

**TG08.7 – Glass Floors**

Questions are numbered in the order received. Numbers missing in the sequence either have been answered in a previous response set or will be answered in a future set.

<b>Question No.</b>	<b>Submission Date</b>	<b>Drawing No.</b>	<b>Document/ Spec. No.</b>	<b>Question</b>	<b>Response</b>
TG08.7-003	2/17/2015	A1-2705	00 04 41 Pre-Bid Substitution Request 08 88 53	Please review the attached form 00 04 41 - Pre-Bid Request for Substitution.	Due to lack of current UL rating report, the system does not meet the specification requirements. The substitution request is rejected. Please refer to the attached comments on technical issues found within the information provided.

00 04 41 – PRE-BID REQUEST FOR SUBSTITUTION

During the bidding period, a proposed change by a bidder of a product, equipment, or service required by the Contract Documents is considered a pre-bid request for substitution. A pre-bid request for substitution will be considered as part of the questions on bid documents (QBD) process. Refer to the CM/GC's Bid Manual for QBD instructions and forms.

During the bidding period and prior to the deadline for the submission of QBDs, Bidders may submit a request for a substitution of an "or equal" product, equipment, or service specified in the Contract Documents by completing and submitting this form as an attachment to a QBD, in accordance with the QBD process. The TJPA will respond in writing to a pre-bid request for substitution in accordance with the QBD process and deadlines specified in the bidding documents.

Pre-bid requests for substitution requested during the bidding period and accepted by Addendum prior to opening of bids are included in the Contract Documents.

Spec. Section: 08 88 53 GLAZED FLOORS Date: 2/16/2015  
 Drawing Sheet: A1-2704, A1-2705, A1-2305 Paragraph(s): 2.2  
 Detail(s): W-12 & W-13

Does not have 2-HR UL approval

Proposed Substitution: SAFTI FIRST 2-HR FIRE RESISTIVE FLOOR SYSTEM  
 Manufacturer/Address/Phone: SAFTI FIRST/100 N HILL DR., STE 12, BRISBANE CA 94005/  
 Trade Name/Model No.: N/A PHONE: 888-653-3333

Product History: ☒ New ☐ 2-5 years old ☐ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product (attach required point-by-point comparative data):

SEE ATTACHED COMPARISON CHART.

Reason for not providing specified item:

SAFTI FIRST'S 2-HR FLOOR SYSTEM IS MADE IN THE USA AT OUR FACTORY IN MERCED, CA. OUR GLASS AND FRAMING HAS A BETTER OVERALL DESIGN AND IS EASIER TO INSTALL THAN THE SPECIFIED SYSTEM.

Similar installation where proposed substitution has been used (Project/Address/Architect/Owner/Date Installed):

N/A.

Proposed substitution affects other parts of the Work: ☐ No ☒ Yes: explain

SEE ATTACHMENT "CHANGES AND MODIFICATIONS TO OTHER WORK".

Changes or modifications needed to coordinate other parts of the Work that will be necessary to accommodate the proposed substitution:

SEE ATTACHMENT "CHANGES AND MODIFICATIONS TO OTHER WORK".

Supporting data attached: X Product Data X Drawings \_\_\_ Test Reports \_\_\_ Samples

\_\_\_ Manufacturer's Standard Form of Warranty or Guarantee

Other: COMPARISON CHART; EXPLANATION OF CHANGES AND  
MODIFICATIONS TO OTHER WORK.

The Bidder certifies that

- The proposed substitution has been fully investigated and determined to be equal or superior in all respects to the specified product.
- The proposed substitution conforms in all respects to the requirements of the Contract Documents and all applicable regulatory requirements and is appropriate for the application intended.
- The same warranty or guarantee for the specified product will be furnished for the proposed substitution.
- The proposed substitution does not affect dimensions or functional clearances.

Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Attachments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

END OF SECTION 00 04 41

SPECIFICATION ISSUE LOG

Revision	Date
0	August 11, 2014

### 120 Minute Fire Resistive Floor Comparison

	SAFTI FIRST	TGP
Fire Rating	120 minutes	120 minutes
ASTM E-119 Heat Barrier	Yes	Yes
Origin for Glazing	<b>Manufactured in California / USA</b>	Imported
Make-up	<p><b>Single glass unit</b> comprised of custom SuperLite II-XL 120 insulated with a tempered laminated walking surface and a structural steel framing grid that contains electrical and plumbing for a clean, seamless look. Both the glass unit and the structural steel framing grid will be manufactured and provided by SAFTI FIRST.</p>	<p><b>Separate glass units</b> consisting of Pilkington Pyrostop® 120 glass installed from below. A tempered laminated walking surface glass will be installed from above on a steel framing grid by others.</p>
Max. Panel Size	60" x 60"	48" x 50"
Frame Finish	Stainless steel, Painted steel or other options desired.	Painted Steel
Installation	<p>The fire rated glazing and walking surface will be installed concurrently on the top-side rather than separate glazing surfaces from <u>about</u> and below the structural framing. This provides for easier installation and subsequent repairs. A minimal airspace between the fire rated glass and walkable surface is designed to eliminate condensation issues.</p>	<p>Fire rated glass is bottom-loaded with the walkable surface top-loaded and a 10" air space between. This provides an uncontrolled air space with substantial condensation problems. It is a very labor intensive system to install and will require constant maintenance.</p>
Condensation Control Between Fire Rated Glass and Walkable Surface	<p>The walkable surface is <u>sealed with</u> the fire rated glass to make one single unit with a controlled air space.</p>	<p>Desiccant bags are placed in the 10" air space between the walkable surface and the fire rated glass and will have to be changed regularly through access panels in the system. We believe this to be unworkable and there will be condensation problems regardless, even with constant maintenance.</p>
Structural Steel Rod Assembly	<p>The floor system will accommodate the structural steel rod assembly termination points without penetrating the fire rated glass system, which keeps the fire rated integrity intact.</p>	<p>Structural steel rod assembly penetrates the fire rated glass system, compromising the fire rated integrity of the system.</p>
Leakage	<p>Designed to stop all leakage <u>but can</u> be designed with draining to the</p>	<p>Designed to leak into the seismic joint</p>

does not specify the overall thickness of the glass unit, or how many layers of glass.

above?

Does this statement mean factory-sealed?

?  
Drainage channel is not an option.

	outside where required (the expansion areas).	
Maintenance	<p>This design requires no maintenance:</p> <ul style="list-style-type: none"> <li>• Stainless steel finish resists rust and other types of finishes can be provided.</li> <li>• No desiccant bags are between the fire rated glass and walkable surface that need to be repaired or replaced</li> <li>• The glazing can easily be accessed in case of repair.</li> <li>• Easy to perform electrical maintenance</li> <li>• Easy to perform sprinkler maintenance</li> </ul>	<p>Current design requires a lot of maintenance:</p> <ul style="list-style-type: none"> <li>• Painted steel finish susceptible to rust</li> <li>• Desiccant bags between the fire rated glass and walkable surface need to be replaced regularly.</li> <li>• Difficult to remove the fire rated glass in case it needs to be replaced</li> <li>• Difficult to perform electrical maintenance</li> <li>• Difficult to perform sprinkler maintenance.</li> </ul>
Additional Design Features	Our system is designed with room for an electrical box and can easily be prepared for fire sprinkler systems. It also is designed to hang fixtures, etc.	System must meet all subparagraphs of Specification Section 08 88 53 1.13
Warranty	5 years	5 years
Listing Agency	Successfully passed initial testing. Additional full assembly testing scheduled for the 1 <sup>st</sup> Quarter of 2015 and formal testing and listing scheduled for the 2 <sup>nd</sup> Quarter of 2015 with Intertek Testing Services.	System must hold a 2-HR fire rated UL Design Report.  UL

To view photos of our fire rated installations, click here: <http://safti.com/projects/#page:1>



FIRE RATED GLAZING SOLUTIONS

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### Changes and Modification to Other Work

We believe that the he GPX 120-minute glazed floor system is a great improvement over the current system. It offers cleaner design, easier installation and no maintenance. We anticipate that there will be changes and modifications to other work, engineering and to the design that will need to be worked out. The immediate differences that we anticipate are:

- The system proposed does not require desiccant bags between the fire rated glass and the walking surface that need to be changed or serviced, so the hinged access panels and the desiccant feed tubes to change the desiccant bags will be eliminated.
- This proposed design provides open access to the structural framing provided by SAFTI *FIRST* and allows the installation of the glass from above for easy installation and replacement should there ever be breakage. Our engineering team will coordinate any changes to the structural steel details with the architects, engineers and contractors as it relates to this fire rated floor system. We have extensive experience and involvement in design-build projects.
- This design provides for the the option of the electrical conduit, junction boxes and sprinkler system to be installed within the structural framing during the manufacturing process, reducing field labor and provides a clean aesthetic look.
- In this design, the fixtures will be hung from the concealed fixture box in the beams for easy access and repair.

We are a local company located in Brisbane, California. Our engineering and project management staff can easily attend any job site meetings or provide guidance during installation. Our manufacturing facility is located in Merced, California which is relatively close by to the Bay Area, and we invite the project architects, engineers and contractors to visit our manufacturing facility and to witness our planned additional testing and tour the facility where the system will be built. We believe this would greatly help to better evaluate our capacity, engineering skills and capabilities.

To view photos of our fire rated installations, click here: <http://safti.com/projects/#page:1>

# SAFTIFIRST

## 120 MIN. FIRE-RATED FLOOR

If tested, provide UL Design. SFFD/DBI will not accept Intertek Listing alone

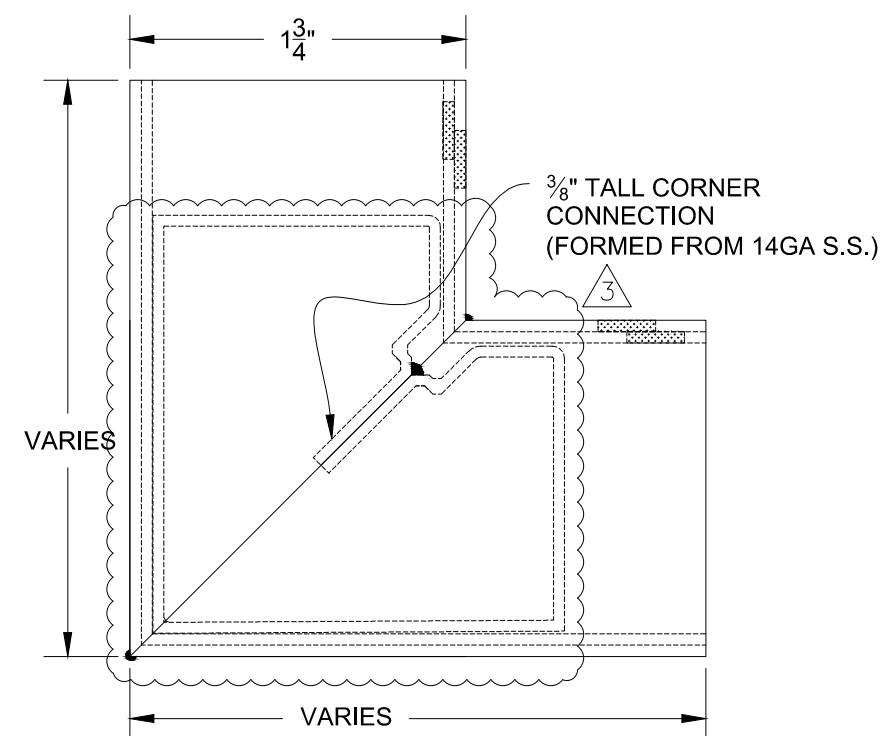
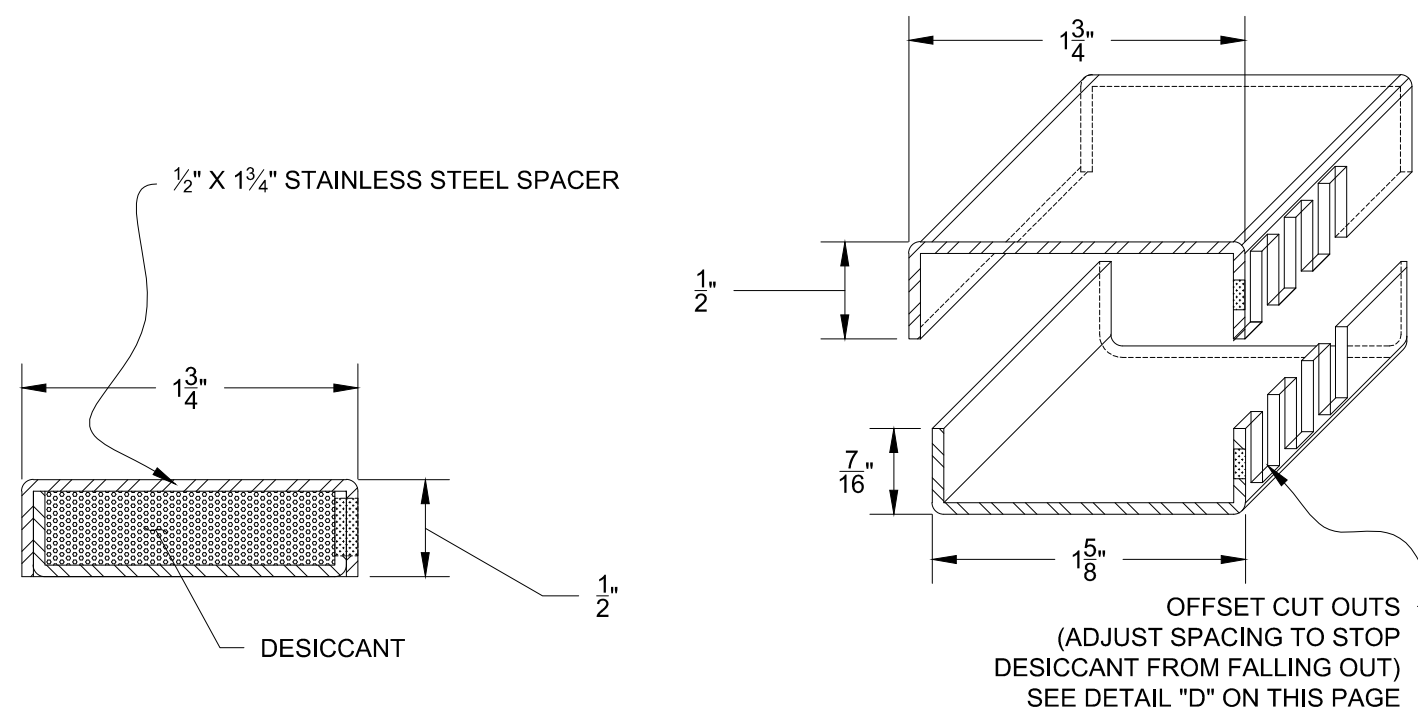
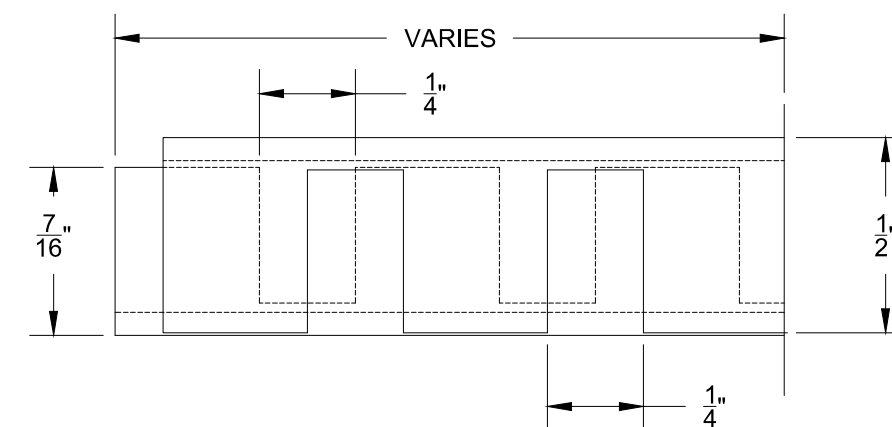
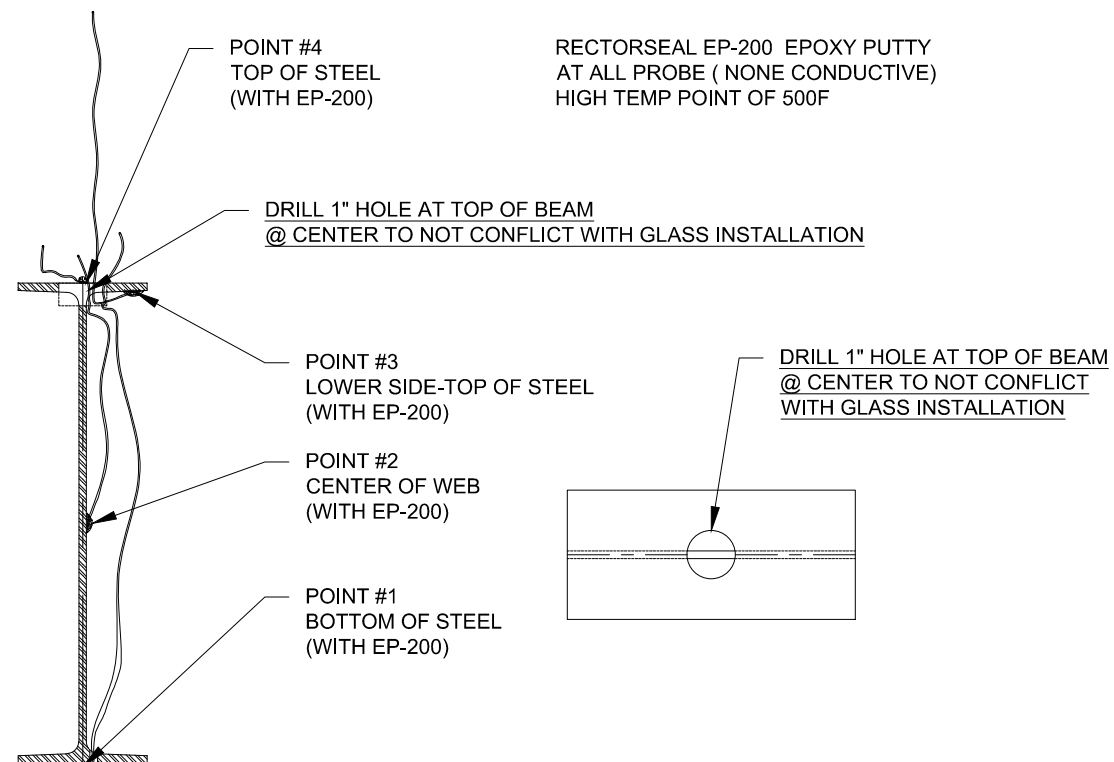
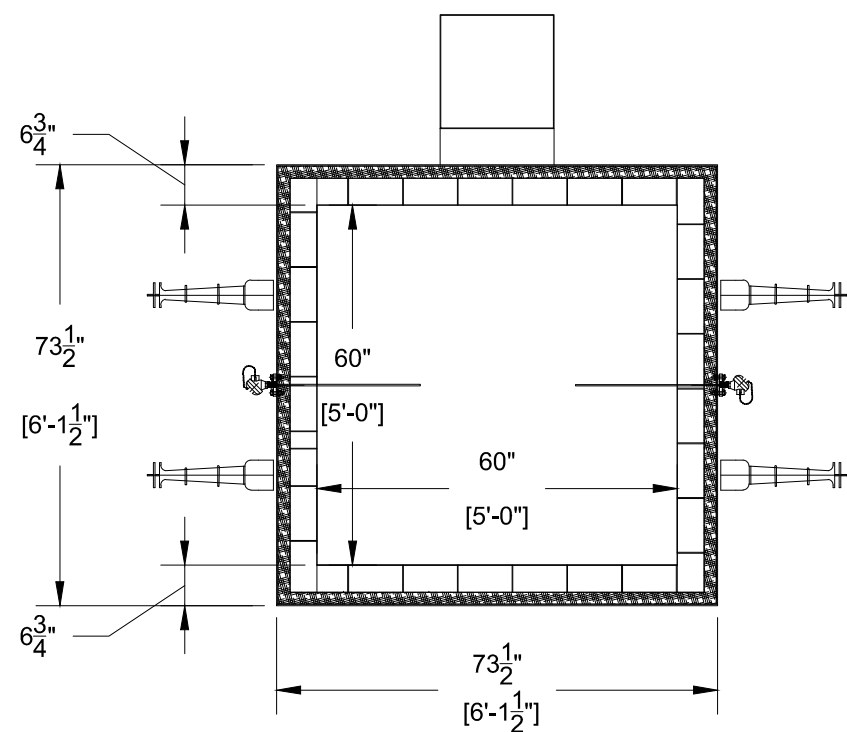
GLASS TYPE:
120 MIN. SAFTIFIRST FIRE-RATED GLASS AS TESTED <sup>2</sup>

WALK-ABLE GLASS TYPE:
LAMINATED GLASS WALKING SURFACE AS ENGINEERING REQUIRED <sup>3</sup>

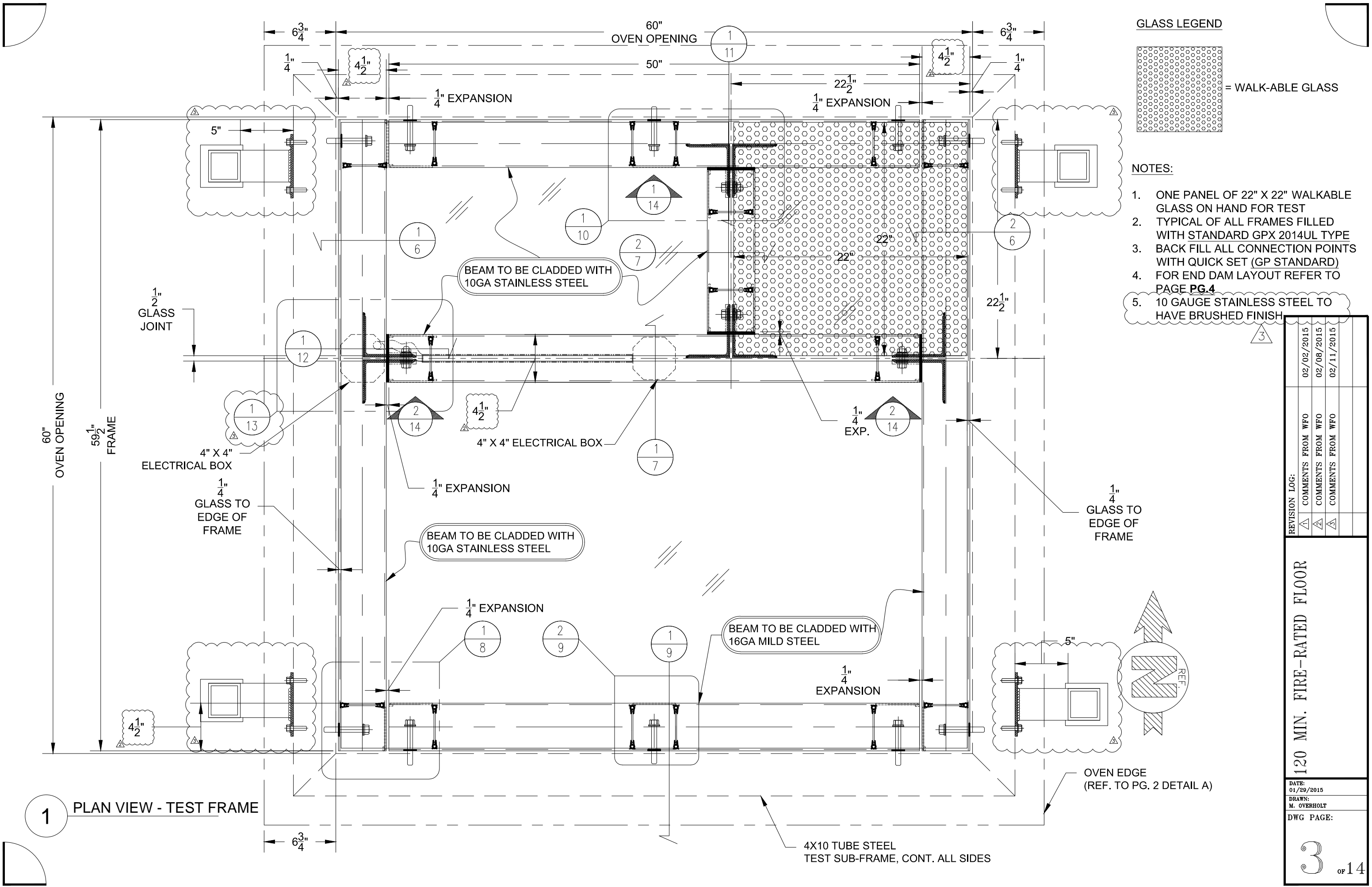
WALKING

REVISION LOG:	△	COMMENTS FROM WFO	02/02/2015
	△	COMMENTS FROM WFO	02/08/2015
	△	COMMENTS FROM WFO	02/11/2015
120 MIN. FIRE-RATED FLOOR			
DATE: 01/29/2015			
DRAWN: M. OVERHOLT			
DWG PAGE:			
1 of 14			

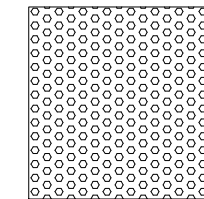




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	△2	COMMENTS FROM WFO	02/08/2015
	△3	COMMENTS FROM WFO	02/11/2015



GLASS LEGEND



= WALK-ABLE GLASS

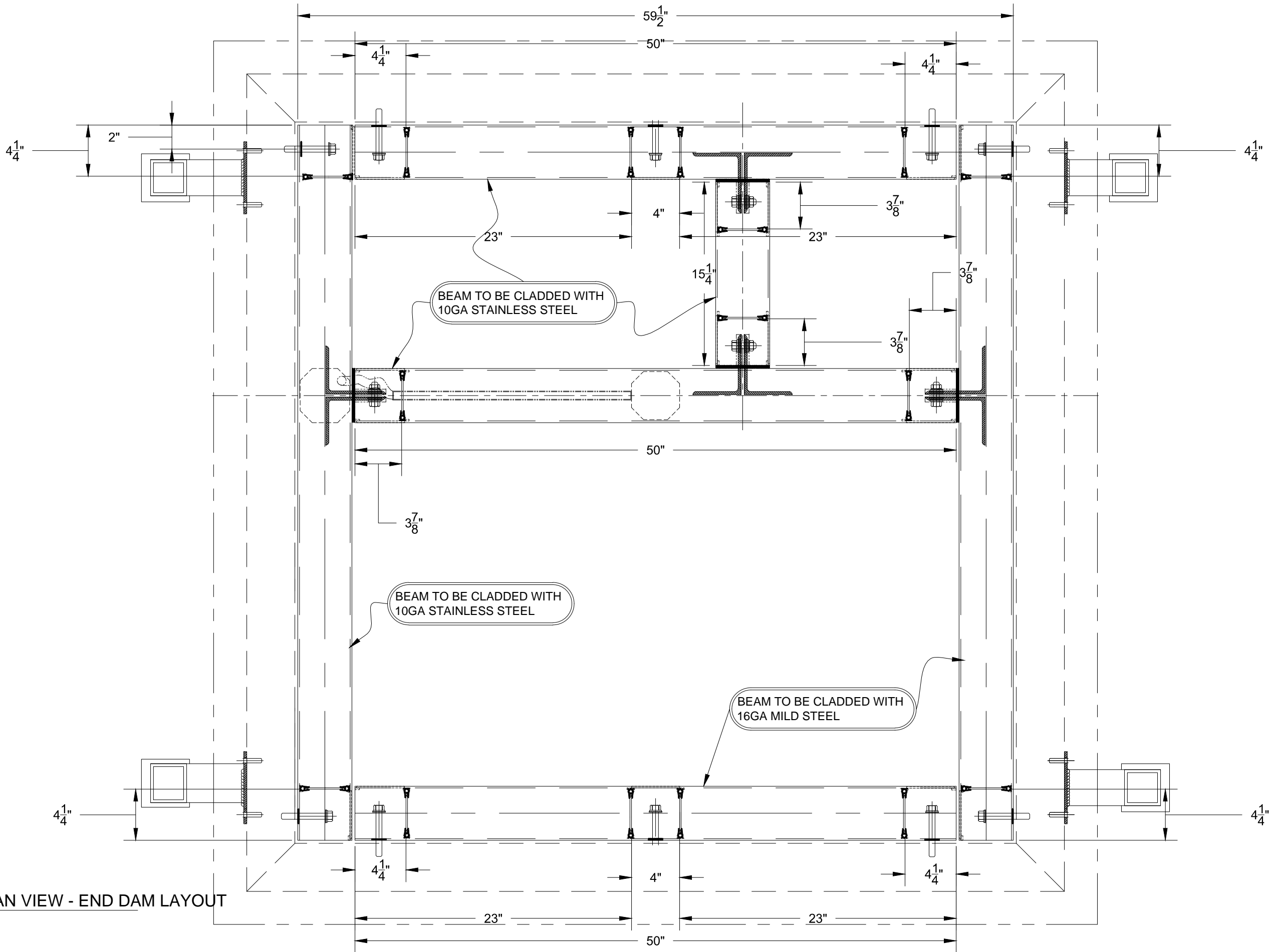
NOTES:

1. ONE PANEL OF 22" X 22" WALKABLE GLASS ON HAND FOR TEST
2. TYPICAL OF ALL FRAMES FILLED WITH STANDARD GPX 2014UL TYPE
3. BACK FILL ALL CONNECTION POINTS WITH QUICK SET (GP STANDARD)
4. FOR END DAM LAYOUT REFER TO PAGE PG.4
5. 10 GAUGE STAINLESS STEEL TO HAVE BRUSHED FINISH

REVISION LOG:		02/02/2015	02/08/2015	02/11/2015
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120 MIN. FIRE-RATED FLOOR

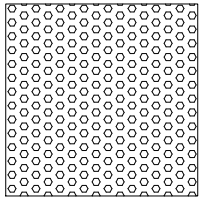
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01/29/2015  
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1 PLAN VIEW - END DAM LAYOUT

REVISION LOG:			
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△	COMMENTS FROM WFO	02/11/2015	
120 MIN. FIRE-RATED FLOOR			
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GLASS LEGEND



= WALK-ABLE GLASS

NOTES:

1. ONE PANEL OF 22" X 22" WALKABLE GLASS ON HAND FOR TEST

LOCATION #2  
OF PROBE GROUP  
(PTS #5-8)  
(REF. TO PG. 2 DETAIL B)

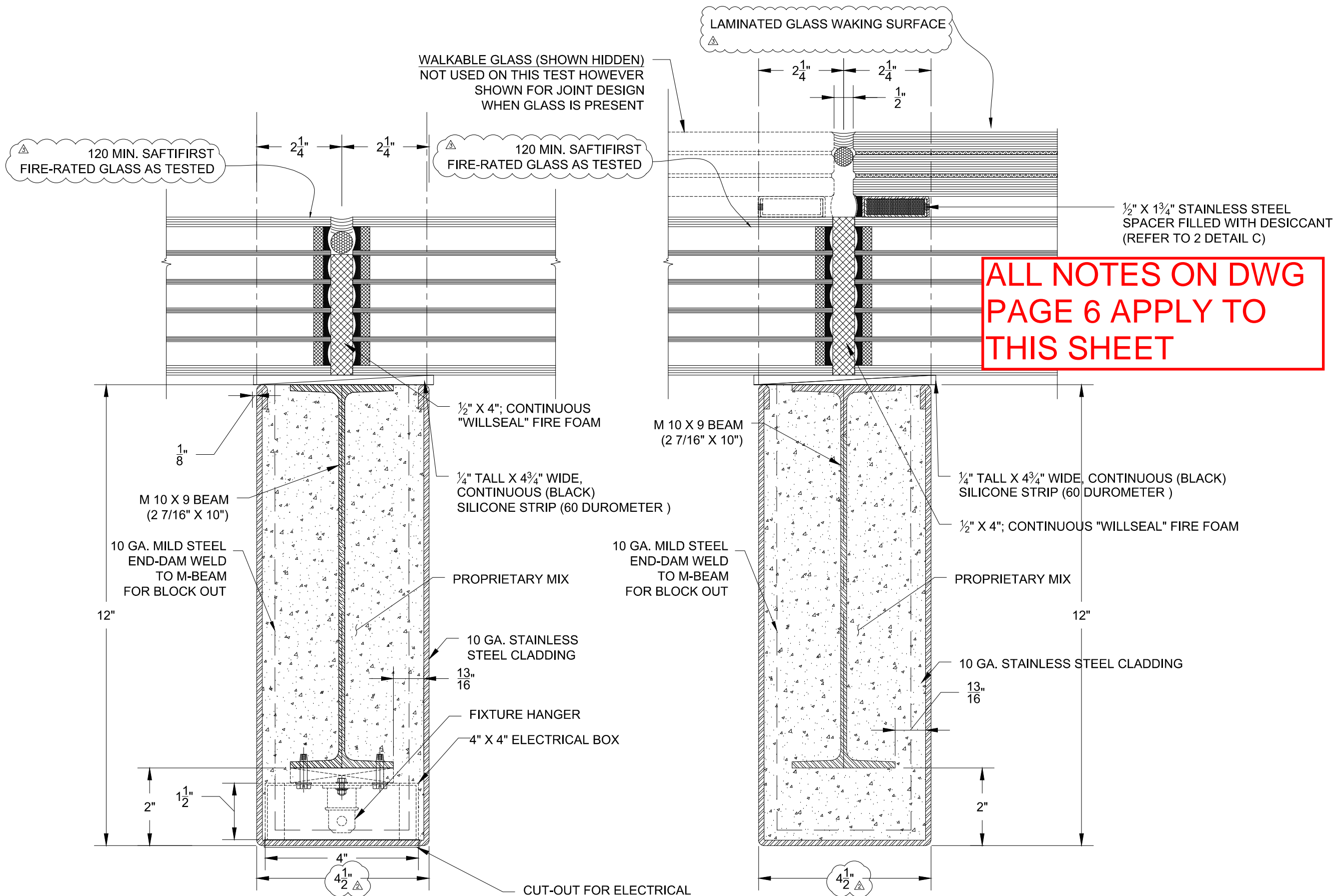
LOCATION #9  
OF TC PROBE  
ON SURFACE OF GLASS

LOCATION #1  
OF PROBE GROUP  
(PTS #1-4)  
(REF. TO 2 DETAIL B)

1 PLAN VIEW - THERMOCOUPLE LAYOUT

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	COMMENTS FROM WFO	02/08/2015	
	COMMENTS FROM WFO	02/11/2015	
120 MIN. FIRE-RATED FLOOR			
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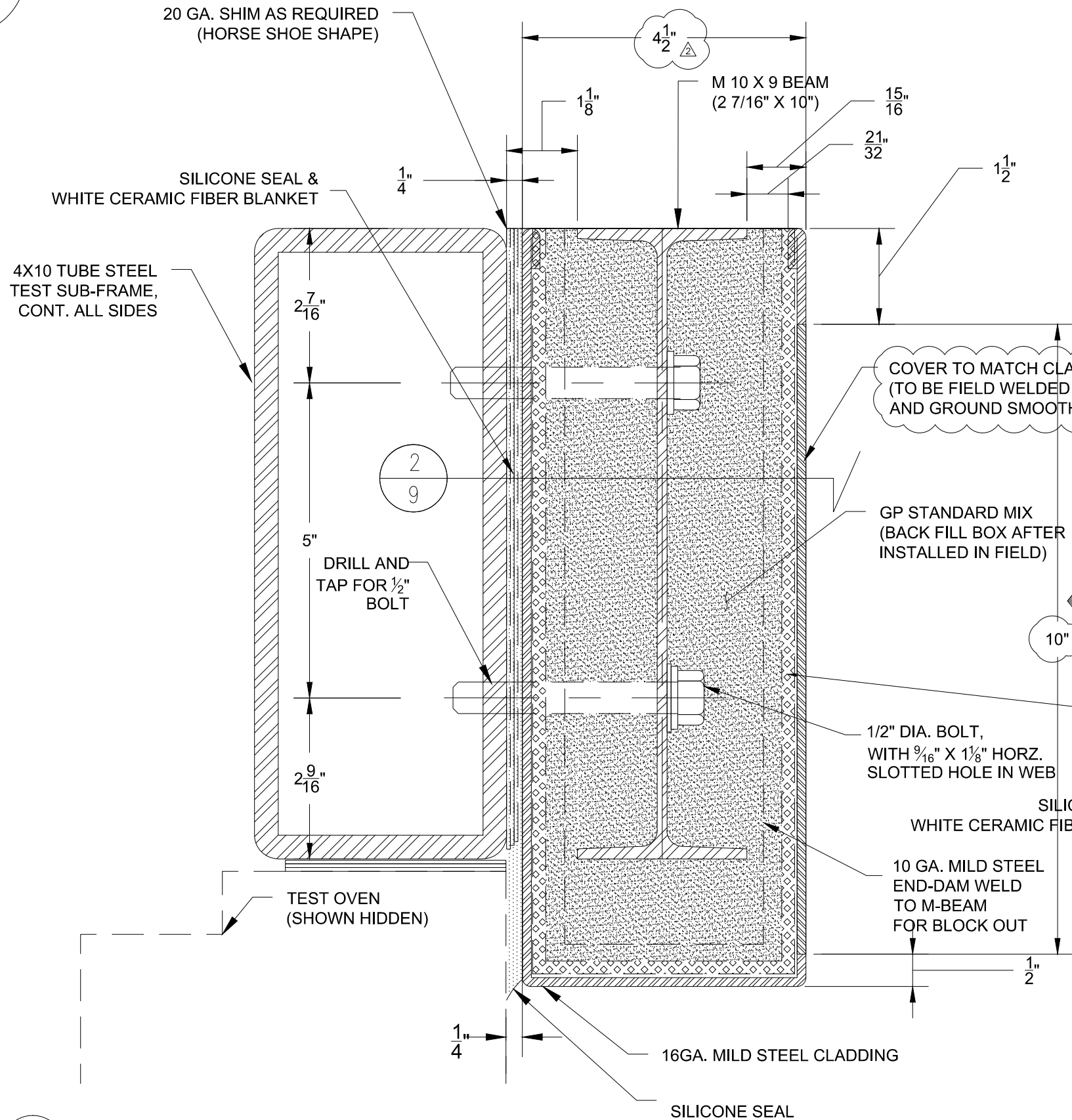
1 FRAME SECTION @ ELEC. BOX

2 FRAME SECTION

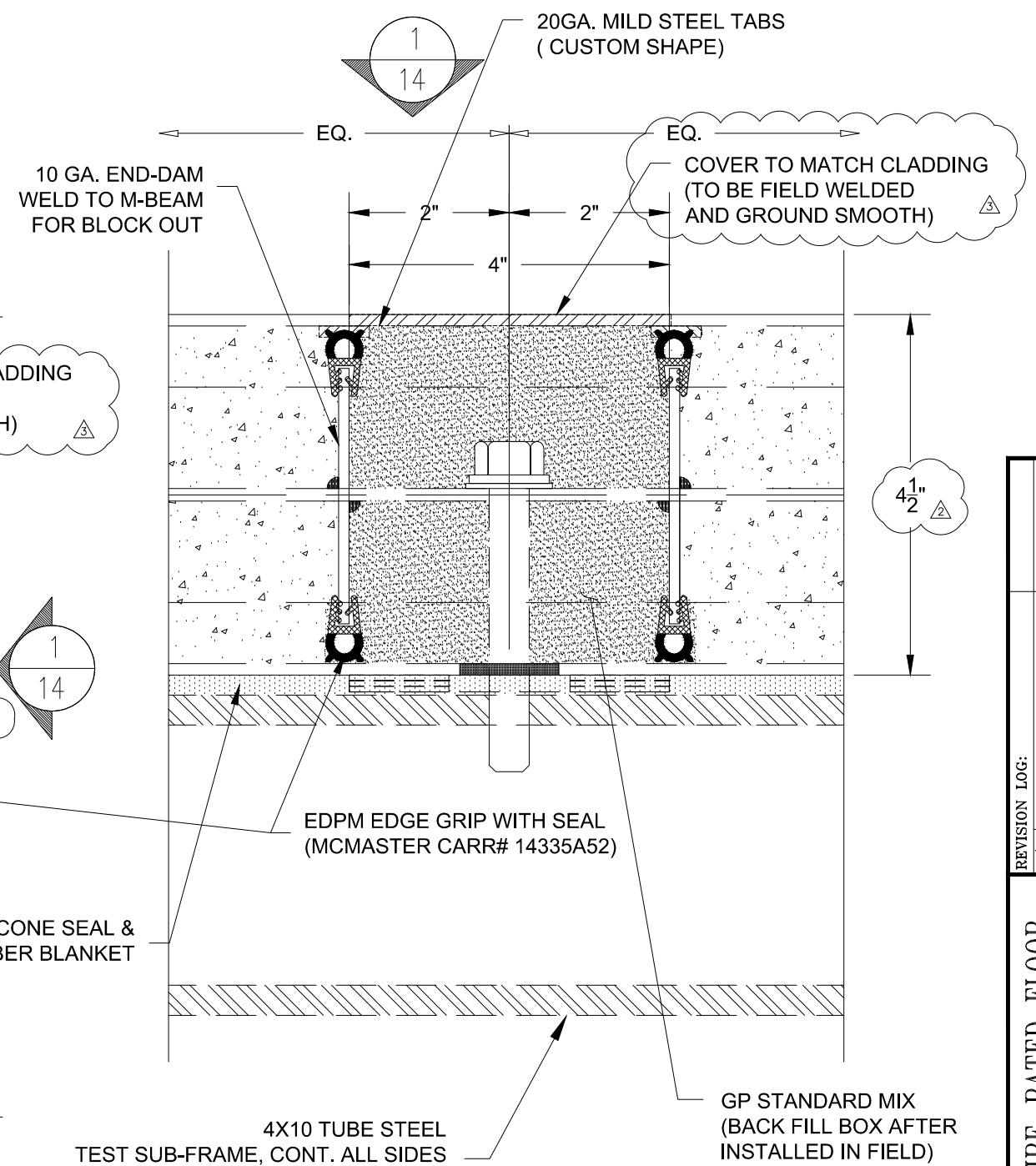
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120 MIN. FIRE-RATED FLOOR		
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1 STEEL SUB FRAME CONNECTION DETAIL(SOUTH)

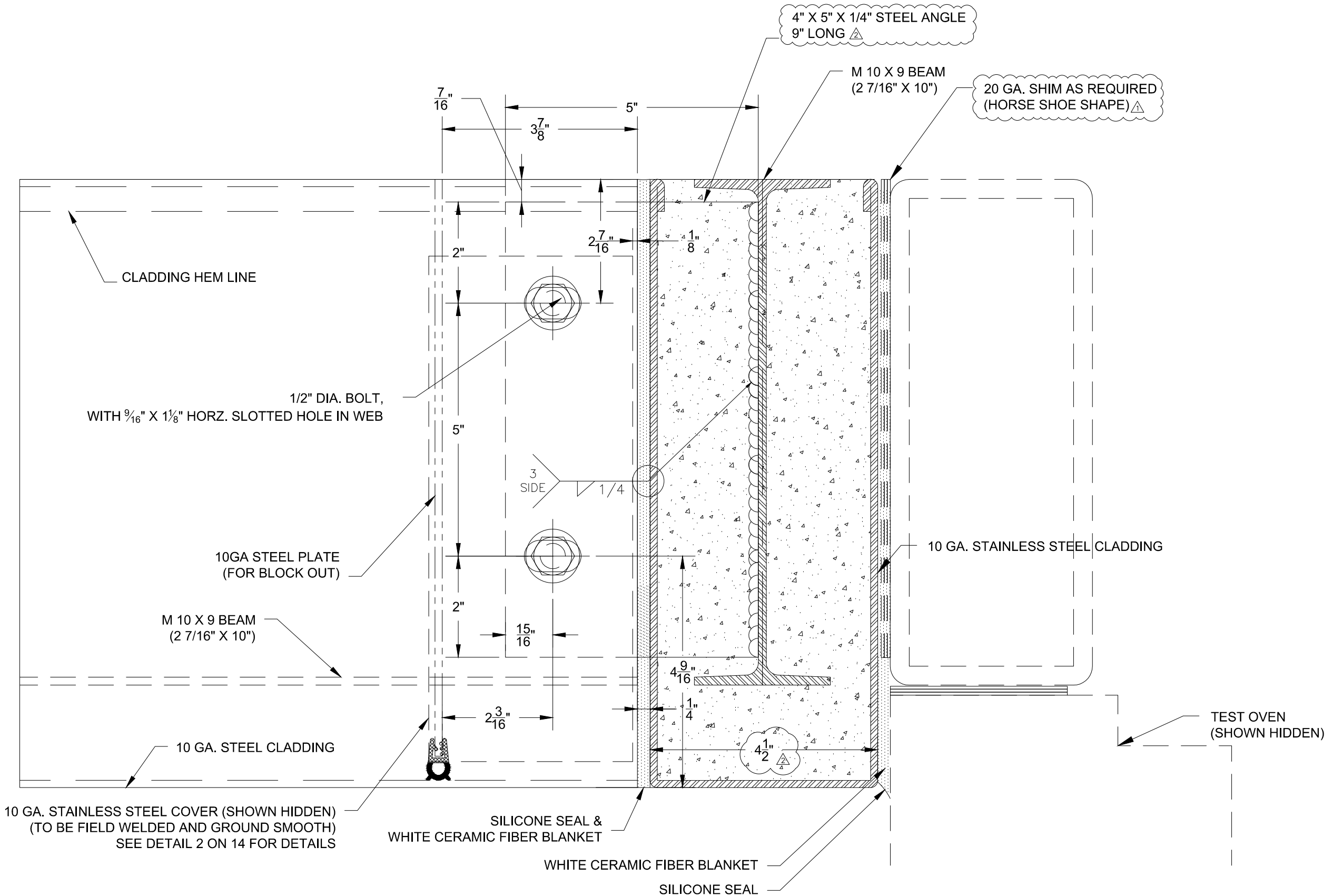


2 PLAN VIEW - CONNECTION DETAIL (SOUTH)

REVISION LOG:	COMMENTS FROM WFO	02/02/2015
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	COMMENTS FROM WFO	02/11/2015
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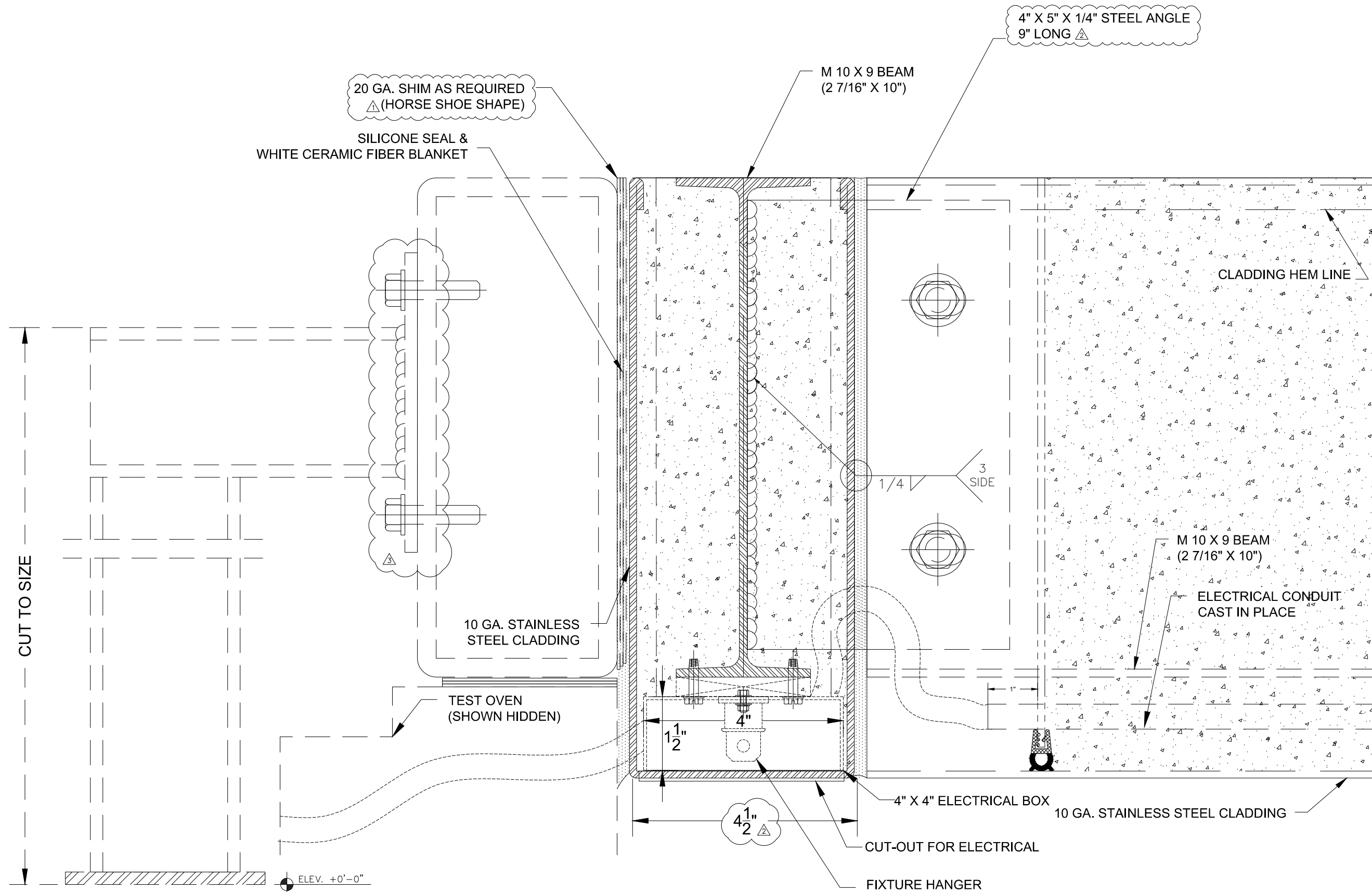
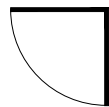
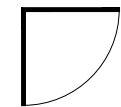




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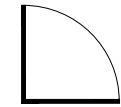
FRAME MEMBER TO FRAME MEMBER CONNECTION  
NORTH SIDE ( THRU THE CONNECTION )

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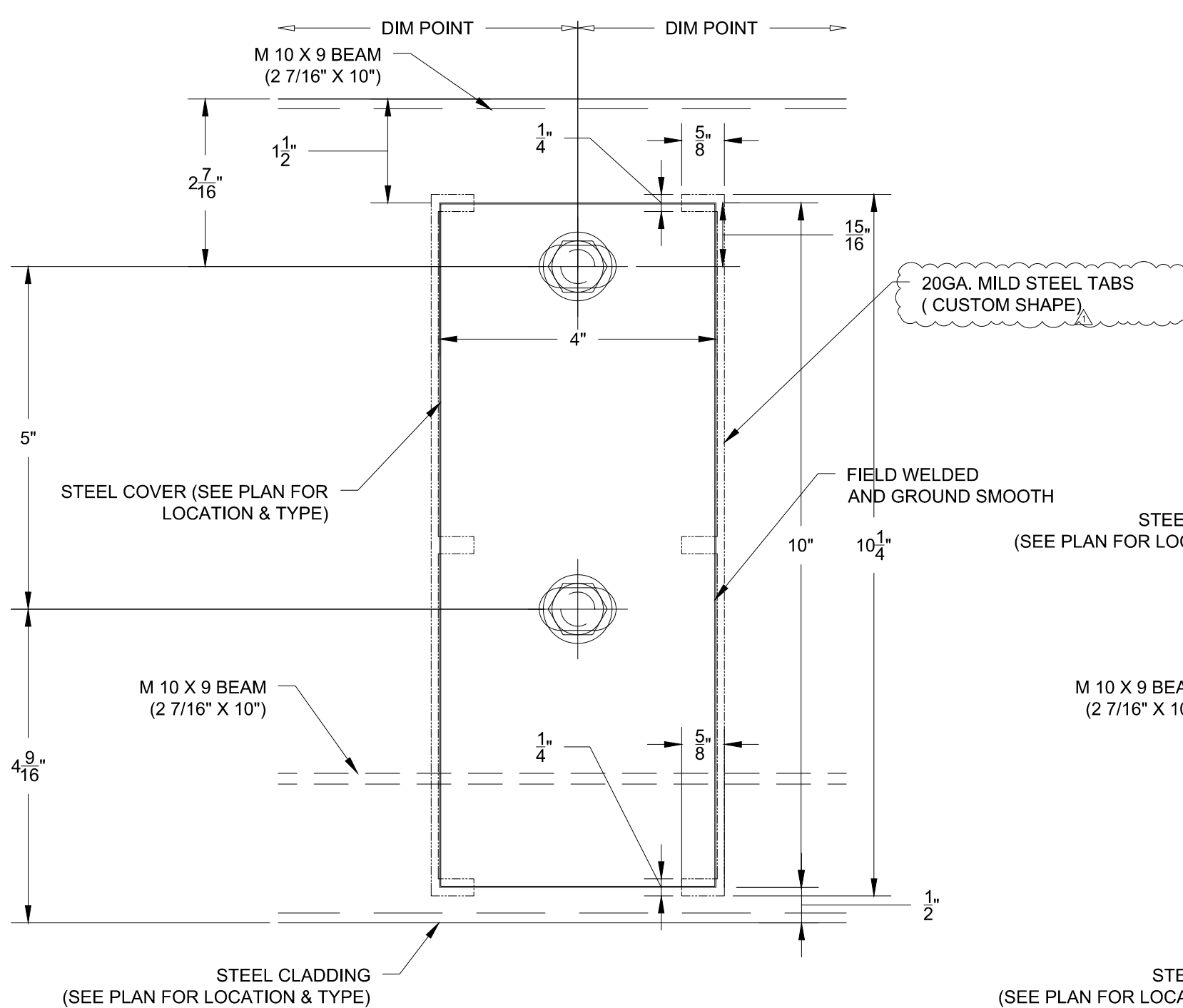
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FRAME MEMBER TO FRAME MEMBER CONNECTION  
WEST SIDE ( THRU THE CONNECTION & ELECTRICAL BOX)

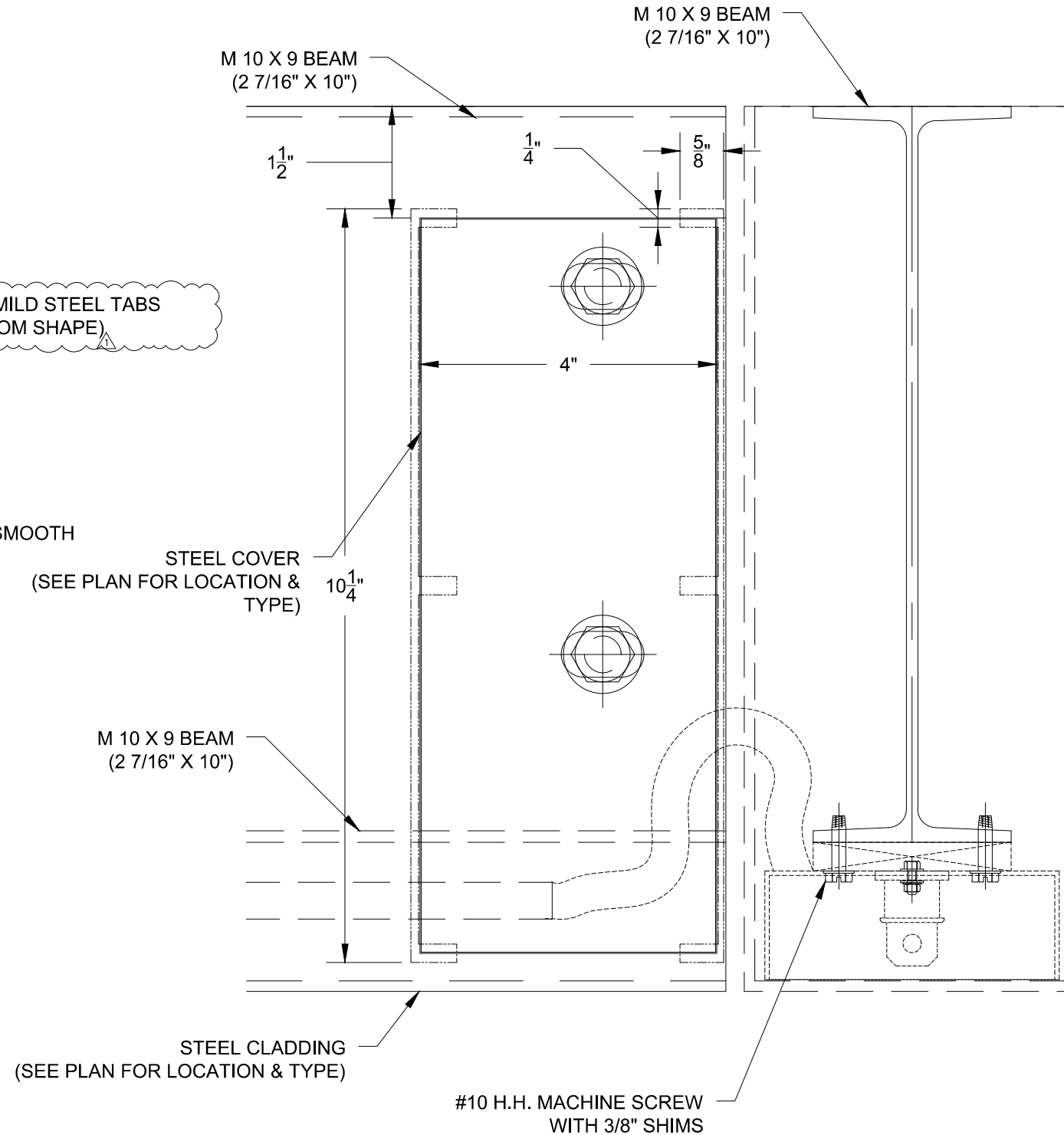


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1 (4" X 10") COVER DETAIL AND CUT OUT  
LOCATION VARIES SEE PLAN



2 (4" X 10") COVER DETAIL AND CUT OUT  
LOCATION @ END OF FRAME (ELECTRICAL WHERE APPLIED)

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