

12

Channel Street

Raymond L. Flynn Marine Park
Boston, Massachusetts



TENANT GUIDELINES & BUILDING INFORMATION



**boston planning &
development agency**

Economic Development and Industrial Corporation of Boston
22 Drydock Avenue, Raymond L. Flynn Marine Park, Boston, MA 02210
Capital Construction Department Tel. No.: (617) 722-4300

Martin J. Walsh, Mayor of Boston

Brian P. Golden, Director

Revised: November 15, 2016

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INTRODUCTION

The purpose of these tenant guidelines is to establish comprehensible minimum standards for tenant renovations to both the interior and exterior of 12 Channel St (Building No. 32) in the Economic Development and Industrial Corporation of Boston (EDIC) Raymond L. Flynn Marine Park. They are for the use of tenants, architects, engineers, contractors, and whosoever may have an interest in modifications to building areas. It is not intended to unduly increase design and/or construction costs, but to clarify acceptable minimum standards and to define long-term interests of EDIC as building owner.

These guidelines should serve as a vehicle to answer most architectural/engineering design questions. It must be understood that the EDIC, through these tenant guidelines, does not intend to establish all details of design or to restrict the tenants' right to further modification and/or deviation from the established guidelines contained herein, if the prior written approval of EDIC is obtained.

PROCEDURES

Prior to obtaining construction permits, all tenants must submit detailed plans and specifications in accordance with the BRA/EDIC submittal requirements depicting all work to be performed to:

EDIC / Boston
Engineering & Facility Management Division
22 Drydock Ave., Suite 201
Boston Ma. 02210
(617) 722-4300
ATTN: Marla Cumming

The plans will be reviewed to assure conformance with these guidelines and any additional concerns, which may not be addressed in the specifications or on the drawings. It should be noted that compliance with all applicable state, federal and City of Boston codes, laws, and ordinances is the sole responsibility of the tenant, as is the acquisition of permits and licenses required. Licenses and permits should be obtained through the City of Boston Inspectional Services Department. Copies of all permits must be submitted to EDIC for record purposes.

EDIC review of construction documents will be completed within fifteen (15) working days of receipt and shall be returned to the A/E and/or tenant stamped with our approval/rejection including all comments. Construction shall proceed based on the EDIC approved documents. Any deviation from the approved documents is prohibited without the prior written approval of EDIC. Any Construction changes made without the approval of EDIC shall be undertaken at the sole risk of the tenant. EDIC reserves the right to have any and all work, which does not conform with these guidelines or applicable codes immediately, removed at the sole expense of the tenant.

Drawings and specifications must be complete, accurate, legible, and definitive of all aspects of the intended construction. Any improvements made by the Tenant must be submitted to the BRA/EDIC for final written approval prior to the start of work.

- A. Prior to construction start, one reproducible transparency (Mylar), and two (2) black line prints/copies of EDIC approved construction documents, incorporating all noted revisions (if any) must be submitted to EDIC Engineering Facility Management Division for final approval. EDIC Engineering and Facility Management Division is located at 22 Drydock Avenue Suite 201, Boston, MA 02210. The submittal shall consist of a complete set of architectural, fire protection, plumbing, mechanical, and electrical drawings.
- B. The Tenant shall submit AutoCad Drawings with fonts and all Xrefs bound to EDIC. EDIC requires these drawings to maintain the record drawings. An AutoCAD version of the “New” floor plan shall be submitted for the purpose of updating the BRA/EDIC floor plans. AutoCAD drawings shall include special fonts and have Xrefs bound and be compatible with the latest version of AutoCAD.

- C. Overall drawing size shall not exceed 30" x 42". The drawing must denote floor location, Tenant Name, and suite number.
- D. Plans shall be drawn to a minimum scale of 1/16" = 1'-0" except where larger scale is required to clarify dimensional data, interferences, interfacing of various trades, etc.
- E. Sections and details shall be drawn at a minimum scale of 1/4" = 1'- 0".
- F. All construction documents must be dated, signed, and bear the seal of a professional Architect and/or Engineer registered in the Commonwealth of Massachusetts.
- G. Any modifications, additions, and/or revisions to the contract drawings, showing area(s) affected, initials of individual(s) making the change(s), and date the change(s) was/were made shall be submitted for additional approvals.
- H. Upon construction completion, one reproducible (Mylar) set of the construction documents depicting actual "As Built" conditions and an Adobe Reader version of these mylars shall be submitted to EDIC for reference and record. Any variance from the original documents as a result of field conditions must be recorded thereon.

GENERAL BUILDING INFORMATION

AGE: Completed in 1941

HEIGHT Nine stories plus basement, 103 feet from finish grade

TOTAL GROSS AREA Parcel: 69,878 SF
Building: 357,361 SF

VOLUME 4,128,000 Cubic Feet

CONSTRUCTION Concrete piles
Reinforced concrete
Waffle Slabs
Brick veneer exterior (Masonry Restoration “Sika” Yr. 2003)
Built up Roof System (New Roof System “Tremco” Yr. 2002)

USE Building Code Designation:
B Business (Office & Conference Rooms < 50 people)
F1 Factory/Industrial (Processing and manufacturing)
I-2 (General Manufacturing Zone)
S-2 Storage

APPLICABLE CODES Mass. State Building Code/International Building Code
International Energy Code
Mass Arch Access Board, 521 CMR + ADAGG
Mass Electrical Code 527 CMR
Mass Fire Prevention Regulations, 527 CMR
International Mechanical Code
Mass Fuel Gas and Plumbing Codes, 248 CMR
Boston Fire Dept. Rules and Regulations

FLOORS Approximately 200 Feet x 180 feet
Column Spacing 21’-0” O.C. each way

Level	Gross Area (sf)	Loads (psf)	Height (ft)
Bsmnt.	38,635	1000	15
1	35,414	500	10
2, 3	35,414	400	10
4,5	35,414	250	10
6 – 8	35,414	200	10
9	35,414	150	10

EGRESS Each floor is provided with three (3) exit stairs remotely located from each other. NE Stairwell was renovated in 2014.

HISTORIC	The property is not listed on the National and State Registers of Historic Places.
AIR CONDITIONING	At first floor lobby area only.
HEATING	A high efficiency central heating plant consisting of two 9,415,000 BTU boilers are located on the first floor. The boilers have a primary fuel source of natural gas. The heating medium is low-pressure steam, which is fed from each boiler into the existing cascading steam distribution system. At each perimeter radiation section, there has been installed a control valve to regulate heat dissipation and surrounding ambient temperature.
GAS	A 6" natural gas riser and 12" venting system is available centrally in the Building for process purposes.
HOT WATER	Domestic (limited), steam coil and gas Varies per floor.
FIRE ALARM	Master Box, terminal box, Aux. alarm box. Fire alarm devices are provided throughout the building. A Notifier by Honeywell System was installed in 2011 with a centrally located Command Center for use by fire personnel.
FIRE PROTECTION	The entire building is fully sprinklered with a "wet" system in addition to standpipes in each of the north and south stairwells. A 500 GPM fire pump system is located in the basement of the building, providing "booster pump" capacity, thus assuring ample water pressure at the sprinkler heads on upper floors of the structure. A fire alarm system, Notifier by Honeywell, has been installed in 2011 which includes interconnection with flow switches on the sprinkler system and a centrally located fire fighters command center for easy identification of area of fire involvement.
SECURITY	The entire Raymond L. Flynn Marine Park (MIP) is under 24-hour site security by the Boston Municipal Police with one roving patrol during the day and at night. Information booths are located at the entrances to the MIP to provide assistance to visitors and regulate traffic. In addition, EDIC maintenance personnel open the building at 6:30 a.m. each morning and secure the building at 6:30 p.m. in the evening. An intrusion alarm/security system has been installed throughout the building to provide additional protection for our tenants. This state of

the art system is electronically tied to our central control station at Drydock Ave.

ELECTRICAL

A 3,000 amperes, 480 volt, 3 phase, ground faulted electrical system via owner furnished disconnect switches were installed in 1978 and is available at 225 amp capacity for each 36,000 square foot section on floors 1 through 9, in the building. Emergency power is supplied from a centrally located, 125 kilowatt 277/480 volts 3 phase Diesel Generator furnishing energy to the three passenger elevators, fire alarm system and stair lighting.

ELEVATORS

The building has three passenger elevators and four large freight elevators. The freight elevators are centrally located and access a large open loading area adjacent to the loading dock. The freight elevators are approximately 9 ft. x 24 ft. in size and are rated for ten thousand pounds (lbs.) each.

TRASH REMOVAL

The building has a centrally located refuse disposal area on the first floor. The room is provided with hydraulic lift to an indoor/outdoor platform for easy disposal of owner furnished trash compactors.

ACCESS

The MIP is one of the most accessible industrial areas within the City of Boston with the added convenience of on-site vehicular parking. Within five minutes of the Ted Williams Tunnel, Massachusetts Turnpike, and/or Downtown, the site is exceptionally attractive to both commuter or commercial traffic flows. The Third Harbor Tunnel will greatly enhance access to Logan Airport and points North following completion. Maritime related industries have the unique convenience of proximity to deep water porting facilities.

Massachusetts Bay Transportation Authority (MBTA) provides bus service to the MIP. Bus route #7 travels between Downtown, South Station to the entrance on Summer St. and City Point. Bus route #4 comes from North Station into the Park along Northern Avenue, currently operating only during morning and afternoon rush hours. MBTA Silver Line Service (SL2) is in operation within the MIP, operating every 7- 15 minutes during non-peak and every 5 minutes during morning and afternoon rush hours. Buses travel to the site on a 15-20 minute schedule during morning and afternoon rush hours. The MBTA Silver Line is operation within the Raymond L. Flynn Marine Park.

MAIL DELIVERY

Mailboxes are located on the first floor and boxes are available to tenants based on one box free and any additional boxes at a one time cost of \$200 per box.

AMENITIES

A popular restaurant on the first floor of the building provides convenient service/catering during business hours. Additional restaurants are located in the MIP and adjacent properties. Banking facilities are nearby with a 24-hour ATM service. EDIC staff are on site to provide any needed assistance as well as to maintain its extensive properties including well groomed, landscaped "pocket parks" throughout" the Raymond L. Flynn Marine Park.

NEW TENANT BUILDOUT SPECIFICATIONS

CODES AND STANDARDS

All material and work shall conform, at minimum, to the following:

- a. Massachusetts State Building Code
- b. Massachusetts Architectural Barriers Board
- c. Life Safety Code
- d. OSHA
- e. Underwriter's Laboratory
- f. Manufacturers Standards for Quality Control, Installation and Operation.

WALLS

SCOPE OF SECTION

1. Exterior Concrete Masonry Wall
2. Exterior Brick Masonry Wall
3. Interior Masonry Wall
4. Interior Drywall Partitions

OBJECTIVES

1. To provide consistent appearance and detailing, thus presenting a visual unity, both interior and exterior of 12 Channel Street.
2. To establish a consistent level of product quality.
3. To establish a uniform performance criteria.

MATERIAL DESCRIPTION FOR EXTERIOR CONCRETE MASONRY

- a. Concrete masonry units shall be modular lightweight units conforming to ASTM COO, Grade N, Type 1.
- b. Units shall be structural type, 8 inch 4 inch x 16 inch, scored 8 inch x 8 inch, and laid 1/4 running bond.
- c. Provide insulation and ties as shown on existing construction drawings.
- d. Finish block with a Sika parge coat and Sikagard elastomeric coating. The parge coat shall be properly primed and two coats of the Sikagard applied in 16 mil. thickness. Color shall match existing.

MATERIAL DESCRIPTION FOR EXTERIOR BRICK MASONRY

- a. Brick masonry units shall be Spaulding Brick Company, Glen-gery Brick molded series, 53-DD modular. The brick units shall be laid in a running bond pattern to match existing. Units shall conform to ASTM standards.
- b. Brick masonry units shall be coated with a clear sealant Sikagard. The sealant shall be installed in strict accordance of the Manufacturer's written instructions and at temperatures no lower that 40 degrees F.

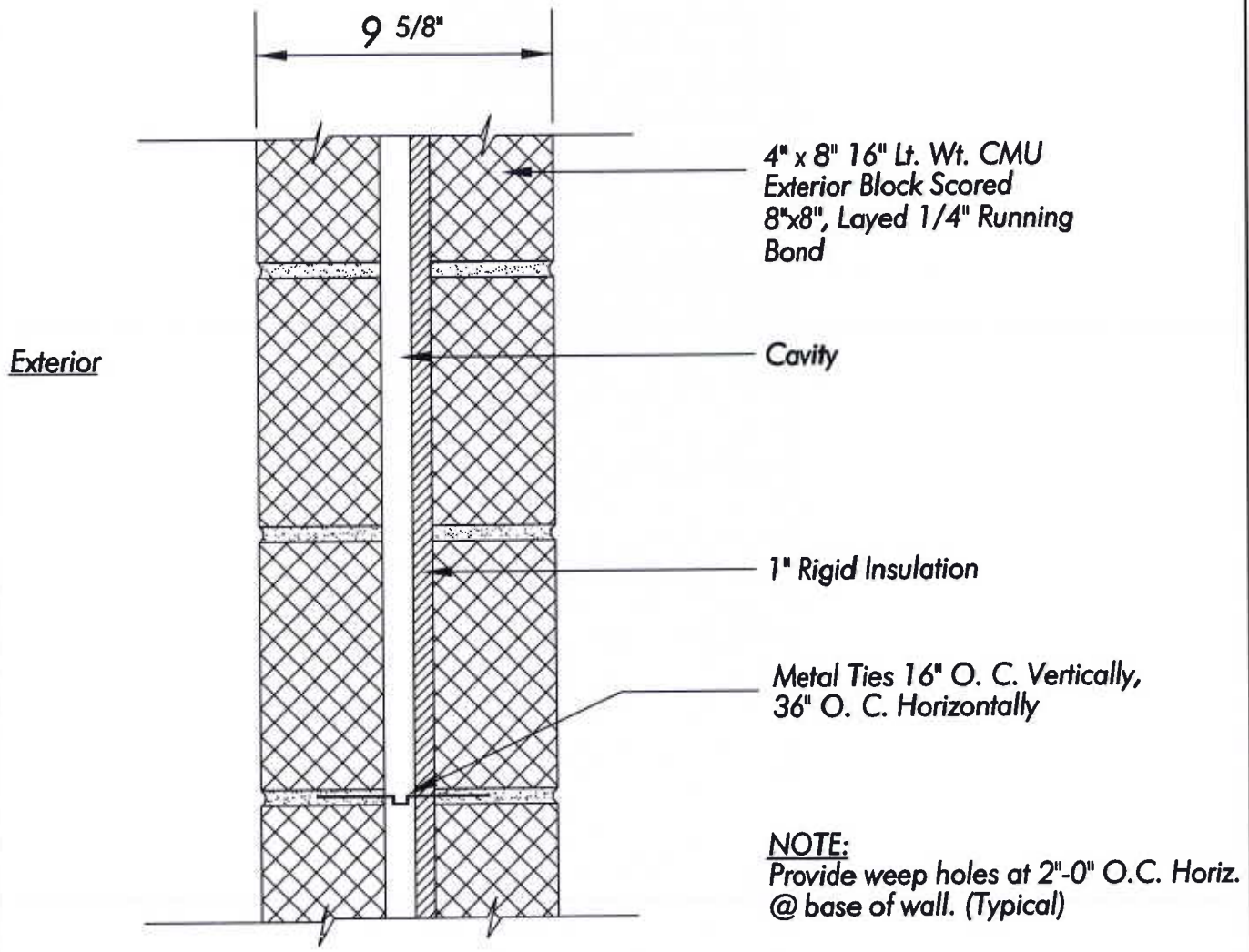
MATERIAL DESCRIPTION
FOR INTERIOR MASONRY

- a. Concrete masonry units shall be modular. Lightweight units conforming to ASTM C 90, Grade N, Type 1. All units shall be structural type, 8" x 8" x16".
- b. Units that face onto public spaces shall have that face of the masonry unit scored 8" x 8" and rayed 1A running board.
- c. Finish block with one coat PVA pigment sealer and two coats alkyd enamel (semi-gloss).
- d. Common Areas paint: SW7071(Gray Screen)

MATERIAL DESCRIPTION FOR
INTERIOR DRYWALL PARTITIONS

- a. Partition shall be made 5/8" thick fire rated gypsum board: ASTM C36. type X with tapered edges and metal framing studs 6" deep, 20 gauge, spaced not to exceed 16" on center.
- b. Provide 2 studs (web to web) at each door and window frame opening.
- c. Finish partitions with one coat PV A pigment sealer and 2 coats alkyd enamel (semi-gloss).
- d. Paint – Common Areas– Sherwin Williams (SW) or Pittsburgh (PPG):
Lobby Walls/Corridor Walls/Columns:
SW7071(Gray Screen)
Lobby Green Wall: SW6717 (Lime Rickey)
Lobby Purple Wall: SW6528 (Cosmos)
Wood Corridor Base and Chair Rail- SW 7073 (Network Gray)
- e. Gypsum board, metal drywall studs and accessories shall be from one of the following manufacturers:
United States Gypsum Co.
Gold Bond Building Products
The Celotex Corp.
The Flinktoke Co.
Georgia-Pacific Corp.

TYPICAL WALL DETAILS



10" CAVITY / INFILL WALL

Construction Standards



**boston planning &
development agency**

ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION OF BOSTON
22 DRYDOCK AVENUE, SUITE 201, BOSTON, MASSACHUSETTS 02210
(617) 722-4300

STANDARD DETAIL

12 CHANNEL STREET

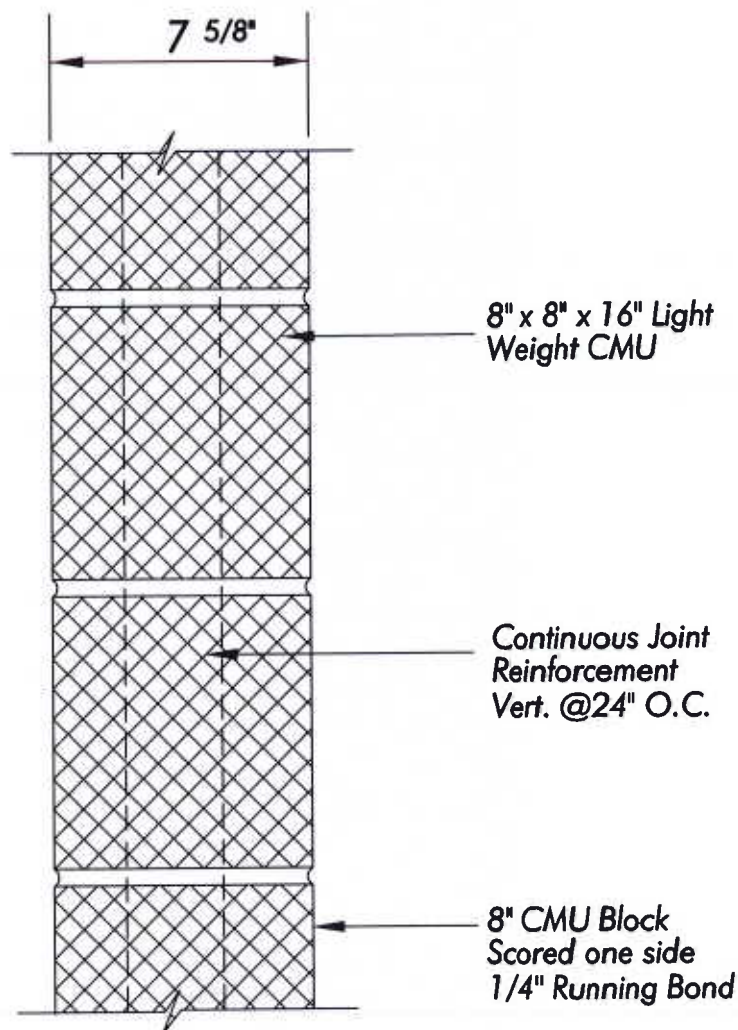
DATE: NOV 2016 SCALE: AS NOTED FN:

APPRVD: P. OSBORN DRN: M. CUMMING

ENCL. NO.

SK-W1

SHEET 1 OF 6



TYPICAL INTERIOR CMU WALL 2 HOUR RATED

Construction Standards



boston planning & development agency

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22 DRYDOCK AVENUE, SUITE 201, BOSTON, MASSACHUSETTS 02210
(617) 722-4300

STANDARD DETAIL

12 CHANNEL STREET

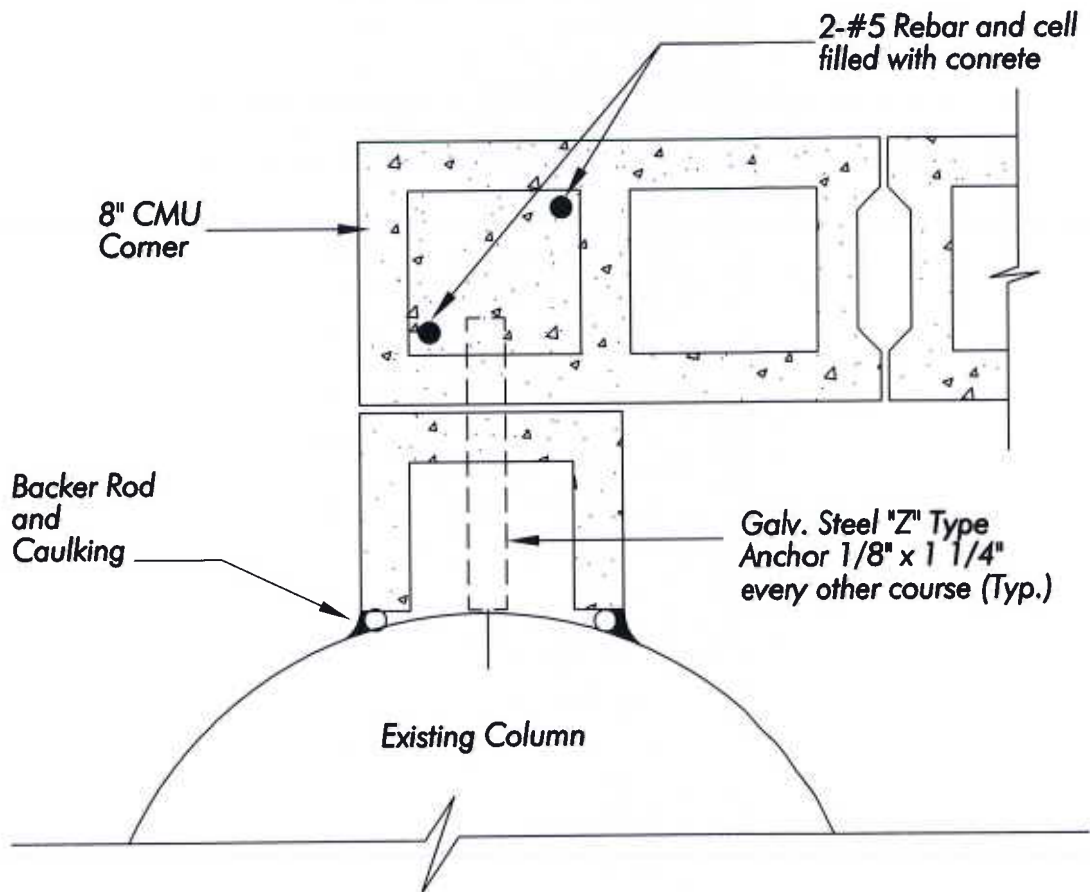
DATE: NOV 2016 SCALE: AS NOTED FN:

APPRVD: P. OSBORN DRN: M. CUMMING

(DWG. NO.)

SK-W2

SHEET 2 OF 6



DETAIL OF CORNER AT COLUMN

Construction Standards



boston planning & development agency

ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION OF BOSTON
 22 DRYDOCK AVENUE, SUITE 201, BOSTON, MASSACHUSETTS 02210
 (617) 722-4300

STANDARD DETAIL

12 CHANNEL STREET

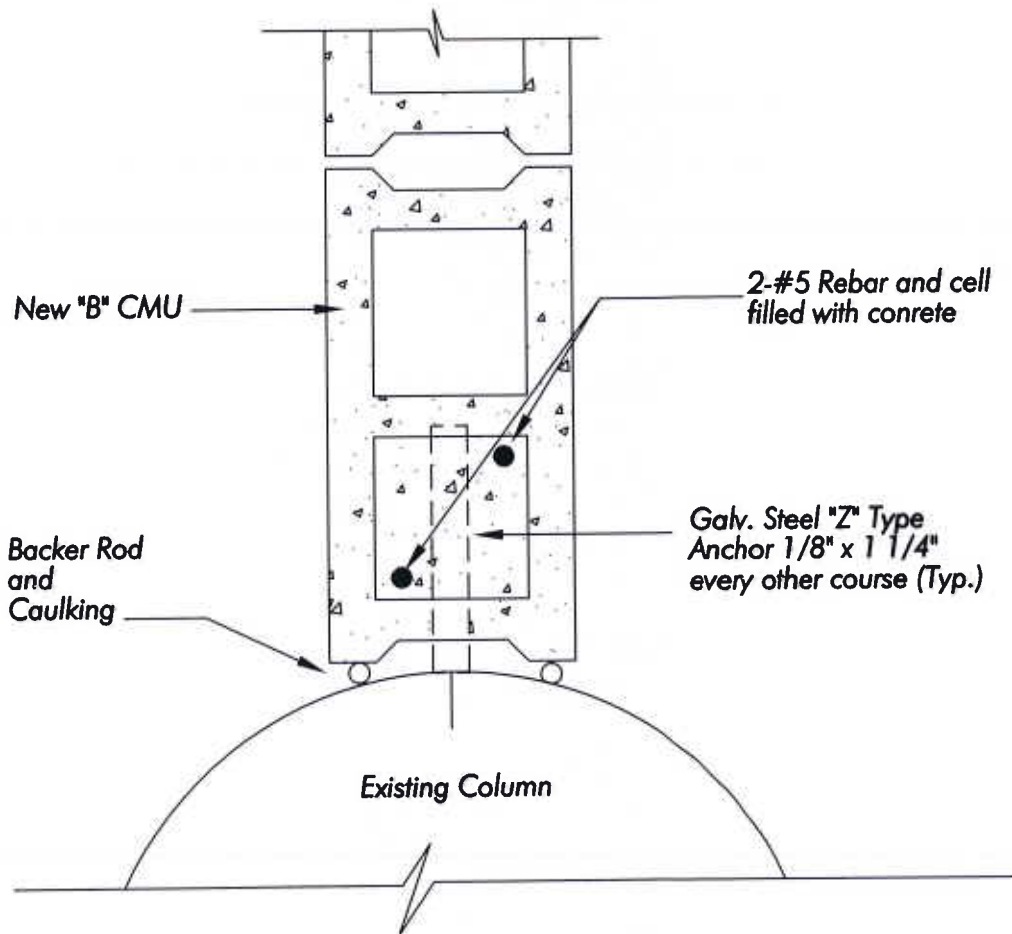
DATE: NOV 2016 SCALE: AS NOTED FN:

APPRVD: P. OSBORN DRN: M. CUMMING

DWG. NO.

SK-W3

SHEET 3 OF 6



DETAIL OF WALL AT COLUMN

Construction Standards



boston planning & development agency

ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION OF BOSTON
 22 DRYDOCK AVENUE, SUITE 201, BOSTON, MASSACHUSETTS 02210
 (617) 722-4300

STANDARD DETAIL

12 CHANNEL STREET

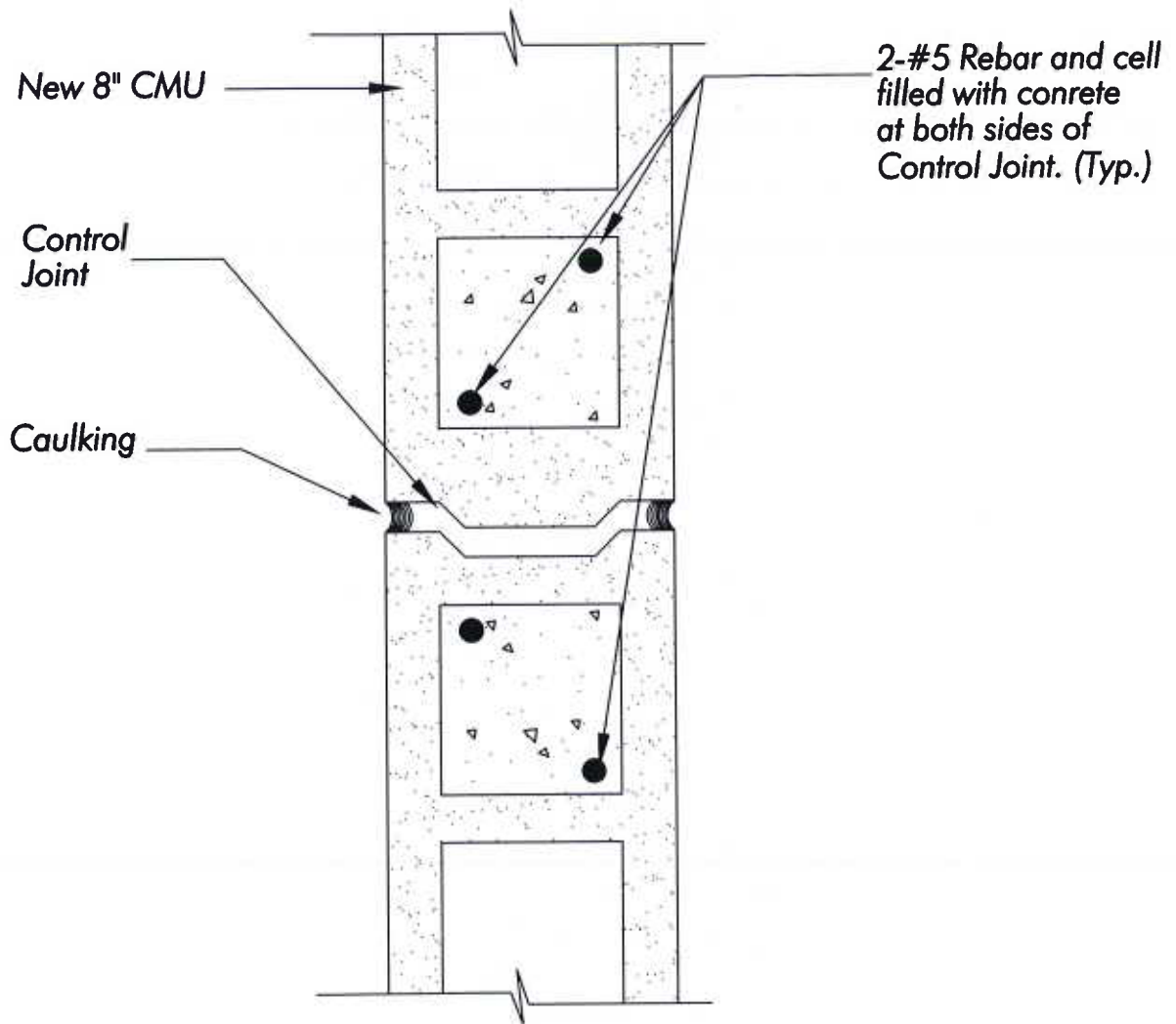
UNCL. INT.

SK-W4

DATE: NOV 2016	SCALE: AS NOTED	FN:
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APPRVD: P. OSBORN	DRN: M. CUMMING
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SHEET 4 OF 6



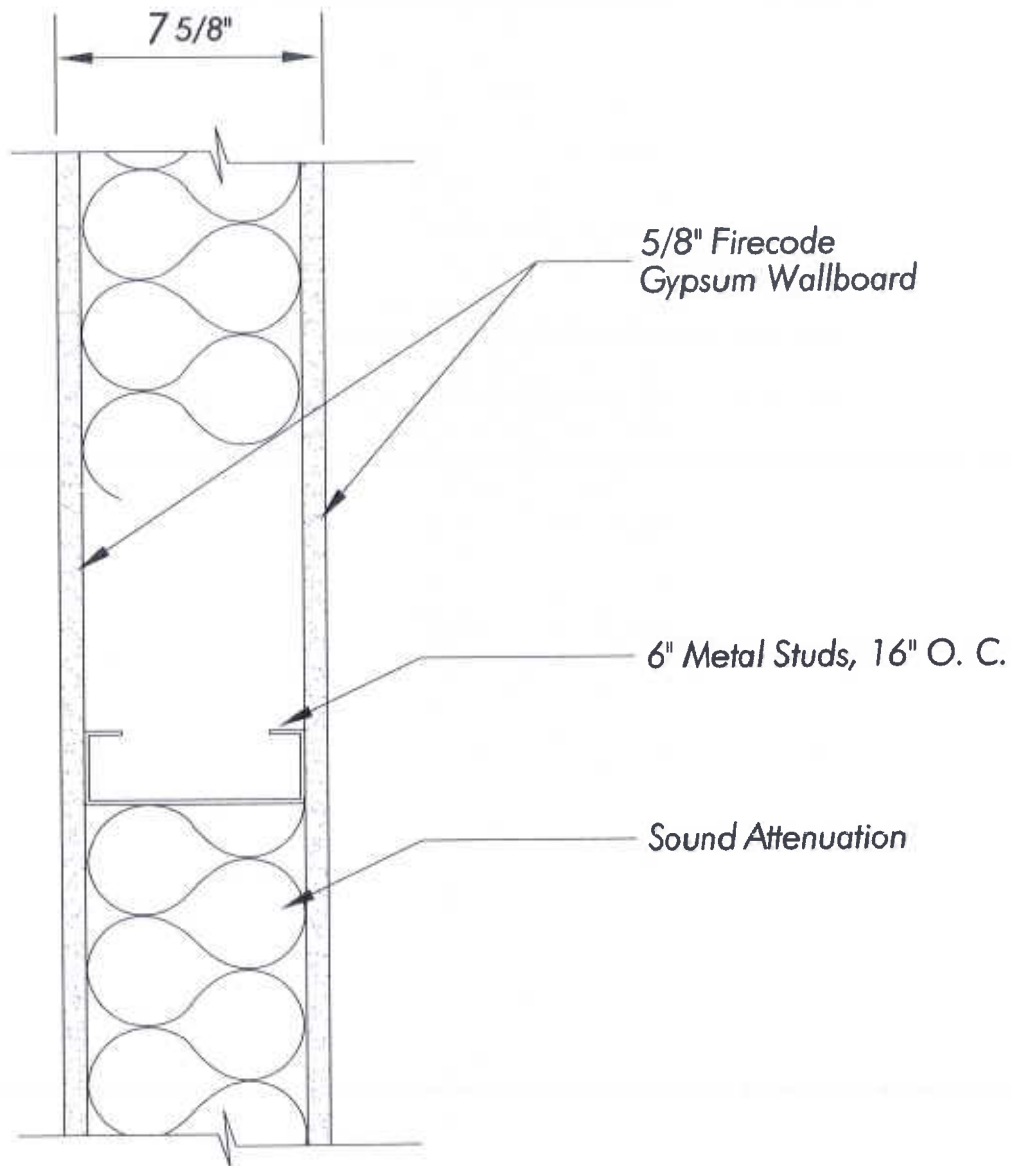
PLAN AT CONTROL JOINT

Construction Standards



ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION OF BOSTON
 22 DRYDOCK AVENUE, SUITE 201, BOSTON, MASSACHUSETTS 02210
 (617) 722-4300

STANDARD DETAIL		<small>DWG. NO.</small>
12 CHANNEL STREET		SK-W5
<small>DATE:</small> NOV 2016	<small>SCALE:</small> AS NOTED	<small>FN:</small>
<small>APPRVD:</small> P. OSBORN	<small>DRN:</small> M. CUMMING	SHEET 5 OF 6



**INTERIOR PARTITION FOR TYPICAL
UPPER FLOOR TENANT COORIDOR
1 HOUR RATED**

Construction Standards



**boston planning &
development agency**

ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION OF BOSTON
22 DRYDOCK AVENUE, SUITE 201, BOSTON, MASSACHUSETTS 02210
(617) 722-4300

STANDARD DETAIL

12 CHANNEL STREET

DATE:
NOV 2016

SCALE:
AS NOTED

FN:

APPRVD:
P. OSBORN

DRN:
M. CUMMING

DWG. NO.

SK-W6

SHEET 6 OF 6

DOORS, WINDOWS, LOUVERS & RAILINGS

SCOPE OF SECTION

1. Exterior hollow metal doors into tenant space.
2. Exterior sectional roll up steel doors.
3. Exterior ground floor infill windows.
4. Exterior upper floor replacement windows.
5. Exterior insulated panels.
6. Exterior louvers.
7. Exterior Railings

OBJECTIVES

1. To provide a consistent appearance and detailing to visually unify 12 Channel St.
2. To establish a consistent level of product quality.
3. To establish a uniform performance criteria.

MATERIAL DESCRIPTION FOR EXTERIOR DOORS

1. Hollow Metal Exterior Doors
 - a. Hollow metal doors shall be 16 gauge form and welded galvanized flush steel sheet.
 - b. Doors shall be, insulated with a polystyrene foam core.
 - c. Frames shall be fully welded 14 gauge cold rolled, pickled, annealed carbon steel.
 - d. Finish shall include 1 coat of zinc primer and 2 coats of alkyd exterior enamel (gloss). Color to be SW6195 (Rock Garden)
2. Sectional Doors
 - a. Doors shall be fully insulated upward acting sectional steel doors, 20 gauge front cover; 24 gauge back cover, 1-5/16" expanded polystyrene board insulated.
 - b. Doors shall be double-glazed with vision panels.
 - c. Doors shall be Series No. 422 as manufactured by Overhead Door Co. or equal by Crawford Doors or Clark Doors.

- d. Finish shall include one coat zinc primer and 2 coats Sherwin Williams exterior enamel gloss. Color to be SW6195 (Rock Garden).

MATERIAL DESCRIPTION FOR WINDOWS

(For window details see attached sketches)

1. Infill Windows – First Floor Only
 - a. Infill window framing system shall be made up of Kawneer 1600 series curtain wall system.
 - b. Finish shall be Anodized Aluminum.
 - c. Glazing shall be 1" thick clear insulating glass, 1h" air space & W glass. Note: Glass shall be tempered on ground floor where required by code.
2. Existing Wood Windows – First Floor Only
 - a. Existing wood windows shall be painted SW6206 (Oyster Bay) to match existing.
3. Replacement Windows – Floors 2 thru 9
 - b. Replacement windows shall be made up of EFCO 590 Series Heavy Commercial Projected Replication Windows 2-7/16".
 - c. Finish shall be Anodized Aluminum.
 - d. Glazing shall be 1" thick clear insulating glass as set forth in ANSI/AAMA 101. Exterior lite to be 1/4 " annealed PPG Solarban 60 low-e glass.
 - e. Operable windows to be awning windows.

WINDOW REPLACEMENT STANDARDS

NOTES:

Introduction

- A. These window standards are to be utilized by current and future EDIC tenants within the building known as 12 Channel Street or Building 32. This window standard established by the BRA/EDIC is intended to insure that the installation and quality of product purchased by Tenants conform to a Building Standard. It is also necessary, that all windows installed throughout the building have continuity in design, visual appearance, and discrepancies between varying window installments are not evident. The BRA/EDIC's goal is to maintain the architectural and structural integrity of the building by requiring the size, shape, proportions and finish be identical with no visual discrepancy.
- B. The BRA/EDIC reserves the right to refuse approval of any window submission, which fails to meet these goals. No windows will be installed without prior written approval of the BRA/EDIC.
- C. All requirements listed herein and all applicable codes and/or testing agency whichever is greater shall govern the quality of windows.

General

- A. All work performed must be performed according to the requirements set herein, and according to the best standards and practices of the trades involved. All installation methods shall comply with all City, State and federal statues and codes, including the Massachusetts State Building Code and subsequent Energy Code.
- B. The Tenant shall provide professionally stamped structural engineered design calculations and letter with shop drawings confirming the window is designed to withstand the design pressures. See structural engineer's requirements under Submittals.
- C. Do not commence removal of existing window units until new windows have been delivered to the site. The BRA/EDIC shall approve any temporary coverings and other protection against weather damage.
- D. The Tenant shall install one (1) complete window unit into the existing building for the BRA/EDIC's visual approval. The window shall be manufactured as approved by the BRA/EDIC, size shall be approximately size 18' x 5'-6" and installed per approved specification and complete. The purpose of this inspection is to confirm that the window unit has been manufactured and installed in accordance with the approved submittals and achieves the BRA/EDIC's goal for continuity throughout the building.

- E. Make all necessary arrangements with the appropriate municipal authorities, and obtain all required approvals, before the operation of any cranes, placing any exterior barriers, signs, warning flashers, and similar items required to protect persons and property. Furnish, erect, and maintain in a safe condition, for the duration of the work, all temporary protection and warning items required to protect persons and property from accident, due to the operations required for the installation.
- F. After the removal of each existing window, blocking and other related items, thoroughly clean existing surfaces, remove all remaining existing caulking material therefrom, and scrape surfaces and proper abatement, if required, shall be executed. Paint all areas of the rough opening where required before installing new windows.
- G. All contractors engaged on the project must be fully insured (bodily injury, property damage, Workmen's Compensation, Builders All Risk, etc.) in accordance with the lease and/or the Tenant Guidelines.
- H. All construction methods and materials and/or improvements must conform to the Tenant Guidelines and/or lease conditions and shall be in accordance with the Latest editions of the Massachusetts State Building Code, City of Boston Building Code, Life Safety Code, OSHA, Underwriters Laboratory, the American Architectural Manufacturers Association and the Manufacturer's Standard for Quality Control, Installation and Operation.
- I. In accordance with EDIC Construction guidelines all proposed plans must be stamped by an Architect or Engineer registered in the Commonwealth of Massachusetts.
- J. It is expected that all contractors employed by the Tenant will work in harmony with other contractors currently working in the Raymond L. Flynn Marine Park and will follow the Boston Residents Job Policy for the construction trades employed.

Windows Requirements:

- A. The general appearance of the exterior of the window shall be a low profile or amount of protrusion from the face of the glazing shall be minimal and shall replicate the profile of the existing steel window system. The mullions shall have the same proportionate division on center as the existing steel system and shall maintain a uniform standard and division between structural frame and structural mullion.
- B. Aluminum windows shall conform to the Requirements of AAMA 101-97 classification HC 40 for "Heavy Commercial," AAMA 101-93 will not be acceptable.
- C. All principal frame, sash or fixed window sections shall be of special extruded aluminum shapes produced from Architectural Grade homogenized aluminum primary billet.

- D. Materials: Main frame and sash members shall be aluminum alloy 6063-T6. All extrusions shall have a nominal wall thickness of 0.125 inches, minimum.
- E. Thermal Break: The thermal break shall provide a continuous uninterrupted thermal break around the entire perimeter of the frame and all sash and shall not be bridged by metal conductors at any point.
- F. Thermal Barrier: The thermal barrier shall be poured-in-place, two part polyurethane. A non-structural thermal barrier is will not be acceptable.
- G. Weatherstripping: All weatherstripping shall be as recommended by the Manufacturer or approved equal.
- H. Operable Sash: The operable sash shall be of awning style and shall project out and shall pivot from the upper frame, the latching mechanism shall be at the lower frame. Provide adjustable opening restrictor devices for all operable sashes.
- I. Glazing: Exterior sash shall be factory glazed with 0.250 inch float glass. Interior sash shall be factory glazed with 0.250 inch float glass. All factory glazed units shall be wet glazed with a silicone backbed compound and an extruded aluminum glazing bead with vinyl gasket. The glazing shall be low E in accordance with the Massachusetts Energy Code.
- J. Finish: Clean all surfaces and remove surface blemishes, scratches, burrs, and tool work. Substrate preparation shall include cleaning, degreasing and chromate conversion coating. Finish shall be Anodized Aluminum.
- K. Muntins: Muntins shall be surface applied muntin bars. The muntins shall have similar construction and same material and finish as the frames. Beveled at exterior surface.
- L. Bug Screens at the interior side of windows (Optional): Screen frame shall be extruded 6063-T6 aluminum alloy frames, with mitered or coped joints and concealed mechanical fasteners. Finish frame to match window units. Provide removable PVC spline-anchor concealing edge of screen frame. Provide frames covering all operable sash. Screen fabric shall be 18/18 mesh, 0.009 inch diameter coated aluminum wire complying with FSRR-w-365 type VII.
- M. Latch Poles: Provide a pole operated head latch which locks automatically when upper sash is in fully closed position. All poles shall match the specified hardware finish. The poles shall be 6'-0" long poles (one per room) with hooking devices compatible with locking hardware and with wall mounted pole holders.

Additional Requirements

- A. Aluminum window units above shall be factory assembled with windows separated by 1/4" minimum thermal barrier. The windows shall be low profile to replicate the existing steel window system with the least sight lines as required by the structural engineers report, with surfaced applied muntin bar where shown, as manufactured by EFCO Corporation, Win Vent, Custom Window Company, Graham Window Company, Moduline Window Systems, Wausau Window systems or equal.
- B. Empty cavities behind the window frame shall be insulated with unfaced glass fiber batt insulation and cellulose insulation by Ownes- Coming Fiberglass Corp., Certainteed, Manville Company or equal.
- C. Perimeter exterior sealant for joints between metal members furnished hereunder and dissimilar materials shall be a two-part, non-sag, urethane sealant, conforming to Federal Specification TT-S-227E, Type H, in color Aluminum Stone, as manufactured by Tremco, Pecora, Vulkem or equal.
- D. Interior caulking material for joints between metal members furnished hereunder and dissimilar materials shall be Acrylic latex caulking material conforming to the standards set forth in ASTM C 834-76, in color Aluminum Stone, as manufactured by Tremco, Pecora, Vulkem or equal.

Submittals – Required by the Tenant prior to construction:

The following shall be submitted to the BRA/EDIC before construction commences. This submission is required before final written approval will be granted.

A. Structural Engineer Report:

- 1. A letter and calculations from a professional structural engineer registered in the Commonwealth of Massachusetts stating the compliance with the following:
- 2. The design factors regarding positive and negative pressures, on the building including corners, shall be calculated and certify that the Tenant's specified manufacturer's window meets the Unified load Structural tests in accordance with ASTM A331-97. The ASCE 7-88 shall be consulted. The wind speed factor used for these calculations shall be 110 mph. The Nature of Occupancy of the building is category I. Location is less than 100 miles from the Hurricane Oceanline.
- 3. Verify that the Tenant's specified fasteners and fastener spacing for the window installation meet the structural loading required. Fasteners shall be of sufficient strength to perform the function for which they are used. Fasteners shall be concealed as far as practical and heads shall be tamper-proof.

4. All requirements shall be submitted to the BRA/EDIC bearing the signature and professional stamp of the Tenant's structural engineer.

B. Other:

1. Final design appearance of the window proportions shall be submitted, including an elevation of the window or windows being replaced and a sections vertically and horizontally through the specified window.
2. Prior to the start of construction, all applicable permits must be obtained and copies of the permits submitted to BRA/EDIC at 22 Drydock Avenue, Suite 201, Boston, MA 02210.

C. Performance of Windows required by the Manufacturer:

The intent of this section is to establish a level of quality for windows and related items which will save energy, reduces sound transmission to the specified level, and provide the lowest cost to the Tenant over an extended life cycle. While this establishes a minimum performance standard, the specified requirements are in no way intended to restrict product designs, which will equal or offer superior performance to that which is specified herein.

D. Copies of Certifications:

1. Written and signed certification by an officer of the window manufacturer, from the window manufacturer stating that the windows, and all related items proposed to be furnished hereunder meet or exceed the materials and performance requirements specified and that the units and materials being proposed are identical to those tested by an AAMA Certified Laboratory in accordance with AAMA 101-97 Testing (AAMA 101-93 will not be accepted).
2. Copies of complete certified test reports on the windows to be furnished hereunder, performed by an independent and AAMA certified testing laboratory, verifying that the proposed windows and related items meet or exceed all performance requirements specified herein. Test results shall include the name and location of the testing laboratory; the date(s) on which the tests were performed; specific descriptions of the window units used in the tests; the various types of tests performed, the criteria and actual data for such tests, in accordance with ASTM, AAMA and other industry standards; and all other information as necessary to verify compliance with the specified requirements.
3. The Manufacturer shall also submit evidence of the Tenant's specified window shall pass the following performance tests.
 - a) Uniform Load Structural Tests: This test shall be conducted in accordance with ASTM E331-97 for an exterior load specified by the Structural Engineer's report. At the conclusion of these tests, there shall be no breakage or failure to any part of the unit.

- b) Window Thermal Performance: When tested in accordance with AAMA-1503.1-98 on an exact size window size of 4'-0" x 6'-0", the thermal transmittance due to conduction (Uc) shall not exceed 0.58 when all sash are glazed with 1/4" - 1/4" clear monolithic glass.
- c) Condensation Resistance Factor (CRF): When tested in accordance with AAMA-1503.1-98 on an exact size window size of 4'-0" x 6'-0", the CRF shall not be less than 62 when all sash are glazed with 1/4" - 1/4" clear monolithic glass.
- d) Air Infiltration Test: Air infiltration shall not exceed 0.20 cfm per foot of sash perimeter with the sash in the closed and locked position under static pressure drop of 1.57 psf (equivalent to 25 mph wind velocity) when tested in accordance with ASTM-E283-97 on an exact window size of 5'-0" x 8'-0".
- e) Water Resistance Test: The glazed unit shall be mounted in its vertical position continuously supported around the outside perimeter. With the interior sash in a fully closed and locked position, and the exterior sash open, the window unit shall be subjected to Water Resistance Test in accordance with ASTM E547.97 on an exact window size of 5'-0" x 8'-0". When a positive static pressure of 8 pounds per square foot has been stabilized, 5 gallons of water per hour per square foot of window area shall be applied to the exterior face of the window for a period of 15 minutes. The same test with all four sash closed resulting in 12 pounds per square foot. No water shall pass the interior face of the window frame or penetrate into the area that would represent wall construction surrounding an installed window.
- f) Sound Transmission Loss Test: One complete window unit of a typical size and design to be used on this project and preglazed as specified herein, with 1/4" float glass in exterior sash and 1/4" float glass in interior sash, shall be tested for determination of its Sound Transmission Class (STC). With the interior and exterior sash closed and locked, sound transmission loss measurement shall be performed in accordance with the requirements of ASTM E90 and ASTM E413 current editions. The STC shall be not less than 32. No test shall be more than 3 years old.

E. The manufacturer of the windows and related items shall furnish adequate evidence that the company is, and has been for not less than five consecutive years, regularly engaged in the manufacture of the type and quality of windows specified herein; and shall submit a listing of at least three (3) projects where said type and quality windows have been in place for at least two years.

F. The installer of the windows shall furnish adequate evidence that the company is, and has been for not less than five consecutive years, regularly engaged in the installation of the type and quality of windows specified herein; and shall submit a listing of at least three (3) projects where said type and quality windows have been in place for at least two years.

- G. Literature: Manufacturer's product data sheets for windows, glass, sealant, factory finish system, and other manufactured materials in conjunction with the windows, including cleaning and maintenance procedures for pre-finished metal work, and glass.
- H. Shop Drawings: Shop Drawings shall include complete schedule of new aluminum windows, louver, and related items to be furnished hereunder. These drawings shall establish window identification and location and must show elevation of units, large size sections, thickness and gauges of metal, fastenings, part numbers and locations, type of finish, size, and spacing of anchors, method of glazing, insulation, method of caulking and sealing, mullion detail, hardware details and complete installation details, where applicable, coordinated to the actual condition and field dimensions of existing openings showing methods of anchorage and sealing to surrounding work.

Submittals – Required by the Tenant at the end of construction:

- A. Submit accurate As-Builts upon completion of the construction project. As-Built Drawings shall include the installation method and locations of window replacement. The submission shall also consist of a full set of reproducible vellums bearing a professional stamp of the architect and/or engineer registered in the Commonwealth of Massachusetts, dated and signed; also submit Autocad compatible electronic files.
- B. Copies of Warranties:
 - 1. Aluminum window manufacturer's written and signed warranty covering defects in workmanship and materials for a period of ten (10) years from the date of completion and acceptance of the Tenant. The warranty shall state that all parts used in the manufacture of the windows as herein specified for this project shall be available, for the ten year warranty period and that a number of replacement parts shall be kept in stock to facilitate any necessary repair in a timely manner. Repairs shall be determined in the required annual inspection by the manufacturer within the first 30 days after the end of the year as guaranteed in the warranty. A total minimum of ten inspections shall be performed. The warranty shall further state that the manufacturer will provide all labor required at the job site to repair and/or replace defective materials as outlined herein at no cost to the Tenant.
- C. Aluminum finish manufacturer's written guarantee against color fading, chipping, peeling, cracking, blistering or other defects in the finish material for a period of (10) years commencing on the date of completion and acceptance of the Contract.
- D. Contractors Submittals:
 - 1. Contractor's written and signed warranty covering the installation for a period of two (2) years from the date of completion and acceptance of the Tenant. This warranty shall be covered by a surety bond, acceptable to the Tenant, and is intended to insure that the installation meets the standards for the two year period, and any corrective work to maintain the performance in the accord shall be performed by the Contractor at no additional cost to the Tenant.

END OF STANDARDS

MATERIAL DESCRIPTION FOR
INSULATED PANELS

Insulated metal panels shall be #28 thick 28 gauge porcelain enamel faced with 1/8" hard board stabilizer, polyurethane core, and 1/8" hard board back with 25 gauge galvanized steel painted face panel. Face finish color shall be anodized aluminum.

MATERIAL DESCRIPTION
FOR LOUVERS

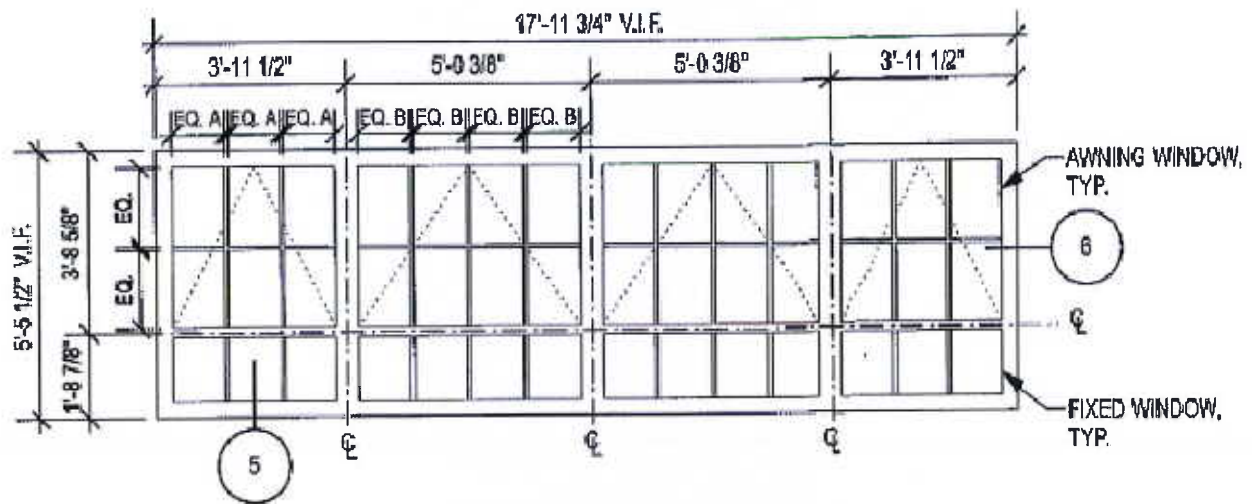
(For approved louver locations see detail)

- a. Exterior louvers shall be 4" deep, horizontal drainable louver as manufactured by Construction Specialties, Inc. 01 equal.
- b. Frame and blades shall be extruded aluminum, .081" thick for fixed blades and .125" thick for operating blades.
- c. Provide insulated backup panels at all louvers, finish to match louvers.
- d. Provide 16 x 16 mesh aluminum insect screen secured within an independent and removable 10-gauge extruded aluminum frames.
- e. Louvers attached to mechanical ducts shall have 1-2" square mesh, 14 gauge steel cloth, galvanized, secured to an independent and removable 10-gauge extruded aluminum frame.
- f. Louvers shall be anodized aluminum.

FINISH FOR STEEL
RAILINGS

The finish for all steel railings shall include one coat zinc primer and 2 coats Sherwin Williams exterior enamel gloss. Color to be SW 6195 (Rock Garden).

WINDOW AND LOUVER DETAILS



1 TYP. EXTERIOR WINDOW ELEVATION - FLOORS 2-9

GENERAL NOTES:

1. DIMENSION NOTES ARE FOR INFORMATION ONLY. ALL MEASUREMENTS TO BE VERIFIED IN THE FIELD.
2. IT IS THE INTENT OF THE TENANT GUIDELINES TO ESTABLISH MINIMUM STANDARDS FOR WINDOW SYSTEMS AND LOUVERS. THE PURPOSE IS TO PROVIDE UNIFORMITY AND STANDARDIZATION OF ALL FIXTURES AND APPURTENANCES THAT AFFECT THE EXTERIOR BUILDING APPEARANCE. AS WITH ALL BUILDING CHANGES, PLANS, DETAILS, AND SPECIFICATIONS MUST BE APPROVED BY EDIC PRIOR TO COMMENCEMENT OF WORK.
3. REPLACEMENT OF WINDOWS AND LOUVERS LOCATED ON FLOORS 2-9 ARE COVERED IN THE WINDOW REPLACEMENT STANDARDS AND REQUIRED SUBMISSIONS FOR THE 12 CHANNEL STREET BUILDING IN THE BMIP. SEE SKA1-8 FOR ADDITIONAL INFORMATION.
4. THE WINDOW UNIT SHOWN ABOVE IS ONE OF SEVERAL WINDOW TYPES FOUND AT 12 CHANNEL STREET. THIS PARTICULAR WINDOW UNIT HAS 4 OPERABLE SASHES. NOT ALL WINDOWS HAVE BEEN DOCUMENTED.
5. EDIC DOES NOT GUARANTEE WATER-TIGHT INTEGRITY OF THE SPACES DUE TO THE AGE AND CONDITION OF EXISTING WINDOW AND LOUVER UNITS. MODERNIZATION, MODIFICATION, AND COMPLETE REPLACEMENT OF WINDOW AND LOUVER UNITS IS ENCOURAGED WITHIN THE ESTABLISHED TENANT GUIDELINES.

Construction Standards



boston planning & development agency

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 22 DRYDOCK AVENUE, SUITE 201, BOSTON, MASSACHUSETTS 02210
 (617) 722-4300

STANDARD DETAIL

12 CHANNEL STREET

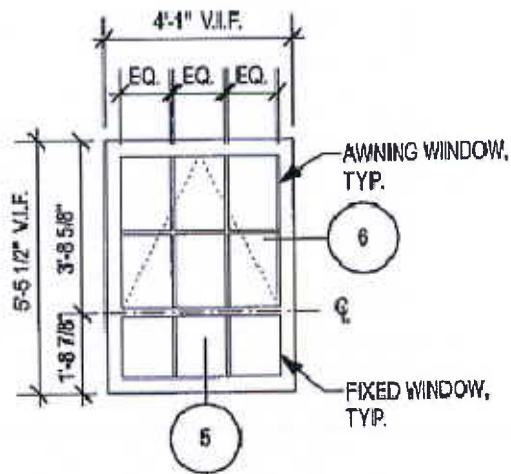
DATE: NOV 2016 SCALE: AS NOTED FN:

APPRVD: P. OSBORN DRN: M. CUMMING

DWG. NO.

SK-A1

SHEET 1 OF 8



2 TYP. EXTERIOR SINGLE WINDOW ELEVATION - FLOORS 2-9

GENERAL NOTES:

1. DIMENSION NOTES ARE FOR INFORMATION ONLY. ALL MEASUREMENTS TO BE VERIFIED IN THE FIELD.
2. IT IS THE INTENT OF THE TENANT GUIDELINES TO ESTABLISH MINIMUM STANDARDS FOR WINDOW SYSTEMS AND LOUVERS. THE PURPOSE IS TO PROVIDE UNIFORMITY AND STANDARDIZATION OF ALL FIXTURES AND APPURTENANCES THAT AFFECT THE EXTERIOR BUILDING APPEARANCE. AS WITH ALL BUILDING CHANGES, PLANS, DETAILS, AND SPECIFICATIONS MUST BE APPROVED BY EDIC PRIOR TO COMMENCEMENT OF WORK.
3. REPLACEMENT OF WINDOWS AND LOUVERS LOCATED ON FLOORS 2-9 ARE COVERED IN THE WINDOW REPLACEMENT STANDARDS AND REQUIRED SUBMISSIONS FOR THE 12 CHANNEL STREET BUILDING IN THE BMIP. SEE SKA1-8 FOR ADDITIONAL INFORMATION.
4. THE WINDOW UNIT SHOWN ABOVE IS ONE OF SEVERAL WINDOW TYPES FOUND AT 12 CHANNEL STREET. THIS PARTICULAR WINDOW UNIT HAS 1 OPERABLE SASH. NOT ALL WINDOWS HAVE BEEN DOCUMENTED.
5. EDIC DOES NOT GUARANTEE WATER-TIGHT INTEGRITY OF THE SPACES DUE TO THE AGE AND CONDITION OF EXISTING WINDOW AND LOUVER UNITS. MODERNIZATION, MODIFICATION, AND COMPLETE REPLACEMENT OF WINDOW AND LOUVER UNITS IS ENCOURAGED WITHIN THE ESTABLISHED TENANT GUIDELINES.

Construction Standards



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STANDARD DETAIL

12 CHANNEL STREET

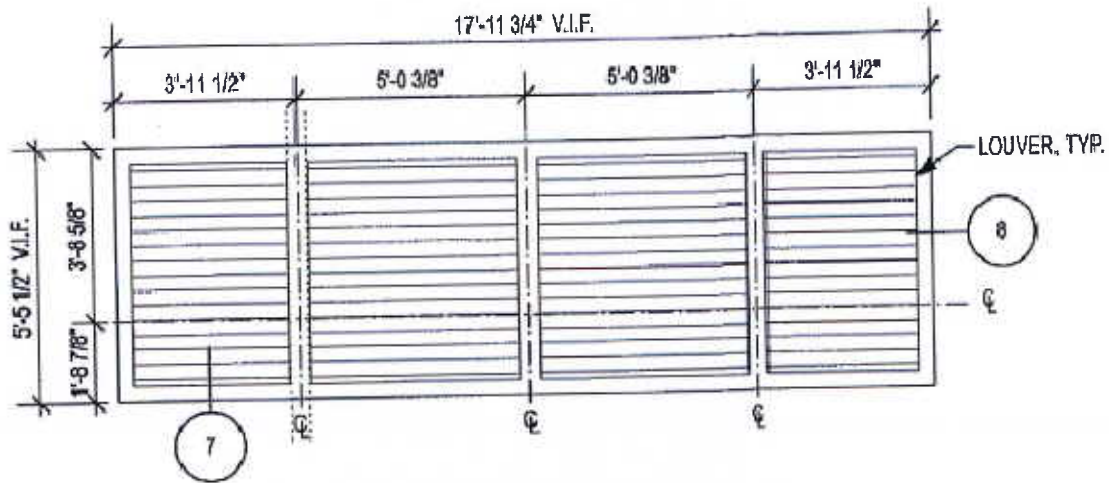
DATE: NOV 2016 SCALE: AS NOTED FN:

APPRVD: P. OSBORN DRN: M. CUMMING

DWG. NO.

SK-A2

SHEET 2 OF 8



3 TYP. EXTERIOR LOUVER ELEVATION - FLOORS 2-9

GENERAL NOTES:

1. DIMENSION NOTES ARE FOR INFORMATION ONLY. ALL MEASUREMENTS TO BE VERIFIED IN THE FIELD.
2. IT IS THE INTENT OF THE TENANT GUIDELINES TO ESTABLISH MINIMUM STANDARDS FOR WINDOW SYSTEMS AND LOUVERS. THE PURPOSE IS TO PROVIDE UNIFORMITY AND STANDARDIZATION OF ALL FIXTURES AND APPURTENANCES THAT AFFECT THE EXTERIOR BUILDING APPEARANCE. AS WITH ALL BUILDING CHANGES, PLANS, DETAILS, AND SPECIFICATIONS MUST BE APPROVED BY EDIC PRIOR TO COMMENCEMENT OF WORK.
3. REPLACEMENT OF WINDOWS AND LOUVERS LOCATED ON FLOORS 2-9 ARE COVERED IN THE WINDOW REPLACEMENT STANDARDS AND REQUIRED SUBMISSIONS FOR THE 12 CHANNEL STREET BUILDING IN THE BMIP. SEE SKA1-8 FOR ADDITIONAL INFORMATION.
4. THE LOUVER UNIT SHOWN ABOVE IS ONE OF SEVERAL LOUVER TYPES FOUND AT 12 CHANNEL STREET. NOT ALL LOUVERS HAVE BEEN DOCUMENTED.
5. EDIC DOES NOT GUARANTEE WATER-TIGHT INTEGRITY OF THE SPACES DUE TO THE AGE AND CONDITION OF EXISTING WINDOW AND LOUVER UNITS. MODERNIZATION, MODIFICATION, AND COMPLETE REPLACEMENT OF WINDOW AND LOUVER UNITS IS ENCOURAGED WITHIN THE ESTABLISHED TENANT GUIDELINES.

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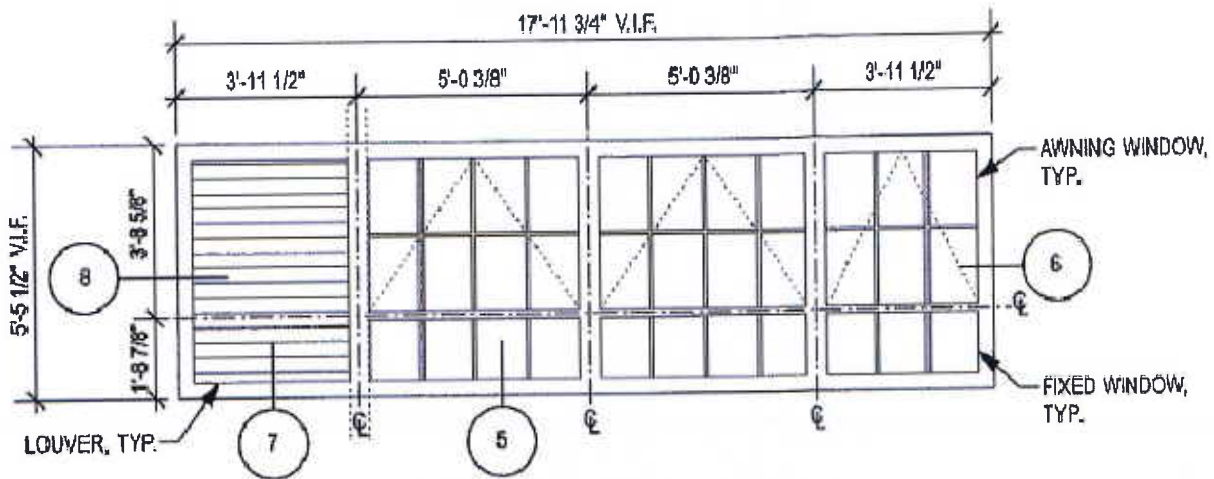
STANDARD DETAIL
 12 CHANNEL STREET

DATE: NOV 2016	SCALE: AS NOTED	FN:
APPRVD: P. OSBORN	DRN: M. CUMMING	

DWG. NO.

SK-A3

SHEET 3 OF 8



4 TYP. EXTERIOR WINDOW/LOUWER ELEVATION - FLOORS 2-9

GENERAL NOTES:

1. DIMENSION NOTES ARE FOR INFORMATION ONLY. ALL MEASUREMENTS TO BE VERIFIED IN THE FIELD.
2. IT IS THE INTENT OF THE TENANT GUIDELINES TO ESTABLISH MINIMUM STANDARDS FOR WINDOW SYSTEMS AND LOUVERS. THE PURPOSE IS TO PROVIDE UNIFORMITY AND STANDARDIZATION OF ALL FIXTURES AND APPURTENANCES THAT AFFECT THE EXTERIOR BUILDING APPEARANCE. AS WITH ALL BUILDING CHANGES, PLANS, DETAILS, AND SPECIFICATIONS MUST BE APPROVED BY EDIC PRIOR TO COMMENCEMENT OF WORK.
3. REPLACEMENT OF WINDOWS AND LOUVERS LOCATED ON FLOORS 2-9 ARE COVERED IN THE WINDOW REPLACEMENT STANDARDS AND REQUIRED SUBMISSIONS FOR THE 12 CHANNEL STREET BUILDING IN THE BMIP. SEE SKA1-8 FOR ADDITIONAL INFORMATION.
4. THE WINDOW UNIT SHOWN ABOVE IS ONE OF SEVERAL WINDOW TYPES FOUND AT 12 CHANNEL STREET. THIS PARTICULAR WINDOW/LOUWER UNIT HAS 3 OPERABLE SASHES. NOT ALL WINDOWS HAVE BEEN DOCUMENTED.
5. EDIC DOES NOT GUARANTEE WATER-TIGHT INTEGRITY OF THE SPACES DUE TO THE AGE AND CONDITION OF EXISTING WINDOW AND LOUWER UNITS. MODERNIZATION, MODIFICATION, AND COMPLETE REPLACEMENT OF WINDOW AND LOUWER UNITS IS ENCOURAGED WITHIN THE ESTABLISHED TENANT GUIDELINES.

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STANDARD DETAIL

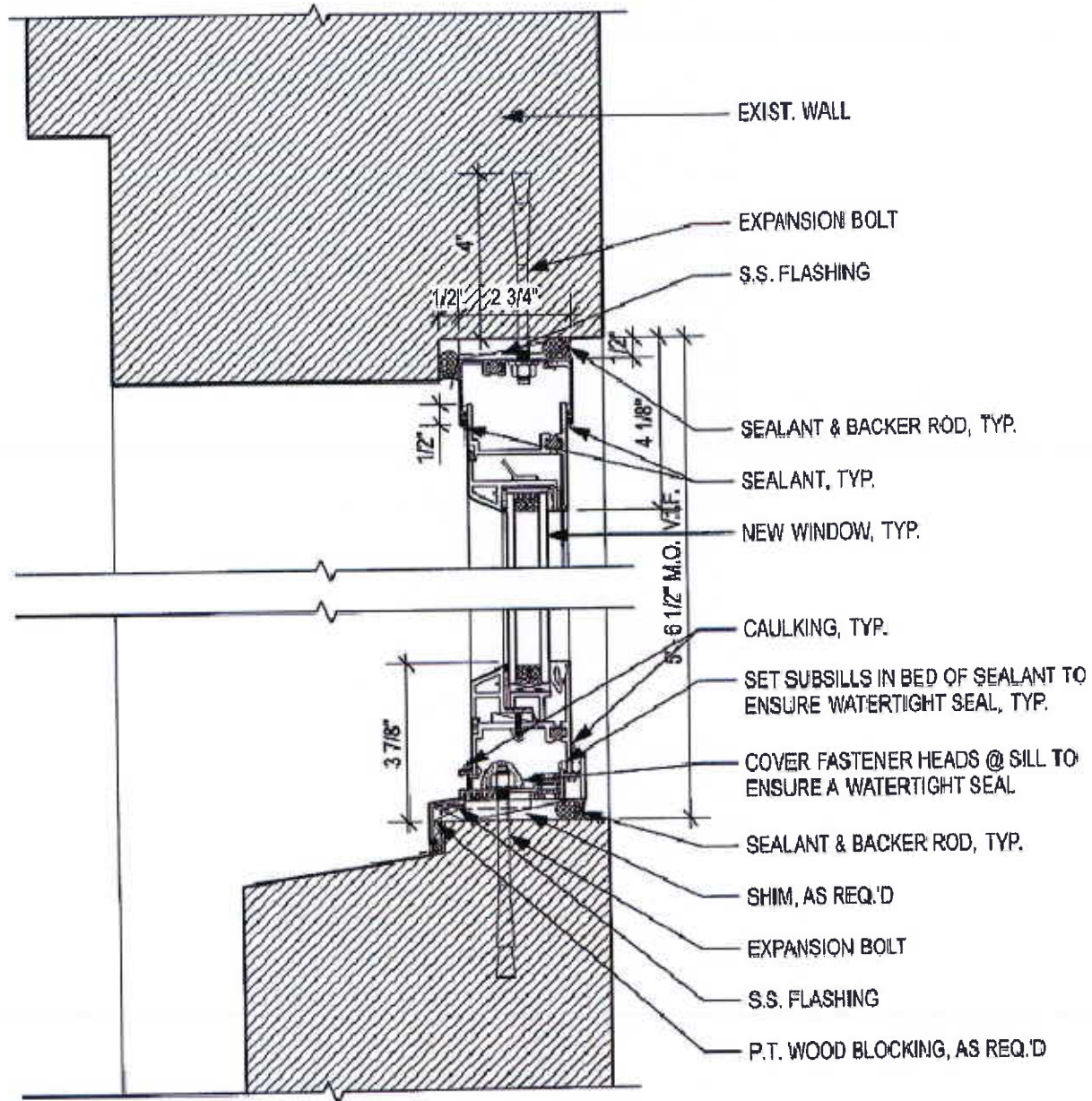
12 CHANNEL STREET

DRW. NO.

SK-A4

DATE: NOV 2016 SCALE: AS NOTED FN:
 APPRVD: P. OSBORN DRN: M. CUMMING

SHEET 4 OF 8



5 TYP. WINDOW HEAD & SILL DETAIL

Construction Standards



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STANDARD DETAIL

12 CHANNEL STREET

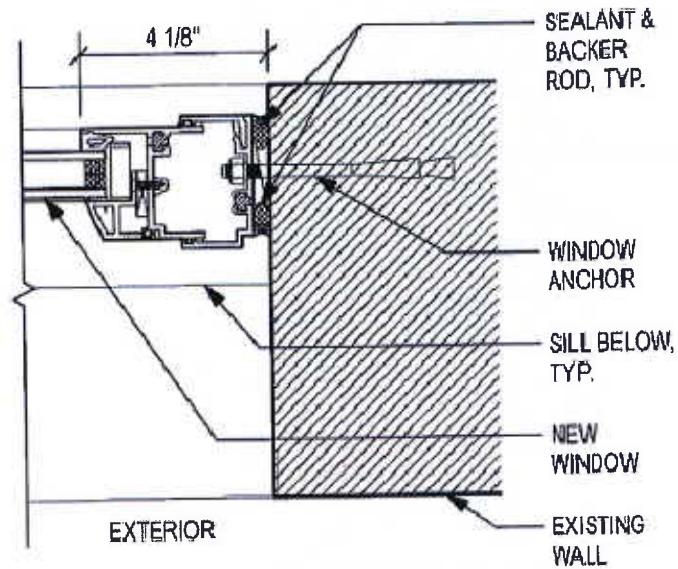
DATE: NOV 2016 SCALE: AS NOTED FN:

APPRVD: P. OSBORN DRN: M. CUMMING

ENGR. NO.

SK-A5

SHEET 5 OF 8



6 TYP. FIXED WINDOW JAMB DETAIL

Construction Standards



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STANDARD DETAIL

12 CHANNEL STREET

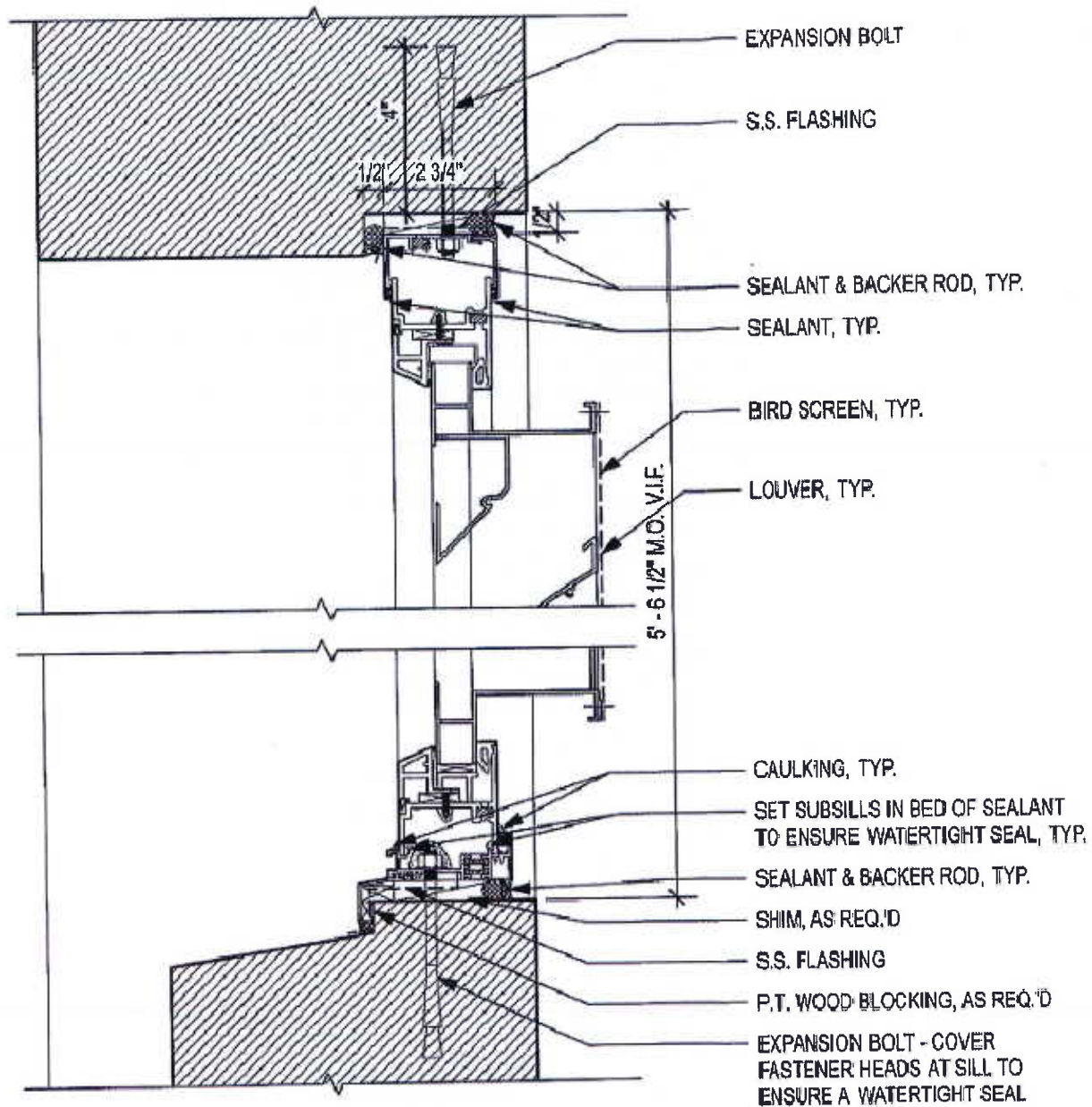
DATE: NOV 2016 SCALE: AS NOTED FN:

APPRVD: P. OSBORN DRN: M. CUMMING

DWG. NO.

SK-A6

SHEET 6 OF 8



7 TYP. LOUVER HEAD & SILL DETAIL

Construction Standards



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STANDARD DETAIL

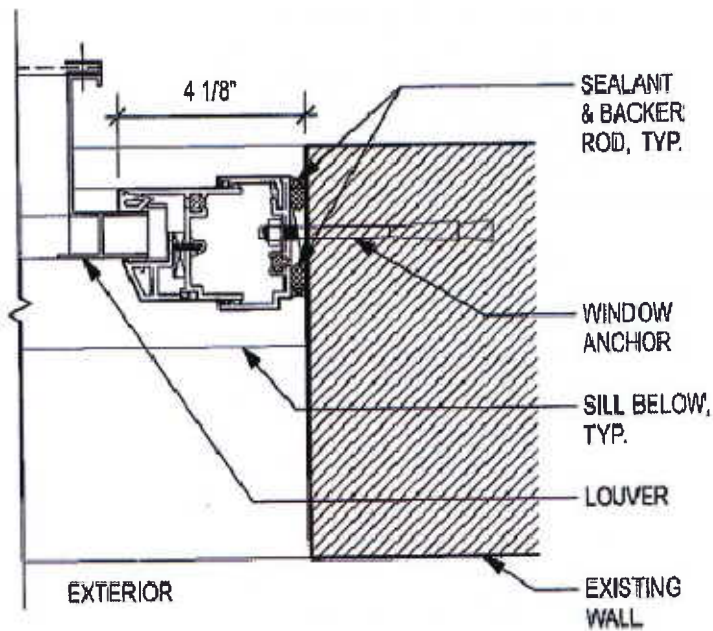
12 CHANNEL STREET

DATE: NOV 2016 SCALE: AS NOTED FN:
 APPRVD: P. OSBORN DRN: M. CLIMMING

ENCL. NO.

SK-A7

SHEET 7 OF 8



8 TYP. LOUVER JAMB DETAIL

Construction Standards



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STANDARD DETAIL

12 CHANNEL STREET

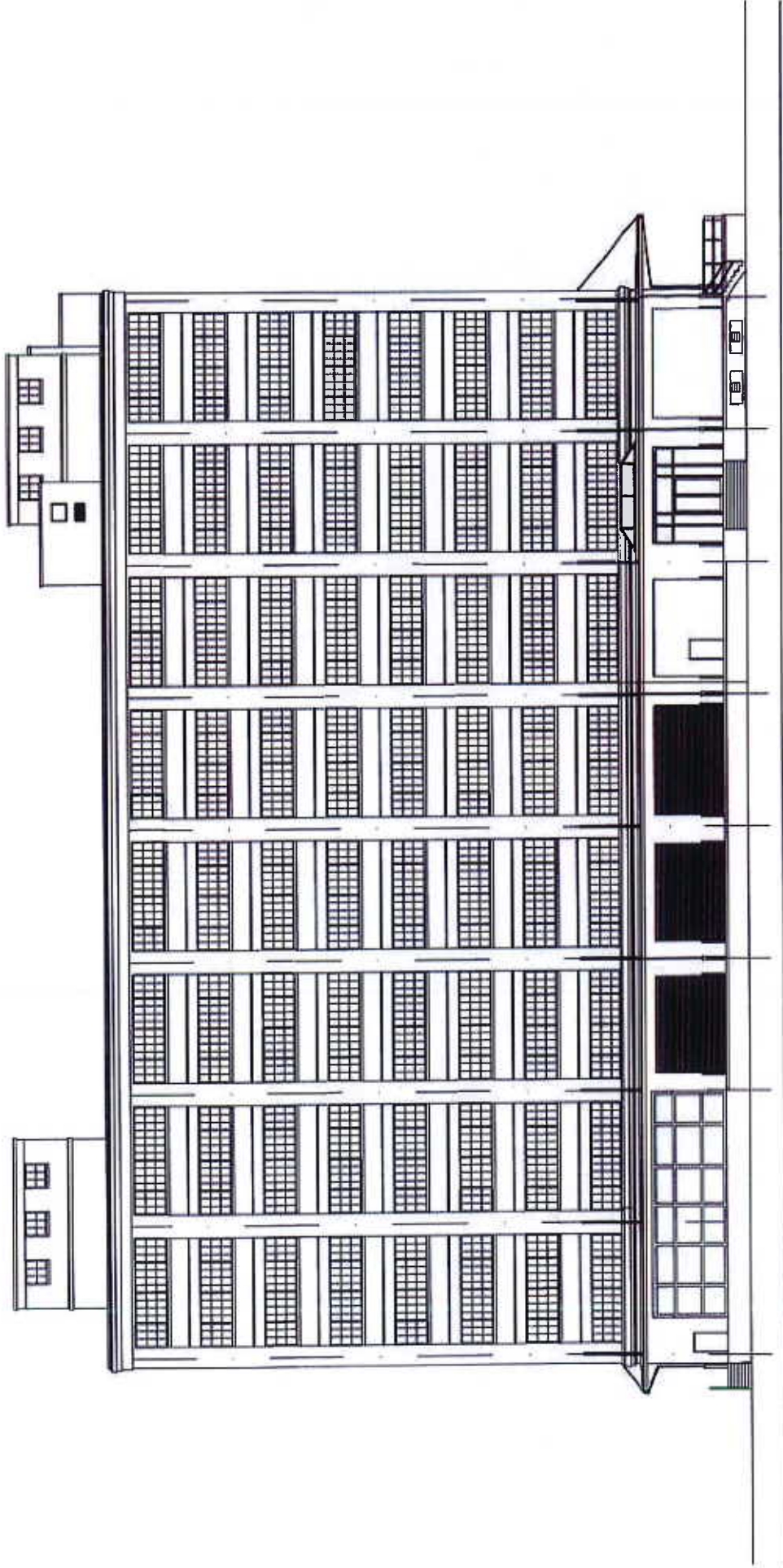
DATE: NOV 2016 SCALE: AS NOTED FN:

APPRVD: P. OSBORN DRN: M. CUMMING

DWG. NO.

SK-A8

SHEET 8 OF 8

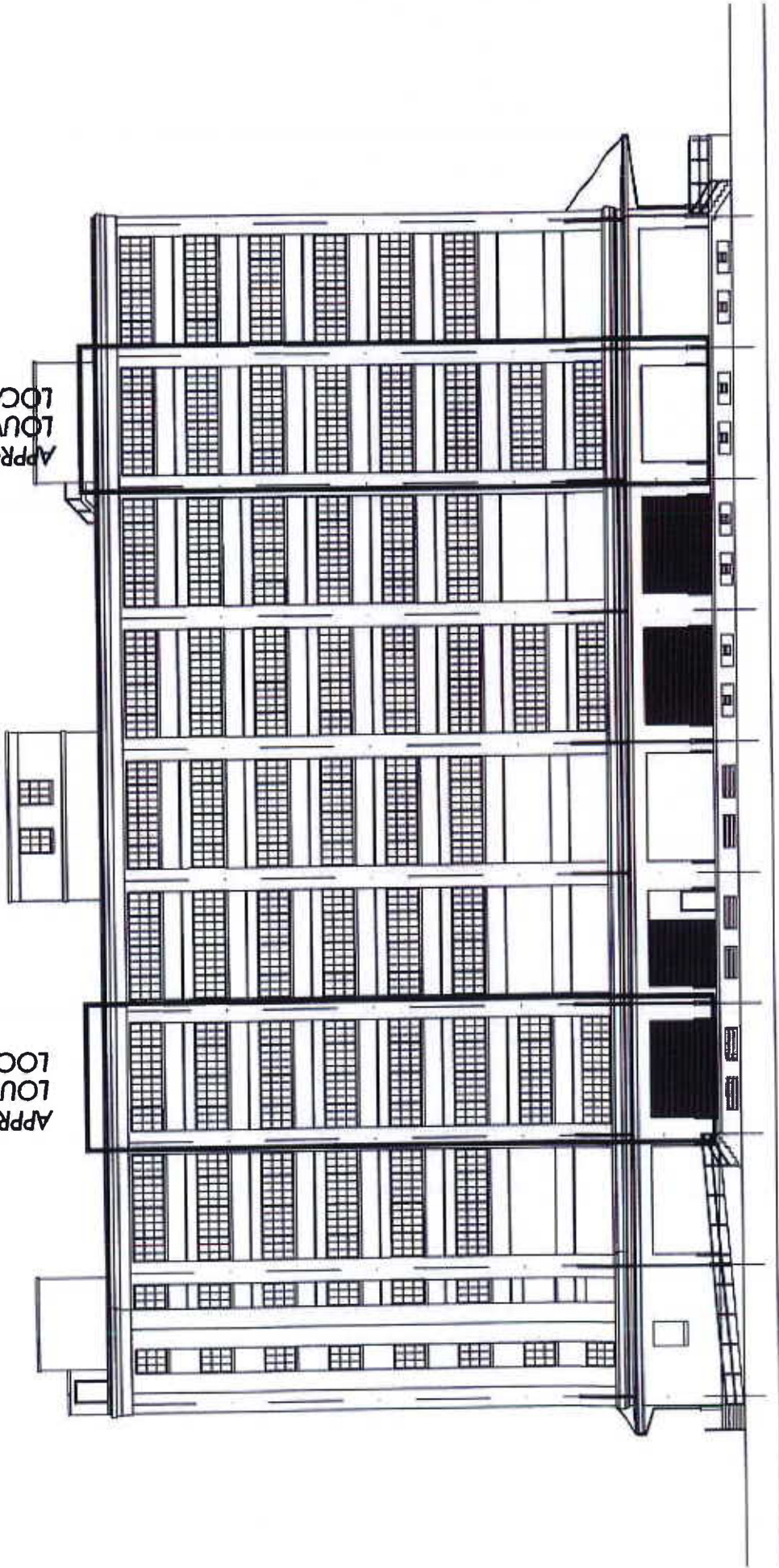


SOUTH ELEVATION

NO LOUVERS ARE ALLOWED ON THE SOUTH SIDE OF THE BUILDING UNLESS OTHERWISE AUTHORIZED BY EDIC OF BOSTON.

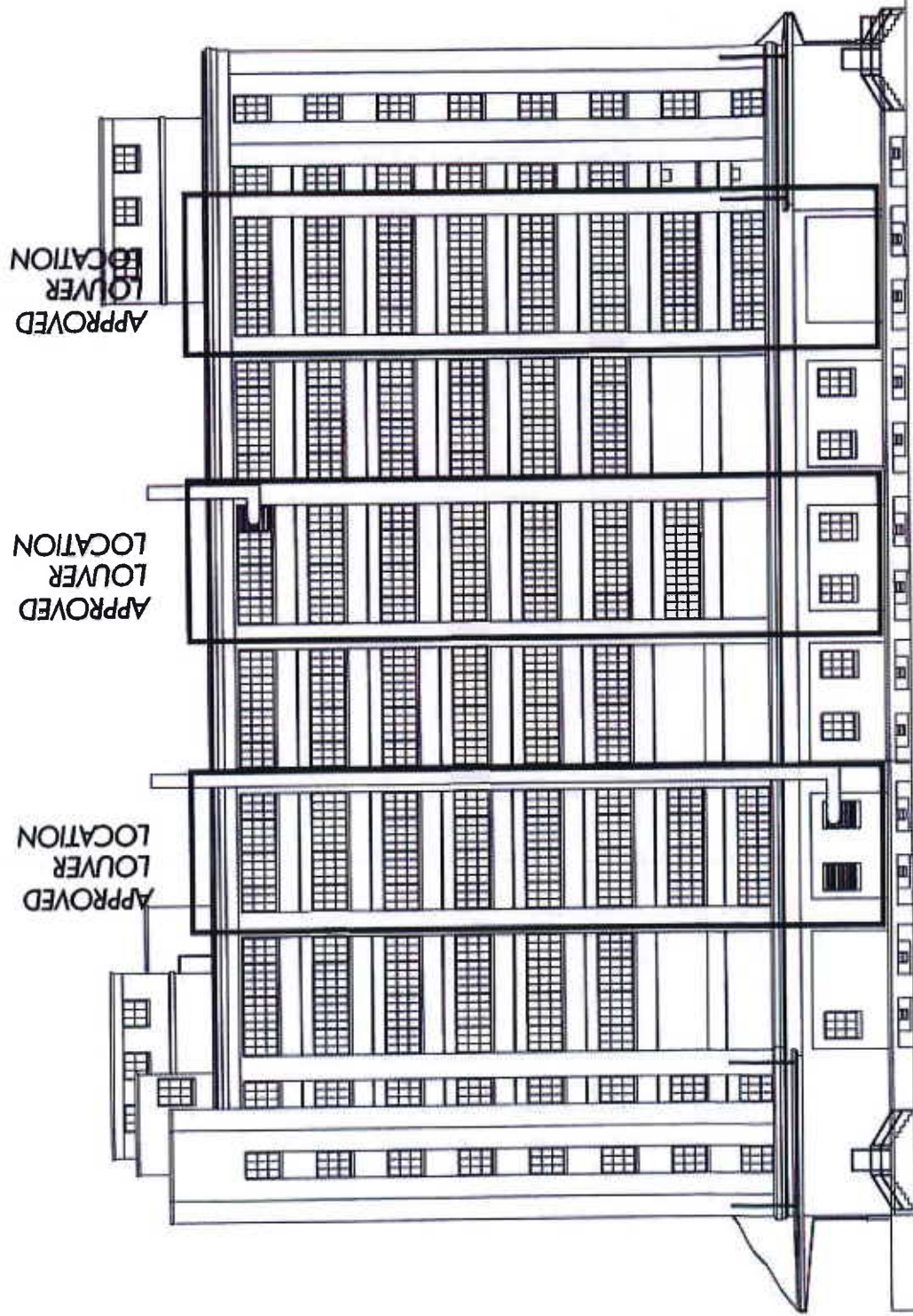
APPROVED
LOUVER
LOCATION

APPROVED
LOUVER
LOCATION



WEST ELEVATION

ALL LOUVER INSTALLATIONS ARE REQUIRED TO BE APPROVED BY EDIC OF BOSTON.

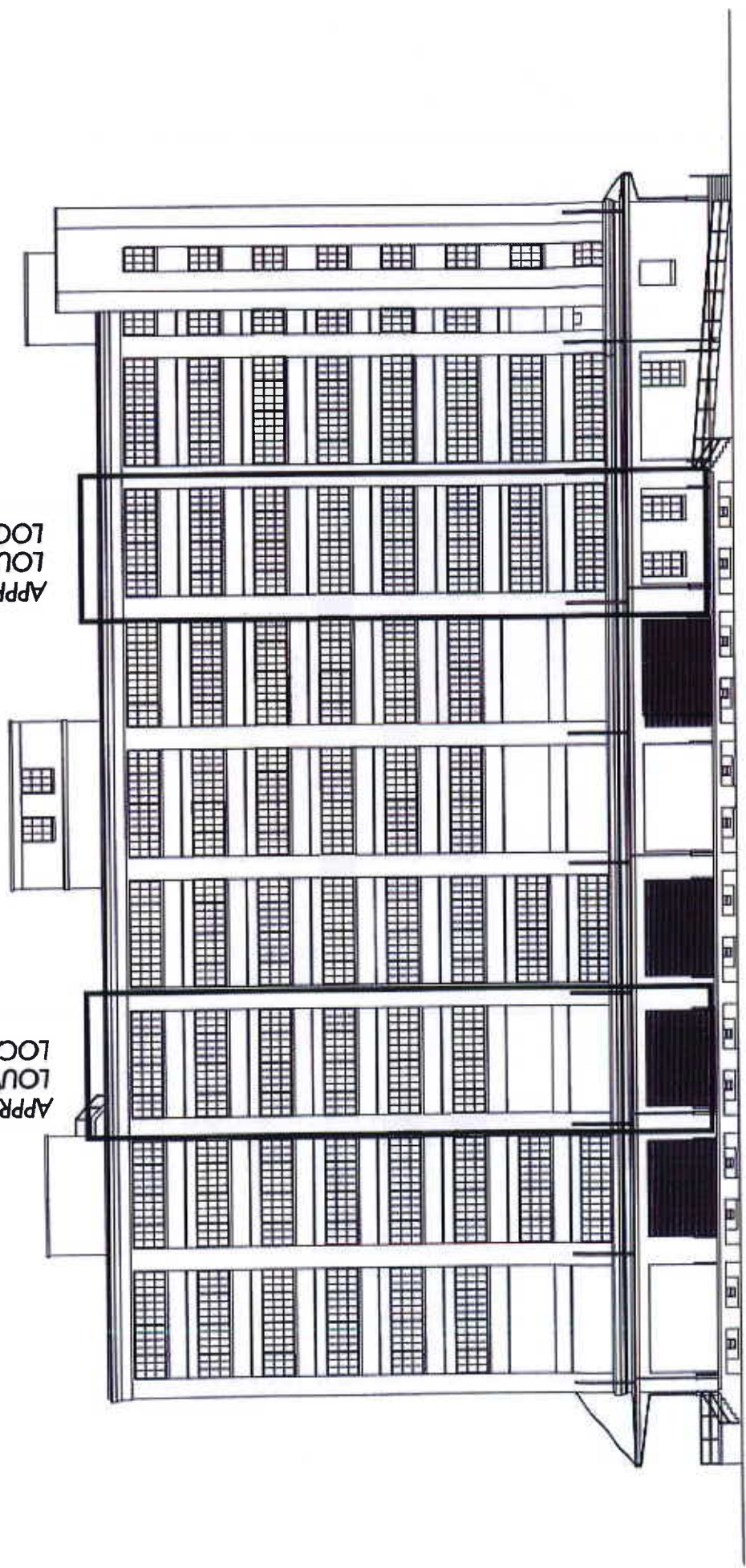


NORTH ELEVATION

ALL LOUVER INSTALLATIONS ARE REQUIRED TO BE APPROVED BY EDIC OF BOSTON.

APPROVED
LOUVER
LOCATION

APPROVED
LOUVER
LOCATION



EAST ELEVATION

ALL LOUVER INSTALLATIONS ARE REQUIRED TO BE APPROVED BY EDIC OF BOSTON.

INTERIOR DOORS AND HARDWARE

MATERIAL DESCRIPTION FOR INTERIOR DOORS

- a. Interior doors shall be 18 gauge hollow metal of form and welded galvanized flush steel sheet.
- b. All doors shall be reinforced for strength, and hardware.
- c. Frames shall be fully welded 16 gauge cold rolled steel.
- d. Finish shall include 1 coat of zinc primer and 2 coats of alkyd enamel (semi-gloss).
- e. Hollow metal doors and frames shall have a fire rating as required by the Massachusetts State Building Code and be from one of the following manufacturers; or equal.
 - Fenestra
 - Allied Steel
 - Leco
 - Overly Manufacturing Co.
 - Phyllipp
 - Pioneer
 - Seacraft
 - Williamsburg
- f. Public side shall be painted SW7072 (Online)

MATERIAL DESCRIPTION FOR FINISH HARDWARE

- a. Provide finish hardware for complete operation of all doors & windows.
- b. Finish hardware shall include butts; locks; deadlocks; latches; escutcheons; pulls; push plates; door closures, checks, holders, silencers, and stops; exit devices; protective plates; pivots.
- c. Finish hardware shall be from the following manufacturers: Baldwin, Corbin, Ives, LCN, Russwin, Schlage.
- d. Suite Corridor doors and hardware shall have kick plates. Finish to be nickel- to be compatible with Schlage finish.

STORAGE OF HAZARDOUS MATERIALS

- a. Storage of industrial chemicals and hazardous material used for industrial and manufacturing are required to be reported to the BFD and stored in proper methods.

SIGNAGE

The installation of signs and billboards is restricted throughout Boston Raymond L. Flynn Marine Park. EDIC has provided an Electronic Directory in the Main Lobby and a directory at each floor lobby for the purpose of directing visitors to tenant spaces with a minimum of inconvenience. Tenants shall not display signs in the windows or on the outside surface of the building. At floors where there is more than a single tenant company, suitable approved signage may be installed at window walls (in elevator lobbies) and on corridor walls where further direction is necessary. The illustrations that follow are meant as guidelines - not restrictions. A tenant may prefer an alternate method of identification which will require submission of plans for approval by EDIC.

Interior signage designating rooms, spaces and direction shall be:

1. 1/16" thick brushed aluminum finish sign with text in tactile and braille with VHB mounting tape. Letters shall be 1/16" thick, black, 1" tall and Helvetica. All signs shall be 5" high and wide enough to accommodate required text.
2. Suite signage shall be 7" wide, located at each entry door and read "Suite S(room #)".
3. Room directional signage shall accommodate suite names and arrows.
4. Signage for mechanical and electrical rooms shall be required at each appropriate location.
5. Floor numbering signs shall be located in each floor's elevator lobby, fabricated to match the existing 7th floor metal sign, and sized at 38" tall, 27" wide, 1/4" thick and mounted approximately 4' AFF from bottom of sign.

All signage is required to be submitted to the BRA/EDIC for final written approval. Submissions shall include a photosim(s) or other graphical representation of the proposed signage.

BUILDING SERVICES DESCRIPTION

12 Channel Street has been outfitted with these services, including:

- Steam Boilers (low pressure)
- Ventilation System
- Plumbing System
- Elevators
- Electrical services

To assure uniform and equitable distribution of available services, EDIC must reserve the right to control any and all modifications to installed systems. Prior to any anticipated construction in the building, a tenant is required to submit plans and specifications to EDIC for approval. The tenant shall be responsible for all costs incurred and must obtain all permits and licenses required for the work, and all work shall be performed by qualified personnel in accordance with all applicable codes, standards and regulations.

The following systems descriptions and tenant construction guidelines, although not all inclusive are presented to minimize the development of expensive plans and specifications that do not fit within the building criterion.

AIR CONDITIONING

Except for the front entrance lobby, 12 Channel St. is not furnished with air conditioning. Tenants desiring such systems must provide same at their own expense and must receive prior approval of all plans and specifications of the system prior to installation commencement. The following requirements must be adhered to when considering air conditioning installation:

1. Unitary window mounted units are not allowed.
2. Water cooled systems are not allowed.
3. Ductwork cannot be exposed on the outer face of the building. (see Doors, Windows, Louvers, Section 7 of these guidelines)
4. Air intakes and/or exhausts should be designed to avoid the use of baffles.
5. All installations must be confined to the Tenants' space. Condensate lines must not protrude from exterior walls and/or windows.
6. Cooling towers are not permitted.
7. No equipment is allowed on the roof.
8. Stacks must be stainless steel and are only allowed on the North side of the building.
9. Condensate must be piped to sewer. No condensate water can be piped to drain out windows or down the side of the building.

Floor mounted Dx air conditioning units are acceptable and built-up ceiling hung units may be used as long as the louvered air intakes are designed and located as defined within these guidelines.

PLUMBING

Any new toilet facilities, trash rooms, kitchens, etc., which may be desired by a tenant will be furnished and installed at their expense. A complete and detailed set of plans and specifications must be reviewed and approved by EDIC prior to commencing work. All permits, licenses and inspections necessary shall be obtained and paid for by the tenant.

Basic guidelines pertaining to the existing system and the areas served are as follows:

1. Tenants are held responsible for keeping the toilet room and janitors closets clean at all times.
2. Handicapped toilet rooms are not to be used for storage of equipment or materials of any kind.
3. Flammable materials or solutions of any kind are not to be stored in Janitor Closets or elsewhere in the building.
4. Water cooler valves shall not be wedged open. This forces continuous operation of the compressor and even burn out of motor.
5. The tenant may be requested to provide capacity information on the existing 6" sewer line when adding additional toilet rooms and/or kitchen sinks in order not to exceed the fixture unit permitted.

ELEVATORS

Four freight and three passenger elevators are maintained by EDIC in the building for use by our tenants. All units are provided with keyed lock outs and timers. In addition, the passenger elevators are provided with a telecommunication system for emergency use, should an equipment malfunction take place.

Basic guidelines applicable to elevator use are as follows:

1. Passenger elevators are not to be used under any circumstances for transporting freight or for deliveries.
2. Freight elevators are to be kept clean and free of debris.
3. Freight elevators cannot be used for storage of equipment and/or materials of any kind.
4. As a courtesy to other tenants, the freight elevator gates must be securely closed to provide availability of the unit when not in use.
5. Loading Dock and adjacent interior service areas must be kept clean and free of stored materials to provide free access to all tenants within the building.
6. No freight shall be transported which exceeds the maximum allowed weight requirements.
7. No dollies are allowed to use the glass lobby doors. Deliveries with dollies must use the open loading dock areas for entry into the lobby.

ELECTRICAL

Main Service Power

Electrical power for 12 Channel Street originates as 13,800 volts AC and enters a Boston Edison pad mounted transformer #PM H4202 outside the rear *of* the building, where the voltage is reduced to 480 volts AC. Electrical power then enters the building underground through cement enclosed conduit, which leads to the building's switchgear. The switchgear has a **Main Service Switch** rated at 3,000 amps @ 600 volts. This **Main Service Switch** feeds a **Tenant Power Switch** rated at 3,000 amps @ 600 volts and a **House Main Switch** rated at 1,200 amps @ 600 volts.

House Main Power and Lighting

A 480/277 V riser supplies electrical service to panel per floor. On the second, fourth, and seventh floors, dry type transformers have been installed to supply 208/120V panels. This entire riser is under the sole control *of* EDIC, and is utilized for electrical supply to various "house" loads, such as common area lighting and receptacles, air handling equipment, various heaters etc. This riser must not be added to modified, or used by any tenant for any reason. Lobby lighting to be Prudential Lighting Decorative LED Disk Pendant, 4' diameter. Catalog #: P4040-LED3LO-0VWA-YPE-DI-DC-277-SSC/LENGTH-X3-DM10

The house main power is metered by Boston Edison meter #319261 and feeds:

- freight elevators #'s 1,2,3 & 4
- passenger elevators #'s 5, 6 & 7
- lighting panels on the 1st floor and basement
- outside security lighting
- basement mechanical room
- fire alarm & fire pump

Tenant Power

The Tenant Power Switch feeds a 480/277 Volt busduct supplying electrical power to the tenant spaces with busduct switches on each floor as follows:

Floor	Tap Off Busduct	Total
1	1-200 amp, 2-60 amp	320 amps
2	400 amp	400 amps
3	2-600 amp	1200 amps
4	2-400 amp	800 amps
5	2-400 amp, 1-200 amp	1000 amps
6	2-200 amp, 1-400 amp	800 amps
7	1-300 amp, 1-100 amp, 1-400 amp, 1-110 amp	910 amps
8	2-400 amp	800 amps
9	1-200 amp, 1-600 amp	800 amps

Optional Calculations for Additional Loads to Existing Installations

For the purpose of allowing additional loads to be connected to existing feeders and services, it shall be permitted to use actual maximum KVA demand figures to determine the existing load on a service or feeder when all the following conditions are met:

1. The maximum demand data is available in KVA for a minimum of a one-year period.
2. The existing demand at 125 percent plus the new load does not exceed the ampacity of the feeder or rating of the service.
3. The feeder or service has overcurrent protection in accordance with Sections 230-90 and 240-3.

Currently, 12 Channel Street's demand is approximately 600 amps @ 480 volts. The Main Service Switch for the building is rated at 3,000 amps (2,400 amps is usable due to electrical industry

guidelines of loading equipment to 80% of rated load). 125% of the existing demand plus the new load should not exceed the rating of the service.

The extent to which EDIC provides tenant services is limited as follows:

- a. Access to a main disconnect, either in the switchgear (located in basement) for floors one and two or from a bus duct switch located in the electrical room on the floor being serviced. This applies to floors 3 through 8.
- b. Space in an electrical room for the installation of current transformers and meter sockets. All other apparatus is to be located in the tenant's space.
- c. Limited exit lighting and additional equipment may be added to this "public" panel in accordance with guidelines set forth herein.

Tenant and House Emergency Power & Lighting

Passenger elevator Nos. 5, 6 & 7 as well as emergency lighting are supported by CAT diesel generator with an automatic transfer switch in the event of power failure. A Superior diesel generator supports the fire alarm and fire pump also using an automatic transfer switch. If the transfer switch should sense a loss of voltage in the normal supply, it will automatically send a "start" signal to the emergency generator and switch over to this alternate source.

Elevator

Elevator Motors

Freight elevators #'s 1, 2, 3 & 4 are each powered by a motor producing 60 hp, drawing 172 amps maximum @ 280 volts and passenger elevators #'s 5, 6 & 7 are powered by 25 hp motors drawing 92 amps maximum @ 230 volts. Elevator problems will be treated as emergency. The tenant must contact EDIC personnel for action. The number to call is 617-482-9753, which will connect the tenant to the Building Superintendent's office on the first floor.

Fire Alarm System

Existing System - The Fire Alarm System is a Notifier by Honeywell installed in 2011 and consists of a central command center in the Main Lobby. This center monitors sprinkler waterflow by each floor, smoke detection in selected rooms, stairs, elevator shafts and penthouse, and pull stations at each means of egress on each floor. The center also provides voice communication wired to each floor. The system is tied directly to the Boston Fire Department. Tenants are cautioned not to create dusty conditions (such as sweeping) in areas protected by smoke detectors, minute particles of dust will activate alarm and automatically contact the City of Boston Fire Department for response.

Security System

Existing System: - The existing security system is used to secure building perimeter and common building areas during the hours of 10:00 p.m. and 6:30 a.m. daily. (These hours are subject to change). During these periods tenants will be affected in the following ways:

- a. The first floor tenants must gain access for their rental spaces by their exterior doors located on the south side of the building.
- b. The tenants on floors 2 through 9 must use the front passenger elevators for entrance and egress.
- c. Exterior doors of stairwells both north and south may not be used.
- d. The service areas may not be used.
- e. The trash rooms may not be used.
- f. Toilets on each floor may be used.

If any time the tenant requires access to a secured area during secured times, he must give EDIC written notification 48 hours in advance. Off-hour deliveries and extended time for evening operations may be accommodated at the expense of tenants requesting such service.

General Notes:

1. Electrical service must be confined within the boundaries of the section in which the main disconnect is located.
2. Capacity of electrical service is limited to 400 amps per floor per section or as approved by EDIC.
3. Main switchgear is provided with ground fault interrupters. However, EDIC is not responsible for outages that affect tenant operations. If computers on other "non-interruptible" equipment is installed, tenants are advised to install local uninterruptible (UPS) power supply.
4. Bx and/or Greenfield with ground wire is to be used in all interior partitions. If exposed, all wiring must be encased in conduit.
5. Tenants are responsible for any arrangements with Boston Edison for the installation of meters.
6. The tenant shall be responsible for the installation of additional voice communication transmitters as required to assure that all personnel within a tenant area are continuously able to hear instructions in the event of an emergency.

FIRE PROTECTION

Fire protection is provided through the combined use of a new and existing wet sprinkler system supplemented by a fire pumping station to assure adequate water pressure throughout the structure in the case of fire involvement. The sprinkler fire protection system is flow monitored through the use of flow switches, which are directly tied to an alarm system at the Boston Fire Department. Additionally, smoke sensing devices have been installed several areas, tied to the alarm system thus providing greater safety protection of occupants.

Fire Alarm

The addition of partitions or machinery to tenants areas may require additional fire alarm equipment. The tenant will be responsible for supplying and installing additional speakers, visual units and pull stations and portable fire extinguishers in accordance with Boston Fire Department Fire Alarm Regulation #1. The extent of this work is dependent upon the amount of changes made by the tenant, and the acoustic characteristics of the leased area. Pre-recorded messages must be audible at all locations of the tenant space when all equipment is operating. Light units must be visible from all floor areas to assure safe and timely egress.

Sprinkler/Standpipes

The sprinkler system, as installed, would not usually be of concern to the tenant except where he may construct boundaries that necessitate re-piping or changes in the system. As with other services, changes must be approved by EDIC prior to work on the system. Some other considerations, the cost of which shall be borne by the tenant, are:

1. Whenever sprinkler system work is to be done which will require draining of the system, the tenant must notify Boston Water & Sewer.

2. In order to avoid alarming the Fire Alarm System during Sprinkler System draining/work, the Tenant is responsible for contacting the Director of Operations 72 hours in advance of the system draining. He may be reached at 617-918-6203. The EDIC Service Contractor shall disconnect the Fire Alarm System and reconnect the Fire Alarm System once the work is complete. It is recommended that all work possible be accomplished prior to the final tie-ins before EDIC's Service Contractor is called. The Tenant is responsible for all associated costs with the Fire Alarm System disconnection and reconnection.
3. Intermediate temperature heads must be installed because the system is designed to receive heat through a convection system within the building. This system is not presently in use however, the EDIC intends to keep the system operational should it be desirable in the future.
4. If a space constructed by the tenant results in the absence of heat and the possibility of freezing occurs, then the tenant shall provide a glycol loop in compliance with NFPA-13.
5. Construction of partitioning and/or ceilings within tenant spaces may effect proper spacing and adequate coverage of sprinkler heads. Tenants must comply with NFPA-13 standards relative to the above work.
6. All work must be completed in accordance with NFPA standard and shall conform to all City of Boston Fire Department rules and regulations.
7. Neither the sprinkler system or fire alarm system will be allowed to remain inactive overnight.

NATURAL GAS

The tenant shall be responsible for all costs incurred for installation of piping, meters, equipment, etc., as required for their particular use. All installations shall be in accordance with the Massachusetts State Building Code and the requirements of the local utility company/s. All drawings and specifications of the intended work must be submitted to EDIC for approval prior to commencement.

All individual Tenant's gas supply shall be metered. Tenant is responsible for coordinating with the gas company and all associated costs.

EMERGENCY POWER

Each floor contains panels that are energized at all times. Tenants may install one 20 amp circuit breaker in this (ELP) panel for the purpose of providing power to tenant supplied emergency lighting chargers, additional exit signs, or a combination of those devices. These circuits shall be dedicated to the purpose mentioned above and shall not be interconnected with the tenant electrical systems. All junction boxes must be labeled to identify that this circuit is powered by the building public panel (ELP) and not by the tenant system. The emergency power supply cannot be tapped into for any other reason than for emergency systems.

HEATING

The building is heated with gas-fired low pressure (5-10 lbs) steam furnished by Two 9,415,000 BTU boilers installed in 2013 and located in the centrally located, boiler rooms on the first floor level. The high efficiency Cleaver Brooks boilers are fired by natural gas. Each of the boiler units is furnished natural gas through underground gas service lines installed on Alley Side Street and updated and repiped in 2013.

After leaving the boiler rooms, steam is fed to a single main which runs from the boilers up through the building branches to all floors. At this point steam is fed to a distribution system comprised of existing ceiling mounted unit heaters, perimeter radiation, and steam supply line branches. The radiators banks are thermostatically controlled by semi-automatic Taco valves to allow temperature control in tenant areas.

Condensate passes through traps at the end of each bank of radiation and is collected, via a series of condensate return lines, at a low point in the basement where new condensate tanks and pumps deliver the water back to the boiler feed tanks. The condensate system was also installed in 2013.

At the first floor level, heat is provided to service areas, tenant areas, and loading docks through the use of ceiling mounted, steam fed, unit heaters.

Boiler room operation is fully automatic with lead-lag control, automatic feed water chemical distributor, condensate metering, emergency generator connections, and all of which provide for a highly efficient operation. It must be noted that the boiler plants are intended for the sole purpose of heating the building and the low pressure steam generated is not for process or any other use by

tenants. Interior modifications by tenants must be designed so as not to "overload" the existing system through the use of properly sized supply and return lines. Installation of steam coils, heat exchangers and/or unit heaters shall be done in a manner compatible with existing equipment and with the approval of the BRA/EDIC.