

# Development Services

## From Concept to Construction

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More Contact Info (<http://www.portlandoregon.gov/bds/article/519984>)



### APPEAL SUMMARY

**Status:** Hold for Additional Information

<b>Appeal ID:</b> 23427	<b>Project Address:</b> 3330 SE 69th Ave
<b>Hearing Date:</b> 2/5/20	<b>Appellant Name:</b> Tim Ayersman
<b>Case No.:</b> B-018	<b>Appellant Phone:</b> 971-200-7213
<b>Appeal Type:</b> Building	<b>Plans Examiner/Inspector:</b> John Cooley
<b>Project Type:</b> commercial	<b>Stories:</b> 3 <b>Occupancy:</b> E, B, A-2, A-3 <b>Construction Type:</b> II-B
<b>Building/Business Name:</b> Portland Public Schools - Kellogg Middle School	<b>Fire Sprinklers:</b> Yes - Fully-sprinklered throughout
<b>Appeal Involves:</b> Erection of a new structure	<b>LUR or Permit Application No.:</b> 19-130649-CO
<b>Plan Submitted Option:</b> pdf [File 1]	<b>Proposed use:</b> Middle School (Grades 6-8)

### APPEAL INFORMATION SHEET

#### Appeal item 1

<b>Code Section</b>	§703.2 Fire-resistance ratings
<b>Requires</b>	§ 703.2 Fire-resistance ratings. Where materials, systems or devices that have not been tested as part of a fire-resistance-rated assembly are incorporated into the building element, component or assembly, sufficient data shall be made available to the building official to show that the required fire-resistance rating is not reduced.
<b>Code Modification or Alternate Requested</b>	This appeal was requested by BDS Plans Examiner, John Cooley.  The intent of the appeal is to confirm the fire-resistance-rated assembly of a fire wall proposal that does not have a UL/GA listed assembly.
<b>Proposed Design</b>	The proposed fire wall design is based on a listed GA shaft wall assembly (GA 7065.5) with an ~8" jog around the steel structure (W14x22) and an engineering judgement at the metal deck connection provided by Hilti. The required fire-resistance rating is met with is proposal and is improved at the low side beam and supporting columns which will now be protected with spray fire-resistant materials (SFRM) to the same fire-resistance rating as the fire wall assembly, in contrast to the permitted design that includes 1-hour fire-resistance rating for this structure. This proposal only occurs at the double structure running north-south adjacent to Gridline JJ between Gridline 5 and Gridline 8. All other fire wall conditions remain as permitted. This direction provides added protection to the structure versus the original permitted fire wall and creates a detail that is more accessible for inspection.

The following attachments have been arranged to walk through the proposal starting with architectural plans to wall section and architectural detail then followed by structural plans and details.

SEE ATTACHED:

• ARCHITECTURAL

FOR INFORMATION: FLS PLAN SECOND FLOOR – SECTOR A&B (G-202)

? Location of Fire Wall and appeal proposal.

? 1-hour rated roof assembly and supporting element extents.

FOR INFORMATION: WALL SECTION – FIRE WALL AT ADMIN (4/A-419)

? Wall section at Fire Wall along Gridline JJ.

? Location of revised Fire Wall detail.

? Description of 1-hour rated roof assembly.

PROPOSED FIRE WALL REVISION CONCEPT

? Fire Wall revision overview sketch.

N-S FIRE WALL AT LOW ROOF (2/A-718)

? Proposed revised detail at Fire Wall.

ENGINEERING JUDGEMENT FIRESTOP DETAIL (352536b)

? Fire Wall connection to deck detail.

FOR INFORMATION: Excerpt from GA-600-2015 FIRE RESISTANCE DESIGN MANUAL

? Listing for GA WP 7065.5.

• STRUCTURAL

LOW ROOF FRAMING PLAN – SECTOR C (S-221C)

? Location of low side column bracing at Fire Wall.

DETAIL AT FIRE WALL (12/S-605)

? Melt-away clip location

? Extent of Fire Wall enclosure

LOW COLUMN BRACING AT FIRE WALL (11/S-606)

? Out-of-plane stability bracing of the low side column to the steel frame on Gridline JJ per Structural Plans Examiner (Greg Wilken) request.

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**Reason for alternative** The alternate Fire Wall design provides equivalent fire protection, life safety, and structural capacity while improving inspection accessibility, sequencing of work for the contractor, and increases the level of protection on the structure for the low building at the building separation.

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## APPEAL DECISION

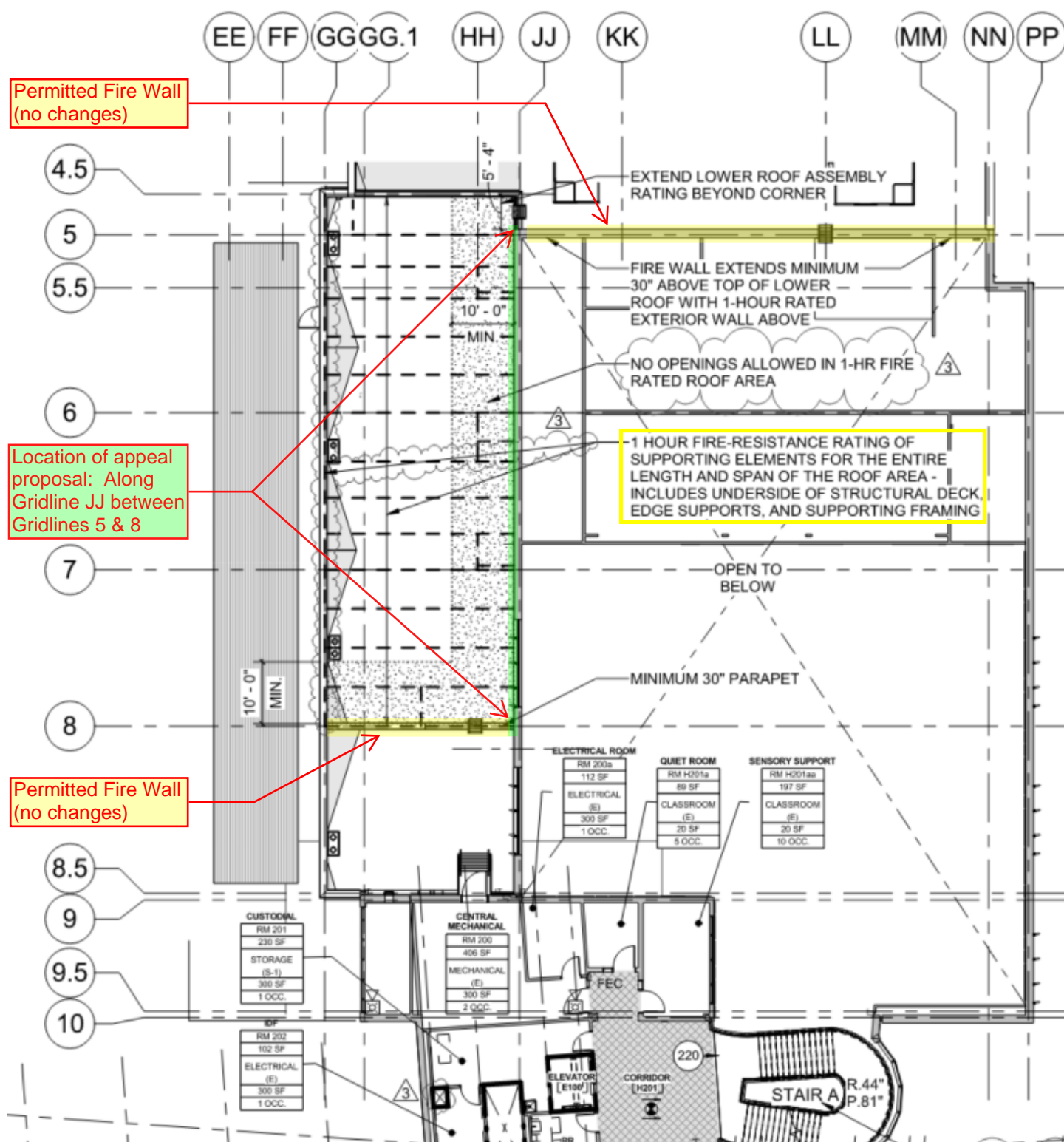
**Alternate 1 hour fire rated fire wall assembly with engineering analysis: Hold for additional information. Appellant may contact John Butler (503 823-7339) with questions.**

Additional information is submitted as a no fee reconsideration, following the same submittal process and using the same appeals form as the original appeal. Indicate at the beginning of the appeal form that you are filing a reconsideration and include the original assigned Appeal ID number. The reconsideration will receive a new appeal number.

Include the original attachments and appeal language. Provide new text with only that information that is specific to the reconsideration in a separate paragraph(s) clearly identified as "Reconsideration Text" with any new attachments also referenced. No additional fee is required.

# FOR INFORMATION ONLY

Not to Scale



- Location of Fire Wall and appeal proposal.
- 1-hour rated roof assembly and supporting element extents.

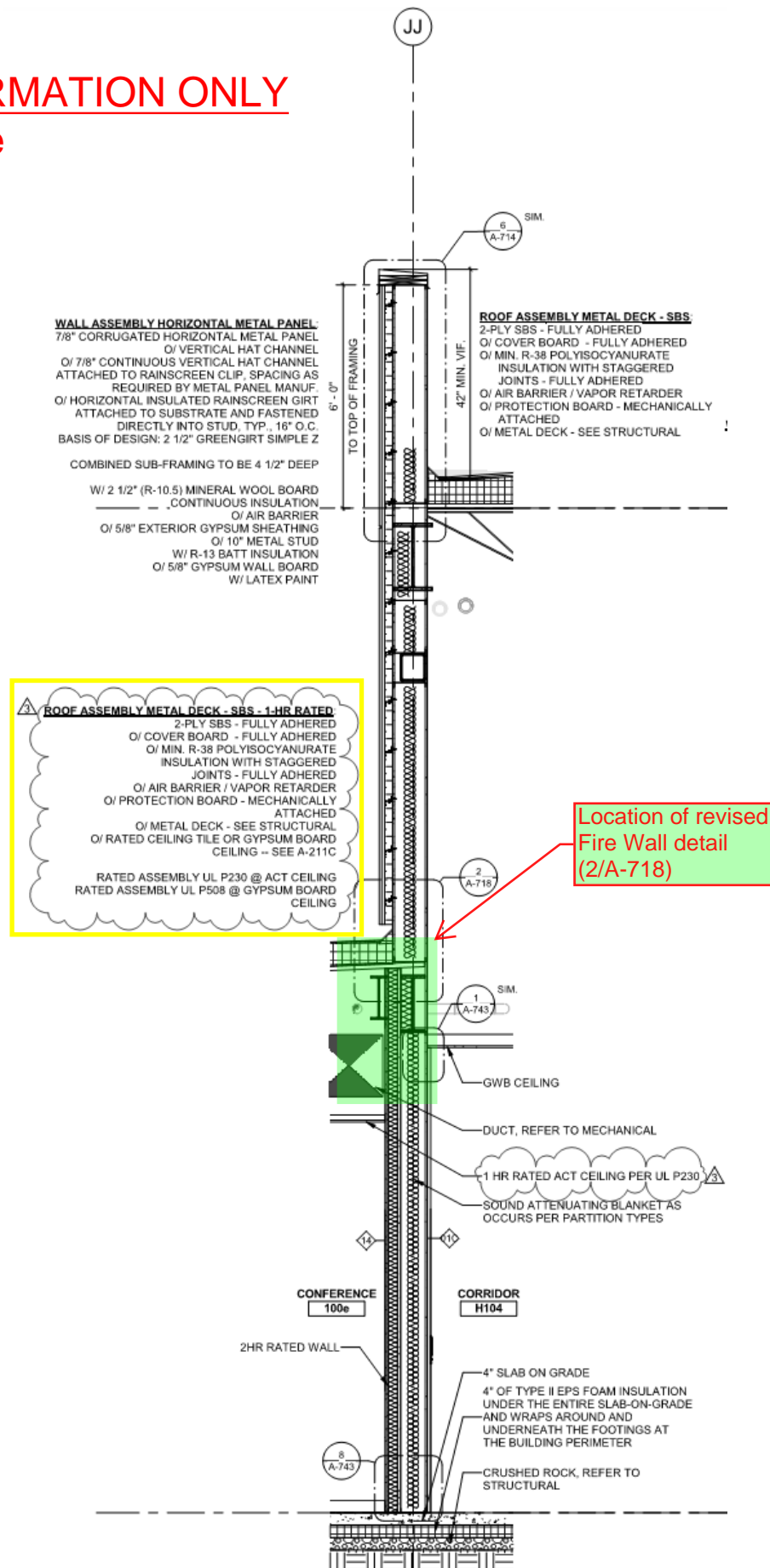
1/G-202

Oh

01/29/2020

**FOR INFORMATION ONLY**  
**Not to Scale**

2



- Wall section at Fire Wall along Gridline JJ.
- Location of revised Fire Wall detail.
- Description of 1-hour rated roof assembly

**4** WALL SECTION - FIRE WALL AT ADMIN  
 1/2" = 1'-0"

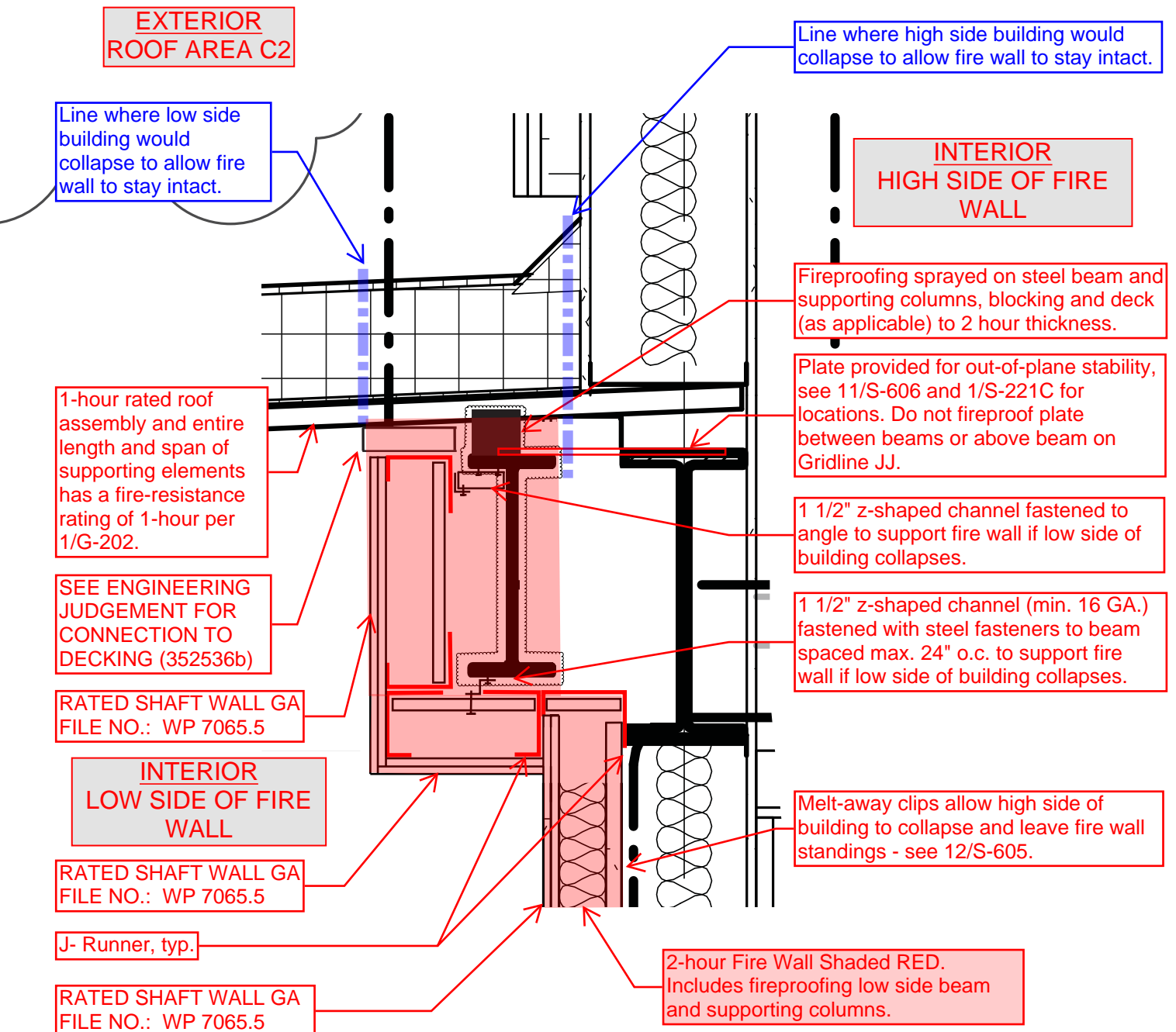
4/A-419

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01/29/2020

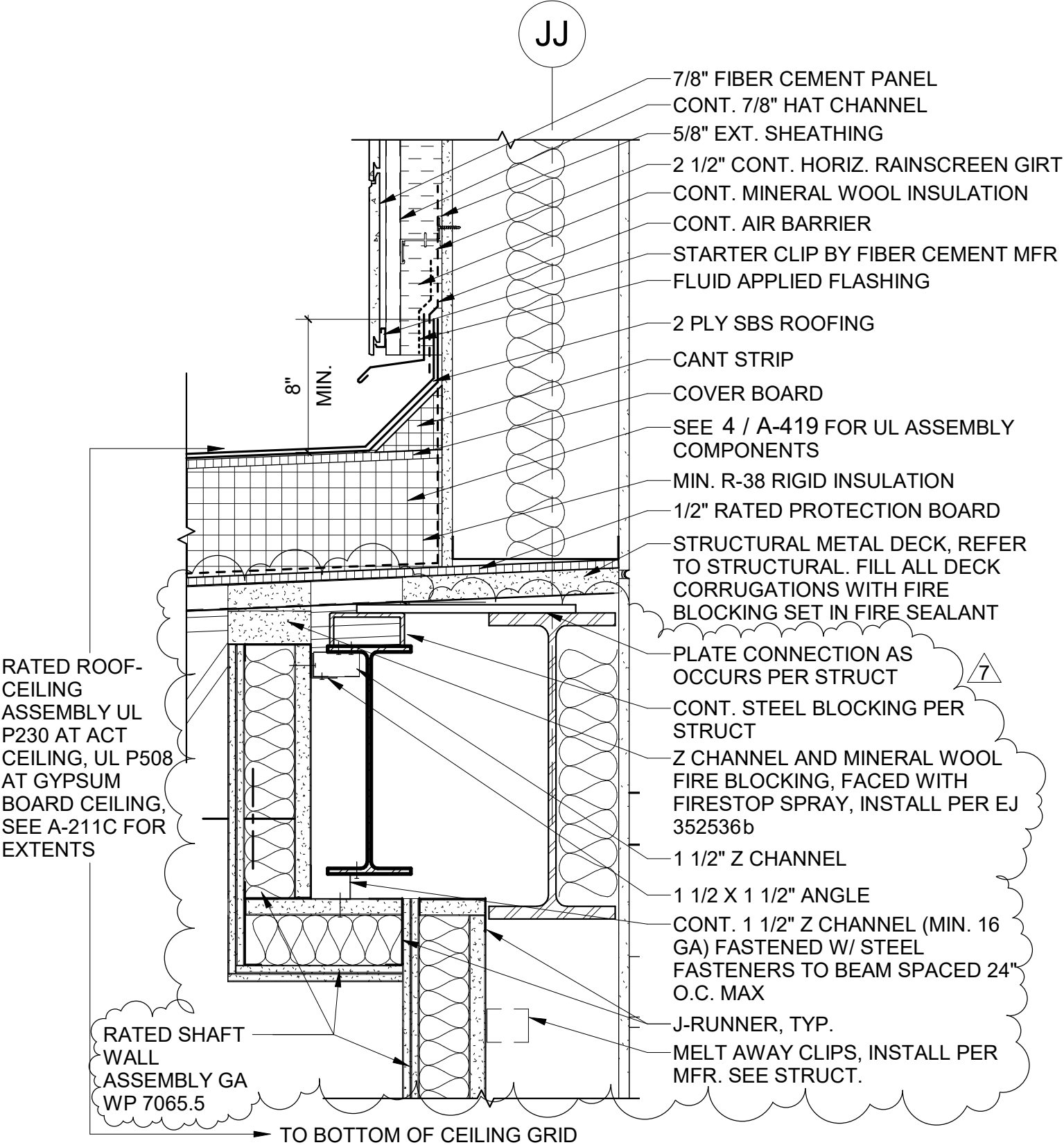
# Proposed Fire Wall Revision Concept Not to Scale

3



See 4/A-419 and 2/A-718 for:  
- Exterior Wall and Roof Construction  
- UL for Rated Roof - Ceiling Assembly  
- GA Rated Shaft Wall Assembly

▪ Fire Wall revision overview sketch.



2 N-S FIRE WALL AT LOW ROOF  
1 1/2" = 1'-0"

■ Proposed revised detail at Fire Wall

2/A-718



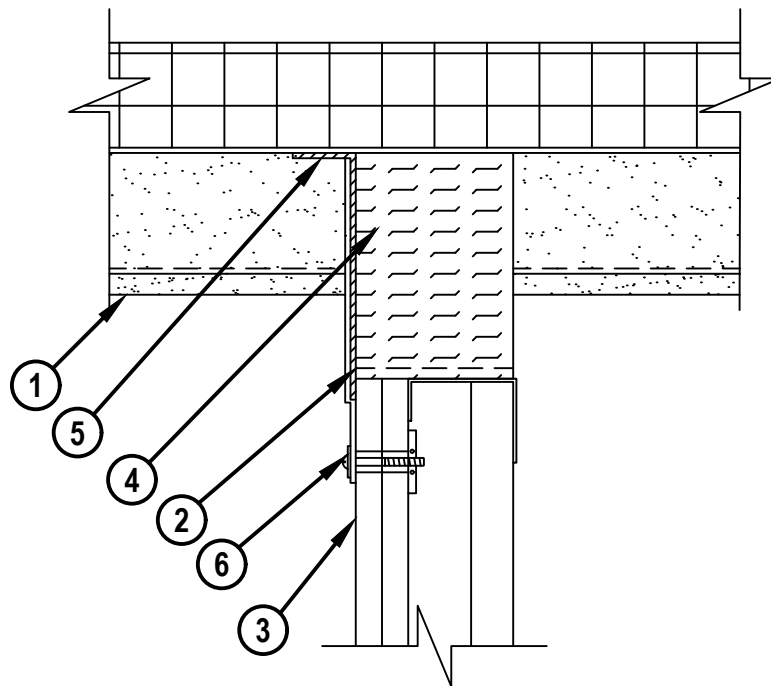
**ENGINEERING JUDGMENT FIRESTOP DETAIL**

5

PROJECT : KELLOGG MIDDLE SCHOOL

CONTRACTOR : CASCADE ACOUSTICS

F-RATING = 1-HR. OR 2-HR. (SEE NOTE NO. 3 BELOW)

**CROSS-SECTIONAL VIEW**

1. BUILT UP METAL ROOF DECK ASSEMBLY (MIN. 22 GA.) (NON FIRE-RATED).
2. Z-SHAPED CLIPS (MIN. 20 GA.) WITH THE FOLLOWING DIMENSIONS : MINIMUM 1" WIDE (BUT NOT EXCEEDING THE WIDTH OF THE WALL) WITH 2" UPPER AND LOWER LEGS, HEIGHT OF CLIPS TO BE EQUAL TO THE REQUIRED THICKNESS OF SPRAY APPLIED FIREPROOFING ON THE METAL DECK. LEGS OF CLIPS FASTENED TO BOTTOM OF METAL DECK (PRIOR TO APPLYING FIREPROOFING) AND TOP OF CEILING RUNNER WITH STEEL FASTENERS OR WELDS. CLIPS SPACED MAXIMUM 24" OC.
3. GYPSUM SHAFT WALL ASSEMBLY (UL/cUL CLASSIFIED) (1-HR. OR 2-HR. FIRE-RATING)(2-HR. SHOWN).
4. MINERAL WOOL SAFING (MIN. 4 PCF DENSITY) COMPRESSED 50%, TO COMPLETELY FILL JOINT AND FLUTE, FLUSH WITH WALL SURFACES.
5. MINIMUM 1/8" (WET) THICKNESS HILTI CFS-SP WB FIRESTOP JOINT SPRAY TO COMPLETELY COVER MINERAL WOOL, OVERLAPPING MINIMUM 1/2" ONTO GYPSUM WALL ASSEMBLY AND MINIMUM 2" ONTO FIREPROOFING.
6. SHEET METAL COVER PLATE (MIN. 18 GA.) COMPLETELY COVER JOINT, RECESSED 1/4" TO 3/4" FROM METAL DECK/Z-CLIP AND ATTACHED TO WALL WITH THE APPROPRIATE HILTI ANCHORS.

NOTES : 1. MAXIMUM WIDTH OF JOINT = 2".

2. THIS SYSTEM IS DESIGNED BASED UPON CANADIAN TEST STANDARD CAN/ULC-S115-11.

3. FIRE-RATING OF ASSEMBLY IS DEPENDENT UPON THE PERFORMANCE OF Z-CLIPS AND METAL DECK UNDER FIRE CONDITIONS.

THIS ENGINEERING JUDGMENT REPRESENTS A FIRESTOP SYSTEM THAT WOULD BE EXPECTED TO PASS THE STATED RATINGS IF TESTED.  
(REFERENCE : UL/cUL SYSTEM NO. HW-D-0750 & HW-D-0571; UL SYSTEM NO. CJ-D-0004)

**Hilti Firestop Systems**

HILTI, Inc.  
Plano, Texas USA (800) 879-8000

Designed by

Sheet 1 of 1

Scale 7/32" = 1"

Date Jan. 23, 2020

Drawing No.

**352536b*****Saving Lives through Innovation and Education***

■ Fire Wall connection to deck detail.

## SHAFT WALLS

GA FILE NO. WP 7065.2

PROPRIETARY\*

2 HOUR  
FIRE50 to 54 STC  
SOUND

## GYPSUM PANEL PRODUCTS, STEEL C-H, C-T, OR I STUDS

One layer 1" x 24" proprietary type X glass mat gypsum panels inserted between 2-1/2" floor and ceiling runners with tab-flange section of 2-1/2" steel C-H, C-T, or I studs between panels.

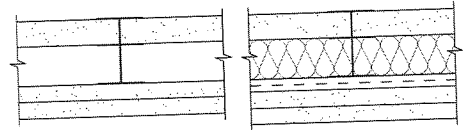
OPPOSITE SIDE: **Base** layer 5/8" proprietary type X glass mat gypsum substrate applied parallel to studs with 1" Type S drywall screws 24" o.c.

**Face** layer 5/8" proprietary type X glass mat gypsum substrate applied parallel to studs with 1-5/8" Type S drywall screws 12" o.c.

Sound tested with resilient channels 24" o.c. and 1-1/2" glass fiber insulation friction fit in stud space. (NLB)

## PROPRIETARY GYPSUM PANEL PRODUCTS

National Gypsum Company ..... 5/8" Gold Bond® Brand eXP®  
Interior Extreme® Gypsum Panels  
1" Gold Bond® Brand eXP® FIRE-SHIELD® Shaftliner



Thickness: 3-3/4" (Fire)  
4-1/4" (Sound)

Approx. Weight: 9 psf  
Fire Test: UL R3501, 08NK58332,  
12-12-08; 07NK17992,  
12-12-07;

Sound Test: UL Design U497;  
13NK02062, 1-14-13,  
UL Design W419, System B;  
KAL 437362, 11-3-76

GA FILE NO. WP 7065.5

PROPRIETARY\*

2 HOUR  
FIRE50 to 54 STC  
SOUND

## GYPSUM PANEL PRODUCTS, STEEL C-H, C-T, OR I STUDS

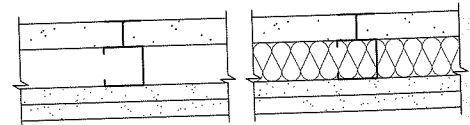
One layer 1" x 24" proprietary type X gypsum panels inserted between 2-1/2" floor and ceiling runners with tab-flange section of 2-1/2" steel C-H, C-T, or I studs between panels.

OPPOSITE SIDE: **Base** layer 5/8" proprietary type X gypsum wallboard applied parallel or at right angles to studs with 1" Type S drywall screws 24" o.c. **Face** layer 5/8" proprietary type X gypsum wallboard applied parallel to studs with 1-5/8" Type S drywall screws 12" o.c.

Sound tested with 1-1/2" mineral fiber insulation friction fit in stud spaces. (NLB)

## PROPRIETARY GYPSUM PANEL PRODUCTS

Georgia-Pacific Gypsum LLC ..... 5/8" ToughRock® Fireguard X™ Gypsum Board  
1" DensGlass® Shaftliner



Thickness: 3-3/4"  
Approx. Weight: 8.5 psf  
Fire Test: UL R6937, 09CA38295,  
10-27-09,  
UL Design V493

Sound Test: RAL TL08-288B, 10-10-08

WP 7065.5

\* Contact the manufacturer for more detailed information on proprietary products.

■ Listing for GA WP 7065.5.

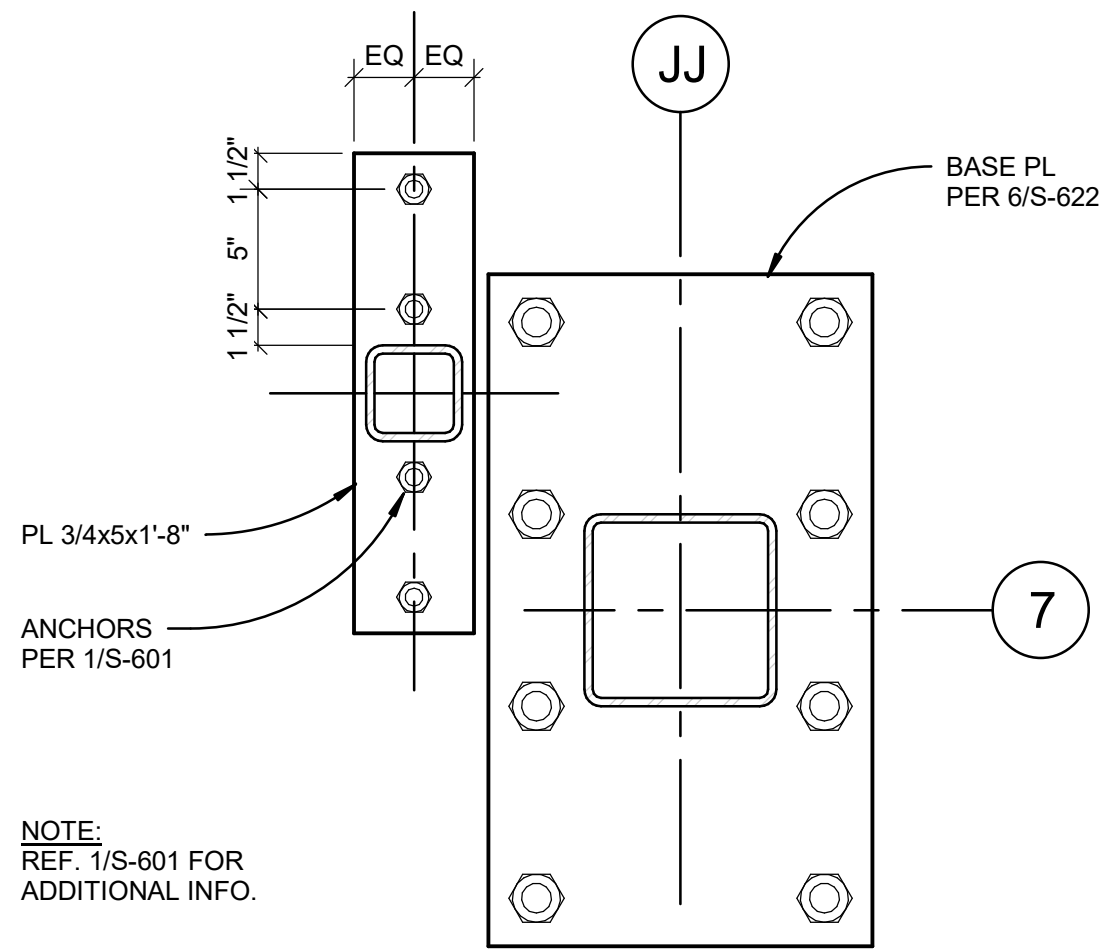




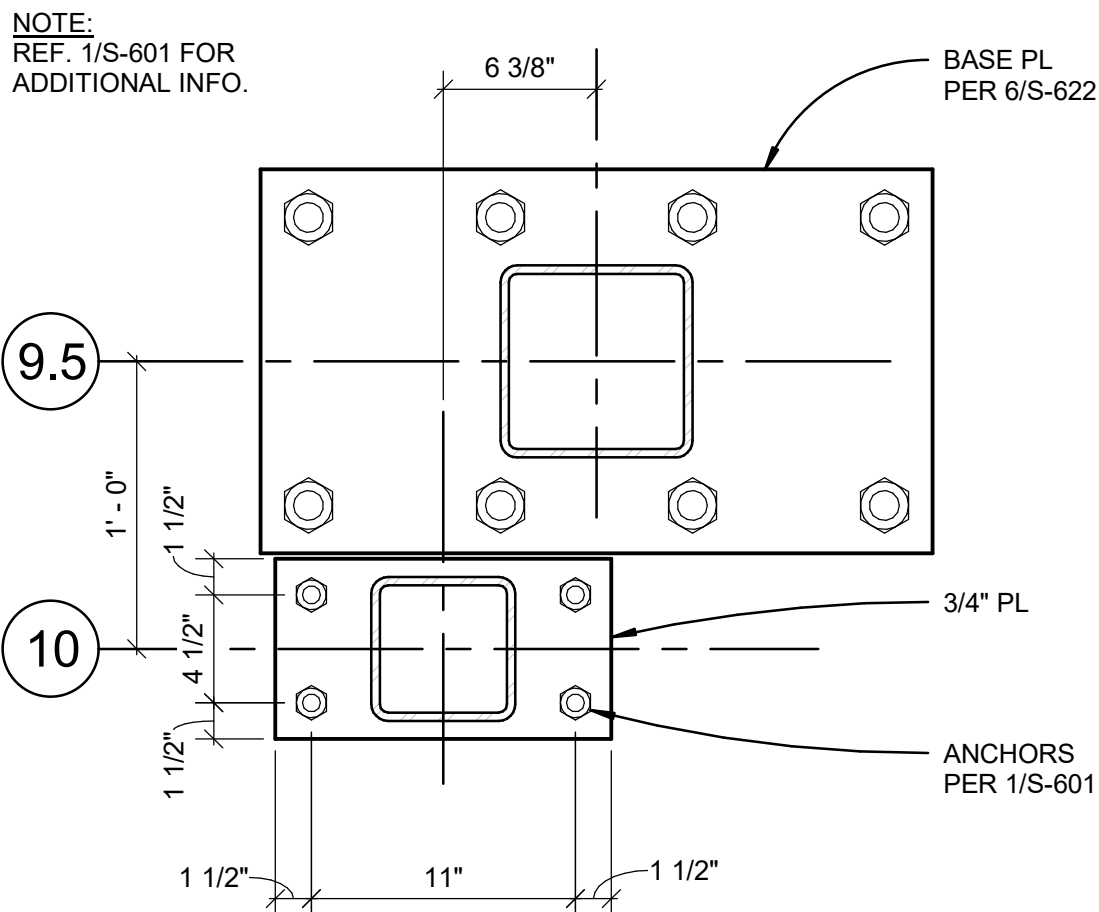




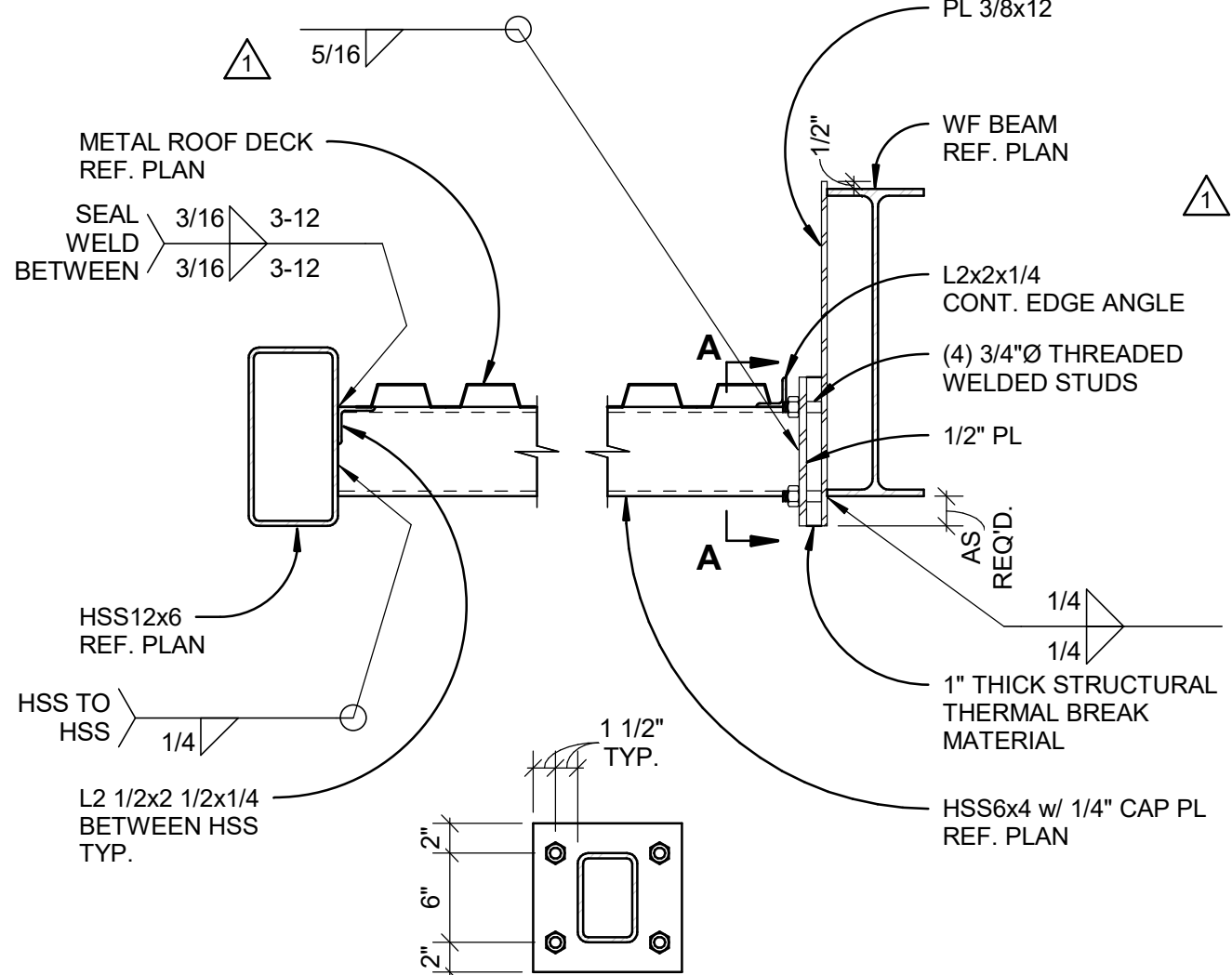
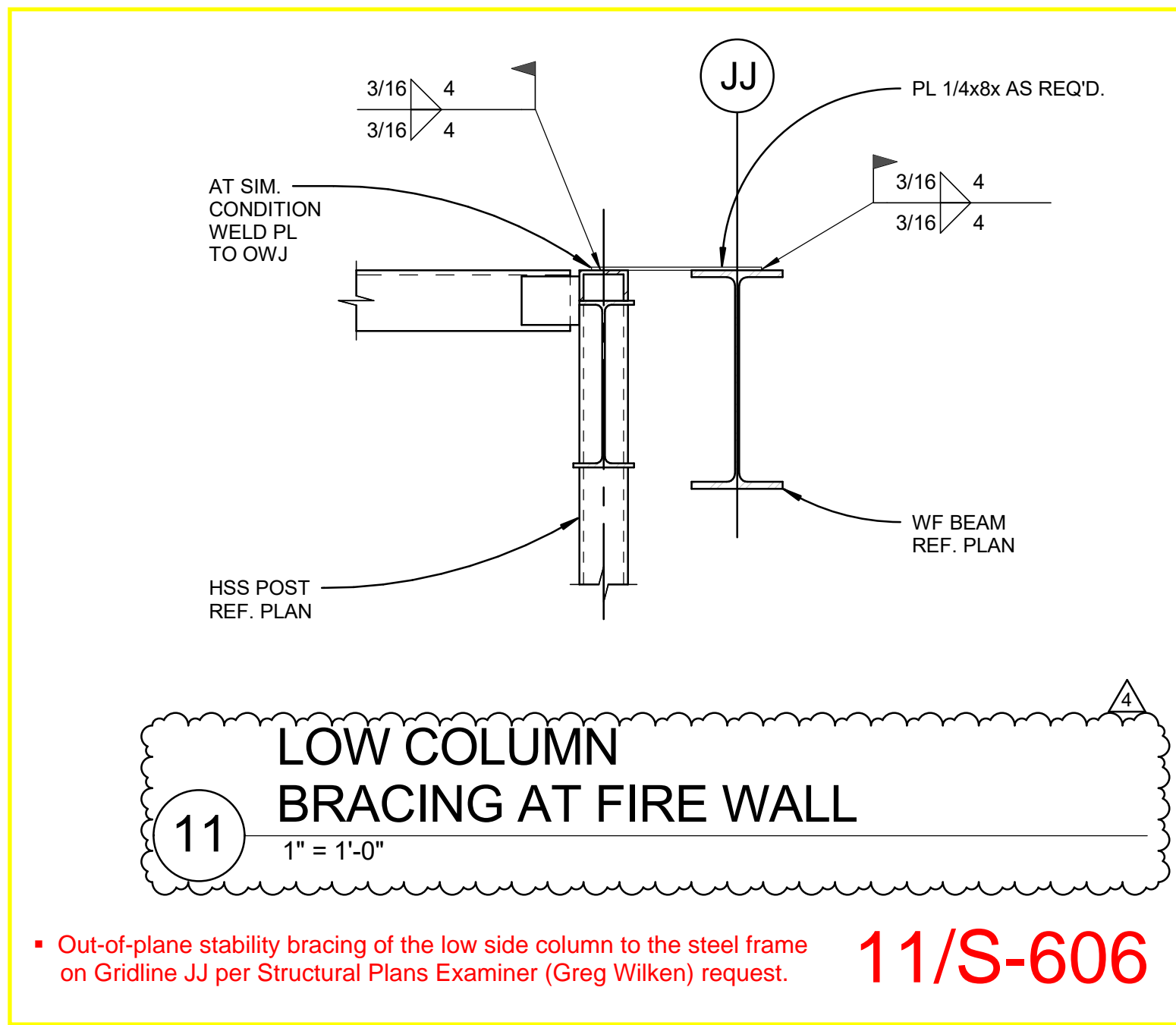




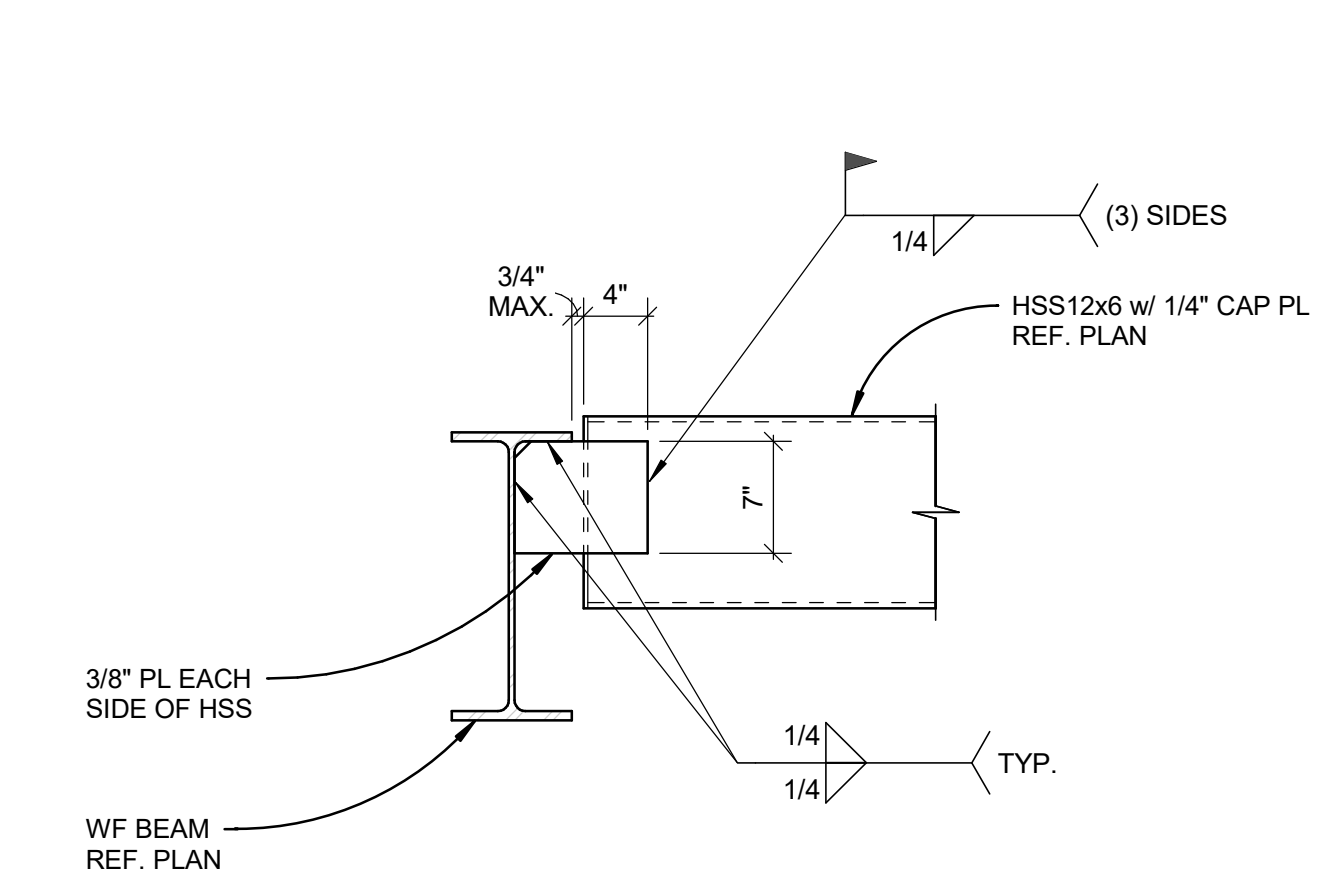
9 BASE PLATE AT  
ADJACENT COLUMNS  
1 1/2" = 1'-0"



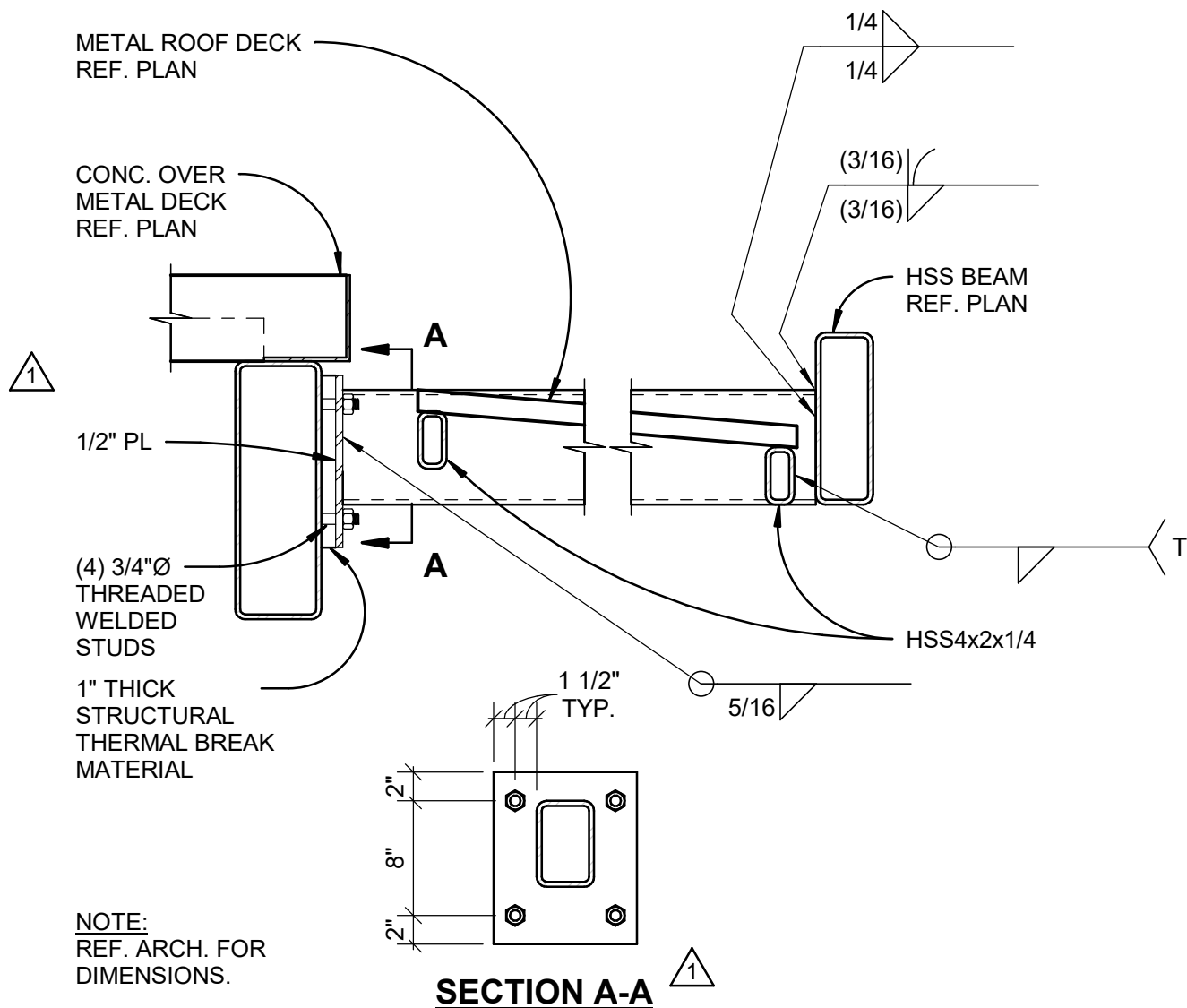
10 BASE PLATE AT  
ADJACENT COLUMNS  
1 1/2" = 1'-0"



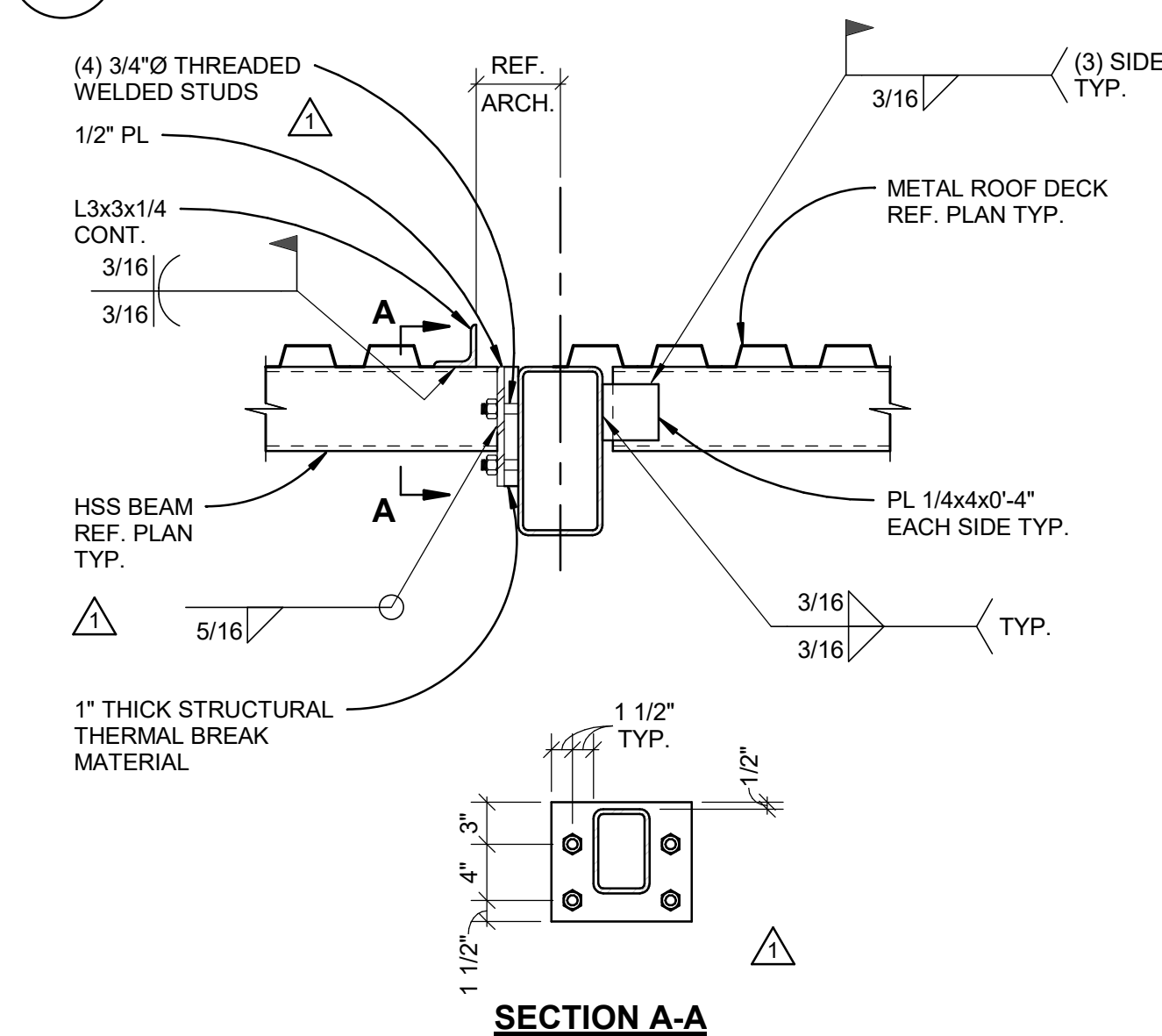
5 GYM ENTRY CANOPY  
1" = 1'-0"



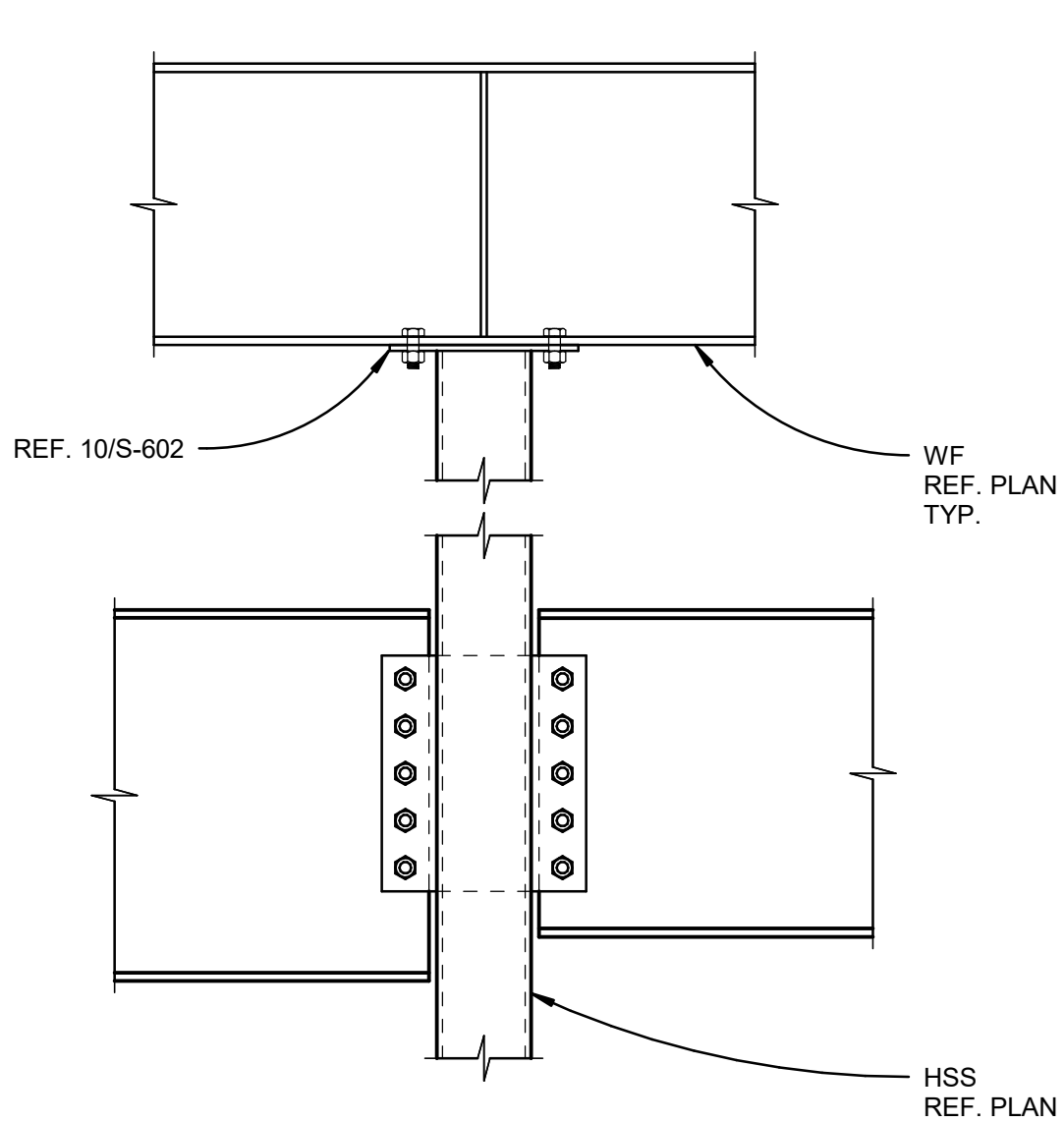
6 HSS TO WF CONNECTION  
1" = 1'-0"



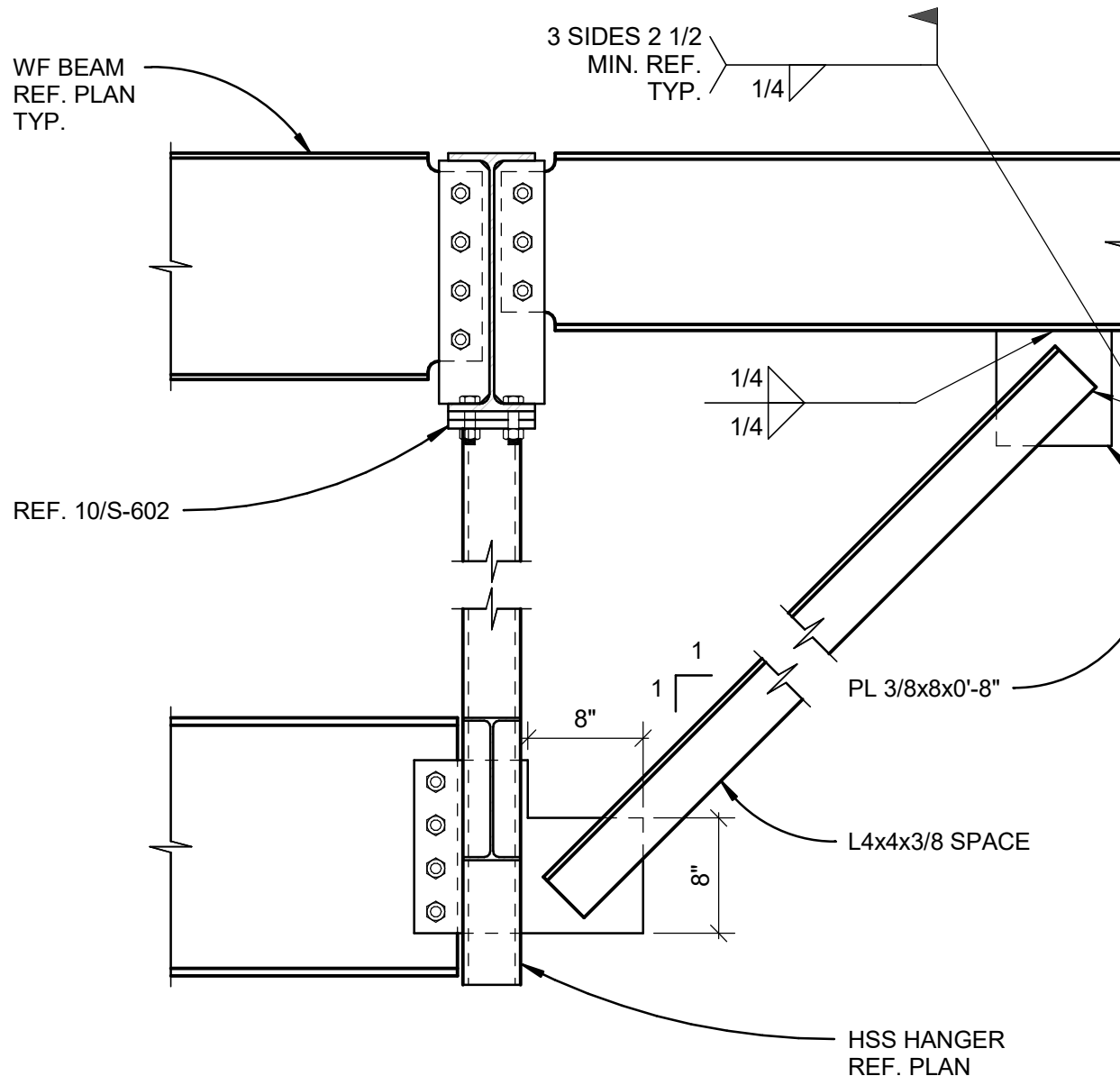
7 GARBAGE CANOPY SECTION  
1" = 1'-0"



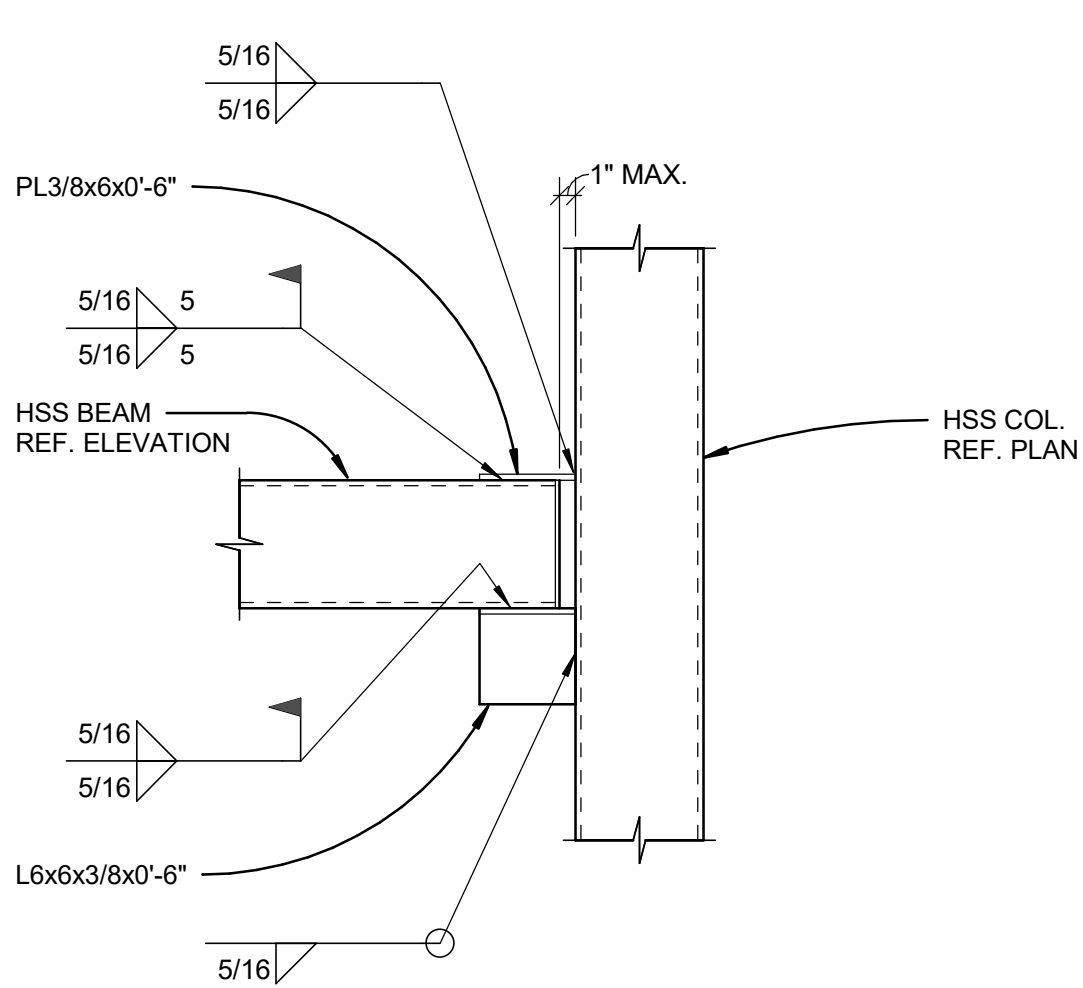
8 ENTRY CANOPY DETAIL  
1" = 1'-0"



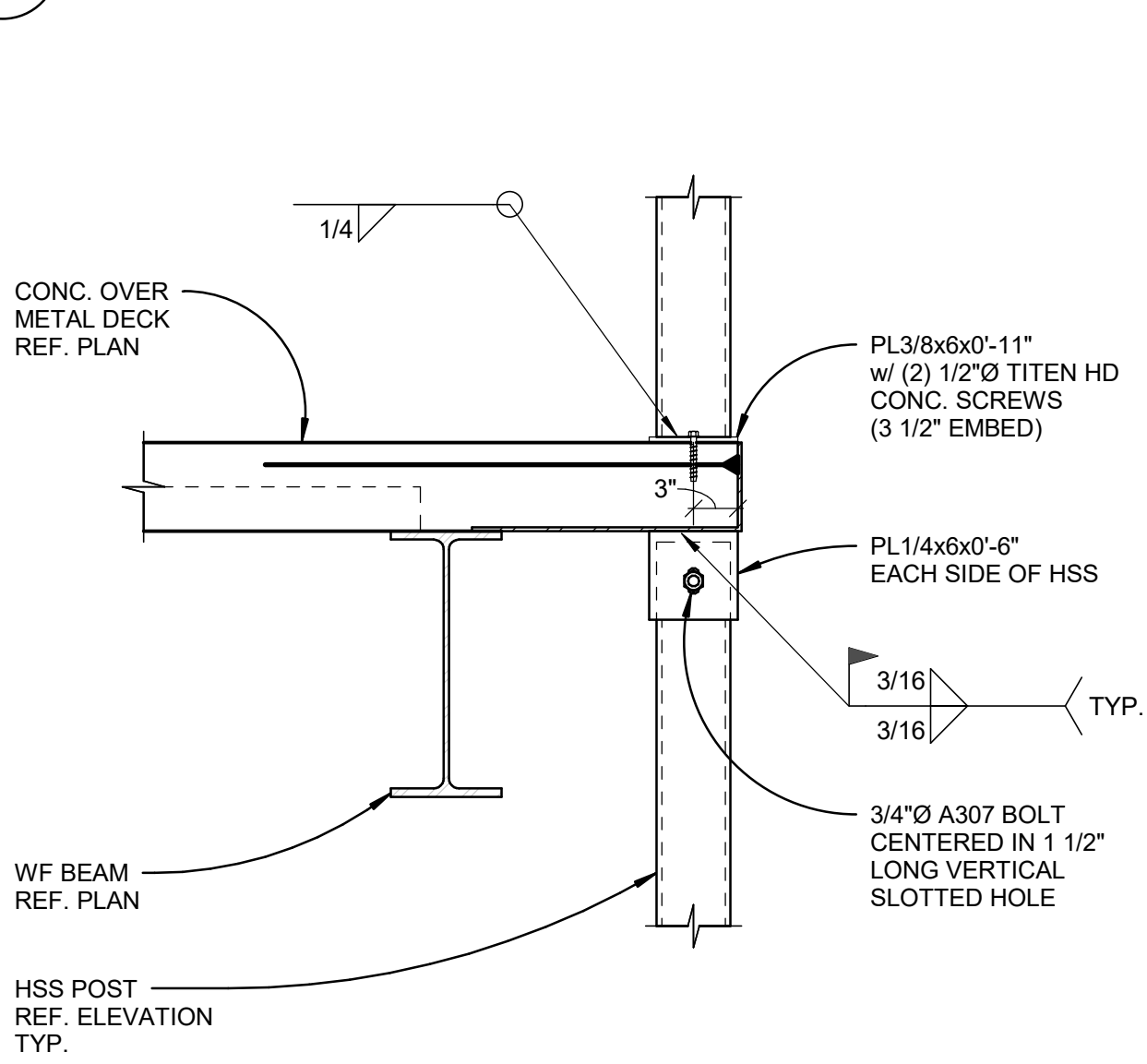
1 DETAIL AT ROOF STEP  
1" = 1'-0"



2 DETAIL AT ROOF STEP  
1" = 1'-0"



3 HSS TO HSS CONNECTION  
1" = 1'-0"



4 HSS TO SLAB CONNECTION  
1" = 1'-0"



KELLOGG  
MIDDLE SCHOOL

Oh

OH PLANNING + DESIGN,  
ARCHITECTURE

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Portland, OR 97209

T 503.280.8000  
F 503.224.5442

Consultants:

kppff

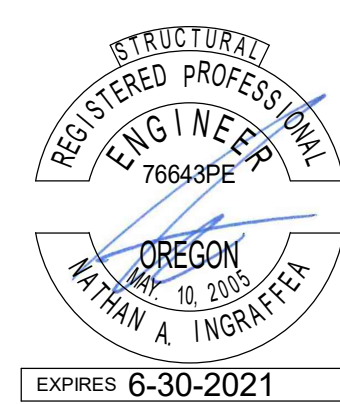
111 SW Fifth Ave., Suite 2500  
Portland, OR 97204

O: 503.227.3251  
F: 503.227.7980

www.kpff.com

KELLOGG MIDDLE SCHOOL  
3330 SE 69TH AVE.  
PORTLAND, OR 97206

CONFORMED SET



Date: 03/11/2019  
Project Number: 90031  
Drawn By: JBD  
Checked By: KPFF

Revision Schedule:  
1 ADDENDUM #3 03/27/2019  
2 ASI 01 07/03/2019  
4 City Revision #5 01/20/2020

Sheet Title:  
STEEL DETAILS

Sheet Number:

S-606

CONFORMED SET