

North Wall Summary 300 Summer Street

Fort Point Channel Landmark District Application for Design Approval

29 September 2016

Existing Conditions

300 Summer Street – North Wall

North Wall – Existing Condition

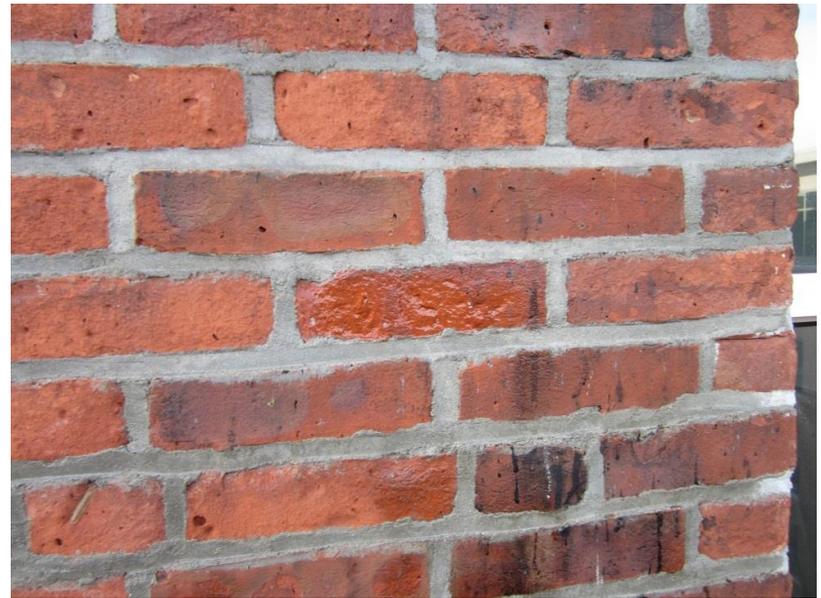
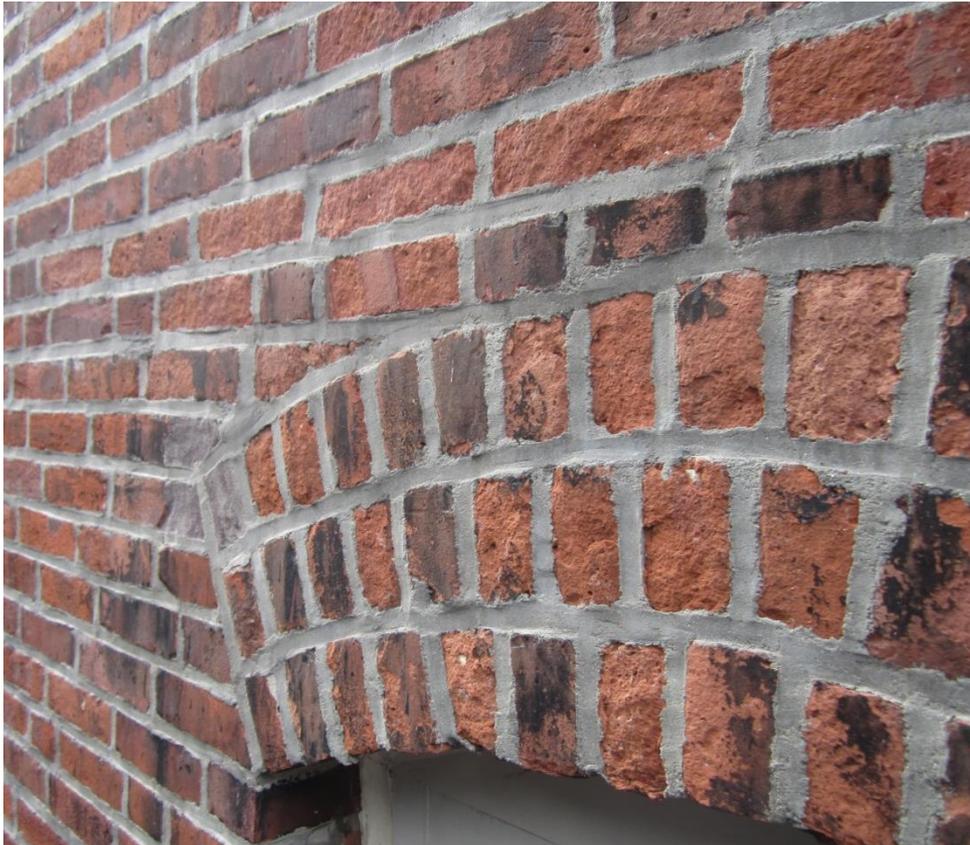


North Wall – Existing Condition



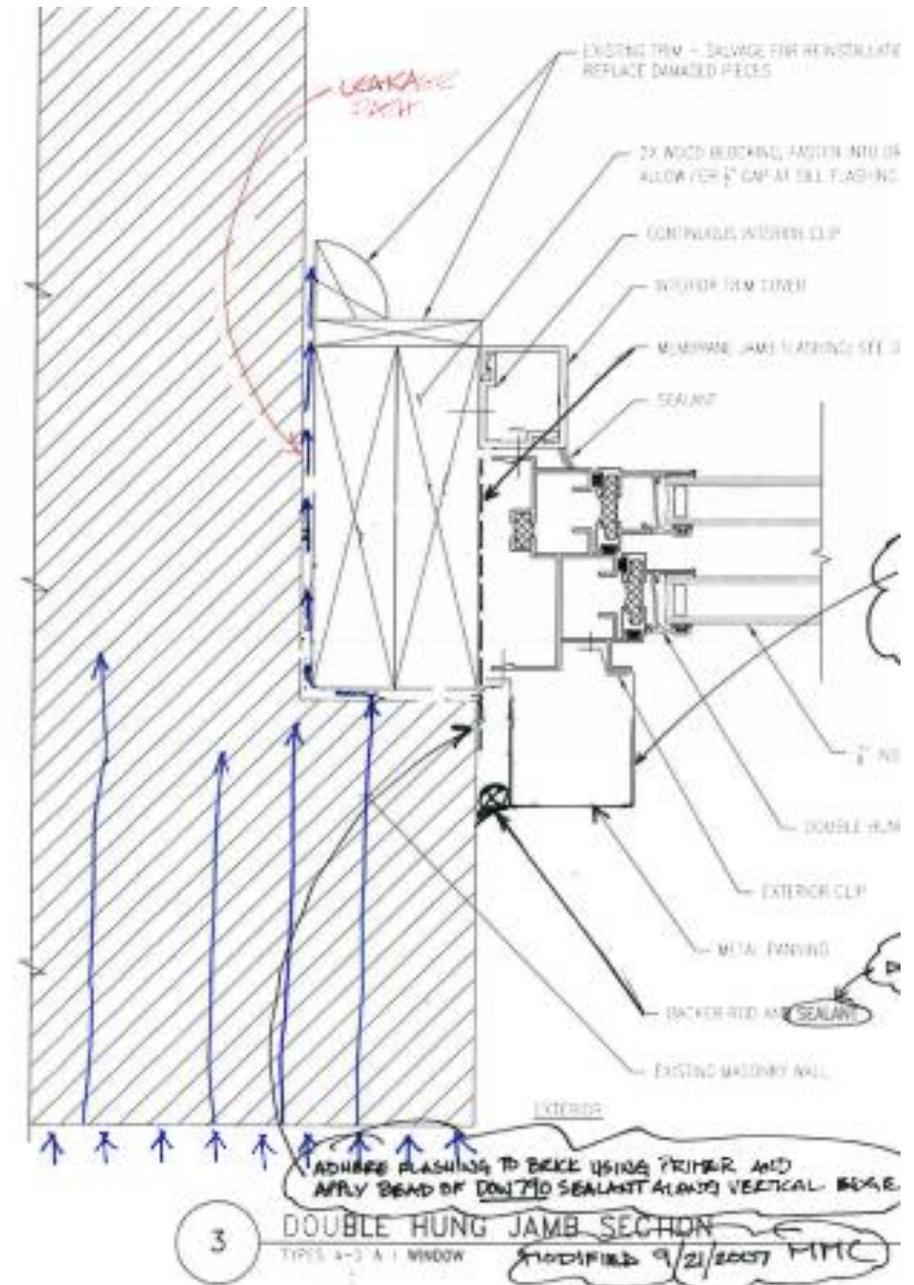
North Wall Masonry

The existing north wall has full mortar joint. The brick masonry units are typically "soft" or a lesser quality brick with higher absorption properties. Some brick have a loss of the fireskin and some spalling, which increases absorption through the brick.



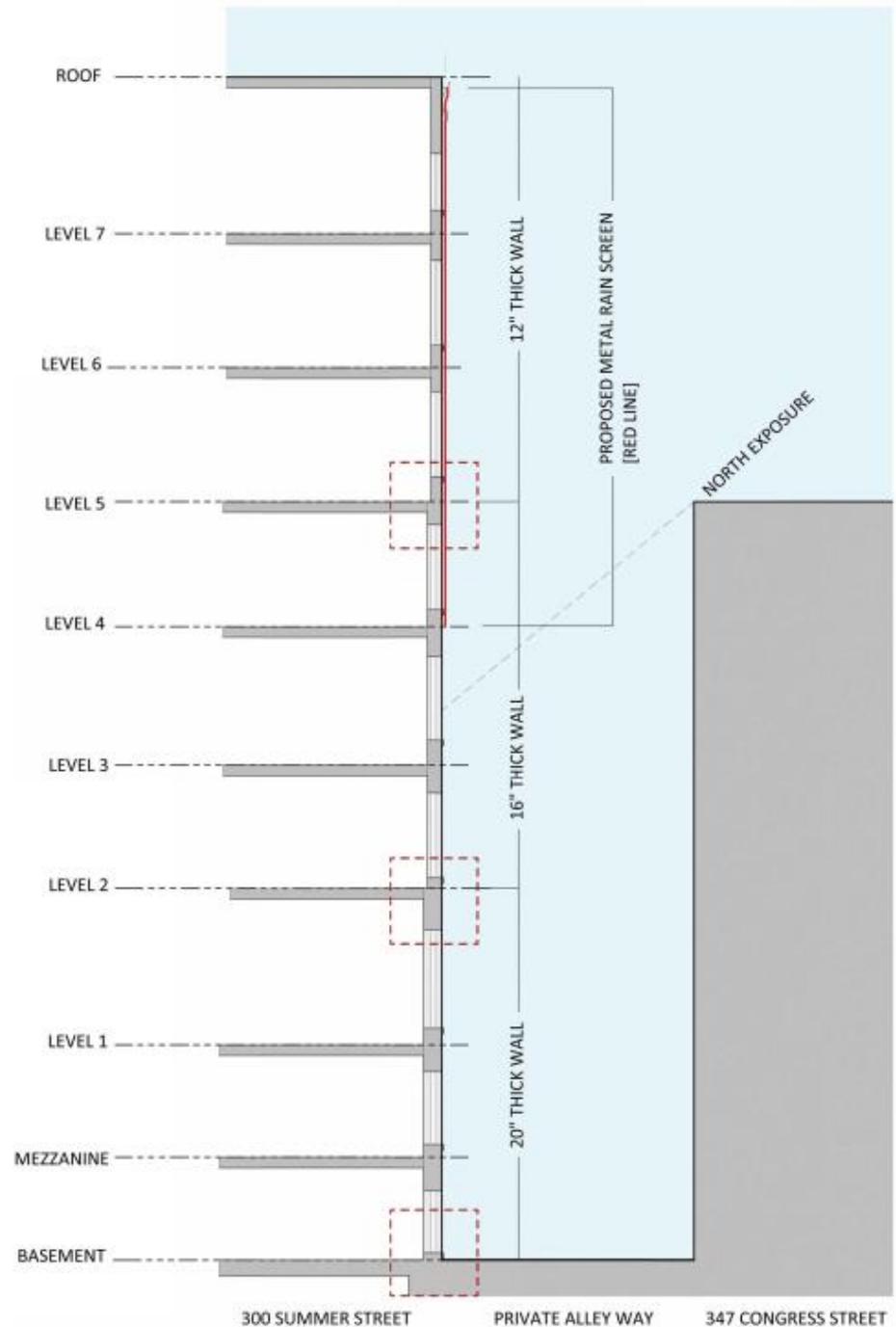
North Wall Masonry

Even with a properly maintained wall, leakage can occur through the brick masonry if it is exposed to a sufficient volume of water. The vulnerability depends upon the wall thickness; the walls at 300 Summer are thinner at upper floors and become narrower at window jambs and beam pockets.



Typical Jamb Detail

Section North Wall and Neighboring Building



North Wall History and Repair Work to Date

North Wall History and Repairs

Window Replacement

Investigation - Leakage on upper floors, above windows, around beam pockets

Repairs - Point deteriorated mortar and step cracking. Applied Siloxane water repellent coating above the fifth floor

Leaks reported around windows, beam pockets, and from ceiling above.

SGH water tested windows, masonry and flooded gutter. Leaks through window and masonry; most leakage attributed to windows though produced leaks through masonry spandrel after multiple hours of testing

Repairs - Point 100% at upper floors and spot pointing on lower floors. Replace floors 4-7 double hung windows and picture windows. Replace window sealant on floors A-3. Replace roof, gutter, and downleaders.

Leaks observed during continuous heavy rains

1995

1997

2006

2007-2008

2010



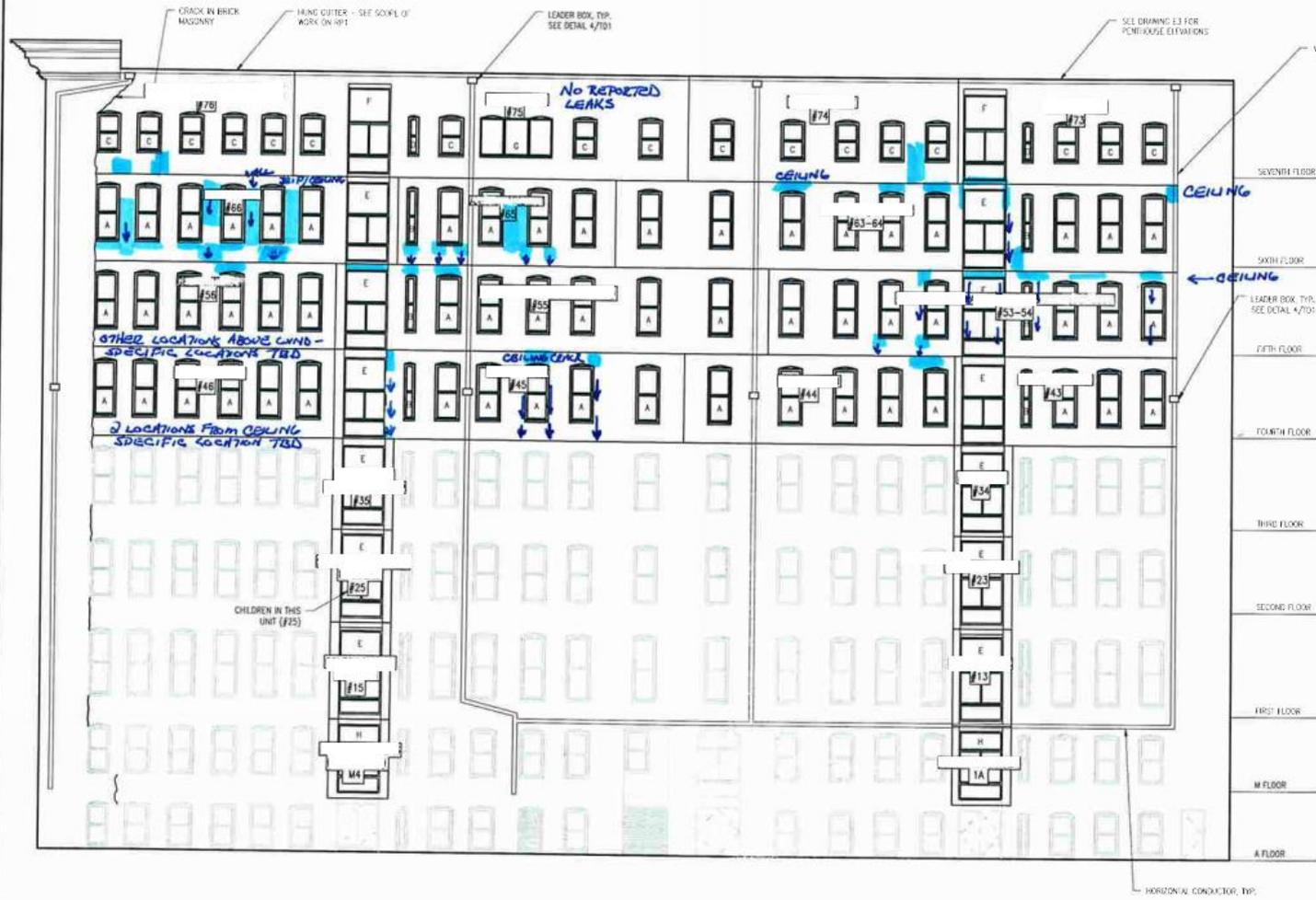
LEAKAGE SUMMARY
24/25 FEBRUARY 2010 STORM

LEAKAGE LOCATIONS AS REPORTED BY OWNERS/OCCUPANTS

AREA REPORTED WET/DAMP/LEAK
← WATER RUNNING/DRIPPING

GENERALLY LEAK REPORTS STARTED AROUND 8:50/9 pm ON 2/25/2010

NO REPORTED OVERRUN FROM GUTTER.



1 NORTH ELEVATION SCALE: 1/8"=1'-0"

- SCOPE OF WORK SHOWN ON THIS DRAWING
- BASE BID:
1. Remove and replace existing windows on 5th through 7th floor. Provide wood sill, membrane and metal flashing of each window opening. See Drawing M1 for window schedule.
 2. Point brick masonry on 5th through 7th floors. See Detail 4/701.
 3. Point brick masonry on floors A through 4 as directed by Engineer. Include pointing 20% of brick area on lower floors in Base Bid. See Detail 4/701.
 4. Remove existing steel shutter anchors at all window openings (4 per double-hung opening, 2 per picture window opening). Remove adjacent, damaged brick masonry at each location (assume 2 bricks at each location). Provide replacement brick masonry. See Detail 1/701.
 5. Remove existing vertical and horizontal conductors. Provide 4" x 8" copper vertical conductors with ladder-locks of connection in gutter and at mid-point of vertical run. Provide replacement horizontal PVC conductor with 4" x 8" sloped to drain. Provide weathertight connections between all replacement and existing piping to remain.
 6. Provide saddle and batten rod in stack of roof and Reel crack as required to provide proper weathertight geometry. See Detail 2/701 for sealing joint requirements.
- ALTERNATE 1:
1. Remove and replace Type E and H windows on floors A

24/25 February 2010 Reported Leakage



13-15 March 2010 Reported Leakage

North Wall History and Repairs

Repairs – Point additional areas and rebuild bulged masonry and isolated lintels. Clean masonry and apply Cleaning & clear sealer (Protectosil Chem-Trete BSM 400). Modify Stormwater piping.

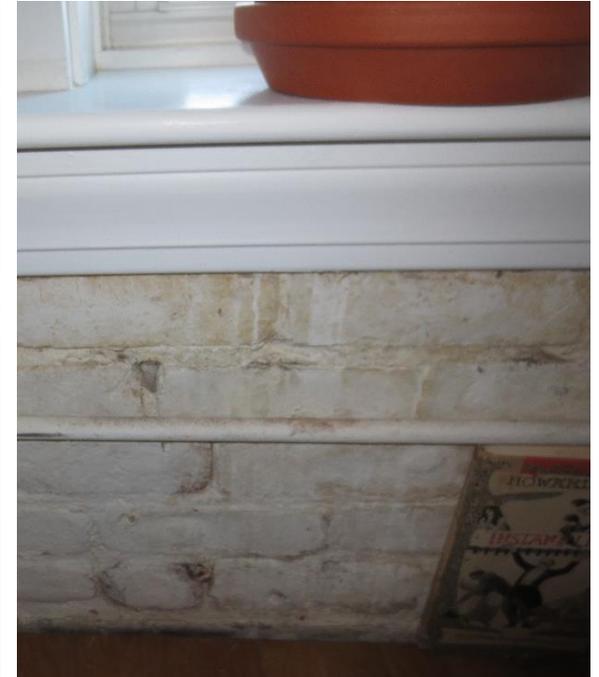
Leaks observed (November 2012)

Leaks observed (January 2013)

2012



2013





7 November 2012 Reported Leakage

Structrural Concerns

North Wall Masonry – Embedded Structure



Structural steel floor framing is embedded into the mass masonry wall. Embedded steel is subject to a damp environment, which causes corrosion and secondary damage (bulged and displaced brick).

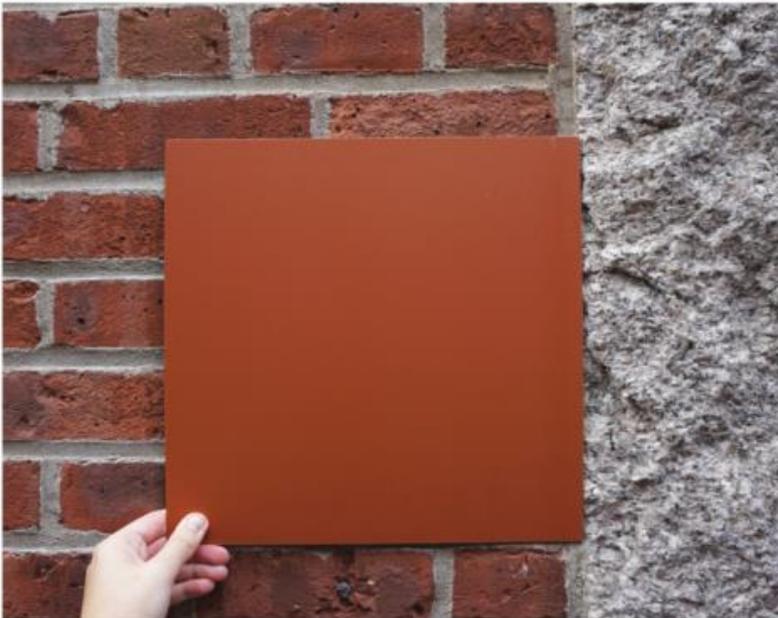
The current level of visible corrosion and resulting masonry damage indicates minimal section loss of the embedded members, but the steel corrosion and masonry damage will continue until the steel elements are protected.

Proposed Repair – Metal Panel Rain Screen

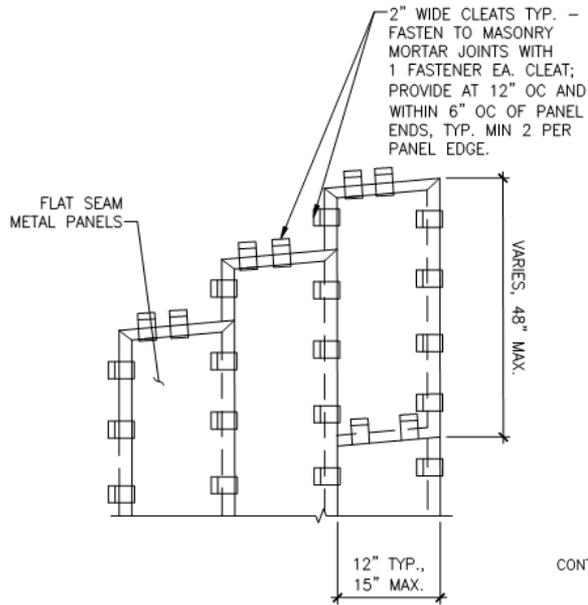
Proposed Metal Panel Rain Screen



Proposed Metal Panel Rain Screen

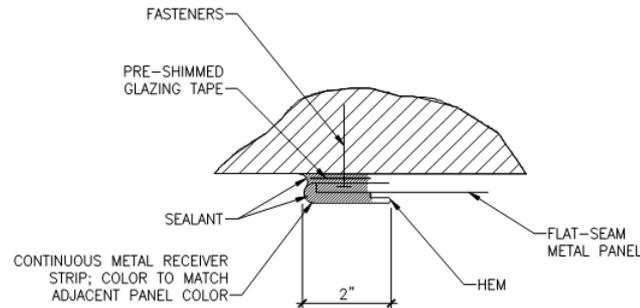


Proposed Metal Panel Rain Screen



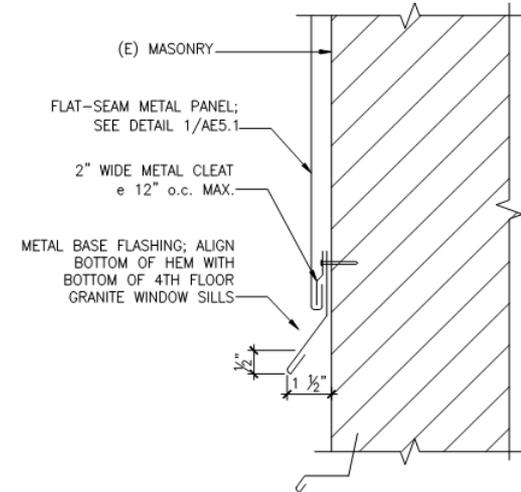
NOTES:

1. REFER TO RENDERING FOR FLAT-SEAM METAL PANEL LAYOUT.
2. 12"x48" IS MAXIMUM PANEL SIZE.
3. PROVIDE MIN. 1/8" SHIMS BELOW CLEATS TO GAP FROM WALL. PROVIDE LARGER SHIMS IF REQUIRED TO PROVIDE EVEN SURFACE - 1/4" MAX. TYP. SHIMS NOT SHOWN FOR CLARITY.



5 TYPICAL RECEIVER STRIP

N.T.S.



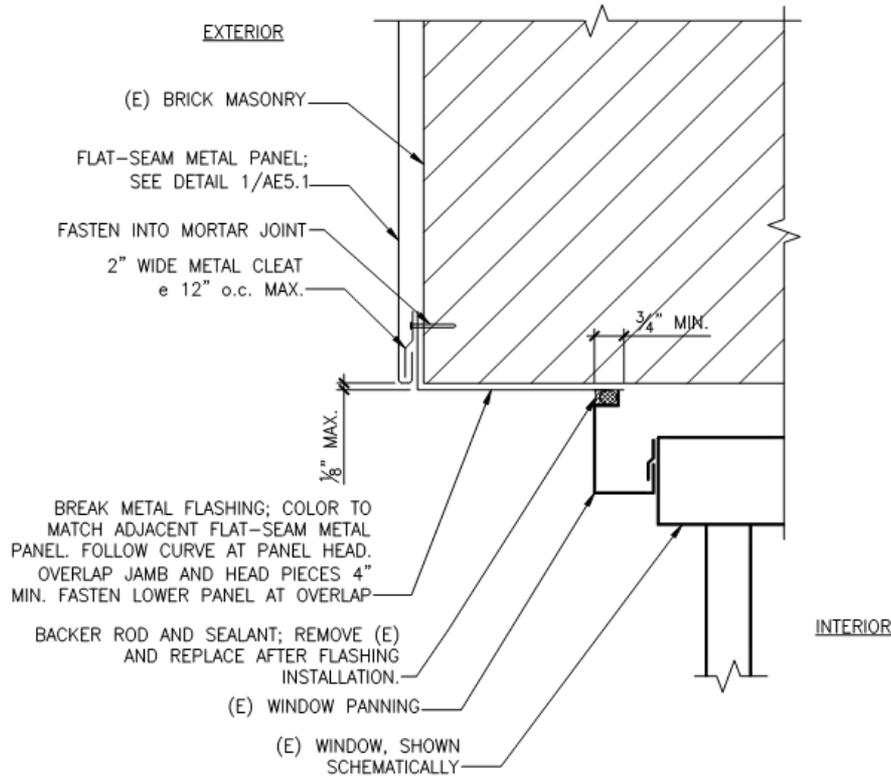
6 METAL PANEL BASE TERMINATION

N.T.S.

1 FLAT SEAM METAL WALL PANELS

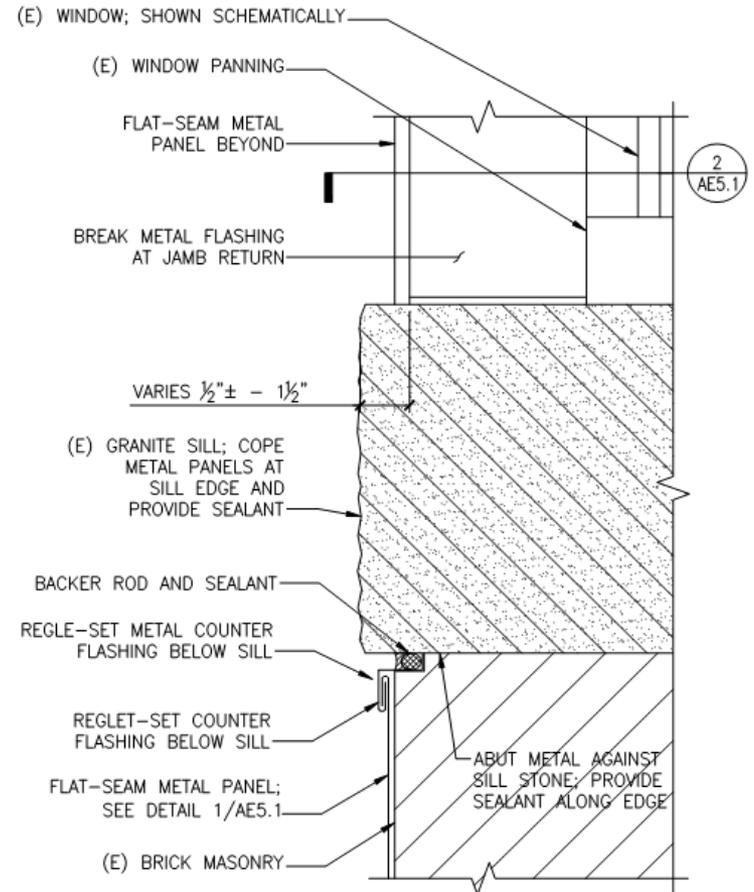
N.T.S.

Proposed Metal Panel Rain Screen



2 JAMB AND HEAD RETURN DETAIL

N.T.S.



3 TYPICAL SILL DETAIL

N.T.S.

Proposed Metal Panel Rain Screen

