.3	0	0.3	0	0	
Cars	96	86	0	6	0	0	0	0	0	69	12	0	1	0	1	0	0	271
% Cars	97	63.2	0	100	0	0	0	0	0	58.5	85.7	0	100	0	100	0	0	72.1
Heavy Vehicles	3	50	0	0	1	0	0	0	0	49	2	0	0	0	0	0	0	105
% Heavy Vehicles	3	36.8	0	0	100	0	0	0	0	41.5	14.3	0	0	0	0	0	0	27.9

Start Time	Forsyth Street From North					World Series Way From East					Forsyth Street From South					Greenleaf Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	13	15	0	0	28	1	0	0	0	1	0	13	1	0	14	0	0	0	0	0	43
08:15 AM	12	10	0	2	24	0	0	0	0	0	0	12	2	0	14	0	0	0	0	0	38
08:30 AM	20	23	0	1	44	0	0	0	0	0	0	17	1	0	18	0	0	0	0	0	62
08:45 AM	16	15	0	1	32	0	0	0	0	0	0	17	3	0	20	0	0	1	0	1	53
Total Volume	61	63	0	4	128	1	0	0	0	1	0	59	7	0	66	0	0	1	0	1	196
% App. Total	47.7	49.2	0	3.1		100	0	0	0		0	89.4	10.6	0		0	0	100	0		
PHF	.763	.685	.000	.500	.727	.250	.000	.000	.000	.250	.000	.868	.583	.000	.825	.000	.000	.250	.000	.250	.790
Cars	60	38	0	4	102	0	0	0	0	0	0	35	7	0	42	0	0	1	0	1	145
% Cars	98.4	60.3	0	100	79.7	0	0	0	0	0	0	59.3	100	0	63.6	0	0	100	0	100	74.0
Heavy Vehicles	1	25	0	0	26	1	0	0	0	1	0	24	0	0	24	0	0	0	0	0	51
% Heavy Vehicles	1.6	39.7	0	0	20.3	100	0	0	0	100	0	40.7	0	0	36.4	0	0	0	0	0	26.0



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N/S: Forsyth Street
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City, State: Boston, MA
Client: Howard/Stein-Hudson / J. Lizza

File Name : 123083 A
Site Code : 2011046
Start Date : 10/17/2012
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Forsyth Street From North					World Series Way From East					Forsyth Street From South					Greenleaf Street From West					Int. Total
	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	
07:00 AM	1	1	0	14	3	0	0	0	11	65	0	2	0	1	1	0	0	0	7	8	114
07:15 AM	1	1	0	8	4	0	0	0	17	87	0	1	0	0	0	0	0	1	12	21	153
07:30 AM	0	3	0	7	6	0	0	0	38	87	1	2	0	6	1	2	0	1	14	31	199
07:45 AM	0	14	2	30	87	0	0	0	137	44	0	1	0	6	6	1	0	1	11	342	682
Total	2	19	2	59	100	0	0	0	203	283	1	6	0	13	8	3	0	3	44	402	1148
08:00 AM	2	7	0	25	22	0	0	0	42	41	0	5	0	2	1	0	0	1	12	95	255
08:15 AM	1	2	1	13	20	0	0	0	22	47	0	2	1	3	1	0	2	1	35	9	160
08:30 AM	0	1	0	15	10	0	0	0	24	35	0	1	0	0	5	0	0	1	19	19	130
08:45 AM	1	4	0	21	18	0	0	0	36	47	0	2	0	1	0	0	1	0	19	22	172
Total	4	14	1	74	70	0	0	0	124	170	0	10	1	6	7	0	3	3	85	145	717
Grand Total	6	33	3	133	170	0	0	0	327	453	1	16	1	19	15	3	3	6	129	547	1865
Apprch %	1.7	9.6	0.9	38.6	49.3	0	0	0	41.9	58.1	1.9	30.8	1.9	36.5	28.8	0.4	0.4	0.9	18.8	79.5	
Total %	0.3	1.8	0.2	7.1	9.1	0	0	0	17.5	24.3	0.1	0.9	0.1	1	0.8	0.2	0.2	0.3	6.9	29.3	

Start Time	Forsyth Street From North						World Series Way From East						Forsyth Street From South						Greenleaf Street From West						Int. Total	
	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																										
Peak Hour for Entire Intersection Begins at 07:30 AM																										
07:30 AM	0	3	0	7	6	16	0	0	0	38	87	125	1	2	0	6	1	10	2	0	1	14	31	48	199	
07:45 AM	0	14	2	30	87	133	0	0	0	137	44	181	0	1	0	6	6	13	1	0	1	11	342	355	682	
08:00 AM	2	7	0	25	22	56	0	0	0	42	41	83	0	5	0	2	1	8	0	0	1	12	95	108	255	
08:15 AM	1	2	1	13	20	37	0	0	0	22	47	69	0	2	1	3	1	7	0	2	1	35	9	47	160	
Total Volume	3	26	3	75	135	242	0	0	0	239	219	458	1	10	1	17	9	38	3	2	4	72	477	558	1296	
% App. Total	1.2	10.7	1.2	31	55.8	0	0	0	52.2	47.8	2.6	26.3	2.6	44.7	23.7	0.5	0.4	0.7	12.9	85.5						
PHF	.375	.464	.375	.625	.388	.455	.000	.000	.000	.436	.629	.633	.250	.500	.250	.708	.375	.731	.375	.250	1.0	.514	.349	.393	.475	



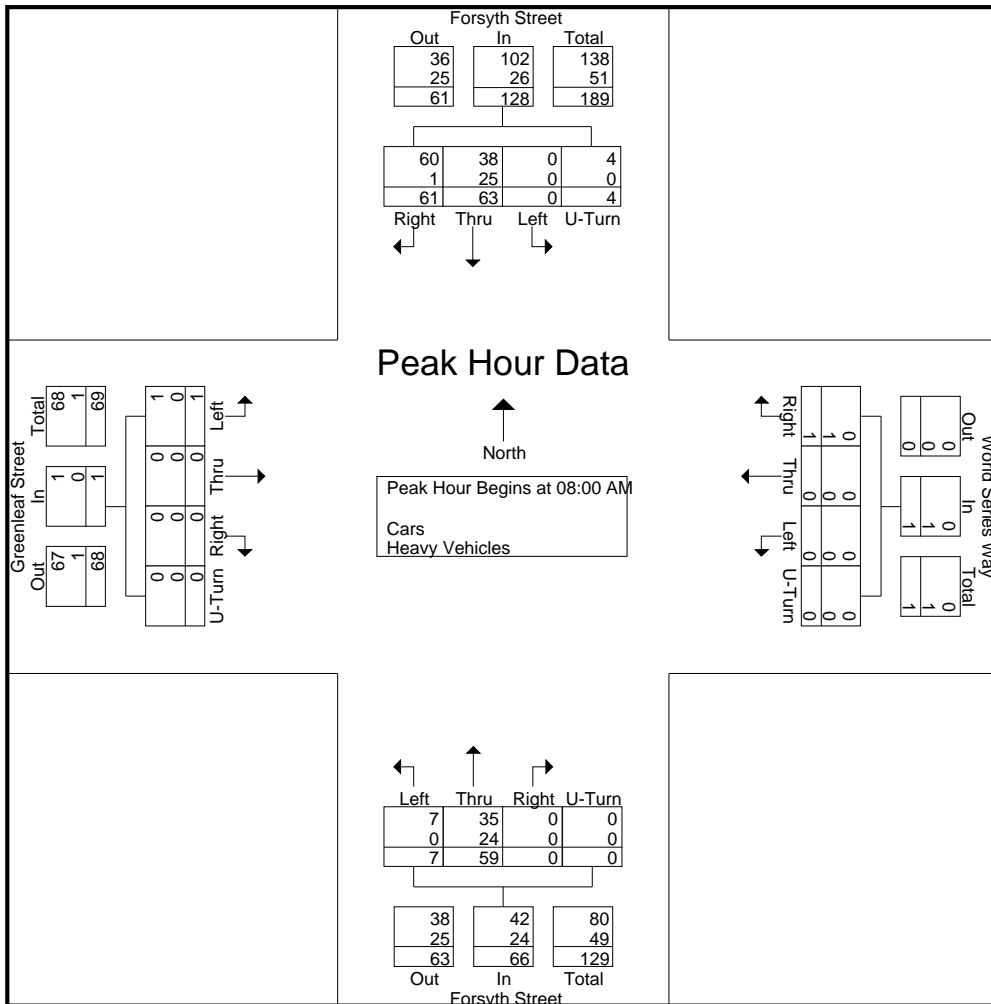
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File Name : 123083 A
Site Code : 2011046
Start Date : 10/17/2012
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Start Time	Forsyth Street From North					World Series Way From East					Forsyth Street From South					Greenleaf Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	13	15	0	0	28	1	0	0	0	1	0	13	1	0	14	0	0	0	0	0	43
08:15 AM	12	10	0	2	24	0	0	0	0	0	0	12	2	0	14	0	0	0	0	0	38
08:30 AM	20	23	0	1	44	0	0	0	0	0	0	17	1	0	18	0	0	0	0	0	62
08:45 AM	16	15	0	1	32	0	0	0	0	0	0	17	3	0	20	0	0	1	0	1	53
Total Volume	61	63	0	4	128	1	0	0	0	1	0	59	7	0	66	0	0	1	0	1	196
% App. Total	47.7	49.2	0	3.1		100	0	0	0		0	89.4	10.6	0		0	0	100	0		
PHF	.763	.685	.000	.500	.727	.250	.000	.000	.000	.250	.000	.868	.583	.000	.825	.000	.000	.250	.000	.250	.790
Cars	60	38	0	4	102	0	0	0	0	0	0	35	7	0	42	0	0	1	0	1	145
% Cars	98.4	60.3	0	100	79.7	0	0	0	0	0	0	59.3	100	0	63.6	0	0	100	0	100	74.0
Heavy Vehicles	1	25	0	0	26	1	0	0	0	1	0	24	0	0	24	0	0	0	0	0	51
% Heavy Vehicles	1.6	39.7	0	0	20.3	100	0	0	0	100	0	40.7	0	0	36.4	0	0	0	0	0	26.0





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N/S: Forsyth Street
E/W: World Series Way/ Greenleaf Street
City, State: Boston, MA
Client: Howard/Stein-Hudson / J. Lizza

File Name : 123083 AA
Site Code : 2011046
Start Date : 10/17/2012
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Forsyth Street From North				World Series Way From East				Forsyth Street From South				Greenleaf Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
04:00 PM	17	9	0	1	0	0	0	0	0	7	0	0	0	0	0	0	0	34
04:15 PM	10	13	0	0	0	0	0	0	0	14	3	0	1	0	1	0	0	42
04:30 PM	30	15	0	1	0	0	0	0	0	23	1	0	0	0	0	0	0	70
04:45 PM	22	15	0	1	0	0	0	0	0	9	0	0	0	0	0	0	0	47
Total	79	52	0	3	0	0	0	0	0	53	4	0	1	0	1	0	0	193
05:00 PM	14	14	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	42
05:15 PM	18	15	0	0	0	0	0	0	0	11	3	0	0	0	1	0	0	48
05:30 PM	18	19	0	1	0	0	0	0	1	19	2	0	0	0	1	0	0	61
05:45 PM	19	22	0	0	0	0	0	0	0	21	2	0	0	0	0	0	0	64
Total	69	70	0	1	0	0	0	0	1	65	7	0	0	0	2	0	0	215
Grand Total	148	122	0	4	0	0	0	0	1	118	11	0	1	0	3	0	0	408
Apprch %	54	44.5	0	1.5	0	0	0	0	0.8	90.8	8.5	0	25	0	75	0	0	
Total %	36.3	29.9	0	1	0	0	0	0	0.2	28.9	2.7	0	0.2	0	0.7	0	0	
Cars	146	91	0	4	0	0	0	0	1	88	10	0	1	0	3	0	0	344
% Cars	98.6	74.6	0	100	0	0	0	0	100	74.6	90.9	0	100	0	100	0	0	84.3
Heavy Vehicles	2	31	0	0	0	0	0	0	0	30	1	0	0	0	0	0	0	64
% Heavy Vehicles	1.4	25.4	0	0	0	0	0	0	0	25.4	9.1	0	0	0	0	0	0	15.7

Start Time	Forsyth Street From North					World Series Way From East					Forsyth Street From South					Greenleaf Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	14	14	0	0	28	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	42
05:15 PM	18	15	0	0	33	0	0	0	0	0	0	11	3	0	14	0	0	1	0	1	48
05:30 PM	18	19	0	1	38	0	0	0	0	0	1	19	2	0	22	0	0	1	0	1	61
05:45 PM	19	22	0	0	41	0	0	0	0	0	0	21	2	0	23	0	0	0	0	0	64
Total Volume	69	70	0	1	140	0	0	0	0	0	1	65	7	0	73	0	0	2	0	2	215
% App. Total	49.3	50	0	0.7		0	0	0	0		1.4	89	9.6	0		0	0	100	0		
PHF	.908	.795	.000	.250	.854	.000	.000	.000	.000	.000	.250	.774	.583	.000	.793	.000	.000	.500	.000	.500	.840
Cars	69	56	0	1	126	0	0	0	0	0	1	50	6	0	57	0	0	2	0	2	185
% Cars	100	80.0	0	100	90.0	0	0	0	0	0	100	76.9	85.7	0	78.1	0	0	100	0	100	86.0
Heavy Vehicles	0	14	0	0	14	0	0	0	0	0	0	15	1	0	16	0	0	0	0	0	30
% Heavy Vehicles	0	20.0	0	0	10.0	0	0	0	0	0	0	23.1	14.3	0	21.9	0	0	0	0	0	14.0



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E/W: World Series Way/ Greenleaf Street
City, State: Boston, MA
Client: Howard/Stein-Hudson / J. Lizza

File Name : 123083 AA
Site Code : 2011046
Start Date : 10/17/2012
Page No : 1

Groups Printed- Cars

Start Time	Forsyth Street From North				World Series Way From East				Forsyth Street From South				Greenleaf Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
04:00 PM	17	5	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	26
04:15 PM	8	10	0	0	0	0	0	0	0	11	3	0	1	0	1	0	0	34
04:30 PM	30	11	0	1	0	0	0	0	0	19	1	0	0	0	0	0	0	62
04:45 PM	22	9	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	37
Total	77	35	0	3	0	0	0	0	0	38	4	0	1	0	1	0	0	159
05:00 PM	14	10	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	33
05:15 PM	18	13	0	0	0	0	0	0	0	10	2	0	0	0	1	0	0	44
05:30 PM	18	14	0	1	0	0	0	0	1	13	2	0	0	0	1	0	0	50
05:45 PM	19	19	0	0	0	0	0	0	0	18	2	0	0	0	0	0	0	58
Total	69	56	0	1	0	0	0	0	1	50	6	0	0	0	2	0	0	185
Grand Total	146	91	0	4	0	0	0	0	1	88	10	0	1	0	3	0	0	344
Apprch %	60.6	37.8	0	1.7	0	0	0	0	1	88.9	10.1	0	25	0	75	0	0	
Total %	42.4	26.5	0	1.2	0	0	0	0	0.3	25.6	2.9	0	0.3	0	0.9	0	0	

Start Time	Forsyth Street From North					World Series Way From East					Forsyth Street From South					Greenleaf Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	14	10	0	0	24	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	33
05:15 PM	18	13	0	0	31	0	0	0	0	0	0	10	2	0	12	0	0	1	0	1	44
05:30 PM	18	14	0	1	33	0	0	0	0	0	1	13	2	0	16	0	0	1	0	1	50
05:45 PM	19	19	0	0	38	0	0	0	0	0	0	18	2	0	20	0	0	0	0	0	58
Total Volume	69	56	0	1	126	0	0	0	0	0	1	50	6	0	57	0	0	2	0	2	185
% App. Total	54.8	44.4	0	0.8		0	0	0	0		1.8	87.7	10.5	0		0	0	100	0		
PHF	.908	.737	.000	.250	.829	.000	.000	.000	.000	.000	.250	.694	.750	.000	.713	.000	.000	.500	.000	.500	.797



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City, State: Boston, MA
Client: Howard/Stein-Hudson / J. Lizza

File Name : 123083 AA
Site Code : 2011046
Start Date : 10/17/2012
Page No : 1

Groups Printed- Peds and Bicycles

Start Time	Forsyth Street From North					World Series Way From East					Forsyth Street From South					Greenleaf Street From West					Int. Total
	Right	Thru	Left	Peds EB	Peds WB	Right	Thru	Left	Peds SB	Peds NB	Right	Thru	Left	Peds WB	Peds EB	Right	Thru	Left	Peds NB	Peds SB	
04:00 PM	0	2	0	16	35	0	0	0	89	46	1	0	0	4	5	0	2	2	27	42	271
04:15 PM	1	3	0	55	89	0	0	0	130	27	0	0	0	22	8	0	1	3	62	177	578
04:30 PM	4	5	0	68	87	0	1	0	71	111	1	11	0	20	19	1	0	1	129	150	679
04:45 PM	1	0	0	28	30	0	0	0	58	33	0	4	0	8	9	1	0	2	40	52	266
Total	6	10	0	167	241	0	1	0	348	217	2	15	0	54	41	2	3	8	258	421	1794
05:00 PM	1	3	0	26	27	0	0	0	52	91	0	11	1	4	10	0	0	0	50	36	312
05:15 PM	2	0	0	39	21	0	0	0	82	80	0	4	0	3	10	1	0	1	39	42	324
05:30 PM	2	2	0	64	90	0	0	0	127	239	1	9	4	14	13	0	0	2	157	66	790
05:45 PM	3	9	0	56	57	1	1	1	111	235	0	12	2	5	15	0	0	3	120	81	712
Total	8	14	0	185	195	1	1	1	372	645	1	36	7	26	48	1	0	6	366	225	2138
Grand Total	14	24	0	352	436	1	2	1	720	862	3	51	7	80	89	3	3	14	624	646	3932
Apprch %	1.7	2.9	0	42.6	52.8	0.1	0.1	0.1	45.4	54.4	1.3	22.2	3	34.8	38.7	0.2	0.2	1.1	48.4	50.1	
Total %	0.4	0.6	0	9	11.1	0	0.1	0	18.3	21.9	0.1	1.3	0.2	2	2.3	0.1	0.1	0.4	15.9	16.4	

Start Time	Forsyth Street From North						World Series Way From East						Forsyth Street From South						Greenleaf Street From West						Int. Total
	Right	Thru	Left	Peds EB	Peds WB	App. Total	Right	Thru	Left	Peds SB	Peds NB	App. Total	Right	Thru	Left	Peds WB	Peds EB	App. Total	Right	Thru	Left	Peds NB	Peds SB	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																									
Peak Hour for Entire Intersection Begins at 05:00 PM																									
05:00 PM	1	3	0	26	27	57	0	0	0	52	91	143	0	11	1	4	10	26	0	0	0	50	36	86	312
05:15 PM	2	0	0	39	21	62	0	0	0	82	80	162	0	4	0	3	10	17	1	0	1	39	42	83	324
05:30 PM	2	2	0	64	90	158	0	0	0	127	239	366	1	9	4	14	13	41	0	0	2	157	66	225	790
05:45 PM	3	9	0	56	57	125	1	1	1	111	235	349	0	12	2	5	15	34	0	0	3	120	81	204	712
Total Volume	8	14	0	185	195	402	1	1	1	372	645	1020	1	36	7	26	48	118	1	0	6	366	225	598	2138
% App. Total	2	3.5	0	46	48.5		0.1	0.1	0.1	36.5	63.2		0.8	30.5	5.9	22	40.7		0.2	0	1	61.2	37.6		
PHF	.667	.389	.000	.723	.542	.636	.250	.250	.250	.732	.675	.697	.250	.750	.438	.464	.800	.720	.250	.000	.500	.583	.694	.664	.677



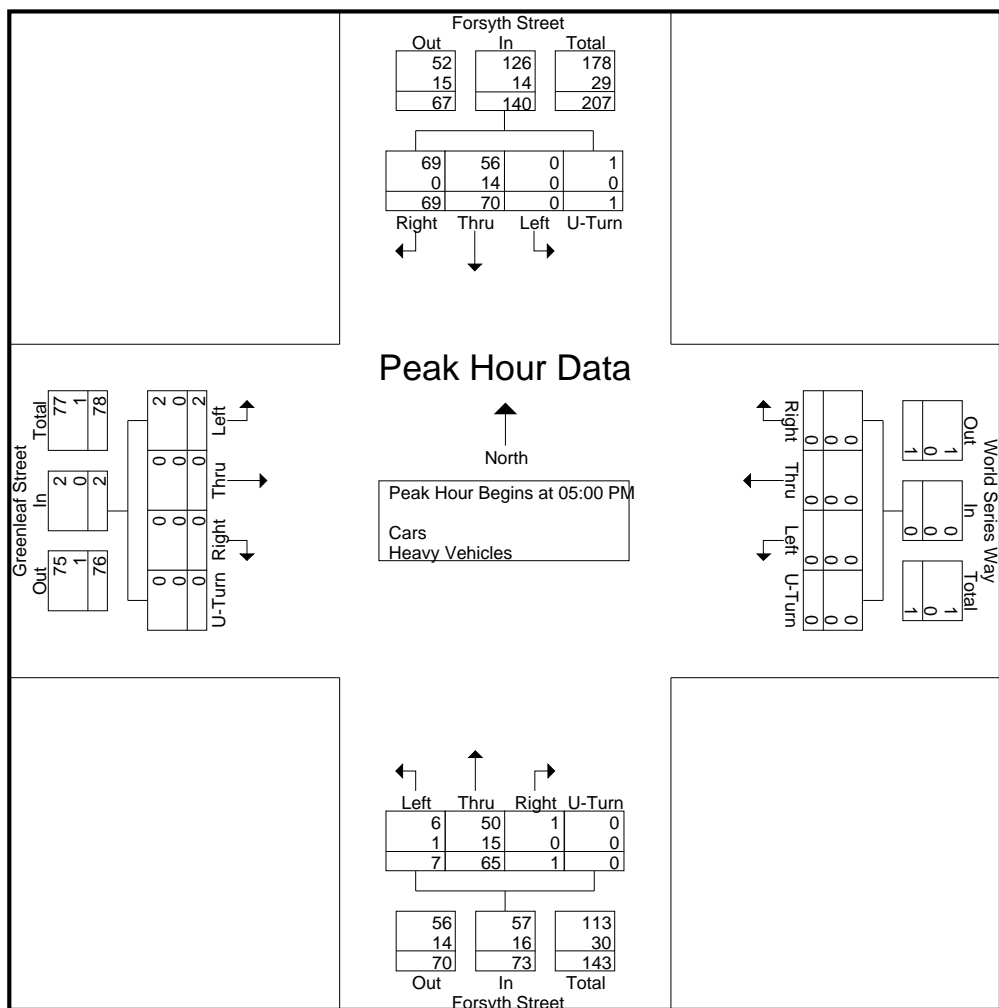
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File Name : 123083 AA
Site Code : 2011046
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Page No : 1

Start Time	Forsyth Street From North					World Series Way From East					Forsyth Street From South					Greenleaf Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	14	14	0	0	28	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	42
05:15 PM	18	15	0	0	33	0	0	0	0	0	0	11	3	0	14	0	0	1	0	1	48
05:30 PM	18	19	0	1	38	0	0	0	0	0	1	19	2	0	22	0	0	1	0	1	61
05:45 PM	19	22	0	0	41	0	0	0	0	0	0	21	2	0	23	0	0	0	0	0	64
Total Volume	69	70	0	1	140	0	0	0	0	0	1	65	7	0	73	0	0	2	0	2	215
% App. Total	49.3	50	0	0.7		0	0	0	0	0	1.4	89	9.6	0		0	0	100	0		
PHF	.908	.795	.000	.250	.854	.000	.000	.000	.000	.000	.250	.774	.583	.000	.793	.000	.000	.500	.000	.500	.840
Cars	69	56	0	1	126	0	0	0	0	0	1	50	6	0	57	0	0	2	0	2	185
% Cars	100	80.0	0	100	90.0	0	0	0	0	0	100	76.9	85.7	0	78.1	0	0	100	0	100	86.0
Heavy Vehicles	0	14	0	0	14	0	0	0	0	0	0	15	1	0	16	0	0	0	0	0	30
% Heavy Vehicles	0	20.0	0	0	10.0	0	0	0	0	0	0	23.1	14.3	0	21.9	0	0	0	0	0	14.0





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File Name : 123026 A
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North			Field Street From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	119	2	0	0	0	0	4	175	0	300
07:15 AM	155	0	0	0	0	0	3	178	0	336
07:30 AM	161	0	0	0	0	0	2	193	0	356
07:45 AM	157	0	0	1	0	0	4	178	0	340
Total	592	2	0	1	0	0	13	724	0	1332
08:00 AM	130	0	0	2	0	0	1	132	0	265
08:15 AM	103	0	0	0	1	0	1	148	0	253
08:30 AM	126	0	0	0	0	0	3	155	0	284
08:45 AM	118	1	0	1	0	0	1	179	0	300
Total	477	1	0	3	1	0	6	614	0	1102
Grand Total	1069	3	0	4	1	0	19	1338	0	2434
Apprch %	99.7	0.3	0	80	20	0	1.4	98.6	0	
Total %	43.9	0.1	0	0.2	0	0	0.8	55	0	
Cars	955	2	0	2	1	0	14	1221	0	2195
% Cars	89.3	66.7	0	50	100	0	73.7	91.3	0	90.2
Heavy Vehicles	114	1	0	2	0	0	5	117	0	239
% Heavy Vehicles	10.7	33.3	0	50	0	0	26.3	8.7	0	9.8

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	119	2	0	121	0	0	0	0	4	175	0	179	300
07:15 AM	155	0	0	155	0	0	0	0	3	178	0	181	336
07:30 AM	161	0	0	161	0	0	0	0	2	193	0	195	356
07:45 AM	157	0	0	157	1	0	0	1	4	178	0	182	340
Total Volume	592	2	0	594	1	0	0	1	13	724	0	737	1332
% App. Total	99.7	0.3	0		100	0	0		1.8	98.2	0		
PHF	.919	.250	.000	.922	.250	.000	.000	.250	.813	.938	.000	.945	.935
Cars	536	1	0	537	1	0	0	1	12	666	0	678	1216
% Cars	90.5	50.0	0	90.4	100	0	0	100	92.3	92.0	0	92.0	91.3
Heavy Vehicles	56	1	0	57	0	0	0	0	1	58	0	59	116
% Heavy Vehicles	9.5	50.0	0	9.6	0	0	0	0	7.7	8.0	0	8.0	8.7



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Page No : 1

N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Ruggles Street From North			Field Street From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	98	1	0	0	0	0	4	160	0	263
07:15 AM	144	0	0	0	0	0	2	161	0	307
07:30 AM	153	0	0	0	0	0	2	179	0	334
07:45 AM	141	0	0	1	0	0	4	166	0	312
Total	536	1	0	1	0	0	12	666	0	1216
08:00 AM	119	0	0	1	0	0	1	118	0	239
08:15 AM	87	0	0	0	1	0	1	128	0	217
08:30 AM	116	0	0	0	0	0	0	146	0	262
08:45 AM	97	1	0	0	0	0	0	163	0	261
Total	419	1	0	1	1	0	2	555	0	979
Grand Total	955	2	0	2	1	0	14	1221	0	2195
Apprch %	99.8	0.2	0	66.7	33.3	0	1.1	98.9	0	
Total %	43.5	0.1	0	0.1	0	0	0.6	55.6	0	

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	98	1	0	99	0	0	0	0	4	160	0	164	263
07:15 AM	144	0	0	144	0	0	0	0	2	161	0	163	307
07:30 AM	153	0	0	153	0	0	0	0	2	179	0	181	334
07:45 AM	141	0	0	141	1	0	0	1	4	166	0	170	312
Total Volume	536	1	0	537	1	0	0	1	12	666	0	678	1216
% App. Total	99.8	0.2	0		100	0	0		1.8	98.2	0		
PHF	.876	.250	.000	.877	.250	.000	.000	.250	.750	.930	.000	.936	.910



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File Name : 123026 A
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North			Field Street From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	21	1	0	0	0	0	0	15	0	37
07:15 AM	11	0	0	0	0	0	1	17	0	29
07:30 AM	8	0	0	0	0	0	0	14	0	22
07:45 AM	16	0	0	0	0	0	0	12	0	28
Total	56	1	0	0	0	0	1	58	0	116
08:00 AM	11	0	0	1	0	0	0	14	0	26
08:15 AM	16	0	0	0	0	0	0	20	0	36
08:30 AM	10	0	0	0	0	0	3	9	0	22
08:45 AM	21	0	0	1	0	0	1	16	0	39
Total	58	0	0	2	0	0	4	59	0	123
Grand Total	114	1	0	2	0	0	5	117	0	239
Apprch %	99.1	0.9	0	100	0	0	4.1	95.9	0	
Total %	47.7	0.4	0	0.8	0	0	2.1	49	0	

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	11	0	0	11	1	0	0	1	0	14	0	14	26
08:15 AM	16	0	0	16	0	0	0	0	0	20	0	20	36
08:30 AM	10	0	0	10	0	0	0	0	3	9	0	12	22
08:45 AM	21	0	0	21	1	0	0	1	1	16	0	17	39
Total Volume	58	0	0	58	2	0	0	2	4	59	0	63	123
% App. Total	100	0	0		100	0	0		6.3	93.7	0		
PHF	.690	.000	.000	.690	.500	.000	.000	.500	.333	.738	.000	.788	.788



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N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North			Field Street From East			Ruggles Street From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00 AM	1	0	1	0	0	0	0	3	1	6
07:15 AM	5	0	5	0	0	0	0	9	2	21
07:30 AM	9	0	0	0	0	0	0	3	0	12
07:45 AM	11	0	2	0	0	0	0	6	0	19
Total	26	0	8	0	0	0	0	21	3	58
08:00 AM	6	1	0	0	0	0	0	11	2	20
08:15 AM	0	0	1	0	0	0	0	7	4	12
08:30 AM	5	0	0	0	0	0	0	15	2	22
08:45 AM	6	0	1	0	0	0	2	16	4	29
Total	17	1	2	0	0	0	2	49	12	83
Grand Total	43	1	10	0	0	0	2	70	15	141
Apprch %	79.6	1.9	18.5	0	0	0	2.3	80.5	17.2	
Total %	30.5	0.7	7.1	0	0	0	1.4	49.6	10.6	

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	6	1	0	7	0	0	0	0	0	11	2	13	20
08:15 AM	0	0	1	1	0	0	0	0	0	7	4	11	12
08:30 AM	5	0	0	5	0	0	0	0	0	15	2	17	22
08:45 AM	6	0	1	7	0	0	0	0	2	16	4	22	29
Total Volume	17	1	2	20	0	0	0	0	2	49	12	63	83
% App. Total	85	5	10		0	0	0		3.2	77.8	19		
PHF	.708	.250	.500	.714	.000	.000	.000	.000	.250	.766	.750	.716	.716



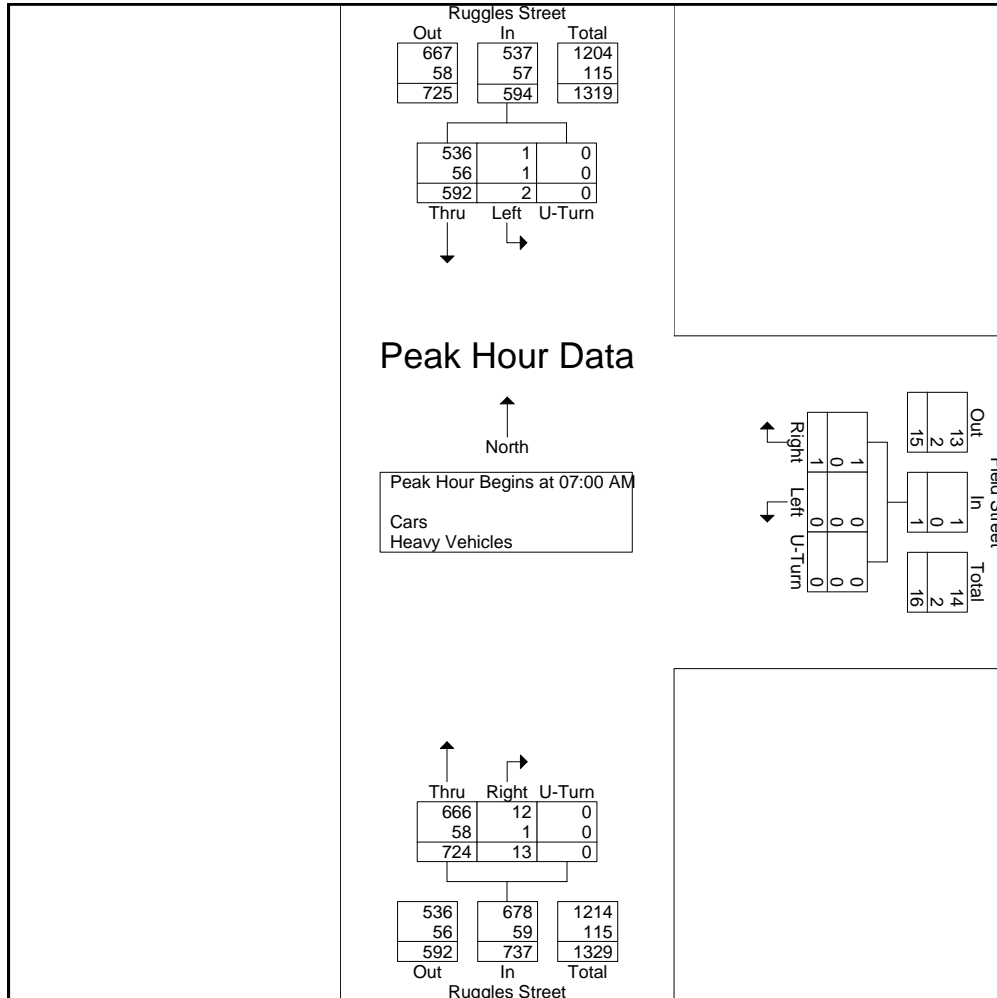
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N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	119	2	0	121	0	0	0	0	4	175	0	179	300
07:15 AM	155	0	0	155	0	0	0	0	3	178	0	181	336
07:30 AM	161	0	0	161	0	0	0	0	2	193	0	195	356
07:45 AM	157	0	0	157	1	0	0	1	4	178	0	182	340
Total Volume	592	2	0	594	1	0	0	1	13	724	0	737	1332
% App. Total	99.7	0.3	0		100	0	0		1.8	98.2	0		
PHF	.919	.250	.000	.922	.250	.000	.000	.250	.813	.938	.000	.945	.935
Cars	536	1	0	537	1	0	0	1	12	666	0	678	1216
% Cars	90.5	50.0	0	90.4	100	0	0	100	92.3	92.0	0	92.0	91.3
Heavy Vehicles	56	1	0	57	0	0	0	0	1	58	0	59	116
% Heavy Vehicles	9.5	50.0	0	9.6	0	0	0	0	7.7	8.0	0	8.0	8.7





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N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North			Field Street From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	165	0	0	0	0	0	1	164	0	330
04:15 PM	165	0	0	0	0	0	0	164	0	329
04:30 PM	141	0	0	0	0	0	0	171	1	313
04:45 PM	144	0	0	0	0	0	0	184	0	328
Total	615	0	0	0	0	0	1	683	1	1300
05:00 PM	152	0	0	0	1	0	3	184	0	340
05:15 PM	156	0	0	0	0	0	2	191	0	349
05:30 PM	150	0	0	0	0	0	0	199	0	349
05:45 PM	149	0	0	0	0	0	0	191	0	340
Total	607	0	0	0	1	0	5	765	0	1378
Grand Total	1222	0	0	0	1	0	6	1448	1	2678
Apprch %	100	0	0	0	100	0	0.4	99.5	0.1	
Total %	45.6	0	0	0	0	0	0.2	54.1	0	
Cars	1136	0	0	0	1	0	6	1344	1	2488
% Cars	93	0	0	0	100	0	100	92.8	100	92.9
Heavy Vehicles	86	0	0	0	0	0	0	104	0	190
% Heavy Vehicles	7	0	0	0	0	0	0	7.2	0	7.1

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	152	0	0	152	0	1	0	1	3	184	0	187	340
05:15 PM	156	0	0	156	0	0	0	0	2	191	0	193	349
05:30 PM	150	0	0	150	0	0	0	0	0	199	0	199	349
05:45 PM	149	0	0	149	0	0	0	0	0	191	0	191	340
Total Volume	607	0	0	607	0	1	0	1	5	765	0	770	1378
% App. Total	100	0	0		0	100	0		0.6	99.4	0		
PHF	.973	.000	.000	.973	.000	.250	.000	.250	.417	.961	.000	.967	.987
Cars	571	0	0	571	0	1	0	1	5	720	0	725	1297
% Cars	94.1	0	0	94.1	0	100	0	100	100	94.1	0	94.2	94.1
Heavy Vehicles	36	0	0	36	0	0	0	0	0	45	0	45	81
% Heavy Vehicles	5.9	0	0	5.9	0	0	0	0	0	5.9	0	5.8	5.9



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N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Ruggles Street From North			Field Street From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	154	0	0	0	0	0	1	146	0	301
04:15 PM	149	0	0	0	0	0	0	147	0	296
04:30 PM	131	0	0	0	0	0	0	157	1	289
04:45 PM	131	0	0	0	0	0	0	174	0	305
Total	565	0	0	0	0	0	1	624	1	1191
05:00 PM	141	0	0	0	1	0	3	171	0	316
05:15 PM	149	0	0	0	0	0	2	182	0	333
05:30 PM	142	0	0	0	0	0	0	188	0	330
05:45 PM	139	0	0	0	0	0	0	179	0	318
Total	571	0	0	0	1	0	5	720	0	1297
Grand Total	1136	0	0	0	1	0	6	1344	1	2488
Apprch %	100	0	0	0	100	0	0.4	99.5	0.1	
Total %	45.7	0	0	0	0	0	0.2	54	0	

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	141	0	0	141	0	1	0	1	3	171	0	174	316
05:15 PM	149	0	0	149	0	0	0	0	2	182	0	184	333
05:30 PM	142	0	0	142	0	0	0	0	0	188	0	188	330
05:45 PM	139	0	0	139	0	0	0	0	0	179	0	179	318
Total Volume	571	0	0	571	0	1	0	1	5	720	0	725	1297
% App. Total	100	0	0		0	100	0		0.7	99.3	0		
PHF	.958	.000	.000	.958	.000	.250	.000	.250	.417	.957	.000	.964	.974



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N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North			Field Street From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	11	0	0	0	0	0	0	18	0	29
04:15 PM	16	0	0	0	0	0	0	17	0	33
04:30 PM	10	0	0	0	0	0	0	14	0	24
04:45 PM	13	0	0	0	0	0	0	10	0	23
Total	50	0	0	0	0	0	0	59	0	109
05:00 PM	11	0	0	0	0	0	0	13	0	24
05:15 PM	7	0	0	0	0	0	0	9	0	16
05:30 PM	8	0	0	0	0	0	0	11	0	19
05:45 PM	10	0	0	0	0	0	0	12	0	22
Total	36	0	0	0	0	0	0	45	0	81
Grand Total	86	0	0	0	0	0	0	104	0	190
Apprch %	100	0	0	0	0	0	0	100	0	
Total %	45.3	0	0	0	0	0	0	54.7	0	

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	11	0	0	11	0	0	0	0	0	18	0	18	29
04:15 PM	16	0	0	16	0	0	0	0	0	17	0	17	33
04:30 PM	10	0	0	10	0	0	0	0	0	14	0	14	24
04:45 PM	13	0	0	13	0	0	0	0	0	10	0	10	23
Total Volume	50	0	0	50	0	0	0	0	0	59	0	59	109
% App. Total	100	0	0		0	0	0		0	100	0		
PHF	.781	.000	.000	.781	.000	.000	.000	.000	.000	.819	.000	.819	.826



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N/S: Ruggles Street
E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North			Field Street From East			Ruggles Street From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
04:00 PM	6	0	3	0	0	0	0	8	2	19
04:15 PM	4	0	2	0	0	0	0	6	10	22
04:30 PM	10	0	3	0	0	0	0	5	3	21
04:45 PM	9	0	3	0	0	0	0	10	4	26
Total	29	0	11	0	0	0	0	29	19	88
05:00 PM	12	1	1	1	0	0	1	6	4	26
05:15 PM	12	1	1	3	0	0	0	11	2	30
05:30 PM	10	0	0	1	0	0	0	7	8	26
05:45 PM	11	0	1	0	0	0	0	16	7	35
Total	45	2	3	5	0	0	1	40	21	117
Grand Total	74	2	14	5	0	0	1	69	40	205
Apprch %	82.2	2.2	15.6	100	0	0	0.9	62.7	36.4	
Total %	36.1	1	6.8	2.4	0	0	0.5	33.7	19.5	

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	12	1	1	14	1	0	0	1	1	6	4	11	26
05:15 PM	12	1	1	14	3	0	0	3	0	11	2	13	30
05:30 PM	10	0	0	10	1	0	0	1	0	7	8	15	26
05:45 PM	11	0	1	12	0	0	0	0	0	16	7	23	35
Total Volume	45	2	3	50	5	0	0	5	1	40	21	62	117
% App. Total	90	4	6		100	0	0		1.6	64.5	33.9		
PHF	.938	.500	.750	.893	.417	.000	.000	.417	.250	.625	.656	.674	.836



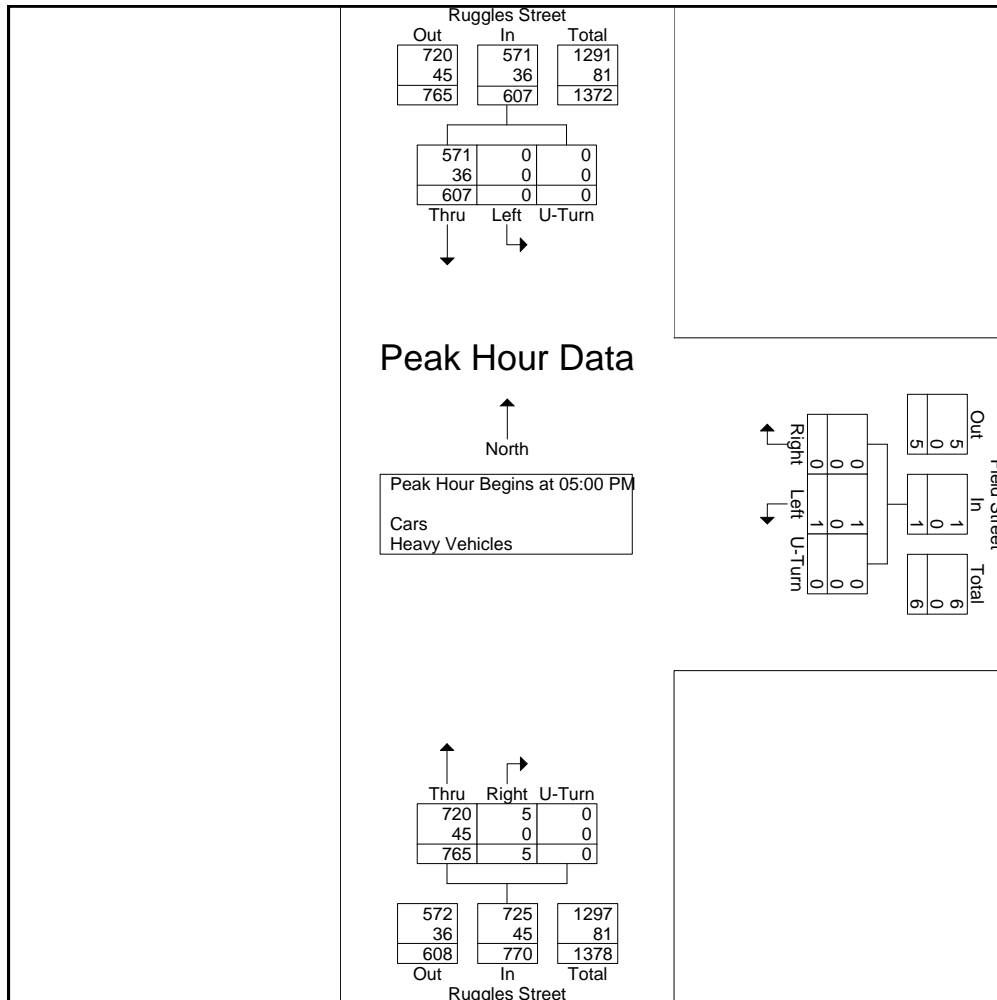
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E: Field Street (Gated Access)
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North				Field Street From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	152	0	0	152	0	1	0	1	3	184	0	187	340
05:15 PM	156	0	0	156	0	0	0	0	2	191	0	193	349
05:30 PM	150	0	0	150	0	0	0	0	0	199	0	199	349
05:45 PM	149	0	0	149	0	0	0	0	0	191	0	191	340
Total Volume	607	0	0	607	0	1	0	1	5	765	0	770	1378
% App. Total	100	0	0		0	100	0		0.6	99.4	0		
PHF	.973	.000	.000	.973	.000	.250	.000	.250	.417	.961	.000	.967	.987
Cars	571	0	0	571	0	1	0	1	5	720	0	725	1297
% Cars	94.1	0	0	94.1	0	100	0	100	100	94.1	0	94.2	94.1
Heavy Vehicles	36	0	0	36	0	0	0	0	0	45	0	45	81
% Heavy Vehicles	5.9	0	0	5.9	0	0	0	0	0	5.9	0	5.8	5.9





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N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	0	112	3	0	2	0	2	0	5	183	0	0	1	0	1	0	309
07:15 AM	0	148	4	0	1	0	4	0	5	177	0	0	5	0	0	0	344
07:30 AM	0	158	6	0	0	0	6	0	4	195	0	0	9	0	4	0	382
07:45 AM	0	142	11	0	4	0	3	0	9	171	1	0	7	1	2	0	351
Total	0	560	24	0	7	0	15	0	23	726	1	0	22	1	7	0	1386
08:00 AM	0	123	9	0	3	0	6	0	1	143	0	0	4	0	0	0	289
08:15 AM	0	95	8	0	2	0	4	0	10	145	0	0	6	0	1	0	271
08:30 AM	0	116	7	0	4	0	6	0	2	158	0	0	2	0	0	0	295
08:45 AM	0	108	6	0	2	0	1	0	7	174	0	0	1	0	0	0	299
Total	0	442	30	0	11	0	17	0	20	620	0	0	13	0	1	0	1154
Grand Total	0	1002	54	0	18	0	32	0	43	1346	1	0	35	1	8	0	2540
Apprch %	0	94.9	5.1	0	36	0	64	0	3.1	96.8	0.1	0	79.5	2.3	18.2	0	
Total %	0	39.4	2.1	0	0.7	0	1.3	0	1.7	53	0	0	1.4	0	0.3	0	
Cars	0	885	53	0	16	0	30	0	41	1228	1	0	34	1	8	0	2297
% Cars	0	88.3	98.1	0	88.9	0	93.8	0	95.3	91.2	100	0	97.1	100	100	0	90.4
Heavy Vehicles	0	117	1	0	2	0	2	0	2	118	0	0	1	0	0	0	243
% Heavy Vehicles	0	11.7	1.9	0	11.1	0	6.2	0	4.7	8.8	0	0	2.9	0	0	0	9.6

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	112	3	0	115	2	0	2	0	4	5	183	0	0	188	1	0	1	0	2	309
07:15 AM	0	148	4	0	152	1	0	4	0	5	5	177	0	0	182	5	0	0	0	5	344
07:30 AM	0	158	6	0	164	0	0	6	0	6	4	195	0	0	199	9	0	4	0	13	382
07:45 AM	0	142	11	0	153	4	0	3	0	7	9	171	1	0	181	7	1	2	0	10	351
Total Volume	0	560	24	0	584	7	0	15	0	22	23	726	1	0	750	22	1	7	0	30	1386
% App. Total	0	95.9	4.1	0		31.8	0	68.2	0		3.1	96.8	0.1	0		73.3	3.3	23.3	0		
PHF	.000	.886	.545	.000	.890	.438	.000	.625	.000	.786	.639	.931	.250	.000	.942	.611	.250	.438	.000	.577	.907
Cars	0	504	23	0	527	6	0	14	0	20	21	664	1	0	686	21	1	7	0	29	1262
% Cars	0	90.0	95.8	0	90.2	85.7	0	93.3	0	90.9	91.3	91.5	100	0	91.5	95.5	100	100	0	96.7	91.1
Heavy Vehicles	0	56	1	0	57	1	0	1	0	2	2	62	0	0	64	1	0	0	0	1	124
% Heavy Vehicles	0	10.0	4.2	0	9.8	14.3	0	6.7	0	9.1	8.7	8.5	0	0	8.5	4.5	0	0	0	3.3	8.9



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File Name : 123026 B
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	0	92	2	0	2	0	2	0	4	166	0	0	1	0	1	0	270
07:15 AM	0	136	4	0	1	0	4	0	5	159	0	0	5	0	0	0	314
07:30 AM	0	150	6	0	0	0	5	0	4	181	0	0	9	0	4	0	359
07:45 AM	0	126	11	0	3	0	3	0	8	158	1	0	6	1	2	0	319
Total	0	504	23	0	6	0	14	0	21	664	1	0	21	1	7	0	1262
08:00 AM	0	111	9	0	3	0	6	0	1	130	0	0	4	0	0	0	264
08:15 AM	0	79	8	0	2	0	3	0	10	125	0	0	6	0	1	0	234
08:30 AM	0	102	7	0	3	0	6	0	2	148	0	0	2	0	0	0	270
08:45 AM	0	89	6	0	2	0	1	0	7	161	0	0	1	0	0	0	267
Total	0	381	30	0	10	0	16	0	20	564	0	0	13	0	1	0	1035
Grand Total	0	885	53	0	16	0	30	0	41	1228	1	0	34	1	8	0	2297
Apprch %	0	94.3	5.7	0	34.8	0	65.2	0	3.2	96.7	0.1	0	79.1	2.3	18.6	0	
Total %	0	38.5	2.3	0	0.7	0	1.3	0	1.8	53.5	0	0	1.5	0	0.3	0	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	92	2	0	94	2	0	2	0	4	4	166	0	0	170	1	0	1	0	2	270
07:15 AM	0	136	4	0	140	1	0	4	0	5	5	159	0	0	164	5	0	0	0	5	314
07:30 AM	0	150	6	0	156	0	0	5	0	5	4	181	0	0	185	9	0	4	0	13	359
07:45 AM	0	126	11	0	137	3	0	3	0	6	8	158	1	0	167	6	1	2	0	9	319
Total Volume	0	504	23	0	527	6	0	14	0	20	21	664	1	0	686	21	1	7	0	29	1262
% App. Total	0	95.6	4.4	0		30	0	70	0		3.1	96.8	0.1	0		72.4	3.4	24.1	0		
PHF	.000	.840	.523	.000	.845	.500	.000	.700	.000	.833	.656	.917	.250	.000	.927	.583	.250	.438	.000	.558	.879



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N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total	
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn		
07:00 AM	0	20	1	0	0	0	0	0	1	17	0	0	0	0	0	0	0	39
07:15 AM	0	12	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	30
07:30 AM	0	8	0	0	0	0	1	0	0	14	0	0	0	0	0	0	0	23
07:45 AM	0	16	0	0	1	0	0	0	1	13	0	0	1	0	0	0	0	32
Total	0	56	1	0	1	0	1	0	2	62	0	0	1	0	0	0	0	124
08:00 AM	0	12	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	25
08:15 AM	0	16	0	0	0	0	1	0	0	20	0	0	0	0	0	0	0	37
08:30 AM	0	14	0	0	1	0	0	0	0	10	0	0	0	0	0	0	0	25
08:45 AM	0	19	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	32
Total	0	61	0	0	1	0	1	0	0	56	0	0	0	0	0	0	0	119
Grand Total	0	117	1	0	2	0	2	0	2	118	0	0	1	0	0	0	0	243
Apprch %	0	99.2	0.8	0	50	0	50	0	1.7	98.3	0	0	100	0	0	0	0	
Total %	0	48.1	0.4	0	0.8	0	0.8	0	0.8	48.6	0	0	0.4	0	0	0	0	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	20	1	0	21	0	0	0	0	0	1	17	0	0	18	0	0	0	0	0	39
07:15 AM	0	12	0	0	12	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	30
07:30 AM	0	8	0	0	8	0	0	1	0	1	0	14	0	0	14	0	0	0	0	0	23
07:45 AM	0	16	0	0	16	1	0	0	0	1	1	13	0	0	14	1	0	0	0	1	32
Total Volume	0	56	1	0	57	1	0	1	0	2	2	62	0	0	64	1	0	0	0	1	124
% App. Total	0	98.2	1.8	0		50	0	50	0		3.1	96.9	0	0		100	0	0	0		
PHF	.000	.700	.250	.000	.679	.250	.000	.250	.000	.500	.500	.861	.000	.000	.889	.250	.000	.000	.000	.250	.795



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N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	1	0	2	1	0	0	35	3	3	0	3	0	0	0	18	66
07:15 AM	0	5	0	4	0	0	0	47	2	3	1	10	0	0	0	13	85
07:30 AM	0	5	1	11	0	0	0	80	3	3	0	5	0	0	0	17	125
07:45 AM	0	4	5	3	0	0	0	73	1	11	0	10	0	0	0	31	138
Total	0	15	6	20	1	0	0	235	9	20	1	28	0	0	0	79	414
08:00 AM	0	5	2	2	0	0	0	43	1	9	0	9	0	0	0	16	87
08:15 AM	0	0	0	0	0	0	0	38	6	7	0	8	0	0	0	11	70
08:30 AM	0	8	0	2	0	0	0	37	6	13	0	10	0	0	0	12	88
08:45 AM	0	5	0	5	0	0	0	64	14	19	0	7	0	0	0	12	126
Total	0	18	2	9	0	0	0	182	27	48	0	34	0	0	0	51	371
Grand Total	0	33	8	29	1	0	0	417	36	68	1	62	0	0	0	130	785
Apprch %	0	47.1	11.4	41.4	0.2	0	0	99.8	21.6	40.7	0.6	37.1	0	0	0	100	
Total %	0	4.2	1	3.7	0.1	0	0	53.1	4.6	8.7	0.1	7.9	0	0	0	16.6	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	0	5	0	4	9	0	0	0	47	47	2	3	1	10	16	0	0	0	13	13	85
07:30 AM	0	5	1	11	17	0	0	0	80	80	3	3	0	5	11	0	0	0	17	17	125
07:45 AM	0	4	5	3	12	0	0	0	73	73	1	11	0	10	22	0	0	0	31	31	138
08:00 AM	0	5	2	2	9	0	0	0	43	43	1	9	0	9	19	0	0	0	16	16	87
Total Volume	0	19	8	20	47	0	0	0	243	243	7	26	1	34	68	0	0	0	77	77	435
% App. Total	0	40.4	17	42.6		0	0	0	100		10.3	38.2	1.5	50		0	0	0	100		
PHF	.000	.950	.400	.455	.691	.000	.000	.000	.759	.759	.583	.591	.250	.850	.773	.000	.000	.000	.621	.621	.788



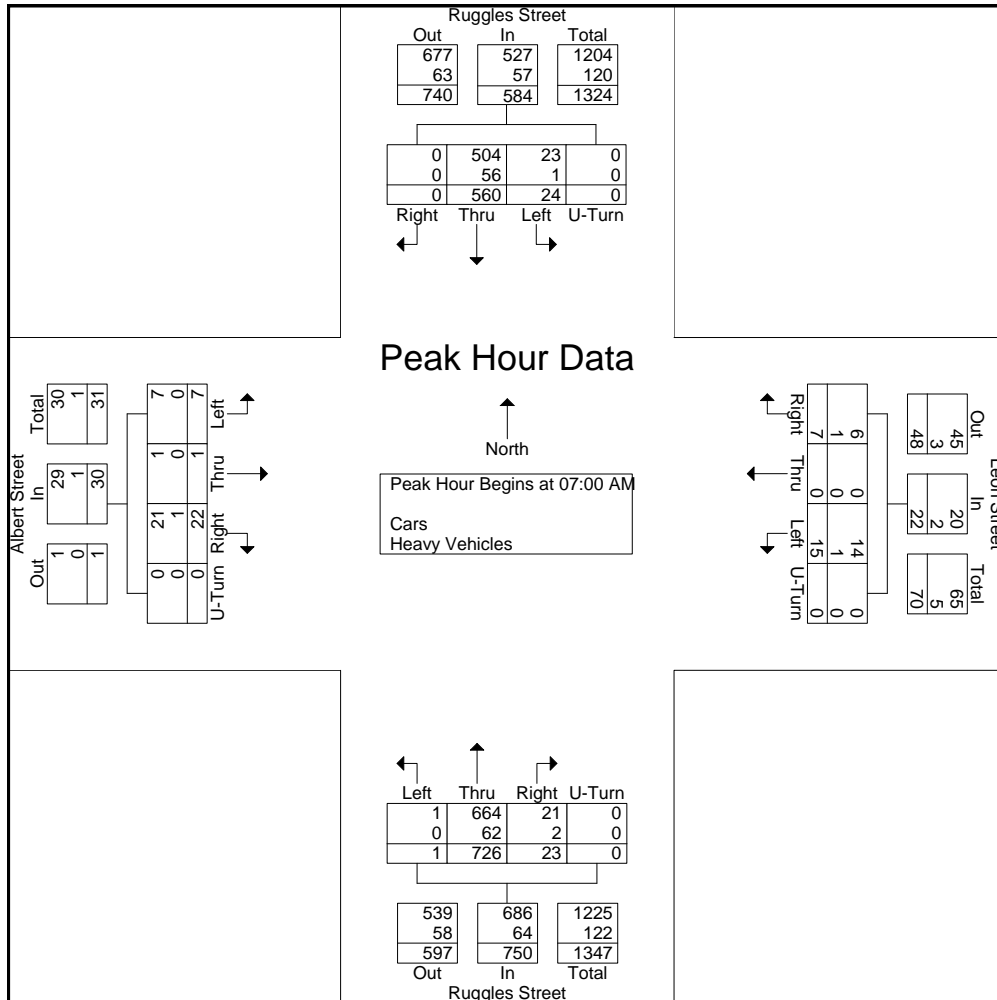
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N/S: Ruggles Street
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Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	112	3	0	115	2	0	2	0	4	5	183	0	0	188	1	0	1	0	2	309
07:15 AM	0	148	4	0	152	1	0	4	0	5	5	177	0	0	182	5	0	0	0	5	344
07:30 AM	0	158	6	0	164	0	0	6	0	6	4	195	0	0	199	9	0	4	0	13	382
07:45 AM	0	142	11	0	153	4	0	3	0	7	9	171	1	0	181	7	1	2	0	10	351
Total Volume	0	560	24	0	584	7	0	15	0	22	23	726	1	0	750	22	1	7	0	30	1386
% App. Total	0	95.9	4.1	0		31.8	0	68.2	0		3.1	96.8	0.1	0		73.3	3.3	23.3	0		
PHF	.000	.886	.545	.000	.890	.438	.000	.625	.000	.786	.639	.931	.250	.000	.942	.611	.250	.438	.000	.577	.907
Cars	0	504	23	0	527	6	0	14	0	20	21	664	1	0	686	21	1	7	0	29	1262
% Cars	0	90.0	95.8	0	90.2	85.7	0	93.3	0	90.9	91.3	91.5	100	0	91.5	95.5	100	100	0	96.7	91.1
Heavy Vehicles	0	56	1	0	57	1	0	1	0	2	2	62	0	0	64	1	0	0	0	1	124
% Heavy Vehicles	0	10.0	4.2	0	9.8	14.3	0	6.7	0	9.1	8.7	8.5	0	0	8.5	4.5	0	0	0	3.3	8.9





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N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	167	4	0	18	0	14	0	1	153	0	0	8	0	0	0	365
04:15 PM	0	162	3	0	12	0	16	0	0	150	0	0	1	0	1	0	345
04:30 PM	0	134	6	0	6	0	18	0	0	172	0	0	4	0	1	0	341
04:45 PM	0	140	4	0	13	0	29	0	8	172	0	0	8	1	1	0	376
Total	0	603	17	0	49	0	77	0	9	647	0	0	21	1	3	0	1427
05:00 PM	0	146	1	0	19	0	18	0	3	168	0	0	3	0	0	0	358
05:15 PM	0	153	0	0	18	0	22	0	6	171	0	0	7	0	1	0	378
05:30 PM	0	146	0	0	12	0	21	0	5	191	0	0	2	0	0	0	377
05:45 PM	0	140	0	0	20	0	18	0	5	169	0	0	12	0	1	0	365
Total	0	585	1	0	69	0	79	0	19	699	0	0	24	0	2	0	1478
Grand Total	0	1188	18	0	118	0	156	0	28	1346	0	0	45	1	5	0	2905
Apprch %	0	98.5	1.5	0	43.1	0	56.9	0	2	98	0	0	88.2	2	9.8	0	
Total %	0	40.9	0.6	0	4.1	0	5.4	0	1	46.3	0	0	1.5	0	0.2	0	
Cars	0	1097	17	0	116	0	152	0	28	1246	0	0	45	1	5	0	2707
% Cars	0	92.3	94.4	0	98.3	0	97.4	0	100	92.6	0	0	100	100	100	0	93.2
Heavy Vehicles	0	91	1	0	2	0	4	0	0	100	0	0	0	0	0	0	198
% Heavy Vehicles	0	7.7	5.6	0	1.7	0	2.6	0	0	7.4	0	0	0	0	0	0	6.8

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	140	4	0	144	13	0	29	0	42	8	172	0	0	180	8	1	1	0	10	376
05:00 PM	0	146	1	0	147	19	0	18	0	37	3	168	0	0	171	3	0	0	0	3	358
05:15 PM	0	153	0	0	153	18	0	22	0	40	6	171	0	0	177	7	0	1	0	8	378
05:30 PM	0	146	0	0	146	12	0	21	0	33	5	191	0	0	196	2	0	0	0	2	377
Total Volume	0	585	5	0	590	62	0	90	0	152	22	702	0	0	724	20	1	2	0	23	1489
% App. Total	0	99.2	0.8	0		40.8	0	59.2	0		3	97	0	0		87	4.3	8.7	0		
PHF	.000	.956	.313	.000	.964	.816	.000	.776	.000	.905	.688	.919	.000	.000	.923	.625	.250	.500	.000	.575	.985
Cars	0	546	5	0	551	62	0	88	0	150	22	661	0	0	683	20	1	2	0	23	1407
% Cars	0	93.3	100	0	93.4	100	0	97.8	0	98.7	100	94.2	0	0	94.3	100	100	100	0	100	94.5
Heavy Vehicles	0	39	0	0	39	0	0	2	0	2	0	41	0	0	41	0	0	0	0	0	82
% Heavy Vehicles	0	6.7	0	0	6.6	0	0	2.2	0	1.3	0	5.8	0	0	5.7	0	0	0	0	0	5.5



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N/S: Ruggles Street
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Groups Printed- Cars

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	153	4	0	18	0	14	0	1	135	0	0	8	0	0	0	333
04:15 PM	0	143	2	0	12	0	14	0	0	132	0	0	1	0	1	0	305
04:30 PM	0	124	6	0	5	0	18	0	0	160	0	0	4	0	1	0	318
04:45 PM	0	127	4	0	13	0	28	0	8	163	0	0	8	1	1	0	353
Total	0	547	16	0	48	0	74	0	9	590	0	0	21	1	3	0	1309
05:00 PM	0	135	1	0	19	0	17	0	3	155	0	0	3	0	0	0	333
05:15 PM	0	147	0	0	18	0	22	0	6	161	0	0	7	0	1	0	362
05:30 PM	0	137	0	0	12	0	21	0	5	182	0	0	2	0	0	0	359
05:45 PM	0	131	0	0	19	0	18	0	5	158	0	0	12	0	1	0	344
Total	0	550	1	0	68	0	78	0	19	656	0	0	24	0	2	0	1398
Grand Total	0	1097	17	0	116	0	152	0	28	1246	0	0	45	1	5	0	2707
Apprch %	0	98.5	1.5	0	43.3	0	56.7	0	2.2	97.8	0	0	88.2	2	9.8	0	
Total %	0	40.5	0.6	0	4.3	0	5.6	0	1	46	0	0	1.7	0	0.2	0	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	127	4	0	131	13	0	28	0	41	8	163	0	0	171	8	1	1	0	10	353
05:00 PM	0	135	1	0	136	19	0	17	0	36	3	155	0	0	158	3	0	0	0	3	333
05:15 PM	0	147	0	0	147	18	0	22	0	40	6	161	0	0	167	7	0	1	0	8	362
05:30 PM	0	137	0	0	137	12	0	21	0	33	5	182	0	0	187	2	0	0	0	2	359
Total Volume	0	546	5	0	551	62	0	88	0	150	22	661	0	0	683	20	1	2	0	23	1407
% App. Total	0	99.1	0.9	0		41.3	0	58.7	0		3.2	96.8	0	0		87	4.3	8.7	0		
PHF	.000	.929	.313	.000	.937	.816	.000	.786	.000	.915	.688	.908	.000	.000	.913	.625	.250	.500	.000	.575	.972



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File Name : 123026 BB
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North				Leon Street From East				Ruggles Street From South				Albert Street From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	3	1	10	0	0	2	56	2	7	0	2	1	0	0	17	101
04:15 PM	0	7	0	8	0	0	7	72	0	6	0	10	0	0	0	12	122
04:30 PM	0	7	1	11	1	0	4	95	0	4	0	15	0	0	0	16	154
04:45 PM	0	8	0	4	2	0	5	133	2	5	0	15	0	1	1	13	189
Total	0	25	2	33	3	0	18	356	4	22	0	42	1	1	1	58	566
05:00 PM	0	10	0	13	0	0	2	120	1	1	0	13	1	0	0	19	180
05:15 PM	0	10	0	10	3	1	3	98	2	7	0	4	0	0	0	26	164
05:30 PM	0	8	0	8	0	0	5	77	0	7	0	9	0	0	0	7	121
05:45 PM	0	9	0	9	3	0	1	50	2	5	0	7	0	0	1	23	110
Total	0	37	0	40	6	1	11	345	5	20	0	33	1	0	1	75	575
Grand Total	0	62	2	73	9	1	29	701	9	42	0	75	2	1	2	133	1141
Apprch %	0	45.3	1.5	53.3	1.2	0.1	3.9	94.7	7.1	33.3	0	59.5	1.4	0.7	1.4	96.4	
Total %	0	5.4	0.2	6.4	0.8	0.1	2.5	61.4	0.8	3.7	0	6.6	0.2	0.1	0.2	11.7	

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	7	1	11	19	1	0	4	95	100	0	4	0	15	19	0	0	0	16	16	154
04:45 PM	0	8	0	4	12	2	0	5	133	140	2	5	0	15	22	0	1	1	13	15	189
05:00 PM	0	10	0	13	23	0	0	2	120	122	1	1	0	13	15	1	0	0	19	20	180
05:15 PM	0	10	0	10	20	3	1					7	0	4	13	0	0	0	26	26	
Total Volume	0	35	1	38	74	6	1	14	446	467	5	17	0	47	69	1	1	1	74	77	687
% App. Total	0	47.3	1.4	51.4		1.3	0.2	3	95.5		7.2	24.6	0	68.1		1.3	1.3	1.3	96.1		
PHF	.000	.875	.250	.731	.804	.500	.250	.700	.838	.834	.625	.607	.000	.783	.784	.250	.250	.250	.712	.740	.909



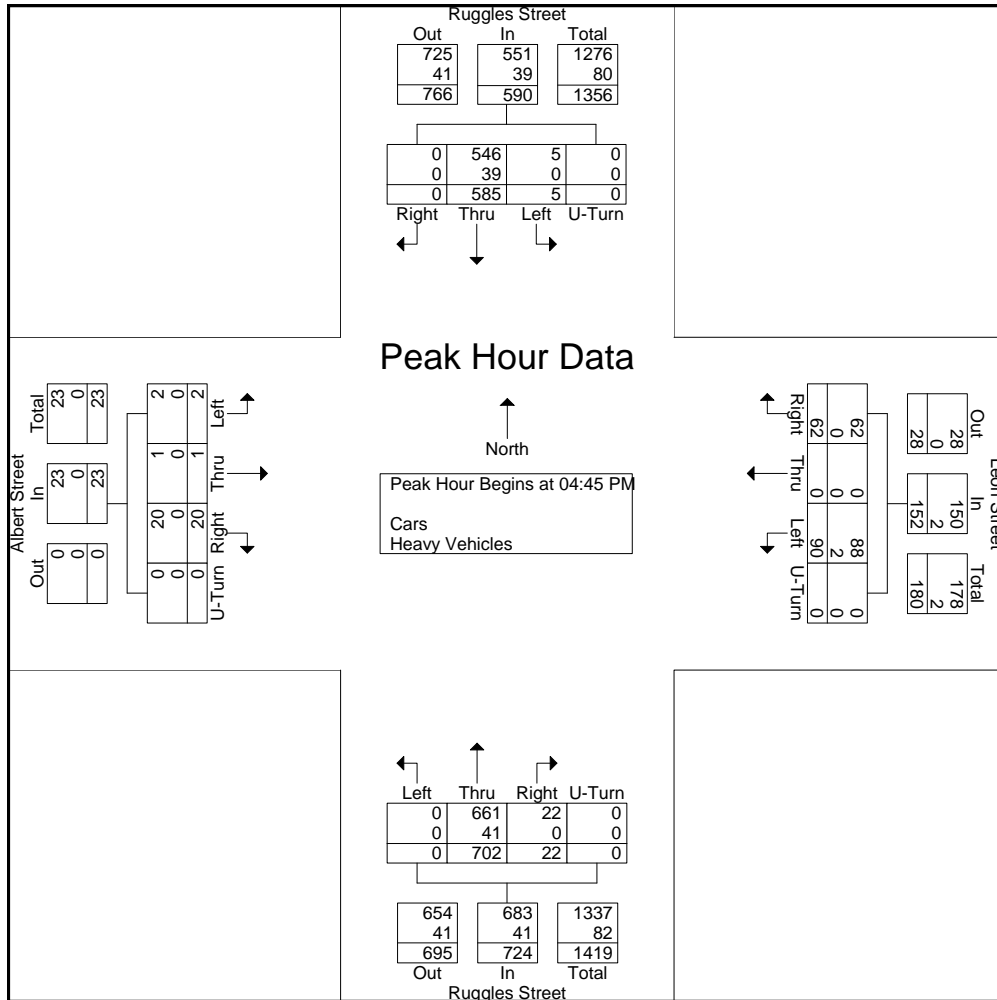
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File Name : 123026 BB
Site Code : 2011046_
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N/S: Ruggles Street
E/W: Leon Street/ Albert Street
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North					Leon Street From East					Ruggles Street From South					Albert Street From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	140	4	0	144	13	0	29	0	42	8	172	0	0	180	8	1	1	0	10	376
05:00 PM	0	146	1	0	147	19	0	18	0	37	3	168	0	0	171	3	0	0	0	3	358
05:15 PM	0	153	0	0	153	18	0	22	0	40	6	171	0	0	177	7	0	1	0	8	378
05:30 PM	0	146	0	0	146	12	0	21	0	33	5	191	0	0	196	2	0	0	0	2	377
Total Volume	0	585	5	0	590	62	0	90	0	152	22	702	0	0	724	20	1	2	0	23	1489
% App. Total	0	99.2	0.8	0		40.8	0	59.2	0		3	97	0	0		87	4.3	8.7	0		
PHF	.000	.956	.313	.000	.964	.816	.000	.776	.000	.905	.688	.919	.000	.000	.923	.625	.250	.500	.000	.575	.985
Cars	0	546	5	0	551	62	0	88	0	150	22	661	0	0	683	20	1	2	0	23	1407
% Cars	0	93.3	100	0	93.4	100	0	97.8	0	98.7	100	94.2	0	0	94.3	100	100	100	0	100	94.5
Heavy Vehicles	0	39	0	0	39	0	0	2	0	2	0	41	0	0	41	0	0	0	0	0	82
% Heavy Vehicles	0	6.7	0	0	6.6	0	0	2.2	0	1.3	0	5.8	0	0	5.7	0	0	0	0	0	5.5





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Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North			MBTA Bus Entrance From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	105	9	0	0	0	0	11	190	1	316
07:15 AM	160	4	0	0	0	0	11	182	0	357
07:30 AM	170	4	0	0	0	0	11	198	1	384
07:45 AM	147	7	0	0	0	0	16	178	0	348
Total	582	24	0	0	0	0	49	748	2	1405
08:00 AM	130	4	0	0	0	0	12	149	0	295
08:15 AM	99	6	0	0	0	0	11	153	0	269
08:30 AM	122	6	0	0	0	0	17	162	0	307
08:45 AM	105	5	0	0	0	0	10	186	0	306
Total	456	21	0	0	0	0	50	650	0	1177
Grand Total	1038	45	0	0	0	0	99	1398	2	2582
Apprch %	95.8	4.2	0	0	0	0	6.6	93.3	0.1	
Total %	40.2	1.7	0	0	0	0	3.8	54.1	0.1	
Cars	959	5	0	0	0	0	11	1279	2	2256
% Cars	92.4	11.1	0	0	0	0	11.1	91.5	100	87.4
Heavy Vehicles	79	40	0	0	0	0	88	119	0	326
% Heavy Vehicles	7.6	88.9	0	0	0	0	88.9	8.5	0	12.6

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	105	9	0	114	0	0	0	0	11	190	1	202	316
07:15 AM	160	4	0	164	0	0	0	0	11	182	0	193	357
07:30 AM	170	4	0	174	0	0	0	0	11	198	1	210	384
07:45 AM	147	7	0	154	0	0	0	0	16	178	0	194	348
Total Volume	582	24	0	606	0	0	0	0	49	748	2	799	1405
% App. Total	96	4	0		0	0	0		6.1	93.6	0.3		
PHF	.856	.667	.000	.871	.000	.000	.000	.000	.766	.944	.500	.951	.915
Cars	546	3	0	549	0	0	0	0	5	688	2	695	1244
% Cars	93.8	12.5	0	90.6	0	0	0	0	10.2	92.0	100	87.0	88.5
Heavy Vehicles	36	21	0	57	0	0	0	0	44	60	0	104	161
% Heavy Vehicles	6.2	87.5	0	9.4	0	0	0	0	89.8	8.0	0	13.0	11.5



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N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Ruggles Street From North			MBTA Bus Entrance From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	94	1	0	0	0	0	1	172	1	269
07:15 AM	150	1	0	0	0	0	1	165	0	317
07:30 AM	165	0	0	0	0	0	1	185	1	352
07:45 AM	137	1	0	0	0	0	2	166	0	306
Total	546	3	0	0	0	0	5	688	2	1244
08:00 AM	123	0	0	0	0	0	1	135	0	259
08:15 AM	87	1	0	0	0	0	1	132	0	221
08:30 AM	113	1	0	0	0	0	3	151	0	268
08:45 AM	90	0	0	0	0	0	1	173	0	264
Total	413	2	0	0	0	0	6	591	0	1012
Grand Total	959	5	0	0	0	0	11	1279	2	2256
Apprch %	99.5	0.5	0	0	0	0	0.9	99	0.2	
Total %	42.5	0.2	0	0	0	0	0.5	56.7	0.1	

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	94	1	0	95	0	0	0	0	1	172	1	174	269
07:15 AM	150	1	0	151	0	0	0	0	1	165	0	166	317
07:30 AM	165	0	0	165	0	0	0	0	1	185	1	187	352
07:45 AM	137	1	0	138	0	0	0	0	2	166	0	168	306
Total Volume	546	3	0	549	0	0	0	0	5	688	2	695	1244
% App. Total	99.5	0.5	0		0	0	0		0.7	99	0.3		
PHF	.827	.750	.000	.832	.000	.000	.000	.000	.625	.930	.500	.929	.884



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Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North			MBTA Bus Entrance From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
07:00 AM	11	8	0	0	0	0	10	18	0	47
07:15 AM	10	3	0	0	0	0	10	17	0	40
07:30 AM	5	4	0	0	0	0	10	13	0	32
07:45 AM	10	6	0	0	0	0	14	12	0	42
Total	36	21	0	0	0	0	44	60	0	161
08:00 AM	7	4	0	0	0	0	11	14	0	36
08:15 AM	12	5	0	0	0	0	10	21	0	48
08:30 AM	9	5	0	0	0	0	14	11	0	39
08:45 AM	15	5	0	0	0	0	9	13	0	42
Total	43	19	0	0	0	0	44	59	0	165
Grand Total	79	40	0	0	0	0	88	119	0	326
Apprch %	66.4	33.6	0	0	0	0	42.5	57.5	0	
Total %	24.2	12.3	0	0	0	0	27	36.5	0	

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:45 AM													
07:45 AM	10	6	0	16	0	0	0	0	14	12	0	26	42
08:00 AM	7	4	0	11	0	0	0	0	11	14	0	25	36
08:15 AM	12	5	0	17	0	0	0	0	10	21	0	31	48
08:30 AM	9	5	0	14	0	0	0	0	14	11	0	25	39
Total Volume	38	20	0	58	0	0	0	0	49	58	0	107	165
% App. Total	65.5	34.5	0		0	0	0		45.8	54.2	0		
PHF	.792	.833	.000	.853	.000	.000	.000	.000	.875	.690	.000	.863	.859



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N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North			MBTA Bus Entrance From East			Ruggles Street From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
07:00 AM	0	0	16	0	0	3	0	4	3	26
07:15 AM	3	0	18	0	0	12	0	8	2	43
07:30 AM	4	0	15	0	0	21	0	8	1	49
07:45 AM	8	0	13	0	0	20	0	10	3	54
Total	15	0	62	0	0	56	0	30	9	172
08:00 AM	4	0	14	0	0	19	0	10	2	49
08:15 AM	0	0	16	0	0	33	1	15	1	66
08:30 AM	6	0	8	0	0	25	0	14	5	58
08:45 AM	5	1	13	1	0	19	0	22	2	63
Total	15	1	51	1	0	96	1	61	10	236
Grand Total	30	1	113	1	0	152	1	91	19	408
Apprch %	20.8	0.7	78.5	0.7	0	99.3	0.9	82	17.1	
Total %	7.4	0.2	27.7	0.2	0	37.3	0.2	22.3	4.7	

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	4	0	14	18	0	0	19	19	0	10	2	12	49
08:15 AM	0	0	16	16	0	0	33	33	1	15	1	17	66
08:30 AM	6	0	8	14	0	0	25	25	0	14	5	19	58
08:45 AM	5	1	13	19	1	0	19	19	0	22	2	24	63
Total Volume	15	1	51	67	1	0	96	97	1	61	10	72	236
% App. Total	22.4	1.5	76.1		1	0	99		1.4	84.7	13.9		
PHF	.625	.250	.797	.882	.250	.000	.727	.735	.250	.693	.500	.750	.894



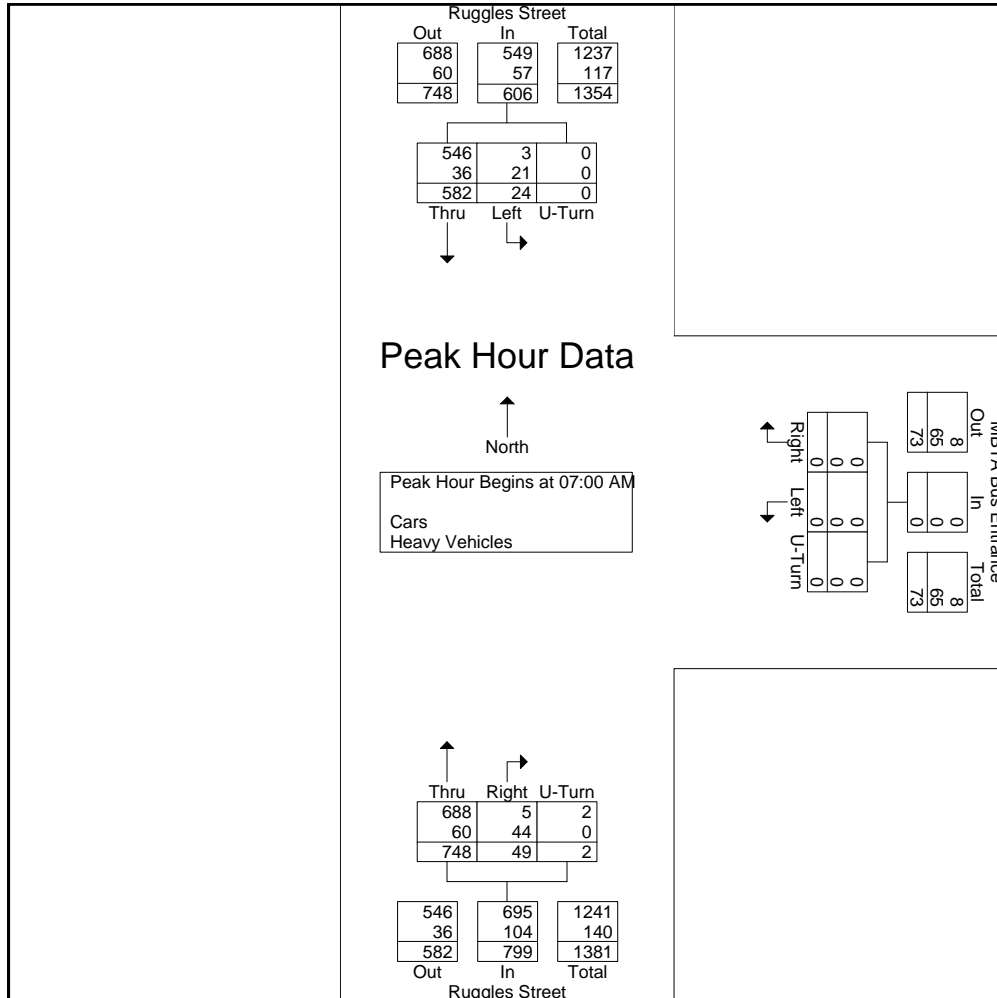
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N/S: Ruggles Street
E: MBTA Bus Entrance
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Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	105	9	0	114	0	0	0	0	11	190	1	202	316
07:15 AM	160	4	0	164	0	0	0	0	11	182	0	193	357
07:30 AM	170	4	0	174	0	0	0	0	11	198	1	210	384
07:45 AM	147	7	0	154	0	0	0	0	16	178	0	194	348
Total Volume	582	24	0	606	0	0	0	0	49	748	2	799	1405
% App. Total	96	4	0		0	0	0		6.1	93.6	0.3		
PHF	.856	.667	.000	.871	.000	.000	.000	.000	.766	.944	.500	.951	.915
Cars	546	3	0	549	0	0	0	0	5	688	2	695	1244
% Cars	93.8	12.5	0	90.6	0	0	0	0	10.2	92.0	100	87.0	88.5
Heavy Vehicles	36	21	0	57	0	0	0	0	44	60	0	104	161
% Heavy Vehicles	6.2	87.5	0	9.4	0	0	0	0	89.8	8.0	0	13.0	11.5





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N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Ruggles Street From North			MBTA Bus Entrance From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	192	6	0	0	0	0	11	158	0	367
04:15 PM	170	4	0	0	0	0	12	150	0	336
04:30 PM	165	4	0	0	0	0	3	175	0	347
04:45 PM	172	6	0	0	0	0	9	184	0	371
Total	699	20	0	0	0	0	35	667	0	1421
05:00 PM	165	2	0	0	0	0	10	169	0	346
05:15 PM	181	4	0	0	0	0	8	179	0	372
05:30 PM	161	5	0	0	0	0	9	198	0	373
05:45 PM	166	2	1	0	0	0	11	166	0	346
Total	673	13	1	0	0	0	38	712	0	1437
Grand Total	1372	33	1	0	0	0	73	1379	0	2858
Apprch %	97.6	2.3	0.1	0	0	0	5	95	0	
Total %	48	1.2	0	0	0	0	2.6	48.3	0	
Cars	1309	7	1	0	0	0	17	1281	0	2615
% Cars	95.4	21.2	100	0	0	0	23.3	92.9	0	91.5
Heavy Vehicles	63	26	0	0	0	0	56	98	0	243
% Heavy Vehicles	4.6	78.8	0	0	0	0	76.7	7.1	0	8.5

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	172	6	0	178	0	0	0	0	9	184	0	193	371
05:00 PM	165	2	0	167	0	0	0	0	10	169	0	179	346
05:15 PM	181	4	0	185	0	0	0	0	8	179	0	187	372
05:30 PM	161	5	0	166	0	0	0	0	9	198	0	207	373
Total Volume	679	17	0	696	0	0	0	0	36	730	0	766	1462
% App. Total	97.6	2.4	0		0	0	0		4.7	95.3	0		
PHF	.938	.708	.000	.941	.000	.000	.000	.000	.900	.922	.000	.925	.980
Cars	650	4	0	654	0	0	0	0	7	692	0	699	1353
% Cars	95.7	23.5	0	94.0	0	0	0	0	19.4	94.8	0	91.3	92.5
Heavy Vehicles	29	13	0	42	0	0	0	0	29	38	0	67	109
% Heavy Vehicles	4.3	76.5	0	6.0	0	0	0	0	80.6	5.2	0	8.7	7.5



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File Name : 123026 CC
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Ruggles Street From North			MBTA Bus Entrance From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	185	2	0	0	0	0	6	140	0	333
04:15 PM	158	1	0	0	0	0	4	133	0	296
04:30 PM	158	0	0	0	0	0	0	160	0	318
04:45 PM	162	1	0	0	0	0	2	174	0	339
Total	663	4	0	0	0	0	12	607	0	1286
05:00 PM	154	1	0	0	0	0	1	156	0	312
05:15 PM	177	2	0	0	0	0	2	170	0	351
05:30 PM	157	0	0	0	0	0	2	192	0	351
05:45 PM	158	0	1	0	0	0	0	156	0	315
Total	646	3	1	0	0	0	5	674	0	1329
Grand Total	1309	7	1	0	0	0	17	1281	0	2615
Apprch %	99.4	0.5	0.1	0	0	0	1.3	98.7	0	
Total %	50.1	0.3	0	0	0	0	0.7	49	0	

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	162	1	0	163	0	0	0	0	2	174	0	176	339
05:00 PM	154	1	0	155	0	0	0	0	1	156	0	157	312
05:15 PM	177	2	0	179	0	0	0	0	2	170	0	172	351
05:30 PM	157	0	0	157	0	0	0	0	2	192	0	194	351
Total Volume	650	4	0	654	0	0	0	0	7	692	0	699	1353
% App. Total	99.4	0.6	0		0	0	0		1	99	0		
PHF	.918	.500	.000	.913	.000	.000	.000	.000	.875	.901	.000	.901	.964



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N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Ruggles Street From North			MBTA Bus Entrance From East			Ruggles Street From South			Int. Total
	Thru	Left	U-Turn	Right	Left	U-Turn	Right	Thru	U-Turn	
04:00 PM	7	4	0	0	0	0	5	18	0	34
04:15 PM	12	3	0	0	0	0	8	17	0	40
04:30 PM	7	4	0	0	0	0	3	15	0	29
04:45 PM	10	5	0	0	0	0	7	10	0	32
Total	36	16	0	0	0	0	23	60	0	135
05:00 PM	11	1	0	0	0	0	9	13	0	34
05:15 PM	4	2	0	0	0	0	6	9	0	21
05:30 PM	4	5	0	0	0	0	7	6	0	22
05:45 PM	8	2	0	0	0	0	11	10	0	31
Total	27	10	0	0	0	0	33	38	0	108
Grand Total	63	26	0	0	0	0	56	98	0	243
Apprch %	70.8	29.2	0	0	0	0	36.4	63.6	0	
Total %	25.9	10.7	0	0	0	0	23	40.3	0	

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:00 PM													
04:00 PM	7	4	0	11	0	0	0	0	5	18	0	23	34
04:15 PM	12	3	0	15	0	0	0	0	8	17	0	25	40
04:30 PM	7	4	0	11	0	0	0	0	3	15	0	18	29
04:45 PM	10	5	0	15	0	0	0	0	7	10	0	17	32
Total Volume	36	16	0	52	0	0	0	0	23	60	0	83	135
% App. Total	69.2	30.8	0		0	0	0		27.7	72.3	0		
PHF	.750	.800	.000	.867	.000	.000	.000	.000	.719	.833	.000	.830	.844



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N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Ruggles Street From North			MBTA Bus Entrance From East			Ruggles Street From South			Int. Total
	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	
04:00 PM	0	0	20	4	0	29	0	6	7	66
04:15 PM	2	1	17	2	0	21	0	6	2	51
04:30 PM	4	0	15	4	0	27	0	5	2	57
04:45 PM	3	0	13	4	0	97	0	5	8	130
Total	9	1	65	14	0	174	0	22	19	304
05:00 PM	5	0	17	0	0	31	0	3	1	57
05:15 PM	5	0	10	0	0	50	0	6	8	79
05:30 PM	6	0	8	0	0	27	0	6	8	55
05:45 PM	6	0	22	0	0	24	0	13	5	70
Total	22	0	57	0	0	132	0	28	22	261
Grand Total	31	1	122	14	0	306	0	50	41	565
Apprch %	20.1	0.6	79.2	4.4	0	95.6	0	54.9	45.1	
Total %	5.5	0.2	21.6	2.5	0	54.2	0	8.8	7.3	

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	4	0	15	19	4	0	27	31	0	5	2	7	57
04:45 PM	3	0	13	16	4	0	97	101	0	5	8	13	130
05:00 PM	5	0	17	22	0	0	31	31	0	3	1	4	57
05:15 PM	5	0	10	15	0	0	50	50	0	6	8	14	79
Total Volume	17	0	55	72	8	0	205	213	0	19	19	38	323
% App. Total	23.6	0	76.4		3.8	0	96.2		0	50	50		
PHF	.850	.000	.809	.818	.500	.000	.528	.527	.000	.792	.594	.679	.621



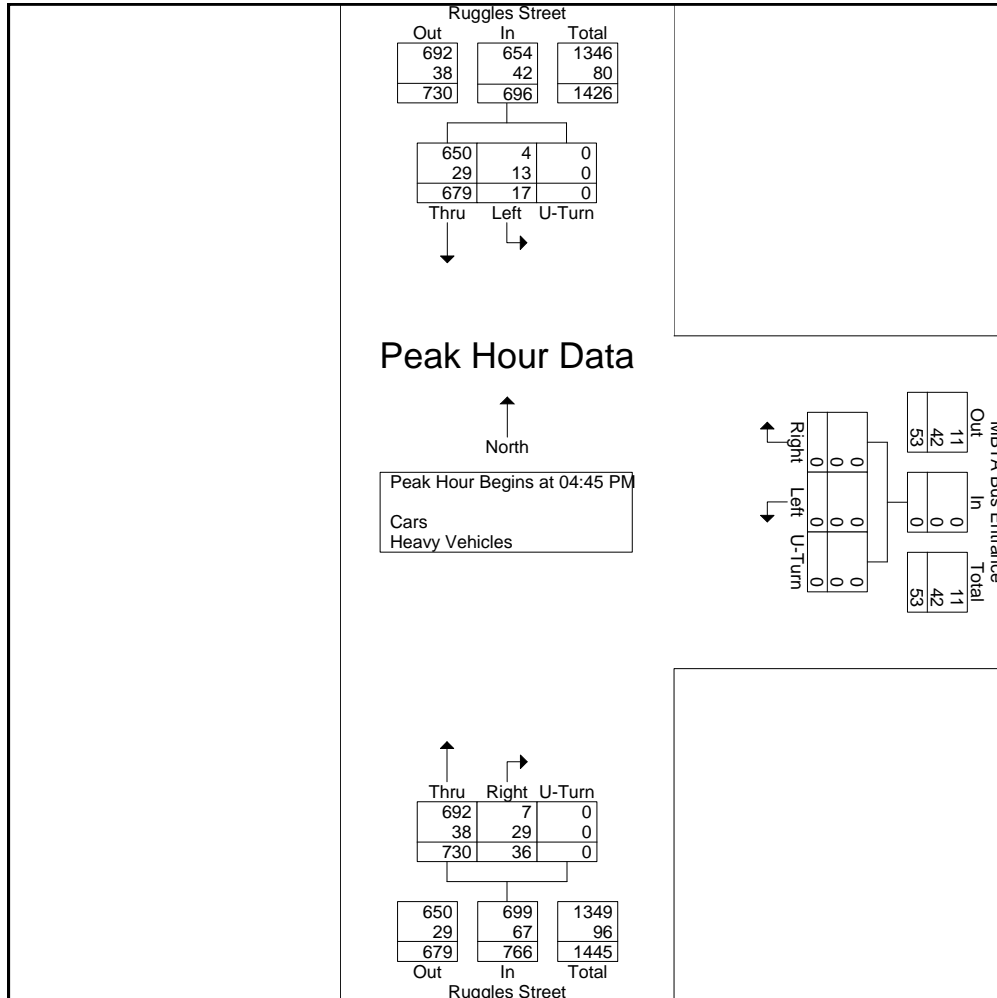
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Page No : 1

N/S: Ruggles Street
E: MBTA Bus Entrance
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Ruggles Street From North				MBTA Bus Entrance From East				Ruggles Street From South				Int. Total
	Thru	Left	U-Turn	App. Total	Right	Left	U-Turn	App. Total	Right	Thru	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	172	6	0	178	0	0	0	0	9	184	0	193	371
05:00 PM	165	2	0	167	0	0	0	0	10	169	0	179	346
05:15 PM	181	4	0	185	0	0	0	0	8	179	0	187	372
05:30 PM	161	5	0	166	0	0	0	0	9	198	0	207	373
Total Volume	679	17	0	696	0	0	0	0	36	730	0	766	1462
% App. Total	97.6	2.4	0		0	0	0		4.7	95.3	0		
PHF	.938	.708	.000	.941	.000	.000	.000	.000	.900	.922	.000	.925	.980
Cars	650	4	0	654	0	0	0	0	7	692	0	699	1353
% Cars	95.7	23.5	0	94.0	0	0	0	0	19.4	94.8	0	91.3	92.5
Heavy Vehicles	29	13	0	42	0	0	0	0	29	38	0	67	109
% Heavy Vehicles	4.3	76.5	0	6.0	0	0	0	0	80.6	5.2	0	8.7	7.5





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Start Date : 9/25/2012
Page No : 1

N/S: Columbus Ave Lot/ Cunard Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Columbus Ave Lot From North				Columbus Avenue From East				Cunard Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	4	0	6	0	4	45	0	0	0	0	0	0	4	67	2	1	133
07:15 AM	4	0	5	0	3	53	2	0	0	0	0	0	6	52	5	0	130
07:30 AM	5	0	5	0	10	36	3	0	0	0	0	0	3	77	5	0	144
07:45 AM	0	0	8	0	14	60	3	0	0	0	0	0	2	90	9	0	186
Total	13	0	24	0	31	194	8	0	0	0	0	0	15	286	21	1	593
08:00 AM	2	0	2	0	8	53	1	0	0	0	0	0	2	66	17	0	151
08:15 AM	3	2	2	0	6	42	0	0	0	0	0	0	3	76	17	0	151
08:30 AM	2	0	2	0	7	61	3	1	0	0	0	0	6	71	15	0	168
08:45 AM	2	0	1	0	10	51	3	0	0	0	0	0	2	73	7	0	149
Total	9	2	7	0	31	207	7	1	0	0	0	0	13	286	56	0	619
Grand Total	22	2	31	0	62	401	15	1	0	0	0	0	28	572	77	1	1212
Apprch %	40	3.6	56.4	0	12.9	83.7	3.1	0.2	0	0	0	0	4.1	84.4	11.4	0.1	
Total %	1.8	0.2	2.6	0	5.1	33.1	1.2	0.1	0	0	0	0	2.3	47.2	6.4	0.1	
Cars	20	2	31	0	61	375	14	1	0	0	0	0	25	549	76	1	1155
% Cars	90.9	100	100	0	98.4	93.5	93.3	100	0	0	0	0	89.3	96	98.7	100	95.3
Heavy Vehicles	2	0	0	0	1	26	1	0	0	0	0	0	3	23	1	0	57
% Heavy Vehicles	9.1	0	0	0	1.6	6.5	6.7	0	0	0	0	0	10.7	4	1.3	0	4.7

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	8	0	8	14	60	3	0	77	0	0	0	0	0	2	90	9	0	101	186
08:00 AM	2	0	2	0	4	8	53	1	0	62	0	0	0	0	0	2	66	17	0	85	151
08:15 AM	3	2	2	0	7	6	42	0	0	48	0	0	0	0	0	3	76	17	0	96	151
08:30 AM	2	0	2	0	4	7	61	1	1	72	0	0	0	0	0	6	71	15	0	92	168
Total Volume	7	2	14	0	23	35	216	7	1	259	0	0	0	0	0	13	303	58	0	374	656
% App. Total	30.4	8.7	60.9	0		13.5	83.4	2.7	0.4		0	0	0	0		3.5	81	15.5	0		
PHF	.583	.250	.438	.000	.719	.625	.885	.583	.250	.841	.000	.000	.000	.000	.000	.542	.842	.853	.000	.926	.882
Cars	5	2	14	0	21	34	205	6	1	246	0	0	0	0	0	10	296	57	0	363	630
% Cars	71.4	100	100	0	91.3	97.1	94.9	85.7	100	95.0	0	0	0	0	0	76.9	97.7	98.3	0	97.1	96.0
Heavy Vehicles	2	0	0	0	2	1	11	1	0	13	0	0	0	0	0	3	7	1	0	11	26
% Heavy Vehicles	28.6	0	0	0	8.7	2.9	5.1	14.3	0	5.0	0	0	0	0	0	23.1	2.3	1.7	0	2.9	4.0



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N/S: Columbus Ave Lot/ Cunard Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 G
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars

Start Time	Columbus Ave Lot From North				Columbus Avenue From East				Cunard Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	4	0	6	0	4	42	0	0	0	0	0	0	4	62	2	1	125
07:15 AM	4	0	5	0	3	51	2	0	0	0	0	0	6	49	5	0	125
07:30 AM	5	0	5	0	10	33	3	0	0	0	0	0	3	72	5	0	136
07:45 AM	0	0	8	0	14	57	3	0	0	0	0	0	1	89	9	0	181
Total	13	0	24	0	31	183	8	0	0	0	0	0	14	272	21	1	567
08:00 AM	2	0	2	0	7	52	0	0	0	0	0	0	2	63	17	0	145
08:15 AM	2	2	2	0	6	39	0	0	0	0	0	0	3	74	16	0	144
08:30 AM	1	0	2	0	7	57	3	1	0	0	0	0	4	70	15	0	160
08:45 AM	2	0	1	0	10	44	3	0	0	0	0	0	2	70	7	0	139
Total	7	2	7	0	30	192	6	1	0	0	0	0	11	277	55	0	588
Grand Total	20	2	31	0	61	375	14	1	0	0	0	0	25	549	76	1	1155
Apprch %	37.7	3.8	58.5	0	13.5	83.1	3.1	0.2	0	0	0	0	3.8	84.3	11.7	0.2	
Total %	1.7	0.2	2.7	0	5.3	32.5	1.2	0.1	0	0	0	0	2.2	47.5	6.6	0.1	

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	8	0	8	14	57	3	0	74	0	0	0	0	0	1	89	9	0	99	181
08:00 AM	2	0	2	0	4	7	52	0	0	59	0	0	0	0	0	2	63	17	0	82	145
08:15 AM	2	2	2	0	6	6	39	0	0	45	0	0	0	0	0	3	74	16	0	93	144
08:30 AM	1	0	2	0	3	7	57	3	1	68	0	0	0	0	0	4	70	15	0	89	160
Total Volume	5	2	14	0	21	34	205	6	1	246	0	0	0	0	0	10	296	57	0	363	630
% App. Total	23.8	9.5	66.7	0		13.8	83.3	2.4	0.4		0	0	0	0		2.8	81.5	15.7	0		
PHF	.625	.250	.438	.000	.656	.607	.899	.500	.250	.831	.000	.000	.000	.000	.000	.625	.831	.838	.000	.917	.870



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N/S: Columbus Ave Lot/ Cunard Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Columbus Ave Lot From North				Columbus Avenue From East				Cunard Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	5	0	0	8
07:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5
07:30 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	5	0	0	8
07:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	1	1	0	0	5
Total	0	0	0	0	0	11	0	0	0	0	0	0	1	14	0	0	26
08:00 AM	0	0	0	0	1	1	1	0	0	0	0	0	0	3	0	0	6
08:15 AM	1	0	0	0	0	3	0	0	0	0	0	0	0	2	1	0	7
08:30 AM	1	0	0	0	0	4	0	0	0	0	0	0	2	1	0	0	8
08:45 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	3	0	0	10
Total	2	0	0	0	1	15	1	0	0	0	0	0	2	9	1	0	31
Grand Total	2	0	0	0	1	26	1	0	0	0	0	0	3	23	1	0	57
Apprch %	100	0	0	0	3.6	92.9	3.6	0	0	0	0	0	11.1	85.2	3.7	0	
Total %	3.5	0	0	0	1.8	45.6	1.8	0	0	0	0	0	5.3	40.4	1.8	0	

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	3	0	0	3	6
08:15 AM	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	2	1	0	3	7
08:30 AM	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	2	1	0	0	3	8
08:45 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	3	0	0	3	10
Total Volume	2	0	0	0	2	1	15	1	0	17	0	0	0	0	0	2	9	1	0	12	31
% App. Total	100	0	0	0		5.9	88.2	5.9	0		0	0	0	0		16.7	75	8.3	0		
PHF	.500	.000	.000	.000	.500	.250	.536	.250	.000	.607	.000	.000	.000	.000	.000	.250	.750	.250	.000	1.00	.775



PRECISION
D A T A
INDUSTRIES, LLC

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Email: datarequests@pdillc.com

N/S: Columbus Ave Lot/ Cunard Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 G
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Peds and Bikes

Start Time	Columbus Ave Lot From North				Columbus Avenue From East				Cunard Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	19	0	5	0	4	0	0	0	7	0	7	0	1	43
07:15 AM	0	0	0	17	0	8	0	5	0	0	0	8	0	22	0	6	66
07:30 AM	0	0	0	25	0	4	0	8	0	0	0	14	1	30	0	3	85
07:45 AM	0	0	0	64	0	9	0	15	0	0	0	20	0	35	0	4	147
Total	0	0	0	125	0	26	0	32	0	0	0	49	1	94	0	14	341
08:00 AM	0	0	0	22	0	8	0	8	0	0	0	13	0	37	0	3	91
08:15 AM	0	0	0	26	0	6	0	5	0	0	0	11	0	47	0	4	99
08:30 AM	0	0	0	22	0	12	0	8	0	0	0	12	0	50	0	4	108
08:45 AM	0	0	0	23	0	6	0	6	0	0	0	19	0	56	0	1	111
Total	0	0	0	93	0	32	0	27	0	0	0	55	0	190	0	12	409
Grand Total	0	0	0	218	0	58	0	59	0	0	0	104	1	284	0	26	750
Apprch %	0	0	0	100	0	49.6	0	50.4	0	0	0	100	0.3	91.3	0	8.4	
Total %	0	0	0	29.1	0	7.7	0	7.9	0	0	0	13.9	0.1	37.9	0	3.5	

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	64	64	0	9	0	15	24	0	0	0	20	20	0	35	0	4	39	147
08:00 AM	0	0	0	22	22	0	8	0	8	16	0	0	0	13	13	0	37	0	3	40	91
08:15 AM	0	0	0	26	26	0	6	0	5	11	0	0	0	11	11	0	47	0	4	51	99
08:30 AM	0	0	0	22	22	0	12	0	8	20	0	0	0	12	12	0	50	0	4	54	108
Total Volume	0	0	0	134	134	0	35	0	36	71	0	0	0	56	56	0	169	0	15	184	445
% App. Total	0	0	0	100		0	49.3	0	50.7		0	0	0	100		0	91.8	0	8.2		
PHF	.000	.000	.000	.523	.523	.000	.729	.000	.600	.740	.000	.000	.000	.700	.700	.000	.845	.000	.938	.852	.757



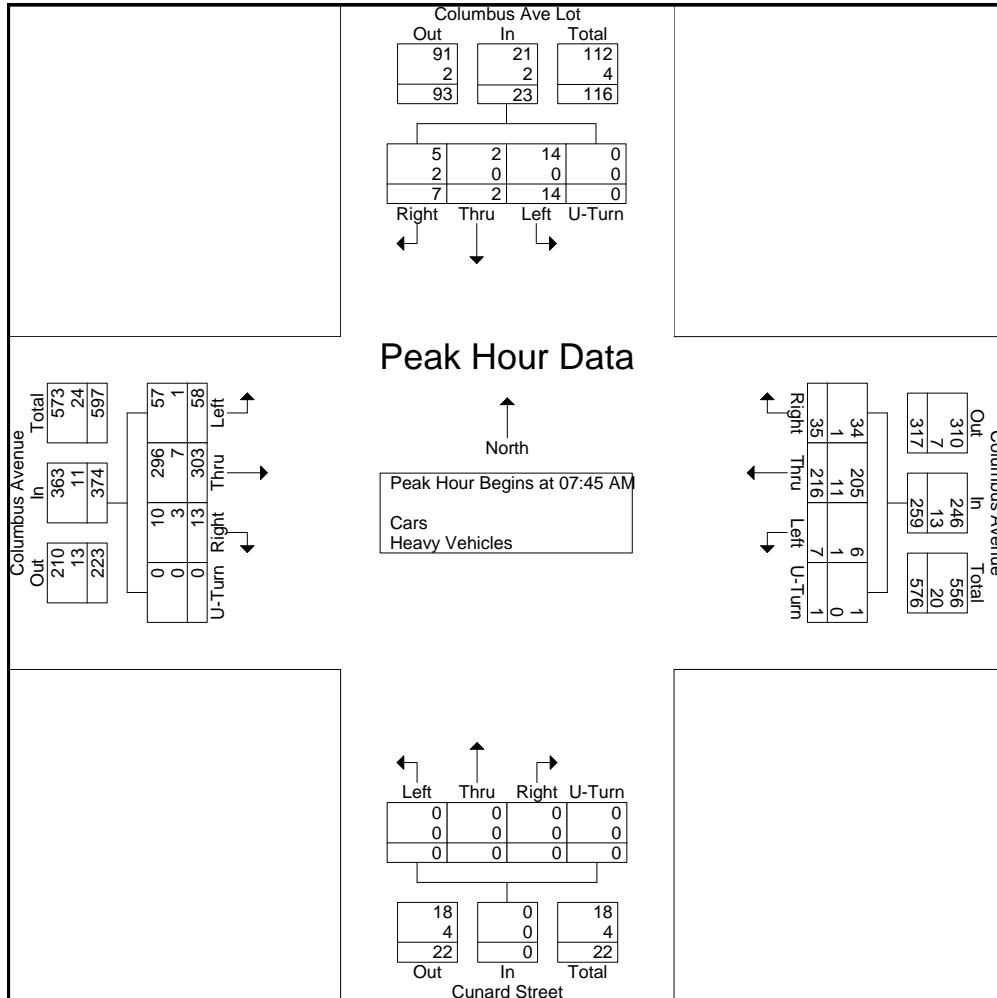
PRECISION
D A T A
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N/S: Columbus Ave Lot/ Cunard Street
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Client: HSH/ J. SanClemente

File Name : 123026 G
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	8	0	8	14	60	3	0	77	0	0	0	0	0	2	90	9	0	101	186
08:00 AM	2	0	2	0	4	8	53	1	0	62	0	0	0	0	0	2	66	17	0	85	151
08:15 AM	3	2	2	0	7	6	42	0	0	48	0	0	0	0	0	3	76	17	0	96	151
08:30 AM	2	0	2	0	4	7	61	1	1	72	0	0	0	0	0	6	71	15	0	92	168
Total Volume	7	2	14	0	23	35	216	7	1	259	0	0	0	0	0	13	303	58	0	374	656
% App. Total	30.4	8.7	60.9	0		13.5	83.4	2.7	0.4		0	0	0	0		3.5	81	15.5	0		
PHF	.583	.250	.438	.000	.719	.625	.885	.583	.250	.841	.000	.000	.000	.000	.000	.542	.842	.853	.000	.926	.882
Cars	5	2	14	0	21	34	205	6	1	246	0	0	0	0	0	10	296	57	0	363	630
% Cars	71.4	100	100	0	91.3	97.1	94.9	85.7	100	95.0	0	0	0	0	0	76.9	97.7	98.3	0	97.1	96.0
Heavy Vehicles	2	0	0	0	2	1	11	1	0	13	0	0	0	0	0	3	7	1	0	11	26
% Heavy Vehicles	28.6	0	0	0	8.7	2.9	5.1	14.3	0	5.0	0	0	0	0	0	23.1	2.3	1.7	0	2.9	4.0





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Client: HSH/ J. SanClemente

File Name : 123026 GG
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars - Heavy Vehicles

Start Time	Columbus Ave Lot From North				Columbus Avenue From East				Cunard Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	14	0	19	0	8	69	1	2	0	0	0	0	7	42	9	0	171
04:15 PM	21	1	17	0	9	56	3	1	0	0	0	0	8	60	6	0	182
04:30 PM	33	0	32	0	13	66	6	1	0	0	0	0	2	69	11	0	233
04:45 PM	23	0	24	0	18	69	6	1	0	0	1	0	0	66	7	0	215
Total	91	1	92	0	48	260	16	5	0	0	1	0	17	237	33	0	801
05:00 PM	24	3	30	0	11	68	6	0	0	0	0	0	5	59	8	0	214
05:15 PM	31	4	41	0	14	88	5	0	0	0	0	0	4	60	11	0	258
05:30 PM	22	1	25	0	24	69	1	0	0	0	0	0	1	59	12	0	214
05:45 PM	14	0	19	0	13	69	4	0	0	0	0	0	5	47	7	0	178
Total	91	8	115	0	62	294	16	0	0	0	0	0	15	225	38	0	864
Grand Total	182	9	207	0	110	554	32	5	0	0	1	0	32	462	71	0	1665
Apprch %	45.7	2.3	52	0	15.7	79	4.6	0.7	0	0	100	0	5.7	81.8	12.6	0	
Total %	10.9	0.5	12.4	0	6.6	33.3	1.9	0.3	0	0	0.1	0	1.9	27.7	4.3	0	
Cars	182	9	207	0	110	541	30	5	0	0	1	0	32	452	71	0	1640
% Cars	100	100	100	0	100	97.7	93.8	100	0	0	100	0	100	97.8	100	0	98.5
Heavy Vehicles	0	0	0	0	0	13	2	0	0	0	0	0	0	10	0	0	25
% Heavy Vehicles	0	0	0	0	0	2.3	6.2	0	0	0	0	0	0	2.2	0	0	1.5

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	33	0	32	0	65	13	66	6	1	86	0	0	0	0	0	2	69	11	0	82	233
04:45 PM	23	0	24	0	47	18	69	6	1	94	0	0	1	0	1	0	66	7	0	73	215
05:00 PM	24	3	30	0	57	11	68	6	0	85	0	0	0	0	0	5	59	8	0	72	214
05:15 PM	31	4	41	0	76	14	88	5	0	107	0	0	0	0	0	4	60	11	0	75	258
Total Volume	111	7	127	0	245	56	291	23	2	372	0	0	1	0	1	11	254	37	0	302	920
% App. Total	45.3	2.9	51.8	0		15.1	78.2	6.2	0.5		0	0	100	0		3.6	84.1	12.3	0		
PHF	.841	.438	.774	.000	.806	.778	.827	.958	.500	.869	.000	.000	.250	.000	.250	.550	.920	.841	.000	.921	.891
Cars	111	7	127	0	245	56	287	21	2	366	0	0	1	0	1	11	250	37	0	298	910
% Cars	100	100	100	0	100	100	98.6	91.3	100	98.4	0	0	100	0	100	100	98.4	100	0	98.7	98.9
Heavy Vehicles	0	0	0	0	0	0	4	2	0	6	0	0	0	0	0	0	4	0	0	4	10
% Heavy Vehicles	0	0	0	0	0	0	1.4	8.7	0	1.6	0	0	0	0	0	0	1.6	0	0	1.3	1.1



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City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123026 GG
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Cars

Start Time	Columbus Ave Lot From North				Columbus Avenue From East				Cunard Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	14	0	19	0	8	67	1	2	0	0	0	0	7	41	9	0	168
04:15 PM	21	1	17	0	9	52	3	1	0	0	0	0	8	58	6	0	176
04:30 PM	33	0	32	0	13	64	6	1	0	0	0	0	2	68	11	0	230
04:45 PM	23	0	24	0	18	68	5	1	0	0	1	0	0	65	7	0	212
Total	91	1	92	0	48	251	15	5	0	0	1	0	17	232	33	0	786
05:00 PM	24	3	30	0	11	67	6	0	0	0	0	0	5	58	8	0	212
05:15 PM	31	4	41	0	14	88	4	0	0	0	0	0	4	59	11	0	256
05:30 PM	22	1	25	0	24	67	1	0	0	0	0	0	1	57	12	0	210
05:45 PM	14	0	19	0	13	68	4	0	0	0	0	0	5	46	7	0	176
Total	91	8	115	0	62	290	15	0	0	0	0	0	15	220	38	0	854
Grand Total	182	9	207	0	110	541	30	5	0	0	1	0	32	452	71	0	1640
Apprch %	45.7	2.3	52	0	16	78.9	4.4	0.7	0	0	100	0	5.8	81.4	12.8	0	
Total %	11.1	0.5	12.6	0	6.7	33	1.8	0.3	0	0	0.1	0	2	27.6	4.3	0	

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	33	0	32	0	65	13	64	6	1	84	0	0	0	0	0	2	68	11	0	81	230
04:45 PM	23	0	24	0	47	18	68	5	1	92	0	0	1	0	1	0	65	7	0	72	212
05:00 PM	24	3	30	0	57	11	67	6	0	84	0	0	0	0	0	5	58	8	0	71	212
05:15 PM	31	4	41	0	76	14	88	4	0	106	0	0	0	0	0	0	0	0	0	0	256
Total Volume	111	7	127	0	245	56	287	21	2	366	0	0	1	0	1	11	250	37	0	298	910
% App. Total	45.3	2.9	51.8	0		15.3	78.4	5.7	0.5		0	0	100	0		3.7	83.9	12.4	0		
PHF	.841	.438	.774	.000	.806	.778	.815	.875	.500	.863	.000	.000	.250	.000	.250	.550	.919	.841	.000	.920	.889



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File Name : 123026 GG
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

Groups Printed- Heavy Vehicles

Start Time	Columbus Ave Lot From North				Columbus Avenue From East				Cunard Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
04:15 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	6
04:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
04:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	3
Total	0	0	0	0	0	9	1	0	0	0	0	0	0	5	0	0	15
05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
05:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
05:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Total	0	0	0	0	0	4	1	0	0	0	0	0	0	5	0	0	10
Grand Total	0	0	0	0	0	13	2	0	0	0	0	0	0	10	0	0	25
Apprch %	0	0	0	0	0	86.7	13.3	0	0	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	52	8	0	0	0	0	0	0	40	0	0	

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	6
04:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
04:45 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	3
Total Volume	0	0	0	0	0	0	9	1	0	10	0	0	0	0	0	0	5	0	0	5	15
% App. Total	0	0	0	0	0	0	90	10	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.563	.250	.000	.625	.000	.000	.000	.000	.000	.000	.625	.000	.000	.625	.625



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Page No : 1

Groups Printed- Peds and Bikes

Start Time	Columbus Ave Lot From North				Columbus Avenue From East				Cunard Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	0	0	0	41	0	21	0	12	0	0	0	19	0	7	0	6	106
04:15 PM	0	0	1	34	0	15	0	11	1	0	0	44	0	9	0	5	120
04:30 PM	0	0	0	29	0	16	0	12	0	0	0	45	0	10	0	7	119
04:45 PM	1	0	1	53	0	24	0	23	0	0	0	49	0	8	0	0	159
Total	1	0	2	157	0	76	0	58	1	0	0	157	0	34	0	18	504
05:00 PM	0	0	0	50	0	41	0	17	0	0	3	55	0	5	0	4	175
05:15 PM	0	0	0	62	0	43	0	14	0	0	0	58	0	17	0	12	206
05:30 PM	0	0	0	43	1	44	0	12	0	0	0	60	0	18	0	8	186
05:45 PM	1	0	0	55	0	38	1	19	0	0	0	59	1	11	1	7	193
Total	1	0	0	210	1	166	1	62	0	0	3	232	1	51	1	31	760
Grand Total	2	0	2	367	1	242	1	120	1	0	3	389	1	85	1	49	1264
Apprch %	0.5	0	0.5	98.9	0.3	66.5	0.3	33	0.3	0	0.8	99	0.7	62.5	0.7	36	
Total %	0.2	0	0.2	29	0.1	19.1	0.1	9.5	0.1	0	0.2	30.8	0.1	6.7	0.1	3.9	

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	50	50	0	41	0	17	58	0	0	3	55	58	0	5	0	4	9	175
05:15 PM	0	0	0	62	62	0	43	0	14	57	0	0	0	58	58	0	17	0	12	29	206
05:30 PM	0	0	0	43	43	1	44	0	12	57	0	0	0	60	60	0	18	0	8	26	186
05:45 PM	1	0	0	55	56	0	38	1	19	58	0	0	0	59	59	1	11	1	7	20	193
Total Volume	1	0	0	210	211	1	166	1	62	230	0	0	3	232	235	1	51	1	31	84	760
% App. Total	0.5	0	0	99.5		0.4	72.2	0.4	27		0	0	1.3	98.7		1.2	60.7	1.2	36.9		
PHF	.250	.000	.000	.847	.851	.250	.943	.250	.816	.991	.000	.000	.250	.967	.979	.250	.708	.250	.646	.724	.922



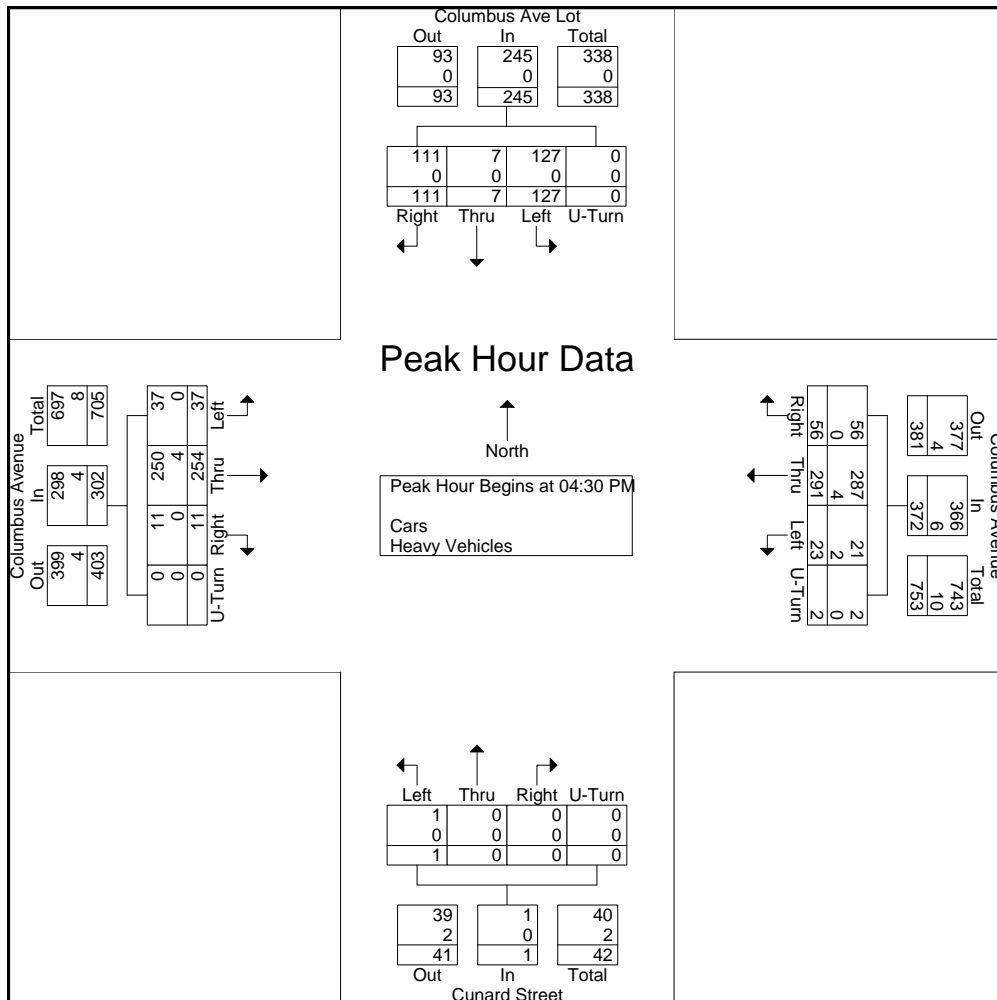
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Client: HSH/ J. SanClemente

Start Time	Columbus Ave Lot From North					Columbus Avenue From East					Cunard Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	33	0	32	0	65	13	66	6	1	86	0	0	0	0	0	2	69	11	0	82	233
04:45 PM	23	0	24	0	47	18	69	6	1	94	0	0	1	0	1	0	66	7	0	73	215
05:00 PM	24	3	30	0	57	11	68	6	0	85	0	0	0	0	0	5	59	8	0	72	214
05:15 PM	31	4	41		76	14	88			107											258
Total Volume	111	7	127	0	245	56	291	23	2	372	0	0	1	0	1	11	254	37	0	302	920
% App. Total	45.3	2.9	51.8	0		15.1	78.2	6.2	0.5		0	0	100	0		3.6	84.1	12.3	0		92.0
PHF	.841	.438	.774	.000	.806	.778	.827	.958	.500	.869	.000	.000	.250	.000	.250	.550	.920	.841	.000	.921	.891
Cars	111	7	127	0	245	56	287	21	2	366	0	0	1	0	1	11	250	37	0	298	910
% Cars	100	100	100	0	100	100	98.6	91.3	100	98.4	0	0	100	0	100	100	98.4	100	0	98.7	98.9
Heavy Vehicles	0	0	0	0	0	0	4	2	0	6	0	0	0	0	0	0	4	0	0	4	10
% Heavy Vehicles	0	0	0	0	0	0	1.4	8.7	0	1.6	0	0	0	0	0	0	1.6	0	0	1.3	1.1

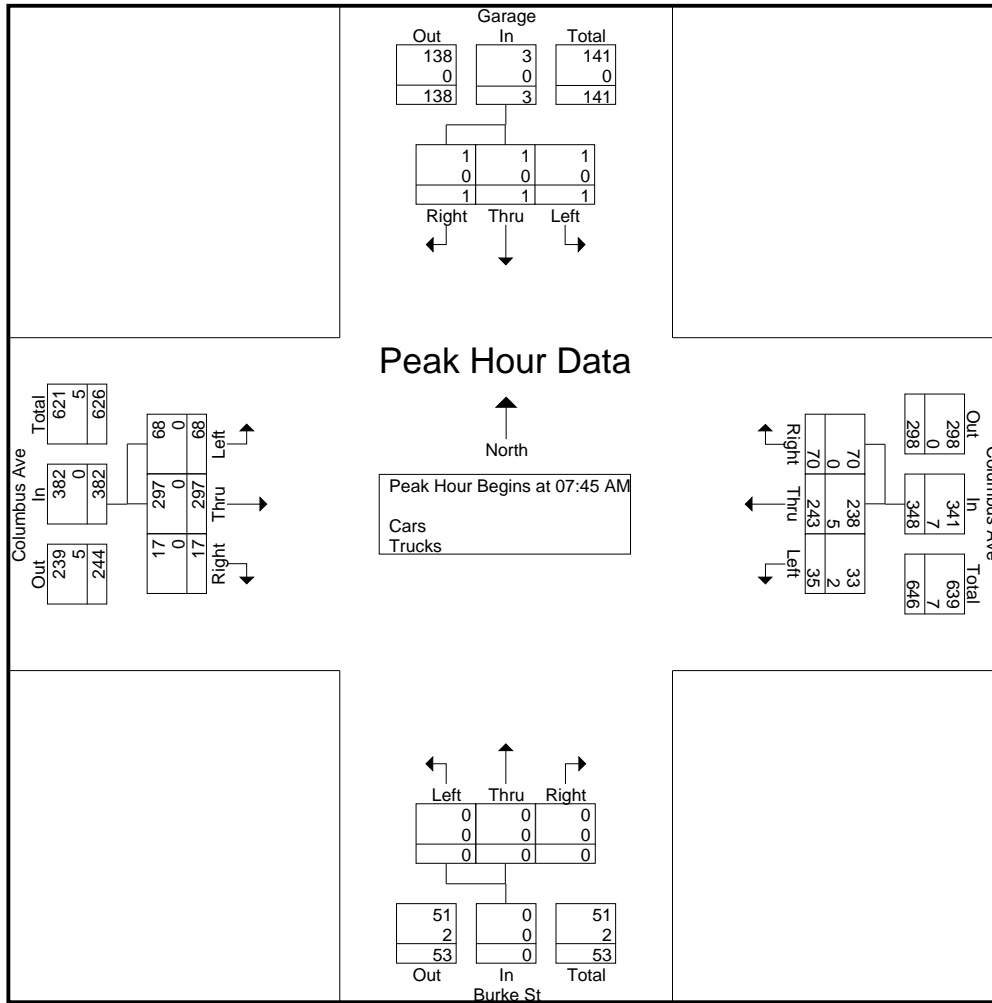


Accurate Counts

978-664-2565

N/S Street : Garage / Burke Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Cloudy

File Name : 11046001
 Site Code : 11046001
 Start Date : 4/10/2013
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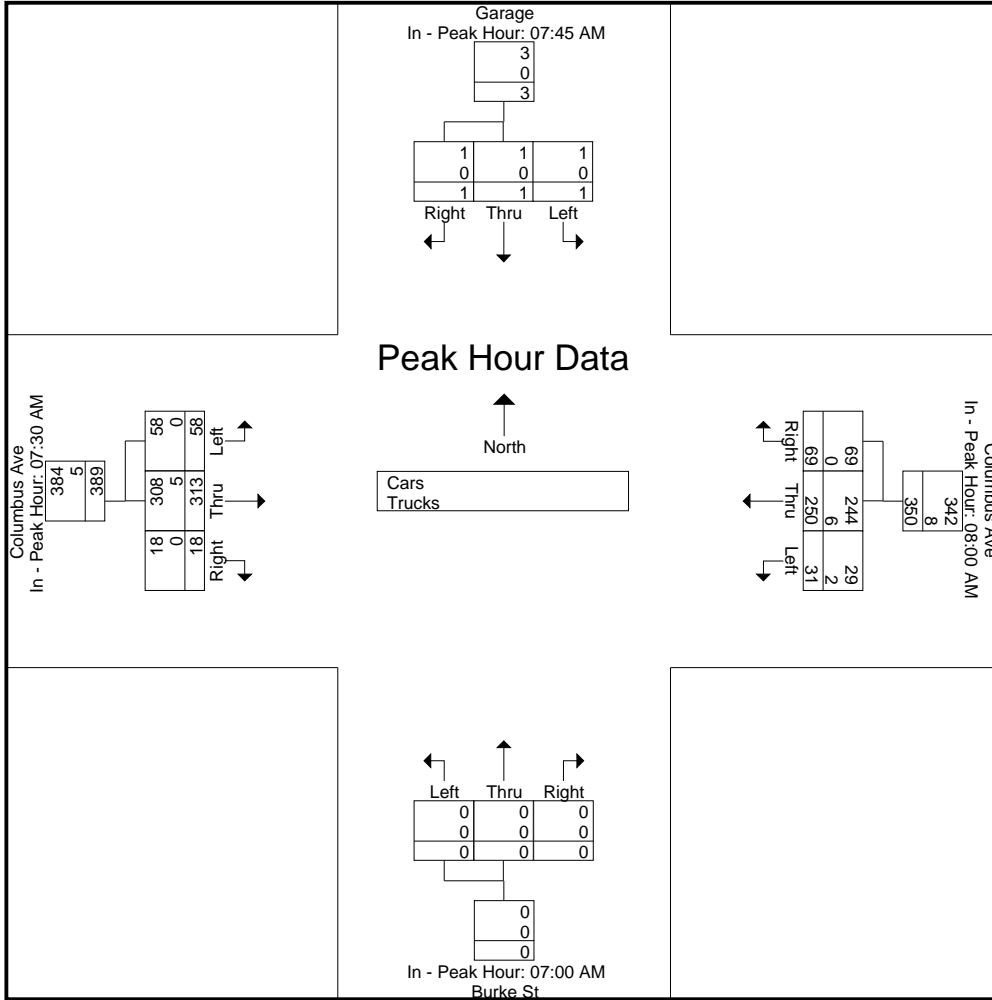
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	1	0	1	12	69	15	96	0	0	0	0	8	85	5	98
+15 mins.	0	0	0	0	7	46	14	67	0	0	0	0	10	87	6	103
+30 mins.	1	0	0	1	6	67	19	92	0	0	0	0	16	77	1	94
+45 mins.	0	0	1	1	6	68	21	95	0	0	0	0	24	64	6	94
Total Volume	1	1	1	3	31	250	69	350	0	0	0	0	58	313	18	389
% App. Total	33.3	33.3	33.3		8.9	71.4	19.7		0	0	0	0	14.9	80.5	4.6	
PHF	.250	.250	.250	.750	.646	.906	.821	.911	.000	.000	.000	.000	.604	.899	.750	.944
Cars	1	1	1	3	29	244	69	342	0	0	0	0	58	308	18	384
% Cars	100	100	100	100	93.5	97.6	100	97.7	0	0	0	0	100	98.4	100	98.7
Trucks	0	0	0	0	2	6	0	8	0	0	0	0	0	5	0	5
% Trucks	0	0	0	0	6.5	2.4	0	2.3	0	0	0	0	0	1.6	0	1.3

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Garage / Burke Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Cloudy

File Name : 11046001
 Site Code : 11046001
 Start Date : 4/10/2013
 Page No : 1

Groups Printed- Cars

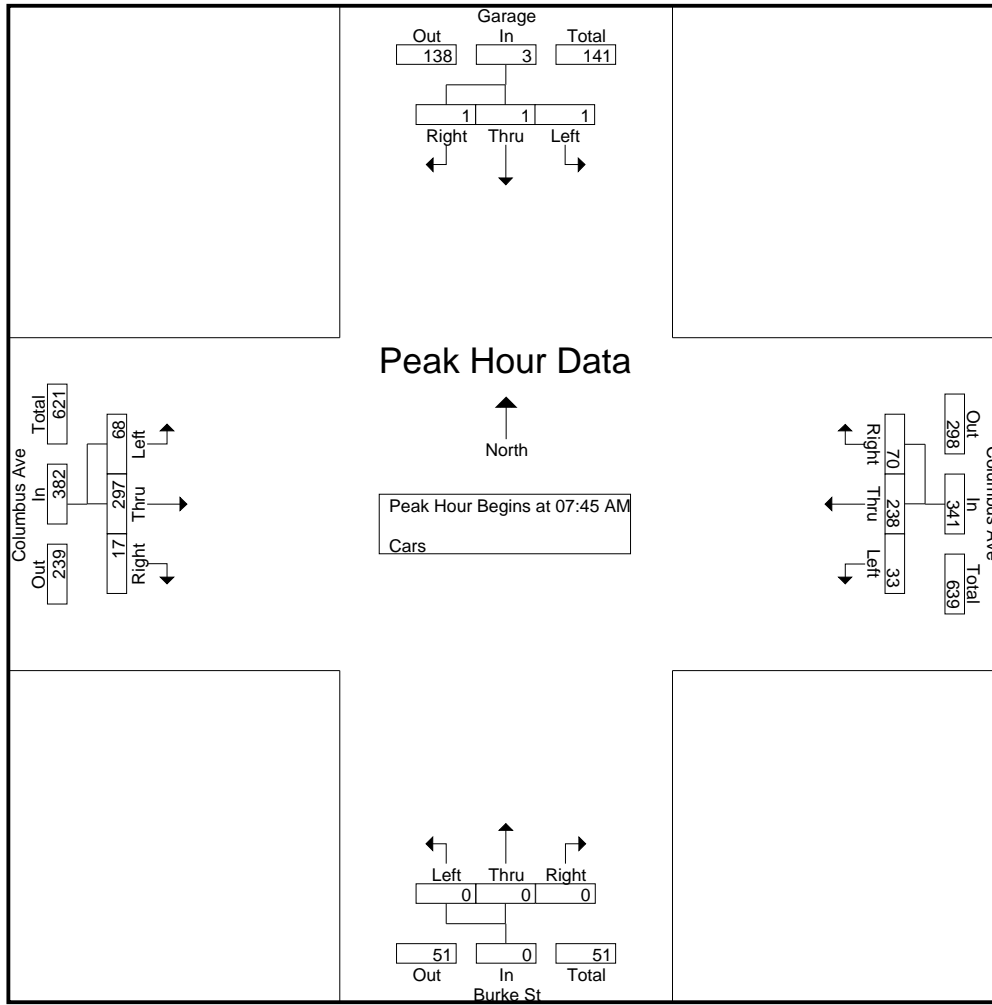
Start Time	Garage From North			Columbus Ave From East			Burke St From South			Columbus Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	1	0	0	3	51	11	0	0	0	8	60	1	135
07:15 AM	0	0	0	6	43	6	0	0	0	4	61	4	124
07:30 AM	0	0	0	2	60	11	0	0	0	8	80	5	166
07:45 AM	0	1	0	10	60	22	0	0	0	10	87	6	196
Total	1	1	0	21	214	50	0	0	0	30	288	16	621
08:00 AM	0	0	0	12	68	15	0	0	0	16	77	1	189
08:15 AM	1	0	0	7	45	14	0	0	0	24	64	6	161
08:30 AM	0	0	1	4	65	19	0	0	0	18	69	4	180
08:45 AM	0	0	0	6	66	21	0	0	0	17	56	7	173
Total	1	0	1	29	244	69	0	0	0	75	266	18	703
Grand Total	2	1	1	50	458	119	0	0	0	105	554	34	1324
Apprch %	50	25	25	8	73	19	0	0	0	15.2	79.9	4.9	
Total %	0.2	0.1	0.1	3.8	34.6	9	0	0	0	7.9	41.8	2.6	

Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	1	0	1	10	60	22	92	0	0	0	0	10	87	6	103	196
08:00 AM	0	0	0	0	12	68	15	95	0	0	0	0	16	77	1	94	189
08:15 AM	1	0	0	1	7	45	14	66	0	0	0	0	24	64	6	94	161
08:30 AM	0	0	1	1	4	65	19	88	0	0	0	0	18	69	4	91	180
Total Volume	1	1	1	3	33	238	70	341	0	0	0	0	68	297	17	382	726
% App. Total	33.3	33.3	33.3		9.7	69.8	20.5		0	0	0		17.8	77.7	4.5		
PHF	.250	.250	.250	.750	.688	.875	.795	.897	.000	.000	.000	.000	.708	.853	.708	.927	.926

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 2



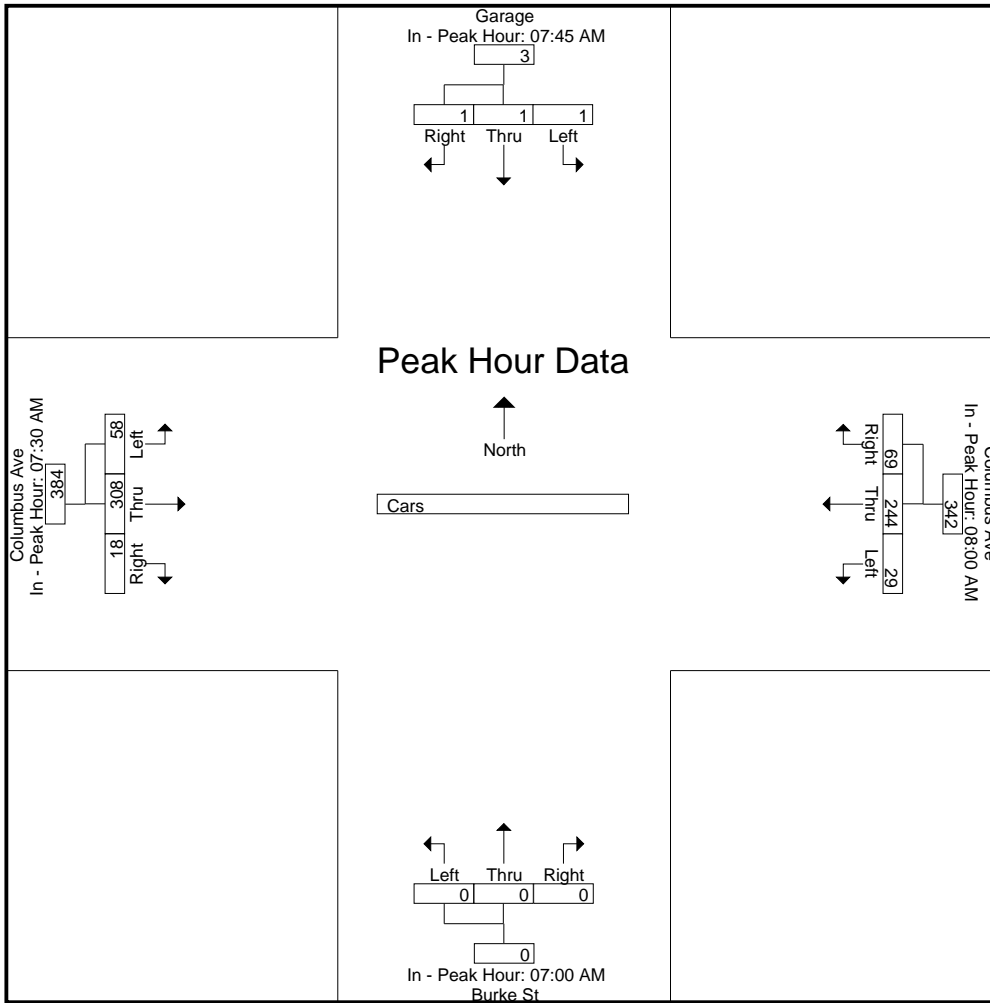
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	1	0	1	12	68	15	95	0	0	0	0	8	80	5	93
+15 mins.	0	0	0	0	7	45	14	66	0	0	0	0	10	87	6	103
+30 mins.	1	0	0	1	4	65	19	88	0	0	0	0	16	77	1	94
+45 mins.	0	0	1	1	6	66	21	93	0	0	0	0	24	64	6	94
Total Volume	1	1	1	3	29	244	69	342	0	0	0	0	58	308	18	384
% App. Total	33.3	33.3	33.3		8.5	71.3	20.2		0	0	0		15.1	80.2	4.7	
PHF	.250	.250	.250	.750	.604	.897	.821	.900	.000	.000	.000	.000	.604	.885	.750	.932

Accurate Counts
978-664-2565

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 3

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy



Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 1

Groups Printed- Trucks

Start Time	Garage From North			Columbus Ave From East			Burke St From South			Columbus Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
07:15 AM	0	0	0	0	2	0	0	0	0	0	5	0	7
07:30 AM	0	0	0	0	1	0	0	0	0	0	5	0	6
07:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	4	0	0	0	0	0	13	0	17
08:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	2	2	0	0	0	0	0	0	0	4
08:45 AM	0	0	0	0	2	0	0	0	0	0	2	0	4
Total	0	0	0	2	6	0	0	0	0	0	2	0	10
Grand Total	0	0	0	2	10	0	0	0	0	0	15	0	27
Apprch %	0	0	0	16.7	83.3	0	0	0	0	0	100	0	
Total %	0	0	0	7.4	37	0	0	0	0	0	55.6	0	

Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	7
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5	6
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	13	0	13	17
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.650	.000	.650	.607

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

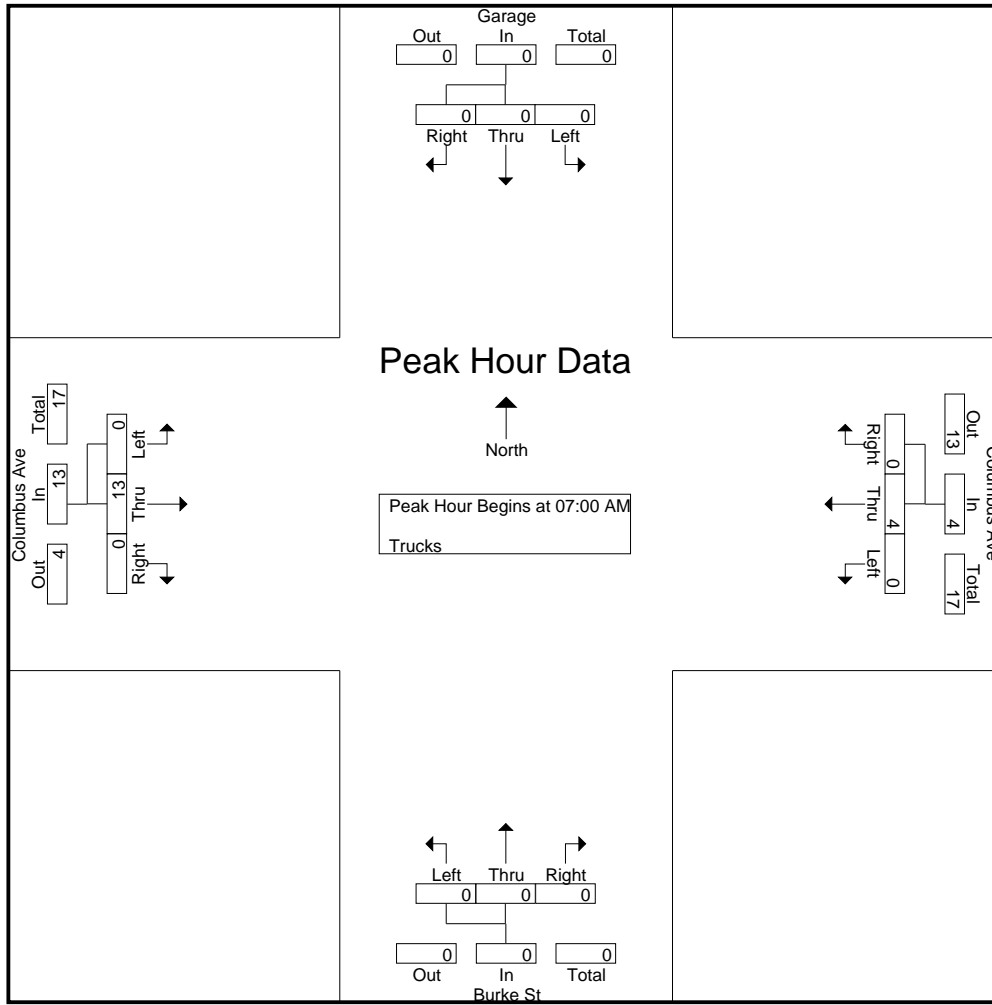
Peak Hour for Entire Intersection Begins at 07:00 AM

Accurate Counts

978-664-2565

N/S Street : Garage / Burke Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Cloudy

File Name : 11046001
 Site Code : 11046001
 Start Date : 4/10/2013
 Page No : 2



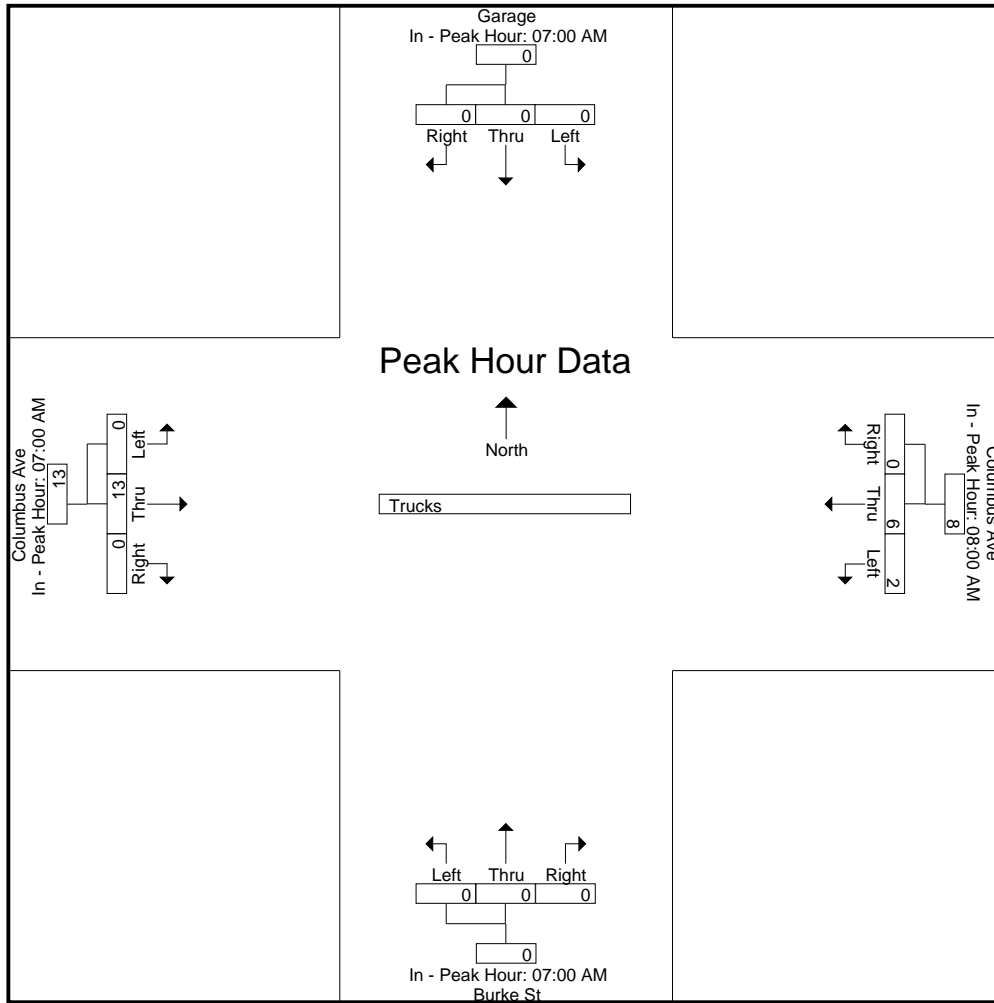
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5
+30 mins.	0	0	0	0	2	2	0	4	0	0	0	0	0	5	0	5
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	2	6	0	8	0	0	0	0	0	13	0	13
% App. Total	0	0	0	0	25	75	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.250	.750	.000	.500	.000	.000	.000	.000	.000	.650	.000	.650

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Garage / Burke Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Cloudy

File Name : 11046001
 Site Code : 11046001
 Start Date : 4/10/2013
 Page No : 1

Groups Printed- Bikes Peds

Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00 AM	0	0	0	12	0	4	0	2	0	0	0	12	0	5	1	5	31	10	41
07:15 AM	0	0	1	13	1	2	0	2	0	0	0	19	0	8	1	7	41	13	54
07:30 AM	0	0	0	25	0	4	0	1	0	0	0	10	0	17	0	10	46	21	67
07:45 AM	0	0	0	42	0	1	1	1	0	0	0	18	0	23	0	19	80	25	105
Total	0	0	1	92	1	11	1	6	0	0	0	59	0	53	2	41	198	69	267
08:00 AM	1	0	0	36	0	3	1	2	0	0	0	34	0	18	0	17	89	23	112
08:15 AM	0	0	0	6	0	2	0	2	0	0	0	23	0	29	0	21	52	31	83
08:30 AM	0	0	0	18	0	3	0	3	0	0	0	35	1	30	2	21	77	36	113
08:45 AM	0	1	0	21	0	5	0	2	0	0	0	35	0	35	0	24	82	41	123
Total	1	1	0	81	0	13	1	9	0	0	0	127	1	112	2	83	300	131	431
Grand Total	1	1	1	173	1	24	2	15	0	0	0	186	1	165	4	124	498	200	698
Apprch %	33.3	33.3	33.3		3.7	88.9	7.4		0	0	0		0.6	97.1	2.4				
Total %	0.5	0.5	0.5		0.5	12	1		0	0	0		0.5	82.5	2		71.3	28.7	

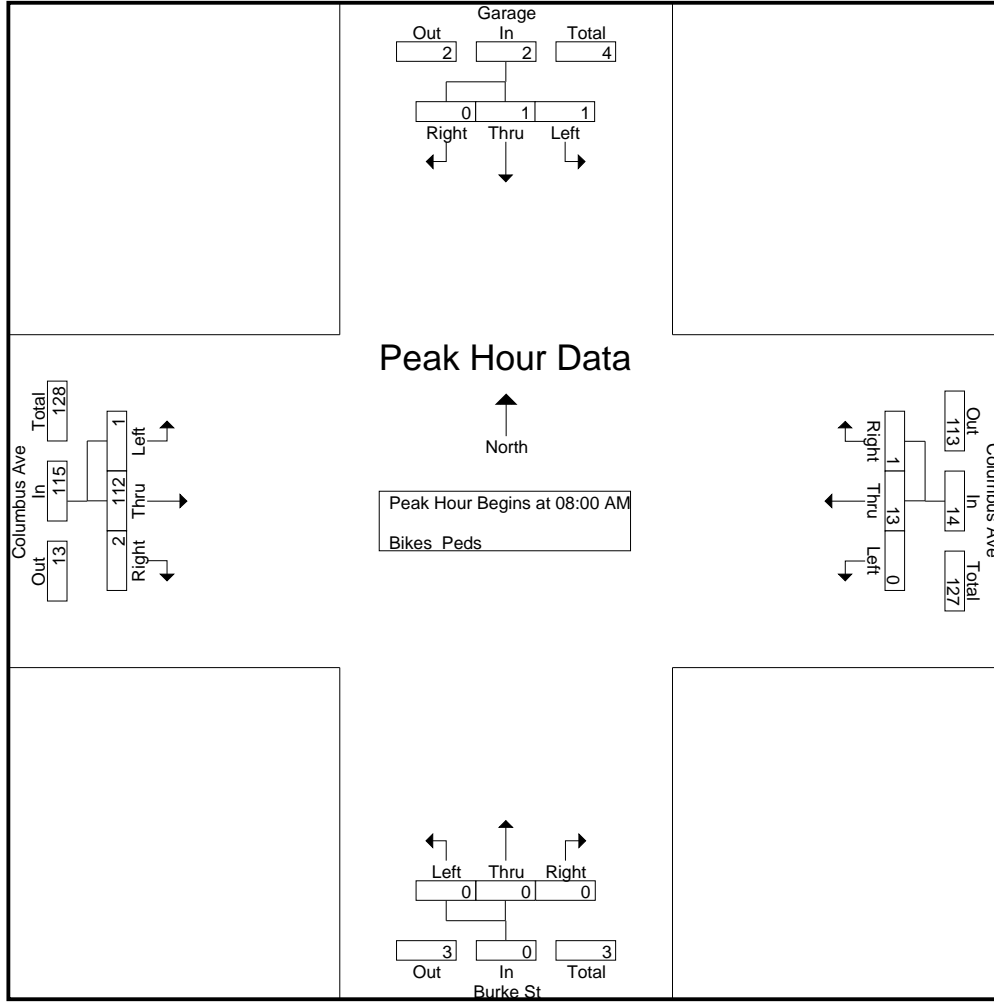
Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	1	0	0	1	0	3	1	4	0	0	0	0	0	18	0	18	23
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	29	0	29	31
08:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	1	30	2	33	36
08:45 AM	0	1	0	1	0	5	0	5	0	0	0	0	0	35	0	35	41
Total Volume	1	1	0	2	0	13	1	14	0	0	0	0	1	112	2	115	131
% App. Total	50	50	0		0	92.9	7.1		0	0	0		0.9	97.4	1.7		
PHF	.250	.250	.000	.500	.000	.650	.250	.700	.000	.000	.000	.000	.250	.800	.250	.821	.799

Accurate Counts

978-664-2565

N/S Street : Garage / Burke Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Cloudy

File Name : 11046001
 Site Code : 11046001
 Start Date : 4/10/2013
 Page No : 2



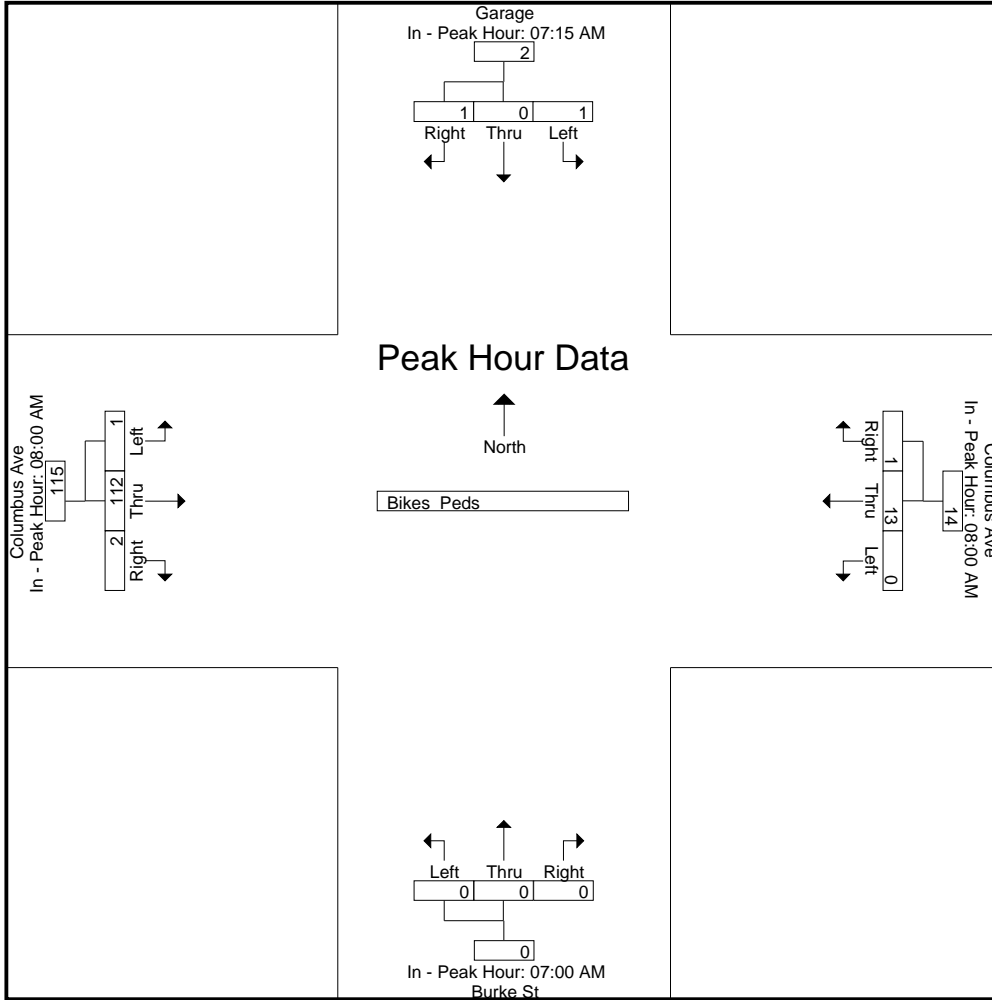
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	0	1	1	0	3	1	4	0	0	0	0	0	18	0	18
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	29	0	29
+30 mins.	0	0	0	0	0	3	0	3	0	0	0	0	1	30	2	33
+45 mins.	1	0	0	1	0	5	0	5	0	0	0	0	0	35	0	35
Total Volume	1	0	1	2	0	13	1	14	0	0	0	0	1	112	2	115
% App. Total	50	0	50		0	92.9	7.1		0	0	0		0.9	97.4	1.7	
PHF	.250	.000	.250	.500	.000	.650	.250	.700	.000	.000	.000	.000	.250	.800	.250	.821

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Garage / Burke Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Cloudy

File Name : 11046001
 Site Code : 11046001
 Start Date : 4/10/2013
 Page No : 1

Groups Printed- Cars - Trucks

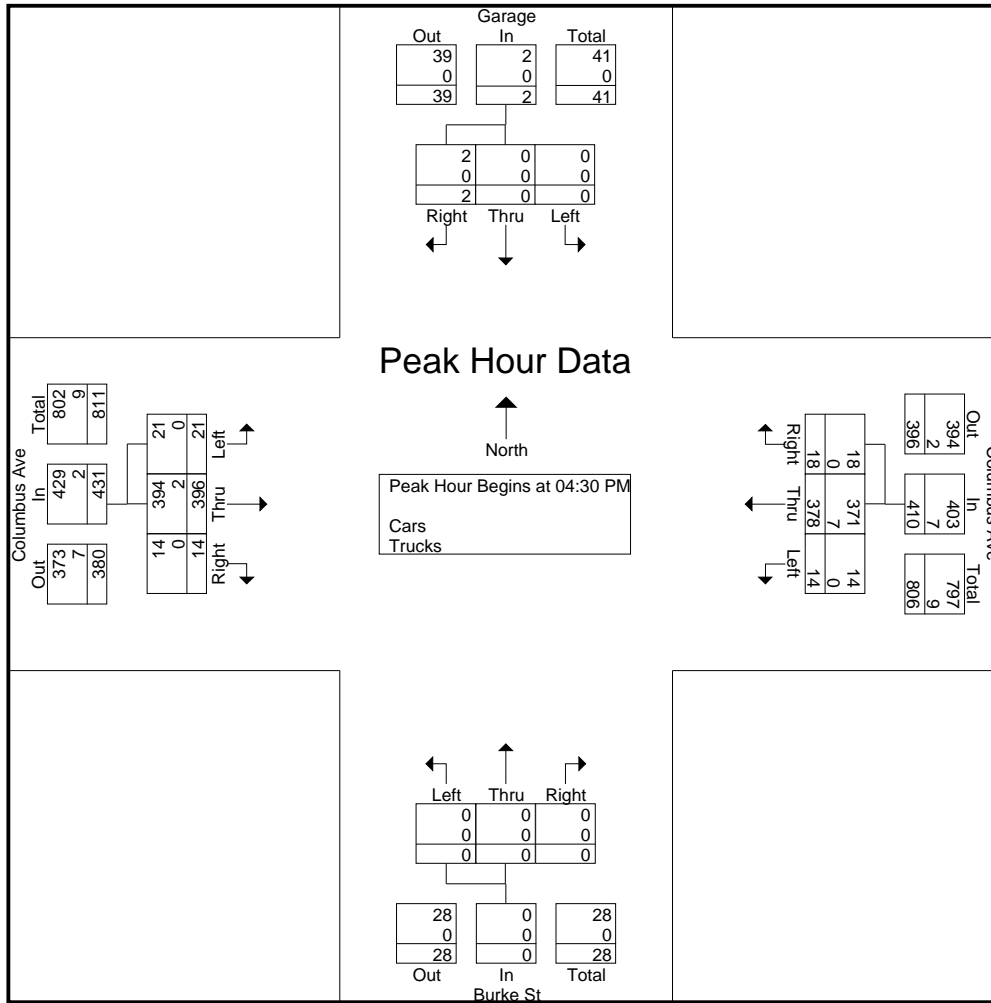
Start Time	Garage From North			Columbus Ave From East			Burke St From South			Columbus Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	1	2	79	5	0	0	0	1	93	3	184
04:15 PM	0	0	1	4	83	7	0	0	0	2	89	4	190
04:30 PM	0	0	1	2	84	5	0	0	0	2	106	3	203
04:45 PM	0	0	1	5	91	4	0	0	0	8	108	5	222
Total	0	0	4	13	337	21	0	0	0	13	396	15	799
05:00 PM	0	0	0	3	93	6	0	0	0	4	106	3	215
05:15 PM	0	0	0	4	110	3	0	0	0	7	76	3	203
05:30 PM	0	0	0	5	65	3	0	0	0	0	71	8	152
05:45 PM	0	0	0	1	83	4	0	0	0	1	71	5	165
Total	0	0	0	13	351	16	0	0	0	12	324	19	735
Grand Total	0	0	4	26	688	37	0	0	0	25	720	34	1534
Apprch %	0	0	100	3.5	91.6	4.9	0	0	0	3.2	92.4	4.4	
Total %	0	0	0.3	1.7	44.9	2.4	0	0	0	1.6	46.9	2.2	
Cars	0	0	4	26	678	37	0	0	0	25	715	34	1519
% Cars	0	0	100	100	98.5	100	0	0	0	100	99.3	100	99
Trucks	0	0	0	0	10	0	0	0	0	0	5	0	15
% Trucks	0	0	0	0	1.5	0	0	0	0	0	0.7	0	1

Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	1	1	2	84	5	91	0	0	0	0	2	106	3	111	203
04:45 PM	0	0	1	1	5	91	4	100	0	0	0	0	8	108	5	121	222
05:00 PM	0	0	0	0	3	93	6	102	0	0	0	0	4	106	3	113	215
05:15 PM	0	0	0	0	4	110	3	117	0	0	0	0	7	76	3	86	203
Total Volume	0	0	2	2	14	378	18	410	0	0	0	0	21	396	14	431	843
% App. Total	0	0	100	100	3.4	92.2	4.4		0	0	0		4.9	91.9	3.2		
PHF	.000	.000	.500	.500	.700	.859	.750	.876	.000	.000	.000	.000	.656	.917	.700	.890	.949
Cars	0	0	2	2	14	371	18	403	0	0	0	0	21	394	14	429	834
% Cars	0	0	100	100	100	98.1	100	98.3	0	0	0	0	100	99.5	100	99.5	98.9
Trucks	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
% Trucks	0	0	0	0	0	1.9	0	1.7	0	0	0	0	0	0.5	0	0.5	1.1

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 2



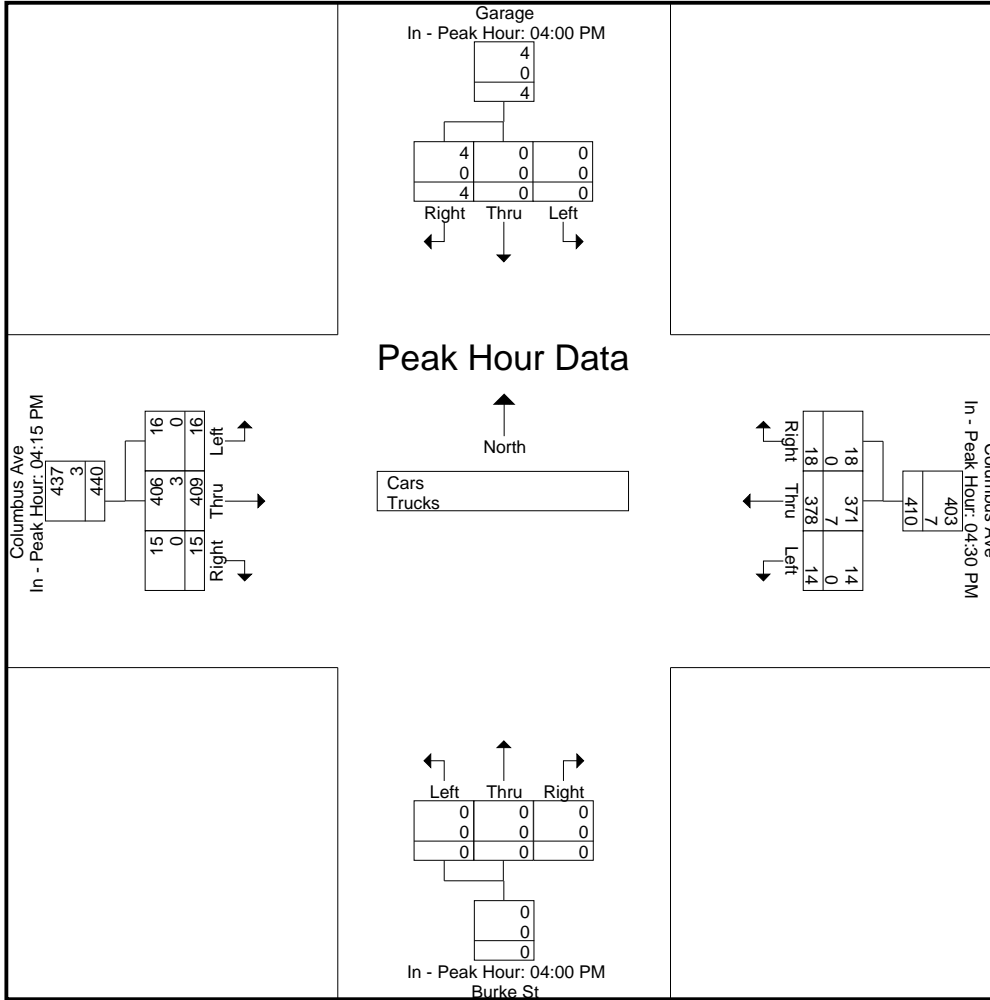
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:00 PM				04:15 PM			
+0 mins.	0	0	1	1	2	84	5	91	0	0	0	0	2	89	4	95
+15 mins.	0	0	1	1	5	91	4	100	0	0	0	0	2	106	3	111
+30 mins.	0	0	1	1	3	93	6	102	0	0	0	0	8	108	5	121
+45 mins.	0	0	1	1	4	110	3	117	0	0	0	0	4	106	3	113
Total Volume	0	0	4	4	14	378	18	410	0	0	0	0	16	409	15	440
% App. Total	0	0	100	100	3.4	92.2	4.4	100	0	0	0	0	3.6	93	3.4	100
PHF	.000	.000	1.000	1.000	.700	.859	.750	.876	.000	.000	.000	.000	.500	.947	.750	.909
Cars	0	0	4	4	14	371	18	403	0	0	0	0	16	406	15	437
% Cars	0	0	100	100	100	98.1	100	98.3	0	0	0	0	100	99.3	100	99.3
Trucks	0	0	0	0	0	7	0	7	0	0	0	0	0	3	0	3
% Trucks	0	0	0	0	0	1.9	0	1.7	0	0	0	0	0	0.7	0	0.7

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 1

Groups Printed- Cars

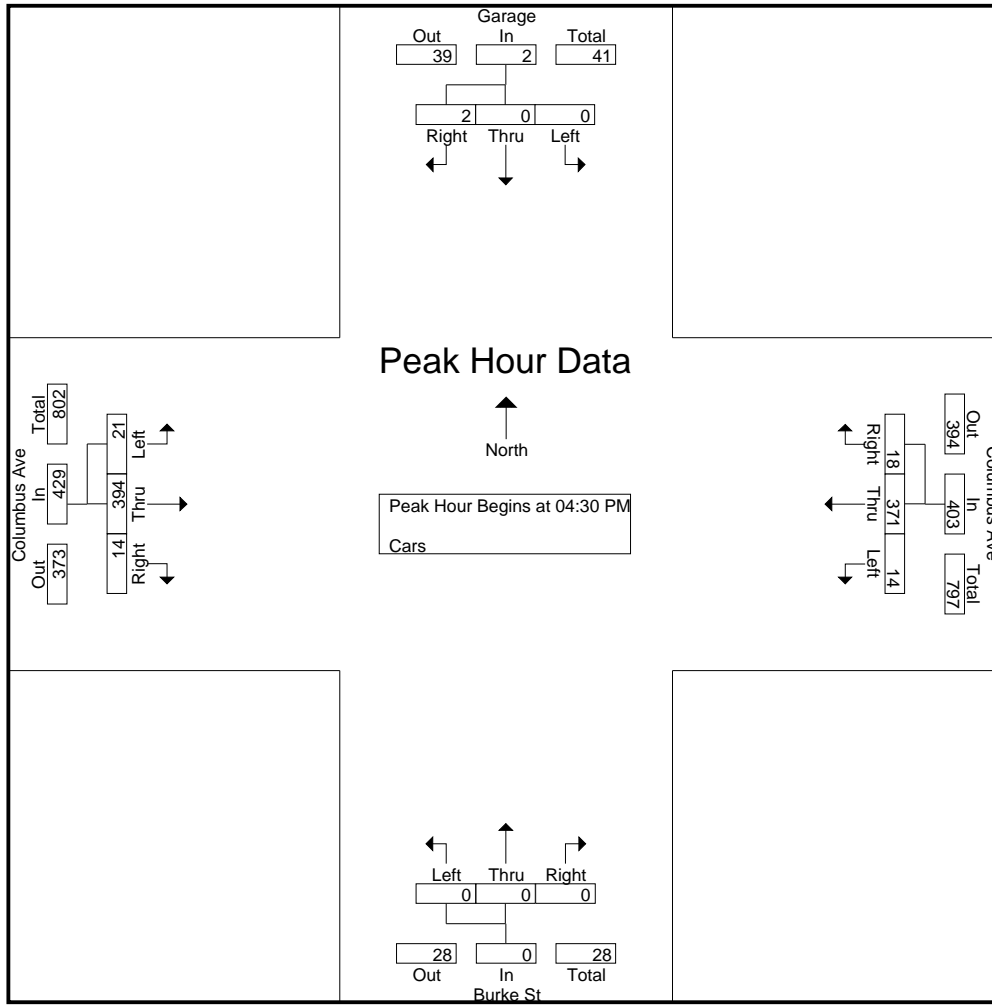
Start Time	Garage From North			Columbus Ave From East			Burke St From South			Columbus Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	1	2	78	5	0	0	0	1	92	3	182
04:15 PM	0	0	1	4	83	7	0	0	0	2	88	4	189
04:30 PM	0	0	1	2	80	5	0	0	0	2	104	3	197
04:45 PM	0	0	1	5	90	4	0	0	0	8	108	5	221
Total	0	0	4	13	331	21	0	0	0	13	392	15	789
05:00 PM	0	0	0	3	91	6	0	0	0	4	106	3	213
05:15 PM	0	0	0	4	110	3	0	0	0	7	76	3	203
05:30 PM	0	0	0	5	63	3	0	0	0	0	71	8	150
05:45 PM	0	0	0	1	83	4	0	0	0	1	70	5	164
Total	0	0	0	13	347	16	0	0	0	12	323	19	730
Grand Total	0	0	4	26	678	37	0	0	0	25	715	34	1519
Apprch %	0	0	100	3.5	91.5	5	0	0	0	3.2	92.4	4.4	
Total %	0	0	0.3	1.7	44.6	2.4	0	0	0	1.6	47.1	2.2	

Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	1	1	2	80	5	87	0	0	0	0	2	104	3	109	197
04:45 PM	0	0	1	1	5	90	4	99	0	0	0	0	8	108	5	121	221
05:00 PM	0	0	0	0	3	91	6	100	0	0	0	0	4	106	3	113	213
05:15 PM	0	0	0	0	4	110	3	117	0	0	0	0	7	76	3	86	203
Total Volume	0	0	2	2	14	371	18	403	0	0	0	0	21	394	14	429	834
% App. Total	0	0	100		3.5	92.1	4.5		0	0	0		4.9	91.8	3.3		
PHF	.000	.000	.500	.500	.700	.843	.750	.861	.000	.000	.000	.000	.656	.912	.700	.886	.943

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 2



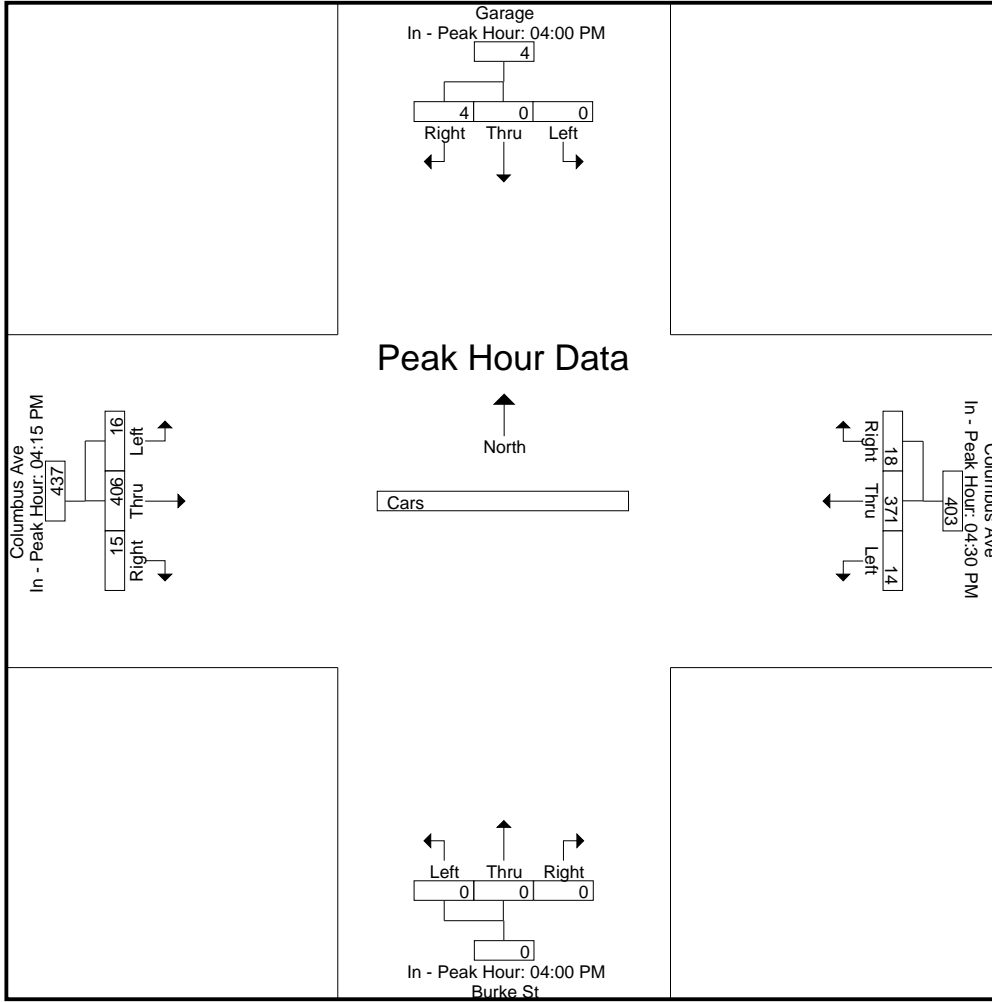
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:00 PM				04:15 PM			
+0 mins.	0	0	1	1	2	80	5	87	0	0	0	0	2	88	4	94
+15 mins.	0	0	1	1	5	90	4	99	0	0	0	0	2	104	3	109
+30 mins.	0	0	1	1	3	91	6	100	0	0	0	0	8	108	5	121
+45 mins.	0	0	1	1	4	110	3	117	0	0	0	0	4	106	3	113
Total Volume	0	0	4	4	14	371	18	403	0	0	0	0	16	406	15	437
% App. Total	0	0	100		3.5	92.1	4.5		0	0	0		3.7	92.9	3.4	
PHF	.000	.000	1.000	1.000	.700	.843	.750	.861	.000	.000	.000	.000	.500	.940	.750	.903

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 1

Groups Printed- Trucks

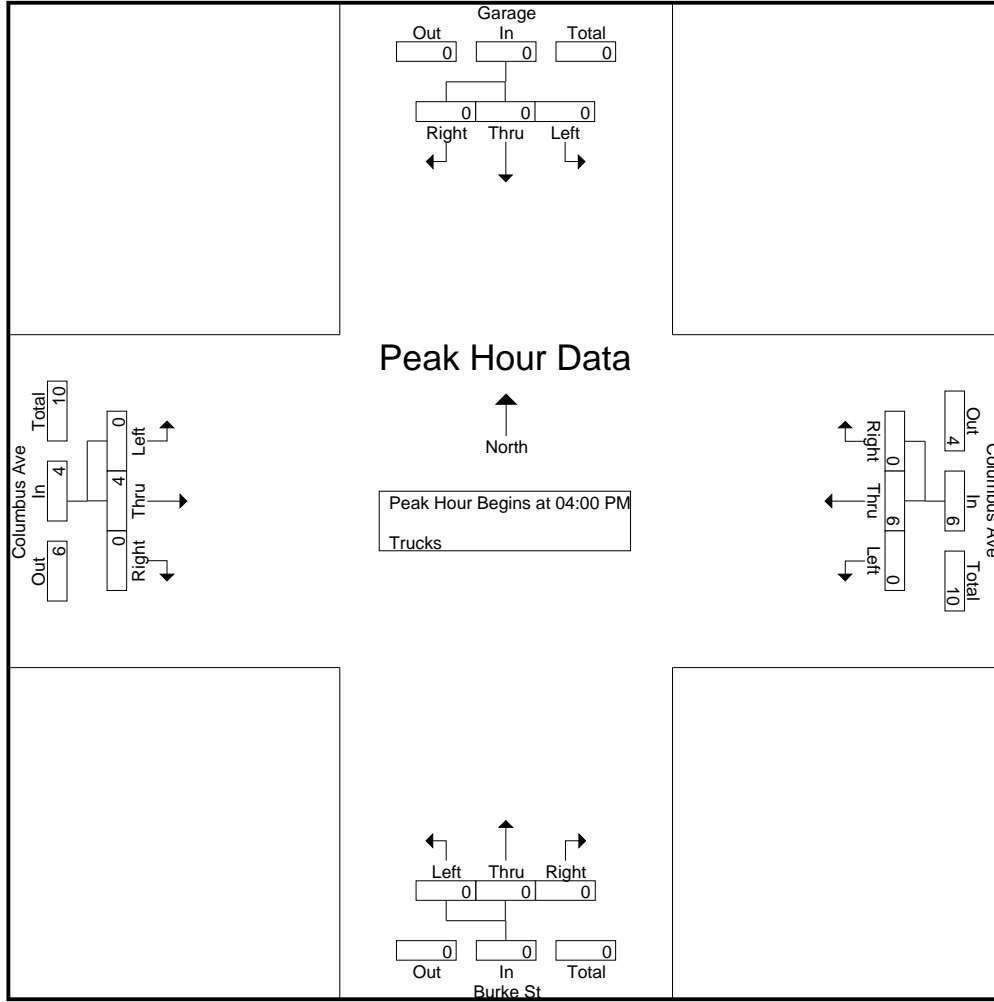
Start Time	Garage From North			Columbus Ave From East			Burke St From South			Columbus Ave From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
04:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:30 PM	0	0	0	0	4	0	0	0	0	0	2	0	6
04:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	6	0	0	0	0	0	4	0	10
05:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	4	0	0	0	0	0	1	0	5
Grand Total	0	0	0	0	10	0	0	0	0	0	5	0	15
Apprch %	0	0	0	0	100	0	0	0	0	0	100	0	
Total %	0	0	0	0	66.7	0	0	0	0	0	33.3	0	

Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:00 PM																		
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	2	0	2	6
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	0	4	0	4	10
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	0	100	0	0	
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500	.417	

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 2



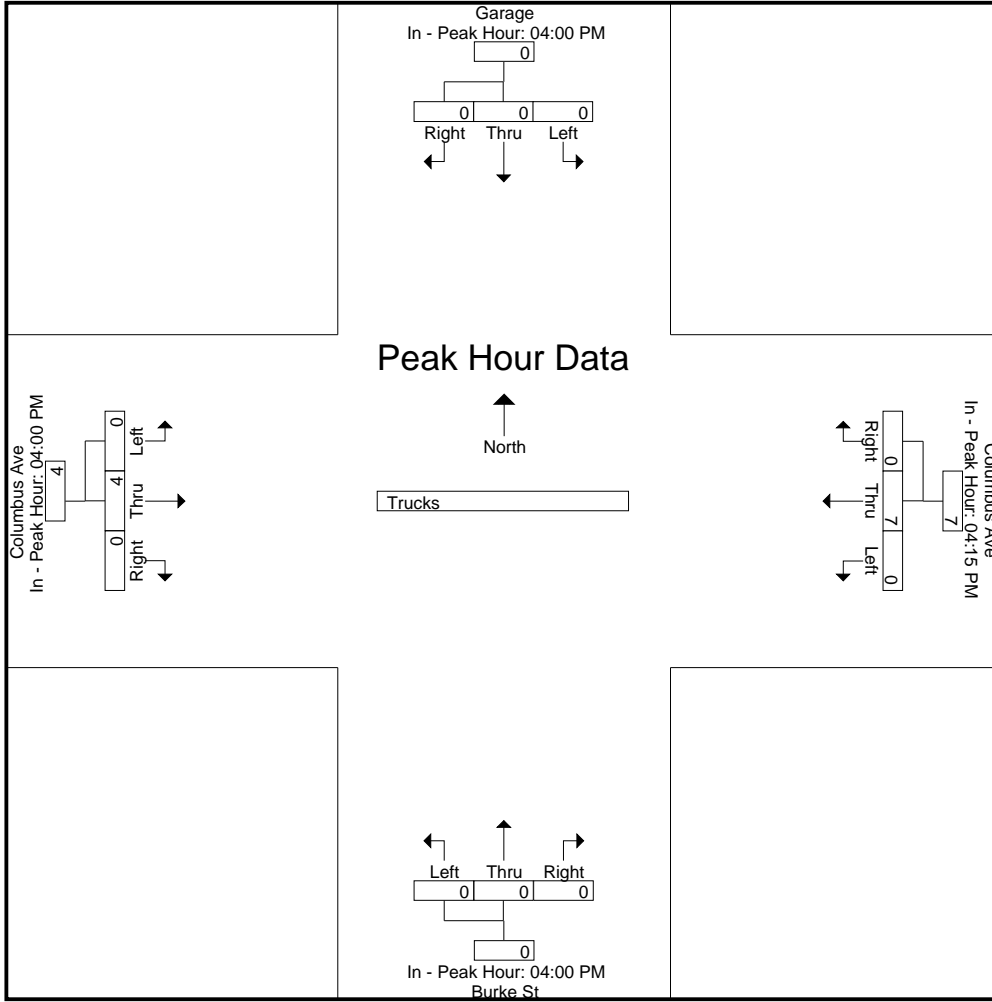
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	7	0	7	0	0	0	0	0	4	0	4
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.438	.000	.438	.000	.000	.000	.000	.000	.500	.000	.500

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 1

Groups Printed- Bikes Peds

Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
04:00 PM	1	0	0	27	0	8	1	8	0	0	0	41	0	4	0	33	109	14	123
04:15 PM	1	0	0	36	0	10	1	6	0	0	0	32	0	5	0	25	99	17	116
04:30 PM	0	0	1	32	0	6	0	7	0	0	0	35	0	8	0	43	117	15	132
04:45 PM	1	0	0	25	0	16	0	5	0	0	0	39	0	7	0	38	107	24	131
Total	3	0	1	120	0	40	2	26	0	0	0	147	0	24	0	139	432	70	502
05:00 PM	1	0	0	27	0	25	1	12	0	0	0	34	0	9	0	39	112	36	148
05:15 PM	0	0	0	32	0	31	0	8	0	0	0	43	0	7	0	28	111	38	149
05:30 PM	0	0	0	35	0	21	0	8	0	0	0	26	0	2	0	16	85	23	108
05:45 PM	2	0	0	9	0	21	0	7	0	0	0	22	0	7	0	20	58	30	88
Total	3	0	0	103	0	98	1	35	0	0	0	125	0	25	0	103	366	127	493
Grand Total	6	0	1	223	0	138	3	61	0	0	0	272	0	49	0	242	798	197	995
Apprch %	85.7	0	14.3		0	97.9	2.1		0	0	0		0	100	0				
Total %	3	0	0.5		0	70.1	1.5		0	0	0		0	24.9	0		80.2	19.8	

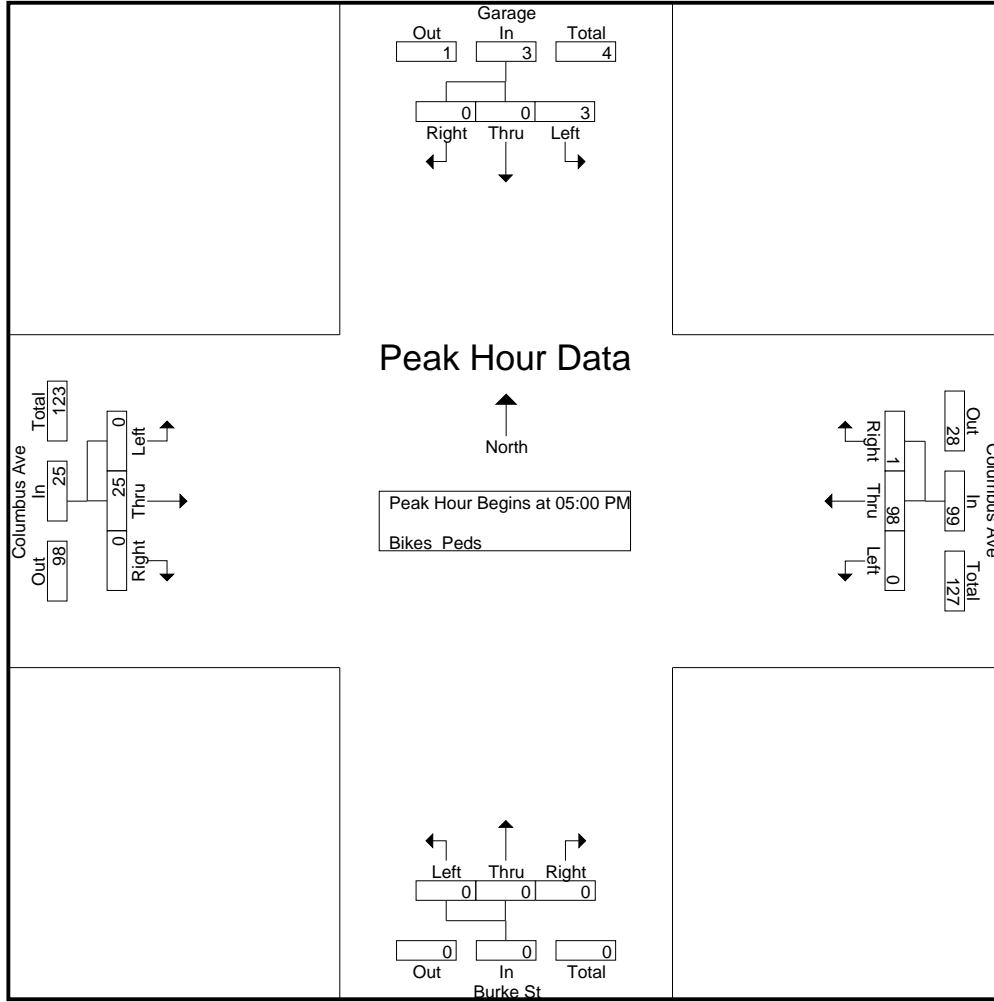
Start Time	Garage From North				Columbus Ave From East				Burke St From South				Columbus Ave From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	0	0	1	0	25	1	26	0	0	0	0	0	9	0	9	36
05:15 PM	0	0	0	0	0	31	0	31	0	0	0	0	0	7	0	7	38
05:30 PM	0	0	0	0	0	21	0	21	0	0	0	0	0	2	0	2	23
05:45 PM	2	0	0	2	0	21	0	21	0	0	0	0	0	7	0	7	30
Total Volume	3	0	0	3	0	98	1	99	0	0	0	0	0	25	0	25	127
% App. Total	100	0	0		0	99	1		0	0	0		0	100	0		
PHF	.375	.000	.000	.375	.000	.790	.250	.798	.000	.000	.000	.000	.000	.694	.000	.694	.836

Accurate Counts

978-664-2565

N/S Street : Garage / Burke Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Cloudy

File Name : 11046001
 Site Code : 11046001
 Start Date : 4/10/2013
 Page No : 2



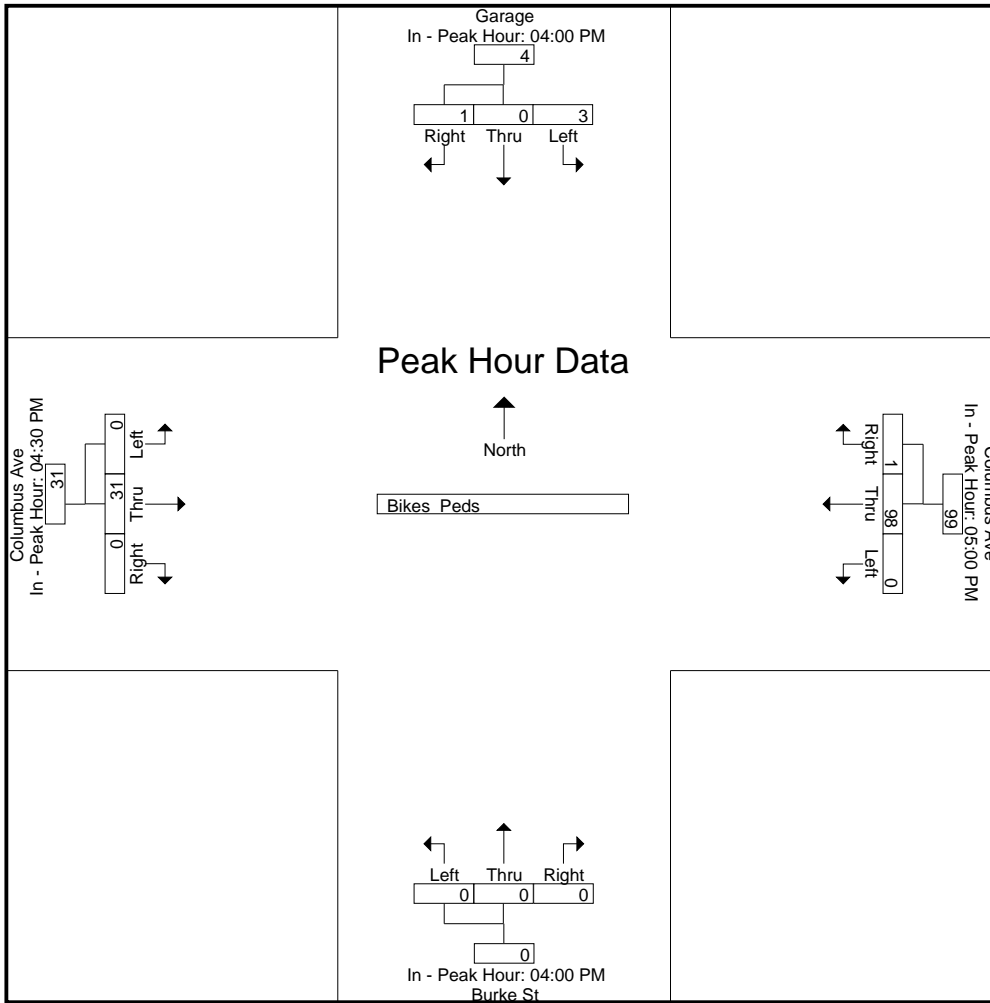
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				04:00 PM				04:30 PM			
+0 mins.	1	0	0	1	0	25	1	26	0	0	0	0	0	8	0	8
+15 mins.	1	0	0	1	0	31	0	31	0	0	0	0	0	7	0	7
+30 mins.	0	0	1	1	0	21	0	21	0	0	0	0	0	9	0	9
+45 mins.	1	0	0	1	0	21	0	21	0	0	0	0	0	7	0	7
Total Volume	3	0	1	4	0	98	1	99	0	0	0	0	0	31	0	31
% App. Total	75	0	25		0	99	1		0	0	0	0	0	100	0	
PHF	.750	.000	.250	1.000	.000	.790	.250	.798	.000	.000	.000	.000	.000	.861	.000	.861

Accurate Counts
978-664-2565

N/S Street : Garage / Burke Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Cloudy

File Name : 11046001
Site Code : 11046001
Start Date : 4/10/2013
Page No : 3





PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 123026 I
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Camden Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Camden Street From North				Columbus Avenue From East				Camden Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	1	1	3	0	1	61	3	0	2	1	2	0	1	65	0	0	141
07:15 AM	2	1	2	0	1	72	2	1	8	1	0	0	3	60	0	0	153
07:30 AM	1	0	1	0	0	75	1	0	6	0	0	0	0	84	1	0	169
07:45 AM	0	0	0	0	1	92	1	0	5	0	0	0	0	91	2	0	192
Total	4	2	6	0	3	300	7	1	21	2	2	0	4	300	3	0	655
08:00 AM	0	0	0	0	0	80	8	1	8	0	0	0	4	76	0	0	177
08:15 AM	0	0	1	0	1	74	0	0	4	0	1	0	1	72	0	0	154
08:30 AM	0	1	1	0	0	93	5	0	2	0	1	0	6	60	2	0	171
08:45 AM	1	1	1	0	0	69	1	0	6	1	1	0	4	67	3	0	155
Total	1	2	3	0	1	316	14	1	20	1	3	0	15	275	5	0	657
Grand Total	5	4	9	0	4	616	21	2	41	3	5	0	19	575	8	0	1312
Apprch %	27.8	22.2	50	0	0.6	95.8	3.3	0.3	83.7	6.1	10.2	0	3.2	95.5	1.3	0	
Total %	0.4	0.3	0.7	0	0.3	47	1.6	0.2	3.1	0.2	0.4	0	1.4	43.8	0.6	0	
Cars	4	3	9	0	4	586	21	2	40	3	5	0	17	550	8	0	1252
% Cars	80	75	100	0	100	95.1	100	100	97.6	100	100	0	89.5	95.7	100	0	95.4
Heavy Vehicles	1	1	0	0	0	30	0	0	1	0	0	0	2	25	0	0	60
% Heavy Vehicles	20	25	0	0	0	4.9	0	0	2.4	0	0	0	10.5	4.3	0	0	4.6

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	1	92	1	0	94	5	0	0	0	5	0	91	2	0	93	192
08:00 AM	0	0	0	0	0	0	80	8	1	89	8	0	0	0	8	4	76	0	0	80	177
08:15 AM	0	0	1	0	0	0	93	5	0	98	2	0	1	0	3	6	60	2	0	68	171
08:30 AM	0	1	1	0	2	0	93	5	0	98	2	0	1	0	3	6	60	2	0	68	171
Total Volume	0	1	2	0	3	2	339	14	1	356	19	0	2	0	21	11	299	4	0	314	694
% App. Total	0	33.3	66.7	0	0	0.6	95.2	3.9	0.3	90.5	0	9.5	0	0	0	3.5	95.2	1.3	0	0	
PHF	.000	.250	.500	.000	.375	.500	.911	.438	.250	.908	.594	.000	.500	.000	.656	.458	.821	.500	.000	.844	.904
Cars	0	1	2	0	3	2	321	14	1	338	18	0	2	0	20	10	291	4	0	305	666
% Cars	0	100	100	0	100	100	94.7	100	100	94.9	94.7	0	100	0	95.2	90.9	97.3	100	0	97.1	96.0
Heavy Vehicles	0	0	0	0	0	0	18	0	0	18	1	0	0	0	1	1	8	0	0	9	28
% Heavy Vehicles	0	0	0	0	0	0	5.3	0	0	5.1	5.3	0	0	0	4.8	9.1	2.7	0	0	2.9	4.0



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 123026 I
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Camden Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Cars

Start Time	Camden Street From North				Columbus Avenue From East				Camden Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	0	1	3	0	1	57	3	0	2	1	2	0	1	61	0	0	132
07:15 AM	2	1	2	0	1	71	2	1	8	1	0	0	3	56	0	0	148
07:30 AM	1	0	1	0	0	73	1	0	6	0	0	0	0	78	1	0	161
07:45 AM	0	0	0	0	1	87	1	0	5	0	0	0	0	88	2	0	184
Total	3	2	6	0	3	288	7	1	21	2	2	0	4	283	3	0	625
08:00 AM	0	0	0	0	0	78	8	1	7	0	0	0	4	73	0	0	171
08:15 AM	0	0	1	0	1	71	0	0	4	0	1	0	1	71	0	0	150
08:30 AM	0	1	1	0	0	85	5	0	2	0	1	0	5	59	2	0	161
08:45 AM	1	0	1	0	0	64	1	0	6	1	1	0	3	64	3	0	145
Total	1	1	3	0	1	298	14	1	19	1	3	0	13	267	5	0	627
Grand Total	4	3	9	0	4	586	21	2	40	3	5	0	17	550	8	0	1252
Apprch %	25	18.8	56.2	0	0.7	95.6	3.4	0.3	83.3	6.2	10.4	0	3	95.7	1.4	0	
Total %	0.3	0.2	0.7	0	0.3	46.8	1.7	0.2	3.2	0.2	0.4	0	1.4	43.9	0.6	0	

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	0	1	0	2	0	73	1	0	74	6	0	0	0	6	0	78	1	0	79	161
07:45 AM	0	0	0	0	0	1	87			89	7	0	0	0	7		88	2	0	90	184
08:00 AM	0	0	0	0	0	0	78	8	1	87	7	0	0	0	7	4	73	0	0	77	171
08:15 AM	0	0	1	0	1	1	71	0	0	72	4	0	1								
Total Volume	1	0	2	0	3	2	309	10	1	322	22	0	1	0	23	5	310	3	0	318	666
% App. Total	33.3	0	66.7	0		0.6	96	3.1	0.3		95.7	0	4.3	0		1.6	97.5	0.9	0		
PHF	.250	.000	.500	.000	.375	.500	.888	.313	.250	.904	.786	.000	.250	.000	.821	.313	.881	.375	.000	.883	.905



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File Name : 123026 I
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Camden Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Heavy Vehicles

Start Time	Camden Street From North				Columbus Avenue From East				Camden Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
07:00 AM	1	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0	9
07:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	5
07:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0	8
07:45 AM	0	0	0	0	0	5	0	0	0	0	0	0	0	3	0	0	8
Total	1	0	0	0	0	12	0	0	0	0	0	0	0	17	0	0	30
08:00 AM	0	0	0	0	0	2	0	0	0	1	0	0	0	0	3	0	6
08:15 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
08:30 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	1	1	0	10
08:45 AM	0	1	0	0	0	5	0	0	0	0	0	0	0	1	3	0	10
Total	0	1	0	0	0	18	0	0	0	1	0	0	0	2	8	0	30
Grand Total	1	1	0	0	0	30	0	0	0	1	0	0	0	2	25	0	60
Apprch %	50	50	0	0	0	100	0	0	0	100	0	0	0	7.4	92.6	0	0
Total %	1.7	1.7	0	0	0	50	0	0	0	1.7	0	0	0	3.3	41.7	0	0

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	9
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5
07:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	8
07:45 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	8
Total Volume	1	0	0	0	1	0	12	0	0	12	0	0	0	0	0	0	17	0	0	17	30
% App. Total	100	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	100	0	0	0	0
PHF	.250	.000	.000	.000	.250	.000	.600	.000	.000	.600	.000	.000	.000	.000	.000	.000	.708	.000	.000	.708	.833



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N/S: Camden Street
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Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Camden Street From North				Columbus Avenue From East				Camden Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	4	0	4	0	9	0	0	0	8	0	11	0	5	41
07:15 AM	0	0	0	6	0	7	0	11	0	0	0	8	0	21	2	4	59
07:30 AM	0	0	0	5	0	5	0	11	0	1	0	23	0	22	3	11	81
07:45 AM	1	0	2	7	0	8	0	16	0	0	0	16	0	48	1	12	111
Total	1	0	2	22	0	24	0	47	0	1	0	55	0	102	6	32	292
08:00 AM	0	0	0	9	0	6	0	12	0	0	0	19	0	28	0	13	87
08:15 AM	0	0	0	9	0	7	0	14	0	0	0	11	0	54	0	8	103
08:30 AM	0	0	0	9	0	12	0	15	0	0	0	18	0	45	1	12	112
08:45 AM	0	0	0	13	0	6	1	14	0	0	0	13	0	62	1	10	120
Total	0	0	0	40	0	31	1	55	0	0	0	61	0	189	2	43	422
Grand Total	1	0	2	62	0	55	1	102	0	1	0	116	0	291	8	75	714
Apprch %	1.5	0	3.1	95.4	0	34.8	0.6	64.6	0	0.9	0	99.1	0	77.8	2.1	20.1	
Total %	0.1	0	0.3	8.7	0	7.7	0.1	14.3	0	0.1	0	16.2	0	40.8	1.1	10.5	

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	9	9	0	6	0	12	18	0	0	0	19	19	0	28	0	13	41	87
08:15 AM	0	0	0	9	9	0	7	0	14	21	0	0	0	11	11	0	54	0	8	62	103
08:30 AM	0	0	0	9	9	0	12	0	15	27	0	0	0	13	13	0	1	12	58	112	
08:45 AM	0	0	0	13	13	0	6	1	14	21	0	0	0	13	13	0	62	1	10	73	120
Total Volume	0	0	0	40	40	0	31	1	55	87	0	0	0	61	61	0	189	2	43	234	422
% App. Total	0	0	0	100		0	35.6	1.1	63.2		0	0	0	100		0	80.8	0.9	18.4		
PHF	.000	.000	.000	.769	.769	.000	.646	.250	.917	.806	.000	.000	.000	.803	.803	.000	.762	.500	.827	.801	.879



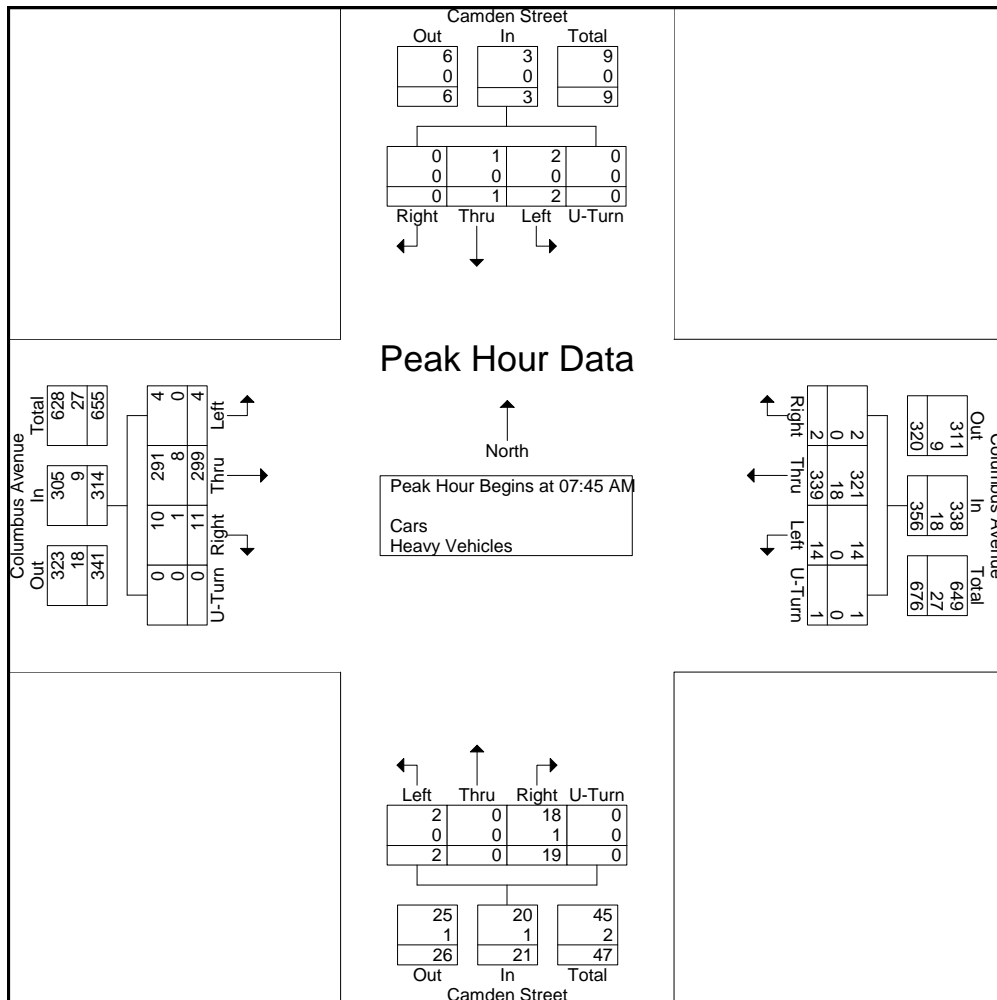
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N/S: Camden Street
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Client: HSH/ J. SanClemente

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	1	92	1	0	94	5	0	0	0	5	0	91	2	0	93	192
08:00 AM	0	0	0	0	0	0	80	8	1	89	8	0	0	0	8	4	76	0	0	80	177
08:15 AM	0	0	1	0	0	0	93	5	0	98	2	0	1	0	3	6	60	2	0	68	171
08:30 AM	0	1	1	0	2	0	93	5	0	98	2	0	1	0	3	6	60	2	0	68	171
Total Volume	0	1	2	0	3	2	339	14	1	356	19	0	2	0	21	11	299	4	0	314	694
% App. Total	0	33.3	66.7	0	0	0.6	95.2	3.9	0.3	0	90.5	0	9.5	0	0	3.5	95.2	1.3	0	0	0
PHF	.000	.250	.500	.000	.375	.500	.911	.438	.250	.908	.594	.000	.500	.000	.656	.458	.821	.500	.000	.844	.904
Cars	0	1	2	0	3	2	321	14	1	338	18	0	2	0	20	10	291	4	0	305	666
% Cars	0	100	100	0	100	100	94.7	100	100	94.9	94.7	0	100	0	95.2	90.9	97.3	100	0	97.1	96.0
Heavy Vehicles	0	0	0	0	0	0	18	0	0	18	1	0	0	0	1	1	8	0	0	9	28
% Heavy Vehicles	0	0	0	0	0	0	5.3	0	0	5.1	5.3	0	0	0	4.8	9.1	2.7	0	0	2.9	4.0





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N/S: Camden Street
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Client: HSH/ J. SanClemente

Groups Printed- Cars - Heavy Vehicles

Start Time	Camden Street From North				Columbus Avenue From East				Camden Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	4	1	0	0	91	3	0	5	0	1	0	2	59	0	0	166
04:15 PM	0	2	3	0	1	93	11	0	3	0	2	0	1	86	1	1	204
04:30 PM	1	2	3	0	1	95	10	0	2	0	1	0	3	96	0	0	214
04:45 PM	2	1	3	0	0	108	8	0	3	0	1	0	8	99	4	3	240
Total	3	9	10	0	2	387	32	0	13	0	5	0	14	340	5	4	824
05:00 PM	2	1	0	0	1	96	13	0	4	0	5	0	4	86	1	2	215
05:15 PM	0	1	3	0	1	102	7	0	3	1	2	0	4	107	2	0	233
05:30 PM	1	0	3	0	4	111	11	0	3	1	1	0	5	91	0	0	231
05:45 PM	1	4	5	0	1	90	11	1	2	0	1	0	0	77	4	0	197
Total	4	6	11	0	7	399	42	1	12	2	9	0	13	361	7	2	876
Grand Total	7	15	21	0	9	786	74	1	25	2	14	0	27	701	12	6	1700
Apprch %	16.3	34.9	48.8	0	1	90.3	8.5	0.1	61	4.9	34.1	0	3.6	94	1.6	0.8	
Total %	0.4	0.9	1.2	0	0.5	46.2	4.4	0.1	1.5	0.1	0.8	0	1.6	41.2	0.7	0.4	
Cars	7	14	21	0	9	769	72	1	23	2	14	0	27	693	12	6	1670
% Cars	100	93.3	100	0	100	97.8	97.3	100	92	100	100	0	100	98.9	100	100	98.2
Heavy Vehicles	0	1	0	0	0	17	2	0	2	0	0	0	0	8	0	0	30
% Heavy Vehicles	0	6.7	0	0	0	2.2	2.7	0	8	0	0	0	0	1.1	0	0	1.8

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	2	1	3	0	6	0	108	8	0	116	3	0	1	0	4	8	99	4	3	114	240
05:00 PM	2	1	0	0	3	1	96	13	0	110	4	0	5	0	9	4	86	1	2	93	215
05:15 PM	0	1	3	0	4	1	102	7	0	110	3	1	2	0	6	4	107				
05:30 PM	1	0	3	0	4	4	111	11	0	126	3	1	1	0	5	5	91	0	0	96	231
Total Volume	5	3	9	0	17	6	417	39	0	462	13	2	9	0	24	21	383	7	5	416	919
% App. Total	29.4	17.6	52.9	0		1.3	90.3	8.4	0		54.2	8.3	37.5	0		5	92.1	1.7	1.2		
PHF	.625	.750	.750	.000	.708	.375	.939	.750	.000	.917	.813	.500	.450	.000	.667	.656	.895	.438	.417	.912	.957
Cars	5	3	9	0	17	6	411	38	0	455	13	2	9	0	24	21	381	7	5	414	910
% Cars	100	100	100	0	100	100	98.6	97.4	0	98.5	100	100	100	0	100	100	99.5	100	100	99.5	99.0
Heavy Vehicles	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	2	0	0	2	9
% Heavy Vehicles	0	0	0	0	0	0	1.4	2.6	0	1.5	0	0	0	0	0	0	0.5	0	0	0.5	1.0



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N/S: Camden Street
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Groups Printed- Cars

Start Time	Camden Street From North				Columbus Avenue From East				Camden Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	4	1	0	0	89	2	0	3	0	1	0	2	57	0	0	159
04:15 PM	0	1	3	0	1	88	11	0	3	0	2	0	1	84	1	1	196
04:30 PM	1	2	3	0	1	92	10	0	2	0	1	0	3	95	0	0	210
04:45 PM	2	1	3	0	0	106	8	0	3	0	1	0	8	99	4	3	238
Total	3	8	10	0	2	375	31	0	11	0	5	0	14	335	5	4	803
05:00 PM	2	1	0	0	1	94	12	0	4	0	5	0	4	85	1	2	211
05:15 PM	0	1	3	0	1	102	7	0	3	1	2	0	4	107	2	0	233
05:30 PM	1	0	3	0	4	109	11	0	3	1	1	0	5	90	0	0	228
05:45 PM	1	4	5	0	1	89	11	1	2	0	1	0	0	76	4	0	195
Total	4	6	11	0	7	394	41	1	12	2	9	0	13	358	7	2	867
Grand Total	7	14	21	0	9	769	72	1	23	2	14	0	27	693	12	6	1670
Apprch %	16.7	33.3	50	0	1.1	90.4	8.5	0.1	59	5.1	35.9	0	3.7	93.9	1.6	0.8	
Total %	0.4	0.8	1.3	0	0.5	46	4.3	0.1	1.4	0.1	0.8	0	1.6	41.5	0.7	0.4	

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	2	1	3	0	6	0	106	8	0	114	3	0	1	0	4	8	99	4	3	114	238
05:00 PM	2	1	0	0	3	1	94	12	0	107	4	0	5	0	9	4	85	1	2	92	211
05:15 PM	0	1	3	0	4	1	102	7	0	110	3	1	2	0	6	4	107				
05:30 PM	1	0	3	0	4	4	109	11	0	124	3	1	1	0	5	5	90	0	0	95	228
Total Volume	5	3	9	0	17	6	411	38	0	455	13	2	9	0	24	21	381	7	5	414	910
% App. Total	29.4	17.6	52.9	0		1.3	90.3	8.4	0		54.2	8.3	37.5	0		5.1	92	1.7	1.2		
PHF	.625	.750	.750	.000	.708	.375	.943	.792	.000	.917	.813	.500	.450	.000	.667	.656	.890	.438	.417	.908	.956



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Groups Printed- Heavy Vehicles

Start Time	Camden Street From North				Columbus Avenue From East				Camden Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	
04:00 PM	0	0	0	0	0	2	1	0	2	0	0	0	0	2	0	0	7
04:15 PM	0	1	0	0	0	5	0	0	0	0	0	0	0	2	0	0	8
04:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	1	0	0	0	12	1	0	2	0	0	0	0	5	0	0	21
05:00 PM	0	0	0	0	0	2	1	0	0	0	0	0	0	1	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3
05:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Total	0	0	0	0	0	5	1	0	0	0	0	0	0	3	0	0	9
Grand Total	0	1	0	0	0	17	2	0	2	0	0	0	0	8	0	0	30
Apprch %	0	100	0	0	0	89.5	10.5	0	100	0	0	0	0	100	0	0	
Total %	0	3.3	0	0	0	56.7	6.7	0	6.7	0	0	0	0	26.7	0	0	

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	0	0	0	2	1	0	3	2	0	0	0	2	0	2	0	0	2	7
04:15 PM	0	1	0	0	1	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	8
04:30 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4
04:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	1	0	0	1	0	12	1	0	13	2	0	0	0	2	0	5	0	0	5	21
% App. Total	0	100	0	0		0	92.3	7.7	0		100	0	0	0		0	100	0	0		
PHF	.000	.250	.000	.000	.250	.000	.600	.250	.000	.650	.250	.000	.000	.000	.250	.000	.625	.000	.000	.625	.656



PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 123026 II
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Camden Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds and Bikes

Start Time	Camden Street From North				Columbus Avenue From East				Camden Street From South				Columbus Avenue From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
04:00 PM	2	0	0	5	2	20	0	11	0	0	1	16	1	4	0	8	70
04:15 PM	0	0	0	5	0	14	0	27	0	3	0	18	1	11	0	11	90
04:30 PM	0	0	0	18	0	18	0	32	0	0	0	31	0	10	0	23	132
04:45 PM	0	0	0	6	0	25	0	24	0	1	0	28	1	8	0	12	105
Total	2	0	0	34	2	77	0	94	0	4	1	93	3	33	0	54	397
05:00 PM	1	1	0	22	0	36	0	27	0	0	0	24	0	9	1	23	144
05:15 PM	0	0	0	20	1	47	0	29	0	0	1	38	0	14	1	18	169
05:30 PM	0	0	0	30	0	43	0	32	0	0	0	23	1	12	4	24	169
05:45 PM	1	0	0	21	0	37	1	30	0	0	0	32	0	15	1	18	156
Total	2	1	0	93	1	163	1	118	0	0	1	117	1	50	7	83	638
Grand Total	4	1	0	127	3	240	1	212	0	4	2	210	4	83	7	137	1035
Apprch %	3	0.8	0	96.2	0.7	52.6	0.2	46.5	0	1.9	0.9	97.2	1.7	35.9	3	59.3	
Total %	0.4	0.1	0	12.3	0.3	23.2	0.1	20.5	0	0.4	0.2	20.3	0.4	8	0.7	13.2	

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	1	0	22	24	0	36	0	27	63	0	0	0	24	24	0	9	1	23	33	144
05:15 PM	0	0	0	20	20	1	47	0	29	77	0	0	1	38	39	0	14	1	18	33	169
05:30 PM	0	0	0	30	30	0	43	0	32	75	0	0	0	23	23	1	12	4	24	41	169
05:45 PM	1	0	0	21	22	0	37	1	30	68	0	0	0	32	32	0	15	1	18	34	156
Total Volume	2	1	0	93	96	1	163	1	118	283	0	0	1	117	118	1	50	7	83	141	638
% App. Total	2.1	1	0	96.9		0.4	57.6	0.4	41.7		0	0	0.8	99.2		0.7	35.5	5	58.9		
PHF	.500	.250	.000	.775	.800	.250	.867	.250	.922	.919	.000	.000	.250	.770	.756	.250	.833	.438	.865	.860	.944



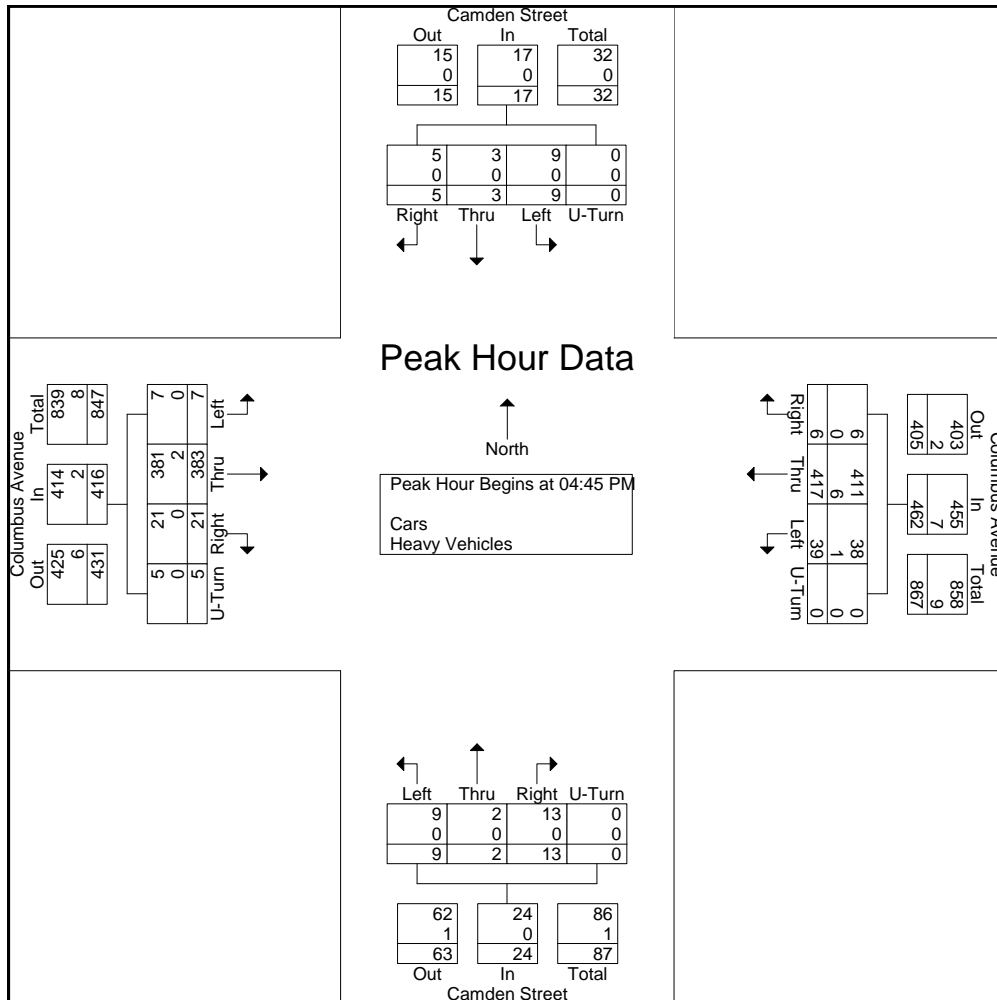
PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

File Name : 123026 II
Site Code : 2011046_
Start Date : 9/25/2012
Page No : 1

N/S: Camden Street
E/W: Columbus Avenue
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Camden Street From North					Columbus Avenue From East					Camden Street From South					Columbus Avenue From West					Int. Total
	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	Right	Thru	Left	U-Turn	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	2	1	3	0	6	0	108	8	0	116	3	0	1	0	4	8	99	4	3	114	240
05:00 PM	2	1	0	0	3	1	96	13	0	110	4	0	5	0	9	4	86	1	2	93	215
05:15 PM	0	1	3	0	4	1	102	7	0	110	3	1	2	0	6	4	107				
05:30 PM	1	0	3	0	4	4	111	11	0	126	3	1	1	0	5	5	91	0	0	96	231
Total Volume	5	3	9	0	17	6	417	39	0	462	13	2	9	0	24	21	383	7	5	416	919
% App. Total	29.4	17.6	52.9	0		1.3	90.3	8.4	0		54.2	8.3	37.5	0		5	92.1	1.7	1.2		
PHF	.625	.750	.750	.000	.708	.375	.939	.750	.000	.917	.813	.500	.450	.000	.667	.656	.895	.438	.417	.912	.957
Cars	5	3	9	0	17	6	411	38	0	455	13	2	9	0	24	21	381	7	5	414	910
% Cars	100	100	100	0	100	100	98.6	97.4	0	98.5	100	100	100	0	100	100	99.5	100	100	99.5	99.0
Heavy Vehicles	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	2	0	0	2	9
% Heavy Vehicles	0	0	0	0	0	0	1.4	2.6	0	1.5	0	0	0	0	0	0	0.5	0	0	0.5	1.0



Accurate Counts

978-664-2565

N/S Street : St Botolph Street
 E/W Street: Gainsborough Street
 City/State : Boston, MA
 Weather : Light Rain AM

File Name : 82050004
 Site Code : 82050004
 Start Date : 10/26/2011
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	St Botolph St From North			Gainsborough St From East			St Botolph St From South			Gainsborough St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	10	3	19	2	4	4	0	0	1	4	7	5	59
07:15	16	9	29	2	3	1	3	1	0	8	9	4	85
07:30	9	5	19	1	3	3	4	3	0	14	5	5	71
07:45	10	5	19	1	4	5	5	3	0	12	13	5	82
Total	45	22	86	6	14	13	12	7	1	38	34	19	297
08:00	11	7	23	0	3	0	4	1	2	10	8	4	73
08:15	9	8	22	2	5	4	4	1	0	10	6	3	74
08:30	7	5	15	1	2	2	4	3	1	12	8	3	63
08:45	16	5	22	1	3	5	3	1	0	8	13	5	82
Total	43	25	82	4	13	11	15	6	3	40	35	15	292
09:00	11	7	21	0	2	6	5	6	1	9	8	5	81
09:15	9	7	16	3	8	0	3	2	2	11	7	1	69
09:30	8	4	24	2	1	4	1	1	1	3	7	5	61
09:45	7	12	30	0	2	4	4	0	2	4	8	2	75
Total	35	30	91	5	13	14	13	9	6	27	30	13	286
10:00	8	9	25	2	5	3	7	3	2	9	8	10	91
10:15	2	4	28	0	6	2	1	5	4	9	9	3	73
10:30	6	5	21	5	6	5	1	1	1	11	6	4	72
10:45	3	11	24	2	3	1	5	4	2	13	5	0	73
Total	19	29	98	9	20	11	14	13	9	42	28	17	309
11:00	3	7	20	0	4	3	5	5	1	11	5	2	66
11:15	8	4	21	0	1	3	2	1	0	5	1	1	47
11:30	6	9	26	3	5	5	7	4	1	6	3	2	77
11:45	5	5	17	0	5	5	4	1	2	5	4	4	57
Total	22	25	84	3	15	16	18	11	4	27	13	9	247
12:00	3	3	28	0	5	3	1	4	0	10	3	4	64
12:15	2	6	22	0	2	6	2	3	0	7	4	6	60
12:30	6	5	12	1	9	2	2	5	0	16	1	4	63
12:45	5	4	13	1	10	2	4	2	0	7	4	5	57
Total	16	18	75	2	26	13	9	14	0	40	12	19	244
13:00	3	5	16	2	7	2	4	5	0	13	3	5	65
13:15	10	2	25	1	9	9	4	5	0	4	7	2	78
13:30	7	3	20	2	7	3	4	1	1	2	3	2	55
13:45	1	5	27	1	8	2	2	1	0	9	4	1	61
Total	21	15	88	6	31	16	14	12	1	28	17	10	259
14:00	5	6	24	2	6	6	6	9	1	9	6	5	85
14:15	6	6	20	1	13	6	3	2	2	9	3	1	72
14:30	4	5	25	2	22	14	3	9	2	18	2	3	109
14:45	3	6	21	0	11	5	2	5	0	19	6	4	82
Total	18	23	90	5	52	31	14	25	5	55	17	13	348
15:00	3	7	20	1	13	9	6	5	0	15	2	3	84
15:15	6	4	25	2	8	7	2	6	1	18	4	1	84
15:30	3	4	26	1	17	11	3	6	0	22	4	3	100
15:45	3	4	18	0	9	4	6	4	2	15	5	4	74
Total	15	19	89	4	47	31	17	21	3	70	15	11	342
16:00	1	5	14	0	11	4	6	3	3	21	5	6	79
16:15	5	7	33	1	12	7	1	4	1	12	1	4	88
16:30	5	7	17	0	14	16	7	1	2	13	6	2	90
16:45	6	6	15	1	15	10	1	5	1	16	7	2	85
Total	17	25	79	2	52	37	15	13	7	62	19	14	342
17:00	6	2	24	0	16	17	3	4	1	18	7	1	99
17:15	11	4	43	0	17	5	6	4	0	35	8	6	139

Accurate Counts

978-664-2565

N/S Street : St Botolph Street
 E/W Street: Gainsborough Street
 City/State : Boston, MA
 Weather : Light Rain AM

File Name : 82050004
 Site Code : 82050004
 Start Date : 10/26/2011
 Page No : 2

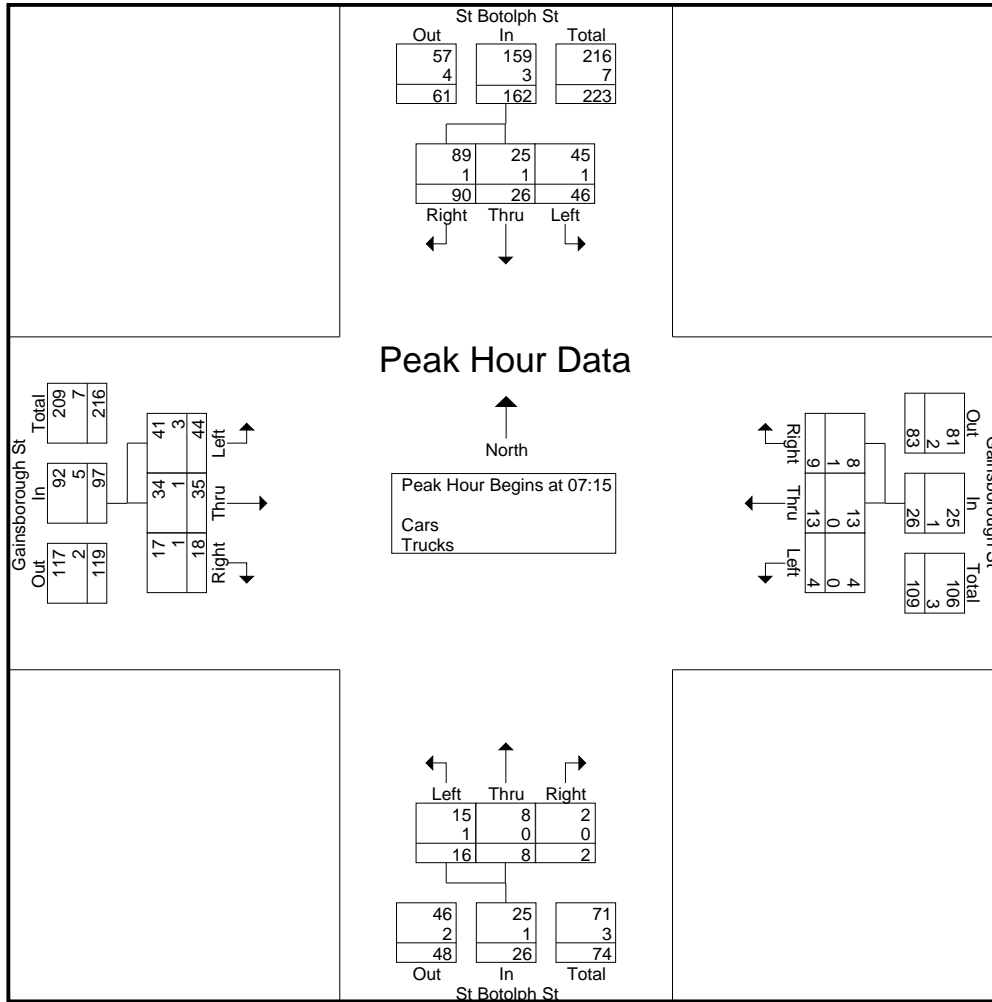
Groups Printed- Cars - Trucks

Start Time	St Botolph St From North			Gainsborough St From East			St Botolph St From South			Gainsborough St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17:30	15	8	26	0	25	11	5	4	8	23	12	5	142
17:45	4	5	27	1	7	3	8	5	0	19	12	5	96
Total	36	19	120	1	65	36	22	17	9	95	39	17	476
Grand Total	287	250	982	47	348	229	163	148	48	524	259	157	3442
Apprch %	18.9	16.5	64.6	7.5	55.8	36.7	45.4	41.2	13.4	55.7	27.6	16.7	
Total %	8.3	7.3	28.5	1.4	10.1	6.7	4.7	4.3	1.4	15.2	7.5	4.6	
Cars	283	245	964	47	343	225	160	147	48	509	255	155	3381
% Cars	98.6	98	98.2	100	98.6	98.3	98.2	99.3	100	97.1	98.5	98.7	98.2
Trucks	4	5	18	0	5	4	3	1	0	15	4	2	61
% Trucks	1.4	2	1.8	0	1.4	1.7	1.8	0.7	0	2.9	1.5	1.3	1.8

Start Time	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	16	9	29	54	2	3	1	6	3	1	0	4	8	9	4	21	85
07:30	9	5	19	33	1	3	3	7	4	3	0	7	14	5	5	24	71
07:45	10	5	19	34	1	4	5	10	5	3	0	8	12	13	5	30	82
08:00	11	7	23	41	0	3	0	3	4	1	2	7	10	8	4	22	73
Total Volume	46	26	90	162	4	13	9	26	16	8	2	26	44	35	18	97	311
% App. Total	28.4	16	55.6		15.4	50	34.6		61.5	30.8	7.7		45.4	36.1	18.6		
PHF	.719	.722	.776	.750	.500	.813	.450	.650	.800	.667	.250	.813	.786	.673	.900	.808	.915
Cars	45	25	89	159	4	13	8	25	15	8	2	25	41	34	17	92	301
% Cars	97.8	96.2	98.9	98.1	100	100	88.9	96.2	93.8	100	100	96.2	93.2	97.1	94.4	94.8	96.8
Trucks	1	1	1	3	0	0	1	1	1	0	0	1	3	1	1	5	10
% Trucks	2.2	3.8	1.1	1.9	0	0	11.1	3.8	6.3	0	0	3.8	6.8	2.9	5.6	5.2	3.2

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 3



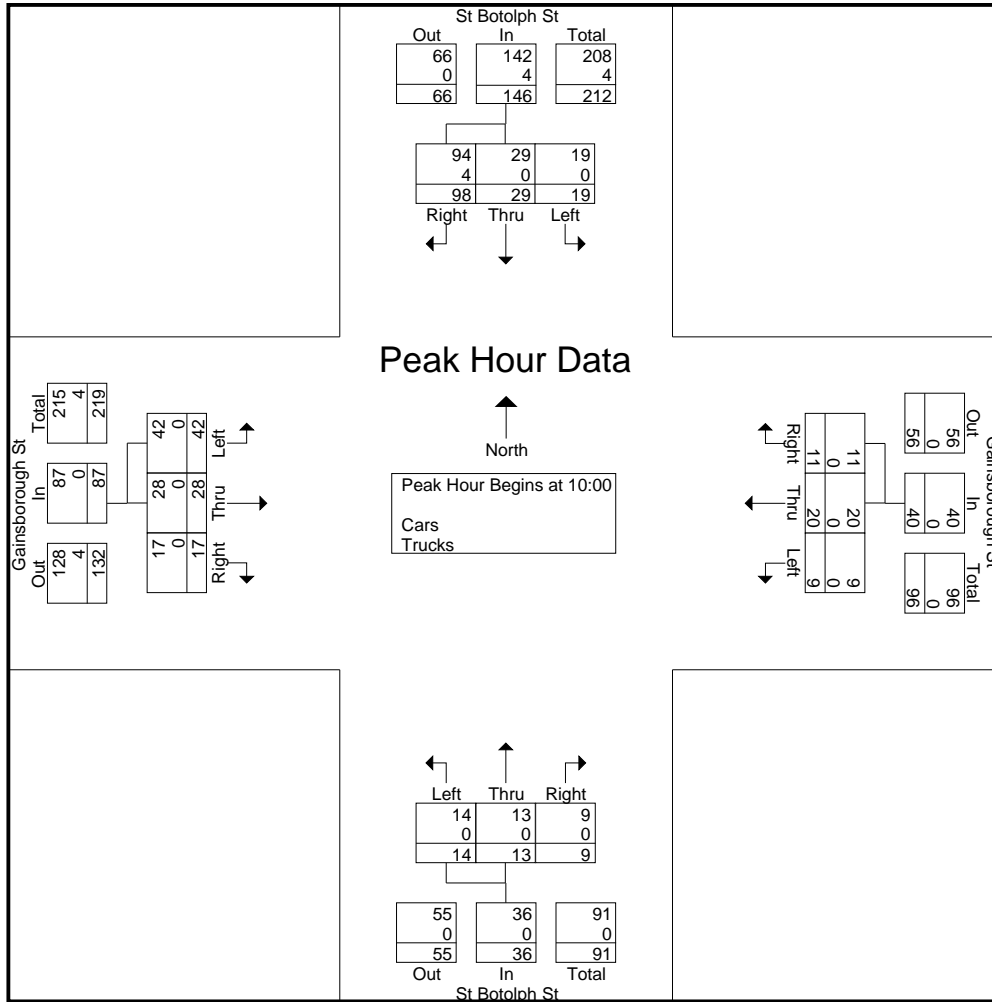
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15				08:45				08:30				07:15			
+0 mins.	16	9	29	54	1	3	5	9	4	3	1	8	8	9	4	21
+15 mins.	9	5	19	33	0	2	6	8	3	1	0	4	14	5	5	24
+30 mins.	10	5	19	34	3	8	0	11	5	6	1	12	12	13	5	30
+45 mins.	11	7	23	41	2	1	4	7	3	2	2	7	10	8	4	22
Total Volume	46	26	90	162	6	14	15	35	15	12	4	31	44	35	18	97
% App. Total	28.4	16	55.6		17.1	40	42.9		48.4	38.7	12.9		45.4	36.1	18.6	
PHF	.719	.722	.776	.750	.500	.438	.625	.795	.750	.500	.500	.646	.786	.673	.900	.808
Cars	45	25	89	159	6	12	15	33	14	12	4	30	41	34	17	92
% Cars	97.8	96.2	98.9	98.1	100	85.7	100	94.3	93.3	100	100	96.8	93.2	97.1	94.4	94.8
Trucks	1	1	1	3	0	2	0	2	1	0	0	1	3	1	1	5
% Trucks	2.2	3.8	1.1	1.9	0	14.3	0	5.7	6.7	0	0	3.2	6.8	2.9	5.6	5.2

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 5

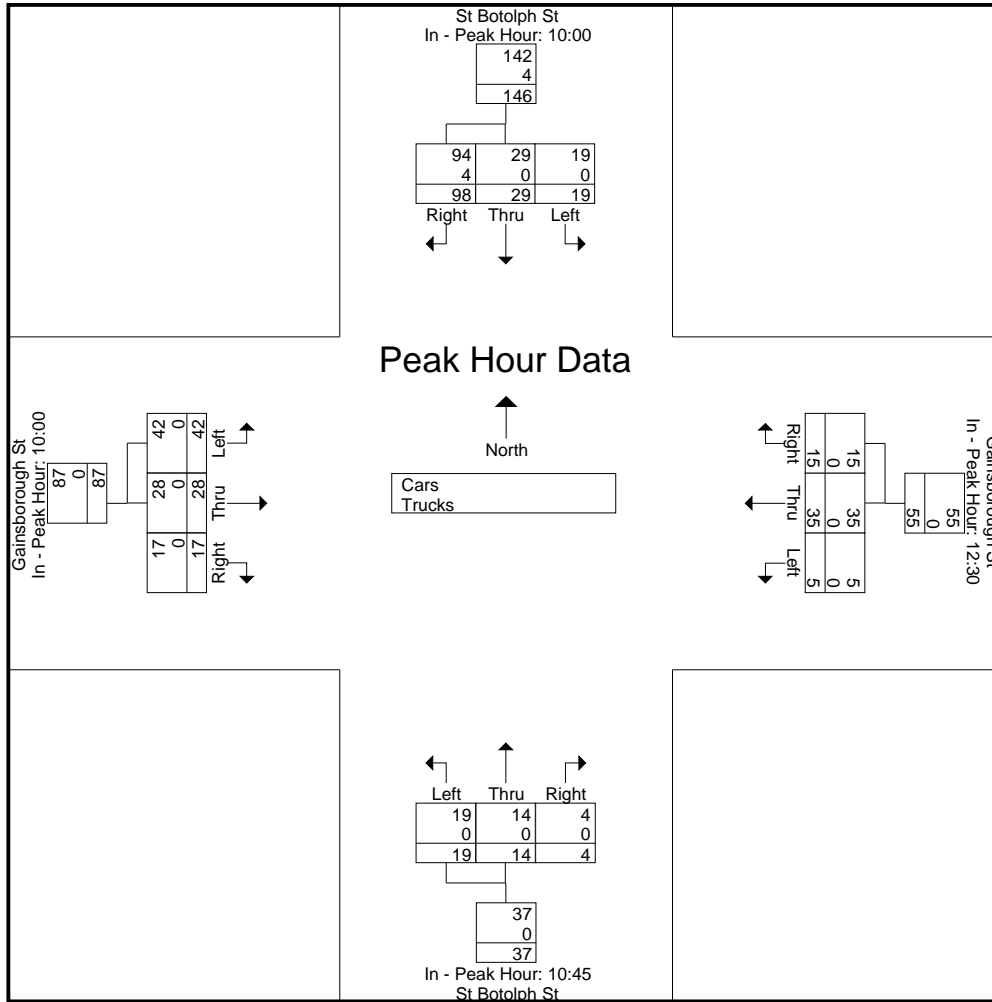


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	10:00				12:30				10:45				10:00			
+0 mins.	8	9	25	42	1	9	2	12	5	4	2	11	9	8	10	27
+15 mins.	2	4	28	34	1	10	2	13	5	5	1	11	9	9	3	21
+30 mins.	6	5	21	32	2	7	2	11	2	1	0	3	11	6	4	21
+45 mins.	3	11	24	38	1	9	9	19	7	4	1	12	13	5	0	18
Total Volume	19	29	98	146	5	35	15	55	19	14	4	37	42	28	17	87
% App. Total	13	19.9	67.1		9.1	63.6	27.3		51.4	37.8	10.8		48.3	32.2	19.5	
PHF	.594	.659	.875	.869	.625	.875	.417	.724	.679	.700	.500	.771	.808	.778	.425	.806
Cars	19	29	94	142	5	35	15	55	19	14	4	37	42	28	17	87
% Cars	100	100	95.9	97.3	100	100	100	100	100	100	100	100	100	100	100	100
Trucks	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	4.1	2.7	0	0	0	0	0	0	0	0	0	0	0	0

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

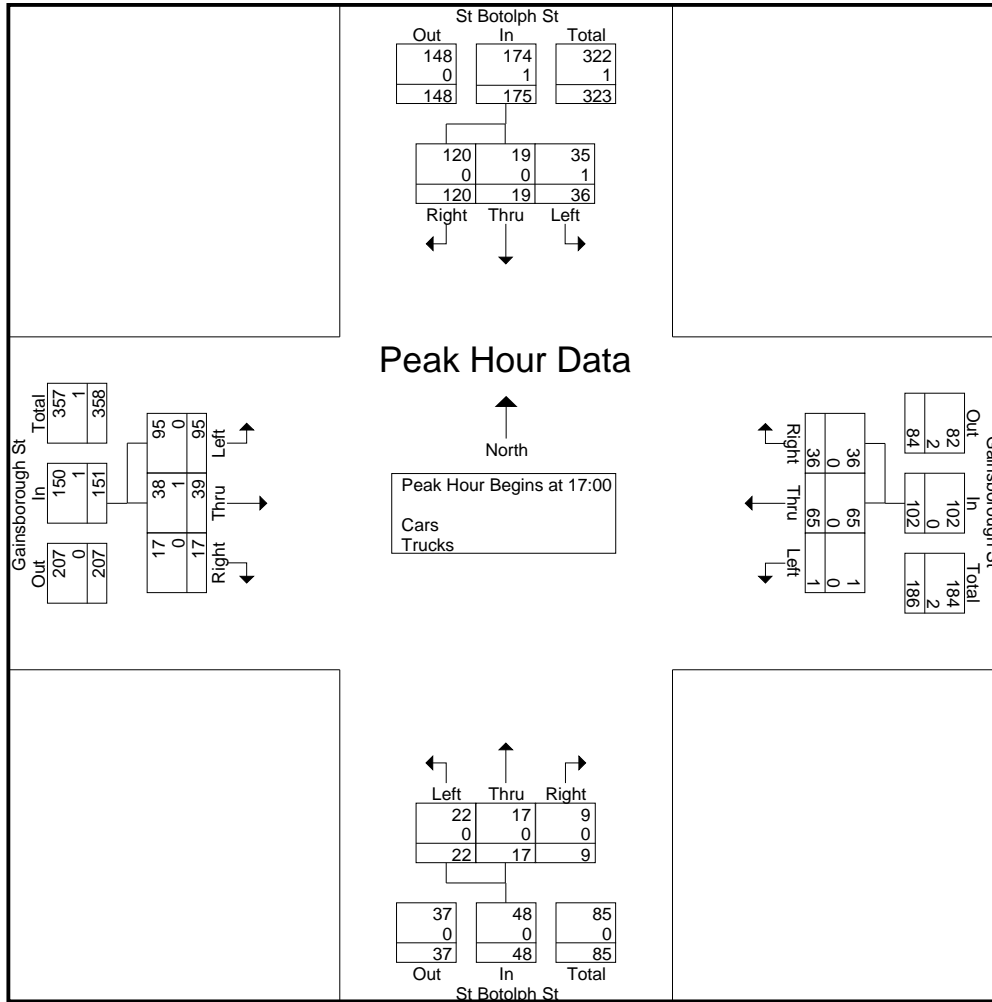


Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	6	2	24	32	0	16	17	33	3	4	1	8	18	7	1	26	99
17:15	11	4	43	58	0	17	5	22	6	4	0	10	35	8	6	49	139
17:30	15	8	26	49	0	25	11	36	5	4	8	17	23	12	5	40	142
17:45	4	5	27	36	1	7	3	11	8	5	0	13	19	12	5	36	96
Total Volume	36	19	120	175	1	65	36	102	22	17	9	48	95	39	17	151	476
% App. Total	20.6	10.9	68.6		1	63.7	35.3		45.8	35.4	18.8		62.9	25.8	11.3		
PHF	.600	.594	.698	.754	.250	.650	.529	.708	.688	.850	.281	.706	.679	.813	.708	.770	.838
Cars	35	19	120	174	1	65	36	102	22	17	9	48	95	38	17	150	474
% Cars	97.2	100	100	99.4	100	100	100	100	100	100	100	100	100	97.4	100	99.3	99.6
Trucks	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
% Trucks	2.8	0	0	0.6	0	0	0	0	0	0	0	0	0	2.6	0	0.7	0.4

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

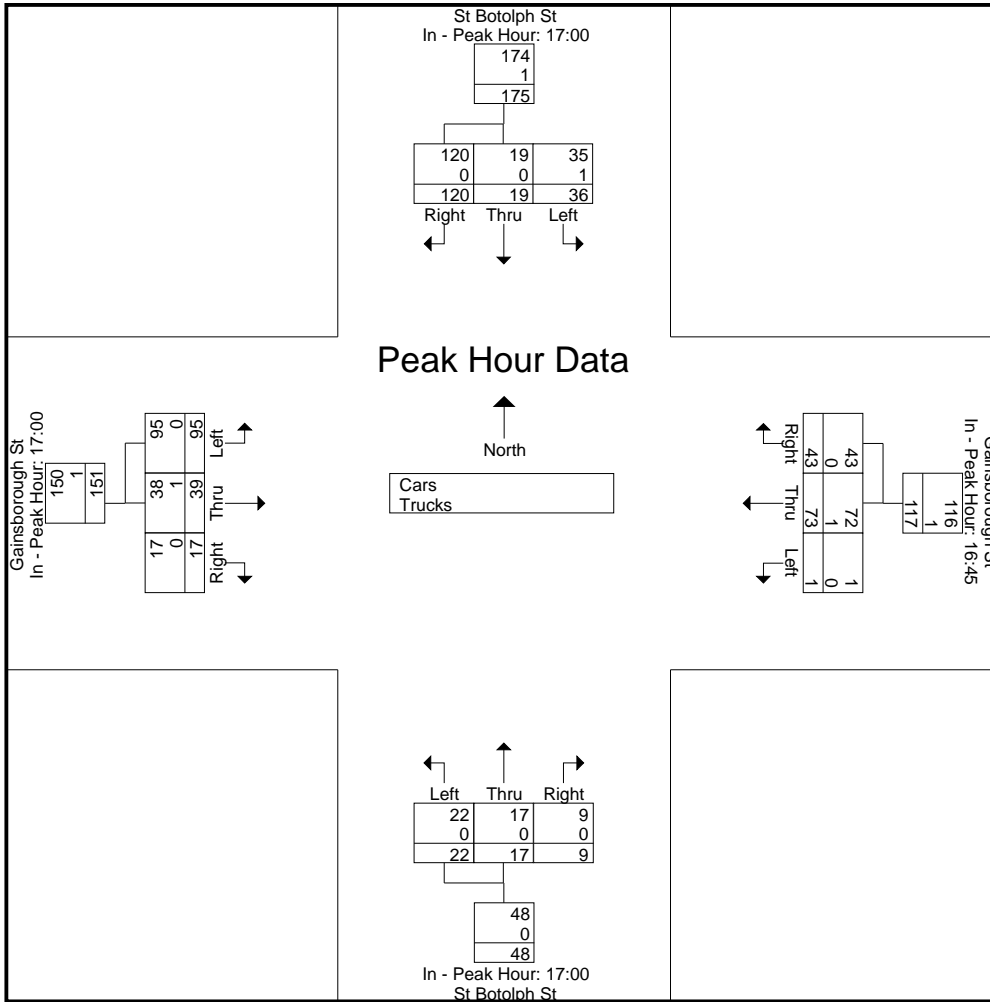
File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 7



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	17:00				16:45				17:00				17:00			
+0 mins.	6	2	24	32	1	15	10	26	3	4	1	8	18	7	1	26
+15 mins.	11	4	43	58	0	16	17	33	6	4	0	10	35	8	6	49
+30 mins.	15	8	26	49	0	17	5	22	5	4	8	17	23	12	5	40
+45 mins.	4	5	27	36	0	25	11	36	8	5	0	13	19	12	5	36
Total Volume	36	19	120	175	1	73	43	117	22	17	9	48	95	39	17	151
% App. Total	20.6	10.9	68.6		0.9	62.4	36.8		45.8	35.4	18.8		62.9	25.8	11.3	
PHF	.600	.594	.698	.754	.250	.730	.632	.813	.688	.850	.281	.706	.679	.813	.708	.770
Cars	35	19	120	174	1	72	43	116	22	17	9	48	95	38	17	150
% Cars	97.2	100	100	99.4	100	98.6	100	99.1	100	100	100	100	100	97.4	100	99.3
Trucks	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1
% Trucks	2.8	0	0	0.6	0	1.4	0	0.9	0	0	0	0	0	2.6	0	0.7



Accurate Counts
978-664-2565

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 1

Groups Printed- Cars

Start Time	St Botolph St From North			Gainsborough St From East			St Botolph St From South			Gainsborough St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
07:00	10	3	17	2	4	4	0	0	1	4	7	5	57
07:15	15	9	28	2	3	1	2	1	0	8	8	4	81
07:30	9	5	19	1	3	3	4	3	0	14	5	5	71
07:45	10	5	19	1	4	4	5	3	0	10	13	5	79
Total	44	22	83	6	14	12	11	7	1	36	33	19	288
08:00	11	6	23	0	3	0	4	1	2	9	8	3	70
08:15	9	6	20	2	5	4	4	1	0	10	6	3	70
08:30	7	5	14	1	1	2	3	3	1	12	8	3	60
08:45	16	5	22	1	3	5	3	1	0	8	13	5	82
Total	43	22	79	4	12	11	14	6	3	39	35	14	282
09:00	11	7	20	0	2	6	5	6	1	9	8	5	80
09:15	9	7	16	3	6	0	3	2	2	11	6	1	66
09:30	7	3	23	2	1	4	1	1	1	3	7	5	58
09:45	7	12	28	0	2	4	4	0	2	4	8	2	73
Total	34	29	87	5	11	14	13	9	6	27	29	13	277
10:00	8	9	24	2	5	3	7	3	2	9	8	10	90
10:15	2	4	28	0	6	2	1	5	4	9	9	3	73
10:30	6	5	19	5	6	5	1	1	1	11	6	4	70
10:45	3	11	23	2	3	1	5	4	2	13	5	0	72
Total	19	29	94	9	20	11	14	13	9	42	28	17	305
11:00	2	7	20	0	4	2	5	5	1	10	5	2	63
11:15	8	4	21	0	1	3	2	1	0	5	1	1	47
11:30	6	9	26	3	5	5	7	4	1	5	3	2	76
11:45	5	5	17	0	5	5	4	1	2	5	4	4	57
Total	21	25	84	3	15	15	18	11	4	25	13	9	243
12:00	3	3	26	0	5	3	1	3	0	10	3	4	61
12:15	2	6	22	0	2	6	2	3	0	5	4	6	58
12:30	6	5	12	1	9	2	2	5	0	15	1	4	62
12:45	5	4	13	1	10	2	4	2	0	6	4	4	55
Total	16	18	73	2	26	13	9	13	0	36	12	18	236
13:00	3	5	16	2	7	2	4	5	0	13	3	5	65
13:15	10	2	23	1	9	9	4	5	0	4	7	2	76
13:30	7	3	20	2	7	2	4	1	1	2	3	2	54
13:45	1	5	27	1	8	2	2	1	0	9	4	1	61
Total	21	15	86	6	31	15	14	12	1	28	17	10	256
14:00	5	6	24	2	5	6	6	9	1	9	6	5	84
14:15	6	6	20	1	13	6	3	2	2	9	3	1	72
14:30	4	5	25	2	22	14	3	9	2	18	2	3	109
14:45	3	6	21	0	11	5	2	5	0	19	6	4	82
Total	18	23	90	5	51	31	14	25	5	55	17	13	347
15:00	3	7	20	1	13	8	6	5	0	15	2	3	83
15:15	6	4	25	2	8	7	2	6	1	17	4	1	83
15:30	3	4	26	1	17	11	3	6	0	19	4	3	97
15:45	3	4	18	0	9	4	6	4	2	13	5	4	72
Total	15	19	89	4	47	30	17	21	3	64	15	11	335
16:00	1	4	14	0	11	4	5	3	3	21	4	6	76
16:15	5	7	33	1	12	7	1	4	1	12	1	4	88
16:30	5	7	17	0	14	16	7	1	2	13	6	2	90
16:45	6	6	15	1	14	10	1	5	1	16	7	2	84
Total	17	24	79	2	51	37	14	13	7	62	18	14	338
17:00	6	2	24	0	16	17	3	4	1	18	7	1	99
17:15	11	4	43	0	17	5	6	4	0	35	8	6	139

Accurate Counts
978-664-2565

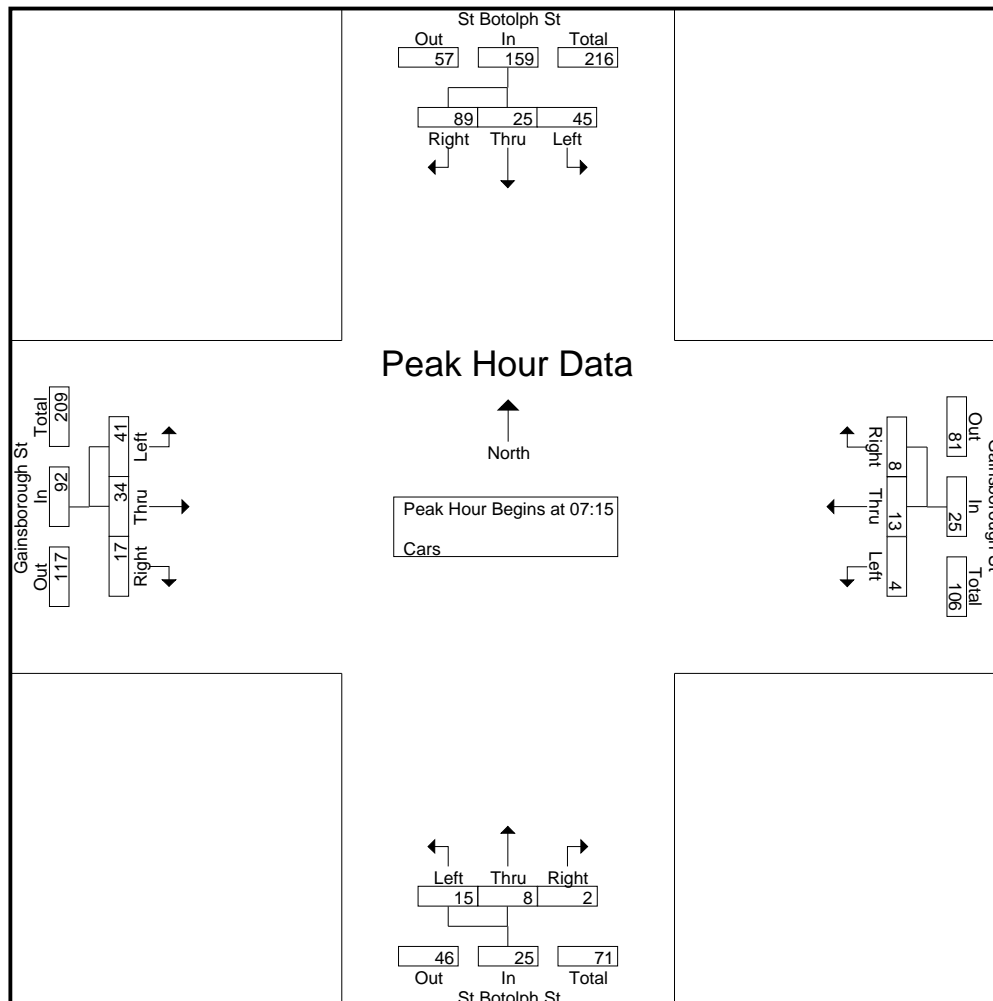
N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 2

Groups Printed- Cars

Start Time	St Botolph St From North			Gainsborough St From East			St Botolph St From South			Gainsborough St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17:30	14	8	26	0	25	11	5	4	8	23	12	5	141
17:45	4	5	27	1	7	3	8	5	0	19	11	5	95
Total	35	19	120	1	65	36	22	17	9	95	38	17	474
Grand Total	283	245	964	47	343	225	160	147	48	509	255	155	3381
Apprch %	19	16.4	64.6	7.6	55.8	36.6	45.1	41.4	13.5	55.4	27.7	16.9	
Total %	8.4	7.2	28.5	1.4	10.1	6.7	4.7	4.3	1.4	15.1	7.5	4.6	

Start Time	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	15	9	28	52	2	3	1	6	2	1	0	3	8	8	4	20	81
07:30	9	5	19	33	1	3	3	7	4	3	0	7	14	5	5	24	71
07:45	10	5	19	34	1	4	4	9	5	3	0	8	10	13	5	28	79
08:00	11	6	23	40	0	3	0	3	4	1	2	7	9	8	3	20	70
Total Volume	45	25	89	159	4	13	8	25	15	8	2	25	41	34	17	92	301
% App. Total	28.3	15.7	56		16	52	32		60	32	8		44.6	37	18.5		
PHF	.750	.694	.795	.764	.500	.813	.500	.694	.750	.667	.250	.781	.732	.654	.850	.821	.929

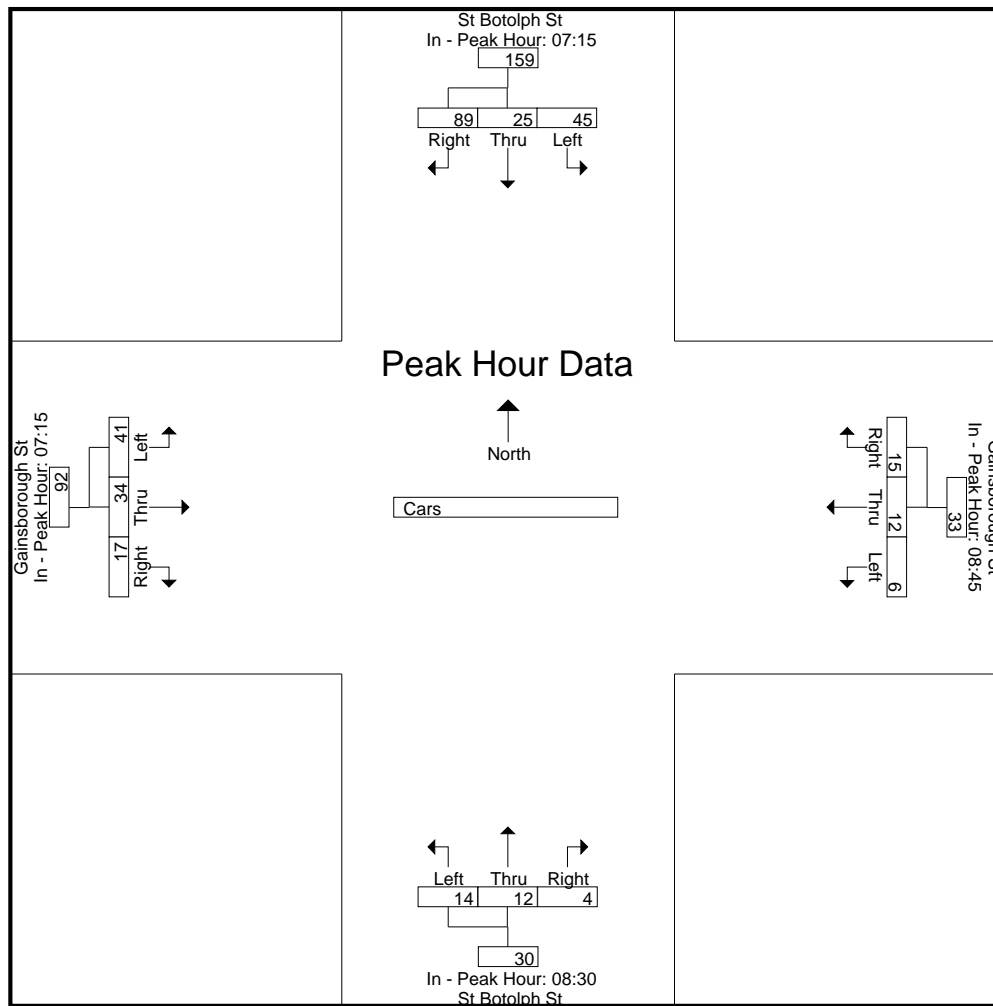


Accurate Counts
978-664-2565

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 3

Start Time	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15				08:45				08:30				07:15				
+0 mins.	15	9	28	52	1	3	5	9	3	3	1	7	8	8	4	20	
+15 mins.	9	5	19	33	0	2	6	8	3	1	0	4	14	5	5	24	
+30 mins.	10	5	19	34	3	6	0	9	5	6	1	12	10	13	5	28	
+45 mins.	11	6	23	40	2	1	4	7	3	2	2	7	9	8	3	20	
Total Volume	45	25	89	159	6	12	15	33	14	12	4	30	41	34	17	92	
% App. Total	28.3	15.7	56		18.2	36.4	45.5		46.7	40	13.3		44.6	37	18.5		
PHF	.750	.694	.795	.764	.500	.500	.625	.917	.700	.500	.500	.625	.732	.654	.850	.821	

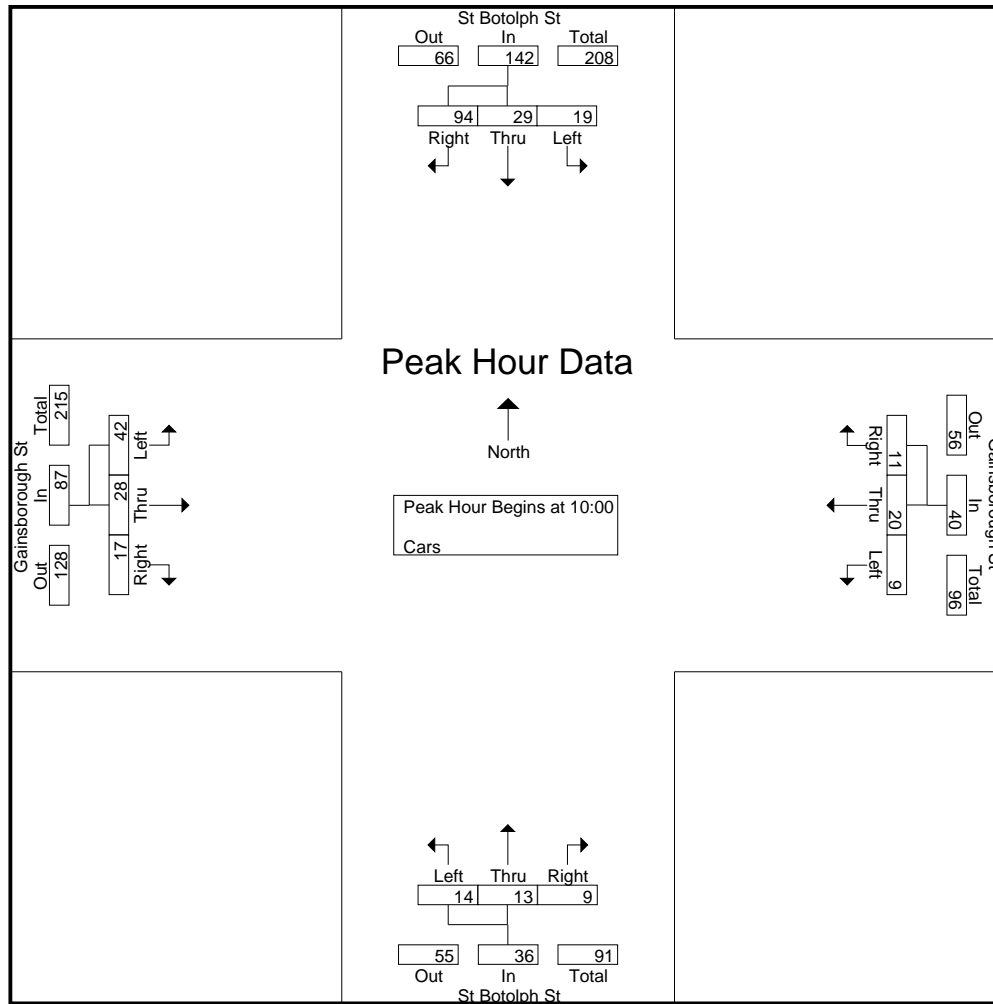


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 10:00

10:00	8	9	24	41	2	5	3	10	7	3	2	12	9	8	10	27	90
10:15	2	4	28	34	0	6	2	8	1	5	4	10	9	9	3	21	73
10:30	6	5	19	30	5	6	5	16	1	1	1	3	11	6	4	21	70
10:45	3	11	23	37	2	3	1	6	5	4	2	11	13	5	0	18	72
Total Volume	19	29	94	142	9	20	11	40	14	13	9	36	42	28	17	87	305
% App. Total	13.4	20.4	66.2		22.5	50	27.5		38.9	36.1	25		48.3	32.2	19.5		
PHF	.594	.659	.839	.866	.450	.833	.550	.625	.500	.650	.563	.750	.808	.778	.425	.806	.847

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 4



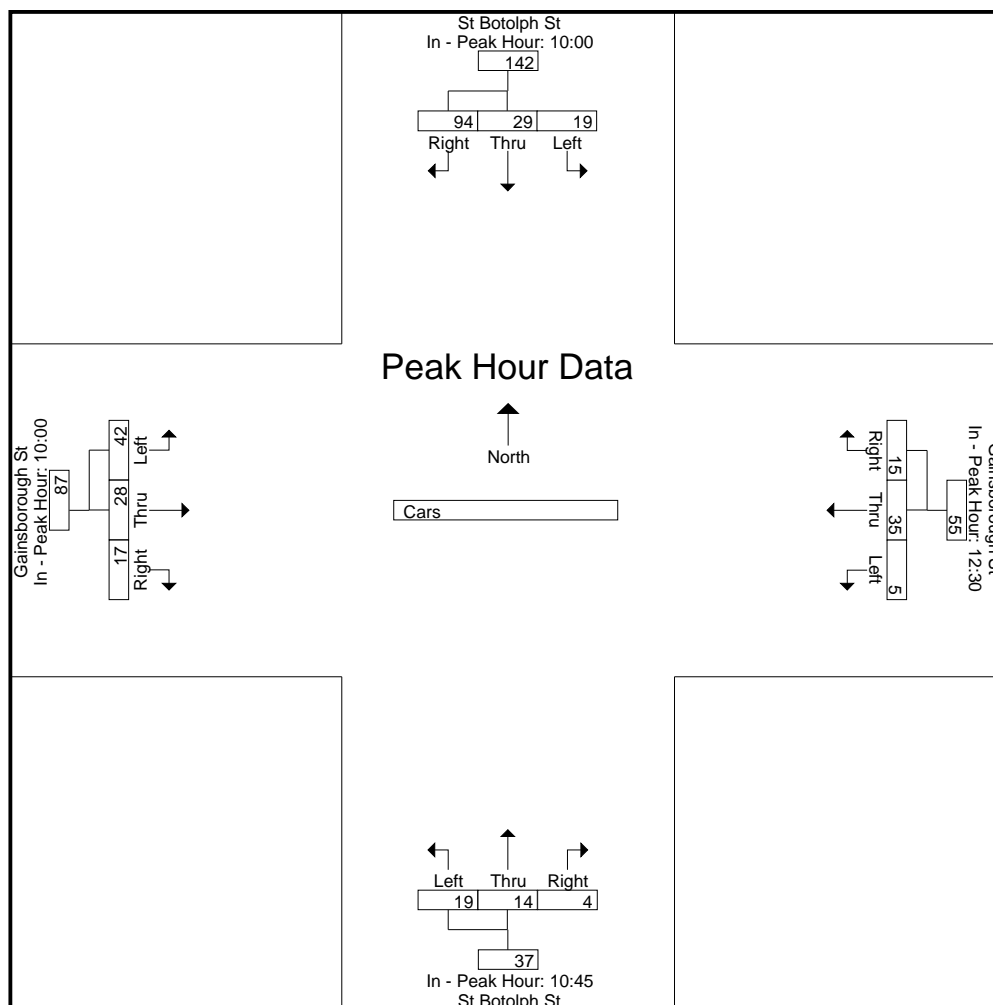
Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	10:00				12:30				10:45				10:00			
+0 mins.	8	9	24	41	1	9	2	12	5	4	2	11	9	8	10	27
+15 mins.	2	4	28	34	1	10	2	13	5	5	1	11	9	9	3	21
+30 mins.	6	5	19	30	2	7	2	11	2	1	0	3	11	6	4	21
+45 mins.	3	11	23	37	1	9	9	19	7	4	1	12	13	5	0	18
Total Volume	19	29	94	142	5	35	15	55	19	14	4	37	42	28	17	87
% App. Total	13.4	20.4	66.2		9.1	63.6	27.3		51.4	37.8	10.8		48.3	32.2	19.5	
PHF	.594	.659	.839	.866	.625	.875	.417	.724	.679	.700	.500	.771	.808	.778	.425	.806

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 5

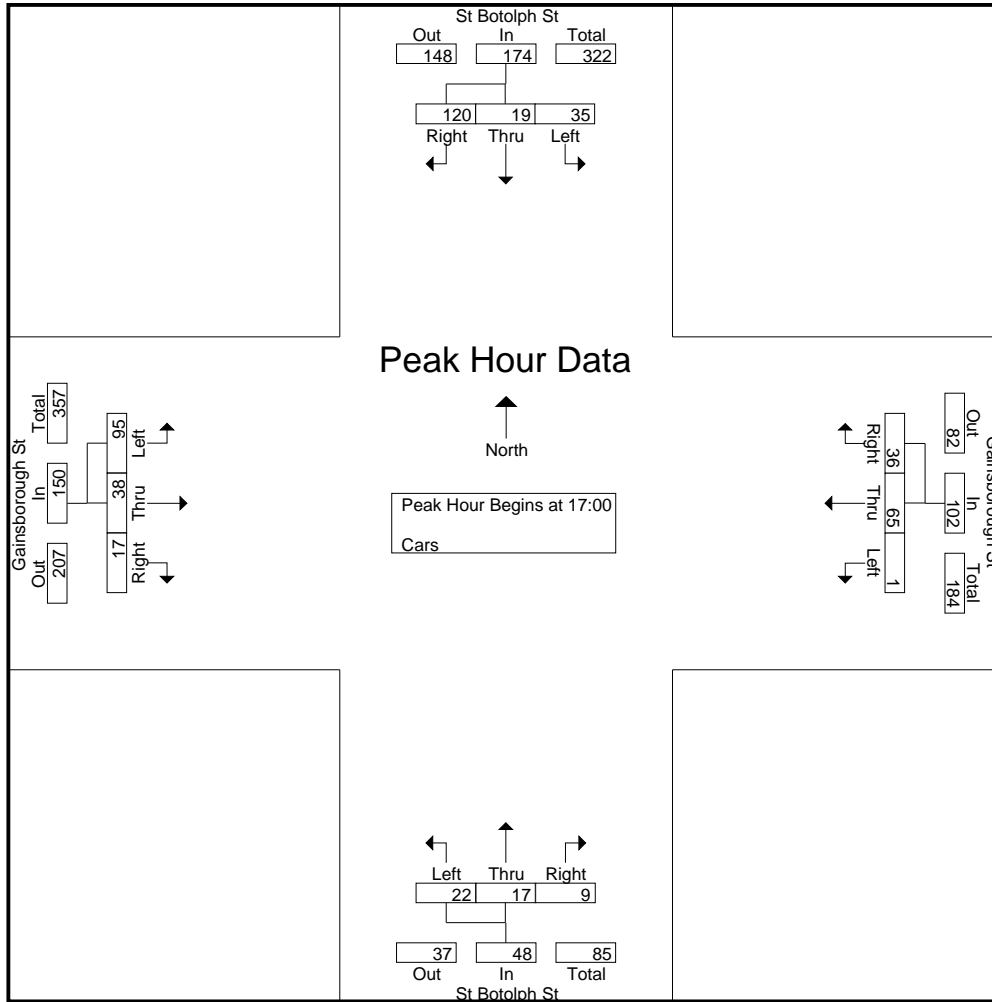


Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	6	2	24	32	0	16	17	33	3	4	1	8	18	7	1	26	99
17:15	11	4	43	58	0	17	5	22	6	4	0	10	35	8	6	49	139
17:30	14	8	26	48	0	25	11	36	5	4	8	17	23	12	5	40	141
17:45	4	5	27	36	1	7	3	11	8	5	0	13	19	11	5	35	95
Total Volume	35	19	120	174	1	65	36	102	22	17	9	48	95	38	17	150	474
% App. Total	20.1	10.9	69		1	63.7	35.3		45.8	35.4	18.8		63.3	25.3	11.3		
PHF	.625	.594	.698	.750	.250	.650	.529	.708	.688	.850	.281	.706	.679	.792	.708	.765	.840

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 6



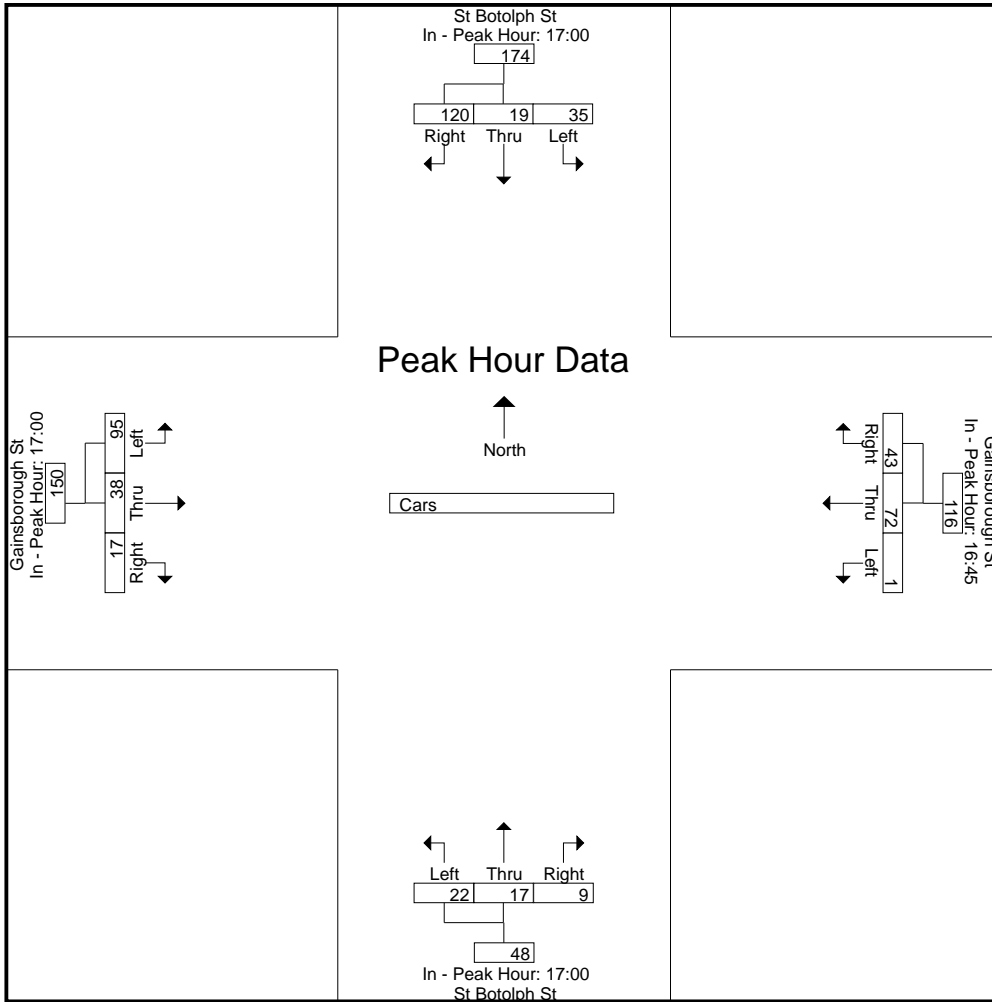
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	17:00				16:45				17:00				17:00			
+0 mins.	6	2	24	32	1	14	10	25	3	4	1	8	18	7	1	26
+15 mins.	11	4	43	58	0	16	17	33	6	4	0	10	35	8	6	49
+30 mins.	14	8	26	48	0	17	5	22	5	4	8	17	23	12	5	40
+45 mins.	4	5	27	36	0	25	11	36	8	5	0	13	19	11	5	35
Total Volume	35	19	120	174	1	72	43	116	22	17	9	48	95	38	17	150
% App. Total	20.1	10.9	69		0.9	62.1	37.1		45.8	35.4	18.8		63.3	25.3	11.3	
PHF	.625	.594	.698	.750	.250	.720	.632	.806	.688	.850	.281	.706	.679	.792	.708	.765

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 7



Accurate Counts
978-664-2565

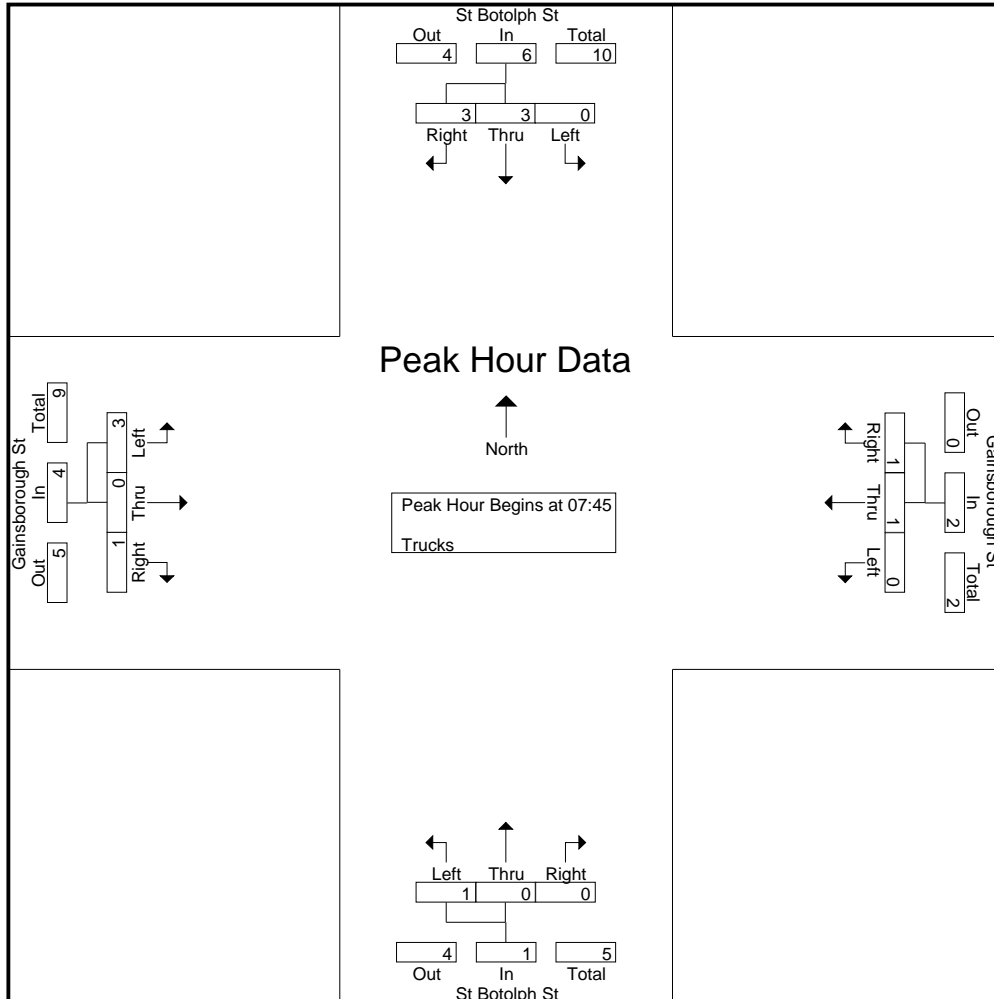
N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 2

Groups Printed- Trucks

Start Time	St Botolph St From North			Gainsborough St From East			St Botolph St From South			Gainsborough St From West			Int. Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
17:30	1	0	0	0	0	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	1	0	0	0	0	0	0	0	0	0	1	0	2
Grand Total	4	5	18	0	5	4	3	1	0	15	4	2	61
Apprch %	14.8	18.5	66.7	0	55.6	44.4	75	25	0	71.4	19	9.5	
Total %	6.6	8.2	29.5	0	8.2	6.6	4.9	1.6	0	24.6	6.6	3.3	

Start Time	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45																	
07:45	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	2	3
08:00	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	2	3
08:15	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	4
08:30	0	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	3
Total Volume	0	3	3	6	0	1	1	2	1	0	0	1	3	0	1	4	13
% App. Total	0	50	50		0	50	50		100	0	0		75	0	25		
PHF	.000	.375	.375	.375	.000	.250	.250	.500	.250	.000	.000	.250	.375	.000	.250	.500	.813

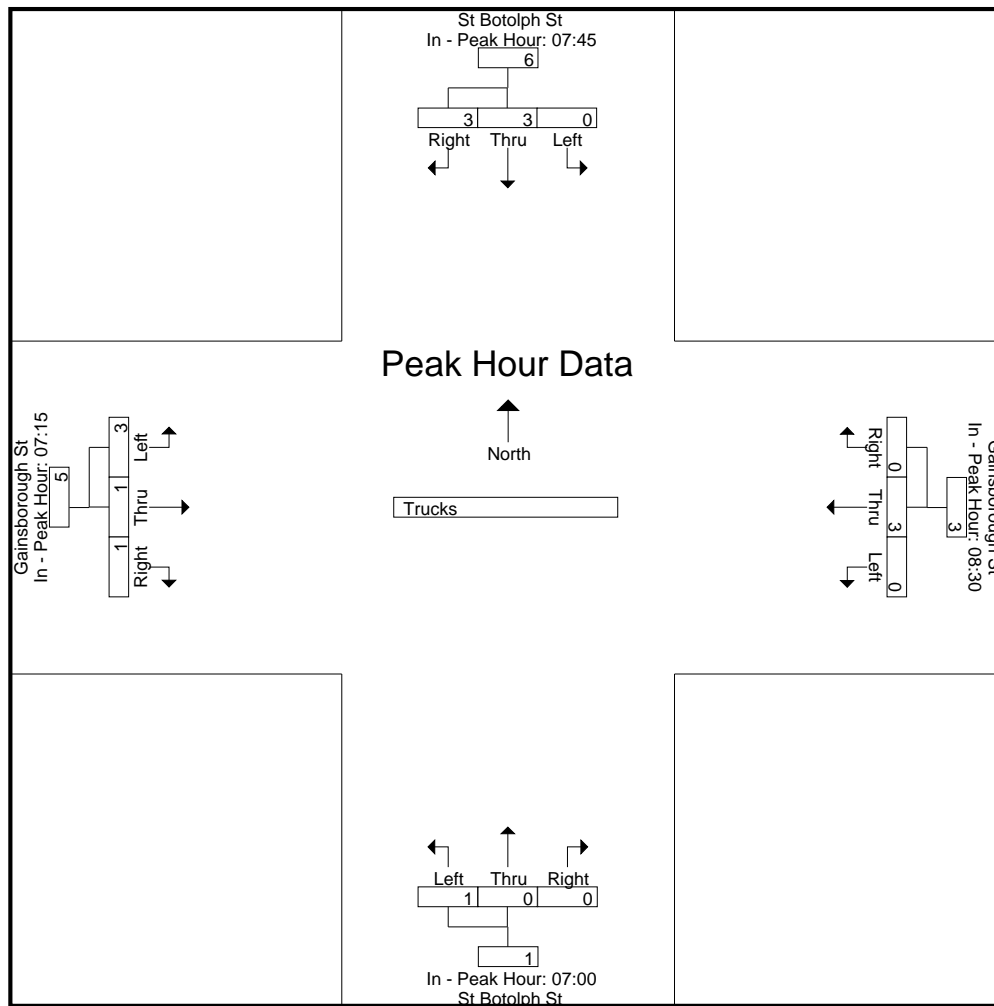


Accurate Counts
978-664-2565

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 3

Start Time	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45				08:30				07:00				07:15				
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	
+15 mins.	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	
+30 mins.	0	2	2	4	0	0	0	0	0	0	0	0	2	0	0	2	
+45 mins.	0	0	1	1	0	2	0	2	0	0	0	0	1	0	1	2	
Total Volume	0	3	3	6	0	3	0	3	1	0	0	1	3	1	1	5	
% App. Total	0	50	50		0	100	0		100	0	0		60	20	20		
PHF	.000	.375	.375	.375	.000	.375	.000	.375	.250	.000	.000	.250	.375	.250	.250	.625	

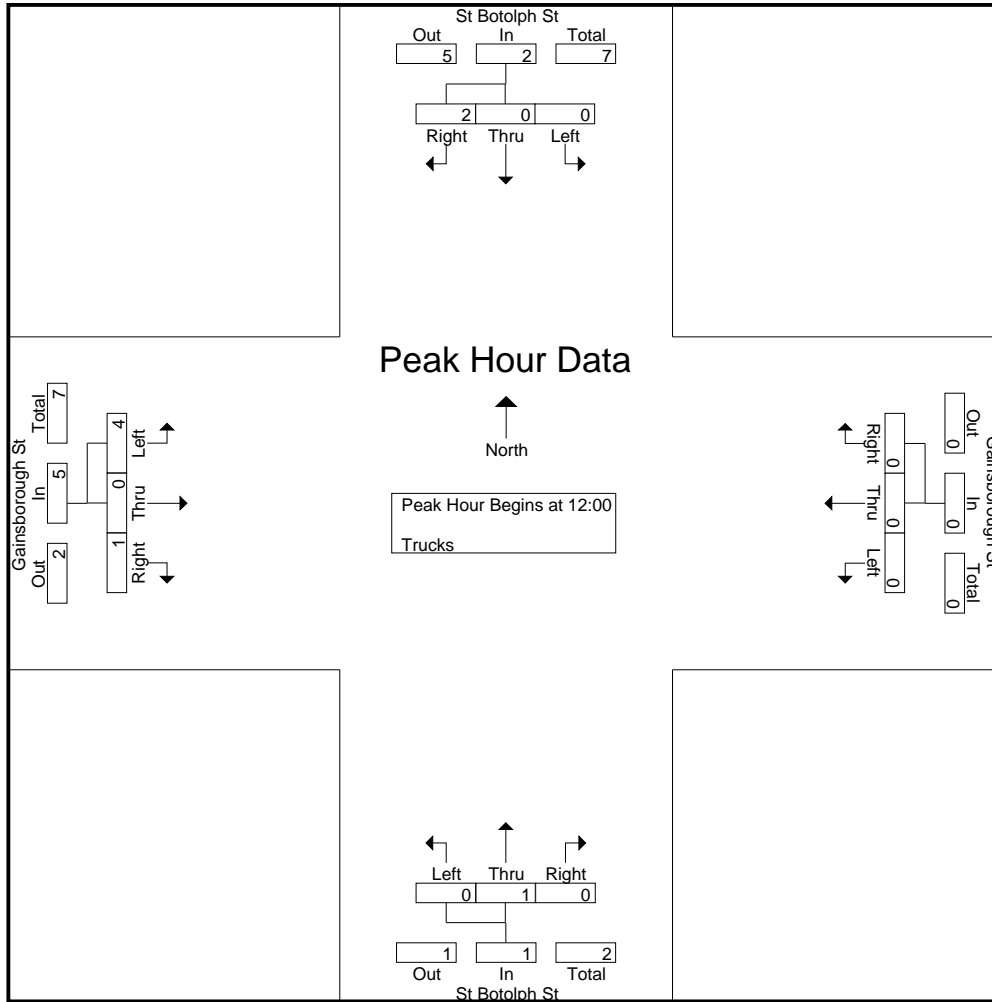


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 12:00

12:00	0	0	2	2	0	0	0	0	0	1	0	1	0	0	0	0	3
12:15	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
12:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
12:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	2
Total Volume	0	0	2	2	0	0	0	0	0	1	0	1	4	0	1	5	8
% App. Total	0	0	100		0	0	0		0	100	0		80	0	20		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250	.500	.000	.250	.625	.667

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 4



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

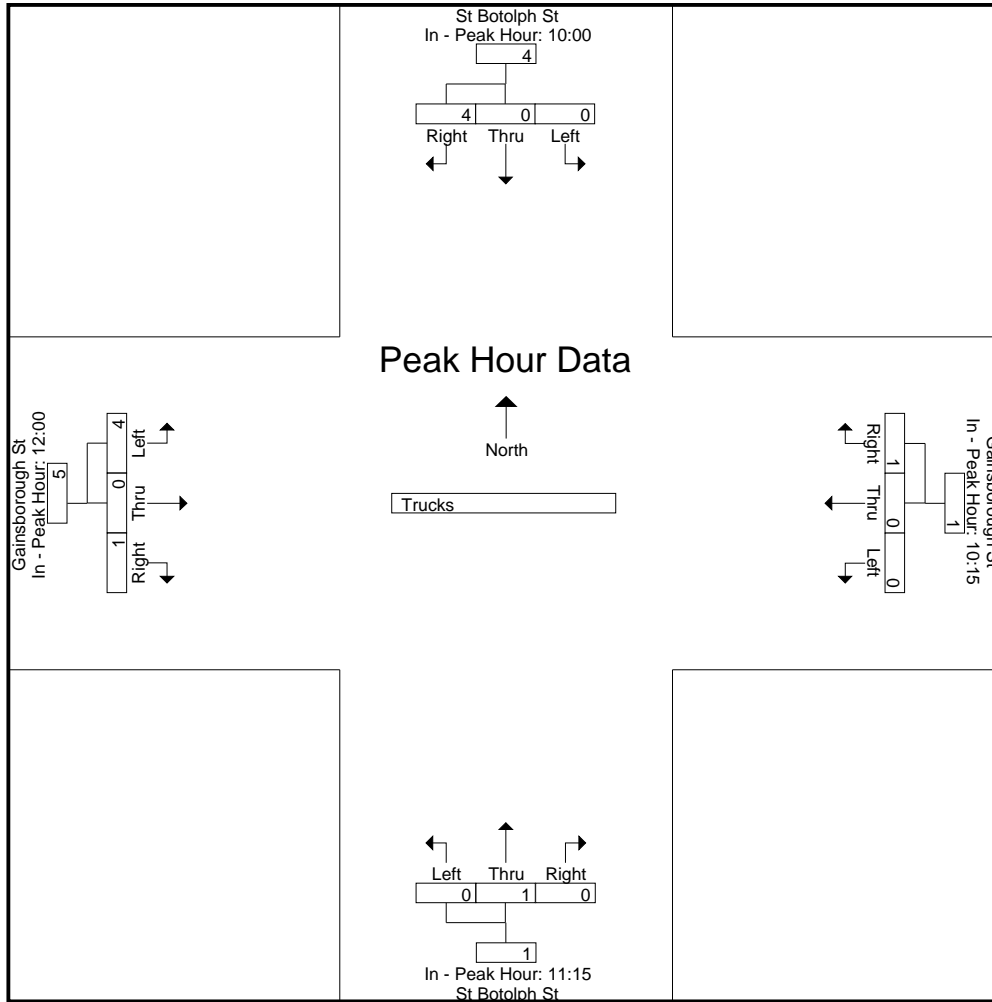
Peak Hour for Each Approach Begins at:

	10:00				10:15				11:15				12:00			
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
+30 mins.	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	1
+45 mins.	0	0	1	1	0	0	1	1	0	1	0	1	1	0	1	2
Total Volume	0	0	4	4	0	0	1	1	0	1	0	1	4	0	1	5
% App. Total	0	0	100		0	0	100		0	100	0		80	0	20	
PHF	.000	.000	.500	.500	.000	.000	.250	.250	.000	.250	.000	.250	.500	.000	.250	.625

Accurate Counts
978-664-2565

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 5

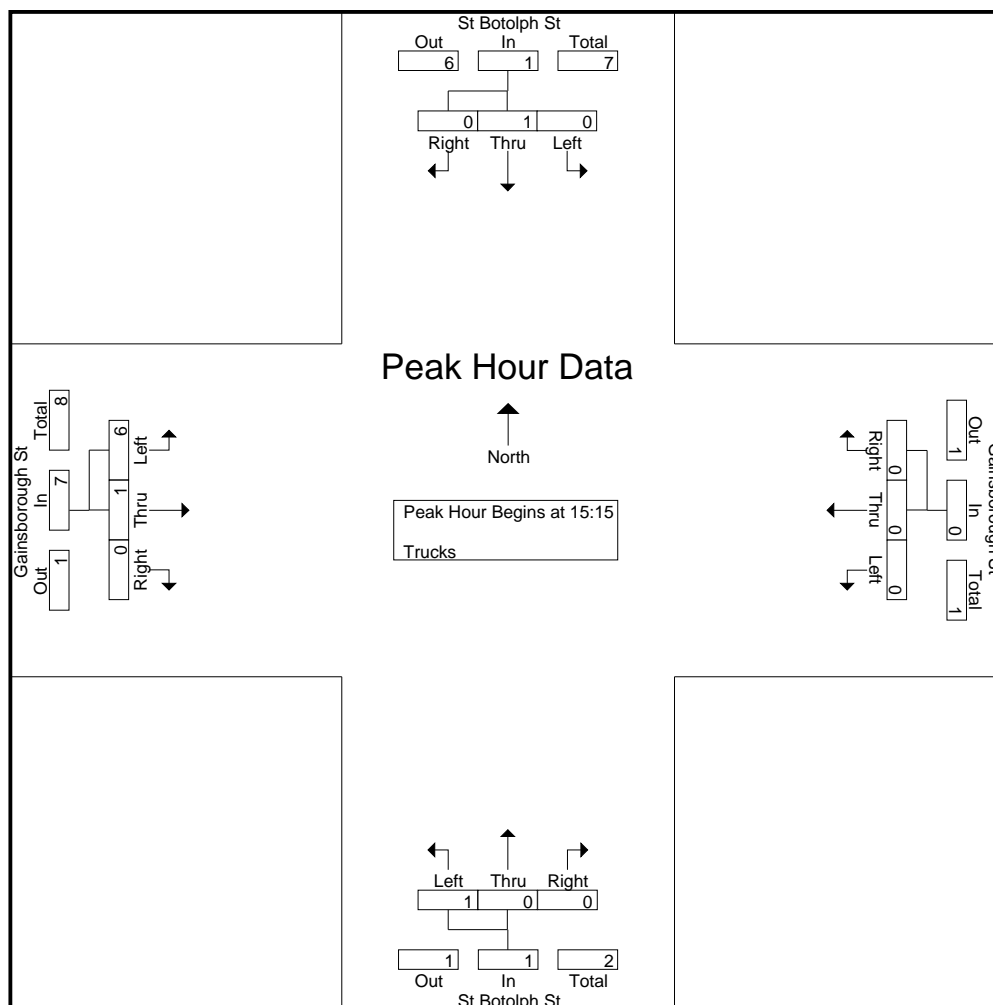


Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 15:15

15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
16:00	0	1	0	1	0	0	0	0	1	0	0	1	0	0	1	0	1	3
Total Volume	0	1	0	1	0	0	0	0	1	0	0	1	6	1	0	7	9	
% App. Total	0	100	0	0	0	0	0	0	100	0	0	0	85.7	14.3	0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250	.500	.250	.000	.583	.750	

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 6



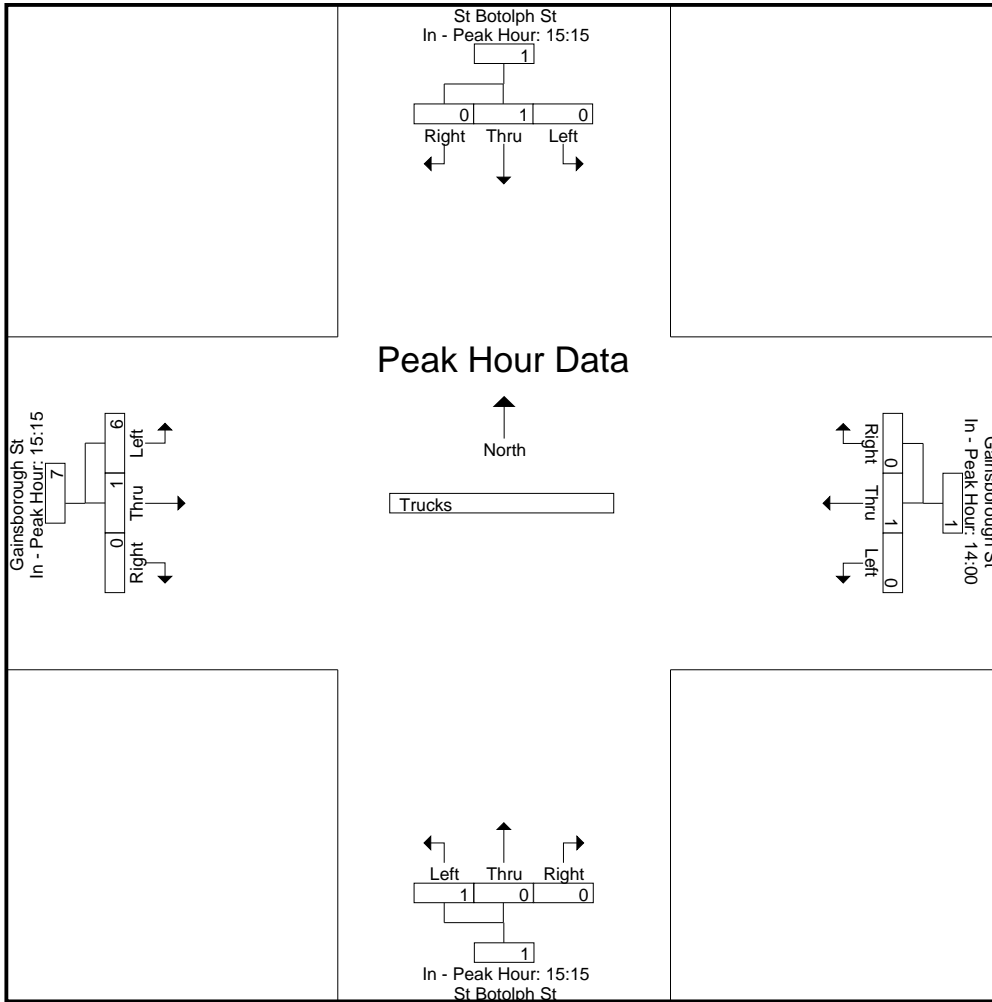
Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	15:15				14:00				15:15				15:15			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
+45 mins.	0	1	0	1	0	0	0	0	1	0	0	1	0	1	0	1
Total Volume	0	1	0	1	0	1	0	1	1	0	0	1	6	1	0	7
% App. Total	0	100	0	0	0	100	0	0	100	0	0	0	85.7	14.3	0	0
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.250	.000	.000	.250	.500	.250	.000	.583

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 7



Accurate Counts

978-664-2565

N/S Street : St Botolph Street
 E/W Street: Gainsborough Street
 City/State : Boston, MA
 Weather : Light Rain AM

File Name : 82050004
 Site Code : 82050004
 Start Date : 10/26/2011
 Page No : 1

Groups Printed- Bikes Peds

Start Time	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
07:00	0	0	1	12	0	1	0	8	0	0	0	6	0	0	1	4	30	3	33
07:15	0	1	0	15	0	0	0	3	0	0	0	14	0	0	0	13	45	1	46
07:30	1	0	0	13	0	1	1	9	0	0	1	5	0	0	0	4	31	4	35
07:45	0	3	0	20	0	0	1	16	0	0	0	12	1	0	0	7	55	5	60
Total	1	4	1	60	0	2	2	36	0	0	1	37	1	0	1	28	161	13	174
08:00	2	0	1	31	0	1	1	16	0	0	0	18	1	0	0	15	80	6	86
08:15	0	0	0	26	0	2	0	10	0	0	0	10	0	0	0	22	68	2	70
08:30	1	1	2	41	0	1	2	11	0	1	0	19	1	0	0	16	87	9	96
08:45	0	3	0	52	0	0	0	21	0	0	0	28	0	0	0	34	135	3	138
Total	3	4	3	150	0	4	3	58	0	1	0	75	2	0	0	87	370	20	390
09:00	0	2	2	31	0	1	1	29	1	1	0	13	0	0	0	21	94	8	102
09:15	4	0	1	19	0	0	1	11	0	0	0	10	1	1	0	11	51	8	59
09:30	0	0	1	18	0	2	0	10	0	0	0	4	0	0	0	16	48	3	51
09:45	5	1	2	37	0	2	1	16	0	0	0	15	1	0	0	21	89	12	101
Total	9	3	6	105	0	5	3	66	1	1	0	42	2	1	0	69	282	31	313
10:00	0	2	0	19	0	0	0	11	0	2	1	5	0	0	0	26	61	5	66
10:15	0	1	1	23	1	0	0	19	0	1	0	14	0	2	0	24	80	6	86
10:30	0	1	0	17	0	0	0	11	1	0	0	5	0	0	1	17	50	3	53
10:45	1	0	1	27	0	0	0	32	0	1	2	9	0	0	0	26	94	5	99
Total	1	4	2	86	1	0	0	73	1	4	3	33	0	2	1	93	285	19	304
11:00	0	2	0	20	0	0	0	19	0	1	0	6	0	0	1	19	64	4	68
11:15	0	2	1	14	0	0	0	3	0	0	0	13	0	0	0	16	46	3	49
11:30	0	0	4	19	0	0	0	22	0	0	0	8	0	1	0	23	72	5	77
11:45	4	1	3	33	0	0	2	21	0	1	0	11	0	1	0	52	117	12	129
Total	4	5	8	86	0	0	2	65	0	2	0	38	0	2	1	110	299	24	323
12:00	0	1	0	22	0	1	0	11	0	1	0	10	0	0	0	28	71	3	74
12:15	0	0	0	30	0	1	0	12	0	0	0	7	0	1	0	22	71	2	73
12:30	0	0	0	21	0	1	0	17	0	0	0	24	0	0	0	26	88	1	89
12:45	0	1	1	28	0	0	2	20	1	1	0	17	0	0	1	33	98	7	105
Total	0	2	1	101	0	3	2	60	1	2	0	58	0	1	1	109	328	13	341
13:00	0	1	0	27	0	0	1	23	2	2	0	12	1	1	1	27	89	9	98
13:15	1	1	0	35	0	1	1	15	0	1	1	12	0	0	2	23	85	8	93
13:30	0	0	1	13	0	2	1	17	0	0	0	9	1	1	0	29	68	6	74
13:45	1	5	0	32	0	0	1	14	0	0	0	6	0	2	0	37	89	9	98
Total	2	7	1	107	0	3	4	69	2	3	1	39	2	4	3	116	331	32	363
14:00	3	0	0	26	0	1	0	12	0	1	1	14	1	0	0	25	77	7	84
14:15	2	1	0	16	0	0	0	7	0	0	0	11	0	1	0	22	56	4	60
14:30	0	0	1	21	0	0	0	21	1	1	0	13	0	0	0	18	73	3	76
14:45	1	0	0	32	0	1	0	17	1	0	1	14	1	0	0	40	103	5	108
Total	6	1	1	95	0	2	0	57	2	2	2	52	2	1	0	105	309	19	328
15:00	1	0	3	28	0	0	1	20	0	0	0	19	0	0	0	24	91	5	96
15:15	1	0	0	15	0	1	0	19	1	0	0	15	0	0	1	21	70	4	74
15:30	0	0	1	32	0	3	0	11	0	0	0	17	2	0	0	24	84	6	90
15:45	0	4	0	25	0	2	0	22	0	0	0	17	0	1	0	38	102	7	109
Total	2	4	4	100	0	6	1	72	1	0	0	68	2	1	1	107	347	22	369
16:00	0	0	2	24	1	0	0	30	1	0	0	21	1	0	0	43	118	5	123
16:15	1	2	0	26	0	0	2	24	0	0	0	23	0	0	0	19	92	5	97
16:30	1	1	1	34	0	0	0	46	1	2	0	16	0	3	0	34	130	9	139
16:45	0	0	2	41	0	0	1	36	0	0	0	17	0	0	0	33	127	3	130
Total	2	3	5	125	1	0	3	136	2	2	0	77	1	3	0	129	467	22	489
17:00	7	2	5	43	0	0	0	44	0	1	1	31	0	1	0	27	145	17	162
17:15	3	2	0	47	0	1	1	23	4	0	2	26	2	1	1	36	132	17	149
17:30	0	0	0	59	0	1	1	30	1	1	0	29	2	0	0	32	150	6	156
17:45	1	3	1	77	0	3	2	41	3	2	0	20	0	0	0	33	171	15	186
Total	11	7	6	226	0	5	4	138	8	4	3	106	4	2	1	128	598	55	653

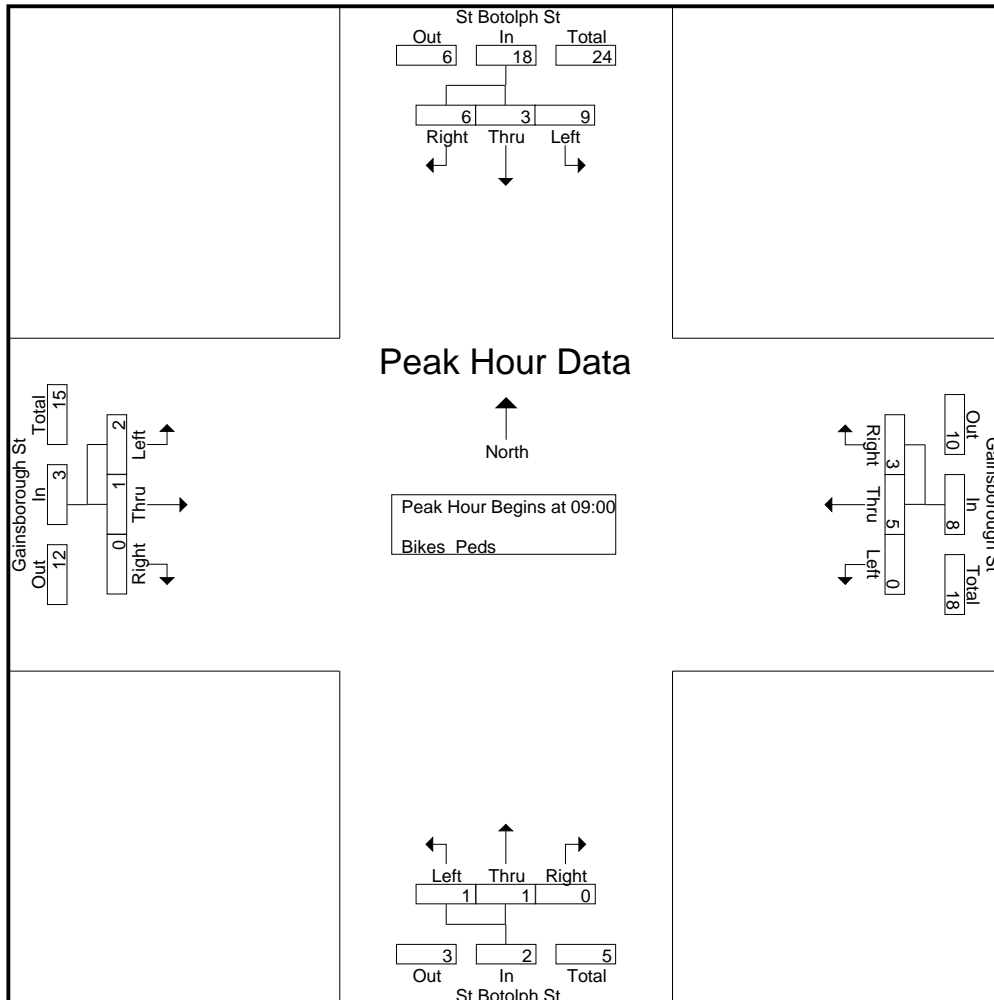
N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 2

Groups Printed- Bikes Peds

	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds			
Grand Total	41	44	38	1241	2	30	24	830	18	21	10	625	16	17	9	1081	3777	270	4047
Apprch %	33.3	35.8	30.9		3.6	53.6	42.9		36.7	42.9	20.4		38.1	40.5	21.4				
Total %	15.2	16.3	14.1		0.7	11.1	8.9		6.7	7.8	3.7		5.9	6.3	3.3		93.3	6.7	

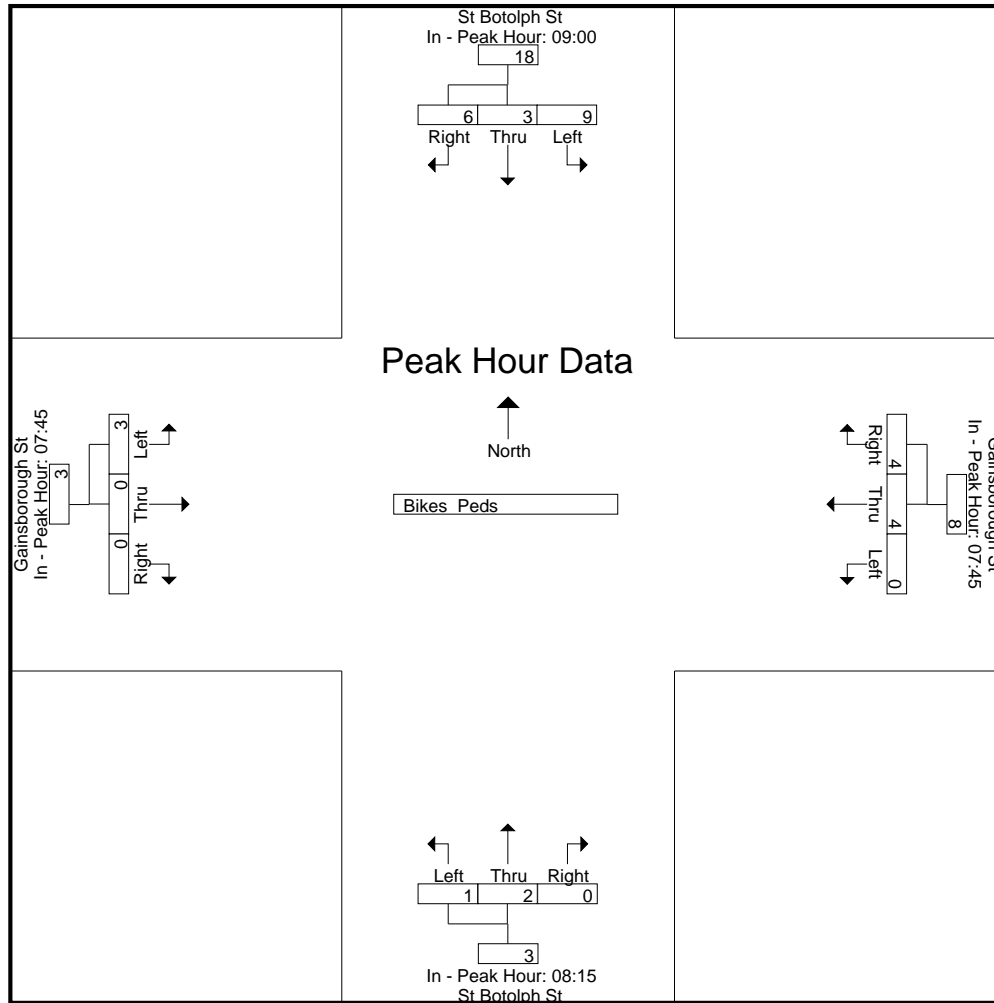
Start Time	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 09:00																		
09:00	0	2	2	4	0	1	1	2	1	1	0	2	0	0	0	0	0	8
09:15	4	0	1	5	0	0	1	1	0	0	0	0	1	1	0	2	8	
09:30	0	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	3	
09:45	5	1	2	8	0	2	1	3	0	0	0	0	1	0	0	1	12	
Total Volume	9	3	6	18	0	5	3	8	1	1	0	2	2	1	0	3	31	
% App. Total	50	16.7	33.3		0	62.5	37.5		50	50	0		66.7	33.3	0			
PHF	.450	.375	.750	.563	.000	.625	.750	.667	.250	.250	.000	.250	.500	.250	.000	.375	.646	



N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 3

Start Time	St Botolph St From North				Gainsborough St From East				St Botolph St From South				Gainsborough St From West				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	09:00				07:45				08:15				07:45				
+0 mins.	0	2	2	4	0	0	1	1	0	0	0	0	1	0	0	1	
+15 mins.	4	0	1	5	0	1	1	2	0	1	0	1	1	0	0	1	
+30 mins.	0	0	1	1	0	2	0	2	0	0	0	0	0	0	0	0	
+45 mins.	5	1	2	8	0	1	2	3	1	1	0	2	1	0	0	1	
Total Volume	9	3	6	18	0	4	4	8	1	2	0	3	3	0	0	3	
% App. Total	50	16.7	33.3		0	50	50		33.3	66.7	0		100	0	0		
PHF	.450	.375	.750	.563	.000	.500	.500	.667	.250	.500	.000	.375	.750	.000	.000	.750	

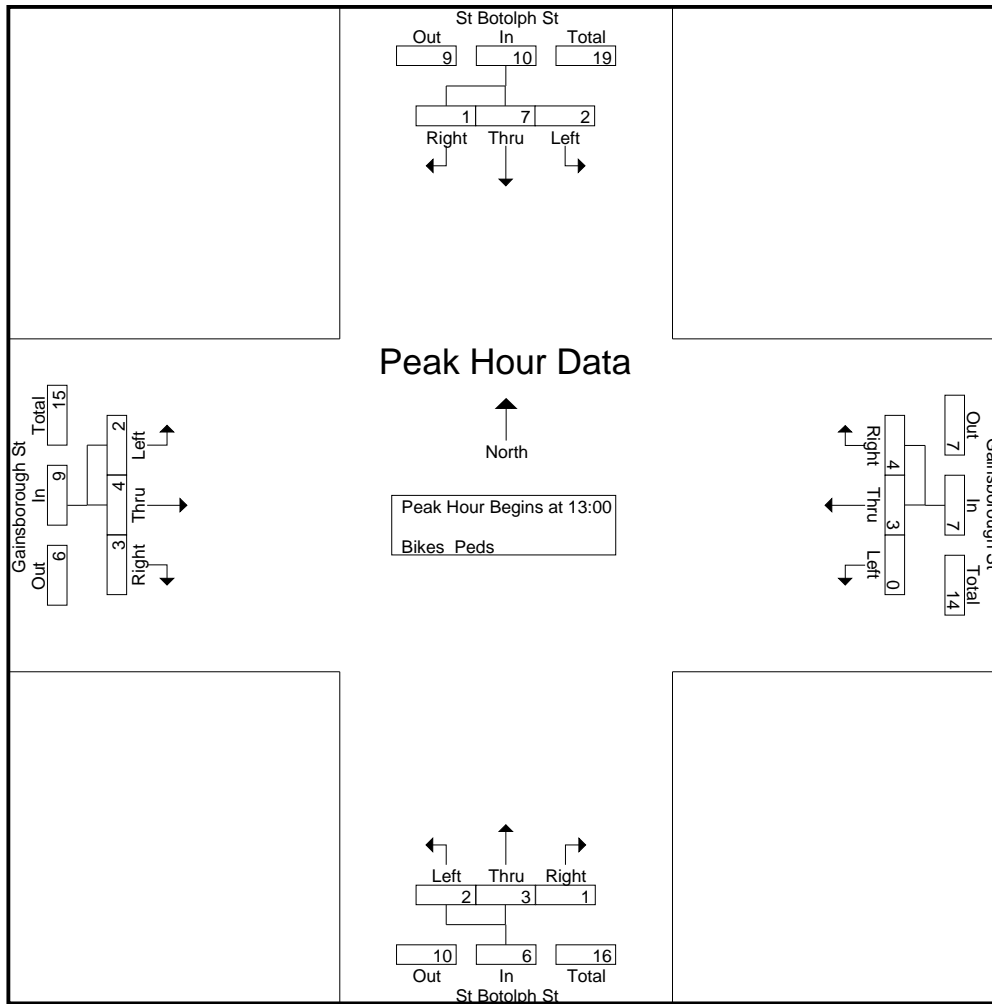


Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 13:00

13:00	0	1	0	1	0	0	1	1	2	2	0	4	1	1	1	3	9
13:15	1	1	0	2	0	1	1	2	0	1	1	2	0	0	2	2	8
13:30	0	0	1	1	0	2	1	3	0	0	0	0	1	1	0	2	6
13:45	1	5	0	6	0	0	1	1	0	0	0	0	0	2	0	2	9
Total Volume	2	7	1	10	0	3	4	7	2	3	1	6	2	4	3	9	32
% App. Total	20	70	10		0	42.9	57.1		33.3	50	16.7		22.2	44.4	33.3		
PHF	.500	.350	.250	.417	.000	.375	1.000	.583	.250	.375	.250	.375	.500	.500	.375	.750	.889

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 4



Peak Hour Analysis From 10:00 to 13:45 - Peak 1 of 1

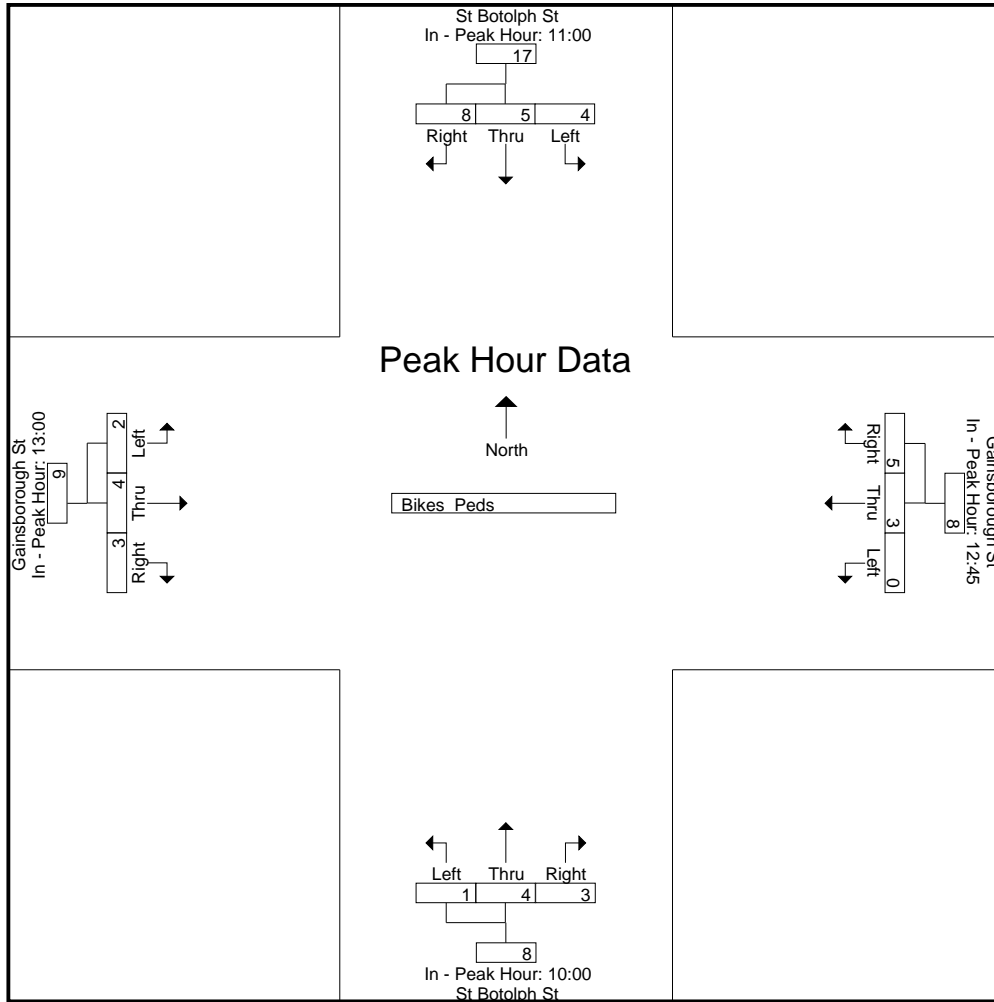
Peak Hour for Each Approach Begins at:

	11:00				12:45				10:00				13:00			
+0 mins.	0	2	0	2	0	0	2	2	0	2	1	3	1	1	1	3
+15 mins.	0	2	1	3	0	0	1	1	0	1	0	1	0	0	2	2
+30 mins.	0	0	4	4	0	1	1	2	1	0	0	1	1	1	0	2
+45 mins.	4	1	3	8	0	2	1	3	0	1	2	3	0	2	0	2
Total Volume	4	5	8	17	0	3	5	8	1	4	3	8	2	4	3	9
% App. Total	23.5	29.4	47.1		0	37.5	62.5		12.5	50	37.5		22.2	44.4	33.3	
PHF	.250	.625	.500	.531	.000	.375	.625	.667	.250	.500	.375	.667	.500	.500	.375	.750

Accurate Counts
978-664-2565

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 5

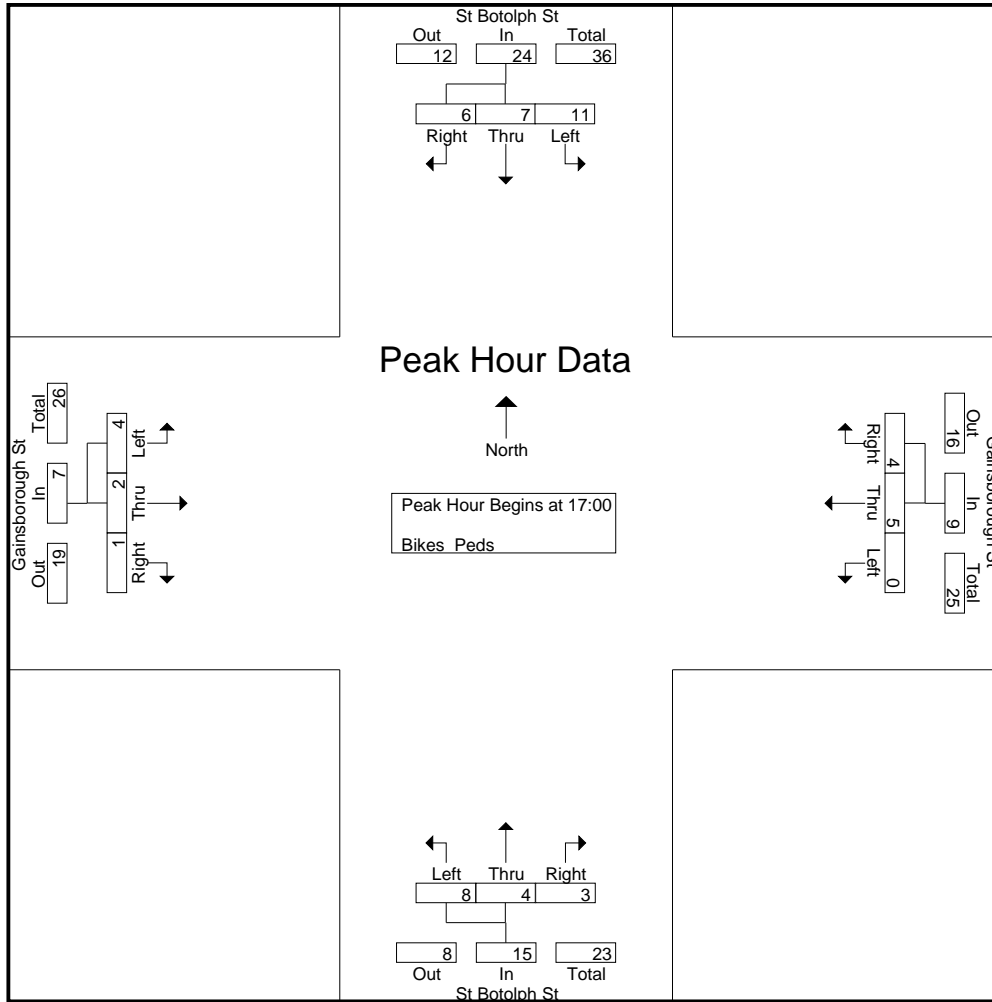


Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	7	2	5	14	0	0	0	0	0	1	1	2	0	1	0	1	17
17:15	3	2	0	5	0	1	1	2	4	0	2	6	2	1	1	4	17
17:30	0	0	0	0	0	1	1	2	1	1	0	2	2	0	0	2	6
17:45	1	3	1	5	0	3	2	5	3	2	0	5	0	0	0	0	15
Total Volume	11	7	6	24	0	5	4	9	8	4	3	15	4	2	1	7	55
% App. Total	45.8	29.2	25		0	55.6	44.4		53.3	26.7	20		57.1	28.6	14.3		
PHF	.393	.583	.300	.429	.000	.417	.500	.450	.500	.500	.375	.625	.500	.500	.250	.438	.809

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 6



Peak Hour Analysis From 14:00 to 17:45 - Peak 1 of 1

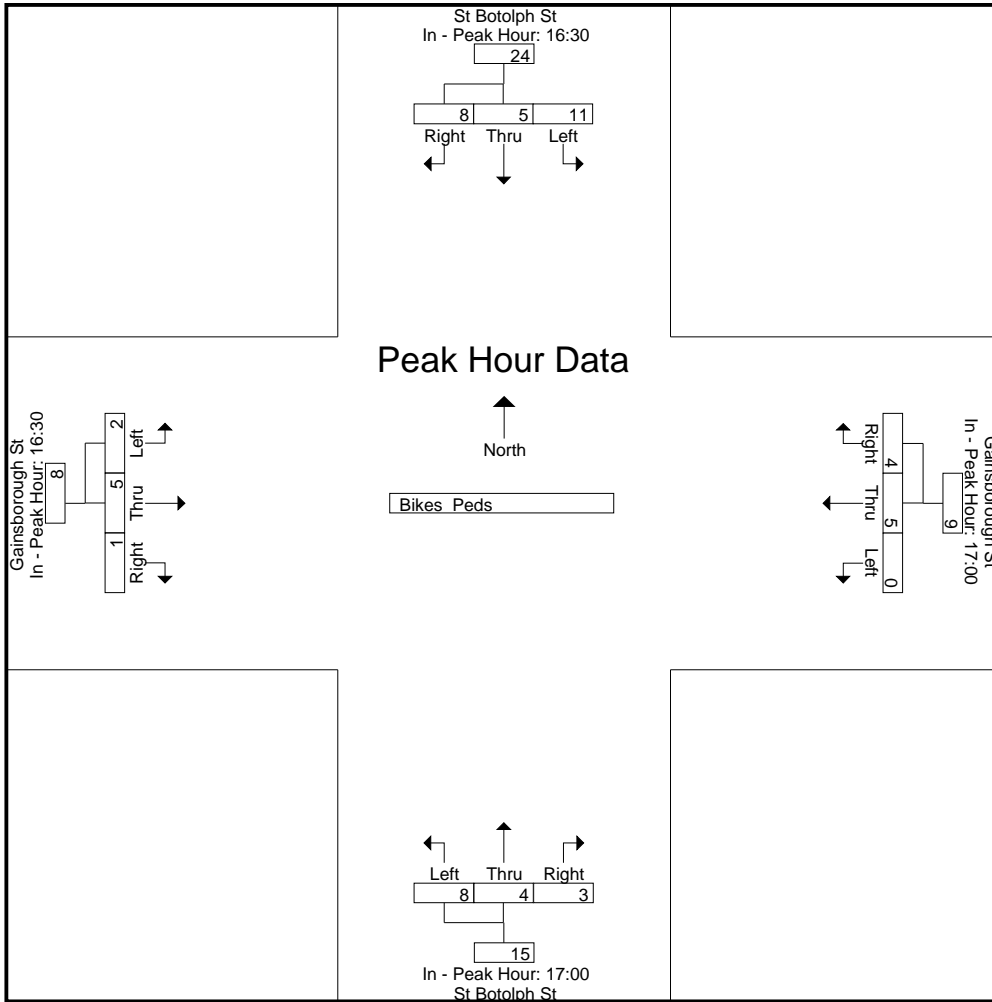
Peak Hour for Each Approach Begins at:

	16:30				17:00				17:00				16:30			
+0 mins.	1	1	1	3	0	0	0	0	0	1	1	2	0	3	0	3
+15 mins.	0	0	2	2	0	1	1	2	4	0	2	6	0	0	0	0
+30 mins.	7	2	5	14	0	1	1	2	1	1	0	2	0	1	0	1
+45 mins.	3	2	0	5	0	3	2	5	3	2	0	5	2	1	1	4
Total Volume	11	5	8	24	0	5	4	9	8	4	3	15	2	5	1	8
% App. Total	45.8	20.8	33.3		0	55.6	44.4		53.3	26.7	20		25	62.5	12.5	
PHF	.393	.625	.400	.429	.000	.417	.500	.450	.500	.500	.375	.625	.250	.417	.250	.500

Accurate Counts
978-664-2565

N/S Street : St Botolph Street
E/W Street: Gainsborough Street
City/State : Boston, MA
Weather : Light Rain AM

File Name : 82050004
Site Code : 82050004
Start Date : 10/26/2011
Page No : 7



Accurate Counts

978-664-2565

N/S Street : Saint Cyprians Place
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Clear

File Name : 11046003
 Site Code : 11046003
 Start Date : 5/13/2013
 Page No : 1

Groups Printed- Cars - Trucks

Start Time	Columbus Ave From East		St, Cyprians Pl From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	37	0	6	63	0	106
07:15 AM	0	31	2	2	62	0	97
07:30 AM	0	40	0	4	78	0	122
07:45 AM	0	47	1	2	102	0	152
Total	0	155	3	14	305	0	477
08:00 AM	0	44	1	0	73	0	118
08:15 AM	0	47	1	2	81	0	131
08:30 AM	0	47	0	3	79	0	129
08:45 AM	0	49	1	7	98	0	155
Total	0	187	3	12	331	0	533
Grand Total	0	342	6	26	636	0	1010
Apprch %	0	100	18.8	81.2	100	0	
Total %	0	33.9	0.6	2.6	63	0	
Cars	0	328	6	26	608	0	968
% Cars	0	95.9	100	100	95.6	0	95.8
Trucks	0	14	0	0	28	0	42
% Trucks	0	4.1	0	0	4.4	0	4.2

Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

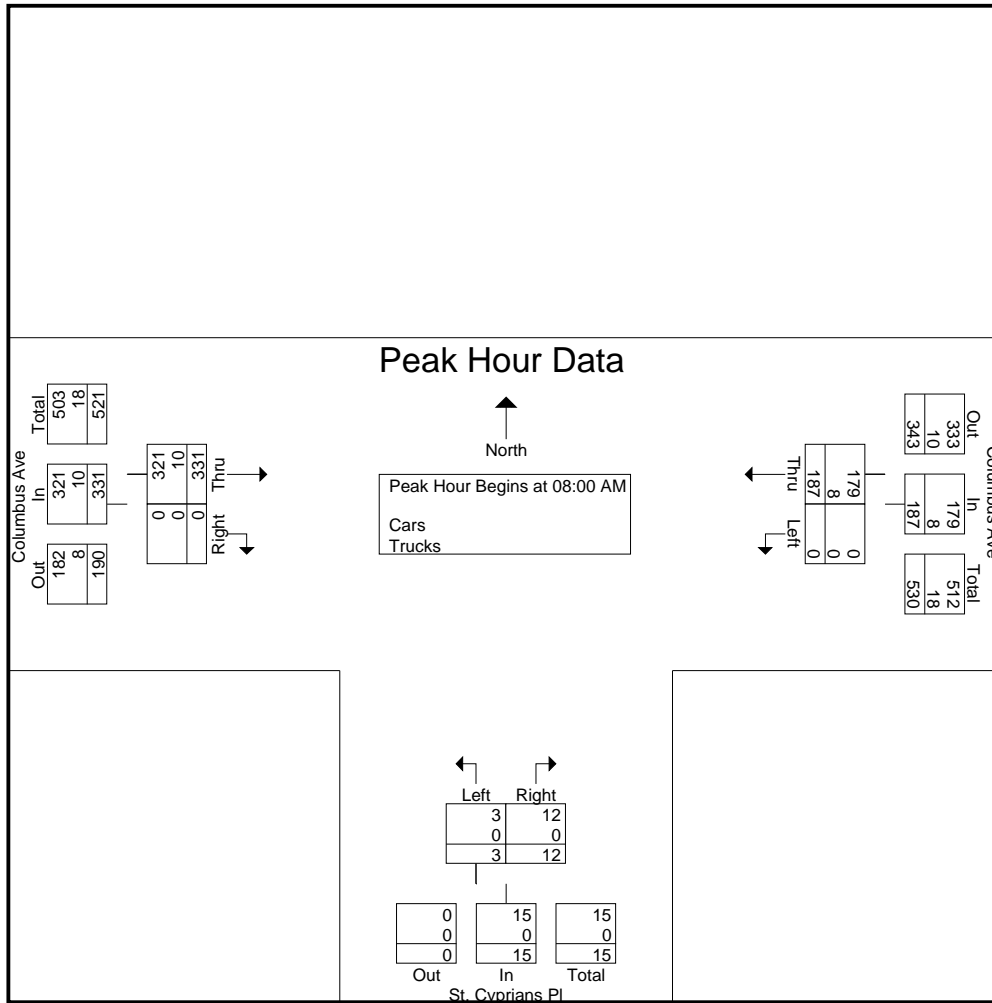
Peak Hour for Entire Intersection Begins at 08:00 AM

08:00 AM	0	44	44	1	0	1	73	0	73	118
08:15 AM	0	47	47	1	2	3	81	0	81	131
08:30 AM	0	47	47	0	3	3	79	0	79	129
08:45 AM	0	49	49	1	7	8	98	0	98	155
Total Volume	0	187	187	3	12	15	331	0	331	533
% App. Total	0	100		20	80		100	0		
PHF	.000	.954	.954	.750	.429	.469	.844	.000	.844	.860
Cars	0	179	179	3	12	15	321	0	321	515
% Cars	0	95.7	95.7	100	100	100	97.0	0	97.0	96.6
Trucks	0	8	8	0	0	0	10	0	10	18
% Trucks	0	4.3	4.3	0	0	0	3.0	0	3.0	3.4

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
Page No : 2



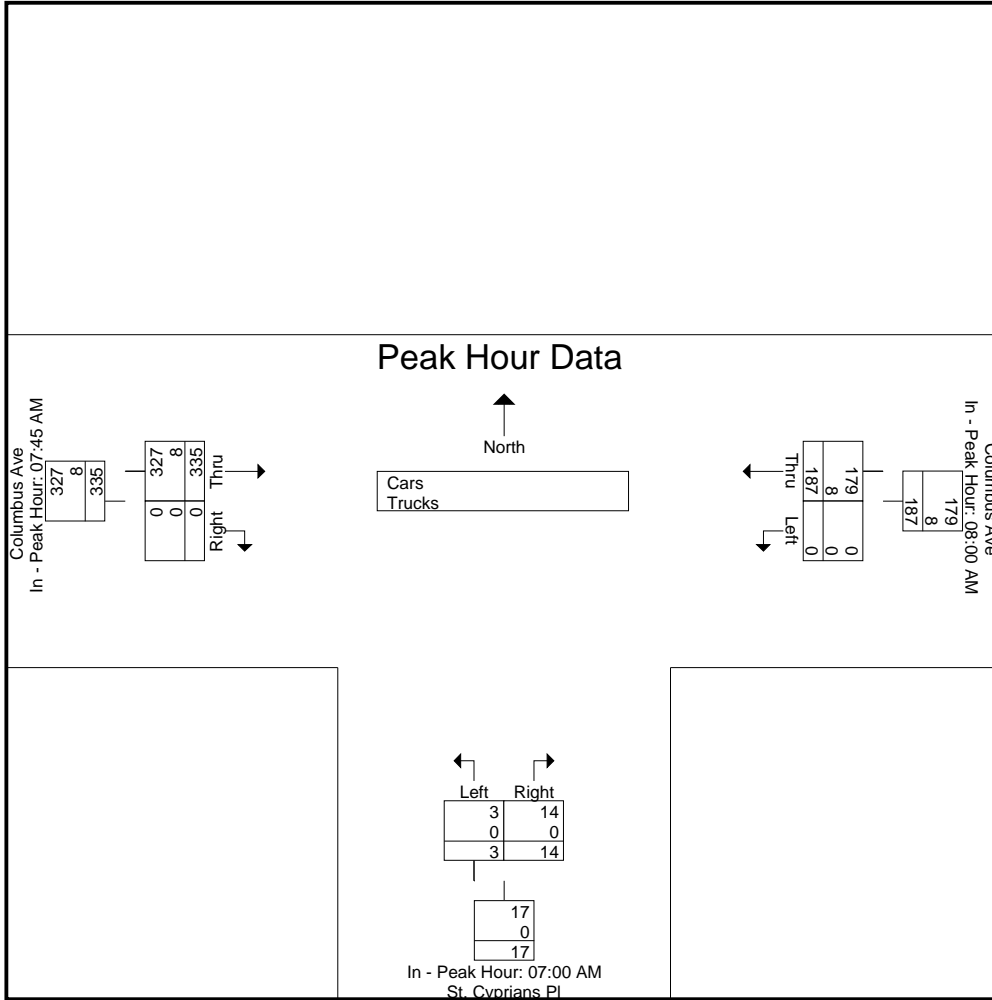
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:00 AM			07:45 AM		
+0 mins.	0	44	44	0	6	6	0	102	
+15 mins.	0	47	47	2	2	4	73	73	
+30 mins.	0	47	47	0	4	4	81	81	
+45 mins.	0	49	49	1	2	3	79	79	
Total Volume	0	187	187	3	14	17	335	335	
% App. Total	0	100	100	17.6	82.4	100	100	100	
PHF	.000	.954	.954	.375	.583	.708	.821	.821	
Cars	0	179	179	3	14	17	327	327	
% Cars	0	95.7	95.7	100	100	100	97.6	97.6	
Trucks	0	8	8	0	0	0	8	8	
% Trucks	0	4.3	4.3	0	0	0	2.4	2.4	

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
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Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
Page No : 1

Groups Printed- Cars

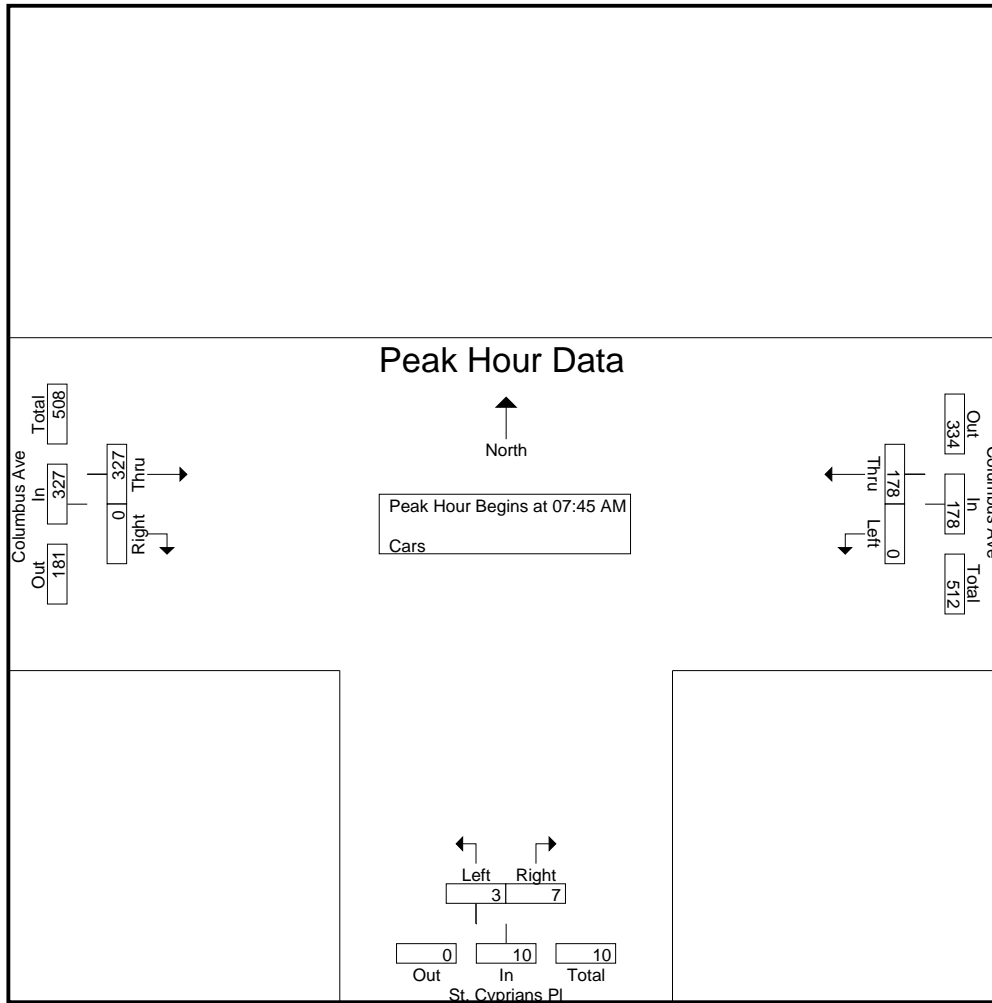
Start Time	Columbus Ave From East		St, Cyprians Pl From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	36	0	6	53	0	95
07:15 AM	0	31	2	2	59	0	94
07:30 AM	0	36	0	4	76	0	116
07:45 AM	0	46	1	2	99	0	148
Total	0	149	3	14	287	0	453
08:00 AM	0	42	1	0	73	0	116
08:15 AM	0	46	1	2	76	0	125
08:30 AM	0	44	0	3	79	0	126
08:45 AM	0	47	1	7	93	0	148
Total	0	179	3	12	321	0	515
Grand Total	0	328	6	26	608	0	968
Apprch %	0	100	18.8	81.2	100	0	
Total %	0	33.9	0.6	2.7	62.8	0	

Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	46	46	1	2	3	99	0	99	148
08:00 AM	0	42	42	1	0	1	73	0	73	116
08:15 AM	0	46	46	1	2	3	76	0	76	125
08:30 AM	0	44	44	0	3	3	79	0	79	126
Total Volume	0	178	178	3	7	10	327	0	327	515
% App. Total	0	100		30	70		100	0		
PHF	.000	.967	.967	.750	.583	.833	.826	.000	.826	.870

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
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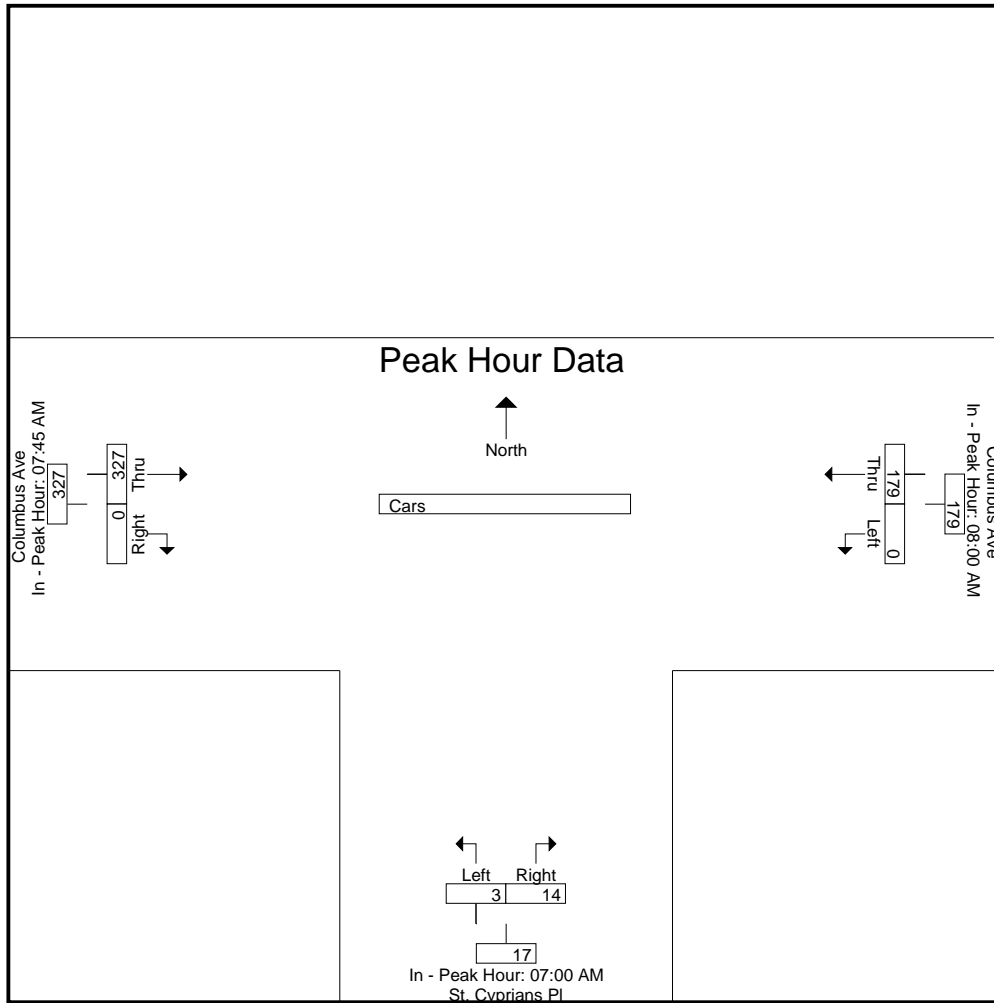
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM		07:00 AM			07:45 AM			
+0 mins.	0	42	42	0	6	6	0	99	
+15 mins.	0	46	46	2	2	4	73	73	
+30 mins.	0	44	44	0	4	4	76	76	
+45 mins.	0	47	47	1	2	3	79	79	
Total Volume	0	179	179	3	14	17	327	327	
% App. Total	0	100		17.6	82.4		100	0	
PHF	.000	.952	.952	.375	.583	.708	.826	.000	.826

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
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Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
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Groups Printed- Trucks

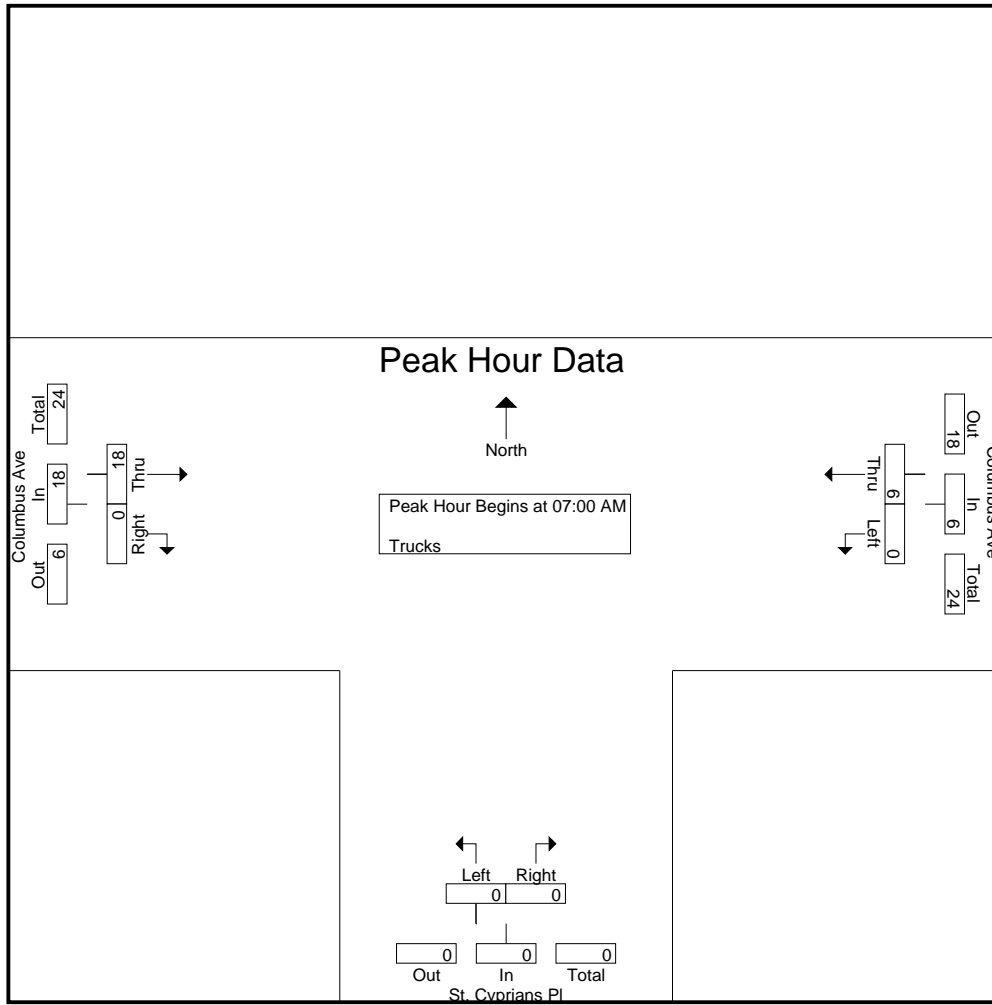
Start Time	Columbus Ave From East		St, Cyprians Pl From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	1	0	0	10	0	11
07:15 AM	0	0	0	0	3	0	3
07:30 AM	0	4	0	0	2	0	6
07:45 AM	0	1	0	0	3	0	4
Total	0	6	0	0	18	0	24
08:00 AM	0	2	0	0	0	0	2
08:15 AM	0	1	0	0	5	0	6
08:30 AM	0	3	0	0	0	0	3
08:45 AM	0	2	0	0	5	0	7
Total	0	8	0	0	10	0	18
Grand Total	0	14	0	0	28	0	42
Apprch %	0	100	0	0	100	0	
Total %	0	33.3	0	0	66.7	0	

Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	1	1	0	0	0	10	0	10	11
07:15 AM	0	0	0	0	0	0	3	0	3	3
07:30 AM	0	4	4	0	0	0	2	0	2	6
07:45 AM	0	1	1	0	0	0	3	0	3	4
Total Volume	0	6	6	0	0	0	18	0	18	24
% App. Total	0	100		0	0		100	0		
PHF	.000	.375	.375	.000	.000	.000	.450	.000	.450	.545

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
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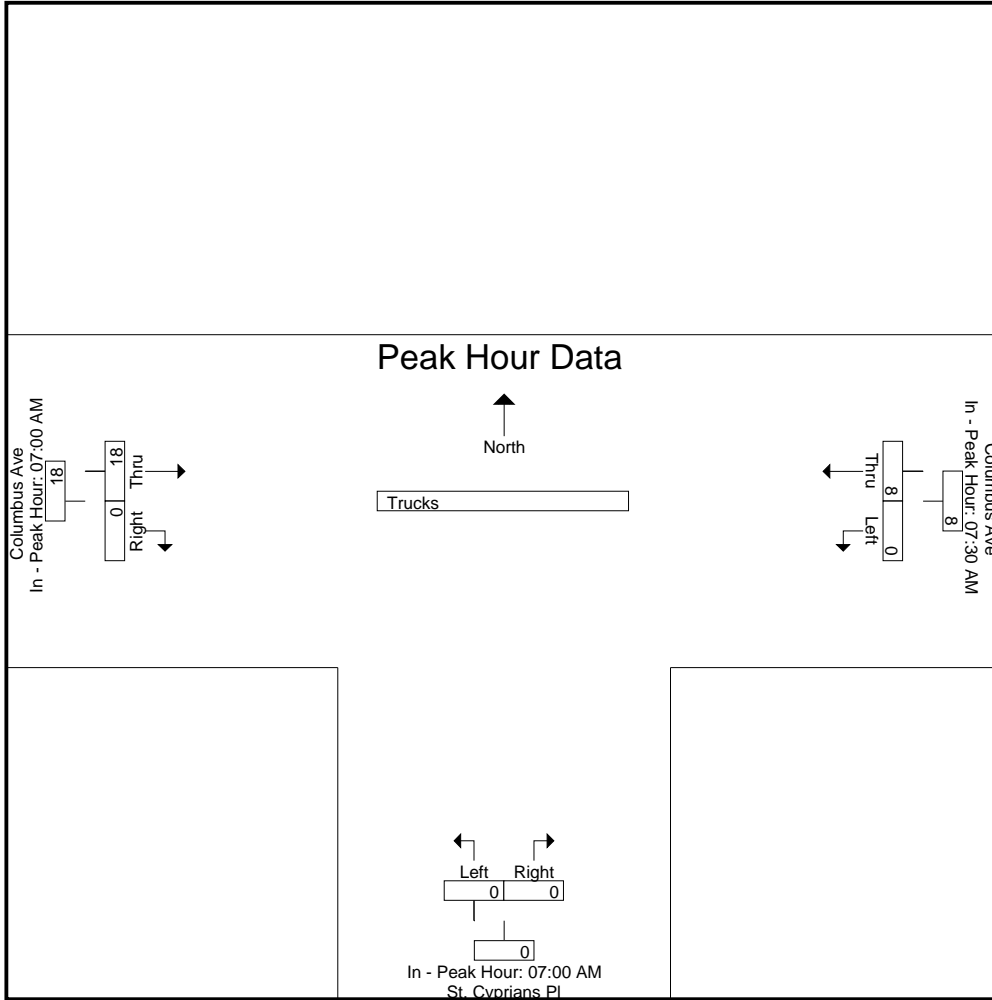
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:00 AM		
+0 mins.	0	4	4	0	0	0	10	0	10
+15 mins.	0	1	1	0	0	0	3	0	3
+30 mins.	0	2	2	0	0	0	2	0	2
+45 mins.	0	1	1	0	0	0	3	0	3
Total Volume	0	8	8	0	0	0	18	0	18
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.450	.000	.450

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
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Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
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Groups Printed- Bikes Peds

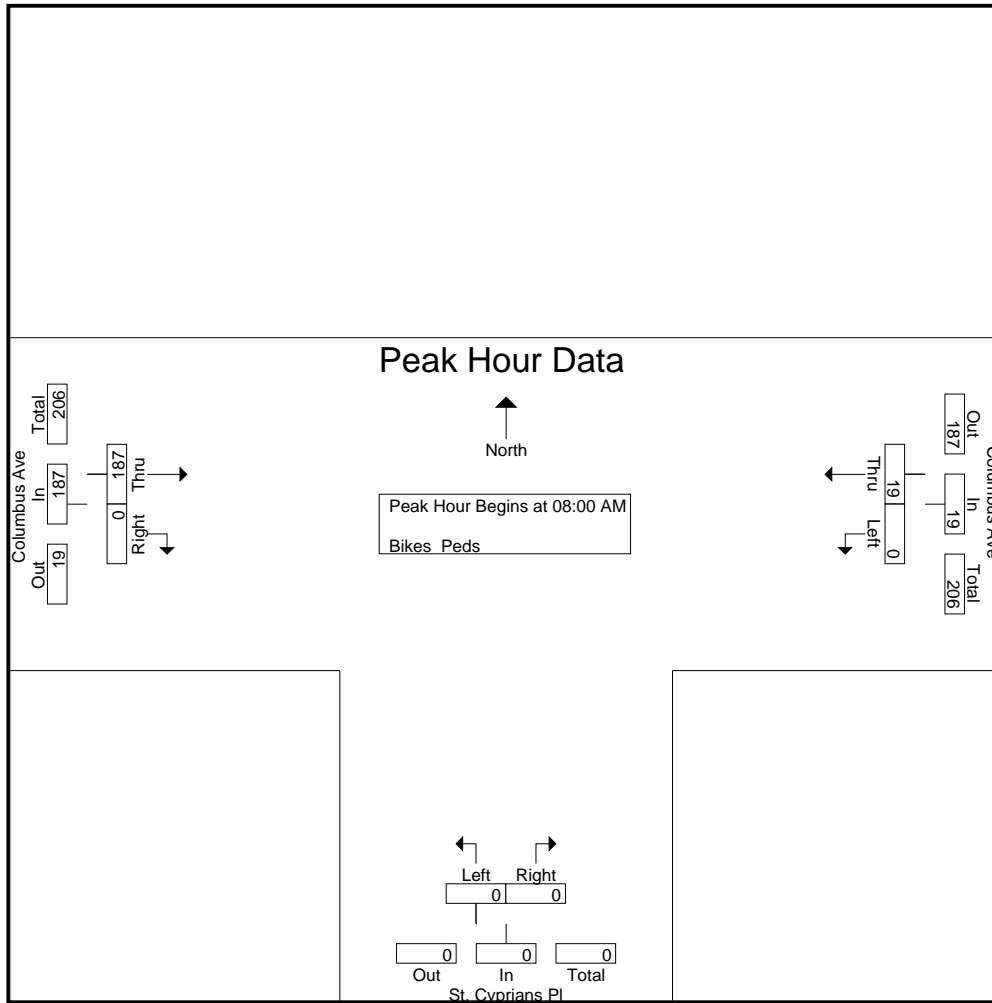
Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	3	4	0	0	5	14	0	1	10	17	27
07:15 AM	0	3	0	0	0	1	18	0	2	3	21	24
07:30 AM	0	4	7	0	0	4	23	0	1	12	27	39
07:45 AM	0	6	11	0	0	6	36	0	0	17	42	59
Total	0	16	22	0	0	16	91	0	4	42	107	149
08:00 AM	0	3	3	0	0	8	30	0	2	13	33	46
08:15 AM	0	9	13	0	0	4	43	0	1	18	52	70
08:30 AM	0	2	14	0	0	6	46	0	5	25	48	73
08:45 AM	0	5	6	0	0	7	68	0	2	15	73	88
Total	0	19	36	0	0	25	187	0	10	71	206	277
Grand Total	0	35	58	0	0	41	278	0	14	113	313	426
Apprch %	0	100		0	0		100	0				
Total %	0	11.2		0	0		88.8	0		26.5	73.5	

Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	3	3	0	0	0	30	0	30	33
08:15 AM	0	9	9	0	0	0	43	0	43	52
08:30 AM	0	2	2	0	0	0	46	0	46	48
08:45 AM	0	5	5	0	0	0	68	0	68	73
Total Volume	0	19	19	0	0	0	187	0	187	206
% App. Total	0	100		0	0		100	0		
PHF	.000	.528	.528	.000	.000	.000	.688	.000	.688	.705

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
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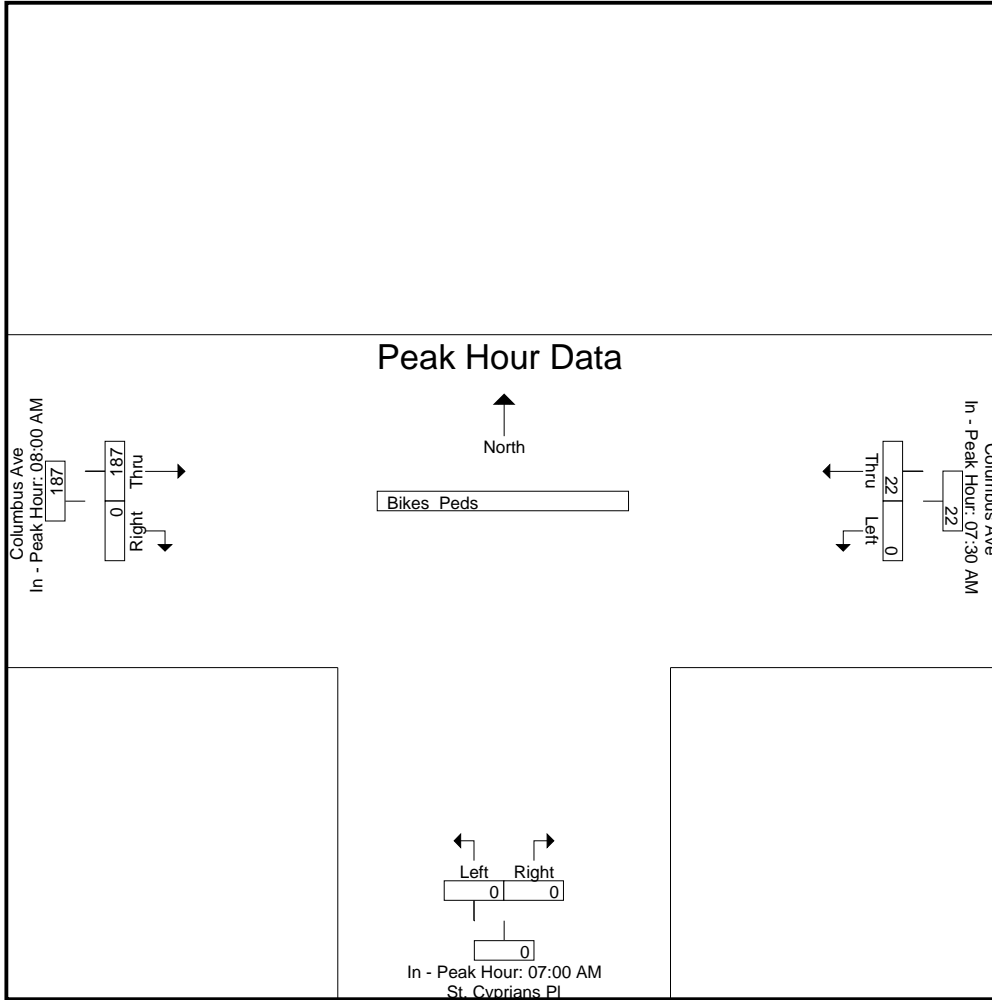
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM		07:00 AM			08:00 AM			
+0 mins.	0	4	4	0	0	0	30	0	30
+15 mins.	0	6	6	0	0	0	43	0	43
+30 mins.	0	3	3	0	0	0	46	0	46
+45 mins.	0	9	9	0	0	0	68	0	68
Total Volume	0	22	22	0	0	0	187	0	187
% App. Total	0	100		0	0		100	0	
PHF	.000	.611	.611	.000	.000	.000	.688	.000	.688

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
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Accurate Counts

978-664-2565

N/S Street : Saint Cyprians Place
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Clear

File Name : 11046003
 Site Code : 11046003
 Start Date : 5/13/2013
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Groups Printed- Cars - Trucks

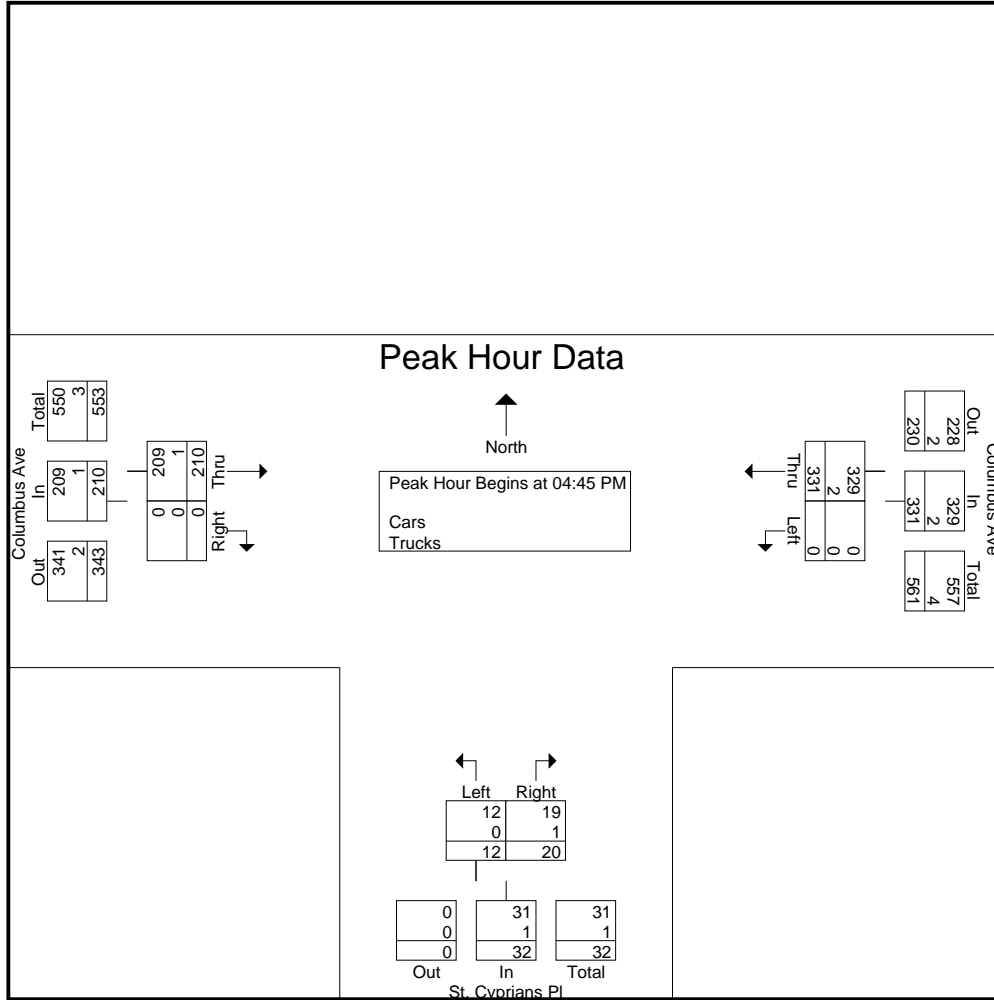
Start Time	Columbus Ave From East		St, Cyprians Pl From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	79	0	3	43	0	125
04:15 PM	0	95	3	6	50	0	154
04:30 PM	0	76	2	7	46	0	131
04:45 PM	0	68	1	4	60	0	133
Total	0	318	6	20	199	0	543
05:00 PM	0	94	2	5	42	0	143
05:15 PM	0	85	2	7	69	0	163
05:30 PM	0	84	7	4	39	0	134
05:45 PM	0	65	3	2	48	0	118
Total	0	328	14	18	198	0	558
Grand Total	0	646	20	38	397	0	1101
Apprch %	0	100	34.5	65.5	100	0	
Total %	0	58.7	1.8	3.5	36.1	0	
Cars	0	638	20	37	393	0	1088
% Cars	0	98.8	100	97.4	99	0	98.8
Trucks	0	8	0	1	4	0	13
% Trucks	0	1.2	0	2.6	1	0	1.2

Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	68	68	1	4	5	60	0	60	133
05:00 PM	0	94	94	2	5	7	42	0	42	143
05:15 PM	0	85	85	2	7	9	69	0	69	163
05:30 PM	0	84	84	7	4	11	39	0	39	134
Total Volume	0	331	331	12	20	32	210	0	210	573
% App. Total	0	100		37.5	62.5		100	0		
PHF	.000	.880	.880	.429	.714	.727	.761	.000	.761	.879
Cars	0	329	329	12	19	31	209	0	209	569
% Cars	0	99.4	99.4	100	95.0	96.9	99.5	0	99.5	99.3
Trucks	0	2	2	0	1	1	1	0	1	4
% Trucks	0	0.6	0.6	0	5.0	3.1	0.5	0	0.5	0.7

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
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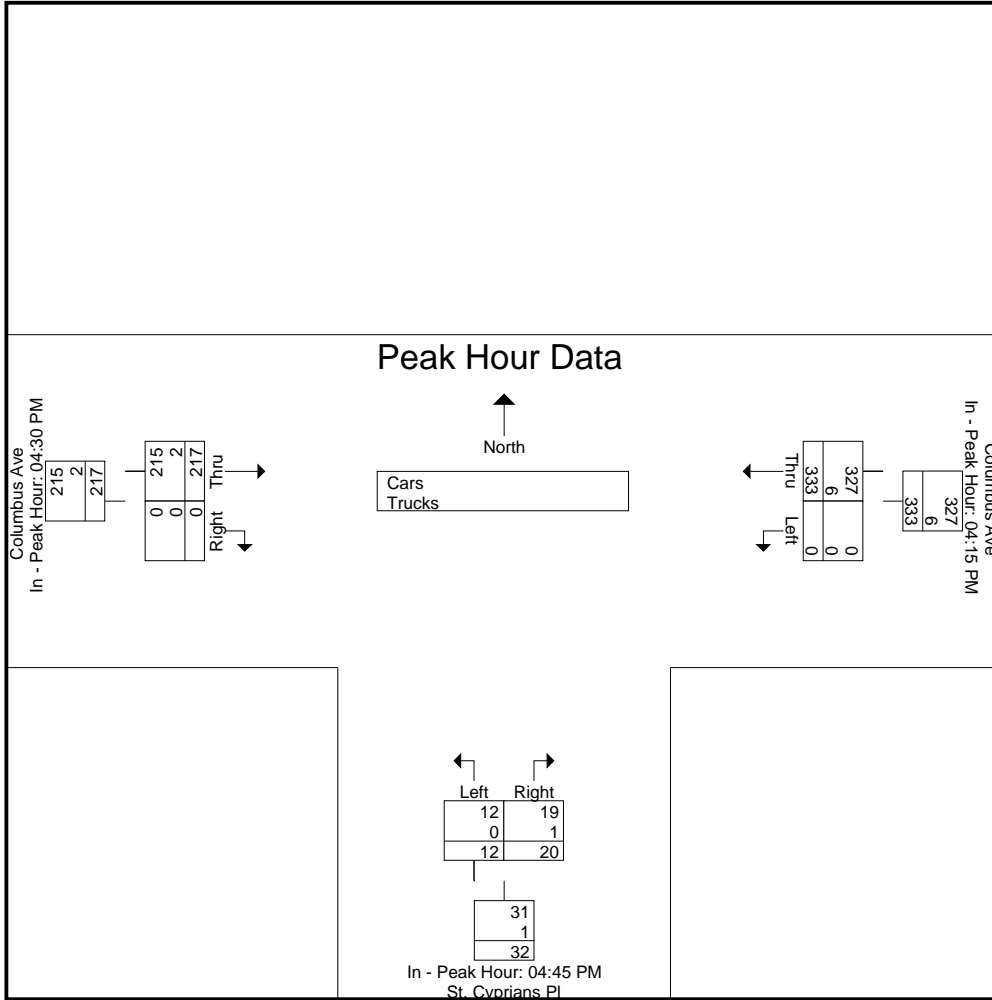
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:45 PM			04:30 PM		
+0 mins.	0	95	95	1	4	5	46	0	46
+15 mins.	0	76	76	2	5	7	60	0	60
+30 mins.	0	68	68	2	7	9	42	0	42
+45 mins.	0	94	94	7	4	11	69	0	69
Total Volume	0	333	333	12	20	32	217	0	217
% App. Total	0	100	100	37.5	62.5		100	0	
PHF	.000	.876	.876	.429	.714	.727	.786	.000	.786
Cars	0	327	327	12	19	31	215	0	215
% Cars	0	98.2	98.2	100	95	96.9	99.1	0	99.1
Trucks	0	6	6	0	1	1	2	0	2
% Trucks	0	1.8	1.8	0	5	3.1	0.9	0	0.9

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
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Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
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Groups Printed- Cars

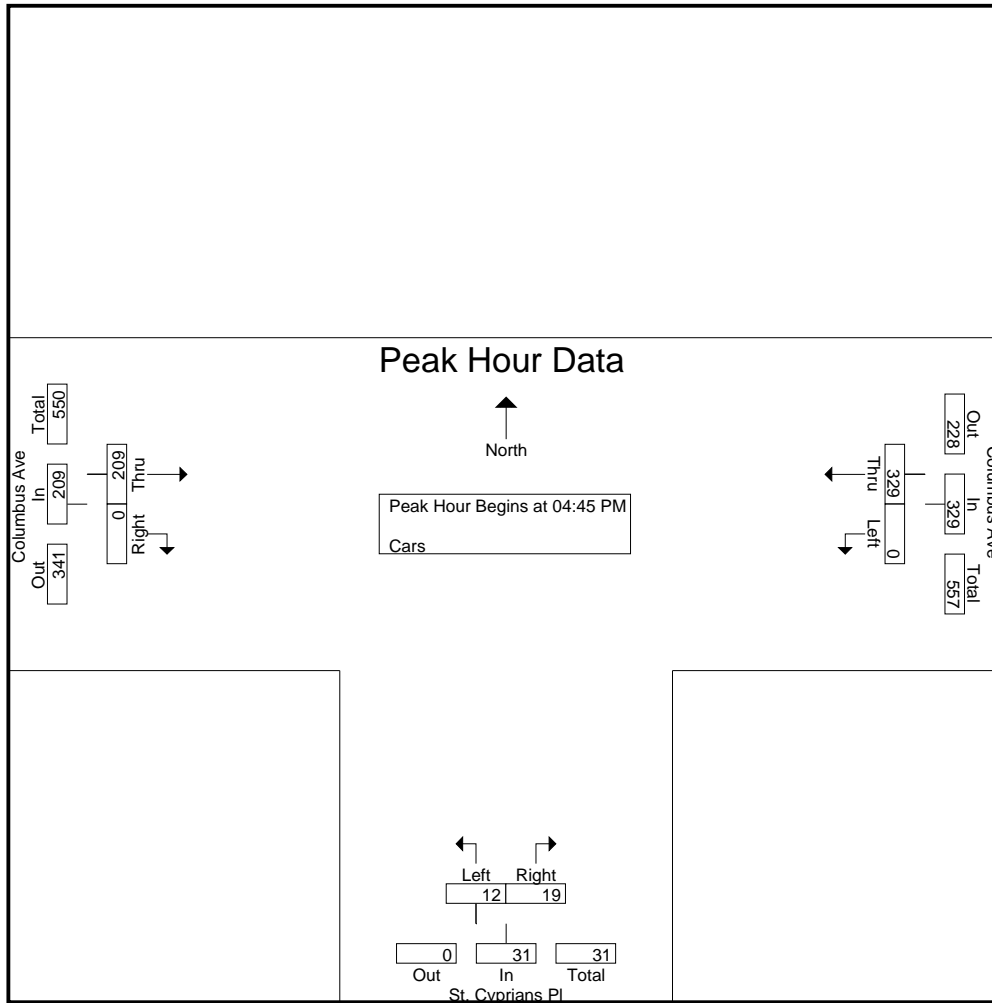
Start Time	Columbus Ave From East		St, Cyprians Pl From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	79	0	3	41	0	123
04:15 PM	0	92	3	6	50	0	151
04:30 PM	0	73	2	7	45	0	127
04:45 PM	0	68	1	4	60	0	133
Total	0	312	6	20	196	0	534
05:00 PM	0	94	2	4	41	0	141
05:15 PM	0	84	2	7	69	0	162
05:30 PM	0	83	7	4	39	0	133
05:45 PM	0	65	3	2	48	0	118
Total	0	326	14	17	197	0	554
Grand Total	0	638	20	37	393	0	1088
Apprch %	0	100	35.1	64.9	100	0	
Total %	0	58.6	1.8	3.4	36.1	0	

Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	68	68	1	4	5	60	0	60	133
05:00 PM	0	94	94	2	4	6	41	0	41	141
05:15 PM	0	84	84	2	7	9	69	0	69	162
05:30 PM	0	83	83	7	4	11	39	0	39	133
Total Volume	0	329	329	12	19	31	209	0	209	569
% App. Total	0	100		38.7	61.3		100	0		
PHF	.000	.875	.875	.429	.679	.705	.757	.000	.757	.878

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
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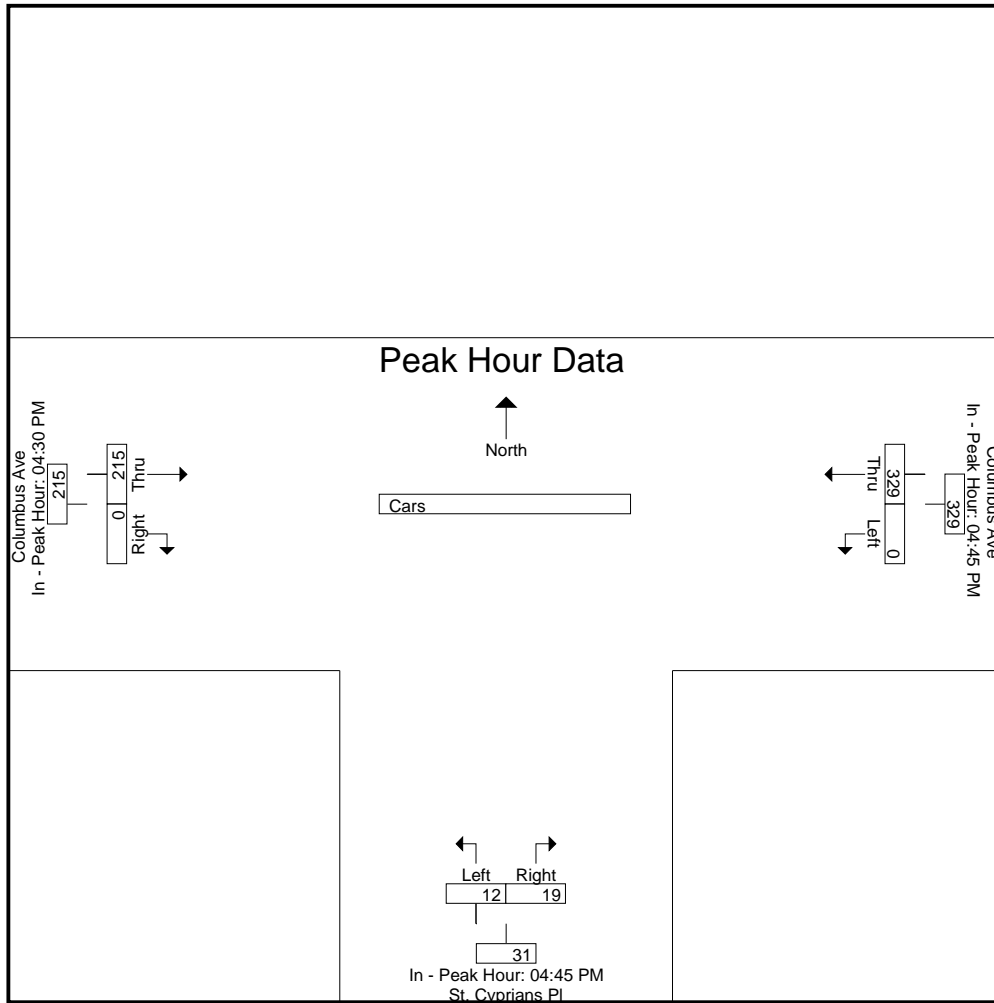
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM		04:45 PM			04:30 PM			
+0 mins.	0	68	68	1	4	5	45	0	45
+15 mins.	0	94	94	2	4	6	60	0	60
+30 mins.	0	84	84	2	7	9	41	0	41
+45 mins.	0	83	83	7	4	11	69	0	69
Total Volume	0	329	329	12	19	31	215	0	215
% App. Total	0	100		38.7	61.3		100	0	
PHF	.000	.875	.875	.429	.679	.705	.779	.000	.779

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
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Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
Page No : 1

Groups Printed- Trucks

Start Time	Columbus Ave From East		St, Cyprians Pl From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	0	0	0	2	0	2
04:15 PM	0	3	0	0	0	0	3
04:30 PM	0	3	0	0	1	0	4
04:45 PM	0	0	0	0	0	0	0
Total	0	6	0	0	3	0	9
05:00 PM	0	0	0	1	1	0	2
05:15 PM	0	1	0	0	0	0	1
05:30 PM	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0
Total	0	2	0	1	1	0	4
Grand Total	0	8	0	1	4	0	13
Apprch %	0	100	0	100	100	0	
Total %	0	61.5	0	7.7	30.8	0	

Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	2	0	2	2
04:15 PM	0	3	3	0	0	0	0	0	0	3
04:30 PM	0	3	3	0	0	0	1	0	1	4
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	6	6	0	0	0	3	0	3	9
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.375	.000	.375	.563

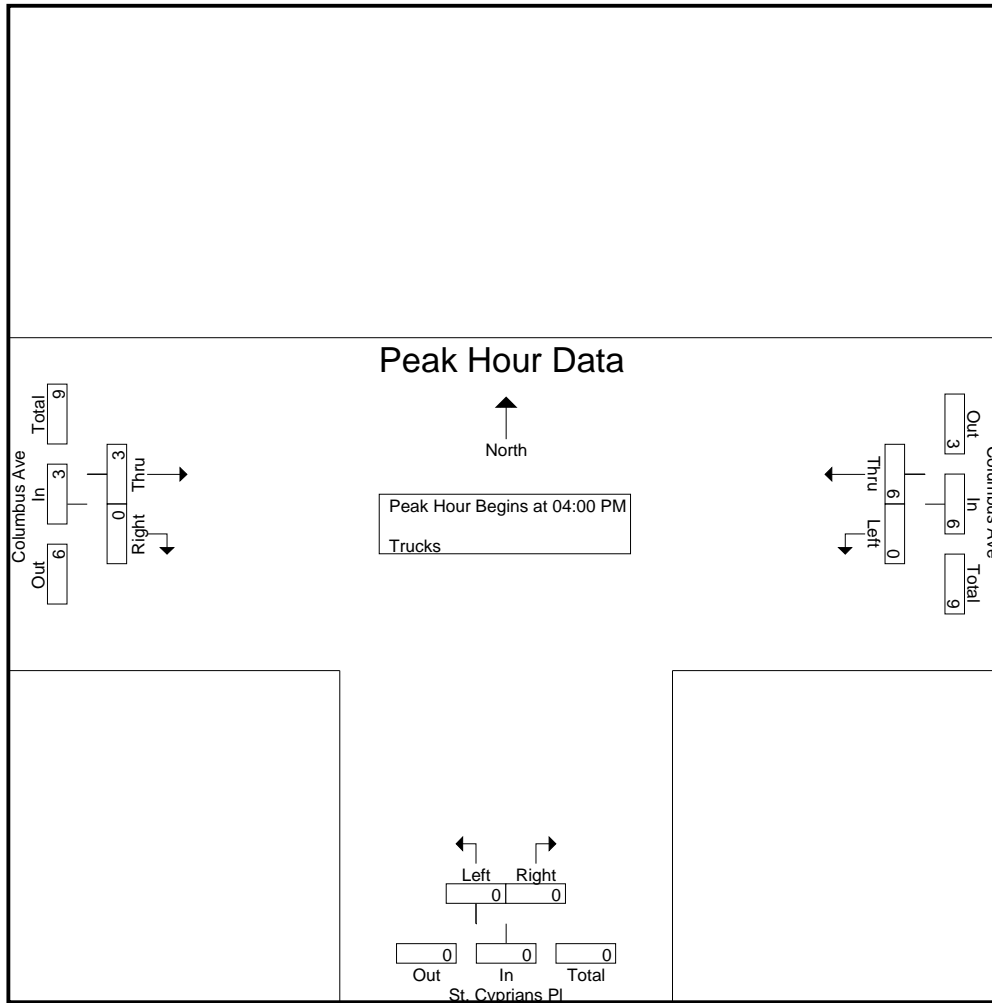
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
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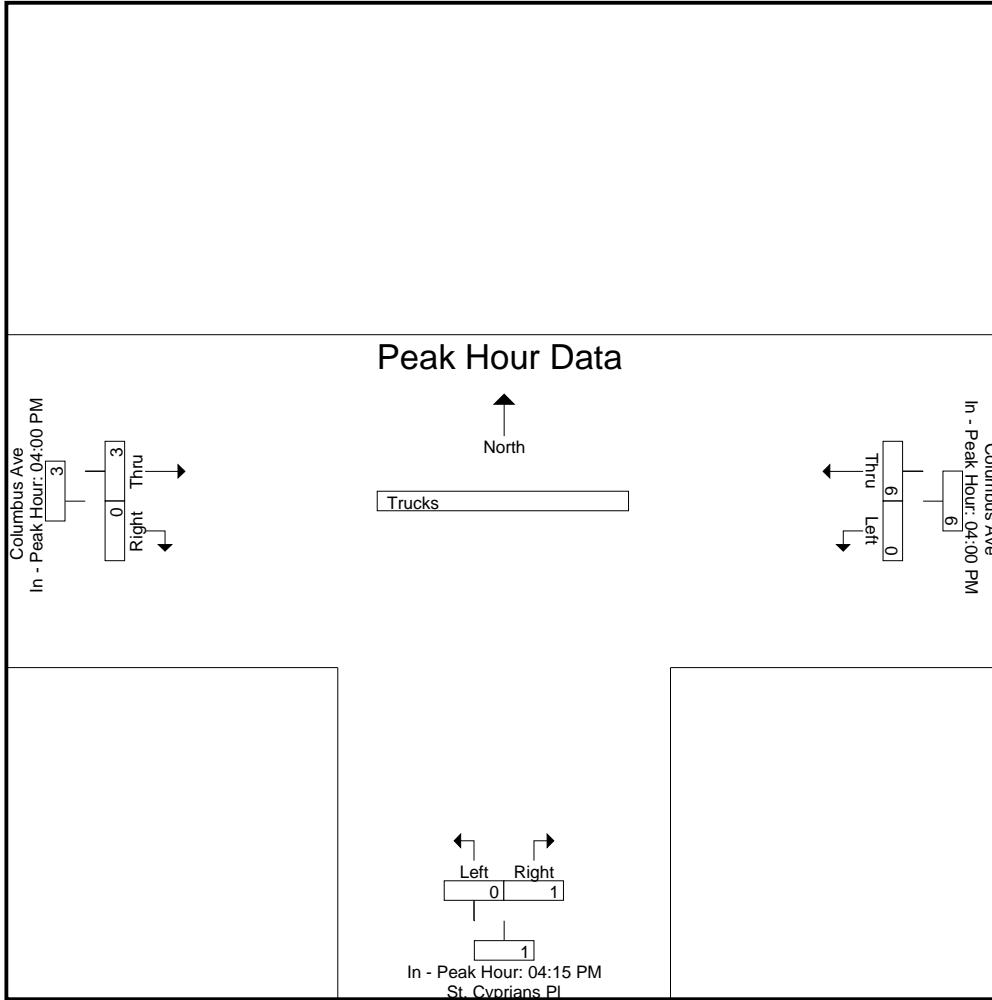
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	0	3	3	0	0	0	0	0	0
+30 mins.	0	3	3	0	0	0	1	0	1
+45 mins.	0	0	0	0	1	1	0	0	0
Total Volume	0	6	6	0	1	1	3	0	3
% App. Total	0	100		0	100		100	0	
PHF	.000	.500	.500	.000	.250	.250	.375	.000	.375

Accurate Counts
978-664-2565

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
Page No : 3

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear



Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
Page No : 1

Groups Printed- Bikes Peds

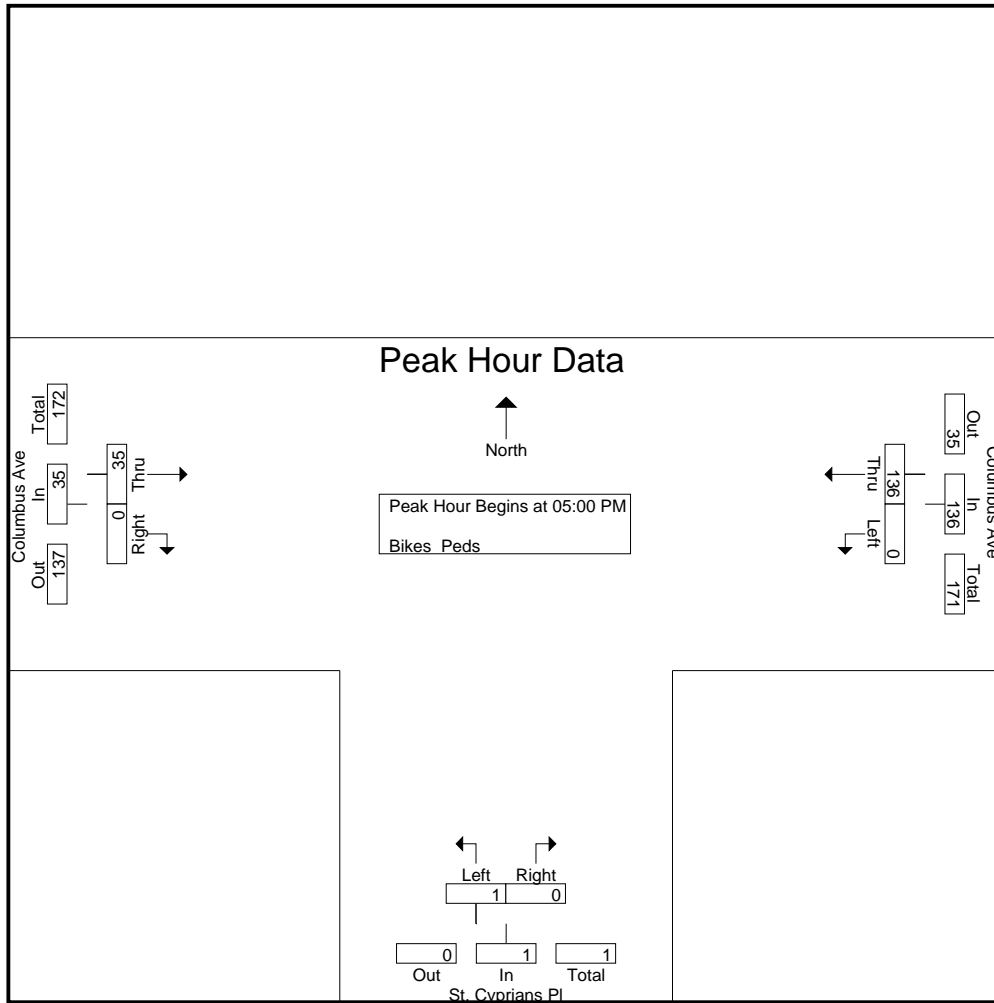
Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:00 PM	0	12	10	0	0	13	7	0	6	29	19	48
04:15 PM	0	16	2	0	0	13	2	0	11	26	18	44
04:30 PM	0	13	6	0	0	14	4	0	2	22	17	39
04:45 PM	0	20	3	0	0	14	5	0	4	21	25	46
Total	0	61	21	0	0	54	18	0	23	98	79	177
05:00 PM	0	22	4	0	0	19	9	0	3	26	31	57
05:15 PM	0	28	3	1	0	7	11	0	1	11	40	51
05:30 PM	0	48	7	0	0	8	9	0	1	16	57	73
05:45 PM	0	38	9	0	0	13	6	0	3	25	44	69
Total	0	136	23	1	0	47	35	0	8	78	172	250
Grand Total	0	197	44	1	0	101	53	0	31	176	251	427
Apprch %	0	100		100	0		100	0				
Total %	0	78.5		0.4	0		21.1	0		41.2	58.8	

Start Time	Columbus Ave From East			St, Cyprians Pl From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	22	22	0	0	0	9	0	9	31
05:15 PM	0	28	28	1	0	1	11	0	11	40
05:30 PM	0	48	48	0	0	0	9	0	9	57
05:45 PM	0	38	38	0	0	0	6	0	6	44
Total Volume	0	136	136	1	0	1	35	0	35	172
% App. Total	0	100		100	0		100	0		
PHF	.000	.708	.708	.250	.000	.250	.795	.000	.795	.754

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
Page No : 2



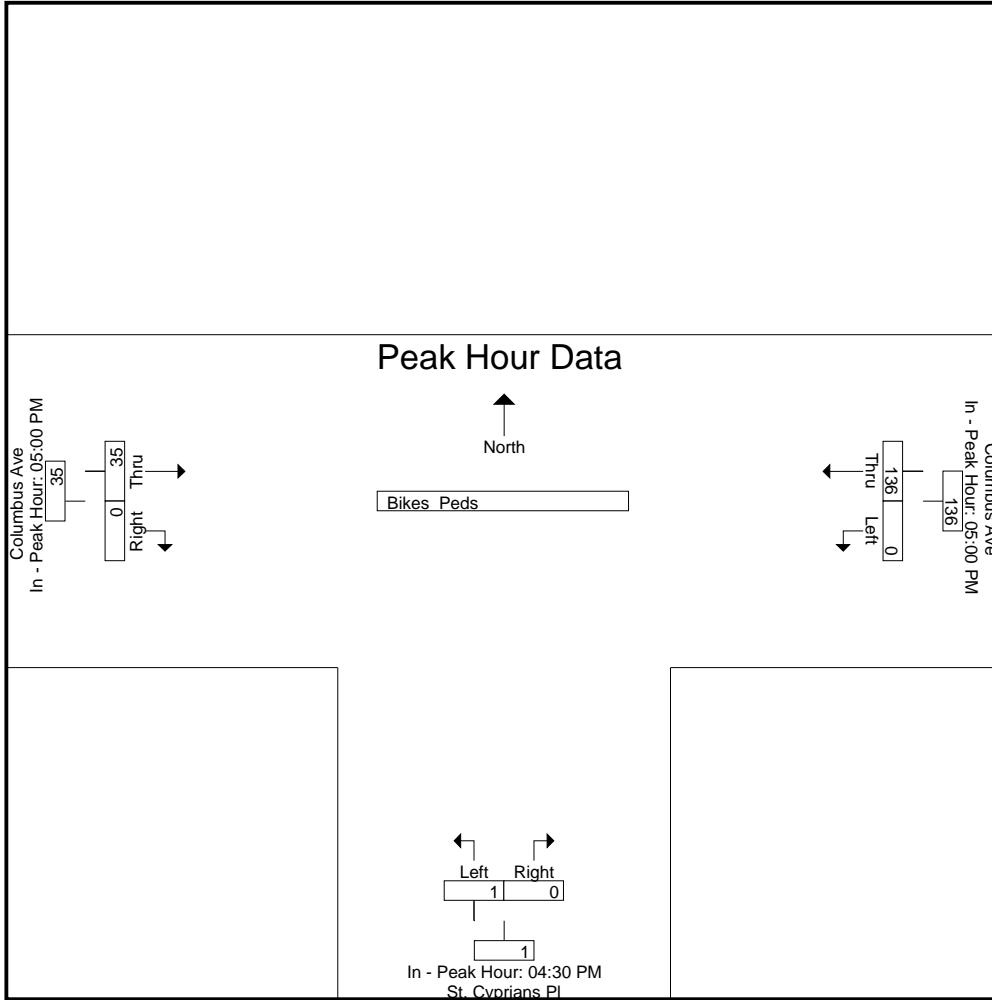
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM		04:30 PM			05:00 PM			
+0 mins.	0	22	22	0	0	0	9	0	9
+15 mins.	0	28	28	0	0	0	11	0	11
+30 mins.	0	48	48	0	0	0	9	0	9
+45 mins.	0	38	38	1	0	1	6	0	6
Total Volume	0	136	136	1	0	1	35	0	35
% App. Total	0	100		100	0		100	0	
PHF	.000	.708	.708	.250	.000	.250	.795	.000	.795

Accurate Counts
978-664-2565

N/S Street : Saint Cyprians Place
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046003
Site Code : 11046003
Start Date : 5/13/2013
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Columbus Ave From East		Coventry St From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	45	1	2	60	0	108
07:15 AM	0	32	1	3	68	0	104
07:30 AM	0	44	2	5	66	0	117
07:45 AM	0	54	2	9	89	0	154
Total	0	175	6	19	283	0	483
08:00 AM	0	58	0	4	70	0	132
08:15 AM	0	44	1	6	69	0	120
08:30 AM	0	66	3	4	78	0	151
08:45 AM	0	58	1	10	83	0	152
Total	0	226	5	24	300	0	555
Grand Total	0	401	11	43	583	0	1038
Apprch %	0	100	20.4	79.6	100	0	
Total %	0	38.6	1.1	4.1	56.2	0	
Cars	0	390	9	41	564	0	1004
% Cars	0	97.3	81.8	95.3	96.7	0	96.7
Trucks	0	11	2	2	19	0	34
% Trucks	0	2.7	18.2	4.7	3.3	0	3.3

Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:45 AM	0	54	54	2	9	11	89	0	89	154
08:00 AM	0	58	58	0	4	4	70	0	70	132
08:15 AM	0	44	44	1	6	7	69	0	69	120
08:30 AM	0	66	66	3	4	7	78	0	78	151
Total Volume	0	222	222	6	23	29	306	0	306	557
% App. Total	0	100		20.7	79.3		100	0		
PHF	.000	.841	.841	.500	.639	.659	.860	.000	.860	.904
Cars	0	216	216	5	23	28	300	0	300	544
% Cars	0	97.3	97.3	83.3	100	96.6	98.0	0	98.0	97.7
Trucks	0	6	6	1	0	1	6	0	6	13
% Trucks	0	2.7	2.7	16.7	0	3.4	2.0	0	2.0	2.3

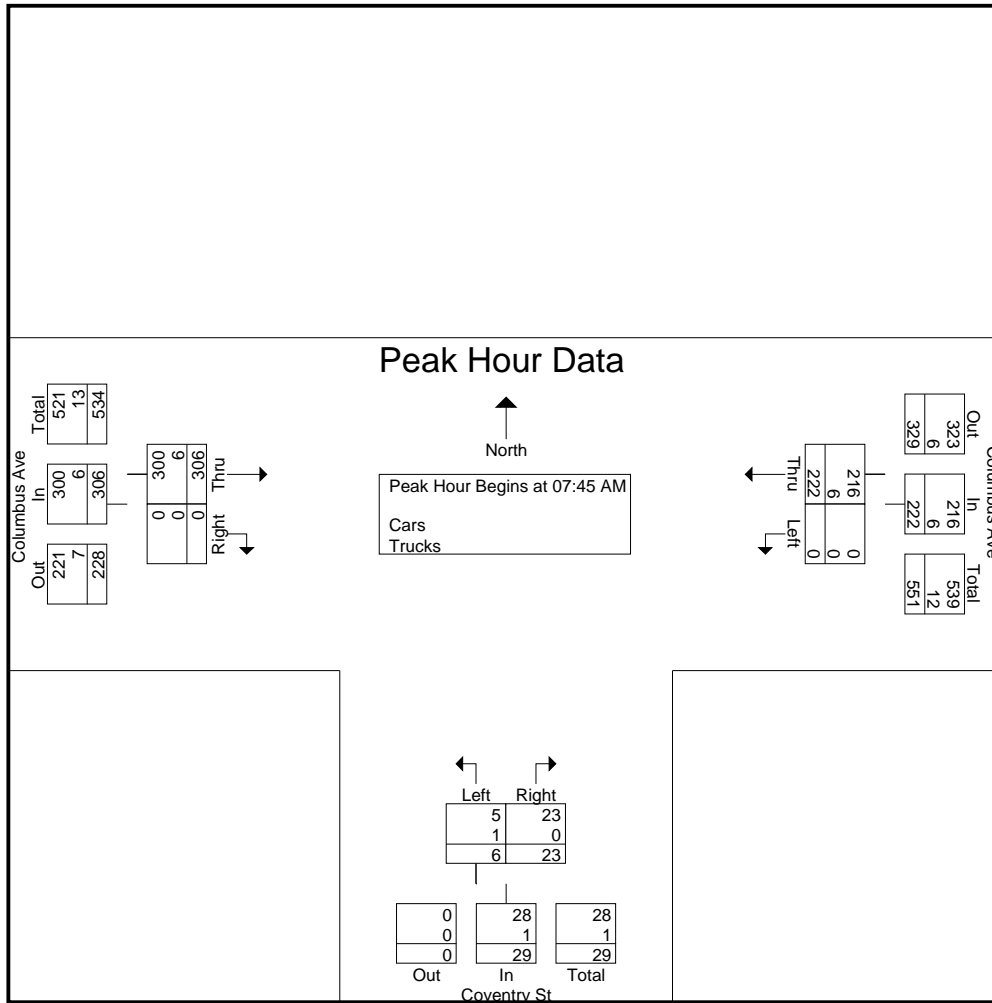
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 2



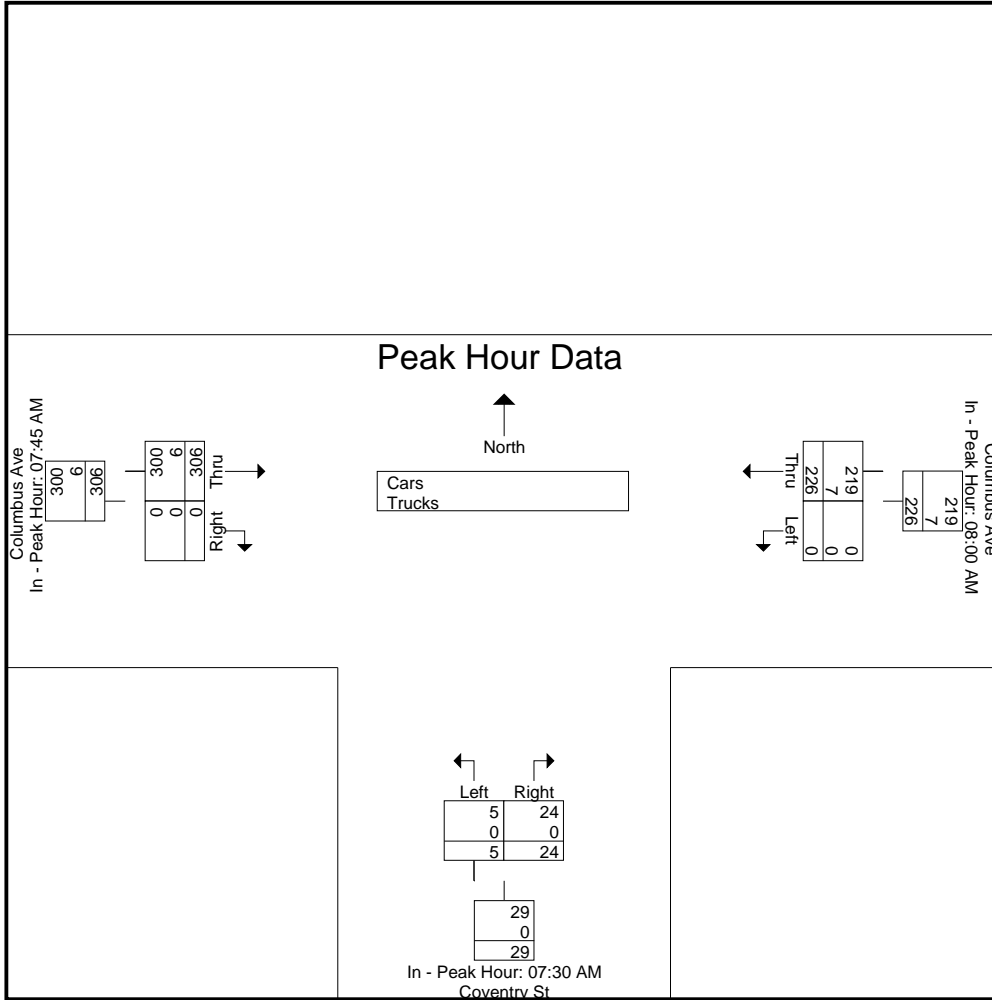
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM			07:30 AM			07:45 AM		
+0 mins.	0	58	58	2	5	7	89	0	89
+15 mins.	0	44	44	2	9	11	70	0	70
+30 mins.	0	66	66	0	4	4	69	0	69
+45 mins.	0	58	58	1	6	7	78	0	78
Total Volume	0	226	226	5	24	29	306	0	306
% App. Total	0	100		17.2	82.8		100	0	
PHF	.000	.856	.856	.625	.667	.659	.860	.000	.860
Cars	0	219	219	5	24	29	300	0	300
% Cars	0	96.9	96.9	100	100	100	98	0	98
Trucks	0	7	7	0	0	0	6	0	6
% Trucks	0	3.1	3.1	0	0	0	2	0	2

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
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Start Date : 5/13/2013
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Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 1

Groups Printed- Cars

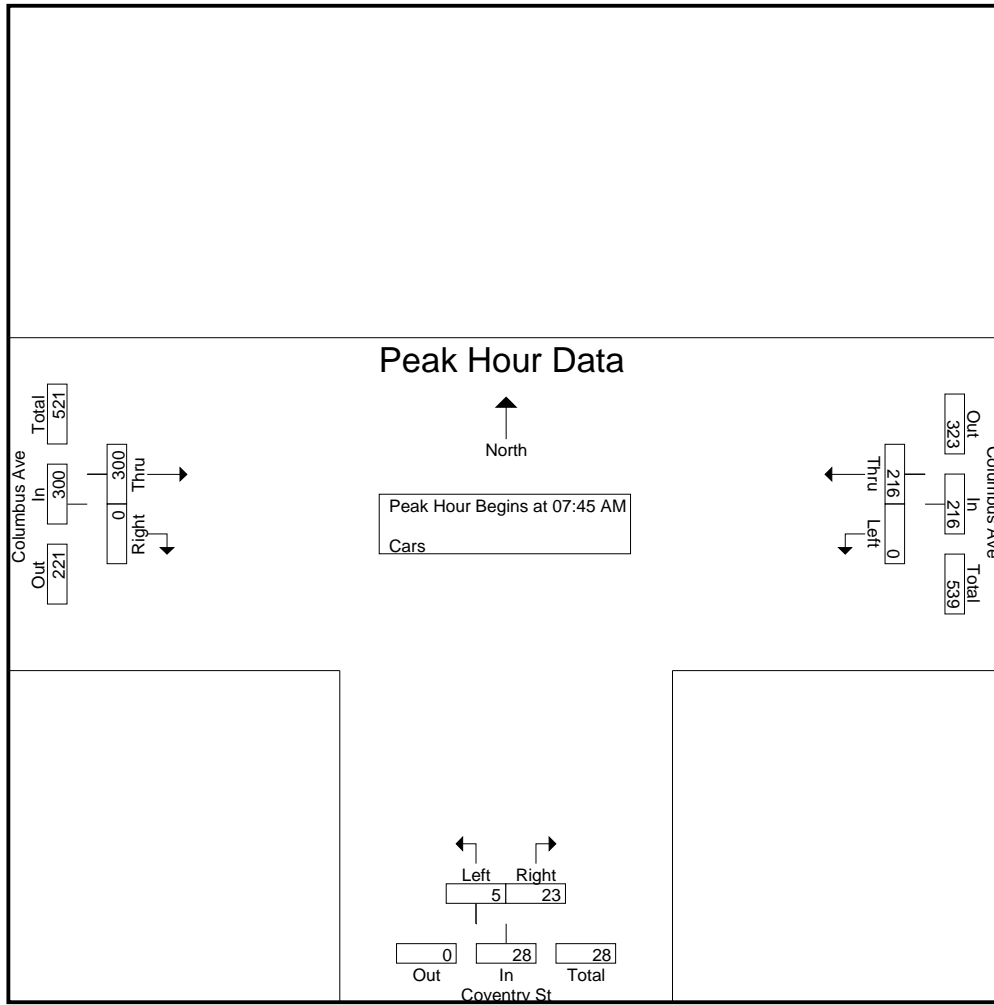
Start Time	Columbus Ave From East		Coventry St From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	44	1	1	54	0	100
07:15 AM	0	32	1	3	66	0	102
07:30 AM	0	41	2	5	62	0	110
07:45 AM	0	54	2	9	88	0	153
Total	0	171	6	18	270	0	465
08:00 AM	0	55	0	4	69	0	128
08:15 AM	0	43	1	6	65	0	115
08:30 AM	0	64	2	4	78	0	148
08:45 AM	0	57	0	9	82	0	148
Total	0	219	3	23	294	0	539
Grand Total	0	390	9	41	564	0	1004
Apprch %	0	100	18	82	100	0	
Total %	0	38.8	0.9	4.1	56.2	0	

Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	54	54	2	9	11	88	0	88	153
08:00 AM	0	55	55	0	4	4	69	0	69	128
08:15 AM	0	43	43	1	6	7	65	0	65	115
08:30 AM	0	64	64	2	4	6	78	0	78	148
Total Volume	0	216	216	5	23	28	300	0	300	544
% App. Total	0	100		17.9	82.1		100	0		
PHF	.000	.844	.844	.625	.639	.636	.852	.000	.852	.889

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
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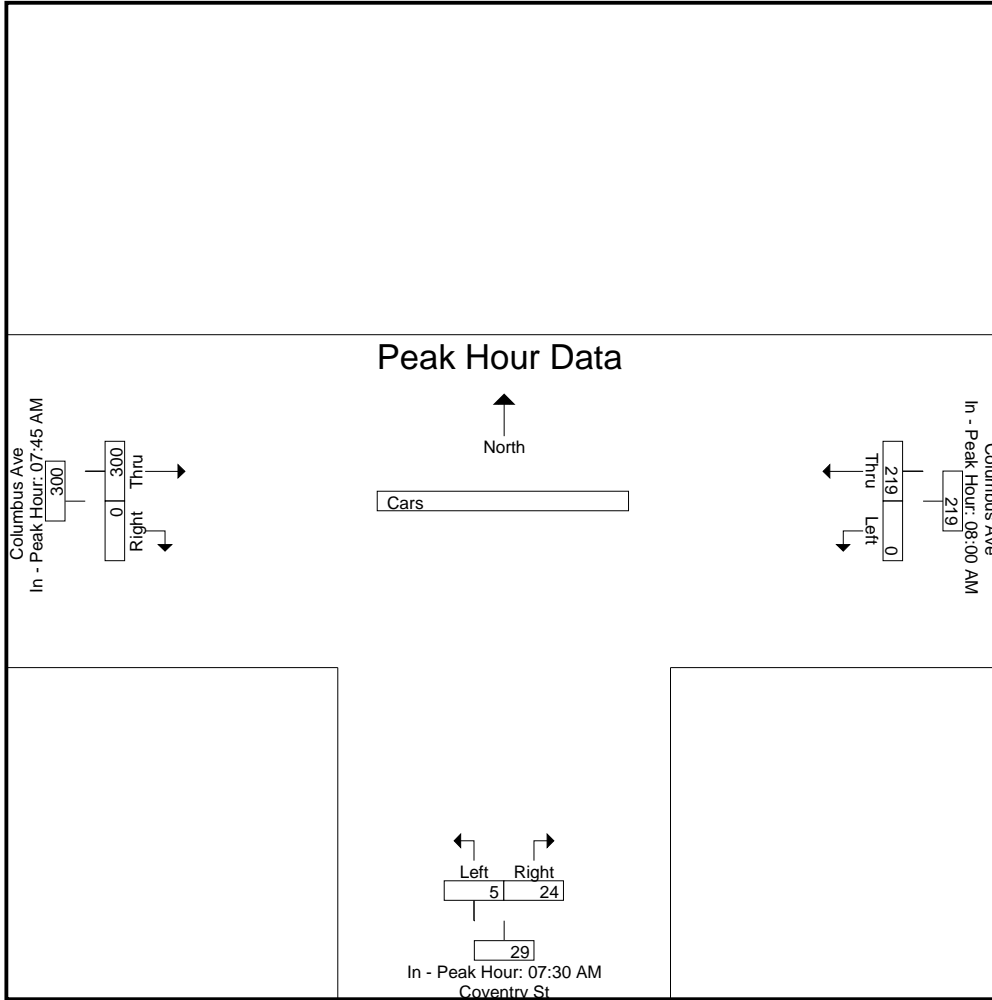
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM		07:30 AM			07:45 AM			
+0 mins.	0	55	55	2	5	7	88	0	88
+15 mins.	0	43	43	2	9	11	69	0	69
+30 mins.	0	64	64	0	4	4	65	0	65
+45 mins.	0	57	57	1	6	7	78	0	78
Total Volume	0	219	219	5	24	29	300	0	300
% App. Total	0	100		17.2	82.8		100	0	
PHF	.000	.855	.855	.625	.667	.659	.852	.000	.852

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
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Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 1

Groups Printed- Trucks

Start Time	Columbus Ave From East		Coventry St From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
07:00 AM	0	1	0	1	6	0	8
07:15 AM	0	0	0	0	2	0	2
07:30 AM	0	3	0	0	4	0	7
07:45 AM	0	0	0	0	1	0	1
Total	0	4	0	1	13	0	18
08:00 AM	0	3	0	0	1	0	4
08:15 AM	0	1	0	0	4	0	5
08:30 AM	0	2	1	0	0	0	3
08:45 AM	0	1	1	1	1	0	4
Total	0	7	2	1	6	0	16
Grand Total	0	11	2	2	19	0	34
Apprch %	0	100	50	50	100	0	
Total %	0	32.4	5.9	5.9	55.9	0	

Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	1	1	0	1	1	6	0	6	8
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	3	3	0	0	0	4	0	4	7
07:45 AM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	4	4	0	1	1	13	0	13	18
% App. Total	0	100		0	100		100	0		
PHF	.000	.333	.333	.000	.250	.250	.542	.000	.542	.563

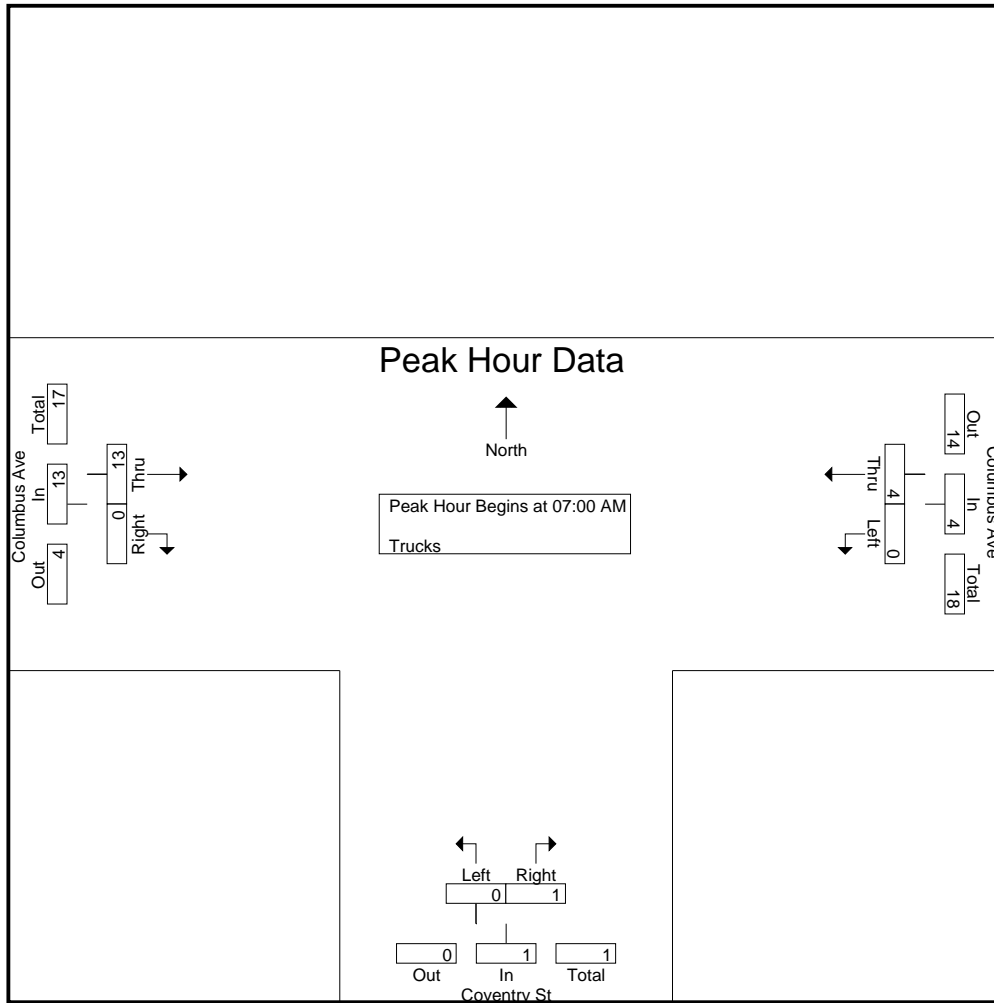
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
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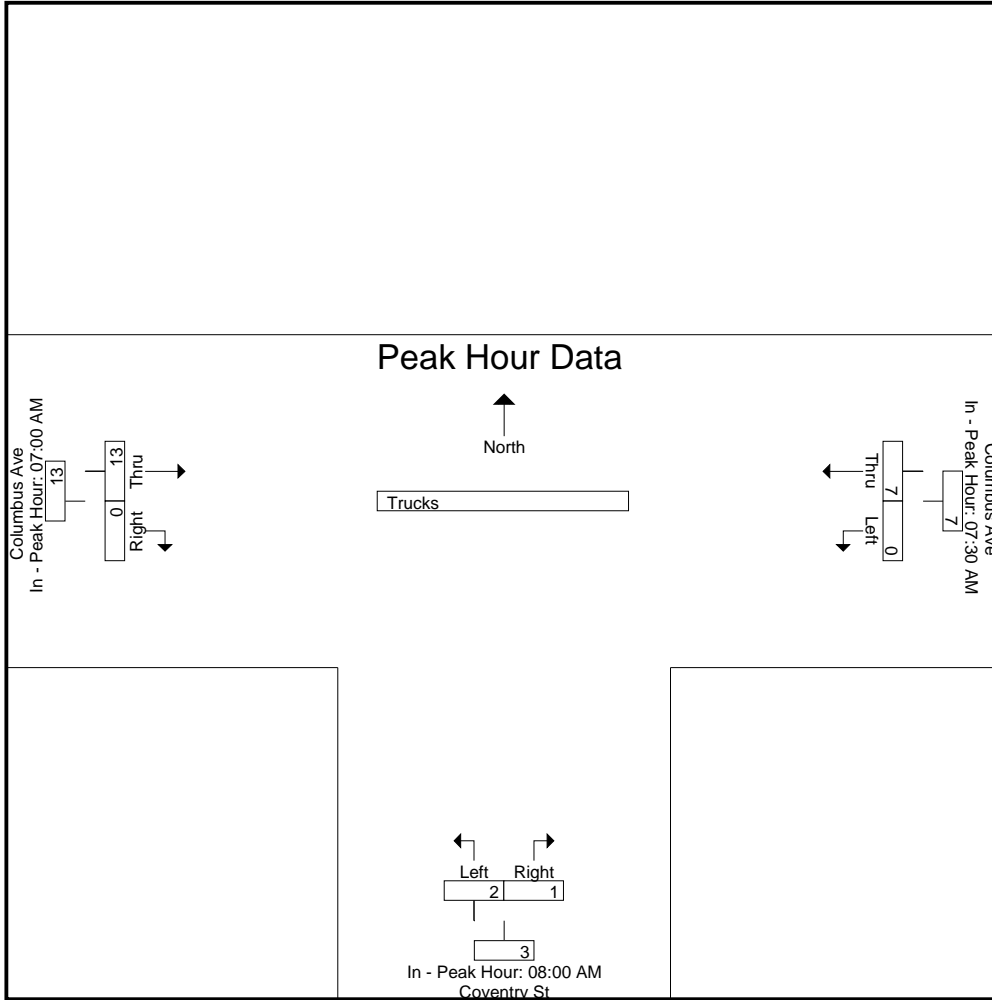
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			08:00 AM			07:00 AM		
+0 mins.	0	3	3	0	0	0	6	0	6
+15 mins.	0	0	0	0	0	0	2	0	2
+30 mins.	0	3	3	1	0	1	4	0	4
+45 mins.	0	1	1	1	1	2	1	0	1
Total Volume	0	7	7	2	1	3	13	0	13
% App. Total	0	100		66.7	33.3		100	0	
PHF	.000	.583	.583	.500	.250	.375	.542	.000	.542

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
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Accurate Counts

978-664-2565

N/S Street : Coventry Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Clear

File Name : 11046002
 Site Code : 11046002
 Start Date : 5/13/2013
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Groups Printed- Bikes Peds

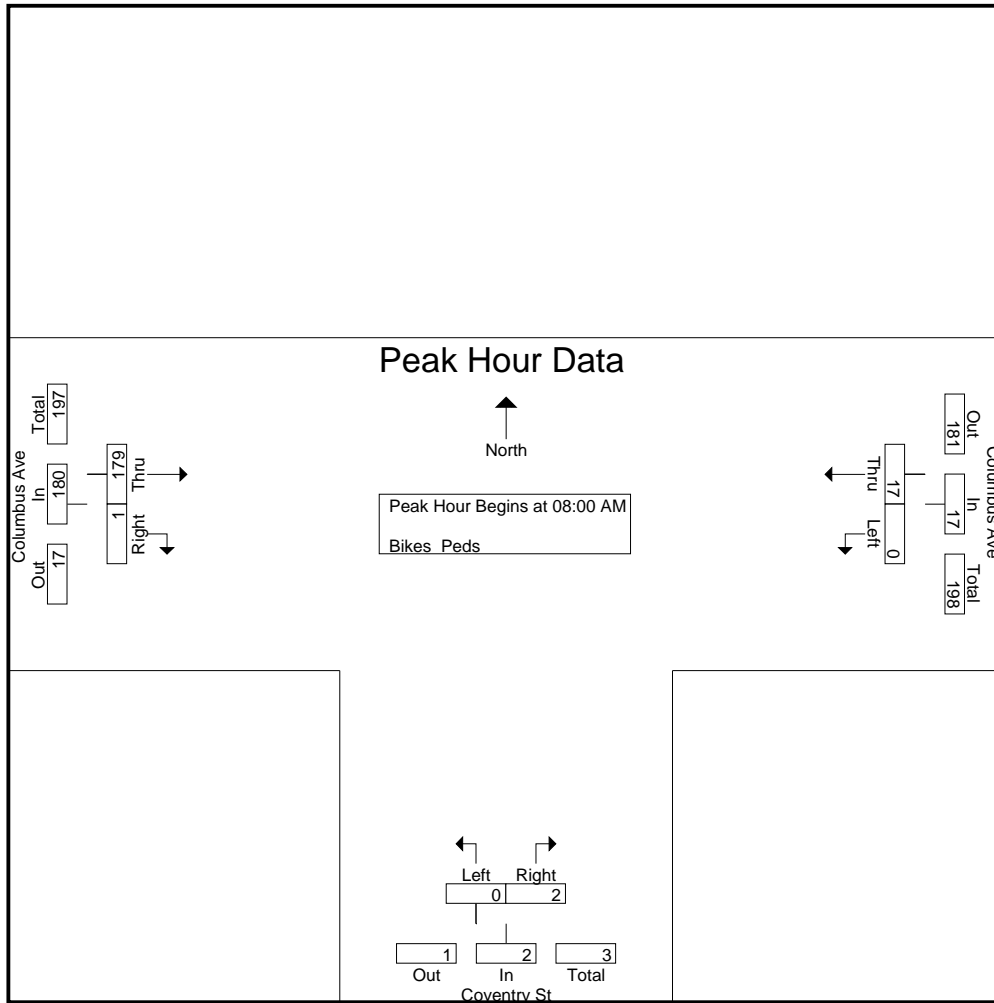
Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
07:00 AM	0	3	1	0	0	2	12	0	0	3	15	18
07:15 AM	0	4	1	0	0	1	18	0	2	4	22	26
07:30 AM	0	4	4	0	1	7	22	0	1	12	27	39
07:45 AM	1	5	3	0	0	6	36	1	0	9	43	52
Total	1	16	9	0	1	16	88	1	3	28	107	135
08:00 AM	0	3	8	0	0	5	32	0	2	15	35	50
08:15 AM	0	9	5	0	0	4	42	0	1	10	51	61
08:30 AM	0	2	3	0	0	10	43	0	1	14	45	59
08:45 AM	0	3	2	0	2	7	62	1	0	9	68	77
Total	0	17	18	0	2	26	179	1	4	48	199	247
Grand Total	1	33	27	0	3	42	267	2	7	76	306	382
Apprch %	2.9	97.1		0	100		99.3	0.7				
Total %	0.3	10.8		0	1		87.3	0.7		19.9	80.1	

Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	3	3	0	0	0	32	0	32	35
08:15 AM	0	9	9	0	0	0	42	0	42	51
08:30 AM	0	2	2	0	0	0	43	0	43	45
08:45 AM	0	3	3	0	2	2	62	1	63	68
Total Volume	0	17	17	0	2	2	179	1	180	199
% App. Total	0	100		0	100		99.4	0.6		
PHF	.000	.472	.472	.000	.250	.250	.722	.250	.714	.732

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
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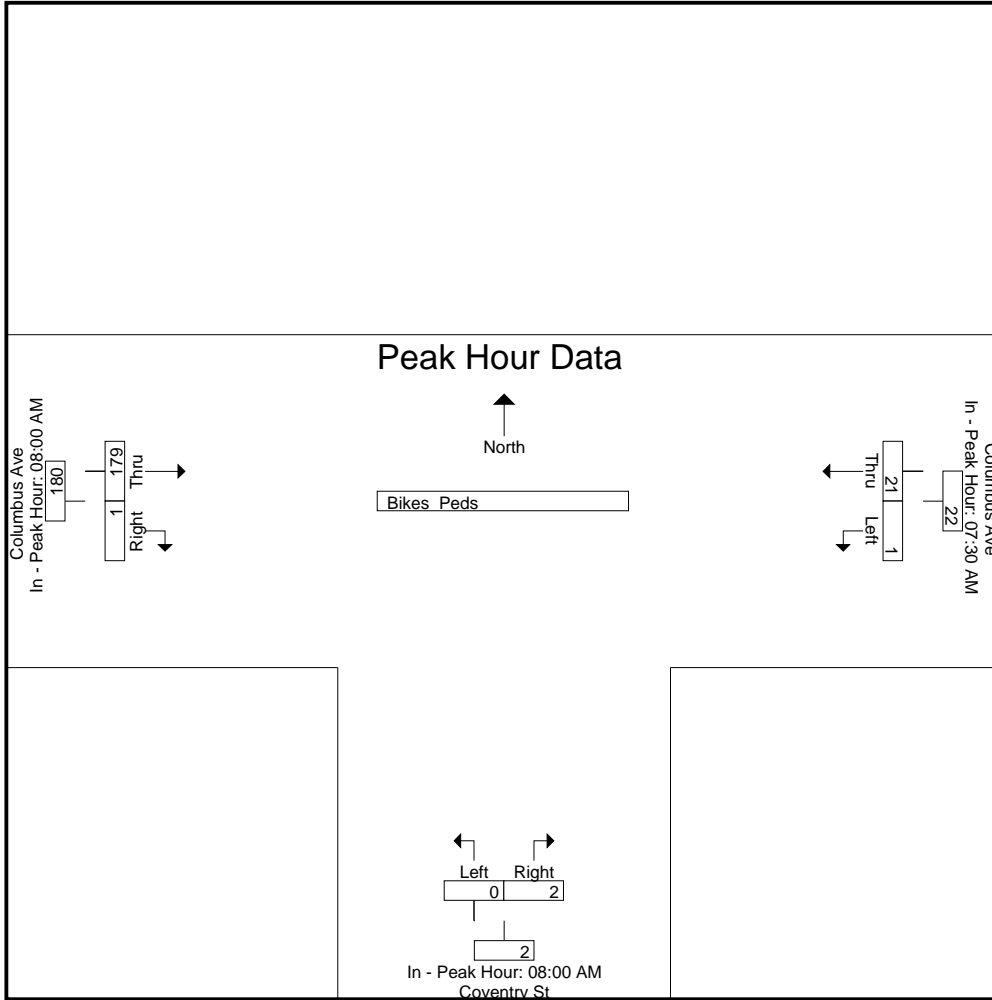
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			08:00 AM			08:00 AM		
+0 mins.	0	4	4	0	0	0	32	0	32
+15 mins.	1	5	6	0	0	0	42	0	42
+30 mins.	0	3	3	0	0	0	43	0	43
+45 mins.	0	9	9	0	2	2	62	1	63
Total Volume	1	21	22	0	2	2	179	1	180
% App. Total	4.5	95.5		0	100		99.4	0.6	
PHF	.250	.583	.611	.000	.250	.250	.722	.250	.714

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
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Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 1

Groups Printed- Cars - Trucks

Start Time	Columbus Ave From East		Coventry St From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	74	3	10	60	0	147
04:15 PM	0	67	2	8	62	0	139
04:30 PM	0	60	1	6	61	0	128
04:45 PM	0	63	4	6	77	0	150
Total	0	264	10	30	260	0	564
05:00 PM	0	83	2	2	89	0	176
05:15 PM	0	101	8	4	87	0	200
05:30 PM	0	76	1	3	57	0	137
05:45 PM	0	54	2	5	47	0	108
Total	0	314	13	14	280	0	621
Grand Total	0	578	23	44	540	0	1185
Apprch %	0	100	34.3	65.7	100	0	
Total %	0	48.8	1.9	3.7	45.6	0	
Cars	0	572	23	43	537	0	1175
% Cars	0	99	100	97.7	99.4	0	99.2
Trucks	0	6	0	1	3	0	10
% Trucks	0	1	0	2.3	0.6	0	0.8

Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:45 PM	0	63	63	4	6	10	77	0	77	150
05:00 PM	0	83	83	2	2	4	89	0	89	176
05:15 PM	0	101	101	8	4	12	87	0	87	200
05:30 PM	0	76	76	1	3	4	57	0	57	137
Total Volume	0	323	323	15	15	30	310	0	310	663
% App. Total	0	100		50	50		100	0		
PHF	.000	.800	.800	.469	.625	.625	.871	.000	.871	.829
Cars	0	321	321	15	15	30	309	0	309	660
% Cars	0	99.4	99.4	100	100	100	99.7	0	99.7	99.5
Trucks	0	2	2	0	0	0	1	0	1	3
% Trucks	0	0.6	0.6	0	0	0	0.3	0	0.3	0.5

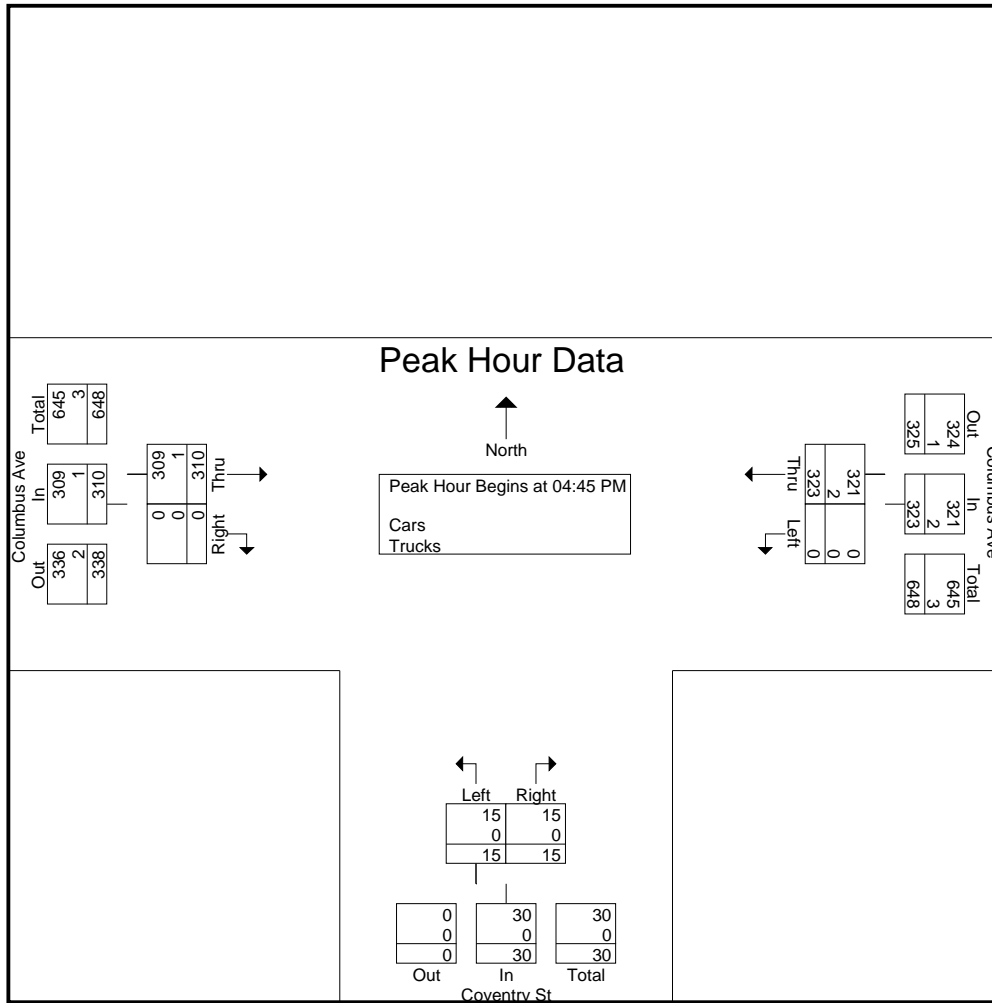
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 2



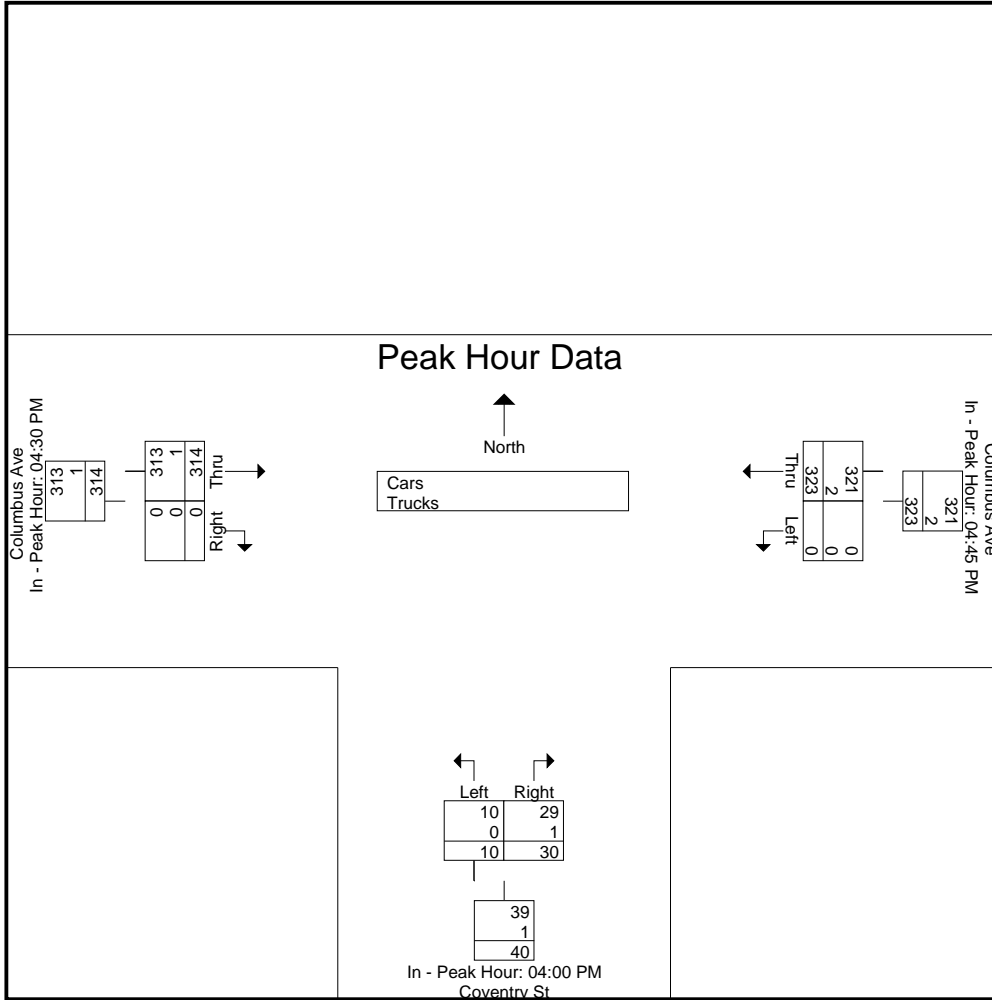
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:30 PM		
+0 mins.	0	63	63	3	10	13	61	0	61
+15 mins.	0	83	83	2	8	10	77	0	77
+30 mins.	0	101	101	1	6	7	89	0	89
+45 mins.	0	76	76	4	6	10	87	0	87
Total Volume	0	323	323	10	30	40	314	0	314
% App. Total	0	100	100	25	75	75	100	0	100
PHF	.000	.800	.800	.625	.750	.769	.882	.000	.882
Cars	0	321	321	10	29	39	313	0	313
% Cars	0	99.4	99.4	100	96.7	97.5	99.7	0	99.7
Trucks	0	2	2	0	1	1	1	0	1
% Trucks	0	0.6	0.6	0	3.3	2.5	0.3	0	0.3

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 3



Accurate Counts

978-664-2565

N/S Street : Coventry Street
 E/W Street: Columbus Avenue
 City/State : Boston, MA
 Weather : Clear

File Name : 11046002
 Site Code : 11046002
 Start Date : 5/13/2013
 Page No : 1

Groups Printed- Cars

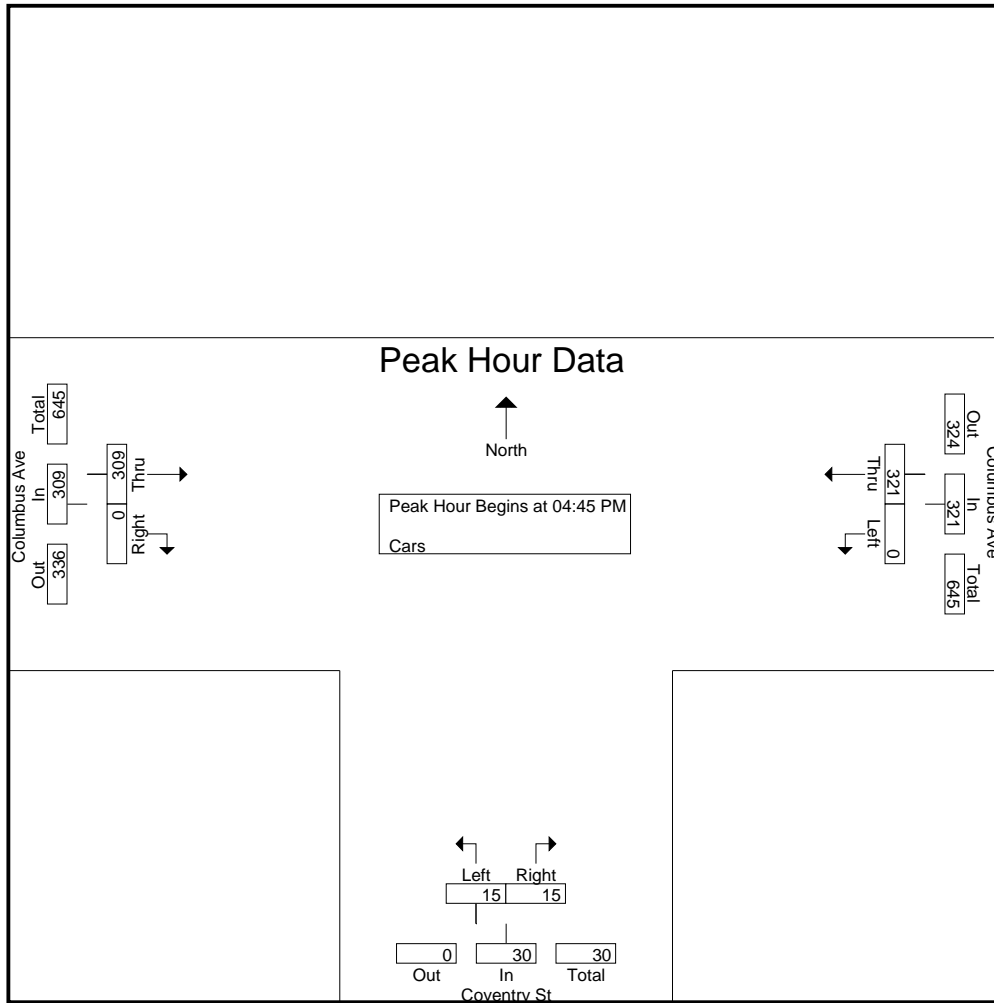
Start Time	Columbus Ave From East		Coventry St From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	74	3	10	58	0	145
04:15 PM	0	65	2	7	62	0	136
04:30 PM	0	58	1	6	61	0	126
04:45 PM	0	63	4	6	76	0	149
Total	0	260	10	29	257	0	556
05:00 PM	0	83	2	2	89	0	176
05:15 PM	0	100	8	4	87	0	199
05:30 PM	0	75	1	3	57	0	136
05:45 PM	0	54	2	5	47	0	108
Total	0	312	13	14	280	0	619
Grand Total	0	572	23	43	537	0	1175
Apprch %	0	100	34.8	65.2	100	0	
Total %	0	48.7	2	3.7	45.7	0	

Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	63	63	4	6	10	76	0	76	149
05:00 PM	0	83	83	2	2	4	89	0	89	176
05:15 PM	0	100	100	8	4	12	87	0	87	199
05:30 PM	0	75	75	1	3	4	57	0	57	136
Total Volume	0	321	321	15	15	30	309	0	309	660
% App. Total	0	100		50	50		100	0		
PHF	.000	.803	.803	.469	.625	.625	.868	.000	.868	.829

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 2



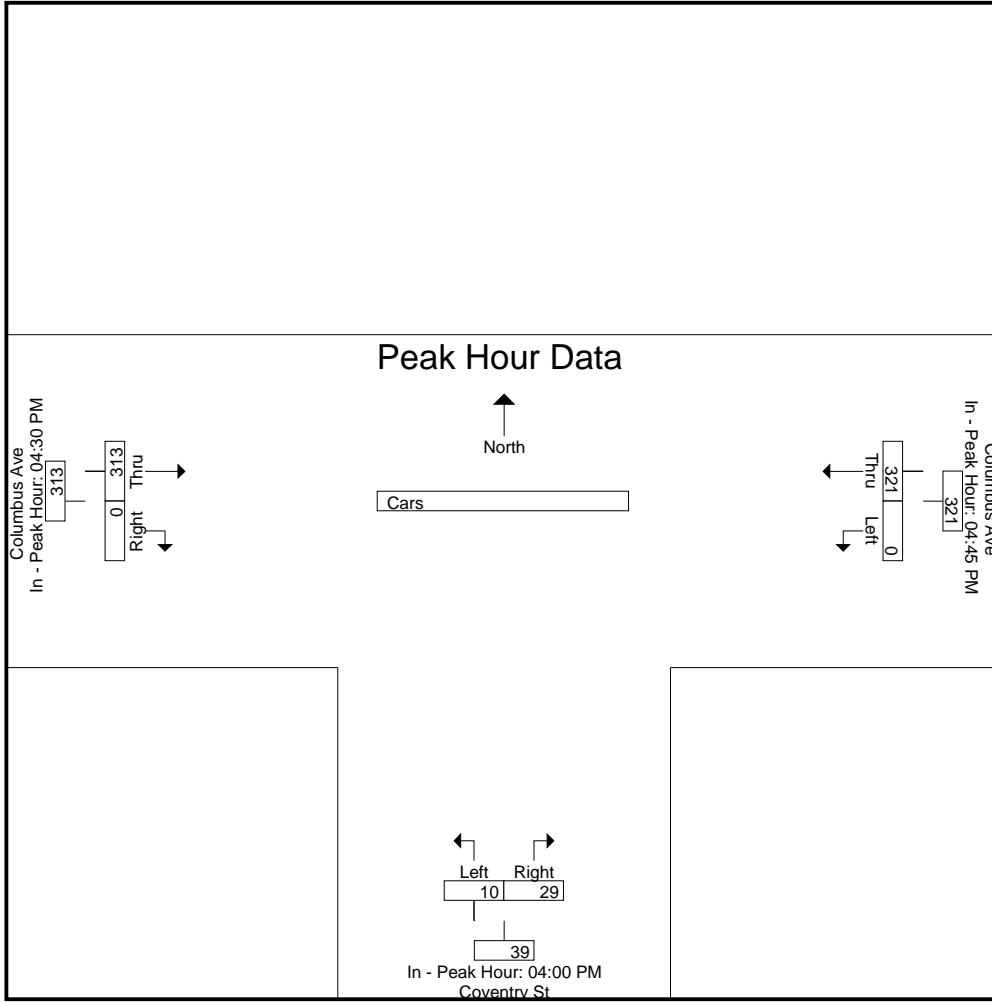
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:30 PM		
+0 mins.	0	63	63	3	10	13	61	0	61
+15 mins.	0	83	83	2	7	9	76	0	76
+30 mins.	0	100	100	1	6	7	89	0	89
+45 mins.	0	75	75	4	6	10	87	0	87
Total Volume	0	321	321	10	29	39	313	0	313
% App. Total	0	100		25.6	74.4		100	0	
PHF	.000	.803	.803	.625	.725	.750	.879	.000	.879

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 1

Groups Printed- Trucks

Start Time	Columbus Ave From East		Coventry St From South		Columbus Ave From West		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	0	0	0	0	2	0	2
04:15 PM	0	2	0	1	0	0	3
04:30 PM	0	2	0	0	0	0	2
04:45 PM	0	0	0	0	1	0	1
Total	0	4	0	1	3	0	8
05:00 PM	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	0	0	1
05:30 PM	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0
Total	0	2	0	0	0	0	2
Grand Total	0	6	0	1	3	0	10
Apprch %	0	100	0	100	100	0	
Total %	0	60	0	10	30	0	

Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	0	2	0	2	2
04:15 PM	0	2	2	0	1	1	0	0	0	3
04:30 PM	0	2	2	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	1	0	1	1
Total Volume	0	4	4	0	1	1	3	0	3	8
% App. Total	0	100		0	100		100	0		
PHF	.000	.500	.500	.000	.250	.250	.375	.000	.375	.667

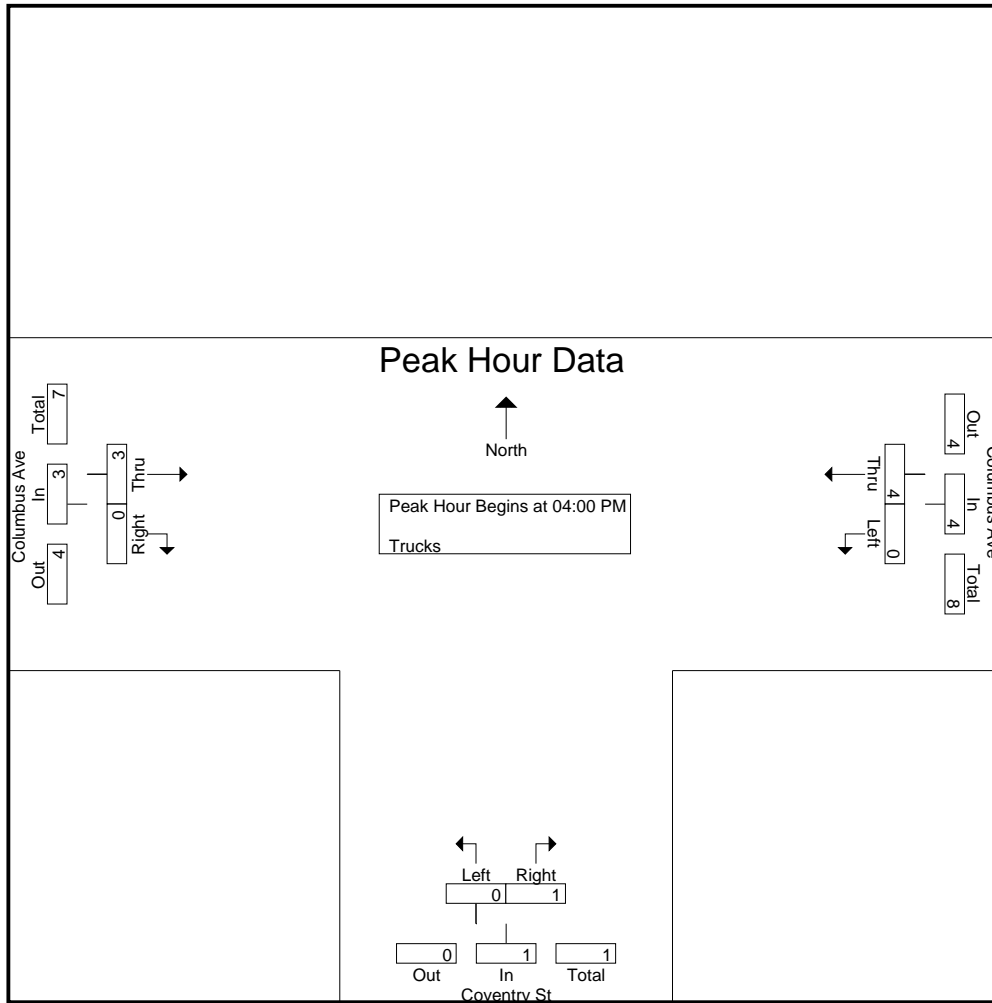
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 2



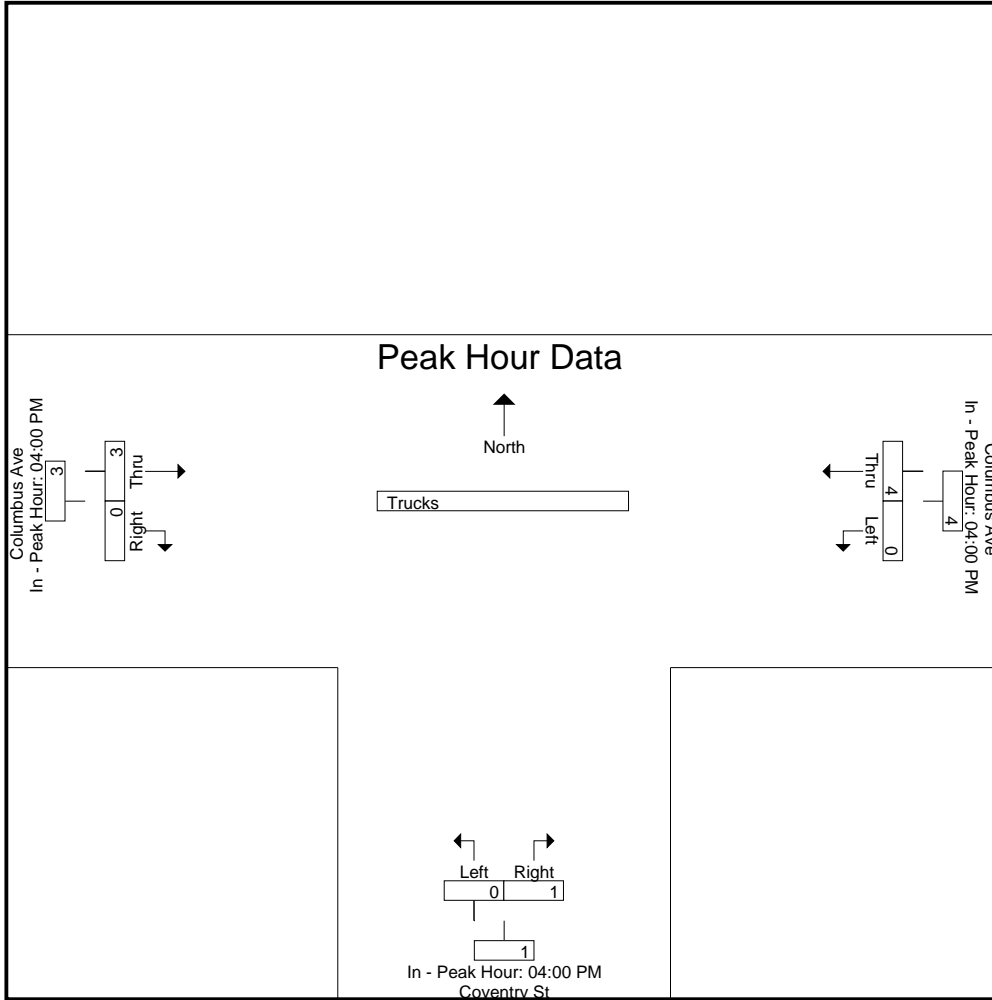
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	0	2	2	0	1	1	0	0	0
+30 mins.	0	2	2	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	0	1
Total Volume	0	4	4	0	1	1	3	0	3
% App. Total	0	100		0	100		100	0	
PHF	.000	.500	.500	.000	.250	.250	.375	.000	.375

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 3



Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 1

Groups Printed- Bikes Peds

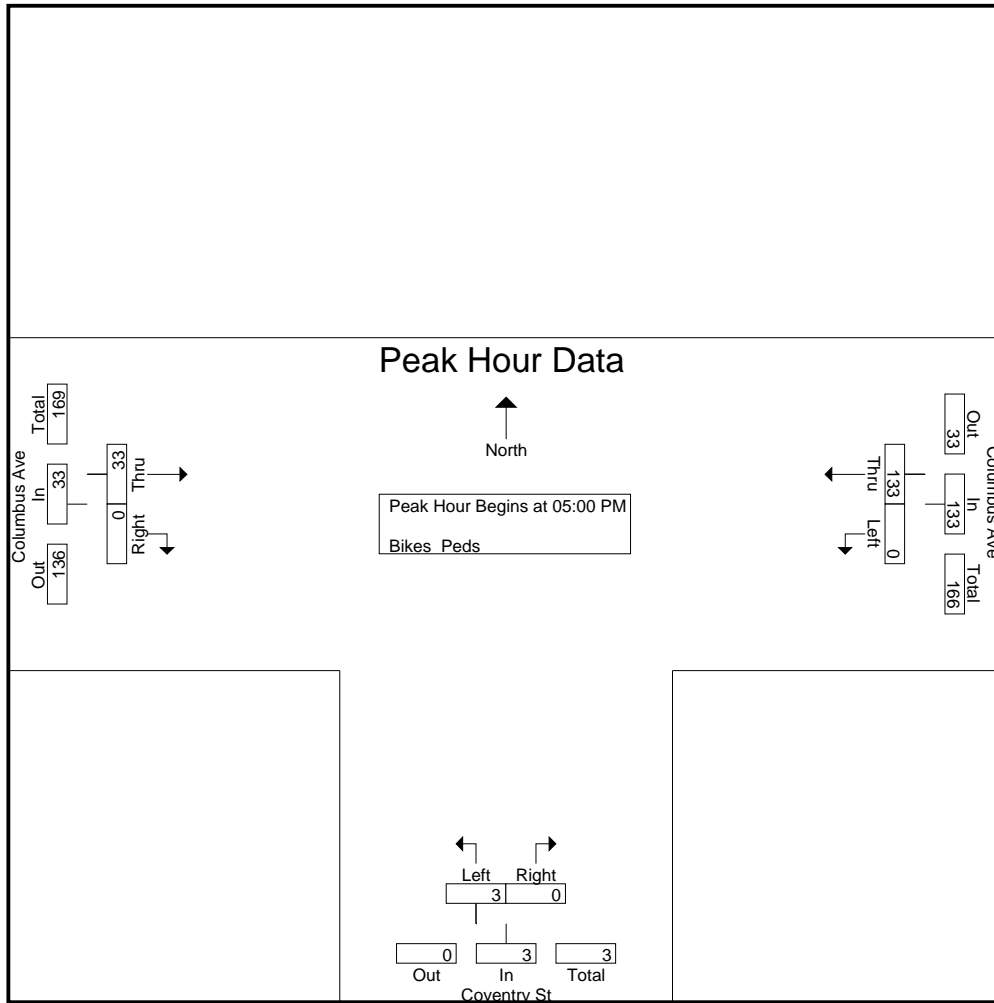
Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Peds	Left	Right	Peds	Thru	Right	Peds			
04:00 PM	0	10	5	0	0	20	8	0	0	25	18	43
04:15 PM	0	14	4	0	1	12	3	0	0	16	18	34
04:30 PM	0	16	7	0	0	17	3	0	1	25	19	44
04:45 PM	0	17	6	0	0	18	6	0	1	25	23	48
Total	0	57	22	0	1	67	20	0	2	91	78	169
05:00 PM	0	18	11	3	0	33	10	0	4	48	31	79
05:15 PM	0	32	4	0	0	7	8	0	1	12	40	52
05:30 PM	0	47	14	0	0	22	8	0	1	37	55	92
05:45 PM	0	36	9	0	0	16	7	0	0	25	43	68
Total	0	133	38	3	0	78	33	0	6	122	169	291
Grand Total	0	190	60	3	1	145	53	0	8	213	247	460
Apprch %	0	100		75	25		100	0		46.3	53.7	
Total %	0	76.9		1.2	0.4		21.5	0				

Start Time	Columbus Ave From East			Coventry St From South			Columbus Ave From West			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	0	18	18	3	0	3	10	0	10	31
05:15 PM	0	32	32	0	0	0	8	0	8	40
05:30 PM	0	47	47	0	0	0	8	0	8	55
05:45 PM	0	36	36	0	0	0	7	0	7	43
Total Volume	0	133	133	3	0	3	33	0	33	169
% App. Total	0	100		100	0		100	0		
PHF	.000	.707	.707	.250	.000	.250	.825	.000	.825	.768

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 2



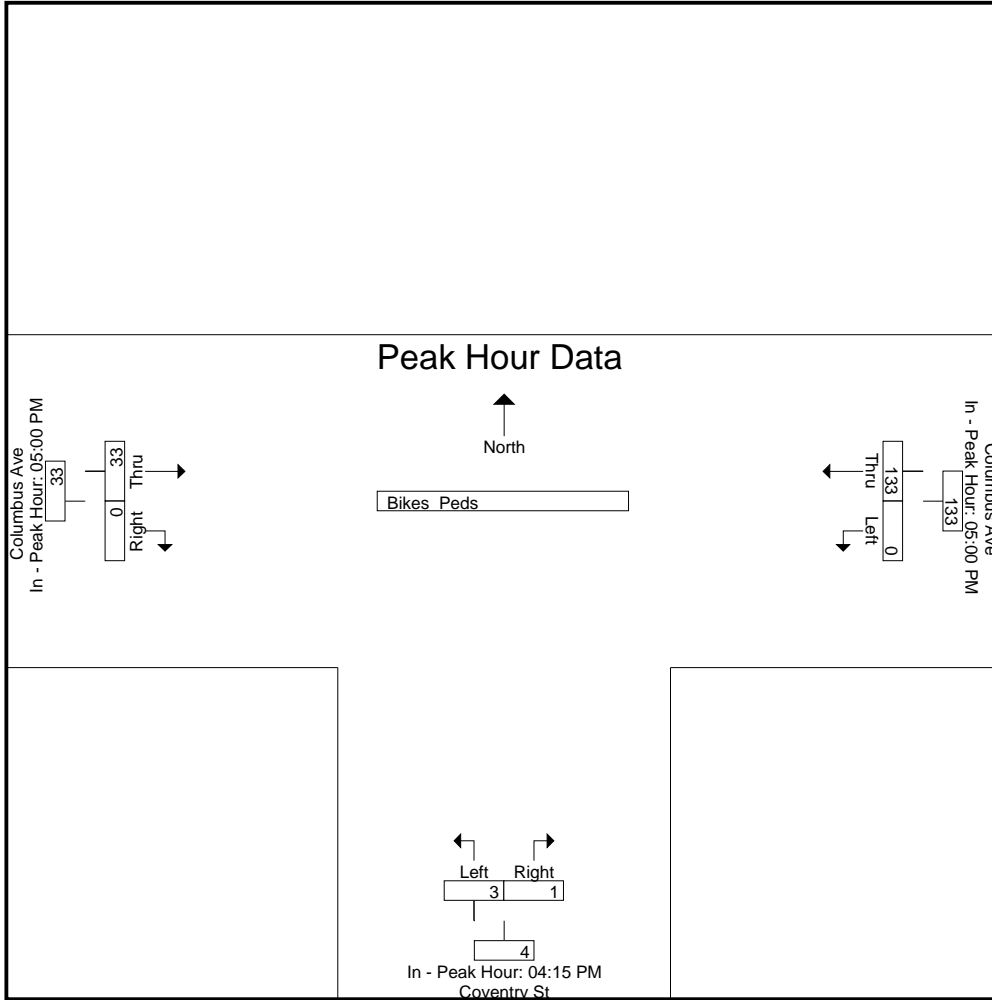
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM		04:15 PM			05:00 PM			
+0 mins.	0	18	18	0	1	1	0	10	
+15 mins.	0	32	32	0	0	0	8	8	
+30 mins.	0	47	47	0	0	0	8	8	
+45 mins.	0	36	36	3	0	3	7	7	
Total Volume	0	133	133	3	1	4	33	33	
% App. Total	0	100		75	25		100	0	
PHF	.000	.707	.707	.250	.250	.333	.825	.000	.825

Accurate Counts
978-664-2565

N/S Street : Coventry Street
E/W Street: Columbus Avenue
City/State : Boston, MA
Weather : Clear

File Name : 11046002
Site Code : 11046002
Start Date : 5/13/2013
Page No : 3





PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

N: Forsyth Street
S: Ruggles T Station Doorway
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 D
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Peds

Start Time	Forsyth Street From North			From East			Ruggles T-Station Doorway From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	30	0	0	0	0	0	252	0	0	0	0	282
07:15 AM	0	49	0	0	0	0	0	381	0	0	0	0	430
07:30 AM	0	37	0	0	0	0	0	327	0	0	0	0	364
07:45 AM	0	45	0	0	0	0	0	640	0	0	0	0	685
Total	0	161	0	0	0	0	0	1600	0	0	0	0	1761
08:00 AM	0	50	0	0	0	0	0	417	0	0	0	0	467
08:15 AM	0	49	0	0	0	0	0	374	0	0	0	0	423
08:30 AM	0	47	0	0	0	0	0	330	0	0	0	0	377
08:45 AM	0	41	0	0	0	0	0	352	0	0	0	0	393
Total	0	187	0	0	0	0	0	1473	0	0	0	0	1660
Grand Total	0	348	0	0	0	0	0	3073	0	0	0	0	3421
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	10.2	0	0	0	0	0	89.8	0	0	0	0	

Start Time	Forsyth Street From North				From East				Ruggles T-Station Doorway From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	45	0	45	0	0	0	0	0	640	0	640	0	0	0	0	685
08:00 AM	0	50	0	50	0	0	0	0	0	417	0	417	0	0	0	0	467
08:15 AM	0	49	0	49	0	0	0	0	0	374	0	374	0	0	0	0	423
08:30 AM	0	47	0	47	0	0	0	0	0	330	0	330	0	0	0	0	377
Total Volume	0	191	0	191	0	0	0	0	0	1761	0	1761	0	0	0	0	1952
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.955	.000	.955	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.000	.000	.712



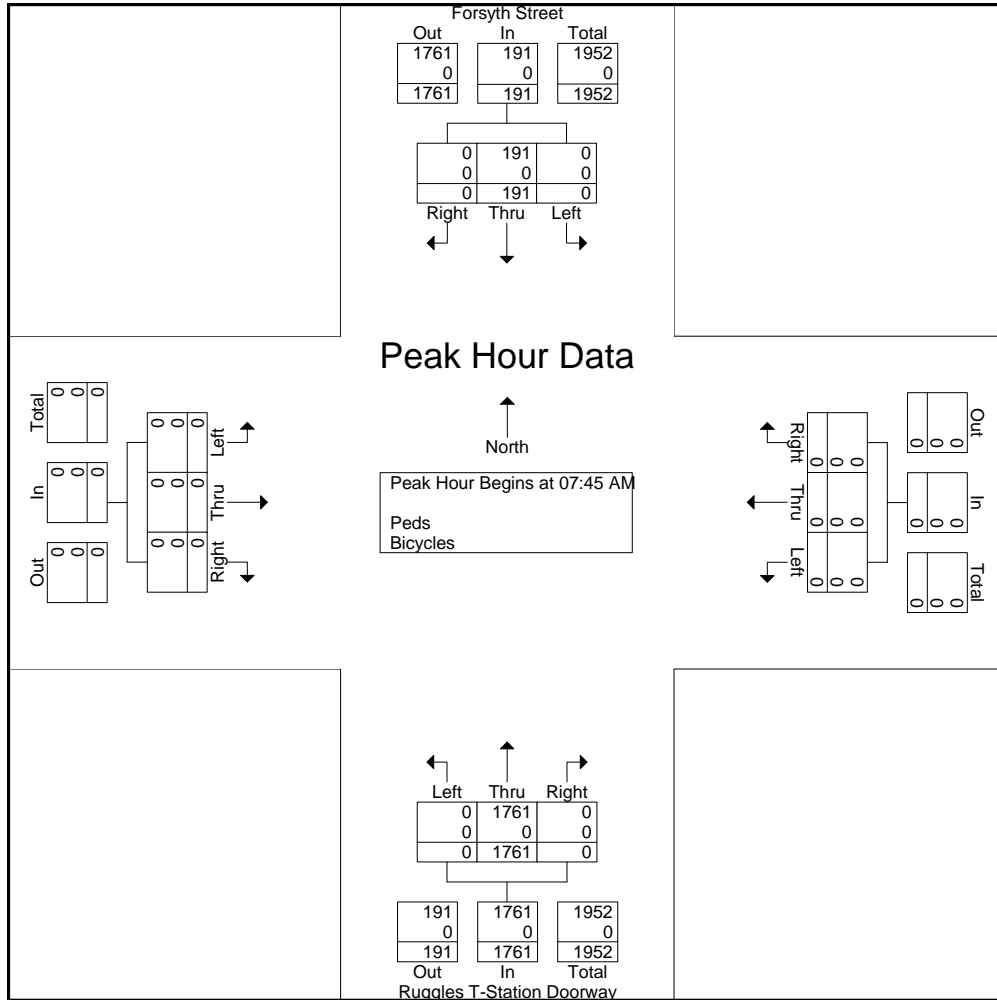
PRECISION
D A T A
INDUSTRIES, LLC

P.O. Box 301 Berlin, MA 01503
Office: 508.481.3999 Fax: 508.545.1234
Email: datarequests@pdillc.com

N: Forsyth Street
S: Ruggles T Station Doorway
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 D
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Start Time	Forsyth Street From North				From East				Ruggles T-Station Doorway From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	45	0	45	0	0	0	0	0	640	0	640	0	0	0	0	685
08:00 AM	0	50	0	50	0	0	0	0	0	417	0	417	0	0	0	0	467
08:15 AM	0	49	0	49	0	0	0	0	0	374	0	374	0	0	0	0	423
08:30 AM	0	47	0	47	0	0	0	0	0	330	0	330	0	0	0	0	377
Total Volume	0	191	0	191	0	0	0	0	0	1761	0	1761	0	0	0	0	1952
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.955	.000	.955	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.000	.000	.712
Peds	0	191	0	191	0	0	0	0	0	1761	0	1761	0	0	0	0	1952
% Peds	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	100
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





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Email: datarequests@pdillc.com

File Name : 123114 DD
Site Code : 2011046
Start Date : 11/15/2012
Page No : 1

N: Forsyth Street
S: Ruggles T Station Doorway
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds - Bicycles

Start Time	Forsyth Street From North			From East			Ruggles T-Station Doorway From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	299	0	0	0	0	0	136	0	0	0	0	435
04:15 PM	0	295	0	0	0	0	0	230	0	0	0	0	525
04:30 PM	0	285	0	0	0	0	0	231	0	0	0	0	516
04:45 PM	0	285	0	0	0	0	0	124	0	0	0	0	409
Total	0	1164	0	0	0	0	0	721	0	0	0	0	1885
05:00 PM	0	400	0	0	0	0	0	167	0	0	0	0	567
05:15 PM	0	294	0	0	0	0	0	175	0	0	0	0	469
05:30 PM	0	334	0	0	0	0	0	219	0	0	0	0	553
05:45 PM	0	382	0	0	0	0	0	202	0	0	0	0	584
Total	0	1410	0	0	0	0	0	763	0	0	0	0	2173
Grand Total	0	2574	0	0	0	0	0	1484	0	0	0	0	4058
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	63.4	0	0	0	0	0	36.6	0	0	0	0	
Peds	0	2568	0	0	0	0	0	1480	0	0	0	0	4048
% Peds	0	99.8	0	0	0	0	0	99.7	0	0	0	0	99.8
Bicycles	0	6	0	0	0	0	0	4	0	0	0	0	10
% Bicycles	0	0.2	0	0	0	0	0	0.3	0	0	0	0	0.2

Start Time	Forsyth Street From North				From East				Ruggles T-Station Doorway From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	400	0	400	0	0	0	0	0	167	0	167	0	0	0	0	567
05:15 PM	0	294	0	294	0	0	0	0	0	175	0	175	0	0	0	0	469
05:30 PM	0	334	0	334	0	0	0	0	0	219	0	219	0	0	0	0	553
05:45 PM	0	382	0	382	0	0	0	0	0	202	0	202	0	0	0	0	584
Total Volume	0	1410	0	1410	0	0	0	0	0	763	0	763	0	0	0	0	2173
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.881	.000	.881	.000	.000	.000	.000	.000	.871	.000	.871	.000	.000	.000	.000	.930
Peds	0	1405	0	1405	0	0	0	0	0	761	0	761	0	0	0	0	2166
% Peds	0	99.6	0	99.6	0	0	0	0	0	99.7	0	99.7	0	0	0	0	99.7
Bicycles	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
% Bicycles	0	0.4	0	0.4	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0.3



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Email: datarequests@pdillc.com

File Name : 123114 DD
Site Code : 2011046
Start Date : 11/15/2012
Page No : 1

N: Forsyth Street
S: Ruggles T Station Doorway
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds

Start Time	Forsyth Street From North			From East			Ruggles T-Station Doorway From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	299	0	0	0	0	0	134	0	0	0	0	433
04:15 PM	0	295	0	0	0	0	0	230	0	0	0	0	525
04:30 PM	0	285	0	0	0	0	0	231	0	0	0	0	516
04:45 PM	0	284	0	0	0	0	0	124	0	0	0	0	408
Total	0	1163	0	0	0	0	0	719	0	0	0	0	1882
05:00 PM	0	397	0	0	0	0	0	166	0	0	0	0	563
05:15 PM	0	292	0	0	0	0	0	175	0	0	0	0	467
05:30 PM	0	334	0	0	0	0	0	219	0	0	0	0	553
05:45 PM	0	382	0	0	0	0	0	201	0	0	0	0	583
Total	0	1405	0	0	0	0	0	761	0	0	0	0	2166
Grand Total	0	2568	0	0	0	0	0	1480	0	0	0	0	4048
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	63.4	0	0	0	0	0	36.6	0	0	0	0	

Start Time	Forsyth Street From North				From East				Ruggles T-Station Doorway From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	397	0	397	0	0	0	0	0	166	0	166	0	0	0	0	563
05:15 PM	0	292	0	292	0	0	0	0	0	175	0	175	0	0	0	0	467
05:30 PM	0	334	0	334	0	0	0	0	0	219	0	219	0	0	0	0	553
05:45 PM	0	382	0	382	0	0	0	0	0	201	0	201	0	0	0	0	583
Total Volume	0	1405	0	1405	0	0	0	0	0	761	0	761	0	0	0	0	2166
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.885	.000	.885	.000	.000	.000	.000	.000	.869	.000	.869	.000	.000	.000	.000	.929



PRECISION
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File Name : 123114 DD
Site Code : 2011046
Start Date : 11/15/2012
Page No : 1

N: Forsyth Street
S: Ruggles T Station Doorway
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Bicycles

Start Time	Forsyth Street From North			From East			Ruggles T-Station Doorway From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	0	0	2	0	0	0	0	3
05:00 PM	0	3	0	0	0	0	0	1	0	0	0	0	4
05:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	5	0	0	0	0	0	2	0	0	0	0	7
Grand Total	0	6	0	0	0	0	0	4	0	0	0	0	10
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	60	0	0	0	0	0	40	0	0	0	0	

Start Time	Forsyth Street From North				From East				Ruggles T-Station Doorway From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	6	0	6	0	0	0	0	0	1	0	1	0	0	0	0	7
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.438



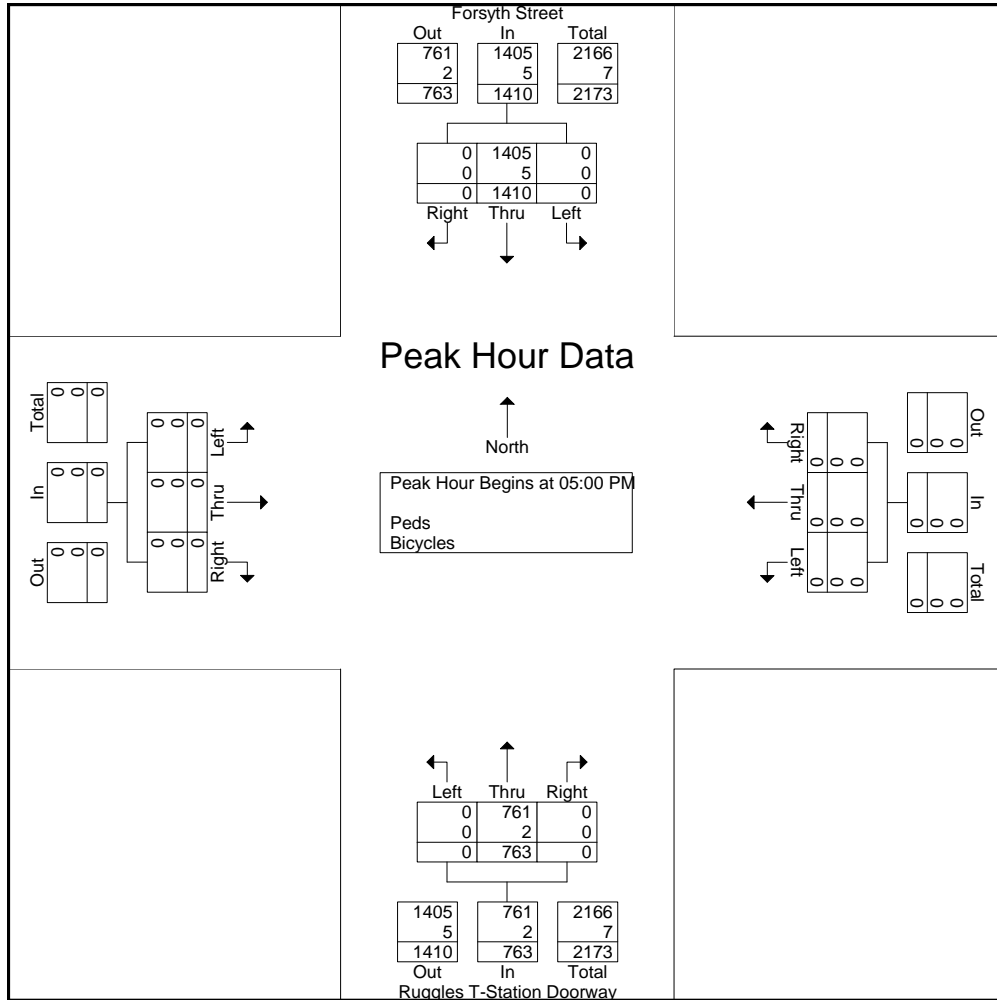
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File Name : 123114 DD
Site Code : 2011046
Start Date : 11/15/2012
Page No : 1

N: Forsyth Street
S: Ruggles T Station Doorway
City, State: Boston, MA
Client: HSH/ J. SanClemente

Start Time	Forsyth Street From North				From East				Ruggles T-Station Doorway From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	400	0	400	0	0	0	0	0	167	0	167	0	0	0	0	567
05:15 PM	0	294	0	294	0	0	0	0	0	175	0	175	0	0	0	0	469
05:30 PM	0	334	0	334	0	0	0	0	0	219	0	219	0	0	0	0	553
05:45 PM	0	382	0	382	0	0	0	0	0	202	0	202	0	0	0	0	584
Total Volume	0	1410	0	1410	0	0	0	0	0	763	0	763	0	0	0	0	2173
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.881	.000	.881	.000	.000	.000	.000	.000	.871	.000	.871	.000	.000	.000	.000	.930
Peds	0	1405	0	1405	0	0	0	0	0	761	0	761	0	0	0	0	2166
% Peds	0	99.6	0	99.6	0	0	0	0	0	99.7	0	99.7	0	0	0	0	99.7
Bicycles	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
% Bicycles	0	0.4	0	0.4	0	0	0	0	0	0.3	0	0.3	0	0	0	0	0.3





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N: Northeastern University Service Road
S: Columbus Avenue Surface Lot
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 C
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Peds

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Surface Lot From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	5	0	0	0	0	0	8	0	0	0	0	13
07:15 AM	0	6	0	0	0	0	0	19	0	0	0	0	25
07:30 AM	0	5	0	0	0	0	0	28	0	0	0	0	33
07:45 AM	0	10	0	0	0	0	0	87	0	0	0	0	97
Total	0	26	0	0	0	0	0	142	0	0	0	0	168
08:00 AM	0	7	0	0	0	0	0	40	0	0	0	0	47
08:15 AM	0	4	0	0	0	0	0	24	0	0	0	0	28
08:30 AM	0	5	0	0	0	0	0	25	0	0	0	0	30
08:45 AM	0	2	0	0	0	0	0	40	0	0	0	0	42
Total	0	18	0	0	0	0	0	129	0	0	0	0	147
Grand Total	0	44	0	0	0	0	0	271	0	0	0	0	315
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	14	0	0	0	0	0	86	0	0	0	0	

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Surface Lot From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	5	0	5	0	0	0	0	0	28	0	28	0	0	0	0	33
07:45 AM	0	10	0	10	0	0	0	0	0	87	0	87	0	0	0	0	97
08:00 AM	0	7	0	7	0	0	0	0	0	40	0	40	0	0	0	0	47
08:15 AM	0	4	0	4	0	0	0	0	0	24	0	24	0	0	0	0	28
Total Volume	0	26	0	26	0	0	0	0	0	179	0	179	0	0	0	0	205
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.650	.000	.650	.000	.000	.000	.000	.000	.514	.000	.514	.000	.000	.000	.000	.528



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N: Northeastern University Service Road
S: Columbus Avenue Surface Lot
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 C
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Bicycles

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Surface Lot From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0	0	0	0	0	0	0	0	0	0
Total %	0	100	0	0	0	0	0	0	0	0	0	0	0

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Surface Lot From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM



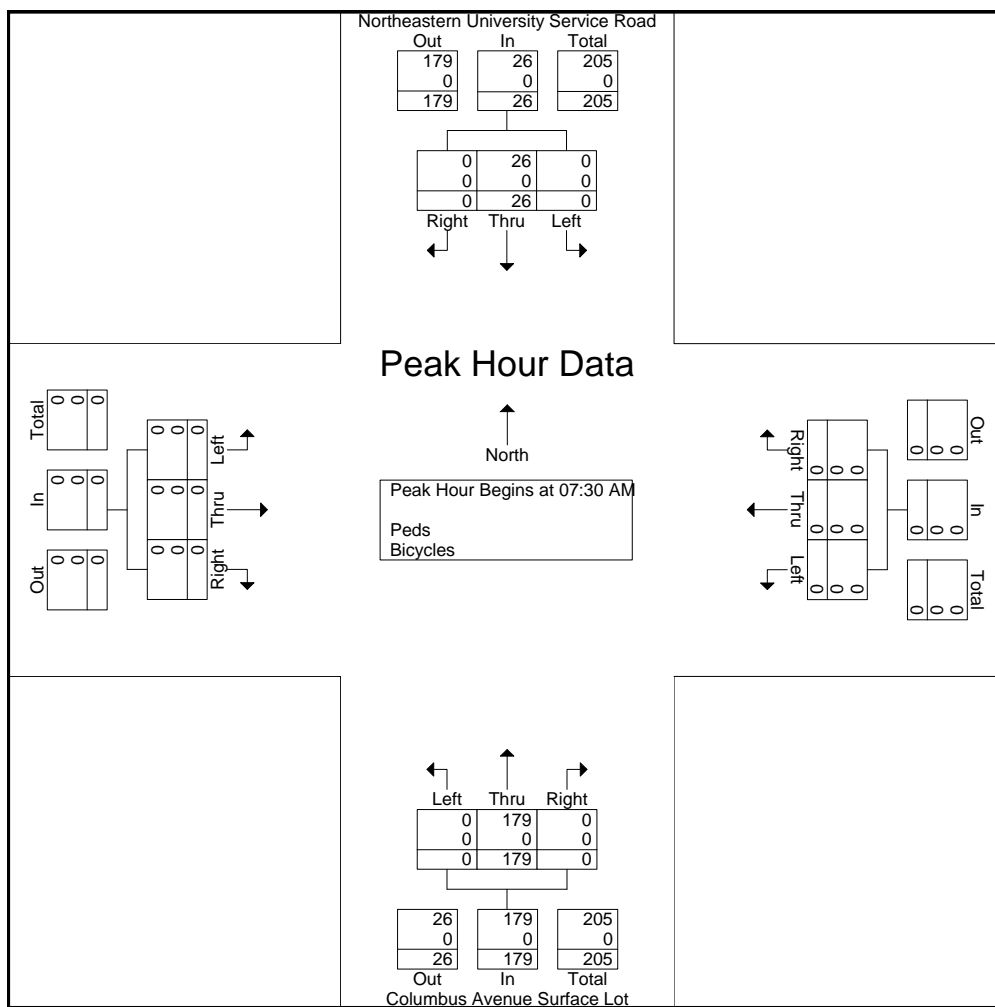
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N: Northeastern University Service Road
S: Columbus Avenue Surface Lot
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 C
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Surface Lot From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	5	0	5	0	0	0	0	0	28	0	28	0	0	0	0	33
07:45 AM	0	10	0	10	0	0	0	0	0	87	0	87	0	0	0	0	97
08:00 AM	0	7	0	7	0	0	0	0	0	40	0	40	0	0	0	0	47
08:15 AM	0	4	0	4	0	0	0	0	0	24	0	24	0	0	0	0	28
Total Volume	0	26	0	26	0	0	0	0	0	179	0	179	0	0	0	0	205
% App. Total	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	100
PHF	.000	.650	.000	.650	.000	.000	.000	.000	.000	.514	.000	.514	.000	.000	.000	.000	.528
Peds	0	26	0	26	0	0	0	0	0	179	0	179	0	0	0	0	205
% Peds	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	100
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





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N: Northeastern University Service Road
S: Columbus Avenue Surface Lot
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 CC
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Peds

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Surface Lot From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	36	0	0	0	0	0	25	0	0	0	0	61
04:15 PM	0	43	0	0	0	0	0	57	0	0	0	0	100
04:30 PM	0	81	0	0	0	0	0	37	0	0	0	0	118
04:45 PM	0	31	0	0	0	0	0	23	0	0	0	0	54
Total	0	191	0	0	0	0	0	142	0	0	0	0	333
05:00 PM	0	38	0	0	0	0	0	42	0	0	0	0	80
05:15 PM	0	46	0	0	0	0	0	28	0	0	0	0	74
05:30 PM	0	61	0	0	0	0	0	43	0	0	0	0	104
05:45 PM	0	68	0	0	0	0	0	42	0	0	0	0	110
Total	0	213	0	0	0	0	0	155	0	0	0	0	368
Grand Total	0	404	0	0	0	0	0	297	0	0	0	0	701
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	57.6	0	0	0	0	0	42.4	0	0	0	0	

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Surface Lot From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	38	0	38	0	0	0	0	0	42	0	42	0	0	0	0	80
05:15 PM	0	46	0	46	0	0	0	0	0	28	0	28	0	0	0	0	74
05:30 PM	0	61	0	61	0	0	0	0	0	43	0	43	0	0	0	0	104
05:45 PM	0	68	0	68	0	0	0	0	0	42	0	42	0	0	0	0	110
Total Volume	0	213	0	213	0	0	0	0	0	155	0	155	0	0	0	0	368
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.783	.000	.783	.000	.000	.000	.000	.000	.901	.000	.901	.000	.000	.000	.000	.836



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N: Northeastern University Service Road
S: Columbus Avenue Surface Lot
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 CC
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Bicycles

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Surface Lot From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %													

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Surface Lot From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM



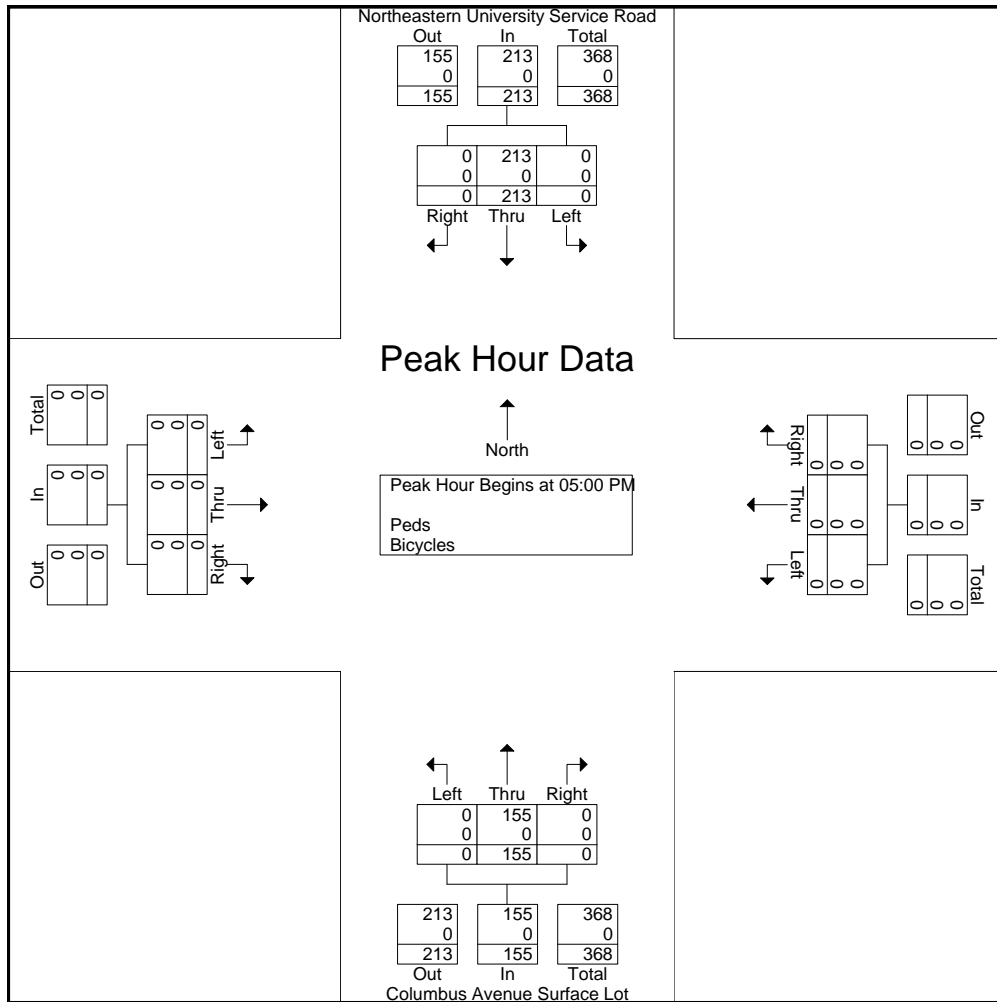
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N: Northeastern University Service Road
S: Columbus Avenue Surface Lot
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 CC
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Surface Lot From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	38	0	38	0	0	0	0	0	42	0	42	0	0	0	0	80
05:15 PM	0	46	0	46	0	0	0	0	0	28	0	28	0	0	0	0	74
05:30 PM	0	61	0	61	0	0	0	0	0	43	0	43	0	0	0	0	104
05:45 PM	0	68	0	68	0	0	0	0	0	42	0	42	0	0	0	0	110
Total Volume	0	213	0	213	0	0	0	0	0	155	0	155	0	0	0	0	368
% App. Total	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	100
PHF	.000	.783	.000	.783	.000	.000	.000	.000	.000	.901	.000	.901	.000	.000	.000	.000	.836
Peds	0	213	0	213	0	0	0	0	0	155	0	155	0	0	0	0	368
% Peds	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	100
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





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N: Northeastern University Service Road
S: Columbus Avenue Garage
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 B
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Peds - Bicycles

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Garage From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	6	0	0	0	0	0	31	0	0	0	0	37
07:15 AM	0	4	0	0	0	0	0	26	0	0	0	0	30
07:30 AM	0	8	0	0	0	0	0	43	0	0	0	0	51
07:45 AM	0	11	0	0	0	0	0	125	0	0	0	0	136
Total	0	29	0	0	0	0	0	225	0	0	0	0	254
08:00 AM	0	4	0	0	0	0	0	58	0	0	0	0	62
08:15 AM	0	3	0	0	0	0	0	53	0	0	0	0	56
08:30 AM	0	8	0	0	0	0	0	54	0	0	0	0	62
08:45 AM	0	8	0	0	0	0	0	74	0	0	0	0	82
Total	0	23	0	0	0	0	0	239	0	0	0	0	262
Grand Total	0	52	0	0	0	0	0	464	0	0	0	0	516
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	10.1	0	0	0	0	0	89.9	0	0	0	0	
Peds	0	52	0	0	0	0	0	458	0	0	0	0	510
% Peds	0	100	0	0	0	0	0	98.7	0	0	0	0	98.8
Bicycles	0	0	0	0	0	0	0	6	0	0	0	0	6
% Bicycles	0	0	0	0	0	0	0	1.3	0	0	0	0	1.2

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Garage From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	11	0	11	0	0	0	0	0	125	0	125	0	0	0	0	136
08:00 AM	0	4	0	4	0	0	0	0	0	58	0	58	0	0	0	0	62
08:15 AM	0	3	0	3	0	0	0	0	0	53	0	53	0	0	0	0	56
08:30 AM	0	8	0	8	0	0	0	0	0	54	0	54	0	0	0	0	62
Total Volume	0	26	0	26	0	0	0	0	0	290	0	290	0	0	0	0	316
% App. Total	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	
PHF	.000	.591	.000	.591	.000	.000	.000	.000	.000	.580	.000	.580	.000	.000	.000	.000	.581
Peds	0	26	0	26	0	0	0	0	0	285	0	285	0	0	0	0	311
% Peds	0	100	0	100	0	0	0	0	0	98.3	0	98.3	0	0	0	0	98.4
Bicycles	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	5
% Bicycles	0	0	0	0	0	0	0	0	0	1.7	0	1.7	0	0	0	0	1.6



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N: Northeastern University Service Road
S: Columbus Avenue Garage
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 B
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Peds

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Garage From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	6	0	0	0	0	0	31	0	0	0	0	37
07:15 AM	0	4	0	0	0	0	0	26	0	0	0	0	30
07:30 AM	0	8	0	0	0	0	0	43	0	0	0	0	51
07:45 AM	0	11	0	0	0	0	0	124	0	0	0	0	135
Total	0	29	0	0	0	0	0	224	0	0	0	0	253
08:00 AM	0	4	0	0	0	0	0	58	0	0	0	0	62
08:15 AM	0	3	0	0	0	0	0	50	0	0	0	0	53
08:30 AM	0	8	0	0	0	0	0	53	0	0	0	0	61
08:45 AM	0	8	0	0	0	0	0	73	0	0	0	0	81
Total	0	23	0	0	0	0	0	234	0	0	0	0	257
Grand Total	0	52	0	0	0	0	0	458	0	0	0	0	510
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	10.2	0	0	0	0	0	89.8	0	0	0	0	

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Garage From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	11	0	11	0	0	0	0	0	124	0	124	0	0	0	0	135
08:00 AM	0	4	0	4	0	0	0	0	0	58	0	58	0	0	0	0	62
08:15 AM	0	3	0	3	0	0	0	0	0	50	0	50	0	0	0	0	53
08:30 AM	0	8	0	8	0	0	0	0	0	53	0	53	0	0	0	0	61
Total Volume	0	26	0	26	0	0	0	0	0	285	0	285	0	0	0	0	311
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.591	.000	.591	.000	.000	.000	.000	.000	.575	.000	.575	.000	.000	.000	.000	.576



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N: Northeastern University Service Road
S: Columbus Avenue Garage
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 B
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Bicycles

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Garage From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	5	0	0	0	0	5
Grand Total	0	0	0	0	0	0	0	6	0	0	0	0	6
Apprch %	0	0	0	0	0	0	0	100	0	0	0	0	0
Total %	0	0	0	0	0	0	0	100	0	0	0	0	0

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Garage From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	5
% App. Total	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.417	.000	.417	.000	.000	.000	.000	.417



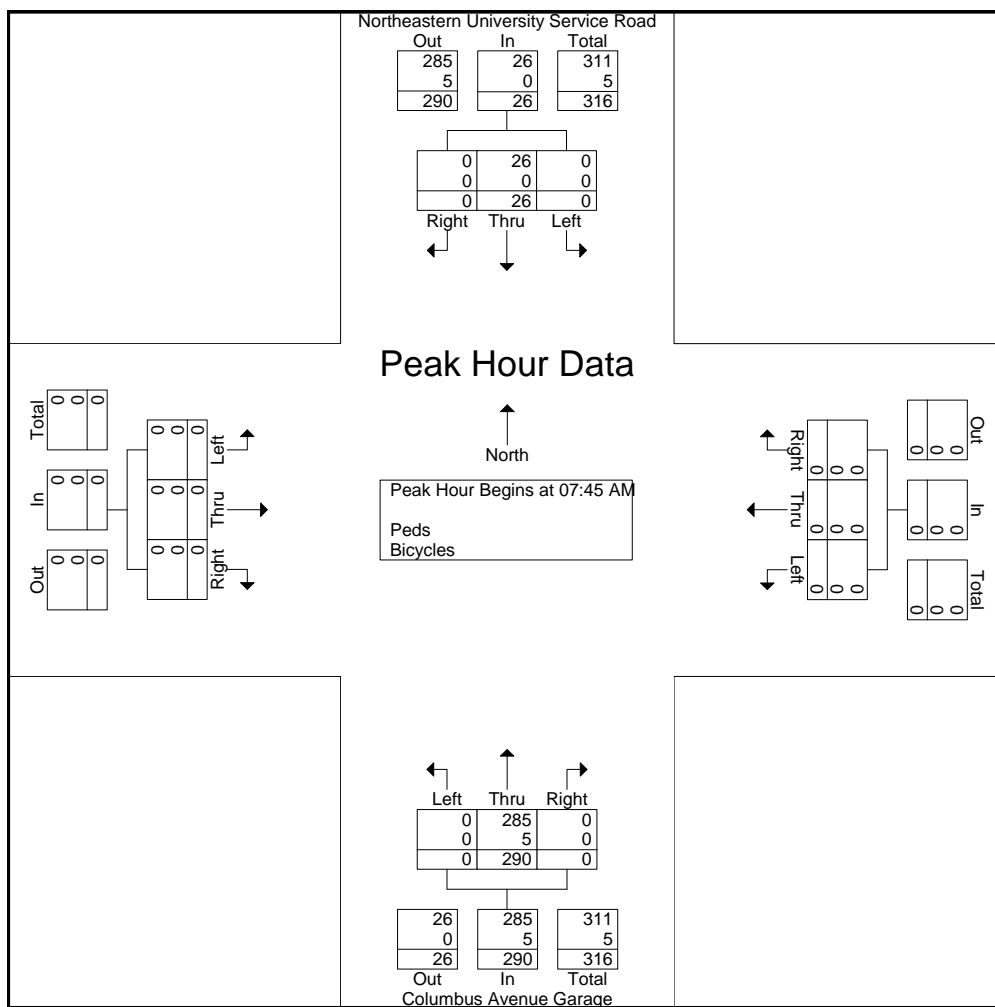
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N: Northeastern University Service Road
S: Columbus Avenue Garage
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 B
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Garage From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	11	0	11	0	0	0	0	0	125	0	125	0	0	0	0	136
08:00 AM	0	4	0	4	0	0	0	0	0	58	0	58	0	0	0	0	62
08:15 AM	0	3	0	3	0	0	0	0	0	53	0	53	0	0	0	0	56
08:30 AM	0	8	0	8	0	0	0	0	0	54	0	54	0	0	0	0	62
Total Volume	0	26	0	26	0	0	0	0	0	290	0	290	0	0	0	0	316
% App. Total	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	
PHF	.000	.591	.000	.591	.000	.000	.000	.000	.000	.580	.000	.580	.000	.000	.000	.000	.581
Peds	0	26	0	26	0	0	0	0	0	285	0	285	0	0	0	0	311
% Peds	0	100	0	100	0	0	0	0	0	98.3	0	98.3	0	0	0	0	98.4
Bicycles	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	5
% Bicycles	0	0	0	0	0	0	0	0	0	1.7	0	1.7	0	0	0	0	1.6





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S: Columbus Avenue Garage
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 BB
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Peds

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Garage From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	77	0	0	0	0	0	36	0	0	0	0	113
04:15 PM	0	90	0	0	0	0	0	97	0	0	0	0	187
04:30 PM	0	143	0	0	0	0	0	68	0	0	0	0	211
04:45 PM	0	79	0	0	0	0	0	45	0	0	0	0	124
Total	0	389	0	0	0	0	0	246	0	0	0	0	635
05:00 PM	0	61	0	0	0	0	0	50	0	0	0	0	111
05:15 PM	0	67	0	0	0	0	0	45	0	0	0	0	112
05:30 PM	0	105	0	0	0	0	0	39	0	0	0	0	144
05:45 PM	0	123	0	0	0	0	0	72	0	0	0	0	195
Total	0	356	0	0	0	0	0	206	0	0	0	0	562
Grand Total	0	745	0	0	0	0	0	452	0	0	0	0	1197
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	62.2	0	0	0	0	0	37.8	0	0	0	0	

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Garage From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	77	0	77	0	0	0	0	0	36	0	36	0	0	0	0	113
04:15 PM	0	90	0	90	0	0	0	0	0	97	0	97	0	0	0	0	187
04:30 PM	0	143	0	143	0	0	0	0	0	68	0	68	0	0	0	0	211
04:45 PM	0	79	0	79	0	0	0	0	0	45	0	45	0	0	0	0	124
Total Volume	0	389	0	389	0	0	0	0	0	246	0	246	0	0	0	0	635
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.680	.000	.680	.000	.000	.000	.000	.000	.634	.000	.634	.000	.000	.000	.000	.752



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S: Columbus Avenue Garage
City, State: Boston, MA
Client: HSH/ J. SanClemente

File Name : 123114 BB
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Groups Printed- Bicycles

Start Time	Northeastern University Service Road From North			From East			Columbus Avenue Garage From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	0	0	0	1
Grand Total	0	2	0	0	0	0	0	1	0	0	0	0	3
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	66.7	0	0	0	0	0	33.3	0	0	0	0	

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Garage From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM



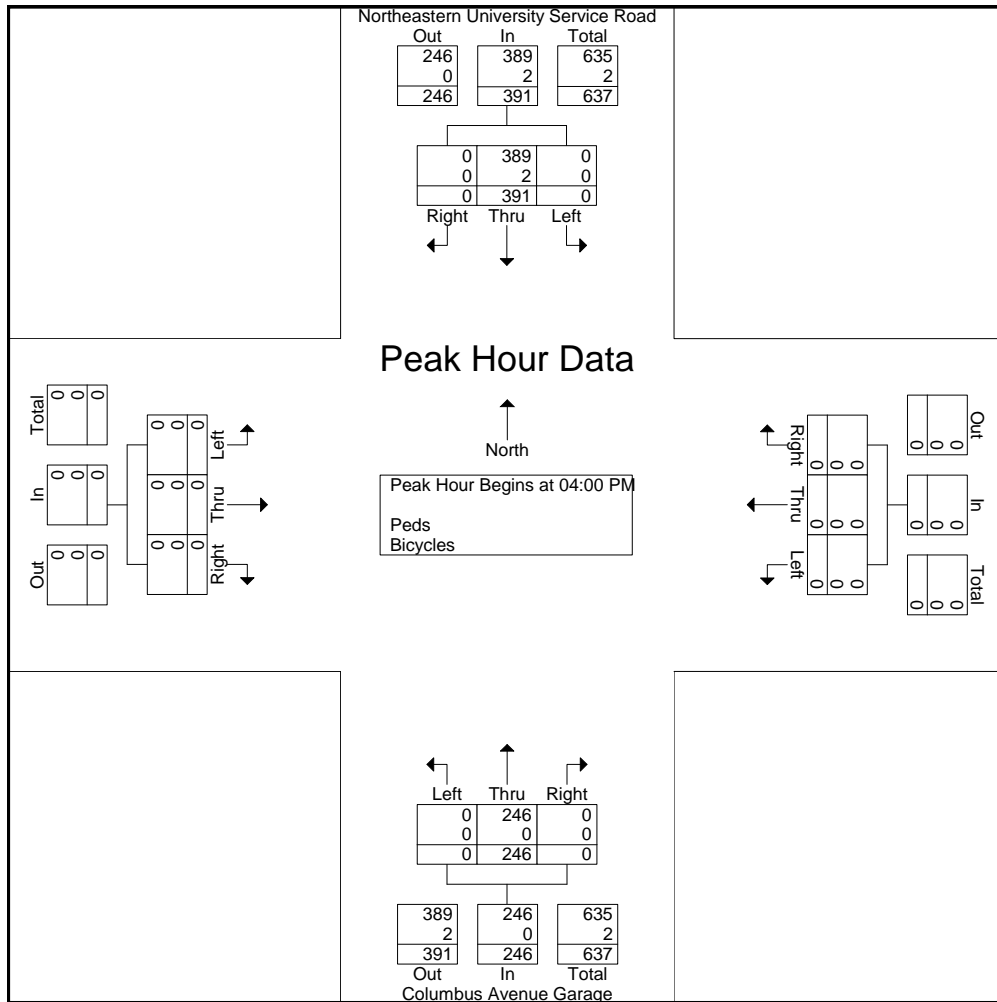
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N: Northeastern University Service Road
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City, State: Boston, MA
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File Name : 123114 BB
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

Start Time	Northeastern University Service Road From North				From East				Columbus Avenue Garage From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	77	0	77	0	0	0	0	0	36	0	36	0	0	0	0	113
04:15 PM	0	90	0	90	0	0	0	0	0	97	0	97	0	0	0	0	187
04:30 PM	0	144	0	144	0	0	0	0	0	68	0	68	0	0	0	0	212
04:45 PM	0	80	0	80	0	0	0	0	0	45	0	45	0	0	0	0	125
Total Volume	0	391	0	391	0	0	0	0	0	246	0	246	0	0	0	0	637
% App. Total	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	
PHF	.000	.679	.000	.679	.000	.000	.000	.000	.000	.634	.000	.634	.000	.000	.000	.000	.751
Peds	0	389	0	389	0	0	0	0	0	246	0	246	0	0	0	0	635
% Peds	0	99.5	0	99.5	0	0	0	0	0	100	0	100	0	0	0	0	99.7
Bicycles	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% Bicycles	0	0.5	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0.3





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File Name : 123114 A
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

N: Gainsborough Street Access
S: Camden Street Access
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds - Bicycles

Start Time	Gainsborough Street From North			From East			Camden Street From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	6	0	0	0	0	0	13	0	0	0	0	19
07:15 AM	0	1	0	0	0	0	0	12	0	0	0	0	13
07:30 AM	0	7	0	0	0	0	0	15	0	0	0	0	22
07:45 AM	0	13	0	0	0	0	0	21	0	0	0	0	34
Total	0	27	0	0	0	0	0	61	0	0	0	0	88
08:00 AM	0	13	0	0	0	0	0	16	0	0	0	0	29
08:15 AM	0	12	0	0	0	0	0	17	0	0	0	0	29
08:30 AM	0	15	0	0	0	0	0	16	0	0	0	0	31
08:45 AM	0	7	0	0	0	0	0	26	0	0	0	0	33
Total	0	47	0	0	0	0	0	75	0	0	0	0	122
Grand Total	0	74	0	0	0	0	0	136	0	0	0	0	210
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	35.2	0	0	0	0	0	64.8	0	0	0	0	
Peds	0	68	0	0	0	0	0	132	0	0	0	0	200
% Peds	0	91.9	0	0	0	0	0	97.1	0	0	0	0	95.2
Bicycles	0	6	0	0	0	0	0	4	0	0	0	0	10
% Bicycles	0	8.1	0	0	0	0	0	2.9	0	0	0	0	4.8

Start Time	Gainsborough Street From North				From East				Camden Street From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	13	0	13	0	0	0	0	0	21	0	21	0	0	0	0	34
08:00 AM	0	13	0	13	0	0	0	0	0	16	0	16	0	0	0	0	29
08:15 AM	0	12	0	12	0	0	0	0	0	17	0	17	0	0	0	0	29
08:30 AM	0	15	0	15	0	0	0	0	0	16	0	16	0	0	0	0	31
Total Volume	0	53	0	53	0	0	0	0	0	70	0	70	0	0	0	0	123
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.883	.000	.883	.000	.000	.000	.000	.000	.833	.000	.833	.000	.000	.000	.000	.904
Peds	0	47	0	47	0	0	0	0	0	69	0	69	0	0	0	0	116
% Peds	0	88.7	0	88.7	0	0	0	0	0	98.6	0	98.6	0	0	0	0	94.3
Bicycles	0	6	0	6	0	0	0	0	0	1	0	1	0	0	0	0	7
% Bicycles	0	11.3	0	11.3	0	0	0	0	0	1.4	0	1.4	0	0	0	0	5.7



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File Name : 123114 A
Site Code : 2011046
Start Date : 11/14/2012
Page No : 1

N: Gainsborough Street Access
S: Camden Street Access
City, State: Boston, MA
Client: HSH/ J. SanClemente

Groups Printed- Peds

Start Time	Gainsborough Street From North			From East			Camden Street From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	6	0	0	0	0	0	11	0	0	0	0	17
07:15 AM	0	1	0	0	0	0	0	12	0	0	0	0	13
07:30 AM	0	7	0	0	0	0	0	15	0	0	0	0	22
07:45 AM	0	12	0	0	0	0	0	21	0	0	0	0	33
Total	0	26	0	0	0	0	0	59	0	0	0	0	85
08:00 AM	0	10	0	0	0	0	0	15	0	0	0	0	25
08:15 AM	0	10	0	0	0	0	0	17	0	0	0	0	27
08:30 AM	0	15	0	0	0	0	0	16	0	0	0	0	31
08:45 AM	0	7	0	0	0	0	0	25	0	0	0	0	32
Total	0	42	0	0	0	0	0	73	0	0	0	0	115
Grand Total	0	68	0	0	0	0	0	132	0	0	0	0	200
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	34	0	0	0	0	0	66	0	0	0	0	

Start Time	Gainsborough Street From North				From East				Camden Street From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	12	0	12	0	0	0	0	0	21	0	21	0	0	0	0	33
08:00 AM	0	10	0	10	0	0	0	0	0	15	0	15	0	0	0	0	25
08:15 AM	0	10	0	10	0	0	0	0	0	17	0	17	0	0	0	0	27
08:30 AM	0	15	0	15	0	0	0	0	0	16	0	16	0	0	0	0	31
Total Volume	0	47	0	47	0	0	0	0	0	69	0	69	0	0	0	0	116
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.783	.000	.783	.000	.000	.000	.000	.000	.821	.000	.821	.000	.000	.000	.000	.879



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N: Gainsborough Street Access
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Groups Printed- Bicycles

Start Time	Gainsborough Street From North			From East			Camden Street From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	0	0	0	2	0	0	0	0	3
08:00 AM	0	3	0	0	0	0	0	1	0	0	0	0	4
08:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
Total	0	5	0	0	0	0	0	2	0	0	0	0	7
Grand Total	0	6	0	0	0	0	0	4	0	0	0	0	10
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	60	0	0	0	0	0	40	0	0	0	0	

Start Time	Gainsborough Street From North				From East				Camden Street From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
08:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	6	0	6	0	0	0	0	0	1	0	1	0	0	0	0	7
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.438



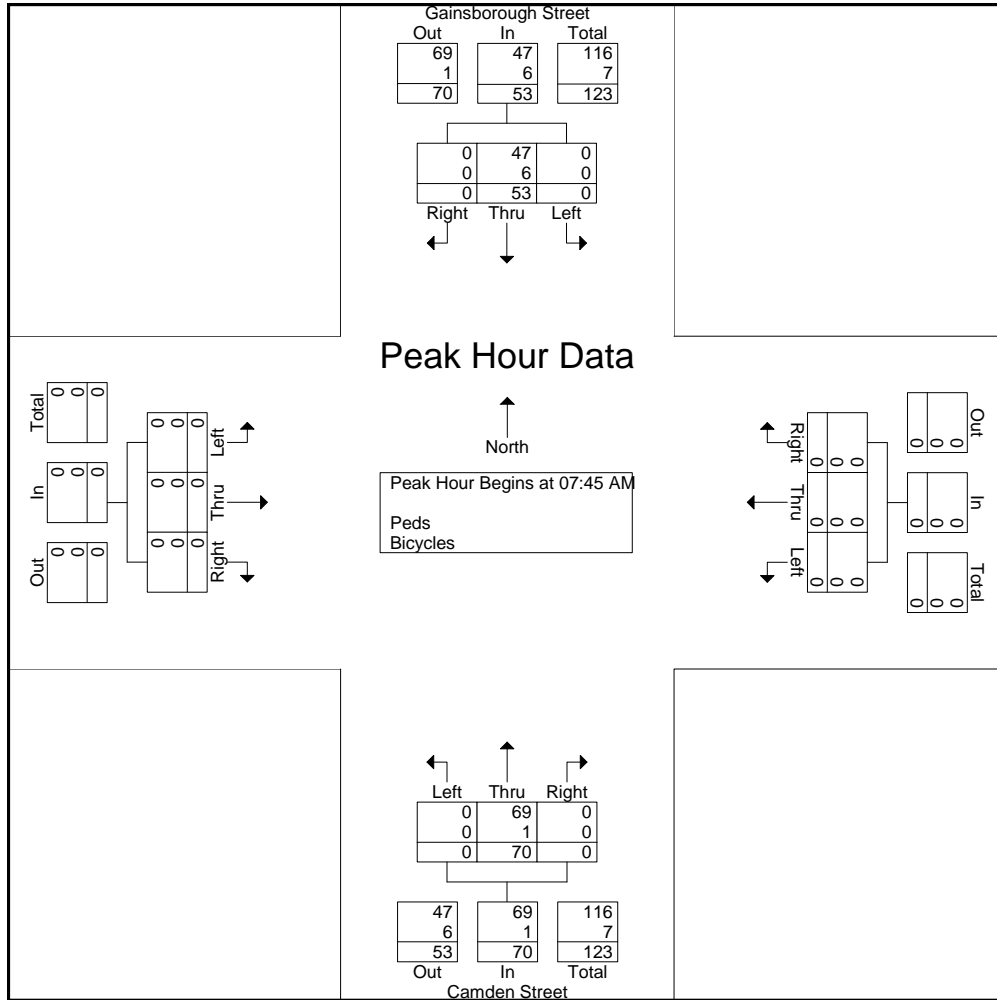
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Start Time	Gainsborough Street From North				From East				Camden Street From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	13	0	13	0	0	0	0	0	21	0	21	0	0	0	0	34
08:00 AM	0	13	0	13	0	0	0	0	0	16	0	16	0	0	0	0	29
08:15 AM	0	12	0	12	0	0	0	0	0	17	0	17	0	0	0	0	29
08:30 AM	0	15	0	15	0	0	0	0	0	16	0	16	0	0	0	0	31
Total Volume	0	53	0	53	0	0	0	0	0	70	0	70	0	0	0	0	123
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.883	.000	.883	.000	.000	.000	.000	.000	.833	.000	.833	.000	.000	.000	.000	.904
Peds	0	47	0	47	0	0	0	0	0	69	0	69	0	0	0	0	116
% Peds	0	88.7	0	88.7	0	0	0	0	0	98.6	0	98.6	0	0	0	0	94.3
Bicycles	0	6	0	6	0	0	0	0	0	1	0	1	0	0	0	0	7
% Bicycles	0	11.3	0	11.3	0	0	0	0	0	1.4	0	1.4	0	0	0	0	5.7





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Start Date : 11/14/2012
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Groups Printed- Peds

Start Time	Gainsborough Street From North			From East			Camden Street From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	35	0	0	0	0	0	15	0	0	0	0	50
04:15 PM	0	33	0	0	0	0	0	17	0	0	0	0	50
04:30 PM	0	52	0	0	0	0	0	14	0	0	0	0	66
04:45 PM	0	36	0	0	0	0	0	13	0	0	0	0	49
Total	0	156	0	0	0	0	0	59	0	0	0	0	215
05:00 PM	0	45	0	0	0	0	0	20	0	0	0	0	65
05:15 PM	0	38	0	0	0	0	0	17	0	0	0	0	55
05:30 PM	0	46	0	0	0	0	0	27	0	0	0	0	73
05:45 PM	0	35	0	0	0	0	0	36	0	0	0	0	71
Total	0	164	0	0	0	0	0	100	0	0	0	0	264
Grand Total	0	320	0	0	0	0	0	159	0	0	0	0	479
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	66.8	0	0	0	0	0	33.2	0	0	0	0	

Start Time	Gainsborough Street From North				From East				Camden Street From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	45	0	45	0	0	0	0	0	20	0	20	0	0	0	0	65
05:15 PM	0	38	0	38	0	0	0	0	0	17	0	17	0	0	0	0	55
05:30 PM	0	46	0	46	0	0	0	0	0	27	0	27	0	0	0	0	73
05:45 PM	0	35	0	35	0	0	0	0	0	36	0	36	0	0	0	0	71
Total Volume	0	164	0	164	0	0	0	0	0	100	0	100	0	0	0	0	264
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.891	.000	.891	.000	.000	.000	.000	.000	.694	.000	.694	.000	.000	.000	.000	.904



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Groups Printed- Bicycles

Start Time	Gainsborough Street From North			From East			Camden Street From South			From West			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
04:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
04:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	0	0	0	0	3	0	0	0	0	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	0	0	0	0	0	3	0	0	0	0	5
Apprch %	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	40	0	0	0	0	0	60	0	0	0	0	

Start Time	Gainsborough Street From North				From East				Camden Street From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.625



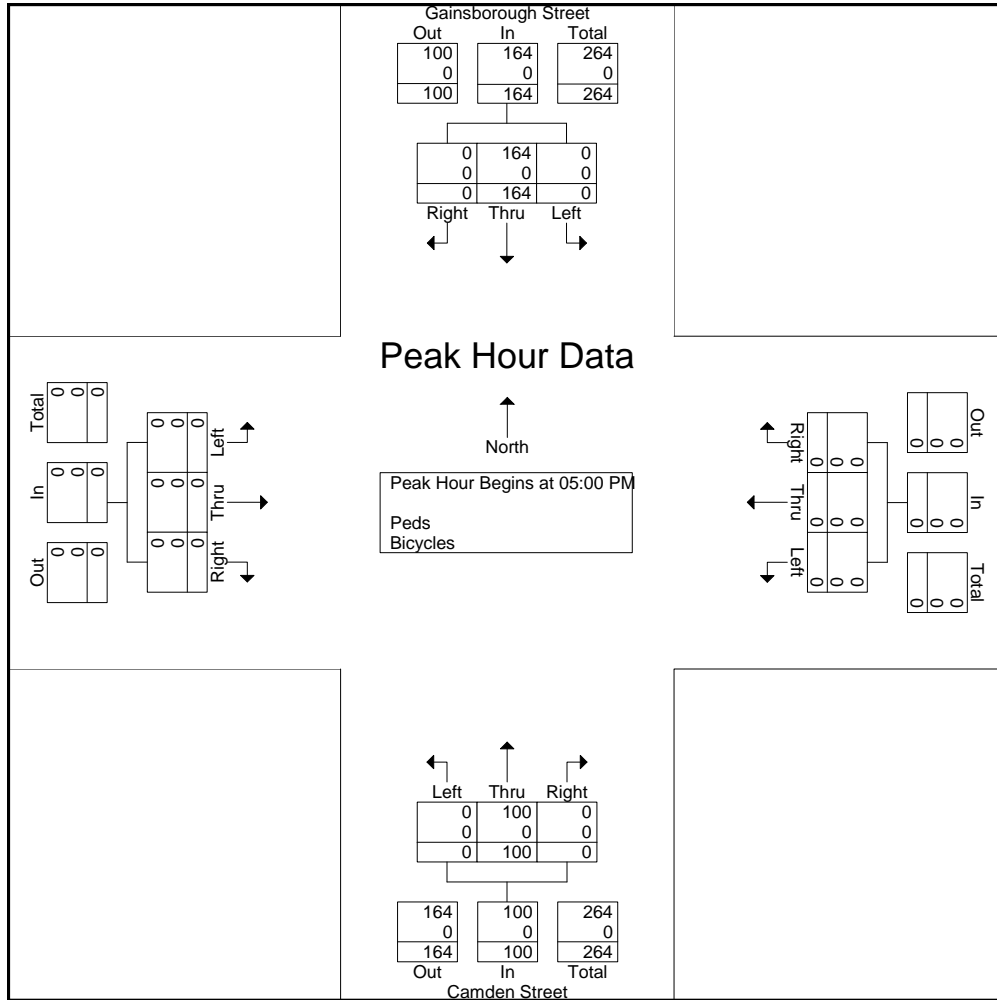
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Start Time	Gainsborough Street From North				From East				Camden Street From South				From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	45	0	45	0	0	0	0	0	20	0	20	0	0	0	0	65
05:15 PM	0	38	0	38	0	0	0	0	0	17	0	17	0	0	0	0	55
05:30 PM	0	46	0	46	0	0	0	0	0	27	0	27	0	0	0	0	73
05:45 PM	0	35	0	35	0	0	0	0	0	36	0	36	0	0	0	0	71
Total Volume	0	164	0	164	0	0	0	0	0	100	0	100	0	0	0	0	264
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.891	.000	.891	.000	.000	.000	.000	.000	.694	.000	.694	.000	.000	.000	.000	.904
Peds	0	164	0	164	0	0	0	0	0	100	0	100	0	0	0	0	264
% Peds	0	100	0	100	0	0	0	0	0	100	0	100	0	0	0	0	100
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	11	12	12	10	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.98			0.74				
Frt		0.987			0.995			0.982				
Flt Protected	0.950				0.997			0.966				
Satd. Flow (prot)	1560	3079	0	0	3579	0	0	1471	0	0	0	0
Flt Permitted	0.396				0.871			0.966				
Satd. Flow (perm)	650	3079	0	0	3127	0	0	1137	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			9			6				
Headway Factor	1.09	1.00	1.00	1.00	1.04	1.00	1.00	1.09	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		362			634			254				308
Travel Time (s)		8.2			14.4			5.8				7.0
Volume (vph)	38	603	59	33	527	19	91	20	17	0	0	0
Confl. Peds. (#/hr)			159			200	262		136			
Confl. Bikes (#/hr)			10			12			4			
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	10%	8%	3%	39%	16%	7%	5%	24%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	42	663	65	35	567	20	97	21	18	0	0	0
Lane Group Flow (vph)	42	728	0	0	622	0	0	136	0	0	0	0
Turn Type	Perm			D.P+P			Perm					
Protected Phases		1		3	1 3			2				
Permitted Phases	1			1			2					
Detector Phases	1	1		3	1 3		2	2				
Minimum Initial (s)	8.0	8.0		6.0			8.0	8.0				
Minimum Split (s)	19.0	19.0		12.0			31.0	31.0				
Total Split (s)	77.0	77.0	0.0	12.0	89.0	0.0	31.0	31.0	0.0	0.0	0.0	0.0
Total Split (%)	64.2%	64.2%	0.0%	10.0%	74.2%	0.0%	25.8%	25.8%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	72.0	72.0		7.0			25.0	25.0				
Yellow Time (s)	3.0	3.0		3.0			3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0			3.0	3.0				
Lead/Lag				Lag			Lead	Lead				
Lead-Lag Optimize?				Yes			Yes	Yes				
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0			3.0	3.0				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Recall Mode	C-Max	C-Max		None			None	None				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	5.0	5.0					17.0	17.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)	79.9	79.9			87.9			20.1				
Actuated g/C Ratio	0.67	0.67			0.73			0.17				
v/c Ratio	0.10	0.35			0.27			0.69				
Control Delay	5.5	5.7			4.9			62.4				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	5.5	5.7			4.9			62.4				
LOS	A	A			A			E				
Approach Delay		5.7			4.9			62.4				
Approach LOS		A			A			E				
90th %ile Green (s)	72.0	72.0		7.0			25.0	25.0				
90th %ile Term Code	Coord	Coord		Max			Max	Max				
70th %ile Green (s)	75.0	75.0		7.0			22.0	22.0				
70th %ile Term Code	Coord	Coord		Max			Gap	Gap				
50th %ile Green (s)	78.4	78.4		7.0			18.6	18.6				
50th %ile Term Code	Coord	Coord		Max			Gap	Gap				
30th %ile Green (s)	82.0	82.0		7.0			15.0	15.0				
30th %ile Term Code	Coord	Coord		Max			Gap	Gap				
10th %ile Green (s)	86.9	86.9		7.0			10.1	10.1				
10th %ile Term Code	Coord	Coord		Max			Gap	Gap				
Queue Length 50th (ft)	6	52			42			96				
Queue Length 95th (ft)	17	83			70			157				
Internal Link Dist (ft)		282			554			174			228	
Turn Bay Length (ft)	150											
Base Capacity (vph)	433	2055			2322			260				
Starvation Cap Reductn	0	0			0			0				
Spillback Cap Reductn	0	0			0			0				
Storage Cap Reductn	0	0			0			0				
Reduced v/c Ratio	0.10	0.35			0.27			0.52				

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	23 (19%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	10.4
Intersection LOS:	B
Intersection Capacity Utilization:	60.6%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 363: Huntington Avenue & Gainsborough Street





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Lane Configurations			↑↑				↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)		0%	0%		0%		
Storage Length (ft)	0			0	0	0	
Storage Lanes	0			0	0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)			100			20	
Trailing Detector (ft)			0			0	
Turning Speed (mph)	15			9	15	9	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00	
Ped Bike Factor							
Fr _t							0.865
Fl _t Protected							
Satd. Flow (prot)	0	0	3374	0	0	1565	
Fl _t Permitted							
Satd. Flow (perm)	0	0	3374	0	0	1565	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						486	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)		25	25		30		
Link Distance (ft)		279	408		361		
Travel Time (s)		7.6	11.1		8.2		
Volume (vph)	0	0	621	0	0	97	
Confl. Peds. (#/hr)	9			20		176	
Confl. Bikes (#/hr)				10		2	
Peak Hour Factor	0.90	0.90	0.92	0.92	0.87	0.87	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	9%	7%	0%	0%	5%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)		0%	0%		0%		
Adj. Flow (vph)	0	0	675	0	0	111	
Lane Group Flow (vph)	0	0	675	0	0	111	
Turn Type							custom
Protected Phases			1			3	2
Permitted Phases							
Detector Phases			1			3	
Minimum Initial (s)			8.0			8.0	4.0
Minimum Split (s)			18.0			13.0	19.0
Total Split (s)	0.0	0.0	27.0	0.0	0.0	14.0	19.0
Total Split (%)	0.0%	0.0%	45.0%	0.0%	0.0%	23.3%	32%
Maximum Green (s)			23.0			10.0	15.0
Yellow Time (s)			3.0			3.0	3.0
All-Red Time (s)			1.0			1.0	1.0
Lead/Lag			Lead			Lag	
Lead-Lag Optimize?			Yes			Yes	
Vehicle Extension (s)			3.0			3.0	3.0
Minimum Gap (s)			3.0			3.0	3.0

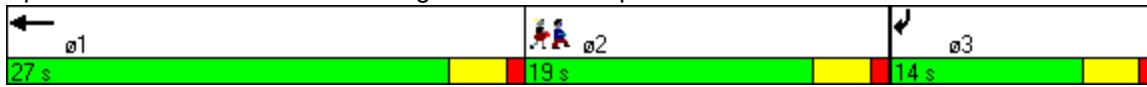


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Time Before Reduce (s)			0.0			0.0	0.0
Time To Reduce (s)			0.0			0.0	0.0
Recall Mode			C-Max			None	Ped
Walk Time (s)			7.0				10.0
Flash Dont Walk (s)			5.0				5.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)			27.4			8.4	
Actuated g/C Ratio			0.46			0.14	
v/c Ratio			0.44			0.17	
Control Delay			13.1			0.6	
Queue Delay			0.0			0.0	
Total Delay			13.1			0.6	
LOS			B			A	
Approach Delay			13.1				
Approach LOS			B				
90th %ile Green (s)			25.0			8.0	15.0
90th %ile Term Code			Coord			Min	Ped
70th %ile Green (s)			25.0			8.0	15.0
70th %ile Term Code			Coord			Min	Ped
50th %ile Green (s)			25.0			8.0	15.0
50th %ile Term Code			Coord			Min	Ped
30th %ile Green (s)			25.0			8.0	15.0
30th %ile Term Code			Coord			Min	Ped
10th %ile Green (s)			37.0			0.0	15.0
10th %ile Term Code			Coord			Skip	Ped
Queue Length 50th (ft)			89			0	
Queue Length 95th (ft)			131			0	
Internal Link Dist (ft)		199	328		281		
Turn Bay Length (ft)							
Base Capacity (vph)			1541			666	
Starvation Cap Reductn			0			0	
Spillback Cap Reductn			0			0	
Storage Cap Reductn			0			0	
Reduced v/c Ratio			0.44			0.17	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	55 (92%), Referenced to phase 1:WBT, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.44
Intersection Signal Delay:	11.3
Intersection LOS:	B
Intersection Capacity Utilization:	37.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4019: Huntington Avenue & Opera Place





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Lane Configurations	↑↑						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	0%			0%	0%		
Storage Length (ft)		0	0		0	0	
Storage Lanes		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	100						
Trailing Detector (ft)	0						
Turning Speed (mph)		9	15		15	9	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt							
Flt Protected							
Satd. Flow (prot)	3539	0	0	0	0	0	
Flt Permitted							
Satd. Flow (perm)	3539	0	0	0	0	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)	30			30	30		
Link Distance (ft)	280			409	285		
Travel Time (s)	6.4			9.3	6.5		
Volume (vph)	700	0	0	0	0	0	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%	0%		
Adj. Flow (vph)	737	0	0	0	0	0	
Lane Group Flow (vph)	737	0	0	0	0	0	
Turn Type							
Protected Phases	1						2
Permitted Phases							
Detector Phases	1						
Minimum Initial (s)	8.0						4.0
Minimum Split (s)	14.0						19.0
Total Split (s)	41.0	0.0	0.0	0.0	0.0	0.0	19.0
Total Split (%)	68.3%	0.0%	0.0%	0.0%	0.0%	0.0%	32%
Maximum Green (s)	37.0						15.0
Yellow Time (s)	3.0						3.0
All-Red Time (s)	1.0						1.0
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0						3.0
Minimum Gap (s)	3.0						3.0



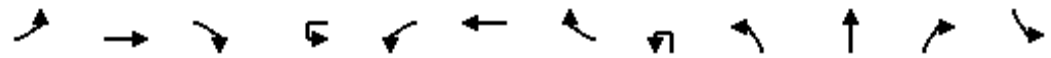
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Time Before Reduce (s)	0.0						0.0
Time To Reduce (s)	0.0						0.0
Recall Mode	C-Min						Ped
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	37.0						
Actuated g/C Ratio	0.62						
v/c Ratio	0.34						
Control Delay	6.0						
Queue Delay	0.0						
Total Delay	6.0						
LOS	A						
Approach Delay	6.0						
Approach LOS	A						
90th %ile Green (s)	37.0						15.0
90th %ile Term Code	Coord						Ped
70th %ile Green (s)	37.0						15.0
70th %ile Term Code	Coord						Ped
50th %ile Green (s)	37.0						15.0
50th %ile Term Code	Coord						Ped
30th %ile Green (s)	37.0						15.0
30th %ile Term Code	Coord						Ped
10th %ile Green (s)	37.0						15.0
10th %ile Term Code	Coord						Ped
Queue Length 50th (ft)	148						
Queue Length 95th (ft)	166						
Internal Link Dist (ft)	200			329	205		
Turn Bay Length (ft)							
Base Capacity (vph)	2182						
Starvation Cap Reductn	0						
Spillback Cap Reductn	0						
Storage Cap Reductn	0						
Reduced v/c Ratio	0.34						

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	31 (52%), Referenced to phase 1:EBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.34
Intersection Signal Delay:	6.0
Intersection Capacity Utilization	22.7%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

Splits and Phases: 4020: Huntington Avenue & South

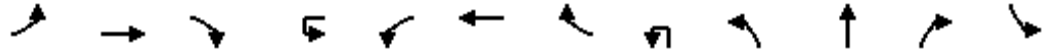




Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations		↑↑				↑↑				↑↑		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%				0%				0%		
Storage Length (ft)	0		0		0		0		0		0	0
Storage Lanes	0		0		0		0		0		0	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50	50		50	50	50		50
Trailing Detector (ft)		0		0	0	0		0	0	0		0
Turning Speed (mph)	15		9	9	15		9	9	15		9	15
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96				0.96				0.81		
Frt		0.990				0.993				0.967		
Flt Protected						0.996				0.980		
Satd. Flow (prot)	0	2938	0	0	0	2853	0	0	0	1030	0	0
Flt Permitted						0.806				0.848		
Satd. Flow (perm)	0	2938	0	0	0	2268	0	0	0	828	0	0
Right Turn on Red			Yes				Yes				Yes	
Satd. Flow (RTOR)		10								12		
Headway Factor	1.14	1.10	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Link Speed (mph)		30				30				25		
Link Distance (ft)		606				258				482		
Travel Time (s)		13.8				5.9				13.1		
Volume (vph)	0	652	44	30	34	619	35	1	30	25	18	29
Confl. Peds. (#/hr)			276	755	276		155		183		755	755
Confl. Bikes (#/hr)			38				1				2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.81	0.81	0.81	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	7%	30%	2%	8%	10%	12%	2%	64%	15%	23%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%				0%		
Adj. Flow (vph)	0	709	48	33	37	673	38	1	37	31	22	32
Lane Group Flow (vph)	0	757	0	0	0	781	0	0	0	91	0	0
Turn Type			custom D.P+P					Perm	Perm			Perm
Protected Phases		1				3	1 3			2		
Permitted Phases				3	1			2	2			2
Detector Phases		1		3	3	1 3		2	2	2		2
Minimum Initial (s)		8.0		8.0	8.0			8.0	8.0	8.0		8.0
Minimum Split (s)		21.0		14.0	14.0			16.0	16.0	16.0		16.0
Total Split (s)	0.0	73.0	0.0	15.0	15.0	88.0	0.0	32.0	32.0	32.0	0.0	32.0
Total Split (%)	0.0%	60.8%	0.0%	12.5%	12.5%	73.3%	0.0%	26.7%	26.7%	26.7%	0.0%	26.7%
Maximum Green (s)		68.0		10.0	10.0			26.0	26.0	26.0		26.0
Yellow Time (s)		3.0		3.0	3.0			3.0	3.0	3.0		3.0
All-Red Time (s)		2.0		2.0	2.0			3.0	3.0	3.0		3.0
Lead/Lag				Lag	Lag			Lead	Lead	Lead		Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes	Yes		Yes
Vehicle Extension (s)		2.0		2.0	2.0			3.0	3.0	3.0		3.0
Minimum Gap (s)		3.0		3.0	3.0			3.0	3.0	3.0		3.0



Lane Group	SBT	SBR
Lane Configurations	↕	
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	14	12
Grade (%)	0%	
Storage Length (ft)	0	
Storage Lanes	0	
Total Lost Time (s)	4.0	4.0
Leading Detector (ft)	50	
Trailing Detector (ft)	0	
Turning Speed (mph)	9	
Lane Util. Factor	1.00	1.00
Ped Bike Factor	0.83	
Frt	0.965	
Flt Protected	0.989	
Satd. Flow (prot)	1382	0
Flt Permitted	0.922	
Satd. Flow (perm)	1188	0
Right Turn on Red	Yes	
Satd. Flow (RTOR)	14	
Headway Factor	1.05	1.14
Link Speed (mph)	25	
Link Distance (ft)	466	
Travel Time (s)	12.7	
Volume (vph)	68	34
Confl. Peds. (#/hr)	183	
Confl. Bikes (#/hr)	2	
Peak Hour Factor	0.91	0.91
Growth Factor	100%	100%
Heavy Vehicles (%)	21%	4%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Adj. Flow (vph)	75	37
Lane Group Flow (vph)	144	0
Turn Type		
Protected Phases	2	
Permitted Phases		
Detector Phases	2	
Minimum Initial (s)	8.0	
Minimum Split (s)	16.0	
Total Split (s)	32.0	0.0
Total Split (%)	26.7%	0.0%
Maximum Green (s)	26.0	
Yellow Time (s)	3.0	
All-Red Time (s)	3.0	
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	
Minimum Gap (s)	3.0	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Time Before Reduce (s)		0.0		0.0	0.0			0.0	0.0	0.0		0.0
Time To Reduce (s)		0.0		0.0	0.0			0.0	0.0	0.0		0.0
Recall Mode		C-Max		None	None			Ped	Ped	Ped		Ped
Walk Time (s)		7.0						7.0	7.0	7.0		7.0
Flash Dont Walk (s)		7.0						2.0	2.0	2.0		2.0
Pedestrian Calls (#/hr)		0						0	0	0		0
Act Effct Green (s)		77.4				88.4				19.6		
Actuated g/C Ratio		0.64				0.74				0.16		
v/c Ratio		0.40				0.45				0.63		
Control Delay		4.9				4.8				58.1		
Queue Delay		0.0				0.0				0.0		
Total Delay		4.9				4.8				58.1		
LOS		A				A				E		
Approach Delay		4.9				4.8				58.1		
Approach LOS		A				A				E		
90th %ile Green (s)		68.0		10.0	10.0			26.0	26.0	26.0		26.0
90th %ile Term Code		Coord		Max	Max			Max	Max	Max		Max
70th %ile Green (s)		72.8		10.0	10.0			21.2	21.2	21.2		21.2
70th %ile Term Code		Coord		Max	Max			Gap	Gap	Gap		Gap
50th %ile Green (s)		76.5		10.0	10.0			17.5	17.5	17.5		17.5
50th %ile Term Code		Coord		Max	Max			Gap	Gap	Gap		Gap
30th %ile Green (s)		80.1		10.0	10.0			13.9	13.9	13.9		13.9
30th %ile Term Code		Coord		Max	Max			Gap	Gap	Gap		Gap
10th %ile Green (s)		84.6		10.0	10.0			9.4	9.4	9.4		9.4
10th %ile Term Code		Coord		Max	Max			Gap	Gap	Gap		Gap
Queue Length 50th (ft)		54				18				58		
Queue Length 95th (ft)		65				182				m93		
Internal Link Dist (ft)		526				178				402		
Turn Bay Length (ft)												
Base Capacity (vph)		1899				1724				202		
Starvation Cap Reductn		0				0				0		
Spillback Cap Reductn		0				0				0		
Storage Cap Reductn		0				0				0		
Reduced v/c Ratio		0.40				0.45				0.45		

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 90 (75%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 12.0 Intersection LOS: B
 Intersection Capacity Utilization 65.8% ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBT	SBR
Time Before Reduce (s)	0.0	
Time To Reduce (s)	0.0	
Recall Mode	Ped	
Walk Time (s)	7.0	
Flash Dont Walk (s)	2.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	19.6	
Actuated g/C Ratio	0.16	
v/c Ratio	0.70	
Control Delay	59.4	
Queue Delay	0.0	
Total Delay	59.4	
LOS	E	
Approach Delay	59.4	
Approach LOS	E	
90th %ile Green (s)	26.0	
90th %ile Term Code	Max	
70th %ile Green (s)	21.2	
70th %ile Term Code	Gap	
50th %ile Green (s)	17.5	
50th %ile Term Code	Gap	
30th %ile Green (s)	13.9	
30th %ile Term Code	Gap	
10th %ile Green (s)	9.4	
10th %ile Term Code	Gap	
Queue Length 50th (ft)	96	
Queue Length 95th (ft)	157	
Internal Link Dist (ft)	386	
Turn Bay Length (ft)		
Base Capacity (vph)	288	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.50	
Intersection Summary		

Splits and Phases: 643: Huntington Avenue & Forsyth Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑			↕			↖	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	12	12	16	12	12	12	15
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50		50	50		50	50	50
Trailing Detector (ft)		0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			0.93				0.71
Frt					0.998			0.967				0.850
Flt Protected				0.950				0.998			0.996	
Satd. Flow (prot)	0	2927	0	1430	2869	0	0	1686	0	0	1650	1552
Flt Permitted				0.950				0.983			0.947	
Satd. Flow (perm)	0	2927	0	1430	2869	0	0	1660	0	0	1569	1105
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.14	1.14	1.25	1.19	1.14	1.14	0.97	1.14	1.14	1.14	1.01
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		894			606			731			263	
Travel Time (s)		20.3			13.8			19.9			7.2	
Volume (vph)	0	580	0	108	581	9	15	287	97	19	200	167
Confl. Peds. (#/hr)			37			50			73			78
Confl. Bikes (#/hr)			11			14			4			2
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.95	0.95	0.95	0.88	0.88	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	0%	6%	9%	11%	7%	1%	11%	16%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	624	0	120	646	10	16	302	102	22	227	190
Lane Group Flow (vph)	0	624	0	120	656	0	0	420	0	0	249	190
Turn Type				Prot			Perm			Perm		Perm
Protected Phases		1		3	1 3			2				2
Permitted Phases							2			2		2
Detector Phases		1		3	1 3		2	2		2	2	2
Minimum Initial (s)		8.0		6.0			8.0	8.0		8.0	8.0	8.0
Minimum Split (s)		33.0		13.0			18.0	18.0		18.0	18.0	18.0
Total Split (s)	0.0	50.0	0.0	22.0	72.0	0.0	48.0	48.0	0.0	48.0	48.0	48.0
Total Split (%)	0.0%	41.7%	0.0%	18.3%	60.0%	0.0%	40.0%	40.0%	0.0%	40.0%	40.0%	40.0%
Maximum Green (s)		45.0		16.0			41.0	41.0		41.0	41.0	41.0
Yellow Time (s)		3.0		3.0			3.0	3.0		3.0	3.0	3.0
All-Red Time (s)		2.0		3.0			4.0	4.0		4.0	4.0	4.0
Lead/Lag				Lag			Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?				Yes			Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)		2.0		2.0			3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)		2.0		3.0			3.0	3.0		3.0	3.0	3.0

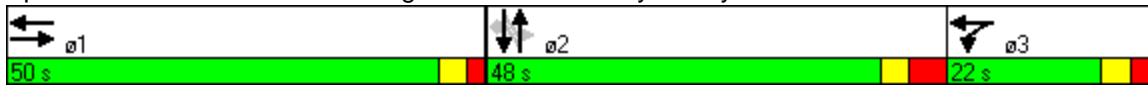


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Recall Mode		C-Max		None			Ped	Ped		Ped	Ped	Ped
Walk Time (s)		7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		19.0					3.0	3.0		3.0	3.0	3.0
Pedestrian Calls (#/hr)		0					0	0		0	0	0
Act Effct Green (s)		54.4		16.1	74.5		37.5			37.5	37.5	37.5
Actuated g/C Ratio		0.45		0.13	0.62		0.31			0.31	0.31	0.31
v/c Ratio		0.47		0.62	0.37		0.81			0.51	0.55	0.55
Control Delay		8.5		62.8	14.8		47.7			36.6	39.6	39.6
Queue Delay		0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Delay		8.5		62.8	14.8		47.7			36.6	39.6	39.6
LOS		A		E	B		D			D	D	D
Approach Delay		8.5			22.2		47.7			37.9		
Approach LOS		A			C		D			D		
90th %ile Green (s)		45.0		16.0			41.0	41.0		41.0	41.0	41.0
90th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
70th %ile Green (s)		45.3		16.0			40.7	40.7		40.7	40.7	40.7
70th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	Gap
50th %ile Green (s)		50.8		16.0			35.2	35.2		35.2	35.2	35.2
50th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	Gap
30th %ile Green (s)		57.7		13.4			30.9	30.9		30.9	30.9	30.9
30th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)		68.3		9.1			24.6	24.6		24.6	24.6	24.6
10th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
Queue Length 50th (ft)		75		73	111		339			156	121	
Queue Length 95th (ft)		171		m137	145		m399			214	179	
Internal Link Dist (ft)		814			526		651			183		
Turn Bay Length (ft)				100								
Base Capacity (vph)		1327		215	1775		609			575	405	
Starvation Cap Reductn		0		0	0		0			0	0	
Spillback Cap Reductn		0		0	0		0			0	0	
Storage Cap Reductn		0		0	0		0			0	0	
Reduced v/c Ratio		0.47		0.56	0.37		0.69			0.43	0.47	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 100 (83%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 26.2 Intersection LOS: C
 Intersection Capacity Utilization 76.9% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 569: Huntington Avenue & Forsyth Way



Northeastern University IMP
3096: Huntington Avenue & Louis Prang Street

2013 Existing Conditions
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕			↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	12	12	11	11	12	13	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50		50	50		50	50	
Trailing Detector (ft)	0	0			0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.91			0.85			1.00			0.99	
Frt		0.949			0.962			0.999			0.997	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1472	2444	0	0	2460	0	1441	1540	0	1486	1517	0
Flt Permitted	0.950						0.209			0.477		
Satd. Flow (perm)	1472	2444	0	0	2460	0	317	1540	0	746	1517	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.25	1.19	1.14	1.14	1.14	1.14	1.19	1.19	1.14	1.10	1.14	1.14
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		679			894			582			631	
Travel Time (s)		15.4			20.3			15.9			17.2	
Volume (vph)	74	490	254	0	536	181	222	446	3	32	339	7
Confl. Peds. (#/hr)			54			177			80			97
Confl. Bikes (#/hr)			12			11			11			2
Peak Hour Factor	0.94	0.94	0.94	0.97	0.97	0.97	0.89	0.89	0.89	0.79	0.79	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	11%	10%	0%	8%	10%	9%	7%	33%	13%	11%	43%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	79	521	270	0	553	187	249	501	3	41	429	9
Lane Group Flow (vph)	79	791	0	0	740	0	249	504	0	41	438	0
Turn Type	Prot						D.P+P			Perm		
Protected Phases	4	1 4			1		2	2 3				3
Permitted Phases							3			3		
Detector Phases	4	1 4			1		2	2 3		3		3
Minimum Initial (s)	5.0				8.0		6.0			8.0	8.0	
Minimum Split (s)	12.0				21.0		14.0			18.0	18.0	
Total Split (s)	16.0	58.0	0.0	0.0	42.0	0.0	20.0	62.0	0.0	42.0	42.0	0.0
Total Split (%)	13.3%	48.3%	0.0%	0.0%	35.0%	0.0%	16.7%	51.7%	0.0%	35.0%	35.0%	0.0%
Maximum Green (s)	10.0				36.0		13.0			35.0	35.0	
Yellow Time (s)	3.0				3.0		3.0			3.0	3.0	
All-Red Time (s)	3.0				3.0		4.0			4.0	4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0				2.0		3.0			3.0	3.0	
Minimum Gap (s)	3.0				3.0		3.0			3.0	3.0	



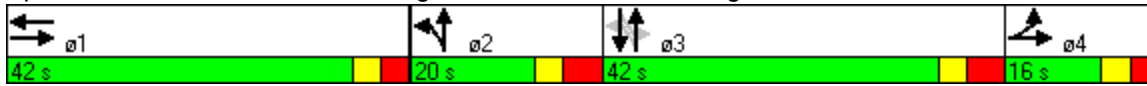
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Time To Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Recall Mode	None			C-Max			None			Ped	Ped	
Walk Time (s)					7.0					7.0	7.0	
Flash Dont Walk (s)					6.0					3.0	3.0	
Pedestrian Calls (#/hr)					0					0	0	
Act Effct Green (s)	12.0	54.8			38.8		53.2	57.2		37.2	37.2	
Actuated g/C Ratio	0.10	0.46			0.32		0.44	0.48		0.31	0.31	
v/c Ratio	0.54	0.71			1.02dr		0.86	0.69		0.18	0.93	
Control Delay	65.6	30.8			42.8		45.4	29.9		32.2	68.1	
Queue Delay	0.0	0.0			0.0		0.0	1.4		0.0	0.0	
Total Delay	65.6	30.8			42.8		45.4	31.3		32.2	68.1	
LOS	E	C			D		D	C		C	E	
Approach Delay		34.0			42.8			36.0			65.0	
Approach LOS		C			D			D			E	
90th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
90th %ile Term Code	Max				Coord		Max			Max	Max	
70th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
70th %ile Term Code	Max				Coord		Max			Max	Max	
50th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
50th %ile Term Code	Max				Coord		Max			Max	Max	
30th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
30th %ile Term Code	Max				Coord		Max			Max	Max	
10th %ile Green (s)	10.0				39.8		13.0			31.2	31.2	
10th %ile Term Code	Max				Coord		Max			Gap	Gap	
Queue Length 50th (ft)	59	256			129		128	308		23	325	
Queue Length 95th (ft)	112	335			#411		m#224	m443		46	#411	
Internal Link Dist (ft)		599			814			502			551	
Turn Bay Length (ft)	100											
Base Capacity (vph)	147	1115			795		291	744		236	480	
Starvation Cap Reductn	0	0			0		0	99		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.54	0.71			0.93		0.86	0.78		0.17	0.91	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84 (70%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 42.0 Intersection LOS: D
 Intersection Capacity Utilization 76.7% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3096: Huntington Avenue & Louis Prang Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	16	12	12	10	12	12	15	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor			0.86		0.99			0.94			0.99	
Frt			0.850		0.991			0.981			0.990	
Flt Protected		0.989			0.989			0.995			0.999	
Satd. Flow (prot)	0	1556	1211	0	1716	0	0	2686	0	0	1667	0
Flt Permitted		0.827			0.702			0.845			0.990	
Satd. Flow (perm)	0	1301	1048	0	1218	0	0	2281	0	0	1652	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			48		4						5	
Headway Factor	1.14	1.25	1.25	1.14	0.97	1.14	1.14	1.25	1.14	1.14	1.01	1.14
Link Speed (mph)		25			30			25			30	
Link Distance (ft)		563			731			505			582	
Travel Time (s)		15.4			16.6			13.8			13.2	
Volume (vph)	76	294	41	70	216	17	48	592	85	3	468	36
Confl. Peds. (#/hr)			38			73			113			27
Confl. Bikes (#/hr)			19			2			11			5
Peak Hour Factor	0.79	0.90	0.85	0.88	0.90	0.71	0.63	0.98	0.89	0.38	0.80	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	1%	12%	6%	11%	9%	3%	4%	0%	33%	11%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	96	327	48	80	240	24	76	604	96	8	585	48
Lane Group Flow (vph)	0	423	48	0	344	0	0	776	0	0	641	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		5!			5!		8!	1			1	
Permitted Phases	5!		5	5!						1		
Detector Phases	5	5	5	5	5		8	1		1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		4.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0		20.0	20.0		20.0	20.0	
Total Split (s)	60.0	60.0	60.0	60.0	60.0	0.0	20.0	60.0	0.0	60.0	60.0	0.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	0.0%	16.7%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	56.0	56.0	56.0	56.0	56.0		16.0	56.0		56.0	56.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.5	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		0.5	1.0		1.0	1.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		3.0	2.0		2.0	2.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		3.0	2.0		2.0	2.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None	None	None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0		5.0	8.0		8.0	8.0	
Flash Dont Walk (s)	7.0	7.0	7.0	7.0	7.0		11.0	6.0		6.0	6.0	
Pedestrian Calls (#/hr)	35	35	35	35	35		0	0		0	0	
Act Effct Green (s)		44.5	44.5		44.5			112.0			67.5	
Actuated g/C Ratio		0.37	0.37		0.37			0.93			0.56	
v/c Ratio		0.88	0.11		0.76			0.52			0.69	
Control Delay		53.8	5.9		41.0			2.9			19.3	
Queue Delay		0.0	0.0		0.0			0.0			0.8	
Total Delay		53.8	5.9		41.0			2.9			20.0	
LOS		D	A		D			A			C	
Approach Delay		48.9			41.0			2.9			20.0	
Approach LOS		D			D			A			C	
90th %ile Green (s)	56.0	56.0	56.0	56.0	56.0		56.0	56.0		56.0	56.0	
90th %ile Term Code	Max	Max	Max	Max	Max		Hold	Coord		Coord	Coord	
70th %ile Green (s)	51.3	51.3	51.3	51.3	51.3		51.3	60.7		60.7	60.7	
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
50th %ile Green (s)	45.0	45.0	45.0	45.0	45.0		45.0	67.0		67.0	67.0	
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
30th %ile Green (s)	39.2	39.2	39.2	39.2	39.2		39.2	72.8		72.8	72.8	
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
10th %ile Green (s)	31.0	31.0	31.0	31.0	31.0		31.0	81.0		81.0	81.0	
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
Queue Length 50th (ft)		301	0		286			0			204	
Queue Length 95th (ft)		380	19		382			22			m220	
Internal Link Dist (ft)		483			651			425			502	
Turn Bay Length (ft)												
Base Capacity (vph)		607	515		571			1494			932	
Starvation Cap Reductn		0	0		0			0			91	
Spillback Cap Reductn		0	0		0			4			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.70	0.09		0.60			0.52			0.76	

Intersection Summary

Area Type: CBD

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 25 (21%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 23.4

Intersection LOS: C

Intersection Capacity Utilization 106.9%

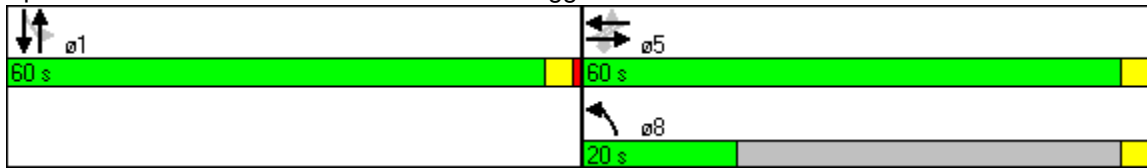
ICU Level of Service G

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

! Phase conflict between lane groups.

Splits and Phases: 389: Parker Street & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	13	11	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.96		0.97			
Frt		0.850	0.993			
Flt Protected	0.950					0.996
Satd. Flow (prot)	1417	1318	1476	0	0	2955
Flt Permitted	0.950					0.785
Satd. Flow (perm)	1365	1318	1476	0	0	2329
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		34	8			
Headway Factor	1.25	1.10	1.19	1.14	1.14	1.14
Link Speed (mph)	30		25			30
Link Distance (ft)	302		208			95
Travel Time (s)	6.9		5.7			2.2
Volume (vph)	32	15	737	31	32	560
Confl. Peds. (#/hr)	28	20		235	235	
Confl. Bikes (#/hr)				20		
Peak Hour Factor	0.63	0.44	0.94	0.67	0.55	0.89
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	14%	8%	8%	4%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	51	34	784	46	58	629
Lane Group Flow (vph)	51	34	830	0	0	687
Turn Type		Prot			Perm	
Protected Phases	5	5	1			1
Permitted Phases					1	
Detector Phases	5	5	1		1	1
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0
Total Split (s)	22.0	22.0	48.0	0.0	48.0	48.0
Total Split (%)	31.4%	31.4%	68.6%	0.0%	68.6%	68.6%
Maximum Green (s)	17.0	17.0	42.0		42.0	42.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	8.0	8.0	8.0		8.0	8.0
Flash Dont Walk (s)	8.0	8.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)	78	78	9		9	9
Act Effct Green (s)	15.4	15.4	50.0			50.0
Actuated g/C Ratio	0.22	0.22	0.71			0.71
v/c Ratio	0.16	0.11	0.79			0.41
Control Delay	22.5	9.0	11.5			6.6
Queue Delay	0.0	0.0	1.0			0.0
Total Delay	22.5	9.0	12.5			6.6
LOS	C	A	B			A
Approach Delay	17.1		12.5			6.6
Approach LOS	B		B			A
90th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	0.0	0.0	64.0		64.0	64.0
10th %ile Term Code	Skip	Skip	Coord		Coord	Coord
Queue Length 50th (ft)	17	0	130			67
Queue Length 95th (ft)	30	4	#568			99
Internal Link Dist (ft)	222		128			15
Turn Bay Length (ft)						
Base Capacity (vph)	364	364	1057			1663
Starvation Cap Reductn	0	0	71			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.14	0.09	0.84			0.41

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 4 (6%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 10.2

Intersection LOS: B

Intersection Capacity Utilization 62.1%

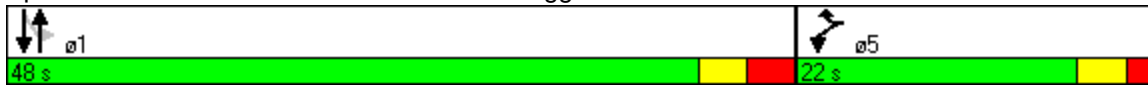
ICU Level of Service B












Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1526: Leon Street & Ruggles Street



							
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Lane Configurations						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	16	16	13	12	12	11	
Grade (%)	0%		0%			0%	
Storage Length (ft)	0	0		0	0		
Storage Lanes	1	1		0	0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50	50	50			50	
Trailing Detector (ft)	0	0	0			0	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	
Ped Bike Factor							
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	939	876	1578	0	0	2935	
Flt Permitted	0.950						
Satd. Flow (perm)	939	876	1578	0	0	2935	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		32					
Headway Factor	0.97	0.97	1.10	1.14	1.14	1.19	
Link Speed (mph)	30		25			30	
Link Distance (ft)	232		340			229	
Travel Time (s)	5.3		9.3			5.2	
Volume (vph)	72	25	787	0	0	592	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.90	0.78	0.91	0.25	0.84	0.93	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	96%	88%	12%	0%	0%	7%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	80	32	865	0	0	637	
Lane Group Flow (vph)	80	32	865	0	0	637	
Turn Type		Prot					
Protected Phases	5	5	1			1	2
Permitted Phases							
Detector Phases	5	5	1			1	
Minimum Initial (s)	8.0	8.0	8.0			8.0	7.0
Minimum Split (s)	13.0	13.0	13.0			13.0	24.0
Total Split (s)	17.0	17.0	29.0	0.0	0.0	29.0	24.0
Total Split (%)	24.3%	24.3%	41.4%	0.0%	0.0%	41.4%	34%
Maximum Green (s)	12.0	12.0	24.0			24.0	20.0
Yellow Time (s)	3.0	3.0	3.0			3.0	3.0
All-Red Time (s)	2.0	2.0	2.0			2.0	1.0
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0			2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0			3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Time Before Reduce (s)	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0			0.0	0.0
Recall Mode	None	None	C-Max			C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	11.0	11.0	49.6			49.6	
Actuated g/C Ratio	0.16	0.16	0.71			0.71	
v/c Ratio	0.54	0.19	0.77			0.31	
Control Delay	40.8	12.5	18.4			6.9	
Queue Delay	0.3	0.0	1.8			0.0	
Total Delay	41.1	12.5	20.2			6.9	
LOS	D	B	C			A	
Approach Delay	32.9		20.2			6.9	
Approach LOS	C		C			A	
90th %ile Green (s)	12.0	12.0	24.0			24.0	20.0
90th %ile Term Code	Max	Max	Coord			Coord	Ped
70th %ile Green (s)	12.0	12.0	48.0			48.0	0.0
70th %ile Term Code	Max	Max	Coord			Coord	Skip
50th %ile Green (s)	10.1	10.1	49.9			49.9	0.0
50th %ile Term Code	Gap	Gap	Coord			Coord	Skip
30th %ile Green (s)	8.0	8.0	52.0			52.0	0.0
30th %ile Term Code	Min	Min	Coord			Coord	Skip
10th %ile Green (s)	0.0	0.0	65.0			65.0	0.0
10th %ile Term Code	Skip	Skip	Coord			Coord	Skip
Queue Length 50th (ft)	32	0	210			27	
Queue Length 95th (ft)	72	17m#1354				123	
Internal Link Dist (ft)	152		260			149	
Turn Bay Length (ft)							
Base Capacity (vph)	174	189	1118			2079	
Starvation Cap Reductn	0	0	122			0	
Spillback Cap Reductn	6	0	0			143	
Storage Cap Reductn	0	0	0			0	
Reduced v/c Ratio	0.48	0.17	0.87			0.33	

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 1 (1%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 15.8

Intersection LOS: B

Intersection Capacity Utilization 59.4%

ICU Level of Service B

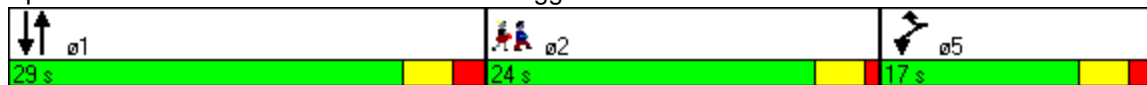
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3068: MBTA Exit & Ruggles Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑			↑↑	↗	↘	↗		↗↘		↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	11	11	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	1		0	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50	50	50	50		50		50
Trailing Detector (ft)	0	0			0	0	0	0		0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	0.98					0.92	0.99	0.98		0.97		0.99
Frt						0.850		0.936				0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1555	4424	0	0	3049	1371	1570	1504	0	3090	0	1439
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	1529	4424	0	0	3049	1264	1556	1504	0	3009	0	1418
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)								20				151
Headway Factor	1.19	1.19	1.14	1.14	1.19	1.14	1.19	1.19	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		911			298			632				340
Travel Time (s)		20.7			6.8			14.4				7.7
Volume (vph)	202	1339	0	0	805	553	34	32	19	536	0	128
Confl. Peds. (#/hr)	11		24	24		11	4		13	13		4
Confl. Bikes (#/hr)			7									
Peak Hour Factor	0.94	0.96	0.92	0.92	0.89	0.89	0.76	0.85	0.69	0.82	0.92	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	3%	6%	0%	2%	0%	2%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	215	1395	0	0	904	621	45	38	28	654	0	151
Lane Group Flow (vph)	215	1395	0	0	904	621	45	66	0	654	0	151
Turn Type	Prot				pm+ov	Split				Prot		custom
Protected Phases	1	6			2	3	4	4		3		1
Permitted Phases						2						3
Detector Phases	1	6			2	3	4	4		3		1
Minimum Initial (s)	8.0	16.0			16.0	9.0	8.0	8.0		9.0		8.0
Minimum Split (s)	12.0	20.0			20.0	13.0	23.0	23.0		13.0		12.0
Total Split (s)	30.0	69.0	0.0	0.0	39.0	38.0	33.0	33.0	0.0	38.0	0.0	30.0
Total Split (%)	21.4%	49.3%	0.0%	0.0%	27.9%	27.1%	23.6%	23.6%	0.0%	27.1%	0.0%	21.4%
Maximum Green (s)	26.0	65.0			35.0	34.0	29.0	29.0		34.0		26.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0		3.0
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0		1.0		1.0
Lead/Lag	Lead				Lag	Lead	Lag	Lag		Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0			2.0	2.0	2.0	2.0		2.0		2.0
Minimum Gap (s)	2.0	2.0			2.0	2.0	2.0	2.0		2.0		2.0

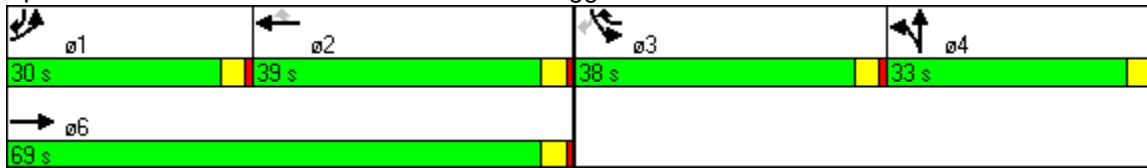


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0		0.0		0.0
Time To Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0		0.0		0.0
Recall Mode	None	C-Max			C-Max	None	None	None		None		None
Walk Time (s)		8.0			8.0		8.0	8.0				
Flash Dont Walk (s)		6.0			5.0		11.0	11.0				
Pedestrian Calls (#/hr)		12			14		5	5				
Act Effct Green (s)	22.2	87.0			60.8	93.5	10.8	10.8		32.7		54.8
Actuated g/C Ratio	0.16	0.62			0.43	0.67	0.08	0.08		0.23		0.39
v/c Ratio	0.87	0.51			0.68	0.71	0.37	0.49		0.91		0.23
Control Delay	89.2	16.8			35.9	19.9	68.6	55.6		64.2		6.6
Queue Delay	0.0	0.0			1.8	1.3	0.0	0.0		15.1		0.0
Total Delay	89.2	16.8			37.7	21.2	68.6	55.6		79.3		6.6
LOS	F	B			D	C	E	E		E		A
Approach Delay		26.5			31.0			60.9				
Approach LOS		C			C			E				
90th %ile Green (s)	26.0	75.0			45.0	34.0	19.0	19.0		34.0		26.0
90th %ile Term Code	Max	Coord			Coord	Max	Ped	Ped		Max		Max
70th %ile Green (s)	26.0	83.6			53.6	34.0	10.4	10.4		34.0		26.0
70th %ile Term Code	Max	Coord			Coord	Max	Gap	Gap		Max		Max
50th %ile Green (s)	23.7	85.6			57.9	34.0	8.4	8.4		34.0		23.7
50th %ile Term Code	Gap	Coord			Coord	Max	Gap	Gap		Max		Gap
30th %ile Green (s)	19.9	86.0			62.1	34.0	8.0	8.0		34.0		19.9
30th %ile Term Code	Gap	Coord			Coord	Max	Min	Min		Max		Gap
10th %ile Green (s)	15.2	104.6			85.4	27.4	0.0	0.0		27.4		15.2
10th %ile Term Code	Gap	Coord			Coord	Gap	Skip	Skip		Gap		Gap
Queue Length 50th (ft)	191	250			356	300	40	41		275		8
Queue Length 95th (ft)	#300	353			#536	570	65	80		255		49
Internal Link Dist (ft)		831			218			552				260
Turn Bay Length (ft)	200											
Base Capacity (vph)	289	2748			1324	882	325	327		750		686
Starvation Cap Reductn	0	0			256	3	0	0		97		0
Spillback Cap Reductn	0	82			0	108	0	1		0		0
Storage Cap Reductn	0	0			0	0	0	0		0		0
Reduced v/c Ratio	0.74	0.52			0.85	0.80	0.14	0.20		1.00		0.22

Intersection Summary

Area Type: CBD
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 96 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 36.9 Intersection LOS: D
 Intersection Capacity Utilization 71.5% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 611: Tremont Street & Ruggles Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑							↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50			50							50
Trailing Detector (ft)		0			0							0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99										
Frt		0.989										0.865
Flt Protected												
Satd. Flow (prot)	0	4534	0	0	4532	0	0	0	0	0	0	1465
Flt Permitted												
Satd. Flow (perm)	0	4534	0	0	4532	0	0	0	0	0	0	1465
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24										81
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		298			471			679				377
Travel Time (s)		6.8			10.7			15.4				8.6
Volume (vph)	0	1772	126	0	1319	0	0	0	0	0	0	43
Confl. Peds. (#/hr)	25		17	17		25	17		101	101		17
Confl. Bikes (#/hr)			14			4						
Peak Hour Factor	0.40	0.89	0.80	0.92	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.76
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	0	1991	158	0	1388	0	0	0	0	0	0	57
Lane Group Flow (vph)	0	2149	0	0	1388	0	0	0	0	0	0	57
Turn Type												custom
Protected Phases		1			1							5
Permitted Phases												
Detector Phases		1			1							5
Minimum Initial (s)		10.0			10.0							4.0
Minimum Split (s)		24.0			24.0							33.0
Total Split (s)	0.0	107.0	0.0	0.0	107.0	0.0	0.0	0.0	0.0	0.0	0.0	33.0
Total Split (%)	0.0%	76.4%	0.0%	0.0%	76.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.6%
Maximum Green (s)		102.0			102.0							28.0
Yellow Time (s)		3.0			3.0							3.0
All-Red Time (s)		2.0			2.0							2.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0			2.0							2.0
Minimum Gap (s)		2.0			2.0							2.0



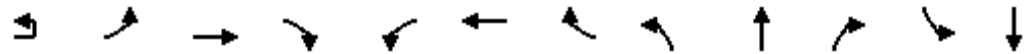
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0			0.0							0.0
Time To Reduce (s)		0.0			0.0							0.0
Recall Mode		C-Max			C-Max							None
Walk Time (s)		8.0			8.0							8.0
Flash Dont Walk (s)		6.0			6.0							17.0
Pedestrian Calls (#/hr)		30			30							5
Act Effct Green (s)		125.1			125.1							9.6
Actuated g/C Ratio		0.89			0.89							0.07
v/c Ratio		0.53			0.34							0.32
Control Delay		1.5			2.3							9.0
Queue Delay		0.1			0.3							0.6
Total Delay		1.5			2.7							9.6
LOS		A			A							A
Approach Delay		1.5			2.7							
Approach LOS		A			A							
90th %ile Green (s)		105.0			105.0							25.0
90th %ile Term Code		Coord			Coord							Ped
70th %ile Green (s)		125.5			125.5							4.5
70th %ile Term Code		Coord			Coord							Gap
50th %ile Green (s)		125.5			125.5							4.5
50th %ile Term Code		Coord			Coord							Gap
30th %ile Green (s)		125.5			125.5							4.5
30th %ile Term Code		Coord			Coord							Gap
10th %ile Green (s)		135.0			135.0							0.0
10th %ile Term Code		Coord			Coord							Skip
Queue Length 50th (ft)		8			38							0
Queue Length 95th (ft)		227			164							8
Internal Link Dist (ft)		218			391			599			297	
Turn Bay Length (ft)												
Base Capacity (vph)		4054			4050							368
Starvation Cap Reductn		515			1845							0
Spillback Cap Reductn		0			665							147
Storage Cap Reductn		0			0							0
Reduced v/c Ratio		0.61			0.63							0.26

Intersection Summary

Area Type:	CBD
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	73 (52%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.53
Intersection Signal Delay:	2.1
Intersection LOS:	A
Intersection Capacity Utilization	46.6%
ICU Level of Service	A
Analysis Period (min)	15

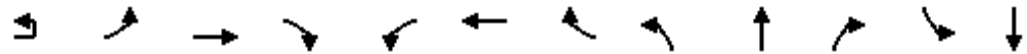
Splits and Phases: 3082: Tremont Street & Columbus Ave





Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations			↕↕	↗		↕↕		↖	↕↕			↖
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	10	10	16	11	16	12	14	14	13	12	11
Grade (%)			0%			0%			0%			0%
Storage Length (ft)		0		0	0		0	325		0	0	
Storage Lanes		0		1	0		0	1		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50		50	50		50	50
Trailing Detector (ft)	0	0	0	0	0	0		0	0		0	0
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Lane Util. Factor	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.91	0.91	0.95	1.00	1.00
Ped Bike Factor			0.99	0.98		1.00		0.99	0.99			1.00
Frt				0.850		0.997			0.990			
Flt Protected			0.979			0.995		0.950	0.970			0.996
Satd. Flow (prot)	0	0	2536	1404	0	3080	0	1344	2658	0	0	1417
Flt Permitted			0.631			0.658		0.950	0.970			0.996
Satd. Flow (perm)	0	0	1622	1380	0	2036	0	1325	2635	0	0	1416
Right Turn on Red				No			Yes			No		
Satd. Flow (RTOR)						2						
Headway Factor	1.14	1.25	1.25	0.97	1.19	0.97	1.14	1.05	1.05	1.10	1.14	1.19
Link Speed (mph)			30			30			30			30
Link Distance (ft)			471			2258			635			349
Travel Time (s)			10.7			51.3			14.4			7.9
Volume (vph)	1	346	480	945	31	294	6	848	221	48	5	55
Confl. Peds. (#/hr)		26		15	15		26	10		16	16	
Confl. Bikes (#/hr)				1			4			2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.89	0.89	0.92	0.92	0.92	0.85	0.85
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	6%	5%	8%	5%	44%	5%	7%	26%	25%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%			0%			0%
Adj. Flow (vph)	1	384	533	1050	35	330	7	922	240	52	6	65
Lane Group Flow (vph)	0	0	918	1050	0	372	0	461	753	0	0	71
Turn Type	D.P+P	D.P+P		Free	Perm			Split				Split
Protected Phases	7	7	17			1		6	6		5	5
Permitted Phases	1	1		Free	1							
Detector Phases	7	17	17		1	1		6	6		5	5
Minimum Initial (s)	4.0	4.0			10.0	10.0		10.0	10.0		8.0	8.0
Minimum Split (s)	9.0	9.0			26.0	26.0		22.0	22.0		24.0	24.0
Total Split (s)	17.0	17.0	46.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0	25.0	25.0
Total Split (%)	17.0%	17.0%	46.0%	0.0%	29.0%	29.0%	0.0%	29.0%	29.0%	0.0%	25.0%	25.0%
Maximum Green (s)	13.0	13.0			25.0	25.0		25.0	25.0		21.0	21.0
Yellow Time (s)	3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0			1.0	1.0		1.0	1.0		1.0	1.0
Lead/Lag								Lag	Lag		Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0			2.0	2.0		2.0	2.0		2.0	2.0
Minimum Gap (s)	2.0	2.0			2.0	2.0		2.0	2.0		2.0	2.0

Lane Group	SBR
Lane Configurations	7
Ideal Flow (vphpl)	1700
Lane Width (ft)	13
Grade (%)	
Storage Length (ft)	0
Storage Lanes	1
Total Lost Time (s)	4.0
Leading Detector (ft)	50
Trailing Detector (ft)	0
Turning Speed (mph)	9
Lane Util. Factor	1.00
Ped Bike Factor	0.97
Frt	0.850
Flt Protected	
Satd. Flow (prot)	1268
Flt Permitted	
Satd. Flow (perm)	1227
Right Turn on Red	Yes
Satd. Flow (RTOR)	195
Headway Factor	1.10
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	176
Confl. Peds. (#/hr)	10
Confl. Bikes (#/hr)	5
Peak Hour Factor	0.85
Growth Factor	100%
Heavy Vehicles (%)	6%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	207
Lane Group Flow (vph)	207
Turn Type	Perm
Protected Phases	
Permitted Phases	5
Detector Phases	5
Minimum Initial (s)	8.0
Minimum Split (s)	24.0
Total Split (s)	25.0
Total Split (%)	25.0%
Maximum Green (s)	21.0
Yellow Time (s)	3.0
All-Red Time (s)	1.0
Lead/Lag	Lead
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0			0.0	0.0		0.0	0.0		0.0	0.0
Recall Mode	Max	Max			C-Max	C-Max		None	None		None	None
Walk Time (s)					7.0	7.0					7.0	7.0
Flash Dont Walk (s)					15.0	15.0					13.0	13.0
Pedestrian Calls (#/hr)					0	0					5	5
Act Effct Green (s)			45.5	100.0		32.5		25.0	25.0			13.5
Actuated g/C Ratio			0.46	1.00		0.32		0.25	0.25			0.14
v/c Ratio			1.07	0.76		0.56		1.37	1.31dl			0.37
Control Delay			77.3	4.0		31.1		217.2	113.2			30.1
Queue Delay			0.0	0.0		0.0		0.0	0.0			0.0
Total Delay			77.3	4.0		31.1		217.2	113.2			30.1
LOS			E	A		C		F	F			C
Approach Delay			38.2			31.1			152.7			22.0
Approach LOS			D			C			F			C
90th %ile Green (s)	13.0	13.0			25.0	25.0		25.0	25.0		21.0	21.0
90th %ile Term Code	MaxR	MaxR			Coord	Coord		Max	Max		Max	Max
70th %ile Green (s)	13.0	13.0			29.0	29.0		25.0	25.0		17.0	17.0
70th %ile Term Code	MaxR	MaxR			Coord	Coord		Max	Max		Gap	Gap
50th %ile Green (s)	13.0	13.0			33.5	33.5		25.0	25.0		12.5	12.5
50th %ile Term Code	MaxR	MaxR			Coord	Coord		Max	Max		Gap	Gap
30th %ile Green (s)	13.0	13.0			37.0	37.0		25.0	25.0		9.0	9.0
30th %ile Term Code	MaxR	MaxR			Coord	Coord		Max	Max		Gap	Gap
10th %ile Green (s)	13.0	13.0			38.0	38.0		25.0	25.0		8.0	8.0
10th %ile Term Code	MaxR	MaxR			Coord	Coord		Max	Max		Min	Min
Queue Length 50th (ft)			~251	0		117		~429	~308			41
Queue Length 95th (ft)			#510	0		173		#641	#432			m91
Internal Link Dist (ft)			391			2178			555			269
Turn Bay Length (ft)								325				
Base Capacity (vph)			857	1380		663		336	665			298
Starvation Cap Reductn			0	0		0		0	0			0
Spillback Cap Reductn			0	0		0		0	0			0
Storage Cap Reductn			0	0		0		0	0			0
Reduced v/c Ratio			1.07	0.76		0.56		1.37	1.13			0.24

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 48 (48%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.37

Intersection Signal Delay: 72.6

Intersection LOS: E

Intersection Capacity Utilization 105.0%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.



Lane Group		SBR
Time Before Reduce (s)	0.0	
Time To Reduce (s)	0.0	
Recall Mode	None	
Walk Time (s)	7.0	
Flash Dont Walk (s)	13.0	
Pedestrian Calls (#/hr)	5	
Act Effct Green (s)	13.5	
Actuated g/C Ratio	0.14	
v/c Ratio	0.62	
Control Delay	19.3	
Queue Delay	0.0	
Total Delay	19.3	
LOS	B	
Approach Delay		
Approach LOS		
90th %ile Green (s)	21.0	
90th %ile Term Code	Max	
70th %ile Green (s)	17.0	
70th %ile Term Code	Gap	
50th %ile Green (s)	12.5	
50th %ile Term Code	Gap	
30th %ile Green (s)	9.0	
30th %ile Term Code	Gap	
10th %ile Green (s)	8.0	
10th %ile Term Code	Min	
Queue Length 50th (ft)	59	
Queue Length 95th (ft)	m152	
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)	412	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.50	
Intersection Summary		

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3098: Tremont Street & Melnea Cass Boulevard



Northeastern University IMP
2085: Columbus Avenue & Melnea Cass Boulevard

2013 Existing Conditions
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕↕			↕↕				↕	↕		↕↕
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	12	12	12	11	12	12	12	14	14	12	16
Grade (%)		0%			0%				0%			0%
Storage Length (ft)	0		25	0		0		0		0	0	
Storage Lanes	0		0	0		0		0		1	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.89			0.96				0.96			0.99
Frt		0.924								0.850		
Flt Protected					0.961				0.955			0.976
Satd. Flow (prot)	0	2184	0	0	1356	0	0	0	1429	1334	0	1128
Flt Permitted					0.961				0.736			0.931
Satd. Flow (perm)	0	2184	0	0	1298	0	0	0	1060	1334	0	1067
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		30								398		
Headway Factor	1.14	1.14	1.14	1.14	1.19	1.14	1.14	1.14	1.05	1.05	1.14	0.97
Link Speed (mph)		30			30				30			30
Link Distance (ft)		421			373				349			337
Travel Time (s)		9.6			8.5				7.9			7.7
Volume (vph)	0	23	24	207	44	1	4	206	13	350	1	1
Confl. Peds. (#/hr)	33		39	39		33		29		20	20	
Confl. Bikes (#/hr)			50			13						
Peak Hour Factor	0.79	0.79	0.79	0.85	0.85	0.85	0.88	0.88	0.88	0.88	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	8%	5%	4%	0%	0%	4%	91%	4%	100%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%				0%			0%
Adj. Flow (vph)	0	29	30	244	52	1	5	234	15	398	2	2
Lane Group Flow (vph)	0	59	0	0	297	0	0	0	254	398	0	4
Turn Type				Split			Perm	Perm		pt+ov	Perm	
Protected Phases		5		1	1				6	1	6	6
Permitted Phases							6	6				6
Detector Phases		5		1	1		6	6	6	6	6	6
Minimum Initial (s)		10.0		10.0	10.0		8.0	8.0	8.0		8.0	8.0
Minimum Split (s)		14.0		15.0	15.0		14.0	14.0	14.0		14.0	14.0
Total Split (s)	0.0	14.0	0.0	25.0	25.0	0.0	40.0	40.0	40.0	65.0	40.0	40.0
Total Split (%)	0.0%	14.0%	0.0%	25.0%	25.0%	0.0%	40.0%	40.0%	40.0%	65.0%	40.0%	40.0%
Maximum Green (s)		10.0		21.0	21.0		36.0	36.0	36.0		36.0	36.0
Yellow Time (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
All-Red Time (s)		1.0		1.0	1.0		1.0	1.0	1.0		1.0	1.0
Lead/Lag		Lead		Lead	Lead		Lag	Lag	Lag		Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0	2.0		2.0	2.0
Minimum Gap (s)		2.0		2.0	2.0		2.0	2.0	2.0		2.0	2.0

Lane Group	SBR	ø2
Lane Configurations		
Ideal Flow (vphpl)	1700	
Lane Width (ft)	12	
Grade (%)		
Storage Length (ft)	0	
Storage Lanes	0	
Total Lost Time (s)	4.0	
Leading Detector (ft)		
Trailing Detector (ft)		
Turning Speed (mph)	9	
Lane Util. Factor	1.00	
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)	0	
Flt Permitted		
Satd. Flow (perm)	0	
Right Turn on Red	Yes	
Satd. Flow (RTOR)		
Headway Factor	1.14	
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Volume (vph)	0	
Confl. Peds. (#/hr)	29	
Confl. Bikes (#/hr)		
Peak Hour Factor	0.50	
Growth Factor	100%	
Heavy Vehicles (%)	0%	
Bus Blockages (#/hr)	0	
Parking (#/hr)		
Mid-Block Traffic (%)		
Adj. Flow (vph)	0	
Lane Group Flow (vph)	0	
Turn Type		
Protected Phases		2
Permitted Phases		
Detector Phases		
Minimum Initial (s)		8.0
Minimum Split (s)		21.0
Total Split (s)	0.0	21.0
Total Split (%)	0.0%	21%
Maximum Green (s)		18.0
Yellow Time (s)		2.0
All-Red Time (s)		1.0
Lead/Lag		Lag
Lead-Lag Optimize?		
Vehicle Extension (s)		2.0
Minimum Gap (s)		2.0



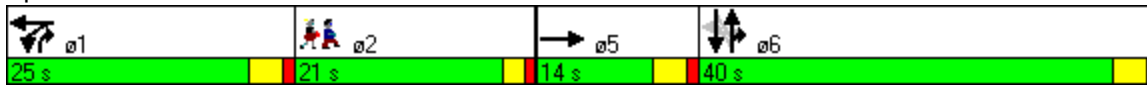
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Time Before Reduce (s)		0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)		0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Recall Mode		None		C-Max	C-Max		None	None	None		None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.0		47.8			28.8	81.4			28.8	
Actuated g/C Ratio		0.10		0.48			0.29	0.81			0.29	
v/c Ratio		0.24		0.46			0.83	0.34			0.01	
Control Delay		27.1		24.4			37.0	0.5			21.5	
Queue Delay		0.0		0.0			0.1	1.0			0.0	
Total Delay		27.1		24.4			37.1	1.5			21.5	
LOS		C		C			D	A			C	
Approach Delay		27.1		24.4			15.3				21.5	
Approach LOS		C		C			B				C	
90th %ile Green (s)		10.0		21.0	21.0		36.0	36.0	36.0		36.0	36.0
90th %ile Term Code		Max		Coord	Coord		Max	Max	Max		Max	Max
70th %ile Green (s)		10.0		42.0	42.0		36.0	36.0	36.0		36.0	36.0
70th %ile Term Code		Max		Coord	Coord		Max	Max	Max		Max	Max
50th %ile Green (s)		10.0		47.3	47.3		30.7	30.7	30.7		30.7	30.7
50th %ile Term Code		Max		Coord	Coord		Gap	Gap	Gap		Gap	Gap
30th %ile Green (s)		10.0		54.2	54.2		23.8	23.8	23.8		23.8	23.8
30th %ile Term Code		Max		Coord	Coord		Gap	Gap	Gap		Gap	Gap
10th %ile Green (s)		0.0		74.6	74.6		17.4	17.4	17.4		17.4	17.4
10th %ile Term Code		Skip		Coord	Coord		Gap	Gap	Gap		Gap	Gap
Queue Length 50th (ft)		8		103			136	0			2	
Queue Length 95th (ft)		24		m#314			m104	m8			5	
Internal Link Dist (ft)		341		293			269				257	
Turn Bay Length (ft)												
Base Capacity (vph)		245		649			382	1160			384	
Starvation Cap Reductn		0		0			3	501			0	
Spillback Cap Reductn		0		0			0	0			0	
Storage Cap Reductn		0		0			0	0			0	
Reduced v/c Ratio		0.24		0.46			0.67	0.60			0.01	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 45 (45%), Referenced to phase 1:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 18.7 Intersection LOS: B
 Intersection Capacity Utilization 61.6% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	SBR	ø2
Time Before Reduce (s)		0.0
Time To Reduce (s)		0.0
Recall Mode		None
Walk Time (s)		7.0
Flash Dont Walk (s)		11.0
Pedestrian Calls (#/hr)		5
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
90th %ile Green (s)		18.0
90th %ile Term Code		Ped
70th %ile Green (s)		0.0
70th %ile Term Code		Skip
50th %ile Green (s)		0.0
50th %ile Term Code		Skip
30th %ile Green (s)		0.0
30th %ile Term Code		Skip
10th %ile Green (s)		0.0
10th %ile Term Code		Skip
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Splits and Phases: 2085: Columbus Avenue & Melnea Cass Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	10	11	12	12	10	11	12	10	11
Grade (%)		0%			0%				0%			0%
Storage Length (ft)	0		0	0		0		0		0	0	
Storage Lanes	1		0	1		0		1		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50		50	50
Trailing Detector (ft)	0	0		0	0		0	0	0		0	0
Turning Speed (mph)	15		9	15		9	9	15		9	15	
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor	0.97	0.98		0.96	0.99			0.98	0.98		0.98	0.99
Frt		0.975			0.968				0.976			0.990
Flt Protected	0.950			0.950				0.950			0.950	
Satd. Flow (prot)	1404	2818	0	1391	2771	0	0	1448	2747	0	1417	2871
Flt Permitted	0.399			0.246				0.204			0.124	
Satd. Flow (perm)	575	2818	0	347	2771	0	0	304	2747	0	182	2871
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		23			33				27			9
Headway Factor	1.25	1.19	1.14	1.25	1.19	1.14	1.14	1.25	1.19	1.14	1.25	1.19
Link Speed (mph)		30			30				30			30
Link Distance (ft)		2258			721				869			630
Travel Time (s)		51.3			16.4				19.8			14.3
Volume (vph)	115	475	80	81	231	59	1	56	825	147	64	765
Confl. Peds. (#/hr)	38		86	86		38		139		151	151	
Confl. Bikes (#/hr)			12			3				22		
Peak Hour Factor	0.94	0.88	0.74	0.84	0.85	0.79	0.25	0.78	0.90	0.85	0.78	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	6%	8%	9%	8%	9%	0%	5%	10%	6%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%				0%			0%
Adj. Flow (vph)	122	540	108	96	272	75	4	72	917	173	82	823
Lane Group Flow (vph)	122	648	0	96	347	0	0	76	1090	0	82	882
Turn Type	pm+pt			pm+pt			pm+pt	pm+pt			pm+pt	
Protected Phases	7	4		3	8		5	5	2		1	6
Permitted Phases	4			8			2	2			6	
Detector Phases	7	4		3	8		5	5	2		1	6
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	6.0	43.0		6.0	43.0
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	10.0	47.0		10.0	47.0
Total Split (s)	14.0	32.0	0.0	11.0	29.0	0.0	10.0	10.0	47.0	0.0	10.0	47.0
Total Split (%)	14.0%	32.0%	0.0%	11.0%	29.0%	0.0%	10.0%	10.0%	47.0%	0.0%	10.0%	47.0%
Maximum Green (s)	10.0	28.0		7.0	25.0		6.0	6.0	43.0		6.0	43.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0		1.0	1.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead	Lag		Lead	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0		2.0	2.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Lane Util. Factor	0.95
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Headway Factor	1.14
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	49
Confl. Peds. (#/hr)	139
Confl. Bikes (#/hr)	62
Peak Hour Factor	0.83
Growth Factor	100%
Heavy Vehicles (%)	12%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	59
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None		None	None		None	None	C-Max		None	C-Max
Walk Time (s)		7.0			7.0				23.0			23.0
Flash Dont Walk (s)		16.0			16.0				20.0			20.0
Pedestrian Calls (#/hr)		0			0				0			0
Act Effct Green (s)	33.5	25.9		28.5	21.7			54.1	49.3		54.1	49.3
Actuated g/C Ratio	0.34	0.26		0.28	0.22			0.54	0.49		0.54	0.49
v/c Ratio	0.46	0.87		0.56	0.55			0.33	0.80		0.48	0.62
Control Delay	31.8	47.0		35.3	34.1			15.3	28.7		25.0	17.5
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	31.8	47.0		35.3	34.1			15.3	28.7		25.0	17.5
LOS	C	D		D	C			B	C		C	B
Approach Delay		44.6			34.3				27.8			18.2
Approach LOS		D			C				C			B
90th %ile Green (s)	10.0	28.0		7.0	25.0		6.0	6.0	43.0		6.0	43.0
90th %ile Term Code	Max	Max		Max	Hold		Max	Max	Coord		Max	Coord
70th %ile Green (s)	10.0	28.0		7.0	25.0		6.0	6.0	43.0		6.0	43.0
70th %ile Term Code	Max	Max		Max	Hold		Max	Max	Coord		Max	Coord
50th %ile Green (s)	9.8	28.0		7.0	25.2		6.0	6.0	43.0		6.0	43.0
50th %ile Term Code	Gap	Max		Max	Hold		Max	Max	Coord		Max	Coord
30th %ile Green (s)	8.3	24.6		7.0	23.3		6.0	6.0	46.4		6.0	46.4
30th %ile Term Code	Gap	Gap		Max	Hold		Max	Max	Coord		Max	Coord
10th %ile Green (s)	6.9	21.0		0.0	10.1		0.0	0.0	71.0		0.0	71.0
10th %ile Term Code	Gap	Hold		Skip	Gap		Skip	Skip	Coord		Skip	Coord
Queue Length 50th (ft)	50	158		40	89			23	327		20	123
Queue Length 95th (ft)	m65	m180		70	125			39	#470		m40	183
Internal Link Dist (ft)		2178			641				789			550
Turn Bay Length (ft)												
Base Capacity (vph)	278	806		173	719			233	1368		172	1420
Starvation Cap Reductn	0	0		0	0			0	0		0	0
Spillback Cap Reductn	0	0		0	0			0	0		0	0
Storage Cap Reductn	0	0		0	0			0	0		0	0
Reduced v/c Ratio	0.44	0.80		0.55	0.48			0.33	0.80		0.48	0.62

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 29.8

Intersection LOS: C

Intersection Capacity Utilization 78.3%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.









Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBR
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Splits and Phases: 96: Tremont Street & Mass Ave

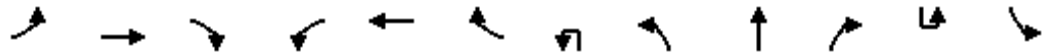
 ø1	 ø2	 ø3	 ø4
10 s	47 s	11 s	32 s
 ø5	 ø6	 ø7	 ø8
10 s	47 s	14 s	29 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	11	12	12	12	10	11	12	12	10
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	0		0	0		0		0		0		0
Storage Lanes	1		0	1		0		1		0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50		50	50
Trailing Detector (ft)	0	0		0	0		0	0	0		0	0
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	1.00	0.95	0.95	0.95	1.00
Ped Bike Factor	0.95	0.97		0.94	0.94			0.97	0.99			0.98
Frt	0.968		0.933		0.986		0.986		0.986		0.986	
Flt Protected	0.950			0.950				0.950				0.950
Satd. Flow (prot)	1472	2791	0	1454	1434	0	0	1489	2756	0	0	1326
Flt Permitted	0.279			0.589				0.162				0.160
Satd. Flow (perm)	411	2791	0	846	1434	0	0	245	2756	0	0	219
Right Turn on Red			No				No				Yes	
Satd. Flow (RTOR)											13	
Headway Factor	1.25	1.19	1.14	1.19	1.14	1.14	1.14	1.25	1.19	1.14	1.14	1.25
Link Speed (mph)	30		30		30		30		30		30	
Link Distance (ft)	628		795		630		630		630		630	
Travel Time (s)	14.3		18.1		14.3		14.3		14.3		14.3	
Volume (vph)	302	164	39	111	131	90	2	41	881	75	1	59
Confl. Peds. (#/hr)	84		71	71		84		140		143		143
Confl. Bikes (#/hr)			76			13				33		
Peak Hour Factor	0.89	0.79	0.70	0.82	0.82	0.69	0.50	0.79	0.98	0.82	0.25	0.72
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	7%	0%	8%	5%	5%	0%	2%	11%	11%	0%	15%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	0											
Mid-Block Traffic (%)	0%		0%		0%		0%		0%		0%	
Adj. Flow (vph)	339	208	56	135	160	130	4	52	899	91	4	82
Lane Group Flow (vph)	339	264	0	135	290	0	0	56	990	0	0	86
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt		pm+pt		pm+pt	
Protected Phases	7	4		3	8		5	5	2		1	1
Permitted Phases	4			8			2	2			6	6
Detector Phases	7	4		3	8		5	5	2		1	1
Minimum Initial (s)	6.0	8.0		6.0	8.0		5.0	5.0	1.0		5.0	5.0
Minimum Split (s)	10.0	28.0		10.0	28.0		9.0	9.0	44.0		9.0	9.0
Total Split (s)	16.0	34.0	0.0	10.0	28.0	0.0	9.0	9.0	47.0	0.0	9.0	9.0
Total Split (%)	16.0%	34.0%	0.0%	10.0%	28.0%	0.0%	9.0%	9.0%	47.0%	0.0%	9.0%	9.0%
Maximum Green (s)	12.0	30.0		6.0	24.0		5.0	5.0	43.0		5.0	5.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0		1.0	1.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead	Lag		Lead	Lead
Lead-Lag Optimize?	No											
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0		2.0	2.0
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0



Lane Group	SBT	SBR
Lane Configurations	↑↑	
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	12
Grade (%)	0%	
Storage Length (ft)		0
Storage Lanes		0
Total Lost Time (s)	4.0	4.0
Leading Detector (ft)	50	
Trailing Detector (ft)	0	
Turning Speed (mph)		9
Lane Util. Factor	0.95	0.95
Ped Bike Factor	0.95	
Frt	0.966	
Flt Protected		
Satd. Flow (prot)	2723	0
Flt Permitted		
Satd. Flow (perm)	2723	0
Right Turn on Red		Yes
Satd. Flow (RTOR)	47	
Headway Factor	1.19	1.14
Link Speed (mph)	30	
Link Distance (ft)	892	
Travel Time (s)	20.3	
Volume (vph)	726	195
Confl. Peds. (#/hr)		140
Confl. Bikes (#/hr)		41
Peak Hour Factor	0.95	0.88
Growth Factor	100%	100%
Heavy Vehicles (%)	7%	2%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Adj. Flow (vph)	764	222
Lane Group Flow (vph)	986	0
Turn Type		
Protected Phases	6	
Permitted Phases		
Detector Phases	6	
Minimum Initial (s)	1.0	
Minimum Split (s)	47.0	
Total Split (s)	47.0	0.0
Total Split (%)	47.0%	0.0%
Maximum Green (s)	43.0	
Yellow Time (s)	3.0	
All-Red Time (s)	1.0	
Lead/Lag	Lag	
Lead-Lag Optimize?		
Vehicle Extension (s)	2.0	
Minimum Gap (s)	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None		None	None		None	None	C-Max		None	None
Walk Time (s)		7.0			7.0				25.0			
Flash Dont Walk (s)		17.0			17.0				15.0			
Pedestrian Calls (#/hr)		0			0				5			
Act Effct Green (s)	38.2	28.2		28.2	22.2			50.6	46.6			50.6
Actuated g/C Ratio	0.38	0.28		0.28	0.22			0.51	0.47			0.51
v/c Ratio	1.19	0.34		0.49	0.91			0.30	0.77			0.52
Control Delay	142.0	29.5		29.6	71.1			15.8	20.7			20.2
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0			0.0
Total Delay	142.0	29.5		29.6	71.1			15.8	20.7			20.2
LOS	F	C		C	E			B	C			C
Approach Delay		92.7			57.9				20.4			
Approach LOS		F			E				C			
90th %ile Green (s)	12.0	30.0		6.0	24.0		5.0	5.0	43.0		5.0	5.0
90th %ile Term Code	Max	Hold		Max	Max		Max	Max	Coord		Max	Max
70th %ile Green (s)	12.0	30.0		6.0	24.0		5.0	5.0	43.0		5.0	5.0
70th %ile Term Code	Max	Hold		Max	Max		Max	Max	Coord		Max	Max
50th %ile Green (s)	12.0	30.0		6.0	24.0		5.0	5.0	43.0		5.0	5.0
50th %ile Term Code	Max	Hold		Max	Max		Max	Max	Coord		Max	Max
30th %ile Green (s)	12.0	28.1		6.0	22.1		5.0	5.0	44.9		5.0	5.0
30th %ile Term Code	Max	Hold		Max	Gap		Max	Max	Coord		Max	Max
10th %ile Green (s)	12.0	22.7		6.0	16.7		0.0	0.0	59.3		0.0	0.0
10th %ile Term Code	Max	Hold		Max	Gap		Skip	Skip	Coord		Skip	Skip
Queue Length 50th (ft)	~178	64		56	177			14	142			10
Queue Length 95th (ft)	m#350	m85		90	#272			m22	192			m19
Internal Link Dist (ft)		548			715				550			
Turn Bay Length (ft)												
Base Capacity (vph)	284	837		275	344			186	1292			166
Starvation Cap Reductn	0	0		0	0			0	0			0
Spillback Cap Reductn	0	0		0	0			0	0			0
Storage Cap Reductn	0	0		0	0			0	0			0
Reduced v/c Ratio	1.19	0.32		0.49	0.84			0.30	0.77			0.52

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.19
 Intersection Signal Delay: 36.5 Intersection LOS: D
 Intersection Capacity Utilization 89.2% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

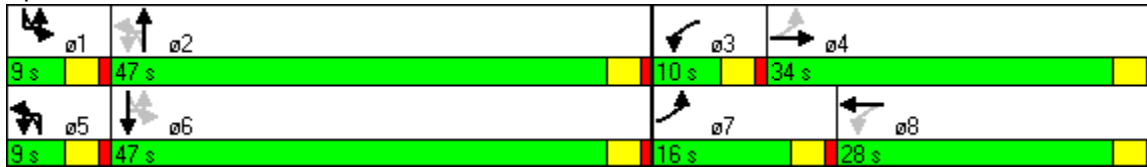


Lane Group	SBT	SBR
Time Before Reduce (s)	0.0	
Time To Reduce (s)	0.0	
Recall Mode	C-Max	
Walk Time (s)	25.0	
Flash Dont Walk (s)	15.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)	46.6	
Actuated g/C Ratio	0.47	
v/c Ratio	0.76	
Control Delay	11.3	
Queue Delay	0.0	
Total Delay	11.3	
LOS	B	
Approach Delay	12.0	
Approach LOS	B	
90th %ile Green (s)	43.0	
90th %ile Term Code	Coord	
70th %ile Green (s)	43.0	
70th %ile Term Code	Coord	
50th %ile Green (s)	43.0	
50th %ile Term Code	Coord	
30th %ile Green (s)	44.9	
30th %ile Term Code	Coord	
10th %ile Green (s)	59.3	
10th %ile Term Code	Coord	
Queue Length 50th (ft)	55	
Queue Length 95th (ft)	145	
Internal Link Dist (ft)	812	
Turn Bay Length (ft)		
Base Capacity (vph)	1295	
Starvation Cap Reductn	0	
Spillback Cap Reductn	0	
Storage Cap Reductn	0	
Reduced v/c Ratio	0.76	
Intersection Summary		

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 95: Columbus Avenue & Mass Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12	11	12	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.93			0.94		0.92	0.98		0.97	0.98	
Frt		0.902			0.953			0.991			0.993	
Flt Protected		0.992			0.980		0.950			0.950		
Satd. Flow (prot)	0	1401	0	0	1294	0	1540	2988	0	1516	2907	0
Flt Permitted		0.946			0.846		0.161			0.097		
Satd. Flow (perm)	0	1321	0	0	1093	0	241	2988	0	150	2907	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		125			27			9			8	
Headway Factor	1.14	1.14	1.14	1.14	1.42	1.14	1.19	1.14	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		640			294			892			301	
Travel Time (s)		14.5			6.7			20.3			6.8	
Volume (vph)	9	13	66	32	18	31	114	1101	59	53	883	42
Confl. Peds. (#/hr)	90		74	74		90	428		251	251		428
Confl. Bikes (#/hr)			3			5			38			28
Peak Hour Factor	0.32	0.65	0.53	0.67	0.64	0.78	0.73	0.94	0.78	0.70	0.82	0.75
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	8%	2%	0%	0%	0%	2%	6%	2%	0%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0							
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	28	20	125	48	28	40	156	1171	76	76	1077	56
Lane Group Flow (vph)	0	173	0	0	116	0	156	1247	0	76	1133	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phases	8	8		4	4		1	6		5	2	
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		11.0	52.0		14.0	55.0	
Total Split (s)	34.0	34.0	0.0	34.0	34.0	0.0	11.0	52.0	0.0	14.0	55.0	0.0
Total Split (%)	34.0%	34.0%	0.0%	34.0%	34.0%	0.0%	11.0%	52.0%	0.0%	14.0%	55.0%	0.0%
Maximum Green (s)	30.0	30.0		30.0	30.0		7.0	48.0		10.0	51.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min		None	None		None	C-Min		None	C-Min	
Walk Time (s)	9.0	9.0		9.0	9.0			34.0			34.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0			13.0			13.0	
Pedestrian Calls (#/hr)	428	428		251	251			74			90	
Act Effct Green (s)		30.0			30.0		58.9	52.9		57.7	50.6	
Actuated g/C Ratio		0.30			0.30		0.59	0.53		0.58	0.51	
v/c Ratio		0.36			0.33		0.66	0.79		0.42	0.77	
Control Delay		11.2			23.9		23.5	26.9		20.3	11.2	
Queue Delay		0.0			0.0		0.0	0.1		0.0	0.0	
Total Delay		11.2			23.9		23.5	27.0		20.3	11.2	
LOS		B			C		C	C		C	B	
Approach Delay		11.2			23.9			26.6			11.8	
Approach LOS		B			C			C			B	
90th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	48.1		9.9	51.0	
90th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
70th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	50.7		7.3	51.0	
70th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
50th %ile Green (s)	30.0	30.0		30.0	30.0		8.0	51.8		6.2	50.0	
50th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
30th %ile Green (s)	30.0	30.0		30.0	30.0		8.0	52.0		6.0	50.0	
30th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Min	Coord	
10th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	62.0		0.0	51.0	
10th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Skip	Coord	
Queue Length 50th (ft)		22			43		53	354		6	307	
Queue Length 95th (ft)		34			57		m68	m392		m22	77	
Internal Link Dist (ft)		560			214			812			221	
Turn Bay Length (ft)												
Base Capacity (vph)		484			347		238	1585		228	1486	
Starvation Cap Reductn		0			0		0	0		0	8	
Spillback Cap Reductn		0			0		0	11		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.36			0.33		0.66	0.79		0.33	0.77	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 88 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 19.4

Intersection LOS: B

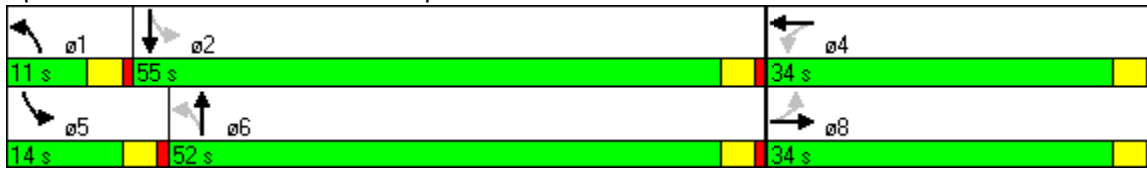
Intersection Capacity Utilization 80.6%

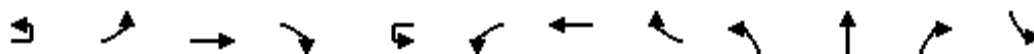
ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 134: St. Botolph Street & Mass Ave

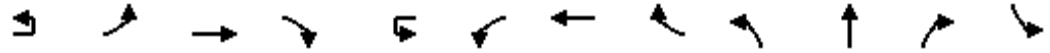




Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations			↕↕				↕↕			↕↕		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	10	12	16	12	11	12	12	13	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		0		50		0		0	0		0	0
Storage Lanes		0		1		0		1	0		0	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50	50			50		
Trailing Detector (ft)	0	0	0		0	0	0			0		
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor			0.85				0.86			0.99		
Frt			0.944				0.953			0.986		
Flt Protected			0.974				0.974					
Satd. Flow (prot)	0	0	2289	0	0	0	2524	0	0	3102	0	0
Flt Permitted			0.974				0.692					
Satd. Flow (perm)	0	0	2110	0	0	0	1660	0	0	3102	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			104				67			14		
Headway Factor	0.97	1.14	1.38	1.14	0.97	1.14	1.19	1.14	1.14	1.10	1.14	1.14
Link Speed (mph)			30				30			30		
Link Distance (ft)			634				427			301		
Travel Time (s)			14.4				9.7			6.8		
Volume (vph)	8	124	20	81	14	99	33	65	0	1050	88	0
Confl. Peds. (#/hr)		128		121		121		128	451		209	209
Confl. Bikes (#/hr)			3					6			25	
Peak Hour Factor	0.56	0.91	0.83	0.78	0.63	0.77	0.83	0.75	0.38	0.94	0.77	0.25
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	10%	1%	0%	7%	9%	9%	0%	5%	7%	0%
Bus Blockages (#/hr)	0	0	0	9	0	0	0	0	0	0	0	0
Parking (#/hr)			12	12								
Mid-Block Traffic (%)			0%				0%			0%		
Adj. Flow (vph)	14	136	24	104	22	129	40	87	0	1117	114	0
Lane Group Flow (vph)	0	0	278	0	0	0	278	0	0	1231	0	0
Turn Type	Perm	Split			Perm	Perm						
Protected Phases		3	3				4			6		
Permitted Phases	3				4	4						
Detector Phases	3	3	3		4	4	4			6		
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0	4.0			4.0		
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0	23.0			29.0		
Total Split (s)	25.0	25.0	25.0	0.0	25.0	25.0	25.0	0.0	0.0	50.0	0.0	0.0
Total Split (%)	25.0%	25.0%	25.0%	0.0%	25.0%	25.0%	25.0%	0.0%	0.0%	50.0%	0.0%	0.0%
Maximum Green (s)	21.0	21.0	21.0		21.0	21.0	21.0			41.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0			6.0		
Lead/Lag	Lead	Lead	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	10
Grade (%)	0%	
Storage Length (ft)		150
Storage Lanes		1
Total Lost Time (s)	4.0	4.0
Leading Detector (ft)	50	50
Trailing Detector (ft)	0	0
Turning Speed (mph)		9
Lane Util. Factor	0.95	1.00
Ped Bike Factor		0.69
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3020	1256
Flt Permitted		
Satd. Flow (perm)	3020	871
Right Turn on Red		Yes
Satd. Flow (RTOR)		116
Headway Factor	1.19	1.25
Link Speed (mph)	30	
Link Distance (ft)	288	
Travel Time (s)	6.5	
Volume (vph)	798	121
Confl. Peds. (#/hr)		451
Confl. Bikes (#/hr)		26
Peak Hour Factor	0.82	0.95
Growth Factor	100%	100%
Heavy Vehicles (%)	4%	8%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Adj. Flow (vph)	973	127
Lane Group Flow (vph)	973	127
Turn Type		Perm
Protected Phases	2	
Permitted Phases		2
Detector Phases	2	2
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	29.0	29.0
Total Split (s)	50.0	50.0
Total Split (%)	50.0%	50.0%
Maximum Green (s)	41.0	41.0
Yellow Time (s)	3.0	3.0
All-Red Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Minimum Gap (s)	3.0	3.0



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0	0.0			0.0		
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0	0.0			0.0		
Recall Mode	Min	Min	Min		Min	Min	Min			Min		
Walk Time (s)	8.0	8.0	8.0		8.0	8.0	8.0					
Flash Dont Walk (s)	10.0	10.0	10.0		10.0	10.0	10.0					
Pedestrian Calls (#/hr)	149	149	149		129	129	129					
Act Effct Green (s)			18.1				19.2			50.7		
Actuated g/C Ratio			0.18				0.19			0.51		
v/c Ratio			0.56				0.75			0.78		
Control Delay			27.7				41.7			13.1		
Queue Delay			0.2				1.8			1.5		
Total Delay			28.0				43.5			14.6		
LOS			C				D			B		
Approach Delay			28.0				43.5			14.6		
Approach LOS			C				D			B		
90th %ile Green (s)	18.5	18.5	18.5		21.0	21.0	21.0			43.5		
90th %ile Term Code	Gap	Gap	Gap		Max	Max	Max			Coord		
70th %ile Green (s)	18.0	18.0	18.0		21.0	21.0	21.0			44.0		
70th %ile Term Code	Ped	Ped	Ped		Max	Max	Max			Coord		
50th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0			47.0		
50th %ile Term Code	Ped	Ped	Ped		Gap	Gap	Gap			Coord		
30th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0			47.0		
30th %ile Term Code	Ped	Ped	Ped		Ped	Ped	Ped			Coord		
10th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0			47.0		
10th %ile Term Code	Ped	Ped	Ped		Ped	Ped	Ped			Coord		
Queue Length 50th (ft)			52				68			108		
Queue Length 95th (ft)			84				101			154		
Internal Link Dist (ft)			554				347			221		
Turn Bay Length (ft)												
Base Capacity (vph)			563				402			1580		
Starvation Cap Reductn			0				0			95		
Spillback Cap Reductn			42				40			181		
Storage Cap Reductn			0				0			0		
Reduced v/c Ratio			0.53				0.77			0.88		

Intersection Summary

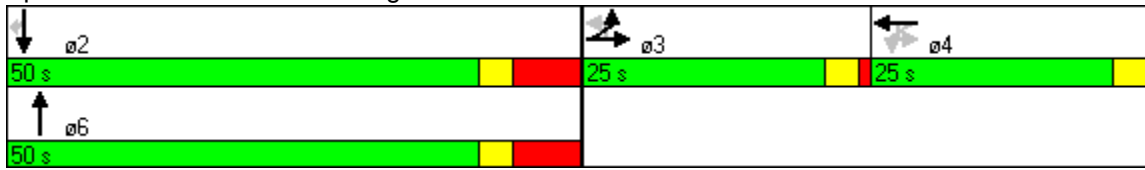
Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 84 (84%), Referenced to phase 2:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 34.8 Intersection LOS: C
 Intersection Capacity Utilization 57.6% ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBT	SBR
Time Before Reduce (s)	0.0	0.0
Time To Reduce (s)	0.0	0.0
Recall Mode	C-Min	C-Min
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)	50.7	50.7
Actuated g/C Ratio	0.51	0.51
v/c Ratio	0.64	0.25
Control Delay	23.4	7.9
Queue Delay	39.8	0.0
Total Delay	63.2	7.9
LOS	E	A
Approach Delay	56.8	
Approach LOS	E	
90th %ile Green (s)	43.5	43.5
90th %ile Term Code	Coord	Coord
70th %ile Green (s)	44.0	44.0
70th %ile Term Code	Coord	Coord
50th %ile Green (s)	47.0	47.0
50th %ile Term Code	Coord	Coord
30th %ile Green (s)	47.0	47.0
30th %ile Term Code	Coord	Coord
10th %ile Green (s)	47.0	47.0
10th %ile Term Code	Coord	Coord
Queue Length 50th (ft)	213	19
Queue Length 95th (ft)	264	m27
Internal Link Dist (ft)	208	
Turn Bay Length (ft)		150
Base Capacity (vph)	1531	499
Starvation Cap Reductn	625	0
Spillback Cap Reductn	185	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.07	0.25

Intersection Summary

Splits and Phases: 94: Huntington Avenue & Mass Ave





Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Lane Configurations	↗		↗		↘	↕			↕			
Ideal Flow (vphpl)	1500	1500	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	11	12	11	11	11	11	
Grade (%)						0%			0%			
Storage Length (ft)	0		0		0		0	0		0		
Storage Lanes	1		1		1		0	0		0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50		50	50	50	50		50	50			
Trailing Detector (ft)	0		0	0	0	0		0	0			
Turning Speed (mph)	9	9	9	15	15		9	15		9	9	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Ped Bike Factor					0.78	1.00			0.94			
Frt	0.865					0.997			0.985			
Flt Protected					0.950				0.999			
Satd. Flow (prot)	1168	0	1710	0	1624	3122	0	0	2912	0	0	
Flt Permitted					0.399				0.687			
Satd. Flow (perm)	1168	0	1710	0	533	3122	0	0	2003	0	0	
Right Turn on Red		No	Yes				Yes				No	
Satd. Flow (RTOR)						6						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.19	1.19	1.19	1.19	
Link Speed (mph)						25			25			
Link Distance (ft)						288			768			
Travel Time (s)						7.9			20.9			
Volume (vph)	383	20	0	28	340	852	19	16	537	3	57	
Confl. Peds. (#/hr)		156	174	156	176		45	45		156	176	
Confl. Bikes (#/hr)	1	1					39			37	37	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	416	22	0	30	370	926	21	17	584	3	62	
Lane Group Flow (vph)	438	0	0	0	400	947	0	0	666	0	0	
Turn Type	custom		Free	custom	Prot			Perm				
Protected Phases	7 8!			2	2 7 8	1 2 8			1			7
Permitted Phases			Free	7 8!				1				
Detector Phases	7 8			2	2 7 8	1 2 8		1	1			
Minimum Initial (s)				6.0				8.0	8.0			8.0
Minimum Split (s)				12.0				28.0	28.0			21.0
Total Split (s)	45.0	0.0	0.0	12.0	57.0	78.0	0.0	43.0	43.0	0.0	0.0	22.0
Total Split (%)	45.0%	0.0%	0.0%	12.0%	57.0%	78.0%	0.0%	43.0%	43.0%	0.0%	0.0%	22%
Maximum Green (s)				6.0				37.0	37.0			16.0
Yellow Time (s)				3.0				3.0	3.0			3.0
All-Red Time (s)				3.0				3.0	3.0			3.0
Lead/Lag				Lag				Lead	Lead			Lead
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0				2.0	2.0			2.0
Minimum Gap (s)				2.0				2.0	2.0			2.0

Lane Group	ø8
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	22.5
Total Split (s)	23.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0



Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Time Before Reduce (s)				0.0				0.0	0.0			0.0
Time To Reduce (s)				0.0				0.0	0.0			0.0
Recall Mode				Max				C-Max	C-Max			Ped
Walk Time (s)								15.0	15.0			10.0
Flash Dont Walk (s)								7.0	7.0			5.0
Pedestrian Calls (#/hr)								5	5			0
Act Effct Green (s)	41.0				49.0	74.0			39.0			
Actuated g/C Ratio	0.41				0.49	0.74			0.39			
v/c Ratio	0.91				1.15	0.41			0.85			
Control Delay	54.2				108.5	10.0			40.3			
Queue Delay	33.4				0.0	5.1			3.7			
Total Delay	87.5				108.5	15.0			43.9			
LOS	F				F	B			D			
Approach Delay						42.8			43.9			
Approach LOS						D			D			
90th %ile Green (s)				6.0				37.0	37.0			16.0
90th %ile Term Code				MaxR				Coord	Coord			Max
70th %ile Green (s)				6.0				37.0	37.0			16.0
70th %ile Term Code				MaxR				Coord	Coord			Max
50th %ile Green (s)				6.0				37.0	37.0			16.0
50th %ile Term Code				MaxR				Coord	Coord			Max
30th %ile Green (s)				6.0				37.0	37.0			16.0
30th %ile Term Code				MaxR				Coord	Coord			Max
10th %ile Green (s)				6.0				37.0	37.0			16.0
10th %ile Term Code				MaxR				Coord	Coord			Max
Queue Length 50th (ft)	258				~94	247			200			
Queue Length 95th (ft)	#456				m#240	260			#307			
Internal Link Dist (ft)						208			688			
Turn Bay Length (ft)												
Base Capacity (vph)	479				348	2312			781			
Starvation Cap Reductn	0				0	1282			0			
Spillback Cap Reductn	67				0	0			60			
Storage Cap Reductn	0				0	0			0			
Reduced v/c Ratio	1.06				1.15	0.92			0.92			

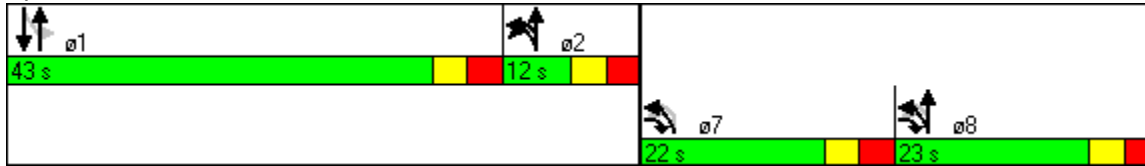
Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 31 (31%), Referenced to phase 1:NBSB, Start of Green
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.15
 Intersection Signal Delay: 51.1 Intersection LOS: D
 Intersection Capacity Utilization 91.9% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø8
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	17.0
90th %ile Term Code	MaxR
70th %ile Green (s)	17.0
70th %ile Term Code	MaxR
50th %ile Green (s)	17.0
50th %ile Term Code	MaxR
30th %ile Green (s)	17.0
30th %ile Term Code	MaxR
10th %ile Green (s)	17.0
10th %ile Term Code	MaxR
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 93: Westland Avenue & Massachusetts Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	16	16	16	10	10	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50					50	50		50	50	50
Trailing Detector (ft)	0	0					0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.87						0.98			1.00	0.91
Frt		0.961						0.982				0.850
Flt Protected		0.983						0.992			0.993	
Satd. Flow (prot)	0	1383	0	0	0	0	0	1626	0	0	1545	1391
Flt Permitted		0.983						0.683			0.894	
Satd. Flow (perm)	0	1300	0	0	0	0	0	1112	0	0	1386	1267
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.12	1.14	1.14	1.14	1.14	0.97	1.12	0.97	1.25	1.25	1.19
Link Speed (mph)		25				25		25			25	
Link Distance (ft)		465				518		1125			259	
Travel Time (s)		12.7				14.1		30.7			7.1	
Volume (vph)	62	62	34	0	0	0	57	288	52	55	376	523
Confl. Peds. (#/hr)	106		131	131			106	89		47	47	89
Confl. Bikes (#/hr)			25				11			18		21
Peak Hour Factor	0.86	0.78	0.56	0.92	0.92	0.92	0.75	0.92	0.85	0.86	0.89	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	15%	0%	0%	0%	8%	0%	14%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	72	79	61	0	0	0	76	313	61	64	422	534
Lane Group Flow (vph)	0	212	0	0	0	0	0	450	0	0	486	534
Turn Type	Split						Perm			Perm		pm+ov
Protected Phases	3	3						1			1	3
Permitted Phases							1			1		1
Detector Phases	3	3					1	1		1	1	3
Minimum Initial (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.0	12.0					12.0	12.0		12.0	12.0	12.0
Total Split (s)	31.0	31.0	0.0	0.0	0.0	0.0	43.0	43.0	0.0	43.0	43.0	31.0
Total Split (%)	34.4%	34.4%	0.0%	0.0%	0.0%	0.0%	47.8%	47.8%	0.0%	47.8%	47.8%	34.4%
Maximum Green (s)	27.0	27.0					39.0	39.0		39.0	39.0	27.0
Yellow Time (s)	3.0	3.0					3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0

Lane Group	ø2
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	7.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	18%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None					None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		15.7					31.7			31.7	47.4	
Actuated g/C Ratio		0.24					0.49			0.49	0.73	
v/c Ratio		0.63					0.82			0.71	0.56	
Control Delay		34.6					33.7			24.3	5.8	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		34.6					33.7			24.3	5.8	
LOS		C					C			C	A	
Approach Delay		34.6					33.7			14.6		
Approach LOS		C					C			B		
90th %ile Green (s)	27.0	27.0					39.0	39.0		39.0	39.0	27.0
90th %ile Term Code	Max	Max					Max	Max		Max	Max	Max
70th %ile Green (s)	21.2	21.2					39.0	39.0		39.0	39.0	21.2
70th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
50th %ile Green (s)	17.9	17.9					39.0	39.0		39.0	39.0	17.9
50th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
30th %ile Green (s)	8.0	8.0					21.4	21.4		21.4	21.4	8.0
30th %ile Term Code	Gap	Gap					Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)	7.0	7.0					15.2	15.2		15.2	15.2	7.0
10th %ile Term Code	Min	Min					Gap	Gap		Gap	Gap	Min
Queue Length 50th (ft)		99					189			187	84	
Queue Length 95th (ft)		141					#434			#401	136	
Internal Link Dist (ft)		385			438		1045			179		
Turn Bay Length (ft)												
Base Capacity (vph)		530					625			779	1035	
Starvation Cap Reductn		0					0			0	0	
Spillback Cap Reductn		0					0			0	0	
Storage Cap Reductn		0					0			0	0	
Reduced v/c Ratio		0.40					0.72			0.62	0.52	

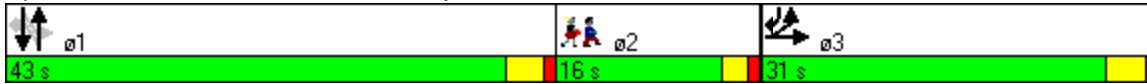
Intersection Summary

Area Type:	CBD
Cycle Length:	90
Actuated Cycle Length:	64.5
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	22.2
Intersection LOS:	C
Intersection Capacity Utilization:	77.6%
ICU Level of Service:	D
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	84.2
50th %ile Actuated Cycle:	80.9
30th %ile Actuated Cycle:	37.4

Lane Group	ø2
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	40
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	13.0
90th %ile Term Code	Ped
70th %ile Green (s)	13.0
70th %ile Term Code	Ped
50th %ile Green (s)	13.0
50th %ile Term Code	Ped
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

10th %ile Actuated Cycle: 30.2
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 481: Hemenway Street & Westland Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔				
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	0	62	34	19	63	0	0	0	0
Peak Hour Factor	0.25	0.25	0.25	0.25	0.77	0.70	0.72	0.59	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	0	0	0	0	81	49	26	107	0	0	0	0
Pedestrians		70									76	
Lane Width (ft)		0.0									0.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)								308				
pX, platoon unblocked												
vC, conflicting volume	394	230	70	160	230	183	70			107		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	394	230	70	160	230	183	70			107		
tC, single (s)	7.1	6.5	6.2	7.1	6.6	6.3	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.4	2.3			2.2		
p0 queue free %	100	100	100	100	88	94	98			100		
cM capacity (veh/h)	478	662	998	800	647	837	1506			1497		

Direction, Lane #	WB 1	NB 1
Volume Total	129	133
Volume Left	0	26
Volume Right	49	0
cSH	707	1506
Volume to Capacity	0.18	0.02
Queue Length 95th (ft)	17	1
Control Delay (s)	11.2	1.6
Lane LOS	B	A
Approach Delay (s)	11.2	1.6
Approach LOS	B	

Intersection Summary		
Average Delay		6.3
Intersection Capacity Utilization	24.8%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↘
Sign Control	Free			Free	Stop	
Grade	15%			0%	0%	
Volume (veh/h)	97	0	0	444	20	77
Peak Hour Factor	0.69	0.25	0.25	0.74	0.68	0.66
Hourly flow rate (vph)	141	0	0	600	29	117
Pedestrians	11			1	133	
Lane Width (ft)	12.0			12.0	16.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	15	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	465					
pX, platoon unblocked						
vC, conflicting volume			274		885	275
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			274		885	275
tC, single (s)			4.1		6.4	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		89	82
cM capacity (veh/h)			1109		263	641

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	141	600	146
Volume Left	0	0	29
Volume Right	0	0	117
cSH	1700	1700	497
Volume to Capacity	0.08	0.35	0.29
Queue Length 95th (ft)	0	0	30
Control Delay (s)	0.0	0.0	15.2
Lane LOS	C		
Approach Delay (s)	0.0	0.0	15.2
Approach LOS	C		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBU	NBL	NBR
Lane Configurations	↶			↷		↶	
Sign Control	Stop			Stop		Stop	
Volume (vph)	50	38	91	373	2	12	47
Peak Hour Factor	0.71	0.79	0.73	0.85	0.50	0.69	0.75
Hourly flow rate (vph)	70	48	125	439	0	17	63

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	119	563	80
Volume Left (vph)	0	125	17
Volume Right (vph)	48	0	63
Hadj (s)	0.00	0.09	-0.21
Departure Headway (s)	4.7	4.3	5.2
Degree Utilization, x	0.16	0.68	0.12
Capacity (veh/h)	731	813	604
Control Delay (s)	8.6	16.1	8.9
Approach Delay (s)	8.6	16.1	8.9
Approach LOS	A	C	A

Intersection Summary			
Delay		14.2	
HCM Level of Service		B	
Intersection Capacity Utilization	54.1%		ICU Level of Service A
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	377	8	250	64	24	31
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	410	9	272	70	26	34
Pedestrians	11		1		6	
Lane Width (ft)	16.0		10.0		11.0	
Walking Speed (ft/s)	4.0		4.0		4.0	
Percent Blockage	1		0		0	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	263					
pX, platoon unblocked	0.81	0.81			0.81	
vC, conflicting volume	404	324			352	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	264	164			200	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	28	99			98	
cM capacity (veh/h)	565	701			1097	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	418	341	60
Volume Left	410	0	26
Volume Right	9	70	0
cSH	568	1700	1097
Volume to Capacity	0.74	0.20	0.02
Queue Length 95th (ft)	157	0	2
Control Delay (s)	27.0	0.0	3.8
Lane LOS	D		A
Approach Delay (s)	27.0	0.0	3.8
Approach LOS	D		

Intersection Summary			
Average Delay			14.1
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)			15



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations					↕			↕				↕
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Volume (veh/h)	0	0	0	0	0	1	7	68	0	4	0	74
Peak Hour Factor	0.25	0.92	0.92	0.92	0.92	0.25	0.58	0.87	0.92	0.92	0.92	0.68
Hourly flow rate (vph)	0	0	0	0	0	4	12	78	0	0	0	109
Pedestrians		230			294			13				144
Lane Width (ft)		0.0			10.0			16.0				16.0
Walking Speed (ft/s)		4.0			4.0			4.0				4.0
Percent Blockage		0			20			1				16
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												482
pX, platoon unblocked									0.00			
vC, conflicting volume	658	804	421	587	873	516	477		0		372	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	658	804	421	587	873	516	477		0		372	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	7.2	4.1		0.0		4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	4.2	2.2		0.0		2.2	
p0 queue free %	100	100	100	100	100	99	99		0		100	
cM capacity (veh/h)	263	251	628	278	229	272	1096		0		953	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	90	247
Volume Left	0	12	0
Volume Right	4	0	138
cSH	272	1096	953
Volume to Capacity	0.01	0.01	0.00
Queue Length 95th (ft)	1	1	0
Control Delay (s)	18.4	1.2	0.0
Lane LOS	C	A	
Approach Delay (s)	18.4	1.2	0.0
Approach LOS	C		

Intersection Summary		
Average Delay		0.5
Intersection Capacity Utilization	33.8%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	69
Peak Hour Factor	0.50
Hourly flow rate (vph)	138
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	
tC, single (s)	
tC, 2 stage (s)	
tF (s)	
p0 queue free %	
cM capacity (veh/h)	
Direction, Lane #	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔		↔↕	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	0	1	739	13	2	592
Peak Hour Factor	0.25	0.25	0.94	0.81	0.25	0.92
Hourly flow rate (vph)	0	4	786	16	8	643
Pedestrians			3			8
Lane Width (ft)			10.0			14.0
Walking Speed (ft/s)			4.0			4.0
Percent Blockage			0			1
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			422			505
pX, platoon unblocked	0.75					
vC, conflicting volume	1457	409			802	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1608	409			802	
tC, single (s)	6.8	6.9			5.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.7	
p0 queue free %	100	99			99	
cM capacity (veh/h)	72	593			569	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	4	524	278	651
Volume Left	0	0	0	8
Volume Right	4	0	16	0
cSH	593	1700	1700	569
Volume to Capacity	0.01	0.31	0.16	0.01
Queue Length 95th (ft)	1	0	0	1
Control Delay (s)	11.1	0.0	0.0	0.4
Lane LOS	B			A
Approach Delay (s)	11.1	0.0	0.4	
Approach LOS	B			

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	8	22	0	760	592	0
Peak Hour Factor	0.50	0.61	0.25	0.96	0.91	0.25
Hourly flow rate (vph)	16	36	0	792	651	0
Pedestrians	79				235	
Lane Width (ft)	13.0				11.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	7				18	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				95	832	
pX, platoon unblocked	0.61					
vC, conflicting volume	1756	404	730			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2243	404	730			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	6	93	100			
cM capacity (veh/h)	17	546	821			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	52	792	325	325
Volume Left	16	0	0	0
Volume Right	36	0	0	0
cSH	52	1700	1700	1700
Volume to Capacity	1.01	0.47	0.19	0.19
Queue Length 95th (ft)	111	0	0	0
Control Delay (s)	255.6	0.0	0.0	0.0
Lane LOS	F			
Approach Delay (s)	255.6	0.0	0.0	
Approach LOS	F			

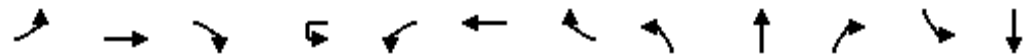
Intersection Summary			
Average Delay		8.9	
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations			↔			↔↔	
Sign Control	Yield		Free		Free		
Grade	0%		0%		0%		
Volume (veh/h)	0	0	761	49	24	590	
Peak Hour Factor	0.25	0.25	0.94	0.77	0.67	0.86	
Hourly flow rate (vph)	0	0	810	64	36	686	
Pedestrians	56		9		62		
Lane Width (ft)	0.0		13.0		11.0		
Walking Speed (ft/s)	4.0		4.0		4.0		
Percent Blockage	0		1		5		
Right turn flare (veh)							
Median type	None						
Median storage (veh)							
Upstream signal (ft)			229		208		
pX, platoon unblocked	0.58	0.54			0.54		
vC, conflicting volume	1321	959			929		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	1271	925			870		
tC, single (s)	6.8	6.9			5.9		
tC, 2 stage (s)							
tF (s)	3.5	3.3			3.1		
p0 queue free %	100	100			84		
cM capacity (veh/h)	78	142			219		

Direction, Lane #	NB 1	SB 1	SB 2
Volume Total	873	265	457
Volume Left	0	36	0
Volume Right	64	0	0
cSH	1700	219	1700
Volume to Capacity	0.51	0.16	0.27
Queue Length 95th (ft)	0	14	0
Control Delay (s)	0.0	7.4	0.0
Lane LOS	A		
Approach Delay (s)	0.0	2.7	
Approach LOS			

Intersection Summary			
Average Delay			1.2
Intersection Capacity Utilization	66.8%		ICU Level of Service C
Analysis Period (min)			15



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕				↕						↕
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Volume (veh/h)	58	303	13	1	7	245	35	0	0	0	14	2
Peak Hour Factor	0.85	0.84	0.54	0.25	0.58	0.89	0.63	0.25	0.25	0.25	0.44	0.25
Hourly flow rate (vph)	68	361	24	0	12	275	56	0	0	0	32	8
Pedestrians		15				36			56			134
Lane Width (ft)		11.0				11.0			0.0			16.0
Walking Speed (ft/s)		4.0				4.0			4.0			4.0
Percent Blockage		1				3			0			15
Right turn flare (veh)												
Median type									None			None
Median storage (veh)												
Upstream signal (ft)		373										
pX, platoon unblocked				0.00								
vC, conflicting volume	465			0	441			923	1054	465	1006	1038
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	465			0	441			923	1054	465	1006	1038
tC, single (s)	4.1			0.0	4.2			7.1	6.5	6.2	7.1	6.5
tC, 2 stage (s)												
tF (s)	2.2			0.0	2.3			3.5	4.0	3.3	3.5	4.0
p0 queue free %	93			0	99			100	100	100	79	96
cM capacity (veh/h)	933			0	1058			195	178	585	152	181

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	453	343	52
Volume Left	68	12	32
Volume Right	24	56	12
cSH	933	1058	186
Volume to Capacity	0.07	0.01	0.28
Queue Length 95th (ft)	6	1	27
Control Delay (s)	2.1	0.4	31.7
Lane LOS	A	A	D
Approach Delay (s)	2.1	0.4	31.7
Approach LOS			D

Intersection Summary		
Average Delay		3.2
Intersection Capacity Utilization	60.8%	ICU Level of Service
Analysis Period (min)		15
		B



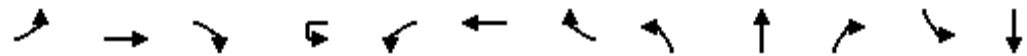
Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	7
Peak Hour Factor	0.58
Hourly flow rate (vph)	12
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	452
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	452
tC, single (s)	6.5
tC, 2 stage (s)	
tF (s)	3.6
p0 queue free %	97
cM capacity (veh/h)	467
Direction, Lane #	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕							
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	68	297	17	35	243	70	0	0	0	0	0	0
Peak Hour Factor	0.71	0.85	0.71	0.73	0.88	0.80	0.25	0.25	0.25	0.25	0.25	0.25
Hourly flow rate (vph)	96	349	24	48	276	88	0	0	0	0	0	0
Pedestrians		85			7			133			117	
Lane Width (ft)		11.0			10.0			0.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		737										
pX, platoon unblocked												
vC, conflicting volume	481			506			1187	1262	501	1093	1231	522
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	481			506			1187	1262	501	1093	1231	522
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			95			100	100	100	100	100	100
cM capacity (veh/h)	1092			1038			141	149	571	173	156	522

Direction, Lane #	EB 1	WB 1
Volume Total	469	412
Volume Left	96	48
Volume Right	24	88
cSH	1092	1038
Volume to Capacity	0.09	0.05
Queue Length 95th (ft)	7	4
Control Delay (s)	2.5	1.5
Lane LOS	A	A
Approach Delay (s)	2.5	1.5
Approach LOS		

Intersection Summary		
Average Delay		2.0
Intersection Capacity Utilization	40.6%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕				↕			↕			↕
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Volume (veh/h)	4	299	11	1	14	339	2	2	0	19	2	1
Peak Hour Factor	0.50	0.82	0.46	0.25	0.44	0.91	0.50	0.50	0.25	0.60	0.50	0.25
Hourly flow rate (vph)	8	365	24	0	32	373	4	4	0	32	4	4
Pedestrians		45				57			64			34
Lane Width (ft)		11.0				10.0			16.0			13.0
Walking Speed (ft/s)		4.0				4.0			4.0			4.0
Percent Blockage		3				4			7			3
Right turn flare (veh)												
Median type									None			None
Median storage (veh)												
Upstream signal (ft)						628						
pX, platoon unblocked				0.00								
vC, conflicting volume	411			0	453			942	931	498	953	941
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	411			0	453			942	931	498	953	941
tC, single (s)	4.1			0.0	4.1			7.1	6.5	6.2	7.1	6.5
tC, 2 stage (s)												
tF (s)	2.2			0.0	2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	99			0	97			98	100	94	98	98
cM capacity (veh/h)	1124			0	1039			195	233	505	189	230

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	397	408	36	8
Volume Left	8	32	4	4
Volume Right	24	4	32	0
cSH	1124	1039	429	207
Volume to Capacity	0.01	0.03	0.08	0.04
Queue Length 95th (ft)	1	2	7	3
Control Delay (s)	0.2	1.0	14.2	23.1
Lane LOS	A	A	B	C
Approach Delay (s)	0.2	1.0	14.2	23.1
Approach LOS			B	C

Intersection Summary			
Average Delay		1.4	
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	0
Peak Hour Factor	0.25
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	454
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	454
tC, single (s)	6.2
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	571
Direction, Lane #	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	8	2	46	26	90	4	13	9	44	35	18
Peak Hour Factor	0.85	0.67	0.38	0.84	0.78	0.86	0.50	0.70	0.55	0.92	0.67	0.75
Hourly flow rate (vph)	19	12	5	55	33	105	8	19	16	48	52	24

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	36	193	43	124
Volume Left (vph)	19	55	8	48
Volume Right (vph)	5	105	16	24
Hadj (s)	0.07	-0.20	-0.08	-0.02
Departure Headway (s)	4.6	4.1	4.5	4.4
Degree Utilization, x	0.05	0.22	0.05	0.15
Capacity (veh/h)	748	828	753	763
Control Delay (s)	7.8	8.3	7.7	8.2
Approach Delay (s)	7.8	8.3	7.7	8.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.2	
HCM Level of Service		A	
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)		15	

11046 Northeastern IMP
363: Huntington Avenue & Gainsborough St

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	11	12	12	10	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.92			0.95			0.71				
Frt		0.979			0.989			0.977				
Flt Protected	0.950				0.998			0.970				
Satd. Flow (prot)	1652	3129	0	0	4573	0	0	1481	0	0	0	0
Flt Permitted	0.360				0.890			0.970				
Satd. Flow (perm)	626	3129	0	0	4078	0	0	1155	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			20			11				
Headway Factor	1.09	1.00	1.00	1.00	1.04	1.00	1.00	1.09	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		305			644			302				308
Travel Time (s)		6.9			14.6			6.9				7.0
Volume (vph)	55	625	100	29	568	47	82	29	23	0	0	0
Confl. Peds. (#/hr)			230			335	481		225			
Confl. Bikes (#/hr)			10			12			4			
Peak Hour Factor	0.95	0.95	0.95	0.96	0.96	0.96	0.93	0.93	0.93	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	1%	0%	3%	2%	4%	0%	9%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	58	658	105	30	592	49	88	31	25	0	0	0
Lane Group Flow (vph)	58	763	0	0	671	0	0	144	0	0	0	0
Turn Type	Perm			D.P+P			Perm					
Protected Phases		1		3	1 3			2				
Permitted Phases	1			1			2					
Detector Phases	1	1		3	1 3		2	2				
Minimum Initial (s)	8.0	8.0		6.0			8.0	8.0				
Minimum Split (s)	19.0	19.0		12.0			31.0	31.0				
Total Split (s)	51.0	51.0	0.0	12.0	63.0	0.0	37.0	37.0	0.0	0.0	0.0	0.0
Total Split (%)	51.0%	51.0%	0.0%	12.0%	63.0%	0.0%	37.0%	37.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	46.0	46.0		7.0			31.0	31.0				
Yellow Time (s)	3.0	3.0		3.0			3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0			3.0	3.0				
Lead/Lag				Lag			Lead	Lead				
Lead-Lag Optimize?				Yes			Yes	Yes				
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0			3.0	3.0				

11046 Northeastern IMP
363: Huntington Avenue & Gainsborough St

Existing
Timing Plan: PM Peak

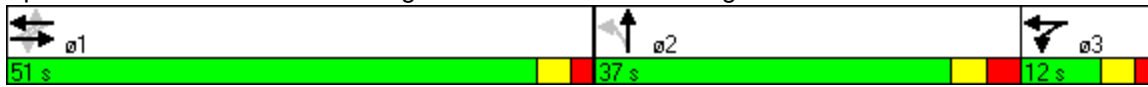


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Recall Mode	C-Max	C-Max		None			None	None				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	5.0	5.0					17.0	17.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)	61.9	61.9			69.9			18.1				
Actuated g/C Ratio	0.62	0.62			0.70			0.18				
v/c Ratio	0.15	0.39			0.23			0.66				
Control Delay	11.2	13.1			4.8			48.7				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	11.2	13.1			4.8			48.7				
LOS	B	B			A			D				
Approach Delay		13.0			4.8			48.7				
Approach LOS		B			A			D				
90th %ile Green (s)	53.1	53.1		7.0			23.9	23.9				
90th %ile Term Code	Coord	Coord		Max			Gap	Gap				
70th %ile Green (s)	57.8	57.8		7.0			19.2	19.2				
70th %ile Term Code	Coord	Coord		Max			Gap	Gap				
50th %ile Green (s)	61.1	61.1		7.0			15.9	15.9				
50th %ile Term Code	Coord	Coord		Max			Gap	Gap				
30th %ile Green (s)	64.2	64.2		7.0			12.8	12.8				
30th %ile Term Code	Coord	Coord		Max			Gap	Gap				
10th %ile Green (s)	68.5	68.5		7.0			8.5	8.5				
10th %ile Term Code	Coord	Coord		Max			Gap	Gap				
Queue Length 50th (ft)	14	151			37			80				
Queue Length 95th (ft)	58	301			72			133				
Internal Link Dist (ft)		225			564			222			228	
Turn Bay Length (ft)	150											
Base Capacity (vph)	388	1947			2898			389				
Starvation Cap Reductn	0	0			0			0				
Spillback Cap Reductn	0	0			0			0				
Storage Cap Reductn	0	0			0			0				
Reduced v/c Ratio	0.15	0.39			0.23			0.37				

Intersection Summary

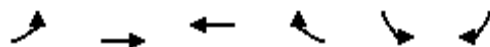
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	23 (23%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.66
Intersection Signal Delay:	12.8
Intersection LOS:	B
Intersection Capacity Utilization:	64.8%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 363: Huntington Avenue & Gainsborough St





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Lane Configurations			↑↑			↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)		0%	0%		0%		
Storage Length (ft)	0			0	0	0	
Storage Lanes	0			0	0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)			100			20	
Trailing Detector (ft)			0			0	
Turning Speed (mph)	15			9	15	9	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00	
Ped Bike Factor							
Frt							0.865
Flt Protected							
Satd. Flow (prot)	0	0	3505	0	0	1627	
Flt Permitted							
Satd. Flow (perm)	0	0	3505	0	0	1627	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						376	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)		25	25		30		
Link Distance (ft)		249	450		303		
Travel Time (s)		6.8	12.3		6.9		
Volume (vph)	0	0	646	0	0	143	
Confl. Peds. (#/hr)	9			20		176	
Confl. Bikes (#/hr)				10		2	
Peak Hour Factor	0.90	0.90	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	9%	3%	0%	0%	1%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)		0%	0%		0%		
Adj. Flow (vph)	0	0	702	0	0	155	
Lane Group Flow (vph)	0	0	702	0	0	155	
Turn Type							custom
Protected Phases			1			3	2
Permitted Phases							
Detector Phases			1			3	
Minimum Initial (s)			8.0			8.0	4.0
Minimum Split (s)			19.0			13.0	19.0
Total Split (s)	0.0	0.0	57.0	0.0	0.0	24.0	19.0
Total Split (%)	0.0%	0.0%	57.0%	0.0%	0.0%	24.0%	19%
Maximum Green (s)			53.0			20.0	15.0
Yellow Time (s)			3.0			3.0	3.0
All-Red Time (s)			1.0			1.0	1.0
Lead/Lag			Lead			Lag	
Lead-Lag Optimize?			Yes			Yes	
Vehicle Extension (s)			3.0			3.0	3.0
Minimum Gap (s)			3.0			3.0	3.0



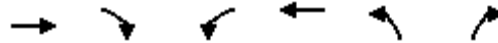
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Time Before Reduce (s)			0.0			0.0	0.0
Time To Reduce (s)			0.0			0.0	0.0
Recall Mode			C-Max			None	Ped
Walk Time (s)			7.0				10.0
Flash Dont Walk (s)			5.0				5.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)			65.0			8.0	
Actuated g/C Ratio			0.65			0.08	
v/c Ratio			0.31			0.33	
Control Delay			8.1			1.7	
Queue Delay			0.0			0.0	
Total Delay			8.1			1.7	
LOS			A			A	
Approach Delay			8.1				
Approach LOS			A				
90th %ile Green (s)			65.0			8.0	15.0
90th %ile Term Code			Coord			Min	Ped
70th %ile Green (s)			65.0			8.0	15.0
70th %ile Term Code			Coord			Min	Ped
50th %ile Green (s)			65.0			8.0	15.0
50th %ile Term Code			Coord			Min	Ped
30th %ile Green (s)			65.0			8.0	15.0
30th %ile Term Code			Coord			Min	Ped
10th %ile Green (s)			65.0			8.0	15.0
10th %ile Term Code			Coord			Min	Ped
Queue Length 50th (ft)			93			0	
Queue Length 95th (ft)			122			m0	
Internal Link Dist (ft)		169	370		223		
Turn Bay Length (ft)							
Base Capacity (vph)			2278			626	
Starvation Cap Reductn			0			0	
Spillback Cap Reductn			0			0	
Storage Cap Reductn			0			0	
Reduced v/c Ratio			0.31			0.25	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 23 (23%), Referenced to phase 1:WBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.33
 Intersection Signal Delay: 6.9 Intersection LOS: A
 Intersection Capacity Utilization 40.9% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4019: Huntington Avenue & Opera Place





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Lane Configurations	↑↑						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	0%			0%	0%		
Storage Length (ft)		0	0		0	0	
Storage Lanes		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	100						
Trailing Detector (ft)	0						
Turning Speed (mph)		9	15		15	9	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt							
Flt Protected							
Satd. Flow (prot)	3505	0	0	0	0	0	
Flt Permitted							
Satd. Flow (perm)	3505	0	0	0	0	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)	30			30	30		
Link Distance (ft)	213			487	159		
Travel Time (s)	4.8			11.1	3.6		
Volume (vph)	814	0	0	0	0	0	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%	0%		
Adj. Flow (vph)	857	0	0	0	0	0	
Lane Group Flow (vph)	857	0	0	0	0	0	
Turn Type							
Protected Phases	1						2
Permitted Phases							
Detector Phases	1						
Minimum Initial (s)	8.0						4.0
Minimum Split (s)	14.0						19.0
Total Split (s)	81.0	0.0	0.0	0.0	0.0	0.0	19.0
Total Split (%)	81.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19%
Maximum Green (s)	77.0						15.0
Yellow Time (s)	3.0						3.0
All-Red Time (s)	1.0						1.0
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0						3.0
Minimum Gap (s)	3.0						3.0



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Time Before Reduce (s)	0.0						0.0
Time To Reduce (s)	0.0						0.0
Recall Mode	C-Min						Ped
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	77.0						
Actuated g/C Ratio	0.77						
v/c Ratio	0.32						
Control Delay	1.6						
Queue Delay	0.0						
Total Delay	1.6						
LOS	A						
Approach Delay	1.6						
Approach LOS	A						
90th %ile Green (s)	77.0						15.0
90th %ile Term Code	Coord						Ped
70th %ile Green (s)	77.0						15.0
70th %ile Term Code	Coord						Ped
50th %ile Green (s)	77.0						15.0
50th %ile Term Code	Coord						Ped
30th %ile Green (s)	77.0						15.0
30th %ile Term Code	Coord						Ped
10th %ile Green (s)	77.0						15.0
10th %ile Term Code	Coord						Ped
Queue Length 50th (ft)	5						
Queue Length 95th (ft)	109						
Internal Link Dist (ft)	133			407	79		
Turn Bay Length (ft)							
Base Capacity (vph)	2699						
Starvation Cap Reductn	0						
Spillback Cap Reductn	0						
Storage Cap Reductn	0						
Reduced v/c Ratio	0.32						

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	13 (13%), Referenced to phase 1:EBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.32
Intersection Signal Delay:	1.6
Intersection Capacity Utilization	25.8%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

Splits and Phases: 4020: Huntington Avenue & South



11046 Northeastern IMP
643: Huntington Ave & Forsyth Street

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↑			↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	12	12	12	12	12	14	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50		50	50		50	50	
Trailing Detector (ft)		0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96			0.94			0.73			0.79	
Frt		0.993			0.990			0.949			0.965	
Flt Protected					0.998			0.981			0.989	
Satd. Flow (prot)	0	3101	0	0	2938	0	0	1065	0	0	1363	0
Flt Permitted					0.902			0.841			0.911	
Satd. Flow (perm)	0	3101	0	0	2634	0	0	840	0	0	1149	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7						29			16	
Headway Factor	1.14	1.10	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.05	1.14
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		527			294			482			458	
Travel Time (s)		14.4			8.0			13.1			12.5	
Volume (vph)	0	697	33	35	769	56	29	19	29	39	86	44
Confl. Peds. (#/hr)	508		613	613		508	572		1516	1516		572
Confl. Bikes (#/hr)			28			9						4
Peak Hour Factor	0.97	0.97	0.97	0.92	0.92	0.92	0.79	0.79	0.79	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	12%	2%	4%	2%	28%	25%	6%	5%	17%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	719	34	38	836	61	37	24	37	43	95	48
Lane Group Flow (vph)	0	753	0	0	935	0	0	98	0	0	186	0
Turn Type			D.P+P			Perm			Perm			
Protected Phases		1		3	1 3			2			2	
Permitted Phases				1			2			2		
Detector Phases		1		3	1 3		2	2		2	2	
Minimum Initial (s)		8.0		8.0			8.0	8.0		8.0	8.0	
Minimum Split (s)		21.0		14.0			16.0	16.0		16.0	16.0	
Total Split (s)	0.0	58.0	0.0	14.0	72.0	0.0	28.0	28.0	0.0	28.0	28.0	0.0
Total Split (%)	0.0%	58.0%	0.0%	14.0%	72.0%	0.0%	28.0%	28.0%	0.0%	28.0%	28.0%	0.0%
Maximum Green (s)		53.0		9.0			22.0	22.0		22.0	22.0	
Yellow Time (s)		3.0		3.0			3.0	3.0		3.0	3.0	
All-Red Time (s)		2.0		2.0			3.0	3.0		3.0	3.0	
Lead/Lag				Lag		Lead	Lead		Lead	Lead		
Lead-Lag Optimize?				Yes		Yes	Yes		Yes	Yes		
Vehicle Extension (s)		2.0		2.0			3.0	3.0		3.0	3.0	
Minimum Gap (s)		3.0		3.0			3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	
Time To Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	
Recall Mode		C-Max		None			Ped	Ped		Ped	Ped	
Walk Time (s)		7.0					7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		7.0					2.0	2.0		2.0	2.0	
Pedestrian Calls (#/hr)		0					0	0		0	0	
Act Effct Green (s)		58.0		68.0			20.0			20.0		
Actuated g/C Ratio		0.58		0.68			0.20			0.20		
v/c Ratio		0.42		0.51			0.51			0.77		
Control Delay		10.4		8.2			34.5			54.6		
Queue Delay		0.0		0.0			0.0			0.0		
Total Delay		10.4		8.2			34.5			54.6		
LOS		B		A			C			D		
Approach Delay		10.4		8.2			34.5			54.6		
Approach LOS		B		A			C			D		
90th %ile Green (s)		53.0		9.0			22.0	22.0		22.0	22.0	
90th %ile Term Code		Coord		Max			Max	Max		Max	Max	
70th %ile Green (s)		53.0		9.0			22.0	22.0		22.0	22.0	
70th %ile Term Code		Coord		Max			Max	Max		Max	Max	
50th %ile Green (s)		55.3		9.0			19.7	19.7		19.7	19.7	
50th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	
30th %ile Green (s)		59.3		9.0			15.7	15.7		15.7	15.7	
30th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	
10th %ile Green (s)		64.6		9.0			10.4	10.4		10.4	10.4	
10th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	
Queue Length 50th (ft)		98			118			38			101	
Queue Length 95th (ft)		m107			170			m73			#178	
Internal Link Dist (ft)		447			214			402			378	
Turn Bay Length (ft)												
Base Capacity (vph)		1803			1823			224			288	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.42			0.51			0.44			0.65	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 50 (50%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 14.8

Intersection LOS: B

Intersection Capacity Utilization 75.0%

ICU Level of Service D

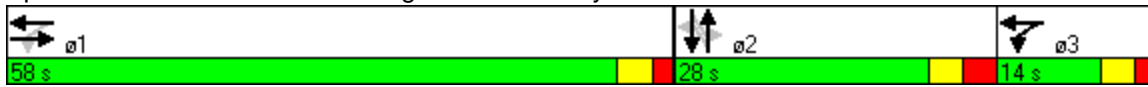
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 643: Huntington Ave & Forsyth Street



11046 Northeastern IMP
569: Huntington Ave & Forsyth Way

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑			↕			↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	12	12	16	12	12	12	15
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50		50	50		50	50	50
Trailing Detector (ft)		0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.99			0.90				0.59
Frt		0.999			0.994			0.960				0.850
Flt Protected				0.950				0.999			0.997	
Satd. Flow (prot)	0	3149	0	1501	2990	0	0	1662	0	0	1674	1583
Flt Permitted				0.950				0.987			0.954	
Satd. Flow (perm)	0	3149	0	1501	2990	0	0	1642	0	0	1602	940
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.14	1.14	1.25	1.19	1.14	1.14	0.97	1.14	1.14	1.14	1.01
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		960			527			786			209	
Travel Time (s)		26.2			14.4			21.4			5.7	
Volume (vph)	0	591	3	167	592	23	9	252	111	19	309	94
Confl. Peds. (#/hr)			82			60			150			270
Confl. Bikes (#/hr)			11			14			4			2
Peak Hour Factor	0.97	0.97	0.97	0.94	0.94	0.94	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	1%	4%	0%	0%	0%	2%	16%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	609	3	178	630	24	11	307	135	23	377	115
Lane Group Flow (vph)	0	612	0	178	654	0	0	453	0	0	400	115
Turn Type				Prot			Perm			Perm		Perm
Protected Phases		1		3	1 3			2			2	
Permitted Phases							2			2		2
Detector Phases		1		3	1 3		2	2		2	2	2
Minimum Initial (s)		8.0		6.0			8.0	8.0		8.0	8.0	8.0
Minimum Split (s)		33.0		13.0			18.0	18.0		18.0	18.0	18.0
Total Split (s)	0.0	38.0	0.0	24.0	62.0	0.0	38.0	38.0	0.0	38.0	38.0	38.0
Total Split (%)	0.0%	38.0%	0.0%	24.0%	62.0%	0.0%	38.0%	38.0%	0.0%	38.0%	38.0%	38.0%
Maximum Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
Yellow Time (s)		3.0		3.0			3.0	3.0		3.0	3.0	3.0
All-Red Time (s)		2.0		3.0			4.0	4.0		4.0	4.0	4.0
Lead/Lag				Lag			Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?				Yes			Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)		2.0		2.0			3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)		2.0		3.0			3.0	3.0		3.0	3.0	3.0

11046 Northeastern IMP
569: Huntington Ave & Forsyth Way

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Recall Mode		C-Max		None			Ped	Ped		Ped	Ped	Ped
Walk Time (s)		7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		19.0					3.0	3.0		3.0	3.0	3.0
Pedestrian Calls (#/hr)		0					0	0		0	0	0
Act Effct Green (s)		38.0		17.8	59.8		32.2			32.2	32.2	32.2
Actuated g/C Ratio		0.38		0.18	0.60		0.32			0.32	0.32	0.32
v/c Ratio		0.51		0.67	0.37		0.86			0.78	0.38	
Control Delay		18.2		54.1	8.1		42.0			41.8	29.8	
Queue Delay		0.0		0.0	0.0		0.0			0.0	0.0	
Total Delay		18.2		54.1	8.1		42.0			41.8	29.8	
LOS		B		D	A		D			D	C	
Approach Delay		18.2			17.9		42.0			39.1		
Approach LOS		B			B		D			D		
90th %ile Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
90th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
70th %ile Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
70th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
50th %ile Green (s)		34.5		16.5			31.0	31.0		31.0	31.0	31.0
50th %ile Term Code		Coord		Gap			Max	Max		Max	Max	Max
30th %ile Green (s)		34.1		18.0			29.9	29.9		29.9	29.9	29.9
30th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)		50.5		8.5			23.0	23.0		23.0	23.0	23.0
10th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
Queue Length 50th (ft)		65		93	67		287			222	55	
Queue Length 95th (ft)		127		m158	81		m316			294	93	
Internal Link Dist (ft)		880			447		706			129		
Turn Bay Length (ft)				100								
Base Capacity (vph)		1197		300	1773		558			545	320	
Starvation Cap Reductn		0		0	0		0			0	0	
Spillback Cap Reductn		0		0	0		0			0	0	
Storage Cap Reductn		0		0	0		0			0	0	
Reduced v/c Ratio		0.51		0.59	0.37		0.81			0.73	0.36	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 62 (62%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 27.1

Intersection LOS: C

Intersection Capacity Utilization 74.7%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 569: Huntington Ave & Forsyth Way



11046 Northeastern IMP
3096: Huntington Ave & Louis Prang Street

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕			↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	12	12	11	11	12	13	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50		50	50		50	50	
Trailing Detector (ft)	0	0			0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.90			0.89			1.00			0.99	
Frt		0.957			0.971			0.997			0.998	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1516	2573	0	0	2697	0	1540	1498	0	1646	1602	0
Flt Permitted	0.950						0.276			0.520		
Satd. Flow (perm)	1516	2573	0	0	2697	0	447	1498	0	901	1602	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.25	1.19	1.14	1.14	1.14	1.14	1.19	1.19	1.14	1.10	1.14	1.14
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		477			960			561			606	
Travel Time (s)		13.0			26.2			15.3			16.5	
Volume (vph)	55	524	210	0	580	141	188	353	7	43	342	5
Confl. Peds. (#/hr)			88			221			141			266
Confl. Bikes (#/hr)			12			11			11			2
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.87	0.87	0.87	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	7%	0%	3%	6%	2%	10%	0%	2%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	57	540	216	0	624	152	216	406	8	44	353	5
Lane Group Flow (vph)	57	756	0	0	776	0	216	414	0	44	358	0
Turn Type	Prot						D.P+P			Perm		
Protected Phases	4	1 4			1		2	2 3				3
Permitted Phases							3			3		
Detector Phases	4	1 4			1		2	2 3		3		3
Minimum Initial (s)	5.0				8.0		6.0			8.0	8.0	
Minimum Split (s)	12.0				21.0		14.0			18.0	18.0	
Total Split (s)	12.0	49.0	0.0	0.0	37.0	0.0	19.0	51.0	0.0	32.0	32.0	0.0
Total Split (%)	12.0%	49.0%	0.0%	0.0%	37.0%	0.0%	19.0%	51.0%	0.0%	32.0%	32.0%	0.0%
Maximum Green (s)	6.0				31.0		12.0			25.0	25.0	
Yellow Time (s)	3.0				3.0		3.0			3.0	3.0	
All-Red Time (s)	3.0				3.0		4.0			4.0	4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0				2.0		3.0			3.0	3.0	
Minimum Gap (s)	3.0				3.0		3.0			3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Time To Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Recall Mode	None			C-Max			None			Ped	Ped	
Walk Time (s)					7.0					7.0	7.0	
Flash Dont Walk (s)					6.0					3.0	3.0	
Pedestrian Calls (#/hr)					0					0	0	
Act Effct Green (s)	8.0	46.1			34.1		41.9	45.9		26.9	26.9	
Actuated g/C Ratio	0.08	0.46			0.34		0.42	0.46		0.27	0.27	
v/c Ratio	0.47	0.64			0.84		0.62	0.60		0.18	0.83	
Control Delay	57.4	23.9			36.2		23.7	22.4		29.7	52.0	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	57.4	23.9			36.2		23.7	22.4		29.7	52.0	
LOS	E	C			D		C	C		C	D	
Approach Delay		26.3			36.2			22.9			49.6	
Approach LOS		C			D			C			D	
90th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
90th %ile Term Code	Max				Coord		Max			Max	Max	
70th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
70th %ile Term Code	Max				Coord		Max			Max	Max	
50th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
50th %ile Term Code	Max				Coord		Max			Max	Max	
30th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
30th %ile Term Code	Max				Coord		Max			Max	Max	
10th %ile Green (s)	6.0				36.7		12.0			19.3	19.3	
10th %ile Term Code	Max				Coord		Max			Gap	Gap	
Queue Length 50th (ft)	35	191			193		81	161		21	212	
Queue Length 95th (ft)	77	258			m#357		m75	m149		50	#356	
Internal Link Dist (ft)		397			880			481			526	
Turn Bay Length (ft)	100											
Base Capacity (vph)	121	1187			921		351	704		252	449	
Starvation Cap Reductn	0	0			0		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.47	0.64			0.84		0.62	0.59		0.17	0.80	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 59 (59%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 32.0 Intersection LOS: C
 Intersection Capacity Utilization 73.9% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3096: Huntington Ave & Louis Prang Street



11046 Northeastern IMP
389: Parker Street & Ruggles Street

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	15	12	12	16	12	12	10	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.55		1.00			0.95			0.98	
Frt			0.850		0.994			0.972			0.988	
Flt Protected		0.990			0.989			0.994			0.998	
Satd. Flow (prot)	0	1580	1384	0	1827	0	0	1671	0	0	1448	0
Flt Permitted		0.805			0.729			0.821			0.967	
Satd. Flow (perm)	0	1285	765	0	1347	0	0	1380	0	0	1403	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			54		3			17			7	
Headway Factor	1.14	1.25	1.14	1.14	1.01	1.14	1.14	0.97	1.14	1.14	1.25	1.25
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		751			786			490			561	
Travel Time (s)		17.1			17.9			11.1			12.8	
Volume (vph)	56	218	42	101	312	13	67	469	119	13	501	39
Confl. Peds. (#/hr)			188			67			67			53
Confl. Bikes (#/hr)			19			2			11			5
Peak Hour Factor	0.78	0.81	0.78	0.84	0.82	0.54	0.73	0.86	0.73	0.65	0.94	0.70
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	5%	0%	1%	0%	2%	8%	2%	0%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	72	269	54	120	380	24	92	545	163	20	533	56
Lane Group Flow (vph)	0	341	54	0	524	0	0	800	0	0	609	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		5			5			1			1	
Permitted Phases	5		5	5			1			1		
Detector Phases	5	5	5	5	5		1	1		1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0		20.0	20.0		20.0	20.0	
Total Split (s)	49.0	49.0	49.0	49.0	49.0	0.0	51.0	51.0	0.0	51.0	51.0	0.0
Total Split (%)	49.0%	49.0%	49.0%	49.0%	49.0%	0.0%	51.0%	51.0%	0.0%	51.0%	51.0%	0.0%
Maximum Green (s)	45.0	45.0	45.0	45.0	45.0		47.0	47.0		47.0	47.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	

11046 Northeastern IMP
389: Parker Street & Ruggles Street

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None	None	None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)	7.0	7.0	7.0	7.0	7.0		6.0	6.0		6.0	6.0	
Pedestrian Calls (#/hr)	30	30	30	30	30		0	0		0	0	
Act Effct Green (s)		41.4	41.4		41.4			50.6			50.6	
Actuated g/C Ratio		0.41	0.41		0.41			0.51			0.51	
v/c Ratio		0.64	0.16		0.94			1.13			0.85	
Control Delay		29.0	5.7		52.9			102.5			29.2	
Queue Delay		0.0	0.0		0.0			0.0			0.0	
Total Delay		29.0	5.7		52.9			102.5			29.2	
LOS		C	A		D			F			C	
Approach Delay		25.8			52.9			102.5			29.2	
Approach LOS		C			D			F			C	
90th %ile Green (s)	45.0	45.0	45.0	45.0	45.0		47.0	47.0		47.0	47.0	
90th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	
70th %ile Green (s)	45.0	45.0	45.0	45.0	45.0		47.0	47.0		47.0	47.0	
70th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	
50th %ile Green (s)	45.0	45.0	45.0	45.0	45.0		47.0	47.0		47.0	47.0	
50th %ile Term Code	Max	Max	Max	Max	Max		Coord	Coord		Coord	Coord	
30th %ile Green (s)	39.8	39.8	39.8	39.8	39.8		52.2	52.2		52.2	52.2	
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Coord	Coord		Coord	Coord	
10th %ile Green (s)	32.1	32.1	32.1	32.1	32.1		59.9	59.9		59.9	59.9	
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Coord	Coord		Coord	Coord	
Queue Length 50th (ft)		158	0		362			~626			192	
Queue Length 95th (ft)		215	16		#429			#801			m#530	
Internal Link Dist (ft)		671			706			410			481	
Turn Bay Length (ft)												
Base Capacity (vph)		578	374		608			707			714	
Starvation Cap Reductn		0	0		0			0			0	
Spillback Cap Reductn		0	0		0			0			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.59	0.14		0.86			1.13			0.85	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 4 (4%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 59.1

Intersection LOS: E

Intersection Capacity Utilization 129.1%

ICU Level of Service H

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

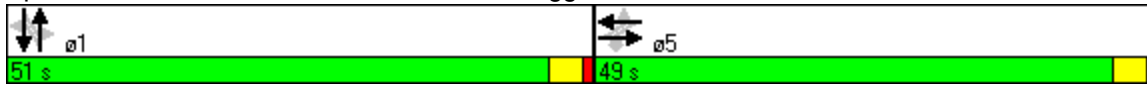
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 389: Parker Street & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	13	11	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.95		0.98			
Frt		0.850	0.996			
Flt Protected	0.950					
Satd. Flow (prot)	1486	1472	1583	0	0	3185
Flt Permitted	0.950					0.951
Satd. Flow (perm)	1418	1472	1583	0	0	3029
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		25	4			
Headway Factor	1.25	1.10	1.19	1.14	1.14	1.14
Link Speed (mph)	30		30			30
Link Distance (ft)	406		126			231
Travel Time (s)	9.2		2.9			5.3
Volume (vph)	98	67	710	23	5	625
Confl. Peds. (#/hr)	35	41		428	428	
Confl. Bikes (#/hr)				21		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	107	73	772	25	5	679
Lane Group Flow (vph)	107	73	797	0	0	684
Turn Type		Prot			Perm	
Protected Phases	5	5	1			1
Permitted Phases					1	
Detector Phases	5	5	1		1	1
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0
Minimum Split (s)	24.0	24.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	46.0	0.0	46.0	46.0
Total Split (%)	34.3%	34.3%	65.7%	0.0%	65.7%	65.7%
Maximum Green (s)	19.0	19.0	40.0		40.0	40.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	2.0	2.0	3.0		3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	8.0	8.0	8.0		8.0	8.0
Flash Dont Walk (s)	8.0	8.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)	78	78	9		9	9
Act Effct Green (s)	15.4	15.4	50.0			50.0
Actuated g/C Ratio	0.22	0.22	0.71			0.71
v/c Ratio	0.33	0.21	0.70			0.32
Control Delay	25.1	17.1	9.6			5.6
Queue Delay	0.0	0.0	0.9			0.0
Total Delay	25.1	17.1	10.5			5.6
LOS	C	B	B			A
Approach Delay	21.8		10.5			5.6
Approach LOS	C		B			A
90th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	0.0	0.0	64.0		64.0	64.0
10th %ile Term Code	Skip	Skip	Coord		Coord	Coord
Queue Length 50th (ft)	38	16	367			61
Queue Length 95th (ft)	78	47	84			87
Internal Link Dist (ft)	326		46			151
Turn Bay Length (ft)						
Base Capacity (vph)	425	438	1132			2163
Starvation Cap Reductn	0	0	124			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.25	0.17	0.79			0.32

Intersection Summary

Area Type:	CBD
Cycle Length:	70
Actuated Cycle Length:	70
Offset:	26 (37%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	9.7
Intersection LOS:	A
Intersection Capacity Utilization	62.0%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 1526: Leon St & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	16	16	13	12	12	11	
Grade (%)	0%		0%			0%	
Storage Length (ft)	0	0		0	0		
Storage Lanes	1	1		0	0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50	50	50			50	
Trailing Detector (ft)	0	0	0			0	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	
Ped Bike Factor							
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	995	941	1621	0	0	3049	
Flt Permitted	0.950						
Satd. Flow (perm)	995	941	1621	0	0	3049	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		36					
Headway Factor	0.97	0.97	1.10	1.14	1.14	1.19	
Link Speed (mph)	30		30			30	
Link Distance (ft)	219		341			206	
Travel Time (s)	5.0		7.8			4.7	
Volume (vph)	66	24	742	0	0	726	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.72	0.67	0.97	0.25	0.25	0.90	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	85%	75%	9%	0%	0%	3%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	92	36	765	0	0	807	
Lane Group Flow (vph)	92	36	765	0	0	807	
Turn Type		Prot					
Protected Phases	5	5	1			1	2
Permitted Phases							
Detector Phases	5	5	1			1	
Minimum Initial (s)	8.0	8.0	8.0			8.0	20.0
Minimum Split (s)	13.0	13.0	13.0			13.0	24.0
Total Split (s)	15.0	15.0	31.0	0.0	0.0	31.0	24.0
Total Split (%)	21.4%	21.4%	44.3%	0.0%	0.0%	44.3%	34%
Maximum Green (s)	10.0	10.0	26.0			26.0	20.0
Yellow Time (s)	3.0	3.0	3.0			3.0	3.5
All-Red Time (s)	2.0	2.0	2.0			2.0	0.5
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0			2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0			3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Time Before Reduce (s)	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0			0.0	0.0
Recall Mode	None	None	C-Max			C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	11.4	11.4	49.2			49.2	
Actuated g/C Ratio	0.16	0.16	0.70			0.70	
v/c Ratio	0.57	0.20	0.67			0.38	
Control Delay	42.4	12.2	16.8			7.9	
Queue Delay	0.0	0.0	0.7			0.1	
Total Delay	42.4	12.2	17.5			8.0	
LOS	D	B	B			A	
Approach Delay	33.9		17.5			8.0	
Approach LOS	C		B			A	
90th %ile Green (s)	10.0	10.0	26.0			26.0	20.0
90th %ile Term Code	Max	Max	Coord			Coord	Max
70th %ile Green (s)	14.2	14.2	45.8			45.8	0.0
70th %ile Term Code	Gap	Gap	Coord			Coord	Skip
50th %ile Green (s)	11.3	11.3	48.7			48.7	0.0
50th %ile Term Code	Gap	Gap	Coord			Coord	Skip
30th %ile Green (s)	8.6	8.6	51.4			51.4	0.0
30th %ile Term Code	Gap	Gap	Coord			Coord	Skip
10th %ile Green (s)	0.0	0.0	65.0			65.0	0.0
10th %ile Term Code	Skip	Skip	Coord			Coord	Skip
Queue Length 50th (ft)	36	0	315			54	
Queue Length 95th (ft)	64	14m#1110				190	
Internal Link Dist (ft)	139		261			126	
Turn Bay Length (ft)							
Base Capacity (vph)	172	192	1139			2142	
Starvation Cap Reductn	0	0	126			0	
Spillback Cap Reductn	0	0	0			267	
Storage Cap Reductn	0	0	0			0	
Reduced v/c Ratio	0.53	0.19	0.76			0.43	

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 25 (36%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 14.2

Intersection LOS: B

Intersection Capacity Utilization 56.7%

ICU Level of Service B

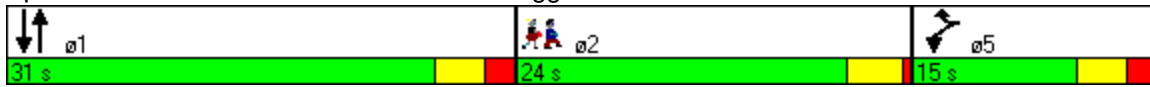
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3068: MBTA Exit & Ruggles Street



11046 Northeastern IMP
611: Tremont Street & Ruggles Street

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑			↑↑	↗	↘	↗		↗↘		↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	11	11	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	1		0	2		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50	50	50	50		50		50
Trailing Detector (ft)	0	0			0	0	0	0		0		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00					0.97	0.96	0.90		0.87		0.97
Frt						0.850		0.897				0.850
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1570	4468	0	0	3110	1454	1570	1323	0	3120	0	1454
Flt Permitted	0.950						0.950			0.950		
Satd. Flow (perm)	1568	4468	0	0	3110	1408	1501	1323	0	2724	0	1415
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)								26				251
Headway Factor	1.19	1.19	1.14	1.14	1.19	1.14	1.19	1.19	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		975			274			591				341
Travel Time (s)		22.2			6.2			13.4				7.8
Volume (vph)	154	1174	0	0	842	568	62	20	36	591	0	201
Confl. Peds. (#/hr)	1		58	58		1	20		65	65		20
Confl. Bikes (#/hr)			8			9						1
Peak Hour Factor	0.85	0.93	0.92	0.92	0.96	0.93	0.57	0.72	0.59	0.89	0.82	0.80
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	1%	0%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	181	1262	0	0	877	611	109	28	61	664	0	251
Lane Group Flow (vph)	181	1262	0	0	877	611	109	89	0	664	0	251
Turn Type	Prot				pm+ov	Split				Prot		custom
Protected Phases	1	6			2	3	4	4		3		1
Permitted Phases						2						3
Detector Phases	1	6			2	3	4	4		3		1
Minimum Initial (s)	8.0	16.0			16.0	9.0	8.0	8.0		9.0		8.0
Minimum Split (s)	12.0	20.0			20.0	13.0	23.0	23.0		13.0		12.0
Total Split (s)	25.0	64.0	0.0	0.0	39.0	43.0	33.0	33.0	0.0	43.0	0.0	25.0
Total Split (%)	17.9%	45.7%	0.0%	0.0%	27.9%	30.7%	23.6%	23.6%	0.0%	30.7%	0.0%	17.9%
Maximum Green (s)	21.0	60.0			35.0	39.0	29.0	29.0		39.0		21.0
Yellow Time (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0		3.0
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0		1.0		1.0
Lead/Lag	Lead				Lag	Lead	Lag	Lag		Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0			2.0	2.0	2.0	2.0		2.0		2.0
Minimum Gap (s)	2.0	2.0			2.0	2.0	2.0	2.0		2.0		2.0

11046 Northeastern IMP
611: Tremont Street & Ruggles Street

Existing
Timing Plan: PM Peak

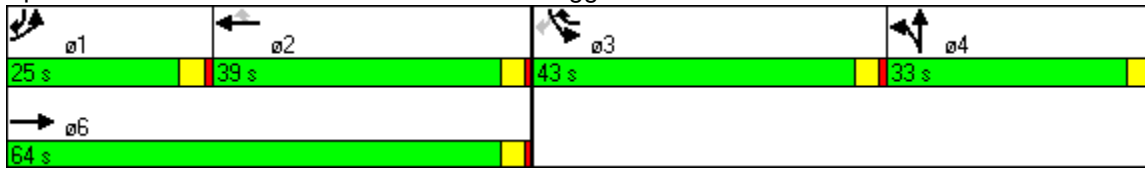


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0		0.0		0.0
Time To Reduce (s)	0.0	0.0			0.0	0.0	0.0	0.0		0.0		0.0
Recall Mode	None C-Max				C-Max	None	None	None		None		None
Walk Time (s)		8.0			8.0		8.0	8.0				
Flash Dont Walk (s)		6.0			5.0		11.0	11.0				
Pedestrian Calls (#/hr)		4			4		17	17				
Act Effct Green (s)	18.7	80.0			57.3	91.1	14.2	14.2		33.8		52.5
Actuated g/C Ratio	0.13	0.57			0.41	0.65	0.10	0.10		0.24		0.38
v/c Ratio	0.86	0.49			0.69	0.66	0.69	0.56		0.88		0.36
Control Delay	93.4	20.2			40.1	18.9	81.0	54.9		60.7		4.2
Queue Delay	93.9	0.1			95.3	4.2	0.0	0.1		4.5		0.2
Total Delay	187.3	20.2			135.4	23.1	81.0	54.9		65.2		4.4
LOS	F	C			F	C	F	D		E		A
Approach Delay		41.2			89.3			69.3				
Approach LOS		D			F			E				
90th %ile Green (s)	21.0	69.5			44.5	39.0	19.5	19.5		39.0		21.0
90th %ile Term Code	Max	Coord			Coord	Max	Ped	Ped		Max		Max
70th %ile Green (s)	21.0	70.2			45.2	38.8	19.0	19.0		38.8		21.0
70th %ile Term Code	Max	Coord			Coord	Gap	Ped	Ped		Gap		Max
50th %ile Green (s)	21.0	79.4			54.4	35.1	13.5	13.5		35.1		21.0
50th %ile Term Code	Max	Coord			Coord	Gap	Gap	Gap		Gap		Max
30th %ile Green (s)	17.6	86.4			64.8	30.5	11.1	11.1		30.5		17.6
30th %ile Term Code	Gap	Coord			Coord	Gap	Gap	Gap		Gap		Gap
10th %ile Green (s)	12.9	94.3			77.4	25.7	8.0	8.0		25.7		12.9
10th %ile Term Code	Gap	Coord			Coord	Gap	Min	Min		Gap		Gap
Queue Length 50th (ft)	161	244			355	297	98	55		300		6
Queue Length 95th (ft)	#248	335			#514	481	96	82		330		50
Internal Link Dist (ft)		895			194			511				261
Turn Bay Length (ft)	200											
Base Capacity (vph)	236	2552			1272	981	325	295		869		713
Starvation Cap Reductn	0	0			544	285	0	0		140		110
Spillback Cap Reductn	83	212			0	0	0	8		56		0
Storage Cap Reductn	0	0			0	0	0	0		0		0
Reduced v/c Ratio	1.18	0.54			1.20	0.88	0.34	0.31		0.91		0.42

Intersection Summary

Area Type: CBD
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 56 (40%), Referenced to phase 2:WBT and 6:EBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 61.9 Intersection LOS: E
 Intersection Capacity Utilization 73.5% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 611: Tremont Street & Ruggles Street



11046 Northeastern IMP
3082: Tremont Street & Columbus Avenue

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑							↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50			50							50
Trailing Detector (ft)		0			0							0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97										
Frt		0.981										0.865
Flt Protected												
Satd. Flow (prot)	0	4421	0	0	4622	0	0	0	0	0	0	1479
Flt Permitted												
Satd. Flow (perm)	0	4421	0	0	4622	0	0	0	0	0	0	1479
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		56										73
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		274			502			667				399
Travel Time (s)		6.2			11.4			15.2				9.1
Volume (vph)	0	1577	230	0	1300	0	0	0	0	0	0	116
Confl. Peds. (#/hr)			50	50		20	25		161	161		25
Confl. Bikes (#/hr)			11			5						
Peak Hour Factor	0.92	0.87	0.89	0.92	0.96	0.38	0.92	0.92	0.92	0.92	0.92	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	0	1813	258	0	1354	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	2071	0	0	1354	0	0	0	0	0	0	135
Turn Type												custom
Protected Phases		1			1							5
Permitted Phases												
Detector Phases		1			1							5
Minimum Initial (s)		10.0			10.0							4.0
Minimum Split (s)		23.0			23.0							29.0
Total Split (s)	0.0	77.0	0.0	0.0	77.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0
Total Split (%)	0.0%	72.6%	0.0%	0.0%	72.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.4%
Maximum Green (s)		73.0			73.0							25.0
Yellow Time (s)		3.0			3.0							3.5
All-Red Time (s)		1.0			1.0							0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0			2.0							3.0
Minimum Gap (s)		2.0			2.0							3.0

11046 Northeastern IMP
3082: Tremont Street & Columbus Avenue

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0			0.0							0.0
Time To Reduce (s)		0.0			0.0							0.0
Recall Mode		C-Max			C-Max							None
Walk Time (s)		8.0			8.0							8.0
Flash Dont Walk (s)		6.0			6.0							17.0
Pedestrian Calls (#/hr)		30			30							5
Act Effct Green (s)		86.1			86.1							11.9
Actuated g/C Ratio		0.81			0.81							0.11
v/c Ratio		0.58			0.36							0.58
Control Delay		5.1			3.7							30.4
Queue Delay		3.4			0.2							0.6
Total Delay		8.5			3.9							31.0
LOS		A			A							C
Approach Delay		8.5			3.9							
Approach LOS		A			A							
90th %ile Green (s)		73.0			73.0							25.0
90th %ile Term Code		Coord			Coord							Ped
70th %ile Green (s)		85.8			85.8							12.2
70th %ile Term Code		Coord			Coord							Gap
50th %ile Green (s)		88.3			88.3							9.7
50th %ile Term Code		Coord			Coord							Gap
30th %ile Green (s)		90.8			90.8							7.2
30th %ile Term Code		Coord			Coord							Gap
10th %ile Green (s)		92.5			92.5							5.5
10th %ile Term Code		Coord			Coord							Gap
Queue Length 50th (ft)		111			57							41
Queue Length 95th (ft)		286			158							81
Internal Link Dist (ft)		194			422			587			319	
Turn Bay Length (ft)												
Base Capacity (vph)		3601			3753							405
Starvation Cap Reductn		1406			1381							0
Spillback Cap Reductn		0			920							84
Storage Cap Reductn		0			0							0
Reduced v/c Ratio		0.94			0.57							0.42

Intersection Summary

Area Type:	CBD
Cycle Length:	106
Actuated Cycle Length:	106
Offset:	10 (9%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	7.6
Intersection LOS:	A
Intersection Capacity Utilization	50.8%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 3082: Tremont Street & Columbus Avenue



11046 Northeastern IMP
3098: Tremont Street & Melnea Cass Boulevard

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗		↕↕		↗	↕↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	10	16	11	16	12	14	14	13	12	11	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	350		0	0		0
Storage Lanes	0		1	0		0	1		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.91	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99	0.98		1.00		0.99	0.99			1.00	0.97
Frt			0.850		0.995			0.985				0.850
Flt Protected		0.986			0.994		0.950	0.963			0.996	
Satd. Flow (prot)	0	2615	1431	0	3142	0	1397	2725	0	0	1447	1331
Flt Permitted		0.578			0.580		0.950	0.963			0.996	
Satd. Flow (perm)	0	1522	1405	0	1832	0	1387	2709	0	0	1445	1297
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					3							219
Headway Factor	1.14	1.25	0.97	1.19	0.97	1.14	1.05	1.05	1.10	1.14	1.19	1.10
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		502			2251			626			342	
Travel Time (s)		11.4			51.2			14.2			7.8	
Volume (vph)	225	542	810	58	398	15	875	66	58	19	211	206
Confl. Peds. (#/hr)	50		20	20		50	7		21	21		7
Confl. Bikes (#/hr)			2			7			14			3
Peak Hour Factor	0.88	0.88	0.88	0.86	0.86	0.86	0.96	0.96	0.96	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	3%	4%	3%	13%	1%	18%	0%	0%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	256	616	920	67	463	17	911	69	60	21	237	231
Lane Group Flow (vph)	0	872	920	0	547	0	456	584	0	0	258	231
Turn Type	D.P+P		Free	Perm			Split			Split		Perm
Protected Phases	7	1 7			1		6	6		5	5	
Permitted Phases	1		Free	1								5
Detector Phases	1 7	1 7		1	1		6	6		5	5	5
Minimum Initial (s)	4.0			10.0	10.0		10.0	10.0		8.0	8.0	8.0
Minimum Split (s)	8.0			26.0	26.0		20.0	20.0		24.0	24.0	24.0
Total Split (s)	15.0	45.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0	25.0	25.0	25.0
Total Split (%)	15.0%	45.0%	0.0%	30.0%	30.0%	0.0%	30.0%	30.0%	0.0%	25.0%	25.0%	25.0%
Maximum Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
Yellow Time (s)	3.0			3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0			1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0

11046 Northeastern IMP
3098: Tremont Street & Melnea Cass Boulevard

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	Max			C-Max	C-Max		None	None		None	None	None
Walk Time (s)				7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)				15.0	15.0					13.0	13.0	13.0
Pedestrian Calls (#/hr)				0	0					5	5	5
Act Effct Green (s)		38.3	100.0		27.3		26.0	26.0			19.7	19.7
Actuated g/C Ratio		0.38	1.00		0.27		0.26	0.26			0.20	0.20
v/c Ratio		1.24	0.65		1.09		1.26	1.20dl			0.91	0.54
Control Delay		147.1	2.4		97.3		169.4	46.1			57.1	6.2
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.8
Total Delay		147.1	2.4		97.3		169.4	46.1			57.1	7.1
LOS		F	A		F		F	D			E	A
Approach Delay		72.8			97.3			100.1			33.5	
Approach LOS		E			F			F			C	
90th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
90th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
70th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
70th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
50th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
50th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
30th %ile Green (s)	11.0			26.7	26.7		26.0	26.0		20.3	20.3	20.3
30th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
10th %ile Green (s)	11.0			31.9	31.9		26.0	26.0		15.1	15.1	15.1
10th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
Queue Length 50th (ft)		~346	0		~217		~402	192			145	16
Queue Length 95th (ft)		#478	0		#305		#613	#283			m#279	m31
Internal Link Dist (ft)		422			2171			546			262	
Turn Bay Length (ft)							350					
Base Capacity (vph)		703	1405		503		363	709			304	445
Starvation Cap Reductn		0	0		0		0	0			0	63
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		1.24	0.65		1.09		1.26	0.82			0.85	0.60

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 36 (36%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.26

Intersection Signal Delay: 78.7

Intersection LOS: E

Intersection Capacity Utilization 103.9%

ICU Level of Service G

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

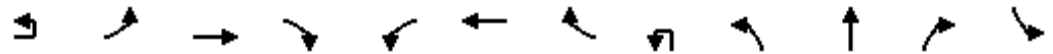
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3098: Tremont Street & Melnea Cass Boulevard



11046 Northeastern IMP
 2085: Columbus Avenue & Melnea Cass

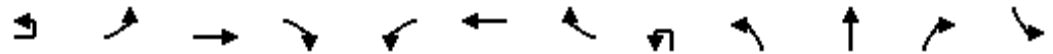
Existing
 Timing Plan: PM Peak



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations			↔			↔				↔	↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	12	12	12	12	11	12	12	12	14	14	12
Grade (%)			0%			0%				0%		
Storage Length (ft)		0		25	0		0		0		0	0
Storage Lanes		0		0	0		0		0		1	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50		50	50	50	50	50
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Turning Speed (mph)	9	15		9	15		9	9	15		9	15
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.93			0.99				0.90		
Frt			0.925			0.999					0.850	
Flt Protected						0.965				0.957		
Satd. Flow (prot)	0	0	2508	0	0	1415	0	0	0	1350	1373	0
Flt Permitted						0.965				0.741		
Satd. Flow (perm)	0	0	2508	0	0	1395	0	0	0	940	1373	0
Right Turn on Red				Yes			Yes				Yes	
Satd. Flow (RTOR)			93								230	
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.14	1.14	1.05	1.05	1.14
Link Speed (mph)			30			30				30		
Link Distance (ft)			383			384				342		
Travel Time (s)			8.7			8.7				7.8		
Volume (vph)	1	0	81	82	340	124	2	13	89	11	193	1
Confl. Peds. (#/hr)		2		31	31		2	31	12		23	23
Confl. Bikes (#/hr)				23			85				2	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.84	0.84	0.84	0.84	0.50
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	12%	64%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%				0%		
Adj. Flow (vph)	1	0	92	93	386	141	2	15	106	13	230	2
Lane Group Flow (vph)	0	0	186	0	0	529	0	0	0	134	230	0
Turn Type	Split				Split		Perm	Perm			pt+ov	Perm
Protected Phases	5		5		1	1				6	1 6	
Permitted Phases							6	6				6
Detector Phases	5		5		1	1	6	6	6	6	6	6
Minimum Initial (s)	10.0		10.0		10.0	10.0	8.0	8.0	8.0			8.0
Minimum Split (s)	14.0		14.0		15.0	15.0	14.0	14.0	14.0			14.0
Total Split (s)	15.0	0.0	15.0	0.0	41.0	41.0	0.0	23.0	23.0	23.0	64.0	23.0
Total Split (%)	15.0%	0.0%	15.0%	0.0%	41.0%	41.0%	0.0%	23.0%	23.0%	23.0%	64.0%	23.0%
Maximum Green (s)	11.0		11.0		37.0	37.0	19.0	19.0	19.0			19.0
Yellow Time (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0			3.0
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	1.0			1.0
Lead/Lag	Lead		Lead		Lead	Lead	Lag	Lag	Lag			Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0		2.0		2.0	2.0	2.0	2.0	2.0			2.0
Minimum Gap (s)	2.0		2.0		2.0	2.0	2.0	2.0	2.0			2.0



Lane Group	SBT	SBR	ø2
Lane Configurations	↕		
Ideal Flow (vphpl)	1700	1700	
Lane Width (ft)	16	12	
Grade (%)	0%		
Storage Length (ft)		0	
Storage Lanes		0	
Total Lost Time (s)	4.0	4.0	
Leading Detector (ft)	50		
Trailing Detector (ft)	0		
Turning Speed (mph)		9	
Lane Util. Factor	1.00	1.00	
Ped Bike Factor	0.96		
Frt	0.932		
Flt Protected	0.988		
Satd. Flow (prot)	1555	0	
Flt Permitted	0.956		
Satd. Flow (perm)	1487	0	
Right Turn on Red		Yes	
Satd. Flow (RTOR)	4		
Headway Factor	0.97	1.14	
Link Speed (mph)	30		
Link Distance (ft)	245		
Travel Time (s)	5.6		
Volume (vph)	1	2	
Confl. Peds. (#/hr)		12	
Confl. Bikes (#/hr)		1	
Peak Hour Factor	0.50	0.50	
Growth Factor	100%	100%	
Heavy Vehicles (%)	0%	0%	
Bus Blockages (#/hr)	0	0	
Parking (#/hr)			
Mid-Block Traffic (%)	0%		
Adj. Flow (vph)	2	4	
Lane Group Flow (vph)	8	0	
Turn Type			
Protected Phases	6		2
Permitted Phases			
Detector Phases	6		
Minimum Initial (s)	8.0		8.0
Minimum Split (s)	14.0		21.0
Total Split (s)	23.0	0.0	21.0
Total Split (%)	23.0%	0.0%	21%
Maximum Green (s)	19.0		18.0
Yellow Time (s)	3.0		2.0
All-Red Time (s)	1.0		1.0
Lead/Lag	Lag		Lag
Lead-Lag Optimize?			
Vehicle Extension (s)	2.0		2.0
Minimum Gap (s)	2.0		2.0



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Time Before Reduce (s)	0.0		0.0		0.0	0.0		0.0	0.0	0.0		0.0
Time To Reduce (s)	0.0		0.0		0.0	0.0		0.0	0.0	0.0		0.0
Recall Mode	None		None		C-Max	C-Max		None	None	None		None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)			10.2			57.4				16.2	77.6	
Actuated g/C Ratio			0.10			0.57				0.16	0.78	
v/c Ratio			0.55			0.65				0.88	0.21	
Control Delay			28.1			23.3				48.6	0.2	
Queue Delay			0.0			0.0				0.0	0.7	
Total Delay			28.1			23.3				48.6	0.8	
LOS			C			C				D	A	
Approach Delay			28.1			23.3				18.4		
Approach LOS			C			C				B		
90th %ile Green (s)	11.0		11.0		37.0	37.0		19.0	19.0	19.0		19.0
90th %ile Term Code	Max		Max		Coord	Coord		Max	Max	Max		Max
70th %ile Green (s)	10.0		10.0		59.0	59.0		19.0	19.0	19.0		19.0
70th %ile Term Code	Min		Min		Coord	Coord		Max	Max	Max		Max
50th %ile Green (s)	10.0		10.0		59.0	59.0		19.0	19.0	19.0		19.0
50th %ile Term Code	Min		Min		Coord	Coord		Max	Max	Max		Max
30th %ile Green (s)	10.0		10.0		63.6	63.6		14.4	14.4	14.4		14.4
30th %ile Term Code	Min		Min		Coord	Coord		Gap	Gap	Gap		Gap
10th %ile Green (s)	10.0		10.0		68.4	68.4		9.6	9.6	9.6		9.6
10th %ile Term Code	Min		Min		Coord	Coord		Gap	Gap	Gap		Gap
Queue Length 50th (ft)			29			212				65	0	
Queue Length 95th (ft)			62			m#497				m61	m0	
Internal Link Dist (ft)			303			304				262		
Turn Bay Length (ft)												
Base Capacity (vph)			359			812				179	1117	
Starvation Cap Reductn			0			0				0	593	
Spillback Cap Reductn			0			0				0	0	
Storage Cap Reductn			0			0				0	0	
Reduced v/c Ratio			0.52			0.65				0.75	0.44	

Intersection Summary

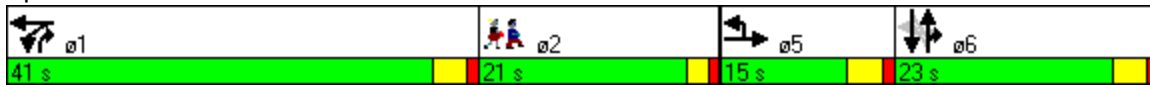
Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 47 (47%), Referenced to phase 1:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 22.5 Intersection LOS: C
 Intersection Capacity Utilization 67.6% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBT	SBR	ø2
Time Before Reduce (s)	0.0		0.0
Time To Reduce (s)	0.0		0.0
Recall Mode	None		None
Walk Time (s)			7.0
Flash Dont Walk (s)			11.0
Pedestrian Calls (#/hr)			15
Act Effct Green (s)	16.2		
Actuated g/C Ratio	0.16		
v/c Ratio	0.03		
Control Delay	26.2		
Queue Delay	0.0		
Total Delay	26.2		
LOS	C		
Approach Delay	26.3		
Approach LOS	C		
90th %ile Green (s)	19.0		18.0
90th %ile Term Code	Max		Ped
70th %ile Green (s)	19.0		0.0
70th %ile Term Code	Max		Skip
50th %ile Green (s)	19.0		0.0
50th %ile Term Code	Max		Skip
30th %ile Green (s)	14.4		0.0
30th %ile Term Code	Gap		Skip
10th %ile Green (s)	9.6		0.0
10th %ile Term Code	Gap		Skip
Queue Length 50th (ft)	2		
Queue Length 95th (ft)	7		
Internal Link Dist (ft)	165		
Turn Bay Length (ft)			
Base Capacity (vph)	286		
Starvation Cap Reductn	0		
Spillback Cap Reductn	0		
Storage Cap Reductn	0		
Reduced v/c Ratio	0.03		

Intersection Summary

Splits and Phases: 2085: Columbus Avenue & Melnea Cass



11046 Northeastern IMP
96: Tremont Street & Mass Ave

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	10	11	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.95	0.97		0.96	0.98		0.98					
Frt		0.964			0.971			0.986			0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1472	2829	0	1417	2901	0	1472	3007	0	1486	2957	0
Flt Permitted	0.413			0.280			0.150			0.190		
Satd. Flow (perm)	605	2829	0	401	2901	0	228	3007	0	297	2957	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40			28			14			15	
Headway Factor	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2251			586			935			635	
Travel Time (s)		51.2			13.3			21.3			14.4	
Volume (vph)	102	369	108	94	294	64	77	789	78	100	895	80
Confl. Peds. (#/hr)	81		83	83		81	150					
Confl. Bikes (#/hr)												
Peak Hour Factor	0.76	0.90	0.84	0.81	0.94	0.86	0.77	0.94	0.89	0.79	0.96	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	4%	7%	3%	2%	3%	3%	3%	2%	5%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	134	410	129	116	313	74	100	839	88	127	932	101
Lane Group Flow (vph)	134	539	0	116	387	0	100	927	0	127	1033	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	6.0		6.0	43.0		6.0	43.0	
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	47.0		10.0	47.0	
Total Split (s)	11.0	30.0	0.0	11.0	30.0	0.0	11.0	48.0	0.0	11.0	48.0	0.0
Total Split (%)	11.0%	30.0%	0.0%	11.0%	30.0%	0.0%	11.0%	48.0%	0.0%	11.0%	48.0%	0.0%
Maximum Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		Max	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			23.0			23.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	32.3	25.3		32.3	25.3		52.4	44.8		50.9	44.0	
Actuated g/C Ratio	0.32	0.25		0.32	0.25		0.52	0.45		0.51	0.44	
v/c Ratio	0.52	0.72		0.58	0.51		0.47	0.68		0.55	0.79	
Control Delay	29.0	33.8		35.2	32.2		18.4	25.1		20.2	23.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.0	33.8		35.2	32.2		18.4	25.1		20.2	23.8	
LOS	C	C		D	C		B	C		C	C	
Approach Delay		32.9			32.9			24.4			23.4	
Approach LOS		C			C			C			C	
90th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
90th %ile Term Code	Max	Max		Max	Hold		MaxR	Coord		Max	Coord	
70th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
70th %ile Term Code	Max	Max		Max	Hold		MaxR	Coord		Max	Coord	
50th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
50th %ile Term Code	Max	Max		Max	Hold		MaxR	Coord		Max	Coord	
30th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
30th %ile Term Code	Max	Max		Max	Hold		MaxR	Coord		Max	Coord	
10th %ile Green (s)	7.0	22.7		7.0	22.7		10.3	47.8		6.5	44.0	
10th %ile Term Code	Max	Gap		Max	Hold		MaxR	Coord		Gap	Coord	
Queue Length 50th (ft)	52	112		50	102		29	240		37	171	
Queue Length 95th (ft)	m44	m91		82	149		46	314		m48	m227	
Internal Link Dist (ft)		2171			506			855			555	
Turn Bay Length (ft)												
Base Capacity (vph)	256	765		200	775		215	1354		235	1309	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.52	0.70		0.58	0.50		0.47	0.68		0.54	0.79	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 27.0

Intersection LOS: C

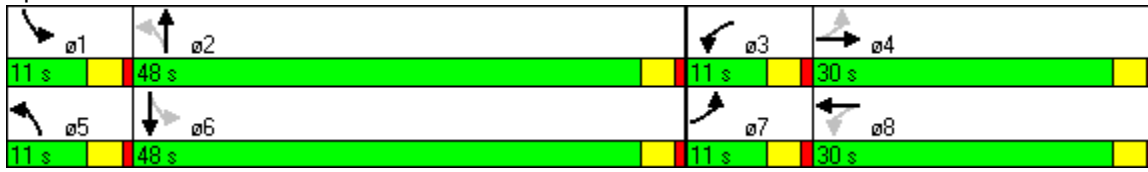
Intersection Capacity Utilization 80.3%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 96: Tremont Street & Mass Ave



11046 Northeastern IMP
95: Columbus Avenue & Mass Ave

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	11	12	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.92	0.96		0.92	0.95		0.96	0.98		0.97	0.93	
Frt		0.961			0.967			0.986			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1516	2872	0	1481	1534	0	1516	2931	0	1486	2706	0
Flt Permitted	0.270			0.570			0.115			0.170		
Satd. Flow (perm)	398	2872	0	821	1534	0	176	2931	0	258	2706	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								14			47	
Headway Factor	1.25	1.19	1.14	1.19	1.14	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		626			513			635			882	
Travel Time (s)		14.2			11.7			14.4			20.0	
Volume (vph)	267	196	51	140	214	67	39	828	81	71	877	225
Confl. Peds. (#/hr)	130		90	90		130	240		204	204		240
Confl. Bikes (#/hr)			26			90			85			47
Peak Hour Factor	0.87	0.96	0.71	0.83	0.89	0.97	0.75	0.89	0.88	0.68	0.94	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	6%	2%	3%	0%	4%	2%	2%	5%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	307	204	72	169	240	69	52	930	92	104	933	256
Lane Group Flow (vph)	307	276	0	169	309	0	52	1022	0	104	1189	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	8.0		5.0	29.0		5.0	29.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		9.0	44.0		9.0	44.0	
Total Split (s)	12.0	30.0	0.0	10.0	28.0	0.0	9.0	51.0	0.0	9.0	51.0	0.0
Total Split (%)	12.0%	30.0%	0.0%	10.0%	28.0%	0.0%	9.0%	51.0%	0.0%	9.0%	51.0%	0.0%
Maximum Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			25.0			25.0	
Flash Dont Walk (s)		17.0			17.0			15.0			15.0	
Pedestrian Calls (#/hr)		5			5			5			5	
Act Effct Green (s)	32.1	24.1		28.1	22.1		53.9	48.9		54.7	50.7	
Actuated g/C Ratio	0.32	0.24		0.28	0.22		0.54	0.49		0.55	0.51	
v/c Ratio	1.41	0.40		0.62	0.91		0.32	0.71		0.51	0.85	
Control Delay	237.0	33.5		37.6	69.1		14.4	12.7		17.2	14.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	237.0	33.5		37.6	69.1		14.4	12.7		17.2	14.5	
LOS	F	C		D	E		B	B		B	B	
Approach Delay		140.7			57.9			12.8			14.7	
Approach LOS		F			E			B			B	
90th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
90th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
70th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
50th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
30th %ile Green (s)	8.0	23.9		6.0	21.9		5.0	49.1		5.0	49.1	
30th %ile Term Code	Max	Hold		Max	Gap		Max	Coord		Max	Coord	
10th %ile Green (s)	8.0	18.8		6.0	16.8		0.0	54.2		5.0	63.2	
10th %ile Term Code	Max	Hold		Max	Gap		Skip	Coord		Max	Coord	
Queue Length 50th (ft)	~191	72		77	188		9	109		13	74	
Queue Length 95th (ft)	#344	108		120	#327		m14	139		m19	#484	
Internal Link Dist (ft)		546			433			555			802	
Turn Bay Length (ft)												
Base Capacity (vph)	217	747		271	368		162	1439		203	1394	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.41	0.37		0.62	0.84		0.32	0.71		0.51	0.85	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.41

Intersection Signal Delay: 41.5

Intersection LOS: D

Intersection Capacity Utilization 90.5%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

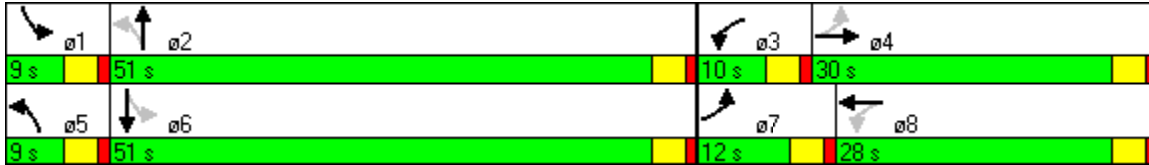
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 95: Columbus Avenue & Mass Ave



11046 Northeastern IMP
134: St. Botolph Street & Mass Ave

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12	11	12	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.92			0.95		0.94	0.98		0.96	0.98	
Frt		0.906			0.960			0.990			0.993	
Flt Protected		0.989			0.982		0.950			0.950		
Satd. Flow (prot)	0	1435	0	0	1314	0	1570	3079	0	1516	3001	0
Flt Permitted		0.918			0.858		0.126			0.167		
Satd. Flow (perm)	0	1313	0	0	1126	0	196	3079	0	257	3001	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		121			22			11			7	
Headway Factor	1.14	1.14	1.14	1.14	1.42	1.14	1.19	1.14	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		639			579			882			301	
Travel Time (s)		14.5			13.2			20.0			6.8	
Volume (vph)	27	13	96	34	28	25	133	975	54	66	1043	38
Confl. Peds. (#/hr)	89		79	79		89	376		190	190		376
Confl. Bikes (#/hr)			2			1			20			22
Peak Hour Factor	0.69	0.81	0.75	0.65	0.58	0.60	0.83	0.95	0.71	0.79	0.97	0.73
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0							
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	16	128	52	48	42	160	1026	76	84	1075	52
Lane Group Flow (vph)	0	183	0	0	142	0	160	1102	0	84	1127	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phases	8	8		4	4		1	6		5	2	
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		11.0	52.0		11.0	51.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	14.0	54.0	0.0	11.0	51.0	0.0
Total Split (%)	35.0%	35.0%	0.0%	35.0%	35.0%	0.0%	14.0%	54.0%	0.0%	11.0%	51.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		10.0	50.0		7.0	47.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min		None	None		None	C-Min		None	C-Min	
Walk Time (s)	9.0	9.0		9.0	9.0			34.0			34.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0			13.0			13.0	
Pedestrian Calls (#/hr)	376	376		190	190			79			89	
Act Effct Green (s)		30.0			30.0		61.8	53.5		54.6	48.1	
Actuated g/C Ratio		0.30			0.30		0.62	0.54		0.55	0.48	
v/c Ratio		0.38			0.40		0.62	0.67		0.38	0.78	
Control Delay		12.8			27.5		21.8	25.9		9.1	12.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.1	
Total Delay		12.8			27.5		21.8	25.9		9.1	12.8	
LOS		B			C		C	C		A	B	
Approach Delay		12.8			27.5			25.4			12.5	
Approach LOS		B			C			C			B	
90th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	50.5		7.5	47.0	
90th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
70th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	51.4		6.6	47.0	
70th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
50th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	51.7		6.3	47.0	
50th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
30th %ile Green (s)	30.0	30.0		30.0	30.0		9.5	52.0		6.0	48.5	
30th %ile Term Code	Ped	Ped		Ped	Ped		Gap	Coord		Min	Coord	
10th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	62.0		0.0	51.0	
10th %ile Term Code	Ped	Ped		Ped	Ped		Gap	Coord		Skip	Coord	
Queue Length 50th (ft)		29			60		62	303		9	210	
Queue Length 95th (ft)		69			65		m81	m282		m11	246	
Internal Link Dist (ft)		559			499			802			221	
Turn Bay Length (ft)												
Base Capacity (vph)		491			364		267	1653		231	1447	
Starvation Cap Reductn		0			0		0	0		0	28	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.37			0.39		0.60	0.67		0.36	0.79	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 85 (85%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 19.1 Intersection LOS: B
 Intersection Capacity Utilization 81.7% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 134: St. Botolph Street & Mass Ave



11046 Northeastern IMP
94: Huntington Avenue & Mass Ave

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	13	12	12	11	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		50	0		0	0		0	0		150
Storage Lanes	0		1	0		1	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50			50			50	50
Trailing Detector (ft)	0	0		0	0			0			0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.82			0.80			0.99				0.68
Frt		0.943			0.927			0.989				0.850
Flt Protected		0.977			0.981							
Satd. Flow (prot)	0	2278	0	0	2371	0	0	3186	0	0	3079	1357
Flt Permitted		0.977			0.981							
Satd. Flow (perm)	0	2099	0	0	2213	0	0	3186	0	0	3079	921
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		117			162			11				150
Headway Factor	1.14	1.38	1.14	1.14	1.19	1.14	1.14	1.10	1.14	1.14	1.19	1.25
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		644			443			301			284	
Travel Time (s)		14.6			10.1			6.8			6.5	
Volume (vph)	110	31	101	115	45	123	0	955	69	0	931	148
Confl. Peds. (#/hr)	168		162	162		168	536		257	257		536
Confl. Bikes (#/hr)			5			4			25			22
Peak Hour Factor	0.78	0.65	0.86	0.86	0.94	0.71	0.38	0.97	0.86	0.25	0.96	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	4%	4%	3%	0%	3%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		12	12									
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	141	48	117	134	48	173	0	985	80	0	970	164
Lane Group Flow (vph)	0	306	0	0	355	0	0	1065	0	0	970	164
Turn Type	Split			Split								Perm
Protected Phases	3	3		4	4			6			2	
Permitted Phases												2
Detector Phases	3	3		4	4			6			2	2
Minimum Initial (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Minimum Split (s)	23.0	23.0		23.0	23.0			29.0			29.0	29.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	0.0	50.0	0.0	0.0	50.0	50.0
Total Split (%)	25.0%	25.0%	0.0%	25.0%	25.0%	0.0%	0.0%	50.0%	0.0%	0.0%	50.0%	50.0%
Maximum Green (s)	21.0	21.0		21.0	21.0			41.0			41.0	41.0
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0			6.0			6.0	6.0
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0

11046 Northeastern IMP
 94: Huntington Avenue & Mass Ave

Existing
 Timing Plan: PM Peak

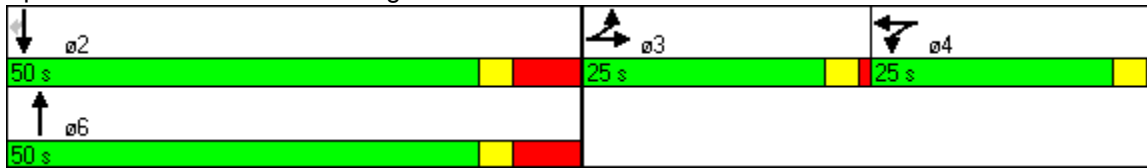


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Recall Mode	Min	Min		Min	Min			Min			C-Min	C-Min
Walk Time (s)	8.0	8.0		8.0	8.0							
Flash Dont Walk (s)	10.0	10.0		10.0	10.0							
Pedestrian Calls (#/hr)	168	168		162	162							
Act Effct Green (s)		18.5			18.4			51.0			51.0	51.0
Actuated g/C Ratio		0.18			0.18			0.51			0.51	0.51
v/c Ratio		0.59			0.62			0.65			0.62	0.30
Control Delay		13.4			25.2			12.6			9.0	1.0
Queue Delay		1.0			0.2			0.4			3.3	0.6
Total Delay		14.4			25.4			13.0			12.3	1.6
LOS		B			C			B			B	A
Approach Delay		14.4			25.4			13.0			10.7	
Approach LOS		B			C			B			B	
90th %ile Green (s)	20.6	20.6		20.2	20.2			42.2			42.2	42.2
90th %ile Term Code	Gap	Gap		Gap	Gap			Coord			Coord	Coord
70th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
70th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
50th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
50th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
30th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
30th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
10th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
10th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
Queue Length 50th (ft)		4			58			98			107	1
Queue Length 95th (ft)		30			105			112			m102	m1
Internal Link Dist (ft)		564			363			221			204	
Turn Bay Length (ft)												150
Base Capacity (vph)		571			626			1632			1571	544
Starvation Cap Reductn		0			0			130			486	160
Spillback Cap Reductn		101			30			170			205	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.65			0.60			0.73			0.89	0.43

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 79 (79%), Referenced to phase 2:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 13.8 Intersection LOS: B
 Intersection Capacity Utilization 72.3% ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 94: Huntington Avenue & Mass Ave



11046 Northeastern IMP
 93: Westland Avenue & Massachusetts Avenue

Existing
 Timing Plan: PM Peak



Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Lane Configurations	↗		↗		↘	↕			↕			
Ideal Flow (vphpl)	1000	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	11	12	11	11	11	11	
Grade (%)						0%			0%			
Storage Length (ft)	0		0		0		0	0		0		
Storage Lanes	1		1		1		0	0		0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50		50	50	50	50		50	50			
Trailing Detector (ft)	0		0	0	0	0		0	0			
Turning Speed (mph)	9	9	9	15	15		9	15		9	9	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Ped Bike Factor			0.90		0.85	0.99			0.94			
Frt	0.865		0.865			0.998			0.984			
Flt Protected					0.950							
Satd. Flow (prot)	778	0	1479	0	1624	3110	0	0	2891	0	0	
Flt Permitted					0.304				0.793			
Satd. Flow (perm)	778	0	1328	0	442	3110	0	0	2292	0	0	
Right Turn on Red		No	Yes				Yes				No	
Satd. Flow (RTOR)			297			4						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.19	1.19	1.19	1.19	
Link Speed (mph)						30			25			
Link Distance (ft)						284			1155			
Travel Time (s)						6.5			31.5			
Volume (vph)	313	22	35	24	427	727	10	4	767	45	48	
Confl. Peds. (#/hr)		116	306	116	216		306	100		116	216	
Confl. Bikes (#/hr)		3					52			45	45	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	340	24	38	26	464	790	11	4	834	49	52	
Lane Group Flow (vph)	364	0	38	0	490	801	0	0	939	0	0	
Turn Type	custom		Free	custom	Prot			Perm				
Protected Phases	7 8!			2	2 7 8	1 2 8			1			7
Permitted Phases			Free	7 8!				1				
Detector Phases	7 8			2	2 7 8	1 2 8		1	1			
Minimum Initial (s)				6.0				8.0	8.0			8.0
Minimum Split (s)				12.0				28.0	28.0			21.0
Total Split (s)	42.0	0.0	0.0	18.0	60.0	78.0	0.0	40.0	40.0	0.0	0.0	22.0
Total Split (%)	42.0%	0.0%	0.0%	18.0%	60.0%	78.0%	0.0%	40.0%	40.0%	0.0%	0.0%	22%
Maximum Green (s)				12.0				34.0	34.0			16.0
Yellow Time (s)				3.0				3.0	3.0			3.0
All-Red Time (s)				3.0				3.0	3.0			3.0
Lead/Lag				Lag				Lead	Lead			Lead
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0				2.0	2.0			2.0
Minimum Gap (s)				2.0				2.0	2.0			2.0

Lane Group	ø8
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	20%
Maximum Green (s)	14.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0



Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Time Before Reduce (s)				0.0				0.0	0.0			0.0
Time To Reduce (s)				0.0				0.0	0.0			0.0
Recall Mode				C-Max				Max	Max			Ped
Walk Time (s)								15.0	15.0			10.0
Flash Dont Walk (s)								7.0	7.0			5.0
Pedestrian Calls (#/hr)								5	5			0
Act Effct Green (s)	38.0		100.0		52.0	74.0			36.0			
Actuated g/C Ratio	0.38		1.00		0.52	0.74			0.36			
v/c Ratio	1.23		0.03		1.24	0.35			1.14			
Control Delay	159.6		0.0		153.9	1.8			108.1			
Queue Delay	0.0		0.0		0.0	0.3			0.0			
Total Delay	159.6		0.0		153.9	2.1			108.1			
LOS	F		A		F	A			F			
Approach Delay						59.7			108.1			
Approach LOS						E			F			
90th %ile Green (s)				12.0				34.0	34.0			16.0
90th %ile Term Code				Coord				MaxR	MaxR			Max
70th %ile Green (s)				12.0				34.0	34.0			16.0
70th %ile Term Code				Coord				MaxR	MaxR			Max
50th %ile Green (s)				12.0				34.0	34.0			16.0
50th %ile Term Code				Coord				MaxR	MaxR			Max
30th %ile Green (s)				12.0				34.0	34.0			16.0
30th %ile Term Code				Coord				MaxR	MaxR			Max
10th %ile Green (s)				12.0				34.0	34.0			16.0
10th %ile Term Code				Coord				MaxR	MaxR			Max
Queue Length 50th (ft)	~288		0		~279	34			~369			
Queue Length 95th (ft)	#466		0		#482	32			#494			
Internal Link Dist (ft)						204			1075			
Turn Bay Length (ft)												
Base Capacity (vph)	296		1328		395	2302			825			
Starvation Cap Reductn	0		0		0	829			0			
Spillback Cap Reductn	0		0		0	0			0			
Storage Cap Reductn	0		0		0	0			0			
Reduced v/c Ratio	1.23		0.03		1.24	0.54			1.14			

Intersection Summary

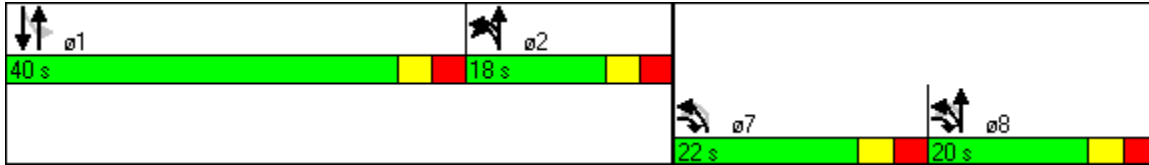
Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 29 (29%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.24
 Intersection Signal Delay: 89.9 Intersection LOS: F
 Intersection Capacity Utilization 109.4% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø8
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	14.0
90th %ile Term Code	MaxR
70th %ile Green (s)	14.0
70th %ile Term Code	MaxR
50th %ile Green (s)	14.0
50th %ile Term Code	MaxR
30th %ile Green (s)	14.0
30th %ile Term Code	MaxR
10th %ile Green (s)	14.0
10th %ile Term Code	MaxR
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Queue shown is maximum after two cycles.

! Phase conflict between lane groups.

Splits and Phases: 93: Westland Avenue & Massachusetts Avenue



11046 Northeastern IMP
481: Hemenway Street & Westland Avenue

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	16	16	16	10	10	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50					50	50		50	50	50
Trailing Detector (ft)	0	0					0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.81						0.96			1.00	0.83
Frt		0.983						0.978				0.850
Flt Protected		0.971						0.993			0.995	
Satd. Flow (prot)	0	1509	0	0	0	0	0	1641	0	0	1560	1405
Flt Permitted		0.971						0.662			0.878	
Satd. Flow (perm)	0	1309	0	0	0	0	0	1076	0	0	1372	1167
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.12	1.14	1.14	1.14	1.14	0.97	1.12	0.97	1.25	1.25	1.19
Link Speed (mph)		25				25		25			25	
Link Distance (ft)		473				459		1138			266	
Travel Time (s)		12.9				12.5		31.0			7.3	
Volume (vph)	129	54	28	0	0	0	55	358	77	29	313	478
Confl. Peds. (#/hr)	156		343	343		156	208		83	83		208
Confl. Bikes (#/hr)			19			16			21			24
Peak Hour Factor	0.90	0.84	0.96	0.25	0.25	0.25	0.63	0.78	0.71	0.73	0.82	0.79
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	4%	0%	0%	0%	2%	0%	3%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	143	64	29	0	0	0	87	459	108	40	382	605
Lane Group Flow (vph)	0	236	0	0	0	0	0	654	0	0	422	605
Turn Type	Split						Perm			Perm		pm+ov
Protected Phases	3	3						1			1	3
Permitted Phases							1			1		1
Detector Phases	3	3					1	1		1	1	3
Minimum Initial (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.0	12.0					12.0	12.0		12.0	12.0	12.0
Total Split (s)	36.0	36.0	0.0	0.0	0.0	0.0	38.0	38.0	0.0	38.0	38.0	36.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	42.2%	42.2%	0.0%	42.2%	42.2%	40.0%
Maximum Green (s)	32.0	32.0					34.0	34.0		34.0	34.0	32.0
Yellow Time (s)	3.0	3.0					3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0

Lane Group	ø2
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	7.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	18%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0

11046 Northeastern IMP
481: Hemenway Street & Westland Avenue

Existing
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None					None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		13.4					34.3			34.3	47.7	
Actuated g/C Ratio		0.24					0.61			0.61	0.85	
v/c Ratio		0.65					0.99			0.50	0.57	
Control Delay		27.5					49.5			10.0	2.9	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		27.5					49.5			10.0	2.9	
LOS		C					D			A	A	
Approach Delay		27.5					49.5			5.8		
Approach LOS		C					D			A		
90th %ile Green (s)	21.6	21.6					34.0	34.0		34.0	34.0	21.6
90th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
70th %ile Green (s)	16.4	16.4					34.0	34.0		34.0	34.0	16.4
70th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
50th %ile Green (s)	13.7	13.7					34.0	34.0		34.0	34.0	13.7
50th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
30th %ile Green (s)	10.1	10.1					34.0	34.0		34.0	34.0	10.1
30th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
10th %ile Green (s)	7.0	7.0					34.0	34.0		34.0	34.0	7.0
10th %ile Term Code	Min	Min					Max	Max		Max	Max	Min
Queue Length 50th (ft)		70					182			66	0	
Queue Length 95th (ft)		117					#389			153	0	
Internal Link Dist (ft)		393			379		1058			186		
Turn Bay Length (ft)												
Base Capacity (vph)		653					661			843	1144	
Starvation Cap Reductn		0					0			0	0	
Spillback Cap Reductn		0					0			0	0	
Storage Cap Reductn		0					0			0	0	
Reduced v/c Ratio		0.36					0.99			0.50	0.53	

Intersection Summary

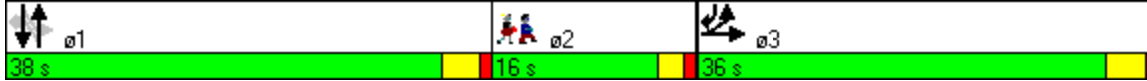
Area Type:	CBD
Cycle Length:	90
Actuated Cycle Length:	55.8
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.99
Intersection Signal Delay:	23.4
Intersection LOS:	C
Intersection Capacity Utilization:	81.3%
ICU Level of Service:	D
Analysis Period (min):	15
90th %ile Actuated Cycle:	63.6
70th %ile Actuated Cycle:	58.4
50th %ile Actuated Cycle:	55.7
30th %ile Actuated Cycle:	52.1

Lane Group	ø2
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	0.0
90th %ile Term Code	Skip
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

10th %ile Actuated Cycle: 49

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 481: Hemenway Street & Westland Avenue



11046 Northeastern IMP
 19: St. Stephen Street & Gainsborough St

Existing
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔				
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	0	141	61	31	108	0	0	0	0
Peak Hour Factor	0.25	0.25	0.25	0.25	0.93	0.78	0.80	0.63	0.50	0.25	0.25	0.25
Hourly flow rate (vph)	0	0	0	0	152	78	39	171	0	0	0	0
Pedestrians		173			228			179			315	
Lane Width (ft)		0.0			16.0			16.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			25			20			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)		977			609							
pX, platoon unblocked												
vC, conflicting volume	545			179			543	724	407	819	685	679
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	545			179			543	724	407	819	685	679
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			87	39	100	100	100	100
cM capacity (veh/h)	1034			1129			305	283	388	99	299	455

Direction, Lane #	WB 1	NB 1
Volume Total	230	210
Volume Left	0	39
Volume Right	78	0
cSH	1700	287
Volume to Capacity	0.14	0.73
Queue Length 95th (ft)	0	132
Control Delay (s)	0.0	45.5
Lane LOS		E
Approach Delay (s)	0.0	45.5
Approach LOS		E

Intersection Summary		
Average Delay		21.7
Intersection Capacity Utilization	36.5%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	125	0	0	469	23	146
Peak Hour Factor	0.96	0.25	0.25	0.97	0.79	0.81
Hourly flow rate (vph)	130	0	0	484	29	180
Pedestrians	25			22	255	
Lane Width (ft)	12.0			12.0	16.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	28	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)				473		
pX, platoon unblocked						
vC, conflicting volume			385		894	407
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			385		894	407
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		87	60
cM capacity (veh/h)			849		216	448

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	130	484	209
Volume Left	0	0	29
Volume Right	0	0	180
cSH	1700	1700	390
Volume to Capacity	0.08	0.28	0.54
Queue Length 95th (ft)	0	0	77
Control Delay (s)	0.0	0.0	24.4
Lane LOS			C
Approach Delay (s)	0.0	0.0	24.4
Approach LOS			C

Intersection Summary			
Average Delay		6.2	
Intersection Capacity Utilization	47.4%		ICU Level of Service A
Analysis Period (min)		15	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	
Sign Control	Stop			Stop	Stop	
Volume (vph)	68	35	132	361	17	58
Peak Hour Factor	0.63	0.65	0.83	0.94	0.47	0.93
Hourly flow rate (vph)	108	54	159	384	36	62

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	162	543	99
Volume Left (vph)	0	159	36
Volume Right (vph)	54	0	62
Hadj (s)	-0.05	0.09	-0.22
Departure Headway (s)	4.7	4.5	5.3
Degree Utilization, x	0.21	0.67	0.14
Capacity (veh/h)	730	793	598
Control Delay (s)	9.0	16.1	9.2
Approach Delay (s)	9.0	16.1	9.2
Approach LOS	A	C	A

Intersection Summary			
Delay		13.8	
HCM Level of Service		B	
Intersection Capacity Utilization	55.9%		ICU Level of Service B
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	357	20	221	74	28	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	388	22	240	80	30	71
Pedestrians	44		2		13	
Lane Width (ft)	16.0		10.0		11.0	
Walking Speed (ft/s)	4.0		4.0		4.0	
Percent Blockage	5		0		1	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	209					
pX, platoon unblocked	0.81	0.81			0.81	
vC, conflicting volume	458	337			365	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	327	177			211	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	22	97			97	
cM capacity (veh/h)	496	657			1041	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	410	321	101
Volume Left	388	0	30
Volume Right	22	80	0
cSH	502	1700	1041
Volume to Capacity	0.82	0.19	0.03
Queue Length 95th (ft)	198	0	2
Control Delay (s)	36.7	0.0	2.8
Lane LOS	E		A
Approach Delay (s)	36.7	0.0	2.8
Approach LOS	E		

Intersection Summary			
Average Delay	18.4		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

11046 Northeastern IMP
23: Greenleaf Street & Forsyth Street

Existing
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations					↔			↔				↔
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Volume (veh/h)	0	0	0	0	0	0	12	75	1	1	0	76
Peak Hour Factor	0.50	0.25	0.25	0.25	0.25	0.25	0.58	0.77	0.25	0.92	0.25	0.80
Hourly flow rate (vph)	0	0	0	0	0	0	21	97	4	0	0	95
Pedestrians		591			1017			74				380
Lane Width (ft)		0.0			10.0			16.0				16.0
Walking Speed (ft/s)		4.0			4.0			4.0				4.0
Percent Blockage		0			71			8				42
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												482
pX, platoon unblocked									0.00			
vC, conflicting volume	1250	1889	803	1370	1929	1496	772		0	1118		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1250	1889	803	1370	1929	1496	772		0	1118		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2		0.0	4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3		0.0	2.2		
p0 queue free %	100	100	100	100	100	100	97		0	100		
cM capacity (veh/h)	37	20	355	14	19	26	792		0	186		
Direction, Lane #	WB 1	NB 1	SB 1									
Volume Total	0	122	181									
Volume Left	0	21	0									
Volume Right	0	4	86									
cSH	1700	792	186									
Volume to Capacity	0.00	0.03	0.00									
Queue Length 95th (ft)	0	2	0									
Control Delay (s)	0.0	1.9	0.0									
Lane LOS	A	A										
Approach Delay (s)	0.0	1.9	0.0									
Approach LOS	A											
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization		35.2%			ICU Level of Service				A			
Analysis Period (min)			15									



Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	78
Peak Hour Factor	0.91
Hourly flow rate (vph)	86
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	
tC, single (s)	
tC, 2 stage (s)	
tF (s)	
p0 queue free %	
cM capacity (veh/h)	
Direction, Lane #	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔			↕↔
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	0	772	5	0	629
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	839	5	0	684
Pedestrians			21			3
Lane Width (ft)			10.0			14.0
Walking Speed (ft/s)			4.0			4.0
Percent Blockage			1			0
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			231			490
pX, platoon unblocked	0.70					
vC, conflicting volume	1547	425			845	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1785	425			845	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	50	576			788	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	1	559	285	684
Volume Left	1	0	0	0
Volume Right	0	0	5	0
cSH	50	1700	1700	788
Volume to Capacity	0.02	0.33	0.17	0.00
Queue Length 95th (ft)	2	0	0	0
Control Delay (s)	78.7	0.0	0.0	0.0
Lane LOS	F			
Approach Delay (s)	78.7	0.0		0.0
Approach LOS	F			

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		47.7%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	20	0	730	723	0
Peak Hour Factor	0.95	0.25	0.63	0.75	0.25	1.00
Hourly flow rate (vph)	3	80	0	973	2892	0
Pedestrians				65		
Lane Width (ft)				10.0		
Walking Speed (ft/s)				4.0		
Percent Blockage				5		
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				314	126	
pX, platoon unblocked	0.71	0.92	0.92			
vC, conflicting volume	3865	1511	2892			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4779	1470	2967			
tC, single (s)	6.9	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	0	23	100			
cM capacity (veh/h)	0	105	111			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	83	973	1446	1446
Volume Left	3	0	0	0
Volume Right	80	0	0	0
cSH	8	1700	1700	1700
Volume to Capacity	9.80	0.57	0.85	0.85
Queue Length 95th (ft)	Err	0	0	0
Control Delay (s)	Err	0.0	0.0	0.0
Lane LOS	F			
Approach Delay (s)	Err	0.0	0.0	
Approach LOS	F			

Intersection Summary			
Average Delay		210.6	
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔↔
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	730	36	17	726
Peak Hour Factor	0.92	0.92	0.92	0.90	0.71	0.94
Hourly flow rate (vph)	0	0	793	40	24	772
Pedestrians	205		25			48
Lane Width (ft)	0.0		13.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	0		2			4
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			206			234
pX, platoon unblocked	0.66	0.66			0.66	
vC, conflicting volume	1478	1066			1038	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1722	1101			1058	
tC, single (s)	6.8	6.9			5.6	
tC, 2 stage (s)						
tF (s)	3.5	3.3			3.0	
p0 queue free %	100	100			90	
cM capacity (veh/h)	46	132			231	
Direction, Lane #	NB 1	SB 1	SB 2			
Volume Total	833	281	515			
Volume Left	0	24	0			
Volume Right	40	0	0			
cSH	1700	231	1700			
Volume to Capacity	0.49	0.10	0.30			
Queue Length 95th (ft)	0	9	0			
Control Delay (s)	0.0	4.4	0.0			
Lane LOS		A				
Approach Delay (s)	0.0	1.6				
Approach LOS						
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			63.5%		ICU Level of Service	B
Analysis Period (min)			15			

11046 Northeastern IMP
27: Columbus Avenue & Cunard Street

Existing
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	37	254	11	23	291	56	0	0	0	127	7	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	276	12	25	316	61	0	0	0	138	8	121
Pedestrians		23			66			207			94	
Lane Width (ft)		11.0			11.0			0.0			16.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			5			0			10	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		384										
pX, platoon unblocked				0.98			0.98	0.98	0.98	0.98	0.98	
vC, conflicting volume	471			495			1114	1091	555	919	1066	464
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	471			487			1116	1092	548	918	1067	464
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			98			100	100	100	25	96	77
cM capacity (veh/h)	977			1059			117	177	501	185	183	526

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	328	402	266
Volume Left	40	25	138
Volume Right	12	61	121
cSH	977	1059	262
Volume to Capacity	0.04	0.02	1.02
Queue Length 95th (ft)	3	2	257
Control Delay (s)	1.5	0.8	102.2
Lane LOS	A	A	F
Approach Delay (s)	1.5	0.8	102.2
Approach LOS			F

Intersection Summary		
Average Delay		28.1
Intersection Capacity Utilization	59.1%	ICU Level of Service
Analysis Period (min)		15
		B

11046 Northeastern IMP
28: Columbus Avenue & Burke Street

Existing
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕							
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	21	396	14	14	378	18	0	0	0	0	0	0
Peak Hour Factor	0.66	0.92	0.70	0.70	0.86	0.75	0.25	0.25	0.50	0.25	0.25	0.25
Hourly flow rate (vph)	32	430	20	20	440	24	0	0	0	0	0	0
Pedestrians		155			47			272			215	
Lane Width (ft)		11.0			10.0			0.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		12			3			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		740										
pX, platoon unblocked												
vC, conflicting volume	679			722			1423	1495	759	1258	1493	822
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	679			722			1423	1495	759	1258	1493	822
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			98			100	100	100	100	100	100
cM capacity (veh/h)	923			889			97	117	396	138	118	333
Direction, Lane #	EB 1	WB 1										
Volume Total	482	484										
Volume Left	32	20										
Volume Right	20	24										
cSH	923	889										
Volume to Capacity	0.03	0.02										
Queue Length 95th (ft)	3	2										
Control Delay (s)	1.0	0.6										
Lane LOS	A	A										
Approach Delay (s)	1.0	0.6										
Approach LOS												
Intersection Summary												
Average Delay			0.8									
Intersection Capacity Utilization			37.4%		ICU Level of Service		A					
Analysis Period (min)			15									

11046 Northeastern IMP
29: Columbus Avenue & Camden Street

Existing
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	7	383	21	39	417	6	9	2	13	9	3	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	416	23	42	453	7	10	2	14	10	3	5
Pedestrians		77			226			113			78	
Lane Width (ft)		11.0			10.0			16.0			13.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			16			13			7	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage (veh)								1			1	
Upstream signal (ft)					626							
pX, platoon unblocked	0.92						0.92	0.92		0.92	0.92	0.92
vC, conflicting volume	538			552			1181	1178	767	1303	1187	612
vC1, stage 1 conf vol							556	556		619	619	
vC2, stage 2 conf vol							625	623		684	567	
vCu, unblocked vol	498			552			1197	1194	767	1330	1203	578
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			96	99	95	95	99	99
cM capacity (veh/h)	912			890			235	251	297	192	242	415

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	447	502	26	18
Volume Left	8	42	10	10
Volume Right	23	7	14	5
cSH	912	890	266	238
Volume to Capacity	0.01	0.05	0.10	0.08
Queue Length 95th (ft)	1	4	8	6
Control Delay (s)	0.3	1.3	20.0	21.4
Lane LOS	A	A	C	C
Approach Delay (s)	0.3	1.3	20.0	21.4
Approach LOS			C	C

Intersection Summary			
Average Delay		1.7	
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)		15	

11046 Northeastern IMP
 30: St. Botolph Street & Gainsborough St

Existing
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	22	17	9	36	19	120	1	65	36	95	39	17
Peak Hour Factor	0.92	0.85	0.28	0.60	0.59	0.92	0.25	0.92	0.53	0.92	0.92	0.92
Hourly flow rate (vph)	24	20	32	60	32	130	4	71	68	103	42	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	76	223	143	164
Volume Left (vph)	24	60	4	103
Volume Right (vph)	32	130	68	18
Hadj (s)	-0.18	-0.26	-0.26	0.09
Departure Headway (s)	4.8	4.5	4.6	4.9
Degree Utilization, x	0.10	0.28	0.18	0.22
Capacity (veh/h)	687	749	732	687
Control Delay (s)	8.3	9.2	8.6	9.3
Approach Delay (s)	8.3	9.2	8.6	9.3
Approach LOS	A	A	A	A

Intersection Summary			
Delay		9.0	
HCM Level of Service		A	
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)		15	

Northeastern University IMP
363: Huntington Avenue & Gainsborough Street

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	11	12	12	10	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.98			0.73				
Frt		0.987			0.996			0.981				
Flt Protected	0.950				0.997			0.964				
Satd. Flow (prot)	1560	3090	0	0	3592	0	0	1458	0	0	0	0
Flt Permitted	0.369				0.864			0.964				
Satd. Flow (perm)	606	3090	0	0	3113	0	0	1116	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			7			6				
Headway Factor	1.09	1.00	1.00	1.00	1.04	1.00	1.00	1.09	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		362			634			254				308
Travel Time (s)		8.2			14.4			5.8				7.0
Volume (vph)	36	647	59	35	576	17	96	16	18	0	0	0
Confl. Peds. (#/hr)			159			200	262		136			
Confl. Bikes (#/hr)			10			12			4			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	10%	8%	3%	39%	16%	7%	5%	24%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	703	64	38	626	18	104	17	20	0	0	0
Lane Group Flow (vph)	39	767	0	0	682	0	0	141	0	0	0	0
Turn Type	Perm			D.P+P			Perm					
Protected Phases		1		3	1 3			2				
Permitted Phases	1			1			2					
Detector Phases	1	1		3	1 3		2	2				
Minimum Initial (s)	8.0	8.0		6.0			8.0	8.0				
Minimum Split (s)	19.0	19.0		12.0			31.0	31.0				
Total Split (s)	77.0	77.0	0.0	12.0	89.0	0.0	31.0	31.0	0.0	0.0	0.0	0.0
Total Split (%)	64.2%	64.2%	0.0%	10.0%	74.2%	0.0%	25.8%	25.8%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	72.0	72.0		7.0			25.0	25.0				
Yellow Time (s)	3.0	3.0		3.0			3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0			3.0	3.0				
Lead/Lag				Lag			Lead	Lead				
Lead-Lag Optimize?				Yes			Yes	Yes				
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0			3.0	3.0				



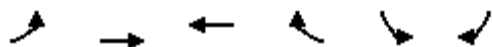
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Recall Mode	C-Max	C-Max		None			None	None				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	5.0	5.0					17.0	17.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)	79.3	79.3			87.3			20.7				
Actuated g/C Ratio	0.66	0.66			0.73			0.17				
v/c Ratio	0.10	0.37			0.30			0.71				
Control Delay	6.0	6.0			5.3			63.4				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	6.0	6.0			5.3			63.4				
LOS	A	A			A			E				
Approach Delay		6.0			5.3			63.4				
Approach LOS		A			A			E				
90th %ile Green (s)	72.0	72.0		7.0			25.0	25.0				
90th %ile Term Code	Coord	Coord		Max			Max	Max				
70th %ile Green (s)	74.0	74.0		7.0			23.0	23.0				
70th %ile Term Code	Coord	Coord		Max			Gap	Gap				
50th %ile Green (s)	77.6	77.6		7.0			19.4	19.4				
50th %ile Term Code	Coord	Coord		Max			Gap	Gap				
30th %ile Green (s)	81.3	81.3		7.0			15.7	15.7				
30th %ile Term Code	Coord	Coord		Max			Gap	Gap				
10th %ile Green (s)	86.4	86.4		7.0			10.6	10.6				
10th %ile Term Code	Coord	Coord		Max			Gap	Gap				
Queue Length 50th (ft)	6	59			49			99				
Queue Length 95th (ft)	18	97			78			163				
Internal Link Dist (ft)		282			554			174			228	
Turn Bay Length (ft)	150											
Base Capacity (vph)	400	2046			2297			256				
Starvation Cap Reductn	0	0			0			0				
Spillback Cap Reductn	0	0			0			0				
Storage Cap Reductn	0	0			0			0				
Reduced v/c Ratio	0.10	0.37			0.30			0.55				

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	23 (19%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	10.7
Intersection LOS:	B
Intersection Capacity Utilization:	62.7%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 363: Huntington Avenue & Gainsborough Street





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Lane Configurations			↑↑				↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)		0%	0%		0%		
Storage Length (ft)	0			0	0	0	
Storage Lanes	0			0	0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)			100			20	
Trailing Detector (ft)			0			0	
Turning Speed (mph)	15			9	15	9	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00	
Ped Bike Factor							
Fr _t							0.865
Fl _t Protected							
Satd. Flow (prot)	0	0	3374	0	0	1565	
Fl _t Permitted							
Satd. Flow (perm)	0	0	3374	0	0	1565	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						475	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)		25	25		30		
Link Distance (ft)		279	408		361		
Travel Time (s)		7.6	11.1		8.2		
Volume (vph)	0	0	675	0	0	91	
Confl. Peds. (#/hr)	9			20		176	
Confl. Bikes (#/hr)				10		2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	9%	7%	0%	0%	5%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)		0%	0%		0%		
Adj. Flow (vph)	0	0	734	0	0	99	
Lane Group Flow (vph)	0	0	734	0	0	99	
Turn Type							custom
Protected Phases			1			3	2
Permitted Phases							
Detector Phases			1			3	
Minimum Initial (s)			8.0			8.0	4.0
Minimum Split (s)			18.0			13.0	19.0
Total Split (s)	0.0	0.0	27.0	0.0	0.0	14.0	19.0
Total Split (%)	0.0%	0.0%	45.0%	0.0%	0.0%	23.3%	32%
Maximum Green (s)			23.0			10.0	15.0
Yellow Time (s)			3.0			3.0	3.0
All-Red Time (s)			1.0			1.0	1.0
Lead/Lag			Lead			Lag	
Lead-Lag Optimize?			Yes			Yes	
Vehicle Extension (s)			3.0			3.0	3.0
Minimum Gap (s)			3.0			3.0	3.0

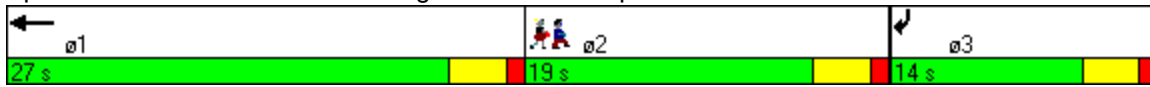


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Time Before Reduce (s)			0.0			0.0	0.0
Time To Reduce (s)			0.0			0.0	0.0
Recall Mode			C-Max			None	Ped
Walk Time (s)			7.0				10.0
Flash Dont Walk (s)			5.0				5.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)			27.4			8.4	
Actuated g/C Ratio			0.46			0.14	
v/c Ratio			0.48			0.16	
Control Delay			13.5			0.5	
Queue Delay			0.0			0.0	
Total Delay			13.5			0.5	
LOS			B			A	
Approach Delay			13.5				
Approach LOS			B				
90th %ile Green (s)			25.0			8.0	15.0
90th %ile Term Code			Coord			Min	Ped
70th %ile Green (s)			25.0			8.0	15.0
70th %ile Term Code			Coord			Min	Ped
50th %ile Green (s)			25.0			8.0	15.0
50th %ile Term Code			Coord			Min	Ped
30th %ile Green (s)			25.0			8.0	15.0
30th %ile Term Code			Coord			Min	Ped
10th %ile Green (s)			37.0			0.0	15.0
10th %ile Term Code			Coord			Skip	Ped
Queue Length 50th (ft)			99			0	
Queue Length 95th (ft)			144			0	
Internal Link Dist (ft)		199	328		281		
Turn Bay Length (ft)							
Base Capacity (vph)			1541			657	
Starvation Cap Reductn			0			0	
Spillback Cap Reductn			0			0	
Storage Cap Reductn			0			0	
Reduced v/c Ratio			0.48			0.15	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	55 (92%), Referenced to phase 1:WBT, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	12.0
Intersection LOS:	B
Intersection Capacity Utilization:	38.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4019: Huntington Avenue & Opera Place





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Lane Configurations	↑↑						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	0%			0%	0%		
Storage Length (ft)		0	0		0	0	
Storage Lanes		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	100						
Trailing Detector (ft)	0						
Turning Speed (mph)		9	15		15	9	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt							
Flt Protected							
Satd. Flow (prot)	3539	0	0	0	0	0	
Flt Permitted							
Satd. Flow (perm)	3539	0	0	0	0	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)	30			30	30		
Link Distance (ft)	280			409	285		
Travel Time (s)	6.4			9.3	6.5		
Volume (vph)	743	0	0	0	0	0	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%	0%		
Adj. Flow (vph)	808	0	0	0	0	0	
Lane Group Flow (vph)	808	0	0	0	0	0	
Turn Type							
Protected Phases	1						2
Permitted Phases							
Detector Phases	1						
Minimum Initial (s)	8.0						4.0
Minimum Split (s)	14.0						19.0
Total Split (s)	41.0	0.0	0.0	0.0	0.0	0.0	19.0
Total Split (%)	68.3%	0.0%	0.0%	0.0%	0.0%	0.0%	32%
Maximum Green (s)	37.0						15.0
Yellow Time (s)	3.0						3.0
All-Red Time (s)	1.0						1.0
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0						3.0
Minimum Gap (s)	3.0						3.0



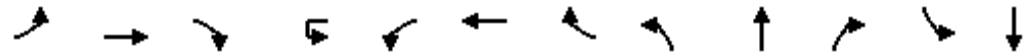
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Time Before Reduce (s)	0.0						0.0
Time To Reduce (s)	0.0						0.0
Recall Mode	C-Min						Ped
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	37.0						
Actuated g/C Ratio	0.62						
v/c Ratio	0.37						
Control Delay	6.0						
Queue Delay	0.0						
Total Delay	6.0						
LOS	A						
Approach Delay	6.0						
Approach LOS	A						
90th %ile Green (s)	37.0						15.0
90th %ile Term Code	Coord						Ped
70th %ile Green (s)	37.0						15.0
70th %ile Term Code	Coord						Ped
50th %ile Green (s)	37.0						15.0
50th %ile Term Code	Coord						Ped
30th %ile Green (s)	37.0						15.0
30th %ile Term Code	Coord						Ped
10th %ile Green (s)	37.0						15.0
10th %ile Term Code	Coord						Ped
Queue Length 50th (ft)	55						
Queue Length 95th (ft)	224						
Internal Link Dist (ft)	200			329	205		
Turn Bay Length (ft)							
Base Capacity (vph)	2182						
Starvation Cap Reductn	0						
Spillback Cap Reductn	0						
Storage Cap Reductn	0						
Reduced v/c Ratio	0.37						

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	31 (52%), Referenced to phase 1:EBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.37
Intersection Signal Delay:	6.0
Intersection Capacity Utilization	23.9%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

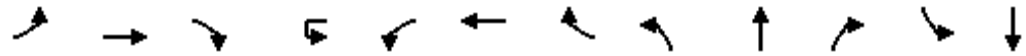
Splits and Phases: 4020: Huntington Avenue & South





Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑				↑↑			↑			↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	12	12	12	12	12	12	14
Grade (%)		0%				0%			0%			0%
Storage Length (ft)	0		0		0		0	0		0	0	
Storage Lanes	0		0		0		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50	50		50	50		50	50
Trailing Detector (ft)		0		0	0	0		0	0		0	0
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96				0.96			0.81			0.82
Frt		0.991				0.993			0.966			0.964
Flt Protected						0.997			0.980			0.989
Satd. Flow (prot)	0	2951	0	0	0	2853	0	0	1020	0	0	1378
Flt Permitted						0.839			0.860			0.923
Satd. Flow (perm)	0	2951	0	0	0	2374	0	0	834	0	0	1176
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)												14
Headway Factor	1.14	1.10	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.05
Link Speed (mph)		30				30			25			25
Link Distance (ft)		606				258			482			466
Travel Time (s)		13.8				5.9			13.1			12.7
Volume (vph)	0	697	44	27	24	667	37	30	25	18	30	69
Confl. Peds. (#/hr)			276	755	276		155	183		755	755	
Confl. Bikes (#/hr)			38				1			2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	7%	30%	2%	8%	10%	12%	64%	15%	23%	6%	21%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Adj. Flow (vph)	0	758	48	29	26	725	40	33	27	20	33	75
Lane Group Flow (vph)	0	806	0	0	0	820	0	0	80	0	0	147
Turn Type				D.P+P	D.P+P			Perm				Perm
Protected Phases		1		3	3	1 3			2			2
Permitted Phases				1	1			2			2	
Detector Phases		1		3	3	1 3		2	2		2	2
Minimum Initial (s)		8.0		8.0	8.0			8.0	8.0		8.0	8.0
Minimum Split (s)		21.0		14.0	14.0			16.0	16.0		16.0	16.0
Total Split (s)	0.0	73.0	0.0	15.0	15.0	88.0	0.0	32.0	32.0	0.0	32.0	32.0
Total Split (%)	0.0%	60.8%	0.0%	12.5%	12.5%	73.3%	0.0%	26.7%	26.7%	0.0%	26.7%	26.7%
Maximum Green (s)		68.0		10.0	10.0			26.0	26.0		26.0	26.0
Yellow Time (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
All-Red Time (s)		2.0		2.0	2.0			3.0	3.0		3.0	3.0
Lead/Lag				Lag	Lag			Lead	Lead		Lead	Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes		Yes	Yes
Vehicle Extension (s)		2.0		2.0	2.0			3.0	3.0		3.0	3.0
Minimum Gap (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Headway Factor	1.14
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	36
Confl. Peds. (#/hr)	183
Confl. Bikes (#/hr)	2
Peak Hour Factor	0.92
Growth Factor	100%
Heavy Vehicles (%)	4%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	39
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Time Before Reduce (s)		0.0		0.0	0.0			0.0	0.0		0.0	0.0
Time To Reduce (s)		0.0		0.0	0.0			0.0	0.0		0.0	0.0
Recall Mode		C-Max		None	None			Ped	Ped		Ped	Ped
Walk Time (s)		7.0						7.0	7.0		7.0	7.0
Flash Dont Walk (s)		7.0						2.0	2.0		2.0	2.0
Pedestrian Calls (#/hr)		0						0	0		0	0
Act Effct Green (s)		77.1				88.1			19.9			19.9
Actuated g/C Ratio		0.64				0.73			0.17			0.17
v/c Ratio		0.43				0.46			0.58			0.71
Control Delay		4.9				4.8			61.2			60.3
Queue Delay		0.0				0.0			0.0			0.0
Total Delay		4.9				4.8			61.2			60.3
LOS		A				A			E			E
Approach Delay		4.9				4.8			61.2			60.3
Approach LOS		A				A			E			E
90th %ile Green (s)		68.0		10.0	10.0			26.0	26.0		26.0	26.0
90th %ile Term Code		Coord		Max	Max			Max	Max		Max	Max
70th %ile Green (s)		72.2		10.0	10.0			21.8	21.8		21.8	21.8
70th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
50th %ile Green (s)		76.1		10.0	10.0			17.9	17.9		17.9	17.9
50th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
30th %ile Green (s)		79.7		10.0	10.0			14.3	14.3		14.3	14.3
30th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
10th %ile Green (s)		84.4		10.0	10.0			9.6	9.6		9.6	9.6
10th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
Queue Length 50th (ft)		58				18			58			99
Queue Length 95th (ft)		m71				194			m104			160
Internal Link Dist (ft)		526				178			402			386
Turn Bay Length (ft)												
Base Capacity (vph)		1896				1787			195			285
Starvation Cap Reductn		0				0			0			0
Spillback Cap Reductn		0				0			0			0
Storage Cap Reductn		0				0			0			0
Reduced v/c Ratio		0.43				0.46			0.41			0.52

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 90 (75%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 11.7 Intersection LOS: B
 Intersection Capacity Utilization 68.5% ICU Level of Service C
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBR
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Splits and Phases: 643: Huntington Avenue & Forsyth Street



Northeastern University IMP
569: Huntington Avenue & Forsyth Way

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑			↕			↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	12	12	16	12	12	12	15
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50		50	50		50	50	50
Trailing Detector (ft)		0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			0.93				0.71
Frt					0.999			0.967				0.850
Flt Protected				0.950				0.998			0.996	
Satd. Flow (prot)	0	2927	0	1430	2875	0	0	1686	0	0	1650	1552
Flt Permitted				0.950				0.984			0.938	
Satd. Flow (perm)	0	2927	0	1430	2875	0	0	1662	0	0	1554	1105
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.14	1.14	1.25	1.19	1.14	1.14	0.97	1.14	1.14	1.14	1.01
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		894			606			731			263	
Travel Time (s)		20.3			13.8			19.9			7.2	
Volume (vph)	0	617	0	114	631	5	16	315	106	20	214	176
Confl. Peds. (#/hr)			37			50			73			78
Confl. Bikes (#/hr)			11			14			4			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	0%	6%	9%	11%	7%	1%	11%	16%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	671	0	124	686	5	17	342	115	22	233	191
Lane Group Flow (vph)	0	671	0	124	691	0	0	474	0	0	255	191
Turn Type				Prot			Perm			Perm		Perm
Protected Phases		1		3	1 3			2			2	
Permitted Phases							2			2		2
Detector Phases		1		3	1 3		2	2		2	2	2
Minimum Initial (s)		8.0		6.0			8.0	8.0		8.0	8.0	8.0
Minimum Split (s)		33.0		13.0			18.0	18.0		18.0	18.0	18.0
Total Split (s)	0.0	50.0	0.0	22.0	72.0	0.0	48.0	48.0	0.0	48.0	48.0	48.0
Total Split (%)	0.0%	41.7%	0.0%	18.3%	60.0%	0.0%	40.0%	40.0%	0.0%	40.0%	40.0%	40.0%
Maximum Green (s)		45.0		16.0			41.0	41.0		41.0	41.0	41.0
Yellow Time (s)		3.0		3.0			3.0	3.0		3.0	3.0	3.0
All-Red Time (s)		2.0		3.0			4.0	4.0		4.0	4.0	4.0
Lead/Lag				Lag		Lead	Lead		Lead	Lead	Lead	
Lead-Lag Optimize?				Yes		Yes	Yes		Yes	Yes	Yes	
Vehicle Extension (s)		2.0		2.0		3.0	3.0		3.0	3.0	3.0	
Minimum Gap (s)		2.0		3.0		3.0	3.0		3.0	3.0	3.0	

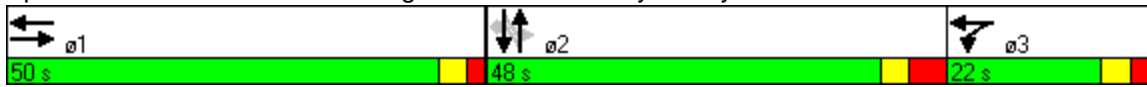


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Recall Mode		C-Max		None			Ped	Ped		Ped	Ped	Ped
Walk Time (s)		7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		19.0					3.0	3.0		3.0	3.0	3.0
Pedestrian Calls (#/hr)		0					0	0		0	0	0
Act Effct Green (s)		51.2		16.7	71.9		40.1			40.1	40.1	40.1
Actuated g/C Ratio		0.43		0.14	0.60		0.33			0.33	0.33	0.33
v/c Ratio		0.54		0.62	0.40		0.85			0.49	0.52	0.52
Control Delay		8.8		60.6	16.3		50.3			34.6	36.8	36.8
Queue Delay		0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Delay		8.8		60.6	16.3		50.3			34.6	36.8	36.8
LOS		A		E	B		D			C	D	D
Approach Delay		8.8			23.0		50.3			35.5		
Approach LOS		A			C		D			D		
90th %ile Green (s)		45.0		16.0			41.0	41.0		41.0	41.0	41.0
90th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
70th %ile Green (s)		45.0		16.0			41.0	41.0		41.0	41.0	41.0
70th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
50th %ile Green (s)		45.3		16.0			40.7	40.7		40.7	40.7	40.7
50th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	Gap
30th %ile Green (s)		51.2		16.0			34.8	34.8		34.8	34.8	34.8
30th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)		64.3		9.5			28.2	28.2		28.2	28.2	28.2
10th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
Queue Length 50th (ft)		144		74	184		380			149	113	113
Queue Length 95th (ft)		160		m141	150		m452			227	186	186
Internal Link Dist (ft)		814			526		651			183		
Turn Bay Length (ft)				100								
Base Capacity (vph)		1248		215	1722		609			570	405	405
Starvation Cap Reductn		0		0	0		0			0	0	0
Spillback Cap Reductn		0		0	0		0			0	0	0
Storage Cap Reductn		0		0	0		0			0	0	0
Reduced v/c Ratio		0.54		0.58	0.40		0.78			0.45	0.47	0.47

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 100 (83%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 26.8 Intersection LOS: C
 Intersection Capacity Utilization 80.4% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 569: Huntington Avenue & Forsyth Way



Northeastern University IMP
3096: Huntington Avenue & Louis Prang Street

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕			↕		↙	↕		↙	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	12	12	11	11	12	13	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50		50	50		50	50	
Trailing Detector (ft)	0	0			0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.91			0.86			1.00			0.99	
Frt		0.949			0.963			0.998			0.996	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1472	2442	0	0	2473	0	1441	1536	0	1486	1509	0
Flt Permitted	0.950						0.213			0.406		
Satd. Flow (perm)	1472	2442	0	0	2473	0	323	1536	0	635	1509	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.25	1.19	1.14	1.14	1.14	1.14	1.19	1.19	1.14	1.10	1.14	1.14
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		679			894			582			631	
Travel Time (s)		15.4			20.3			15.9			17.2	
Volume (vph)	78	534	279	0	582	190	257	509	6	34	389	11
Confl. Peds. (#/hr)			54			177			80			97
Confl. Bikes (#/hr)			12			11			11			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	11%	10%	0%	8%	10%	9%	7%	33%	13%	11%	43%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	85	580	303	0	633	207	279	553	7	37	423	12
Lane Group Flow (vph)	85	883	0	0	840	0	279	560	0	37	435	0
Turn Type	Prot						D.P+P			Perm		
Protected Phases	4	1 4			1		2	2 3				3
Permitted Phases							3			3		
Detector Phases	4	1 4			1		2	2 3		3		3
Minimum Initial (s)	5.0				8.0		6.0			8.0	8.0	
Minimum Split (s)	12.0				21.0		14.0			18.0	18.0	
Total Split (s)	16.0	58.0	0.0	0.0	42.0	0.0	20.0	62.0	0.0	42.0	42.0	0.0
Total Split (%)	13.3%	48.3%	0.0%	0.0%	35.0%	0.0%	16.7%	51.7%	0.0%	35.0%	35.0%	0.0%
Maximum Green (s)	10.0				36.0		13.0			35.0	35.0	
Yellow Time (s)	3.0				3.0		3.0			3.0	3.0	
All-Red Time (s)	3.0				3.0		4.0			4.0	4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0				2.0		3.0			3.0	3.0	
Minimum Gap (s)	3.0				3.0		3.0			3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Time To Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Recall Mode	None			C-Max			None			Ped	Ped	
Walk Time (s)					7.0					7.0	7.0	
Flash Dont Walk (s)					6.0					3.0	3.0	
Pedestrian Calls (#/hr)					0					0	0	
Act Effct Green (s)	12.0	54.8			38.8		53.2	57.2		37.2	37.2	
Actuated g/C Ratio	0.10	0.46			0.32		0.44	0.48		0.31	0.31	
v/c Ratio	0.58	0.79			1.12dr		0.96	0.77		0.19	0.93	
Control Delay	68.0	34.4			70.1		61.2	33.6		33.0	67.9	
Queue Delay	0.0	0.0			0.0		0.0	2.9		0.0	0.0	
Total Delay	68.0	34.4			70.1		61.2	36.5		33.0	67.9	
LOS	E	C			E		E	D		C	E	
Approach Delay		37.4			70.1			44.7			65.1	
Approach LOS		D			E			D			E	
90th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
90th %ile Term Code	Max				Coord		Max			Max	Max	
70th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
70th %ile Term Code	Max				Coord		Max			Max	Max	
50th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
50th %ile Term Code	Max				Coord		Max			Max	Max	
30th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
30th %ile Term Code	Max				Coord		Max			Max	Max	
10th %ile Green (s)	10.0				39.9		13.0			31.1	31.1	
10th %ile Term Code	Max				Coord		Max			Gap	Gap	
Queue Length 50th (ft)	64	303			~363		156	371		21	323	
Queue Length 95th (ft)	#125	394			m#491		m#286	m526		50	#519	
Internal Link Dist (ft)		599			814			502			551	
Turn Bay Length (ft)	100											
Base Capacity (vph)	147	1115			799		292	742		201	478	
Starvation Cap Reductn	0	0			0		0	97		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.58	0.79			1.05		0.96	0.87		0.18	0.91	

Intersection Summary

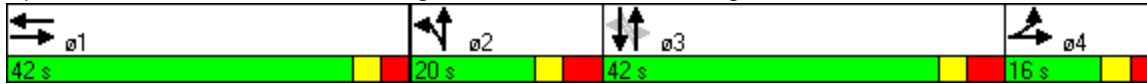
Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84 (70%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 52.4 Intersection LOS: D
 Intersection Capacity Utilization 84.1% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3096: Huntington Avenue & Louis Prang Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	16	12	12	10	12	12	15	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor			0.86		0.99			0.94			0.99	
Frt			0.850		0.992			0.981			0.991	
Flt Protected		0.989			0.989			0.997				
Satd. Flow (prot)	0	1556	1211	0	1720	0	0	2689	0	0	1674	0
Flt Permitted		0.834			0.683			0.904			0.997	
Satd. Flow (perm)	0	1312	1048	0	1188	0	0	2439	0	0	1669	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			47		3						4	
Headway Factor	1.14	1.25	1.25	1.14	0.97	1.14	1.14	1.25	1.14	1.14	1.01	1.14
Link Speed (mph)		25			30			25			30	
Link Distance (ft)		563			731			505			582	
Travel Time (s)		15.4			16.6			13.8			13.2	
Volume (vph)	87	319	43	74	228	18	50	686	105	3	541	38
Confl. Peds. (#/hr)			38			73			113			27
Confl. Bikes (#/hr)			19			2			11			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	1%	12%	6%	11%	9%	3%	4%	0%	33%	11%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	95	347	47	80	248	20	54	746	114	3	588	41
Lane Group Flow (vph)	0	442	47	0	348	0	0	914	0	0	632	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		5!			5!		8!	1			1	
Permitted Phases	5!		5	5!						1		
Detector Phases	5	5	5	5	5		8	1		1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		4.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0		20.0	20.0		20.0	20.0	
Total Split (s)	60.0	60.0	60.0	60.0	60.0	0.0	20.0	60.0	0.0	60.0	60.0	0.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	0.0%	16.7%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	56.0	56.0	56.0	56.0	56.0		16.0	56.0		56.0	56.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.5	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		0.5	1.0		1.0	1.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		3.0	2.0		2.0	2.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		3.0	2.0		2.0	2.0	

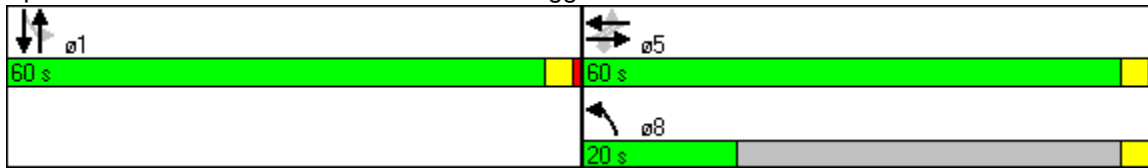


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None	None	None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0		5.0	8.0		8.0	8.0	
Flash Dont Walk (s)	7.0	7.0	7.0	7.0	7.0		11.0	6.0		6.0	6.0	
Pedestrian Calls (#/hr)	35	35	35	35	35		0	0		0	0	
Act Effct Green (s)		45.6	45.6		45.6			112.0			66.4	
Actuated g/C Ratio		0.38	0.38		0.38			0.93			0.55	
v/c Ratio		0.89	0.11		0.77			0.60			0.68	
Control Delay		54.0	5.8		41.0			5.3			20.3	
Queue Delay		0.2	0.0		0.1			0.0			0.9	
Total Delay		54.1	5.8		41.1			5.3			21.2	
LOS		D	A		D			A			C	
Approach Delay		49.5			41.1			5.3			21.2	
Approach LOS		D			D			A			C	
90th %ile Green (s)	56.0	56.0	56.0	56.0	56.0		56.0	56.0		56.0	56.0	
90th %ile Term Code	Max	Max	Max	Max	Max		Hold	Coord		Coord	Coord	
70th %ile Green (s)	52.4	52.4	52.4	52.4	52.4		52.4	59.6		59.6	59.6	
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
50th %ile Green (s)	46.7	46.7	46.7	46.7	46.7		46.7	65.3		65.3	65.3	
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
30th %ile Green (s)	40.8	40.8	40.8	40.8	40.8		40.8	71.2		71.2	71.2	
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
10th %ile Green (s)	32.3	32.3	32.3	32.3	32.3		32.3	79.7		79.7	79.7	
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
Queue Length 50th (ft)		312	0		290			19			218	
Queue Length 95th (ft)		404	22		386			73			m249	
Internal Link Dist (ft)		483			651			425			502	
Turn Bay Length (ft)												
Base Capacity (vph)		612	514		556			1514			925	
Starvation Cap Reductn		0	0		0			0			104	
Spillback Cap Reductn		9	0		8			33			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.73	0.09		0.64			0.62			0.77	

Intersection Summary

Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 25 (21%), Referenced to phase 1:NBSB, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 23.8 Intersection LOS: C
 Intersection Capacity Utilization 115.5% ICU Level of Service H
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.
 ! Phase conflict between lane groups.

Splits and Phases: 389: Parker Street & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	13	11	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.96		0.98			
Frt		0.850	0.995			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1417	1318	1494	0	0	2955
Flt Permitted	0.950					0.809
Satd. Flow (perm)	1365	1318	1494	0	0	2396
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		17	5			
Headway Factor	1.25	1.10	1.19	1.14	1.14	1.14
Link Speed (mph)	30		25			30
Link Distance (ft)	302		208			95
Travel Time (s)	6.9		5.7			2.2
Volume (vph)	32	16	854	32	32	650
Confl. Peds. (#/hr)	28	20		235	235	
Confl. Bikes (#/hr)				20		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	14%	8%	8%	4%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	35	17	928	35	35	707
Lane Group Flow (vph)	35	17	963	0	0	742
Turn Type		Prot			Perm	
Protected Phases	5	5	1			1
Permitted Phases					1	
Detector Phases	5	5	1		1	1
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0
Total Split (s)	22.0	22.0	48.0	0.0	48.0	48.0
Total Split (%)	31.4%	31.4%	68.6%	0.0%	68.6%	68.6%
Maximum Green (s)	17.0	17.0	42.0		42.0	42.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	8.0	8.0	8.0		8.0	8.0
Flash Dont Walk (s)	8.0	8.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)	78	78	9		9	9
Act Effct Green (s)	15.4	15.4	50.0			50.0
Actuated g/C Ratio	0.22	0.22	0.71			0.71
v/c Ratio	0.11	0.06	0.90			0.43
Control Delay	21.8	10.8	17.7			6.7
Queue Delay	0.0	0.0	5.2			0.0
Total Delay	21.8	10.8	23.0			6.7
LOS	C	B	C			A
Approach Delay	18.2		23.0			6.7
Approach LOS	B		C			A
90th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	0.0	0.0	64.0		64.0	64.0
10th %ile Term Code	Skip	Skip	Coord		Coord	Coord
Queue Length 50th (ft)	12	0	~483			74
Queue Length 95th (ft)	33	14	m#720			111
Internal Link Dist (ft)	222		128			15
Turn Bay Length (ft)						
Base Capacity (vph)	364	352	1068			1711
Starvation Cap Reductn	0	0	71			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.10	0.05	0.97			0.43

Intersection Summary












Area Type: CBD
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 4 (6%), Referenced to phase 1:NBSB, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 16.0 Intersection LOS: B
 Intersection Capacity Utilization 69.0% ICU Level of Service C
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1526: Leon Street & Ruggles Street



							
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Lane Configurations						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	16	16	13	12	12	11	
Grade (%)	0%		0%			0%	
Storage Length (ft)	0	0		0	0		
Storage Lanes	1	1		0	0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50	50	50			50	
Trailing Detector (ft)	0	0	0			0	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	
Ped Bike Factor							
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	939	876	1578	0	0	2935	
Flt Permitted	0.950						
Satd. Flow (perm)	939	876	1578	0	0	2935	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		27					
Headway Factor	0.97	0.97	1.10	1.14	1.14	1.19	
Link Speed (mph)	30		25			30	
Link Distance (ft)	232		340			229	
Travel Time (s)	5.3		9.3			5.2	
Volume (vph)	72	25	907	0	0	683	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	96%	88%	12%	0%	0%	7%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	78	27	986	0	0	742	
Lane Group Flow (vph)	78	27	986	0	0	742	
Turn Type		Prot					
Protected Phases	5	5	1			1	2
Permitted Phases							
Detector Phases	5	5	1			1	
Minimum Initial (s)	8.0	8.0	8.0			8.0	7.0
Minimum Split (s)	13.0	13.0	13.0			13.0	24.0
Total Split (s)	17.0	17.0	29.0	0.0	0.0	29.0	24.0
Total Split (%)	24.3%	24.3%	41.4%	0.0%	0.0%	41.4%	34%
Maximum Green (s)	12.0	12.0	24.0			24.0	20.0
Yellow Time (s)	3.0	3.0	3.0			3.0	3.0
All-Red Time (s)	2.0	2.0	2.0			2.0	1.0
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0			2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0			3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Time Before Reduce (s)	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0			0.0	0.0
Recall Mode	None	None	C-Max			C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	11.0	11.0	49.6			49.6	
Actuated g/C Ratio	0.16	0.16	0.71			0.71	
v/c Ratio	0.53	0.17	0.88			0.36	
Control Delay	40.3	12.9	21.9			7.2	
Queue Delay	0.0	0.0	9.1			0.0	
Total Delay	40.3	12.9	31.0			7.3	
LOS	D	B	C			A	
Approach Delay	33.3		31.0			7.3	
Approach LOS	C		C			A	
90th %ile Green (s)	12.0	12.0	24.0			24.0	20.0
90th %ile Term Code	Max	Max	Coord			Coord	Ped
70th %ile Green (s)	12.0	12.0	48.0			48.0	0.0
70th %ile Term Code	Max	Max	Coord			Coord	Skip
50th %ile Green (s)	9.9	9.9	50.1			50.1	0.0
50th %ile Term Code	Gap	Gap	Coord			Coord	Skip
30th %ile Green (s)	8.0	8.0	52.0			52.0	0.0
30th %ile Term Code	Min	Min	Coord			Coord	Skip
10th %ile Green (s)	0.0	0.0	65.0			65.0	0.0
10th %ile Term Code	Skip	Skip	Coord			Coord	Skip
Queue Length 50th (ft)	31	0	286			27	
Queue Length 95th (ft)	70	20m#1577				140	
Internal Link Dist (ft)	152		260			149	
Turn Bay Length (ft)							
Base Capacity (vph)	174	185	1119			2081	
Starvation Cap Reductn	0	0	118			0	
Spillback Cap Reductn	0	0	0			91	
Storage Cap Reductn	0	0	0			0	
Reduced v/c Ratio	0.45	0.15	0.99			0.37	

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 1 (1%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 21.5

Intersection LOS: C

Intersection Capacity Utilization 66.4%

ICU Level of Service C

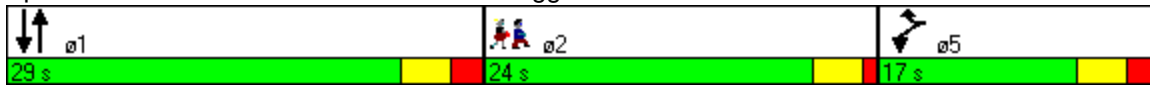
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3068: MBTA Exit & Ruggles Street



Northeastern University IMP
611: Tremont Street & Ruggles Street

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑	↗	↙	↗		↗↗	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	11	11	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	1		0	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	0.98			0.99		0.92	0.99	0.98		0.97	0.98	
Frt						0.850		0.940			0.858	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1555	4424	0	1624	3049	1371	1570	1511	0	3090	1421	0
Flt Permitted	0.950			0.137			0.950			0.950		
Satd. Flow (perm)	1530	4424	0	231	3049	1264	1556	1511	0	3009	1421	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)								17			171	
Headway Factor	1.19	1.19	1.14	1.14	1.19	1.14	1.19	1.19	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		911			298			632			340	
Travel Time (s)		20.7			6.8			14.4			7.7	
Volume (vph)	221	1472	0	9	857	647	36	37	25	585	9	157
Confl. Peds. (#/hr)	11		24	24		11	4		13	13		4
Confl. Bikes (#/hr)			7									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	3%	6%	0%	2%	0%	2%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	240	1600	0	10	932	703	39	40	27	636	10	171
Lane Group Flow (vph)	240	1600	0	10	932	703	39	67	0	636	181	0
Turn Type	Prot			Perm		pm+ov	Split			Prot		
Protected Phases	1!	6!			2!	3	4	4		3	6!	
Permitted Phases				2!		2						
Detector Phases	1	6		2	2	3	4	4		3	6	
Minimum Initial (s)	8.0	16.0		16.0	16.0	9.0	8.0	8.0		9.0	16.0	
Minimum Split (s)	12.0	20.0		20.0	20.0	13.0	23.0	23.0		13.0	20.0	
Total Split (s)	30.0	69.0	0.0	39.0	39.0	38.0	33.0	33.0	0.0	38.0	69.0	0.0
Total Split (%)	21.4%	49.3%	0.0%	27.9%	27.9%	27.1%	23.6%	23.6%	0.0%	27.1%	49.3%	0.0%
Maximum Green (s)	26.0	65.0		35.0	35.0	34.0	29.0	29.0		34.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Gap (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max	None	None	None		None	C-Max	
Walk Time (s)		8.0		8.0	8.0		8.0	8.0			8.0	
Flash Dont Walk (s)		6.0		5.0	5.0		11.0	11.0			6.0	
Pedestrian Calls (#/hr)		12		14	14		5	5			12	
Act Effct Green (s)	23.8	85.5		57.7	57.7	91.7	10.9	10.9		34.0	85.5	
Actuated g/C Ratio	0.17	0.61		0.41	0.41	0.66	0.08	0.08		0.24	0.61	
v/c Ratio	0.91	0.59		0.11	0.74	0.82	0.32	0.50		0.85	0.19	
Control Delay	92.5	18.8		31.0	38.7	26.5	66.2	58.5		57.0	5.9	
Queue Delay	0.0	0.0		0.0	2.6	5.0	0.0	0.0		10.3	0.5	
Total Delay	92.5	18.8		31.0	41.3	31.5	66.2	58.5		67.2	6.4	
LOS	F	B		C	D	C	E	E		E	A	
Approach Delay		28.4			37.1			61.4			53.8	
Approach LOS		C			D			E			D	
90th %ile Green (s)	26.0	75.0		45.0	45.0	34.0	19.0	19.0		34.0	75.0	
90th %ile Term Code	Max	Coord		Coord	Coord	Max	Ped	Ped		Max	Coord	
70th %ile Green (s)	26.0	83.3		53.3	53.3	34.0	10.7	10.7		34.0	83.3	
70th %ile Term Code	Max	Coord		Coord	Coord	Max	Gap	Gap		Max	Coord	
50th %ile Green (s)	26.0	85.3		55.3	55.3	34.0	8.7	8.7		34.0	85.3	
50th %ile Term Code	Max	Coord		Coord	Coord	Max	Gap	Gap		Max	Coord	
30th %ile Green (s)	23.1	86.0		58.9	58.9	34.0	8.0	8.0		34.0	86.0	
30th %ile Term Code	Gap	Coord		Coord	Coord	Max	Min	Min		Max	Coord	
10th %ile Green (s)	17.8	98.0		76.2	76.2	34.0	0.0	0.0		34.0	98.0	
10th %ile Term Code	Gap	Coord		Coord	Coord	Max	Skip	Skip		Max	Coord	
Queue Length 50th (ft)	213	310		6	386	408	35	45		265	15	
Queue Length 95th (ft)	#355	431		m14	#576	#877	69	91		#284	86	
Internal Link Dist (ft)		831			218			552			260	
Turn Bay Length (ft)	200											
Base Capacity (vph)	289	2702		95	1258	854	325	326		750	935	
Starvation Cap Reductn	0	0		0	210	0	0	0		97	437	
Spillback Cap Reductn	0	71		0	0	100	0	1		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.83	0.61		0.11	0.89	0.93	0.12	0.21		0.97	0.36	

Intersection Summary

Area Type: CBD

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 96 (69%), Referenced to phase 2:WBTL and 6:EBSB, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 37.1

Intersection LOS: D

Intersection Capacity Utilization 86.7%

ICU Level of Service E

Analysis Period (min) 15

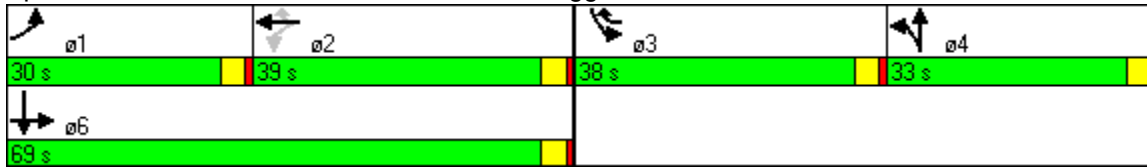
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

! Phase conflict between lane groups.

Splits and Phases: 611: Tremont Street & Ruggles Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑							↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50			50							50
Trailing Detector (ft)		0			0							0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99										
Frt		0.990										0.865
Flt Protected												
Satd. Flow (prot)	0	4544	0	0	4532	0	0	0	0	0	0	1465
Flt Permitted												
Satd. Flow (perm)	0	4544	0	0	4532	0	0	0	0	0	0	1465
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21										54
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		298			471			679				377
Travel Time (s)		6.8			10.7			15.4				8.6
Volume (vph)	0	1926	132	0	1473	0	0	0	0	0	0	46
Confl. Peds. (#/hr)	25		17	17		25	17		101	101		17
Confl. Bikes (#/hr)			14			4						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	0	2093	143	0	1601	0	0	0	0	0	0	50
Lane Group Flow (vph)	0	2236	0	0	1601	0	0	0	0	0	0	50
Turn Type												custom
Protected Phases		1			1							5
Permitted Phases												
Detector Phases		1			1							5
Minimum Initial (s)		10.0			10.0							4.0
Minimum Split (s)		24.0			24.0							33.0
Total Split (s)	0.0	107.0	0.0	0.0	107.0	0.0	0.0	0.0	0.0	0.0	0.0	33.0
Total Split (%)	0.0%	76.4%	0.0%	0.0%	76.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.6%
Maximum Green (s)		102.0			102.0							28.0
Yellow Time (s)		3.0			3.0							3.0
All-Red Time (s)		2.0			2.0							2.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0			2.0							2.0
Minimum Gap (s)		2.0			2.0							2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0			0.0							0.0
Time To Reduce (s)		0.0			0.0							0.0
Recall Mode		C-Max			C-Max							None
Walk Time (s)		8.0			8.0							8.0
Flash Dont Walk (s)		6.0			6.0							17.0
Pedestrian Calls (#/hr)		30			30							5
Act Effct Green (s)		124.8			124.8							9.9
Actuated g/C Ratio		0.89			0.89							0.07
v/c Ratio		0.55			0.40							0.33
Control Delay		1.4			2.6							17.5
Queue Delay		0.1			0.4							0.3
Total Delay		1.5			3.0							17.8
LOS		A			A							B
Approach Delay		1.5			3.0							
Approach LOS		A			A							
90th %ile Green (s)		105.0			105.0							25.0
90th %ile Term Code		Coord			Coord							Ped
70th %ile Green (s)		124.2			124.2							5.8
70th %ile Term Code		Coord			Coord							Gap
50th %ile Green (s)		125.5			125.5							4.5
50th %ile Term Code		Coord			Coord							Gap
30th %ile Green (s)		125.5			125.5							4.5
30th %ile Term Code		Coord			Coord							Gap
10th %ile Green (s)		135.0			135.0							0.0
10th %ile Term Code		Coord			Coord							Skip
Queue Length 50th (ft)		4			47							0
Queue Length 95th (ft)		163			201							34
Internal Link Dist (ft)		218			391			599			297	
Turn Bay Length (ft)												
Base Capacity (vph)		4054			4041							346
Starvation Cap Reductn		606			1714							0
Spillback Cap Reductn		0			529							111
Storage Cap Reductn		0			0							0
Reduced v/c Ratio		0.65			0.69							0.21

Intersection Summary

Area Type:	CBD
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	73 (52%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	2.3
Intersection LOS:	A
Intersection Capacity Utilization	50.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 3082: Tremont Street & Columbus Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗		↕↕		↗	↕↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	10	10	16	11	16	12	14	14	13	12	11	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	325		0	0		0
Storage Lanes	0		1	0		0	1		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.91	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99	0.98		1.00		0.99	0.99			1.00	0.97
Frt			0.850		0.997			0.989				0.850
Flt Protected		0.980			0.996		0.950	0.970			0.997	
Satd. Flow (prot)	0	2538	1404	0	3084	0	1344	2654	0	0	1423	1268
Flt Permitted		0.605			0.628		0.950	0.970			0.997	
Satd. Flow (perm)	0	1556	1380	0	1944	0	1325	2632	0	0	1423	1227
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					2							205
Headway Factor	1.25	1.25	0.97	1.19	0.97	1.14	1.05	1.05	1.10	1.14	1.19	1.10
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		471			2258			635			349	
Travel Time (s)		10.7			51.3			14.4			7.9	
Volume (vph)	375	528	1058	33	349	7	934	241	53	5	62	189
Confl. Peds. (#/hr)	26		15	15		26	10		16	16		10
Confl. Bikes (#/hr)			1			4			2			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	6%	5%	8%	5%	44%	5%	7%	26%	25%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	408	574	1150	36	379	8	1015	262	58	5	67	205
Lane Group Flow (vph)	0	982	1150	0	423	0	508	827	0	0	72	205
Turn Type	D.P+P		Free	Perm			Split			Split		Perm
Protected Phases	7	1 7			1		6	6		5	5	
Permitted Phases	1		Free	1								5
Detector Phases	1 7	1 7		1	1		6	6		5	5	5
Minimum Initial (s)	4.0			10.0	10.0		10.0	10.0		8.0	8.0	8.0
Minimum Split (s)	9.0			26.0	26.0		22.0	22.0		24.0	24.0	24.0
Total Split (s)	17.0	46.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0	25.0	25.0	25.0
Total Split (%)	17.0%	46.0%	0.0%	29.0%	29.0%	0.0%	29.0%	29.0%	0.0%	25.0%	25.0%	25.0%
Maximum Green (s)	13.0			25.0	25.0		25.0	25.0		21.0	21.0	21.0
Yellow Time (s)	3.0			3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0			1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	Max			C-Max	C-Max		None	None		None	None	None
Walk Time (s)				7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)				15.0	15.0					13.0	13.0	13.0
Pedestrian Calls (#/hr)				0	0					5	5	5
Act Effct Green (s)		45.7	100.0		32.7		25.0	25.0			13.3	13.3
Actuated g/C Ratio		0.46	1.00		0.33		0.25	0.25			0.13	0.13
v/c Ratio		1.21dl	0.83		0.67		1.51	1.44dl			0.38	0.60
Control Delay		114.8	6.4		34.5		275.1	156.6			29.6	18.4
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		114.8	6.4		34.5		275.1	156.6			29.6	18.4
LOS		F	A		C		F	F			C	B
Approach Delay		56.3			34.5			201.7			21.3	
Approach LOS		E			C			F			C	
90th %ile Green (s)	13.0			25.0	25.0		25.0	25.0		21.0	21.0	21.0
90th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
70th %ile Green (s)	13.0			29.1	29.1		25.0	25.0		16.9	16.9	16.9
70th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
50th %ile Green (s)	13.0			33.9	33.9		25.0	25.0		12.1	12.1	12.1
50th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
30th %ile Green (s)	13.0			37.3	37.3		25.0	25.0		8.7	8.7	8.7
30th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
10th %ile Green (s)	13.0			38.0	38.0		25.0	25.0		8.0	8.0	8.0
10th %ile Term Code	MaxR			Coord	Coord		Max	Max		Min	Min	Min
Queue Length 50th (ft)		~317	0		135		~498	~363			41	58
Queue Length 95th (ft)		#563	0		#227		#716	#490			98	163
Internal Link Dist (ft)		391			2178			555			269	
Turn Bay Length (ft)							325					
Base Capacity (vph)		838	1380		636		336	664			299	420
Starvation Cap Reductn		0	0		0		0	0			0	0
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		1.17	0.83		0.67		1.51	1.25			0.24	0.49

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 48 (48%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.51
 Intersection Signal Delay: 98.4 Intersection LOS: F
 Intersection Capacity Utilization 98.8% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3098: Tremont Street & Melnea Cass Boulevard



Northeastern University IMP
2085: Columbus Avenue & Melnea Cass Boulevard

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕	↕		↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	12	12	12	11	12	12	14	14	12	16	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		25	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.89			0.96			0.96			0.99	
Frt		0.925							0.850			
Flt Protected					0.961			0.955			0.976	
Satd. Flow (prot)	0	2190	0	0	1356	0	0	1433	1334	0	1128	0
Flt Permitted					0.961			0.737			0.944	
Satd. Flow (perm)	0	2190	0	0	1299	0	0	1064	1334	0	1082	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28							418			
Headway Factor	1.14	1.14	1.14	1.14	1.19	1.14	1.14	1.05	1.05	1.14	0.97	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		421			205			349			337	
Travel Time (s)		9.6			4.7			7.9			7.7	
Volume (vph)	0	26	26	225	50	1	221	13	385	1	1	0
Confl. Peds. (#/hr)	33		39	39		33	29		20	20		29
Confl. Bikes (#/hr)			50			13						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	8%	5%	4%	0%	4%	91%	4%	100%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	28	28	245	54	1	240	14	418	1	1	0
Lane Group Flow (vph)	0	56	0	0	300	0	0	254	418	0	2	0
Turn Type				Split			Perm		pt+ov	Perm		
Protected Phases		5		1	1			6	1 6			6
Permitted Phases							6				6	
Detector Phases		5		1	1		6	6	6	6	6	
Minimum Initial (s)		10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Minimum Split (s)		14.0		15.0	15.0		14.0	14.0		14.0	14.0	
Total Split (s)	0.0	14.0	0.0	25.0	25.0	0.0	40.0	40.0	65.0	40.0	40.0	0.0
Total Split (%)	0.0%	14.0%	0.0%	25.0%	25.0%	0.0%	40.0%	40.0%	65.0%	40.0%	40.0%	0.0%
Maximum Green (s)		10.0		21.0	21.0		36.0	36.0		36.0	36.0	
Yellow Time (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)		1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag		Lead		Lead	Lead		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	

Lane Group	ø2
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	8.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	21%
Maximum Green (s)	18.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0



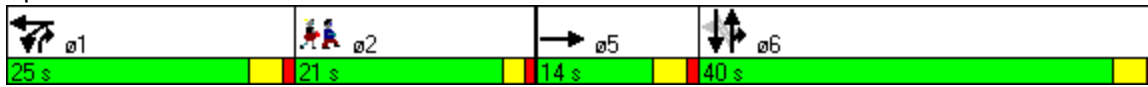
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode		None		C-Max	C-Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.0		47.7			28.9	81.4		28.9		
Actuated g/C Ratio		0.10		0.48			0.29	0.81		0.29		
v/c Ratio		0.23		0.46			0.82	0.36		0.01		
Control Delay		27.3		24.7			36.2	0.5		21.0		
Queue Delay		0.0		0.0			0.1	1.3		0.0		
Total Delay		27.3		24.7			36.3	1.7		21.0		
LOS		C		C			D	A		C		
Approach Delay		27.3		24.7			14.8			21.0		
Approach LOS		C		C			B			C		
90th %ile Green (s)		10.0		21.0	21.0		36.0	36.0		36.0	36.0	
90th %ile Term Code		Max		Coord	Coord		Max	Max		Max	Max	
70th %ile Green (s)		10.0		42.0	42.0		36.0	36.0		36.0	36.0	
70th %ile Term Code		Max		Coord	Coord		Max	Max		Max	Max	
50th %ile Green (s)		10.0		46.4	46.4		31.6	31.6		31.6	31.6	
50th %ile Term Code		Max		Coord	Coord		Gap	Gap		Gap	Gap	
30th %ile Green (s)		10.0		54.4	54.4		23.6	23.6		23.6	23.6	
30th %ile Term Code		Max		Coord	Coord		Gap	Gap		Gap	Gap	
10th %ile Green (s)		0.0		74.6	74.6		17.4	17.4		17.4	17.4	
10th %ile Term Code		Skip		Coord	Coord		Gap	Gap		Gap	Gap	
Queue Length 50th (ft)		8		105			130	0		1		
Queue Length 95th (ft)		28		m#313			m86	m4		6		
Internal Link Dist (ft)		341		125			269			257		
Turn Bay Length (ft)												
Base Capacity (vph)		244		647			383	1164		390		
Starvation Cap Reductn		0		0			4	518		0		
Spillback Cap Reductn		0		0			0	0		0		
Storage Cap Reductn		0		0			0	0		0		
Reduced v/c Ratio		0.23		0.46			0.67	0.65		0.01		

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 45 (45%), Referenced to phase 1:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 18.4 Intersection LOS: B
 Intersection Capacity Utilization 64.3% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	ø2
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	18.0
90th %ile Term Code	Ped
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Splits and Phases: 2085: Columbus Avenue & Melnea Cass Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕		↙	↕		↙	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	10	11	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.98	0.98		0.96	0.99		0.98	0.98		0.98	0.99	
Frt		0.978			0.972			0.978			0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1404	2836	0	1391	2789	0	1444	2756	0	1417	2876	0
Flt Permitted	0.385			0.239			0.157			0.110		
Satd. Flow (perm)	555	2836	0	338	2789	0	234	2756	0	161	2876	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			26			25			9	
Headway Factor	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2258			721			869			630	
Travel Time (s)		51.3			16.4			19.8			14.3	
Volume (vph)	126	517	87	85	271	62	67	886	155	67	861	58
Confl. Peds. (#/hr)	38		86	86		38	139		151	151		139
Confl. Bikes (#/hr)			12			3			22			62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	6%	8%	9%	8%	9%	5%	10%	6%	7%	7%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	137	562	95	92	295	67	73	963	168	73	936	63
Lane Group Flow (vph)	137	657	0	92	362	0	73	1131	0	73	999	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	43.0		6.0	43.0	
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	47.0		10.0	47.0	
Total Split (s)	14.0	32.0	0.0	11.0	29.0	0.0	10.0	47.0	0.0	10.0	47.0	0.0
Total Split (%)	14.0%	32.0%	0.0%	11.0%	29.0%	0.0%	10.0%	47.0%	0.0%	10.0%	47.0%	0.0%
Maximum Green (s)	10.0	28.0		7.0	25.0		6.0	43.0		6.0	43.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			23.0			23.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.0	26.2		28.5	21.7		53.8	49.0		53.8	49.0	
Actuated g/C Ratio	0.34	0.26		0.28	0.22		0.54	0.49		0.54	0.49	
v/c Ratio	0.51	0.87		0.55	0.58		0.37	0.83		0.45	0.71	
Control Delay	32.1	44.4		34.4	35.6		16.9	30.5		25.0	18.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.1	44.4		34.4	35.6		16.9	30.5		25.0	18.8	
LOS	C	D		C	D		B	C		C	B	
Approach Delay		42.3			35.4			29.7			19.2	
Approach LOS		D			D			C			B	
90th %ile Green (s)	10.0	28.0		7.0	25.0		6.0	43.0		6.0	43.0	
90th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	10.0	28.0		7.0	25.0		6.0	43.0		6.0	43.0	
70th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
50th %ile Green (s)	10.0	27.4		7.0	24.4		6.0	43.6		6.0	43.6	
50th %ile Term Code	Max	Gap		Max	Hold		Max	Coord		Max	Coord	
30th %ile Green (s)	9.0	25.3		7.0	23.3		6.0	45.7		6.0	45.7	
30th %ile Term Code	Gap	Gap		Max	Hold		Max	Coord		Max	Coord	
10th %ile Green (s)	7.4	22.1		0.0	10.7		0.0	69.9		0.0	69.9	
10th %ile Term Code	Gap	Hold		Skip	Gap		Skip	Coord		Skip	Coord	
Queue Length 50th (ft)	56	159		38	97		22	344		18	136	
Queue Length 95th (ft)	m65	m167		73	143		45	#500		m31	m192	
Internal Link Dist (ft)		2178			641			789			550	
Turn Bay Length (ft)												
Base Capacity (vph)	275	808		171	717		199	1364		162	1415	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.50	0.81		0.54	0.50		0.37	0.83		0.45	0.71	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 30.1

Intersection LOS: C

Intersection Capacity Utilization 79.2%

ICU Level of Service D









Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 96: Tremont Street & Mass Ave

 ø1	 ø2	 ø3	 ø4
10 s	47 s	11 s	32 s
 ø5	 ø6	 ø7	 ø8
10 s	47 s	14 s	29 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕		↙	↕		↙	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	11	12	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.95	0.97		0.94	0.95		0.98	0.99		0.98	0.95	
Frt		0.970			0.939			0.988			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1472	2800	0	1454	1452	0	1486	2767	0	1318	2729	0
Flt Permitted	0.335			0.606			0.106			0.115		
Satd. Flow (perm)	491	2800	0	868	1452	0	162	2767	0	157	2729	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								11			45	
Headway Factor	1.25	1.19	1.14	1.19	1.14	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		628			795			630			892	
Travel Time (s)		14.3			18.1			14.3			20.3	
Volume (vph)	328	172	43	117	138	95	45	947	79	62	823	230
Confl. Peds. (#/hr)	84		71	71		84	140		143	143		140
Confl. Bikes (#/hr)			76			13			33			41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	7%	0%	8%	5%	5%	2%	11%	11%	15%	7%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	357	187	47	127	150	103	49	1029	86	67	895	250
Lane Group Flow (vph)	357	234	0	127	253	0	49	1115	0	67	1145	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	8.0		5.0	1.0		5.0	1.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		9.0	44.0		9.0	47.0	
Total Split (s)	16.0	34.0	0.0	10.0	28.0	0.0	9.0	47.0	0.0	9.0	47.0	0.0
Total Split (%)	16.0%	34.0%	0.0%	10.0%	28.0%	0.0%	9.0%	47.0%	0.0%	9.0%	47.0%	0.0%
Maximum Green (s)	12.0	30.0		6.0	24.0		5.0	43.0		5.0	43.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			25.0			25.0	
Flash Dont Walk (s)		17.0			17.0			15.0			15.0	
Pedestrian Calls (#/hr)		0			0			5			0	
Act Effct Green (s)	36.2	26.2		26.2	20.2		52.6	48.6		52.6	48.6	
Actuated g/C Ratio	0.36	0.26		0.26	0.20		0.53	0.49		0.53	0.49	
v/c Ratio	1.21	0.32		0.48	0.86		0.32	0.83		0.48	0.85	
Control Delay	148.3	30.5		30.0	65.0		18.8	22.3		25.3	14.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	148.3	30.5		30.0	65.0		18.8	22.3		25.3	14.6	
LOS	F	C		C	E		B	C		C	B	
Approach Delay		101.6			53.3			22.2			15.2	
Approach LOS		F			D			C			B	
90th %ile Green (s)	12.0	30.0		6.0	24.0		5.0	43.0		5.0	43.0	
90th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	12.0	30.0		6.0	24.0		5.0	43.0		5.0	43.0	
70th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	12.0	27.6		6.0	21.6		5.0	45.4		5.0	45.4	
50th %ile Term Code	Max	Hold		Max	Gap		Max	Coord		Max	Coord	
30th %ile Green (s)	12.0	24.3		6.0	18.3		5.0	48.7		5.0	48.7	
30th %ile Term Code	Max	Hold		Max	Gap		Max	Coord		Max	Coord	
10th %ile Green (s)	12.0	19.3		6.0	13.3		0.0	62.7		0.0	62.7	
10th %ile Term Code	Max	Hold		Max	Gap		Skip	Coord		Skip	Coord	
Queue Length 50th (ft)	~227	57		54	154		12	163		7	55	
Queue Length 95th (ft)	#453	87		94	#260		m18	#476		m18	#488	
Internal Link Dist (ft)		548			715			550			812	
Turn Bay Length (ft)												
Base Capacity (vph)	296	840		263	348		151	1349		140	1348	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.21	0.28		0.48	0.73		0.32	0.83		0.48	0.85	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.21

Intersection Signal Delay: 37.2

Intersection LOS: D

Intersection Capacity Utilization 92.4%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

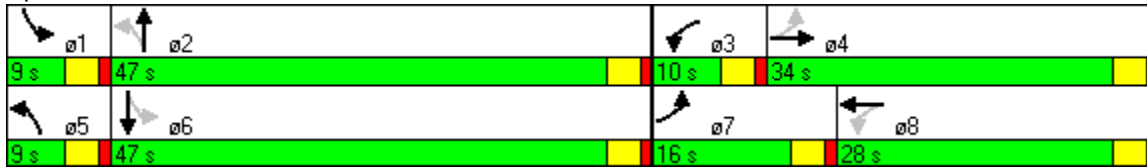
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 95: Columbus Avenue & Mass Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12	11	12	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.93			0.94		0.93	0.99		0.97	0.98	
Frt		0.900			0.948			0.993			0.994	
Flt Protected		0.995			0.981		0.950			0.950		
Satd. Flow (prot)	0	1395	0	0	1283	0	1540	3004	0	1516	2920	0
Flt Permitted		0.977			0.877		0.154			0.078		
Satd. Flow (perm)	0	1359	0	0	1119	0	231	3004	0	121	2920	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			32			7			6	
Headway Factor	1.14	1.14	1.14	1.14	1.42	1.14	1.19	1.14	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		640			294			892			301	
Travel Time (s)		14.5			6.7			20.3			6.8	
Volume (vph)	9	14	66	34	19	33	115	1194	62	56	1016	44
Confl. Peds. (#/hr)	90		74	74		90	428		251	251		428
Confl. Bikes (#/hr)			3			5			38			28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	8%	2%	0%	0%	0%	2%	6%	2%	0%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0							
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	15	72	37	21	36	125	1298	67	61	1104	48
Lane Group Flow (vph)	0	97	0	0	94	0	125	1365	0	61	1152	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phases	8	8		4	4		1	6		5	2	
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		11.0	52.0		14.0	55.0	
Total Split (s)	34.0	34.0	0.0	34.0	34.0	0.0	11.0	52.0	0.0	14.0	55.0	0.0
Total Split (%)	34.0%	34.0%	0.0%	34.0%	34.0%	0.0%	11.0%	52.0%	0.0%	14.0%	55.0%	0.0%
Maximum Green (s)	30.0	30.0		30.0	30.0		7.0	48.0		10.0	51.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min		None	None		None	C-Min		None	C-Min	
Walk Time (s)	9.0	9.0		9.0	9.0			34.0			34.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0			13.0			13.0	
Pedestrian Calls (#/hr)	428	428		251	251			74			90	
Act Effct Green (s)		30.0			30.0		58.7	53.1		58.1	51.2	
Actuated g/C Ratio		0.30			0.30		0.59	0.53		0.58	0.51	
v/c Ratio		0.21			0.26		0.56	0.85		0.37	0.77	
Control Delay		10.8			20.3		18.7	28.9		21.5	10.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		10.8			20.3		18.7	28.9		21.5	10.4	
LOS		B			C		B	C		C	B	
Approach Delay		10.8			20.3			28.1			11.0	
Approach LOS		B			C			C			B	
90th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	48.6		9.4	51.0	
90th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
70th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	50.9		7.1	51.0	
70th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
50th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	52.0		6.0	51.0	
50th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Min	Coord	
30th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	52.0		6.0	51.0	
30th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Min	Coord	
10th %ile Green (s)	30.0	30.0		30.0	30.0		6.0	62.0		0.0	52.0	
10th %ile Term Code	Ped	Ped		Ped	Ped		Min	Coord		Skip	Coord	
Queue Length 50th (ft)		11			29		39	367		5	311	
Queue Length 95th (ft)		50			71		m49	m422		m22	80	
Internal Link Dist (ft)		560			214			812			221	
Turn Bay Length (ft)												
Base Capacity (vph)		458			358		227	1598		213	1498	
Starvation Cap Reductn		0			0		0	0		0	4	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.21			0.26		0.55	0.85		0.29	0.77	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 88 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 20.1

Intersection LOS: C

Intersection Capacity Utilization 80.7%

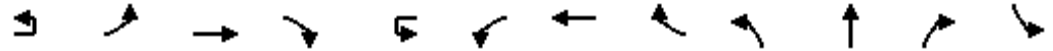
ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 134: St. Botolph Street & Mass Ave

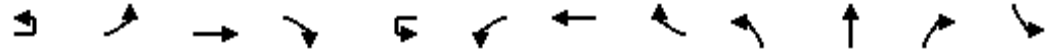




Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations			↕↕				↕↕			↕↕		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	10	12	16	12	11	12	12	13	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		0		50		0		0	0		0	0
Storage Lanes		0		1		0		1	0		0	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50	50			50		
Trailing Detector (ft)	0	0	0		0	0	0			0		
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor			0.85				0.86			0.99		
Frt			0.948				0.955			0.989		
Flt Protected			0.973				0.973					
Satd. Flow (prot)	0	0	2307	0	0	0	2532	0	0	3120	0	0
Flt Permitted			0.973				0.695					
Satd. Flow (perm)	0	0	2113	0	0	0	1671	0	0	3120	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			86				60			11		
Headway Factor	0.97	1.14	1.38	1.14	0.97	1.14	1.19	1.14	1.14	1.10	1.14	1.14
Link Speed (mph)			30				30			30		
Link Distance (ft)			634				427			301		
Travel Time (s)			14.4				9.7			6.8		
Volume (vph)	8	129	24	85	15	111	35	69	0	1137	94	0
Confl. Peds. (#/hr)		128		121		121		128	451		209	209
Confl. Bikes (#/hr)			3					6			25	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	10%	1%	0%	7%	9%	9%	0%	5%	7%	0%
Bus Blockages (#/hr)	0	0	0	9	0	0	0	0	0	0	0	0
Parking (#/hr)			12	12								
Mid-Block Traffic (%)			0%				0%			0%		
Adj. Flow (vph)	9	140	26	92	16	121	38	75	0	1236	102	0
Lane Group Flow (vph)	0	0	267	0	0	0	250	0	0	1338	0	0
Turn Type	Perm	Split			Perm	Perm						
Protected Phases		3	3				4			6		
Permitted Phases	3				4	4						
Detector Phases	3	3	3		4	4	4			6		
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0	4.0			4.0		
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0	23.0			29.0		
Total Split (s)	25.0	25.0	25.0	0.0	25.0	25.0	25.0	0.0	0.0	50.0	0.0	0.0
Total Split (%)	25.0%	25.0%	25.0%	0.0%	25.0%	25.0%	25.0%	0.0%	0.0%	50.0%	0.0%	0.0%
Maximum Green (s)	21.0	21.0	21.0		21.0	21.0	21.0			41.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0			6.0		
Lead/Lag	Lead	Lead	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	10
Grade (%)	0%	
Storage Length (ft)		150
Storage Lanes		1
Total Lost Time (s)	4.0	4.0
Leading Detector (ft)	50	50
Trailing Detector (ft)	0	0
Turning Speed (mph)		9
Lane Util. Factor	0.95	1.00
Ped Bike Factor		0.69
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3020	1256
Flt Permitted		
Satd. Flow (perm)	3020	871
Right Turn on Red		Yes
Satd. Flow (RTOR)		122
Headway Factor	1.19	1.25
Link Speed (mph)	30	
Link Distance (ft)	288	
Travel Time (s)	6.5	
Volume (vph)	920	127
Confl. Peds. (#/hr)		451
Confl. Bikes (#/hr)		26
Peak Hour Factor	0.92	0.92
Growth Factor	100%	100%
Heavy Vehicles (%)	4%	8%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Adj. Flow (vph)	1000	138
Lane Group Flow (vph)	1000	138
Turn Type		Perm
Protected Phases	2	
Permitted Phases		2
Detector Phases	2	2
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	29.0	29.0
Total Split (s)	50.0	50.0
Total Split (%)	50.0%	50.0%
Maximum Green (s)	41.0	41.0
Yellow Time (s)	3.0	3.0
All-Red Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Minimum Gap (s)	3.0	3.0



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0	0.0					0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0	0.0					0.0
Recall Mode	Min	Min	Min		Min	Min	Min					Min
Walk Time (s)	8.0	8.0	8.0		8.0	8.0	8.0					
Flash Dont Walk (s)	10.0	10.0	10.0		10.0	10.0	10.0					
Pedestrian Calls (#/hr)	149	149	149		129	129	129					
Act Effct Green (s)			18.1				18.9					51.0
Actuated g/C Ratio			0.18				0.19					0.51
v/c Ratio			0.55				0.68					0.84
Control Delay			29.6				38.8					13.6
Queue Delay			0.4				1.2					4.9
Total Delay			29.9				39.9					18.5
LOS			C				D					B
Approach Delay			29.9				39.9					18.5
Approach LOS			C				D					B
90th %ile Green (s)	18.5	18.5	18.5		21.0	21.0	21.0					43.5
90th %ile Term Code	Gap	Gap	Gap		Max	Max	Max					Coord
70th %ile Green (s)	18.0	18.0	18.0		19.7	19.7	19.7					45.3
70th %ile Term Code	Ped	Ped	Ped		Gap	Gap	Gap					Coord
50th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0					47.0
50th %ile Term Code	Ped	Ped	Ped		Ped	Ped	Ped					Coord
30th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0					47.0
30th %ile Term Code	Ped	Ped	Ped		Ped	Ped	Ped					Coord
10th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0					47.0
10th %ile Term Code	Ped	Ped	Ped		Ped	Ped	Ped					Coord
Queue Length 50th (ft)			54				60					116
Queue Length 95th (ft)			96				102					#161
Internal Link Dist (ft)			554				347					221
Turn Bay Length (ft)												
Base Capacity (vph)			552				398					1596
Starvation Cap Reductn			0				0					86
Spillback Cap Reductn			57				41					200
Storage Cap Reductn			0				0					0
Reduced v/c Ratio			0.54				0.70					0.96

Intersection Summary

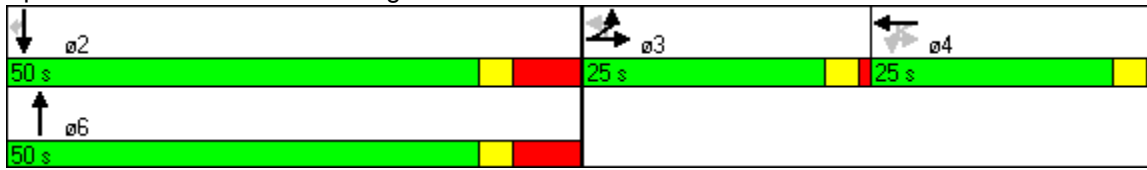
Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 84 (84%), Referenced to phase 2:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 40.0 Intersection LOS: D
 Intersection Capacity Utilization 60.5% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBT	SBR
Time Before Reduce (s)	0.0	0.0
Time To Reduce (s)	0.0	0.0
Recall Mode	C-Min	C-Min
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)	51.0	51.0
Actuated g/C Ratio	0.51	0.51
v/c Ratio	0.65	0.27
Control Delay	21.7	6.8
Queue Delay	54.2	0.0
Total Delay	75.9	6.8
LOS	E	A
Approach Delay	67.6	
Approach LOS	E	
90th %ile Green (s)	43.5	43.5
90th %ile Term Code	Coord	Coord
70th %ile Green (s)	45.3	45.3
70th %ile Term Code	Coord	Coord
50th %ile Green (s)	47.0	47.0
50th %ile Term Code	Coord	Coord
30th %ile Green (s)	47.0	47.0
30th %ile Term Code	Coord	Coord
10th %ile Green (s)	47.0	47.0
10th %ile Term Code	Coord	Coord
Queue Length 50th (ft)	218	19
Queue Length 95th (ft)	m235	m19
Internal Link Dist (ft)	208	
Turn Bay Length (ft)		150
Base Capacity (vph)	1539	503
Starvation Cap Reductn	638	0
Spillback Cap Reductn	172	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.11	0.27

Intersection Summary

Splits and Phases: 94: Huntington Avenue & Mass Ave





Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Lane Configurations	↗		↗		↘	↕			↕			
Ideal Flow (vphpl)	1500	1500	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	11	12	11	11	11	11	
Grade (%)						0%			0%			
Storage Length (ft)	0		0		0		0	0		0		
Storage Lanes	1		1		1		0	0		0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50		50	50	50	50		50	50			
Trailing Detector (ft)	0		0	0	0	0		0	0			
Turning Speed (mph)	9	9	9	15	15		9	15		9	9	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Ped Bike Factor					0.80	1.00			0.91			
Frt	0.865					0.997			0.978			
Flt Protected					0.950				0.999			
Satd. Flow (prot)	1168	0	1710	0	1624	3122	0	0	2799	0	0	
Flt Permitted					0.370				0.687			
Satd. Flow (perm)	1168	0	1710	0	508	3122	0	0	1925	0	0	
Right Turn on Red		No	Yes				Yes				No	
Satd. Flow (RTOR)						6						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.19	1.19	1.19	1.19	
Link Speed (mph)						25			25			
Link Distance (ft)						288			768			
Travel Time (s)						7.9			20.9			
Volume (vph)	443	15	0	29	371	917	19	16	566	41	60	
Confl. Peds. (#/hr)		156	174	156	176		45	45		156	176	
Confl. Bikes (#/hr)	1	1					39			37	37	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	482	16	0	32	403	997	21	17	615	45	65	
Lane Group Flow (vph)	498	0	0	0	435	1018	0	0	742	0	0	
Turn Type	custom		Free	custom	Prot			Perm				
Protected Phases	7 8!			2	2 7 8	1 2 8			1			7
Permitted Phases			Free	7 8!				1				
Detector Phases	7 8			2	2 7 8	1 2 8		1	1			
Minimum Initial (s)				6.0				8.0	8.0			8.0
Minimum Split (s)				12.0				28.0	28.0			21.0
Total Split (s)	45.0	0.0	0.0	12.0	57.0	78.0	0.0	43.0	43.0	0.0	0.0	22.0
Total Split (%)	45.0%	0.0%	0.0%	12.0%	57.0%	78.0%	0.0%	43.0%	43.0%	0.0%	0.0%	22%
Maximum Green (s)				6.0				37.0	37.0			16.0
Yellow Time (s)				3.0				3.0	3.0			3.0
All-Red Time (s)				3.0				3.0	3.0			3.0
Lead/Lag				Lag				Lead	Lead			Lead
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0				2.0	2.0			2.0
Minimum Gap (s)				2.0				2.0	2.0			2.0

Lane Group	ø8
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	22.5
Total Split (s)	23.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0



Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Time Before Reduce (s)				0.0				0.0	0.0			0.0
Time To Reduce (s)				0.0				0.0	0.0			0.0
Recall Mode				Max				C-Max	C-Max			Ped
Walk Time (s)								15.0	15.0			10.0
Flash Dont Walk (s)								7.0	7.0			5.0
Pedestrian Calls (#/hr)								5	5			0
Act Effct Green (s)	41.0				49.0	74.0			39.0			
Actuated g/C Ratio	0.41				0.49	0.74			0.39			
v/c Ratio	1.04				1.29	0.44			0.99			
Control Delay	82.7				163.9	9.9			61.6			
Queue Delay	66.2				0.0	11.6			39.5			
Total Delay	148.8				163.9	21.5			101.1			
LOS	F				F	C			F			
Approach Delay						64.1			101.1			
Approach LOS						E			F			
90th %ile Green (s)				6.0				37.0	37.0			16.0
90th %ile Term Code				MaxR				Coord	Coord			Max
70th %ile Green (s)				6.0				37.0	37.0			16.0
70th %ile Term Code				MaxR				Coord	Coord			Max
50th %ile Green (s)				6.0				37.0	37.0			16.0
50th %ile Term Code				MaxR				Coord	Coord			Max
30th %ile Green (s)				6.0				37.0	37.0			16.0
30th %ile Term Code				MaxR				Coord	Coord			Max
10th %ile Green (s)				6.0				37.0	37.0			16.0
10th %ile Term Code				MaxR				Coord	Coord			Max
Queue Length 50th (ft)	~345				~146	260			242			
Queue Length 95th (ft)	#542				m#269	319			#375			
Internal Link Dist (ft)						208			688			
Turn Bay Length (ft)												
Base Capacity (vph)	479				338	2312			751			
Starvation Cap Reductn	0				0	1276			0			
Spillback Cap Reductn	66				0	0			80			
Storage Cap Reductn	0				0	0			0			
Reduced v/c Ratio	1.21				1.29	0.98			1.11			

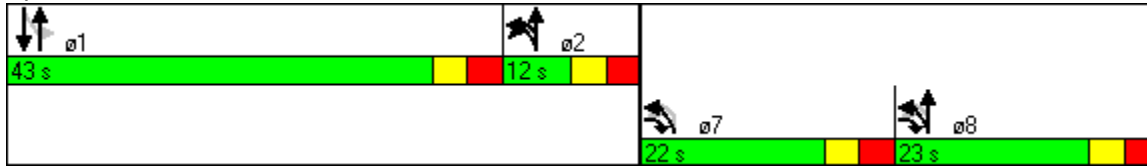
Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 31 (31%), Referenced to phase 1:NBSB, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 90.0 Intersection LOS: F
 Intersection Capacity Utilization 101.4% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø8
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	17.0
90th %ile Term Code	MaxR
70th %ile Green (s)	17.0
70th %ile Term Code	MaxR
50th %ile Green (s)	17.0
50th %ile Term Code	MaxR
30th %ile Green (s)	17.0
30th %ile Term Code	MaxR
10th %ile Green (s)	17.0
10th %ile Term Code	MaxR
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 93: Westland Avenue & Massachusetts Avenue



Northeastern University IMP
481: Hemenway Street & Westland Avenue

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	16	16	16	10	10	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50					50	50		50	50	50
Trailing Detector (ft)	0	0					0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.88						0.98			1.00	0.91
Frt		0.971						0.983				0.850
Flt Protected		0.981						0.993			0.994	
Satd. Flow (prot)	0	1433	0	0	0	0	0	1636	0	0	1546	1391
Flt Permitted		0.981						0.673			0.899	
Satd. Flow (perm)	0	1335	0	0	0	0	0	1103	0	0	1394	1267
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.12	1.14	1.14	1.14	1.14	0.97	1.12	0.97	1.25	1.25	1.19
Link Speed (mph)		25				25		25			25	
Link Distance (ft)		465			518			1125			259	
Travel Time (s)		12.7			14.1			30.7			7.1	
Volume (vph)	65	67	36	0	0	0	60	317	55	58	432	551
Confl. Peds. (#/hr)	106		131	131		106	89		47	47		89
Confl. Bikes (#/hr)			25			11			18			21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	15%	0%	0%	0%	8%	0%	14%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	71	73	39	0	0	0	65	345	60	63	470	599
Lane Group Flow (vph)	0	183	0	0	0	0	0	470	0	0	533	599
Turn Type	Split						Perm			Perm		pm+ov
Protected Phases	3	3						1			1	3
Permitted Phases							1			1		1
Detector Phases	3	3					1	1		1	1	3
Minimum Initial (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.0	12.0					12.0	12.0		12.0	12.0	12.0
Total Split (s)	31.0	31.0	0.0	0.0	0.0	0.0	43.0	43.0	0.0	43.0	43.0	31.0
Total Split (%)	34.4%	34.4%	0.0%	0.0%	0.0%	0.0%	47.8%	47.8%	0.0%	47.8%	47.8%	34.4%
Maximum Green (s)	27.0	27.0					39.0	39.0		39.0	39.0	27.0
Yellow Time (s)	3.0	3.0					3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0

Lane Group	ø2
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	7.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	18%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None					None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		16.4					35.6			35.6	52.0	
Actuated g/C Ratio		0.24					0.52			0.52	0.76	
v/c Ratio		0.54					0.82			0.74	0.61	
Control Delay		31.3					34.8			26.3	6.5	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		31.3					34.8			26.3	6.5	
LOS		C					C			C	A	
Approach Delay		31.3					34.8			15.8		
Approach LOS		C					C			B		
90th %ile Green (s)	27.0	27.0					39.0	39.0		39.0	39.0	27.0
90th %ile Term Code	Max	Max					Max	Max		Max	Max	Max
70th %ile Green (s)	24.6	24.6					39.0	39.0		39.0	39.0	24.6
70th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
50th %ile Green (s)	20.6	20.6					39.0	39.0		39.0	39.0	20.6
50th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
30th %ile Green (s)	8.1	8.1					28.6	28.6		28.6	28.6	8.1
30th %ile Term Code	Gap	Gap					Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)	7.0	7.0					22.9	22.9		22.9	22.9	7.0
10th %ile Term Code	Min	Min					Gap	Gap		Gap	Gap	Min
Queue Length 50th (ft)		83					220			232	103	
Queue Length 95th (ft)		145					#463			#471	168	
Internal Link Dist (ft)		385			438		1045			179		
Turn Bay Length (ft)												
Base Capacity (vph)		513					612			774	1042	
Starvation Cap Reductn		0					0			0	0	
Spillback Cap Reductn		0					0			0	0	
Storage Cap Reductn		0					0			0	0	
Reduced v/c Ratio		0.36					0.77			0.69	0.57	

Intersection Summary

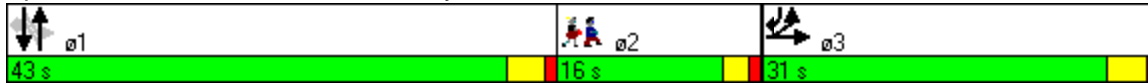
Area Type:	CBD
Cycle Length:	90
Actuated Cycle Length:	68.8
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	22.4
Intersection LOS:	C
Intersection Capacity Utilization:	83.7%
ICU Level of Service:	E
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	87.6
50th %ile Actuated Cycle:	83.6
30th %ile Actuated Cycle:	44.7

Lane Group	ø2
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	40
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	13.0
90th %ile Term Code	Ped
70th %ile Green (s)	13.0
70th %ile Term Code	Ped
50th %ile Green (s)	13.0
50th %ile Term Code	Ped
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

10th %ile Actuated Cycle: 37.9

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 481: Hemenway Street & Westland Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔				
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	0	65	36	20	66	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	71	39	22	72	0	0	0	0
Pedestrians		70									76	
Lane Width (ft)		0.0									0.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)								308				
pX, platoon unblocked												
vC, conflicting volume	336	185	70	115	185	148	70				72	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	336	185	70	115	185	148	70				72	
tC, single (s)	7.1	6.5	6.2	7.1	6.6	6.3	4.2				4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.4	2.3				2.2	
p0 queue free %	100	100	100	100	90	96	99				100	
cM capacity (veh/h)	541	702	998	857	687	876	1506				1541	
Direction, Lane #	WB 1	NB 1										
Volume Total	110	93										
Volume Left	0	22										
Volume Right	39	0										
cSH	744	1506										
Volume to Capacity	0.15	0.01										
Queue Length 95th (ft)	13	1										
Control Delay (s)	10.7	1.8										
Lane LOS	B	A										
Approach Delay (s)	10.7	1.8										
Approach LOS	B											
Intersection Summary												
Average Delay			6.6									
Intersection Capacity Utilization			25.5%		ICU Level of Service					A		
Analysis Period (min)			15									



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↘
Sign Control	Free			Free	Stop	
Grade	15%			0%	0%	
Volume (veh/h)	104	0	0	470	21	81
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	0	0	511	23	88
Pedestrians	11			1	133	
Lane Width (ft)	12.0			12.0	16.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	15	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)				465		
pX, platoon unblocked						
vC, conflicting volume			246		768	247
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			246		768	247
tC, single (s)			4.1		6.4	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		93	87
cM capacity (veh/h)			1135		309	664
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	113	511	111			
Volume Left	0	0	23			
Volume Right	0	0	88			
cSH	1700	1700	537			
Volume to Capacity	0.07	0.30	0.21			
Queue Length 95th (ft)	0	0	19			
Control Delay (s)	0.0	0.0	13.4			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	13.4			
Approach LOS			B			
Intersection Summary						
Average Delay			2.0			
Intersection Capacity Utilization			41.3%		ICU Level of Service	A
Analysis Period (min)			15			



Movement	EBT	EBR	WBL	WBT	NBU	NBL	NBR
Lane Configurations	↶			↷		↶	
Sign Control	Stop			Stop		Stop	
Volume (vph)	57	40	96	393	2	13	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	62	43	104	427	0	14	53

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	105	532	67
Volume Left (vph)	0	104	14
Volume Right (vph)	43	0	53
Hadj (s)	0.00	0.08	-0.22
Departure Headway (s)	4.6	4.3	5.1
Degree Utilization, x	0.14	0.63	0.10
Capacity (veh/h)	747	825	630
Control Delay (s)	8.4	14.3	8.6
Approach Delay (s)	8.4	14.3	8.6
Approach LOS	A	B	A

Intersection Summary			
Delay		12.9	
HCM Level of Service		B	
Intersection Capacity Utilization	55.5%		ICU Level of Service B
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	399	8	274	69	25	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	434	9	298	75	27	37
Pedestrians	11		1		6	
Lane Width (ft)	16.0		10.0		11.0	
Walking Speed (ft/s)	4.0		4.0		4.0	
Percent Blockage	1		0		0	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	263					
pX, platoon unblocked	0.78	0.78			0.78	
vC, conflicting volume	439	352			384	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	276	165			206	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	18	99			97	
cM capacity (veh/h)	532	671			1046	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	442	373	64			
Volume Left	434	0	27			
Volume Right	9	75	0			
cSH	534	1700	1046			
Volume to Capacity	0.83	0.22	0.03			
Queue Length 95th (ft)	209	0	2			
Control Delay (s)	36.4	0.0	3.7			
Lane LOS	E		A			
Approach Delay (s)	36.4	0.0	3.7			
Approach LOS	E					
Intersection Summary						
Average Delay			18.6			
Intersection Capacity Utilization			58.5%	ICU Level of Service	B	
Analysis Period (min)			15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations					↕			↕				↕
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Volume (veh/h)	0	0	0	0	0	1	7	68	0	4	0	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	1	8	74	0	0	0	80
Pedestrians		230			294			13				144
Lane Width (ft)		0.0			10.0			16.0				16.0
Walking Speed (ft/s)		4.0			4.0			4.0				4.0
Percent Blockage		0			20			1				16
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												482
pX, platoon unblocked									0.00			
vC, conflicting volume	582	731	361	514	769	512	385		0	368		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	582	731	361	514	769	512	385		0	368		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	7.2	4.1		0.0	4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	4.2	2.2		0.0	2.2		
p0 queue free %	100	100	100	100	100	100	99		0	100		
cM capacity (veh/h)	300	278	678	312	264	273	1184		0	956		

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	1	82	155
Volume Left	0	8	0
Volume Right	1	0	75
cSH	273	1184	956
Volume to Capacity	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	18.2	0.8	0.0
Lane LOS	C	A	
Approach Delay (s)	18.2	0.8	0.0
Approach LOS	C		

Intersection Summary		
Average Delay		0.4
Intersection Capacity Utilization	33.8%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	69
Peak Hour Factor	0.92
Hourly flow rate (vph)	75
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	
tC, single (s)	
tC, 2 stage (s)	
tF (s)	
p0 queue free %	
cM capacity (veh/h)	
Direction, Lane #	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓			↔
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	1	853	13	2	675
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	927	14	2	734
Pedestrians			3			8
Lane Width (ft)			10.0			14.0
Walking Speed (ft/s)			4.0			4.0
Percent Blockage			0			1
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			422			505
pX, platoon unblocked	0.74					
vC, conflicting volume	1675	479			941	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1918	479			941	
tC, single (s)	6.8	6.9			5.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.7	
p0 queue free %	100	100			100	
cM capacity (veh/h)	44	534			490	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	1	618	323	736
Volume Left	0	0	0	2
Volume Right	1	0	14	0
cSH	534	1700	1700	490
Volume to Capacity	0.00	0.36	0.19	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	11.8	0.0	0.0	0.1
Lane LOS	B			A
Approach Delay (s)	11.8	0.0		0.1
Approach LOS	B			

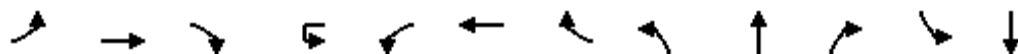
Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		53.6%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘			↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	8	23	0	875	675	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	25	0	951	734	0
Pedestrians	79			235		
Lane Width (ft)	13.0			11.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	7			18		
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				95	832	
pX, platoon unblocked	0.43					
vC, conflicting volume	1999	446	813			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3329	446	813			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	95	100			
cM capacity (veh/h)	2	512	764			
Direction, Lane #	EB 1	NB 1	SB 1	SB 2		
Volume Total	34	951	367	367		
Volume Left	9	0	0	0		
Volume Right	25	0	0	0		
cSH	8	1700	1700	1700		
Volume to Capacity	4.18	0.56	0.22	0.22		
Queue Length 95th (ft)	Err	0	0	0		
Control Delay (s)	Err	0.0	0.0	0.0		
Lane LOS	F					
Approach Delay (s)	Err	0.0	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay	196.1					
Intersection Capacity Utilization	61.2%		ICU Level of Service	B		
Analysis Period (min)	15					



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔↔
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	876	49	24	673
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	952	53	26	732
Pedestrians	56		9			62
Lane Width (ft)	0.0		13.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	0		1			5
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			229			208
pX, platoon unblocked	0.43	0.39			0.39	
vC, conflicting volume	1462	1097			1061	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1605	1246			1156	
tC, single (s)	6.8	6.9			5.9	
tC, 2 stage (s)						
tF (s)	3.5	3.3			3.1	
p0 queue free %	100	100			76	
cM capacity (veh/h)	32	63			110	
Direction, Lane #	NB 1	SB 1	SB 2			
Volume Total	1005	270	488			
Volume Left	0	26	0			
Volume Right	53	0	0			
cSH	1700	110	1700			
Volume to Capacity	0.59	0.24	0.29			
Queue Length 95th (ft)	0	21	0			
Control Delay (s)	0.0	16.4	0.0			
Lane LOS		C				
Approach Delay (s)	0.0	5.9				
Approach LOS						
Intersection Summary						
Average Delay			2.5			
Intersection Capacity Utilization			73.5%	ICU Level of Service		D
Analysis Period (min)			15			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕				↕						↕
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Volume (veh/h)	58	318	14	1	7	258	35	0	0	0	14	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	63	346	15	0	8	280	38	0	0	0	15	2
Pedestrians		15				36			56			134
Lane Width (ft)		11.0				11.0			0.0			16.0
Walking Speed (ft/s)		4.0				4.0			4.0			4.0
Percent Blockage		1				3			0			15
Right turn flare (veh)												
Median type									None			None
Median storage (veh)												
Upstream signal (ft)		373										
pX, platoon unblocked				0.00								
vC, conflicting volume	452			0	417			874	1003	445	964	992
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	452			0	417			874	1003	445	964	992
tC, single (s)	4.1			0.0	4.2			7.1	6.5	6.2	7.1	6.5
tC, 2 stage (s)												
tF (s)	2.2			0.0	2.3			3.5	4.0	3.3	3.5	4.0
p0 queue free %	93			0	99			100	100	100	91	99
cM capacity (veh/h)	943			0	1081			220	192	600	164	195

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	424	326	25
Volume Left	63	8	15
Volume Right	15	38	8
cSH	943	1081	208
Volume to Capacity	0.07	0.01	0.12
Queue Length 95th (ft)	5	1	10
Control Delay (s)	2.0	0.3	24.6
Lane LOS	A	A	C
Approach Delay (s)	2.0	0.3	24.6
Approach LOS			C

Intersection Summary		
Average Delay		2.0
Intersection Capacity Utilization	62.4%	ICU Level of Service
Analysis Period (min)		15
		B



Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	7
Peak Hour Factor	0.92
Hourly flow rate (vph)	8
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	448
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	448
tC, single (s)	6.5
tC, 2 stage (s)	
tF (s)	3.6
p0 queue free %	98
cM capacity (veh/h)	469
Direction, Lane #	



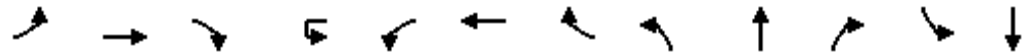
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕							
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	68	312	18	37	255	70	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	74	339	20	40	277	76	0	0	0	0	0	0
Pedestrians		85			7			133			117	
Lane Width (ft)		11.0			10.0			0.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		737										
pX, platoon unblocked												
vC, conflicting volume	470			492			1110	1180	489	1016	1152	517
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	470			492			1110	1180	489	1016	1152	517
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			96			100	100	100	100	100	100
cM capacity (veh/h)	1102			1008			162	172	580	200	179	526

Direction, Lane #	EB 1	WB 1
Volume Total	433	393
Volume Left	74	40
Volume Right	20	76
cSH	1102	1008
Volume to Capacity	0.07	0.04
Queue Length 95th (ft)	5	3
Control Delay (s)	2.1	1.3
Lane LOS	A	A
Approach Delay (s)	2.1	1.3
Approach LOS		

Intersection Summary		
Average Delay		1.7
Intersection Capacity Utilization	41.2%	ICU Level of Service
Analysis Period (min)		15
		A

Northeastern University IMP
29: Columbus Avenue & Camden Street

2023 No-Build
Timing Plan: AM Peak Hour



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕				↕			↕			↕
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Volume (veh/h)	4	314	12	1	15	356	2	2	0	20	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	341	13	0	16	387	2	2	0	22	2	1
Pedestrians		45				57			64			34
Lane Width (ft)		11.0				10.0			16.0			13.0
Walking Speed (ft/s)		4.0				4.0			4.0			4.0
Percent Blockage		3				4			7			3
Right turn flare (veh)												
Median type									None			None
Median storage veh												
Upstream signal (ft)						628						
pX, platoon unblocked				0.00								
vC, conflicting volume	423			0	418			887	876	469	890	882
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	423			0	418			887	876	469	890	882
tC, single (s)	4.1			0.0	4.1			7.1	6.5	6.2	7.1	6.5
tC, 2 stage (s)												
tF (s)	2.2			0.0	2.2			3.5	4.0	3.3	3.5	4.0
p0 queue free %	100			0	98			99	100	96	99	100
cM capacity (veh/h)	1112			0	1070			217	256	525	216	254

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	359	405	24	3
Volume Left	4	16	2	2
Volume Right	13	2	22	0
cSH	1112	1070	465	227
Volume to Capacity	0.00	0.02	0.05	0.01
Queue Length 95th (ft)	0	1	4	1
Control Delay (s)	0.1	0.5	13.2	21.1
Lane LOS	A	A	B	C
Approach Delay (s)	0.1	0.5	13.2	21.1
Approach LOS			B	C

Intersection Summary			
Average Delay			0.8
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)			15



Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	0
Peak Hour Factor	0.92
Hourly flow rate (vph)	0
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	467
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	467
tC, single (s)	6.2
tC, 2 stage (s)	
tF (s)	3.3
p0 queue free %	100
cM capacity (veh/h)	562
Direction, Lane #	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	8	2	46	26	95	4	13	9	46	35	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	9	2	50	28	103	4	14	10	50	38	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	28	182	28	108								
Volume Left (vph)	17	50	4	50								
Volume Right (vph)	2	103	10	20								
Hadj (s)	0.14	-0.22	-0.06	0.00								
Departure Headway (s)	4.5	4.0	4.4	4.4								
Degree Utilization, x	0.04	0.20	0.03	0.13								
Capacity (veh/h)	758	864	766	774								
Control Delay (s)	7.7	8.1	7.6	8.0								
Approach Delay (s)	7.7	8.1	7.6	8.0								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.0									
HCM Level of Service			A									
Intersection Capacity Utilization			33.2%	ICU Level of Service								A
Analysis Period (min)			15									

11046 Northeastern IMP
363: Huntington Avenue & Gainsborough St

2023 No-Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	11	12	12	10	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.92			0.95			0.72				
Frt		0.980			0.989			0.977				
Flt Protected	0.950				0.998			0.970				
Satd. Flow (prot)	1652	3142	0	0	4581	0	0	1483	0	0	0	0
Flt Permitted	0.323				0.881			0.970				
Satd. Flow (perm)	562	3142	0	0	4044	0	0	1156	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			19			11				
Headway Factor	1.09	1.00	1.00	1.00	1.04	1.00	1.00	1.09	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		305			644			302				308
Travel Time (s)		6.9			14.6			6.9				7.0
Volume (vph)	58	688	105	30	614	49	86	30	24	0	0	0
Confl. Peds. (#/hr)			230			335	481		225			
Confl. Bikes (#/hr)			10			12			4			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	1%	0%	3%	2%	4%	0%	9%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	63	748	114	33	667	53	93	33	26	0	0	0
Lane Group Flow (vph)	63	862	0	0	753	0	0	152	0	0	0	0
Turn Type	Perm			D.P+P			Perm					
Protected Phases		1		3	1 3			2				
Permitted Phases	1			1			2					
Detector Phases	1	1		3	1 3		2	2				
Minimum Initial (s)	8.0	8.0		6.0			8.0	8.0				
Minimum Split (s)	19.0	19.0		12.0			31.0	31.0				
Total Split (s)	51.0	51.0	0.0	12.0	63.0	0.0	37.0	37.0	0.0	0.0	0.0	0.0
Total Split (%)	51.0%	51.0%	0.0%	12.0%	63.0%	0.0%	37.0%	37.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	46.0	46.0		7.0			31.0	31.0				
Yellow Time (s)	3.0	3.0		3.0			3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0			3.0	3.0				
Lead/Lag				Lag			Lead	Lead				
Lead-Lag Optimize?				Yes			Yes	Yes				
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0			3.0	3.0				

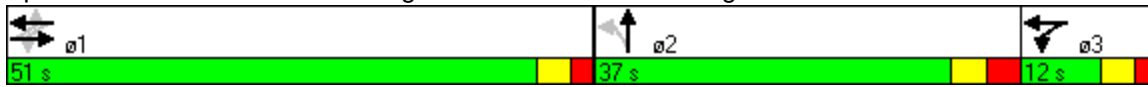


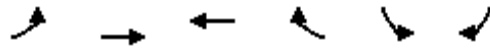
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Recall Mode	C-Max	C-Max		None			None	None				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	5.0	5.0					17.0	17.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)	61.3	61.3			69.3			18.7				
Actuated g/C Ratio	0.61	0.61			0.69			0.19				
v/c Ratio	0.18	0.45			0.26			0.67				
Control Delay	11.1	13.2			5.2			48.7				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	11.1	13.2			5.2			48.7				
LOS	B	B			A			D				
Approach Delay		13.0			5.2			48.7				
Approach LOS		B			A			D				
90th %ile Green (s)	52.1	52.1		7.0			24.9	24.9				
90th %ile Term Code	Coord	Coord		Max			Gap	Gap				
70th %ile Green (s)	57.1	57.1		7.0			19.9	19.9				
70th %ile Term Code	Coord	Coord		Max			Gap	Gap				
50th %ile Green (s)	60.4	60.4		7.0			16.6	16.6				
50th %ile Term Code	Coord	Coord		Max			Gap	Gap				
30th %ile Green (s)	63.6	63.6		7.0			13.4	13.4				
30th %ile Term Code	Coord	Coord		Max			Gap	Gap				
10th %ile Green (s)	68.1	68.1		7.0			8.9	8.9				
10th %ile Term Code	Coord	Coord		Max			Gap	Gap				
Queue Length 50th (ft)	15	179			44			85				
Queue Length 95th (ft)	68	330			82			139				
Internal Link Dist (ft)		225			564			222			228	
Turn Bay Length (ft)	150											
Base Capacity (vph)	344	1934			2849			389				
Starvation Cap Reductn	0	0			0			0				
Spillback Cap Reductn	0	0			0			0				
Storage Cap Reductn	0	0			0			0				
Reduced v/c Ratio	0.18	0.45			0.26			0.39				

Intersection Summary

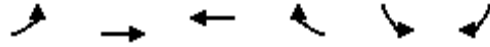
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	23 (23%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	12.8
Intersection LOS:	B
Intersection Capacity Utilization:	67.6%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 363: Huntington Avenue & Gainsborough St





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Lane Configurations			↑↑			↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)		0%	0%		0%		
Storage Length (ft)	0			0	0	0	
Storage Lanes	0			0	0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)			100			20	
Trailing Detector (ft)			0			0	
Turning Speed (mph)	15			9	15	9	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00	
Ped Bike Factor							
Fr _t							0.865
Fl _t Protected							
Satd. Flow (prot)	0	0	3505	0	0	1627	
Fl _t Permitted							
Satd. Flow (perm)	0	0	3505	0	0	1627	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						358	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)		25	25		30		
Link Distance (ft)		249	450		303		
Travel Time (s)		6.8	12.3		6.9		
Volume (vph)	0	0	696	0	0	150	
Confl. Peds. (#/hr)	9			20		176	
Confl. Bikes (#/hr)				10		2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	9%	3%	0%	0%	1%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)		0%	0%		0%		
Adj. Flow (vph)	0	0	757	0	0	163	
Lane Group Flow (vph)	0	0	757	0	0	163	
Turn Type							custom
Protected Phases			1			3	2
Permitted Phases							
Detector Phases			1			3	
Minimum Initial (s)			8.0			8.0	4.0
Minimum Split (s)			19.0			13.0	19.0
Total Split (s)	0.0	0.0	57.0	0.0	0.0	24.0	19.0
Total Split (%)	0.0%	0.0%	57.0%	0.0%	0.0%	24.0%	19%
Maximum Green (s)			53.0			20.0	15.0
Yellow Time (s)			3.0			3.0	3.0
All-Red Time (s)			1.0			1.0	1.0
Lead/Lag			Lead			Lag	
Lead-Lag Optimize?			Yes			Yes	
Vehicle Extension (s)			3.0			3.0	3.0
Minimum Gap (s)			3.0			3.0	3.0



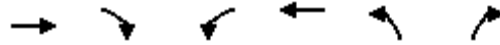
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Time Before Reduce (s)			0.0			0.0	0.0
Time To Reduce (s)			0.0			0.0	0.0
Recall Mode			C-Max			None	Ped
Walk Time (s)			7.0				10.0
Flash Dont Walk (s)			5.0				5.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)			65.0			8.0	
Actuated g/C Ratio			0.65			0.08	
v/c Ratio			0.33			0.35	
Control Delay			8.3			1.7	
Queue Delay			0.0			0.0	
Total Delay			8.3			1.7	
LOS			A			A	
Approach Delay			8.3				
Approach LOS			A				
90th %ile Green (s)			65.0			8.0	15.0
90th %ile Term Code			Coord			Min	Ped
70th %ile Green (s)			65.0			8.0	15.0
70th %ile Term Code			Coord			Min	Ped
50th %ile Green (s)			65.0			8.0	15.0
50th %ile Term Code			Coord			Min	Ped
30th %ile Green (s)			65.0			8.0	15.0
30th %ile Term Code			Coord			Min	Ped
10th %ile Green (s)			65.0			8.0	15.0
10th %ile Term Code			Coord			Min	Ped
Queue Length 50th (ft)			102			0	
Queue Length 95th (ft)			133			m0	
Internal Link Dist (ft)		169	370		223		
Turn Bay Length (ft)							
Base Capacity (vph)			2278			612	
Starvation Cap Reductn			0			0	
Spillback Cap Reductn			0			0	
Storage Cap Reductn			0			0	
Reduced v/c Ratio			0.33			0.27	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 23 (23%), Referenced to phase 1:WBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 7.1
 Intersection LOS: A
 Intersection Capacity Utilization 42.7%
 ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4019: Huntington Avenue & Opera Place





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Lane Configurations	↑↑						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	0%			0%	0%		
Storage Length (ft)		0	0		0	0	
Storage Lanes		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	100						
Trailing Detector (ft)	0						
Turning Speed (mph)		9	15		15	9	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt							
Flt Protected							
Satd. Flow (prot)	3505	0	0	0	0	0	
Flt Permitted							
Satd. Flow (perm)	3505	0	0	0	0	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)	30			30	30		
Link Distance (ft)	213			487	159		
Travel Time (s)	4.8			11.1	3.6		
Volume (vph)	887	0	0	0	0	0	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%	0%		
Adj. Flow (vph)	964	0	0	0	0	0	
Lane Group Flow (vph)	964	0	0	0	0	0	
Turn Type							
Protected Phases	1						2
Permitted Phases							
Detector Phases	1						
Minimum Initial (s)	8.0						4.0
Minimum Split (s)	14.0						19.0
Total Split (s)	81.0	0.0	0.0	0.0	0.0	0.0	19.0
Total Split (%)	81.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19%
Maximum Green (s)	77.0						15.0
Yellow Time (s)	3.0						3.0
All-Red Time (s)	1.0						1.0
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0						3.0
Minimum Gap (s)	3.0						3.0



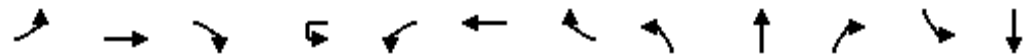
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Time Before Reduce (s)	0.0						0.0
Time To Reduce (s)	0.0						0.0
Recall Mode	C-Min						Ped
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	77.0						
Actuated g/C Ratio	0.77						
v/c Ratio	0.36						
Control Delay	2.9						
Queue Delay	0.0						
Total Delay	2.9						
LOS	A						
Approach Delay	2.9						
Approach LOS	A						
90th %ile Green (s)	77.0						15.0
90th %ile Term Code	Coord						Ped
70th %ile Green (s)	77.0						15.0
70th %ile Term Code	Coord						Ped
50th %ile Green (s)	77.0						15.0
50th %ile Term Code	Coord						Ped
30th %ile Green (s)	77.0						15.0
30th %ile Term Code	Coord						Ped
10th %ile Green (s)	77.0						15.0
10th %ile Term Code	Coord						Ped
Queue Length 50th (ft)	25						
Queue Length 95th (ft)	117						
Internal Link Dist (ft)	133			407	79		
Turn Bay Length (ft)							
Base Capacity (vph)	2699						
Starvation Cap Reductn	0						
Spillback Cap Reductn	0						
Storage Cap Reductn	0						
Reduced v/c Ratio	0.36						

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	13 (13%), Referenced to phase 1:EBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.36
Intersection Signal Delay:	2.9
Intersection Capacity Utilization	27.9%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

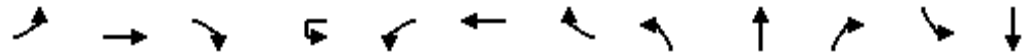
Splits and Phases: 4020: Huntington Avenue & South





Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑				↑↑			↑↑			↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	12	12	12	12	12	12	14
Grade (%)		0%				0%			0%			0%
Storage Length (ft)	0		0		0		0	0		0	0	
Storage Lanes	0		0		0		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50	50		50	50		50	50
Trailing Detector (ft)		0		0	0	0		0	0		0	0
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96				0.94			0.80			0.77
Frt		0.994				0.991			0.949			0.964
Flt Protected						0.996			0.982			0.988
Satd. Flow (prot)	0	3115	0	0	0	2947	0	0	1067	0	0	1357
Flt Permitted						0.757			0.854			0.911
Satd. Flow (perm)	0	3115	0	0	0	2212	0	0	927	0	0	1132
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)												17
Headway Factor	1.14	1.10	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.05
Link Speed (mph)		25				25			25			25
Link Distance (ft)		527				294			482			458
Travel Time (s)		14.4				8.0			13.1			12.5
Volume (vph)	0	764	33	48	35	825	59	29	19	29	41	86
Confl. Peds. (#/hr)	508		613		613		508	572		1516	1516	
Confl. Bikes (#/hr)			28				9					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	12%	2%	2%	4%	2%	28%	25%	6%	5%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Adj. Flow (vph)	0	830	36	52	38	897	64	32	21	32	45	93
Lane Group Flow (vph)	0	866	0	0	0	1051	0	0	85	0	0	188
Turn Type				D.P+P	D.P+P			Perm				Perm
Protected Phases		1		3	3	1 3			2			2
Permitted Phases				1	1			2			2	
Detector Phases		1		3	3	1 3		2	2		2	2
Minimum Initial (s)		8.0		8.0	8.0			8.0	8.0		8.0	8.0
Minimum Split (s)		21.0		14.0	14.0			16.0	16.0		16.0	16.0
Total Split (s)	0.0	58.0	0.0	14.0	14.0	72.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	0.0%	58.0%	0.0%	14.0%	14.0%	72.0%	0.0%	28.0%	28.0%	0.0%	28.0%	28.0%
Maximum Green (s)		53.0		9.0	9.0			22.0	22.0		22.0	22.0
Yellow Time (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
All-Red Time (s)		2.0		2.0	2.0			3.0	3.0		3.0	3.0
Lead/Lag				Lag	Lag			Lead	Lead		Lead	Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes		Yes	Yes
Vehicle Extension (s)		2.0		2.0	2.0			3.0	3.0		3.0	3.0
Minimum Gap (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Headway Factor	1.14
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	46
Confl. Peds. (#/hr)	572
Confl. Bikes (#/hr)	4
Peak Hour Factor	0.92
Growth Factor	100%
Heavy Vehicles (%)	0%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	50
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Time Before Reduce (s)		0.0		0.0	0.0			0.0	0.0		0.0	0.0
Time To Reduce (s)		0.0		0.0	0.0			0.0	0.0		0.0	0.0
Recall Mode		C-Max		None	None			Ped	Ped		Ped	Ped
Walk Time (s)		7.0						7.0	7.0		7.0	7.0
Flash Dont Walk (s)		7.0						2.0	2.0		2.0	2.0
Pedestrian Calls (#/hr)		0						0	0		0	0
Act Effct Green (s)		57.8				67.8			20.2			20.2
Actuated g/C Ratio		0.58				0.68			0.20			0.20
v/c Ratio		0.48				0.67			0.45			0.77
Control Delay		10.7				10.8			42.3			55.1
Queue Delay		0.0				0.0			0.0			0.0
Total Delay		10.7				10.8			42.3			55.1
LOS		B				B			D			E
Approach Delay		10.7				10.8			42.3			55.1
Approach LOS		B				B			D			E
90th %ile Green (s)		53.0		9.0	9.0			22.0	22.0		22.0	22.0
90th %ile Term Code		Coord		Max	Max			Max	Max		Max	Max
70th %ile Green (s)		53.0		9.0	9.0			22.0	22.0		22.0	22.0
70th %ile Term Code		Coord		Max	Max			Max	Max		Max	Max
50th %ile Green (s)		54.8		9.0	9.0			20.2	20.2		20.2	20.2
50th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
30th %ile Green (s)		58.9		9.0	9.0			16.1	16.1		16.1	16.1
30th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
10th %ile Green (s)		64.3		9.0	9.0			10.7	10.7		10.7	10.7
10th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
Queue Length 50th (ft)		105				145			46			101
Queue Length 95th (ft)		m114				202			m92			#190
Internal Link Dist (ft)		447				214			402			378
Turn Bay Length (ft)												
Base Capacity (vph)		1800				1573			222			285
Starvation Cap Reductn		0				0			0			0
Spillback Cap Reductn		0				0			0			0
Storage Cap Reductn		0				0			0			0
Reduced v/c Ratio		0.48				0.67			0.38			0.66

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 50 (50%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 15.8 Intersection LOS: B
 Intersection Capacity Utilization 80.7% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBR
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Splits and Phases: 643: Huntington Ave & Forsyth Street



11046 Northeastern IMP
569: Huntington Ave & Forsyth Way

2023 No-Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑			↕			↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	12	12	16	12	12	12	15
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50		50	50		50	50	50
Trailing Detector (ft)		0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.99			0.90				0.59
Frt		0.999			0.995			0.960				0.850
Flt Protected				0.950				0.999			0.997	
Satd. Flow (prot)	0	3149	0	1501	2994	0	0	1661	0	0	1674	1583
Flt Permitted				0.950				0.989			0.954	
Satd. Flow (perm)	0	3149	0	1501	2994	0	0	1645	0	0	1602	940
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.14	1.14	1.25	1.19	1.14	1.14	0.97	1.14	1.14	1.14	1.01
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		960			527			786			209	
Travel Time (s)		26.2			14.4			21.4			5.7	
Volume (vph)	0	642	3	176	639	24	9	288	127	20	334	99
Confl. Peds. (#/hr)			82			60			150			270
Confl. Bikes (#/hr)			11			14			4			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	1%	4%	0%	0%	0%	2%	16%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	698	3	191	695	26	10	313	138	22	363	108
Lane Group Flow (vph)	0	701	0	191	721	0	0	461	0	0	385	108
Turn Type				Prot			Perm			Perm		Perm
Protected Phases		1		3	1 3			2			2	
Permitted Phases							2			2		2
Detector Phases		1		3	1 3		2	2		2	2	2
Minimum Initial (s)		8.0		6.0			8.0	8.0		8.0	8.0	8.0
Minimum Split (s)		33.0		13.0			18.0	18.0		18.0	18.0	18.0
Total Split (s)	0.0	38.0	0.0	24.0	62.0	0.0	38.0	38.0	0.0	38.0	38.0	38.0
Total Split (%)	0.0%	38.0%	0.0%	24.0%	62.0%	0.0%	38.0%	38.0%	0.0%	38.0%	38.0%	38.0%
Maximum Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
Yellow Time (s)		3.0		3.0			3.0	3.0		3.0	3.0	3.0
All-Red Time (s)		2.0		3.0			4.0	4.0		4.0	4.0	4.0
Lead/Lag				Lag			Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?				Yes			Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)		2.0		2.0			3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)		2.0		3.0			3.0	3.0		3.0	3.0	3.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Recall Mode		C-Max		None			Ped	Ped		Ped	Ped	Ped
Walk Time (s)		7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		19.0					3.0	3.0		3.0	3.0	3.0
Pedestrian Calls (#/hr)		0					0	0		0	0	0
Act Effct Green (s)		37.8		17.9	59.6		32.4			32.4	32.4	32.4
Actuated g/C Ratio		0.38		0.18	0.60		0.32			0.32	0.32	0.32
v/c Ratio		0.59		0.71	0.40		0.87			0.74	0.36	
Control Delay		21.2		55.1	8.3		41.5			39.6	29.1	
Queue Delay		0.0		0.0	0.0		0.0			0.0	0.0	
Total Delay		21.2		55.1	8.3		41.5			39.6	29.1	
LOS		C		E	A		D			D	C	
Approach Delay		21.2			18.1		41.5			37.3		
Approach LOS		C			B		D			D		
90th %ile Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
90th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
70th %ile Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
70th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
50th %ile Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
50th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
30th %ile Green (s)		35.4		16.0			30.6	30.6		30.6	30.6	30.6
30th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)		49.5		9.3			23.2	23.2		23.2	23.2	23.2
10th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
Queue Length 50th (ft)		91		100	74		281			211	51	
Queue Length 95th (ft)		156		m167	92		m308			322	99	
Internal Link Dist (ft)		880			447		706			129		
Turn Bay Length (ft)				100								
Base Capacity (vph)		1190		300	1774		559			545	320	
Starvation Cap Reductn		0		0	0		0			0	0	
Spillback Cap Reductn		0		0	0		0			0	0	
Storage Cap Reductn		0		0	0		0			0	0	
Reduced v/c Ratio		0.59		0.64	0.41		0.82			0.71	0.34	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 62 (62%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 26.8 Intersection LOS: C
 Intersection Capacity Utilization 78.4% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 569: Huntington Ave & Forsyth Way





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕			↕		↖	↗		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	12	12	11	11	12	13	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50		50	50		50	50	
Trailing Detector (ft)	0	0			0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94			0.89			1.00			0.99	
Frt		0.959			0.971			0.997			0.997	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1516	2704	0	0	2705	0	1540	1498	0	1646	1596	0
Flt Permitted	0.950						0.143			0.481		
Satd. Flow (perm)	1516	2704	0	0	2705	0	232	1498	0	833	1596	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.25	1.19	1.14	1.14	1.14	1.14	1.19	1.19	1.14	1.10	1.14	1.14
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		477			960			561			606	
Travel Time (s)		13.0			26.2			15.3			16.5	
Volume (vph)	58	590	224	0	624	148	239	448	10	45	413	9
Confl. Peds. (#/hr)			88			221			141			266
Confl. Bikes (#/hr)			12			11			11			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	7%	0%	3%	6%	2%	10%	0%	2%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	63	641	243	0	678	161	260	487	11	49	449	10
Lane Group Flow (vph)	63	884	0	0	839	0	260	498	0	49	459	0
Turn Type	Prot						D.P+P			Perm		
Protected Phases	4	1 4			1		2	2 3				3
Permitted Phases							3			3		
Detector Phases	4	1 4			1		2	2 3		3		3
Minimum Initial (s)	5.0				8.0		6.0			8.0	8.0	
Minimum Split (s)	12.0				21.0		14.0			18.0	18.0	
Total Split (s)	12.0	49.0	0.0	0.0	37.0	0.0	19.0	51.0	0.0	32.0	32.0	0.0
Total Split (%)	12.0%	49.0%	0.0%	0.0%	37.0%	0.0%	19.0%	51.0%	0.0%	32.0%	32.0%	0.0%
Maximum Green (s)	6.0				31.0		12.0			25.0	25.0	
Yellow Time (s)	3.0				3.0		3.0			3.0	3.0	
All-Red Time (s)	3.0				3.0		4.0			4.0	4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0				2.0		3.0			3.0	3.0	
Minimum Gap (s)	3.0				3.0		3.0			3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Time To Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Recall Mode	None			C-Max			None			Ped	Ped	
Walk Time (s)					7.0					7.0	7.0	
Flash Dont Walk (s)					6.0					3.0	3.0	
Pedestrian Calls (#/hr)					0					0	0	
Act Effct Green (s)	8.0	45.0			33.0		43.0	47.0		28.0	28.0	
Actuated g/C Ratio	0.08	0.45			0.33		0.43	0.47		0.28	0.28	
v/c Ratio	0.52	0.73			0.94		0.88	0.71		0.21	1.03	
Control Delay	60.2	26.8			47.8		41.7	22.7		30.6	86.6	
Queue Delay	0.0	0.0			0.0		0.0	0.2		0.0	0.0	
Total Delay	60.2	26.8			47.8		41.7	22.9		30.6	86.6	
LOS	E	C			D		D	C		C	F	
Approach Delay		29.0			47.8			29.3			81.2	
Approach LOS		C			D			C			F	
90th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
90th %ile Term Code	Max				Coord		Max			Max	Max	
70th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
70th %ile Term Code	Max				Coord		Max			Max	Max	
50th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
50th %ile Term Code	Max				Coord		Max			Max	Max	
30th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
30th %ile Term Code	Max				Coord		Max			Max	Max	
10th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
10th %ile Term Code	Max				Coord		Max			Max	Max	
Queue Length 50th (ft)	39	235			241		134	171		24	~314	
Queue Length 95th (ft)	#89	312			m#406		m82	m124		56	#506	
Internal Link Dist (ft)		397			880			481			526	
Turn Bay Length (ft)	100											
Base Capacity (vph)	121	1217			893		296	704		233	447	
Starvation Cap Reductn	0	0			0		0	13		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.52	0.73			0.94		0.88	0.72		0.21	1.03	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 59 (59%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 42.9

Intersection LOS: D

Intersection Capacity Utilization 83.1%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3096: Huntington Ave & Louis Prang Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↕↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	15	12	12	16	12	12	10	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94			1.00			0.95				0.79
Frt		0.981			0.996			0.975				0.850
Flt Protected		0.990			0.988			0.996			0.999	
Satd. Flow (prot)	0	2760	0	0	1832	0	0	1685	0	0	1492	1292
Flt Permitted		0.760			0.814			0.553			0.976	
Satd. Flow (perm)	0	2119	0	0	1509	0	0	935	0	0	1458	1022
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			2			15				45
Headway Factor	1.14	1.25	1.14	1.14	1.01	1.14	1.14	0.97	1.14	1.14	1.25	1.25
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		751			786			490			561	
Travel Time (s)		17.1			17.9			11.1			12.8	
Volume (vph)	69	235	44	106	332	14	70	612	152	14	589	41
Confl. Peds. (#/hr)			188			67			67			53
Confl. Bikes (#/hr)			19			2			11			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	5%	0%	1%	0%	2%	8%	2%	0%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	75	255	48	115	361	15	76	665	165	15	640	45
Lane Group Flow (vph)	0	378	0	0	491	0	0	906	0	0	655	45
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		5			5			1				1
Permitted Phases	5			5			1			1		1
Detector Phases	5	5		5	5		1	1		1	1	1
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	27.0	27.0		27.0	27.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	49.0	49.0	0.0	49.0	49.0	0.0	51.0	51.0	0.0	51.0	51.0	51.0
Total Split (%)	49.0%	49.0%	0.0%	49.0%	49.0%	0.0%	51.0%	51.0%	0.0%	51.0%	51.0%	51.0%
Maximum Green (s)	45.0	45.0		45.0	45.0		47.0	47.0		47.0	47.0	47.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	8.0
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		6.0	6.0		6.0	6.0	6.0
Pedestrian Calls (#/hr)	30	30		30	30		0	0		0	0	0
Act Effct Green (s)		36.2			36.2			55.8			55.8	55.8
Actuated g/C Ratio		0.36			0.36			0.56			0.56	0.56
v/c Ratio		0.48			0.90			1.72			0.81	0.08
Control Delay		24.3			44.5			351.9			23.3	4.9
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		24.3			44.5			351.9			23.3	4.9
LOS		C			D			F			C	A
Approach Delay		24.3			44.5			351.9			22.1	
Approach LOS		C			D			F			C	
90th %ile Green (s)	45.0	45.0		45.0	45.0		47.0	47.0		47.0	47.0	47.0
90th %ile Term Code	Max	Max		Max	Max		Coord	Coord		Coord	Coord	Coord
70th %ile Green (s)	41.5	41.5		41.5	41.5		50.5	50.5		50.5	50.5	50.5
70th %ile Term Code	Gap	Gap		Gap	Gap		Coord	Coord		Coord	Coord	Coord
50th %ile Green (s)	36.9	36.9		36.9	36.9		55.1	55.1		55.1	55.1	55.1
50th %ile Term Code	Gap	Gap		Gap	Gap		Coord	Coord		Coord	Coord	Coord
30th %ile Green (s)	32.2	32.2		32.2	32.2		59.8	59.8		59.8	59.8	59.8
30th %ile Term Code	Gap	Gap		Gap	Gap		Coord	Coord		Coord	Coord	Coord
10th %ile Green (s)	25.6	25.6		25.6	25.6		66.4	66.4		66.4	66.4	66.4
10th %ile Term Code	Gap	Gap		Gap	Gap		Coord	Coord		Coord	Coord	Coord
Queue Length 50th (ft)		90			340			~866			219	1
Queue Length 95th (ft)		115			441			#1158			m#264	m0
Internal Link Dist (ft)		671			706			410			481	
Turn Bay Length (ft)												
Base Capacity (vph)		965			680			528			813	590
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.39			0.72			1.72			0.81	0.08

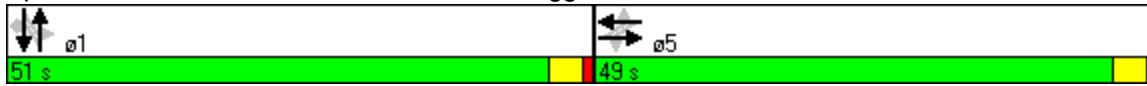
Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 4 (4%), Referenced to phase 1:NBSB, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.72
 Intersection Signal Delay: 147.6 Intersection LOS: F
 Intersection Capacity Utilization 145.2% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 389: Parker Street & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	13	11	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.95		0.98			
Frt		0.850	0.997			
Flt Protected	0.950					
Satd. Flow (prot)	1486	1472	1591	0	0	3185
Flt Permitted	0.950					0.942
Satd. Flow (perm)	1418	1472	1591	0	0	3001
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		15	3			
Headway Factor	1.25	1.10	1.19	1.14	1.14	1.14
Link Speed (mph)	30		30			30
Link Distance (ft)	406		126			231
Travel Time (s)	9.2		2.9			5.3
Volume (vph)	98	67	892	23	5	732
Confl. Peds. (#/hr)	35	41		428	428	
Confl. Bikes (#/hr)				21		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	107	73	970	25	5	796
Lane Group Flow (vph)	107	73	995	0	0	801
Turn Type		Prot			Perm	
Protected Phases	5	5	1			1
Permitted Phases					1	
Detector Phases	5	5	1		1	1
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0
Minimum Split (s)	24.0	24.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	46.0	0.0	46.0	46.0
Total Split (%)	34.3%	34.3%	65.7%	0.0%	65.7%	65.7%
Maximum Green (s)	19.0	19.0	40.0		40.0	40.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	2.0	2.0	3.0		3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	8.0	8.0	8.0		8.0	8.0
Flash Dont Walk (s)	8.0	8.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)	78	78	9		9	9
Act Effct Green (s)	15.4	15.4	50.0			50.0
Actuated g/C Ratio	0.22	0.22	0.71			0.71
v/c Ratio	0.33	0.22	0.88			0.37
Control Delay	25.1	19.5	17.7			6.0
Queue Delay	0.0	0.0	9.8			0.0
Total Delay	25.1	19.5	27.5			6.0
LOS	C	B	C			A
Approach Delay	22.8		27.5			6.0
Approach LOS	C		C			A
90th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	0.0	0.0	64.0		64.0	64.0
10th %ile Term Code	Skip	Skip	Coord		Coord	Coord
Queue Length 50th (ft)	38	20	573			76
Queue Length 95th (ft)	78	51	#404			107
Internal Link Dist (ft)	326		46			151
Turn Bay Length (ft)						
Base Capacity (vph)	425	431	1137			2143
Starvation Cap Reductn	0	0	130			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.25	0.17	0.99			0.37

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 26 (37%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 18.4

Intersection LOS: B

Intersection Capacity Utilization 72.6%

ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1526: Leon St & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	16	16	13	12	12	11	
Grade (%)	0%		0%			0%	
Storage Length (ft)	0	0		0	0		
Storage Lanes	1	1		0	0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50	50	50			50	
Trailing Detector (ft)	0	0	0			0	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	
Ped Bike Factor							
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	995	941	1621	0	0	3049	
Flt Permitted	0.950						
Satd. Flow (perm)	995	941	1621	0	0	3049	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		26					
Headway Factor	0.97	0.97	1.10	1.14	1.14	1.19	
Link Speed (mph)	30		30			30	
Link Distance (ft)	219		341			206	
Travel Time (s)	5.0		7.8			4.7	
Volume (vph)	66	24	926	0	0	838	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	85%	75%	9%	0%	0%	3%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	72	26	1007	0	0	911	
Lane Group Flow (vph)	72	26	1007	0	0	911	
Turn Type		Prot					
Protected Phases	5	5	1			1	2
Permitted Phases							
Detector Phases	5	5	1			1	
Minimum Initial (s)	8.0	8.0	8.0			8.0	20.0
Minimum Split (s)	13.0	13.0	13.0			13.0	24.0
Total Split (s)	15.0	15.0	31.0	0.0	0.0	31.0	24.0
Total Split (%)	21.4%	21.4%	44.3%	0.0%	0.0%	44.3%	34%
Maximum Green (s)	10.0	10.0	26.0			26.0	20.0
Yellow Time (s)	3.0	3.0	3.0			3.0	3.5
All-Red Time (s)	2.0	2.0	2.0			2.0	0.5
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0			2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0			3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Time Before Reduce (s)	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0			0.0	0.0
Recall Mode	None	None	C-Max			C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	10.4	10.4	50.2			50.2	
Actuated g/C Ratio	0.15	0.15	0.72			0.72	
v/c Ratio	0.49	0.16	0.87			0.42	
Control Delay	38.9	13.2	21.4			6.6	
Queue Delay	0.0	0.0	4.6			0.1	
Total Delay	38.9	13.2	26.0			6.7	
LOS	D	B	C			A	
Approach Delay	32.1		26.0			6.7	
Approach LOS	C		C			A	
90th %ile Green (s)	10.0	10.0	26.0			26.0	20.0
90th %ile Term Code	Max	Max	Coord			Coord	Max
70th %ile Green (s)	11.7	11.7	48.3			48.3	0.0
70th %ile Term Code	Gap	Gap	Coord			Coord	Skip
50th %ile Green (s)	9.3	9.3	50.7			50.7	0.0
50th %ile Term Code	Gap	Gap	Coord			Coord	Skip
30th %ile Green (s)	8.0	8.0	52.0			52.0	0.0
30th %ile Term Code	Min	Min	Coord			Coord	Skip
10th %ile Green (s)	0.0	0.0	65.0			65.0	0.0
10th %ile Term Code	Skip	Skip	Coord			Coord	Skip
Queue Length 50th (ft)	29	0	525			49	
Queue Length 95th (ft)	68	20m#1566				133	
Internal Link Dist (ft)	139		261			126	
Turn Bay Length (ft)							
Base Capacity (vph)	161	174	1162			2187	
Starvation Cap Reductn	0	0	104			0	
Spillback Cap Reductn	0	0	0			201	
Storage Cap Reductn	0	0	0			0	
Reduced v/c Ratio	0.45	0.15	0.95			0.46	

Intersection Summary

Area Type: CBD
 Cycle Length: 70
 Actuated Cycle Length: 70
 Offset: 25 (36%), Referenced to phase 1:NBSB, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 17.6 Intersection LOS: B
 Intersection Capacity Utilization 67.5% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3068: MBTA Exit & Ruggles Street



11046 Northeastern IMP
611: Tremont Street & Ruggles Street

2023 No-Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑	↗	↙	↗		↗	↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	11	11	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	1		0	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00			0.97		0.97	0.96	0.91		0.87	0.93	
Frt						0.850		0.908			0.858	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	4468	0	1624	3110	1454	1570	1354	0	3120	1368	0
Flt Permitted	0.950			0.143			0.950			0.950		
Satd. Flow (perm)	1568	4468	0	237	3110	1408	1507	1354	0	2730	1368	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)								19			275	
Headway Factor	1.19	1.19	1.14	1.14	1.19	1.14	1.19	1.19	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		975			274			591			341	
Travel Time (s)		22.2			6.2			13.4			7.8	
Volume (vph)	198	1351	0	18	905	693	65	35	56	639	15	253
Confl. Peds. (#/hr)	1		58	58		1	20		65	65		20
Confl. Bikes (#/hr)			8			9						1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	1%	0%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	215	1468	0	20	984	753	71	38	61	695	16	275
Lane Group Flow (vph)	215	1468	0	20	984	753	71	99	0	695	291	0
Turn Type	Prot			Perm		pm+ov	Split			Prot		
Protected Phases	1!	6!			2!	3	4	4		3	6!	
Permitted Phases				2!		2						
Detector Phases	1	6		2	2	3	4	4		3	6	
Minimum Initial (s)	8.0	16.0		16.0	16.0	9.0	8.0	8.0		9.0	16.0	
Minimum Split (s)	12.0	20.0		20.0	20.0	13.0	23.0	23.0		13.0	20.0	
Total Split (s)	25.0	64.0	0.0	39.0	39.0	43.0	33.0	33.0	0.0	43.0	64.0	0.0
Total Split (%)	17.9%	45.7%	0.0%	27.9%	27.9%	30.7%	23.6%	23.6%	0.0%	30.7%	45.7%	0.0%
Maximum Green (s)	21.0	60.0		35.0	35.0	39.0	29.0	29.0		39.0	60.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Gap (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	








Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max	None	None	None		None	C-Max	
Walk Time (s)		8.0		8.0	8.0		8.0	8.0				8.0
Flash Dont Walk (s)		6.0		5.0	5.0		11.0	11.0				6.0
Pedestrian Calls (#/hr)		4		4	4		17	17				4
Act Effct Green (s)	20.4	75.4		51.0	51.0	90.0	13.6	13.6		39.0	75.4	
Actuated g/C Ratio	0.15	0.54		0.36	0.36	0.64	0.10	0.10		0.28	0.54	
v/c Ratio	0.94	0.61		0.23	0.87	0.82	0.47	0.67		0.80	0.34	
Control Delay	104.2	24.2		42.9	51.3	27.5	68.3	69.5		49.6	7.4	
Queue Delay	10.6	0.2		0.0	239.1	50.9	0.0	1.0		24.6	1.0	
Total Delay	114.8	24.4		42.9	290.4	78.3	68.3	70.5		74.3	8.4	
LOS	F	C		D	F	E	E	E		E	A	
Approach Delay		35.9			196.7			69.6				54.8
Approach LOS		D			F			E				D
90th %ile Green (s)	21.0	70.0		45.0	45.0	39.0	19.0	19.0		39.0	70.0	
90th %ile Term Code	Max	Coord		Coord	Coord	Max	Ped	Ped		Max	Coord	
70th %ile Green (s)	21.0	70.0		45.0	45.0	39.0	19.0	19.0		39.0	70.0	
70th %ile Term Code	Max	Coord		Coord	Coord	Max	Ped	Ped		Max	Coord	
50th %ile Green (s)	21.0	76.8		51.8	51.8	39.0	12.2	12.2		39.0	76.8	
50th %ile Term Code	Max	Coord		Coord	Coord	Max	Gap	Gap		Max	Coord	
30th %ile Green (s)	21.0	79.3		54.3	54.3	39.0	9.7	9.7		39.0	79.3	
30th %ile Term Code	Max	Coord		Coord	Coord	Max	Gap	Gap		Max	Coord	
10th %ile Green (s)	17.9	81.0		59.1	59.1	39.0	8.0	8.0		39.0	81.0	
10th %ile Term Code	Gap	Coord		Coord	Coord	Max	Min	Min		Max	Coord	
Queue Length 50th (ft)	196	318		13	432	425	63	72		291	23	
Queue Length 95th (ft)	#350	409		40	#617	#779	110	131		337	123	
Internal Link Dist (ft)		895			194			511				261
Turn Bay Length (ft)	200											
Base Capacity (vph)	236	2407		86	1134	918	325	296		869	864	
Starvation Cap Reductn	0	0		0	492	235	0	0		194	346	
Spillback Cap Reductn	15	268		0	0	0	0	71		62	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.97	0.69		0.23	1.53	1.10	0.22	0.44		1.03	0.56	

Intersection Summary

Area Type: CBD
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 56 (40%), Referenced to phase 2:WBTL and 6:EBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 102.7 Intersection LOS: F
 Intersection Capacity Utilization 90.9% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 ! Phase conflict between lane groups.

Splits and Phases: 611: Tremont Street & Ruggles Street

 ø1	 ø2	 ø3	 ø4
25 s	39 s	43 s	33 s
 ø5			
64 s			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑							↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50			50							50
Trailing Detector (ft)		0			0							0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98										
Frt		0.982										0.865
Flt Protected												
Satd. Flow (prot)	0	4431	0	0	4622	0	0	0	0	0	0	1479
Flt Permitted												
Satd. Flow (perm)	0	4431	0	0	4622	0	0	0	0	0	0	1479
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52										42
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		274			502			667				399
Travel Time (s)		6.2			11.4			15.2				9.1
Volume (vph)	0	1802	242	0	1499	0	0	0	0	0	0	122
Confl. Peds. (#/hr)			50	50		20	25		161	161		25
Confl. Bikes (#/hr)			11			5						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	0	1959	263	0	1629	0	0	0	0	0	0	133
Lane Group Flow (vph)	0	2222	0	0	1629	0	0	0	0	0	0	133
Turn Type												custom
Protected Phases		1			1							5
Permitted Phases												
Detector Phases		1			1							5
Minimum Initial (s)		10.0			10.0							4.0
Minimum Split (s)		23.0			23.0							29.0
Total Split (s)	0.0	77.0	0.0	0.0	77.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0
Total Split (%)	0.0%	72.6%	0.0%	0.0%	72.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.4%
Maximum Green (s)		73.0			73.0							25.0
Yellow Time (s)		3.0			3.0							3.5
All-Red Time (s)		1.0			1.0							0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0			2.0							3.0
Minimum Gap (s)		2.0			2.0							3.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0			0.0							0.0
Time To Reduce (s)		0.0			0.0							0.0
Recall Mode		C-Max			C-Max							None
Walk Time (s)		8.0			8.0							8.0
Flash Dont Walk (s)		6.0			6.0							17.0
Pedestrian Calls (#/hr)		30			30							5
Act Effct Green (s)		84.9			84.9							13.1
Actuated g/C Ratio		0.80			0.80							0.12
v/c Ratio		0.62			0.44							0.60
Control Delay		6.0			4.4							39.8
Queue Delay		6.3			0.3							0.5
Total Delay		12.4			4.7							40.3
LOS		B			A							D
Approach Delay		12.4			4.7							
Approach LOS		B			A							
90th %ile Green (s)		73.0			73.0							25.0
90th %ile Term Code		Coord			Coord							Ped
70th %ile Green (s)		84.0			84.0							14.0
70th %ile Term Code		Coord			Coord							Gap
50th %ile Green (s)		86.4			86.4							11.6
50th %ile Term Code		Coord			Coord							Gap
30th %ile Green (s)		88.8			88.8							9.2
30th %ile Term Code		Coord			Coord							Gap
10th %ile Green (s)		92.2			92.2							5.8
10th %ile Term Code		Coord			Coord							Gap
Queue Length 50th (ft)		149			87							60
Queue Length 95th (ft)		352			205							107
Internal Link Dist (ft)		194			422			587			319	
Turn Bay Length (ft)												
Base Capacity (vph)		3558			3701							381
Starvation Cap Reductn		1289			1223							0
Spillback Cap Reductn		0			772							66
Storage Cap Reductn		0			0							0
Reduced v/c Ratio		0.98			0.66							0.42

Intersection Summary

Area Type:	CBD
Cycle Length:	106
Actuated Cycle Length:	106
Offset:	10 (9%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	10.2
Intersection LOS:	B
Intersection Capacity Utilization	55.3%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 3082: Tremont Street & Columbus Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗		↕↕		↗	↕↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	10	16	11	16	12	14	14	13	12	11	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	350		0	0		0
Storage Lanes	0		1	0		0	1		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.91	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99	0.98		1.00		0.99	0.99			1.00	0.97
Frt			0.850		0.996			0.983				0.850
Flt Protected		0.987			0.995		0.950	0.962			0.996	
Satd. Flow (prot)	0	2618	1431	0	3151	0	1397	2719	0	0	1447	1331
Flt Permitted		0.555			0.555		0.950	0.962			0.996	
Satd. Flow (perm)	0	1464	1405	0	1757	0	1387	2704	0	0	1445	1297
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					3							209
Headway Factor	1.14	1.25	0.97	1.19	0.97	1.14	1.05	1.05	1.10	1.14	1.19	1.10
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		502			2251			626			342	
Travel Time (s)		11.4			51.2			14.2			7.8	
Volume (vph)	237	640	934	61	486	16	985	69	70	20	222	217
Confl. Peds. (#/hr)	50		20	20		50	7		21	21		7
Confl. Bikes (#/hr)			2			7			14			3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	3%	4%	3%	13%	1%	18%	0%	0%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	258	696	1015	66	528	17	1071	75	76	22	241	236
Lane Group Flow (vph)	0	954	1015	0	611	0	536	686	0	0	263	236
Turn Type	D.P+P		Free	Perm			Split			Split		Perm
Protected Phases	7	1 7			1		6	6		5	5	
Permitted Phases	1		Free	1								5
Detector Phases	1 7	1 7		1	1		6	6		5	5	5
Minimum Initial (s)	4.0			10.0	10.0		10.0	10.0		8.0	8.0	8.0
Minimum Split (s)	8.0			26.0	26.0		20.0	20.0		24.0	24.0	24.0
Total Split (s)	15.0	45.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0	25.0	25.0	25.0
Total Split (%)	15.0%	45.0%	0.0%	30.0%	30.0%	0.0%	30.0%	30.0%	0.0%	25.0%	25.0%	25.0%
Maximum Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
Yellow Time (s)	3.0			3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0			1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	Max			C-Max	C-Max		None	None		None	None	None
Walk Time (s)				7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)				15.0	15.0					13.0	13.0	13.0
Pedestrian Calls (#/hr)				0	0					5	5	5
Act Effct Green (s)		38.1	100.0		27.1		26.0	26.0			19.9	19.9
Actuated g/C Ratio		0.38	1.00		0.27		0.26	0.26			0.20	0.20
v/c Ratio		1.39	0.72		1.28		1.48	1.41dl			0.91	0.56
Control Delay		211.8	3.2		168.3		258.9	65.0			58.5	6.9
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.9
Total Delay		211.8	3.2		168.3		258.9	65.0			58.5	7.8
LOS		F	A		F		F	E			E	A
Approach Delay		104.3			168.3			150.1			34.5	
Approach LOS		F			F			F			C	
90th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
90th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
70th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
70th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
50th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
50th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
30th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
30th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
10th %ile Green (s)	11.0			31.4	31.4		26.0	26.0		15.6	15.6	15.6
10th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
Queue Length 50th (ft)		~435	0		~272		~519	237			154	17
Queue Length 95th (ft)		#561	0		m#377		#743	#364			m#293	m34
Internal Link Dist (ft)		422			2171			546			262	
Turn Bay Length (ft)							350					
Base Capacity (vph)		685	1405		478		363	707			304	437
Starvation Cap Reductn		0	0		0		0	0			0	59
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		1.39	0.72		1.28		1.48	0.97			0.87	0.62

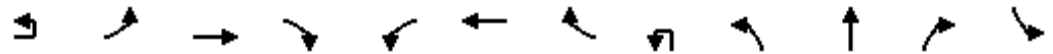
Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 36 (36%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 118.3 Intersection LOS: F
 Intersection Capacity Utilization 113.4% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3098: Tremont Street & Melnea Cass Boulevard

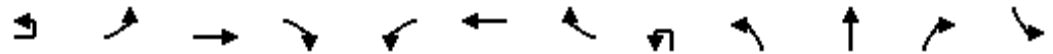




Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Lane Configurations			↔			↔				↔	↔	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	12	12	12	12	11	12	12	12	14	14	12
Grade (%)			0%			0%				0%		
Storage Length (ft)		0		25	0		0		0		0	0
Storage Lanes		0		0	0		0		0		1	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50		50	50	50	50	50
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Turning Speed (mph)	9	15		9	15		9	9	15		9	15
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.93			0.99				0.90		
Frt			0.925			0.999					0.850	
Flt Protected						0.965				0.957		
Satd. Flow (prot)	0	0	2508	0	0	1415	0	0	0	1353	1373	0
Flt Permitted						0.965				0.743		
Satd. Flow (perm)	0	0	2508	0	0	1395	0	0	0	943	1373	0
Right Turn on Red				Yes			Yes				Yes	
Satd. Flow (RTOR)			93								221	
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.14	1.14	1.05	1.05	1.14
Link Speed (mph)			30			30				30		
Link Distance (ft)			383			384				342		
Travel Time (s)			8.7			8.7				7.8		
Volume (vph)	1	0	85	86	357	130	2	14	94	11	203	1
Confl. Peds. (#/hr)		2		31	31		2	31	12		23	23
Confl. Bikes (#/hr)				23			85				2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	12%	64%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%				0%		
Adj. Flow (vph)	1	0	92	93	388	141	2	15	102	12	221	1
Lane Group Flow (vph)	0	0	186	0	0	531	0	0	0	129	221	0
Turn Type	Split				Split		Perm	Perm			pt+ov	Perm
Protected Phases	5		5		1	1				6	1 6	
Permitted Phases							6	6				6
Detector Phases	5		5		1	1	6	6	6	6	6	6
Minimum Initial (s)	10.0		10.0		10.0	10.0	8.0	8.0	8.0			8.0
Minimum Split (s)	14.0		14.0		15.0	15.0	14.0	14.0	14.0			14.0
Total Split (s)	15.0	0.0	15.0	0.0	41.0	41.0	0.0	23.0	23.0	23.0	64.0	23.0
Total Split (%)	15.0%	0.0%	15.0%	0.0%	41.0%	41.0%	0.0%	23.0%	23.0%	23.0%	64.0%	23.0%
Maximum Green (s)	11.0		11.0		37.0	37.0	19.0	19.0	19.0			19.0
Yellow Time (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0			3.0
All-Red Time (s)	1.0		1.0		1.0	1.0	1.0	1.0	1.0			1.0
Lead/Lag	Lead		Lead		Lead	Lead	Lag	Lag	Lag			Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0		2.0		2.0	2.0	2.0	2.0	2.0			2.0
Minimum Gap (s)	2.0		2.0		2.0	2.0	2.0	2.0	2.0			2.0



Lane Group	SBT	SBR	ø2
Lane Configurations	↕		
Ideal Flow (vphpl)	1700	1700	
Lane Width (ft)	16	12	
Grade (%)	0%		
Storage Length (ft)		0	
Storage Lanes		0	
Total Lost Time (s)	4.0	4.0	
Leading Detector (ft)	50		
Trailing Detector (ft)	0		
Turning Speed (mph)		9	
Lane Util. Factor	1.00	1.00	
Ped Bike Factor	0.96		
Frt	0.932		
Flt Protected	0.988		
Satd. Flow (prot)	1555	0	
Flt Permitted	0.963		
Satd. Flow (perm)	1497	0	
Right Turn on Red		Yes	
Satd. Flow (RTOR)	2		
Headway Factor	0.97	1.14	
Link Speed (mph)	30		
Link Distance (ft)	245		
Travel Time (s)	5.6		
Volume (vph)	1	2	
Confl. Peds. (#/hr)		12	
Confl. Bikes (#/hr)		1	
Peak Hour Factor	0.92	0.92	
Growth Factor	100%	100%	
Heavy Vehicles (%)	0%	0%	
Bus Blockages (#/hr)	0	0	
Parking (#/hr)			
Mid-Block Traffic (%)	0%		
Adj. Flow (vph)	1	2	
Lane Group Flow (vph)	4	0	
Turn Type			
Protected Phases	6		2
Permitted Phases			
Detector Phases	6		
Minimum Initial (s)	8.0		8.0
Minimum Split (s)	14.0		21.0
Total Split (s)	23.0	0.0	21.0
Total Split (%)	23.0%	0.0%	21%
Maximum Green (s)	19.0		18.0
Yellow Time (s)	3.0		2.0
All-Red Time (s)	1.0		1.0
Lead/Lag	Lag		Lag
Lead-Lag Optimize?			
Vehicle Extension (s)	2.0		2.0
Minimum Gap (s)	2.0		2.0



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL
Time Before Reduce (s)	0.0		0.0		0.0	0.0		0.0	0.0	0.0		0.0
Time To Reduce (s)	0.0		0.0		0.0	0.0		0.0	0.0	0.0		0.0
Recall Mode	None		None		C-Max	C-Max		None	None	None		None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)			10.2			57.8				15.8	77.6	
Actuated g/C Ratio			0.10			0.58				0.16	0.78	
v/c Ratio			0.55			0.65				0.87	0.20	
Control Delay			28.1			23.0				47.9	0.2	
Queue Delay			0.0			0.0				0.0	0.8	
Total Delay			28.1			23.0				47.9	1.0	
LOS			C			C				D	A	
Approach Delay			28.1			23.0				18.3		
Approach LOS			C			C				B		
90th %ile Green (s)	11.0		11.0		37.0	37.0		19.0	19.0	19.0		19.0
90th %ile Term Code	Max		Max		Coord	Coord		Max	Max	Max		Max
70th %ile Green (s)	10.0		10.0		59.0	59.0		19.0	19.0	19.0		19.0
70th %ile Term Code	Min		Min		Coord	Coord		Max	Max	Max		Max
50th %ile Green (s)	10.0		10.0		59.1	59.1		18.9	18.9	18.9		18.9
50th %ile Term Code	Min		Min		Coord	Coord		Gap	Gap	Gap		Gap
30th %ile Green (s)	10.0		10.0		65.0	65.0		13.0	13.0	13.0		13.0
30th %ile Term Code	Min		Min		Coord	Coord		Gap	Gap	Gap		Gap
10th %ile Green (s)	10.0		10.0		69.0	69.0		9.0	9.0	9.0		9.0
10th %ile Term Code	Min		Min		Coord	Coord		Gap	Gap	Gap		Gap
Queue Length 50th (ft)			29			210				61	0	
Queue Length 95th (ft)			64			m#485				m48	m0	
Internal Link Dist (ft)			303			304				262		
Turn Bay Length (ft)												
Base Capacity (vph)			359			818				179	1106	
Starvation Cap Reductn			0			0				0	612	
Spillback Cap Reductn			0			0				0	0	
Storage Cap Reductn			0			0				0	0	
Reduced v/c Ratio			0.52			0.65				0.72	0.45	

Intersection Summary

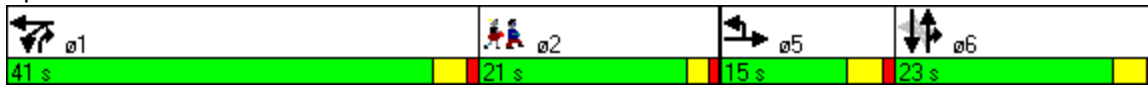
Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 47 (47%), Referenced to phase 1:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 22.4 Intersection LOS: C
 Intersection Capacity Utilization 69.6% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBT	SBR	ø2
Time Before Reduce (s)	0.0		0.0
Time To Reduce (s)	0.0		0.0
Recall Mode	None		None
Walk Time (s)			7.0
Flash Dont Walk (s)			11.0
Pedestrian Calls (#/hr)			15
Act Effct Green (s)	15.8		
Actuated g/C Ratio	0.16		
v/c Ratio	0.02		
Control Delay	27.2		
Queue Delay	0.0		
Total Delay	27.2		
LOS	C		
Approach Delay	27.3		
Approach LOS	C		
90th %ile Green (s)	19.0		18.0
90th %ile Term Code	Max		Ped
70th %ile Green (s)	19.0		0.0
70th %ile Term Code	Max		Skip
50th %ile Green (s)	18.9		0.0
50th %ile Term Code	Gap		Skip
30th %ile Green (s)	13.0		0.0
30th %ile Term Code	Gap		Skip
10th %ile Green (s)	9.0		0.0
10th %ile Term Code	Gap		Skip
Queue Length 50th (ft)	1		
Queue Length 95th (ft)	11		
Internal Link Dist (ft)	165		
Turn Bay Length (ft)			
Base Capacity (vph)	286		
Starvation Cap Reductn	0		
Spillback Cap Reductn	0		
Storage Cap Reductn	0		
Reduced v/c Ratio	0.01		

Intersection Summary

Splits and Phases: 2085: Columbus Avenue & Melnea Cass





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	10	11	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.95	0.97		0.97	0.98		0.99					
Frt		0.966			0.976			0.987			0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1472	2840	0	1417	2926	0	1472	3010	0	1486	2962	0
Flt Permitted	0.349			0.221			0.108			0.143		
Satd. Flow (perm)	515	2840	0	319	2926	0	165	3010	0	224	2962	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			21			12			13	
Headway Factor	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2251			586			935			635	
Travel Time (s)		51.2			13.3			21.3			14.4	
Volume (vph)	121	440	127	99	353	67	93	886	82	105	969	96
Confl. Peds. (#/hr)	81		83	83		81	150					
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	4%	7%	3%	2%	3%	3%	3%	2%	5%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	132	478	138	108	384	73	101	963	89	114	1053	104
Lane Group Flow (vph)	132	616	0	108	457	0	101	1052	0	114	1157	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	6.0		6.0	43.0		6.0	43.0	
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	47.0		10.0	47.0	
Total Split (s)	11.0	30.0	0.0	11.0	30.0	0.0	11.0	48.0	0.0	11.0	48.0	0.0
Total Split (%)	11.0%	30.0%	0.0%	11.0%	30.0%	0.0%	11.0%	48.0%	0.0%	11.0%	48.0%	0.0%
Maximum Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		Max	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			23.0			23.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	31.4	24.4		31.4	24.4		53.4	45.7		50.9	44.0	
Actuated g/C Ratio	0.31	0.24		0.31	0.24		0.53	0.46		0.51	0.44	
v/c Ratio	0.58	0.86		0.61	0.63		0.50	0.76		0.56	0.88	
Control Delay	30.2	35.5		38.5	36.1		22.0	27.3		24.4	27.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	30.2	35.5		38.5	36.1		22.0	27.3		24.4	27.9	
LOS	C	D		D	D		C	C		C	C	
Approach Delay		34.6			36.5			26.9			27.5	
Approach LOS		C			D			C			C	
90th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
90th %ile Term Code	Max	Max		Max	Max		MaxR	Coord		Max	Coord	
70th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
70th %ile Term Code	Max	Max		Max	Hold		MaxR	Coord		Max	Coord	
50th %ile Green (s)	7.0	25.5		7.0	25.5		7.5	44.0		7.5	44.0	
50th %ile Term Code	Max	Gap		Max	Hold		MaxR	Coord		Max	Coord	
30th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
30th %ile Term Code	Max	Max		Max	Hold		MaxR	Coord		Max	Coord	
10th %ile Green (s)	7.0	18.3		7.0	18.3		14.7	52.5		6.2	44.0	
10th %ile Term Code	Max	Gap		Max	Hold		MaxR	Coord		Gap	Coord	
Queue Length 50th (ft)	50	128		47	128		29	292		36	203	
Queue Length 95th (ft)	m37	m93		#93	181		#73	378		m44	m247	
Internal Link Dist (ft)		2171			506			855			555	
Turn Bay Length (ft)												
Base Capacity (vph)	228	765		177	776		201	1382		204	1311	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.58	0.81		0.61	0.59		0.50	0.76		0.56	0.88	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 30.1

Intersection LOS: C

Intersection Capacity Utilization 81.9%

ICU Level of Service D

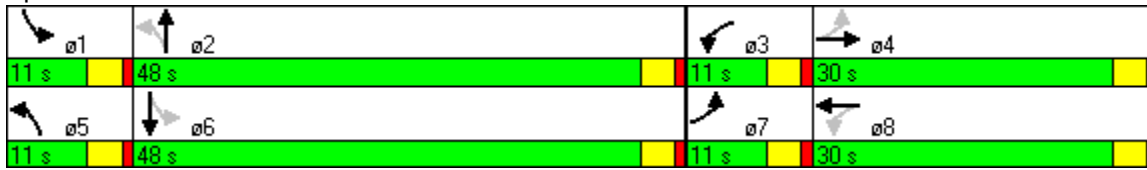
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 96: Tremont Street & Mass Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↗	↖	↕	↗	↖	↕	↗	↖	↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	11	12	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.93	0.97		0.93	0.95		0.97	0.98		0.98	0.93	
Frt		0.969			0.964			0.988			0.970	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1516	2919	0	1481	1524	0	1516	2941	0	1486	2726	0
Flt Permitted	0.250			0.562			0.085			0.138		
Satd. Flow (perm)	370	2919	0	811	1524	0	131	2941	0	211	2726	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								13			41	
Headway Factor	1.25	1.19	1.14	1.19	1.14	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		626			513			635			882	
Travel Time (s)		14.2			11.7			14.4			20.0	
Volume (vph)	281	206	54	147	225	70	41	941	85	75	960	237
Confl. Peds. (#/hr)	130		90	90		130	240		204	204		240
Confl. Bikes (#/hr)			26			90			85			47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	6%	2%	3%	0%	4%	2%	2%	5%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	305	224	59	160	245	76	45	1023	92	82	1043	258
Lane Group Flow (vph)	305	283	0	160	321	0	45	1115	0	82	1301	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	8.0		5.0	29.0		5.0	29.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		9.0	44.0		9.0	44.0	
Total Split (s)	12.0	30.0	0.0	10.0	28.0	0.0	9.0	51.0	0.0	9.0	51.0	0.0
Total Split (%)	12.0%	30.0%	0.0%	10.0%	28.0%	0.0%	9.0%	51.0%	0.0%	9.0%	51.0%	0.0%
Maximum Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			25.0			25.0	
Flash Dont Walk (s)		17.0			17.0			15.0			15.0	
Pedestrian Calls (#/hr)		5			5			5			5	
Act Effct Green (s)	32.8	24.8		28.8	22.8		54.0	50.0		54.8	51.8	
Actuated g/C Ratio	0.33	0.25		0.29	0.23		0.54	0.50		0.55	0.52	
v/c Ratio	1.43	0.39		0.58	0.93		0.32	0.75		0.46	0.91	
Control Delay	246.3	32.8		35.3	71.1		17.9	13.6		16.5	15.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	246.3	32.8		35.3	71.1		17.9	13.6		16.5	15.9	
LOS	F	C		D	E		B	B		B	B	
Approach Delay		143.5			59.2			13.8			16.0	
Approach LOS		F			E			B			B	
90th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
90th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
70th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
50th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
30th %ile Green (s)	8.0	25.7		6.0	23.7		0.0	47.3		5.0	56.3	
30th %ile Term Code	Max	Hold		Max	Gap		Skip	Coord		Max	Coord	
10th %ile Green (s)	8.0	20.2		6.0	18.2		0.0	61.8		0.0	61.8	
10th %ile Term Code	Max	Hold		Max	Gap		Skip	Coord		Skip	Coord	
Queue Length 50th (ft)	~198	73		72	198		7	108		8	64	
Queue Length 95th (ft)	#369	110		125	#354		m13	176		m12	m#556	
Internal Link Dist (ft)		546			433			555			802	
Turn Bay Length (ft)												
Base Capacity (vph)	213	759		274	366		140	1478		179	1432	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.43	0.37		0.58	0.88		0.32	0.75		0.46	0.91	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.43

Intersection Signal Delay: 41.8

Intersection LOS: D

Intersection Capacity Utilization 94.3%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

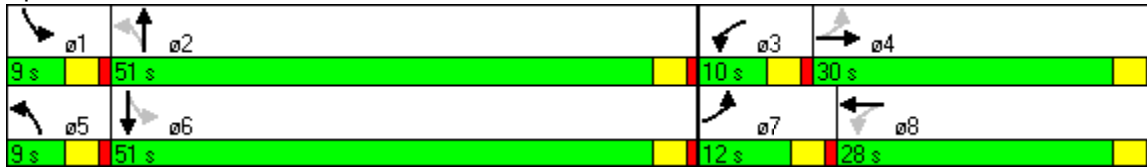
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 95: Columbus Avenue & Mass Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12	11	12	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.92			0.95		0.95	0.99		0.97	0.99	
Frt		0.904			0.962			0.993			0.995	
Flt Protected		0.990			0.981		0.950			0.950		
Satd. Flow (prot)	0	1432	0	0	1317	0	1570	3101	0	1516	3022	0
Flt Permitted		0.938			0.858		0.085			0.119		
Satd. Flow (perm)	0	1337	0	0	1126	0	134	3101	0	185	3022	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		110			21			7			5	
Headway Factor	1.14	1.14	1.14	1.14	1.42	1.14	1.19	1.14	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		639			579			882			301	
Travel Time (s)		14.5			13.2			20.0			6.8	
Volume (vph)	28	14	101	36	29	26	140	1096	57	69	1134	40
Confl. Peds. (#/hr)	89		79	79		89	376		190	190		376
Confl. Bikes (#/hr)			2			1			20			22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0							
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	30	15	110	39	32	28	152	1191	62	75	1233	43
Lane Group Flow (vph)	0	155	0	0	99	0	152	1253	0	75	1276	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phases	8	8		4	4		1	6		5	2	
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		11.0	52.0		11.0	51.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	14.0	54.0	0.0	11.0	51.0	0.0
Total Split (%)	35.0%	35.0%	0.0%	35.0%	35.0%	0.0%	14.0%	54.0%	0.0%	11.0%	51.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		10.0	50.0		7.0	47.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min		None	None		None	C-Min		None	C-Min	
Walk Time (s)	9.0	9.0		9.0	9.0			34.0			34.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0			13.0			13.0	
Pedestrian Calls (#/hr)	376	376		190	190			79			89	
Act Effct Green (s)		30.0			30.0		61.8	53.5		54.4	47.9	
Actuated g/C Ratio		0.30			0.30		0.62	0.54		0.54	0.48	
v/c Ratio		0.32			0.28		0.67	0.75		0.40	0.88	
Control Delay		11.3			23.5		24.7	27.9		15.2	16.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.3	
Total Delay		11.3			23.5		24.7	27.9		15.2	16.9	
LOS		B			C		C	C		B	B	
Approach Delay		11.3			23.5			27.6			16.8	
Approach LOS		B			C			C			B	
90th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	50.0		8.0	47.0	
90th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Max	Coord	
70th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	51.6		6.4	47.0	
70th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
50th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	51.9		6.1	47.0	
50th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
30th %ile Green (s)	30.0	30.0		30.0	30.0		10.4	52.0		6.0	47.6	
30th %ile Term Code	Ped	Ped		Ped	Ped		Gap	Coord		Min	Coord	
10th %ile Green (s)	30.0	30.0		30.0	30.0		7.3	62.0		0.0	50.7	
10th %ile Term Code	Ped	Ped		Ped	Ped		Gap	Coord		Skip	Coord	
Queue Length 50th (ft)		21			37		65	366		7	239	
Queue Length 95th (ft)		71			81		m80	m388		m15	#425	
Internal Link Dist (ft)		559			499			802			221	
Turn Bay Length (ft)												
Base Capacity (vph)		490			364		236	1662		198	1449	
Starvation Cap Reductn		0			0		0	0		0	15	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.32			0.27		0.64	0.75		0.38	0.89	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 85 (85%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 21.7

Intersection LOS: C

Intersection Capacity Utilization 82.1%

ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 134: St. Botolph Street & Mass Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	13	12	12	11	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		50	0		0	0		0	0		150
Storage Lanes	0		1	0		1	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50			50			50	50
Trailing Detector (ft)	0	0		0	0			0			0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.81			0.81			0.99				0.68
Frt		0.938			0.935			0.991				0.850
Flt Protected		0.978			0.980							
Satd. Flow (prot)	0	2245	0	0	2430	0	0	3199	0	0	3079	1357
Flt Permitted		0.978			0.980							
Satd. Flow (perm)	0	2065	0	0	2248	0	0	3199	0	0	3079	921
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			141			9				137
Headway Factor	1.14	1.38	1.14	1.14	1.19	1.14	1.14	1.10	1.14	1.14	1.19	1.25
Link Speed (mph)		30			30			30				30
Link Distance (ft)		644			443			301				284
Travel Time (s)		14.6			10.1			6.8				6.5
Volume (vph)	115	35	106	121	47	130	0	1113	73	0	1016	156
Confl. Peds. (#/hr)	168		162	162		168	536		257	257		536
Confl. Bikes (#/hr)			5			4			25			22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	4%	4%	3%	0%	3%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		12	12									
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	125	38	115	132	51	141	0	1210	79	0	1104	170
Lane Group Flow (vph)	0	278	0	0	324	0	0	1289	0	0	1104	170
Turn Type	Split			Split								Perm
Protected Phases	3	3		4	4			6				2
Permitted Phases												2
Detector Phases	3	3		4	4			6				2
Minimum Initial (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Minimum Split (s)	23.0	23.0		23.0	23.0			29.0			29.0	29.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	0.0	50.0	0.0	0.0	50.0	50.0
Total Split (%)	25.0%	25.0%	0.0%	25.0%	25.0%	0.0%	0.0%	50.0%	0.0%	0.0%	50.0%	50.0%
Maximum Green (s)	21.0	21.0		21.0	21.0			41.0			41.0	41.0
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0			6.0			6.0	6.0
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0

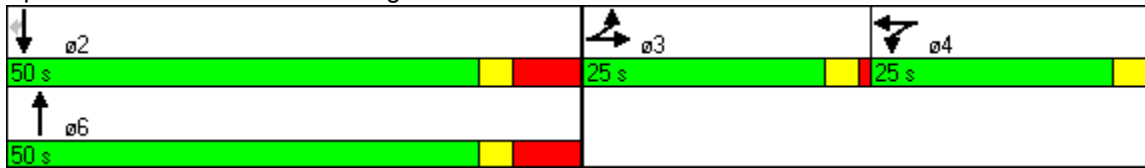


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Recall Mode	Min	Min		Min	Min			Min			C-Min	C-Min
Walk Time (s)	8.0	8.0		8.0	8.0							
Flash Dont Walk (s)	10.0	10.0		10.0	10.0							
Pedestrian Calls (#/hr)	168	168		162	162							
Act Effct Green (s)		18.0			18.1			51.9			51.9	51.9
Actuated g/C Ratio		0.18			0.18			0.52			0.52	0.52
v/c Ratio		0.56			0.58			0.78			0.69	0.31
Control Delay		17.1			25.4			12.7			9.5	1.1
Queue Delay		1.1			0.2			1.4			19.6	0.7
Total Delay		18.2			25.6			14.0			29.2	1.8
LOS		B			C			B			C	A
Approach Delay		18.2			25.6			14.0			25.5	
Approach LOS		B			C			B			C	
90th %ile Green (s)	18.0	18.0		18.7	18.7			46.3			46.3	46.3
90th %ile Term Code	Ped	Ped		Gap	Gap			Coord			Coord	Coord
70th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
70th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
50th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
50th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
30th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
30th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
10th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
10th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
Queue Length 50th (ft)		2			55			107			132	1
Queue Length 95th (ft)		62			101			161			m98	m1
Internal Link Dist (ft)		564			363			221			204	
Turn Bay Length (ft)												150
Base Capacity (vph)		562			622			1663			1597	544
Starvation Cap Reductn		0			0			66			515	164
Spillback Cap Reductn		117			36			193			351	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.62			0.55			0.88			1.02	0.45

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 79 (79%), Referenced to phase 2:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 20.2 Intersection LOS: C
 Intersection Capacity Utilization 77.3% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 94: Huntington Avenue & Mass Ave





Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Lane Configurations												
Ideal Flow (vphpl)	1000	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	11	12	11	11	11	11	11
Grade (%)	0%						0%					
Storage Length (ft)	0		0		0		0	0		0		0
Storage Lanes	1		1		1		0	0		0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50		50	50	50	50		50	50			
Trailing Detector (ft)	0		0	0	0	0		0	0			
Turning Speed (mph)	9	9	9	15	15		9	15		9	9	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor			0.90		0.87	0.99			0.92			
Frt	0.865		0.865			0.998			0.980			
Flt Protected					0.950							
Satd. Flow (prot)	778	0	1479	0	1624	3113	0	0	2827	0	0	0
Flt Permitted					0.282				0.793			
Satd. Flow (perm)	778	0	1328	0	418	3113	0	0	2242	0	0	0
Right Turn on Red		No	Yes				Yes					No
Satd. Flow (RTOR)			286			3						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.19	1.19	1.19	1.19	1.19
Link Speed (mph)						30			25			
Link Distance (ft)						284			1155			
Travel Time (s)						6.5			31.5			
Volume (vph)	337	23	35	25	471	814	10	4	806	77	50	50
Confl. Peds. (#/hr)		116	306	116	216		306	100		116	216	216
Confl. Bikes (#/hr)		3					52			45	45	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	366	25	38	27	512	885	11	4	876	84	54	54
Lane Group Flow (vph)	391	0	38	0	539	896	0	0	1018	0	0	0
Turn Type	custom		Free custom			Prot	Perm					
Protected Phases	7 8!			2	2 7 8	1 2 8			1			7
Permitted Phases			Free	7 8!				1				
Detector Phases	7 8			2	2 7 8	1 2 8		1	1			
Minimum Initial (s)				6.0				8.0	8.0			8.0
Minimum Split (s)				12.0				28.0	28.0			21.0
Total Split (s)	42.0	0.0	0.0	18.0	60.0	78.0	0.0	40.0	40.0	0.0	0.0	22.0
Total Split (%)	42.0%	0.0%	0.0%	18.0%	60.0%	78.0%	0.0%	40.0%	40.0%	0.0%	0.0%	22%
Maximum Green (s)				12.0				34.0	34.0			16.0
Yellow Time (s)				3.0				3.0	3.0			3.0
All-Red Time (s)				3.0				3.0	3.0			3.0
Lead/Lag				Lag				Lead	Lead			Lead
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0				2.0	2.0			2.0
Minimum Gap (s)				2.0				2.0	2.0			2.0

Lane Group	ø8
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	20%
Maximum Green (s)	14.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0



Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Time Before Reduce (s)				0.0				0.0	0.0			0.0
Time To Reduce (s)				0.0				0.0	0.0			0.0
Recall Mode				C-Max				Max	Max			Ped
Walk Time (s)								15.0	15.0			10.0
Flash Dont Walk (s)								7.0	7.0			5.0
Pedestrian Calls (#/hr)								5	5			0
Act Effct Green (s)	38.0		100.0		52.0	74.0			36.0			
Actuated g/C Ratio	0.38		1.00		0.52	0.74			0.36			
v/c Ratio	1.32		0.03		1.40	0.39			1.26			
Control Delay	195.3		0.0		217.2	1.5			157.6			
Queue Delay	2.0		0.0		0.0	0.4			0.0			
Total Delay	197.3		0.0		217.2	1.9			157.6			
LOS	F		A		F	A			F			
Approach Delay						82.8			157.6			
Approach LOS						F			F			
90th %ile Green (s)				12.0				34.0	34.0			16.0
90th %ile Term Code				Coord				MaxR	MaxR			Max
70th %ile Green (s)				12.0				34.0	34.0			16.0
70th %ile Term Code				Coord				MaxR	MaxR			Max
50th %ile Green (s)				12.0				34.0	34.0			16.0
50th %ile Term Code				Coord				MaxR	MaxR			Max
30th %ile Green (s)				12.0				34.0	34.0			16.0
30th %ile Term Code				Coord				MaxR	MaxR			Max
10th %ile Green (s)				12.0				34.0	34.0			16.0
10th %ile Term Code				Coord				MaxR	MaxR			Max
Queue Length 50th (ft)	~324		0		~364	30			~431			
Queue Length 95th (ft)	#506		0		#572	31			#558			
Internal Link Dist (ft)						204			1075			
Turn Bay Length (ft)												
Base Capacity (vph)	296		1328		386	2304			807			
Starvation Cap Reductn	0		0		0	837			0			
Spillback Cap Reductn	1		0		0	0			0			
Storage Cap Reductn	0		0		0	0			0			
Reduced v/c Ratio	1.33		0.03		1.40	0.61			1.26			

Intersection Summary

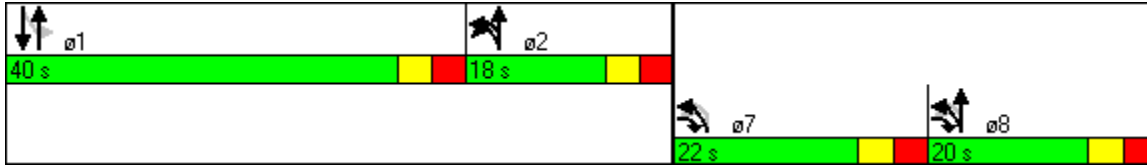
Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 29 (29%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 135
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.40
 Intersection Signal Delay: 123.6 Intersection LOS: F
 Intersection Capacity Utilization 118.1% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø8
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	14.0
90th %ile Term Code	MaxR
70th %ile Green (s)	14.0
70th %ile Term Code	MaxR
50th %ile Green (s)	14.0
50th %ile Term Code	MaxR
30th %ile Green (s)	14.0
30th %ile Term Code	MaxR
10th %ile Green (s)	14.0
10th %ile Term Code	MaxR
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Queue shown is maximum after two cycles.

! Phase conflict between lane groups.

Splits and Phases: 93: Westland Avenue & Massachusetts Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	16	16	16	10	10	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50					50	50		50	50	50
Trailing Detector (ft)	0	0					0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.81						0.96			1.00	0.83
Frt		0.983						0.980				0.850
Flt Protected		0.971						0.995			0.996	
Satd. Flow (prot)	0	1504	0	0	0	0	0	1652	0	0	1561	1405
Flt Permitted		0.971						0.774			0.921	
Satd. Flow (perm)	0	1307	0	0	0	0	0	1267	0	0	1439	1167
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.12	1.14	1.14	1.14	1.14	0.97	1.12	0.97	1.25	1.25	1.19
Link Speed (mph)		25				25		25			25	
Link Distance (ft)		473				459		1138			266	
Travel Time (s)		12.9				12.5		31.0			7.3	
Volume (vph)	136	63	29	0	0	0	58	398	81	30	341	502
Confl. Peds. (#/hr)	156		343	343		156	208		83	83		208
Confl. Bikes (#/hr)			19			16			21			24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	4%	0%	0%	0%	2%	0%	3%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	148	68	32	0	0	0	63	433	88	33	371	546
Lane Group Flow (vph)	0	248	0	0	0	0	0	584	0	0	404	546
Turn Type	Split						Perm			Perm		pm+ov
Protected Phases	3	3						1			1	3
Permitted Phases							1			1		1
Detector Phases	3	3					1	1		1	1	3
Minimum Initial (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.0	12.0					12.0	12.0		12.0	12.0	12.0
Total Split (s)	36.0	36.0	0.0	0.0	0.0	0.0	38.0	38.0	0.0	38.0	38.0	36.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	42.2%	42.2%	0.0%	42.2%	42.2%	40.0%
Maximum Green (s)	32.0	32.0					34.0	34.0		34.0	34.0	32.0
Yellow Time (s)	3.0	3.0					3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0

Lane Group	ø2
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	7.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	18%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None					None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		13.9					34.3			34.3	48.2	
Actuated g/C Ratio		0.25					0.61			0.61	0.86	
v/c Ratio		0.67					0.76			0.46	0.52	
Control Delay		28.0					19.0			9.6	2.3	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		28.0					19.0			9.6	2.3	
LOS		C					B			A	A	
Approach Delay		28.0					19.0			5.4		
Approach LOS		C					B			A		
90th %ile Green (s)	22.5	22.5					34.0	34.0		34.0	34.0	22.5
90th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
70th %ile Green (s)	17.1	17.1					34.0	34.0		34.0	34.0	17.1
70th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
50th %ile Green (s)	14.2	14.2					34.0	34.0		34.0	34.0	14.2
50th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
30th %ile Green (s)	10.5	10.5					34.0	34.0		34.0	34.0	10.5
30th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
10th %ile Green (s)	7.0	7.0					34.0	34.0		34.0	34.0	7.0
10th %ile Term Code	Min	Min					Max	Max		Max	Max	Min
Queue Length 50th (ft)		74						122		63	0	
Queue Length 95th (ft)		136						#386		168	0	
Internal Link Dist (ft)		393			379			1058		186		
Turn Bay Length (ft)												
Base Capacity (vph)		650						773		878	1144	
Starvation Cap Reductn		0						0		0	0	
Spillback Cap Reductn		0						0		0	0	
Storage Cap Reductn		0						0		0	0	
Reduced v/c Ratio		0.38						0.76		0.46	0.48	

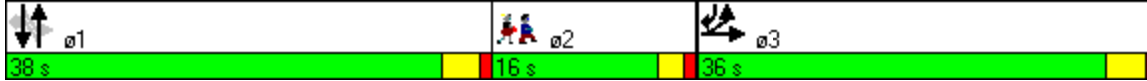
Intersection Summary

Area Type:	CBD
Cycle Length:	90
Actuated Cycle Length:	56.3
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	13.0
Intersection LOS:	B
Intersection Capacity Utilization:	86.7%
ICU Level of Service:	E
Analysis Period (min):	15
90th %ile Actuated Cycle:	64.5
70th %ile Actuated Cycle:	59.1
50th %ile Actuated Cycle:	56.2
30th %ile Actuated Cycle:	52.5

Lane Group	ø2
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	0.0
90th %ile Term Code	Skip
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

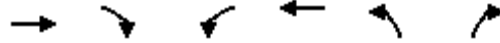
10th %ile Actuated Cycle: 49
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 481: Hemenway Street & Westland Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕				
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	0	148	64	33	114	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	161	70	36	124	0	0	0	0
Pedestrians		173			228			179			315	
Lane Width (ft)		0.0			16.0			16.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			25			20			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)		977			609							
pX, platoon unblocked												
vC, conflicting volume	545			179			548	724	407	801	690	684
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	545			179			548	724	407	801	690	684
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			88	56	100	100	100	100
cM capacity (veh/h)	1034			1129			302	283	388	129	297	452
Direction, Lane #	WB 1	NB 1										
Volume Total	230	160										
Volume Left	0	36										
Volume Right	70	0										
cSH	1700	287										
Volume to Capacity	0.14	0.56										
Queue Length 95th (ft)	0	79										
Control Delay (s)	0.0	32.2										
Lane LOS		D										
Approach Delay (s)	0.0	32.2										
Approach LOS		D										
Intersection Summary												
Average Delay		13.2										
Intersection Capacity Utilization		37.5%	ICU Level of Service	A								
Analysis Period (min)		15										



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	137	0	0	497	24	153
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	149	0	0	540	26	166
Pedestrians	25			22	255	
Lane Width (ft)	12.0			12.0	16.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	28	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	473					
pX, platoon unblocked						
vC, conflicting volume			404		969	426
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			404		969	426
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		87	62
cM capacity (veh/h)			835		195	438

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	149	540	192
Volume Left	0	0	26
Volume Right	0	0	166
cSH	1700	1700	374
Volume to Capacity	0.09	0.32	0.51
Queue Length 95th (ft)	0	0	71
Control Delay (s)	0.0	0.0	24.3
Lane LOS	C		
Approach Delay (s)	0.0	0.0	24.3
Approach LOS	C		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖		↘
Sign Control	Stop			Stop	Stop	
Volume (vph)	76	37	139	384	18	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	83	40	151	417	20	66

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	123	568	86
Volume Left (vph)	0	151	20
Volume Right (vph)	40	0	66
Hadj (s)	-0.05	0.08	-0.31
Departure Headway (s)	4.7	4.4	5.1
Degree Utilization, x	0.16	0.69	0.12
Capacity (veh/h)	735	811	612
Control Delay (s)	8.6	16.4	8.9
Approach Delay (s)	8.6	16.4	8.9
Approach LOS	A	C	A

Intersection Summary			
Delay		14.3	
HCM Level of Service		B	
Intersection Capacity Utilization	57.7%		ICU Level of Service B
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	379	21	249	84	29	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	412	23	271	91	32	79
Pedestrians	44		2		13	
Lane Width (ft)	16.0		10.0		11.0	
Walking Speed (ft/s)	4.0		4.0		4.0	
Percent Blockage	5		0		1	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	209					
pX, platoon unblocked	0.79	0.79			0.79	
vC, conflicting volume	505	373			406	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	373	207			248	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	10	96			97	
cM capacity (veh/h)	456	620			990	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	435	362	111
Volume Left	412	0	32
Volume Right	23	91	0
cSH	463	1700	990
Volume to Capacity	0.94	0.21	0.03
Queue Length 95th (ft)	279	0	2
Control Delay (s)	58.2	0.0	2.7
Lane LOS	F		A
Approach Delay (s)	58.2	0.0	2.7
Approach LOS	F		

Intersection Summary			
Average Delay	28.2		
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations					↕			↕				↕
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Volume (veh/h)	0	0	0	0	0	0	12	75	1	1	0	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	13	82	1	0	0	83
Pedestrians		591			1017			74				380
Lane Width (ft)		0.0			10.0			16.0				16.0
Walking Speed (ft/s)		4.0			4.0			4.0				4.0
Percent Blockage		0			71			8				42
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												482
pX, platoon unblocked									0.00			
vC, conflicting volume	1204	1842	790	1324	1884	1479	758		0	1100		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1204	1842	790	1324	1884	1479	758		0	1100		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2		0.0	4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3		0.0	2.2		
p0 queue free %	100	100	100	100	100	100	98		0	100		
cM capacity (veh/h)	40	22	361	15	21	26	801		0	189		
Direction, Lane #	WB 1	NB 1	SB 1									
Volume Total	0	96	167									
Volume Left	0	13	0									
Volume Right	0	1	85									
cSH	1700	801	189									
Volume to Capacity	0.00	0.02	0.00									
Queue Length 95th (ft)	0	1	0									
Control Delay (s)	0.0	1.4	0.0									
Lane LOS	A	A										
Approach Delay (s)	0.0	1.4	0.0									
Approach LOS	A											
Intersection Summary												
Average Delay			0.5									
Intersection Capacity Utilization		35.2%			ICU Level of Service				A			
Analysis Period (min)			15									



Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	78
Peak Hour Factor	0.92
Hourly flow rate (vph)	85
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	
tC, single (s)	
tC, 2 stage (s)	
tF (s)	
p0 queue free %	
cM capacity (veh/h)	
Direction, Lane #	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	0	950	5	0	708
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	1033	5	0	770
Pedestrians			21			3
Lane Width (ft)			10.0			14.0
Walking Speed (ft/s)			4.0			4.0
Percent Blockage			1			0
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			231			490
pX, platoon unblocked	0.68					
vC, conflicting volume	1826	522			1038	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2220	522			1038	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	100			100	
cM capacity (veh/h)	25	498			665	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	1	688	350	770
Volume Left	1	0	0	0
Volume Right	0	0	5	0
cSH	25	1700	1700	665
Volume to Capacity	0.04	0.40	0.21	0.00
Queue Length 95th (ft)	3	0	0	0
Control Delay (s)	157.8	0.0	0.0	0.0
Lane LOS	F			
Approach Delay (s)	157.8	0.0		0.0
Approach LOS	F			

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		52.4%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	21	0	913	830	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	23	0	992	902	0
Pedestrians				65		
Lane Width (ft)				10.0		
Walking Speed (ft/s)				4.0		
Percent Blockage				5		
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				314	126	
pX, platoon unblocked	0.44	0.90	0.90			
vC, conflicting volume	1895	516	902			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2470	355	783			
tC, single (s)	6.9	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	69	96	100			
cM capacity (veh/h)	10	557	761			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	26	992	451	451
Volume Left	3	0	0	0
Volume Right	23	0	0	0
cSH	73	1700	1700	1700
Volume to Capacity	0.36	0.58	0.27	0.27
Queue Length 95th (ft)	34	0	0	0
Control Delay (s)	79.0	0.0	0.0	0.0
Lane LOS	F			
Approach Delay (s)	79.0	0.0	0.0	
Approach LOS	F			

Intersection Summary			
Average Delay		1.1	
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations			↔			↔↔	
Sign Control	Yield		Free		Free		
Grade	0%		0%		0%		
Volume (veh/h)	0	0	913	36	17	833	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	992	39	18	905	
Pedestrians	205		25		48		
Lane Width (ft)	0.0		13.0		11.0		
Walking Speed (ft/s)	4.0		4.0		4.0		
Percent Blockage	0		2		4		
Right turn flare (veh)							
Median type	None						
Median storage (veh)							
Upstream signal (ft)			206		234		
pX, platoon unblocked	0.43	0.38			0.38		
vC, conflicting volume	1732	1265			1237		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	2176	1697			1622		
tC, single (s)	6.8	6.9			5.6		
tC, 2 stage (s)							
tF (s)	3.5	3.3			3.0		
p0 queue free %	100	100			72		
cM capacity (veh/h)	12	30			67		
Direction, Lane #	NB 1	SB 1	SB 2				
Volume Total	1032	320	604				
Volume Left	0	18	0				
Volume Right	39	0	0				
cSH	1700	67	1700				
Volume to Capacity	0.61	0.28	0.36				
Queue Length 95th (ft)	0	25	0				
Control Delay (s)	0.0	29.6	0.0				
Lane LOS			D				
Approach Delay (s)	0.0	10.3					
Approach LOS							
Intersection Summary							
Average Delay			4.8				
Intersection Capacity Utilization			74.1%		ICU Level of Service		D
Analysis Period (min)	15						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	37	267	12	24	306	56	0	0	0	127	7	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	290	13	26	333	61	0	0	0	138	8	121
Pedestrians		23			66			207			94	
Lane Width (ft)		11.0			11.0			0.0			16.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			5			0			10	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		384										
pX, platoon unblocked				0.98			0.98	0.98	0.98	0.98	0.98	0.98
vC, conflicting volume	487			510			1147	1124	570	952	1100	480
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	487			502			1149	1126	563	952	1102	480
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			98			100	100	100	21	96	77
cM capacity (veh/h)	963			1045			110	169	491	175	174	515

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	343	420	266
Volume Left	40	26	138
Volume Right	13	61	121
cSH	963	1045	250
Volume to Capacity	0.04	0.02	1.07
Queue Length 95th (ft)	3	2	277
Control Delay (s)	1.4	0.8	118.7
Lane LOS	A	A	F
Approach Delay (s)	1.4	0.8	118.7
Approach LOS			F

Intersection Summary		
Average Delay		31.5
Intersection Capacity Utilization	59.9%	ICU Level of Service
Analysis Period (min)		15
		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕							
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	21	416	15	15	397	18	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	452	16	16	432	20	0	0	0	0	0	0
Pedestrians		155			47			272			215	
Lane Width (ft)		11.0			10.0			0.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		12			3			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		740										
pX, platoon unblocked												
vC, conflicting volume	666			740			1407	1477	779	1242	1475	811
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	666			740			1407	1477	779	1242	1475	811
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			100	100	100	100	100	100
cM capacity (veh/h)	923			866			99	121	383	142	121	334
Direction, Lane #	EB 1	WB 1										
Volume Total	491	467										
Volume Left	23	16										
Volume Right	16	20										
cSH	923	866										
Volume to Capacity	0.02	0.02										
Queue Length 95th (ft)	2	1										
Control Delay (s)	0.7	0.6										
Lane LOS	A	A										
Approach Delay (s)	0.7	0.6										
Approach LOS												
Intersection Summary												
Average Delay		0.6										
Intersection Capacity Utilization		38.5%	ICU Level of Service	A								
Analysis Period (min)		15										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	7	403	22	41	438	6	9	2	14	9	3	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	438	24	45	476	7	10	2	15	10	3	5
Pedestrians		77			226			113			78	
Lane Width (ft)		11.0			10.0			16.0			13.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			16			13			7	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh								1			1	
Upstream signal (ft)					626							
pX, platoon unblocked	0.90						0.90	0.90		0.90	0.90	0.90
vC, conflicting volume	561			575			1231	1228	789	1354	1237	634
vC1, stage 1 conf vol							578	578		646	646	
vC2, stage 2 conf vol							653	650		708	590	
vCu, unblocked vol	510			575			1257	1254	789	1395	1264	592
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			96	99	95	95	99	99
cM capacity (veh/h)	880			873			221	237	288	180	229	397
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	470	527	27	18								
Volume Left	8	45	10	10								
Volume Right	24	7	15	5								
cSH	880	873	256	224								
Volume to Capacity	0.01	0.05	0.11	0.08								
Queue Length 95th (ft)	1	4	9	7								
Control Delay (s)	0.3	1.4	20.7	22.5								
Lane LOS	A	A	C	C								
Approach Delay (s)	0.3	1.4	20.7	22.5								
Approach LOS			C	C								
Intersection Summary												
Average Delay			1.8									
Intersection Capacity Utilization			72.2%	ICU Level of Service		C						
Analysis Period (min)			15									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	22	17	9	36	19	126	1	65	36	100	39	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	18	10	39	21	137	1	71	39	109	42	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	52	197	111	170
Volume Left (vph)	24	39	1	109
Volume Right (vph)	10	137	39	18
Hadj (s)	-0.01	-0.34	-0.19	0.10
Departure Headway (s)	4.8	4.3	4.5	4.7
Degree Utilization, x	0.07	0.23	0.14	0.22
Capacity (veh/h)	687	783	747	719
Control Delay (s)	8.2	8.6	8.2	9.0
Approach Delay (s)	8.2	8.6	8.2	9.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.6	
HCM Level of Service		A	
Intersection Capacity Utilization	40.9%		ICU Level of Service A
Analysis Period (min)		15	

Northeastern University IMP
363: Huntington Avenue & Gainsborough Street

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	11	12	12	10	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.98			0.73				
Frt		0.987			0.996			0.981				
Flt Protected	0.950				0.997			0.964				
Satd. Flow (prot)	1560	3090	0	0	3592	0	0	1458	0	0	0	0
Flt Permitted	0.369				0.864			0.964				
Satd. Flow (perm)	606	3090	0	0	3113	0	0	1116	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			7			6				
Headway Factor	1.09	1.00	1.00	1.00	1.04	1.00	1.00	1.09	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		362			634			254				308
Travel Time (s)		8.2			14.4			5.8				7.0
Volume (vph)	36	647	59	35	576	17	96	16	18	0	0	0
Confl. Peds. (#/hr)			159			200	262		136			
Confl. Bikes (#/hr)			10			12			4			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	10%	8%	3%	39%	16%	7%	5%	24%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	703	64	38	626	18	104	17	20	0	0	0
Lane Group Flow (vph)	39	767	0	0	682	0	0	141	0	0	0	0
Turn Type	Perm			D.P+P			Perm					
Protected Phases		1		3	1 3			2				
Permitted Phases	1			1			2					
Detector Phases	1	1		3	1 3		2	2				
Minimum Initial (s)	8.0	8.0		6.0			8.0	8.0				
Minimum Split (s)	19.0	19.0		12.0			31.0	31.0				
Total Split (s)	77.0	77.0	0.0	12.0	89.0	0.0	31.0	31.0	0.0	0.0	0.0	0.0
Total Split (%)	64.2%	64.2%	0.0%	10.0%	74.2%	0.0%	25.8%	25.8%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	72.0	72.0		7.0			25.0	25.0				
Yellow Time (s)	3.0	3.0		3.0			3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0			3.0	3.0				
Lead/Lag				Lag			Lead	Lead				
Lead-Lag Optimize?				Yes			Yes	Yes				
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0			3.0	3.0				



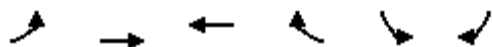
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Recall Mode	C-Max	C-Max		None			None	None				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	5.0	5.0					17.0	17.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)	79.3	79.3			87.3			20.7				
Actuated g/C Ratio	0.66	0.66			0.73			0.17				
v/c Ratio	0.10	0.37			0.30			0.71				
Control Delay	6.0	6.0			5.3			63.4				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	6.0	6.0			5.3			63.4				
LOS	A	A			A			E				
Approach Delay		6.0			5.3			63.4				
Approach LOS		A			A			E				
90th %ile Green (s)	72.0	72.0		7.0			25.0	25.0				
90th %ile Term Code	Coord	Coord		Max			Max	Max				
70th %ile Green (s)	74.0	74.0		7.0			23.0	23.0				
70th %ile Term Code	Coord	Coord		Max			Gap	Gap				
50th %ile Green (s)	77.6	77.6		7.0			19.4	19.4				
50th %ile Term Code	Coord	Coord		Max			Gap	Gap				
30th %ile Green (s)	81.3	81.3		7.0			15.7	15.7				
30th %ile Term Code	Coord	Coord		Max			Gap	Gap				
10th %ile Green (s)	86.4	86.4		7.0			10.6	10.6				
10th %ile Term Code	Coord	Coord		Max			Gap	Gap				
Queue Length 50th (ft)	6	59			49			99				
Queue Length 95th (ft)	18	97			78			163				
Internal Link Dist (ft)		282			554			174			228	
Turn Bay Length (ft)	150											
Base Capacity (vph)	400	2046			2297			256				
Starvation Cap Reductn	0	0			0			0				
Spillback Cap Reductn	0	0			0			0				
Storage Cap Reductn	0	0			0			0				
Reduced v/c Ratio	0.10	0.37			0.30			0.55				

Intersection Summary

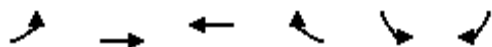
Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	23 (19%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	10.7
Intersection LOS:	B
Intersection Capacity Utilization:	62.7%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 363: Huntington Avenue & Gainsborough Street





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Lane Configurations			↑↑			↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)		0%	0%		0%		
Storage Length (ft)	0			0	0	0	
Storage Lanes	0			0	0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)			100			20	
Trailing Detector (ft)			0			0	
Turning Speed (mph)	15			9	15	9	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00	
Ped Bike Factor							
Fr _t							0.865
Fl _t Protected							
Satd. Flow (prot)	0	0	3374	0	0	1565	
Fl _t Permitted							
Satd. Flow (perm)	0	0	3374	0	0	1565	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						475	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)		25	25		30		
Link Distance (ft)		279	408		361		
Travel Time (s)		7.6	11.1		8.2		
Volume (vph)	0	0	675	0	0	91	
Confl. Peds. (#/hr)	9			20		176	
Confl. Bikes (#/hr)				10		2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	9%	7%	0%	0%	5%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)		0%	0%		0%		
Adj. Flow (vph)	0	0	734	0	0	99	
Lane Group Flow (vph)	0	0	734	0	0	99	
Turn Type							custom
Protected Phases			1			3	2
Permitted Phases							
Detector Phases			1			3	
Minimum Initial (s)			8.0			8.0	4.0
Minimum Split (s)			18.0			13.0	19.0
Total Split (s)	0.0	0.0	27.0	0.0	0.0	14.0	19.0
Total Split (%)	0.0%	0.0%	45.0%	0.0%	0.0%	23.3%	32%
Maximum Green (s)			23.0			10.0	15.0
Yellow Time (s)			3.0			3.0	3.0
All-Red Time (s)			1.0			1.0	1.0
Lead/Lag			Lead			Lag	
Lead-Lag Optimize?			Yes			Yes	
Vehicle Extension (s)			3.0			3.0	3.0
Minimum Gap (s)			3.0			3.0	3.0

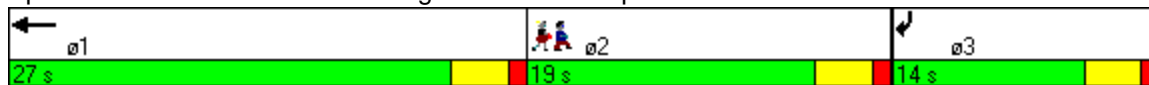


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Time Before Reduce (s)			0.0			0.0	0.0
Time To Reduce (s)			0.0			0.0	0.0
Recall Mode			C-Max			None	Ped
Walk Time (s)			7.0				10.0
Flash Dont Walk (s)			5.0				5.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)			27.4			8.4	
Actuated g/C Ratio			0.46			0.14	
v/c Ratio			0.48			0.16	
Control Delay			13.5			0.5	
Queue Delay			0.0			0.0	
Total Delay			13.5			0.5	
LOS			B			A	
Approach Delay			13.5				
Approach LOS			B				
90th %ile Green (s)			25.0			8.0	15.0
90th %ile Term Code			Coord			Min	Ped
70th %ile Green (s)			25.0			8.0	15.0
70th %ile Term Code			Coord			Min	Ped
50th %ile Green (s)			25.0			8.0	15.0
50th %ile Term Code			Coord			Min	Ped
30th %ile Green (s)			25.0			8.0	15.0
30th %ile Term Code			Coord			Min	Ped
10th %ile Green (s)			37.0			0.0	15.0
10th %ile Term Code			Coord			Skip	Ped
Queue Length 50th (ft)			99			0	
Queue Length 95th (ft)			144			0	
Internal Link Dist (ft)		199	328		281		
Turn Bay Length (ft)							
Base Capacity (vph)			1541			657	
Starvation Cap Reductn			0			0	
Spillback Cap Reductn			0			0	
Storage Cap Reductn			0			0	
Reduced v/c Ratio			0.48			0.15	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	55 (92%), Referenced to phase 1:WBT, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	12.0
Intersection LOS:	B
Intersection Capacity Utilization:	38.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4019: Huntington Avenue & Opera Place





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Lane Configurations	↑↑						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	0%			0%	0%		
Storage Length (ft)		0	0		0	0	
Storage Lanes		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	100						
Trailing Detector (ft)	0						
Turning Speed (mph)		9	15		15	9	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt							
Flt Protected							
Satd. Flow (prot)	3539	0	0	0	0	0	
Flt Permitted							
Satd. Flow (perm)	3539	0	0	0	0	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)	30			30	30		
Link Distance (ft)	280			409	285		
Travel Time (s)	6.4			9.3	6.5		
Volume (vph)	743	0	0	0	0	0	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%	0%		
Adj. Flow (vph)	808	0	0	0	0	0	
Lane Group Flow (vph)	808	0	0	0	0	0	
Turn Type							
Protected Phases	1						2
Permitted Phases							
Detector Phases	1						
Minimum Initial (s)	8.0						4.0
Minimum Split (s)	14.0						19.0
Total Split (s)	41.0	0.0	0.0	0.0	0.0	0.0	19.0
Total Split (%)	68.3%	0.0%	0.0%	0.0%	0.0%	0.0%	32%
Maximum Green (s)	37.0						15.0
Yellow Time (s)	3.0						3.0
All-Red Time (s)	1.0						1.0
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0						3.0
Minimum Gap (s)	3.0						3.0



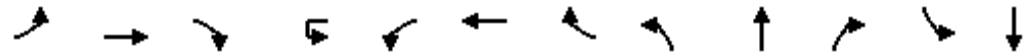
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Time Before Reduce (s)	0.0						0.0
Time To Reduce (s)	0.0						0.0
Recall Mode	C-Min						Ped
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	37.0						
Actuated g/C Ratio	0.62						
v/c Ratio	0.37						
Control Delay	6.0						
Queue Delay	0.0						
Total Delay	6.0						
LOS	A						
Approach Delay	6.0						
Approach LOS	A						
90th %ile Green (s)	37.0						15.0
90th %ile Term Code	Coord						Ped
70th %ile Green (s)	37.0						15.0
70th %ile Term Code	Coord						Ped
50th %ile Green (s)	37.0						15.0
50th %ile Term Code	Coord						Ped
30th %ile Green (s)	37.0						15.0
30th %ile Term Code	Coord						Ped
10th %ile Green (s)	37.0						15.0
10th %ile Term Code	Coord						Ped
Queue Length 50th (ft)	55						
Queue Length 95th (ft)	224						
Internal Link Dist (ft)	200			329	205		
Turn Bay Length (ft)							
Base Capacity (vph)	2182						
Starvation Cap Reductn	0						
Spillback Cap Reductn	0						
Storage Cap Reductn	0						
Reduced v/c Ratio	0.37						

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	60
Offset:	31 (52%), Referenced to phase 1:EBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.37
Intersection Signal Delay:	6.0
Intersection Capacity Utilization	23.9%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

Splits and Phases: 4020: Huntington Avenue & South





Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑				↑↑			↑			↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	12	12	12	12	12	12	14
Grade (%)		0%				0%			0%			0%
Storage Length (ft)	0		0		0		0	0		0	0	
Storage Lanes	0		0		0		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50	50		50	50		50	50
Trailing Detector (ft)		0		0	0	0		0	0		0	0
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96				0.96			0.81			0.82
Frt		0.991				0.993			0.966			0.964
Flt Protected						0.997			0.980			0.989
Satd. Flow (prot)	0	2951	0	0	0	2853	0	0	1020	0	0	1378
Flt Permitted						0.839			0.860			0.923
Satd. Flow (perm)	0	2951	0	0	0	2374	0	0	834	0	0	1176
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)												14
Headway Factor	1.14	1.10	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.05
Link Speed (mph)		30				30			25			25
Link Distance (ft)		606				258			482			466
Travel Time (s)		13.8				5.9			13.1			12.7
Volume (vph)	0	697	44	27	24	667	37	30	25	18	30	69
Confl. Peds. (#/hr)			276	755	276		155	183		755	755	
Confl. Bikes (#/hr)			38				1			2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	7%	30%	2%	8%	10%	12%	64%	15%	23%	6%	21%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Adj. Flow (vph)	0	758	48	29	26	725	40	33	27	20	33	75
Lane Group Flow (vph)	0	806	0	0	0	820	0	0	80	0	0	147
Turn Type				D.P+P	D.P+P			Perm				Perm
Protected Phases		1		3	3	1 3			2			2
Permitted Phases				1	1			2			2	
Detector Phases		1		3	3	1 3		2	2		2	2
Minimum Initial (s)		8.0		8.0	8.0			8.0	8.0		8.0	8.0
Minimum Split (s)		21.0		14.0	14.0			16.0	16.0		16.0	16.0
Total Split (s)	0.0	73.0	0.0	15.0	15.0	88.0	0.0	32.0	32.0	0.0	32.0	32.0
Total Split (%)	0.0%	60.8%	0.0%	12.5%	12.5%	73.3%	0.0%	26.7%	26.7%	0.0%	26.7%	26.7%
Maximum Green (s)		68.0		10.0	10.0			26.0	26.0		26.0	26.0
Yellow Time (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
All-Red Time (s)		2.0		2.0	2.0			3.0	3.0		3.0	3.0
Lead/Lag				Lag	Lag			Lead	Lead		Lead	Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes		Yes	Yes
Vehicle Extension (s)		2.0		2.0	2.0			3.0	3.0		3.0	3.0
Minimum Gap (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Headway Factor	1.14
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	36
Confl. Peds. (#/hr)	183
Confl. Bikes (#/hr)	2
Peak Hour Factor	0.92
Growth Factor	100%
Heavy Vehicles (%)	4%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	39
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	



Lane Group	SBR
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Splits and Phases: 643: Huntington Avenue & Forsyth Street



Northeastern University IMP
569: Huntington Avenue & Forsyth Way

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑			↕			↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	12	12	16	12	12	12	15
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50		50	50		50	50	50
Trailing Detector (ft)		0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00			0.93				0.71
Frt					0.999			0.967				0.850
Flt Protected				0.950				0.998			0.996	
Satd. Flow (prot)	0	2927	0	1430	2875	0	0	1686	0	0	1650	1552
Flt Permitted				0.950				0.984			0.938	
Satd. Flow (perm)	0	2927	0	1430	2875	0	0	1662	0	0	1554	1105
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.14	1.14	1.25	1.19	1.14	1.14	0.97	1.14	1.14	1.14	1.01
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		894			606			731			263	
Travel Time (s)		20.3			13.8			19.9			7.2	
Volume (vph)	0	617	0	114	631	5	16	315	106	20	214	176
Confl. Peds. (#/hr)			37			50			73			78
Confl. Bikes (#/hr)			11			14			4			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	0%	6%	9%	11%	7%	1%	11%	16%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	671	0	124	686	5	17	342	115	22	233	191
Lane Group Flow (vph)	0	671	0	124	691	0	0	474	0	0	255	191
Turn Type				Prot			Perm			Perm		Perm
Protected Phases		1		3	1 3			2			2	
Permitted Phases							2			2		2
Detector Phases		1		3	1 3		2	2		2	2	2
Minimum Initial (s)		8.0		6.0			8.0	8.0		8.0	8.0	8.0
Minimum Split (s)		33.0		13.0			18.0	18.0		18.0	18.0	18.0
Total Split (s)	0.0	50.0	0.0	22.0	72.0	0.0	48.0	48.0	0.0	48.0	48.0	48.0
Total Split (%)	0.0%	41.7%	0.0%	18.3%	60.0%	0.0%	40.0%	40.0%	0.0%	40.0%	40.0%	40.0%
Maximum Green (s)		45.0		16.0			41.0	41.0		41.0	41.0	41.0
Yellow Time (s)		3.0		3.0			3.0	3.0		3.0	3.0	3.0
All-Red Time (s)		2.0		3.0			4.0	4.0		4.0	4.0	4.0
Lead/Lag				Lag			Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?				Yes			Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)		2.0		2.0			3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)		2.0		3.0			3.0	3.0		3.0	3.0	3.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Recall Mode		C-Max		None			Ped	Ped		Ped	Ped	Ped
Walk Time (s)		7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		19.0					3.0	3.0		3.0	3.0	3.0
Pedestrian Calls (#/hr)		0					0	0		0	0	0
Act Effct Green (s)		51.2		16.7	71.9		40.1			40.1	40.1	40.1
Actuated g/C Ratio		0.43		0.14	0.60		0.33			0.33	0.33	0.33
v/c Ratio		0.54		0.62	0.40		0.85			0.49	0.52	0.52
Control Delay		8.8		60.6	16.3		50.3			34.6	36.8	36.8
Queue Delay		0.0		0.0	0.0		0.0			0.0	0.0	0.0
Total Delay		8.8		60.6	16.3		50.3			34.6	36.8	36.8
LOS		A		E	B		D			C	D	D
Approach Delay		8.8			23.0		50.3			35.5		
Approach LOS		A			C		D			D		
90th %ile Green (s)		45.0		16.0			41.0	41.0		41.0	41.0	41.0
90th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
70th %ile Green (s)		45.0		16.0			41.0	41.0		41.0	41.0	41.0
70th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
50th %ile Green (s)		45.3		16.0			40.7	40.7		40.7	40.7	40.7
50th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	Gap
30th %ile Green (s)		51.2		16.0			34.8	34.8		34.8	34.8	34.8
30th %ile Term Code		Coord		Max			Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)		64.3		9.5			28.2	28.2		28.2	28.2	28.2
10th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
Queue Length 50th (ft)		144		74	184		380			149	113	113
Queue Length 95th (ft)		160		m141	150		m452			227	186	186
Internal Link Dist (ft)		814			526		651			183		
Turn Bay Length (ft)				100								
Base Capacity (vph)		1248		215	1722		609			570	405	405
Starvation Cap Reductn		0		0	0		0			0	0	0
Spillback Cap Reductn		0		0	0		0			0	0	0
Storage Cap Reductn		0		0	0		0			0	0	0
Reduced v/c Ratio		0.54		0.58	0.40		0.78			0.45	0.47	0.47

Intersection Summary

Area Type: CBD

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 26.8

Intersection LOS: C

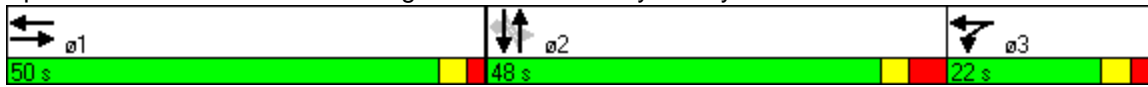
Intersection Capacity Utilization 80.4%

ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 569: Huntington Avenue & Forsyth Way



Northeastern University IMP
3096: Huntington Avenue & Louis Prang Street

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑			↑↑		↙	↘		↙	↘	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	12	12	11	11	12	13	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50		50	50		50	50	
Trailing Detector (ft)	0	0			0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.91			0.86			1.00			0.99	
Frt		0.949			0.963			0.998			0.996	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1472	2442	0	0	2473	0	1441	1536	0	1486	1509	0
Flt Permitted	0.950						0.213			0.406		
Satd. Flow (perm)	1472	2442	0	0	2473	0	323	1536	0	635	1509	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.25	1.19	1.14	1.14	1.14	1.14	1.19	1.19	1.14	1.10	1.14	1.14
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		679			894			582			631	
Travel Time (s)		15.4			20.3			15.9			17.2	
Volume (vph)	78	534	279	0	582	190	257	509	6	34	389	11
Confl. Peds. (#/hr)			54			177			80			97
Confl. Bikes (#/hr)			12			11			11			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	11%	10%	0%	8%	10%	9%	7%	33%	13%	11%	43%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	85	580	303	0	633	207	279	553	7	37	423	12
Lane Group Flow (vph)	85	883	0	0	840	0	279	560	0	37	435	0
Turn Type	Prot						D.P+P			Perm		
Protected Phases	4	1 4			1		2	2 3				3
Permitted Phases							3			3		
Detector Phases	4	1 4			1		2	2 3		3		3
Minimum Initial (s)	5.0				8.0		6.0			8.0	8.0	
Minimum Split (s)	12.0				21.0		14.0			18.0	18.0	
Total Split (s)	16.0	58.0	0.0	0.0	42.0	0.0	20.0	62.0	0.0	42.0	42.0	0.0
Total Split (%)	13.3%	48.3%	0.0%	0.0%	35.0%	0.0%	16.7%	51.7%	0.0%	35.0%	35.0%	0.0%
Maximum Green (s)	10.0				36.0		13.0			35.0	35.0	
Yellow Time (s)	3.0				3.0		3.0			3.0	3.0	
All-Red Time (s)	3.0				3.0		4.0			4.0	4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0				2.0		3.0			3.0	3.0	
Minimum Gap (s)	3.0				3.0		3.0			3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Time To Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Recall Mode	None			C-Max			None			Ped	Ped	
Walk Time (s)					7.0					7.0	7.0	
Flash Dont Walk (s)					6.0					3.0	3.0	
Pedestrian Calls (#/hr)					0					0	0	
Act Effct Green (s)	12.0	54.8			38.8		53.2	57.2		37.2	37.2	
Actuated g/C Ratio	0.10	0.46			0.32		0.44	0.48		0.31	0.31	
v/c Ratio	0.58	0.79			1.12dr		0.96	0.77		0.19	0.93	
Control Delay	68.0	34.4			70.1		61.2	33.6		33.0	67.9	
Queue Delay	0.0	0.0			0.0		0.0	2.9		0.0	0.0	
Total Delay	68.0	34.4			70.1		61.2	36.5		33.0	67.9	
LOS	E	C			E		E	D		C	E	
Approach Delay		37.4			70.1			44.7			65.1	
Approach LOS		D			E			D			E	
90th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
90th %ile Term Code	Max				Coord		Max			Max	Max	
70th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
70th %ile Term Code	Max				Coord		Max			Max	Max	
50th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
50th %ile Term Code	Max				Coord		Max			Max	Max	
30th %ile Green (s)	10.0				36.0		13.0			35.0	35.0	
30th %ile Term Code	Max				Coord		Max			Max	Max	
10th %ile Green (s)	10.0				39.9		13.0			31.1	31.1	
10th %ile Term Code	Max				Coord		Max			Gap	Gap	
Queue Length 50th (ft)	64	303			~363		156	371		21	323	
Queue Length 95th (ft)	#125	394			m#491		m#286	m526		50	#519	
Internal Link Dist (ft)		599			814			502			551	
Turn Bay Length (ft)	100											
Base Capacity (vph)	147	1115			799		292	742		201	478	
Starvation Cap Reductn	0	0			0		0	97		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.58	0.79			1.05		0.96	0.87		0.18	0.91	

Intersection Summary

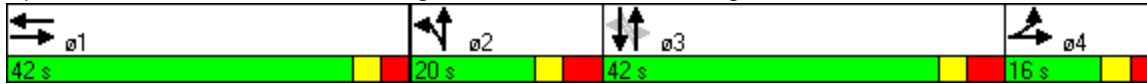
Area Type: CBD
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 84 (70%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.05
 Intersection Signal Delay: 52.4 Intersection LOS: D
 Intersection Capacity Utilization 84.1% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 3096: Huntington Avenue & Louis Prang Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	10	12	16	12	12	10	12	12	15	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor			0.86		0.99			0.94			0.99	
Frt			0.850		0.992			0.981			0.991	
Flt Protected		0.989			0.989			0.997				
Satd. Flow (prot)	0	1556	1211	0	1720	0	0	2689	0	0	1674	0
Flt Permitted		0.834			0.683			0.904			0.997	
Satd. Flow (perm)	0	1312	1048	0	1188	0	0	2439	0	0	1669	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			47		3						4	
Headway Factor	1.14	1.25	1.25	1.14	0.97	1.14	1.14	1.25	1.14	1.14	1.01	1.14
Link Speed (mph)		25			30			25			30	
Link Distance (ft)		563			731			505			582	
Travel Time (s)		15.4			16.6			13.8			13.2	
Volume (vph)	87	319	43	74	228	18	50	686	105	3	541	38
Confl. Peds. (#/hr)			38			73			113			27
Confl. Bikes (#/hr)			19			2			11			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	1%	12%	6%	11%	9%	3%	4%	0%	33%	11%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	95	347	47	80	248	20	54	746	114	3	588	41
Lane Group Flow (vph)	0	442	47	0	348	0	0	914	0	0	632	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		5!			5!		8!	1			1	
Permitted Phases	5!		5	5!						1		
Detector Phases	5	5	5	5	5		8	1		1	1	
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		4.0	8.0		8.0	8.0	
Minimum Split (s)	27.0	27.0	27.0	27.0	27.0		20.0	20.0		20.0	20.0	
Total Split (s)	60.0	60.0	60.0	60.0	60.0	0.0	20.0	60.0	0.0	60.0	60.0	0.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%	0.0%	16.7%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	56.0	56.0	56.0	56.0	56.0		16.0	56.0		56.0	56.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.5	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		0.5	1.0		1.0	1.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		3.0	2.0		2.0	2.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0		3.0	2.0		2.0	2.0	

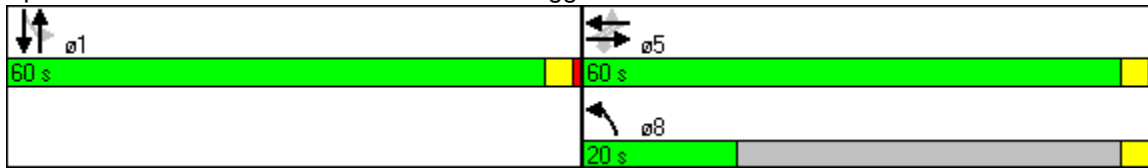


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None	None	None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	15.0	15.0	15.0	15.0	15.0		5.0	8.0		8.0	8.0	
Flash Dont Walk (s)	7.0	7.0	7.0	7.0	7.0		11.0	6.0		6.0	6.0	
Pedestrian Calls (#/hr)	35	35	35	35	35		0	0		0	0	
Act Effct Green (s)		45.6	45.6		45.6			112.0			66.4	
Actuated g/C Ratio		0.38	0.38		0.38			0.93			0.55	
v/c Ratio		0.89	0.11		0.77			0.60			0.68	
Control Delay		54.0	5.8		41.0			5.3			20.3	
Queue Delay		0.2	0.0		0.1			0.0			0.9	
Total Delay		54.1	5.8		41.1			5.3			21.2	
LOS		D	A		D			A			C	
Approach Delay		49.5			41.1			5.3			21.2	
Approach LOS		D			D			A			C	
90th %ile Green (s)	56.0	56.0	56.0	56.0	56.0		56.0	56.0		56.0	56.0	
90th %ile Term Code	Max	Max	Max	Max	Max		Hold	Coord		Coord	Coord	
70th %ile Green (s)	52.4	52.4	52.4	52.4	52.4		52.4	59.6		59.6	59.6	
70th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
50th %ile Green (s)	46.7	46.7	46.7	46.7	46.7		46.7	65.3		65.3	65.3	
50th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
30th %ile Green (s)	40.8	40.8	40.8	40.8	40.8		40.8	71.2		71.2	71.2	
30th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
10th %ile Green (s)	32.3	32.3	32.3	32.3	32.3		32.3	79.7		79.7	79.7	
10th %ile Term Code	Gap	Gap	Gap	Gap	Gap		Hold	Coord		Coord	Coord	
Queue Length 50th (ft)		312	0		290			19			218	
Queue Length 95th (ft)		404	22		386			73			m249	
Internal Link Dist (ft)		483			651			425			502	
Turn Bay Length (ft)												
Base Capacity (vph)		612	514		556			1514			925	
Starvation Cap Reductn		0	0		0			0			104	
Spillback Cap Reductn		9	0		8			33			0	
Storage Cap Reductn		0	0		0			0			0	
Reduced v/c Ratio		0.73	0.09		0.64			0.62			0.77	

Intersection Summary

Area Type:	CBD
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	25 (21%), Referenced to phase 1:NBSB, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.89
Intersection Signal Delay:	23.8
Intersection LOS:	C
Intersection Capacity Utilization:	115.5%
ICU Level of Service:	H
Analysis Period (min):	15
m	Volume for 95th percentile queue is metered by upstream signal.
!	Phase conflict between lane groups.

Splits and Phases: 389: Parker Street & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	13	11	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.96		0.98			
Frt		0.850	0.995			
Flt Protected	0.950					0.998
Satd. Flow (prot)	1417	1318	1494	0	0	2955
Flt Permitted	0.950					0.809
Satd. Flow (perm)	1365	1318	1494	0	0	2396
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		17	5			
Headway Factor	1.25	1.10	1.19	1.14	1.14	1.14
Link Speed (mph)	30		25			30
Link Distance (ft)	302		208			95
Travel Time (s)	6.9		5.7			2.2
Volume (vph)	32	16	854	32	32	650
Confl. Peds. (#/hr)	28	20		235	235	
Confl. Bikes (#/hr)				20		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	14%	8%	8%	4%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	35	17	928	35	35	707
Lane Group Flow (vph)	35	17	963	0	0	742
Turn Type		Prot			Perm	
Protected Phases	5	5	1			1
Permitted Phases					1	
Detector Phases	5	5	1		1	1
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0
Minimum Split (s)	21.0	21.0	21.0		21.0	21.0
Total Split (s)	22.0	22.0	48.0	0.0	48.0	48.0
Total Split (%)	31.4%	31.4%	68.6%	0.0%	68.6%	68.6%
Maximum Green (s)	17.0	17.0	42.0		42.0	42.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	2.0	2.0	2.0		2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	8.0	8.0	8.0		8.0	8.0
Flash Dont Walk (s)	8.0	8.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)	78	78	9		9	9
Act Effct Green (s)	15.4	15.4	50.0			50.0
Actuated g/C Ratio	0.22	0.22	0.71			0.71
v/c Ratio	0.11	0.06	0.90			0.43
Control Delay	21.8	10.8	17.7			6.7
Queue Delay	0.0	0.0	5.2			0.0
Total Delay	21.8	10.8	23.0			6.7
LOS	C	B	C			A
Approach Delay	18.2		23.0			6.7
Approach LOS	B		C			A
90th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	0.0	0.0	64.0		64.0	64.0
10th %ile Term Code	Skip	Skip	Coord		Coord	Coord
Queue Length 50th (ft)	12	0	~483			74
Queue Length 95th (ft)	33	14	m#720			111
Internal Link Dist (ft)	222		128			15
Turn Bay Length (ft)						
Base Capacity (vph)	364	352	1068			1711
Starvation Cap Reductn	0	0	71			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.10	0.05	0.97			0.43

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 4 (6%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 16.0

Intersection LOS: B

Intersection Capacity Utilization 69.0%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1526: Leon Street & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	16	16	13	12	12	11	
Grade (%)	0%		0%			0%	
Storage Length (ft)	0	0		0	0		
Storage Lanes	1	1		0	0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50	50	50			50	
Trailing Detector (ft)	0	0	0			0	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	
Ped Bike Factor							
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	939	876	1578	0	0	2935	
Flt Permitted	0.950						
Satd. Flow (perm)	939	876	1578	0	0	2935	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		27					
Headway Factor	0.97	0.97	1.10	1.14	1.14	1.19	
Link Speed (mph)	30		25			30	
Link Distance (ft)	232		340			229	
Travel Time (s)	5.3		9.3			5.2	
Volume (vph)	72	25	907	0	0	683	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	96%	88%	12%	0%	0%	7%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	78	27	986	0	0	742	
Lane Group Flow (vph)	78	27	986	0	0	742	
Turn Type		Prot					
Protected Phases	5	5	1			1	2
Permitted Phases							
Detector Phases	5	5	1			1	
Minimum Initial (s)	8.0	8.0	8.0			8.0	7.0
Minimum Split (s)	13.0	13.0	13.0			13.0	24.0
Total Split (s)	17.0	17.0	29.0	0.0	0.0	29.0	24.0
Total Split (%)	24.3%	24.3%	41.4%	0.0%	0.0%	41.4%	34%
Maximum Green (s)	12.0	12.0	24.0			24.0	20.0
Yellow Time (s)	3.0	3.0	3.0			3.0	3.0
All-Red Time (s)	2.0	2.0	2.0			2.0	1.0
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0			2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0			3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Time Before Reduce (s)	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0			0.0	0.0
Recall Mode	None	None	C-Max			C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	11.0	11.0	49.6			49.6	
Actuated g/C Ratio	0.16	0.16	0.71			0.71	
v/c Ratio	0.53	0.17	0.88			0.36	
Control Delay	40.3	12.9	21.9			7.2	
Queue Delay	0.0	0.0	9.1			0.0	
Total Delay	40.3	12.9	31.0			7.3	
LOS	D	B	C			A	
Approach Delay	33.3		31.0			7.3	
Approach LOS	C		C			A	
90th %ile Green (s)	12.0	12.0	24.0			24.0	20.0
90th %ile Term Code	Max	Max	Coord			Coord	Ped
70th %ile Green (s)	12.0	12.0	48.0			48.0	0.0
70th %ile Term Code	Max	Max	Coord			Coord	Skip
50th %ile Green (s)	9.9	9.9	50.1			50.1	0.0
50th %ile Term Code	Gap	Gap	Coord			Coord	Skip
30th %ile Green (s)	8.0	8.0	52.0			52.0	0.0
30th %ile Term Code	Min	Min	Coord			Coord	Skip
10th %ile Green (s)	0.0	0.0	65.0			65.0	0.0
10th %ile Term Code	Skip	Skip	Coord			Coord	Skip
Queue Length 50th (ft)	31	0	286			27	
Queue Length 95th (ft)	70	20m#1577				140	
Internal Link Dist (ft)	152		260			149	
Turn Bay Length (ft)							
Base Capacity (vph)	174	185	1119			2081	
Starvation Cap Reductn	0	0	118			0	
Spillback Cap Reductn	0	0	0			91	
Storage Cap Reductn	0	0	0			0	
Reduced v/c Ratio	0.45	0.15	0.99			0.37	

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 1 (1%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 21.5

Intersection LOS: C

Intersection Capacity Utilization 66.4%

ICU Level of Service C

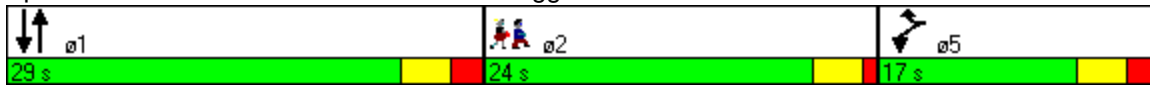
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3068: MBTA Exit & Ruggles Street



Northeastern University IMP
611: Tremont Street & Ruggles Street

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑		↙	↑↑	↗	↙	↗		↗↗	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	11	11	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		0	1		1	1		0	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	0.98			0.99		0.92	0.99	0.98		0.97	0.98	
Frt						0.850		0.940			0.858	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1555	4424	0	1624	3049	1371	1570	1511	0	3090	1421	0
Flt Permitted	0.950			0.137			0.950			0.950		
Satd. Flow (perm)	1530	4424	0	231	3049	1264	1556	1511	0	3009	1421	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)								17			171	
Headway Factor	1.19	1.19	1.14	1.14	1.19	1.14	1.19	1.19	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		911			298			632			340	
Travel Time (s)		20.7			6.8			14.4			7.7	
Volume (vph)	221	1472	0	9	857	647	36	37	25	585	9	157
Confl. Peds. (#/hr)	11		24	24		11	4		13	13		4
Confl. Bikes (#/hr)			7									
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	2%	0%	0%	3%	6%	0%	2%	0%	2%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	240	1600	0	10	932	703	39	40	27	636	10	171
Lane Group Flow (vph)	240	1600	0	10	932	703	39	67	0	636	181	0
Turn Type	Prot			Perm		pm+ov	Split			Prot		
Protected Phases	1!	6!			2!	3	4	4		3	6!	
Permitted Phases				2!		2						
Detector Phases	1	6		2	2	3	4	4		3	6	
Minimum Initial (s)	8.0	16.0		16.0	16.0	9.0	8.0	8.0		9.0	16.0	
Minimum Split (s)	12.0	20.0		20.0	20.0	13.0	23.0	23.0		13.0	20.0	
Total Split (s)	30.0	69.0	0.0	39.0	39.0	38.0	33.0	33.0	0.0	38.0	69.0	0.0
Total Split (%)	21.4%	49.3%	0.0%	27.9%	27.9%	27.1%	23.6%	23.6%	0.0%	27.1%	49.3%	0.0%
Maximum Green (s)	26.0	65.0		35.0	35.0	34.0	29.0	29.0		34.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Gap (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		C-Max	C-Max	None	None	None		None	C-Max	
Walk Time (s)		8.0		8.0	8.0		8.0	8.0			8.0	
Flash Dont Walk (s)		6.0		5.0	5.0		11.0	11.0			6.0	
Pedestrian Calls (#/hr)		12		14	14		5	5			12	
Act Effct Green (s)	23.8	85.5		57.7	57.7	91.7	10.9	10.9		34.0	85.5	
Actuated g/C Ratio	0.17	0.61		0.41	0.41	0.66	0.08	0.08		0.24	0.61	
v/c Ratio	0.91	0.59		0.11	0.74	0.82	0.32	0.50		0.85	0.19	
Control Delay	92.5	18.8		31.0	38.7	26.5	66.2	58.5		57.0	5.9	
Queue Delay	0.0	0.0		0.0	2.6	5.0	0.0	0.0		10.3	0.5	
Total Delay	92.5	18.8		31.0	41.3	31.5	66.2	58.5		67.2	6.4	
LOS	F	B		C	D	C	E	E		E	A	
Approach Delay		28.4			37.1			61.4			53.8	
Approach LOS		C			D			E			D	
90th %ile Green (s)	26.0	75.0		45.0	45.0	34.0	19.0	19.0		34.0	75.0	
90th %ile Term Code	Max	Coord		Coord	Coord	Max	Ped	Ped		Max	Coord	
70th %ile Green (s)	26.0	83.3		53.3	53.3	34.0	10.7	10.7		34.0	83.3	
70th %ile Term Code	Max	Coord		Coord	Coord	Max	Gap	Gap		Max	Coord	
50th %ile Green (s)	26.0	85.3		55.3	55.3	34.0	8.7	8.7		34.0	85.3	
50th %ile Term Code	Max	Coord		Coord	Coord	Max	Gap	Gap		Max	Coord	
30th %ile Green (s)	23.1	86.0		58.9	58.9	34.0	8.0	8.0		34.0	86.0	
30th %ile Term Code	Gap	Coord		Coord	Coord	Max	Min	Min		Max	Coord	
10th %ile Green (s)	17.8	98.0		76.2	76.2	34.0	0.0	0.0		34.0	98.0	
10th %ile Term Code	Gap	Coord		Coord	Coord	Max	Skip	Skip		Max	Coord	
Queue Length 50th (ft)	213	310		6	386	408	35	45		265	15	
Queue Length 95th (ft)	#355	431		m14	#576	#877	69	91		#284	86	
Internal Link Dist (ft)		831			218			552			260	
Turn Bay Length (ft)	200											
Base Capacity (vph)	289	2702		95	1258	854	325	326		750	935	
Starvation Cap Reductn	0	0		0	210	0	0	0		97	437	
Spillback Cap Reductn	0	71		0	0	100	0	1		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.83	0.61		0.11	0.89	0.93	0.12	0.21		0.97	0.36	

Intersection Summary

Area Type: CBD

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 96 (69%), Referenced to phase 2:WBTL and 6:EBSB, Start of Green

Natural Cycle: 110

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 37.1

Intersection LOS: D

Intersection Capacity Utilization 86.7%

ICU Level of Service E

Analysis Period (min) 15

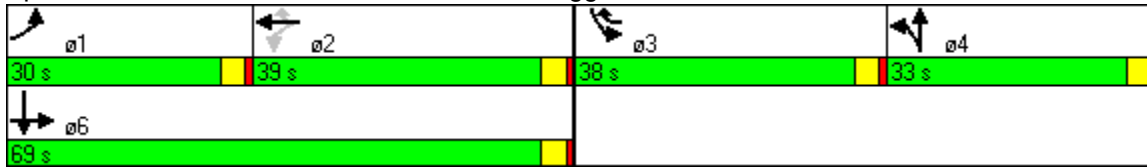
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

! Phase conflict between lane groups.

Splits and Phases: 611: Tremont Street & Ruggles Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑							↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50			50							50
Trailing Detector (ft)		0			0							0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99										
Frt		0.990										0.865
Flt Protected												
Satd. Flow (prot)	0	4544	0	0	4532	0	0	0	0	0	0	1465
Flt Permitted												
Satd. Flow (perm)	0	4544	0	0	4532	0	0	0	0	0	0	1465
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21										54
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		298			471			679				377
Travel Time (s)		6.8			10.7			15.4				8.6
Volume (vph)	0	1926	132	0	1473	0	0	0	0	0	0	46
Confl. Peds. (#/hr)	25		17	17		25	17		101	101		17
Confl. Bikes (#/hr)			14			4						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	1%	0%	3%	0%	0%	0%	0%	0%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	0	2093	143	0	1601	0	0	0	0	0	0	50
Lane Group Flow (vph)	0	2236	0	0	1601	0	0	0	0	0	0	50
Turn Type												custom
Protected Phases		1			1							5
Permitted Phases												
Detector Phases		1			1							5
Minimum Initial (s)		10.0			10.0							4.0
Minimum Split (s)		24.0			24.0							33.0
Total Split (s)	0.0	107.0	0.0	0.0	107.0	0.0	0.0	0.0	0.0	0.0	0.0	33.0
Total Split (%)	0.0%	76.4%	0.0%	0.0%	76.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.6%
Maximum Green (s)		102.0			102.0							28.0
Yellow Time (s)		3.0			3.0							3.0
All-Red Time (s)		2.0			2.0							2.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0			2.0							2.0
Minimum Gap (s)		2.0			2.0							2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0			0.0							0.0
Time To Reduce (s)		0.0			0.0							0.0
Recall Mode		C-Max			C-Max							None
Walk Time (s)		8.0			8.0							8.0
Flash Dont Walk (s)		6.0			6.0							17.0
Pedestrian Calls (#/hr)		30			30							5
Act Effct Green (s)		124.8			124.8							9.9
Actuated g/C Ratio		0.89			0.89							0.07
v/c Ratio		0.55			0.40							0.33
Control Delay		1.4			2.6							17.5
Queue Delay		0.1			0.4							0.3
Total Delay		1.5			3.0							17.8
LOS		A			A							B
Approach Delay		1.5			3.0							
Approach LOS		A			A							
90th %ile Green (s)		105.0			105.0							25.0
90th %ile Term Code		Coord			Coord							Ped
70th %ile Green (s)		124.2			124.2							5.8
70th %ile Term Code		Coord			Coord							Gap
50th %ile Green (s)		125.5			125.5							4.5
50th %ile Term Code		Coord			Coord							Gap
30th %ile Green (s)		125.5			125.5							4.5
30th %ile Term Code		Coord			Coord							Gap
10th %ile Green (s)		135.0			135.0							0.0
10th %ile Term Code		Coord			Coord							Skip
Queue Length 50th (ft)		4			47							0
Queue Length 95th (ft)		163			201							34
Internal Link Dist (ft)		218			391			599			297	
Turn Bay Length (ft)												
Base Capacity (vph)		4054			4041							346
Starvation Cap Reductn		606			1714							0
Spillback Cap Reductn		0			529							111
Storage Cap Reductn		0			0							0
Reduced v/c Ratio		0.65			0.69							0.21

Intersection Summary

Area Type:	CBD
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	73 (52%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	2.3
Intersection LOS:	A
Intersection Capacity Utilization	50.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 3082: Tremont Street & Columbus Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗		↕↕		↗	↕↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	10	10	16	11	16	12	14	14	13	12	11	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	325		0	0		0
Storage Lanes	0		1	0		0	1		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.91	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99	0.98		1.00		0.99	0.99			1.00	0.97
Frt			0.850		0.997			0.989				0.850
Flt Protected		0.980			0.996		0.950	0.970			0.997	
Satd. Flow (prot)	0	2538	1404	0	3084	0	1344	2654	0	0	1423	1268
Flt Permitted		0.605			0.628		0.950	0.970			0.997	
Satd. Flow (perm)	0	1556	1380	0	1944	0	1325	2632	0	0	1423	1227
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					2							205
Headway Factor	1.25	1.25	0.97	1.19	0.97	1.14	1.05	1.05	1.10	1.14	1.19	1.10
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		471			2258			635			349	
Travel Time (s)		10.7			51.3			14.4			7.9	
Volume (vph)	375	528	1058	33	349	7	934	241	53	5	62	189
Confl. Peds. (#/hr)	26		15	15		26	10		16	16		10
Confl. Bikes (#/hr)			1			4			2			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	6%	5%	8%	5%	44%	5%	7%	26%	25%	2%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	408	574	1150	36	379	8	1015	262	58	5	67	205
Lane Group Flow (vph)	0	982	1150	0	423	0	508	827	0	0	72	205
Turn Type	D.P+P		Free	Perm			Split			Split		Perm
Protected Phases	7	1 7			1		6	6		5	5	
Permitted Phases	1		Free	1								5
Detector Phases	1 7	1 7		1	1		6	6		5	5	5
Minimum Initial (s)	4.0			10.0	10.0		10.0	10.0		8.0	8.0	8.0
Minimum Split (s)	9.0			26.0	26.0		22.0	22.0		24.0	24.0	24.0
Total Split (s)	17.0	46.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0	25.0	25.0	25.0
Total Split (%)	17.0%	46.0%	0.0%	29.0%	29.0%	0.0%	29.0%	29.0%	0.0%	25.0%	25.0%	25.0%
Maximum Green (s)	13.0			25.0	25.0		25.0	25.0		21.0	21.0	21.0
Yellow Time (s)	3.0			3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0			1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	Max			C-Max	C-Max		None	None		None	None	None
Walk Time (s)				7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)				15.0	15.0					13.0	13.0	13.0
Pedestrian Calls (#/hr)				0	0					5	5	5
Act Effct Green (s)		45.7	100.0		32.7		25.0	25.0			13.3	13.3
Actuated g/C Ratio		0.46	1.00		0.33		0.25	0.25			0.13	0.13
v/c Ratio		1.21dl	0.83		0.67		1.51	1.44dl			0.38	0.60
Control Delay		114.8	6.4		34.5		275.1	156.6			29.6	18.4
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	0.0
Total Delay		114.8	6.4		34.5		275.1	156.6			29.6	18.4
LOS		F	A		C		F	F			C	B
Approach Delay		56.3			34.5			201.7			21.3	
Approach LOS		E			C			F			C	
90th %ile Green (s)	13.0			25.0	25.0		25.0	25.0		21.0	21.0	21.0
90th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
70th %ile Green (s)	13.0			29.1	29.1		25.0	25.0		16.9	16.9	16.9
70th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
50th %ile Green (s)	13.0			33.9	33.9		25.0	25.0		12.1	12.1	12.1
50th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
30th %ile Green (s)	13.0			37.3	37.3		25.0	25.0		8.7	8.7	8.7
30th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
10th %ile Green (s)	13.0			38.0	38.0		25.0	25.0		8.0	8.0	8.0
10th %ile Term Code	MaxR			Coord	Coord		Max	Max		Min	Min	Min
Queue Length 50th (ft)		~317	0		135		~498	~363			41	58
Queue Length 95th (ft)		#563	0		#227		#716	#490			98	163
Internal Link Dist (ft)		391			2178			555			269	
Turn Bay Length (ft)							325					
Base Capacity (vph)		838	1380		636		336	664			299	420
Starvation Cap Reductn		0	0		0		0	0			0	0
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		1.17	0.83		0.67		1.51	1.25			0.24	0.49

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 48 (48%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.51

Intersection Signal Delay: 98.4

Intersection LOS: F

Intersection Capacity Utilization 98.8%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3098: Tremont Street & Melnea Cass Boulevard



Northeastern University IMP
2085: Columbus Avenue & Melnea Cass Boulevard

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕	↕		↕↕	
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	12	12	12	11	12	12	14	14	12	16	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		25	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.89			0.96			0.96			0.99	
Frt		0.925							0.850			
Flt Protected					0.961			0.955			0.976	
Satd. Flow (prot)	0	2190	0	0	1356	0	0	1433	1334	0	1128	0
Flt Permitted					0.961			0.737			0.944	
Satd. Flow (perm)	0	2190	0	0	1299	0	0	1064	1334	0	1082	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28							418			
Headway Factor	1.14	1.14	1.14	1.14	1.19	1.14	1.14	1.05	1.05	1.14	0.97	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		421			205			349			337	
Travel Time (s)		9.6			4.7			7.9			7.7	
Volume (vph)	0	26	26	225	50	1	221	13	385	1	1	0
Confl. Peds. (#/hr)	33		39	39		33	29		20	20		29
Confl. Bikes (#/hr)			50			13						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	8%	5%	4%	0%	4%	91%	4%	100%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	28	28	245	54	1	240	14	418	1	1	0
Lane Group Flow (vph)	0	56	0	0	300	0	0	254	418	0	2	0
Turn Type				Split			Perm		pt+ov	Perm		
Protected Phases		5		1	1			6	1 6		6	
Permitted Phases							6			6		
Detector Phases		5		1	1		6	6	6	6	6	
Minimum Initial (s)		10.0		10.0	10.0		8.0	8.0		8.0	8.0	
Minimum Split (s)		14.0		15.0	15.0		14.0	14.0		14.0	14.0	
Total Split (s)	0.0	14.0	0.0	25.0	25.0	0.0	40.0	40.0	65.0	40.0	40.0	0.0
Total Split (%)	0.0%	14.0%	0.0%	25.0%	25.0%	0.0%	40.0%	40.0%	65.0%	40.0%	40.0%	0.0%
Maximum Green (s)		10.0		21.0	21.0		36.0	36.0		36.0	36.0	
Yellow Time (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)		1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag		Lead		Lead	Lead		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)		2.0		2.0	2.0		2.0	2.0		2.0	2.0	

Lane Group	ø2
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	8.0
Minimum Split (s)	21.0
Total Split (s)	21.0
Total Split (%)	21%
Maximum Green (s)	18.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0



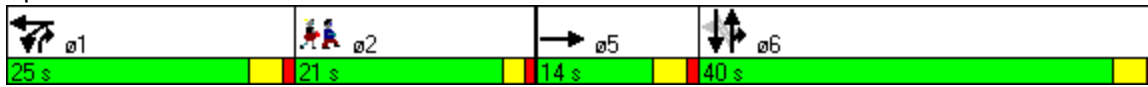
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode		None		C-Max	C-Max		None	None		None	None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		10.0		47.7			28.9	81.4		28.9		
Actuated g/C Ratio		0.10		0.48			0.29	0.81		0.29		
v/c Ratio		0.23		0.46			0.82	0.36		0.01		
Control Delay		27.3		24.7			36.2	0.5		21.0		
Queue Delay		0.0		0.0			0.1	1.3		0.0		
Total Delay		27.3		24.7			36.3	1.7		21.0		
LOS		C		C			D	A		C		
Approach Delay		27.3		24.7			14.8			21.0		
Approach LOS		C		C			B			C		
90th %ile Green (s)		10.0		21.0	21.0		36.0	36.0		36.0	36.0	
90th %ile Term Code		Max		Coord	Coord		Max	Max		Max	Max	
70th %ile Green (s)		10.0		42.0	42.0		36.0	36.0		36.0	36.0	
70th %ile Term Code		Max		Coord	Coord		Max	Max		Max	Max	
50th %ile Green (s)		10.0		46.4	46.4		31.6	31.6		31.6	31.6	
50th %ile Term Code		Max		Coord	Coord		Gap	Gap		Gap	Gap	
30th %ile Green (s)		10.0		54.4	54.4		23.6	23.6		23.6	23.6	
30th %ile Term Code		Max		Coord	Coord		Gap	Gap		Gap	Gap	
10th %ile Green (s)		0.0		74.6	74.6		17.4	17.4		17.4	17.4	
10th %ile Term Code		Skip		Coord	Coord		Gap	Gap		Gap	Gap	
Queue Length 50th (ft)		8		105			130	0		1		
Queue Length 95th (ft)		28		m#313			m86	m4		6		
Internal Link Dist (ft)		341		125			269			257		
Turn Bay Length (ft)												
Base Capacity (vph)		244		647			383	1164		390		
Starvation Cap Reductn		0		0			4	518		0		
Spillback Cap Reductn		0		0			0	0		0		
Storage Cap Reductn		0		0			0	0		0		
Reduced v/c Ratio		0.23		0.46			0.67	0.65		0.01		

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 45 (45%), Referenced to phase 1:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 18.4 Intersection LOS: B
 Intersection Capacity Utilization 64.3% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	ø2
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	18.0
90th %ile Term Code	Ped
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Splits and Phases: 2085: Columbus Avenue & Melnea Cass Boulevard





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↕		↙	↕		↙	↕		↙	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	10	11	12	10	11	12	10	11	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.98	0.98		0.96	0.99		0.98	0.98		0.98	0.99	
Frt	0.978		0.972		0.978		0.991					
Flt Protected	0.950		0.950		0.950		0.950		0.950		0.950	
Satd. Flow (prot)	1404	2836	0	1391	2789	0	1444	2756	0	1417	2876	0
Flt Permitted	0.385		0.239		0.157		0.110					
Satd. Flow (perm)	555	2836	0	338	2789	0	234	2756	0	161	2876	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	19		26		25		9					
Headway Factor	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)	30		30		30		30					
Link Distance (ft)	2258		721		869		630					
Travel Time (s)	51.3		16.4		19.8		14.3					
Volume (vph)	126	517	87	85	271	62	67	886	155	67	861	58
Confl. Peds. (#/hr)	38		86	86		38	139		151	151		139
Confl. Bikes (#/hr)			12			3			22			62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	6%	8%	9%	8%	9%	5%	10%	6%	7%	7%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%		0%		0%	
Adj. Flow (vph)	137	562	95	92	295	67	73	963	168	73	936	63
Lane Group Flow (vph)	137	657	0	92	362	0	73	1131	0	73	999	0
Turn Type	pm+pt		pm+pt		pm+pt		pm+pt					
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	8.0		6.0	43.0		6.0	43.0	
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	47.0		10.0	47.0	
Total Split (s)	14.0	32.0	0.0	11.0	29.0	0.0	10.0	47.0	0.0	10.0	47.0	0.0
Total Split (%)	14.0%	32.0%	0.0%	11.0%	29.0%	0.0%	10.0%	47.0%	0.0%	10.0%	47.0%	0.0%
Maximum Green (s)	10.0	28.0		7.0	25.0		6.0	43.0		6.0	43.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			23.0			23.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.0	26.2		28.5	21.7		53.8	49.0		53.8	49.0	
Actuated g/C Ratio	0.34	0.26		0.28	0.22		0.54	0.49		0.54	0.49	
v/c Ratio	0.51	0.87		0.55	0.58		0.37	0.83		0.45	0.71	
Control Delay	32.1	44.4		34.4	35.6		16.9	30.5		25.0	18.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.1	44.4		34.4	35.6		16.9	30.5		25.0	18.8	
LOS	C	D		C	D		B	C		C	B	
Approach Delay		42.3			35.4			29.7			19.2	
Approach LOS		D			D			C			B	
90th %ile Green (s)	10.0	28.0		7.0	25.0		6.0	43.0		6.0	43.0	
90th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
70th %ile Green (s)	10.0	28.0		7.0	25.0		6.0	43.0		6.0	43.0	
70th %ile Term Code	Max	Max		Max	Hold		Max	Coord		Max	Coord	
50th %ile Green (s)	10.0	27.4		7.0	24.4		6.0	43.6		6.0	43.6	
50th %ile Term Code	Max	Gap		Max	Hold		Max	Coord		Max	Coord	
30th %ile Green (s)	9.0	25.3		7.0	23.3		6.0	45.7		6.0	45.7	
30th %ile Term Code	Gap	Gap		Max	Hold		Max	Coord		Max	Coord	
10th %ile Green (s)	7.4	22.1		0.0	10.7		0.0	69.9		0.0	69.9	
10th %ile Term Code	Gap	Hold		Skip	Gap		Skip	Coord		Skip	Coord	
Queue Length 50th (ft)	56	159		38	97		22	344		18	136	
Queue Length 95th (ft)	m65	m167		73	143		45	#500		m31	m192	
Internal Link Dist (ft)		2178			641			789			550	
Turn Bay Length (ft)												
Base Capacity (vph)	275	808		171	717		199	1364		162	1415	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.50	0.81		0.54	0.50		0.37	0.83		0.45	0.71	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 30.1

Intersection LOS: C

Intersection Capacity Utilization 79.2%

ICU Level of Service D









Analysis Period (min) 15

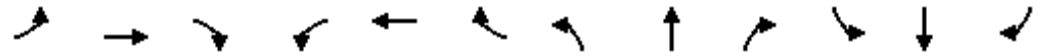
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 96: Tremont Street & Mass Ave

 ø1	 ø2	 ø3	 ø4
10 s	47 s	11 s	32 s
 ø5	 ø6	 ø7	 ø8
10 s	47 s	14 s	29 s



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	11	12	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.95	0.97		0.94	0.95		0.98	0.99		0.98	0.95	
Frt		0.970			0.939			0.988			0.967	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1472	2800	0	1454	1452	0	1486	2767	0	1318	2729	0
Flt Permitted	0.335			0.606			0.106			0.115		
Satd. Flow (perm)	491	2800	0	868	1452	0	162	2767	0	157	2729	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								11			45	
Headway Factor	1.25	1.19	1.14	1.19	1.14	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		628			795			630			892	
Travel Time (s)		14.3			18.1			14.3			20.3	
Volume (vph)	328	172	43	117	138	95	45	947	79	62	823	230
Confl. Peds. (#/hr)	84		71	71		84	140		143	143		140
Confl. Bikes (#/hr)			76			13			33			41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	7%	0%	8%	5%	5%	2%	11%	11%	15%	7%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	357	187	47	127	150	103	49	1029	86	67	895	250
Lane Group Flow (vph)	357	234	0	127	253	0	49	1115	0	67	1145	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	8.0		5.0	1.0		5.0	1.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		9.0	44.0		9.0	47.0	
Total Split (s)	16.0	34.0	0.0	10.0	28.0	0.0	9.0	47.0	0.0	9.0	47.0	0.0
Total Split (%)	16.0%	34.0%	0.0%	10.0%	28.0%	0.0%	9.0%	47.0%	0.0%	9.0%	47.0%	0.0%
Maximum Green (s)	12.0	30.0		6.0	24.0		5.0	43.0		5.0	43.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			25.0			25.0	
Flash Dont Walk (s)		17.0			17.0			15.0			15.0	
Pedestrian Calls (#/hr)		0			0			5			0	
Act Effct Green (s)	36.2	26.2		26.2	20.2		52.6	48.6		52.6	48.6	
Actuated g/C Ratio	0.36	0.26		0.26	0.20		0.53	0.49		0.53	0.49	
v/c Ratio	1.21	0.32		0.48	0.86		0.32	0.83		0.48	0.85	
Control Delay	148.3	30.5		30.0	65.0		18.8	22.3		25.3	14.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	148.3	30.5		30.0	65.0		18.8	22.3		25.3	14.6	
LOS	F	C		C	E		B	C		C	B	
Approach Delay		101.6			53.3			22.2			15.2	
Approach LOS		F			D			C			B	
90th %ile Green (s)	12.0	30.0		6.0	24.0		5.0	43.0		5.0	43.0	
90th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	12.0	30.0		6.0	24.0		5.0	43.0		5.0	43.0	
70th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	12.0	27.6		6.0	21.6		5.0	45.4		5.0	45.4	
50th %ile Term Code	Max	Hold		Max	Gap		Max	Coord		Max	Coord	
30th %ile Green (s)	12.0	24.3		6.0	18.3		5.0	48.7		5.0	48.7	
30th %ile Term Code	Max	Hold		Max	Gap		Max	Coord		Max	Coord	
10th %ile Green (s)	12.0	19.3		6.0	13.3		0.0	62.7		0.0	62.7	
10th %ile Term Code	Max	Hold		Max	Gap		Skip	Coord		Skip	Coord	
Queue Length 50th (ft)	~227	57		54	154		12	163		7	55	
Queue Length 95th (ft)	#453	87		94	#260		m18	#476		m18	#488	
Internal Link Dist (ft)		548			715			550			812	
Turn Bay Length (ft)												
Base Capacity (vph)	296	840		263	348		151	1349		140	1348	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.21	0.28		0.48	0.73		0.32	0.83		0.48	0.85	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.21

Intersection Signal Delay: 37.2

Intersection LOS: D

Intersection Capacity Utilization 92.4%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

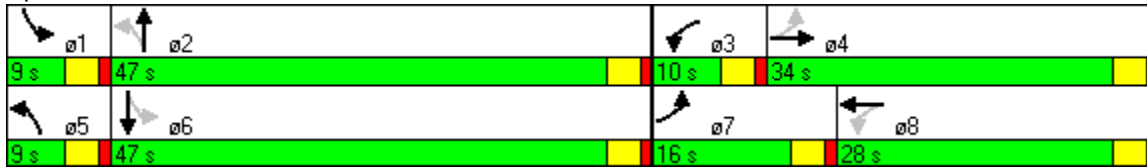
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 95: Columbus Avenue & Mass Ave



Northeastern University IMP
134: St. Botolph Street & Mass Ave

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕		↗	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12	11	12	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.93			0.94		0.93	0.99		0.97	0.98	
Frt		0.900			0.948			0.993			0.994	
Flt Protected		0.995			0.981		0.950			0.950		
Satd. Flow (prot)	0	1395	0	0	1283	0	1540	3004	0	1516	2920	0
Flt Permitted		0.977			0.877		0.154			0.078		
Satd. Flow (perm)	0	1359	0	0	1119	0	231	3004	0	121	2920	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			32			7			6	
Headway Factor	1.14	1.14	1.14	1.14	1.42	1.14	1.19	1.14	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		640			294			892			301	
Travel Time (s)		14.5			6.7			20.3			6.8	
Volume (vph)	9	14	66	34	19	33	115	1194	62	56	1016	44
Confl. Peds. (#/hr)	90		74	74		90	428		251	251		428
Confl. Bikes (#/hr)			3			5			38			28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	8%	2%	0%	0%	0%	2%	6%	2%	0%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0							
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	10	15	72	37	21	36	125	1298	67	61	1104	48
Lane Group Flow (vph)	0	97	0	0	94	0	125	1365	0	61	1152	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phases	8	8		4	4		1	6		5	2	
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		11.0	52.0		14.0	55.0	
Total Split (s)	34.0	34.0	0.0	34.0	34.0	0.0	11.0	52.0	0.0	14.0	55.0	0.0
Total Split (%)	34.0%	34.0%	0.0%	34.0%	34.0%	0.0%	11.0%	52.0%	0.0%	14.0%	55.0%	0.0%
Maximum Green (s)	30.0	30.0		30.0	30.0		7.0	48.0		10.0	51.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



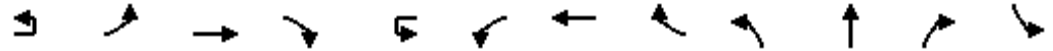
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min		None	None		None	C-Min		None	C-Min	
Walk Time (s)	9.0	9.0		9.0	9.0			34.0			34.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0			13.0			13.0	
Pedestrian Calls (#/hr)	428	428		251	251			74			90	
Act Effct Green (s)		30.0			30.0		58.7	53.1		58.1	51.2	
Actuated g/C Ratio		0.30			0.30		0.59	0.53		0.58	0.51	
v/c Ratio		0.21			0.26		0.56	0.85		0.37	0.77	
Control Delay		10.8			20.3		18.7	28.9		21.5	10.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		10.8			20.3		18.7	28.9		21.5	10.4	
LOS		B			C		B	C		C	B	
Approach Delay		10.8			20.3			28.1			11.0	
Approach LOS		B			C			C			B	
90th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	48.6		9.4	51.0	
90th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
70th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	50.9		7.1	51.0	
70th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
50th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	52.0		6.0	51.0	
50th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Min	Coord	
30th %ile Green (s)	30.0	30.0		30.0	30.0		7.0	52.0		6.0	51.0	
30th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Min	Coord	
10th %ile Green (s)	30.0	30.0		30.0	30.0		6.0	62.0		0.0	52.0	
10th %ile Term Code	Ped	Ped		Ped	Ped		Min	Coord		Skip	Coord	
Queue Length 50th (ft)		11			29		39	367		5	311	
Queue Length 95th (ft)		50			71		m49	m422		m22	80	
Internal Link Dist (ft)		560			214			812			221	
Turn Bay Length (ft)												
Base Capacity (vph)		458			358		227	1598		213	1498	
Starvation Cap Reductn		0			0		0	0		0	4	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.21			0.26		0.55	0.85		0.29	0.77	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 88 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 20.1 Intersection LOS: C
 Intersection Capacity Utilization 80.7% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 134: St. Botolph Street & Mass Ave

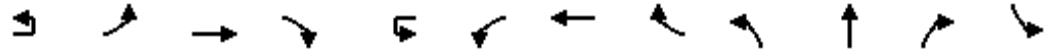




Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations			↕↕				↕↕			↕↕		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	12	10	12	16	12	11	12	12	13	12	12
Grade (%)			0%				0%			0%		
Storage Length (ft)		0		50		0		0	0		0	0
Storage Lanes		0		1		0		1	0		0	0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50	50			50		
Trailing Detector (ft)	0	0	0		0	0	0			0		
Turning Speed (mph)	9	15		9	9	15		9	15		9	15
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00
Ped Bike Factor			0.85				0.86			0.99		
Frt			0.948				0.955			0.989		
Flt Protected			0.973				0.973					
Satd. Flow (prot)	0	0	2307	0	0	0	2532	0	0	3120	0	0
Flt Permitted			0.973				0.695					
Satd. Flow (perm)	0	0	2113	0	0	0	1671	0	0	3120	0	0
Right Turn on Red				Yes				Yes			Yes	
Satd. Flow (RTOR)			86				60			11		
Headway Factor	0.97	1.14	1.38	1.14	0.97	1.14	1.19	1.14	1.14	1.10	1.14	1.14
Link Speed (mph)			30				30			30		
Link Distance (ft)			634				427			301		
Travel Time (s)			14.4				9.7			6.8		
Volume (vph)	8	129	24	85	15	111	35	69	0	1137	94	0
Confl. Peds. (#/hr)		128		121		121		128	451		209	209
Confl. Bikes (#/hr)			3					6			25	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	10%	1%	0%	7%	9%	9%	0%	5%	7%	0%
Bus Blockages (#/hr)	0	0	0	9	0	0	0	0	0	0	0	0
Parking (#/hr)			12	12								
Mid-Block Traffic (%)			0%				0%			0%		
Adj. Flow (vph)	9	140	26	92	16	121	38	75	0	1236	102	0
Lane Group Flow (vph)	0	0	267	0	0	0	250	0	0	1338	0	0
Turn Type	Perm	Split			Perm	Perm						
Protected Phases		3	3				4			6		
Permitted Phases	3				4	4						
Detector Phases	3	3	3		4	4	4			6		
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0	4.0			4.0		
Minimum Split (s)	23.0	23.0	23.0		23.0	23.0	23.0			29.0		
Total Split (s)	25.0	25.0	25.0	0.0	25.0	25.0	25.0	0.0	0.0	50.0	0.0	0.0
Total Split (%)	25.0%	25.0%	25.0%	0.0%	25.0%	25.0%	25.0%	0.0%	0.0%	50.0%	0.0%	0.0%
Maximum Green (s)	21.0	21.0	21.0		21.0	21.0	21.0			41.0		
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0			6.0		
Lead/Lag	Lead	Lead	Lead		Lag	Lag	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes					
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		
Minimum Gap (s)	3.0	3.0	3.0		3.0	3.0	3.0			3.0		



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Ideal Flow (vphpl)	1900	1900
Lane Width (ft)	11	10
Grade (%)	0%	
Storage Length (ft)		150
Storage Lanes		1
Total Lost Time (s)	4.0	4.0
Leading Detector (ft)	50	50
Trailing Detector (ft)	0	0
Turning Speed (mph)		9
Lane Util. Factor	0.95	1.00
Ped Bike Factor		0.69
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3020	1256
Flt Permitted		
Satd. Flow (perm)	3020	871
Right Turn on Red		Yes
Satd. Flow (RTOR)		122
Headway Factor	1.19	1.25
Link Speed (mph)	30	
Link Distance (ft)	288	
Travel Time (s)	6.5	
Volume (vph)	920	127
Confl. Peds. (#/hr)		451
Confl. Bikes (#/hr)		26
Peak Hour Factor	0.92	0.92
Growth Factor	100%	100%
Heavy Vehicles (%)	4%	8%
Bus Blockages (#/hr)	0	0
Parking (#/hr)		
Mid-Block Traffic (%)	0%	
Adj. Flow (vph)	1000	138
Lane Group Flow (vph)	1000	138
Turn Type		Perm
Protected Phases	2	
Permitted Phases		2
Detector Phases	2	2
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	29.0	29.0
Total Split (s)	50.0	50.0
Total Split (%)	50.0%	50.0%
Maximum Green (s)	41.0	41.0
Yellow Time (s)	3.0	3.0
All-Red Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Minimum Gap (s)	3.0	3.0



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0	0.0					0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0	0.0					0.0
Recall Mode	Min	Min	Min		Min	Min	Min					Min
Walk Time (s)	8.0	8.0	8.0		8.0	8.0	8.0					
Flash Dont Walk (s)	10.0	10.0	10.0		10.0	10.0	10.0					
Pedestrian Calls (#/hr)	149	149	149		129	129	129					
Act Effct Green (s)			18.1				18.9					51.0
Actuated g/C Ratio			0.18				0.19					0.51
v/c Ratio			0.55				0.68					0.84
Control Delay			29.6				38.8					13.6
Queue Delay			0.4				1.2					4.9
Total Delay			29.9				39.9					18.5
LOS			C				D					B
Approach Delay			29.9				39.9					18.5
Approach LOS			C				D					B
90th %ile Green (s)	18.5	18.5	18.5		21.0	21.0	21.0					43.5
90th %ile Term Code	Gap	Gap	Gap		Max	Max	Max					Coord
70th %ile Green (s)	18.0	18.0	18.0		19.7	19.7	19.7					45.3
70th %ile Term Code	Ped	Ped	Ped		Gap	Gap	Gap					Coord
50th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0					47.0
50th %ile Term Code	Ped	Ped	Ped		Ped	Ped	Ped					Coord
30th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0					47.0
30th %ile Term Code	Ped	Ped	Ped		Ped	Ped	Ped					Coord
10th %ile Green (s)	18.0	18.0	18.0		18.0	18.0	18.0					47.0
10th %ile Term Code	Ped	Ped	Ped		Ped	Ped	Ped					Coord
Queue Length 50th (ft)			54				60					116
Queue Length 95th (ft)			96				102					#161
Internal Link Dist (ft)			554				347					221
Turn Bay Length (ft)												
Base Capacity (vph)			552				398					1596
Starvation Cap Reductn			0				0					86
Spillback Cap Reductn			57				41					200
Storage Cap Reductn			0				0					0
Reduced v/c Ratio			0.54				0.70					0.96

Intersection Summary

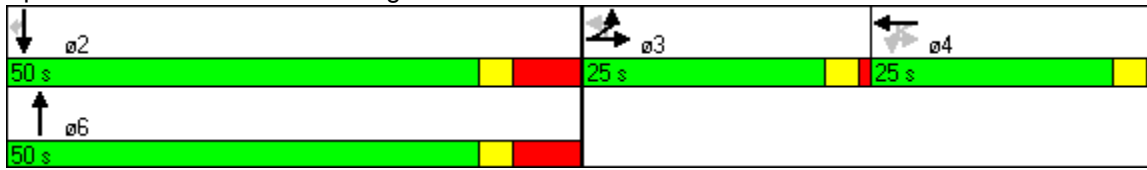
Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 84 (84%), Referenced to phase 2:SBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 40.0 Intersection LOS: D
 Intersection Capacity Utilization 60.5% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBT	SBR
Time Before Reduce (s)	0.0	0.0
Time To Reduce (s)	0.0	0.0
Recall Mode	C-Min	C-Min
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)	51.0	51.0
Actuated g/C Ratio	0.51	0.51
v/c Ratio	0.65	0.27
Control Delay	21.7	6.8
Queue Delay	54.2	0.0
Total Delay	75.9	6.8
LOS	E	A
Approach Delay	67.6	
Approach LOS	E	
90th %ile Green (s)	43.5	43.5
90th %ile Term Code	Coord	Coord
70th %ile Green (s)	45.3	45.3
70th %ile Term Code	Coord	Coord
50th %ile Green (s)	47.0	47.0
50th %ile Term Code	Coord	Coord
30th %ile Green (s)	47.0	47.0
30th %ile Term Code	Coord	Coord
10th %ile Green (s)	47.0	47.0
10th %ile Term Code	Coord	Coord
Queue Length 50th (ft)	218	19
Queue Length 95th (ft)	m235	m19
Internal Link Dist (ft)	208	
Turn Bay Length (ft)		150
Base Capacity (vph)	1539	503
Starvation Cap Reductn	638	0
Spillback Cap Reductn	172	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.11	0.27

Intersection Summary

Splits and Phases: 94: Huntington Avenue & Mass Ave





Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Lane Configurations												
Ideal Flow (vphpl)	1500	1500	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	11	12	11	11	11	11	11
Grade (%)	0%						0%					
Storage Length (ft)	0		0		0		0	0		0		0
Storage Lanes	1		1		1		0	0		0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50		50	50	50	50		50	50			
Trailing Detector (ft)	0		0	0	0	0		0	0			
Turning Speed (mph)	9	9	9	15	15		9	15		9	9	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor					0.80	1.00			0.91			
Frt	0.865					0.997			0.978			
Flt Protected					0.950				0.999			
Satd. Flow (prot)	1168	0	1710	0	1624	3122	0	0	2799	0	0	0
Flt Permitted					0.370				0.687			
Satd. Flow (perm)	1168	0	1710	0	508	3122	0	0	1925	0	0	0
Right Turn on Red		No	Yes				Yes					No
Satd. Flow (RTOR)						6						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.19	1.19	1.19	1.19	1.19
Link Speed (mph)						25			25			
Link Distance (ft)						288			768			
Travel Time (s)						7.9			20.9			
Volume (vph)	443	15	0	29	371	917	19	16	566	41	60	60
Confl. Peds. (#/hr)		156	174	156	176		45	45		156	176	176
Confl. Bikes (#/hr)	1	1					39			37	37	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	482	16	0	32	403	997	21	17	615	45	65	65
Lane Group Flow (vph)	498	0	0	0	435	1018	0	0	742	0	0	0
Turn Type	custom		Free	custom	Prot			Perm				
Protected Phases	7 8!			2	2 7 8	1 2 8			1			7
Permitted Phases			Free	7 8!				1				
Detector Phases	7 8			2	2 7 8	1 2 8		1	1			
Minimum Initial (s)				6.0				8.0	8.0			8.0
Minimum Split (s)				12.0				28.0	28.0			21.0
Total Split (s)	45.0	0.0	0.0	12.0	57.0	78.0	0.0	43.0	43.0	0.0	0.0	22.0
Total Split (%)	45.0%	0.0%	0.0%	12.0%	57.0%	78.0%	0.0%	43.0%	43.0%	0.0%	0.0%	22%
Maximum Green (s)				6.0				37.0	37.0			16.0
Yellow Time (s)				3.0				3.0	3.0			3.0
All-Red Time (s)				3.0				3.0	3.0			3.0
Lead/Lag				Lag				Lead	Lead			Lead
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0				2.0	2.0			2.0
Minimum Gap (s)				2.0				2.0	2.0			2.0

Lane Group	ø8
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	22.5
Total Split (s)	23.0
Total Split (%)	23%
Maximum Green (s)	17.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0



Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Time Before Reduce (s)				0.0				0.0	0.0			0.0
Time To Reduce (s)				0.0				0.0	0.0			0.0
Recall Mode				Max				C-Max	C-Max			Ped
Walk Time (s)								15.0	15.0			10.0
Flash Dont Walk (s)								7.0	7.0			5.0
Pedestrian Calls (#/hr)								5	5			0
Act Effct Green (s)	41.0				49.0	74.0			39.0			
Actuated g/C Ratio	0.41				0.49	0.74			0.39			
v/c Ratio	1.04				1.29	0.44			0.99			
Control Delay	82.7				163.9	9.9			61.6			
Queue Delay	66.2				0.0	11.6			39.5			
Total Delay	148.8				163.9	21.5			101.1			
LOS	F				F	C			F			
Approach Delay						64.1			101.1			
Approach LOS						E			F			
90th %ile Green (s)				6.0				37.0	37.0			16.0
90th %ile Term Code				MaxR				Coord	Coord			Max
70th %ile Green (s)				6.0				37.0	37.0			16.0
70th %ile Term Code				MaxR				Coord	Coord			Max
50th %ile Green (s)				6.0				37.0	37.0			16.0
50th %ile Term Code				MaxR				Coord	Coord			Max
30th %ile Green (s)				6.0				37.0	37.0			16.0
30th %ile Term Code				MaxR				Coord	Coord			Max
10th %ile Green (s)				6.0				37.0	37.0			16.0
10th %ile Term Code				MaxR				Coord	Coord			Max
Queue Length 50th (ft)	~345				~146	260			242			
Queue Length 95th (ft)	#542				m#269	319			#375			
Internal Link Dist (ft)						208			688			
Turn Bay Length (ft)												
Base Capacity (vph)	479				338	2312			751			
Starvation Cap Reductn	0				0	1276			0			
Spillback Cap Reductn	66				0	0			80			
Storage Cap Reductn	0				0	0			0			
Reduced v/c Ratio	1.21				1.29	0.98			1.11			

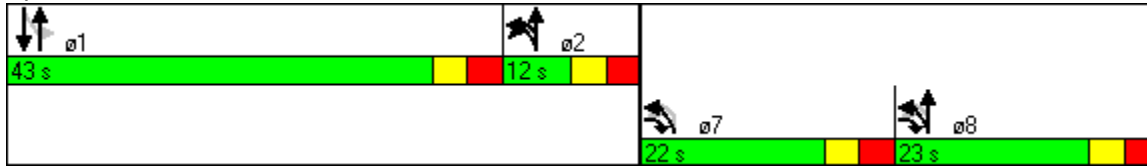
Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 31 (31%), Referenced to phase 1:NBSB, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 90.0 Intersection LOS: F
 Intersection Capacity Utilization 101.4% ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø8
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	17.0
90th %ile Term Code	MaxR
70th %ile Green (s)	17.0
70th %ile Term Code	MaxR
50th %ile Green (s)	17.0
50th %ile Term Code	MaxR
30th %ile Green (s)	17.0
30th %ile Term Code	MaxR
10th %ile Green (s)	17.0
10th %ile Term Code	MaxR
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
! Phase conflict between lane groups.

Splits and Phases: 93: Westland Avenue & Massachusetts Avenue



Northeastern University IMP
481: Hemenway Street & Westland Avenue

2023 No-Build
Timing Plan: AM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	16	16	16	10	10	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50					50	50		50	50	50
Trailing Detector (ft)	0	0					0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.88						0.98			1.00	0.91
Frt		0.971						0.983				0.850
Flt Protected		0.981						0.993			0.994	
Satd. Flow (prot)	0	1433	0	0	0	0	0	1636	0	0	1546	1391
Flt Permitted		0.981						0.673			0.899	
Satd. Flow (perm)	0	1335	0	0	0	0	0	1103	0	0	1394	1267
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.12	1.14	1.14	1.14	1.14	0.97	1.12	0.97	1.25	1.25	1.19
Link Speed (mph)		25				25		25			25	
Link Distance (ft)		465			518			1125			259	
Travel Time (s)		12.7			14.1			30.7			7.1	
Volume (vph)	65	67	36	0	0	0	60	317	55	58	432	551
Confl. Peds. (#/hr)	106		131	131		106	89		47	47		89
Confl. Bikes (#/hr)			25			11			18			21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	16%	15%	0%	0%	0%	8%	0%	14%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	71	73	39	0	0	0	65	345	60	63	470	599
Lane Group Flow (vph)	0	183	0	0	0	0	0	470	0	0	533	599
Turn Type	Split						Perm			Perm		pm+ov
Protected Phases	3	3						1			1	3
Permitted Phases							1			1		1
Detector Phases	3	3					1	1		1	1	3
Minimum Initial (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.0	12.0					12.0	12.0		12.0	12.0	12.0
Total Split (s)	31.0	31.0	0.0	0.0	0.0	0.0	43.0	43.0	0.0	43.0	43.0	31.0
Total Split (%)	34.4%	34.4%	0.0%	0.0%	0.0%	0.0%	47.8%	47.8%	0.0%	47.8%	47.8%	34.4%
Maximum Green (s)	27.0	27.0					39.0	39.0		39.0	39.0	27.0
Yellow Time (s)	3.0	3.0					3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0

Lane Group	ø2
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	7.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	18%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None					None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		16.4					35.6			35.6	52.0	
Actuated g/C Ratio		0.24					0.52			0.52	0.76	
v/c Ratio		0.54					0.82			0.74	0.61	
Control Delay		31.3					34.8			26.3	6.5	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		31.3					34.8			26.3	6.5	
LOS		C					C			C	A	
Approach Delay		31.3					34.8			15.8		
Approach LOS		C					C			B		
90th %ile Green (s)	27.0	27.0					39.0	39.0		39.0	39.0	27.0
90th %ile Term Code	Max	Max					Max	Max		Max	Max	Max
70th %ile Green (s)	24.6	24.6					39.0	39.0		39.0	39.0	24.6
70th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
50th %ile Green (s)	20.6	20.6					39.0	39.0		39.0	39.0	20.6
50th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
30th %ile Green (s)	8.1	8.1					28.6	28.6		28.6	28.6	8.1
30th %ile Term Code	Gap	Gap					Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)	7.0	7.0					22.9	22.9		22.9	22.9	7.0
10th %ile Term Code	Min	Min					Gap	Gap		Gap	Gap	Min
Queue Length 50th (ft)		83					220			232	103	
Queue Length 95th (ft)		145					#463			#471	168	
Internal Link Dist (ft)		385			438		1045			179		
Turn Bay Length (ft)												
Base Capacity (vph)		513					612			774	1042	
Starvation Cap Reductn		0					0			0	0	
Spillback Cap Reductn		0					0			0	0	
Storage Cap Reductn		0					0			0	0	
Reduced v/c Ratio		0.36					0.77			0.69	0.57	

Intersection Summary

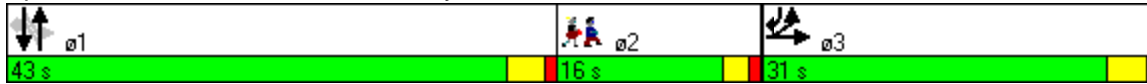
Area Type:	CBD
Cycle Length:	90
Actuated Cycle Length:	68.8
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	22.4
Intersection LOS:	C
Intersection Capacity Utilization:	83.7%
ICU Level of Service:	E
Analysis Period (min):	15
90th %ile Actuated Cycle:	90
70th %ile Actuated Cycle:	87.6
50th %ile Actuated Cycle:	83.6
30th %ile Actuated Cycle:	44.7

Lane Group	ø2
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	40
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	13.0
90th %ile Term Code	Ped
70th %ile Green (s)	13.0
70th %ile Term Code	Ped
50th %ile Green (s)	13.0
50th %ile Term Code	Ped
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

10th %ile Actuated Cycle: 37.9

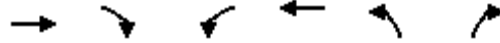
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 481: Hemenway Street & Westland Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔				
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	0	58	36	8	66	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	63	39	9	72	0	0	0	0
Pedestrians		70									76	
Lane Width (ft)		0.0									0.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)								308				
pX, platoon unblocked												
vC, conflicting volume	306	159	70	89	159	148	70			72		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	306	159	70	89	159	148	70			72		
tC, single (s)	7.1	6.5	6.2	7.1	6.6	6.3	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.1	3.4	2.3			2.2		
p0 queue free %	100	100	100	100	91	96	99			100		
cM capacity (veh/h)	577	732	998	897	716	876	1506			1541		
Direction, Lane #	WB 1	NB 1										
Volume Total	102	80										
Volume Left	0	9										
Volume Right	39	0										
cSH	770	1506										
Volume to Capacity	0.13	0.01										
Queue Length 95th (ft)	11	0										
Control Delay (s)	10.4	0.8										
Lane LOS	B	A										
Approach Delay (s)	10.4	0.8										
Approach LOS	B											
Intersection Summary												
Average Delay			6.2									
Intersection Capacity Utilization		24.3%		ICU Level of Service					A			
Analysis Period (min)			15									



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Sign Control	Free			Free	Stop	
Grade	15%			0%	0%	
Volume (veh/h)	104	0	0	471	21	81
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	0	0	512	23	88
Pedestrians	11			1	133	
Lane Width (ft)	12.0			12.0	16.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	15	
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)				465		
pX, platoon unblocked						
vC, conflicting volume			246		769	247
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			246		769	247
tC, single (s)			4.1		6.4	6.3
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		93	87
cM capacity (veh/h)			1135		308	664

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	113	512	111
Volume Left	0	0	23
Volume Right	0	0	88
cSH	1700	1700	536
Volume to Capacity	0.07	0.30	0.21
Queue Length 95th (ft)	0	0	19
Control Delay (s)	0.0	0.0	13.5
Lane LOS			B
Approach Delay (s)	0.0	0.0	13.5
Approach LOS			B

Intersection Summary			
Average Delay		2.0	
Intersection Capacity Utilization		41.4%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶			↷		↷
Sign Control	Stop			Stop	Stop	
Volume (vph)	57	40	97	393	13	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	62	43	105	427	14	53

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	105	533	67
Volume Left (vph)	0	105	14
Volume Right (vph)	43	0	53
Hadj (s)	0.00	0.08	-0.22
Departure Headway (s)	4.6	4.3	5.1
Degree Utilization, x	0.14	0.63	0.10
Capacity (veh/h)	747	825	629
Control Delay (s)	8.4	14.4	8.6
Approach Delay (s)	8.4	14.4	8.6
Approach LOS	A	B	A

Intersection Summary			
Delay		12.9	
HCM Level of Service		B	
Intersection Capacity Utilization	55.6%		ICU Level of Service B
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	399	8	270	69	25	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	434	9	293	75	27	37
Pedestrians	11		1		6	
Lane Width (ft)	16.0		10.0		11.0	
Walking Speed (ft/s)	4.0		4.0		4.0	
Percent Blockage	1		0		0	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	263					
pX, platoon unblocked	0.78	0.78			0.78	
vC, conflicting volume	434	348			379	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	271	160			200	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	19	99			97	
cM capacity (veh/h)	536	676			1051	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	442	368	64
Volume Left	434	0	27
Volume Right	9	75	0
cSH	538	1700	1051
Volume to Capacity	0.82	0.22	0.03
Queue Length 95th (ft)	205	0	2
Control Delay (s)	35.5	0.0	3.7
Lane LOS	E		A
Approach Delay (s)	35.5	0.0	3.7
Approach LOS	E		

Intersection Summary			
Average Delay	18.2		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	0	0	0	0	0	7	68	0	0	74	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	8	74	0	0	80	76
Pedestrians		230			294			13			144	
Lane Width (ft)		0.0			10.0			16.0			16.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			20			1			16	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)											482	
pX, platoon unblocked												
vC, conflicting volume	582	732	361	515	770	512	387			368		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	582	732	361	515	770	512	387			368		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	7.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	4.2	2.2			2.2		
p0 queue free %	100	100	100	100	100	100	99			100		
cM capacity (veh/h)	301	277	678	312	264	273	1183			956		
Direction, Lane #	WB 1	NB 1	SB 1									
Volume Total	0	82	157									
Volume Left	0	8	0									
Volume Right	0	0	76									
cSH	1700	1183	956									
Volume to Capacity	0.00	0.01	0.00									
Queue Length 95th (ft)	0	0	0									
Control Delay (s)	0.0	0.8	0.0									
Lane LOS	A	A										
Approach Delay (s)	0.0	0.8	0.0									
Approach LOS	A											
Intersection Summary												
Average Delay			0.3									
Intersection Capacity Utilization		33.3%		ICU Level of Service					A			
Analysis Period (min)			15									



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	1	854	13	2	686
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	928	14	2	746
Pedestrians			3			8
Lane Width (ft)			10.0			14.0
Walking Speed (ft/s)			4.0			4.0
Percent Blockage			0			1
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			422			505
pX, platoon unblocked	0.74					
vC, conflicting volume	1688	479			942	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1936	479			942	
tC, single (s)	6.8	6.9			5.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.7	
p0 queue free %	100	100			100	
cM capacity (veh/h)	43	534			489	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	1	619	324	748
Volume Left	0	0	0	2
Volume Right	1	0	14	0
cSH	534	1700	1700	489
Volume to Capacity	0.00	0.36	0.19	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	11.8	0.0	0.0	0.1
Lane LOS	B			A
Approach Delay (s)	11.8	0.0		0.1
Approach LOS	B			

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		54.2%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘			↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	8	23	0	879	683	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	25	0	955	742	0
Pedestrians	79				235	
Lane Width (ft)	13.0				11.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	7				18	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				95	832	
pX, platoon unblocked	0.42					
vC, conflicting volume	2012	450	821			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3405	450	821			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	95	100			
cM capacity (veh/h)	2	509	758			
Direction, Lane #	EB 1	NB 1	SB 1	SB 2		
Volume Total	34	955	371	371		
Volume Left	9	0	0	0		
Volume Right	25	0	0	0		
cSH	7	1700	1700	1700		
Volume to Capacity	4.81	0.56	0.22	0.22		
Queue Length 95th (ft)	Err	0	0	0		
Control Delay (s)	Err	0.0	0.0	0.0		
Lane LOS	F					
Approach Delay (s)	Err	0.0	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay			194.6			
Intersection Capacity Utilization			61.4%	ICU Level of Service	B	
Analysis Period (min)			15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations			↔			↔↔	
Sign Control	Yield		Free		Free		
Grade	0%		0%		0%		
Volume (veh/h)	0	0	880	49	24	681	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	0	0	957	53	26	740	
Pedestrians	56		9		62		
Lane Width (ft)	0.0		13.0		11.0		
Walking Speed (ft/s)	4.0		4.0		4.0		
Percent Blockage	0		1		5		
Right turn flare (veh)							
Median type	None						
Median storage (veh)							
Upstream signal (ft)			229		208		
pX, platoon unblocked	0.43	0.39			0.39		
vC, conflicting volume	1470	1101			1066		
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol	1615	1258			1168		
tC, single (s)	6.8	6.9			5.9		
tC, 2 stage (s)							
tF (s)	3.5	3.3			3.1		
p0 queue free %	100	100			76		
cM capacity (veh/h)	31	62			108		
Direction, Lane #	NB 1	SB 1	SB 2				
Volume Total	1010	273	493				
Volume Left	0	26	0				
Volume Right	53	0	0				
cSH	1700	108	1700				
Volume to Capacity	0.59	0.24	0.29				
Queue Length 95th (ft)	0	22	0				
Control Delay (s)	0.0	17.0	0.0				
Lane LOS			C				
Approach Delay (s)	0.0	6.0					
Approach LOS							
Intersection Summary							
Average Delay			2.6				
Intersection Capacity Utilization			73.7%		ICU Level of Service D		
Analysis Period (min)			15				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻							
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	369	14	8	287	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	401	15	9	312	0	0	0	0	0	0	0
Pedestrians		15			36			56			134	
Lane Width (ft)		11.0			11.0			0.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			3			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		373										
pX, platoon unblocked												
vC, conflicting volume	446			472			809	928	501	908	936	461
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	446			472			809	928	501	908	936	461
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.5
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.6
p0 queue free %	100			99			100	100	100	100	100	100
cM capacity (veh/h)	1114			1030			296	268	559	250	265	542

Direction, Lane #	EB 1	WB 1
Volume Total	416	321
Volume Left	0	9
Volume Right	15	0
cSH	1700	1030
Volume to Capacity	0.24	0.01
Queue Length 95th (ft)	0	1
Control Delay (s)	0.0	0.3
Lane LOS		A
Approach Delay (s)	0.0	0.3
Approach LOS		

Intersection Summary		
Average Delay		0.1
Intersection Capacity Utilization	27.3%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕							
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	83	362	18	37	238	112	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	90	393	20	40	259	122	0	0	0	0	0	0
Pedestrians		85			7			133			117	
Lane Width (ft)		11.0			10.0			0.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		737										
pX, platoon unblocked												
vC, conflicting volume	497			546			1202	1295	543	1108	1243	522
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	497			546			1202	1295	543	1108	1243	522
tC, single (s)	4.1			4.2			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			96			100	100	100	100	100	100
cM capacity (veh/h)	1077			961			138	144	541	171	154	523

Direction, Lane #	EB 1	WB 1
Volume Total	503	421
Volume Left	90	40
Volume Right	20	122
cSH	1077	961
Volume to Capacity	0.08	0.04
Queue Length 95th (ft)	7	3
Control Delay (s)	2.3	1.3
Lane LOS	A	A
Approach Delay (s)	2.3	1.3
Approach LOS		

Intersection Summary		
Average Delay		1.9
Intersection Capacity Utilization	49.3%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	330	12	15	384	2	2	0	20	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	359	13	16	417	2	2	0	22	0	1	0
Pedestrians		45			57			64			34	
Lane Width (ft)		11.0			10.0			16.0			13.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		3			4			7			3	
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)					628							
pX, platoon unblocked												
vC, conflicting volume	454			436			935	924	486	938	930	497
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	454			436			935	924	486	938	930	497
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			99	100	96	100	100	100
cM capacity (veh/h)	1083			1054			202	240	513	200	238	540

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	376	436	24	1
Volume Left	4	16	2	0
Volume Right	13	2	22	0
cSH	1083	1054	450	238
Volume to Capacity	0.00	0.02	0.05	0.00
Queue Length 95th (ft)	0	1	4	0
Control Delay (s)	0.1	0.5	13.5	20.2
Lane LOS	A	A	B	C
Approach Delay (s)	0.1	0.5	13.5	20.2
Approach LOS			B	C

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	16	8	2	47	26	90	4	13	9	43	36	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	9	2	51	28	98	4	14	10	47	39	20
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	28	177	28	105								
Volume Left (vph)	17	51	4	47								
Volume Right (vph)	2	98	10	20								
Hadj (s)	0.14	-0.20	-0.06	-0.01								
Departure Headway (s)	4.5	4.0	4.4	4.4								
Degree Utilization, x	0.04	0.20	0.03	0.13								
Capacity (veh/h)	760	864	768	777								
Control Delay (s)	7.7	8.0	7.6	8.0								
Approach Delay (s)	7.7	8.0	7.6	8.0								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.0									
HCM Level of Service			A									
Intersection Capacity Utilization			33.1%	ICU Level of Service								A
Analysis Period (min)			15									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	25	367	0	0	256	16	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	399	0	0	278	17	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		205										
pX, platoon unblocked												
vC, conflicting volume	296			399			740	749	399	740	740	287
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	296			399			740	749	399	740	740	287
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			100	100	100	100	100	100
cM capacity (veh/h)	1266			1160			327	333	651	327	337	752

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	426	296	0
Volume Left	27	0	0
Volume Right	0	17	0
cSH	1266	1700	1700
Volume to Capacity	0.02	0.17	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	0.7	0.0	0.0
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	0.0
Approach LOS			A

Intersection Summary		
Average Delay		0.4
Intersection Capacity Utilization	41.8%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	345	0	0	271	0	0	0	0	28	0	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	375	0	0	295	0	0	0	0	30	0	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)		558										
pX, platoon unblocked												
vC, conflicting volume	295			375			687	670	375	670	670	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	295			375			687	670	375	670	670	295
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	92	100	98
cM capacity (veh/h)	1267			1183			353	378	671	371	378	745
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	375	295	0	48								
Volume Left	0	0	0	30								
Volume Right	0	0	0	17								
cSH	1700	1700	1700	454								
Volume to Capacity	0.22	0.17	0.00	0.11								
Queue Length 95th (ft)	0	0	0	9								
Control Delay (s)	0.0	0.0	0.0	13.9								
Lane LOS				A	B							
Approach Delay (s)	0.0	0.0	0.0	13.9								
Approach LOS				A	B							
Intersection Summary												
Average Delay			0.9									
Intersection Capacity Utilization			28.2%		ICU Level of Service				A			
Analysis Period (min)			15									

11046 Northeastern IMP
363: Huntington Avenue & Gainsborough St

2023 Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	12	12	12	11	12	12	10	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.92			0.95			0.70				
Frt		0.981			0.990			0.976				
Flt Protected	0.950				0.998			0.969				
Satd. Flow (prot)	1652	3154	0	0	4602	0	0	1469	0	0	0	0
Flt Permitted	0.325				0.882			0.969				
Satd. Flow (perm)	565	3154	0	0	4067	0	0	1128	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			17			12				
Headway Factor	1.09	1.00	1.00	1.00	1.04	1.00	1.00	1.09	1.00	1.00	1.00	1.00
Link Speed (mph)		30			30			30				30
Link Distance (ft)		305			644			302				308
Travel Time (s)		6.9			14.6			6.9				7.0
Volume (vph)	54	684	100	30	614	45	86	23	24	0	0	0
Confl. Peds. (#/hr)			230			335	481		225			
Confl. Bikes (#/hr)			10			12			4			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	1%	0%	3%	2%	4%	0%	9%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	59	743	109	33	667	49	93	25	26	0	0	0
Lane Group Flow (vph)	59	852	0	0	749	0	0	144	0	0	0	0
Turn Type	Perm			D.P+P			Perm					
Protected Phases		1		3	1 3			2				
Permitted Phases	1			1			2					
Detector Phases	1	1		3	1 3		2	2				
Minimum Initial (s)	8.0	8.0		6.0			8.0	8.0				
Minimum Split (s)	19.0	19.0		12.0			31.0	31.0				
Total Split (s)	51.0	51.0	0.0	12.0	63.0	0.0	37.0	37.0	0.0	0.0	0.0	0.0
Total Split (%)	51.0%	51.0%	0.0%	12.0%	63.0%	0.0%	37.0%	37.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	46.0	46.0		7.0			31.0	31.0				
Yellow Time (s)	3.0	3.0		3.0			3.0	3.0				
All-Red Time (s)	2.0	2.0		2.0			3.0	3.0				
Lead/Lag				Lag			Lead	Lead				
Lead-Lag Optimize?				Yes			Yes	Yes				
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0				
Minimum Gap (s)	3.0	3.0		3.0			3.0	3.0				

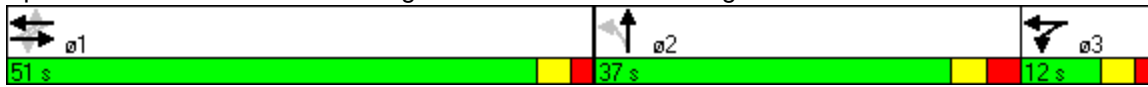


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Time To Reduce (s)	0.0	0.0		0.0			0.0	0.0				
Recall Mode	C-Max	C-Max		None			None	None				
Walk Time (s)	7.0	7.0					7.0	7.0				
Flash Dont Walk (s)	5.0	5.0					17.0	17.0				
Pedestrian Calls (#/hr)	0	0					0	0				
Act Effct Green (s)	61.7	61.7			69.7			18.3				
Actuated g/C Ratio	0.62	0.62			0.70			0.18				
v/c Ratio	0.17	0.44			0.26			0.67				
Control Delay	10.5	12.9			5.1			48.8				
Queue Delay	0.0	0.0			0.0			0.0				
Total Delay	10.5	12.9			5.1			48.8				
LOS	B	B			A			D				
Approach Delay		12.7			5.1			48.8				
Approach LOS		B			A			D				
90th %ile Green (s)	52.6	52.6		7.0			24.4	24.4				
90th %ile Term Code	Coord	Coord		Max			Gap	Gap				
70th %ile Green (s)	57.6	57.6		7.0			19.4	19.4				
70th %ile Term Code	Coord	Coord		Max			Gap	Gap				
50th %ile Green (s)	60.9	60.9		7.0			16.1	16.1				
50th %ile Term Code	Coord	Coord		Max			Gap	Gap				
30th %ile Green (s)	64.1	64.1		7.0			12.9	12.9				
30th %ile Term Code	Coord	Coord		Max			Gap	Gap				
10th %ile Green (s)	68.5	68.5		7.0			8.5	8.5				
10th %ile Term Code	Coord	Coord		Max			Gap	Gap				
Queue Length 50th (ft)	14	178			44			79				
Queue Length 95th (ft)	64	327			81			132				
Internal Link Dist (ft)		225			564			222			228	
Turn Bay Length (ft)	150											
Base Capacity (vph)	349	1956			2884			380				
Starvation Cap Reductn	0	0			0			0				
Spillback Cap Reductn	0	0			0			0				
Storage Cap Reductn	0	0			0			0				
Reduced v/c Ratio	0.17	0.44			0.26			0.38				

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	23 (23%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	65
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	12.4
Intersection LOS:	B
Intersection Capacity Utilization:	67.2%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 363: Huntington Avenue & Gainsborough St





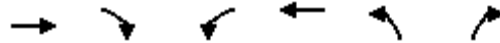
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø2
Lane Configurations			↑↑			↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)		0%	0%		0%		
Storage Length (ft)	0			0	0	0	
Storage Lanes	0			0	0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)			100			20	
Trailing Detector (ft)			0			0	
Turning Speed (mph)	15			9	15	9	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00	
Ped Bike Factor							
Fr _t							0.865
Flt Protected							
Satd. Flow (prot)	0	0	3505	0	0	1627	
Flt Permitted							
Satd. Flow (perm)	0	0	3505	0	0	1627	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						358	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)		25	25		30		
Link Distance (ft)		249	450		303		
Travel Time (s)		6.8	12.3		6.9		
Volume (vph)	0	0	696	0	0	131	
Confl. Peds. (#/hr)	9			20		176	
Confl. Bikes (#/hr)				10		2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	9%	3%	0%	0%	1%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)		0%	0%		0%		
Adj. Flow (vph)	0	0	757	0	0	142	
Lane Group Flow (vph)	0	0	757	0	0	142	
Turn Type							custom
Protected Phases			1			3	2
Permitted Phases							
Detector Phases			1			3	
Minimum Initial (s)			8.0			8.0	4.0
Minimum Split (s)			19.0			13.0	19.0
Total Split (s)	0.0	0.0	57.0	0.0	0.0	24.0	19.0
Total Split (%)	0.0%	0.0%	57.0%	0.0%	0.0%	24.0%	19%
Maximum Green (s)			53.0			20.0	15.0
Yellow Time (s)			3.0			3.0	3.0
All-Red Time (s)			1.0			1.0	1.0
Lead/Lag			Lead			Lag	
Lead-Lag Optimize?			Yes			Yes	
Vehicle Extension (s)			3.0			3.0	3.0
Minimum Gap (s)			3.0			3.0	3.0

Splits and Phases: 4019: Huntington Avenue & Opera Place





Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Lane Configurations	↑↑						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	12	
Grade (%)	0%			0%	0%		
Storage Length (ft)		0	0		0	0	
Storage Lanes		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	100						
Trailing Detector (ft)	0						
Turning Speed (mph)		9	15		15	9	
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor							
Frt							
Flt Protected							
Satd. Flow (prot)	3505	0	0	0	0	0	
Flt Permitted							
Satd. Flow (perm)	3505	0	0	0	0	0	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Link Speed (mph)	30			30	30		
Link Distance (ft)	213			487	159		
Travel Time (s)	4.8			11.1	3.6		
Volume (vph)	875	0	0	0	0	0	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)							
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%			0%	0%		
Adj. Flow (vph)	951	0	0	0	0	0	
Lane Group Flow (vph)	951	0	0	0	0	0	
Turn Type							
Protected Phases	1						2
Permitted Phases							
Detector Phases	1						
Minimum Initial (s)	8.0						4.0
Minimum Split (s)	14.0						19.0
Total Split (s)	81.0	0.0	0.0	0.0	0.0	0.0	19.0
Total Split (%)	81.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19%
Maximum Green (s)	77.0						15.0
Yellow Time (s)	3.0						3.0
All-Red Time (s)	1.0						1.0
Lead/Lag	Lead						Lag
Lead-Lag Optimize?	Yes						Yes
Vehicle Extension (s)	3.0						3.0
Minimum Gap (s)	3.0						3.0



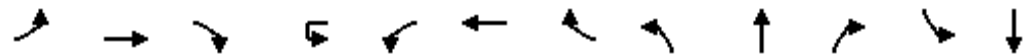
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø2
Time Before Reduce (s)	0.0						0.0
Time To Reduce (s)	0.0						0.0
Recall Mode	C-Min						Ped
Walk Time (s)							10.0
Flash Dont Walk (s)							5.0
Pedestrian Calls (#/hr)							0
Act Effct Green (s)	77.0						
Actuated g/C Ratio	0.77						
v/c Ratio	0.35						
Control Delay	2.7						
Queue Delay	0.0						
Total Delay	2.7						
LOS	A						
Approach Delay	2.7						
Approach LOS	A						
90th %ile Green (s)	77.0						15.0
90th %ile Term Code	Coord						Ped
70th %ile Green (s)	77.0						15.0
70th %ile Term Code	Coord						Ped
50th %ile Green (s)	77.0						15.0
50th %ile Term Code	Coord						Ped
30th %ile Green (s)	77.0						15.0
30th %ile Term Code	Coord						Ped
10th %ile Green (s)	77.0						15.0
10th %ile Term Code	Coord						Ped
Queue Length 50th (ft)	12						
Queue Length 95th (ft)	116						
Internal Link Dist (ft)	133			407	79		
Turn Bay Length (ft)							
Base Capacity (vph)	2699						
Starvation Cap Reductn	0						
Spillback Cap Reductn	0						
Storage Cap Reductn	0						
Reduced v/c Ratio	0.35						

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	13 (13%), Referenced to phase 1:EBT, Start of Green
Natural Cycle:	40
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.35
Intersection Signal Delay:	2.7
Intersection Capacity Utilization	27.5%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	A

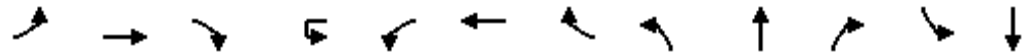
Splits and Phases: 4020: Huntington Avenue & South





Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑				↑↑			↑			↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	12	12	12	12	12	12	14
Grade (%)		0%				0%			0%			0%
Storage Length (ft)	0		0		0		0	0		0	0	
Storage Lanes	0		0		0		0	0		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50	50		50	50		50	50
Trailing Detector (ft)		0		0	0	0		0	0		0	0
Turning Speed (mph)	15		9	9	15		9	15		9	15	
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96				0.94			0.80			0.77
Frt		0.994				0.991			0.949			0.964
Flt Protected						0.996			0.982			0.988
Satd. Flow (prot)	0	3115	0	0	0	2944	0	0	1067	0	0	1357
Flt Permitted						0.787			0.854			0.911
Satd. Flow (perm)	0	3115	0	0	0	2299	0	0	927	0	0	1132
Right Turn on Red			No				Yes			No		
Satd. Flow (RTOR)												17
Headway Factor	1.14	1.10	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.05
Link Speed (mph)		25				25			25			25
Link Distance (ft)		527				294			482			458
Travel Time (s)		14.4				8.0			13.1			12.5
Volume (vph)	0	761	33	39	35	815	59	29	19	29	41	86
Confl. Peds. (#/hr)	508		613		613		508	572		1516	1516	
Confl. Bikes (#/hr)			28				9					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	12%	2%	2%	4%	2%	28%	25%	6%	5%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%				0%			0%			0%
Adj. Flow (vph)	0	827	36	42	38	886	64	32	21	32	45	93
Lane Group Flow (vph)	0	863	0	0	0	1030	0	0	85	0	0	188
Turn Type				D.P+P	D.P+P			Perm				Perm
Protected Phases		1		3	3	1 3			2			2
Permitted Phases				1	1			2			2	
Detector Phases		1		3	3	1 3		2	2		2	2
Minimum Initial (s)		8.0		8.0	8.0			8.0	8.0		8.0	8.0
Minimum Split (s)		21.0		14.0	14.0			16.0	16.0		16.0	16.0
Total Split (s)	0.0	58.0	0.0	14.0	14.0	72.0	0.0	28.0	28.0	0.0	28.0	28.0
Total Split (%)	0.0%	58.0%	0.0%	14.0%	14.0%	72.0%	0.0%	28.0%	28.0%	0.0%	28.0%	28.0%
Maximum Green (s)		53.0		9.0	9.0			22.0	22.0		22.0	22.0
Yellow Time (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0
All-Red Time (s)		2.0		2.0	2.0			3.0	3.0		3.0	3.0
Lead/Lag				Lag	Lag			Lead	Lead		Lead	Lead
Lead-Lag Optimize?				Yes	Yes			Yes	Yes		Yes	Yes
Vehicle Extension (s)		2.0		2.0	2.0			3.0	3.0		3.0	3.0
Minimum Gap (s)		3.0		3.0	3.0			3.0	3.0		3.0	3.0

Lane Group	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Lane Width (ft)	12
Grade (%)	
Storage Length (ft)	0
Storage Lanes	0
Total Lost Time (s)	4.0
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	9
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	Yes
Satd. Flow (RTOR)	
Headway Factor	1.14
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	46
Confl. Peds. (#/hr)	572
Confl. Bikes (#/hr)	4
Peak Hour Factor	0.92
Growth Factor	100%
Heavy Vehicles (%)	0%
Bus Blockages (#/hr)	0
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	50
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phases	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	0.0
Total Split (%)	0.0%
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Minimum Gap (s)	



Lane Group	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Time Before Reduce (s)		0.0		0.0	0.0			0.0	0.0		0.0	0.0
Time To Reduce (s)		0.0		0.0	0.0			0.0	0.0		0.0	0.0
Recall Mode		C-Max		None	None			Ped	Ped		Ped	Ped
Walk Time (s)		7.0						7.0	7.0		7.0	7.0
Flash Dont Walk (s)		7.0						2.0	2.0		2.0	2.0
Pedestrian Calls (#/hr)		0						0	0		0	0
Act Effct Green (s)		57.8				67.8			20.2			20.2
Actuated g/C Ratio		0.58				0.68			0.20			0.20
v/c Ratio		0.48				0.63			0.45			0.77
Control Delay		10.8				10.1			42.3			55.1
Queue Delay		0.0				0.0			0.0			0.0
Total Delay		10.8				10.1			42.3			55.1
LOS		B				B			D			E
Approach Delay		10.8				10.1			42.3			55.1
Approach LOS		B				B			D			E
90th %ile Green (s)		53.0		9.0	9.0			22.0	22.0		22.0	22.0
90th %ile Term Code		Coord		Max	Max			Max	Max		Max	Max
70th %ile Green (s)		53.0		9.0	9.0			22.0	22.0		22.0	22.0
70th %ile Term Code		Coord		Max	Max			Max	Max		Max	Max
50th %ile Green (s)		54.8		9.0	9.0			20.2	20.2		20.2	20.2
50th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
30th %ile Green (s)		58.9		9.0	9.0			16.1	16.1		16.1	16.1
30th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
10th %ile Green (s)		64.3		9.0	9.0			10.7	10.7		10.7	10.7
10th %ile Term Code		Coord		Max	Max			Gap	Gap		Gap	Gap
Queue Length 50th (ft)		105				140			47			101
Queue Length 95th (ft)		m114				195			m92			#190
Internal Link Dist (ft)		447				214			402			378
Turn Bay Length (ft)												
Base Capacity (vph)		1800				1623			222			285
Starvation Cap Reductn		0				0			0			0
Spillback Cap Reductn		0				0			0			0
Storage Cap Reductn		0				0			0			0
Reduced v/c Ratio		0.48				0.63			0.38			0.66

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 50 (50%), Referenced to phase 1:EBWB, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 15.5

Intersection LOS: B

Intersection Capacity Utilization 80.0%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

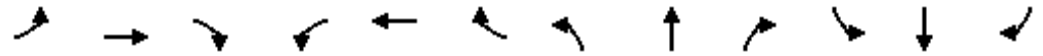
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBR
Time Before Reduce (s)	
Time To Reduce (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	
90th %ile Term Code	
70th %ile Green (s)	
70th %ile Term Code	
50th %ile Green (s)	
50th %ile Term Code	
30th %ile Green (s)	
30th %ile Term Code	
10th %ile Green (s)	
10th %ile Term Code	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Splits and Phases: 643: Huntington Ave & Forsyth Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑			↕			↖	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	11	12	12	16	12	12	12	15
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	100		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50		50	50		50	50	50
Trailing Detector (ft)		0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.90				0.59
Frt		0.999			0.996			0.960				0.850
Flt Protected				0.950				0.999			0.997	
Satd. Flow (prot)	0	3149	0	1501	2999	0	0	1662	0	0	1674	1583
Flt Permitted				0.950				0.989			0.954	
Satd. Flow (perm)	0	3149	0	1501	2999	0	0	1645	0	0	1602	940
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.14	1.14	1.25	1.19	1.14	1.14	0.97	1.14	1.14	1.14	1.01
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		960			527			786			209	
Travel Time (s)		26.2			14.4			21.4			5.7	
Volume (vph)	0	639	3	175	626	18	9	289	127	20	334	99
Confl. Peds. (#/hr)			82			60			150			270
Confl. Bikes (#/hr)			11			14			4			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	0%	1%	4%	0%	0%	0%	2%	16%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	695	3	190	680	20	10	314	138	22	363	108
Lane Group Flow (vph)	0	698	0	190	700	0	0	462	0	0	385	108
Turn Type				Prot			Perm			Perm		Perm
Protected Phases		1		3	1 3			2			2	
Permitted Phases							2			2		2
Detector Phases		1		3	1 3		2	2		2	2	2
Minimum Initial (s)		8.0		6.0			8.0	8.0		8.0	8.0	8.0
Minimum Split (s)		33.0		13.0			18.0	18.0		18.0	18.0	18.0
Total Split (s)	0.0	38.0	0.0	24.0	62.0	0.0	38.0	38.0	0.0	38.0	38.0	38.0
Total Split (%)	0.0%	38.0%	0.0%	24.0%	62.0%	0.0%	38.0%	38.0%	0.0%	38.0%	38.0%	38.0%
Maximum Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
Yellow Time (s)		3.0		3.0			3.0	3.0		3.0	3.0	3.0
All-Red Time (s)		2.0		3.0			4.0	4.0		4.0	4.0	4.0
Lead/Lag				Lag			Lead	Lead		Lead	Lead	Lead
Lead-Lag Optimize?				Yes			Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)		2.0		2.0			3.0	3.0		3.0	3.0	3.0
Minimum Gap (s)		2.0		3.0			3.0	3.0		3.0	3.0	3.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)		0.0		0.0			0.0	0.0		0.0	0.0	0.0
Recall Mode		C-Max		None			Ped	Ped		Ped	Ped	Ped
Walk Time (s)		7.0					7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		19.0					3.0	3.0		3.0	3.0	3.0
Pedestrian Calls (#/hr)		0					0	0		0	0	0
Act Effct Green (s)		37.8		17.8	59.6		32.4			32.4	32.4	32.4
Actuated g/C Ratio		0.38		0.18	0.60		0.32			0.32	0.32	0.32
v/c Ratio		0.59		0.71	0.39		0.87			0.74	0.35	
Control Delay		21.3		55.5	8.2		41.1			39.6	29.1	
Queue Delay		0.0		0.0	0.0		0.0			0.0	0.0	
Total Delay		21.3		55.5	8.2		41.1			39.6	29.1	
LOS		C		E	A		D			D	C	
Approach Delay		21.3			18.3		41.1			37.3		
Approach LOS		C			B		D			D		
90th %ile Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
90th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
70th %ile Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
70th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
50th %ile Green (s)		33.0		18.0			31.0	31.0		31.0	31.0	31.0
50th %ile Term Code		Coord		Max			Max	Max		Max	Max	Max
30th %ile Green (s)		35.4		16.0			30.6	30.6		30.6	30.6	30.6
30th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
10th %ile Green (s)		49.6		9.1			23.3	23.3		23.3	23.3	23.3
10th %ile Term Code		Coord		Gap			Gap	Gap		Gap	Gap	Gap
Queue Length 50th (ft)		92		99	72		281			211	51	
Queue Length 95th (ft)		156		m170	86		m307			322	99	
Internal Link Dist (ft)		880			447		706			129		
Turn Bay Length (ft)				100								
Base Capacity (vph)		1190		300	1776		559			545	320	
Starvation Cap Reductn		0		0	0		0			0	0	
Spillback Cap Reductn		0		0	0		0			0	0	
Storage Cap Reductn		0		0	0		0			0	0	
Reduced v/c Ratio		0.59		0.63	0.39		0.83			0.71	0.34	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 62 (62%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 26.9 Intersection LOS: C
 Intersection Capacity Utilization 78.4% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 569: Huntington Ave & Forsyth Way





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕			↕		↖	↕		↖	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	12	12	12	11	11	12	13	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		0	0		0	0		0	0		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50		50	50		50	50	
Trailing Detector (ft)	0	0			0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94			0.89			1.00			0.99	
Frt		0.958			0.971			0.997			0.997	
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1516	2697	0	0	2703	0	1540	1498	0	1646	1596	0
Flt Permitted	0.950						0.143			0.481		
Satd. Flow (perm)	1516	2697	0	0	2703	0	232	1498	0	833	1596	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Headway Factor	1.25	1.19	1.14	1.14	1.14	1.14	1.19	1.19	1.14	1.10	1.14	1.14
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		477			960			561			606	
Travel Time (s)		13.0			26.2			15.3			16.5	
Volume (vph)	58	587	228	0	621	148	247	449	10	45	413	9
Confl. Peds. (#/hr)			88			221			141			266
Confl. Bikes (#/hr)			12			11			11			2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	7%	0%	3%	6%	2%	10%	0%	2%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	63	638	248	0	675	161	268	488	11	49	449	10
Lane Group Flow (vph)	63	886	0	0	836	0	268	499	0	49	459	0
Turn Type	Prot						D.P+P			Perm		
Protected Phases	4	1 4			1		2	2 3				3
Permitted Phases							3			3		
Detector Phases	4	1 4			1		2	2 3		3		3
Minimum Initial (s)	5.0				8.0		6.0			8.0	8.0	
Minimum Split (s)	12.0				21.0		14.0			18.0	18.0	
Total Split (s)	12.0	49.0	0.0	0.0	37.0	0.0	19.0	51.0	0.0	32.0	32.0	0.0
Total Split (%)	12.0%	49.0%	0.0%	0.0%	37.0%	0.0%	19.0%	51.0%	0.0%	32.0%	32.0%	0.0%
Maximum Green (s)	6.0				31.0		12.0			25.0	25.0	
Yellow Time (s)	3.0				3.0		3.0			3.0	3.0	
All-Red Time (s)	3.0				3.0		4.0			4.0	4.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0				2.0		3.0			3.0	3.0	
Minimum Gap (s)	3.0				3.0		3.0			3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Time To Reduce (s)	0.0				0.0		0.0			0.0	0.0	
Recall Mode	None			C-Max			None			Ped	Ped	
Walk Time (s)					7.0					7.0	7.0	
Flash Dont Walk (s)					6.0					3.0	3.0	
Pedestrian Calls (#/hr)					0					0	0	
Act Effct Green (s)	8.0	45.0			33.0		43.0	47.0		28.0	28.0	
Actuated g/C Ratio	0.08	0.45			0.33		0.43	0.47		0.28	0.28	
v/c Ratio	0.52	0.73			0.94		0.91	0.71		0.21	1.03	
Control Delay	60.2	26.9			47.6		43.3	22.7		30.6	86.6	
Queue Delay	0.0	0.0			0.0		0.0	0.2		0.0	0.0	
Total Delay	60.2	26.9			47.6		43.3	22.8		30.6	86.6	
LOS	E	C			D		D	C		C	F	
Approach Delay		29.1			47.6			30.0			81.2	
Approach LOS		C			D			C			F	
90th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
90th %ile Term Code	Max				Coord		Max			Max	Max	
70th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
70th %ile Term Code	Max				Coord		Max			Max	Max	
50th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
50th %ile Term Code	Max				Coord		Max			Max	Max	
30th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
30th %ile Term Code	Max				Coord		Max			Max	Max	
10th %ile Green (s)	6.0				31.0		12.0			25.0	25.0	
10th %ile Term Code	Max				Coord		Max			Max	Max	
Queue Length 50th (ft)	39	236			234		140	171		24	~314	
Queue Length 95th (ft)	#89	313			m#403		m83	m122		56	#506	
Internal Link Dist (ft)		397			880			481			526	
Turn Bay Length (ft)	100											
Base Capacity (vph)	121	1214			892		296	704		233	447	
Starvation Cap Reductn	0	0			0		0	13		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.52	0.73			0.94		0.91	0.72		0.21	1.03	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 59 (59%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 43.0 Intersection LOS: D
 Intersection Capacity Utilization 83.5% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3096: Huntington Ave & Louis Prang Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	15	12	12	16	12	12	10	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	20	100		20	100		20	100		20	100	20
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94			1.00			0.95				0.79
Frt		0.981			0.996			0.976				0.850
Flt Protected		0.990			0.989			0.996			0.999	
Satd. Flow (prot)	0	2760	0	0	1834	0	0	1687	0	0	1492	1292
Flt Permitted		0.760			0.816			0.547			0.976	
Satd. Flow (perm)	0	2119	0	0	1513	0	0	926	0	0	1458	1022
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			2			15				45
Headway Factor	1.14	1.25	1.14	1.14	1.01	1.14	1.14	0.97	1.14	1.14	1.25	1.25
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		751			786			490			561	
Travel Time (s)		17.1			17.9			11.1			12.8	
Volume (vph)	69	235	44	105	332	14	70	621	153	14	593	41
Confl. Peds. (#/hr)			188			67			67			53
Confl. Bikes (#/hr)			19			2			11			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	5%	0%	1%	0%	2%	8%	2%	0%	7%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	75	255	48	114	361	15	76	675	166	15	645	45
Lane Group Flow (vph)	0	378	0	0	490	0	0	917	0	0	660	45
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		5			5			1				1
Permitted Phases	5			5			1			1		1
Detector Phases	5	5		5	5		1	1		1	1	1
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	8.0		8.0	8.0	8.0
Minimum Split (s)	27.0	27.0		27.0	27.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	49.0	49.0	0.0	49.0	49.0	0.0	51.0	51.0	0.0	51.0	51.0	51.0
Total Split (%)	49.0%	49.0%	0.0%	49.0%	49.0%	0.0%	51.0%	51.0%	0.0%	51.0%	51.0%	51.0%
Maximum Green (s)	45.0	45.0		45.0	45.0		47.0	47.0		47.0	47.0	47.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	15.0	15.0		15.0	15.0		8.0	8.0		8.0	8.0	8.0
Flash Dont Walk (s)	7.0	7.0		7.0	7.0		6.0	6.0		6.0	6.0	6.0
Pedestrian Calls (#/hr)	30	30		30	30		0	0		0	0	0
Act Effct Green (s)		36.1			36.1			55.9			55.9	55.9
Actuated g/C Ratio		0.36			0.36			0.56			0.56	0.56
v/c Ratio		0.49			0.89			1.75			0.81	0.08
Control Delay		24.4			44.4			366.6			23.4	4.9
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		24.4			44.4			366.6			23.4	4.9
LOS		C			D			F			C	A
Approach Delay		24.4			44.4			366.6			22.2	
Approach LOS		C			D			F			C	
90th %ile Green (s)	45.0	45.0		45.0	45.0		47.0	47.0		47.0	47.0	47.0
90th %ile Term Code	Max	Max		Max	Max		Coord	Coord		Coord	Coord	Coord
70th %ile Green (s)	41.3	41.3		41.3	41.3		50.7	50.7		50.7	50.7	50.7
70th %ile Term Code	Gap	Gap		Gap	Gap		Coord	Coord		Coord	Coord	Coord
50th %ile Green (s)	36.7	36.7		36.7	36.7		55.3	55.3		55.3	55.3	55.3
50th %ile Term Code	Gap	Gap		Gap	Gap		Coord	Coord		Coord	Coord	Coord
30th %ile Green (s)	32.1	32.1		32.1	32.1		59.9	59.9		59.9	59.9	59.9
30th %ile Term Code	Gap	Gap		Gap	Gap		Coord	Coord		Coord	Coord	Coord
10th %ile Green (s)	25.5	25.5		25.5	25.5		66.5	66.5		66.5	66.5	66.5
10th %ile Term Code	Gap	Gap		Gap	Gap		Coord	Coord		Coord	Coord	Coord
Queue Length 50th (ft)		90			339			~884			222	1
Queue Length 95th (ft)		115			441			#1176			m#247	m0
Internal Link Dist (ft)		671			706			410			481	
Turn Bay Length (ft)												
Base Capacity (vph)		965			682			524			815	591
Starvation Cap Reductn		0			0			0			0	0
Spillback Cap Reductn		0			0			0			0	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.39			0.72			1.75			0.81	0.08

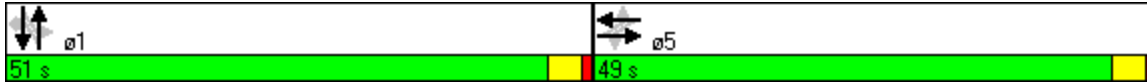
Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 4 (4%), Referenced to phase 1:NBSB, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.75
 Intersection Signal Delay: 153.7 Intersection LOS: F
 Intersection Capacity Utilization 146.0% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 389: Parker Street & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	13	11	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50
Trailing Detector (ft)	0	0	0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Ped Bike Factor	0.95		0.98			
Frt		0.850	0.997			
Flt Protected	0.950					
Satd. Flow (prot)	1486	1472	1591	0	0	3185
Flt Permitted	0.950					0.934
Satd. Flow (perm)	1418	1472	1591	0	0	2975
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		15	3			
Headway Factor	1.25	1.10	1.19	1.14	1.14	1.14
Link Speed (mph)	30		30			30
Link Distance (ft)	406		126			231
Travel Time (s)	9.2		2.9			5.3
Volume (vph)	99	69	900	23	5	735
Confl. Peds. (#/hr)	35	41		428	428	
Confl. Bikes (#/hr)				21		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	108	75	978	25	5	799
Lane Group Flow (vph)	108	75	1003	0	0	804
Turn Type		Prot			Perm	
Protected Phases	5	5	1			1
Permitted Phases					1	
Detector Phases	5	5	1		1	1
Minimum Initial (s)	8.0	8.0	8.0		8.0	8.0
Minimum Split (s)	24.0	24.0	21.0		21.0	21.0
Total Split (s)	24.0	24.0	46.0	0.0	46.0	46.0
Total Split (%)	34.3%	34.3%	65.7%	0.0%	65.7%	65.7%
Maximum Green (s)	19.0	19.0	40.0		40.0	40.0
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0
All-Red Time (s)	2.0	2.0	3.0		3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Minimum Gap (s)	2.0	2.0	3.0		3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0	0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0		0.0	0.0
Recall Mode	None	None	C-Max		C-Max	C-Max
Walk Time (s)	8.0	8.0	8.0		8.0	8.0
Flash Dont Walk (s)	8.0	8.0	7.0		7.0	7.0
Pedestrian Calls (#/hr)	78	78	9		9	9
Act Effct Green (s)	15.4	15.4	50.0			50.0
Actuated g/C Ratio	0.22	0.22	0.71			0.71
v/c Ratio	0.33	0.22	0.88			0.38
Control Delay	25.1	19.7	18.0			6.0
Queue Delay	0.0	0.0	11.3			0.0
Total Delay	25.1	19.7	29.3			6.0
LOS	C	B	C			A
Approach Delay	22.9		29.3			6.0
Approach LOS	C		C			A
90th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
90th %ile Term Code	Ped	Ped	Coord		Coord	Coord
70th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
70th %ile Term Code	Ped	Ped	Coord		Coord	Coord
50th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
50th %ile Term Code	Ped	Ped	Coord		Coord	Coord
30th %ile Green (s)	16.0	16.0	43.0		43.0	43.0
30th %ile Term Code	Ped	Ped	Coord		Coord	Coord
10th %ile Green (s)	0.0	0.0	64.0		64.0	64.0
10th %ile Term Code	Skip	Skip	Coord		Coord	Coord
Queue Length 50th (ft)	38	20	573			76
Queue Length 95th (ft)	79	52	#420			108
Internal Link Dist (ft)	326		46			151
Turn Bay Length (ft)						
Base Capacity (vph)	425	431	1137			2125
Starvation Cap Reductn	0	0	130			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.25	0.17	1.00			0.38

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 26 (37%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 19.3

Intersection LOS: B

Intersection Capacity Utilization 73.1%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1526: Leon St & Ruggles Street





Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	16	16	13	12	12	11	
Grade (%)	0%		0%			0%	
Storage Length (ft)	0	0		0	0		
Storage Lanes	1	1		0	0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50	50	50			50	
Trailing Detector (ft)	0	0	0			0	
Turning Speed (mph)	15	9		9	15		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	
Ped Bike Factor							
Frt		0.850					
Flt Protected	0.950						
Satd. Flow (prot)	995	941	1621	0	0	3049	
Flt Permitted	0.950						
Satd. Flow (perm)	995	941	1621	0	0	3049	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)		26					
Headway Factor	0.97	0.97	1.10	1.14	1.14	1.19	
Link Speed (mph)	30		30			30	
Link Distance (ft)	219		341			206	
Travel Time (s)	5.0		7.8			4.7	
Volume (vph)	66	24	934	0	0	842	
Confl. Peds. (#/hr)							
Confl. Bikes (#/hr)				5			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	85%	75%	9%	0%	0%	3%	
Bus Blockages (#/hr)	0	0	0	0	0	0	
Parking (#/hr)							
Mid-Block Traffic (%)	0%		0%			0%	
Adj. Flow (vph)	72	26	1015	0	0	915	
Lane Group Flow (vph)	72	26	1015	0	0	915	
Turn Type		Prot					
Protected Phases	5	5	1			1	2
Permitted Phases							
Detector Phases	5	5	1			1	
Minimum Initial (s)	8.0	8.0	8.0			8.0	20.0
Minimum Split (s)	13.0	13.0	13.0			13.0	24.0
Total Split (s)	15.0	15.0	31.0	0.0	0.0	31.0	24.0
Total Split (%)	21.4%	21.4%	44.3%	0.0%	0.0%	44.3%	34%
Maximum Green (s)	10.0	10.0	26.0			26.0	20.0
Yellow Time (s)	3.0	3.0	3.0			3.0	3.5
All-Red Time (s)	2.0	2.0	2.0			2.0	0.5
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.0	2.0	2.0			2.0	2.0
Minimum Gap (s)	3.0	3.0	3.0			3.0	3.0



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2
Time Before Reduce (s)	0.0	0.0	0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0			0.0	0.0
Recall Mode	None	None	C-Max			C-Max	None
Walk Time (s)							7.0
Flash Dont Walk (s)							13.0
Pedestrian Calls (#/hr)							10
Act Effct Green (s)	10.4	10.4	50.2			50.2	
Actuated g/C Ratio	0.15	0.15	0.72			0.72	
v/c Ratio	0.49	0.16	0.87			0.42	
Control Delay	38.9	13.2	21.8			6.6	
Queue Delay	0.0	0.0	5.1			0.1	
Total Delay	38.9	13.2	27.0			6.7	
LOS	D	B	C			A	
Approach Delay	32.1		27.0			6.7	
Approach LOS	C		C			A	
90th %ile Green (s)	10.0	10.0	26.0			26.0	20.0
90th %ile Term Code	Max	Max	Coord			Coord	Max
70th %ile Green (s)	11.7	11.7	48.3			48.3	0.0
70th %ile Term Code	Gap	Gap	Coord			Coord	Skip
50th %ile Green (s)	9.3	9.3	50.7			50.7	0.0
50th %ile Term Code	Gap	Gap	Coord			Coord	Skip
30th %ile Green (s)	8.0	8.0	52.0			52.0	0.0
30th %ile Term Code	Min	Min	Coord			Coord	Skip
10th %ile Green (s)	0.0	0.0	65.0			65.0	0.0
10th %ile Term Code	Skip	Skip	Coord			Coord	Skip
Queue Length 50th (ft)	29	0	535			49	
Queue Length 95th (ft)	68	20m#1584				133	
Internal Link Dist (ft)	139		261			126	
Turn Bay Length (ft)							
Base Capacity (vph)	161	174	1162			2187	
Starvation Cap Reductn	0	0	103			0	
Spillback Cap Reductn	0	0	30			276	
Storage Cap Reductn	0	0	0			0	
Reduced v/c Ratio	0.45	0.15	0.96			0.48	

Intersection Summary

Area Type: CBD

Cycle Length: 70

Actuated Cycle Length: 70

Offset: 25 (36%), Referenced to phase 1:NBSB, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 18.1

Intersection LOS: B

Intersection Capacity Utilization 68.0%

ICU Level of Service C

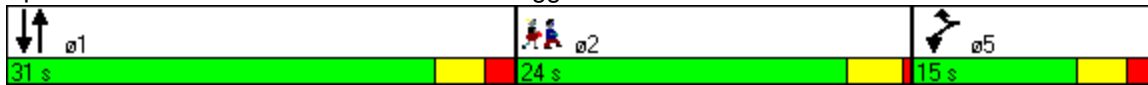
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3068: MBTA Exit & Ruggles Street



11046 Northeastern IMP
611: Tremont Street & Ruggles Street

2023 Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑↑	↗	↙	↑↑	↗	↙	↗	↗	↗↗	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	11	12	11	11	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		0	0		0	0		0	0		0
Storage Lanes	1		1	1		1	1		0	2		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor	1.00			0.97		0.97	0.96	0.91		0.87	0.93	
Frt						0.850		0.908				0.858
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	4468	1710	1624	3110	1454	1570	1354	0	3120	1368	0
Flt Permitted	0.950			0.142			0.950			0.950		
Satd. Flow (perm)	1568	4468	1710	235	3110	1408	1507	1354	0	2730	1368	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)								19			274	
Headway Factor	1.19	1.19	1.14	1.14	1.19	1.14	1.19	1.19	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		975			274			591			341	
Travel Time (s)		22.2			6.2			13.4			7.8	
Volume (vph)	197	1353	0	18	907	696	65	35	56	644	15	252
Confl. Peds. (#/hr)	1		58	58		1	20		65	65		20
Confl. Bikes (#/hr)			8			9						1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	1%	0%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	214	1471	0	20	986	757	71	38	61	700	16	274
Lane Group Flow (vph)	214	1471	0	20	986	757	71	99	0	700	290	0
Turn Type	Prot		Perm	Perm		pm+ov	Split			Prot		
Protected Phases	1!	6!			2!	3	4	4		3	6!	
Permitted Phases			6	2!		2						
Detector Phases	1	6	6	2	2	3	4	4		3	6	
Minimum Initial (s)	8.0	16.0	16.0	16.0	16.0	9.0	8.0	8.0		9.0	16.0	
Minimum Split (s)	12.0	20.0	20.0	20.0	20.0	13.0	23.0	23.0		13.0	20.0	
Total Split (s)	25.0	64.0	64.0	39.0	39.0	43.0	33.0	33.0	0.0	43.0	64.0	0.0
Total Split (%)	17.9%	45.7%	45.7%	27.9%	27.9%	30.7%	23.6%	23.6%	0.0%	30.7%	45.7%	0.0%
Maximum Green (s)	21.0	60.0	60.0	35.0	35.0	39.0	29.0	29.0		39.0	60.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag		Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Minimum Gap (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	

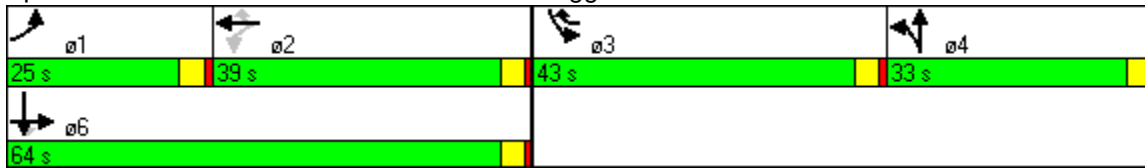


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None	None	None		None	C-Max	
Walk Time (s)		8.0	8.0	8.0	8.0		8.0	8.0			8.0	
Flash Dont Walk (s)		6.0	6.0	5.0	5.0		11.0	11.0			6.0	
Pedestrian Calls (#/hr)		4	4	4	4		17	17			4	
Act Effct Green (s)	20.3	75.4		51.1	51.1	90.1	13.6	13.6		39.0	75.4	
Actuated g/C Ratio	0.14	0.54		0.36	0.36	0.64	0.10	0.10		0.28	0.54	
v/c Ratio	0.94	0.61		0.23	0.87	0.82	0.47	0.67		0.81	0.34	
Control Delay	103.9	24.2		43.1	51.4	27.8	68.3	69.5		50.0	7.4	
Queue Delay	10.2	0.2		0.0	238.4	51.8	0.0	1.1		26.4	1.0	
Total Delay	114.1	24.4		43.1	289.7	79.6	68.3	70.6		76.3	8.4	
LOS	F	C		D	F	E	E	E		E	A	
Approach Delay		35.8			196.7			69.7			56.4	
Approach LOS		D			F			E			E	
90th %ile Green (s)	21.0	70.0	70.0	45.0	45.0	39.0	19.0	19.0		39.0	70.0	
90th %ile Term Code	Max	Coord	Coord	Coord	Coord	Max	Ped	Ped		Max	Coord	
70th %ile Green (s)	21.0	70.0	70.0	45.0	45.0	39.0	19.0	19.0		39.0	70.0	
70th %ile Term Code	Max	Coord	Coord	Coord	Coord	Max	Ped	Ped		Max	Coord	
50th %ile Green (s)	21.0	76.8	76.8	51.8	51.8	39.0	12.2	12.2		39.0	76.8	
50th %ile Term Code	Max	Coord	Coord	Coord	Coord	Max	Gap	Gap		Max	Coord	
30th %ile Green (s)	21.0	79.3	79.3	54.3	54.3	39.0	9.7	9.7		39.0	79.3	
30th %ile Term Code	Max	Coord	Coord	Coord	Coord	Max	Gap	Gap		Max	Coord	
10th %ile Green (s)	17.7	81.0	81.0	59.3	59.3	39.0	8.0	8.0		39.0	81.0	
10th %ile Term Code	Gap	Coord	Coord	Coord	Coord	Max	Min	Min		Max	Coord	
Queue Length 50th (ft)	194	319		12	433	430	63	72		296	23	
Queue Length 95th (ft)	#348	410		40	#620	#797	110	131		344	124	
Internal Link Dist (ft)		895			194			511			261	
Turn Bay Length (ft)	200											
Base Capacity (vph)	236	2407		86	1135	919	325	296		869	863	
Starvation Cap Reductn	0	0		0	491	234	0	0		193	346	
Spillback Cap Reductn	15	271		0	0	0	0	76		64	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.97	0.69		0.23	1.53	1.11	0.22	0.45		1.04	0.56	

Intersection Summary

Area Type: CBD
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 56 (40%), Referenced to phase 2:WBTL and 6:EBSB, Start of Green
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 103.1 Intersection LOS: F
 Intersection Capacity Utilization 91.2% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 ! Phase conflict between lane groups.

Splits and Phases: 611: Tremont Street & Ruggles Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑							↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50			50							50
Trailing Detector (ft)		0			0							0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98										
Frt		0.982										0.865
Flt Protected												
Satd. Flow (prot)	0	4431	0	0	4622	0	0	0	0	0	0	1479
Flt Permitted												
Satd. Flow (perm)	0	4431	0	0	4622	0	0	0	0	0	0	1479
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		52										41
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		274			502			667				399
Travel Time (s)		6.2			11.4			15.2				9.1
Volume (vph)	0	1809	242	0	1509	0	0	0	0	0	0	124
Confl. Peds. (#/hr)			50	50		20	25		161	161		25
Confl. Bikes (#/hr)			11			5						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	0	1966	263	0	1640	0	0	0	0	0	0	135
Lane Group Flow (vph)	0	2229	0	0	1640	0	0	0	0	0	0	135
Turn Type												custom
Protected Phases		1			1							5
Permitted Phases												
Detector Phases		1			1							5
Minimum Initial (s)		10.0			10.0							4.0
Minimum Split (s)		23.0			23.0							29.0
Total Split (s)	0.0	77.0	0.0	0.0	77.0	0.0	0.0	0.0	0.0	0.0	0.0	29.0
Total Split (%)	0.0%	72.6%	0.0%	0.0%	72.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	27.4%
Maximum Green (s)		73.0			73.0							25.0
Yellow Time (s)		3.0			3.0							3.5
All-Red Time (s)		1.0			1.0							0.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		2.0			2.0							3.0
Minimum Gap (s)		2.0			2.0							3.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)		0.0			0.0							0.0
Time To Reduce (s)		0.0			0.0							0.0
Recall Mode		C-Max			C-Max							None
Walk Time (s)		8.0			8.0							8.0
Flash Dont Walk (s)		6.0			6.0							17.0
Pedestrian Calls (#/hr)		30			30							5
Act Effct Green (s)		84.7			84.7							13.3
Actuated g/C Ratio		0.80			0.80							0.13
v/c Ratio		0.63			0.44							0.61
Control Delay		6.1			4.5							40.6
Queue Delay		6.6			0.3							0.5
Total Delay		12.7			4.8							41.1
LOS		B			A							D
Approach Delay		12.7			4.8							
Approach LOS		B			A							
90th %ile Green (s)		73.0			73.0							25.0
90th %ile Term Code		Coord			Coord							Ped
70th %ile Green (s)		83.7			83.7							14.3
70th %ile Term Code		Coord			Coord							Gap
50th %ile Green (s)		86.2			86.2							11.8
50th %ile Term Code		Coord			Coord							Gap
30th %ile Green (s)		88.7			88.7							9.3
30th %ile Term Code		Coord			Coord							Gap
10th %ile Green (s)		92.1			92.1							5.9
10th %ile Term Code		Coord			Coord							Gap
Queue Length 50th (ft)		152			89							61
Queue Length 95th (ft)		355			207							108
Internal Link Dist (ft)		194			422			587			319	
Turn Bay Length (ft)												
Base Capacity (vph)		3553			3695							380
Starvation Cap Reductn		1281			1215							0
Spillback Cap Reductn		0			773							66
Storage Cap Reductn		0			0							0
Reduced v/c Ratio		0.98			0.66							0.43

Intersection Summary

Area Type:	CBD
Cycle Length:	106
Actuated Cycle Length:	106
Offset:	10 (9%), Referenced to phase 1:EBWB, Start of Green
Natural Cycle:	70
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	10.4
Intersection LOS:	B
Intersection Capacity Utilization	55.6%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 3082: Tremont Street & Columbus Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗		↕↕		↗	↕↕			↕	↗
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	10	16	11	16	12	14	14	13	12	11	13
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	350		0	0		0
Storage Lanes	0		1	0		0	1		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50		50	50		50	50	50
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.91	0.91	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99	0.98		1.00		0.99	0.99			1.00	0.97
Frt			0.850		0.996			0.984				0.850
Flt Protected		0.986			0.995		0.950	0.963			0.996	
Satd. Flow (prot)	0	2616	1431	0	3151	0	1397	2721	0	0	1446	1331
Flt Permitted		0.554			0.553		0.950	0.963			0.996	
Satd. Flow (perm)	0	1461	1405	0	1750	0	1387	2706	0	0	1445	1297
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)					3							209
Headway Factor	1.14	1.25	0.97	1.19	0.97	1.14	1.05	1.05	1.10	1.14	1.19	1.10
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		502			2251			626			342	
Travel Time (s)		11.4			51.2			14.2			7.8	
Volume (vph)	243	640	935	61	486	16	985	75	70	20	232	226
Confl. Peds. (#/hr)	50		20	20		50	7		21	21		7
Confl. Bikes (#/hr)			2			7			14			3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	3%	4%	3%	13%	1%	18%	0%	0%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	264	696	1016	66	528	17	1071	82	76	22	252	246
Lane Group Flow (vph)	0	960	1016	0	611	0	536	693	0	0	274	246
Turn Type	D.P+P		Free	Perm			Split			Split		Perm
Protected Phases	7	1 7			1		6	6		5	5	
Permitted Phases	1		Free	1								5
Detector Phases	1 7	1 7		1	1		6	6		5	5	5
Minimum Initial (s)	4.0			10.0	10.0		10.0	10.0		8.0	8.0	8.0
Minimum Split (s)	8.0			26.0	26.0		20.0	20.0		24.0	24.0	24.0
Total Split (s)	15.0	45.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0	25.0	25.0	25.0
Total Split (%)	15.0%	45.0%	0.0%	30.0%	30.0%	0.0%	30.0%	30.0%	0.0%	25.0%	25.0%	25.0%
Maximum Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
Yellow Time (s)	3.0			3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0			1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0			2.0	2.0		2.0	2.0		2.0	2.0	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0			0.0	0.0		0.0	0.0		0.0	0.0	0.0
Recall Mode	Max			C-Max	C-Max		None	None		None	None	None
Walk Time (s)				7.0	7.0					7.0	7.0	7.0
Flash Dont Walk (s)				15.0	15.0					13.0	13.0	13.0
Pedestrian Calls (#/hr)				0	0					5	5	5
Act Effct Green (s)		37.8	100.0		26.8		26.0	26.0			20.2	20.2
Actuated g/C Ratio		0.38	1.00		0.27		0.26	0.26			0.20	0.20
v/c Ratio		1.41	0.72		1.30		1.48	1.41dl			0.94	0.57
Control Delay		220.4	3.3		176.7		258.9	67.2			64.0	7.8
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	1.1
Total Delay		220.4	3.3		176.7		258.9	67.2			64.0	8.9
LOS		F	A		F		F	E			E	A
Approach Delay		108.8			176.7			150.8			37.9	
Approach LOS		F			F			F			D	
90th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
90th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
70th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
70th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
50th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
50th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
30th %ile Green (s)	11.0			26.0	26.0		26.0	26.0		21.0	21.0	21.0
30th %ile Term Code	MaxR			Coord	Coord		Max	Max		Max	Max	Max
10th %ile Green (s)	11.0			29.9	29.9		26.0	26.0		17.1	17.1	17.1
10th %ile Term Code	MaxR			Coord	Coord		Max	Max		Gap	Gap	Gap
Queue Length 50th (ft)		~439	0		~272		~519	241			172	31
Queue Length 95th (ft)		#565	0		m#377		#743	#369			#310	39
Internal Link Dist (ft)		422			2171			546			262	
Turn Bay Length (ft)							350					
Base Capacity (vph)		679	1405		471		363	707			304	437
Starvation Cap Reductn		0	0		0		0	0			0	60
Spillback Cap Reductn		0	0		0		0	0			0	0
Storage Cap Reductn		0	0		0		0	0			0	0
Reduced v/c Ratio		1.41	0.72		1.30		1.48	0.98			0.90	0.65

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 36 (36%), Referenced to phase 1:EBWB, Start of Green
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.48
 Intersection Signal Delay: 121.8 Intersection LOS: F
 Intersection Capacity Utilization 114.1% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

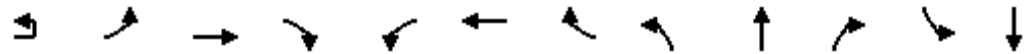
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

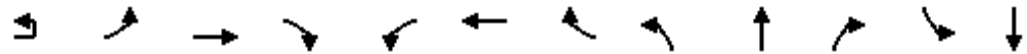
Splits and Phases: 3098: Tremont Street & Melnea Cass Boulevard





Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width (ft)	12	12	12	12	12	11	12	12	14	14	12	16
Grade (%)			0%			0%			0%			0%
Storage Length (ft)		0		25	0		0	0		0	0	
Storage Lanes		0		0	0		0	0		1	0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50		50	50		50	50	50	50	50
Trailing Detector (ft)	0	0	0		0	0		0	0	0	0	0
Turning Speed (mph)	9	15		9	15		9	15		9	15	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.93			0.99			0.97			0.96
Frt			0.927							0.850		0.932
Flt Protected						0.964			0.957			0.988
Satd. Flow (prot)	0	0	2517	0	0	1415	0	0	1330	1373	0	1555
Flt Permitted						0.964			0.746			0.964
Satd. Flow (perm)	0	0	2517	0	0	1395	0	0	1008	1373	0	1498
Right Turn on Red				Yes			Yes			Yes		
Satd. Flow (RTOR)			96							233		2
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.14	1.05	1.05	1.14	0.97
Link Speed (mph)			30			30			30			30
Link Distance (ft)			383			205			342			245
Travel Time (s)			8.7			4.7			7.8			5.6
Volume (vph)	1	0	91	88	375	131	2	95	11	214	1	1
Confl. Peds. (#/hr)		2		31	31		2	12		23	23	
Confl. Bikes (#/hr)				23			85			2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	12%	64%	1%	0%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)			0%			0%			0%			0%
Adj. Flow (vph)	1	0	99	96	408	142	2	103	12	233	1	1
Lane Group Flow (vph)	0	0	196	0	0	552	0	0	115	233	0	4
Turn Type	Split				Split			Perm		pt+ov	Perm	
Protected Phases	5		5		1	1			6	1 6		6
Permitted Phases								6				6
Detector Phases	5		5		1	1		6	6	6	6	6
Minimum Initial (s)	10.0		10.0		10.0	10.0		8.0	8.0		8.0	8.0
Minimum Split (s)	14.0		14.0		15.0	15.0		14.0	14.0		14.0	14.0
Total Split (s)	15.0	0.0	15.0	0.0	41.0	41.0	0.0	23.0	23.0	64.0	23.0	23.0
Total Split (%)	15.0%	0.0%	15.0%	0.0%	41.0%	41.0%	0.0%	23.0%	23.0%	64.0%	23.0%	23.0%
Maximum Green (s)	11.0		11.0		37.0	37.0		19.0	19.0		19.0	19.0
Yellow Time (s)	3.0		3.0		3.0	3.0		3.0	3.0		3.0	3.0
All-Red Time (s)	1.0		1.0		1.0	1.0		1.0	1.0		1.0	1.0
Lead/Lag	Lead		Lead		Lead	Lead		Lag	Lag		Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0		2.0		2.0	2.0		2.0	2.0		2.0	2.0
Minimum Gap (s)	2.0		2.0		2.0	2.0		2.0	2.0		2.0	2.0

Lane Group	SBR	ø2
Lane Configurations		
Ideal Flow (vphpl)	1700	
Lane Width (ft)	12	
Grade (%)		
Storage Length (ft)	0	
Storage Lanes	0	
Total Lost Time (s)	4.0	
Leading Detector (ft)		
Trailing Detector (ft)		
Turning Speed (mph)	9	
Lane Util. Factor	1.00	
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)	0	
Flt Permitted		
Satd. Flow (perm)	0	
Right Turn on Red	Yes	
Satd. Flow (RTOR)		
Headway Factor	1.14	
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Volume (vph)	2	
Confl. Peds. (#/hr)	12	
Confl. Bikes (#/hr)	1	
Peak Hour Factor	0.92	
Growth Factor	100%	
Heavy Vehicles (%)	0%	
Bus Blockages (#/hr)	0	
Parking (#/hr)		
Mid-Block Traffic (%)		
Adj. Flow (vph)	2	
Lane Group Flow (vph)	0	
Turn Type		
Protected Phases	2	
Permitted Phases		
Detector Phases		
Minimum Initial (s)	8.0	
Minimum Split (s)	21.0	
Total Split (s)	0.0	21.0
Total Split (%)	0.0%	21%
Maximum Green (s)	18.0	
Yellow Time (s)	2.0	
All-Red Time (s)	1.0	
Lead/Lag	Lag	
Lead-Lag Optimize?		
Vehicle Extension (s)	2.0	
Minimum Gap (s)	2.0	



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Time Before Reduce (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Time To Reduce (s)	0.0		0.0		0.0	0.0		0.0	0.0		0.0	0.0
Recall Mode	None		None		C-Max	C-Max		None	None		None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)			10.2			58.9			14.7	77.6		14.7
Actuated g/C Ratio			0.10			0.59			0.15	0.78		0.15
v/c Ratio			0.57			0.66			0.78	0.21		0.02
Control Delay			28.9			22.9			44.8	0.3		27.5
Queue Delay			0.0			0.0			0.0	0.8		0.0
Total Delay			28.9			22.9			44.8	1.0		27.5
LOS			C			C			D	A		C
Approach Delay			28.9			22.9			15.5			27.5
Approach LOS			C			C			B			C
90th %ile Green (s)	11.0		11.0		37.0	37.0		19.0	19.0		19.0	19.0
90th %ile Term Code	Max		Max		Coord	Coord		Max	Max		Max	Max
70th %ile Green (s)	10.2		10.2		58.8	58.8		19.0	19.0		19.0	19.0
70th %ile Term Code	Gap		Gap		Coord	Coord		Max	Max		Max	Max
50th %ile Green (s)	10.0		10.0		63.4	63.4		14.6	14.6		14.6	14.6
50th %ile Term Code	Min		Min		Coord	Coord		Gap	Gap		Gap	Gap
30th %ile Green (s)	10.0		10.0		65.2	65.2		12.8	12.8		12.8	12.8
30th %ile Term Code	Min		Min		Coord	Coord		Gap	Gap		Gap	Gap
10th %ile Green (s)	10.0		10.0		70.0	70.0		8.0	8.0		8.0	8.0
10th %ile Term Code	Min		Min		Coord	Coord		Min	Min		Min	Min
Queue Length 50th (ft)			32			191			60	0		1
Queue Length 95th (ft)			68			m#540			m42	m0		11
Internal Link Dist (ft)			303			125			262			165
Turn Bay Length (ft)												
Base Capacity (vph)			362			833			192	1117		286
Starvation Cap Reductn			0			0			0	608		0
Spillback Cap Reductn			0			0			0	0		0
Storage Cap Reductn			0			0			0	0		0
Reduced v/c Ratio			0.54			0.66			0.60	0.46		0.01

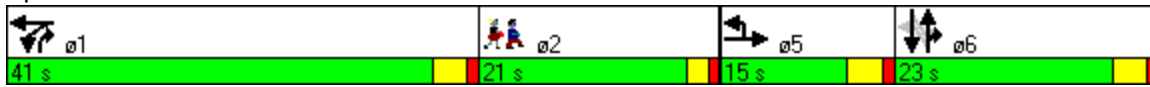
Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 47 (47%), Referenced to phase 1:WBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 21.6 Intersection LOS: C
 Intersection Capacity Utilization 70.0% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	SBR	ø2
Time Before Reduce (s)		0.0
Time To Reduce (s)		0.0
Recall Mode		None
Walk Time (s)		7.0
Flash Dont Walk (s)		11.0
Pedestrian Calls (#/hr)		15
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
90th %ile Green (s)		18.0
90th %ile Term Code		Ped
70th %ile Green (s)		0.0
70th %ile Term Code		Skip
50th %ile Green (s)		0.0
50th %ile Term Code		Skip
30th %ile Green (s)		0.0
30th %ile Term Code		Skip
10th %ile Green (s)		0.0
10th %ile Term Code		Skip
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Splits and Phases: 2085: Columbus Avenue & Melnea Cass





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	10	11	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.95	0.97		0.97	0.98		0.98					
Frt		0.966			0.976			0.987			0.987	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1472	2840	0	1417	2926	0	1472	3010	0	1486	2962	0
Flt Permitted	0.349			0.221			0.108			0.145		
Satd. Flow (perm)	515	2840	0	319	2926	0	165	3010	0	227	2962	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			21			12			13	
Headway Factor	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2251			586			935			635	
Travel Time (s)		51.2			13.3			21.3			14.4	
Volume (vph)	121	440	127	99	353	67	93	881	82	105	968	96
Confl. Peds. (#/hr)	81		83	83		81	150					
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	4%	4%	7%	3%	2%	3%	3%	3%	2%	5%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	132	478	138	108	384	73	101	958	89	114	1052	104
Lane Group Flow (vph)	132	616	0	108	457	0	101	1047	0	114	1156	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	6.0		6.0	43.0		6.0	43.0	
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	47.0		10.0	47.0	
Total Split (s)	11.0	30.0	0.0	11.0	30.0	0.0	11.0	48.0	0.0	11.0	48.0	0.0
Total Split (%)	11.0%	30.0%	0.0%	11.0%	30.0%	0.0%	11.0%	48.0%	0.0%	11.0%	48.0%	0.0%
Maximum Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		Max	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			23.0			23.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	32.8	25.8		32.7	25.8		51.5	44.2		51.0	44.0	
Actuated g/C Ratio	0.33	0.26		0.33	0.26		0.52	0.44		0.51	0.44	
v/c Ratio	0.56	0.81		0.60	0.59		0.56	0.78		0.56	0.88	
Control Delay	29.9	34.6		37.3	34.6		25.6	28.7		23.9	27.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.9	34.6		37.3	34.6		25.6	28.7		23.9	27.6	
LOS	C	C		D	C		C	C		C	C	
Approach Delay		33.8			35.1			28.4			27.3	
Approach LOS		C			D			C			C	
90th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
90th %ile Term Code	Max	Max		Max	Max		MaxR	Coord		Max	Coord	
70th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
70th %ile Term Code	Max	Max		Max	Hold		MaxR	Coord		Max	Coord	
50th %ile Green (s)	7.0	25.5		7.0	25.5		7.5	44.0		7.5	44.0	
50th %ile Term Code	Max	Gap		Max	Hold		MaxR	Coord		Max	Coord	
30th %ile Green (s)	7.0	26.0		7.0	26.0		7.0	44.0		7.0	44.0	
30th %ile Term Code	Max	Max		Max	Hold		MaxR	Coord		Max	Coord	
10th %ile Green (s)	7.0	25.6		6.8	25.4		7.6	45.2		6.4	44.0	
10th %ile Term Code	Max	Gap		Gap	Hold		MaxR	Coord		Gap	Coord	
Queue Length 50th (ft)	50	128		47	128		29	290		36	204	
Queue Length 95th (ft)	m37	m91		#93	181		#73	375		m42	m242	
Internal Link Dist (ft)		2171			506			855			555	
Turn Bay Length (ft)												
Base Capacity (vph)	236	765		181	776		179	1338		205	1311	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.56	0.81		0.60	0.59		0.56	0.78		0.56	0.88	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 30.1

Intersection LOS: C

Intersection Capacity Utilization 81.9%

ICU Level of Service D

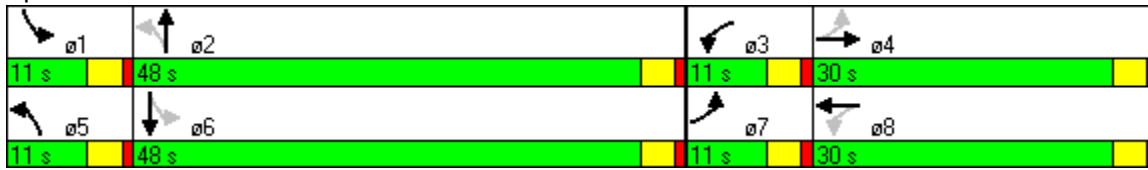
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 96: Tremont Street & Mass Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	12	11	12	12	10	11	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	0.93	0.97		0.93	0.95		0.97	0.98		0.98	0.93	
Frt		0.967			0.964			0.988			0.969	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1516	2909	0	1481	1524	0	1516	2941	0	1486	2713	0
Flt Permitted	0.250			0.558			0.085			0.141		
Satd. Flow (perm)	370	2909	0	805	1524	0	131	2941	0	215	2713	0
Right Turn on Red			No			No			Yes			Yes
Satd. Flow (RTOR)								13			45	
Headway Factor	1.25	1.19	1.14	1.19	1.14	1.14	1.25	1.19	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		626			513			635			882	
Travel Time (s)		14.2			11.7			14.4			20.0	
Volume (vph)	308	206	57	147	225	70	43	934	85	75	956	254
Confl. Peds. (#/hr)	130		90	90		130	240		204	204		240
Confl. Bikes (#/hr)			26			90			85			47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	1%	2%	6%	2%	3%	0%	4%	2%	2%	5%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	335	224	62	160	245	76	47	1015	92	82	1039	276
Lane Group Flow (vph)	335	286	0	160	321	0	47	1107	0	82	1315	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phases	7	4		3	8		5	2		1	6	
Minimum Initial (s)	6.0	8.0		6.0	8.0		5.0	29.0		5.0	29.0	
Minimum Split (s)	10.0	28.0		10.0	28.0		9.0	44.0		9.0	44.0	
Total Split (s)	12.0	30.0	0.0	10.0	28.0	0.0	9.0	51.0	0.0	9.0	51.0	0.0
Total Split (%)	12.0%	30.0%	0.0%	10.0%	28.0%	0.0%	9.0%	51.0%	0.0%	9.0%	51.0%	0.0%
Maximum Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		7.0			7.0			25.0			25.0	
Flash Dont Walk (s)		17.0			17.0			15.0			15.0	
Pedestrian Calls (#/hr)		5			5			5			5	
Act Effct Green (s)	32.8	24.8		28.8	22.8		54.0	50.0		54.8	51.8	
Actuated g/C Ratio	0.33	0.25		0.29	0.23		0.54	0.50		0.55	0.52	
v/c Ratio	1.57	0.40		0.59	0.93		0.34	0.75		0.45	0.92	
Control Delay	305.2	32.8		35.5	71.1		18.9	13.3		15.6	16.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	305.2	32.8		35.5	71.1		18.9	13.3		15.6	16.4	
LOS	F	C		D	E		B	B		B	B	
Approach Delay		179.8			59.3			13.6			16.4	
Approach LOS		F			E			B			B	
90th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
90th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
70th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
70th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
50th %ile Green (s)	8.0	26.0		6.0	24.0		5.0	47.0		5.0	47.0	
50th %ile Term Code	Max	Hold		Max	Max		Max	Coord		Max	Coord	
30th %ile Green (s)	8.0	25.7		6.0	23.7		0.0	47.3		5.0	56.3	
30th %ile Term Code	Max	Hold		Max	Gap		Skip	Coord		Max	Coord	
10th %ile Green (s)	8.0	20.2		6.0	18.2		0.0	61.8		0.0	61.8	
10th %ile Term Code	Max	Hold		Max	Gap		Skip	Coord		Skip	Coord	
Queue Length 50th (ft)	~239	75		72	198		7	107		8	~69	
Queue Length 95th (ft)	#415	112		125	#354		m14	174		m12	m#549	
Internal Link Dist (ft)		546			433			555			802	
Turn Bay Length (ft)												
Base Capacity (vph)	213	756		272	366		140	1478		181	1428	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.57	0.38		0.59	0.88		0.34	0.75		0.45	0.92	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 135

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.57

Intersection Signal Delay: 48.9

Intersection LOS: D

Intersection Capacity Utilization 96.5%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

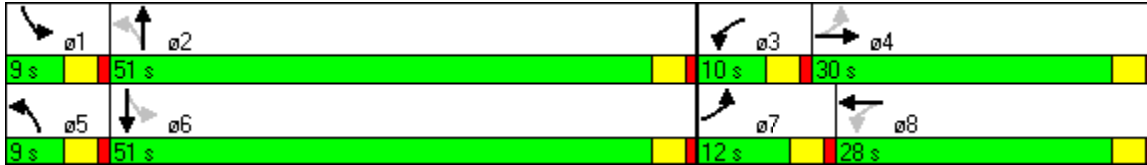
Queue shown is maximum after two cycles.

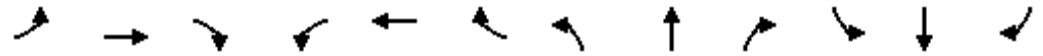
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 95: Columbus Avenue & Mass Ave





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12	11	12	12	10	11	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	1		0	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		0.92			0.95		0.96	0.99		0.97	0.99	
Frt		0.906			0.962			0.993			0.995	
Flt Protected		0.990			0.981		0.950			0.950		
Satd. Flow (prot)	0	1436	0	0	1317	0	1570	3102	0	1516	3023	0
Flt Permitted		0.937			0.859		0.080			0.110		
Satd. Flow (perm)	0	1340	0	0	1127	0	126	3102	0	171	3023	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		105			21			7			5	
Headway Factor	1.14	1.14	1.14	1.14	1.42	1.14	1.19	1.14	1.14	1.25	1.19	1.14
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		639			579			882			301	
Travel Time (s)		14.5			13.2			20.0			6.8	
Volume (vph)	28	14	97	36	29	26	147	1123	57	69	1151	40
Confl. Peds. (#/hr)	89		79	79		89	376		190	190		376
Confl. Bikes (#/hr)			2			1			20			22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)					0							
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	30	15	105	39	32	28	160	1221	62	75	1251	43
Lane Group Flow (vph)	0	150	0	0	99	0	160	1283	0	75	1294	0
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phases	8	8		4	4		1	6		5	2	
Minimum Initial (s)	8.0	8.0		8.0	8.0		6.0	6.0		6.0	6.0	
Minimum Split (s)	34.0	34.0		34.0	34.0		11.0	52.0		11.0	51.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	14.0	54.0	0.0	11.0	51.0	0.0
Total Split (%)	35.0%	35.0%	0.0%	35.0%	35.0%	0.0%	14.0%	54.0%	0.0%	11.0%	51.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		10.0	50.0		7.0	47.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Recall Mode	Min	Min		None	None		None	C-Min		None	C-Min	
Walk Time (s)	9.0	9.0		9.0	9.0			34.0			34.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0			13.0			13.0	
Pedestrian Calls (#/hr)	376	376		190	190			79			89	
Act Effct Green (s)		30.0			30.0		61.8	53.4		54.2	47.6	
Actuated g/C Ratio		0.30			0.30		0.62	0.53		0.54	0.48	
v/c Ratio		0.32			0.28		0.70	0.77		0.41	0.90	
Control Delay		11.5			23.5		25.1	27.7		17.9	18.8	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.3	
Total Delay		11.5			23.5		25.1	27.7		17.9	19.2	
LOS		B			C		C	C		B	B	
Approach Delay		11.5			23.5			27.4			19.1	
Approach LOS		B			C			C			B	
90th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	50.0		8.0	47.0	
90th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Max	Coord	
70th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	51.1		6.9	47.0	
70th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
50th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	51.9		6.1	47.0	
50th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Gap	Coord	
30th %ile Green (s)	30.0	30.0		30.0	30.0		11.0	52.0		6.0	47.0	
30th %ile Term Code	Ped	Ped		Ped	Ped		Max	Coord		Min	Coord	
10th %ile Green (s)	30.0	30.0		30.0	30.0		8.0	62.0		0.0	50.0	
10th %ile Term Code	Ped	Ped		Ped	Ped		Gap	Coord		Skip	Coord	
Queue Length 50th (ft)		21			37		68	378		7	245	
Queue Length 95th (ft)		70			81		m82	m391		m18	#531	
Internal Link Dist (ft)		559			499			802			221	
Turn Bay Length (ft)												
Base Capacity (vph)		488			364		234	1660		190	1441	
Starvation Cap Reductn		0			0		0	0		0	14	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.31			0.27		0.68	0.77		0.39	0.91	

Intersection Summary

Area Type: CBD

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 85 (85%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green

Natural Cycle: 100

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 22.8

Intersection LOS: C

Intersection Capacity Utilization 82.5%

ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 134: St. Botolph Street & Mass Ave



11046 Northeastern IMP
94: Huntington Avenue & Mass Ave

2023 Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕↕			↕↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	10	12	12	11	12	12	13	12	12	11	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		50	0		0	0		0	0		150
Storage Lanes	0		1	0		1	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50			50			50	50
Trailing Detector (ft)	0	0		0	0			0			0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.81			0.81			0.99				0.68
Frt		0.937			0.936			0.990				0.850
Flt Protected		0.978			0.980							
Satd. Flow (prot)	0	2240	0	0	2437	0	0	3193	0	0	3079	1357
Flt Permitted		0.978			0.980							
Satd. Flow (perm)	0	2063	0	0	2251	0	0	3193	0	0	3079	921
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		115			141			10				135
Headway Factor	1.14	1.38	1.14	1.14	1.19	1.14	1.14	1.10	1.14	1.14	1.19	1.25
Link Speed (mph)		30			30			30				30
Link Distance (ft)		644			443			301				284
Travel Time (s)		14.6			10.1			6.8				6.5
Volume (vph)	113	35	106	126	47	130	0	1095	79	0	1028	156
Confl. Peds. (#/hr)	168		162	162		168	536		257	257		536
Confl. Bikes (#/hr)			5			4			25			22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	2%	4%	4%	3%	0%	3%	0%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		12	12									
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	123	38	115	137	51	141	0	1190	86	0	1117	170
Lane Group Flow (vph)	0	276	0	0	329	0	0	1276	0	0	1117	170
Turn Type	Split			Split								Perm
Protected Phases	3	3		4	4			6			2	
Permitted Phases												2
Detector Phases	3	3		4	4			6			2	2
Minimum Initial (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Minimum Split (s)	23.0	23.0		23.0	23.0			29.0			29.0	29.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	0.0	50.0	0.0	0.0	50.0	50.0
Total Split (%)	25.0%	25.0%	0.0%	25.0%	25.0%	0.0%	0.0%	50.0%	0.0%	0.0%	50.0%	50.0%
Maximum Green (s)	21.0	21.0		21.0	21.0			41.0			41.0	41.0
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0			6.0			6.0	6.0
Lead/Lag	Lead	Lead		Lag	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Minimum Gap (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0

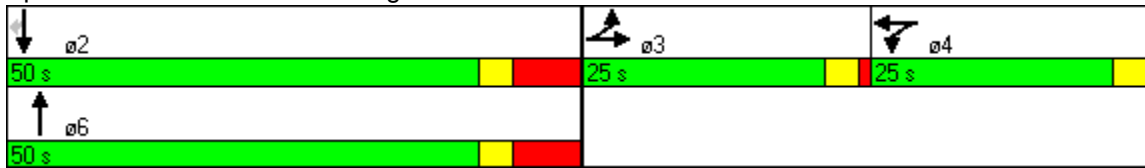


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Time To Reduce (s)	0.0	0.0		0.0	0.0			0.0			0.0	0.0
Recall Mode	Min	Min		Min	Min			Min			C-Min	C-Min
Walk Time (s)	8.0	8.0		8.0	8.0							
Flash Dont Walk (s)	10.0	10.0		10.0	10.0							
Pedestrian Calls (#/hr)	168	168		162	162							
Act Effct Green (s)		18.0			18.2			51.8			51.8	51.8
Actuated g/C Ratio		0.18			0.18			0.52			0.52	0.52
v/c Ratio		0.55			0.59			0.77			0.70	0.31
Control Delay		16.4			25.8			12.0			9.6	1.2
Queue Delay		1.0			0.2			1.4			22.7	0.7
Total Delay		17.4			26.0			13.3			32.4	1.9
LOS		B			C			B			C	A
Approach Delay		17.4			26.0			13.3			28.4	
Approach LOS		B			C			B			C	
90th %ile Green (s)	18.0	18.0		19.0	19.0			46.0			46.0	46.0
90th %ile Term Code	Ped	Ped		Gap	Gap			Coord			Coord	Coord
70th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
70th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
50th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
50th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
30th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
30th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
10th %ile Green (s)	18.0	18.0		18.0	18.0			47.0			47.0	47.0
10th %ile Term Code	Ped	Ped		Ped	Ped			Coord			Coord	Coord
Queue Length 50th (ft)		1			56			99			136	1
Queue Length 95th (ft)		58			102			161			m102	m1
Internal Link Dist (ft)		564			363			221			204	
Turn Bay Length (ft)												150
Base Capacity (vph)		561			623			1659			1595	542
Starvation Cap Reductn		0			0			78			511	163
Spillback Cap Reductn		117			36			197			356	0
Storage Cap Reductn		0			0			0			0	0
Reduced v/c Ratio		0.62			0.56			0.87			1.03	0.45

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 79 (79%), Referenced to phase 2:SBT, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 21.1 Intersection LOS: C
 Intersection Capacity Utilization 77.0% ICU Level of Service D
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 94: Huntington Avenue & Mass Ave





Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Lane Configurations	↗		↗		↘	↕			↕			
Ideal Flow (vphpl)	1000	1000	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	12	11	12	11	11	11	11	
Grade (%)						0%			0%			
Storage Length (ft)	0		0		0		0	0		0		
Storage Lanes	1		1		1		0	0		0		
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Leading Detector (ft)	50		50	50	50	50		50	50			
Trailing Detector (ft)	0		0	0	0	0		0	0			
Turning Speed (mph)	9	9	9	15	15		9	15		9	9	
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	
Ped Bike Factor			0.90		0.87	0.99			0.92			
Frt	0.865		0.865			0.998			0.980			
Flt Protected					0.950							
Satd. Flow (prot)	778	0	1479	0	1624	3113	0	0	2829	0	0	
Flt Permitted					0.282				0.793			
Satd. Flow (perm)	778	0	1328	0	418	3113	0	0	2243	0	0	
Right Turn on Red		No	Yes				Yes				No	
Satd. Flow (RTOR)			286			3						
Headway Factor	1.14	1.14	1.14	1.14	1.14	1.19	1.14	1.19	1.19	1.19	1.19	
Link Speed (mph)						30			25			
Link Distance (ft)						284			1155			
Travel Time (s)						6.5			31.5			
Volume (vph)	347	15	35	25	488	817	10	4	807	76	50	
Confl. Peds. (#/hr)		116	306	116	216		306	100		116	216	
Confl. Bikes (#/hr)		3					52			45	45	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)												
Mid-Block Traffic (%)						0%			0%			
Adj. Flow (vph)	377	16	38	27	530	888	11	4	877	83	54	
Lane Group Flow (vph)	393	0	38	0	557	899	0	0	1018	0	0	
Turn Type	custom		Free	custom	Prot			Perm				
Protected Phases	7 8!			2	2 7 8	1 2 8			1			7
Permitted Phases			Free	7 8!				1				
Detector Phases	7 8			2	2 7 8	1 2 8		1	1			
Minimum Initial (s)				6.0				8.0	8.0			8.0
Minimum Split (s)				12.0				28.0	28.0			21.0
Total Split (s)	42.0	0.0	0.0	18.0	60.0	78.0	0.0	40.0	40.0	0.0	0.0	22.0
Total Split (%)	42.0%	0.0%	0.0%	18.0%	60.0%	78.0%	0.0%	40.0%	40.0%	0.0%	0.0%	22%
Maximum Green (s)				12.0				34.0	34.0			16.0
Yellow Time (s)				3.0				3.0	3.0			3.0
All-Red Time (s)				3.0				3.0	3.0			3.0
Lead/Lag				Lag				Lead	Lead			Lead
Lead-Lag Optimize?												
Vehicle Extension (s)				2.0				2.0	2.0			2.0
Minimum Gap (s)				2.0				2.0	2.0			2.0

Lane Group	ø8
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phases	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	20.0
Total Split (%)	20%
Maximum Green (s)	14.0
Yellow Time (s)	3.0
All-Red Time (s)	3.0
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Minimum Gap (s)	3.0



Lane Group	EBR	EBR2	WBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	ø7
Time Before Reduce (s)				0.0				0.0	0.0			0.0
Time To Reduce (s)				0.0				0.0	0.0			0.0
Recall Mode				C-Max				Max	Max			Ped
Walk Time (s)								15.0	15.0			10.0
Flash Dont Walk (s)								7.0	7.0			5.0
Pedestrian Calls (#/hr)								5	5			0
Act Effct Green (s)	38.0		100.0		52.0	74.0			36.0			
Actuated g/C Ratio	0.38		1.00		0.52	0.74			0.36			
v/c Ratio	1.33		0.03		1.44	0.39			1.26			
Control Delay	198.0		0.0		236.9	1.5			157.6			
Queue Delay	8.0		0.0		0.0	0.4			0.0			
Total Delay	206.1		0.0		236.9	1.9			157.6			
LOS	F		A		F	A			F			
Approach Delay						91.8			157.6			
Approach LOS						F			F			
90th %ile Green (s)				12.0				34.0	34.0			16.0
90th %ile Term Code				Coord				MaxR	MaxR			Max
70th %ile Green (s)				12.0				34.0	34.0			16.0
70th %ile Term Code				Coord				MaxR	MaxR			Max
50th %ile Green (s)				12.0				34.0	34.0			16.0
50th %ile Term Code				Coord				MaxR	MaxR			Max
30th %ile Green (s)				12.0				34.0	34.0			16.0
30th %ile Term Code				Coord				MaxR	MaxR			Max
10th %ile Green (s)				12.0				34.0	34.0			16.0
10th %ile Term Code				Coord				MaxR	MaxR			Max
Queue Length 50th (ft)	~327		0		~389	30			~431			
Queue Length 95th (ft)	#510		0		#600	31			#558			
Internal Link Dist (ft)						204			1075			
Turn Bay Length (ft)												
Base Capacity (vph)	296		1328		386	2304			807			
Starvation Cap Reductn	0		0		0	829			0			
Spillback Cap Reductn	4		0		0	0			0			
Storage Cap Reductn	0		0		0	0			0			
Reduced v/c Ratio	1.35		0.03		1.44	0.61			1.26			

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 29 (29%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 135
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.44
 Intersection Signal Delay: 129.1 Intersection LOS: F
 Intersection Capacity Utilization 119.3% ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Lane Group	ø8
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	14.0
90th %ile Term Code	MaxR
70th %ile Green (s)	14.0
70th %ile Term Code	MaxR
50th %ile Green (s)	14.0
50th %ile Term Code	MaxR
30th %ile Green (s)	14.0
30th %ile Term Code	MaxR
10th %ile Green (s)	14.0
10th %ile Term Code	MaxR
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Queue shown is maximum after two cycles.

! Phase conflict between lane groups.

Splits and Phases: 93: Westland Avenue & Massachusetts Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	16	12	12	12	12	16	16	16	10	10	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50					50	50		50	50	50
Trailing Detector (ft)	0	0					0	0		0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.81						0.97			1.00	0.83
Frt		0.983						0.980				0.850
Flt Protected		0.971						0.995			0.996	
Satd. Flow (prot)	0	1504	0	0	0	0	0	1654	0	0	1561	1405
Flt Permitted		0.971						0.773			0.917	
Satd. Flow (perm)	0	1307	0	0	0	0	0	1268	0	0	1433	1167
Right Turn on Red			No			Yes			No			No
Satd. Flow (RTOR)												
Headway Factor	1.14	1.12	1.14	1.14	1.14	1.14	0.97	1.12	0.97	1.25	1.25	1.19
Link Speed (mph)		25				25		25			25	
Link Distance (ft)		473				459		1138			266	
Travel Time (s)		12.9				12.5		31.0			7.3	
Volume (vph)	136	63	29	0	0	0	58	415	81	30	343	502
Confl. Peds. (#/hr)	156		343	343		156	208		83	83		208
Confl. Bikes (#/hr)			19			16			21			24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	11%	4%	0%	0%	0%	2%	0%	3%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)		0						0				
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	148	68	32	0	0	0	63	451	88	33	373	546
Lane Group Flow (vph)	0	248	0	0	0	0	0	602	0	0	406	546
Turn Type	Split						Perm			Perm		pm+ov
Protected Phases	3	3						1			1	3
Permitted Phases							1			1		1
Detector Phases	3	3					1	1		1	1	3
Minimum Initial (s)	7.0	7.0					7.0	7.0		7.0	7.0	7.0
Minimum Split (s)	12.0	12.0					12.0	12.0		12.0	12.0	12.0
Total Split (s)	36.0	36.0	0.0	0.0	0.0	0.0	38.0	38.0	0.0	38.0	38.0	36.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	42.2%	42.2%	0.0%	42.2%	42.2%	40.0%
Maximum Green (s)	32.0	32.0					34.0	34.0		34.0	34.0	32.0
Yellow Time (s)	3.0	3.0					3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0					1.0	1.0		1.0	1.0	1.0
Lead/Lag							Lead	Lead		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0
Minimum Gap (s)	2.0	2.0					2.0	2.0		2.0	2.0	2.0

Lane Group	ø2
Lane Configurations	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Total Lost Time (s)	
Leading Detector (ft)	
Trailing Detector (ft)	
Turning Speed (mph)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Headway Factor	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Volume (vph)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Adj. Flow (vph)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phases	
Minimum Initial (s)	7.0
Minimum Split (s)	16.0
Total Split (s)	16.0
Total Split (%)	18%
Maximum Green (s)	13.0
Yellow Time (s)	2.0
All-Red Time (s)	1.0
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Time Before Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Recall Mode	None	None					None	None		None	None	None
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		13.9					34.3			34.3	48.2	
Actuated g/C Ratio		0.25					0.61			0.61	0.86	
v/c Ratio		0.67					0.78			0.46	0.52	
Control Delay		28.0					20.2			9.6	2.3	
Queue Delay		0.0					0.0			0.0	0.0	
Total Delay		28.0					20.2			9.6	2.3	
LOS		C					C			A	A	
Approach Delay		28.0					20.2			5.4		
Approach LOS		C					C			A		
90th %ile Green (s)	22.5	22.5					34.0	34.0		34.0	34.0	22.5
90th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
70th %ile Green (s)	17.1	17.1					34.0	34.0		34.0	34.0	17.1
70th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
50th %ile Green (s)	14.2	14.2					34.0	34.0		34.0	34.0	14.2
50th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
30th %ile Green (s)	10.5	10.5					34.0	34.0		34.0	34.0	10.5
30th %ile Term Code	Gap	Gap					Max	Max		Max	Max	Gap
10th %ile Green (s)	7.0	7.0					34.0	34.0		34.0	34.0	7.0
10th %ile Term Code	Min	Min					Max	Max		Max	Max	Min
Queue Length 50th (ft)		74						129		64	0	
Queue Length 95th (ft)		136						#404		170	0	
Internal Link Dist (ft)		393			379			1058		186		
Turn Bay Length (ft)												
Base Capacity (vph)		650						773		874	1144	
Starvation Cap Reductn		0						0		0	0	
Spillback Cap Reductn		0						0		0	0	
Storage Cap Reductn		0						0		0	0	
Reduced v/c Ratio		0.38						0.78		0.46	0.48	

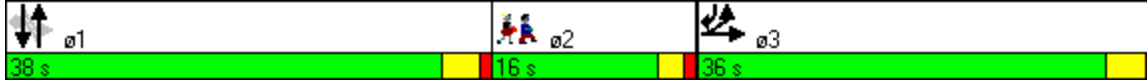
Intersection Summary

Area Type:	CBD
Cycle Length:	90
Actuated Cycle Length:	56.3
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	13.5
Intersection LOS:	B
Intersection Capacity Utilization:	87.8%
ICU Level of Service:	E
Analysis Period (min):	15
90th %ile Actuated Cycle:	64.5
70th %ile Actuated Cycle:	59.1
50th %ile Actuated Cycle:	56.2
30th %ile Actuated Cycle:	52.5

Lane Group	ø2
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	6.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	0.0
90th %ile Term Code	Skip
70th %ile Green (s)	0.0
70th %ile Term Code	Skip
50th %ile Green (s)	0.0
50th %ile Term Code	Skip
30th %ile Green (s)	0.0
30th %ile Term Code	Skip
10th %ile Green (s)	0.0
10th %ile Term Code	Skip
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

10th %ile Actuated Cycle: 49
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 481: Hemenway Street & Westland Avenue





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔			↔				
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	0	0	0	0	139	64	48	114	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	151	70	52	124	0	0	0	0
Pedestrians	173			228			179			315		
Lane Width (ft)	0.0			16.0			16.0			0.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	0			25			20			0		
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	977			609								
pX, platoon unblocked												
vC, conflicting volume	536			179			538	715	407	791	680	674
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	536			179			538	715	407	791	680	674
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			83	57	100	100	100	100
cM capacity (veh/h)	1043			1129			307	286	388	132	301	458

Direction, Lane #	WB 1	NB 1
Volume Total	221	176
Volume Left	0	52
Volume Right	70	0
cSH	1700	292
Volume to Capacity	0.13	0.60
Queue Length 95th (ft)	0	91
Control Delay (s)	0.0	34.4
Lane LOS		D
Approach Delay (s)	0.0	34.4
Approach LOS		D

Intersection Summary		
Average Delay		15.2
Intersection Capacity Utilization	38.1%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↘	↘
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	137	0	0	497	24	153
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	149	0	0	540	26	166
Pedestrians	25			22	255	
Lane Width (ft)	12.0			12.0	16.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	2			2	28	
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	473					
pX, platoon unblocked						
vC, conflicting volume			404		969	426
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			404		969	426
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		87	62
cM capacity (veh/h)			835		195	438

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	149	540	192
Volume Left	0	0	26
Volume Right	0	0	166
cSH	1700	1700	374
Volume to Capacity	0.09	0.32	0.51
Queue Length 95th (ft)	0	0	71
Control Delay (s)	0.0	0.0	24.3
Lane LOS	C		
Approach Delay (s)	0.0	0.0	24.3
Approach LOS	C		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶			↷		↷
Sign Control	Stop			Stop	Stop	
Volume (vph)	76	37	139	384	18	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	83	40	151	417	20	66

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	123	568	86
Volume Left (vph)	0	151	20
Volume Right (vph)	40	0	66
Hadj (s)	-0.05	0.08	-0.31
Departure Headway (s)	4.7	4.4	5.1
Degree Utilization, x	0.16	0.69	0.12
Capacity (veh/h)	735	811	612
Control Delay (s)	8.6	16.4	8.9
Approach Delay (s)	8.6	16.4	8.9
Approach LOS	A	C	A

Intersection Summary			
Delay		14.3	
HCM Level of Service		B	
Intersection Capacity Utilization	57.7%		ICU Level of Service B
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	379	21	244	84	29	73
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	412	23	265	91	32	79
Pedestrians	44		2			13
Lane Width (ft)	16.0		10.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	5		0			1
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	209					
pX, platoon unblocked	0.79	0.79			0.79	
vC, conflicting volume	499	368			401	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	366	199			241	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	11	96			97	
cM capacity (veh/h)	460	626			996	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	435	357	111
Volume Left	412	0	32
Volume Right	23	91	0
cSH	467	1700	996
Volume to Capacity	0.93	0.21	0.03
Queue Length 95th (ft)	273	0	2
Control Delay (s)	56.2	0.0	2.7
Lane LOS	F		A
Approach Delay (s)	56.2	0.0	2.7
Approach LOS	F		

Intersection Summary			
Average Delay		27.4	
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations					↕			↕				↕
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Volume (veh/h)	0	0	0	0	0	0	12	75	1	1	0	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	13	82	1	0	0	83
Pedestrians		591			1017			74				380
Lane Width (ft)		0.0			10.0			16.0				16.0
Walking Speed (ft/s)		4.0			4.0			4.0				4.0
Percent Blockage		0			71			8				42
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)												482
pX, platoon unblocked										0.00		
vC, conflicting volume	1204	1842	790	1324	1884	1479	758			0	1100	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1204	1842	790	1324	1884	1479	758			0	1100	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.2			0.0	4.1	
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.3			0.0	2.2	
p0 queue free %	100	100	100	100	100	100	98			0	100	
cM capacity (veh/h)	40	22	361	15	21	26	801			0	189	
Direction, Lane #	WB 1	NB 1	SB 1									
Volume Total	0	96	167									
Volume Left	0	13	0									
Volume Right	0	1	85									
cSH	1700	801	189									
Volume to Capacity	0.00	0.02	0.00									
Queue Length 95th (ft)	0	1	0									
Control Delay (s)	0.0	1.4	0.0									
Lane LOS	A	A										
Approach Delay (s)	0.0	1.4	0.0									
Approach LOS	A											
Intersection Summary												
Average Delay			0.5									
Intersection Capacity Utilization		35.2%		ICU Level of Service						A		
Analysis Period (min)			15									



Movement	SBR
Lane Configurations	
Sign Control	
Grade	
Volume (veh/h)	78
Peak Hour Factor	0.92
Hourly flow rate (vph)	85
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	
tC, single (s)	
tC, 2 stage (s)	
tF (s)	
p0 queue free %	
cM capacity (veh/h)	
Direction, Lane #	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔			↕
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	0	959	4	0	742
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	1042	4	0	807
Pedestrians			21			3
Lane Width (ft)			10.0			14.0
Walking Speed (ft/s)			4.0			4.0
Percent Blockage			1			0
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			231			490
pX, platoon unblocked	0.66					
vC, conflicting volume	1872	526			1047	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2314	526			1047	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	100			100	
cM capacity (veh/h)	21	495			660	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	1	695	352	807
Volume Left	1	0	0	0
Volume Right	0	0	4	0
cSH	21	1700	1700	660
Volume to Capacity	0.05	0.41	0.21	0.00
Queue Length 95th (ft)	4	0	0	0
Control Delay (s)	187.1	0.0	0.0	0.0
Lane LOS	F			
Approach Delay (s)	187.1	0.0		0.0
Approach LOS	F			

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		54.3%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘			↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	3	21	0	921	834	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	23	0	1001	907	0
Pedestrians				65		
Lane Width (ft)				10.0		
Walking Speed (ft/s)				4.0		
Percent Blockage				5		
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				314	126	
pX, platoon unblocked	0.44	0.90	0.90			
vC, conflicting volume	1908	518	907			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2502	356	787			
tC, single (s)	6.9	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	67	96	100			
cM capacity (veh/h)	10	556	758			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	26	1001	453	453
Volume Left	3	0	0	0
Volume Right	23	0	0	0
cSH	70	1700	1700	1700
Volume to Capacity	0.37	0.59	0.27	0.27
Queue Length 95th (ft)	35	0	0	0
Control Delay (s)	84.5	0.0	0.0	0.0
Lane LOS	F			
Approach Delay (s)	84.5	0.0	0.0	
Approach LOS	F			

Intersection Summary			
Average Delay		1.1	
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↔			↔↔
Sign Control	Yield		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	921	37	17	836
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	1001	40	18	909
Pedestrians	205		25			48
Lane Width (ft)	0.0		13.0			11.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	0		2			4
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			206			234
pX, platoon unblocked	0.43	0.38			0.38	
vC, conflicting volume	1742	1274			1246	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2201	1724			1650	
tC, single (s)	6.8	6.9			5.6	
tC, 2 stage (s)						
tF (s)	3.5	3.3			3.0	
p0 queue free %	100	100			71	
cM capacity (veh/h)	11	28			64	
Direction, Lane #	NB 1	SB 1	SB 2			
Volume Total	1041	321	606			
Volume Left	0	18	0			
Volume Right	40	0	0			
cSH	1700	64	1700			
Volume to Capacity	0.61	0.29	0.36			
Queue Length 95th (ft)	0	26	0			
Control Delay (s)	0.0	32.0	0.0			
Lane LOS		D				
Approach Delay (s)	0.0	11.1				
Approach LOS						
Intersection Summary						
Average Delay			5.2			
Intersection Capacity Utilization		74.6%		ICU Level of Service		D
Analysis Period (min)			15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻							
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	306	12	28	393	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	333	13	30	427	0	0	0	0	0	0	0
Pedestrians		23			66			207			94	
Lane Width (ft)		11.0			11.0			0.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			5			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		384										
pX, platoon unblocked				0.98			0.98	0.98	0.98	0.98	0.98	
vC, conflicting volume	521			553			1057	1128	612	987	1135	544
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	521			546			1058	1130	606	987	1137	544
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			100	100	100	100	100	100
cM capacity (veh/h)	1045			1008			191	194	465	207	193	529

Direction, Lane #	EB 1	WB 1
Volume Total	346	458
Volume Left	0	30
Volume Right	13	0
cSH	1700	1008
Volume to Capacity	0.20	0.03
Queue Length 95th (ft)	0	2
Control Delay (s)	0.0	0.9
Lane LOS		A
Approach Delay (s)	0.0	0.9
Approach LOS		

Intersection Summary		
Average Delay		0.5
Intersection Capacity Utilization	50.4%	ICU Level of Service
Analysis Period (min)		15
		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕							
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	54	457	15	15	356	68	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	59	497	16	16	387	74	0	0	0	0	0	0
Pedestrians		155			47			272			215	
Lane Width (ft)		11.0			10.0			0.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		12			3			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		740										
pX, platoon unblocked												
vC, conflicting volume	676			785			1506	1603	824	1341	1574	794
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	676			785			1506	1603	824	1341	1574	794
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			98			100	100	100	100	100	100
cM capacity (veh/h)	916			834			82	97	361	117	101	342

Direction, Lane #	EB 1	WB 1
Volume Total	572	477
Volume Left	59	16
Volume Right	16	74
cSH	916	834
Volume to Capacity	0.06	0.02
Queue Length 95th (ft)	5	1
Control Delay (s)	1.7	0.6
Lane LOS	A	A
Approach Delay (s)	1.7	0.6
Approach LOS		

Intersection Summary		
Average Delay		1.2
Intersection Capacity Utilization	57.5%	ICU Level of Service
Analysis Period (min)		15
		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	7	444	22	41	457	6	9	2	14	0	3	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	483	24	45	497	7	10	2	15	0	3	0
Pedestrians		77			226			113			78	
Lane Width (ft)		11.0			10.0			16.0			13.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		6			16			13			7	
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh								1			1	
Upstream signal (ft)					626							
pX, platoon unblocked	0.90						0.90	0.90		0.90	0.90	0.90
vC, conflicting volume	581			620			1291	1293	834	1419	1302	655
vC1, stage 1 conf vol							623	623		667	667	
vC2, stage 2 conf vol							668	670		752	635	
vCu, unblocked vol	532			620			1325	1327	834	1468	1337	615
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			95			95	99	94	100	98	100
cM capacity (veh/h)	862			840			212	226	271	168	217	385

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	514	548	27	3
Volume Left	8	45	10	0
Volume Right	24	7	15	0
cSH	862	840	243	217
Volume to Capacity	0.01	0.05	0.11	0.02
Queue Length 95th (ft)	1	4	9	1
Control Delay (s)	0.3	1.4	21.7	21.9
Lane LOS	A	A	C	C
Approach Delay (s)	0.3	1.4	21.7	21.9
Approach LOS			C	C

Intersection Summary			
Average Delay		1.4	
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	22	17	9	36	19	119	1	66	37	95	39	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	18	10	39	21	129	1	72	40	103	42	18

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	52	189	113	164
Volume Left (vph)	24	39	1	103
Volume Right (vph)	10	129	40	18
Hadj (s)	-0.01	-0.33	-0.19	0.09
Departure Headway (s)	4.8	4.3	4.5	4.7
Degree Utilization, x	0.07	0.23	0.14	0.21
Capacity (veh/h)	690	783	753	722
Control Delay (s)	8.1	8.5	8.2	9.0
Approach Delay (s)	8.1	8.5	8.2	9.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.6		
HCM Level of Service	A		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Existing Conditions (2013) Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95 th Percentile Queue length (feet)
<i>Signalized Intersections</i>				
1. Huntington Avenue/Gainsborough Street	B	10.4	-	-
Huntington Avenue EB left	A	5.5	0.10	17
Huntington Avenue EB thru thru/right	A	5.7	0.35	83
Huntington Avenue WB left/thru thru thru/right	A	4.9	0.27	70
Gainsborough Street NB left/thru/right	E	62.4	0.69	157
2. Huntington Avenue/Opera Place	B	11.3	-	-
Huntington Avenue EB thru	A	6.0	0.34	166
Huntington Avenue WB thru	B	13.1	0.44	131
Opera Place SB right	A	0.6	0.17	0
3. Huntington Avenue/Forsyth Street	B	12.0	-	-
Huntington Avenue EB thru thru/right	A	4.9	0.40	65
Huntington Avenue WB left/thru thru/right	A	4.8	0.45	182
Forsyth Street NB left/thru/right	E	58.1	0.63	m93
Forsyth Street SB left/thru/right	E	59.4	0.70	157
4. Huntington Avenue/Parker Street/Forsyth Way	C	26.2	-	-
Huntington Avenue EB thru thru/right	A	8.5	0.47	171
Huntington Avenue WB left	E	62.8	0.62	m137
Huntington Avenue WB thru thru/right	B	14.8	0.37	145
Parker Street NB left/thru/right	D	47.7	0.81	m399
Forsyth Way SB left/thru	D	36.6	0.51	214
Forsyth Way SB right	D	39.6	0.55	179
5. Huntington Avenue/Louis Prang Street/Ruggles Street	D	42.0	-	-
Huntington Avenue EB left	E	65.6	0.54	112
Huntington Avenue EB thru thru/right	C	30.8	0.71	335
Huntington Avenue WB thru thru/right	D	42.8	>1.00	#411

Ruggles Street NB left	D	45.4	0.86	m#224
Ruggles Street NB thru/right	C	31.3	0.69	m443
Louis Prang Street SB left	C	32.2	0.18	46
Louis Prang Street SB thru/right	E	68.1	0.93	#411
6. Ruggles Street/Parker Street	C	23.4	-	-
Parker Street EB left/thru	D	53.8	0.88	380
Parker Street EB right	A	5.9	0.11	19
Parker Street WB left/thru/right	D	41.0	0.76	382
Ruggles Street NB left/thru thru/right	A	2.9	0.52	22
Ruggles Street SB left/thru/right	C	20.0	0.69	m220
7. Ruggles Street/Leon Street	B	10.2	-	-
Leon Street WB left	C	22.5	0.16	30
Leon Street WB right	A	9.0	0.11	4
RugglesStreet NB thru/right	B	12.5	0.79	#568
RugglesStreet SB left/thru thru	A	6.6	0.41	99
8. RugglesStreet/MBTA Exit	B	15.8	-	-
MBTA Exit WB left	D	41.1	0.54	72
MBTA Exit WB right	B	12.5	0.19	17
RugglesStreet NB thru	C	20.2	0.77	m#1354
RugglesStreet SB thru	A	6.9	0.31	123
9. RugglesStreet/Tremont Street/ Whittier Street	D	36.9	-	-
Tremont Street EB left	F	>80.0	0.87	#300
Tremont Street EB thru	B	16.8	0.51	353
Tremont Street WB thru	D	37.7	0.68	#536
Tremont Street WB right	C	21.2	0.71	570
Whittier Street NB left	E	68.6	0.37	65
Whittier Street NB thru/right	E	55.6	0.49	80
Ruggles Street SB left	E	79.3	0.91	255
Ruggles Street SB right	A	6.6	0.23	49
10. Ruggles Street/Tremont Street/ Columbus Avenue	A	2.1	-	-
Tremont Street EB thru	A	1.5	0.53	227
Tremont Street WB thru thru/right	A	2.7	0.34	164
Columbus Avenue SB right	A	9.6	0.32	8

11. Tremont Street/Melnea Cass Boulevard	E	72.6	-	-
Tremont Street EB left/thru thru	E	77.3	>1.00	#510
Tremont Street EB right	A	4.0	0.76	0
Tremont Street WB left/thru thru/right	C	31.1	0.56	173
Melnea Cass Boulevard NB left	F	>80.0	>1.00	#641
Melnea Cass Boulevard NB left/thru thru/right	F	>80.0	>1.00	#432
Melnea Cass Boulevard SB left/thru	C	30.1	0.37	m91
Melnea Cass Boulevard SB right	B	19.3	0.62	m152
12. Melnea Cass Boulevard/Columbus Avenue/MBTA Ruggles Station Driveway	B	18.2	-	-
Columbus Avenue EB left/thru thru/right	C	27.1	0.24	24
Columbus Avenue WB left/thru/right	C	23.3	0.40	m#253
Melnea Cass Boulevard NB left/thru	D	37.0	0.83	m104
Melnea Cass Boulevard NB right	A	1.5	0.34	m8
MBTA Ruggles Station Driveway SB left/thru/right	C	21.5	0.01	5
13. Tremont Street/Massachusetts Avenue	C	29.8	-	-
Tremont Street EB left	C	31.8	0.46	m65
Tremont Street EB thru thru/right	D	47.0	0.87	m180
Tremont Street WB left	D	35.3	0.56	70
Tremont Street WB thru thru/right	C	34.1	0.55	125
Massachusetts Avenue NB left	B	15.3	0.33	39
Massachusetts Avenue NB thru thru/right	C	28.7	0.80	#470
Massachusetts Avenue SB left	C	25.0	0.48	m40
Massachusetts Avenue SB thru thru/right	B	17.5	0.62	183
14. Massachusetts Avenue/ Columbus Avenue	D	36.5	-	-
Columbus Avenue EB left	F	>80.0	>1.00	m#350
Columbus Avenue EB thru thru/right	C	29.5	0.34	m85
Columbus Avenue WB left	C	29.6	0.49	90
Columbus Avenue WB thru/right	E	71.1	0.91	#272
Massachusetts Avenue NB left	B	15.8	0.30	m22
Massachusetts Avenue NB thru thru/right	C	20.7	0.77	192
Massachusetts Avenue SB left	C	20.2	0.52	m19
Massachusetts Avenue SB thru thru/right	B	11.3	0.76	145

15. Massachusetts Avenue/ St. Botolph Street	B	19.4	-	-
St. Botolph Street EB left/thru/right	B	11.2	0.36	34
St. Botolph Street WB left/thru/right	C	23.9	0.33	57
Massachusetts Avenue NB left	C	23.5	0.66	m68
Massachusetts Avenue NB thru thru/right	C	27.0	0.79	m392
Massachusetts Avenue SB left	C	20.3	0.42	m22
Massachusetts Avenue SB thru thru/right	B	11.2	0.77	77
16. Massachusetts Avenue/ Huntington Avenue	C	34.8	-	-
Huntington Avenue EB left/thru thru/right	C	28.0	0.56	84
Huntington Avenue WB left/thru thru/right	D	43.5	0.75	101
Massachusetts Avenue NB thru thru/right	B	14.6	0.78	154
Massachusetts Avenue SB thru	E	63.2	0.64	264
Massachusetts Avenue SB right	A	7.9	0.25	m27
17. Massachusetts Avenue/Westland Avenue/St. Stephens Street/Private Drive	D	51.2	-	-
Westland Avenue EB right	F	>80.0	0.91	#456
Private Drive WB right	-	-	-	-
Massachusetts Avenue NB left	F	>80.0	>1.00	m#240
Massachusetts Avenue NB thru thru/right	B	15.0	0.41	260
Massachusetts Avenue SB left/thru thru/right	D	43.9	0.85	#307
18. Westland Avenue/Hemenway Street	C	22.2	-	-
Hemenway Street EB left/thru/right	C	34.6	0.63	141
Westland Avenue NB left/thru/right	C	33.7	0.82	#434
Westland Avenue SB left/thru	C	24.3	0.71	#401
Westland Avenue SB right	A	5.8	0.56	136
<i>Unsignalized Intersections</i>				
19. Gainsborough Street / St. Stephen Street				
St. Stephen Street WB thru/right	B	11.2	0.18	17
Gainsborough Street NB left/thru	A	1.6	0.02	1
20. Gainsborough Street / Hemenway Street				
Hemenway Street EB thru	A	0.0	0.08	0
Hemenway Street WB thru	A	0.0	0.35	0
Gainsborough Street NB left/right	C	15.2	0.29	30

21. Hemenway Street/Forsyth Street				
Hemenway Street EB thru/right	A	8.6	0.16	-
Hemenway Street WB left/thru	C	16.1	0.68	-
Forsyth Street left/right	A	8.9	0.12	-
22. Hemenway Street/Forsyth Way				
Hemenway Street WB left/right	D	27.0	0.74	157
Forsyth Way NB thru/right	A	0.0	0.2	0
Forsyth Way SB left/thru	A	3.8	0.02	2
23. Forsyth Street/ Greenleaf Street/ World Series Way				
World Series Way WB left/thru/right	C	18.4	0.01	1
Forsyth Street NB left/thru/right	A	1.2	0.01	1
Forsyth Street SB left/thru/right	A	0.0	0.00	0
24. Ruggles Street/Field Street				
Field Street WB left/right	B	11.1	0.01	1
Ruggles Street NB thru thru/right	A	0.0	0.31	0
Ruggles Street SB left/thru	A	0.4	0.01	1
25. Ruggles Street/ Albert Street				
Albert Street EB left/right	F	>50.0	>1.00	111
Ruggles Street NB thru	A	0.0	0.47	0
Ruggles Street SB thru	A	0.0	0.19	0
26. Ruggles Street/ MBTA Entrance				
Ruggles Street NB thru/right	A	0.0	0.51	0
Ruggles Street SB left/thru thru	A	4.7	0.27	14
27. Columbus Avenue/Cunard Street				
Columbus Avenue EB left/thru/right	A	2.0	0.07	6
Columbus Avenue WB left/thru/right	A	0.5	0.01	1
Columbus Parking Area SB left/thru/right	D	30.5	0.27	26
28. Columbus Avenue/Burke Street/Columbus Garage Driveway				
Columbus Avenue EB left/thru/right	A	2.6	0.09	7
Columbus Avenue WB left/thru/right	A	1.4	0.05	4
29. Columbus Avenue/Camden Street				
Columbus Avenue EB left/thru/right	A	0.2	0.01	1

Columbus Avenue WB left/thru/right	A	1.0	0.03	2
Camden Street NB left/thru/right	B	14.2	0.08	7
Camden Street SB left/thru/right	C	23.1	0.04	3
30. Gainsborough Street / St. Botolph Street				
St. Botolph Street EB left/thru/right	A	7.8	0.05	-
St. Botolph Street WB left/thru/right	A	8.3	0.22	-
Gainsborough Street NB left/thru/right	A	7.7	0.05	-
Gainsborough Street SB left/thru/right	A	8.2	0.15	-

= 95th percentile volume exceeds capacity. Queue maybe longer. Queue shown is the maximum after 2 cycles.

m = Volume for 95th percentile queue is metered by an upstream signal.

Grey shading indicates undesirable LOS.

Existing Conditions (2013) Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95 th Percentile Queue length (feet)
<i>Signalized Intersections</i>				
1. Huntington Avenue/Gainsborough Street	B	12.7	-	-
Huntington Avenue EB left	B	11.1	0.15	57
Huntington Avenue EB thru thru/right	B	12.9	0.39	301
Huntington Avenue WB left/thru thru thru/right	A	4.8	0.23	72
Gainsborough Street NB left/thru/right	D	48.7	0.66	133
2. Huntington Avenue/Opera Place	A	6.9	-	-
Huntington Avenue EB thru	A	1.6	0.32	109
Huntington Avenue WB thru	A	8.1	0.31	122
Opera Place SB right	A	1.7	0.33	m0
3. Huntington Avenue/Forsyth Street	B	14.7	-	-
Huntington Avenue EB thru thru/right	B	10.3	0.42	m110
Huntington Avenue WB left/thru thru/right	A	8.2	0.51	170
Forsyth Street NB left/thru/right	C	34.5	0.51	m73
Forsyth Street SB left/thru/right	D	54.6	0.77	#178
4. Huntington Avenue/Parker Street/Forsyth Way	C	27.2	-	-
Huntington Avenue EB thru thru/right	B	17.4	0.51	120
Huntington Avenue WB left	D	54.3	0.67	m158
Huntington Avenue WB thru thru/right	A	8.1	0.37	81
Parker Street NB left/thru/right	D	43.6	0.86	m295
Forsyth Way SB left/thru	D	42.0	0.78	294
Forsyth Way SB right	C	29.8	0.38	93
5. Huntington Avenue/Louis Prang Street/Ruggles Street	C	31.7	-	-
Huntington Avenue EB left	E	57.4	0.47	77
Huntington Avenue EB thru thru/right	C	23.1	0.61	252
Huntington Avenue WB thru thru/right	D	36.2	0.84	m#357
Ruggles Street NB left	C	23.7	0.62	m65
Ruggles Street NB thru/right	C	22.5	0.60	m125

Louis Prang Street SB left	C	29.7	0.18	50
Louis Prang Street SB thru/right	D	52.0	0.83	#356
6. Ruggles Street/Parker Street	E	59.2	-	-
Parker Street EB left/thru	C	29.0	0.64	215
Parker Street EB right	A	5.7	0.16	16
Parker Street WB left/thru/right	D	52.9	0.94	#429
Ruggles Street NB left/thru thru/right	F	>80.0	>1.00	#801
Ruggles Street SB left/thru/right	C	29.5	0.85	m#530
7. Ruggles Street/Leon Street	A	9.7	-	-
Leon Street WB left	C	25.1	0.33	78
Leon Street WB right	B	17.1	0.21	47
Ruggles Street NB thru/right	B	10.5	0.70	84
Ruggles Street SB left/thru thru	A	5.6	0.32	87
8. Ruggles Street/MBTA Exit	B	14.2	-	-
MBTA Exit WB left	D	42.4	0.57	64
MBTA Exit WB right	B	12.2	0.20	14
Ruggles Street NB thru	B	17.5	0.67	m#1110
Ruggles Street SB thru	A	8.0	0.38	190
9. Ruggles Street/Tremont Street/ Whittier Street	E	61.9	-	-
Tremont Street EB left	F	>80.0	0.86	#248
Tremont Street EB thru	C	20.2	0.49	335
Tremont Street WB thru	F	>80.0	0.69	#514
Tremont Street WB right	C	23.1	0.66	481
Whittier Street NB left	F	>80.0	0.69	96
Whittier Street NB thru/right	D	54.9	0.56	82
Ruggles Street SB left	E	65.2	0.88	330
Ruggles Street SB right	A	4.4	0.36	50
10. Ruggles Street/Tremont Street/ Columbus Avenue	A	7.6	-	-
Tremont Street EB thru	A	8.5	0.58	286
Tremont Street WB thru thru/right	A	3.9	0.36	158
Columbus Avenue SB right	C	31.0	0.58	81
11. Tremont Street/Melnea Cass Boulevard	E	78.7	-	-

Tremont Street EB left/thru thru	F	>80.0	>1.00	#478
Tremont Street EB right	A	2.4	0.65	0
Tremont Street WB left/thru thru/right	F	>80.0	>1.00	#305
Melnea Cass Boulevard NB left	F	>80.0	>1.00	#613
Melnea Cass Boulevard NB left/thru thru/right	D	46.1	>1.00	#283
Melnea Cass Boulevard SB left/thru	E	57.1	0.91	m#279
Melnea Cass Boulevard SB right	A	7.1	0.54	m31
12. Melnea Cass Boulevard/Columbus Avenue/MBTA Ruggles Station Driveway	C	22.5	-	-
Columbus Avenue EB left/thru thru/right	C	28.1	0.55	62
Columbus Avenue WB left/thru/right	C	23.3	0.65	m#492
Melnea Cass Boulevard NB left/thru	D	48.6	0.88	m61
Melnea Cass Boulevard NB right	A	0.8	0.21	m0
MBTA Ruggles Station Driveway SB left/thru/right	C	26.2	0.03	7
13. Tremont Street/Massachusetts Avenue	C	27.1	-	-
Tremont Street EB left	C	29.0	0.52	m44
Tremont Street EB thru thru/right	C	33.8	0.72	m91
Tremont Street WB left	D	35.2	0.58	82
Tremont Street WB thru thru/right	C	32.2	0.51	149
Massachusetts Avenue NB left	B	18.4	0.47	46
Massachusetts Avenue NB thru thru/right	C	25.1	0.68	314
Massachusetts Avenue SB left	C	20.2	0.55	m48
Massachusetts Avenue SB thru thru/right	C	24.0	0.79	m227
14. Massachusetts Avenue/ Columbus Avenue	D	41.6	-	-
Columbus Avenue EB left	F	>80.0	>1.00	#344
Columbus Avenue EB thru thru/right	C	33.5	0.40	108
Columbus Avenue WB left	D	37.6	0.62	120
Columbus Avenue WB thru/right	E	69.1	0.91	#327
Massachusetts Avenue NB left	B	14.4	0.32	m14
Massachusetts Avenue NB thru thru/right	B	12.7	0.71	139
Massachusetts Avenue SB left	B	17.2	0.51	m19
Massachusetts Avenue SB thru thru/right	B	14.5	0.85	#484
15. Massachusetts Avenue/ St. Botolph Street	B	19.1		

St. Botolph Street EB left/thru/right	B	12.8	0.38	69
St. Botolph Street WB left/thru/right	C	27.5	0.40	65
Massachusetts Avenue NB left	C	21.8	0.62	m81
Massachusetts Avenue NB thru thru/right	C	26.0	0.67	m282
Massachusetts Avenue SB left	A	9.1	0.38	m11
Massachusetts Avenue SB thru thru/right	B	12.7	0.78	246
16. Massachusetts Avenue/ Huntington Avenue	B	13.8	-	-
Huntington Avenue EB left/thru thru/right	B	14.4	0.59	30
Huntington Avenue WB left/thru thru/right	C	25.4	0.62	105
Massachusetts Avenue NB thru thru/right	B	13.0	0.65	112
Massachusetts Avenue SB thru	B	12.3	0.62	m102
Massachusetts Avenue SB right	A	1.6	0.30	m1
17. Massachusetts Avenue/Westland Avenue/St. Stephens Street/Private Drive	F	>80.0	-	-
Westland Avenue EB right	F	>80.0	>1.00	#466
Private Drive WB right	A	0.0	0.03	0
Massachusetts Avenue NB left	F	>80.0	>1.00	#484
Massachusetts Avenue NB thru thru/right	A	2.1	0.35	31
Massachusetts Avenue SB left/thru thru/right	F	>80.0	>1.00	#494
18. Westland Avenue/Hemenway Street	C	23.4	-	-
Hemenway Street EB left/thru/right	C	27.5	0.65	117
Westland Avenue NB left/thru/right	D	49.5	0.99	#389
Westland Avenue SB left/thru	A	10.0	0.50	153
Westland Avenue SB right	A	2.9	0.57	0
Unsignalized Intersections				
19. Gainsborough Street / St. Stephen Street				
St. Stephen Street WB thru/right	A	0.0	0.14	0
Gainsborough Street NB left/thru	E	45.5	0.73	132
20. Gainsborough Street / Hemenway Street				
Hemenway Street EB thru	A	0.0	0.08	0
Hemenway Street WB thru	A	0.0	0.28	0
Gainsborough Street NB left/right	C	24.4	0.54	77
21. Hemenway Street/Forsyth Street				

Hemenway Street EB thru/right	A	9.0	0.21	-
Hemenway Street WB left/thru	C	16.1	0.67	-
Forsyth Street left/right	A	9.2	0.14	-
22. Hemenway Street/Forsyth Way				
Hemenway Street WB left/right	E	36.7	0.82	198
Forsyth Way NB thru/right	A	0.0	0.19	0
Forsyth Way SB left/thru	A	2.8	0.03	2
23. Forsyth Street/ Greenleaf Street/ World Series Way				
World Series Way WB left/thru/right	-	-	-	-
Forsyth Street NB left/thru/right	A	1.9	0.03	2
Forsyth Street SB left/thru/right	A	0.0	0.00	0
24. Ruggles Street/Field Street				
Field Street WB left/right	F	>50.0	0.02	2
Ruggles Street NB thru thru/right	A	0.0	0.33	0
Ruggles Street SB left/thru	A	0.0	0.00	0
25. Ruggles Street/ Albert Street				
Albert Street EB left/right	F	>50.0	>1.00	-
Ruggles Street NB thru	A	0.0	0.57	0
Ruggles Street SB thru	A	0.0	0.85	0
26. Ruggles Street/ MBTA Entrance				
Ruggles Street NB thru/right	A	0.0	0.49	0
Ruggles Street SB left/thru thru	A	2.7	0.30	9
27. Columbus Avenue/Cunard Street				
Columbus Avenue EB left/thru/right	A	1.5	0.04	3
Columbus Avenue WB left/thru/right	A	0.7	0.02	2
Columbus Parking Area SB left/thru/right	F	>50.0	>1.00	288
28. Columbus Avenue/Burke Street/Columbus Garage Driveway				
Columbus Avenue EB left/thru/right	A	1.0	0.03	3
Columbus Avenue WB left/thru/right	A	0.6	0.02	2
29. Columbus Avenue/Camden Street				
Columbus Avenue EB left/thru/right	A	0.3	0.01	1
Columbus Avenue WB left/thru/right	A	1.3	0.05	4

Camden Street NB left/thru/right	C	20.0	0.10	8
Camden Street SB left/thru/right	C	21.4	0.08	6
30. Gainsborough Street / St. Botolph Street				
St. Botolph Street EB left/thru/right	A	8.3	0.10	-
St. Botolph Street WB left/thru/right	A	9.2	0.28	-
Gainsborough Street NB left/thru/right	A	8.6	0.18	-
Gainsborough Street SB left/thru/right	A	9.3	0.22	-

= 95th percentile volume exceeds capacity. Queue maybe longer. Queue shown is the maximum after 2 cycles.

m = Volume for 95th percentile queue is metered by an upstream signal.

Grey shading indicates undesirable LOS.

No-Build Conditions (2023) Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95 th Percentile Queue Length (feet)
<i>Signalized Intersections</i>				
1. Huntington Avenue/Gainsborough Street	B	10.9	-	-
Huntington Avenue EB left	A	6.3	0.11	19
Huntington Avenue EB thru thru/right	A	6.1	0.38	100
Huntington Avenue WB left/thru thru thru/right	A	5.3	0.30	78
Gainsborough Street NB left/thru/right	E	63.6	0.72	169
2. Huntington Avenue/Opera Place	B	11.8	-	-
Huntington Avenue EB thru	A	6.1	0.37	226
Huntington Avenue WB thru	B	13.5	0.48	144
Opera Place SB right	A	0.6	0.18	0
3. Huntington Avenue/Forsyth Street	B	11.9	-	-
Huntington Avenue EB thru thru/right	A	4.8	0.43	m71
Huntington Avenue WB left/thru thru/right	A	5.4	0.49	201
Forsyth Street NB left/thru/right	E	62.3	0.59	m105
Forsyth Street SB left/thru/right	E	60.1	0.71	160
4. Huntington Avenue/Parker Street/Forsyth Way	C	26.7	-	-
Huntington Avenue EB thru thru/right	A	8.9	0.54	162
Huntington Avenue WB left	E	60.5	0.62	m144
Huntington Avenue WB thru thru/right	B	16.3	0.41	152
Parker Street NB left/thru/right	D	50.4	0.85	m452
Forsyth Way SB left/thru	C	34.5	0.49	227
Forsyth Way SB right	D	36.7	0.52	186
5. Huntington Avenue/Louis Prang Street/Ruggles Street	D	52.2	-	-
Huntington Avenue EB left	E	68.0	0.58	#125
Huntington Avenue EB thru thru/right	C	34.1	0.79	391
Huntington Avenue WB thru thru/right	E	70.9	>1.0	m#494

Ruggles Street NB left	E	57.8	0.94	m#278
Ruggles Street NB thru/right	D	36.5	0.77	m526
Louis Prang Street SB left	C	33.0	0.19	50
Louis Prang Street SB thru/right	E	67.6	0.93	#518
6. Ruggles Street/Parker Street	C	23.8	-	-
Parker Street EB left/thru	D	54.3	0.89	404
Parker Street EB right	A	5.8	0.11	22
Parker Street WB left/thru/right	D	41.1	0.77	386
Ruggles Street NB left/thru thru/right	A	5.2	0.60	72
Ruggles Street SB left/thru/right	C	20.9	0.68	m246
7. Ruggles Street/Leon Street	B	15.6	-	-
Leon Street WB left	C	21.8	0.11	33
Leon Street WB right	B	10.9	0.05	14
Ruggles Street NB thru/right	C	22.2	0.90	m#719
Ruggles Street SB left/thru thru	A	6.7	0.43	108
8. Ruggles Street/MBTA Exit	C	21.1	-	-
MBTA Exit WB left	D	40.3	0.53	70
MBTA Exit WB right	B	12.9	0.17	20
Ruggles Street NB thru	C	30.2	0.88	m#1568
Ruggles Street SB thru	A	7.2	0.35	138
9. Ruggles Street/Tremont Street/ Whittier Street	D	36.9	-	-
Tremont Street EB left	F	>80.0	0.91	#356
Tremont Street EB thru	B	18.8	0.59	429
Tremont Street WB left	C	31.1	0.11	m15
Tremont Street WB thru	D	41.3	0.74	#574
Tremont Street WB right	C	30.1	0.82	#871
Whittier Street NB left	E	66.2	0.32	69
Whittier Street NB thru/right	E	58.5	0.50	91
Ruggles Street SB left	E	66.9	0.85	#292
Ruggles Street SB thru/right	A	6.4	0.19	86
10. Ruggles Street/Tremont Street/ Columbus Avenue	A	2.3	-	-
Tremont Street EB thru	A	1.5	0.55	157
Tremont Street WB thru thru/right	A	3.0	0.39	200

Columbus Avenue SB right	B	17.4	0.32	32
11. Tremont Street/Melnea Cass Boulevard	F	>80.0	-	-
Tremont Street EB left/thru thru	F	>80.0	>1.0	#555
Tremont Street EB right	A	6.4	0.83	0
Tremont Street WB left/thru thru/right	D	35.1	0.67	#226
Melnea Cass Boulevard NB left	F	>80.0	>1.0	#715
Melnea Cass Boulevard NB left/thru thru/right	F	>80.0	>1.0	#481
Melnea Cass Boulevard SB left/thru	C	28.7	0.34	m91
Melnea Cass Boulevard SB right	C	22.1	0.65	m167
12. Melnea Cass Boulevard/Columbus Avenue/MBTA Ruggles Station Driveway	B	18.0	-	-
Columbus Avenue EB left/thru thru/right	C	26.9	0.22	27
Columbus Avenue WB left/thru/right	C	22.9	0.39	m#229
Melnea Cass Boulevard NB left/thru	D	37.2	0.83	m87
Melnea Cass Boulevard NB right	A	1.6	0.34	m4
MBTA Ruggles Station Driveway SB left/thru/right	C	21.0	0.01	6
13. Tremont Street/Massachusetts Avenue	C	30.0	-	-
Tremont Street EB left	C	32.1	0.51	m66
Tremont Street EB thru thru/right	D	44.5	0.87	m167
Tremont Street WB left	C	34.4	0.55	73
Tremont Street WB thru thru/right	D	35.6	0.58	143
Massachusetts Avenue NB left	B	16.9	0.37	45
Massachusetts Avenue NB thru thru/right	C	30.6	0.83	#501
Massachusetts Avenue SB left	C	25.0	0.45	m33
Massachusetts Avenue SB thru thru/right	B	18.5	0.71	192
14. Massachusetts Avenue/ Columbus Avenue	D	35.1	-	-
Columbus Avenue EB left	F	>80.0	>1.0	m#430
Columbus Avenue EB thru thru/right	C	30.7	0.32	m86
Columbus Avenue WB left	C	30.0	0.48	94
Columbus Avenue WB thru/right	E	65.0	0.86	#260
Massachusetts Avenue NB left	B	17.7	0.31	m18
Massachusetts Avenue NB thru thru/right	C	22.5	0.83	#478
Massachusetts Avenue SB left	C	26.6	0.49	m21
Massachusetts Avenue SB thru thru/right	B	13.5	0.83	#470

15. Massachusetts Avenue/ St. Botolph Street	B	20.0	-	-
St. Botolph Street EB left/thru/right	B	10.6	0.22	50
St. Botolph Street WB left/thru/right	C	20.3	0.26	71
Massachusetts Avenue NB left	B	19.1	0.56	m52
Massachusetts Avenue NB thru thru/right	C	28.9	0.85	m421
Massachusetts Avenue SB left	C	21.6	0.37	m24
Massachusetts Avenue SB thru thru/right	B	10.1	0.75	76
16. Massachusetts Avenue/ Huntington Avenue	D	36.1	-	-
Huntington Avenue EB left/thru thru/right	C	30.0	0.55	97
Huntington Avenue WB left/thru thru/right	D	37.3	0.66	96
Massachusetts Avenue NB thru thru/right	B	17.3	0.83	#157
Massachusetts Avenue SB thru	E	67.0	0.63	m235
Massachusetts Avenue SB right	A	6.8	0.27	m20
17. Massachusetts Avenue/Westland Avenue/St. Stephens Street/Private Drive	F	>80.0	-	-
Westland Avenue EB right	F	>80.0	>1.00	#528
Private Drive WB right	A	-	-	-
Massachusetts Avenue NB left	F	>80.0	>1.00	m#263
Massachusetts Avenue NB thru thru/right	C	20.2	0.44	313
Massachusetts Avenue SB left/thru thru/right	F	>80.0	0.99	#374
18. Westland Avenue/Hemenway Street	C	22.6	-	-
Hemenway Street EB left/thru/right	C	30.4	0.52	145
Westland Avenue NB left/thru/right	D	35.1	0.83	#447
Westland Avenue SB left/thru	C	27.0	0.76	#457
Westland Avenue SB right	A	6.6	0.61	166
<i>Unsignalized Intersections</i>				
19. Gainsborough Street / St. Stephen Street	-	-	-	-
St. Stephen Street WB thru/right	B	10.7	0.15	13
Gainsborough Street NB left/thru	A	1.8	0.01	1
20. Gainsborough Street / Hemenway Street	-	-	-	-
Hemenway Street EB thru	A	0	0.07	0
Hemenway Street WB thru	A	0	0.30	0
Gainsborough Street NB left/right	B	13.4	0.21	19

21. Hemenway Street/Forsyth Street	-	-	-	-
Hemenway Street EB thru/right	A	8.4	0.14	-
Hemenway Street WB left/thru	B	14.3	0.63	-
Forsyth Street left/right	A	8.6	0.10	-
22. Hemenway Street/Forsyth Way	-	-	-	-
Hemenway Street WB left/right	E	36.4	0.83	209
Forsyth Way NB thru/right	A	0.0	0.22	0
Forsyth Way SB left/thru	A	3.7	0.03	2
23. Forsyth Street/ Greenleaf Street/ World Series Way	-	-	-	-
World Series Way WB left/thru/right	C	18.2	0.00	0
Forsyth Street NB left/thru/right	A	0.8	0.01	0
Forsyth Street SB left/thru/right	A	0.0	0.00	0
24. Ruggles Street/Field Street	-	-	-	-
Field Street WB left/right	B	11.8	0.00	0
Ruggles Street NB thru thru/right	A	0.0	0.36	0
Ruggles Street SB left/thru	A	0.1	0.00	0
25. Ruggles Street/ Albert Street	-	-	-	-
Albert Street EB left/right	F	>50.0	>1.00	-
Ruggles Street NB thru	A	0.0	0.56	0
Ruggles Street SB thru	A	0.0	0.22	0
26. Ruggles Street/ MBTA Entrance	-	-	-	-
Ruggles Street NB thru/right	A	0.0	0.59	0
Ruggles Street SB left/thru thru	B	13.1	0.29	21
27. Columbus Avenue/Cunard Street	-	-	-	-
Columbus Avenue EB left/thru/right	A	1.9	0.06	5
Columbus Avenue WB left/thru/right	A	0.3	0.01	1
Columbus Parking Area SB left/thru/right	C	23.8	0.12	10
28. Columbus Avenue/Burke Street/Columbus Garage Driveway	-	-	-	-
Columbus Avenue EB left/thru/right	A	2.1	0.07	5
Columbus Avenue WB left/thru/right	A	1.3	0.04	3
29. Columbus Avenue/Camden Street	-	-	-	-
Columbus Avenue EB left/thru/right	A	0.1	0	0
Columbus Avenue WB left/thru/right	A	0.5	0.02	1

Camden Street NB left/thru/right	B	13.2	0.05	4
Camden Street SB left/thru/right	C	21.1	0.01	1
30. Gainsborough Street / St. Botolph Street	-	-	-	-
St. Botolph Street EB left/thru/right	A	7.7	0.04	-
St. Botolph Street WB left/thru/right	A	8.1	0.20	-
Gainsborough Street NB left/thru/right	A	7.6	0.03	-
Gainsborough Street SB left/thru/right	A	8.0	0.13	-

= 95th percentile volume exceeds capacity. Queue maybe longer. Queue shown is the maximum after 2 cycles.

m = Volume for 95th percentile queue is metered by an upstream signal.

Grey shading indicates change in LOS from Existing Conditions.

No-Build Conditions (2023) Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95 th Percentile Queue Length (feet)
<i>Signalized Intersections</i>				
1. Huntington Avenue/Gainsborough Street	B	12.8	-	-
Huntington Avenue EB left	B	11.1	0.18	68
Huntington Avenue EB thru thru/right	B	13.2	0.45	330
Huntington Avenue WB left/thru thru thru/right	A	5.2	0.26	82
Gainsborough Street NB left/thru/right	D	48.7	0.67	139
2. Huntington Avenue/Opera Place	A	7.1	-	-
Huntington Avenue EB thru	A	2.9	0.36	117
Huntington Avenue WB thru	A	8.3	0.33	133
Opera Place SB right	A	1.7	0.35	m0
3. Huntington Avenue/Forsyth Street	B	15.8	-	-
Huntington Avenue EB thru thru/right	B	10.7	0.48	m114
Huntington Avenue WB left/thru thru/right	B	10.8	0.67	202
Forsyth Street NB left/thru/right	D	42.3	0.45	m92
Forsyth Street SB left/thru/right	E	55.1	0.77	#190
4. Huntington Avenue/Parker Street/Forsyth Way	C	26.8	-	-
Huntington Avenue EB thru thru/right	C	21.2	0.59	156
Huntington Avenue WB left	E	55.1	0.71	m167
Huntington Avenue WB thru thru/right	A	8.3	0.40	92
Parker Street NB left/thru/right	D	41.5	0.87	m308
Forsyth Way SB left/thru	D	39.6	0.74	322
Forsyth Way SB right	C	29.1	0.36	99
5. Huntington Avenue/Louis Prang Street/Ruggles Street	D	42.9	-	-
Huntington Avenue EB left	E	60.2	0.52	#89
Huntington Avenue EB thru thru/right	C	26.8	0.73	312
Huntington Avenue WB thru thru/right	D	47.8	0.94	m#406
Ruggles Street NB left	D	41.7	0.88	m82
Ruggles Street NB thru/right	C	22.9	0.71	m124

Louis Prang Street SB left	C	30.6	0.21	56
Louis Prang Street SB thru/right	F	>80.0	>1.0	#506
6. Ruggles Street/Parker Street	F	>80.0	-	-
Parker Street EB left/thru	C	24.3	0.48	115
Parker Street EB right	D	44.5	0.90	441
Parker Street WB left/thru/right	F	>80.0	>1.0	#1158
Ruggles Street NB left/thru thru/right	C	23.3	0.81	m#264
Ruggles Street SB left/thru/right	A	4.9	0.08	m0
7. Ruggles Street/Leon Street	B	18.4	-	-
Leon Street WB left	C	25.1	0.34	78
Leon Street WB right	B	19.5	0.23	51
Ruggles Street NB thru/right	C	27.5	0.88	#404
Ruggles Street SB left/thru thru	A	6.0	0.37	107
8. Ruggles Street/MBTA Exit	B	17.6	-	-
MBTA Exit WB left	D	38.9	0.49	#68
MBTA Exit WB right	B	13.2	0.16	20
Ruggles Street NB thru	C	26.0	0.87	m#1566
Ruggles Street SB thru	A	6.7	0.42	133
9. Ruggles Street/Tremont Street/ Whittier Street	F	>80.0	-	-
Tremont Street EB left	F	>80.0	0.94	#350
Tremont Street EB thru	C	24.4	0.61	409
Tremont Street WB left	D	42.9	0.23	40
Tremont Street WB thru	F	>80.0	0.87	#617
Tremont Street WB right	E	78.3	0.82	#779
Whittier Street NB left	E	68.3	0.47	110
Whittier Street NB thru/right	E	70.5	0.67	131
Ruggles Street SB left	E	74.3	0.80	3387
Ruggles Street SB thru/right	A	8.4	0.34	123
10. Ruggles Street/Tremont Street/ Columbus Avenue	B	10.2	-	-
Tremont Street EB thru	B	12.4	0.62	352
Tremont Street WB thru thru/right	A	4.7	0.44	205
Columbus Avenue SB right	D	40.3	0.60	107

11. Tremont Street/Melnea Cass Boulevard	F	>80.0	-	-
Tremont Street EB left/thru thru	F	>80.0	>1.0	#561
Tremont Street EB right	A	3.2	0.72	0
Tremont Street WB left/thru thru/right	F	>80.0	>1.0	m#377
Melnea Cass Boulevard NB left	F	>80.0	>1.0	#743
Melnea Cass Boulevard NB left/thru thru/right	E	65.0	>1.0	#364
Melnea Cass Boulevard SB left/thru	E	58.5	0.91	m#293
Melnea Cass Boulevard SB right	A	7.8	0.56	m34
12. Melnea Cass Boulevard/Columbus Avenue/MBTA Ruggles Station Driveway	C	22.3	-	-
Columbus Avenue EB left/thru thru/right	C	28.1	0.55	64
Columbus Avenue WB left/thru/right	C	23.0	0.65	m#479
Melnea Cass Boulevard NB left/thru	D	47.9	0.87	m48
Melnea Cass Boulevard NB right	A	1.0	0.20	m0
MBTA Ruggles Station Driveway SB left/thru/right	C	27.2	0.02	11
13. Tremont Street/Massachusetts Avenue	C	30.1	-	-
Tremont Street EB left	C	30.2	0.58	m37
Tremont Street EB thru thru/right	D	35.5	0.86	m93
Tremont Street WB left	D	38.5	0.61	#93
Tremont Street WB thru thru/right	D	36.1	0.63	181
Massachusetts Avenue NB left	C	22.0	0.50	#73
Massachusetts Avenue NB thru thru/right	C	27.3	0.76	378
Massachusetts Avenue SB left	C	24.4	0.56	m44
Massachusetts Avenue SB thru thru/right	C	27.9	0.88	m247
14. Massachusetts Avenue/ Columbus Avenue	D	41.8	-	-
Columbus Avenue EB left	F	>80.0	>1.0	#369
Columbus Avenue EB thru thru/right	C	32.8	0.39	110
Columbus Avenue WB left	D	35.3	0.58	125
Columbus Avenue WB thru/right	E	71.1	0.93	#354
Massachusetts Avenue NB left	B	17.9	0.32	m13
Massachusetts Avenue NB thru thru/right	B	13.6	0.75	176
Massachusetts Avenue SB left	B	16.5	0.46	m12
Massachusetts Avenue SB thru thru/right	B	15.9	0.91	m#556

15. Massachusetts Avenue/ St. Botolph Street	C	21.7	-	-
St. Botolph Street EB left/thru/right	B	11.3	0.32	71
St. Botolph Street WB left/thru/right	C	23.5	0.28	81
Massachusetts Avenue NB left	C	24.7	0.67	m80
Massachusetts Avenue NB thru thru/right	C	27.9	0.75	m388
Massachusetts Avenue SB left	B	15.2	0.40	m15
Massachusetts Avenue SB thru thru/right	B	16.9	0.88	#425
16. Massachusetts Avenue/ Huntington Avenue	C	20.2	-	-
Huntington Avenue EB left/thru thru/right	B	18.2	0.56	62
Huntington Avenue WB left/thru thru/right	C	25.6	0.58	101
Massachusetts Avenue NB thru thru/right	B	14.0	0.78	161
Massachusetts Avenue SB thru	C	29.2	0.69	m98
Massachusetts Avenue SB right	A	1.8	0.31	m1
17. Massachusetts Avenue/Westland Avenue/St. Stephens Street/Private Drive	F	>80.0	-	-
Westland Avenue EB right	F	>80.0	>1.0	#506
Private Drive WB right	A	0.0	0.03	0
Massachusetts Avenue NB left	F	>80.0	>1.0	#572
Massachusetts Avenue NB thru thru/right	A	1.9	0.39	31
Massachusetts Avenue SB left/thru thru/right	F	>80.0	>1.0	#558
18. Westland Avenue/Hemenway Street	B	13.0	-	-
Hemenway Street EB left/thru/right	C	28.0	0.67	136
Westland Avenue NB left/thru/right	B	19.0	0.76	#386
Westland Avenue SB left/thru	A	9.6	0.46	168
Westland Avenue SB right	A	2.3	0.52	0
<i>Unsignalized Intersections</i>				
19. Gainsborough Street / St. Stephen Street	-	-	-	-
St. Stephen Street WB thru/right	A	0.0	0.14	0
Gainsborough Street NB left/thru	D	32.2	0.56	79
20. Gainsborough Street / Hemenway Street	-	-	-	-
Hemenway Street EB thru	A	0.0	0.09	0
Hemenway Street WB thru	A	0.0	0.32	0
Gainsborough Street NB left/right	C	24.3	0.51	71

21. Hemenway Street/Forsyth Street	-	-	-	-
Hemenway Street EB thru/right	A	8.6	0.16	-
Hemenway Street WB left/thru	C	16.4	0.69	-
Forsyth Street left/right	A	8.9	0.12	-
22. Hemenway Street/Forsyth Way	-	-	-	-
Hemenway Street WB left/right	F	>50.0	0.94	279
Forsyth Way NB thru/right	A	0.0	0.21	0
Forsyth Way SB left/thru	A	2.7	0.03	2
23. Forsyth Street/ Greenleaf Street/ World Series Way	-	-	-	-
World Series Way WB left/thru/right	-	-	-	-
Forsyth Street NB left/thru/right	A	1.4	0.02	1
Forsyth Street SB left/thru/right	A	0	0.00	0
24. Ruggles Street/Field Street	-	-	-	-
Field Street WB left/right	F	>50.0	0.04	3
Ruggles Street NB thru thru/right	A	0.0	0.40	0
Ruggles Street SB left/thru	A	0.0	0.00	0
25. Ruggles Street/ Albert Street	-	-	-	-
Albert Street EB left/right	F	>50.0	0.36	34
Ruggles Street NB thru	A	0.0	0.58	0
Ruggles Street SB thru	A	0.0	0.27	0
26. Ruggles Street/ MBTA Entrance	-	-	-	-
Ruggles Street NB thru/right	A	0.0	0.61	0
Ruggles Street SB left/thru thru	D	26.6	0.28	25
27. Columbus Avenue/Cunard Street	-	-	-	-
Columbus Avenue EB left/thru/right	A	1.5	0.04	3
Columbus Avenue WB left/thru/right	A	0.7	0.02	2
Columbus Parking Area SB left/thru/right	F	>50.0	>1.0	325
28. Columbus Avenue/Burke Street/Columbus Garage Driveway	-	-	-	-
Columbus Avenue EB left/thru/right	A	0.7	0.02	2
Columbus Avenue WB left/thru/right	A	0.5	0.02	1
29. Columbus Avenue/Camden Street	-	-	-	-
Columbus Avenue EB left/thru/right	A	0.3	0.01	1
Columbus Avenue WB left/thru/right	A	1.4	0.05	4

Camden Street NB left/thru/right	C	20.7	0.11	9
Camden Street SB left/thru/right	C	22.5	0.08	7
30. Gainsborough Street / St. Botolph Street	-	-	-	-
St. Botolph Street EB left/thru/right	A	8.2	0.07	-
St. Botolph Street WB left/thru/right	A	8.6	0.23	-
Gainsborough Street NB left/thru/right	A	8.2	0.14	-
Gainsborough Street SB left/thru/right	A	9.0	0.22	-

= 95th percentile volume exceeds capacity. Queue maybe longer. Queue shown is the maximum after 2 cycles.

m = Volume for 95th percentile queue is metered by an upstream signal.

Grey shading indicates change in LOS from Existing Condition.

Build Conditions (2023) Capacity Analysis Summary, a.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95 th Percentile Queue Length (feet)
<i>Signalized Intersections</i>				
1. Huntington Avenue/Gainsborough Street	B	10.7	-	-
Huntington Avenue EB left	A	6.0	0.10	18
Huntington Avenue EB thru thru/right	A	6.0	0.37	97
Huntington Avenue WB left/thru thru thru/right	A	5.3	0.30	78
Gainsborough Street NB left/thru/right	E	63.4	0.71	163
2. Huntington Avenue/Opera Place	B	12.0	-	-
Huntington Avenue EB thru	A	6.0	0.37	224
Huntington Avenue WB thru	B	13.5	0.48	144
Opera Place SB right	A	0.5	0.16	0
3. Huntington Avenue/Forsyth Street	B	11.7	-	-
Huntington Avenue EB thru thru/right	A	4.9	0.43	m71
Huntington Avenue WB left/thru thru/right	A	4.8	0.46	194
Forsyth Street NB left/thru/right	E	61.7	0.58	m104
Forsyth Street SB left/thru/right	E	60.3	0.71	160
4. Huntington Avenue/Parker Street/Forsyth Way	C	26.8	-	-
Huntington Avenue EB thru thru/right	A	8.8	0.54	160
Huntington Avenue WB left	E	60.6	0.62	m141
Huntington Avenue WB thru thru/right	B	16.3	0.4	150
Parker Street NB left/thru/right	D	50.3	0.85	m452
Forsyth Way SB left/thru	C	34.6	0.49	227
Forsyth Way SB right	D	36.8	0.52	186
5. Huntington Avenue/Louis Prang Street/Ruggles Street	D	52.4	-	-
Huntington Avenue EB left	E	68	0.58	#125
Huntington Avenue EB thru thru/right	C	34.4	0.79	394
Huntington Avenue WB thru thru/right	E	70.1	>1.00	m#492

Ruggles Street NB left	E	61.2	0.96	m#286
Ruggles Street NB thru/right	D	36.5	0.77	m526
Louis Prang Street SB left	C	33	0.19	50
Louis Prang Street SB thru/right	E	67.9	0.93	#519
6. Ruggles Street/Parker Street	C	23.8	-	-
Parker Street EB left/thru	D	54.1	0.89	404
Parker Street EB right	A	5.8	0.11	22
Parker Street WB left/thru/right	D	41.1	0.77	386
Ruggles Street NB left/thru thru/right	A	5.3	0.6	73
Ruggles Street SB left/thru/right	C	21.2	0.68	m249
7. Ruggles Street/Leon Street	B	16	-	-
Leon Street WB left	C	21.8	0.11	33
Leon Street WB right	B	10.8	0.06	14
Ruggles Street NB thru/right	C	23	0.9	m#720
Ruggles Street SB left/thru thru	A	6.7	0.43	111
8. Ruggles Street/MBTA Exit	C	21.5	-	-
MBTA Exit WB left	D	40.3	0.53	70
MBTA Exit WB right	B	12.9	0.17	20
Ruggles Street NB thru	C	31	0.88	m#1577
Ruggles Street SB thru	A	7.3	0.36	140
9. Ruggles Street/Tremont Street/ Whittier Street	D	37.1	-	-
Tremont Street EB left	F	>80.0	0.91	#355
Tremont Street EB thru	B	18.8	0.59	431
Tremont Street WB left	C	31	0.11	m14
Tremont Street WB thru	D	41.3	0.74	#576
Tremont Street WB right	C	31.5	0.82	#877
Whittier Street NB left	E	66.2	0.32	69
Whittier Street NB thru/right	E	58.5	0.5	91
Ruggles Street SB left	E	67.2	0.85	#284
Ruggles Street SB thru/right	A	6.4	0.19	86
10. Ruggles Street/Tremont Street/ Columbus Avenue	A	2.3	-	-
Tremont Street EB thru	A	1.5	0.55	163
Tremont Street WB thru thru/right	A	3	0.4	201

Columbus Avenue SB right	B	17.8	0.33	34
11. Tremont Street/Melnea Cass Boulevard	F	>80.0	-	-
Tremont Street EB left/thru thru	F	>80.0	>1.00	#563
Tremont Street EB right	A	6.4	0.83	0
Tremont Street WB left/thru thru/right	C	34.5	0.67	#227
Melnea Cass Boulevard NB left	F	>80.0	>1.00	#716
Melnea Cass Boulevard NB left/thru thru/right	F	>80.0	>1.00	#490
Melnea Cass Boulevard SB left/thru	C	29.6	0.38	98
Melnea Cass Boulevard SB right	B	18.4	0.6	163
12. Melnea Cass Boulevard/Columbus Avenue/MBTA Ruggles Station Driveway	B	17.9	-	-
Columbus Avenue EB left/thru thru/right	C	27.3	0.23	28
Columbus Avenue WB left/thru/right	C	23.6	0.41	m#252
Melnea Cass Boulevard NB left/thru	D	36.3	0.82	m86
Melnea Cass Boulevard NB right	A	1.7	0.36	m4
MBTA Ruggles Station Driveway SB left/thru/right	C	21	0.01	6
13. Tremont Street/Massachusetts Avenue	C	30.1	-	-
Tremont Street EB left	C	32.1	0.51	m65
Tremont Street EB thru thru/right	D	44.4	0.87	m167
Tremont Street WB left	C	34.4	0.55	73
Tremont Street WB thru thru/right	D	35.6	0.58	143
Massachusetts Avenue NB left	B	16.9	0.37	45
Massachusetts Avenue NB thru thru/right	C	30.5	0.83	#500
Massachusetts Avenue SB left	C	25	0.45	m31
Massachusetts Avenue SB thru thru/right	B	18.8	0.71	m192
14. Massachusetts Avenue/ Columbus Avenue	D	37.2	-	-
Columbus Avenue EB left	F	>80.0	>1.00	#453
Columbus Avenue EB thru thru/right	C	30.5	0.32	87
Columbus Avenue WB left	C	30	0.48	94
Columbus Avenue WB thru/right	E	65	0.86	#260
Massachusetts Avenue NB left	B	18.8	0.32	m18
Massachusetts Avenue NB thru thru/right	C	22.3	0.83	#476
Massachusetts Avenue SB left	C	25.3	0.48	m18
Massachusetts Avenue SB thru thru/right	B	14.6	0.85	#488

15. Massachusetts Avenue/ St. Botolph Street	C	20.1	-	-
St. Botolph Street EB left/thru/right	B	10.8	0.21	50
St. Botolph Street WB left/thru/right	C	20.3	0.26	71
Massachusetts Avenue NB left	B	18.7	0.56	m49
Massachusetts Avenue NB thru thru/right	C	28.9	0.85	m422
Massachusetts Avenue SB left	C	21.5	0.37	m22
Massachusetts Avenue SB thru thru/right	B	10.4	0.77	80
16. Massachusetts Avenue/ Huntington Avenue	D	40.0	-	-
Huntington Avenue EB left/thru thru/right	C	29.9	0.55	96
Huntington Avenue WB left/thru thru/right	D	39.9	0.68	102
Massachusetts Avenue NB thru thru/right	B	18.5	0.84	#161
Massachusetts Avenue SB thru	E	75.9	0.65	m235
Massachusetts Avenue SB right	A	6.8	0.27	m19
17. Massachusetts Avenue/Westland Avenue/St. Stephens Street/Private Drive	F	>80.0	-	-
Westland Avenue EB right	F	>80.0	>1.00	#542
Private Drive WB right	A	-	-	-
Massachusetts Avenue NB left	F	>80.0	0.99	#375
Massachusetts Avenue NB thru thru/right	C	21.5	0.44	319
Massachusetts Avenue SB left/thru thru/right	F	>80.0	0.99	#375
18. Westland Avenue/Hemenway Street	C	22.4	-	-
Hemenway Street EB left/thru/right	C	31.3	0.54	145
Westland Avenue NB left/thru/right	C	34.8	0.82	#463
Westland Avenue SB left/thru	C	26.3	0.74	#471
Westland Avenue SB right	A	6.5	0.61	168
<i>Unsignalized Intersections</i>				
19. Gainsborough Street / St. Stephen Street	-	-	-	-
St. Stephen Street WB thru/right	B	10.4	0.13	11
Gainsborough Street NB left/thru	A	0.8	0.01	0
20. Gainsborough Street / Hemenway Street	-	-	-	-
Hemenway Street EB thru	A	0.0	0.07	0
Hemenway Street WB thru	A	0.0	0.30	0
Gainsborough Street NB left/right	B	13.5	0.21	19

21. Hemenway Street/Forsyth Street	-	-	-	-
Hemenway Street EB thru/right	A	8.4	0.14	0
Hemenway Street WB left/thru	A	14.4	0.63	0
Forsyth Street left/right	B	8.6	0.10	0
22. Hemenway Street/Forsyth Way	-	-	-	-
Hemenway Street WB left/right	E	35.5	0.82	205
Forsyth Way NB thru/right	A	0.0	0.22	0
Forsyth Way SB left/thru	A	3.7	0.03	2
23. Forsyth Street/ Greenleaf Street/ World Series Way	-	-	-	-
World Series Way WB left/thru/right	-	-	-	-
Forsyth Street NB left/thru/right	A	0.8	0.01	0
Forsyth Street SB left/thru/right	A	0.0	0.00	0
24. Ruggles Street/Field Street	-	-	-	-
Field Street WB left/right	B	11.8	0.00	0
Ruggles Street NB thru thru/right	A	0.0	0.36	0
Ruggles Street SB left/thru	A	0.1	0.00	0
25. Ruggles Street/ Albert Street	-	-	-	-
Albert Street EB left/right	F	>50.0	>1.00	-
Ruggles Street NB thru	A	0.0	0.56	0
Ruggles Street SB thru	A	0.0	0.22	0
26. Ruggles Street/ MBTA Entrance	-	-	-	-
Ruggles Street NB thru/right	A	0.0	0.59	0
Ruggles Street SB left/thru thru	B	13.7	0.29	22
27. Columbus Avenue/Cunard Street	-	-	-	-
Columbus Avenue EB left/thru/right	A	0.0	0.26	0
Columbus Avenue WB left/thru/right	A	0.4	0.01	1
Columbus Parking Area SB left/thru/right	-	-	-	-
28. Columbus Avenue/Burke Street/Columbus Garage Driveway	-	-	-	-
Columbus Avenue EB left/thru/right	A	2.4	0.08	7
Columbus Avenue WB left/thru/right	A	1.3	0.04	3
29. Columbus Avenue/Camden Street	-	-	-	-
Columbus Avenue EB left/thru/right	A	0.1	0.00	0
Columbus Avenue WB left/thru/right	A	0.5	0.02	1

Camden Street NB left/thru/right	B	13.5	0.05	4
Camden Street SB left/thru/right	C	20.2	0.00	0
30. Gainsborough Street / St. Botolph Street	-	-	-	-
St. Botolph Street EB left/thru/right	A	7.7	0.04	-
St. Botolph Street WB left/thru/right	A	8.0	0.20	-
Gainsborough Street NB left/thru/right	A	7.6	0.03	-
Gainsborough Street SB left/thru/right	A	8.0	0.13	-
31. Columbus Avenue/St. Cyprians Place	-	-	-	-
Columbus Avenue EB left/thru	A	0.7	0.02	2
Columbus Avenue WB thru/right	A	0.0	0.16	0
St. Cyprians NB left/thru/right	B	12.4	0.03	2
32. Columbus Avenue/Coventry Street	-	-	-	-
Columbus Avenue EB thru	A	0.0	0.24	0
Columbus Avenue WB thru	A	0.0	0.15	0
Coventry NB left/right	B	12.0	0.07	5
Parking Lot SB left/right	B	14.3	0.11	9

= 95th percentile volume exceeds capacity. Queue maybe longer. Queue shown is the maximum after 2 cycles.

m = Volume for 95th percentile queue is metered by an upstream signal.

Grey shading indicates change in LOS from No-Build Conditions.

Build Conditions (2023) Capacity Analysis Summary, p.m. Peak Hour

Intersection/Approach	LOS	Delay (seconds)	V/C Ratio	95 th Percentile Queue Length (feet)
Signalized Intersections				
1. Huntington Avenue/Gainsborough Street	B	12.4	-	-
Huntington Avenue EB left	B	10.5	0.17	64
Huntington Avenue EB thru thru/right	B	12.9	0.44	327
Huntington Avenue WB left/thru thru thru/right	A	5.1	0.26	81
Gainsborough Street NB left/thru/right	D	48.8	0.67	132
2. Huntington Avenue/Opera Place	A	7.2	-	-
Huntington Avenue EB thru	A	2.7	0.35	116
Huntington Avenue WB thru	A	8.3	0.33	133
Opera Place SB right	A	1.5	0.31	m0
3. Huntington Avenue/Forsyth Street	B	15.5	-	-
Huntington Avenue EB thru thru/right	B	10.8	0.48	m114
Huntington Avenue WB left/thru thru/right	B	10.1	0.63	195
Forsyth Street NB left/thru/right	D	42.3	0.45	m92
Forsyth Street SB left/thru/right	E	55.1	0.77	#190
4. Huntington Avenue/Parker Street/Forsyth Way	C	26.9	-	-
Huntington Avenue EB thru thru/right	C	21.3	0.59	156
Huntington Avenue WB left	E	55.5	0.71	m170
Huntington Avenue WB thru thru/right	A	8.2	0.39	86
Parker Street NB left/thru/right	D	41.1	0.87	m307
Forsyth Way SB left/thru	D	39.6	0.74	322
Forsyth Way SB right	C	29.1	0.35	99
5. Huntington Avenue/Louis Prang Street/Ruggles Street	D	43.0	-	-
Huntington Avenue EB left	E	60.2	0.52	#89
Huntington Avenue EB thru thru/right	C	26.9	0.73	313
Huntington Avenue WB thru thru/right	D	47.6	0.94	m#403
Ruggles Street NB left	D	23.3	0.91	m83

Ruggles Street NB thru/right	C	22.8	0.71	m122
Louis Prang Street SB left	C	30.6	0.21	56
Louis Prang Street SB thru/right	F	>80.0	>1.00	#506
6. Ruggles Street/Parker Street	F	>80.0	-	-
Parker Street EB left/thru	C	24.4	0.49	115
Parker Street EB right	D	44.4	0.89	441
Parker Street WB left/thru/right	F	>80.0	>1.00	#1176
Ruggles Street NB left/thru thru/right	C	23.4	0.81	m#247
Ruggles Street SB left/thru/right	A	4.9	0.08	m0
7. Ruggles Street/Leon Street	B	19.3	-	-
Leon Street WB left	C	25.1	0.33	79
Leon Street WB right	B	19.7	0.22	52
Ruggles Street NB thru/right	C	29.3	0.88	#421
Ruggles Street SB left/thru thru	A	6.0	0.38	108
8. Ruggles Street/MBTA Exit	B	18.1	-	-
MBTA Exit WB left	D	38.9	0.49	68
MBTA Exit WB right	B	13.2	0.16	20
Ruggles Street NB thru	C	27.0	0.87	m#1584
Ruggles Street SB thru	A	6.7	0.42	133
9. Ruggles Street/Tremont Street/ Whittier Street	F	>80.0	-	-
Tremont Street EB left	F	>80.0	0.94	#348
Tremont Street EB thru	C	24.4	0.61	410
Tremont Street WB left	D	43.1	0.23	40
Tremont Street WB thru	F	>80.0	0.87	#620
Tremont Street WB right	E	79.6	0.82	#797
Whittier Street NB left	E	68.3	0.47	110
Whittier Street NB thru/right	E	70.6	0.67	131
Ruggles Street SB left	E	76.3	0.81	344
Ruggles Street SB thru/right	A	8.4	0.34	124
10. Ruggles Street/Tremont Street/ Columbus Avenue	B	10.4	-	-
Tremont Street EB thru	B	12.7	0.63	355
Tremont Street WB thru thru/right	A	4.8	0.44	207
Columbus Avenue SB right	D	41.1	0.61	108

11. Tremont Street/Melnea Cass Boulevard	F	>80.0	-	-
Tremont Street EB left/thru thru	F	>80.0	>1.00	#565
Tremont Street EB right	A	3.3	0.72	0
Tremont Street WB left/thru thru/right	F	>80.0	>1.00	m#377
Melnea Cass Boulevard NB left	F	>80.0	>1.00	#743
Melnea Cass Boulevard NB left/thru thru/right	E	67.2	>1.00	#369
Melnea Cass Boulevard SB left/thru	E	64.0	0.94	#310
Melnea Cass Boulevard SB right	A	8.9	0.57	39
12. Melnea Cass Boulevard/Columbus Avenue/MBTA Ruggles Station Driveway	C	21.6	-	-
Columbus Avenue EB left/thru thru/right	C	28.9	0.57	68
Columbus Avenue WB left/thru/right	C	22.7	0.66	m#521
Melnea Cass Boulevard NB left/thru	D	44.8	0.78	m42
Melnea Cass Boulevard NB right	A	1.0	0.21	m0
MBTA Ruggles Station Driveway SB left/thru/right	C	27.5	0.02	11
13. Tremont Street/Massachusetts Avenue	C	30.1	-	-
Tremont Street EB left	C	29.9	0.33	m37
Tremont Street EB thru thru/right	C	34.6	0.26	m91
Tremont Street WB left	D	37.3	0.33	#93
Tremont Street WB thru thru/right	C	34.6	0.26	181
Massachusetts Avenue NB left	C	25.6	0.52	#73
Massachusetts Avenue NB thru thru/right	C	28.7	0.44	375
Massachusetts Avenue SB left	C	23.9	0.51	m42
Massachusetts Avenue SB thru thru/right	C	27.6	0.44	m242
14. Massachusetts Avenue/ Columbus Avenue	D	48.9	-	-
Columbus Avenue EB left	F	>80.0	>1.00	#415
Columbus Avenue EB thru thru/right	C	32.8	0.40	112
Columbus Avenue WB left	D	35.5	0.59	125
Columbus Avenue WB thru/right	E	71.1	0.93	#354
Massachusetts Avenue NB left	B	18.9	0.34	m14
Massachusetts Avenue NB thru thru/right	B	13.3	0.75	174
Massachusetts Avenue SB left	B	15.6	0.45	m12
Massachusetts Avenue SB thru thru/right	B	16.4	0.92	m#549
15. Massachusetts Avenue/ St. Botolph Street	C	22.8	-	-

St. Botolph Street EB left/thru/right	B	11.5	0.32	70
St. Botolph Street WB left/thru/right	C	23.5	0.28	81
Massachusetts Avenue NB left	C	25.1	0.70	m82
Massachusetts Avenue NB thru thru/right	C	27.7	0.77	m391
Massachusetts Avenue SB left	B	17.9	0.41	m18
Massachusetts Avenue SB thru thru/right	B	19.2	0.90	#531
16. Massachusetts Avenue/ Huntington Avenue	C	21.1	-	-
Huntington Avenue EB left/thru thru/right	B	17.4	0.55	58
Huntington Avenue WB left/thru thru/right	C	26.0	0.59	102
Massachusetts Avenue NB thru thru/right	B	13.3	0.77	161
Massachusetts Avenue SB thru	C	32.4	0.70	m102
Massachusetts Avenue SB right	A	1.9	0.31	m1
17. Massachusetts Avenue/Westland Avenue/St. Stephens Street/Private Drive	F	>80.0	-	-
Westland Avenue EB right	F	>80.0	>1.00	#510
Private Drive WB right	A	0.0	0.03	0
Massachusetts Avenue NB left	F	>80.0	>1.00	#600
Massachusetts Avenue NB thru thru/right	A	1.9	0.39	31
Massachusetts Avenue SB left/thru thru/right	F	>80.0	>1.00	#558
18. Westland Avenue/Hemenway Street	B	13.5	-	-
Hemenway Street EB left/thru/right	C	28.0	0.67	136
Westland Avenue NB left/thru/right	C	20.2	0.78	#404
Westland Avenue SB left/thru	A	9.6	0.46	170
Westland Avenue SB right	A	2.3	0.52	0
Unsignalized Intersections				
19. Gainsborough Street / St. Stephen Street	-	-	-	-
St. Stephen Street WB thru/right	A	0.0	0.13	0
Gainsborough Street NB left/thru	D	34.4	0.60	91
20. Gainsborough Street / Hemenway Street	-	-	-	-
Hemenway Street EB thru	A	0.0	0.09	0
Hemenway Street WB thru	A	0.0	0.32	0
Gainsborough Street NB left/right	C	24.3	0.51	71
21. Hemenway Street/Forsyth Street	-	-	-	-

Hemenway Street EB thru/right	A	8.6	0.16	-
Hemenway Street WB left/thru	C	16.4	0.69	-
Forsyth Street left/right	A	8.9	0.12	-
22. Hemenway Street/Forsyth Way	-	-	-	-
Hemenway Street WB left/right	F	>50.0	0.93	273
Forsyth Way NB thru/right	A	0.0	0.21	0
Forsyth Way SB left/thru	A	2.7	0.03	2
23. Forsyth Street/ Greenleaf Street/ World Series Way	-	-	-	-
World Series Way WB left/thru/right	-	-	-	-
Forsyth Street NB left/thru/right	A	1.4	0.02	1
Forsyth Street SB left/thru/right	A	0.0	0.00	0
24. Ruggles Street/Field Street	-	-	-	-
Field Street WB left/right	F	>50.0	0.05	4
Ruggles Street NB thru thru/right	A	0.0	0.41	0
Ruggles Street SB left/thru	A	0.0	0.00	0
25. Ruggles Street/ Albert Street	-	-	-	-
Albert Street EB left/right	F	>50.0	0.37	35
Ruggles Street NB thru	A	0.0	0.59	0
Ruggles Street SB thru	A	0.0	0.27	0
26. Ruggles Street/ MBTA Entrance	-	-	-	-
Ruggles Street NB thru/right	A	0.0	0.61	0
Ruggles Street SB left/thru thru	D	29.0	0.29	26
27. Columbus Avenue/Cunard Street	-	-	-	-
Columbus Avenue EB left/thru/right	A	0.0	0.20	0
Columbus Avenue WB left/thru/right	A	0.8	0.03	2
28. Columbus Avenue/Burke Street/Columbus Garage Driveway	-	-	-	-
Columbus Avenue EB left/thru/right	A	1.7	0.06	5
Columbus Avenue WB left/thru/right	A	0.5	0.02	1
29. Columbus Avenue/Camden Street	-	-	-	-
Columbus Avenue EB left/thru/right	A	0.3	0.01	1
Columbus Avenue WB left/thru/right	A	1.4	0.05	4
Camden Street NB left/thru/right	C	21.7	0.11	9
Camden Street SB left/thru/right	C	21.9	0.02	1

30. Gainsborough Street / St. Botolph Street	-	-	-	-
St. Botolph Street EB left/thru/right	A	8.1	0.07	-
St. Botolph Street WB left/thru/right	A	8.5	0.23	-
Gainsborough Street NB left/thru/right	A	8.2	0.14	-
Gainsborough Street SB left/thru/right	A	9.0	0.21	-
31. Columbus Avenue/St. Cyprians Place	-	-	-	-
Columbus Avenue EB left/thru	A	0.6	0.02	1
Columbus Avenue WB thru/right	A	0.0	0.32	0
St. Cyprians NB left/thru/right	B	12.6	0.07	6
32. Columbus Avenue/Coventry Street	-	-	-	-
Columbus Avenue EB thru	A	0.0	0.22	0
Columbus Avenue WB thru	A	0.0	0.25	0
Coventry NB left/right	C	19.6	0.14	12
Parking Lot SB left/right	F	>50.0	0.88	215

= 95th percentile volume exceeds capacity. Queue maybe longer. Queue shown is the maximum after 2 cycles.

m = Volume for 95th percentile queue is metered by an upstream signal.

Grey shading indicates change in LOS from No-Build Condition.



NORTHEASTERN UNIVERSITY
Boston Campus

Institutional Master Plan
Transportation Appendix

Prepared by

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