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ACSO  
TRAINING TOWER  
5301 MADIGAN ROAD  
DUBLIN, CA 94568



PER TABLE 504.3 FOR A CONSTRUCTION TYPE V AND OCCUPANCY U  
CLASSIFICATION ALLOWABLE BUILDING HEIGHT IS 40'-0"

PER TABLE 506.2 FOR A CONSTRUCTION TYPE V AND OCCUPANCY U  
CLASSIFICATION ALLOWABLE BUILDING AREA IS 5500 SF

All of the training towers, that are supplied by FFI, have been designated as a nonbuilding structure because of the unusual nature and use of this type of structure. The National Fire Protection Association (NFPA) has published a guide specifically for the design and construction of both tactical and fire training facilities. NFPA 1402 (2019) section A.1.2.2 reads "Fire training structures are not occupied buildings. Building code requirements for many occupied building items, such as fire protection, HVAC, finishes, and accessibility per the ADA, do not apply to fire training structures."

## PROJECT DIRECTORY

**ELECTRICAL**  
RANDALL LAMB ASSOCIATES, INC  
500 WASHINGTON ST, SUITE 200  
SAN FRANCISCO, CA 94111  
CONTACT: AARON STRAUCH  
E: [ASTRAUCH@RANDALLLAMB.COM](mailto:ASTRAUCH@RANDALLLAMB.COM)

ALL WORK SHALL FULLY COMPLY BUT NOT BE LIMITED TO:

- A. 2019 CALIFORNIA BUILDING CODE (CBC)
- B. 2019 CALIFORNIA ELECTRICAL CODE (CEC)
- C. 2019 CALIFORNIA MECHANICAL CODE (CMC)
- D. 2019 CALIFORNIA PLUMBING CODE (CPC)
- E. 2019 CALIFORNIA ENERGY CODE (CENG)
- F. 2019 CALIFORNIA FIRE CODE
- G. 2019 GREEN BUILDING STANDARDS CODE
- H. 2019 GREEN BUILDING STANDARDS CODE (CALGREEN)
- I. NFPA 13 SPRINKLER SYSTEM (NFPA 13-2016 EDITION)
- J. NFPA 72 NATIONAL FIRE ALARM CODE (NFPA 72-2019 EDITION)
- K. 2019 TITLE 24 FROM THE CALIFORNIA CODES OF REGULATIONS (CCR)
- L. ALAMEDA COUNTY MUNICIPAL CODE

[illegible]

PROFESSIONAL SEALS



PROJECT  
ACSO TACTICAL TRAINING TOWER

SHEET TITLE  
COVER

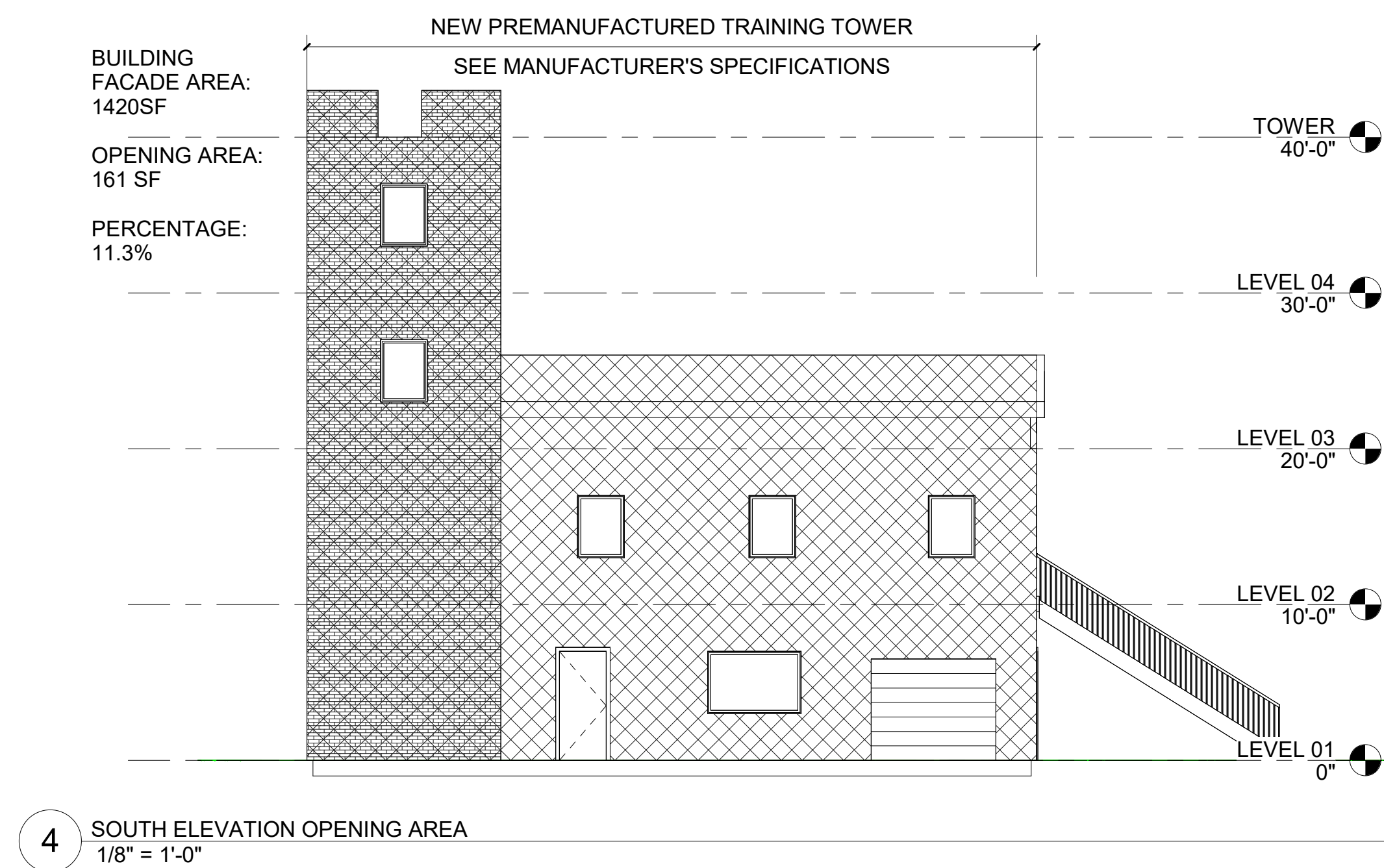
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PROJECT NUMBER

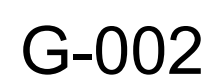
DATE 8/25/21

G-000





SLOPE ARROW



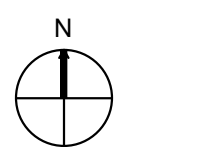




General Services Agency  
Capital Programs  
101 Lakeside Drive  
Oakland CA, 94612

[illegible]

## KEY PLAN



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PROFESSIONAL SEALS



FACILITY  
5301 Madigan Road  
Dublin, CA 94568

PROJECT  
ACSO TACTICAL TRAINING TOWER

SHEET TITLE  
SITE PLAN

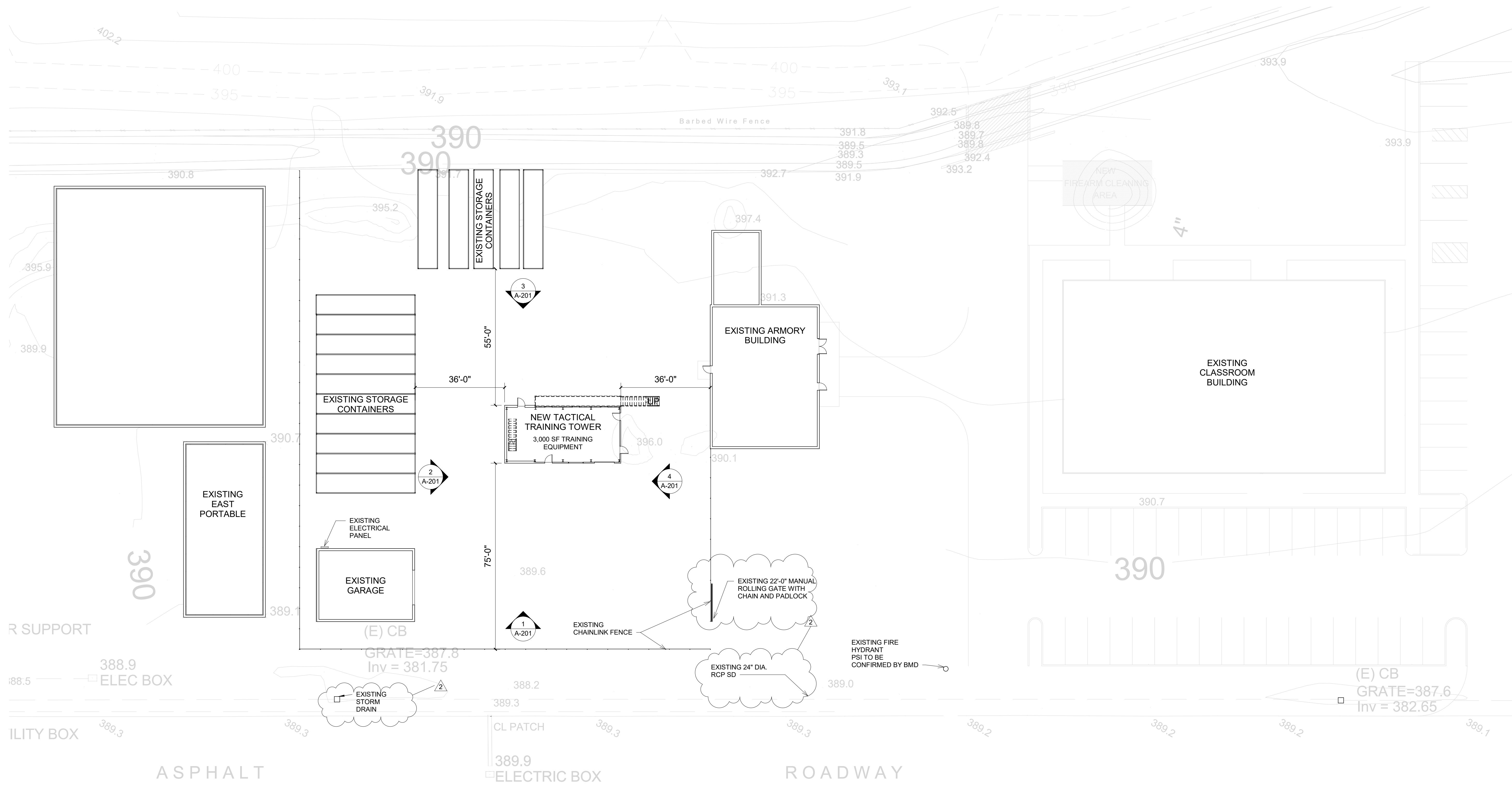
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Author	Approver
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PROJECT NUMBER

2021007

A-001



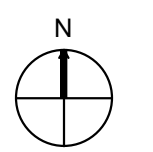
1 SITE PLAN  
1" = 20'-0"



General Services Agency  
Capital Programs  
101 Lakeside Drive  
Oakland CA, 94612

[illegible]

## KEY PLAN



PROFESSIONAL SEALS



FACILITY  
5301 Madigan Road  
Dublin, CA 94568

PROJECT  
ACSO TACTICAL TRAINING TOWER

SHEET TITLE  
SITE ELEVATIONS

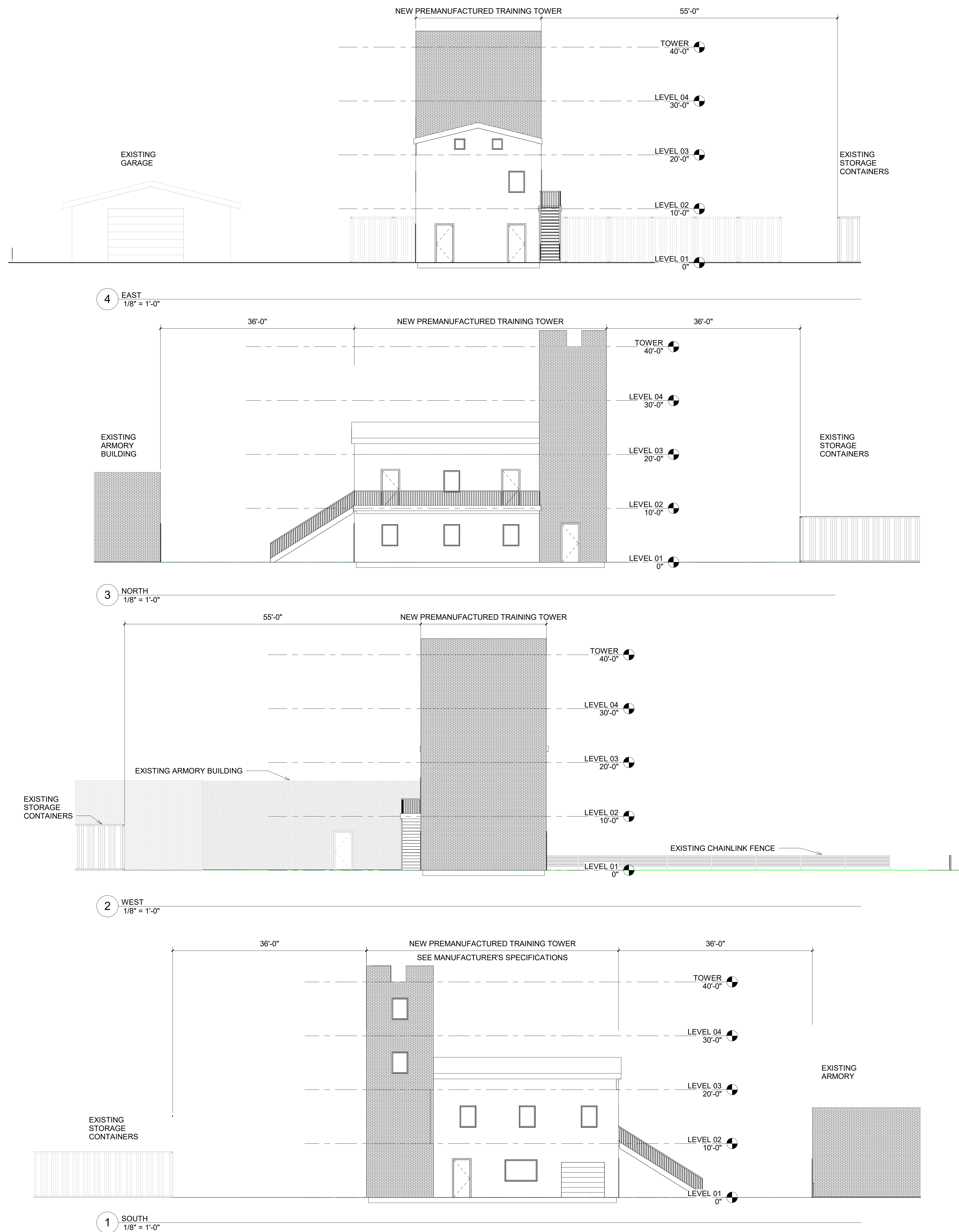
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Author	Approver
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PROJECT NUMBER

2021007

A-201





GENERAL DATA

Occupancy Group: Unoccupied fire- training simulator/nonbuilding structure  
Construction Type: Type II-B  
Area: 3300 sq. ft.  
Height: 40 ft  
Stories: 4  
Allowable Area: N/A  
Fire Sprinkler: N/A

COLORS SELECTED:

BUILDING COLOR: SLATE GRAY  
WINDOW AND DOOR TRIM COLOR: ROYAL BLUE  
EXTERIOR DOOR OTHER THAN ~~BURN DOORS~~: BRONZE  
NOVABRIK COLOR: DESERT SAND  
NOTE: ~~Burn room~~ doors and all shutters are Galvanized Steel

DRAWING INDEX

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PAGE 22 – RAPPELLING RAIL SYSTEM DETAILS  
PAGE 23 – SMOKE DISTRIBUTION SYSTEM DETAILS

DESIGN LOADS:

FLOOR LIVE LOAD: 100 PSF  
ROOF LIVE LOAD: 100 PSF  
WIND LOAD: 92 MPH; RISK CAT II; EXP C  
SEISMIC DESIGN CAT: D  
SITE CLASS: D  
DESIGN CODE: CBC 2019 AND NFPA 1402

NFPA 1402 is the Standard on Facilities for Fire Training and Associated Props. Chapters 1.2.2 and A.1.2.2 state the following "Fire training structures are not occupied buildings. Building code requirements for many occupied building items, such as fire protection, HVAC, finishes, and accessibility per the ADA, do not apply to fire training structures."

MATERIAL SPECIFICATIONS:

W SHAPES: ASTM A992 (Fy = 50 ksi).  
HSS: ASTM A500 (GRADE B).  
PLATES: ASTM A36 OR ASTM A572 (GRADE 50).  
ANGLES: ASTM A36.  
C SHAPES: ASTM A36.  
BOLTS: ASTM A325N.  
LIGHT GAUGE STEEL: ASTM A653 OR ASTM A924.  
WELDS Field Welding Not Required; Shop Electrodes E71T-1

SPECIAL INSPECTIONS  
(cont. reports required for submittal to city inspector):

- HIGH STRENGTH BOLTS
- REINF. CONC W/ F'c > 2.5ksi
- WELDING – NO FIELD WELDING REQUIRED

INSPECTIONS FOR REINF. CONCRETE SHALL TAKE PLACE PRIOR/DURING FOUNDATION CONSTRUCTION AND INSPECTIONS FOR HIGH STRENGTH BOLTS DURING SUPERSTRUCTURE PLACEMENT.

REVISIONS

by

PROFESSIONAL ENGINEER

POST-MON

PE #C69676

Exp. 06-30-22

CIVIL

SITE OF CALIFORNIA

06/27/2021

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TACTICAL

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- A DIVISION OF FIRE FACILITIES, INC.

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TOLL FREE (800) 929-3726 TOLL FREE FAX (866) 639-7072

Job Description:

SERIES 4000 TOWER/RESIDENCE

CUSTOM

DUBLIN, CA

Sheet Title:

TITLE: PAGE

Date:

AUGUST 13, 2021

Drawn by:

GWL

Checked by:

SPW

Scale:

SHOWN

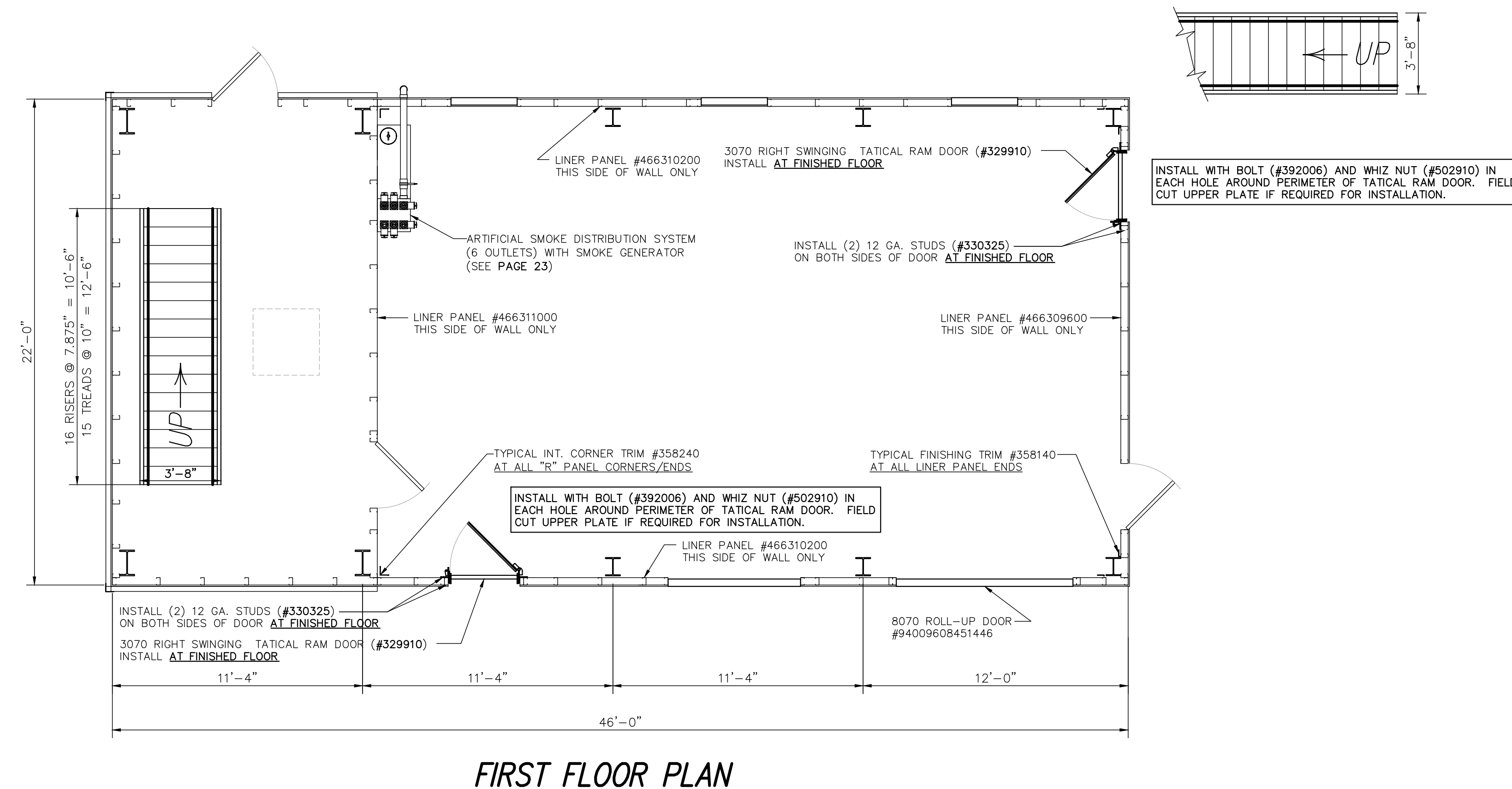
Order No.

TTS-108/#238355

Sheet No.

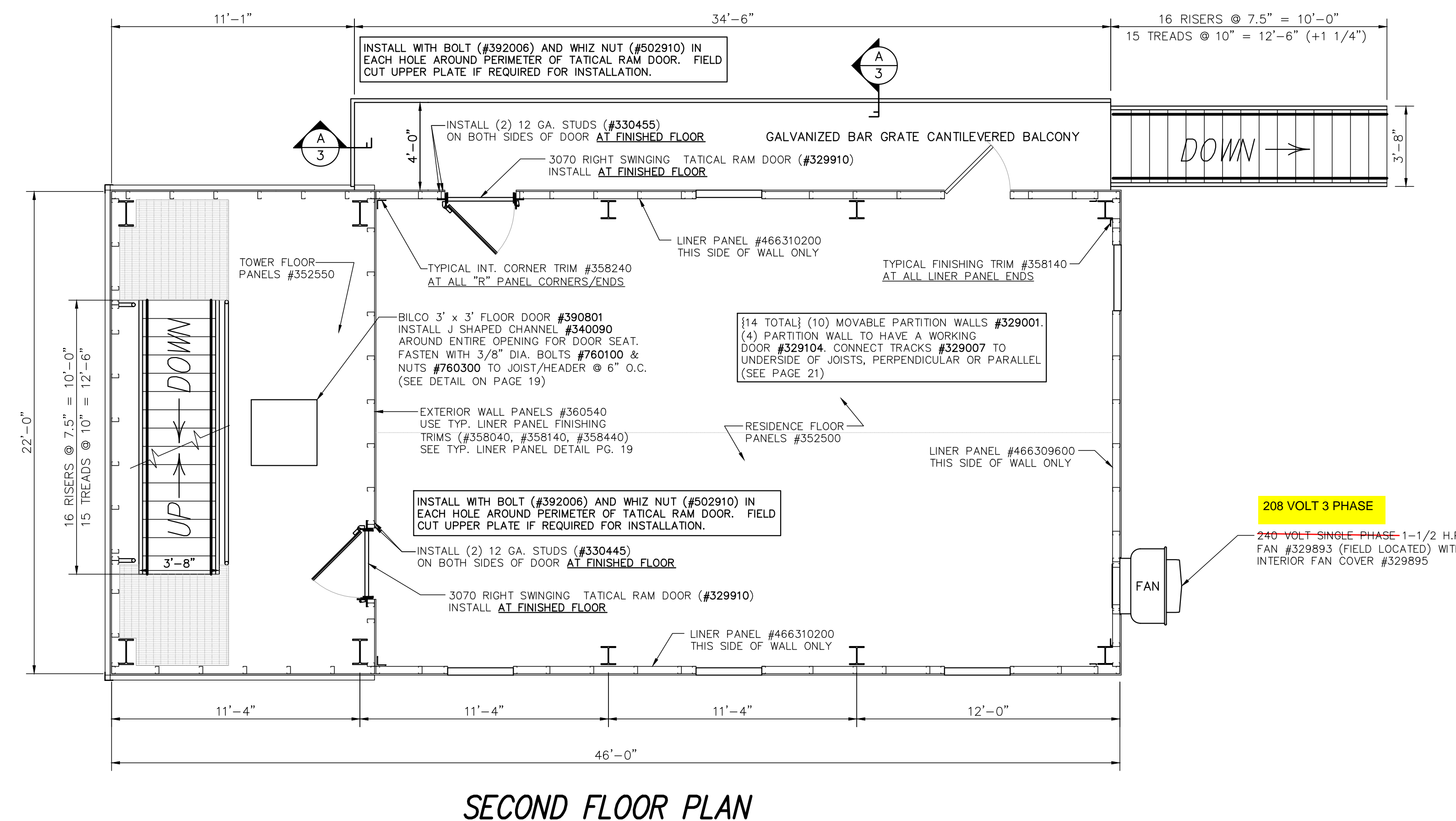
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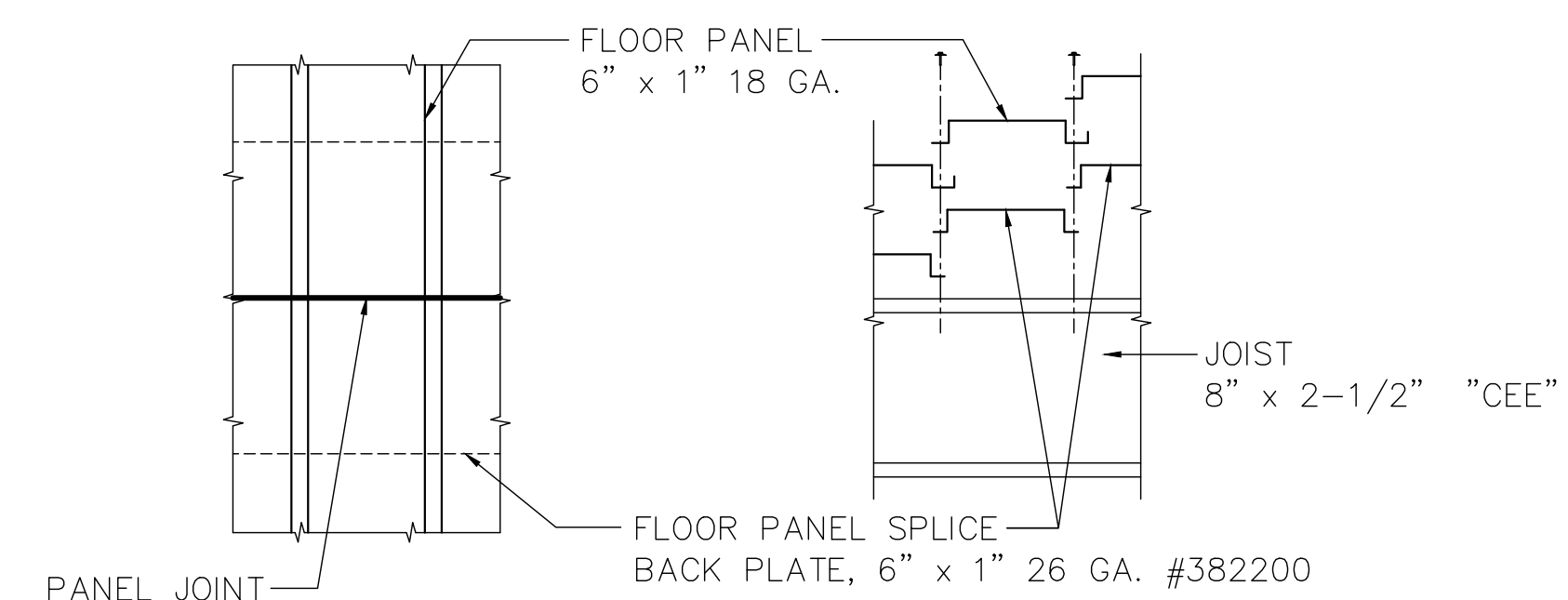
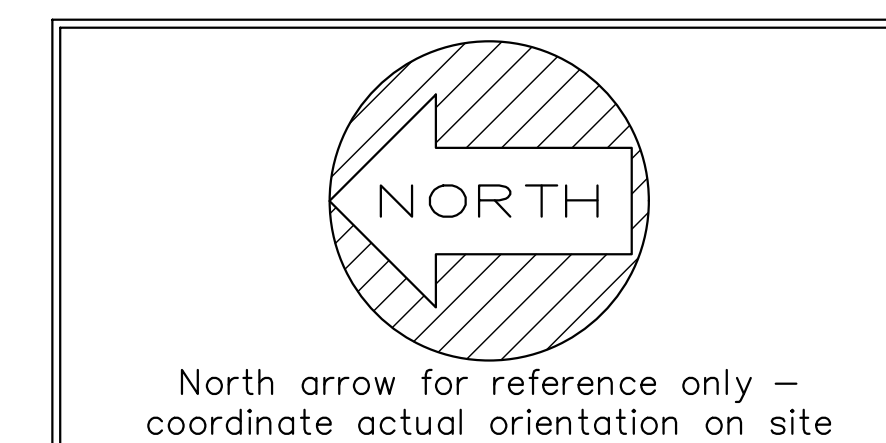


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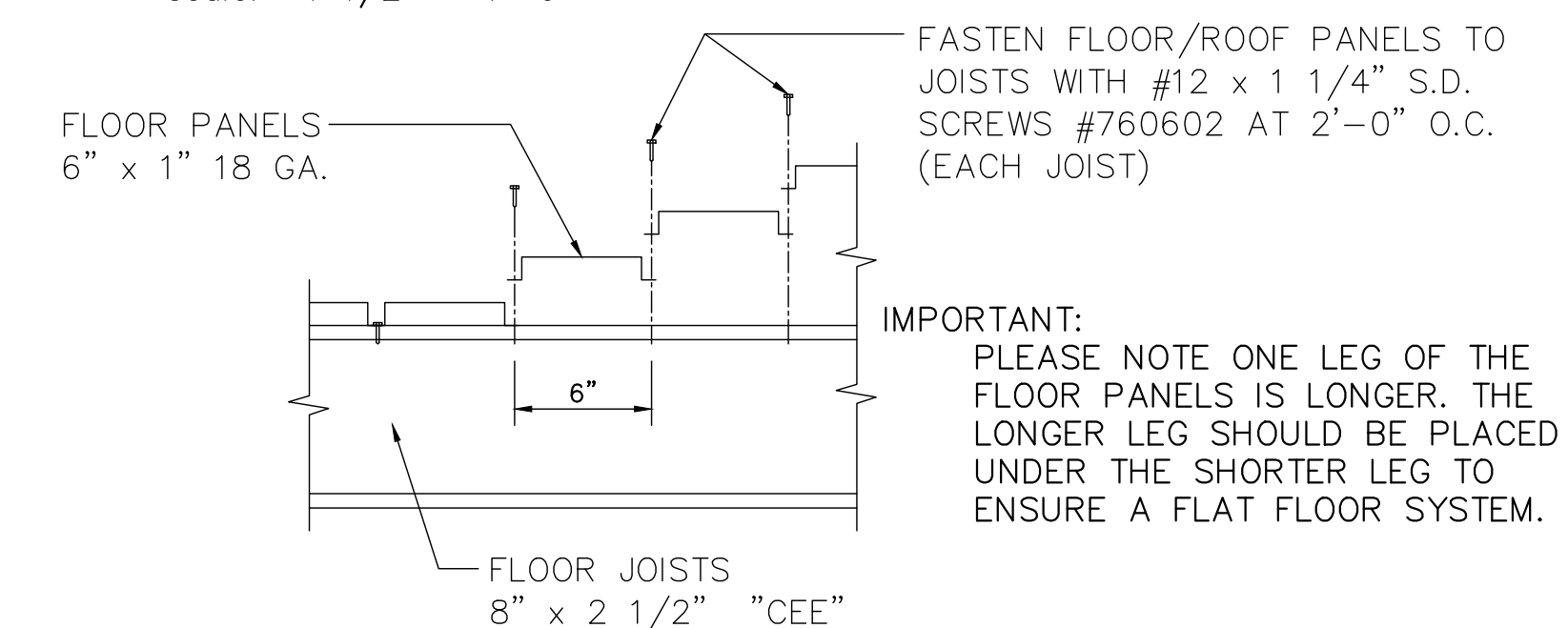
NOTE: ALL SHUTTERS IN TOWER SWING IN, UNLESS OTHERWISE SHOWN  
ALL SHUTTERS IN ATTIC SWING OUT, UNLESS OTHERWISE SHOWN



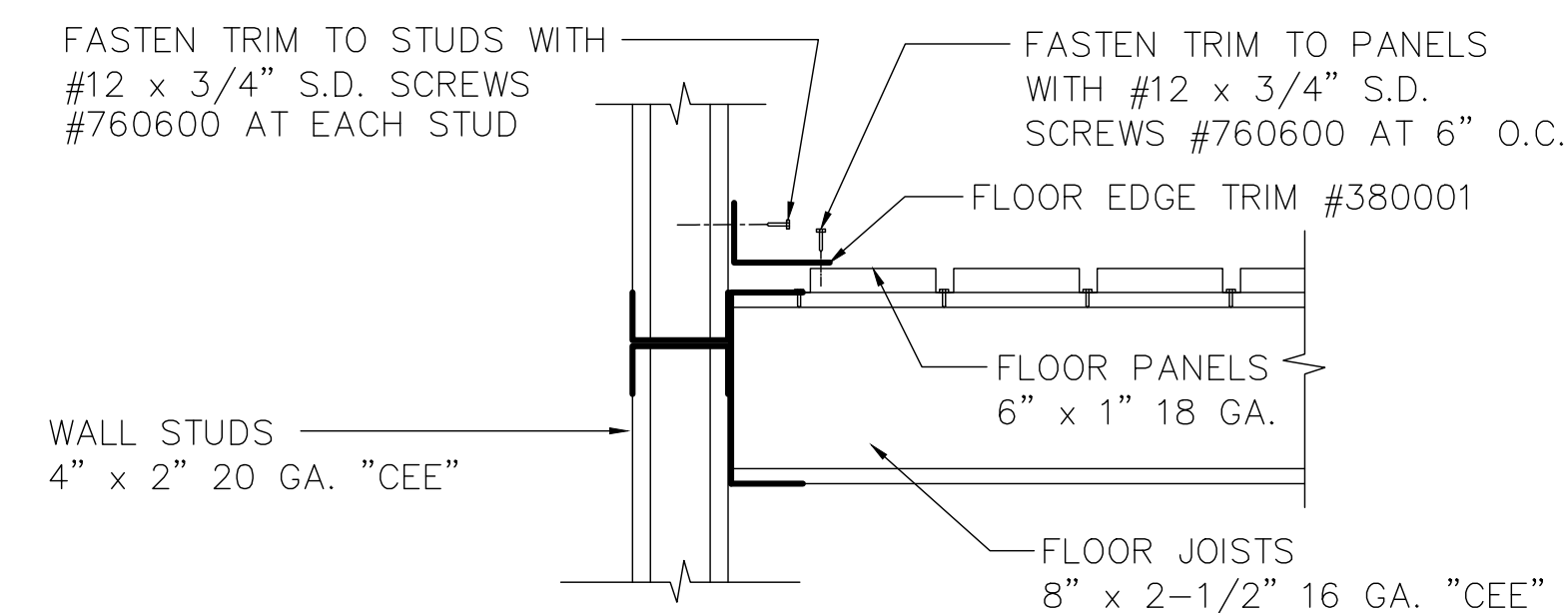
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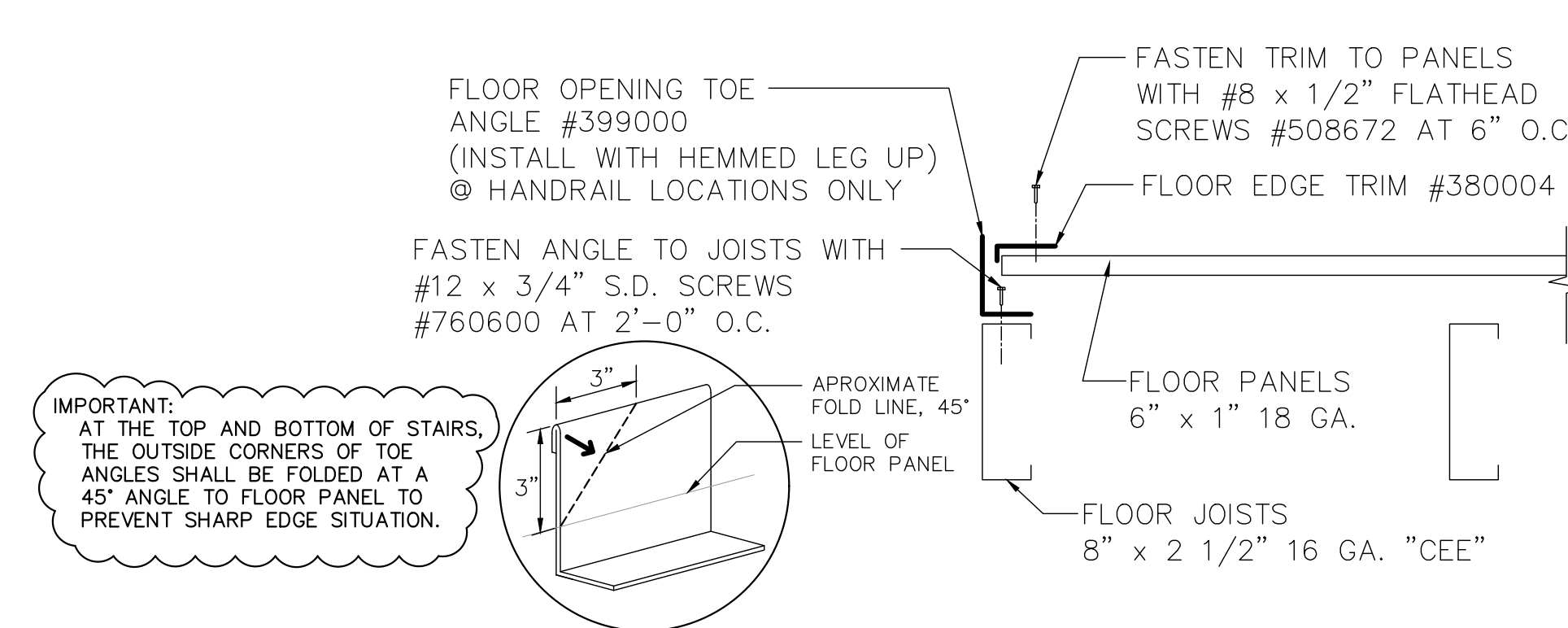
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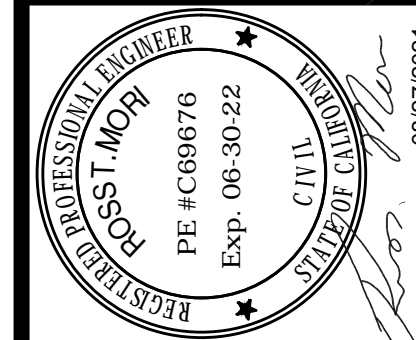
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scale: 1 1/2" = 1'-0"



scale: 1 1/2" = 1'-0"

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**SERIES 4000 TOWER/~~RESIDENCE~~**

CUSTOM  
DUBLIN, CA

Sheet Title:  
FLOOR PLANS

**Job Description:**

Date: AUGUST 13, 2021

Drawn by: GWL

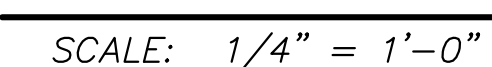
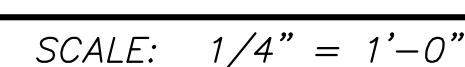
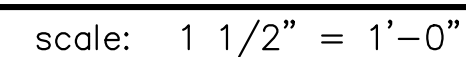
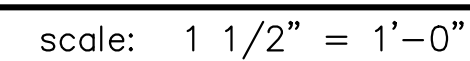
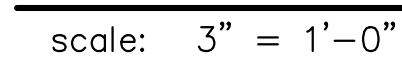
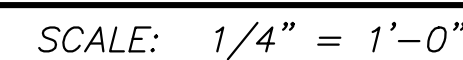
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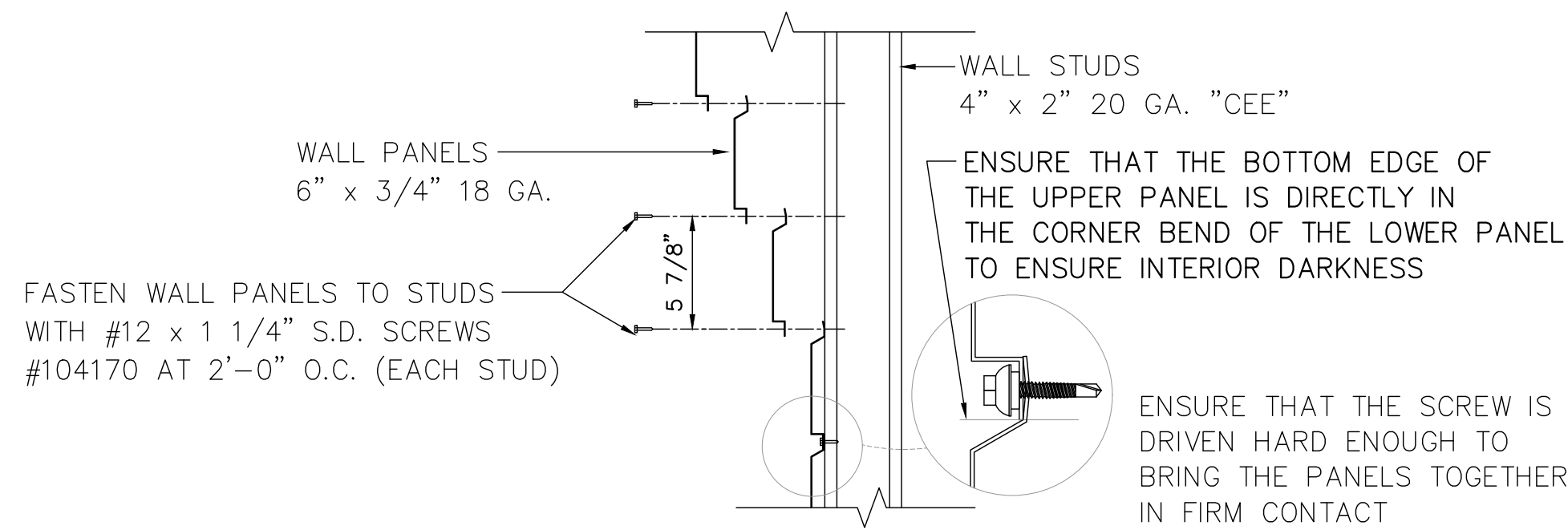
Order No. TTS-108 / #238355

Sheet No.



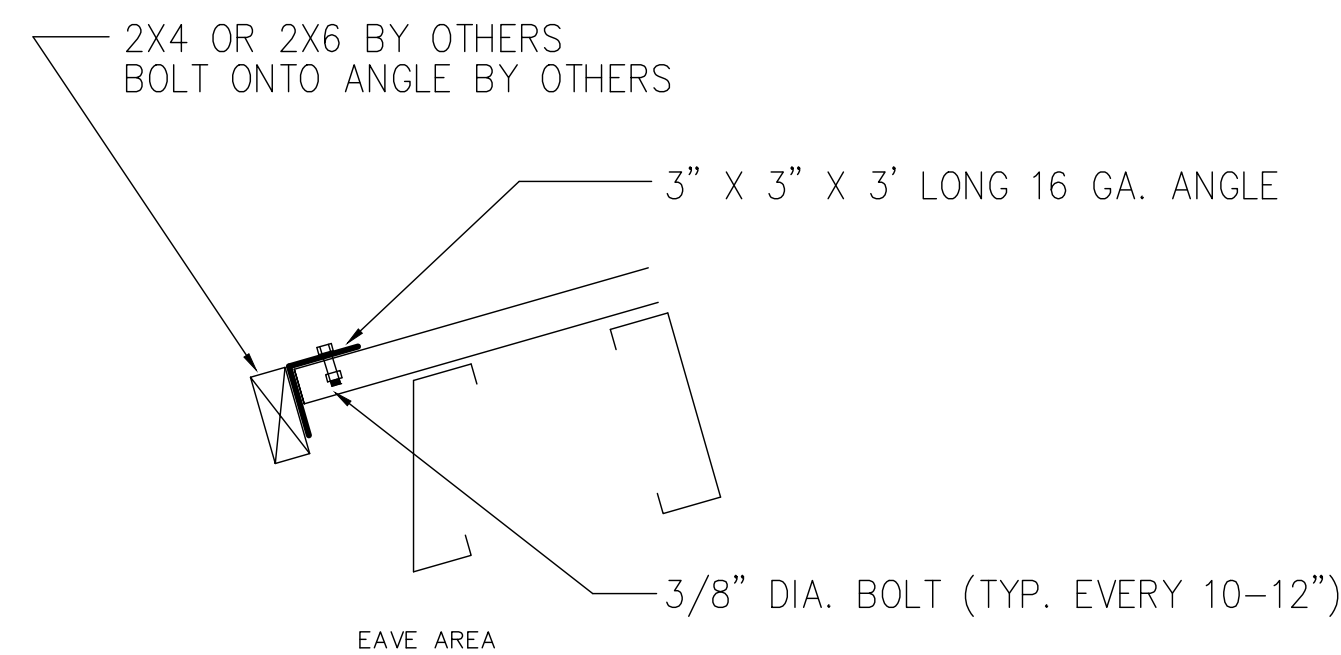
02 of 23





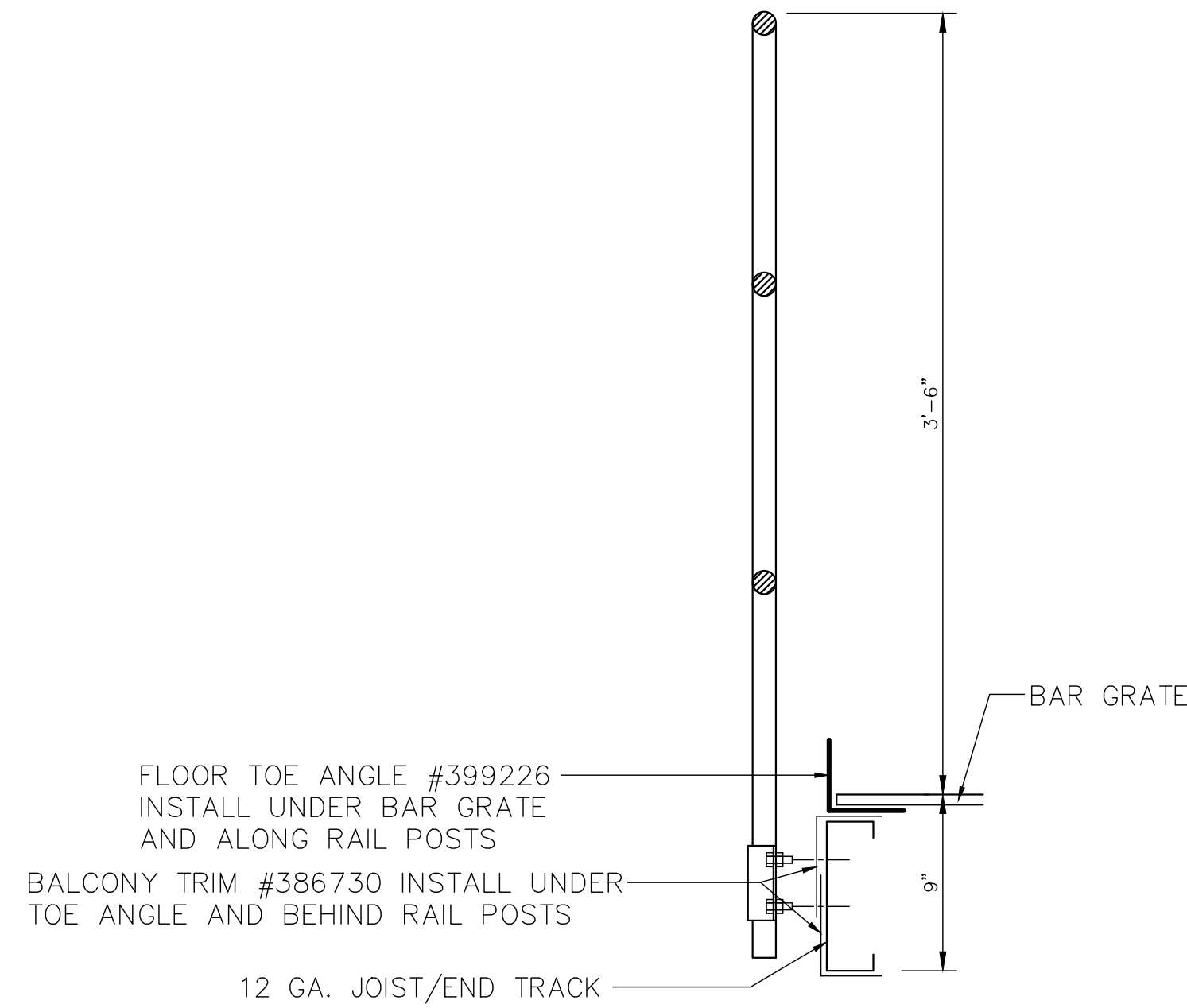
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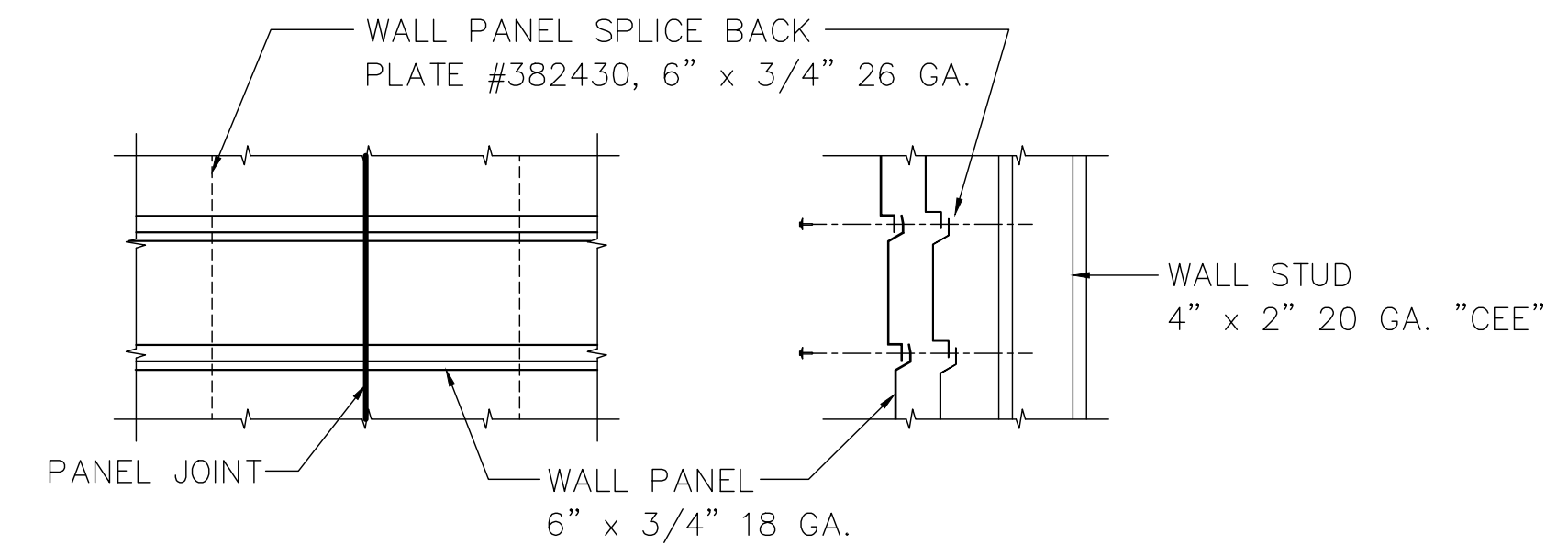
### BRACKETS FOR 2X4 FENDER DETAILS

scale: 1 1/2" = 1'-0"



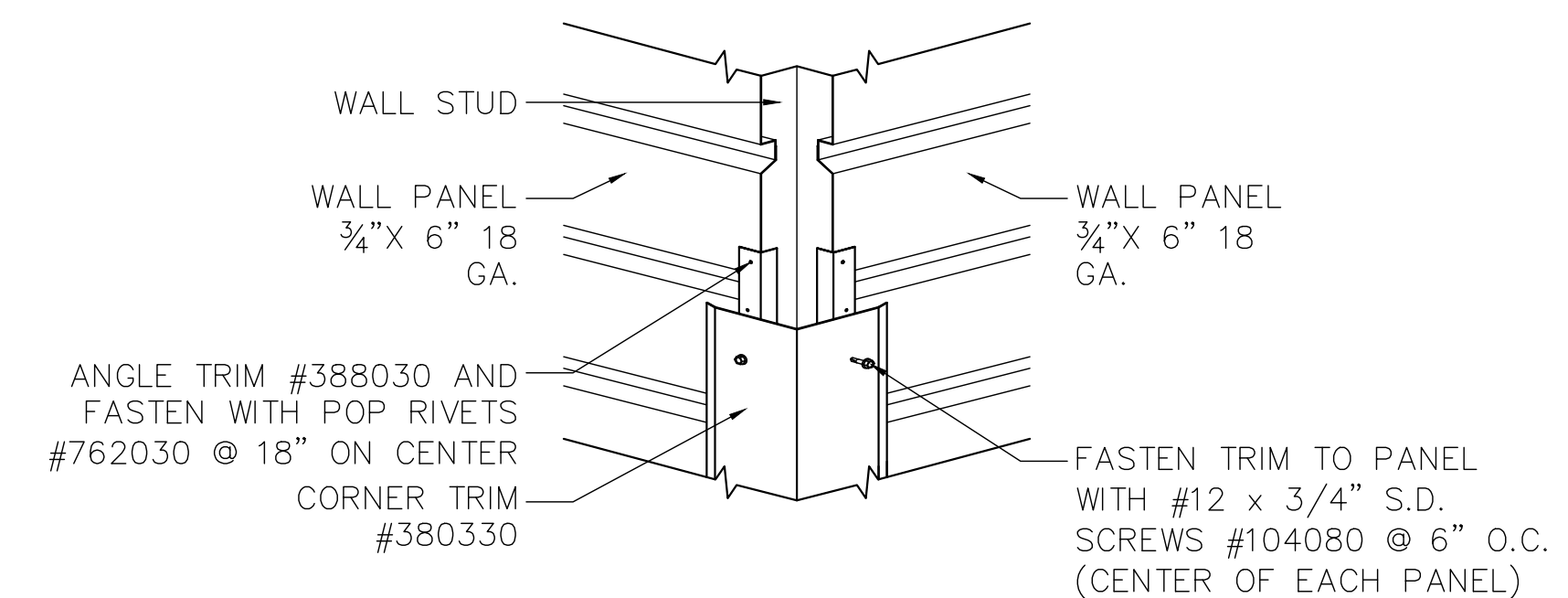
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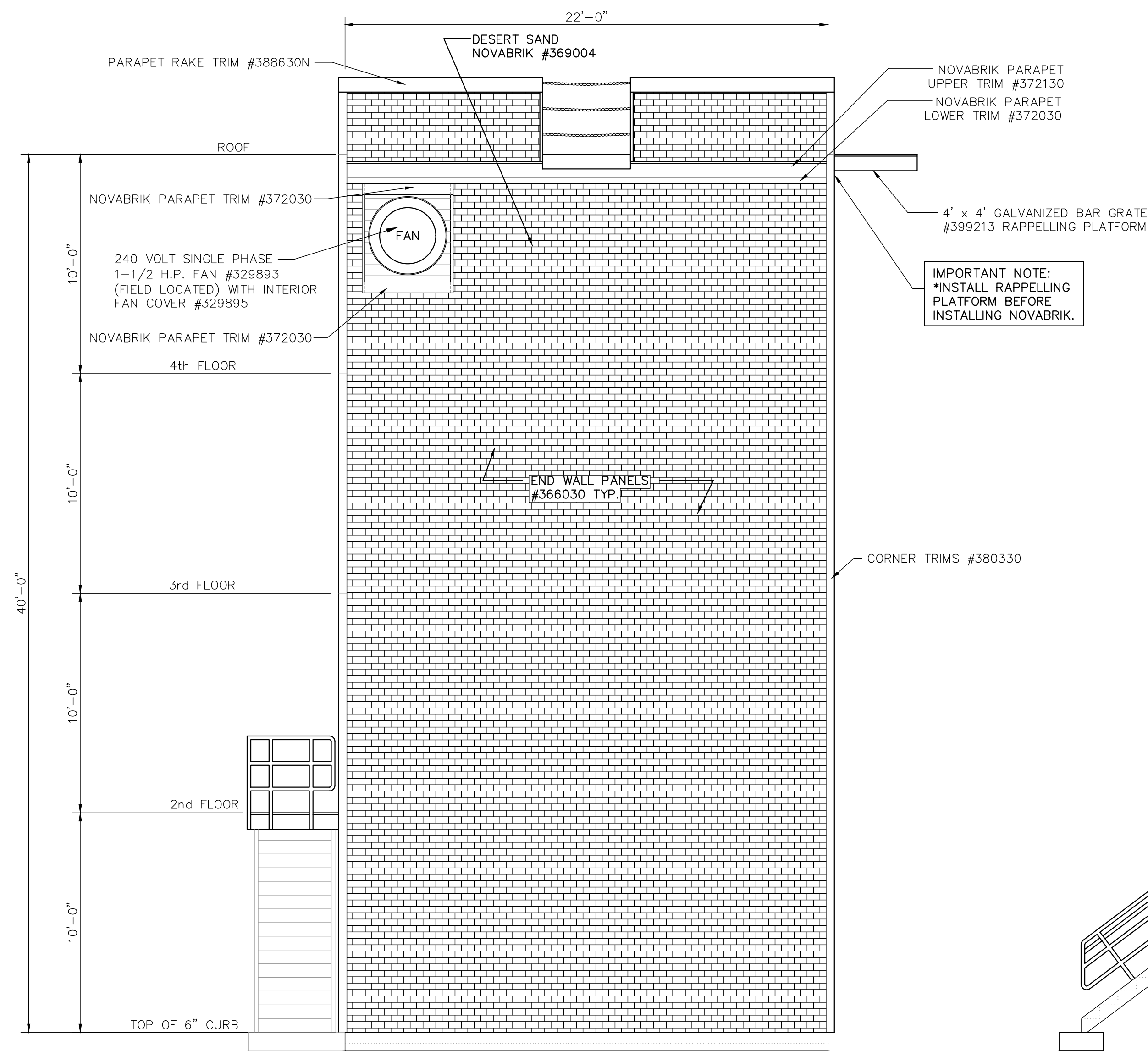
### WALL PANEL SPLICE PLATE

scale: 1 1/2" = 1'-0"



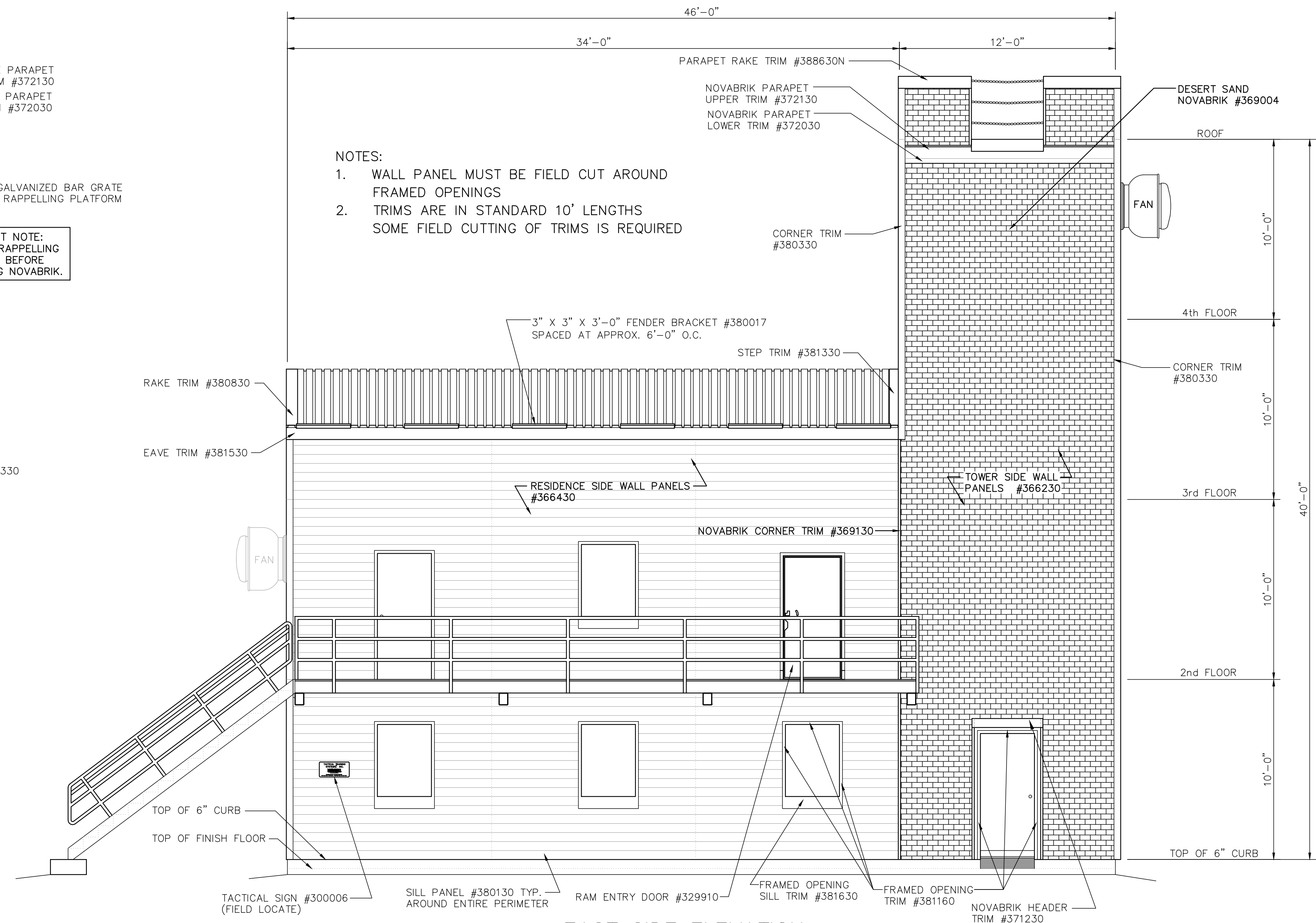
### TYPICAL EXTERIOR CORNER TRIM DETAIL

scale: 1 1/2" = 1'-0"



### NORTH END ELEVATION

SCALE: 1/4" = 1'-0"



### EAST SIDE ELEVATION

SCALE: 1/4" = 1'-0"

- NOTES:
1. WALL PANEL MUST BE FIELD CUT AROUND FRAMED OPENINGS
  2. TRIMS ARE IN STANDARD 10' LENGTHS SOME FIELD CUTTING OF TRIMS IS REQUIRED

REVISIONS	by

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TOLL FREE (800) 929-3726 TOLL FREE FAX (866) 639-7012

Job Description: **SERIES 4000 TOWER/RESIDENCE**  
**CUSTOM DUBLIN, CA**

Sheet Title: **ELEVATIONS**

Date:	AUGUST 13, 2021
Drawn by:	GWL
Checked by:	SPW
Scale:	SHOWN
Order No.	TTS-108/#238355
Sheet No.	

03 of 23

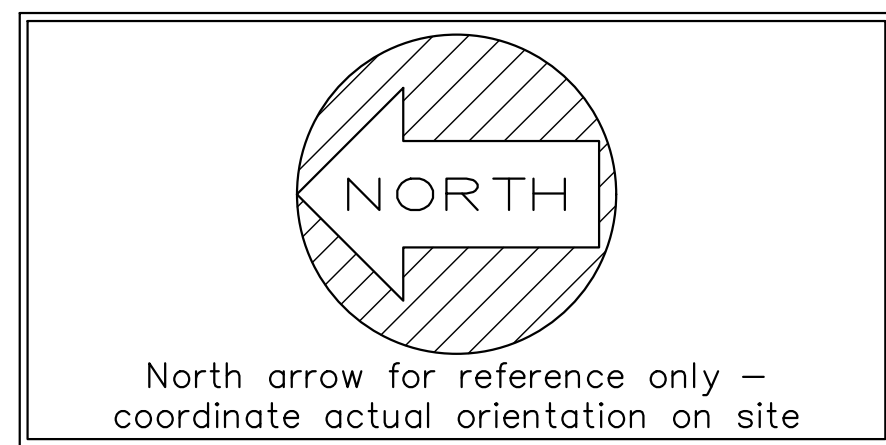






LOAD CASE	COLUMN	SHEAR (KIPS)	DOWNWARD (KIPS)	UPLIFT (KIPS)
WIND	A1,B1	3.46	12.76	15.48
	A2,B2	3.48	11.33	17.25
	A3,B3,A4,B4	2.08	1.82	6.05
	A5,B5	1.04	0.91	3.01
DEAD	A1,B1	0.14	5.11	0.00
	A2,B2	0.35	11.63	0.00
	A3,B3,A4,B4	0.19	9.75	0.00
	A5,B5	0.16	6.48	0.00
LIVE	A1,B1	0.70	27.47	0.00
	A2,B2	1.51	49.51	0.00
	A3,B3,A4,B4	1.04	46.43	0.00
	A5,B5	0.52	26.08	0.00
SEISMIC	A1,B1	29.60	140.87	140.59
	A2,B2	29.75	139.40	139.14
	A3,B3,A4,B4	7.75	17.16	17.06
	A5,B5	3.86	8.81	8.77

Reactions shown above are individual load cases with a load factor of one (no reductions). These reactions are based on CBC 2019 with a 92 mph; exp C wind and a seismic category D. Please note that these reactions include a seismic redundancy factor  $\rho = 1.0$  and the overstrength factors  $\Omega = 2.0$  for OCBF and  $\Omega = 2.0$  for OMF frames. Please also note that these reactions are based on the fire training simulator shown on the Fire Facilities drawing dated or revised on 02/01/2021

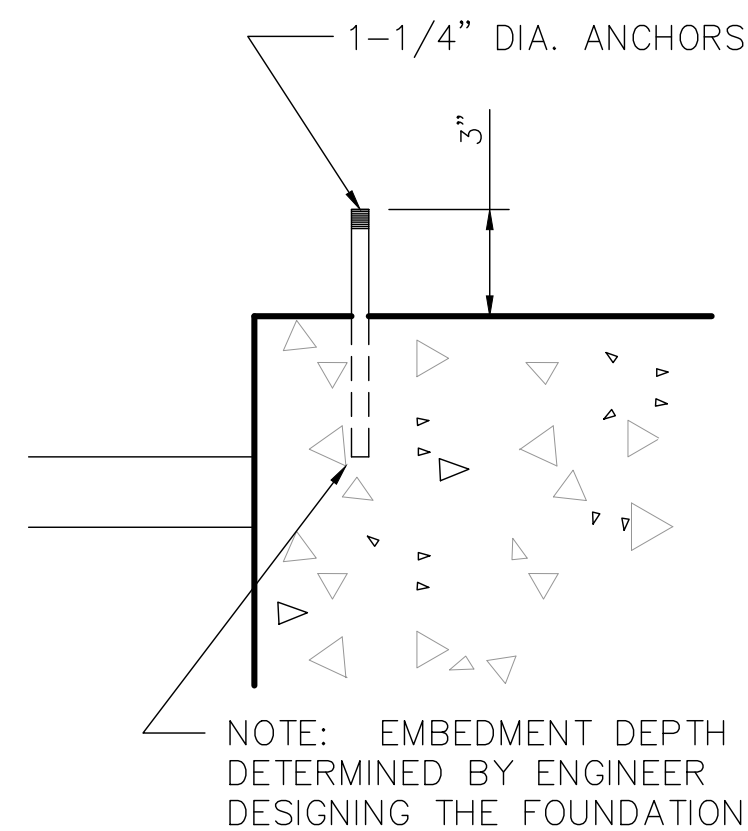
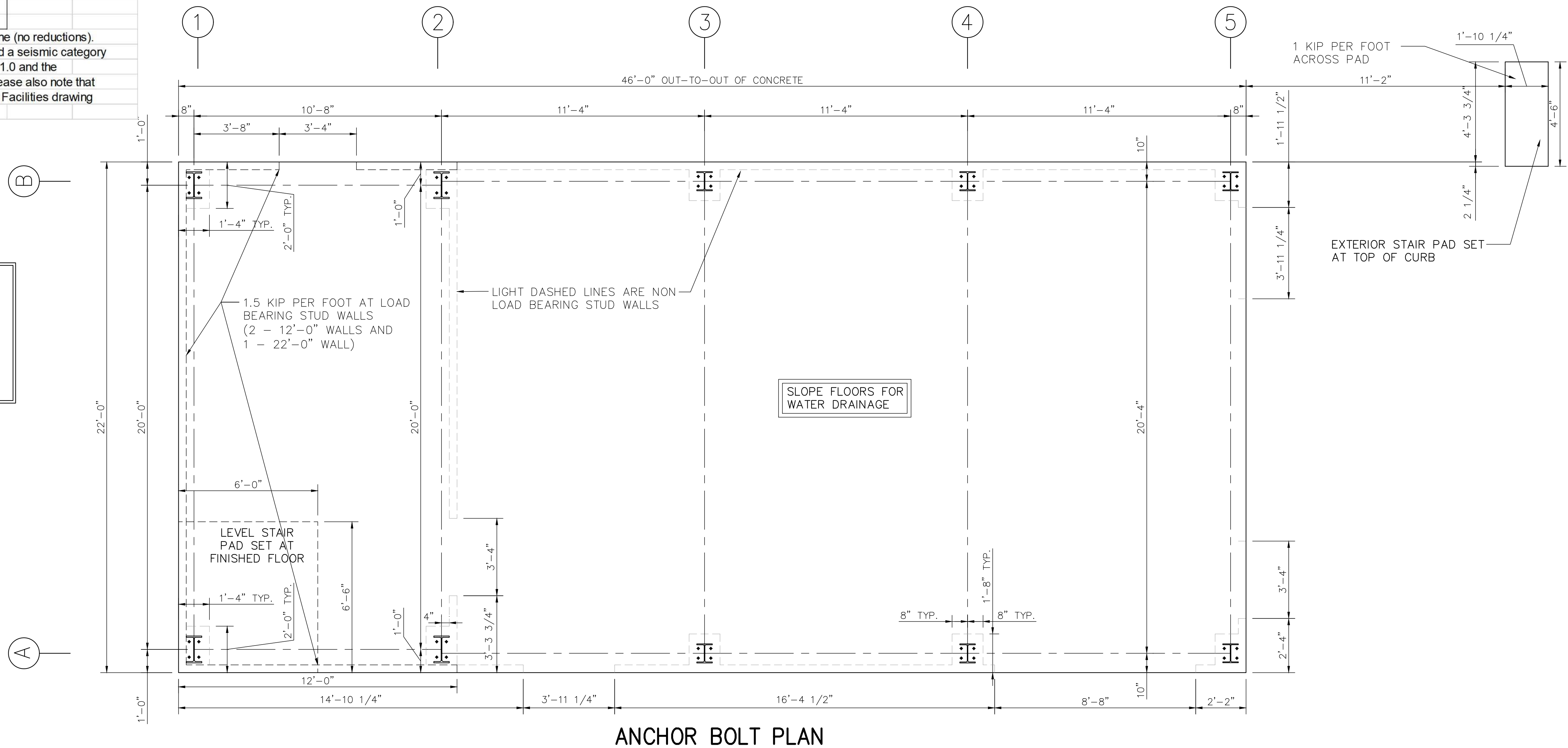


- ALL COLUMNS, EXTERIOR STAIR PADS AND STUD WALLS ARE SET AT TOP OF CURB (FINISHED FLOOR IS 6" BELOW TOP OF CURB).
- ALL PADS OUTSIDE OF EXTERIOR DOORS SHOULD BE SET AT FINISHED FLOOR (IF APPLICABLE).
- ALL DOOR OPENINGS THAT ARE DIMENSIONED SHOULD BE HELD EXACT (DOOR LOCATIONS NOT DIMENSIONED CAN BE FIELD LOCATED).

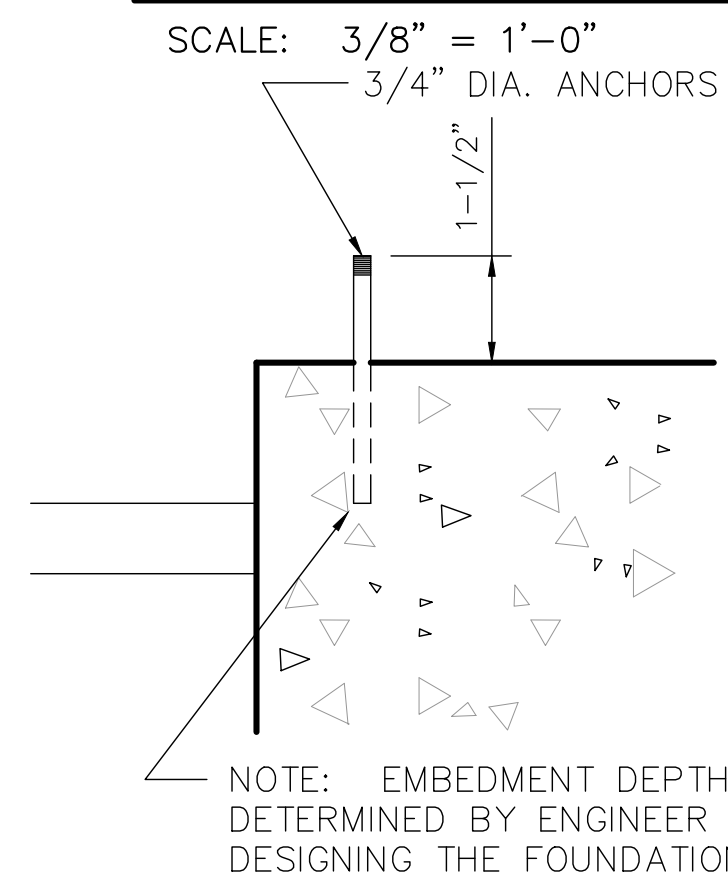
NOTE:

EXCLUDES ANY AND ALL PREPARATIONS INVOLVED IN PROVIDING SUITABLE CONCRETE PADS AND/OR FOUNDATIONS

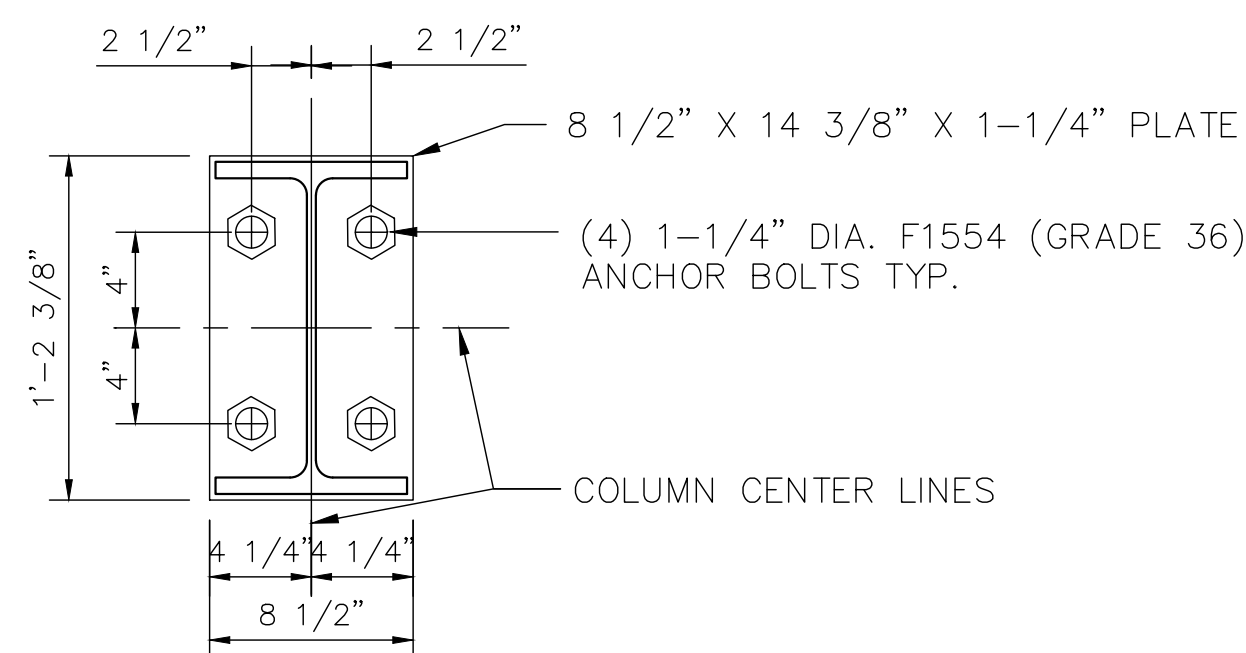
ALSO EXCLUDES ANY ANCHORS REQUIRED TO SECURE THE BUILDING TO THE FOUNDATION.



ANCHOR BOLT PROJECTION DETAIL



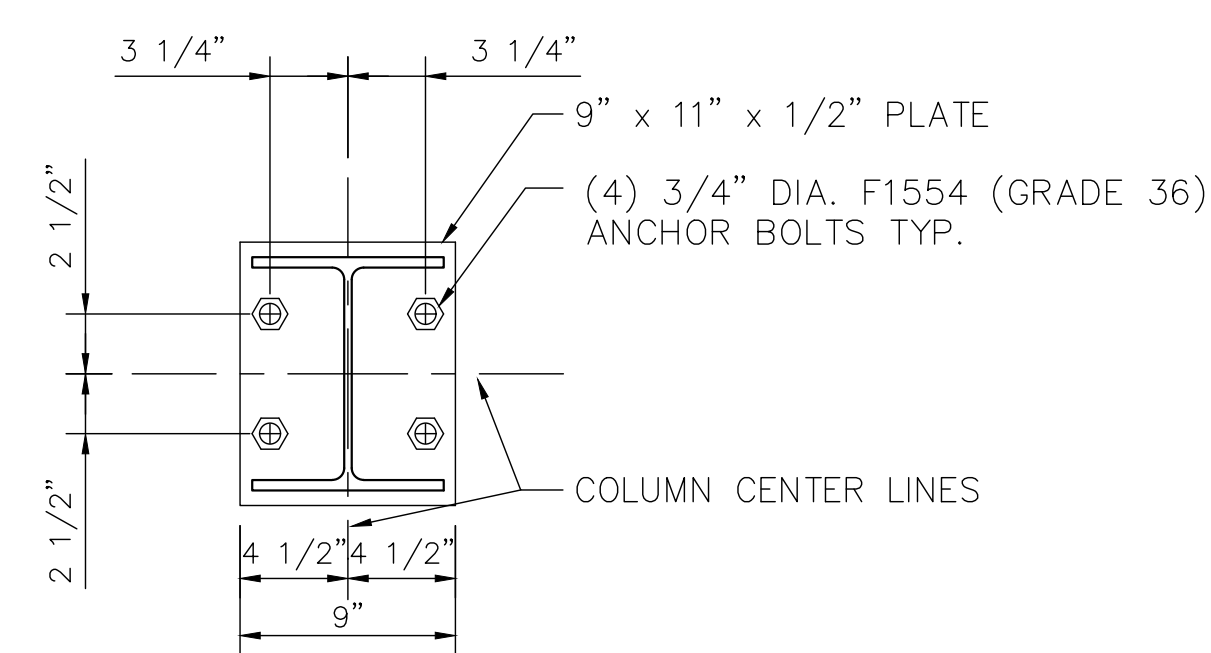
ANCHOR BOLT PROJECTION DETAIL



NOTE: SEE ANCHOR BOLT PLAN FOR COLUMN ORIENTATION AND CENTER LINE LOCATIONS (A1,A2,B1, & B2).

TOWER COLUMN ANCHOR BOLT DETAIL

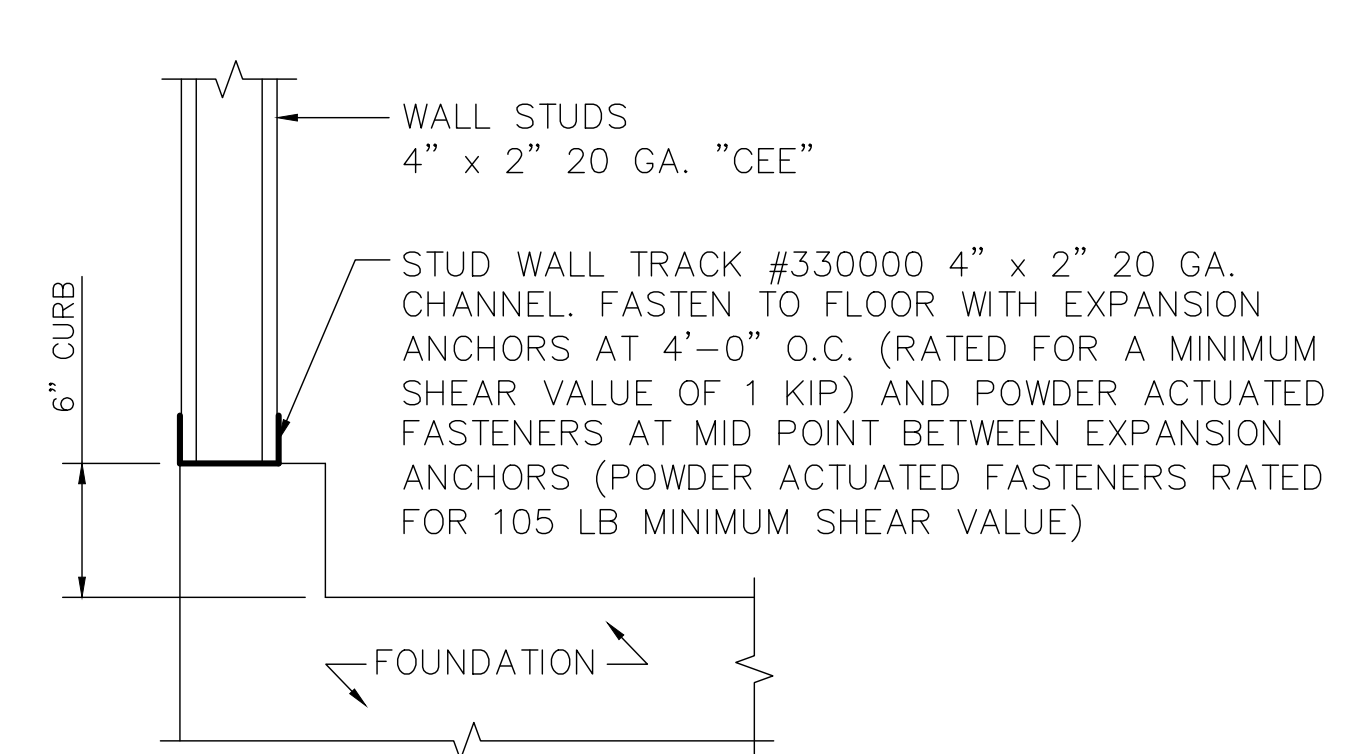
scale: 1 1/2" = 1'-0"



NOTE: SEE ANCHOR BOLT PLAN FOR COLUMN ORIENTATION AND CENTER LINE LOCATIONS (A3,A4,A5,B3,B4, & B5).

RESIDENCE COLUMN ANCHOR BOLT DETAIL

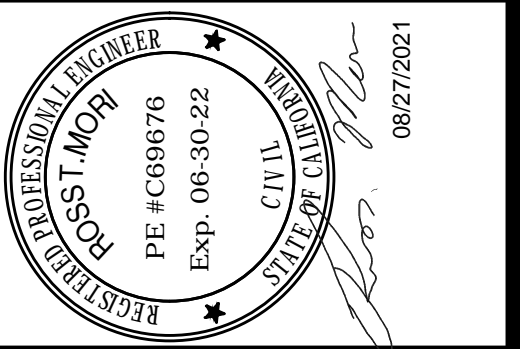
scale: 1 1/2" = 1'-0"



TYPICAL STUD WALL BASE DETAIL

scale: 1 1/2" = 1'-0"

REVISIONS	by



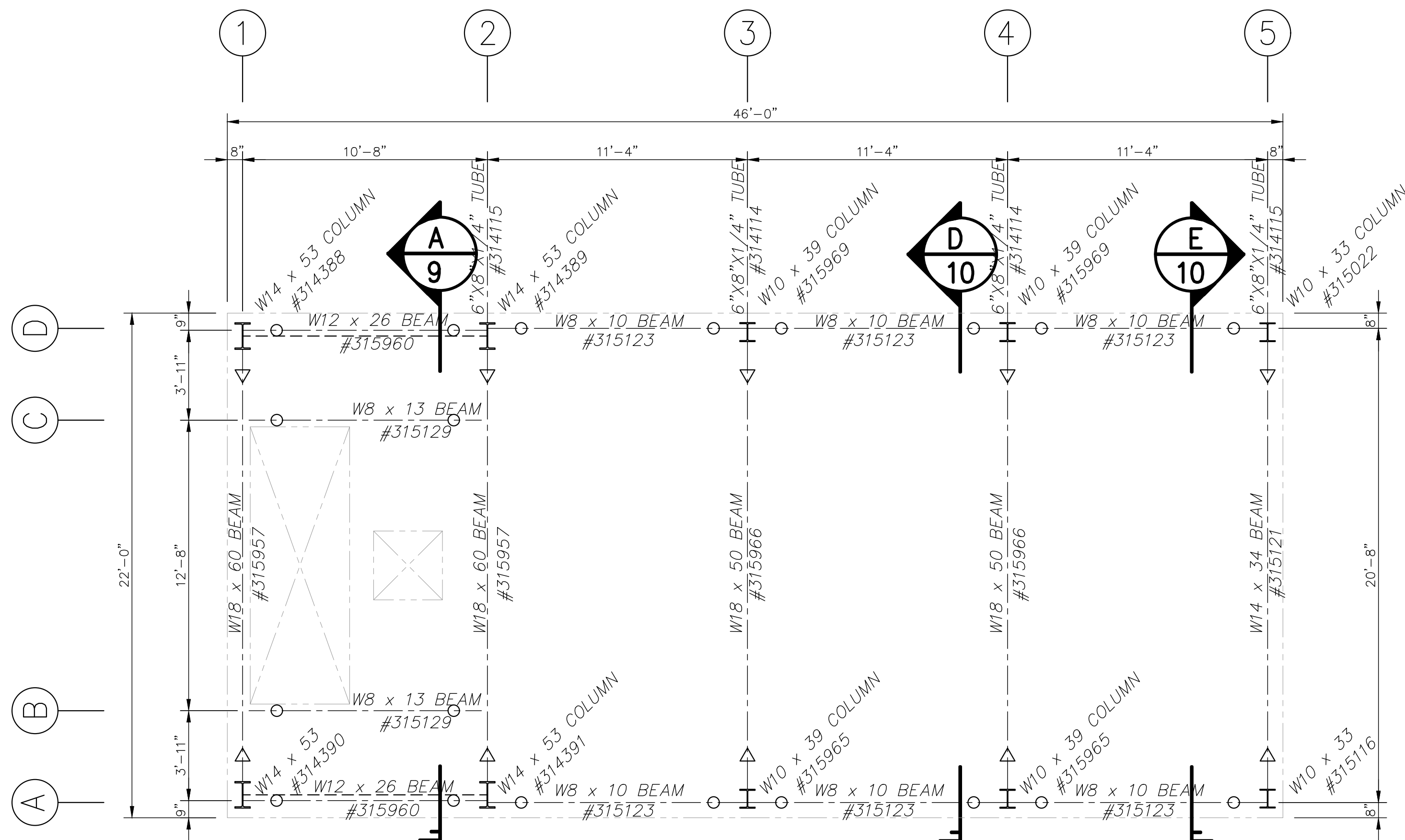
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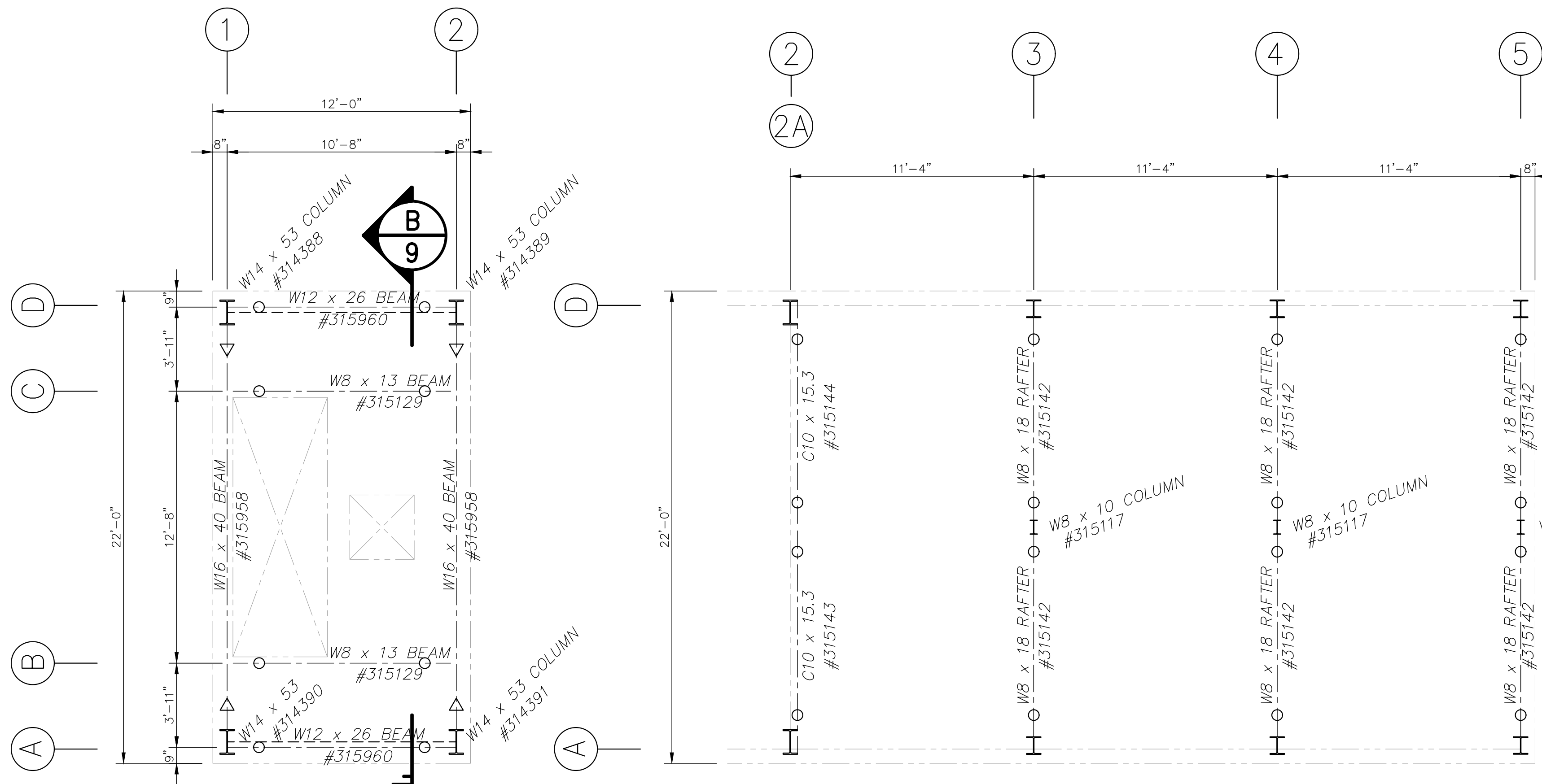
Job Description	SERIES 4000 TOWER/RESIDENCE
	CUSTOM
	DUBLIN, CA
	ANCHOR BOLT PLAN
	Sheet Title
Date	AUGUST 13, 2021
Drawn by	GWL
Checked by	SPW
Scale	SHOWN
Order No.	TTS-108/#238355
Sheet No.	





SECOND FLOOR STRUCTURAL FRAMING PLAN

SCALE: 1/4"=1'-0"

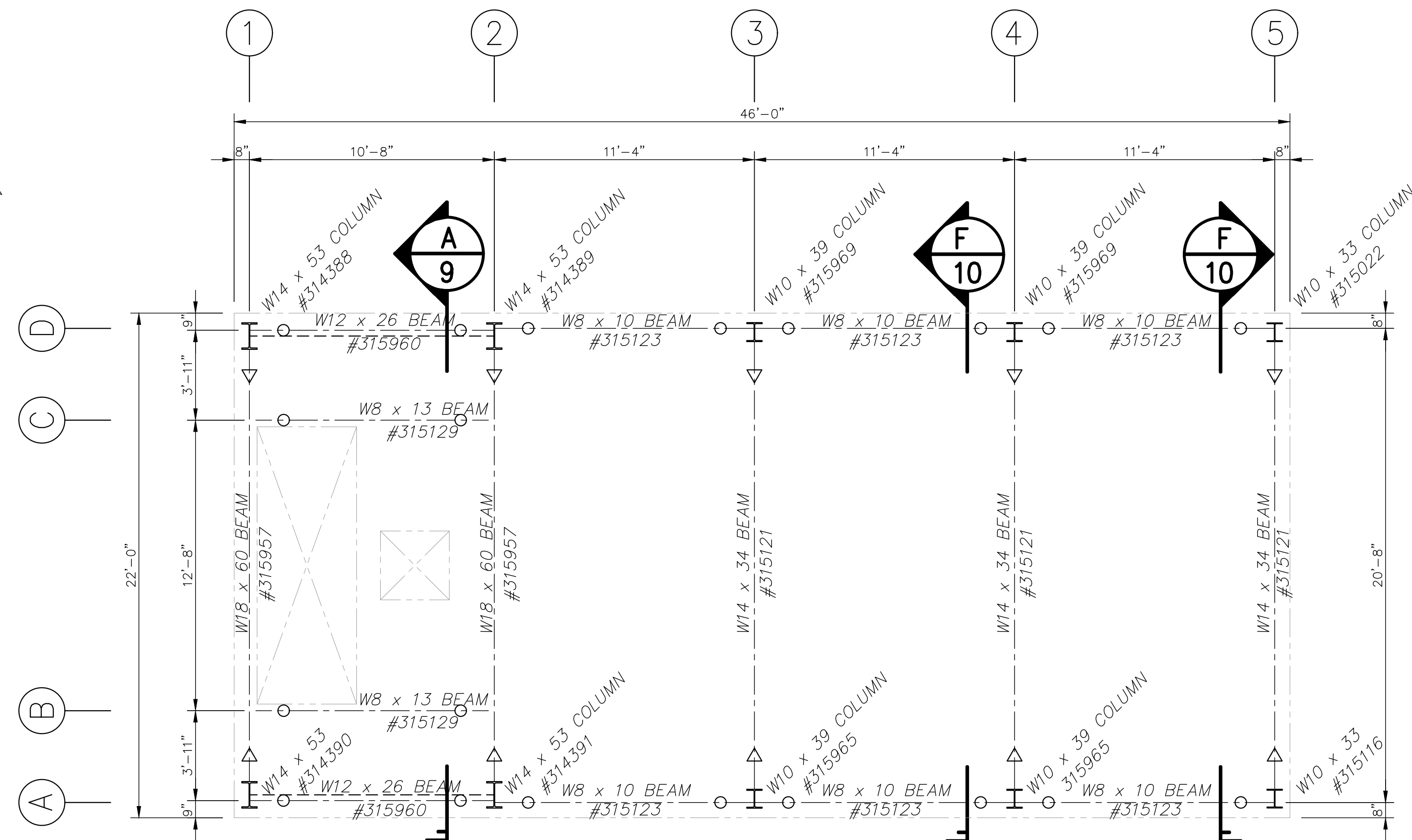


FOURTH FLOOR STRUCTURAL FRAMING PLAN

SCALE: 1/4"=1'-0"

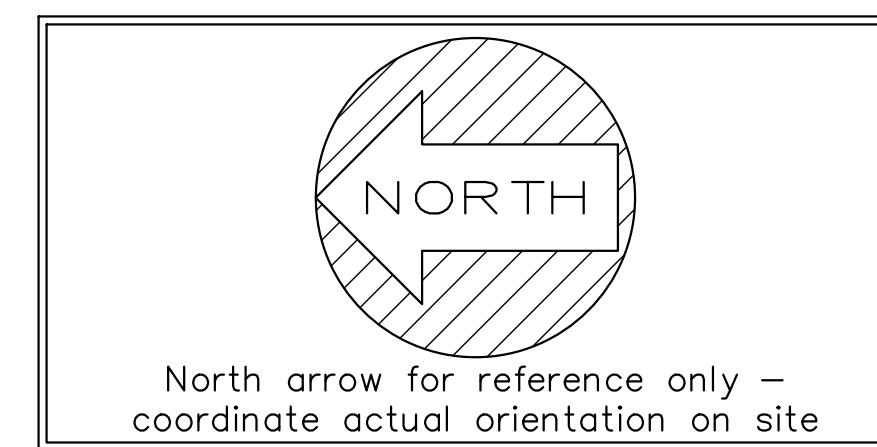
RESIDENCE ROOF STRUCTURAL FRAMING PLAN

SCALE: 1/4"=1'-0"



THIRD FLOOR/ATTIC STRUCTURAL FRAMING PLAN

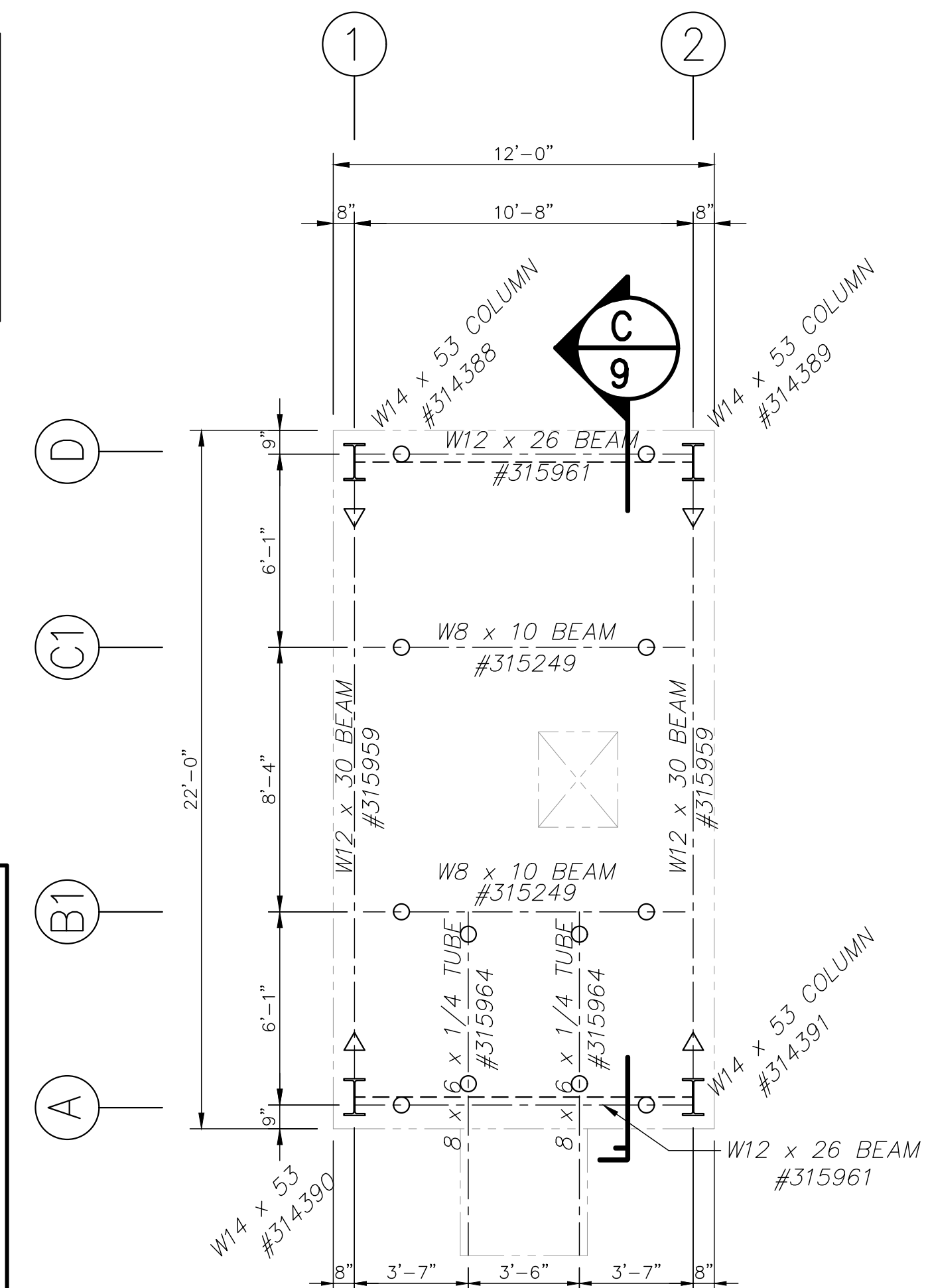
SCALE: 1/4"=1'-0"



LEGEND	
	MOMENT CONNECTION
	PINNED CONNECTION
	BRACING LOCATION

NOTE: TEMPORARY SUPPORT OF THIS STRUCTURAL FRAME IS REQUIRED AND IS THE SOLE RESPONSIBILITY OF THE ERECTOR. THIS TEMPORARY SUPPORT SHOULD NOT BE REMOVED UNTIL ALL OF THE FLOOR AND WALL SYSTEMS ARE IN PLACE.

NOTE: THIS STRUCTURAL FRAME IS DESIGNED WITH ALL SHEAR/BEARING CONNECTIONS (NOT SLIP-CRITICAL) AND ALL JOINTS ARE OF THE PRETENSIONED TYPE. PRETENSIONED JOINTS (TURN-OF-NUT PRETENSIONING METHOD) REQUIRES A NUT ROTATION OF 1/3 TURN FROM SNUG TIGHT CONDITION FOR BOLTS WITH A LENGTH LESS THAN FOUR TIMES ITS DIAMETER AND A NUT ROTATION OF 1/2 TURN FROM SNUG TIGHT CONDITION FOR BOLTS WITH A LENGTH GREATER THAN OR EQUAL TO FOUR TIMES BUT LESS THAN EIGHT TIMES ITS DIAMETER. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.



TOWER ROOF STRUCTURAL FRAMING PLAN

SCALE: 1/4"=1'-0"

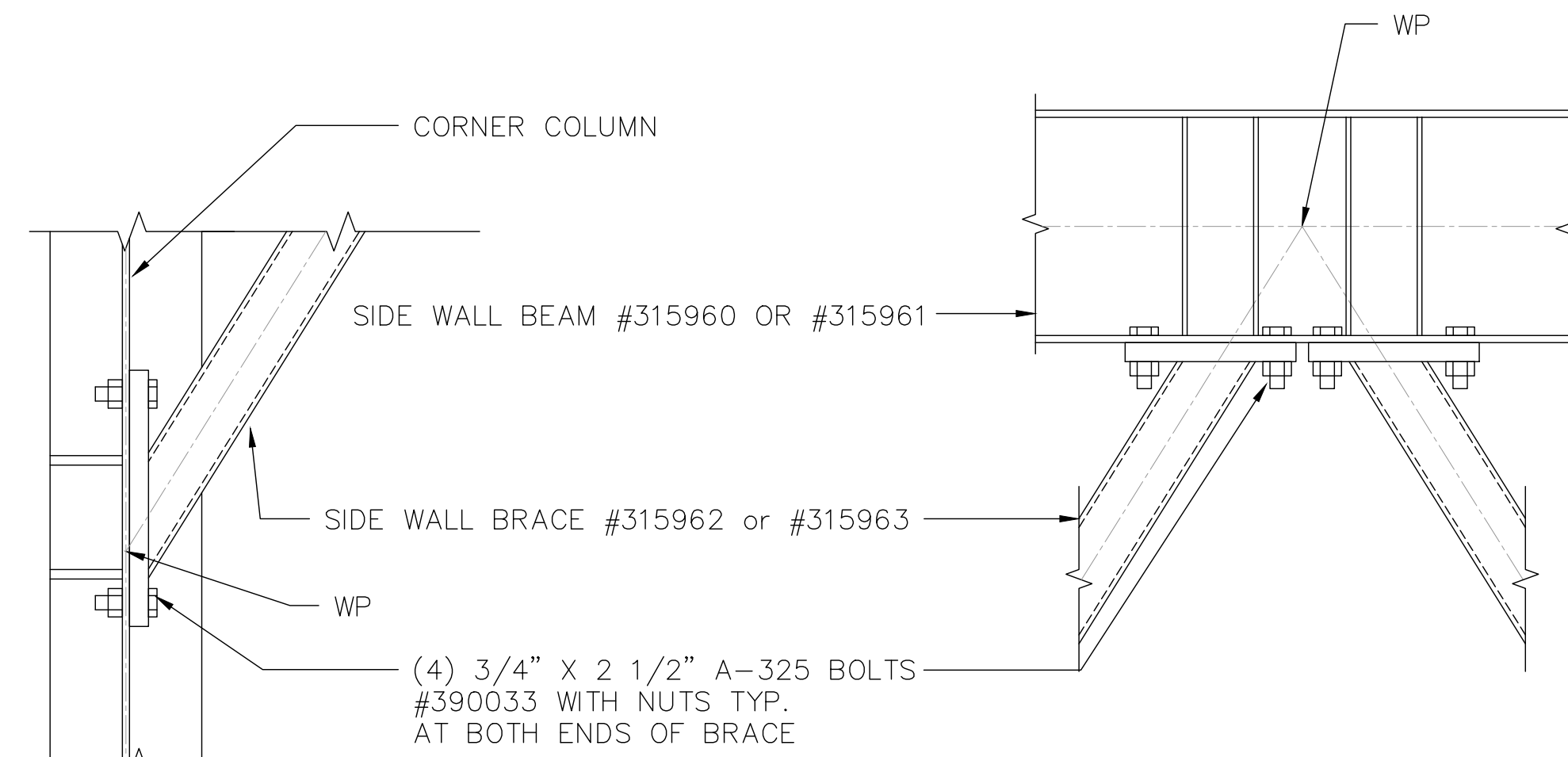
REVISIONS		by

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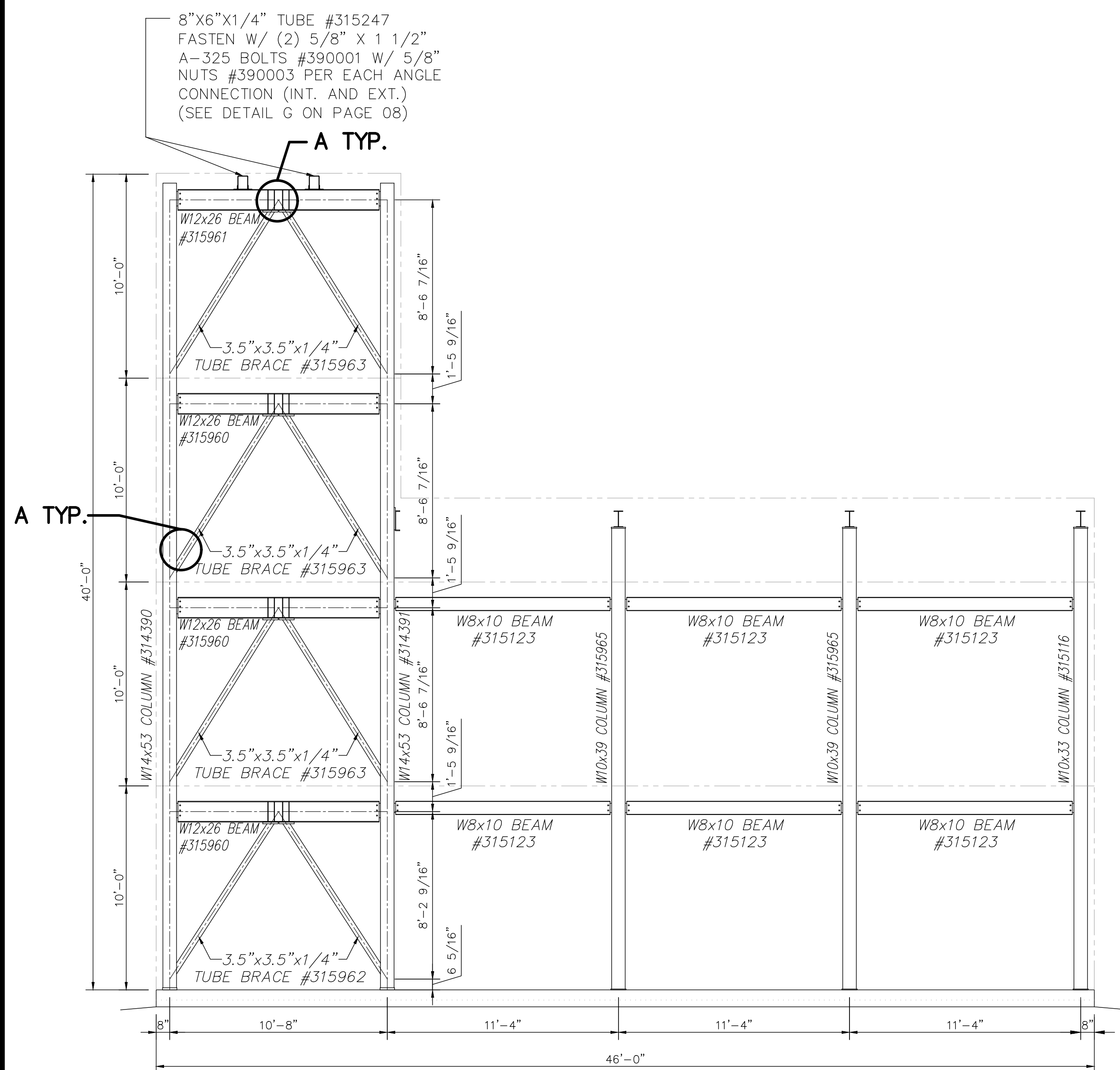
Job Description	SERIES 4000 TOWER/RESIDENCE CUSTOM DUBLIN, CA
Date	AUGUST 13, 2021
Drawn by	GWL
Checked by	SPW
Scale	SHOWN
Order No.	TTS-108/#238355
Sheet No.	06 of 23





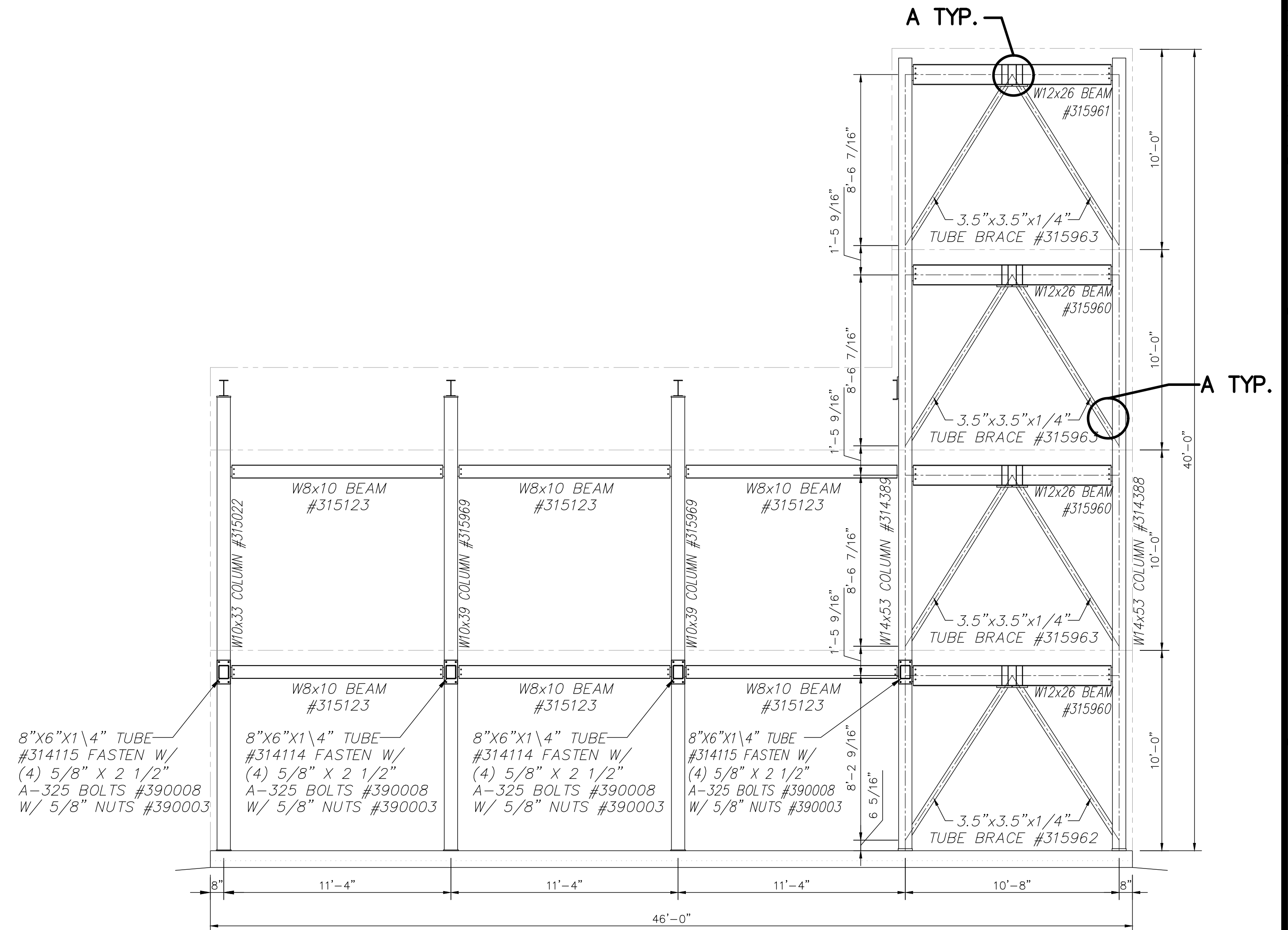
**"A" TYPICAL SIDE WALL BRACE CONNECTION DETAILS**

scale: 1 1/2"=1'-0"



**WEST SIDE WALL STRUCTURAL FRAMING ELEVATION**

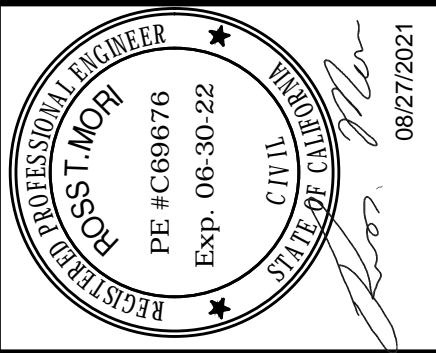
SCALE: 1/4"=1'-0"



**EAST SIDE WALL STRUCTURAL FRAMING ELEVATION**

SCALE: 1/4"=1'-0"

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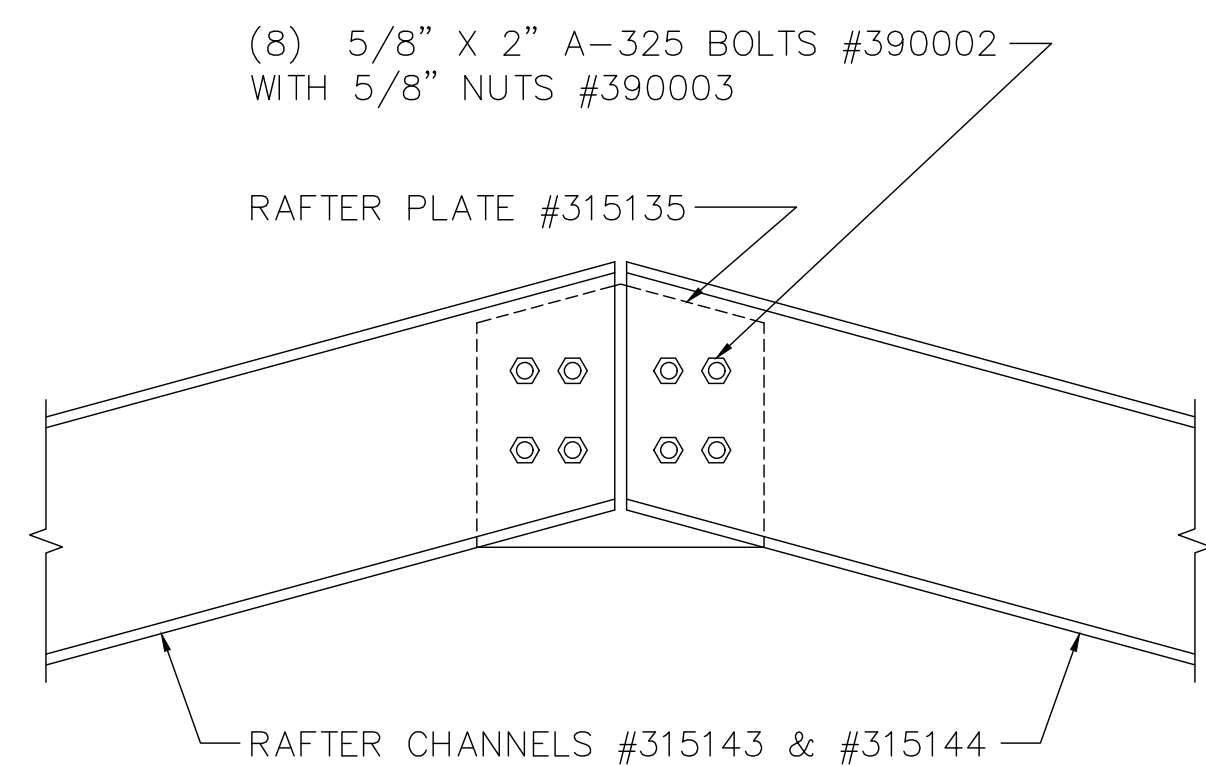


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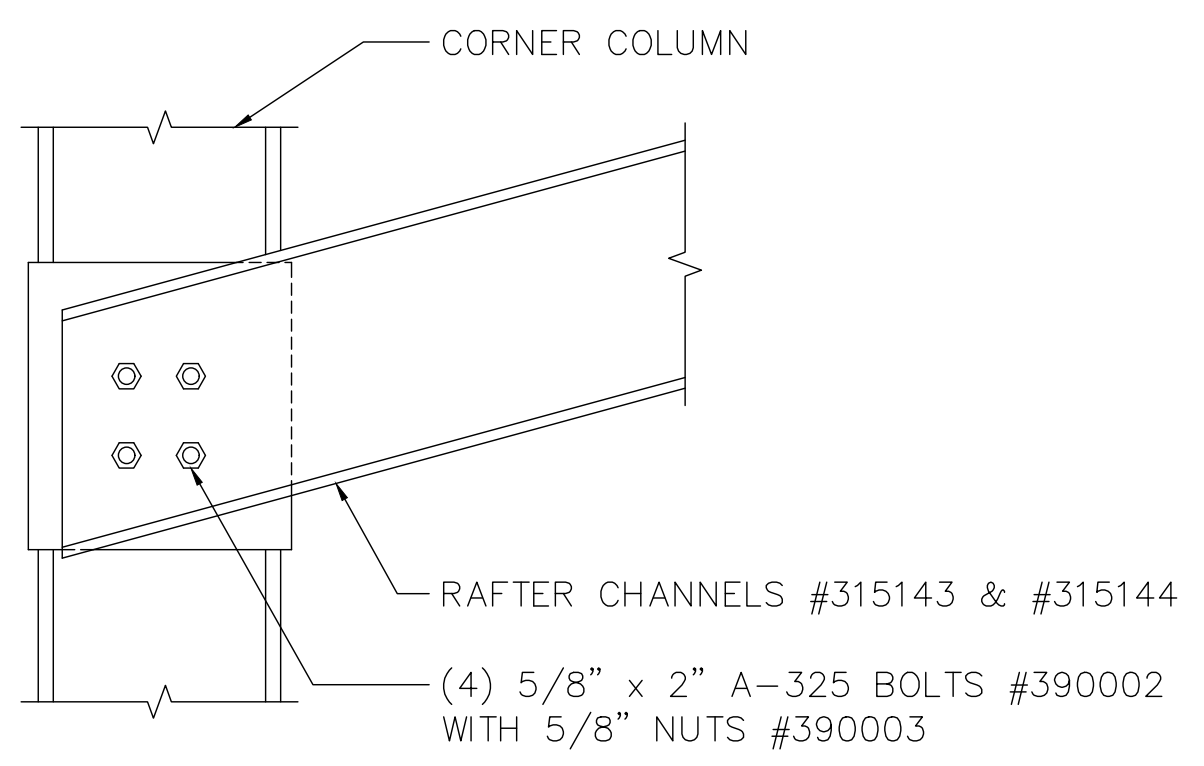
Job Description  
**SERIES 4000 TOWER/RESIDENCE**  
CUSTOM  
DUBLIN, CA

Date  
AUGUST 13, 2021  
Drawn by  
GWL  
Checked by  
SPW  
Scale  
SHOWN  
Order No.  
TTS-108/#238355  
Sheet No.

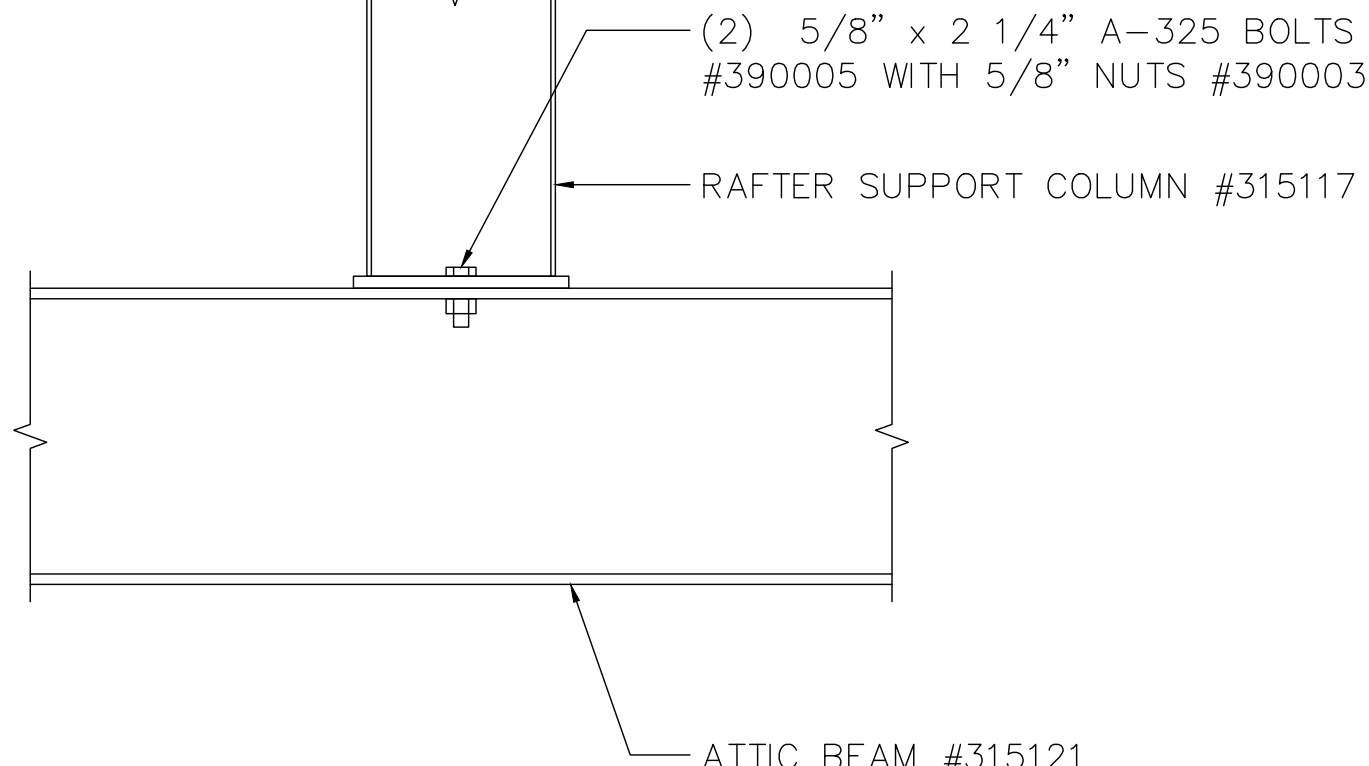




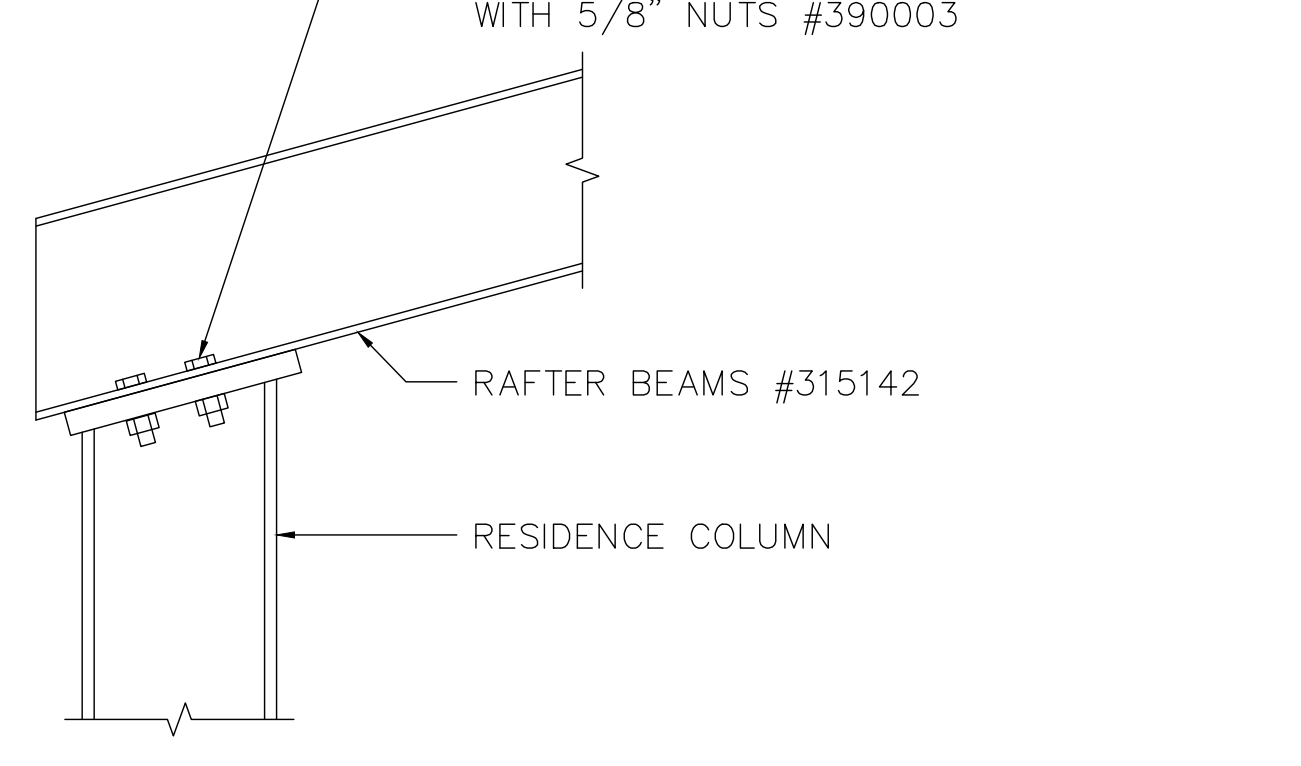
**"B" RAFTER CHANNEL RIDGE CONNECTION**



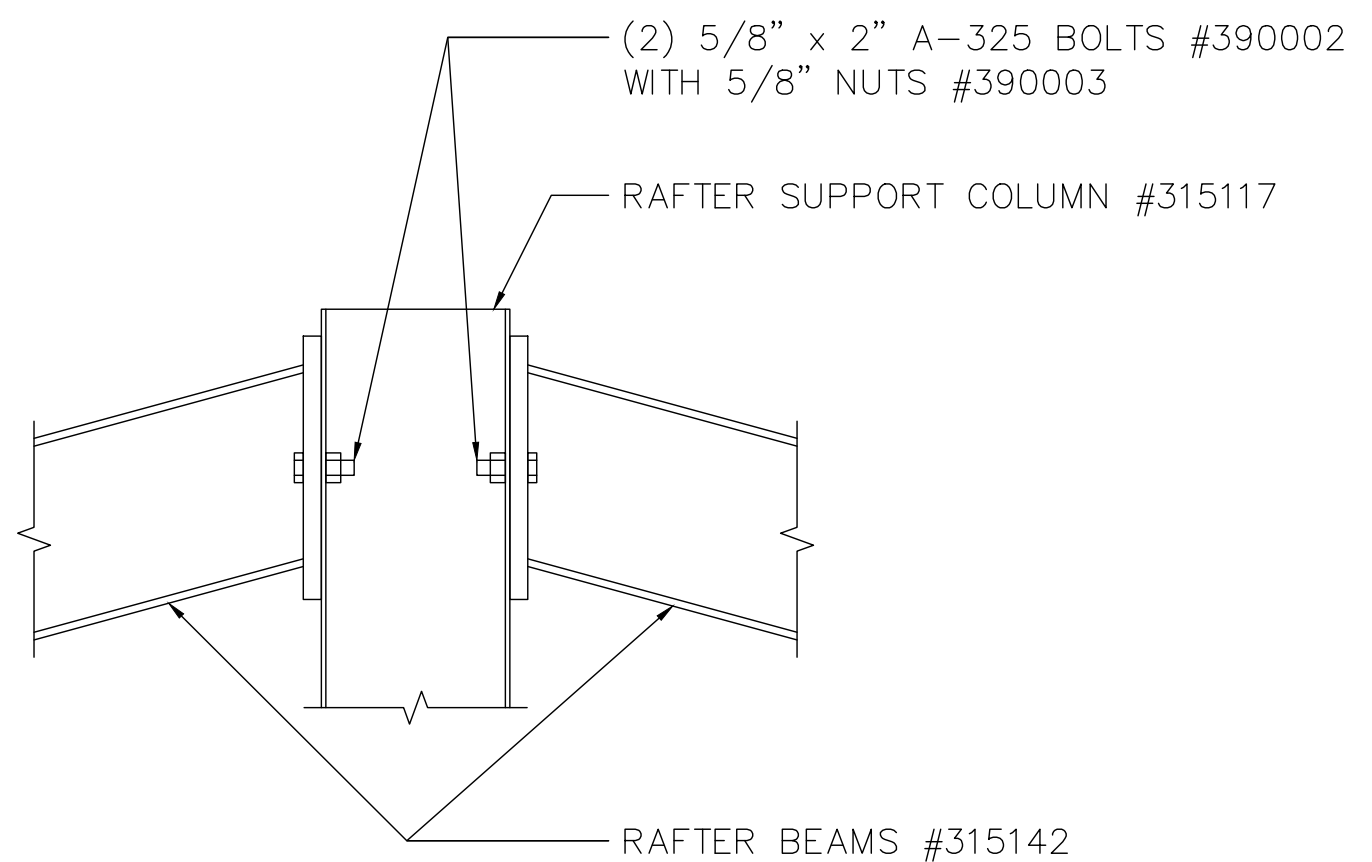
**"C" RAFTER CHANNEL EAVE CONNECTION**



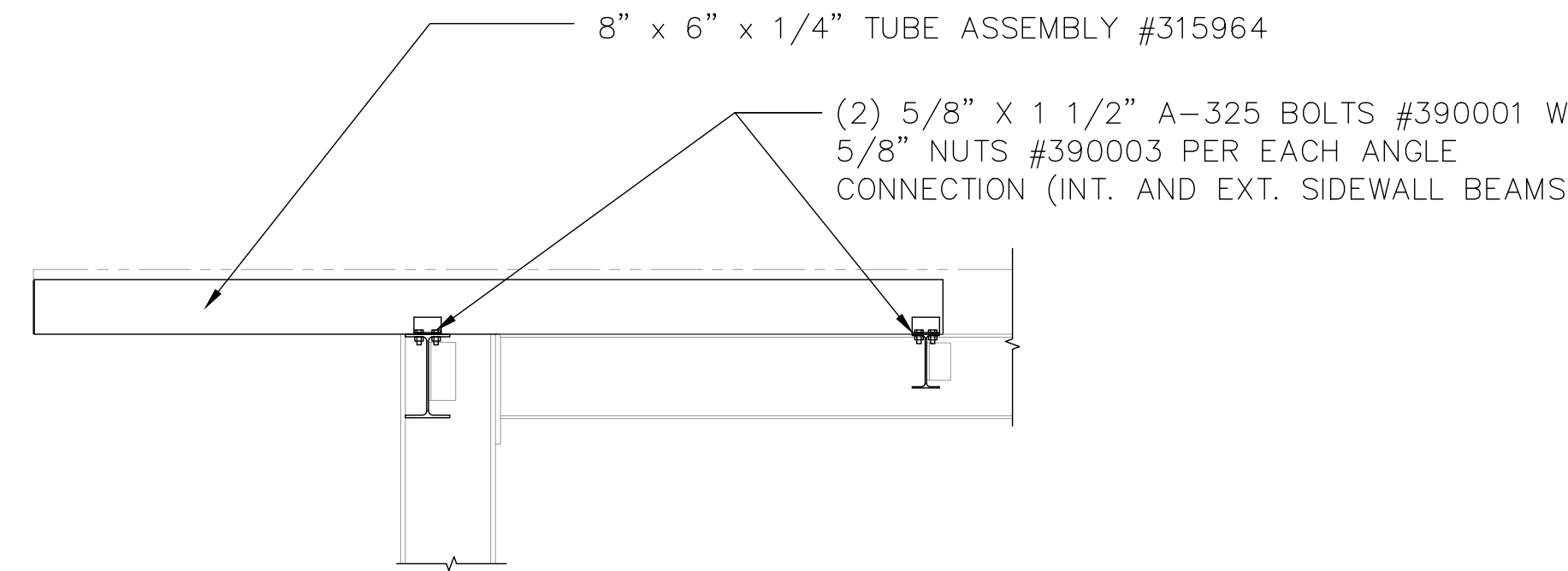
**"D" RAFTER SUPPORT COLUMN BASE**



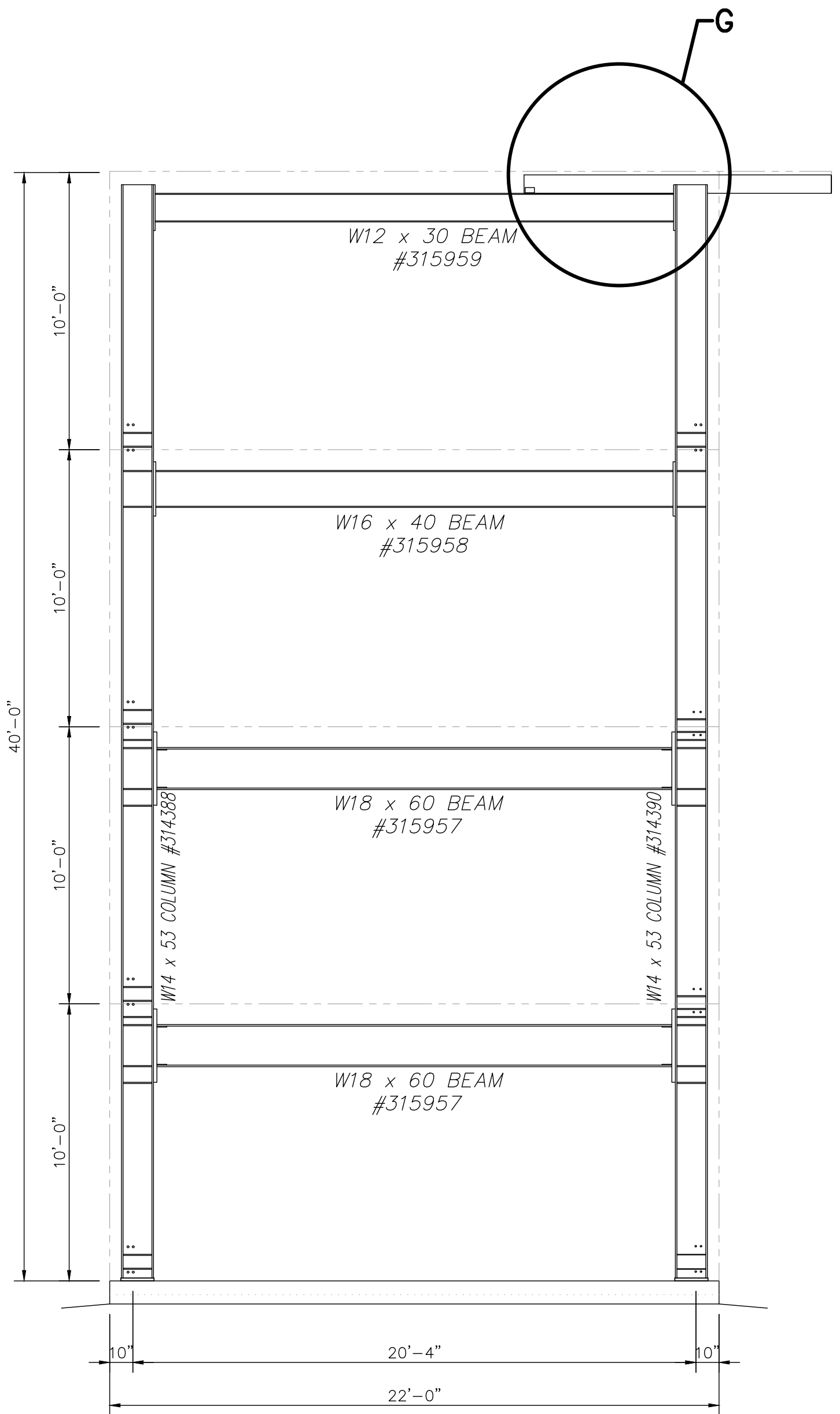
**"E" RAFTER EAVE CONNECTION**



**"F" RAFTER RIDGE CONNECTION**

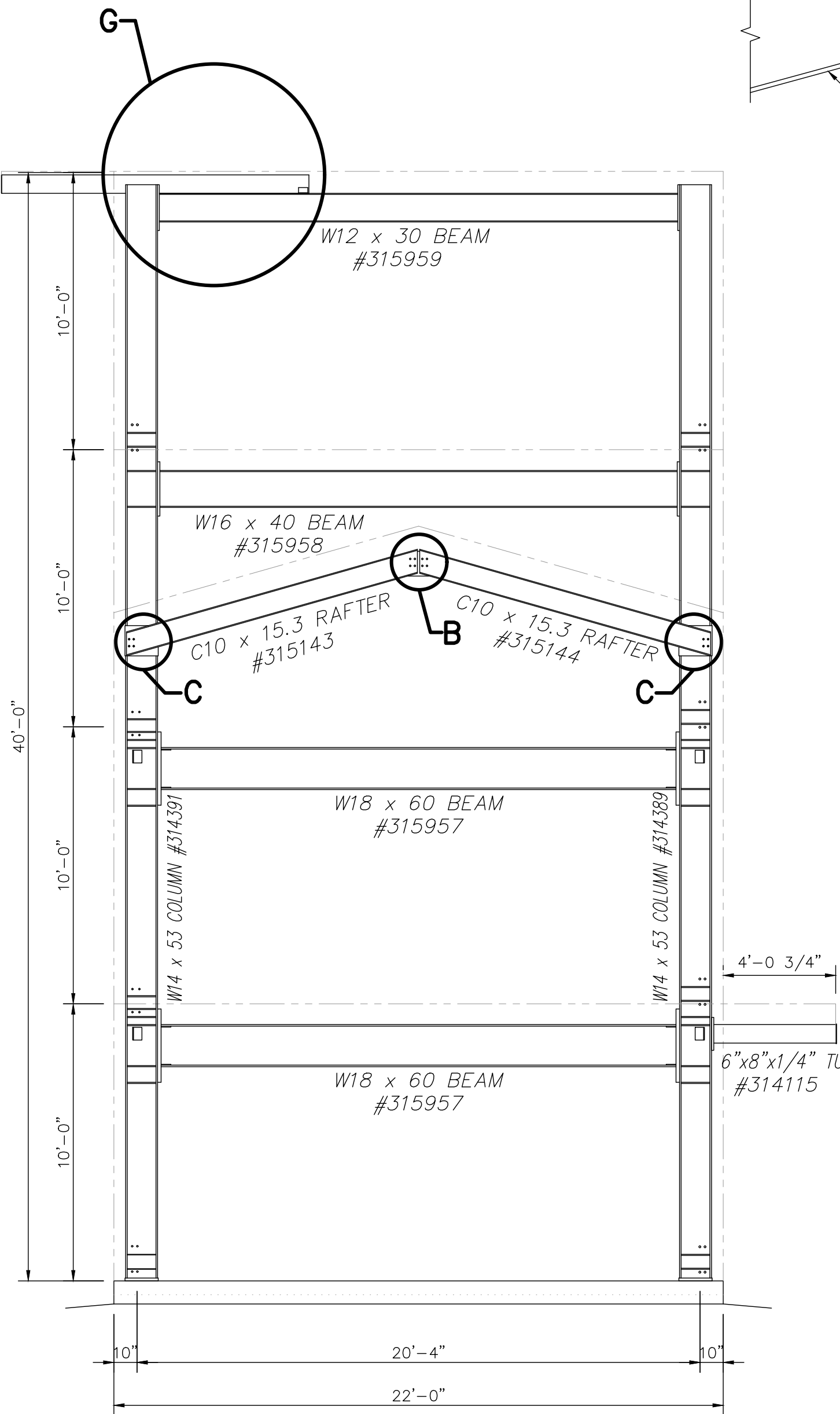


**"G" RAPPELLING PLATFORM CONNECTION**  
scale: 1/2"=1'-0"



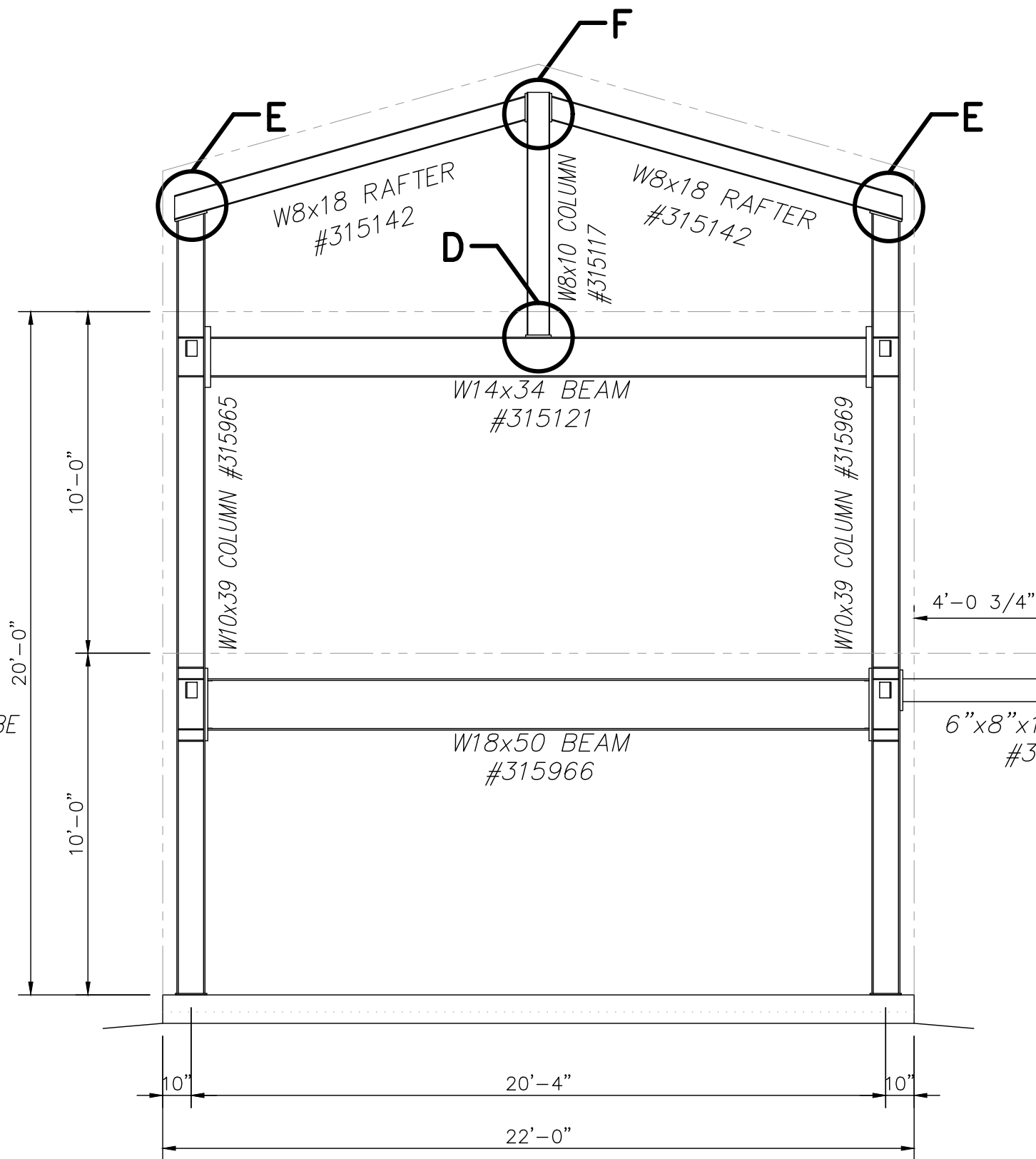
**NORTH END WALL STRUCTURAL FRAMING ELEVATION**

SCALE: 1/4"=1'-0"



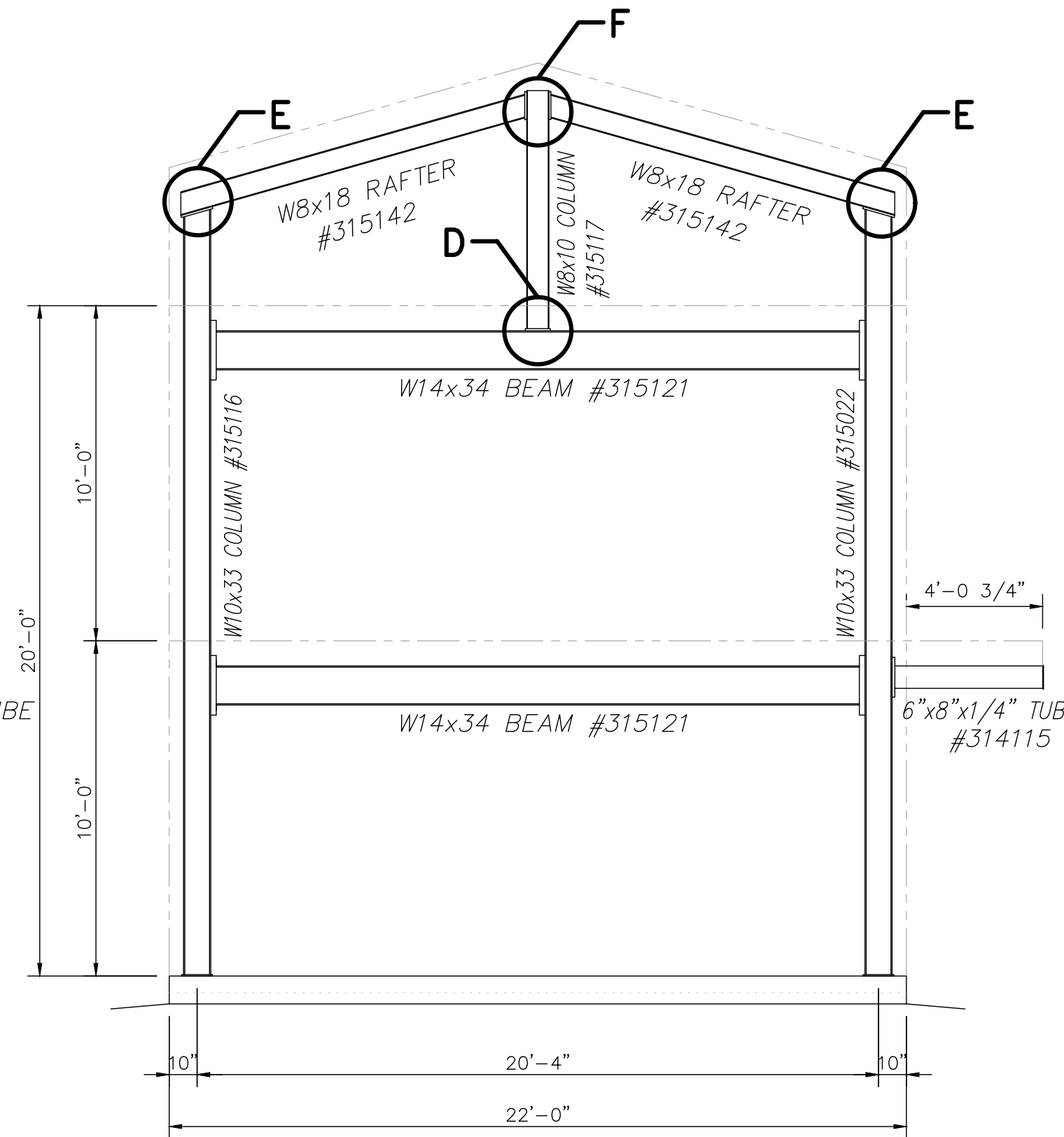
**SECTION THRU STRUCTURAL FRAMING AT COMMON WALL**

SCALE: 1/4"=1'-0"



**COMMON END WALL RESIDENCE STRUCTURAL FRAMING ELEVATION**

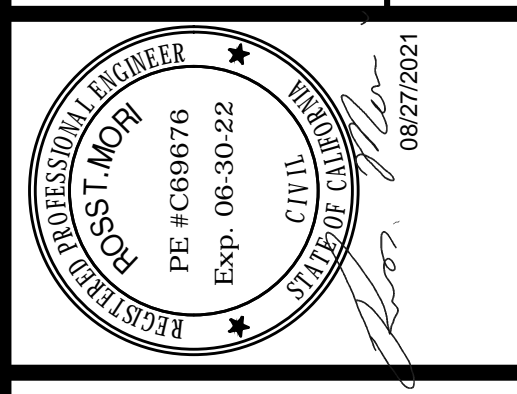
SCALE: 1/4"=1'-0"



**SOUTH END WALL RESIDENCE STRUCTURAL FRAMING ELEVATION**

SCALE: 1/4"=1'-0"

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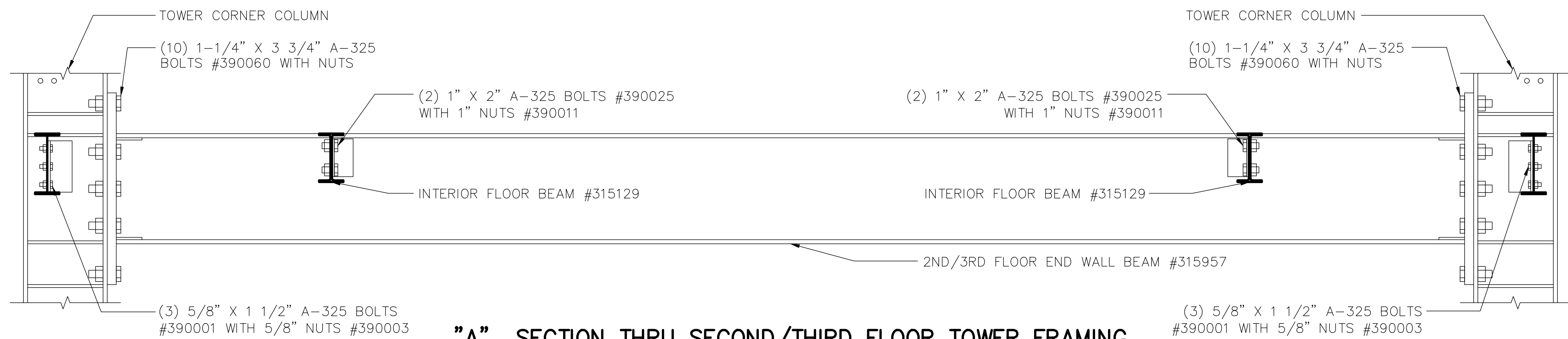


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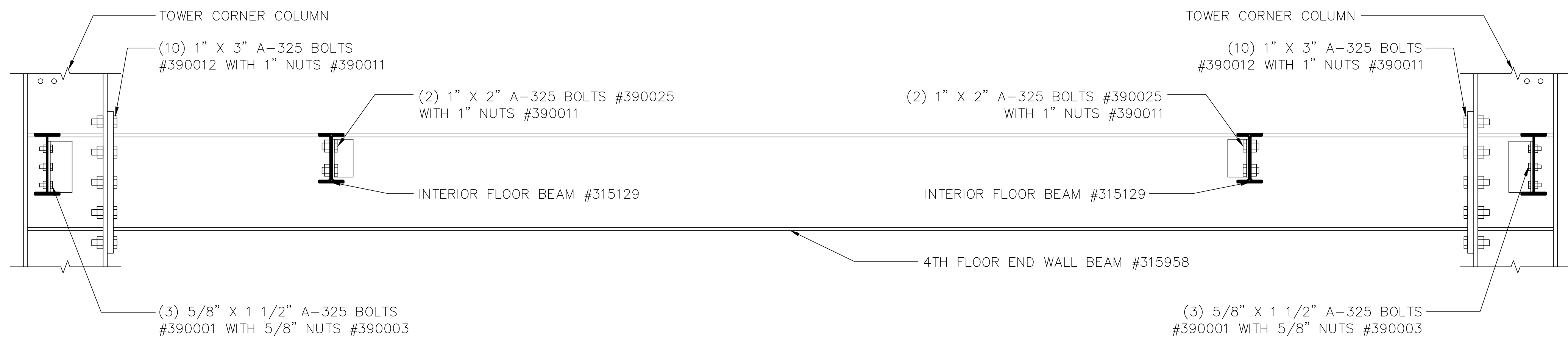


Job Description	SERIES 4000 TOWER/RESIDENCE
Date	AUGUST 13, 2021
Drawn by	GWL
Checked by	SPW
Scale	SHOWN
Order No.	TTS-108/#238355
Sheet Title	STRUCTURAL ELEVATIONS CONT.

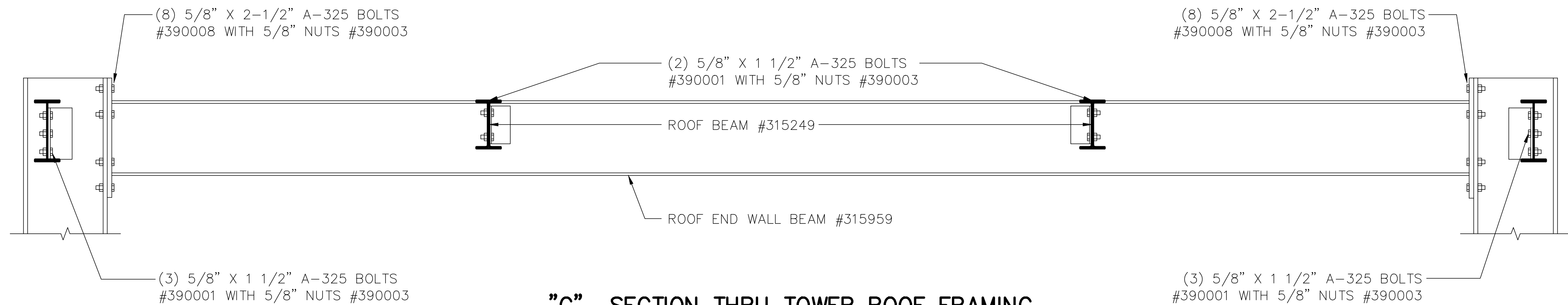




**"A" SECTION THRU SECOND/THIRD FLOOR TOWER FRAMING**

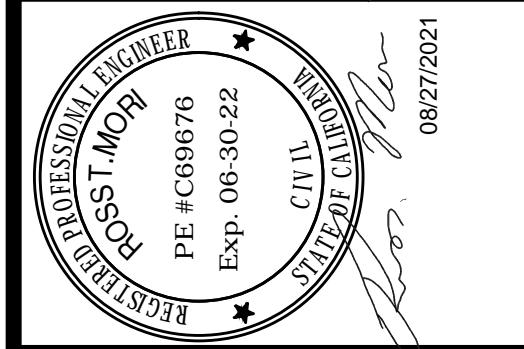


**"B" SECTION THRU FOURTH FLOOR TOWER FLOOR FRAMING**

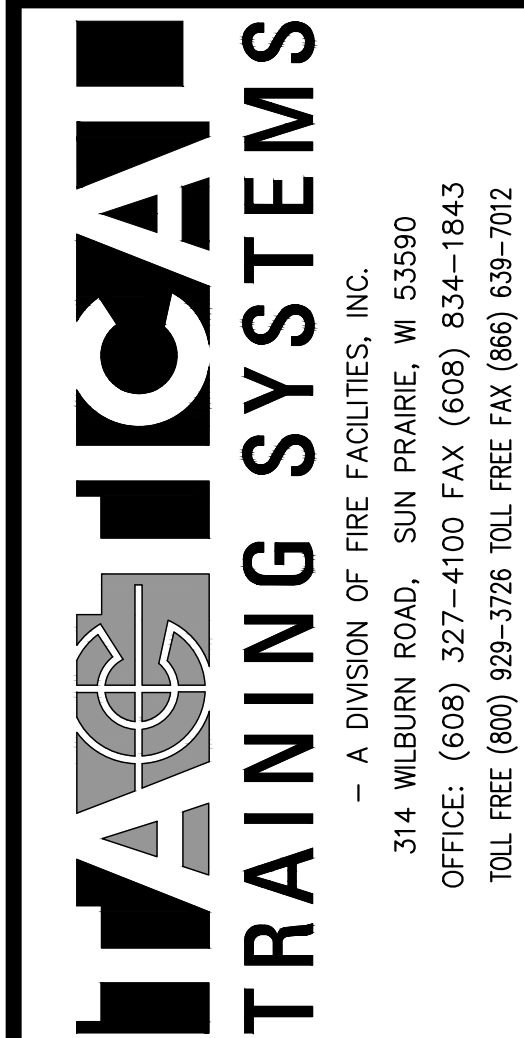


**"C" SECTION THRU TOWER ROOF FRAMING**

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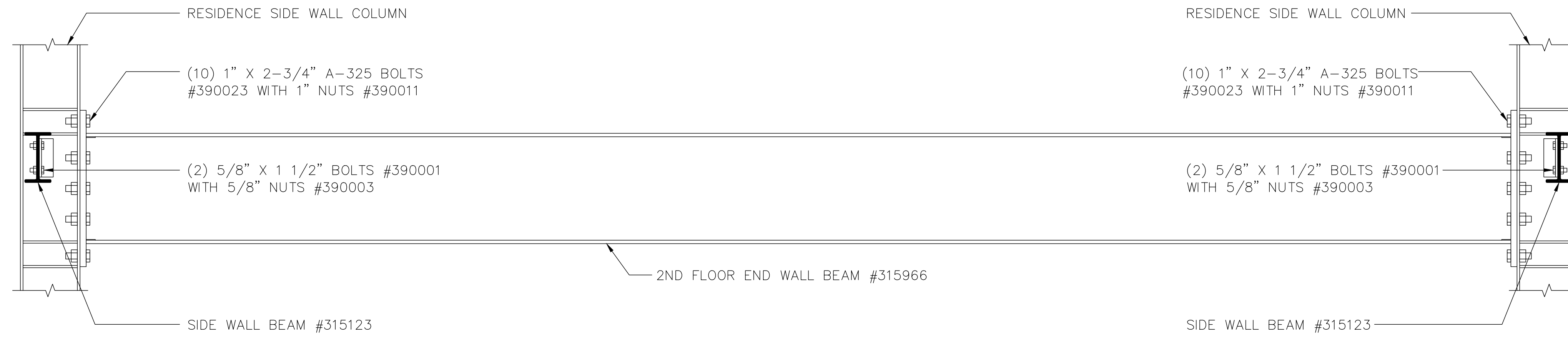
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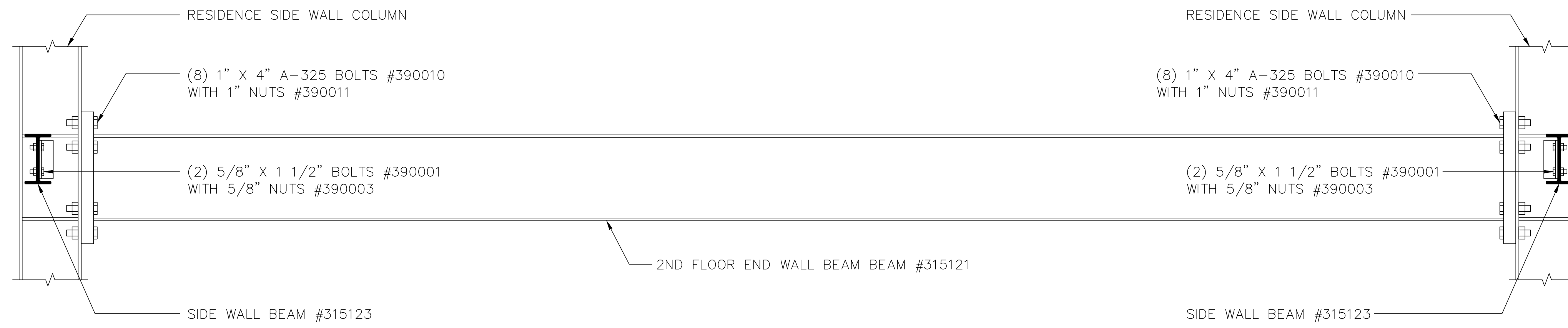
Job Description:	SERIES 4000 TOWER/RESIDENCE CUSTOM DUBLIN, CA
Date:	AUGUST 13, 2021
Drawn by:	GWL
Checked by:	SPW
Scale:	SHOWN
Order No.	TTS-108/#238355
Sheet Title:	TOWER STRUCTURAL SECTIONS

Sheet No.	09 of 23
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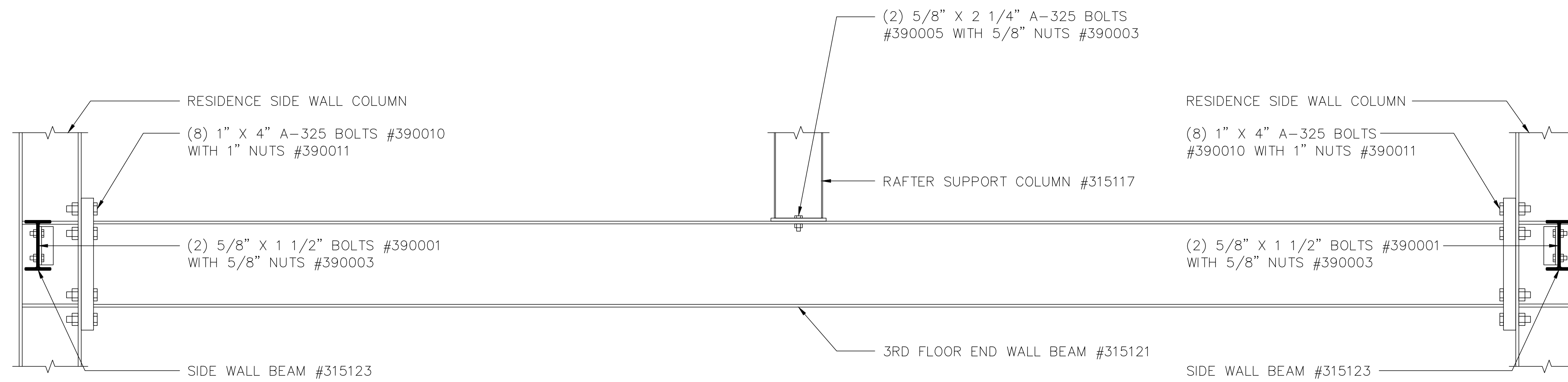




"D" SECTION THRU INTERIOR SECOND FLOOR RESIDENCE FRAMING



"E" SECTION THRU SECOND FLOOR END RESIDENCE FRAMING



"F" SECTION THRU ATTIC FLOOR RESIDENCE FRAMING

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08/27/2021

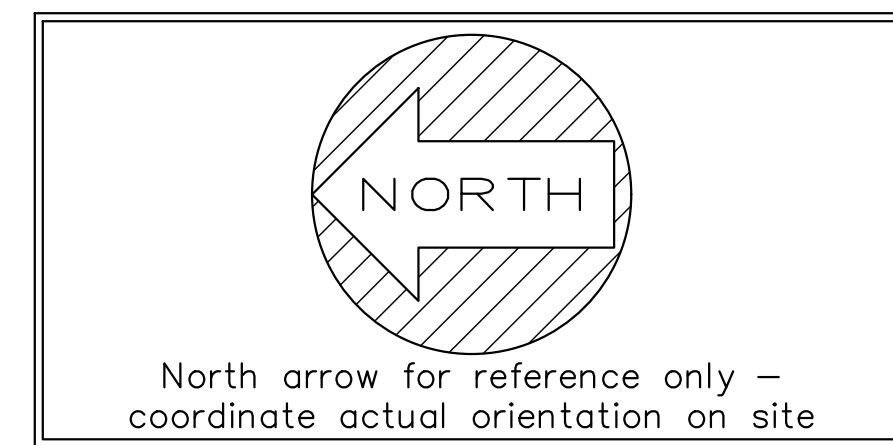
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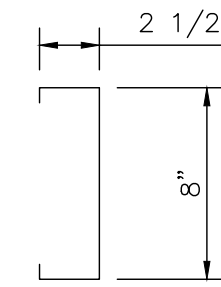
**SERIES 4000 TOWER/RESIDENCE**  
CUSTOM  
DUBLIN, CA

Job Description:	RESIDENTIAL STRUCTURAL SECTIONS
Date:	AUGUST 13, 2021
Drawn by:	GWL
Checked by:	SPW
Scale:	SHOWN
Order No.	TTS-108/#238355
Sheet No.	10 of 23





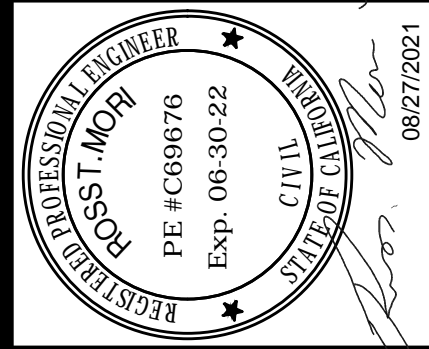
ATTENTION CONTRACTORS:  
METAL SHAVINGS SHALL BE  
COMPLETELY REMOVED FROM THE  
ROOF, FLOORS, AND STUD TRACKS AT  
THE END OF EACH WORK DAY.  
FAILURE TO DO SO MAY RESULT IN  
PREMATURE RUST SPOTS.



TYPICAL FLOOR &/or ROOF JOIST



SOME FIELD DRILLING OF HOLES IN THE STRUCT. BEAM  
WILL BE REQUIRED FOR THE 3/8" BOLT  
ATTACHMENT OF THE CLIP TO THE STRUCTURAL BEAM

[illegible]

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*b Description*

**SERIES 4000 TOWER/~~RESIDENCE~~**

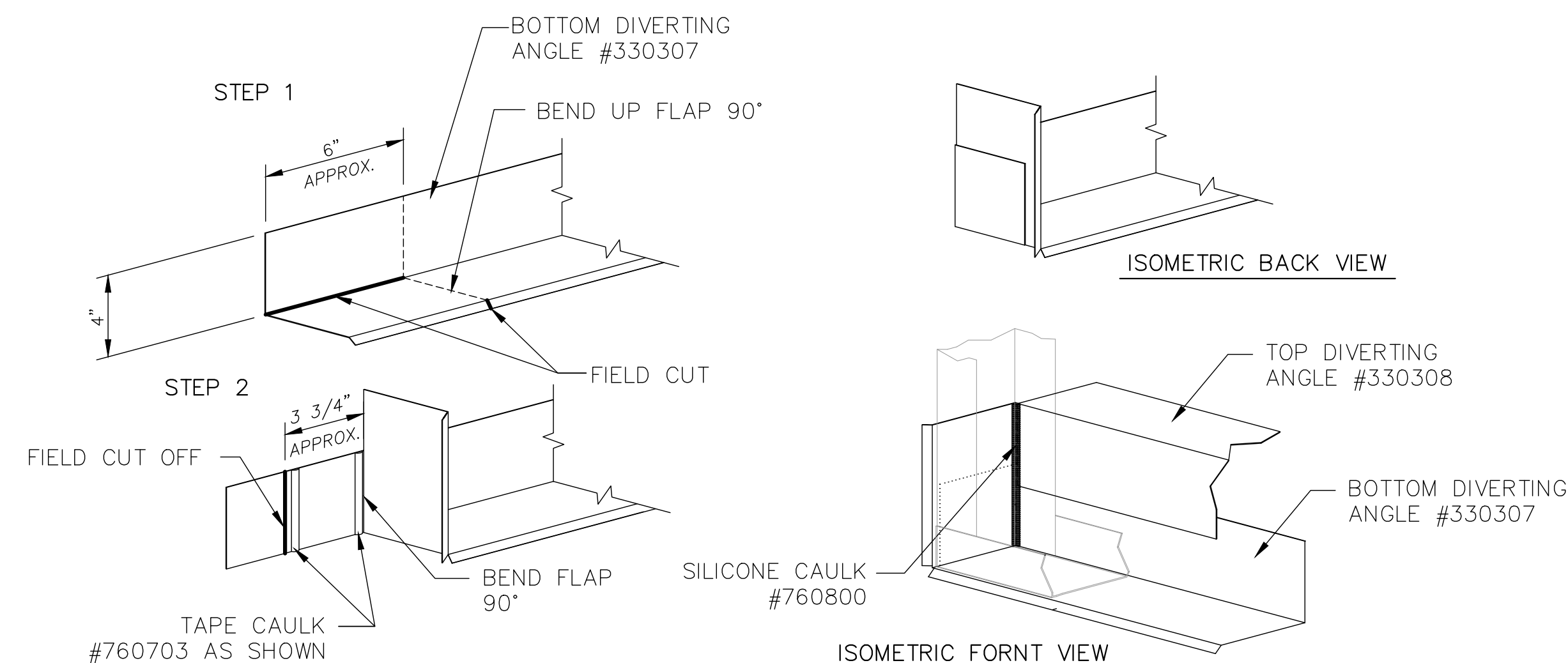
CUSTOM

DUBLIN, CA

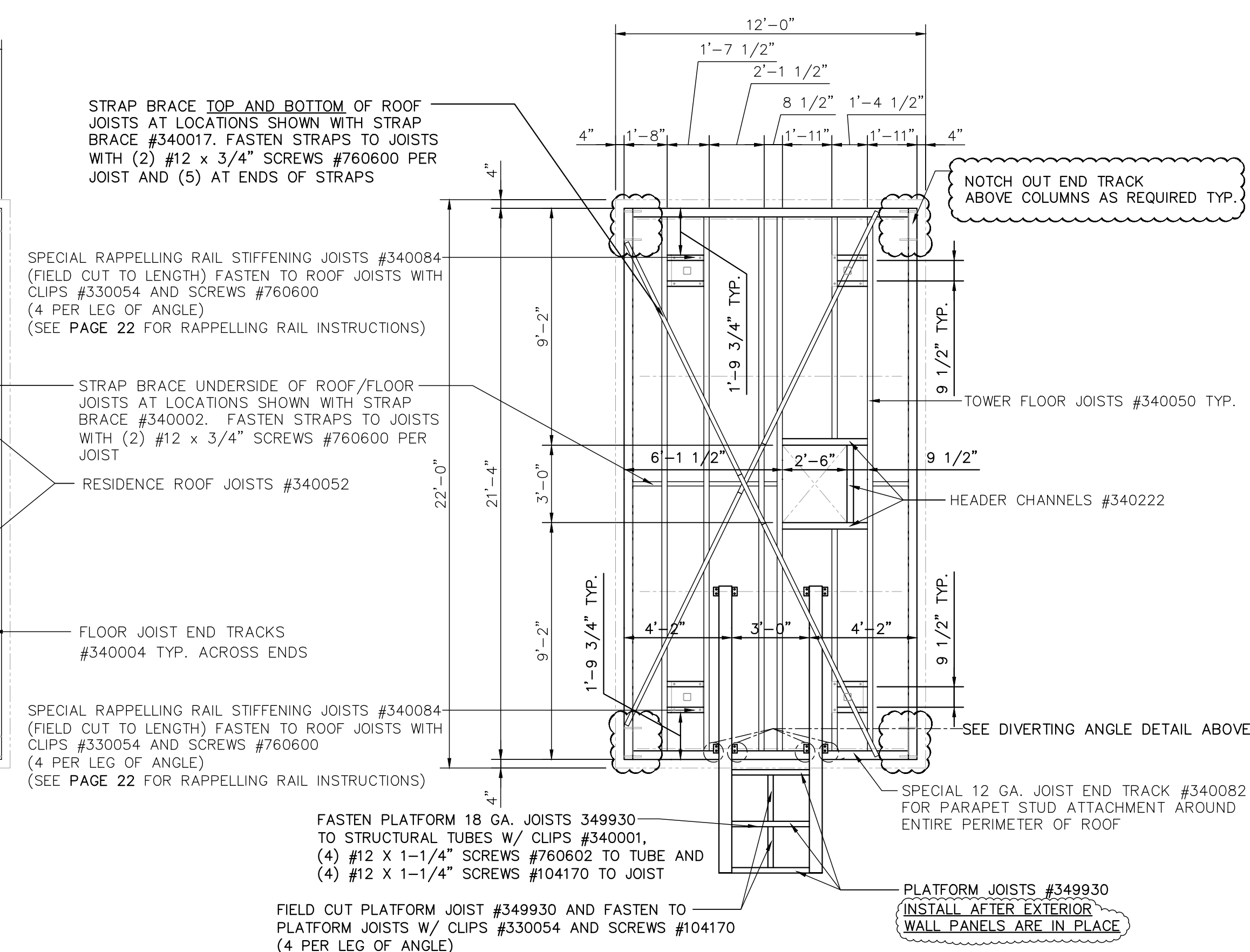
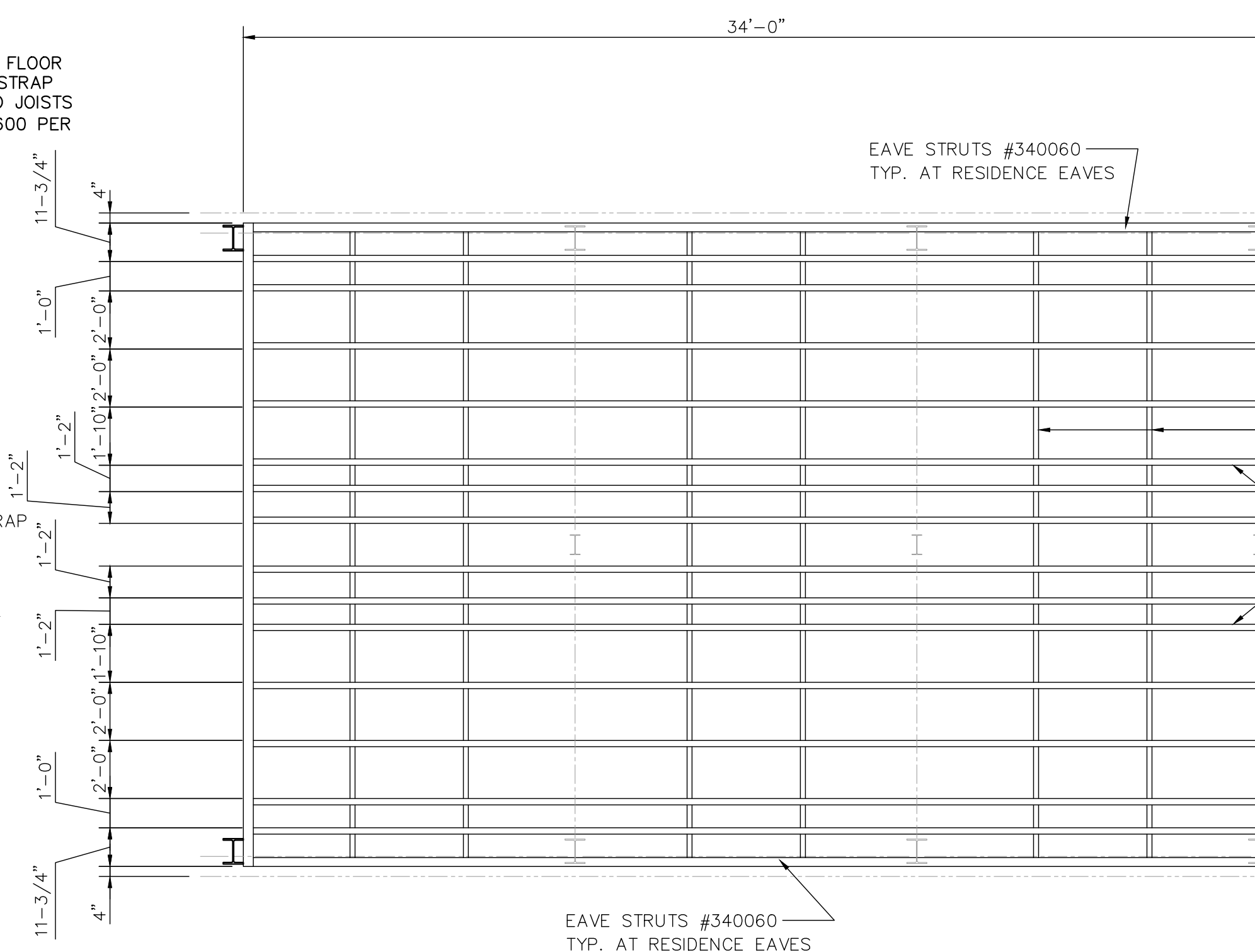
**Sheet Title**  
**JOIST PLANS AND DETAILS**

Date	AUGUST 13, 2021
Drawn by	GWL
Checked by	SPW
Scale	SHOWN
Order No.	TTS-108/#238355
Sheet No.	



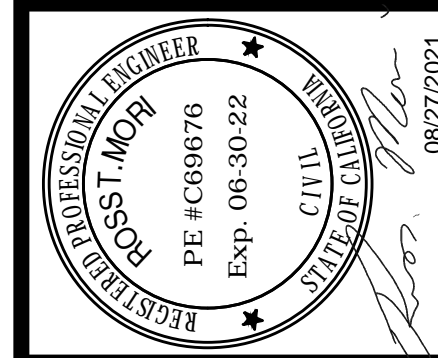


NOTE: FIELD CUT JOISTS AND TRACK AROUND STAIR OPENINGS.



*TOWER ROOF JOIST FRAMING PLAN*

SCALE: 1/4"=1'-0"

[illegible]

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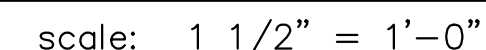
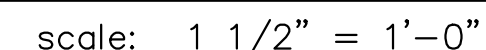


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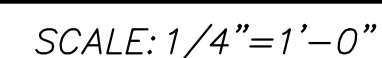
Job Description	Project Title
SERIES 4000 TOWER/RESIDENCE CUSTOM DUBLIN, CA	JOIST PLANS AND DETAILS CONT.

Date	AUGUST 13, 2021
Drawn by	GWL
Checked by	SPW
Scale	SHOWN
Order No.	TTS-108/#238355
Sheet No.	





SCALE: 1/4"=1'-0"

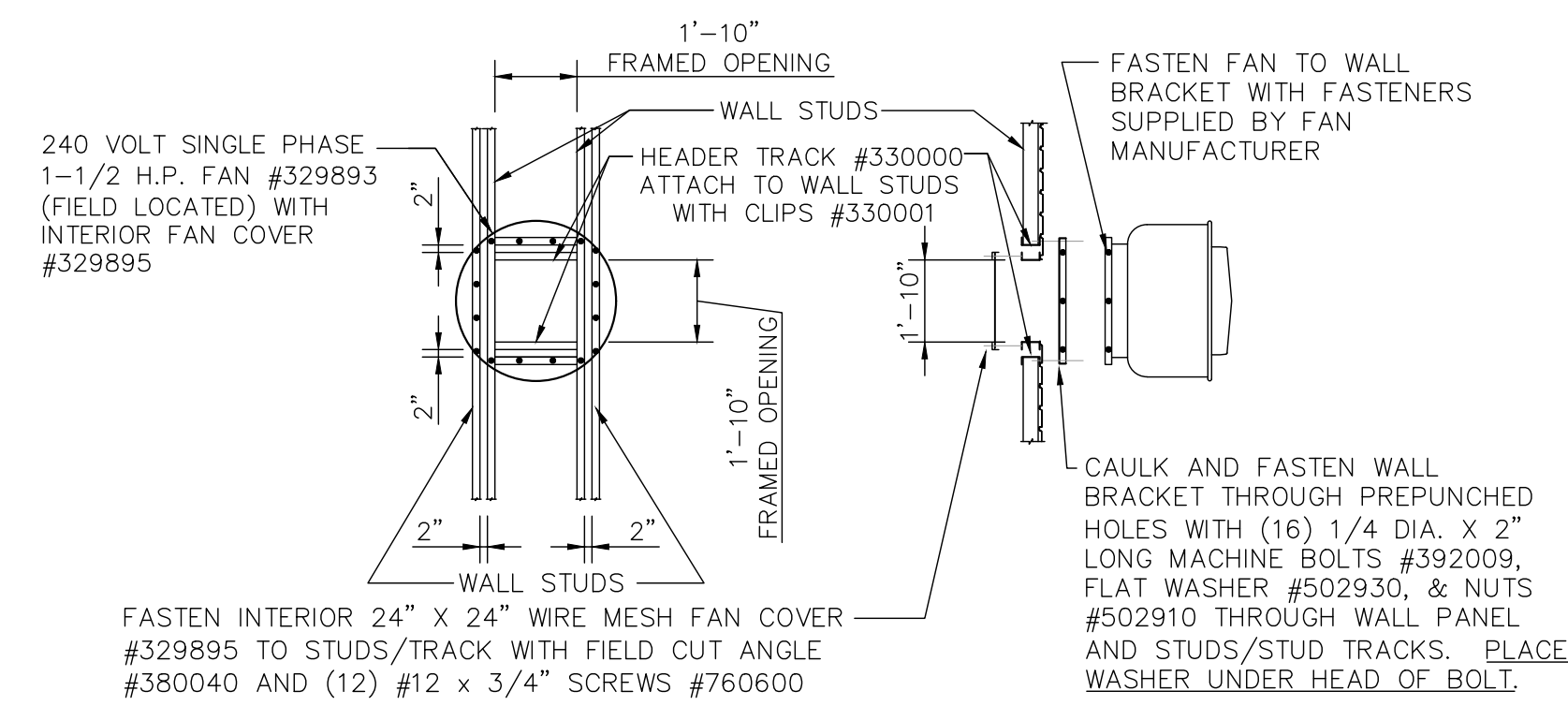


NOTE: FIELD CUT FRAMING AROUND FRAMED OPENINGS

13 of 23



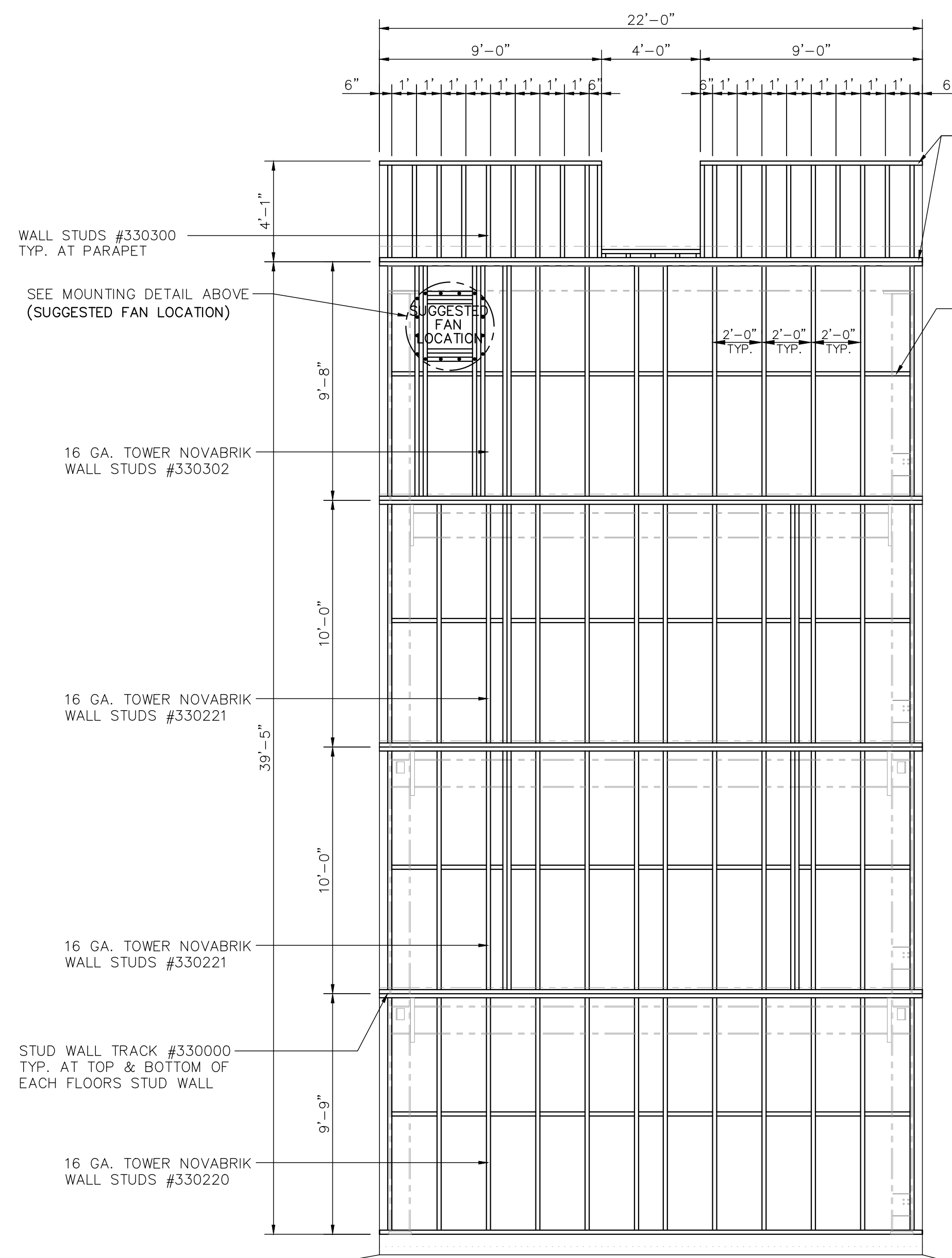
NOTE:  
LOCATION OF FAN IS FIELD LOCATED  
KEEP FAN LOCATION AS CLOSE TO CEILING AS POSSIBLE



\*SEE PG. 18 FOR NOVABRIK DETAIL

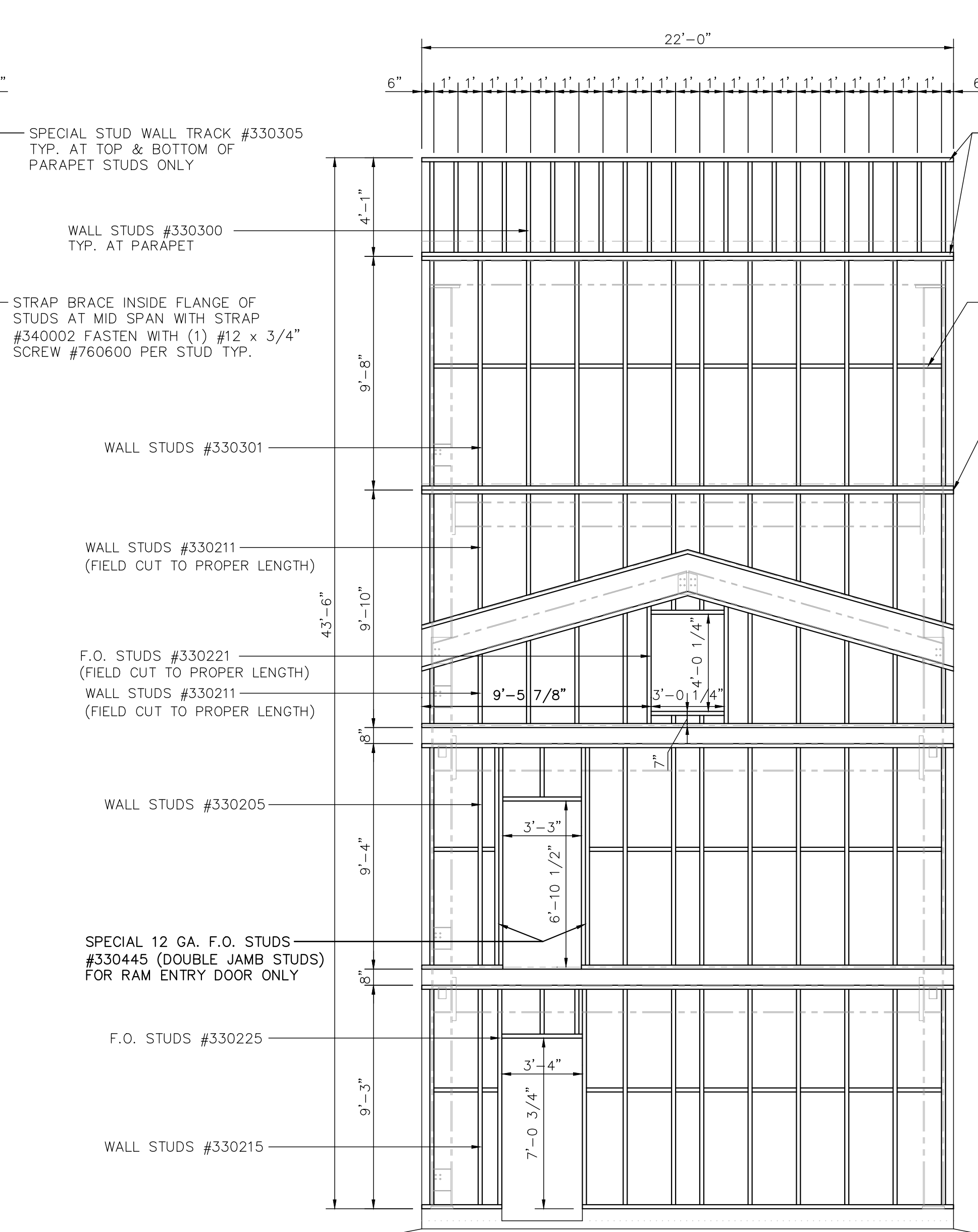
## FAN MOUNTING DETAIL

**IMPORTANT: ALL STUDS MUST LINE UP FROM TOP TO BOTTOM OF 22' WIDE TOWER SECTION TO CARRY NOVABRIK LOADS**



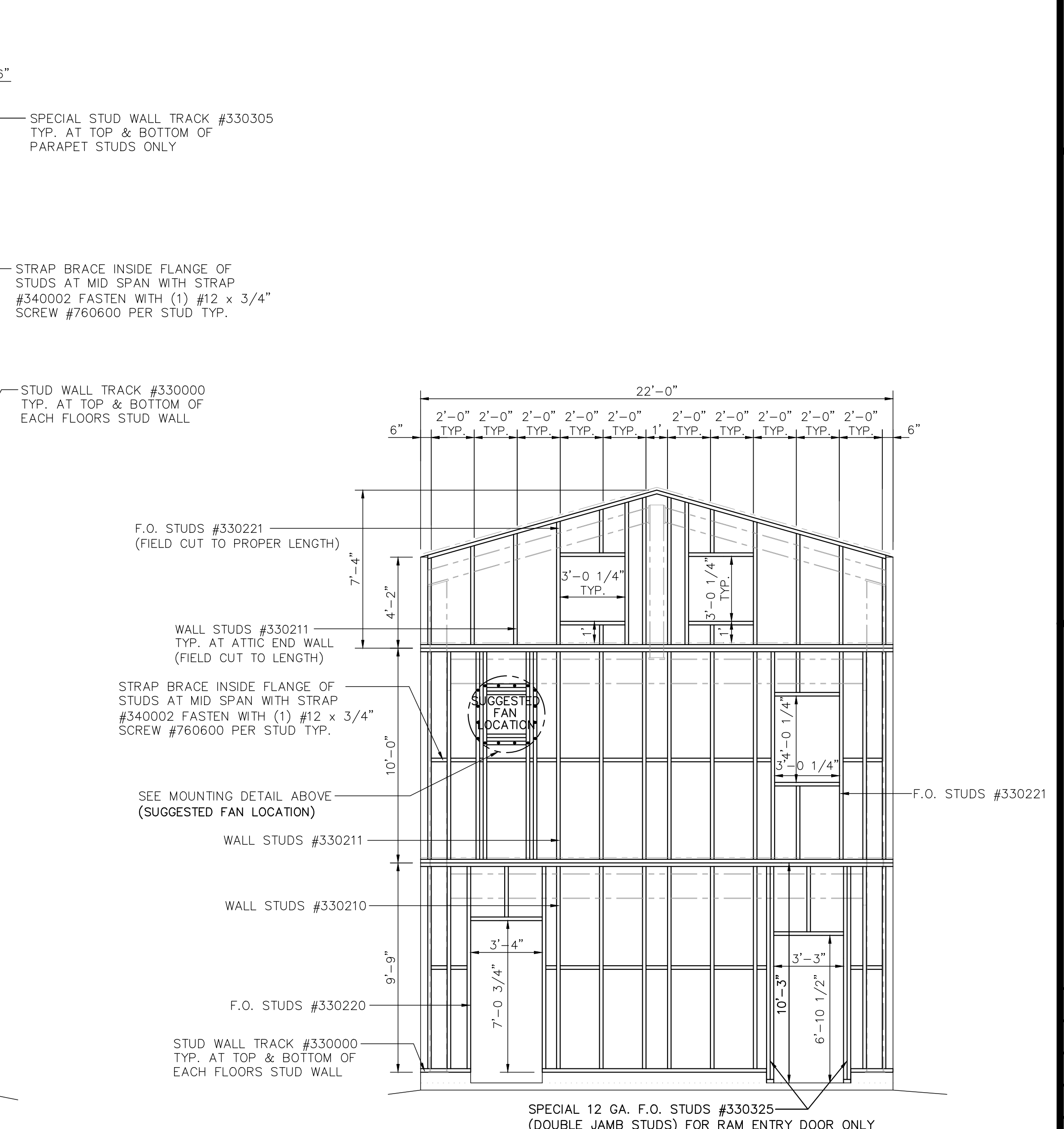
## NORTH END STUD WALL FRAMING ELEVATION

SCALE: 1/4"=1'-0"



## COMMON STUD WALL FRAMING ELEVATION

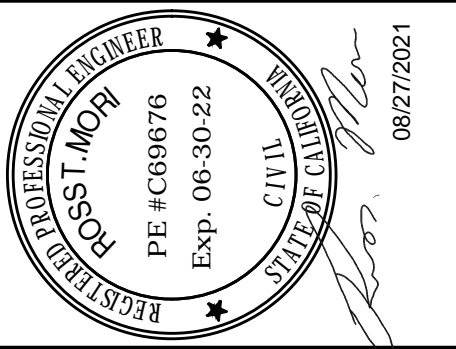
SCALE: 1/4"=1'-0"



## SOUTH END STUD WALL FRAMING

SCALE: 1/4"=1'-0"

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Job Description

SERIES 4000 TOWER/RESIDENCE

CUSTOM

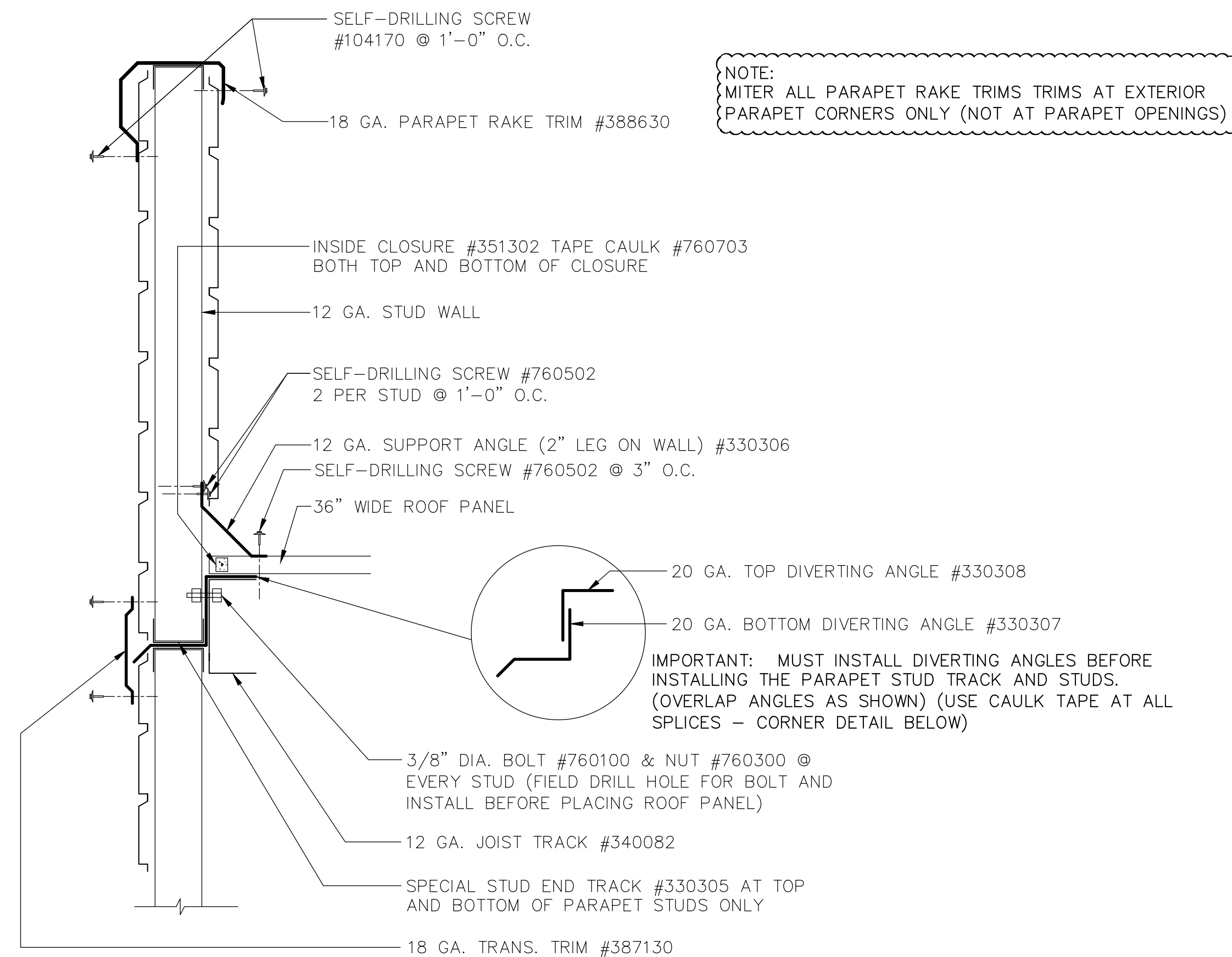
DUBLIN, CA

Sheet Title

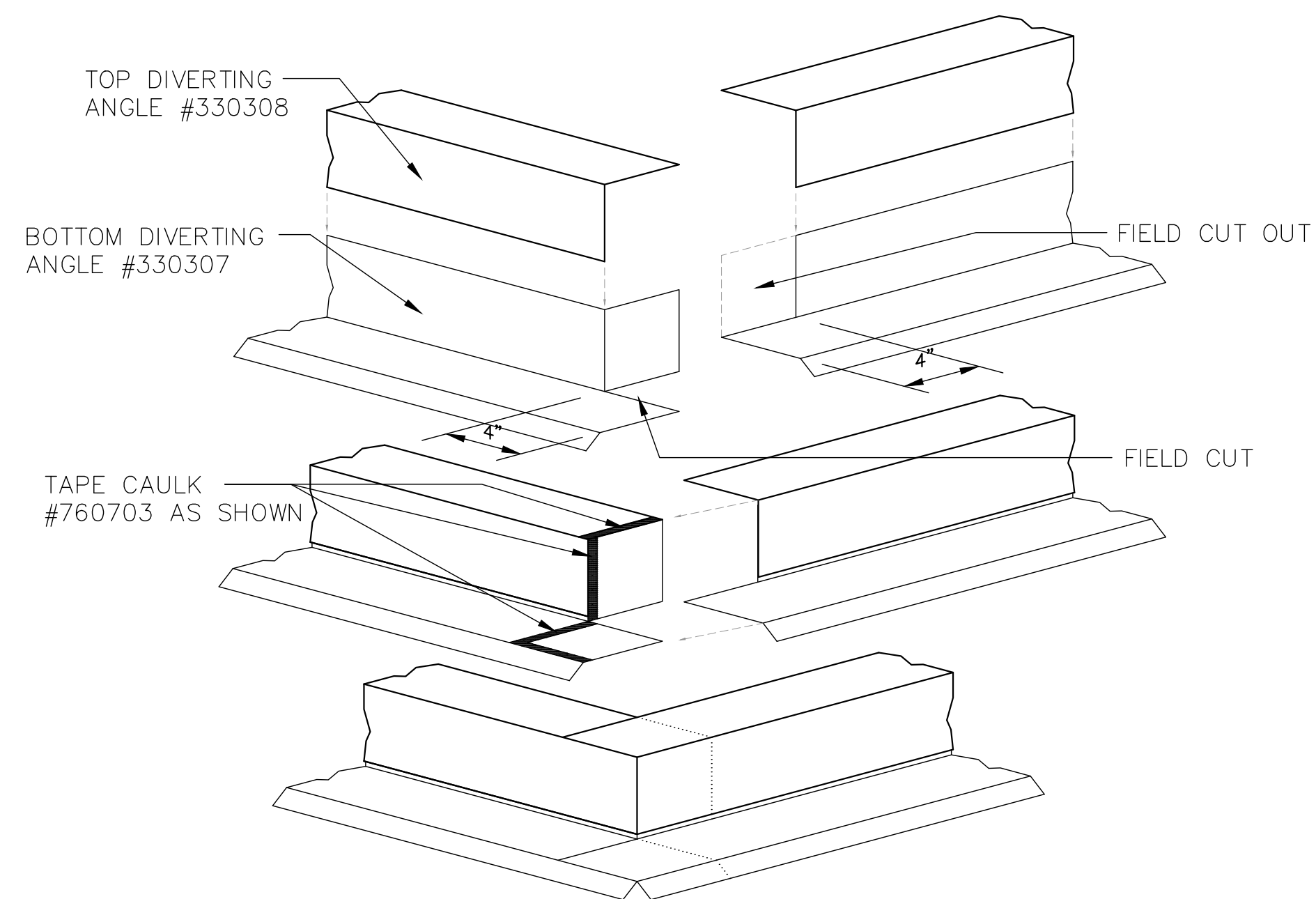
STUD ELEVATIONS & DETAILS CONT.

Date AUGUST 13, 2021  
Drawn by GWL  
Checked by SPW  
Scale SHOWN  
Order No. TTS-108/#238355  
Sheet No.



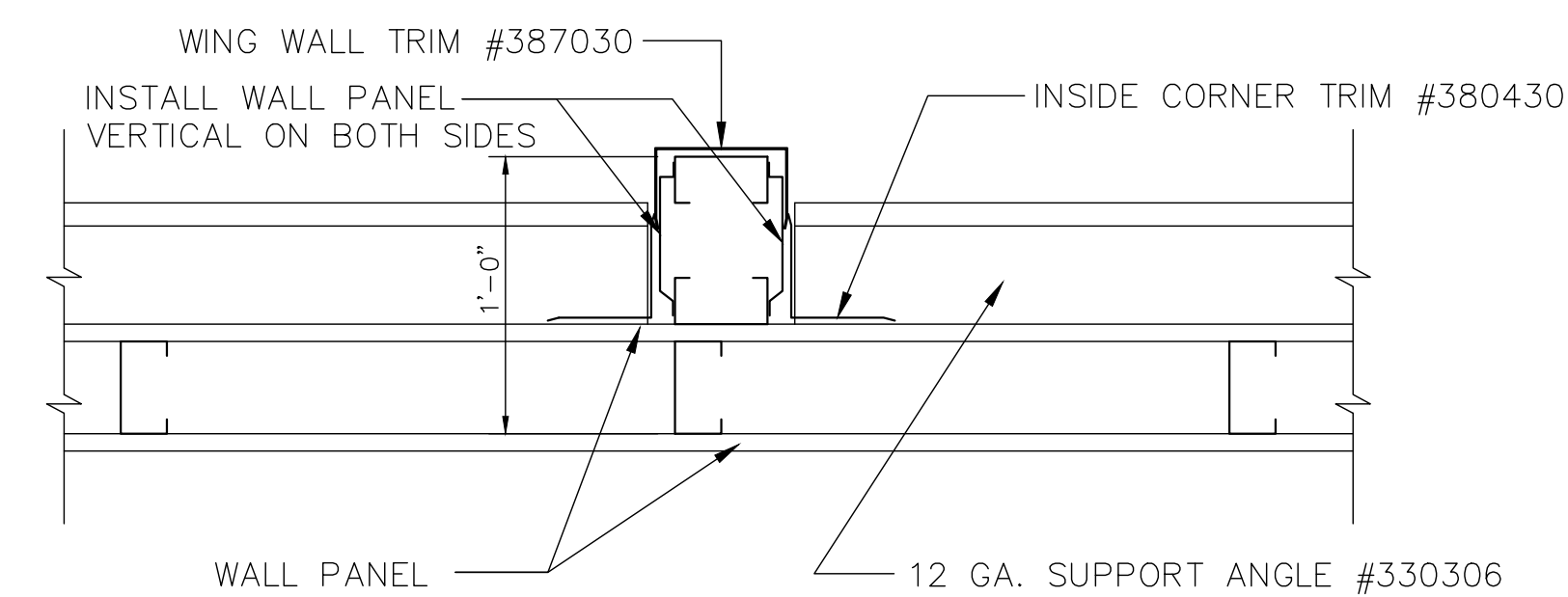


**TOWER (NON-NOVABRIK SIDE) PARAPET DETAIL AT WEST WALL EAVE**

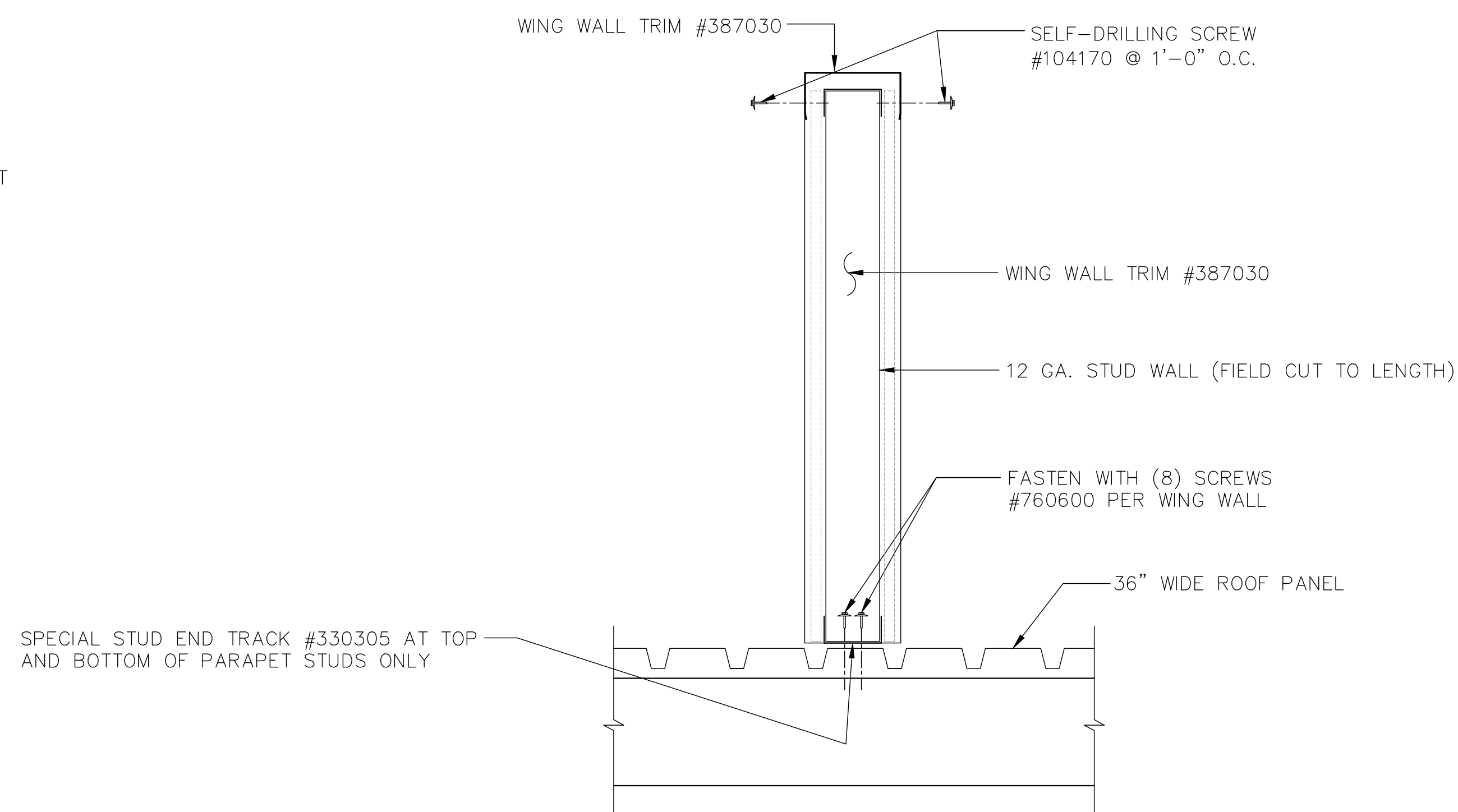


\*CAULK ALONG ALL DIVERTING ANGLES WHERE TWO PIECES OVERLAP EACH OTHER (APPLIES TO NONCORNER OVERLAPPING AREAS ALSO)\*

**DIVERTING ANGELS/CAULK TAPE DETAIL AT CORNER OF BUILDING**

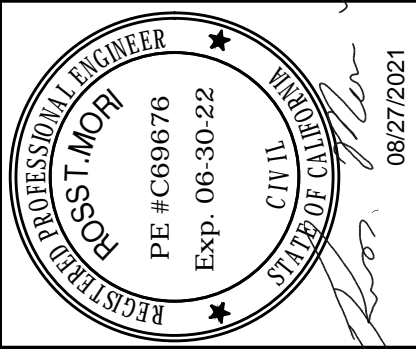


**SECTION THRU PARAPET AT WING WALL**



**PARAPET WING WALL DETAIL AT END**

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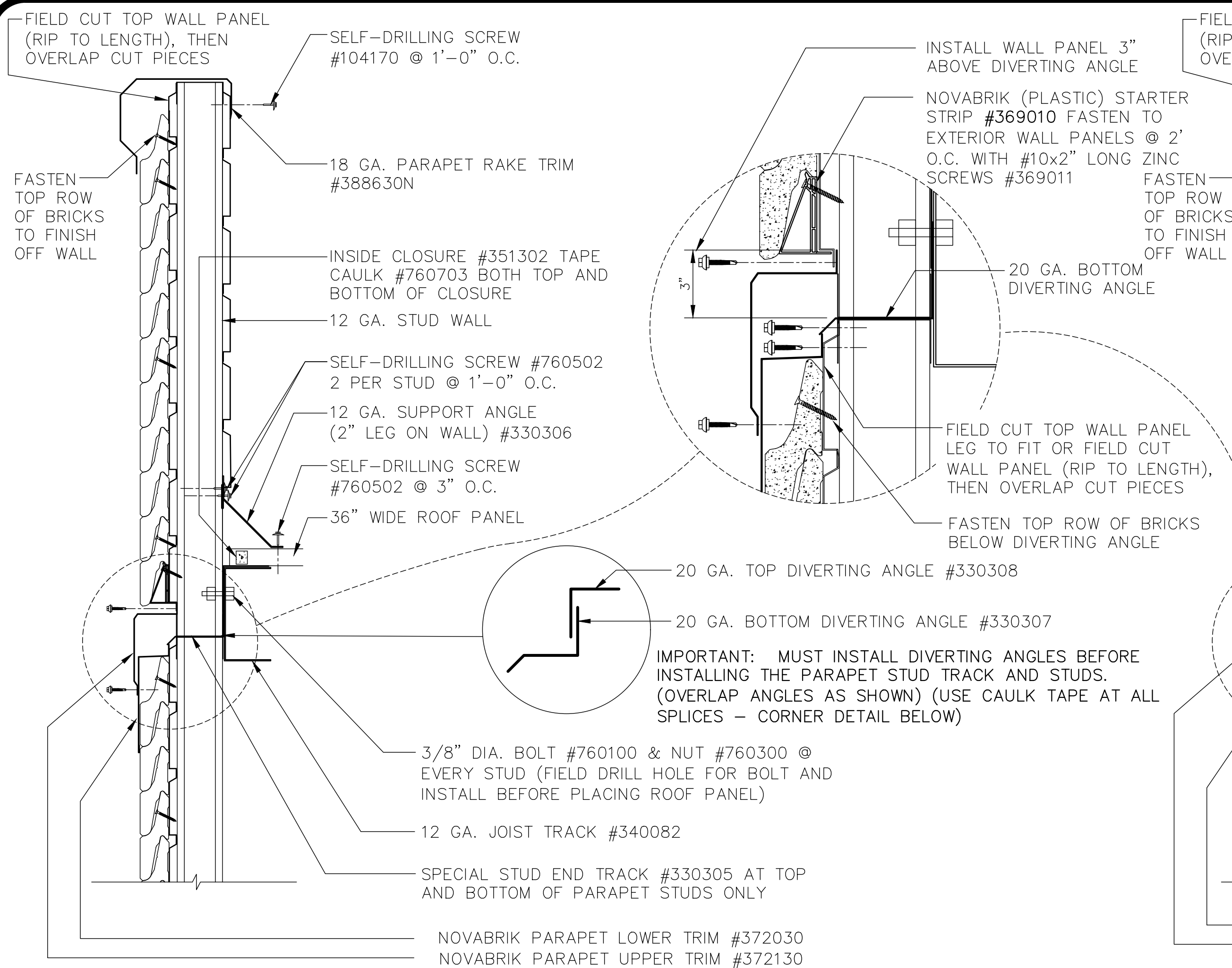
**TACTICAL TRAINING SYSTEMS**

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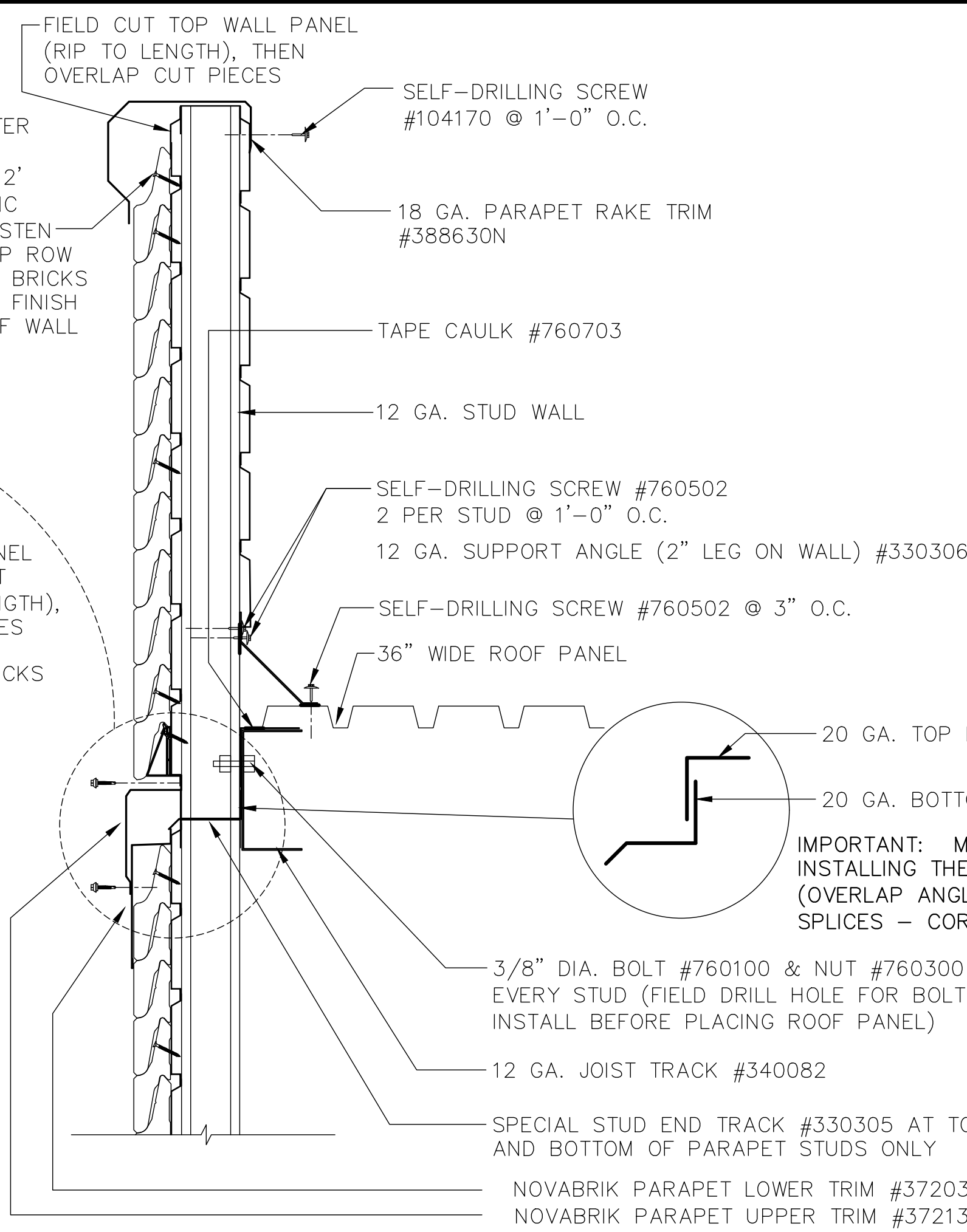
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Job Description:	SERIES 4000 TOWER/RESIDENCE CUSTOM DUBLIN, CA
Date:	AUGUST 13, 2021
Drawn by:	CWL
Checked by:	SPW
Scale:	SHOWN
Order No.	TTS-108/#238355
Sheet No.	PARAPET (NON-NOVABRIK SIDE) DETAILS

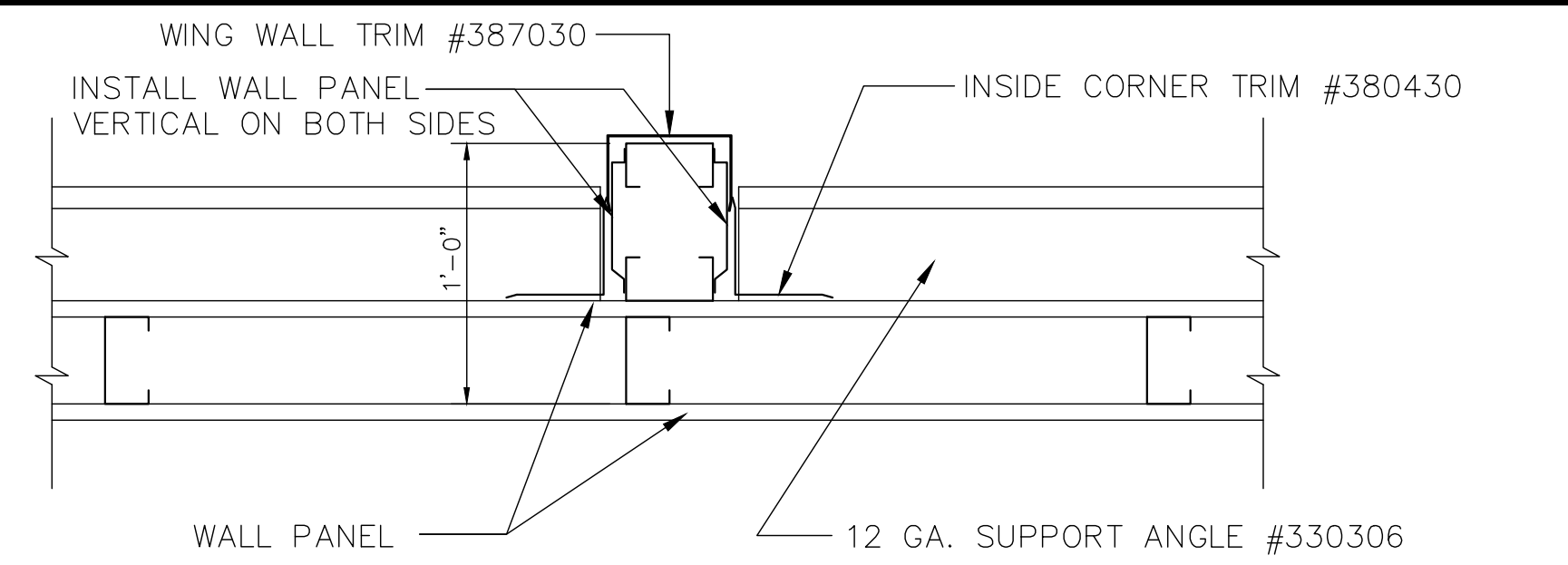




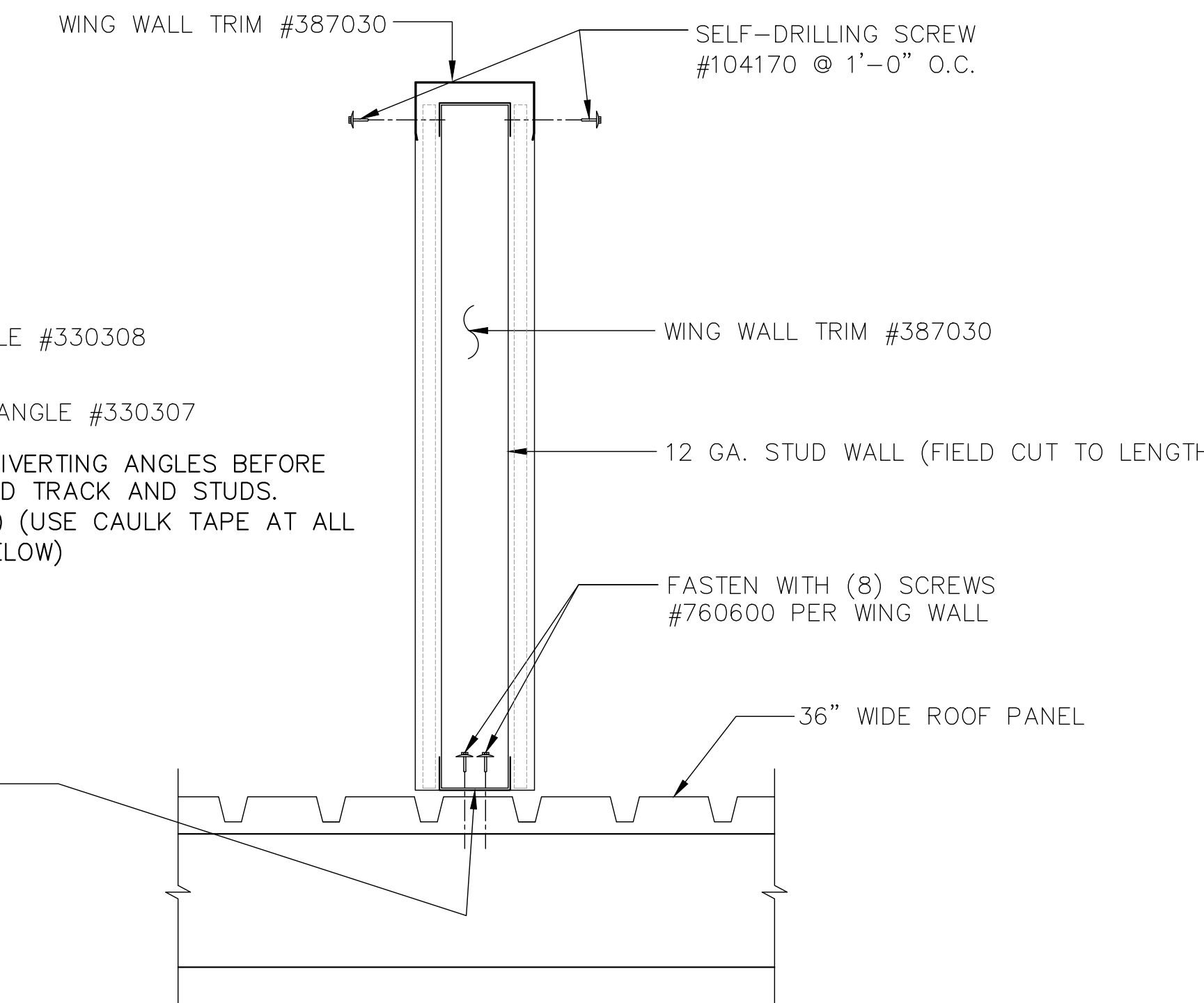
**TOWER PARAPET DETAIL AT EAVE**



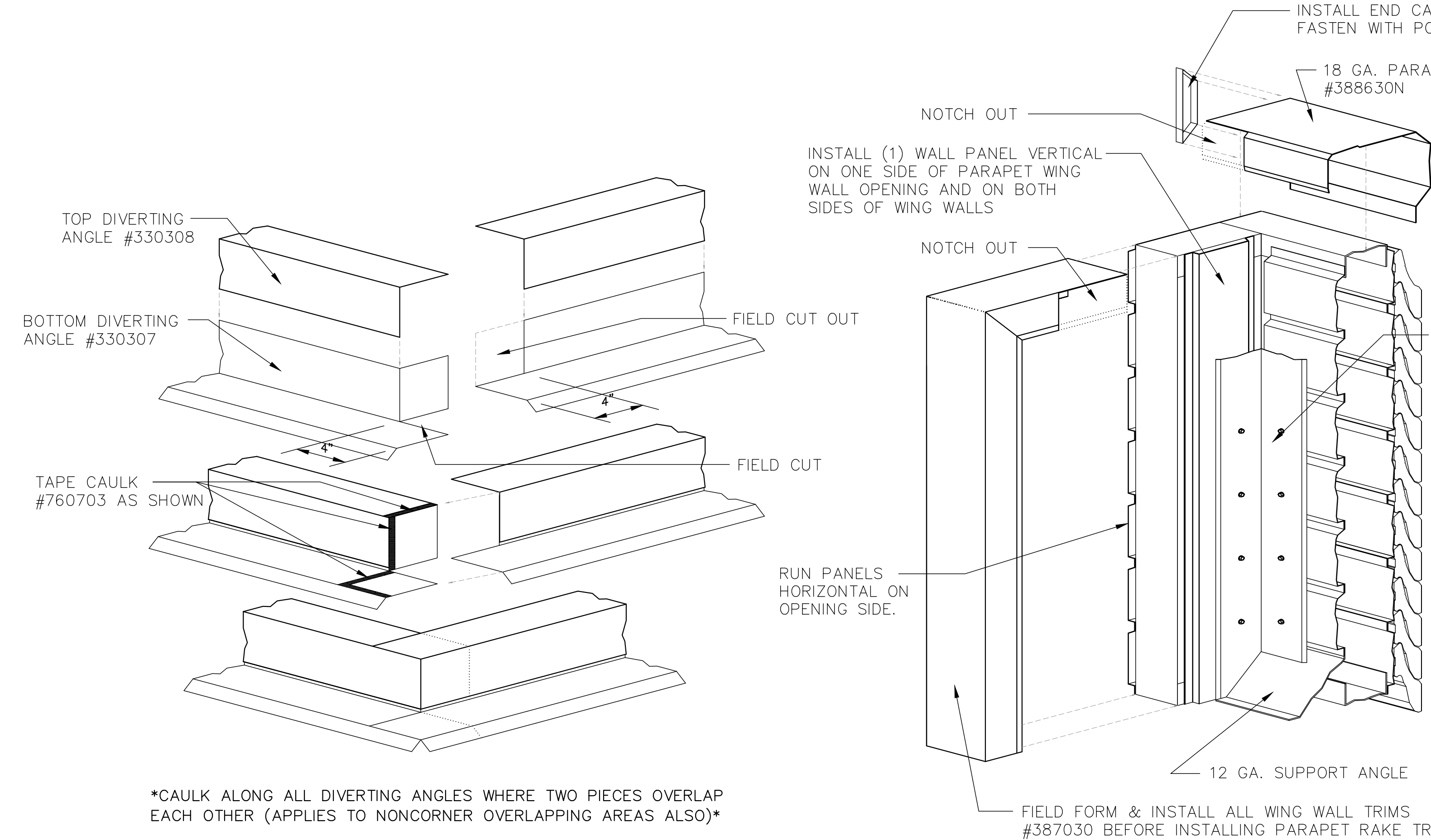
**TOWER PARAPET DETAIL AT RAKE**



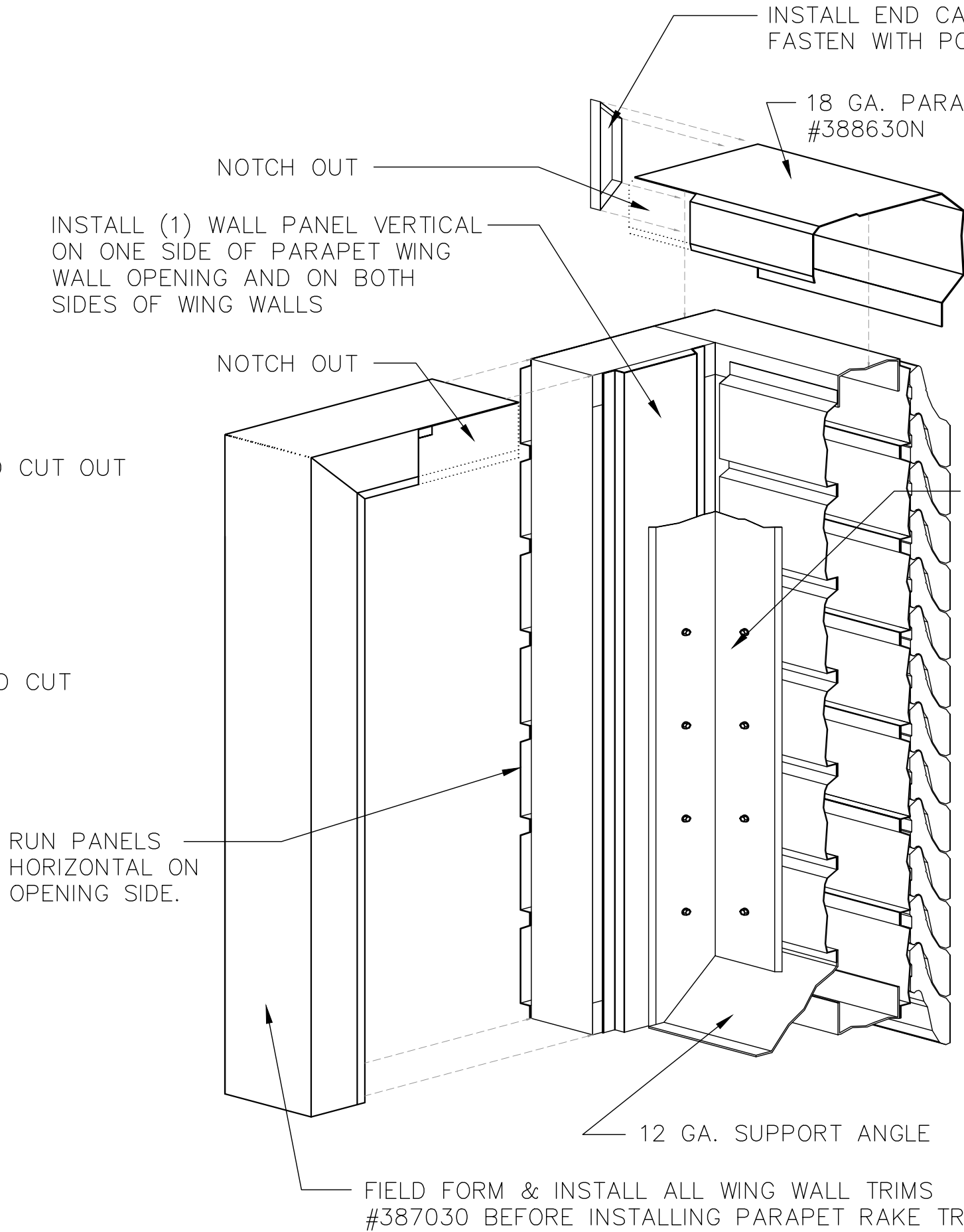
**SECTION THRU PARAPET AT WING WALL**



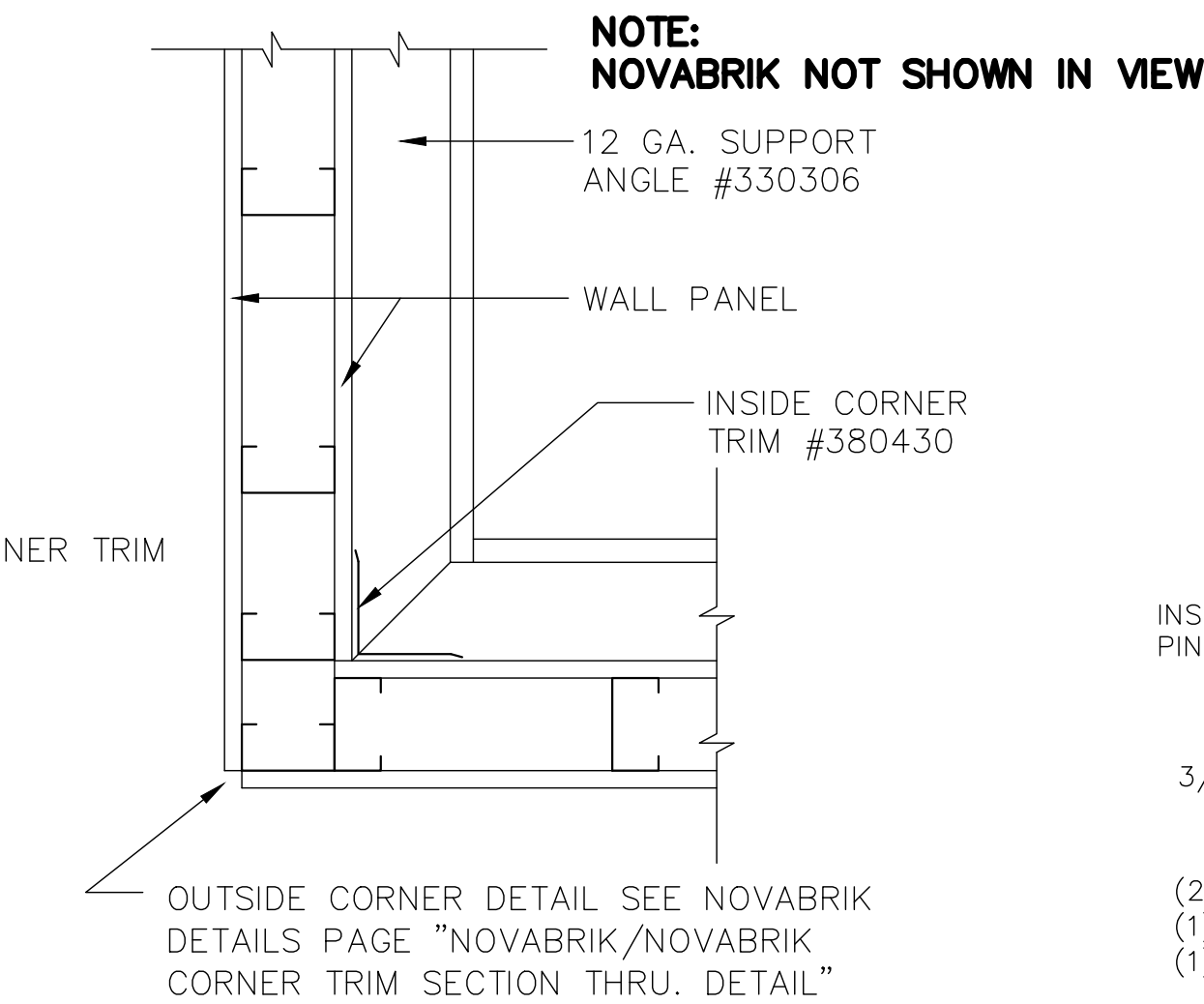
**PARAPET WING WALL DETAIL AT END**



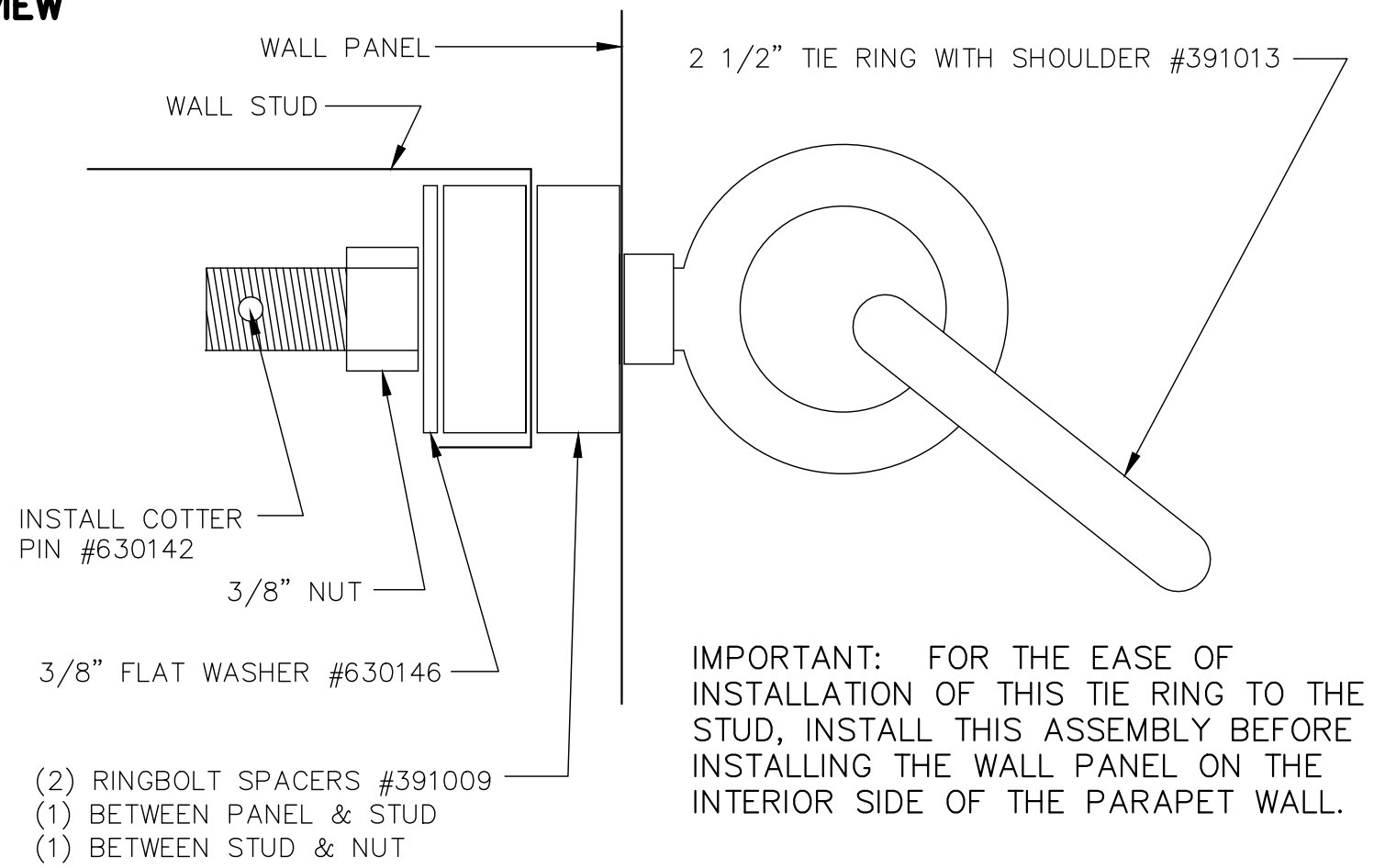
**DIVERTING ANGELS/CAULK TAPE DETAIL AT CORNER OF BUILDING**



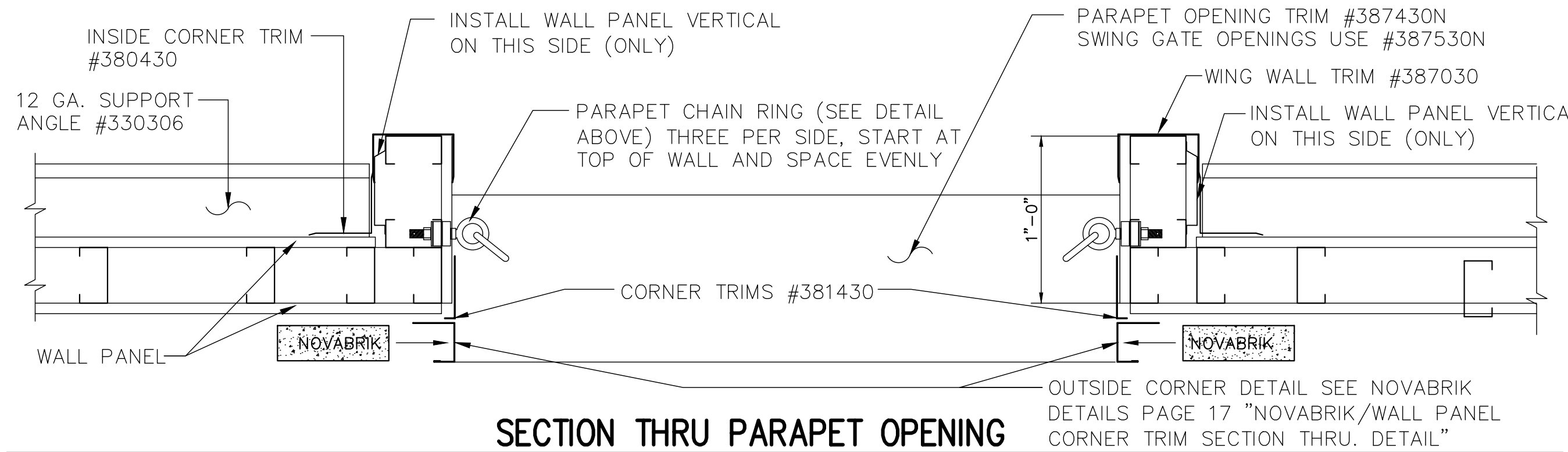
**PARAPET OPENING DETAIL**



**SECTION THRU PARAPET AT BUILDING CORNER**



**PARAPET CHAIN RING INSTALLATION DETAIL**



**SECTION THRU PARAPET OPENING**

REVISIONS	by



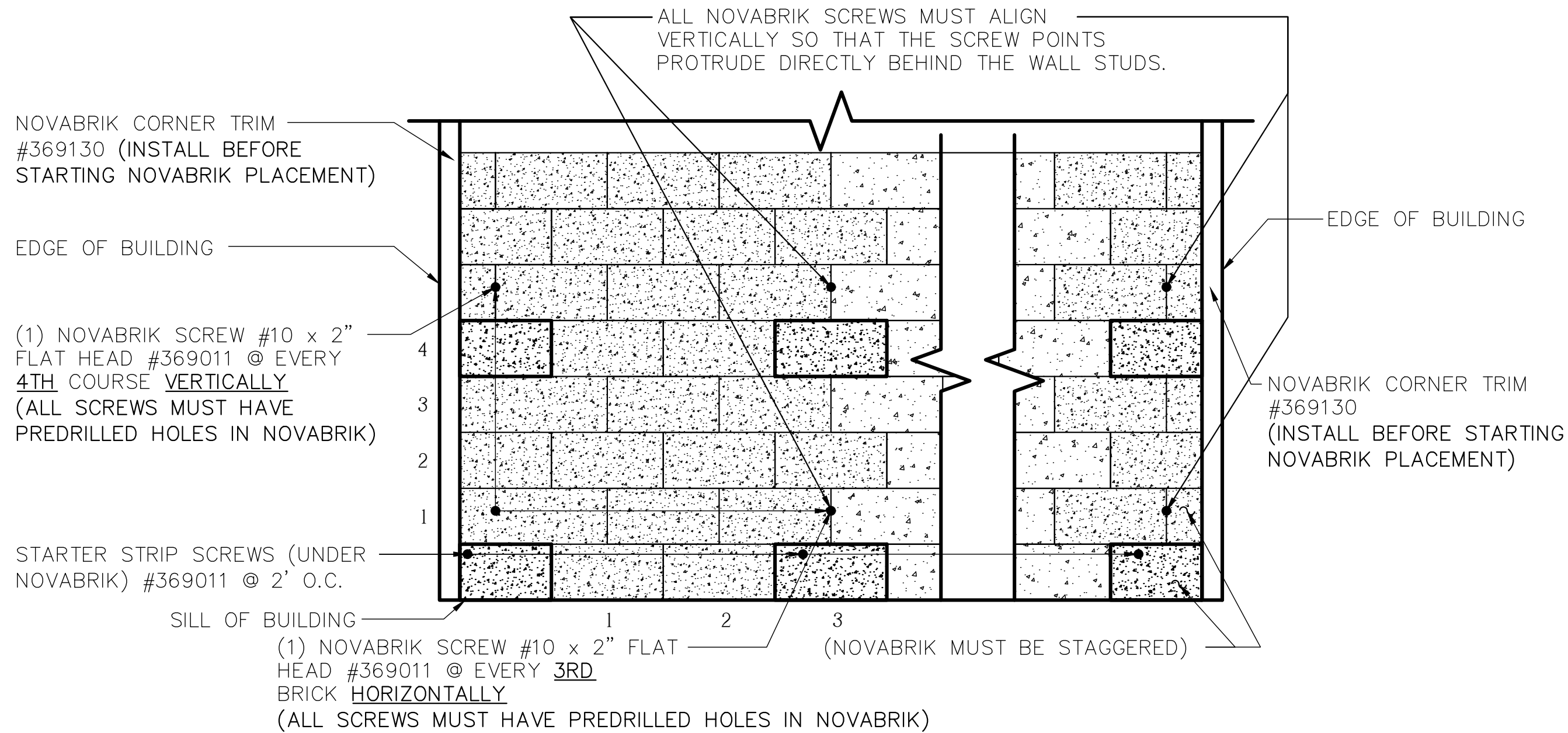
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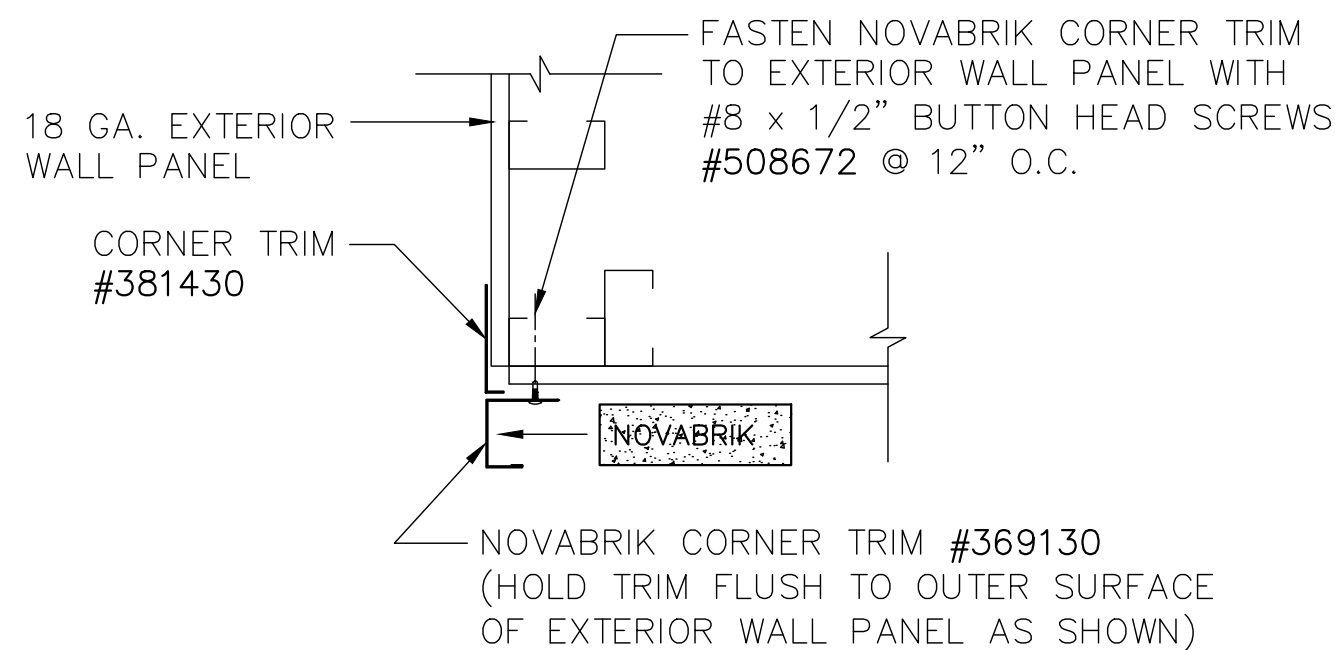
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Job Description:	SERIES 4000 TOWER/RESIDENCE CUSTOM DUBLIN, CA
Date:	AUGUST 13, 2021
Drawn by:	GWL
Checked by:	SPW
Scale:	SHOWN
Order No.	TTS-108/#238355
Sheet No.	NOVABRIK PARAPET DETAILS

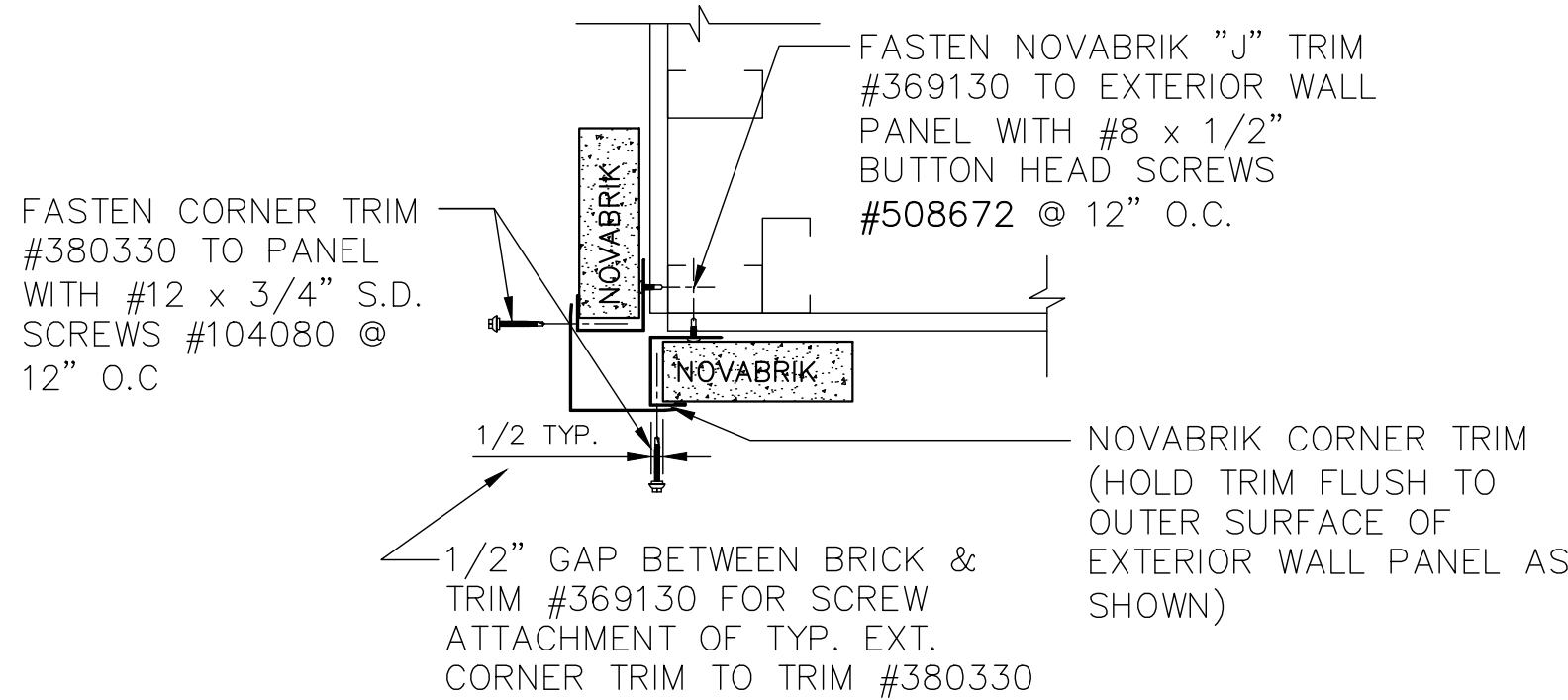




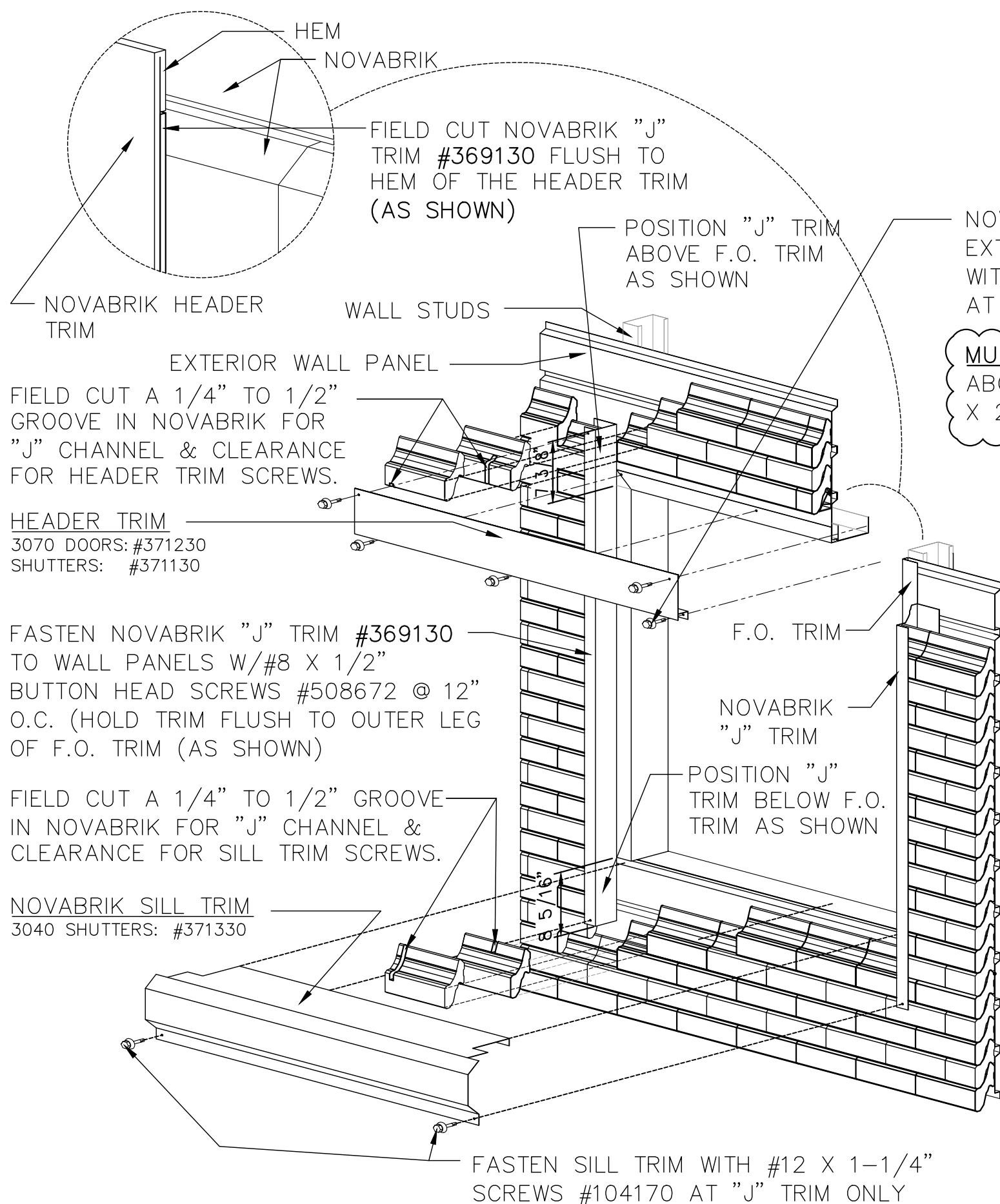
NOVABRIK ELEVATION SCREW LAYOUT DETAIL



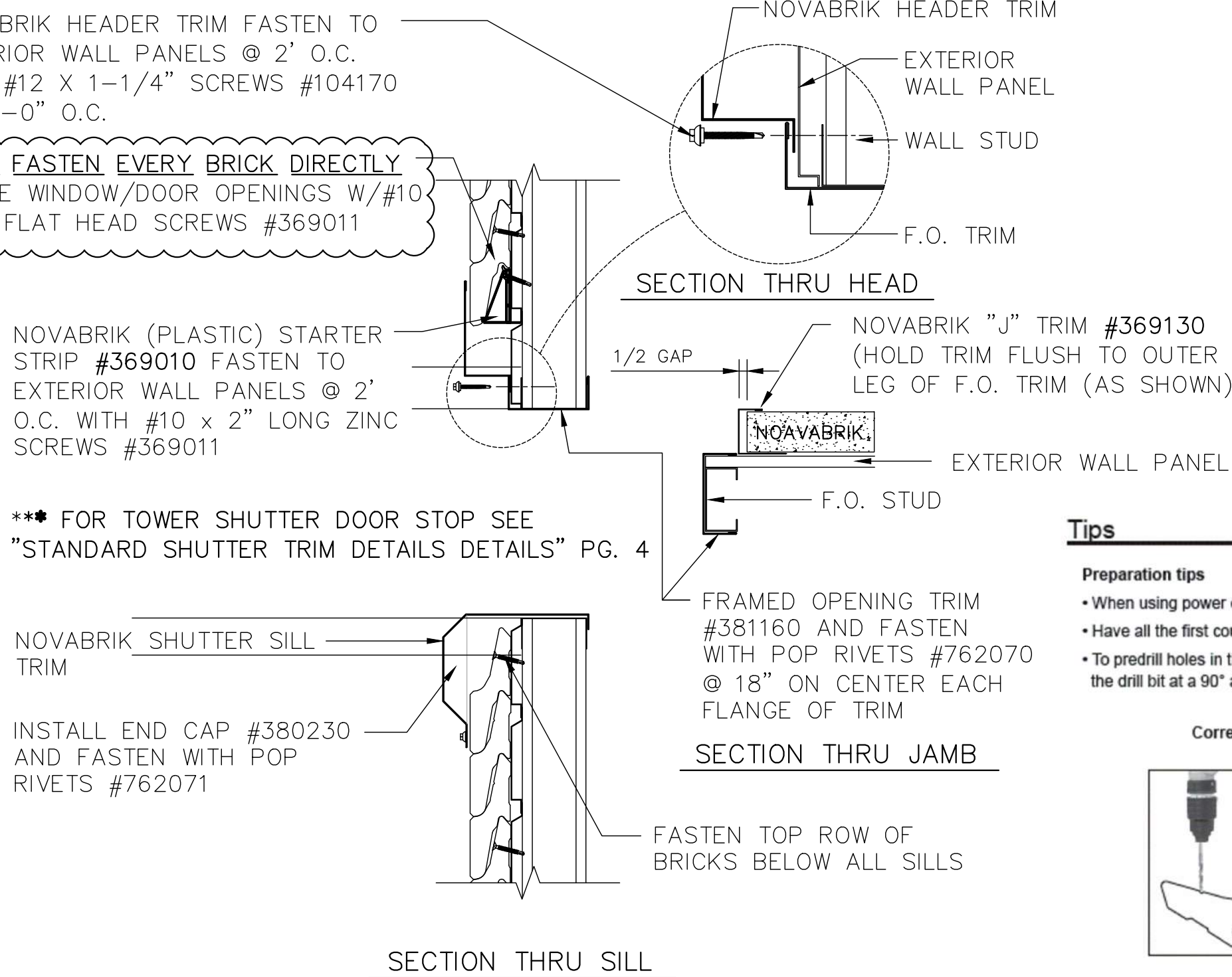
NOVABRIK/WALL PANEL CORNER TRIM SECTION THRU DETAIL



NOVABRIK/NOVABRIK CORNER TRIM SECTION THRU DETAIL

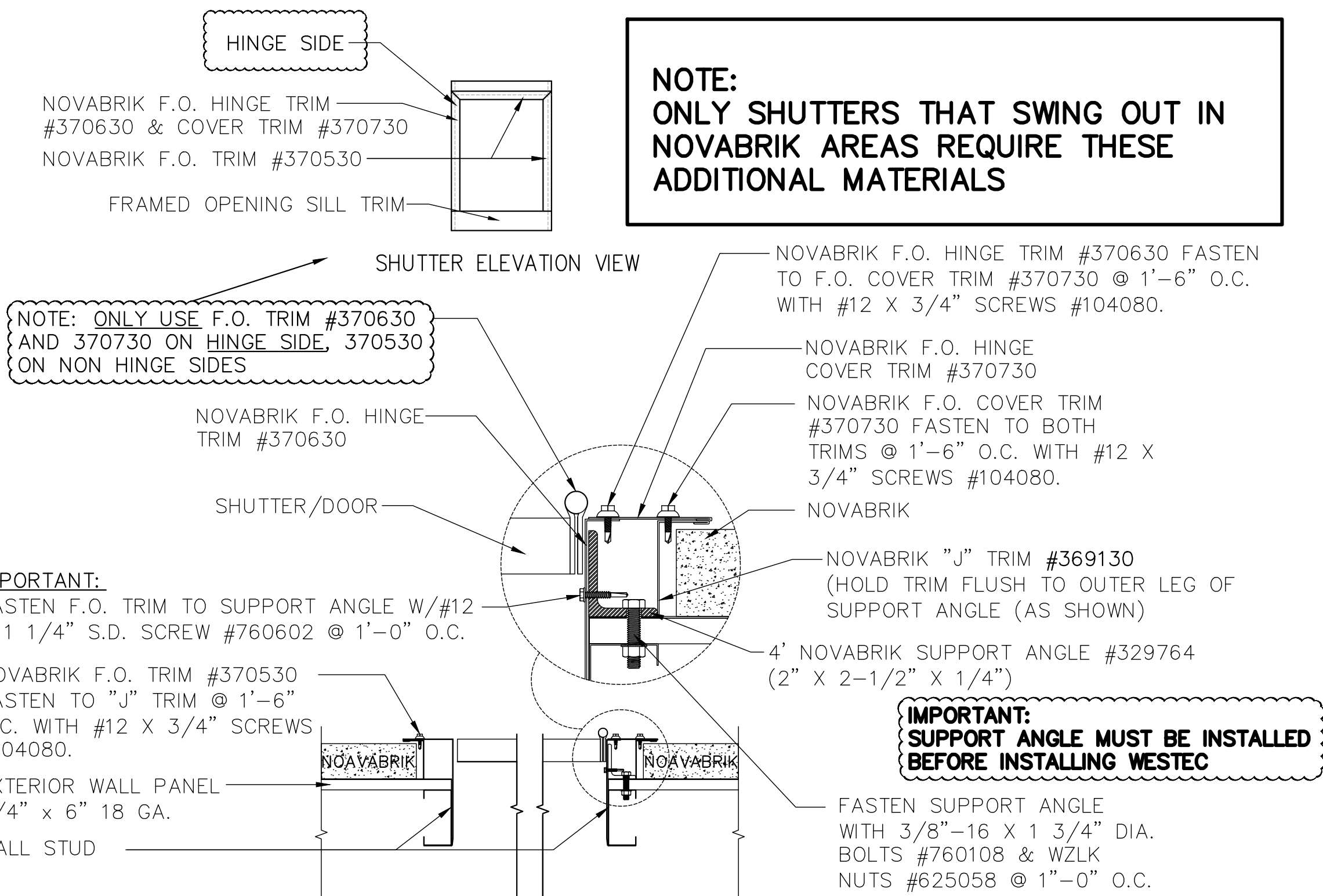


NOVABRIK WINDOW TRIM DETAIL (DOOR SIMILAR)

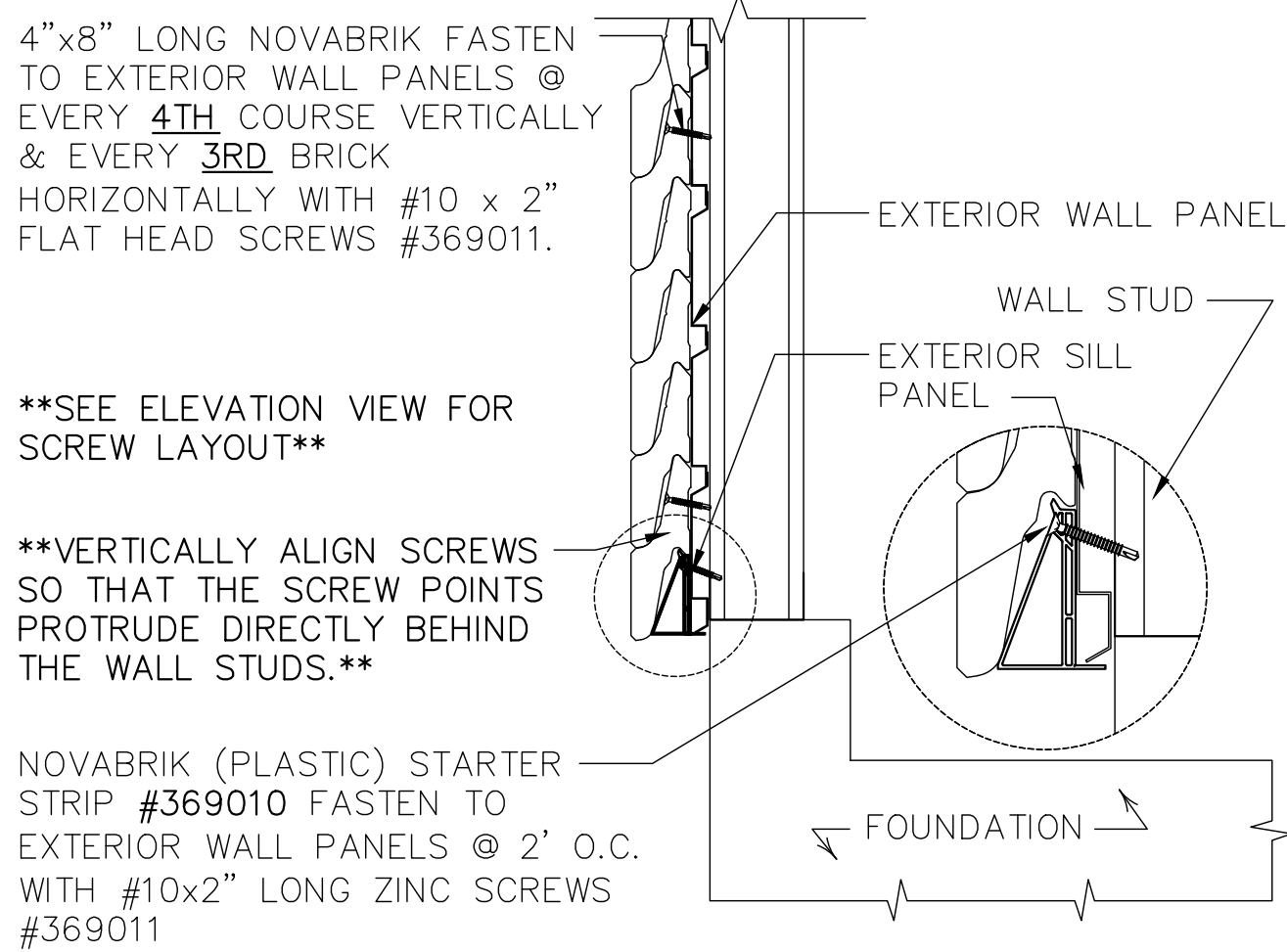


\*\*\* FOR TOWER SHUTTER DOOR STOP SEE "STANDARD SHUTTER TRIM DETAILS DETAILS" PG. 4

SECTION THRU SILL



NOVABRIK SHUTTER (SWING OUT) TRIM DETAIL (X2)



NOVABRIK WALL DETAIL

Tools and Equipment

A proper set of tools will get the job done right. Safety is the number one item on any construction project. Use protective eye wear when cutting brick.

Tool List

- 1/2" (13mm) or 9/16" (14mm) hammer drill (not a rotary SDS hammer drill)
- 3/16" (5mm) and 7/32" (6mm) masonry drill bits designed for a hammer drill
- cordless drill
- drivers for drill to match screws
- chop saw with diamond blade or masonry saw
- level
- rubber hammer
- hand held brush
- measuring tape
- string line for leveling
- utility knife
- skill saw (for wood strips)
- caulking gun
- scaffolding
- hammer
- gloves
- safety glasses
- dust mask
- earplugs

Note on cutting Novabrik

Cutting brick is often a key part of installation. You can use either a wet saw or a dry saw with diamond blades.

A wet saw will reduce dust while cutting. Thoroughly rinse with clear water to remove any cement paste left to avoid staining when the brick dries up. A dry saw will be easier to move around.

Take all necessary precautions to protect yourself from dust. Use safety glasses and a dust mask.



Chop saw with diamond blade

INSTALLING THE NOVABRIK

WITH ALL THE PREP WORK COMPLETED, YOU ARE READY TO INSTALL NOVABRIK.

-SLOPED ROOF SYSTEMS WILL REQUIRE THE NOVABRIK TO BE INSTALLED BEFORE THE ROOF PANELS.

-INSTALL THE NOVABRIK ON THE STARTER STRIP. AT EVERY FURRING STRIP, HOLD DOWN THE FACE OF THE BRICK AND DRILL HOLES AT A DOWNWARD ANGLE (AROUND 30).

-HOLD THE BRICK FLAT ON THE WALL AND ANCHOR IT WITH A #10 X 2 (6MM) SCREW AT A SLIGHT DOWNWARD ANGLE UNTIL THE HEAD TOUCHES THE BRICK. DO NOT OVER-TIGHTEN.

-BE SURE TO MIX NOVABRIK FROM DIFFERENT PALLETS AS YOU STACK AND INSTALL. THIS WILL BLEND THE NOVABRIK TOGETHER.

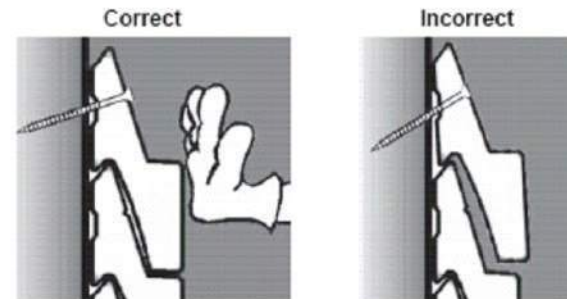
-CHECK THE LEVELING AT EVERY FOURTH COURSE BEFORE FASTENING AND MAKE ADJUSTMENTS IF NECESSARY. A LONG LEVEL OR STRAIGHT EDGE CAN HELP.

-USE YOUR RUBBER Mallet AND WOOD STRAIGHT EDGE TO TAP THE BRICKS IN PLACE AND BRUSH DOWN WITH A SMALL BROOM TO REMOVE DIRT AND DUST.

More Tips

Installation tips

- Give a firm rubber hammer strike down on a 2" x 4" setting on the bricks, before fastening the bricks and tap the face of the bricks. This will set and level the brick before fastening.



- Hold down the face of the brick when fastening the Novabrik. This will prevent the it from kicking out during this procedure.
- Cut and install the Novabrik in a way that the shiny side of the brick (the cut side) is less apparent. Do the same for window sills, i.e.: the cut side into the middle of the opening.

Tool tips

- A 14" blade will allow you to cut two bricks at once.
- Use two separate drills, one for screwing and the other for drilling into the masonry.
- Have a good pair of snips to cut the trim.

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Job Description: **SERIES 4000 TOWER/RESIDENCE CUSTOM DUBLIN, CA**

Sheet Title: **NOVABRIK DETAILS**

Date: **AUGUST 13, 2021**

Drawn by: **GWL**

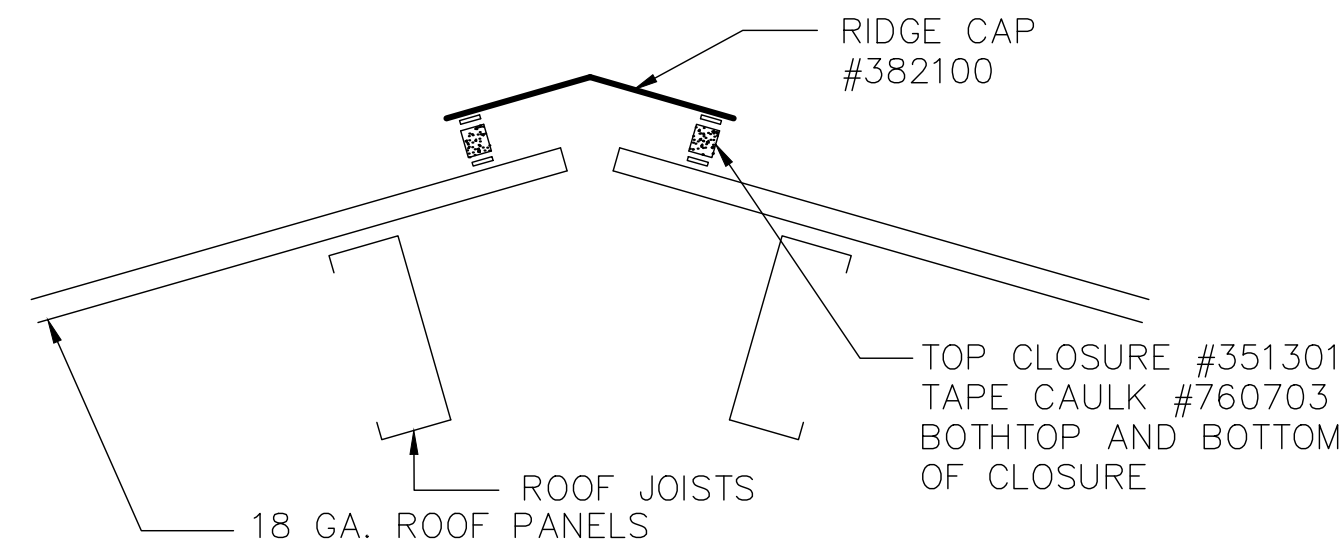
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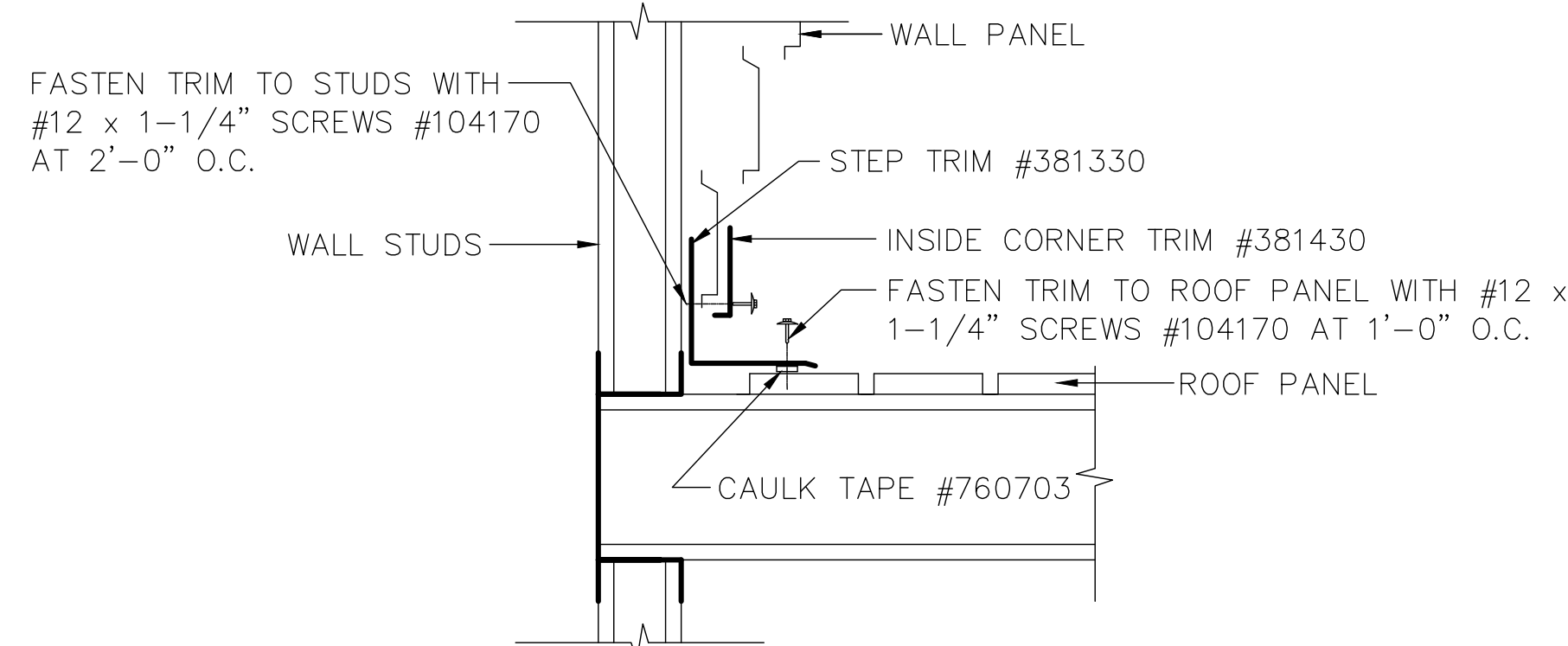
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Sheet No.

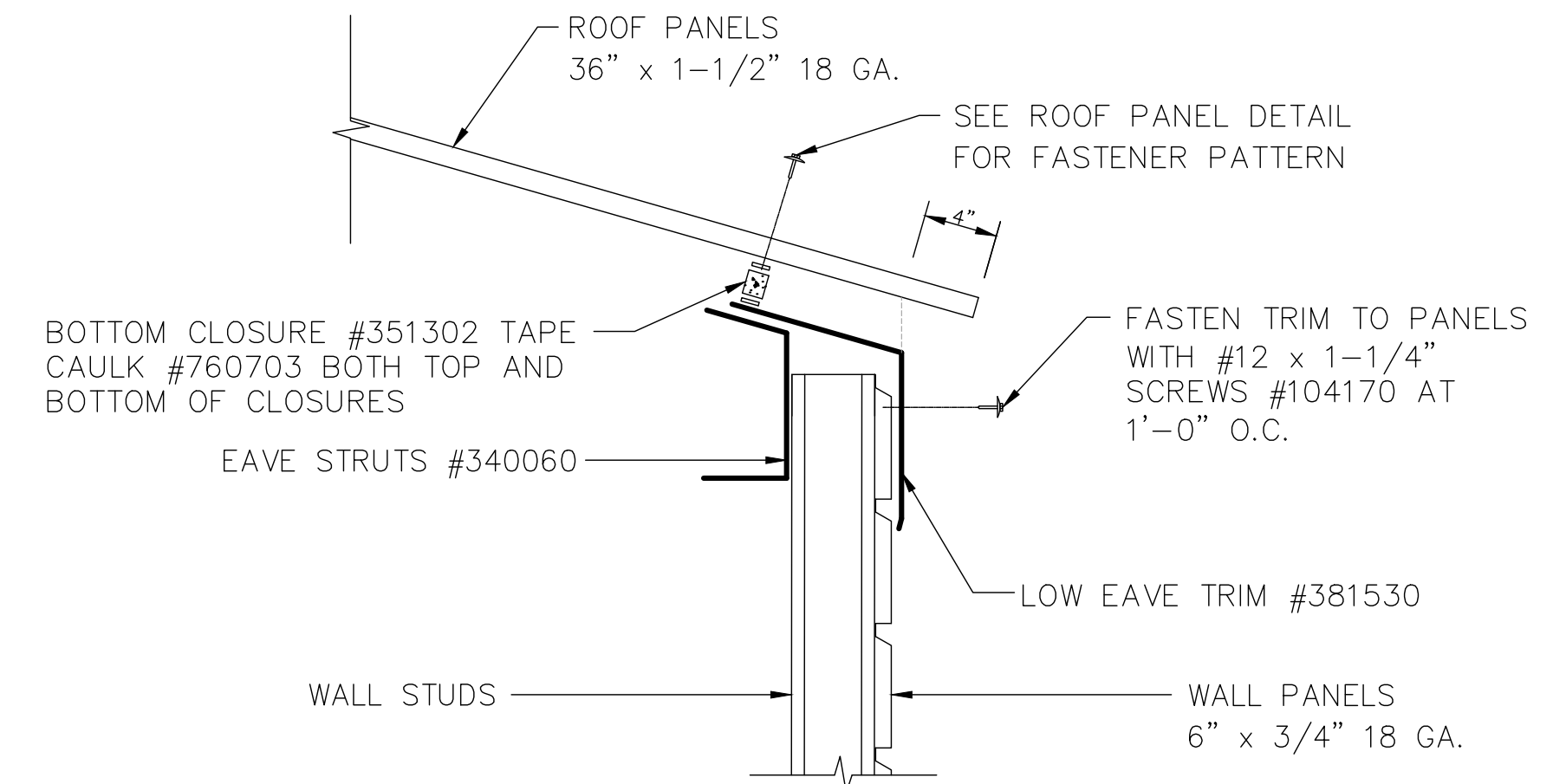




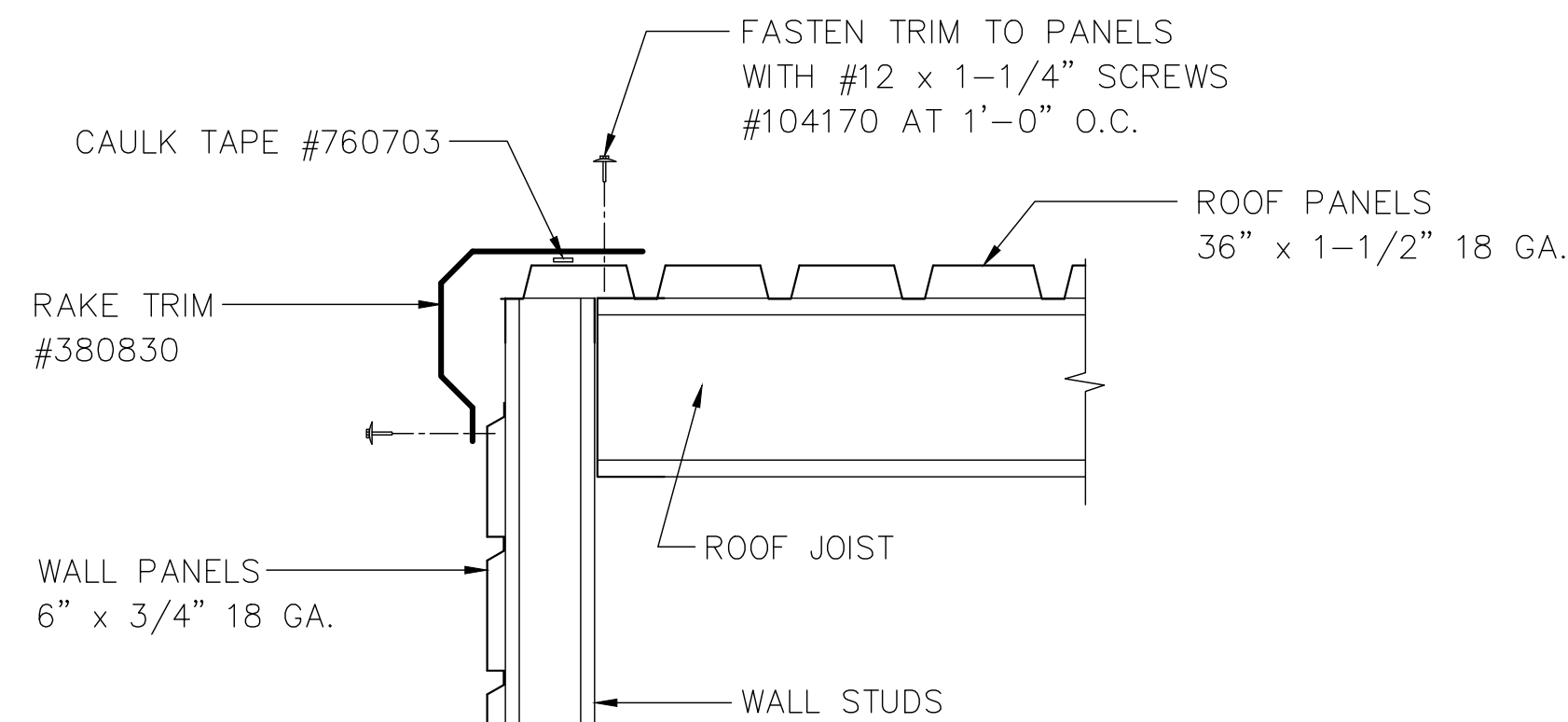
RESIDENCE RIDGE TRIM DETAIL



TOWER/RESIDENCE STEP TRIM DETAIL

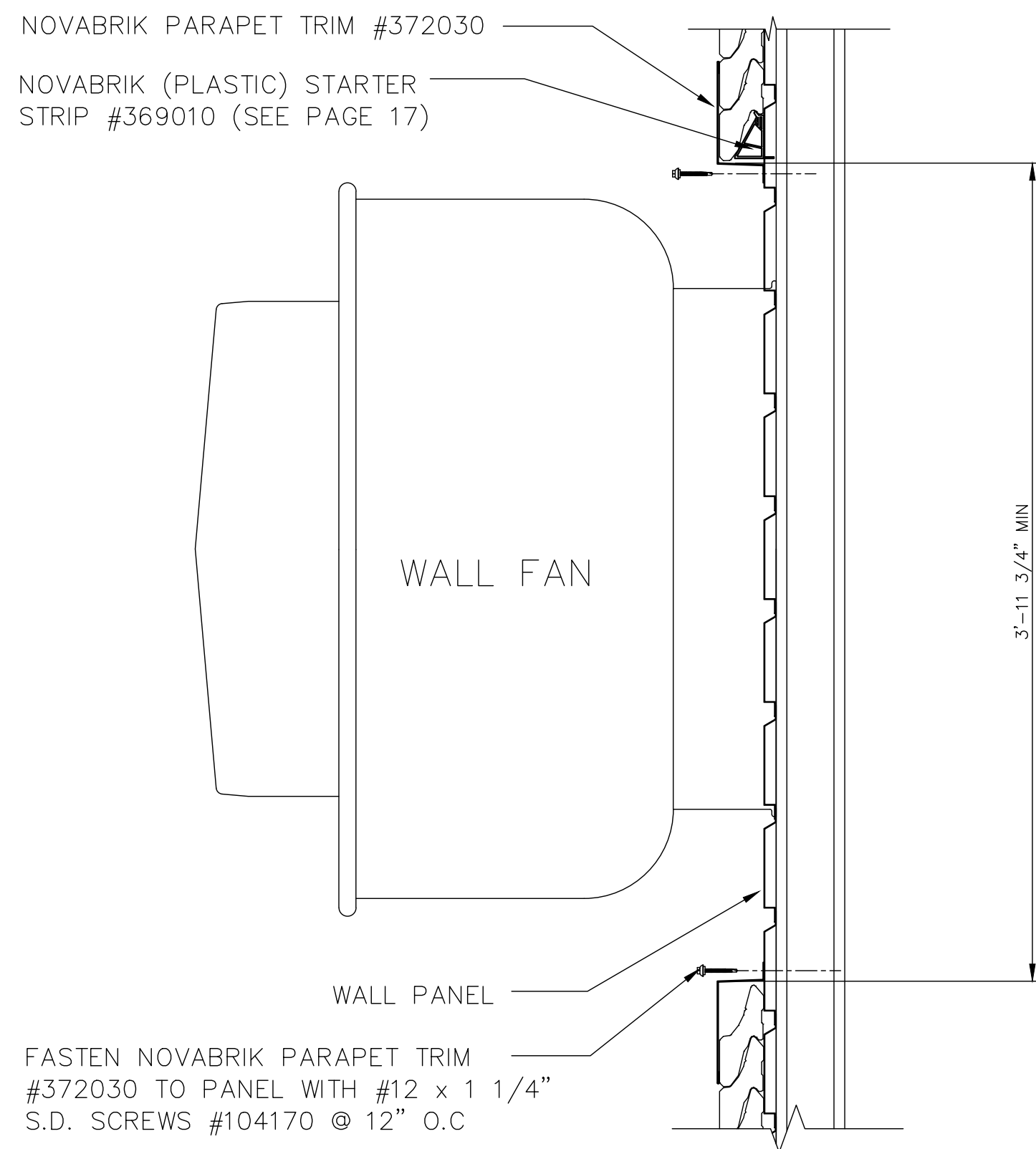


TYPICAL EAVE TRIM DETAIL (RESIDENCE)

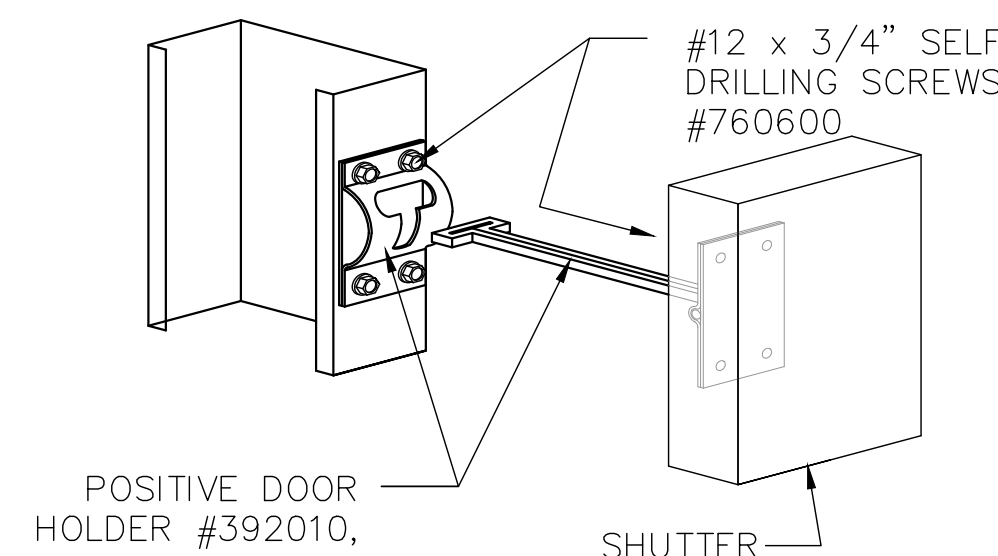


TYPICAL RAKE TRIM DETAIL

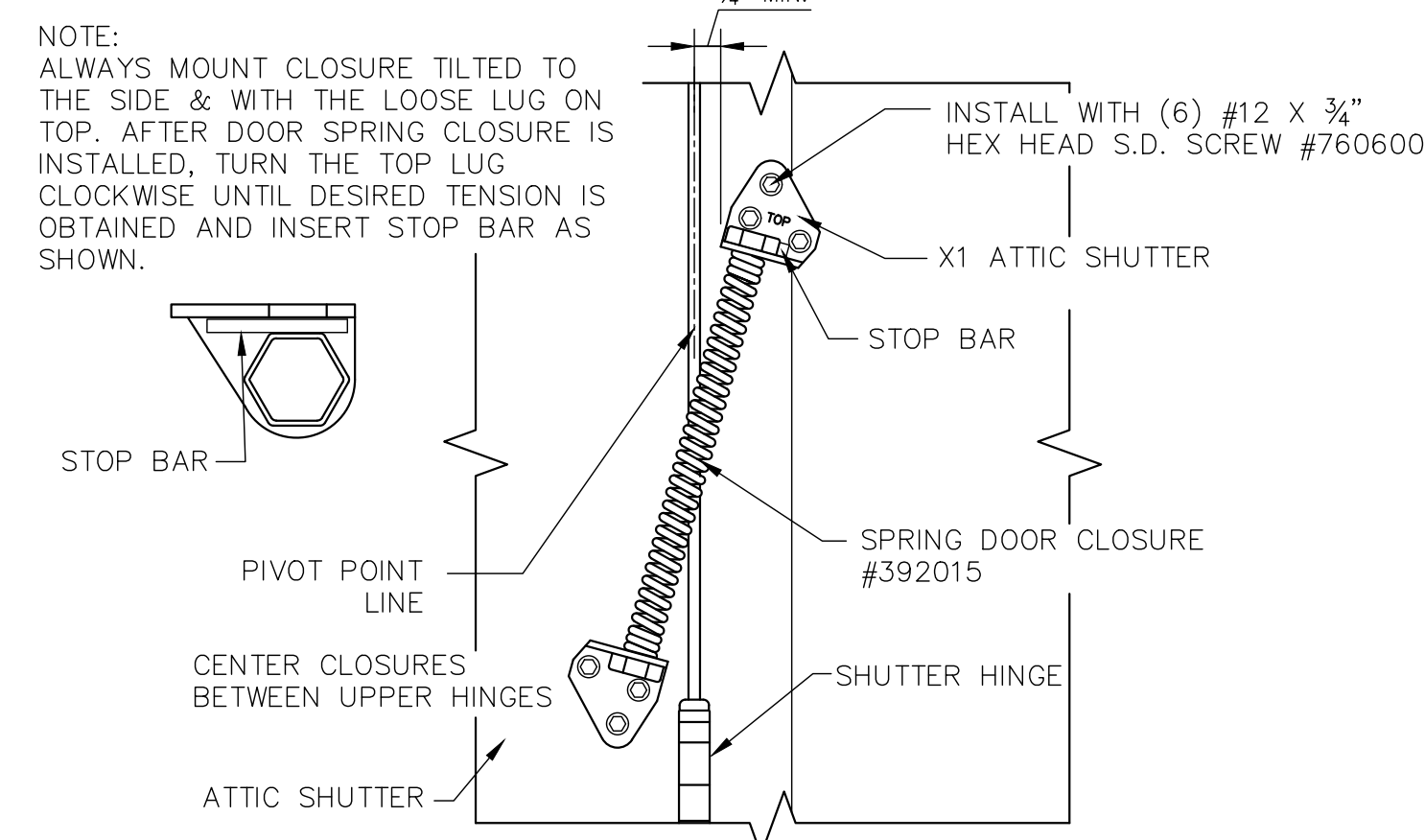
NOTE:  
SEE PAGE 17 FOR FASTEN DETAIL FOR NOVABRIK



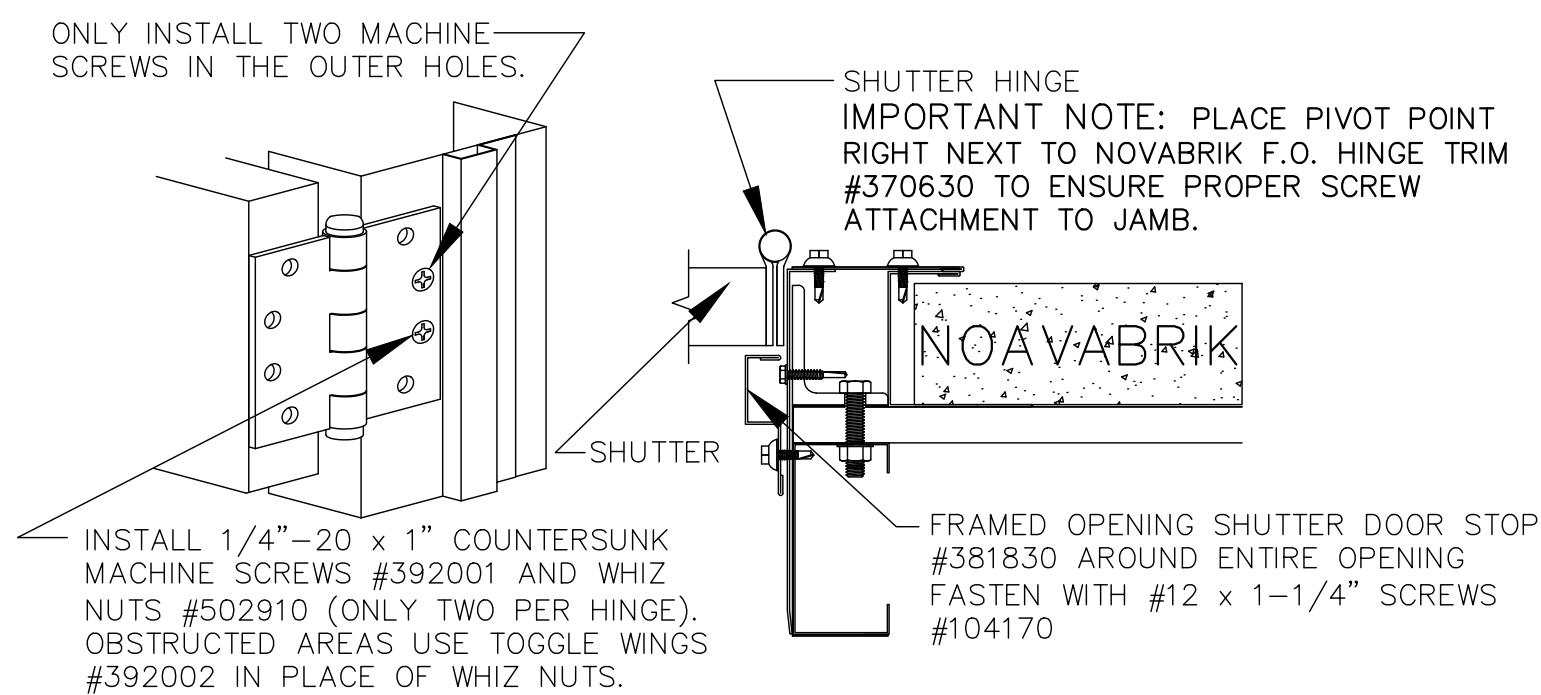
NOVABRIK WITH FAN DETAIL



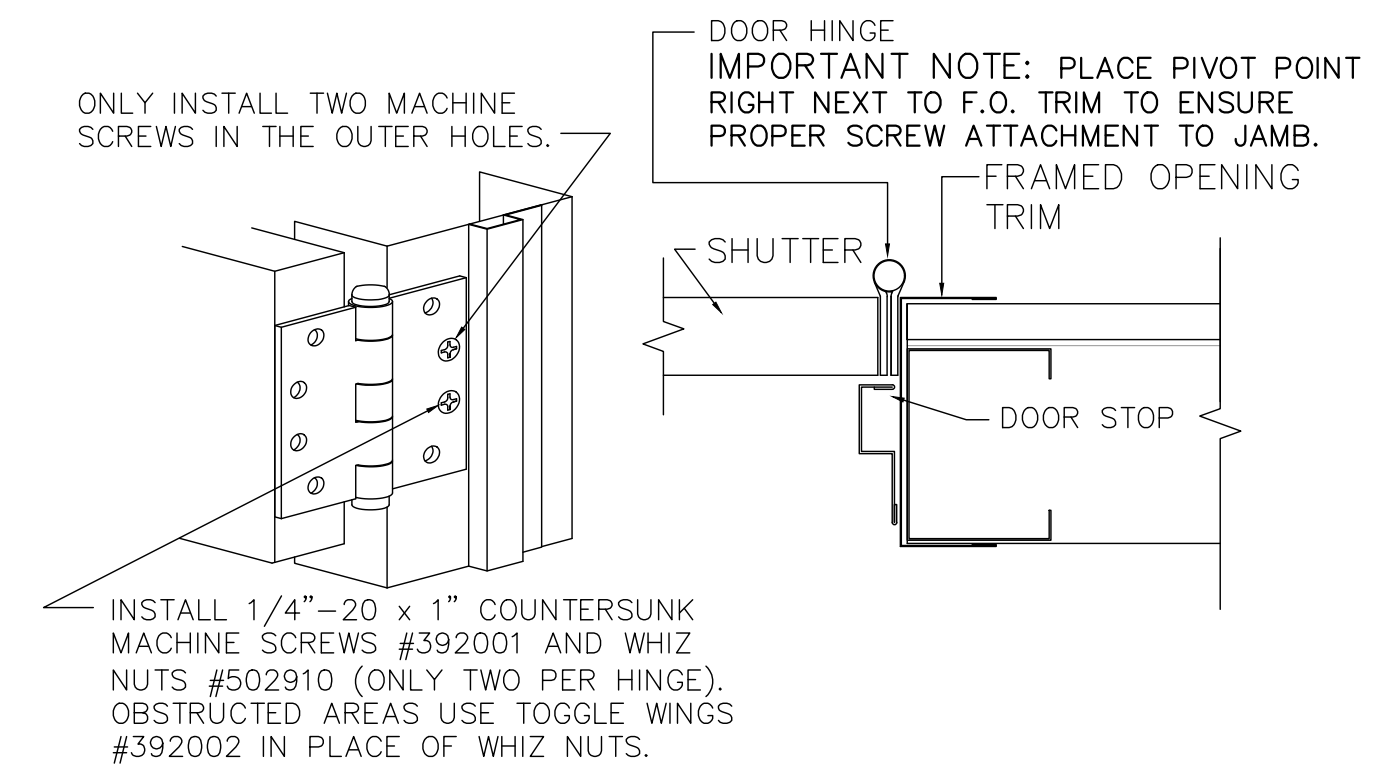
SHUTTERS ONLY HOLDER



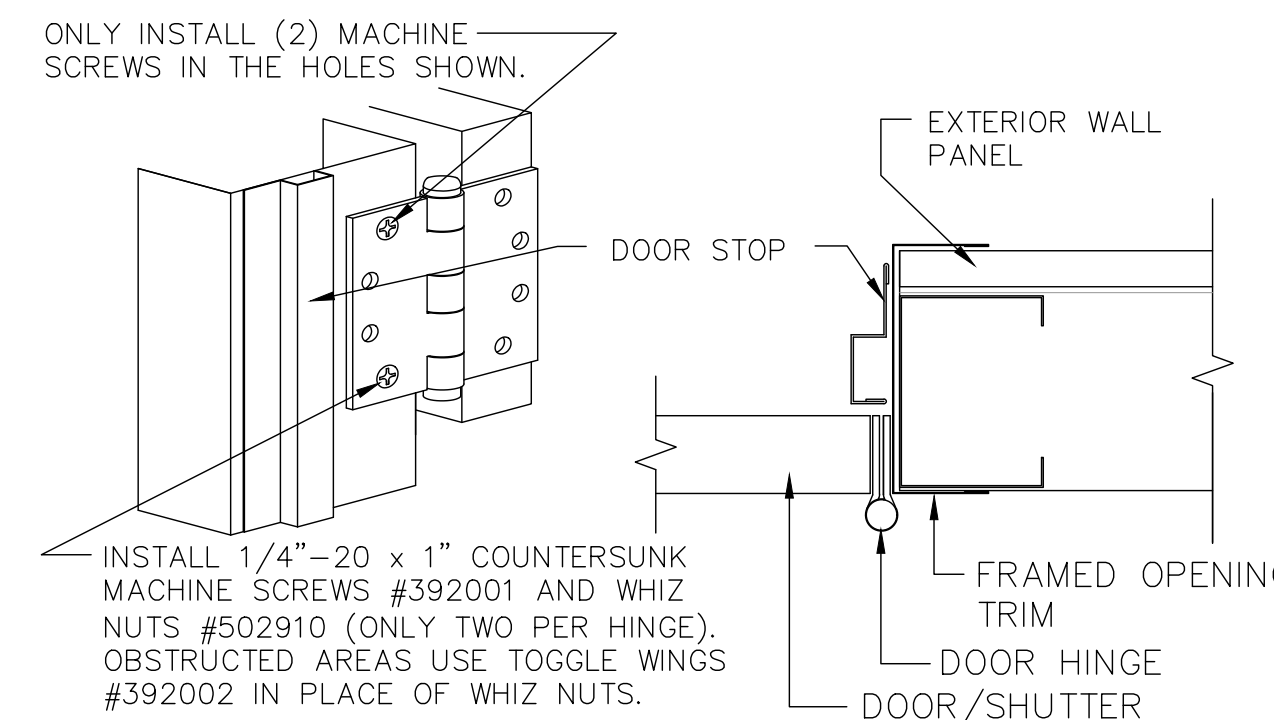
GABLED ATTIC CLOSURE



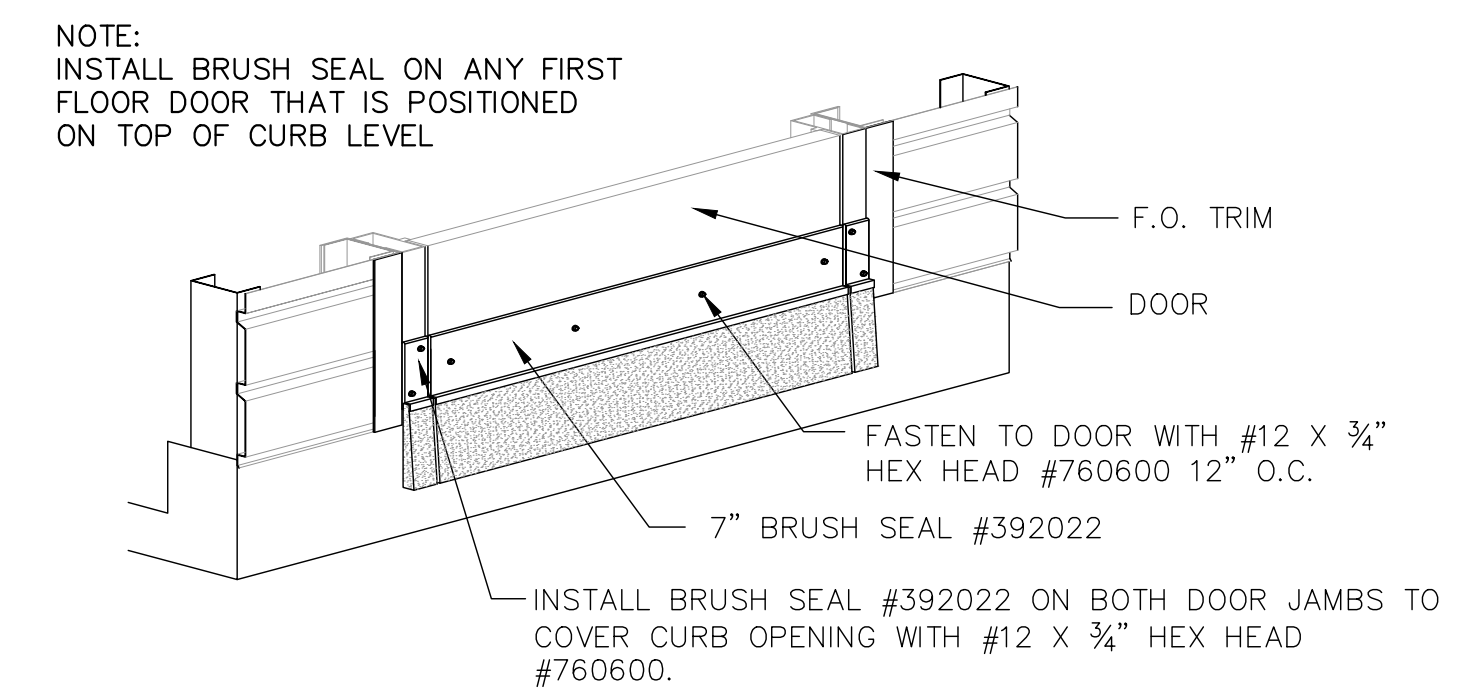
SWING OUT SECTION VIEW OF NONBURN ROOM JAMB



SWING OUT SECTION VIEW OF JAMB



SWING IN SECTION VIEW OF SHUTTER JAMB



TYPICAL FIRST FLOOR DOOR BRUSH SEAL DETAIL

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Job Description: **SERIES 4000 TOWER/RESIDENCE CUSTOM DUBLIN, CA**

Date: AUGUST 13, 2021

Drawn by: GWL

Checked by: SPW

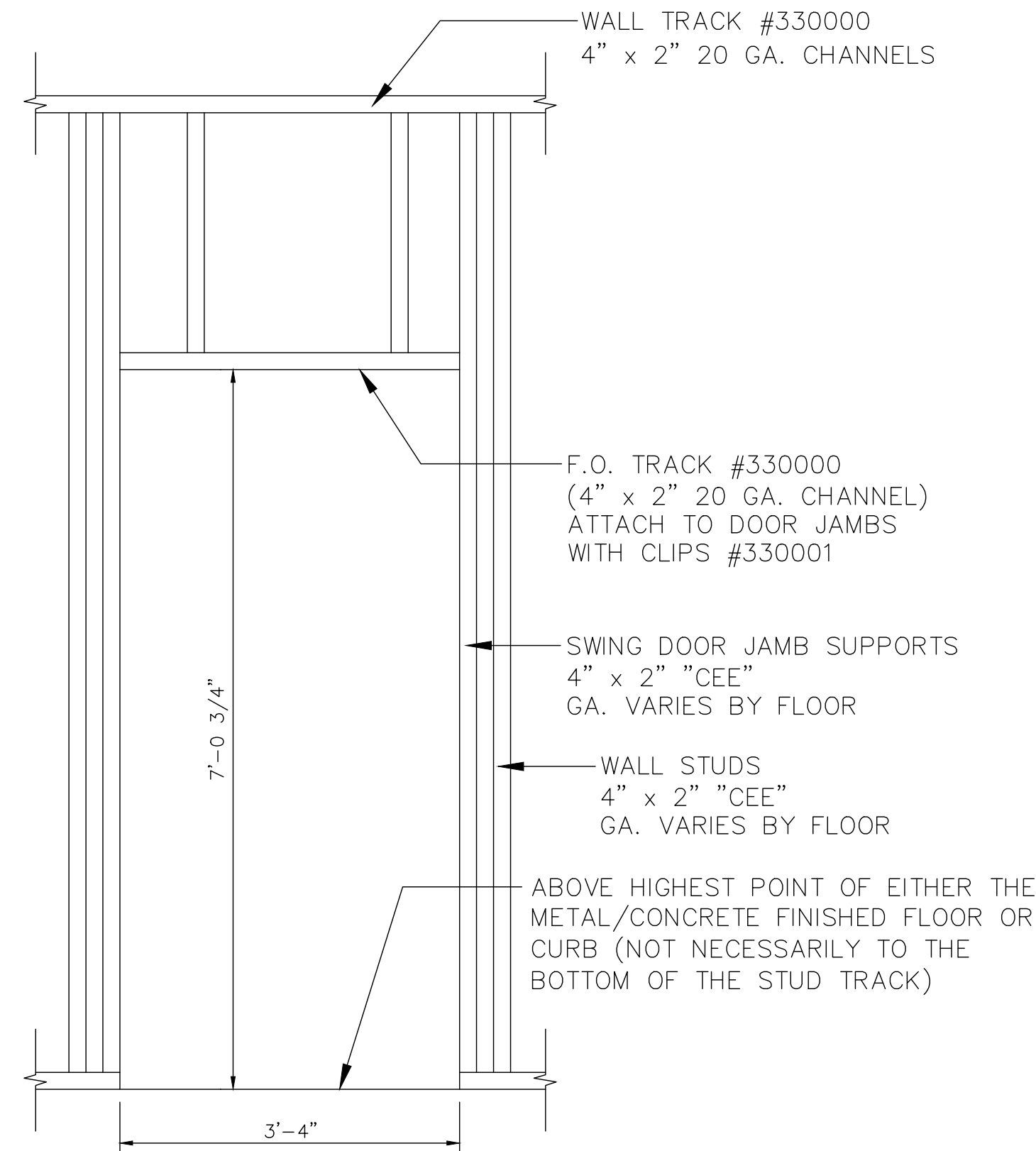
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Order No. TTS-108/#238355

Sheet No. MISC. DETAILS



WALL TRACK #330000  
4" x 2" 20 GA. CHANNELS



Technical drawing of a window shutter assembly, showing side and end views with dimensions and component labels.

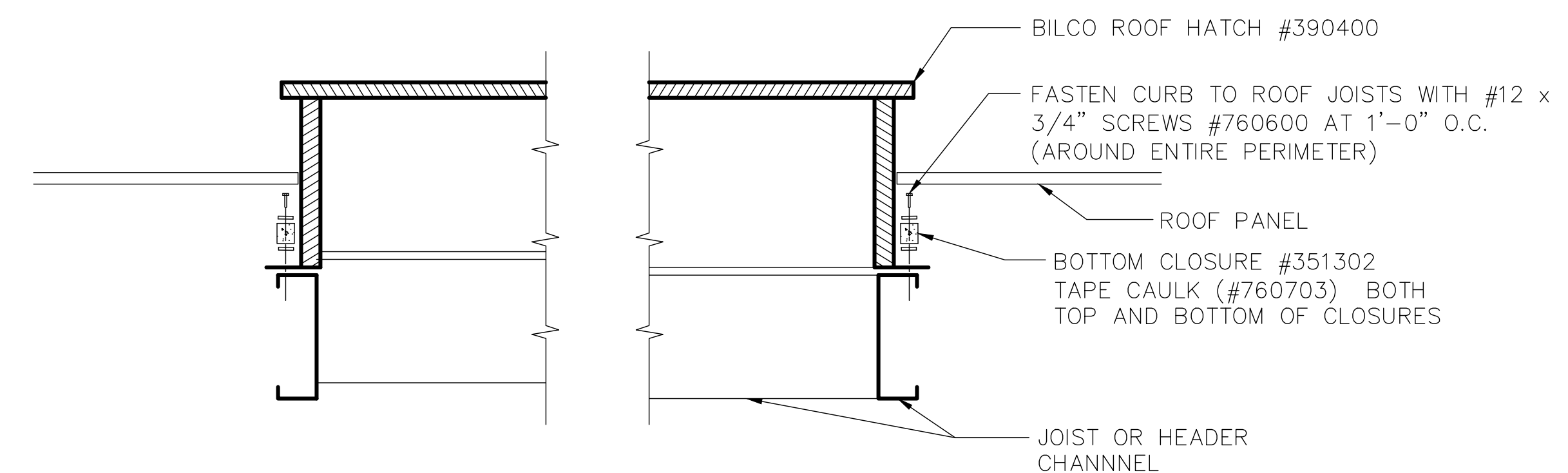
**Labels and Dimensions:**

- WALL TRACK #330000**  
4" x 2" 20 GA. CHANNELS
- F.O. TRACK #330000**  
(4" x 2" 20 GA. CHANNEL)  
ATTACH TO SHUTTER JAMBS  
WITH CLIPS #330001
- JAMB SUPPORTS (SAME AS SWING DOOR)**  
4" x 2" "CEE"  
GA. VARIES BY FLOOR
- WALL STUDS**  
4" x 2" "CEE"  
GA. VARIES BY FLOOR
- ABOVE HIGHEST POINT OF EITHER THE METAL/CONCRETE FINISHED FLOOR OR CURB (NOT NECESSARILY TO THE BOTTOM OF THE STUD TRACK)**
- Dimensions:**
  - 4'-0 1/4"
  - 3'-0 1/4"
  - 3'-6"

Diagram illustrating the installation of a Bilco floor door. The diagram shows the door being set into a J-channel, which is fastened to a floor joist/header. The door is secured with fasteners around its perimeter. Dimensions are provided for the door size, the channel width, and the spacing of the fasteners.

- BILCO 3'x3' FLOOR DOOR #390801
- FLOOR PANELS
- J CHANNEL #340090
- FASTEN WITH 3/8" DIA. BOLTS #760100 & NUTS #760300 @ 6" O.C.
- FASTEN CURB TO CHANNEL WITH #12 x 1-1/4" SCREWS #760602 AT 1'-0" O.C. (AROUND ENTIRE PERIMETER)
- FLOOR EDGE TRIM #380004
- FASTEN TRIM TO PANELS WITH #8 x 1/2" FLATHEAD SCREWS #508672 AT 6" O.C.
- POSITION THE DOOR TO SIT FLUSH WITH TOP OF FINISHED FLOOR.
- FLOOR JOIST/HEADER
- 3'-0"
- 3'-7 1/2"

scale:  $3/4" = 1'-0"$



STUD WALL TRACK

LINER PANEL FINISHING TRIM #358440

FASTEN WITH #12 x 3/4" SCREWS #760604 @ EACH STUD

WALL STUDS

STRAP BRACING #340002 @ MIDPOINT OF WALL FASTEN STRAPS TO STUDS WITH SCREWS #760600

FASTEN PANELS TO STRAP BRACING WITH SCREWS #760604

28 GA. LINER PANEL (VARIED LENGTHS)

LINER PANEL FINISHING TRIM #358140

FASTEN WITH #12 x 3/4" SCREWS #760604 @ 12" O.C.

STUD WALL TRACK

SECTION THRU WALL

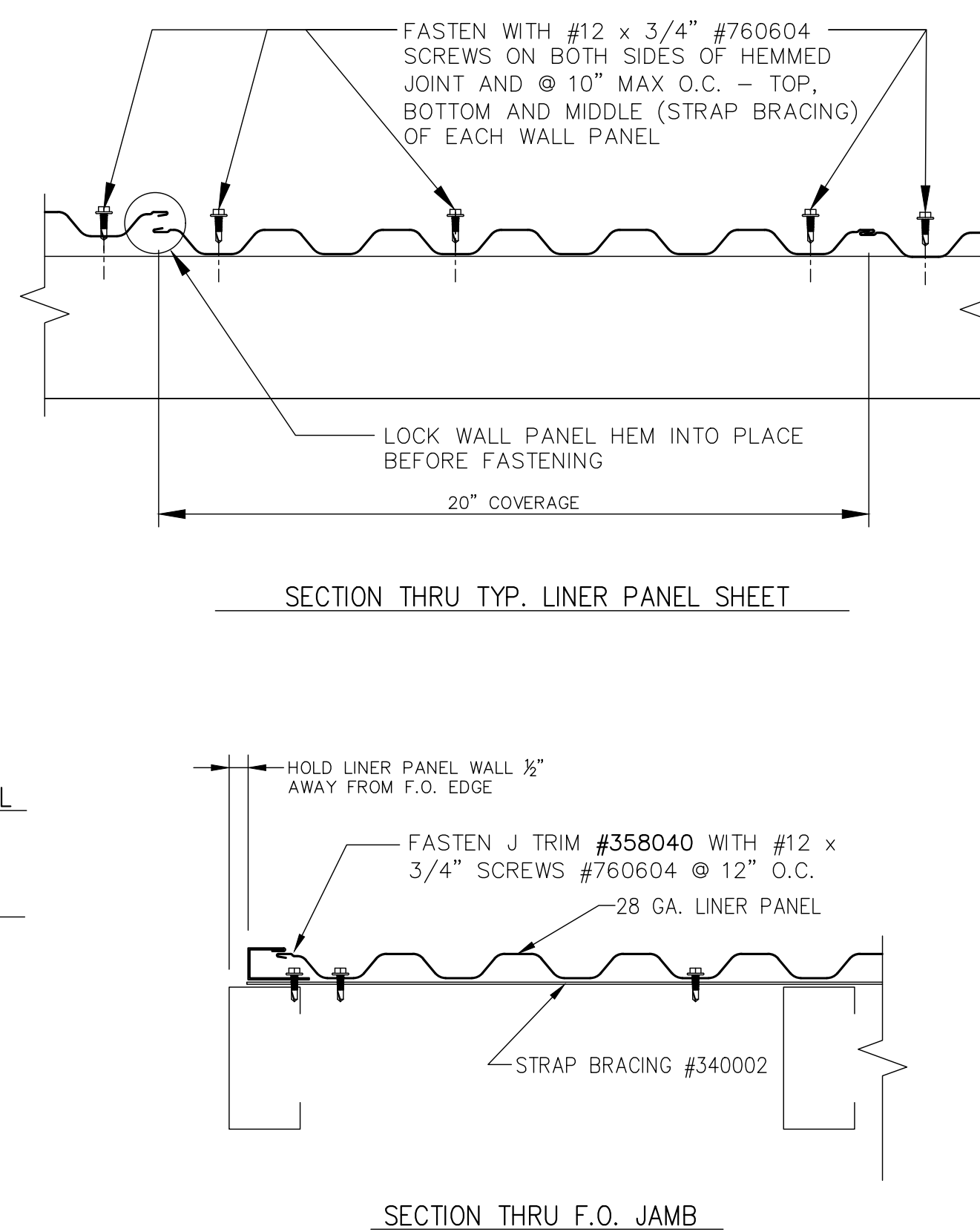
28 GA. LINER PANEL (VARIED LENGTHS)

FRAMED OPENING STUD

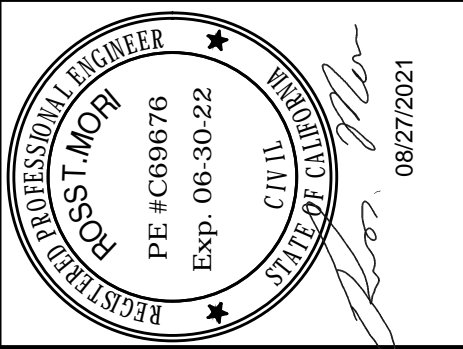
FASTEN J TRIM WITH #12 x 3/4" SCREW #760604 @ EACH STUD

LINER PANEL J TRIM #358040

SECTION THRU F.O. H.



LINER PANEL FINISHING TRIM #358140  
 FASTEN WITH #12 x 3/4" SCREWS #760604 @ 12" O.C.  
 FASTEN WITH #12 x 3/4" SCREWS #760604 @ 12" O.C.  
 LINER PANEL INTERIOR CORNER TRIM #358240  
 28 GA. LINER PANEL  
 LINER PANEL EXTERIOR CORNER TRIM #358340  
 FASTEN WITH #12 x 3/4" SCREWS #760604 @ 12" O.C.  
 LINER PANEL FINISHING TRIM #358140  
 28 GA. LINER PANEL

[illegible]

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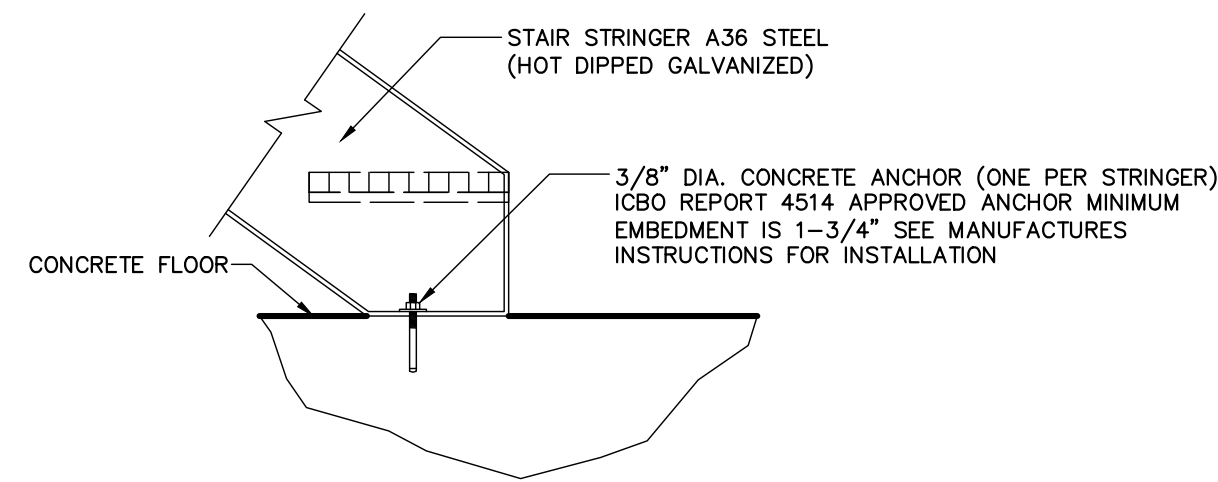
*b. Description:*

**SERIES 4000 TOWER/RESIDENCE**  
CUSTOM  
DUBLIN, CA

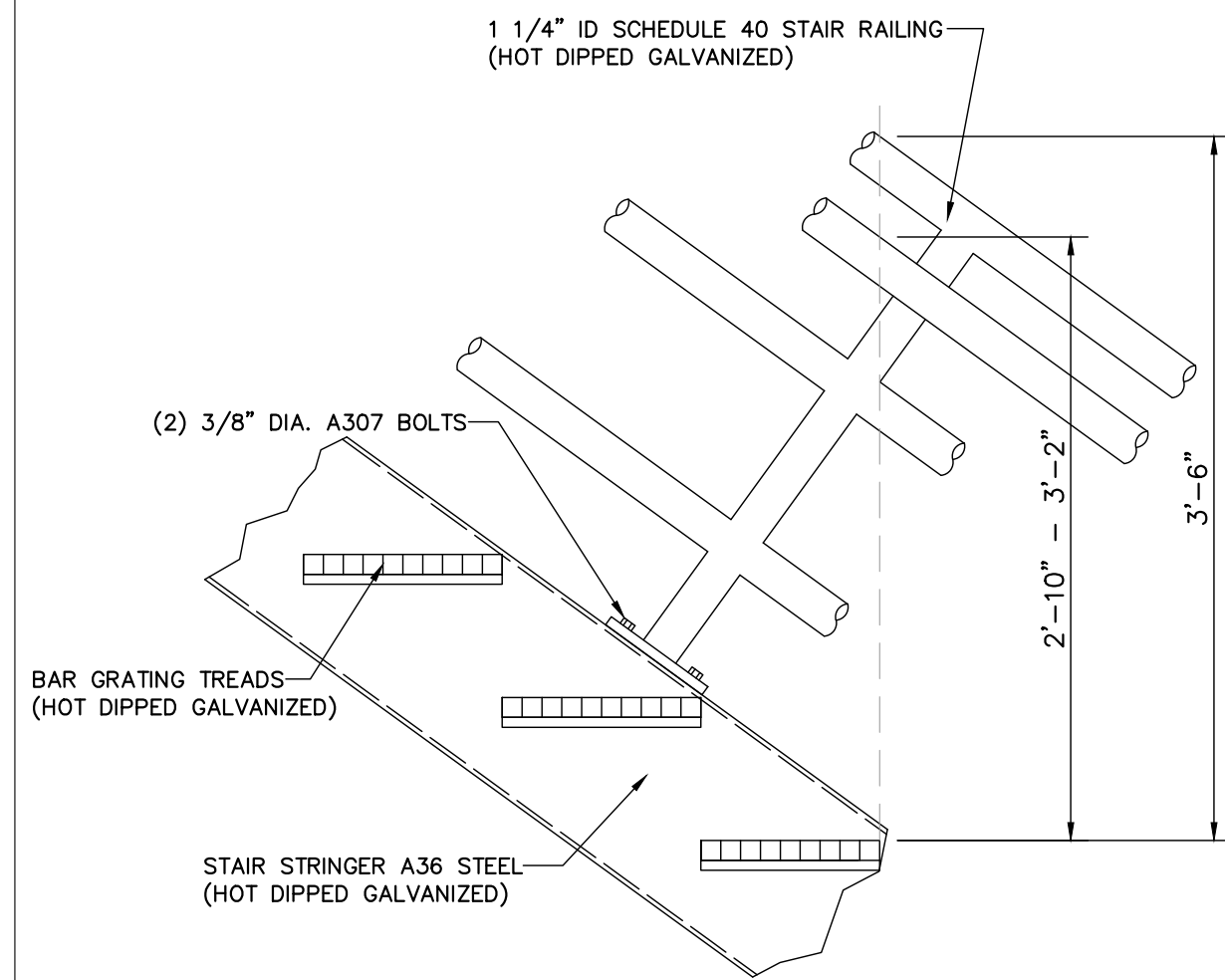
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Scale:	SHOWN
Order No.	TTS-108/#238355
Sheet No.	



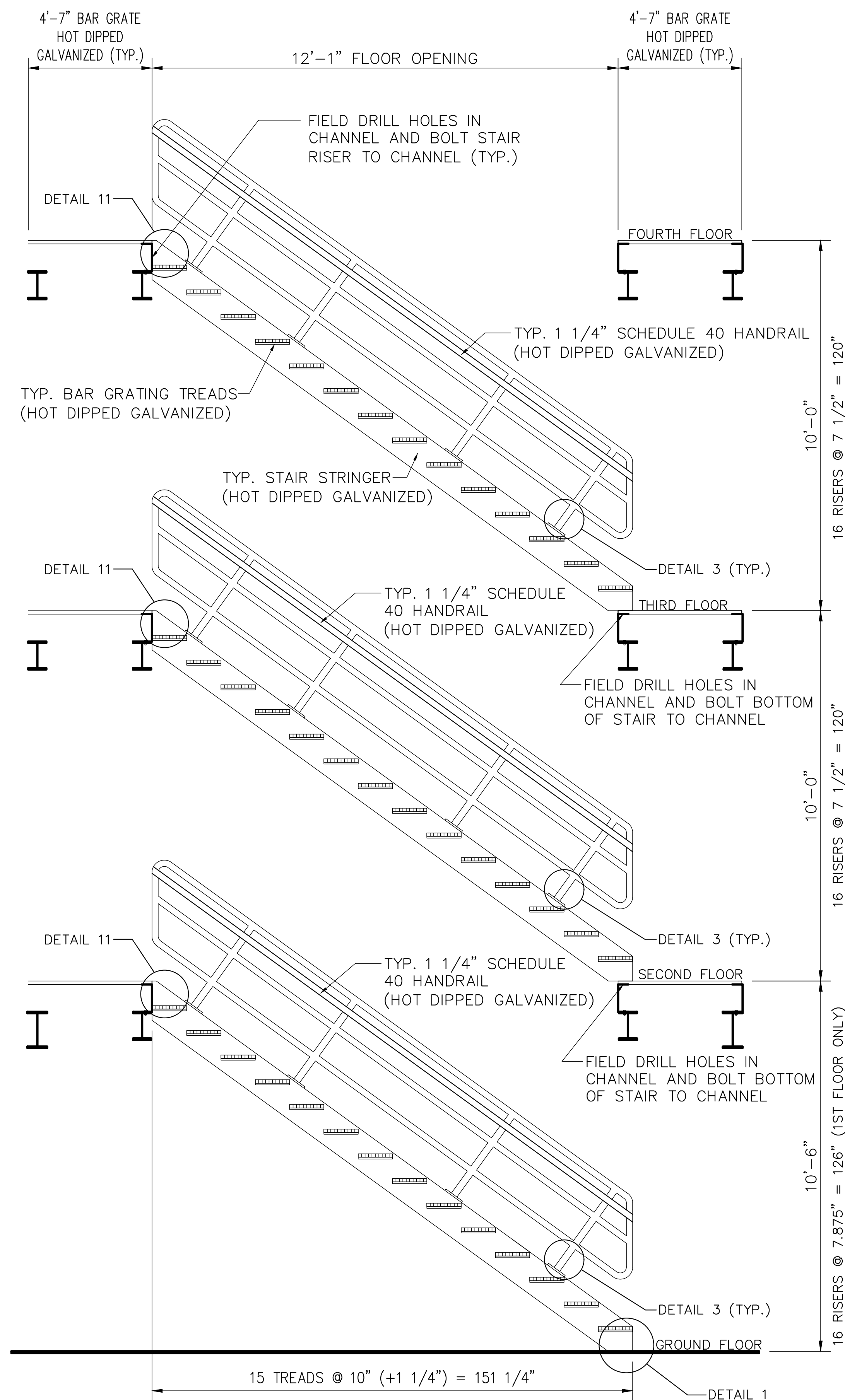
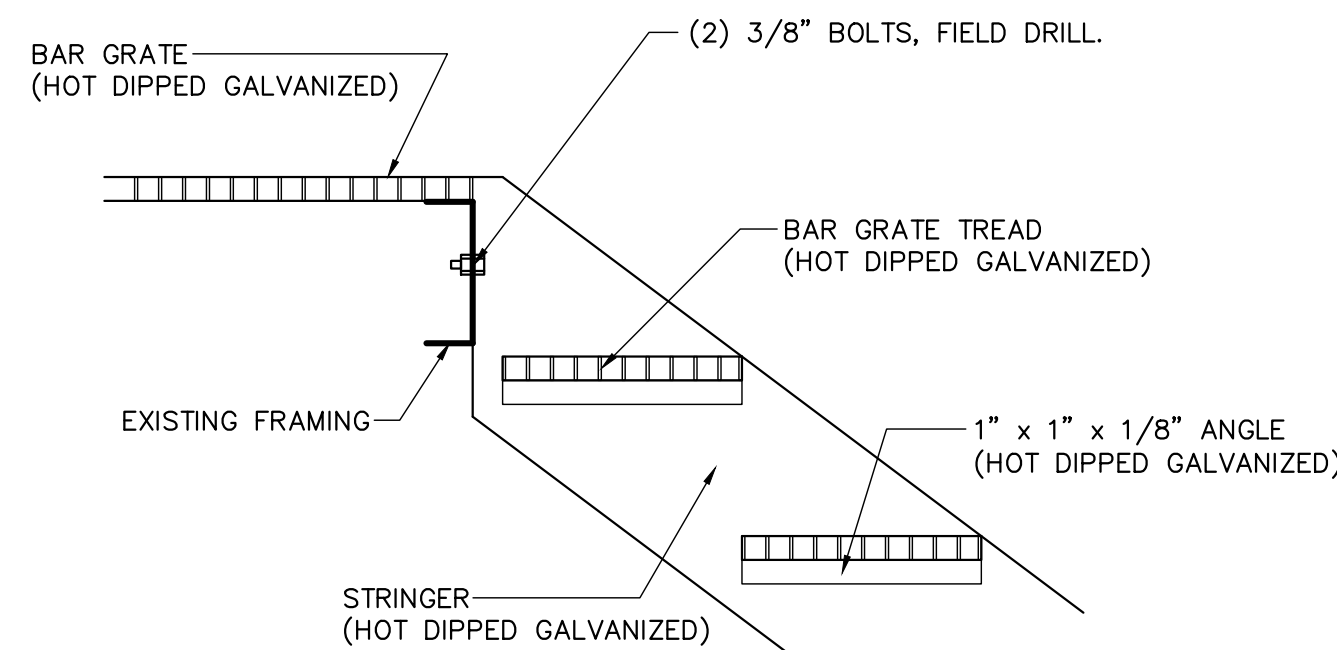
DETAIL 1



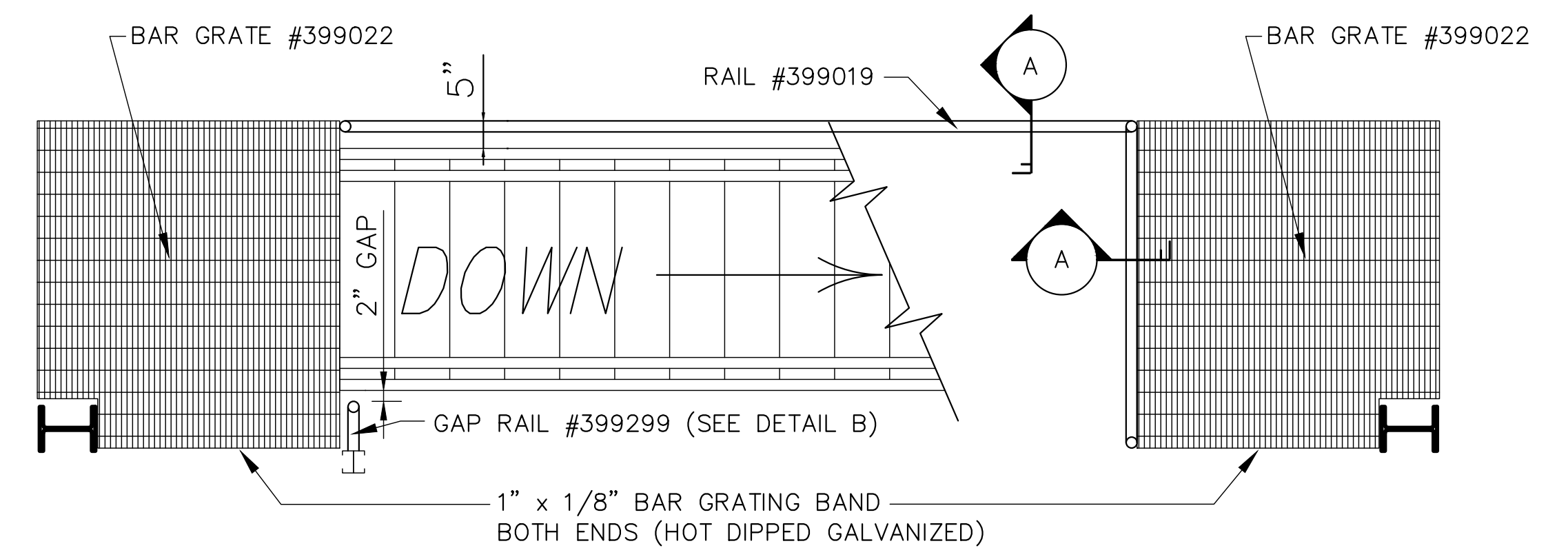
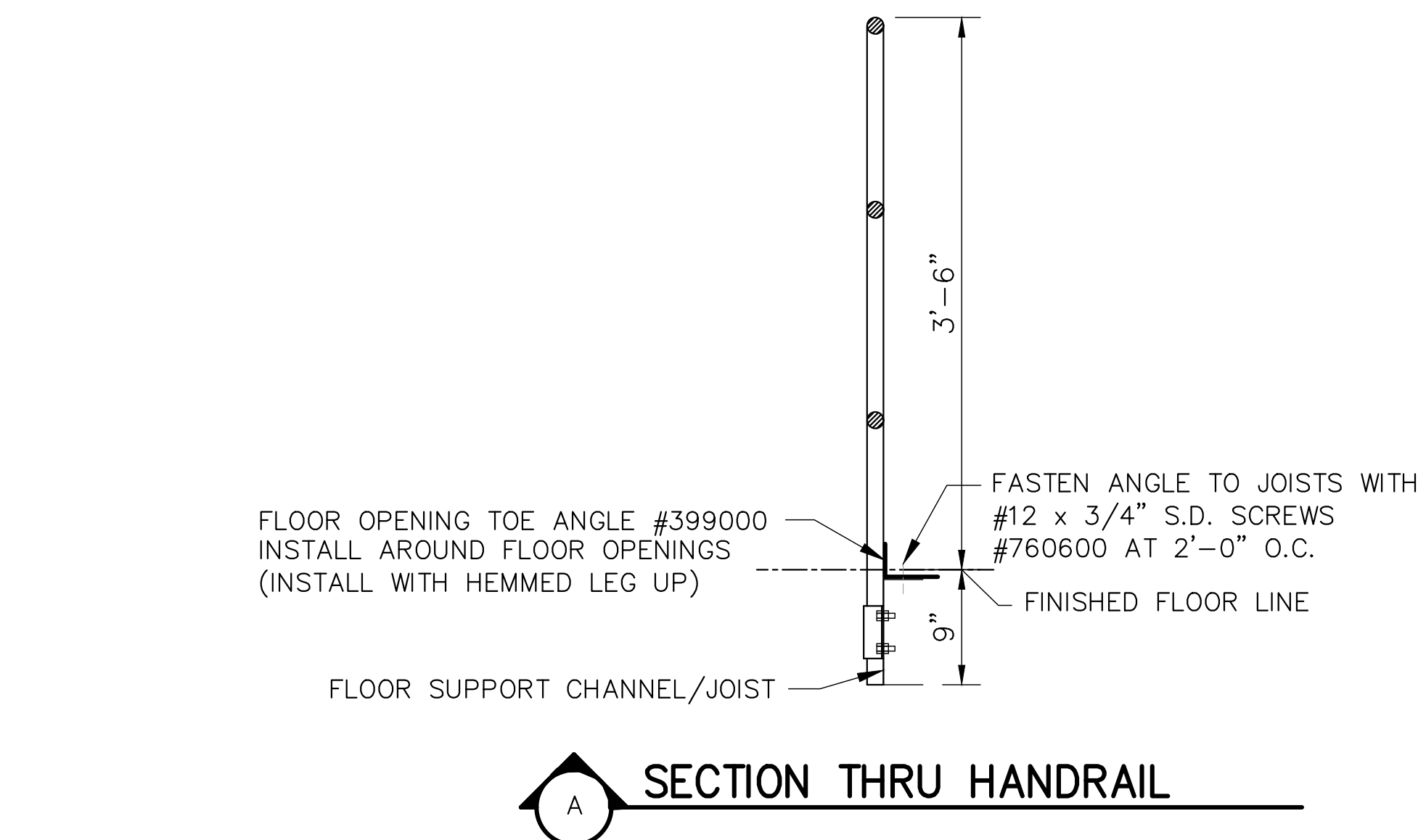
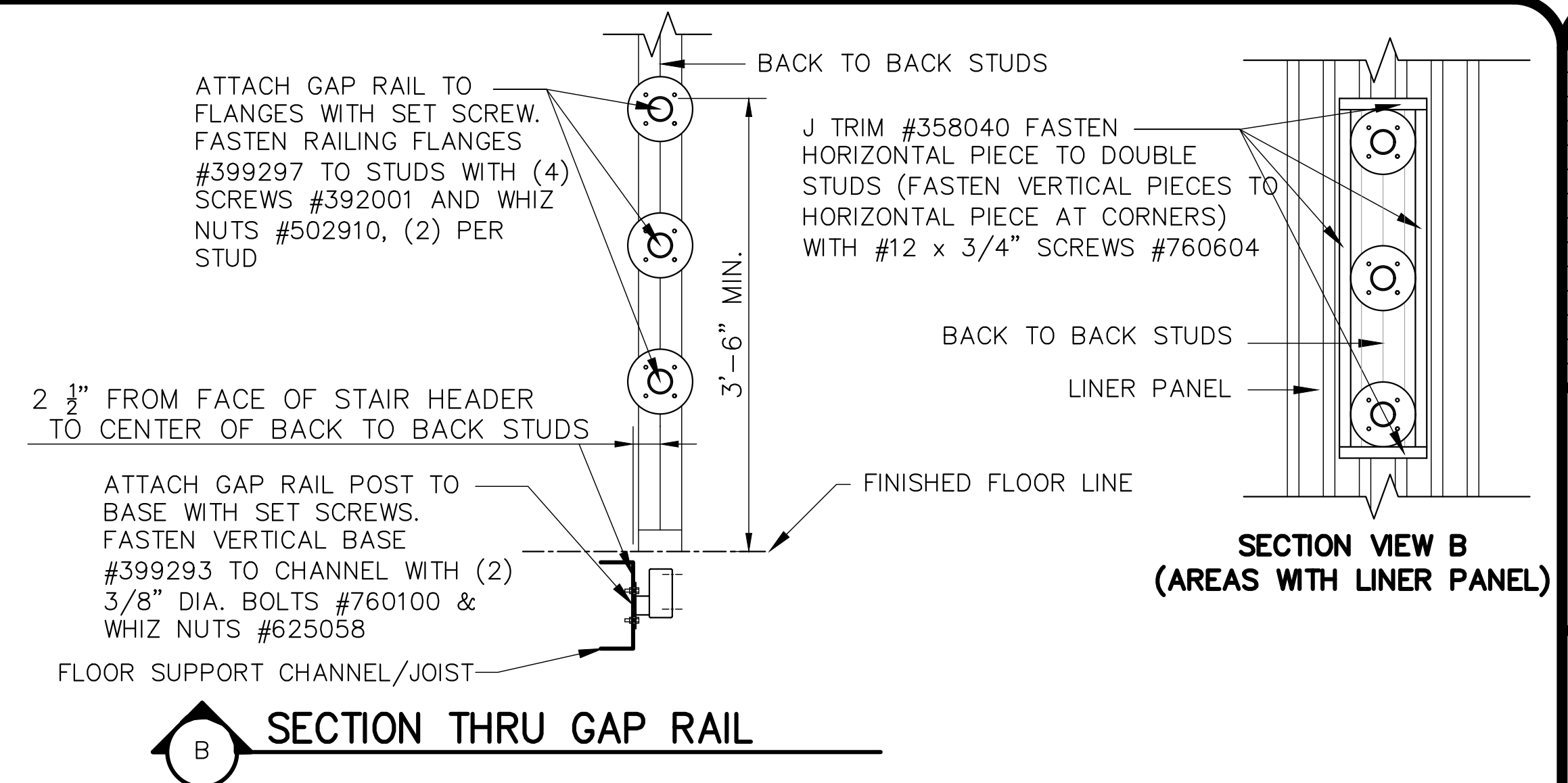
DETAIL 3



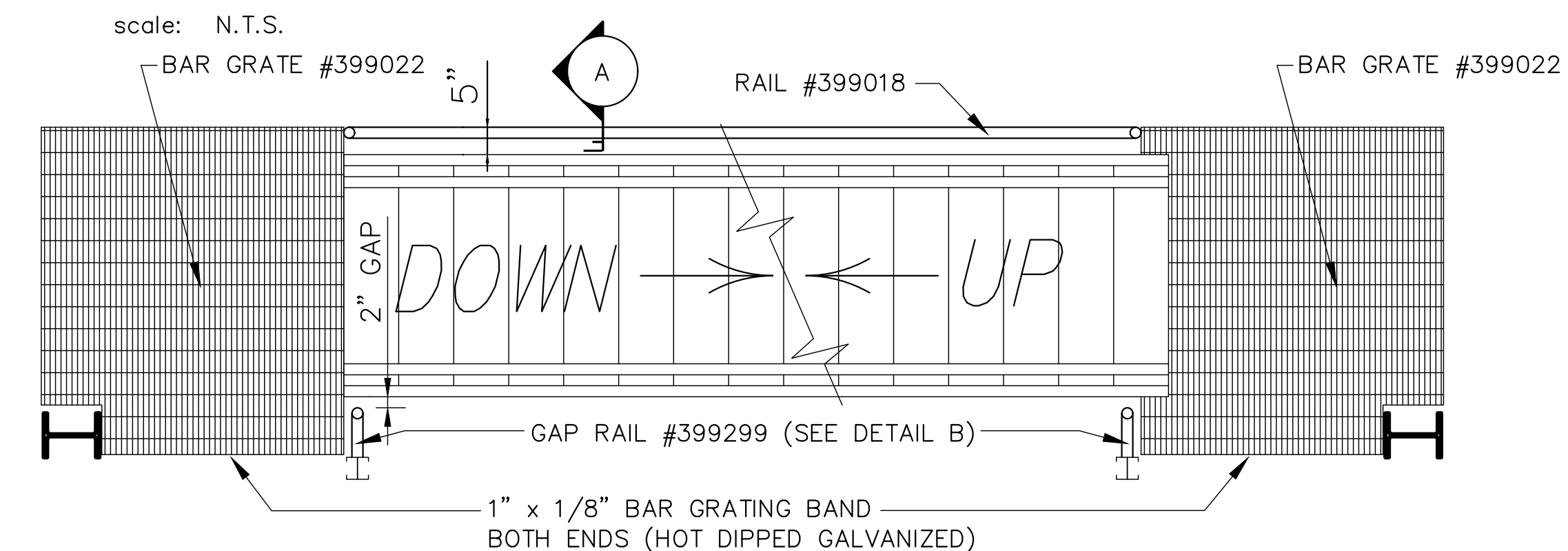
DETAIL 11



SECTION THRU STAIRS scale: N.T.S.



TOWER FOURTH FLOOR STAIR & RAILING PLAN



TOWER SECOND/THIRD FLOOR STAIR & RAILING PLAN

REVISIONS		by

09/27/2021

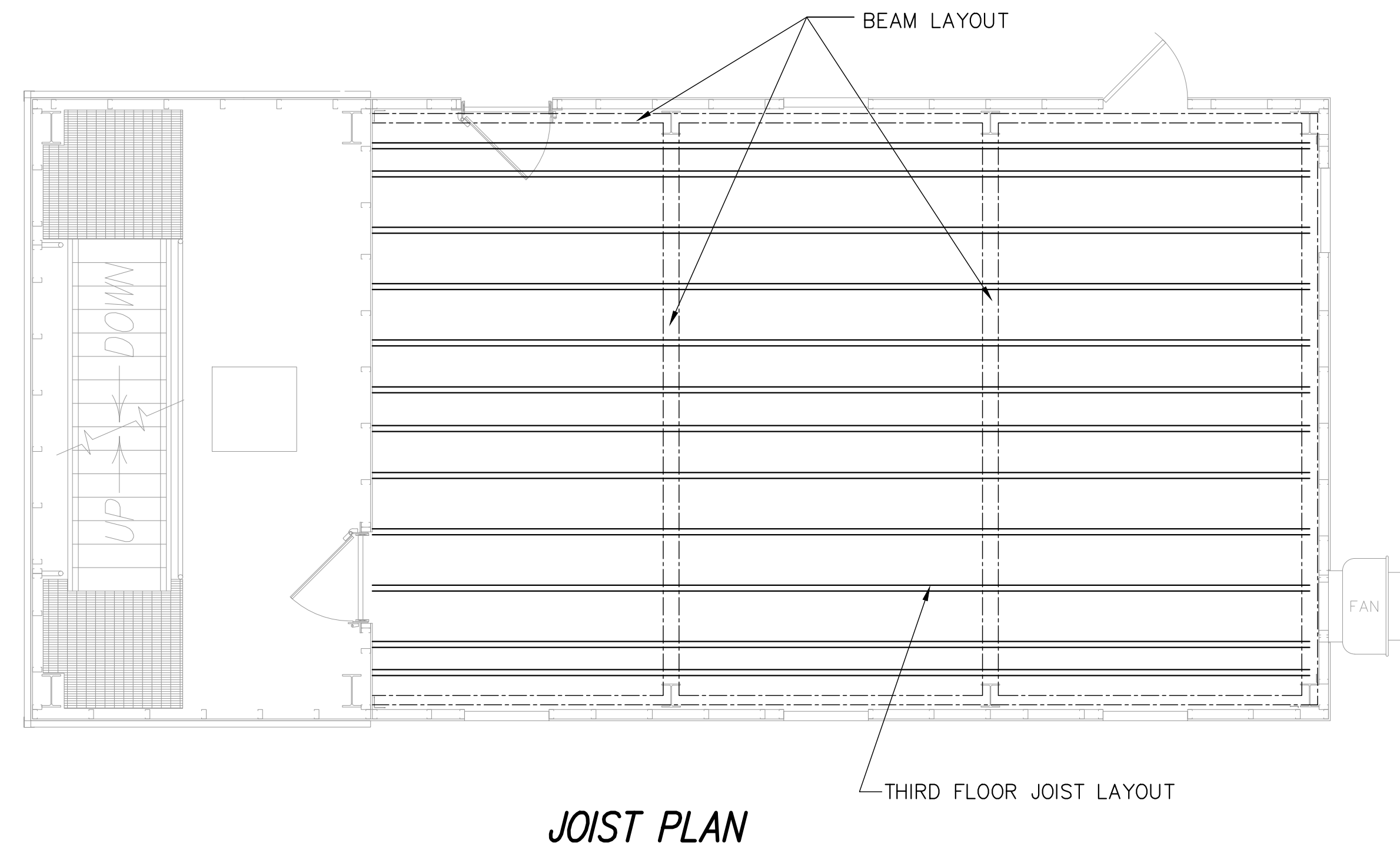
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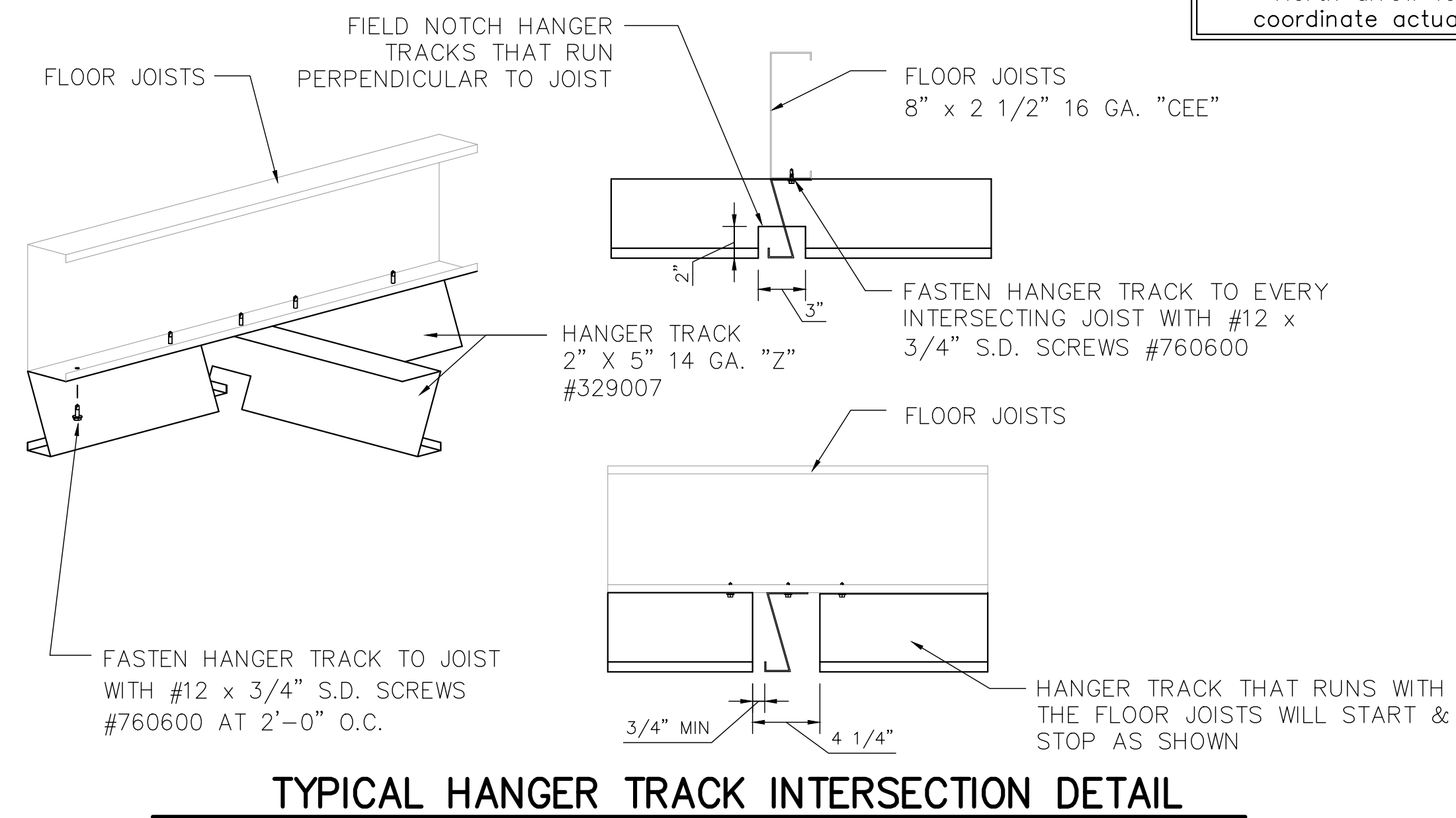
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	Drawn by:	GWL
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	Order No.	TTS-108/#238355
Sheet Title: <b>STAIRS</b>	Sheet No.	

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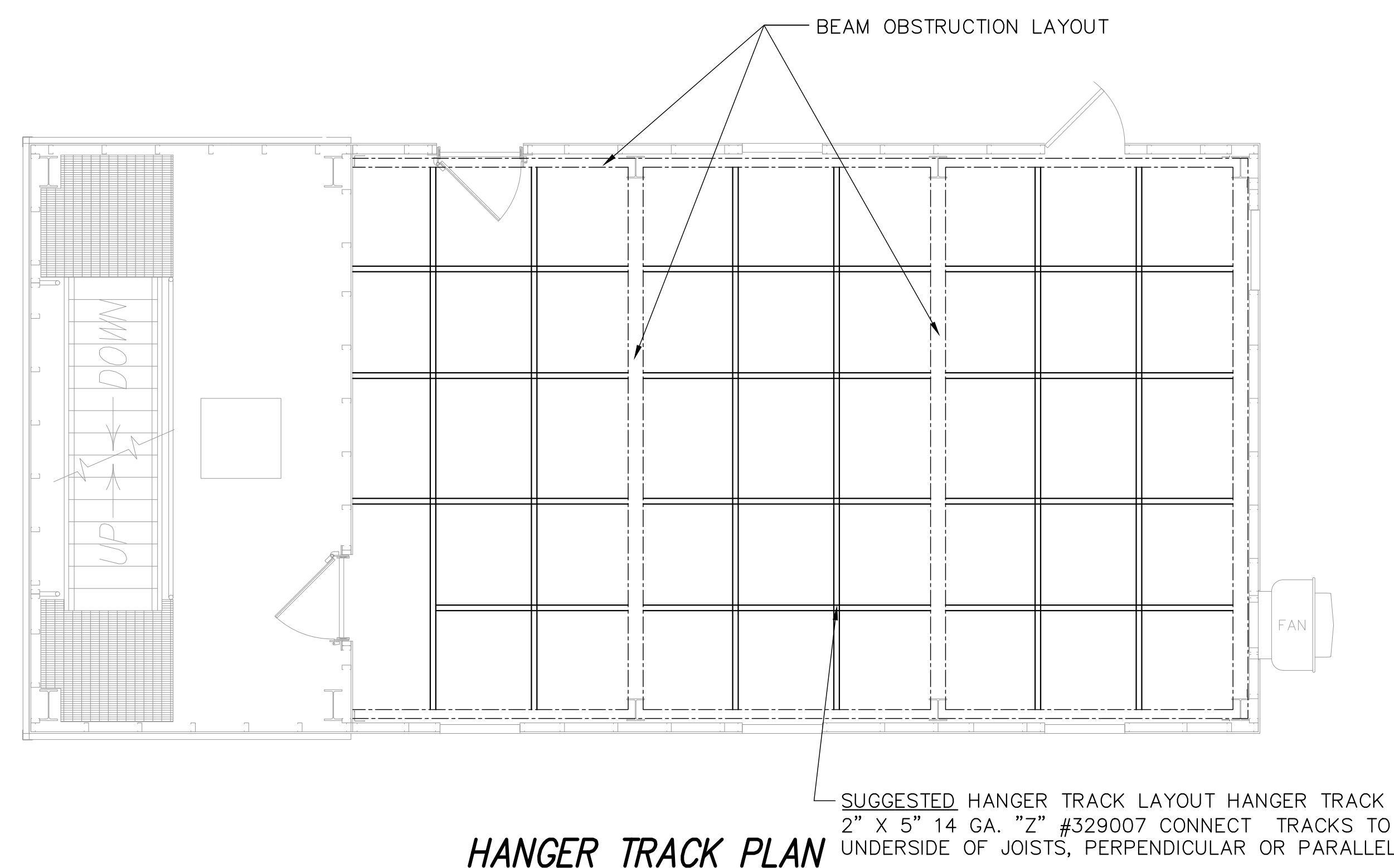
JOIST PLAN



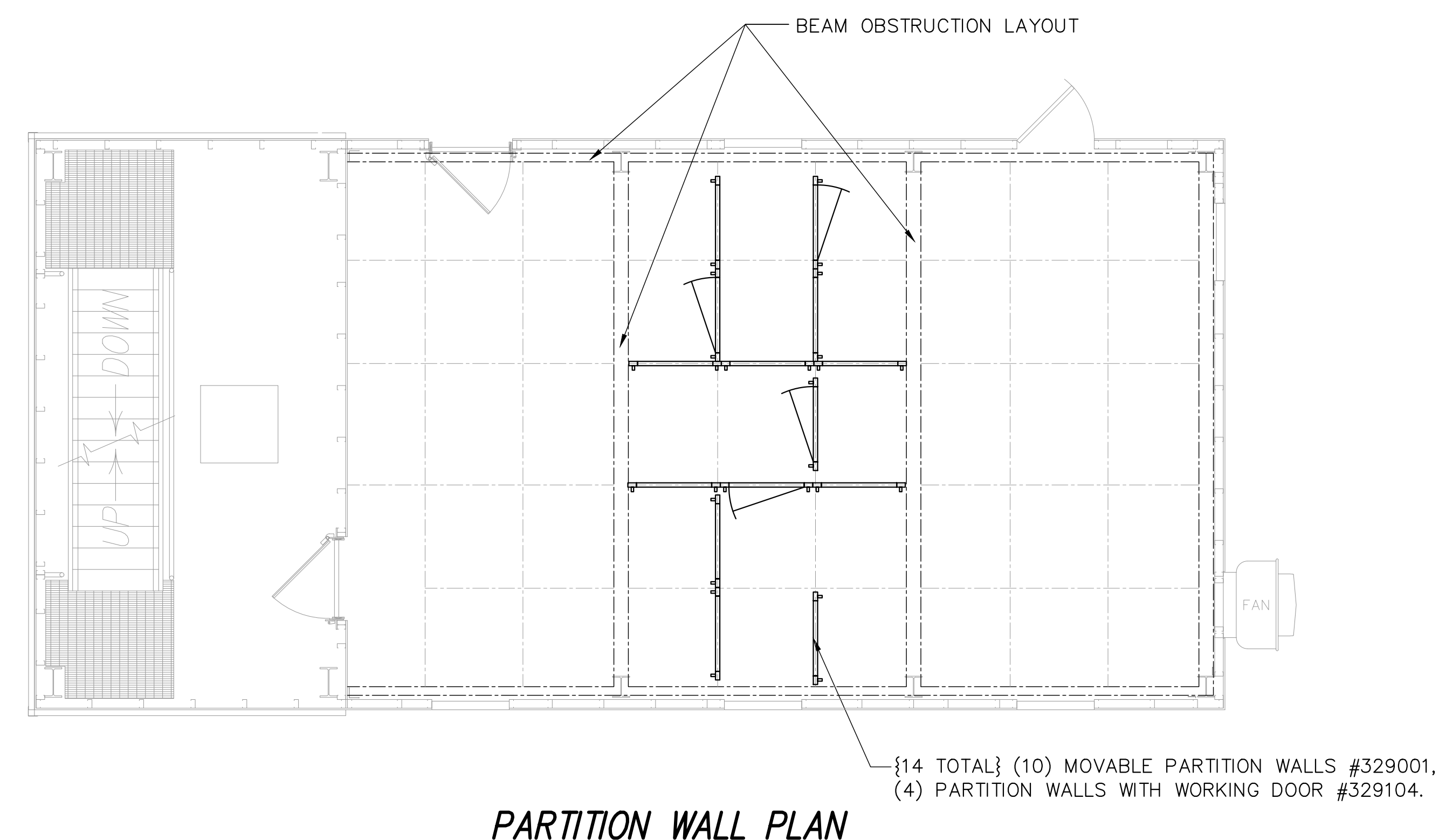
TYPICAL HANGER TRACK INTERSECTION DETAIL

NOTE: LOCATIONS OF HANGER TRACKS AND PARTITION WALLS IS A SUGGESTION ONLY ERECTOR SHOULD COORDINATE FINAL PATTERNS WITH CUSTOMER.

NOTE: LOCATIONS OF HANGER TRACKS AND PARTITION WALLS IS A SUGGESTION ONLY



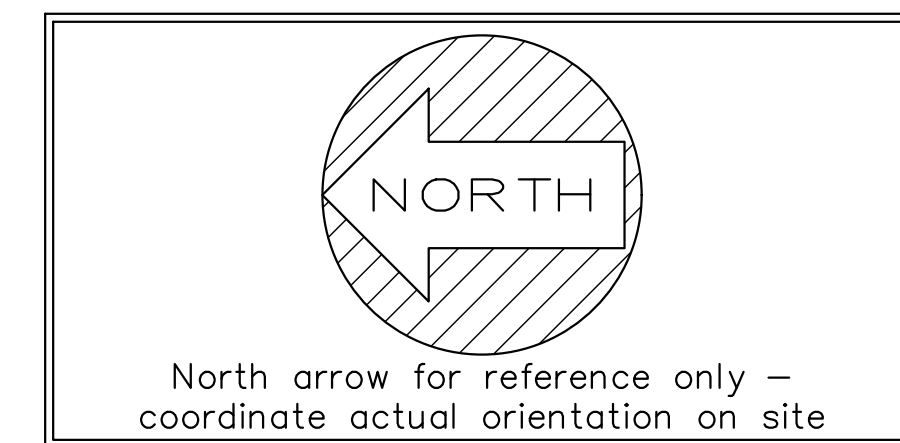
HANGER TRACK PLAN



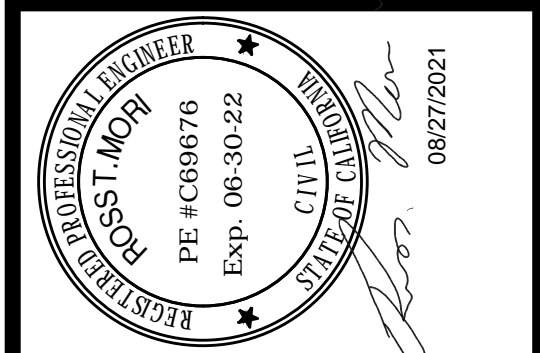
PARTITION WALL PLAN

SECOND FLOOR HANGER TRACK/PARTITION WALL LAYOUT

SCALE: 1/4" = 1'-0"



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Sheet No.	PARTITION PANEL DETAILS













General Services Agency  
Capital Programs  
1401 Lakeside Drive  
Oakland CA, 94612

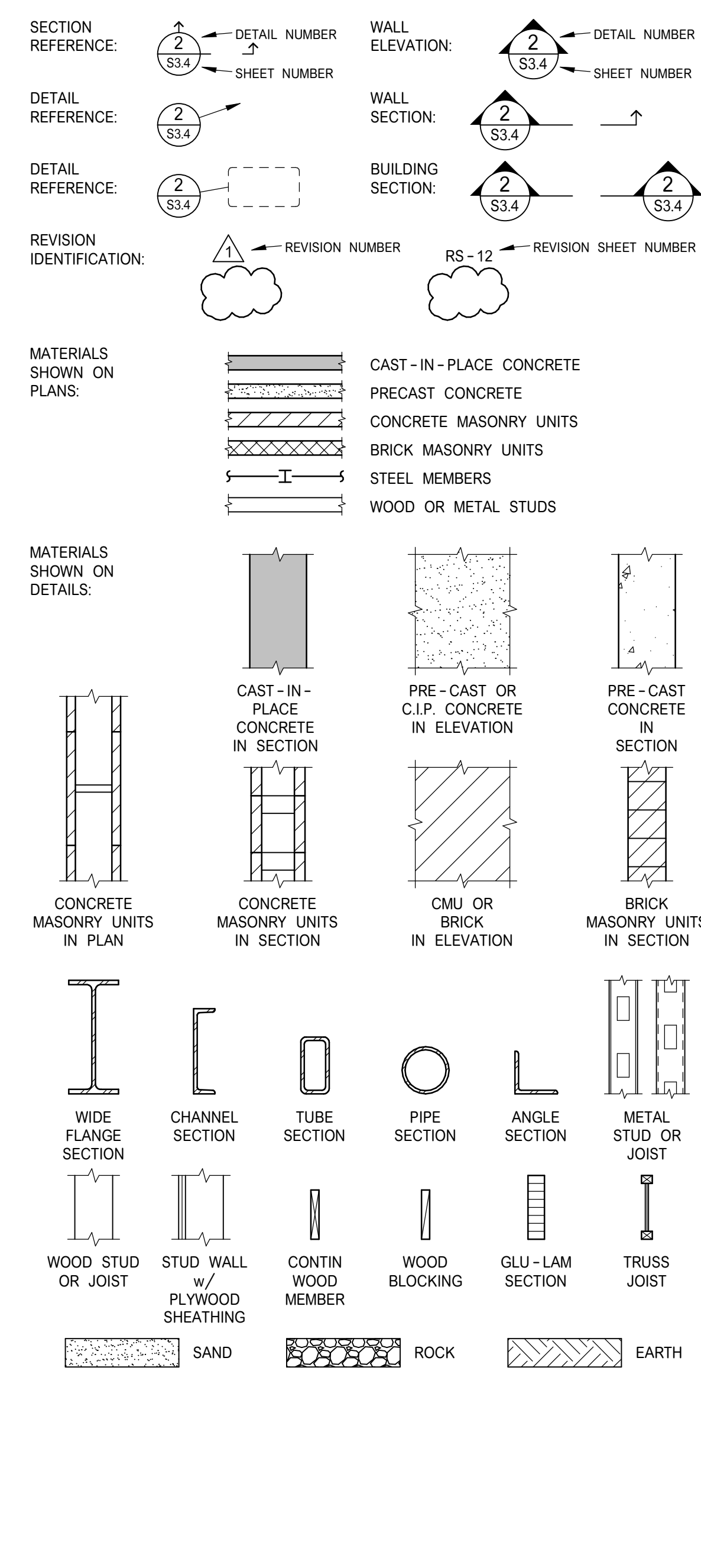
# ALAMEDA COUNTY TACTICAL TRAINING TOWER FOUNDATION

DUBLIN, CA

## ABBREVIATIONS

ACI	Anchor Bolt	F.O. STUD	Face of Stud	PLF	Pounds per Linear Foot
ACI	American Concrete Institute	FRMG	Framing	PLY	Plywood
A.D.	Area Drain	F.S.	Far Side	PLYWD	Plywood
ADDL	Additional	F.T.	Foot or Feet	P.J.P.	Partial Joint Penetration
ADJ	Adjacent	FTG	Footing	PSF	Pounds per Square Foot
A.F.F.	Above Finish Floor	GA	Gage	PSI	Pounds per Square Inch
AISC	American Institute of Steel Construction	GALV	Galvanized	PSL	Parallel Strand Lumber
ALT	Alternate	G.B.	Grade Beam	P/T	Post-Tensioned
APPROX	Approximately	GLB	Glued Laminated Beam	P.T.	Pressure Treated
ARCH	Architect or Architectural	GLC	Glued Laminated Column	P.T.O.F.	Pressure Treated Douglas Fir
ASPH	Asphalt	GR	Grade	R	Radius
ASTM	American Society for Testing and Materials	GYP	Gypsum	R.D.	Roof Drain
A.C.	Asphaltic Concrete, Air Condition			RDWD	Redwood
				REF	Reference
BAL	Balance	HDR	Header	REINF	Reinforcing
B.L.	Bottom Lower	HGR	Hanger	REQD	Required
BLDG	Building	HK	Hook	REV	Revision
BLK	Block	HORIZ	Horizontal	RF	Roof
BLKG	Blocking	H.P.	High Point	RM	Room
BM	Beam	H.R.	Hard Rock	R.O.	Rough Opening
B.S.	Bottom of	HSS	Hollow Structural Section		
BOT	Bottom	HT	Height	S	Section Modulus
B.P.	Break Point			S.A.D.	See Architectural Drawings
BRD	Board	I	Moment of Inertia	S.C.D.	See Civil Drawings
BRG	Bearing	I.D.	Inside Diameter	SCHED	Schedule
BRKT	Bracket	I.F.	Inside Face	S.E.D.	See Electrical Drawings
BTWN	Between	INFO	Information	SF	Square Feet
B.U.	Bottom Upper	INSUL	Insulation	SHT	Sheet
		INT	Interior	SHTG	Sheathing
C	Channel			SIM	Similar
CBC	California Building Code	JST	Joist	S.J.	Shrinkage Joint, Seismic Joint or Slip Joint
C.I.P.	Cast In Place	JT	Joint	S.L.D.	See Landscape Drawings
C.J.	Construction or Control Joint			S.M.D.	See Mechanical Drawings
CLG	Ceiling	KIPS	1000 Pounds	S.M.F.	Special Moment Frames
CL	Center Line	KSF	KIPS Per Square Foot	S.M.S.	Sheet Metal Screw
CLR	Clear			S.O.G.	Slab On Grade
CMU	Concrete Masonry Unit	L	Angle	SP	Space or Spacing
COL	Column	LBS	Pounds	S.P.D.	See Plumbing Drawings
CONC	Concrete	LL	Live Load	SPEC	Specification
CONN	Connection	LLV	Long Leg Vertical	SQ	Square
CONSTR	Construction	LLV	Long Leg Vertical	S.S.D.	See Structural Drawings
CONTIN	Continuous	LONGIT	Longitudinal	STAGG	Staggered
C.J.P.	Complete Joint Penetration	L.P.	Low Point	STD	Standard
CTR	Center	L.S.	Low Shrinkage	STIFF	Stiffener
CTRD	Centered	L.SL	Laminated Strand Lumber	STL	Steel
CTRSNK	Countersink	LT	Light	STRUCT	Structural
		LVL	Laminated Veneer Lumber	SYM	Symmetric
		LTWT	Light Weight		
d	Penny weight			T & B	Top and Bottom
DBL	Double			T & G	Tongue and Groove
DEPR	Depression	MACH	Machine	T.B.	Tie Beam
D.F.	Douglas Fir	MAS	Masonry	THK	Thick
DIA or	Diameter	MATL	Material	THRU	Through
DIAG	Diagonal	MAX	Maximum	T.L.	Top Lower
DM	Dimension	M.B.	Machine Bolt	T.O.	Top Of
DL	Dead Load	MC	Miscellaneous Channel	T.O.T.S.	Top of Topping Slab
DN	Down	M.D.	Mid-depth	T.O. CONC	Top of Concrete
do	Ditto	MECH	Mechanical	T.O. PAR	Top of Parapet
D.W.F.	Deformed Wire Fabric	M.F.	Moment Frame	T.O. PLY	Top of Plywood
DWG	Drawing	MFR	Manufacturer	T.O. PL	Top of Plate
		MIN	Minimum	T.O. SLAB	Top of Slab
(E)	Existing	MISC	Miscellaneous	T.O. STL	Top of Steel
EA	Each	MTL	Metal	TRANS	Transverse
E.F.	Each Face	(N)	New	TS	Tube Steel
E.J.	Expansion Joint	N.A.	Not Applicable	T.U.	Top Upper
EL	Elevation	N.I.C.	Not In Contract	TYP	Typical
ELEC	Electrical	NO.	Number		
ELEV	Elevator	N.P.	No Profile	UBC	Uniform Building Code
EMBED	Embedment	N.S.	Near Side	U.N.O.	Unless Noted Otherwise
E.N.	Edge Nail	N.T.S.	Not To Scale		
ENCL	Enclosure			V.B.	Vapor Barrier
ENGR	Engineer			VENT	Ventilation
E.O.	Edge of	o.c.	On Center	VERT	Vertical
E.O. MAS	Edge of Masonry	O.D.	Outside Diameter	V.I.F.	Verify In Field
E.O. PL	Edge of Plate	O.F.	Outside Face		
E.O. SLAB	Edge of Slab	O.H.	Opposite Hand		
EQ	Equal	OPNG	Opening		
EQPT	Equipment	OPP.	Opposite	W	Wide Flange
E.W.	Each Way	OSB	Oriented Strand Board	w/	With
EXP	Expansion	O.W.S.G.	Open Web Steel Girder	w/o	Without
EXT	Exterior	O.W.S.J.	Open Web Steel Joist	WD	Wood
				WF	Wide Flange
				W.P.	Work Point
F.D.	Floor Drain	PAR	Parapet	W.P.J.	Weakened Plane Joint
FDN	Foundation	PC	Piece	WT	Weight or Structural T
F.F.	Finish Floor	P/C	Precast	W.W.F.	Welded Wire Fabric
FIN	Finish	PCF	Pound per Cubic Foot		
FLR	Floor	P.D.F.	Powder Driven Fastener		
	Face of	P.D.P.	Powder Driven Pin		
F.O. CONC	Face of Concrete	PL	Property Line or Plate		
F.O. MAS	Face of Masonry				

## SYMBOLS



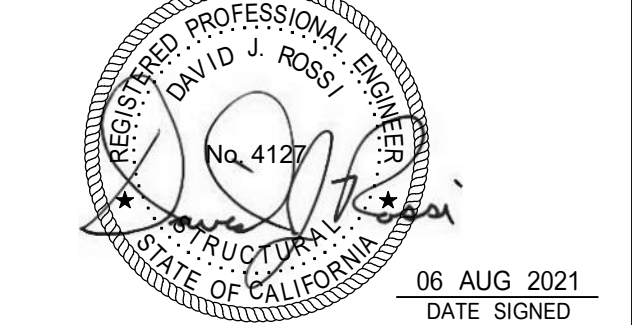
## SHEET INDEX

[illegible][illegible]

KEY PLAN



PROFESSIONAL SEALS



FACILITY	
----------	--

PROJECT  
ALAMEDA COUNTY TACTICAL TRAINING  
TOWER FOUNDATION

SHEET TITLE
TITLE PAGE

DRAWN BY	REV'D BY	SHEET NUMBER
KA	BB	
PROJECT NUMBER		
2100123.00		S-001
DATE		
08-06-2021		

S-001







REACTIONS SHOWN ABOVE ARE INDIVIDUAL LOAD CASES WITH A LOAD FACTOR OF ONE (NO REDUCTIONS). THESE REACTIONS ARE BASED ON CBQ 2019 WITH A BASIC WIND SPEED OF 12 MPH, EXPOSURE CLASS C, AND SEISMIC DESIGN CATEGORY C. PLEASE NOTE THAT THESE REACTIONS INCLUDE A SEISMIC REDUNDANCY FACTOR  $\rho=1.0$  AND OVERSTRENGTH FACTORS  $\Omega=2.0$  FOR CBQF AND  $\Omega=2.0$  FOR OMF. PLEASE ALSO NOTE THAT THESE REACTIONS ARE BASED ON THE FIRE TRAINING SIMULATOR SHOWN ON THE FIRE FACILITIES DRAWING DATED OR REVISED ON 02/01/2021.

7. 

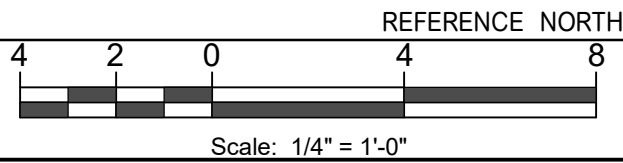
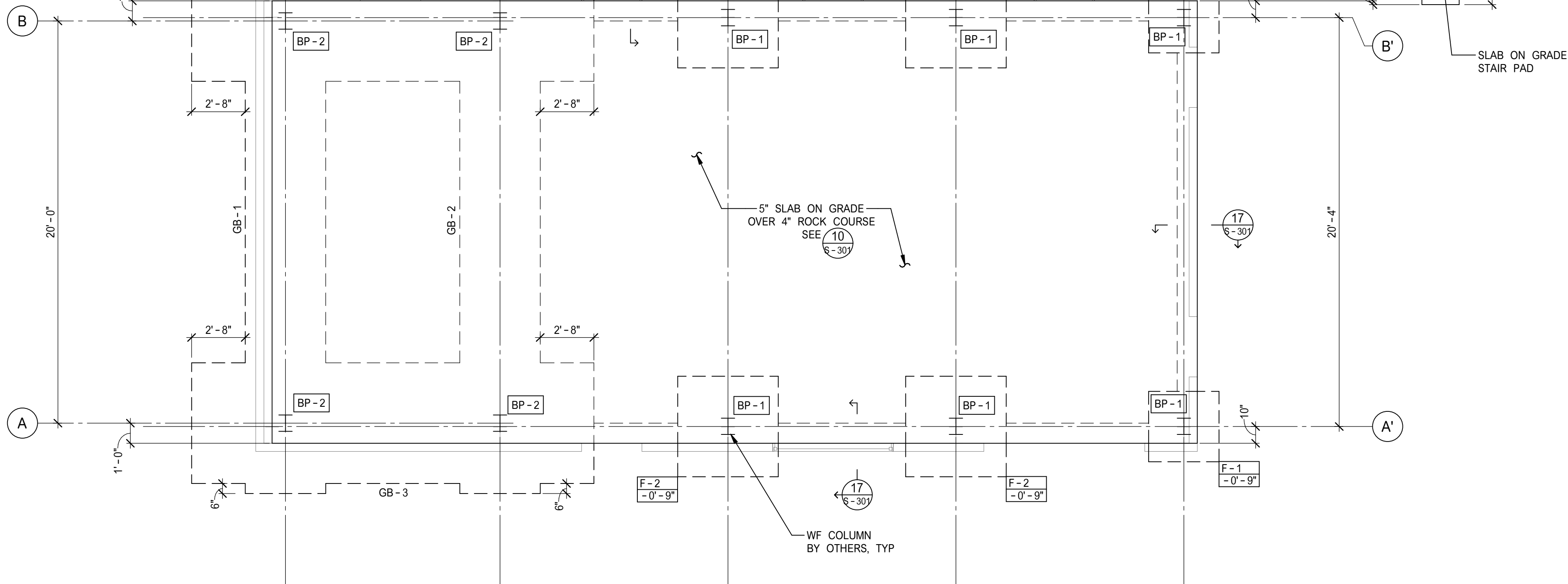
F=1 -1.00'
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 ← INDICATES FOOTING TYPE, SEE 5/S-301  
← INDICATES TOP OF FOOTING ELEVATION,  
RELATIVE TO FINISHED FLOOR = 0'-0"

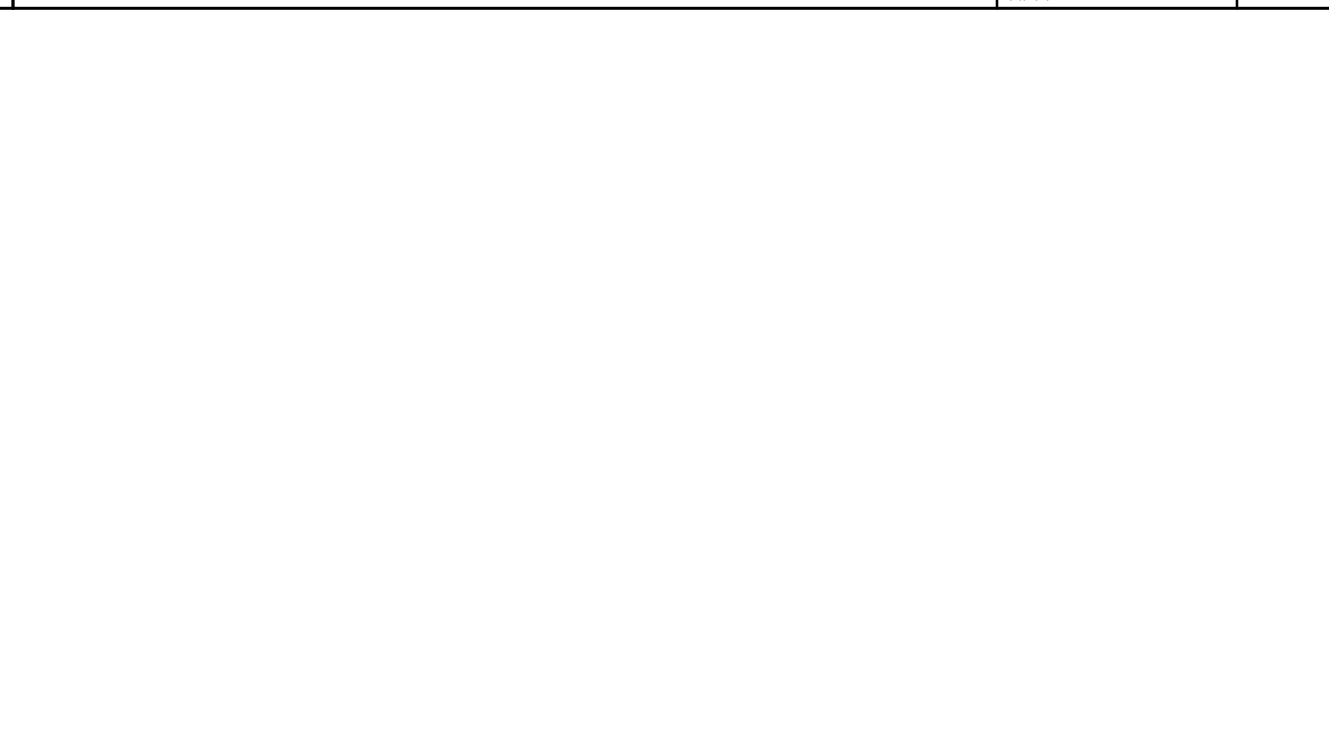
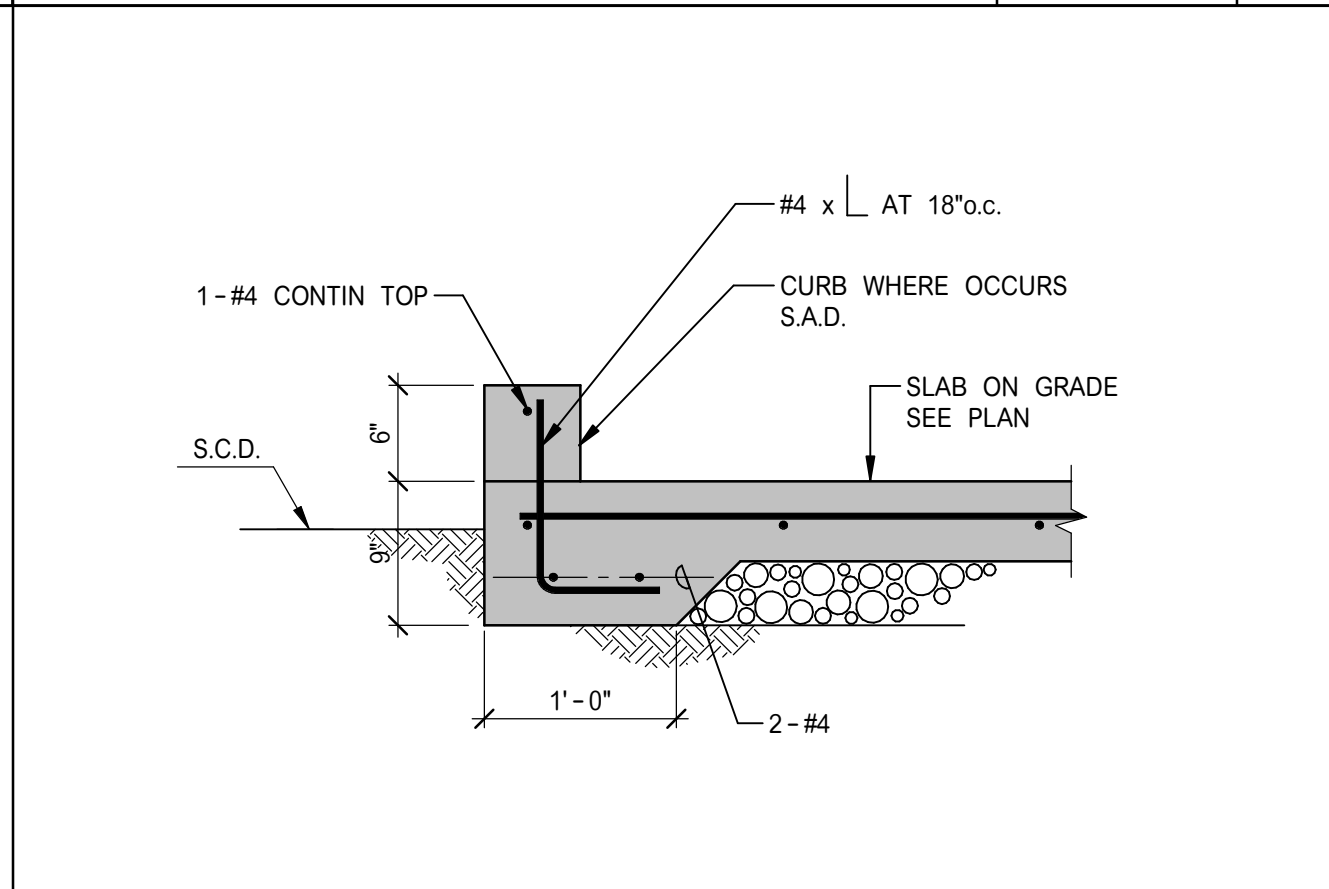
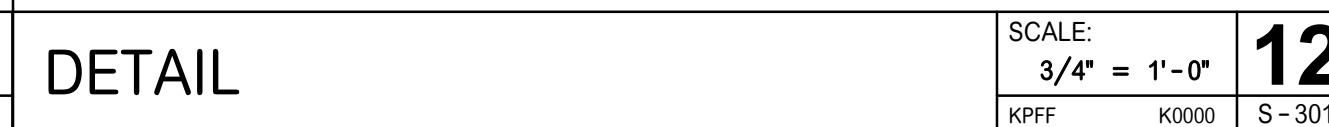
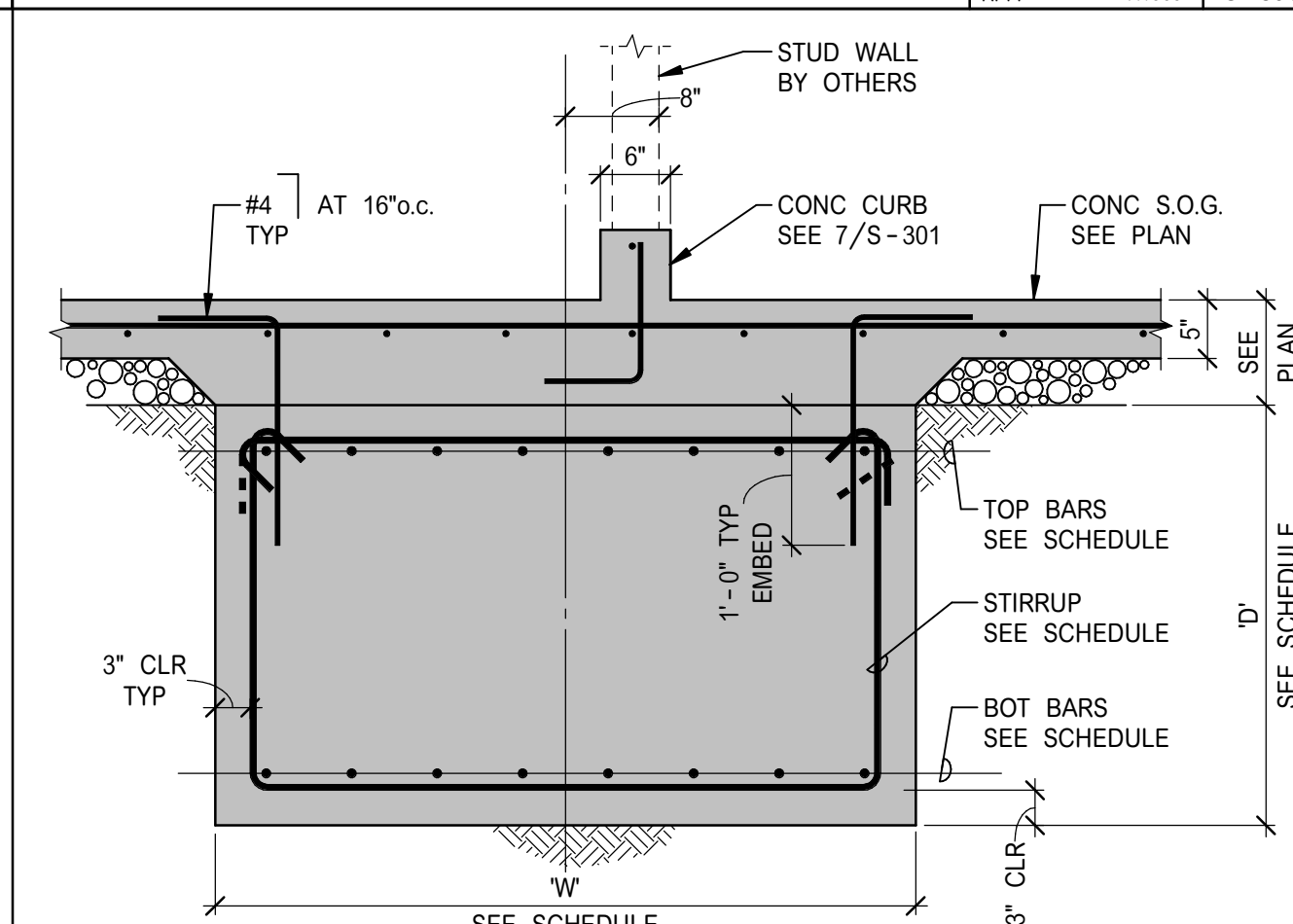
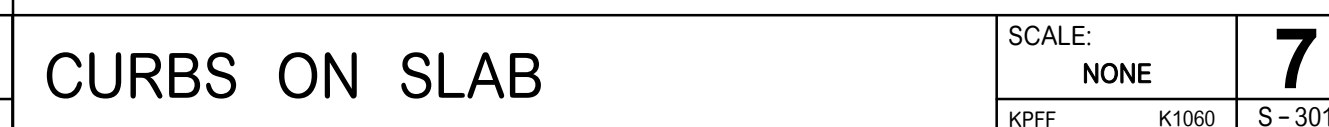
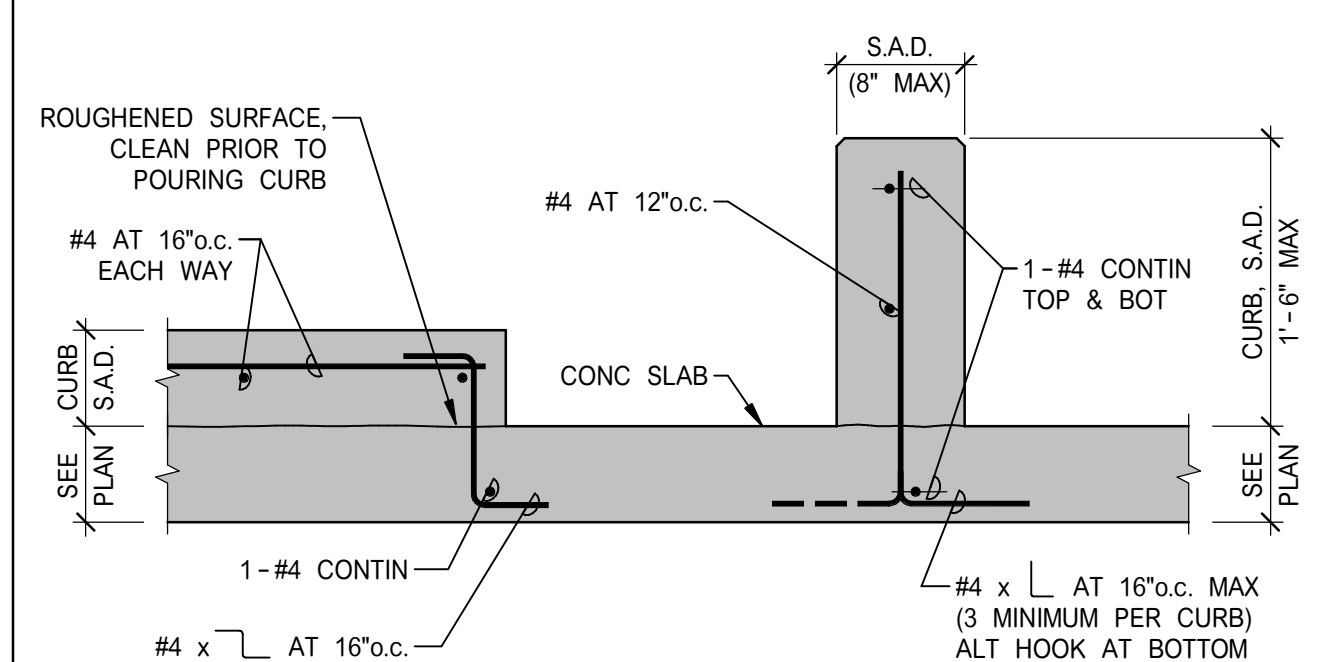
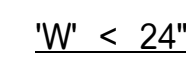
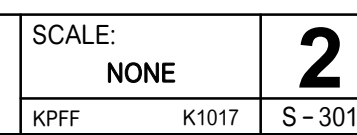
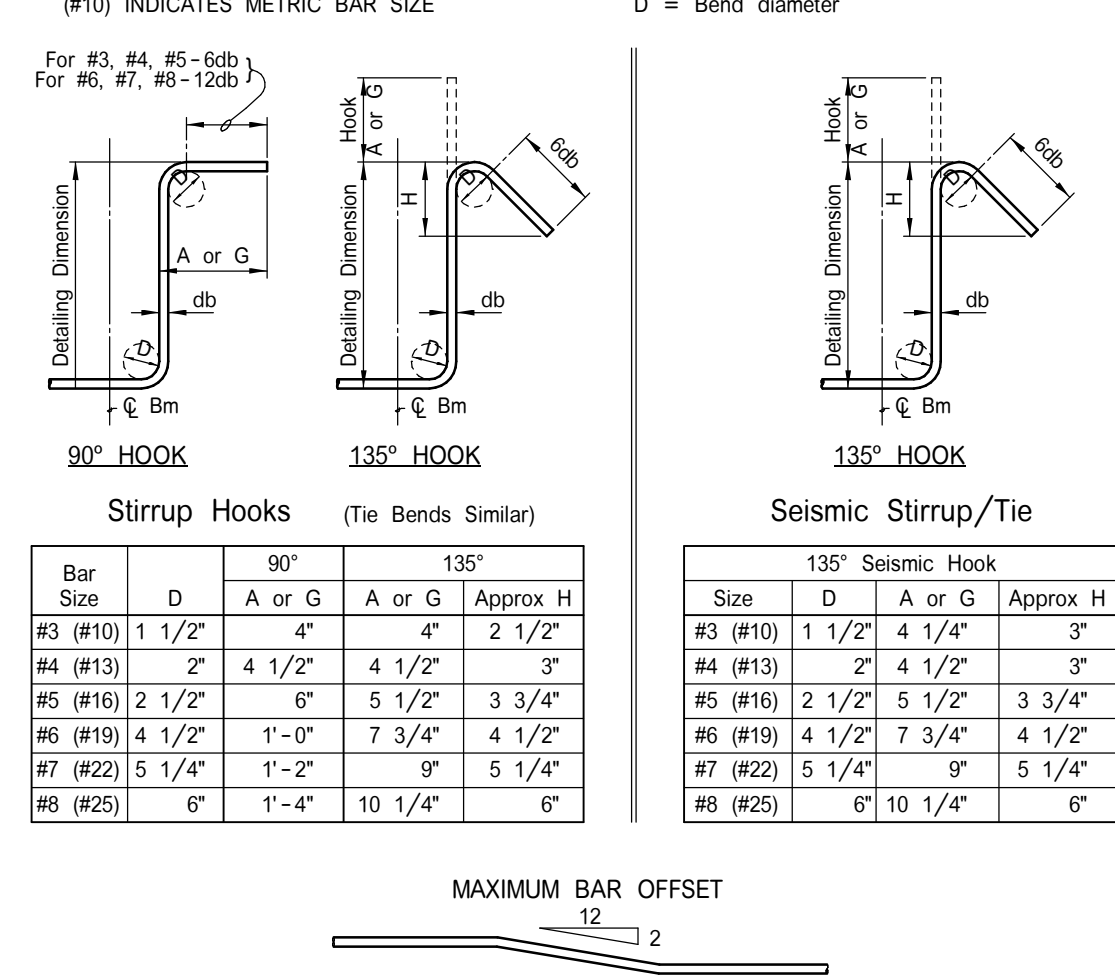
8. ' S.J. ' INDICATES SHRINKAGE JOINT IN S.O.G., SEE 9/S-301  
' W.P. ' INDICATES WEAKENED PLANE JOINT IN S.O.G., SEE 9/S-301

9. ' GB-1 ' INDICATES GRADE BEAM, SEE SCHEDULE 8/S-301

10. ' BP-1 ' INDICATES BASE PLATE, SEE 14/S-301 & 15/S-301





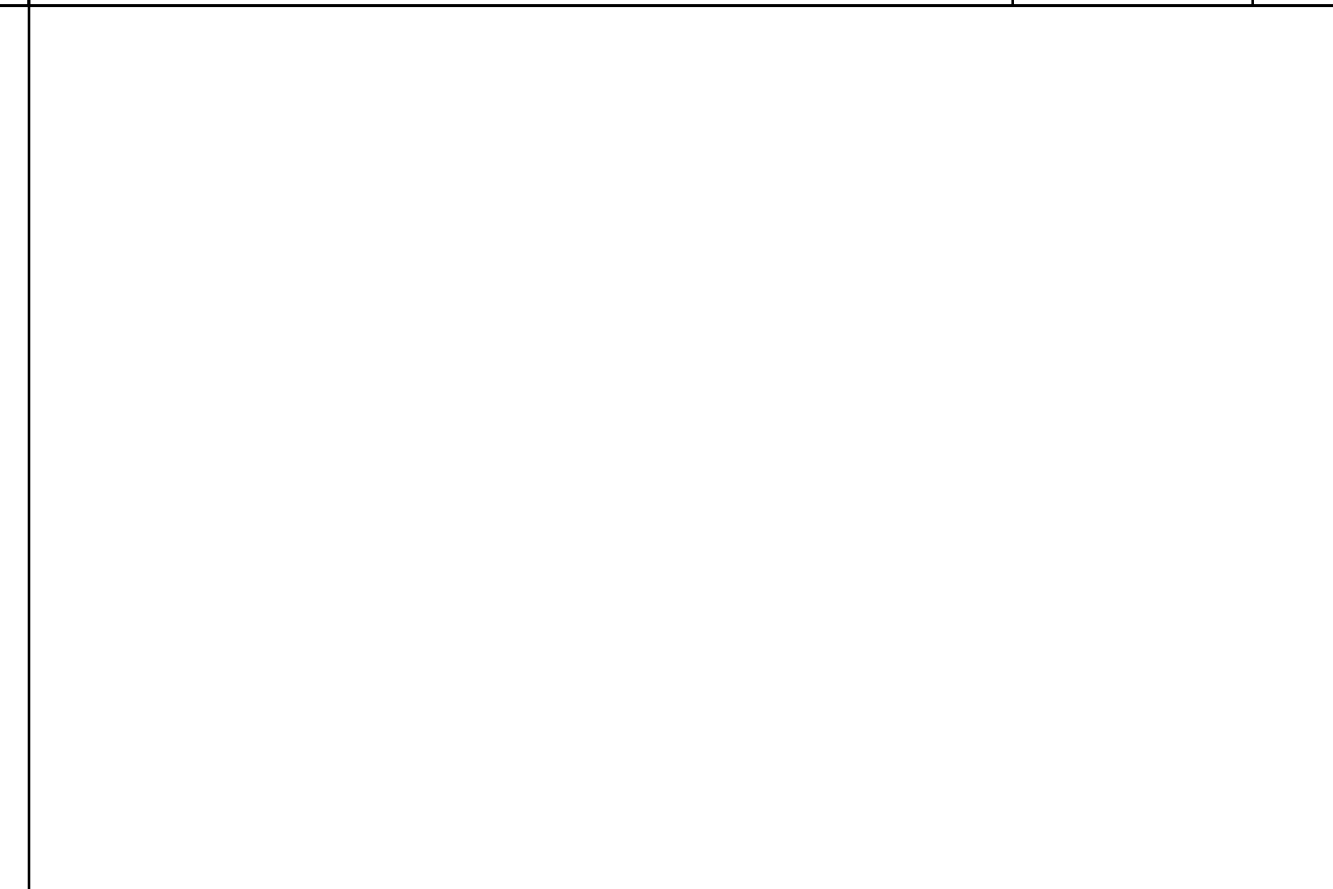
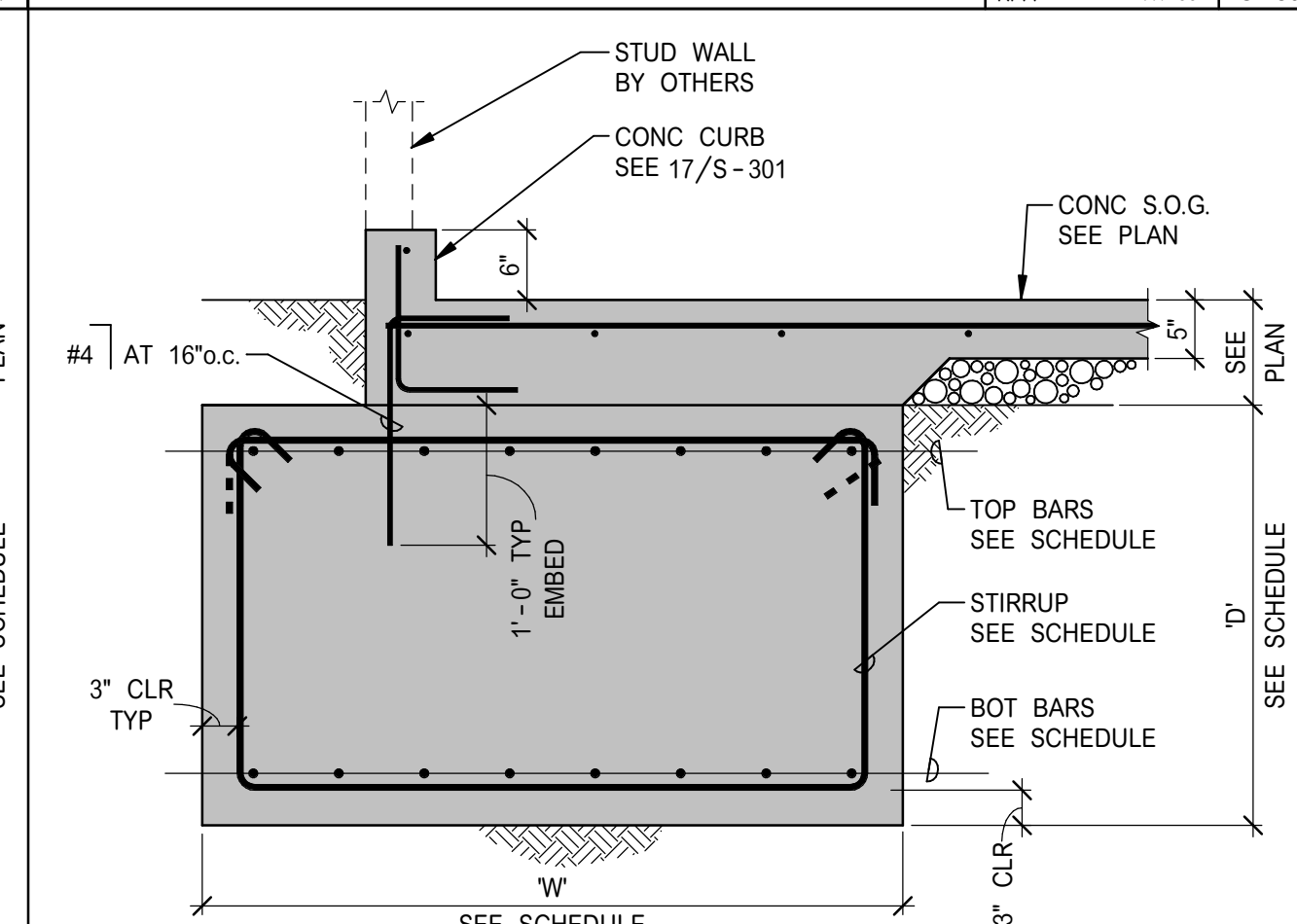


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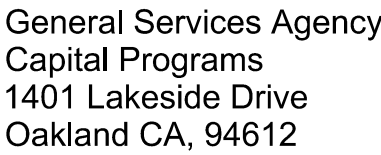
NOTES:

1. GRADE BEAM REINFORCING SHALL BE CONTINUOUS.
2. FOR CORNER AND INTERSECTING GRADE BEAM CONNECTION, SEE 2/S-301
3. COORDINATE PLUMBING SLEEVES WITH GRADE BEAMS. SLEEVES SHALL NOT INTERRUPT REINFORCING, SEE 6/S-301

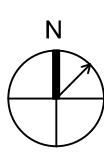
GRADE BEAM SCHEDULE	SCALE:	8
	NONE	
	KPFF	K1400
		S-30







### KEY PLAN



PROFESSIONAL SEALS



FACILITY  
5301 Madigan Road  
Dublin, ca 94568




PROJECT  
ASCO TACTICAL TRAINING TOWER

SHEET TITLE  
ELECTRICAL  
COVER SHEET

E00C

ABBREVIATIONS	
SYMBOL	DESCRIPTION
MV	MERCURY VAPOR.
MH	METAL HALIDE.
MIN.	MINIMUM.
MCA	MINIMUM CIRCUIT AMPS.
MCM	THOUSAND CIRCULAR MILS.
MFR.	MANUFACTURER.
MTD	MOUNTED.
MCP	MOTOR CIRCUIT PROTECTOR.
MW	MICROWAVE.
NEC	NATIONAL ELECTRICAL CODE.
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION.
NC	NORMALLY CLOSED.
NO	NORMALLY OPENED.
NF	NON-FUSED.
NIC	NOT IN CONTRACT.
NL	NIGHT LIGHT.
N.T.S.	NOT TO SCALE.
NL	NIGHT LIGHT.
NO. or #	NUMBER.
OFCl	OWNER FURNISHED, CONTRACTOR INSTALLED.
%Z	PERCENT IMPEDANCE.
PH. or ~	PHASE.
PC	PHOTOCELL
P	POLE.
PVC	POLY VINYL CHLORIDE.
PDU	POWER DISTRIBUTION UNIT.
PRIMARY	OVER 600 VOLTS.
PROVIDE	FURNISH, INSTALL AND CONNECT.
PT	POTENTIAL TRANSFORMER.
PA	PUBLIC ADDRESS.
REC. RECEPT	RECEIPTABLE.
REF	REFRIGERATOR.
RGS	RIGID GALVANIZED STEEL.
RL	RUNNING LIGHT.
S	SINGLE LINE DIAGRAM.
SCC	SHORT CIRCUIT CURRENT.
SFD	SMOKE FIRE DAMPER.
SQ.	SQUARE.
STB	SHUNT TRIP BREAKER.
SU	SITE UTILITIES.
TC	TIMELOCK.
TEL/DATA	TELEPHONE AND DATA.
TV	TELEVISION.
T.V.S.S.	TRANSIENT VOLTAGE SURGE SUPPRESSION.
TYP	TYPICAL.
U.G.P.S.	UNDERGROUND PULL SECTION.
U.O.N.	UNLESS OTHERWISE NOTED.
U.P.S.	UNINTERRUPTABLE POWER SYSTEM.
VAV	VARIABLE AIR VOLUME.
V	VOLTS.
VA	VOLT AMPERES.
VD	VOLTAGE DROP.
WP	WEATHERPROOF.
W	WIRE.
XFMR	TRANSFORMER.
X	INDICATES EXISTING TO REMAIN.
XR	INDICATES EXISTING TO BE REMOVED.
XL	INDICATES EXISTING TO BE RELOCATED.
XN	INDICATES NEW LOCATION OF RELOCATED EQUIPMENT.

## LIGHTING FIXTURE SCHEDULE

SYMBOL	LABEL	DESCRIPTION	MANUFACTURER / MODEL #	FIXTURE VOLTAGE	INPUT WATTS	LUMENS	LAMP	DETAIL/ NOTES
	A	CEILING LIGHT	QUORUM BELFOUR EXTERIOR QUO-501-69 NOIR 301-39	120V	25	-	-	-
	B	10" TALL OUTDOOR WALL SCONCE	QUORUM BELFOUR SINGLE QUO-701-69 NOIR 301-39	120V	25	-	-	-
	C	LED STREET LAMP	COMMERCIAL ELECTRIC INTEGRATED FLOOD DW8899ABZ-B	120V	46	5000	-	-

1. FEEDER LENGTH SHOWN FOR VOLTAGE DROP CALCULATIONS ONLY. CONTRACTOR TO VERIFY FEEDER LENGTHS IN FIELD.
2. 20A, 120V CIRCUITS LONGER THAN 100' - USE #10AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUITS TO 3%
3. 20A, 120V CIRCUITS LONGER THAN 150' - USE #8AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUITS TO 3%
4. 20A, 277V CIRCUITS LONGER THAN 150' - USE #10AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUIT TO 3%

1. ALL WORK SHOWN IS NEW UNLESS NOTED EXISTING.
2. REMOVE ALL CONDUCTORS, DEVICES, AND CONDUIT RENDERED UNUSED BY THIS PROJECT.
3. VERIFY CIRCUITRY OF EXISTING DEVICES TO BE REMOVED PRIOR TO DEMOLITION AND PERFORM SPLICES AS REQUIRED TO MAINTAIN CONTINUITY OF CIRCUITS TO EXISTING DEVICES TO REMAIN.
4. SEAL ALL CONDUIT PENETRATIONS OF FLOORS AND FIRE RATED ASSEMBLIES WITH U.L. APPROVED MATERIALS AND METHODS TO MAINTAIN FIRE RATING.
5. PROVIDE NEW TYPEWRITTEN DIRECTORIES REFLECTING WORK PERFORMED FOR ALL EXISTING PANELBOARDS MODIFIED BY THIS PROJECT.
6. PROTECT ALL OPENINGS FOR STEEL ELECTRICAL BOXES IN FIRE RATED WALLS WITH U.L. APPROVED MATERIALS AND METHODS TO MAINTAIN THE FIRE INTEGRITY. (CBC 712.4.1.2).

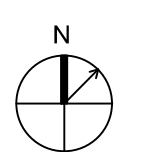
E000	ELECTRICAL COVER SHEET
E100	ELECTRICAL SITE PLAN
E200	ELECTRICAL FLOOR PLANS
E300	ELECTRICAL SPECIFICATIONS

TITLE 24 COMPLIANCE FORMS NOT REQUIRED FOR TRAINING STRUCTURES.

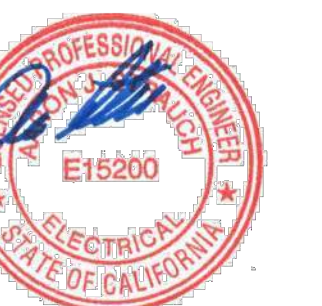


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## KEY PLAN



## PROFESSIONAL SEALS



FACILITY  
5301 Madigan Road  
Dublin, ca 94568

PROJECT  
ASCO TACTICAL TRAINING TOWER

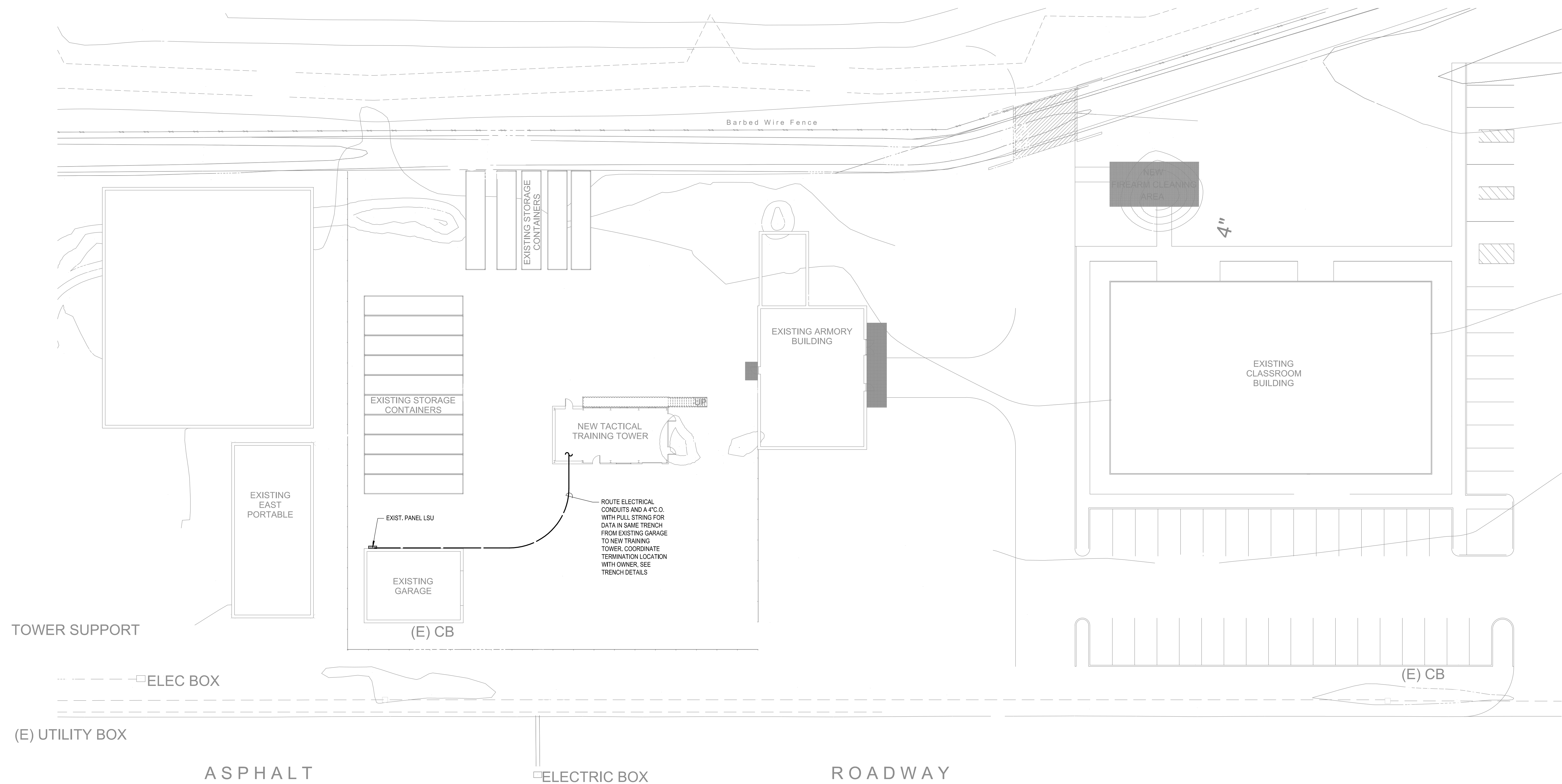
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ELECTRICAL  
SITE PLAN

DRAWN BY	REV'D BY	SHEET NUMBER
RLA	RLA	

PROJECT NUMBER	SF14268.00
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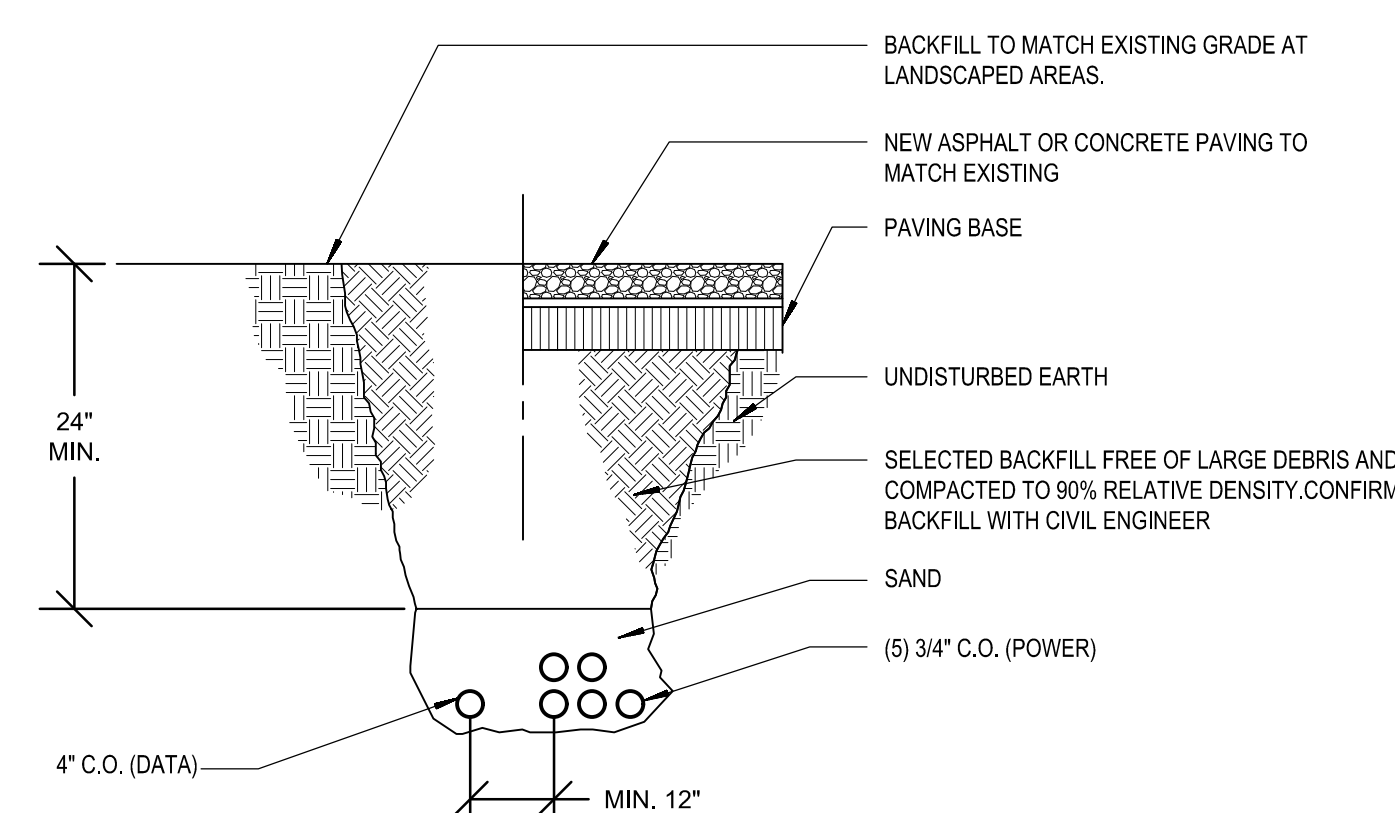
08/27/2021

E100



# 1 ELECTRICAL SITE PLAN

SCALE: 1"=20'-0"



NOTE: PROVIDE MIN. 12" OF SEPARATION BETWEEN NEW ELECTRICAL CONDUITS AND ALL OTHER EXISTING UTILITIES

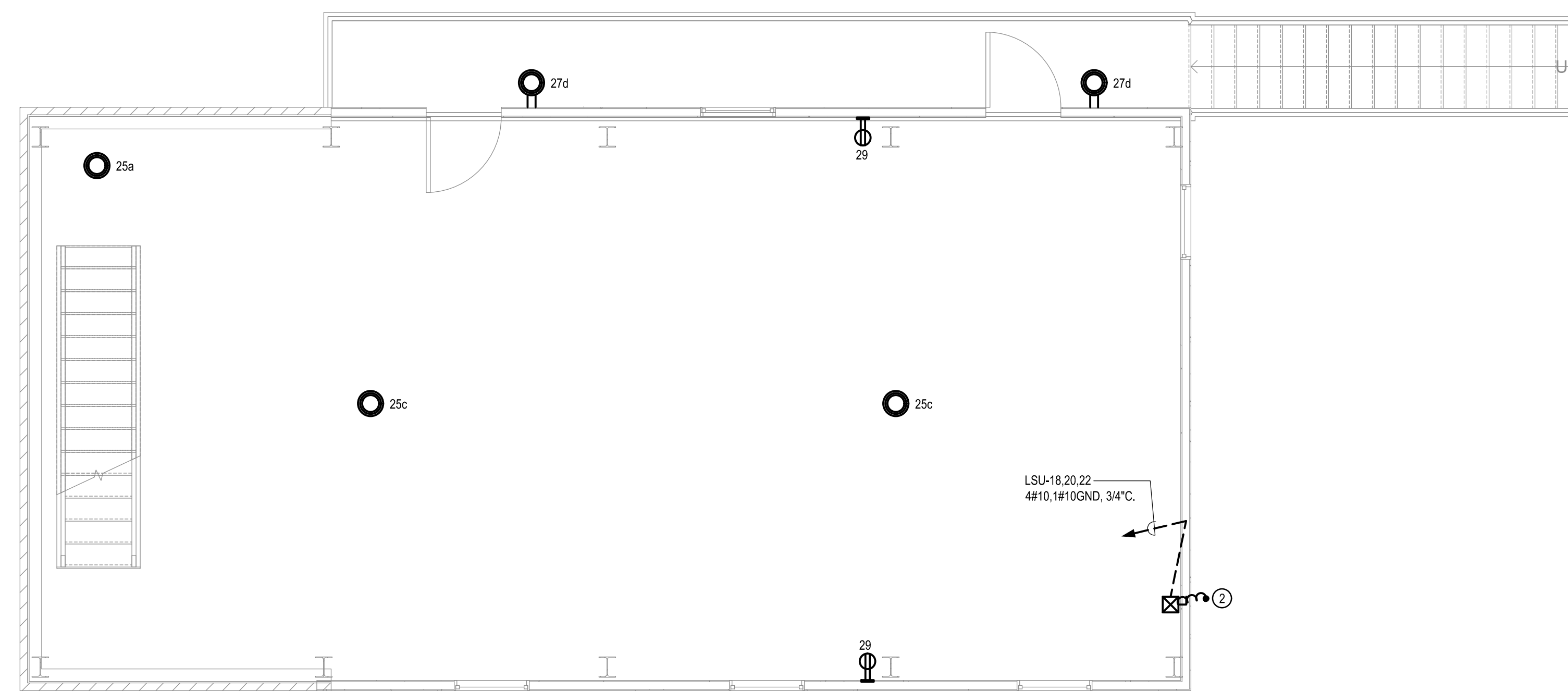
## 2 TRENCH DETAIL

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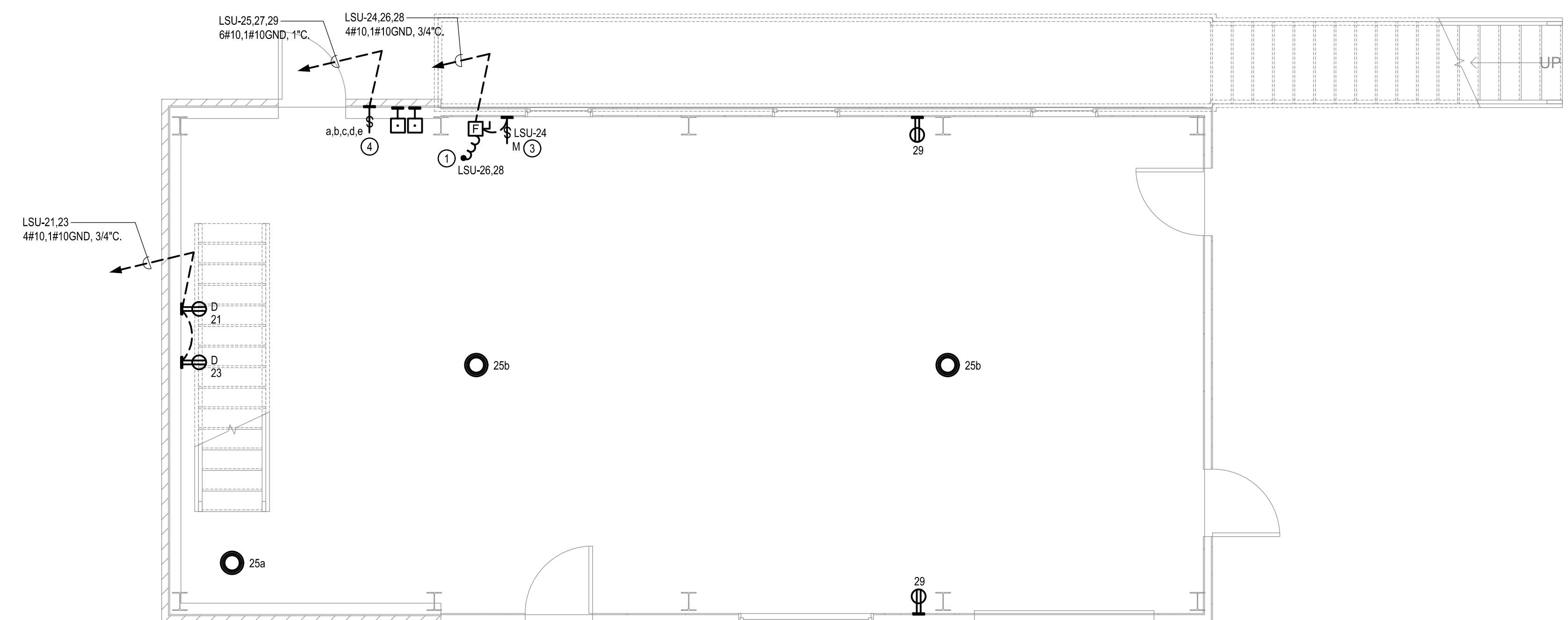
MOUNTING SURFACE										PANEL LSU										10,000		A.I.C. SYM							
208/120			VOLTS		3	PHASE	4			WIRE			MAIN			100 A						BUS		100 A					
VOLT AMPS																					VOLT AMPS								
Ø A	Ø B	Ø C	DESCRIPTION			R	E	T	C	L	O	K	I	B	C	I	R	E	G	L	E	G	DESCRIPTION	Ø A	Ø B	Ø C			
			Main			3	1	0	0	1	A	2	2	0	1	6							Ex Lights & Plugs			1330			
						-	-	-	3	B	4	3	0	1								Ex Siren				500			
						-	-	-	5	C	6	2	0	1															
750			Ex Lights			1	2	0	7	A	8	3	0	2								Ex AC Unit			1560				
	1080		Ex Receiv			6	1	2	0	9	B	10													1560				
793			Ex-4th			6	1	2	0	11	C	12	2	0								Ex Storage Cont.			500	500			
	793		1-1/2 HP			-	-	-	15	B	16	2	0	1								Ex Storage Cont.				500			
	793		6.6 FLA			-	-	-	17	C	18	15	3								EF-2nd				793				
(2)			Ex Spare			1	1	2	0	19	A	20	-	-								1-1/2 HP			793				
(2)	680		Tower Dead			1	1	2	0	21	B	22	-	-								6.6 FLA			793	793			
(2)	680		Tower Dead			1	1	2	0	23	C	24	2	0	1							Smoke Blower				500			
(2)	125		Tower Interior			5	1	2	0	25	A	26	2	0	2							Smoke Generator			1456				
(2)	263		Tower Exterior			8	1	2	0	27	B	28	-	-												1456			
(2)	1080		Tower Tower			6	1	2	0	29	C	30	2	0	1							Ex. Spare							
1668			2816	3633	VAL LINE										5639			4809	1793										
Ø A =			7306		Ø B = 7624										Ø C =			5425											
LIST MTR CNT. LOADS										NON-CONTINUOUS LOADS																			
2376 x1.25= 594										x1.00= 4860																			
RECEPTACLES										OTHER										14288 x1.00 14288									
3388 x1.25= 1735										Ø1.50=																			
TOTAL DESIGN KW= 21										TOTAL DESIGN AMPS= 59																			

- (1) Replace existing spare breaker with size/type shown.
- (2) Reuse existing spare breaker.





**2 ELECTRICAL PLAN LEVEL 02**  
SCALE: 1/4"=1'-0"



**1 ELECTRICAL PLAN LEVEL 01**  
SCALE: 1/4"=1'-0"



**4 ELECTRICAL PLAN LEVEL 04**  
SCALE: 1/4"=1'-0"

**3 ELECTRICAL PLAN LEVEL 03**  
SCALE: 1/4"=1'-0"

## KEYNOTES

- A. ALL OUTLETS TO BE GFCI WITH WEATHER PROOF COVER.
- B. ALL WIRING IN STRUCTURE TO BE #10 AWG IN SURFACE MOUNTED CONDUIT TO DEVICES SHOWS:
  - ① CONNECT TO SMOKE GENERATOR AS REQUIRED. CONFIRM 208 VOLT MODEL SUPPLIED.
  - ② CONNECT TO EXHAUST FAN AS REQUIRED. PROVIDE PUSH BUTTON ON/OFF REMOTE START AT TOWER DOOR.
  - ③ CONNECT TO SMOKE BLOWER FAN AS REQUIRED. MANUAL MOTOR STARTER TO BE CONTROL SWITCH.
  - ④ LABEL SWITCHES TO IDENTIFY LIGHTS AND FAN CONTROLLED.

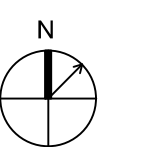
275 Battery Street, Suite 1050  
San Francisco, California 94104  
Ph: 415-233-9991  
Fax: 415-651-8911  
[www.ae3partners.com](http://www.ae3partners.com)



General Services Agency  
Capital Programs  
401 Lakeside Drive  
Oakland CA, 94612

[illegible]

## KEY PLAN



## PROFESSIONAL SEALS



FACILITY  
5301 Madigan Road  
Dublin, ca 94568

PROJECT  
ASCO TACTICAL TRAINING TOWER

SHEET TITLE  
ELECTRICAL  
FLOOR PLANS

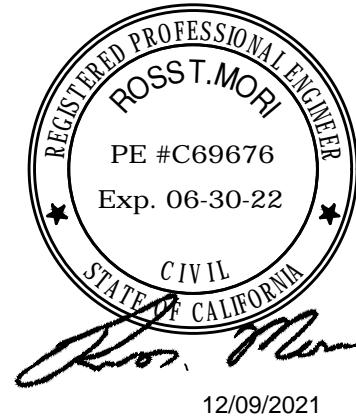
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PROJECT NUMBER SF14268.00		
DATE 08/27/2021		

E200









# APPENDIX B

# STRUCTURAL PART DRAWINGS



**APPENDIX B**  
STRUCTURAL DRAWINGS  
TO FOLLOW

Date:	JULY 2, 2021
Drawn by:	DWK
Checked by:	SPW
Scale:	SHOWN
Order No.	TTS-108 / 238355
Sheet No.	
TITLE PAGE	



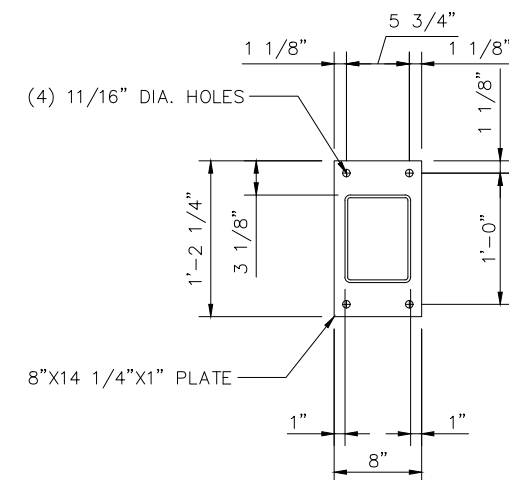
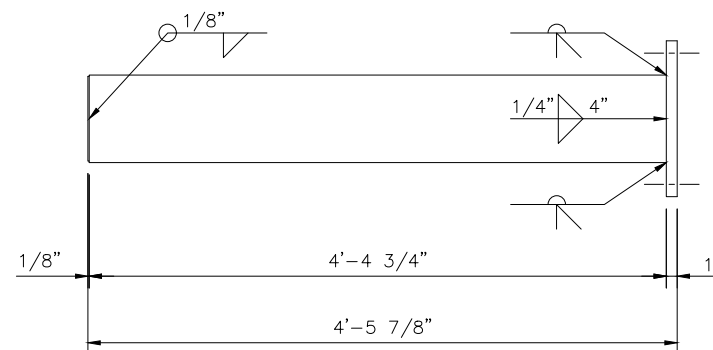
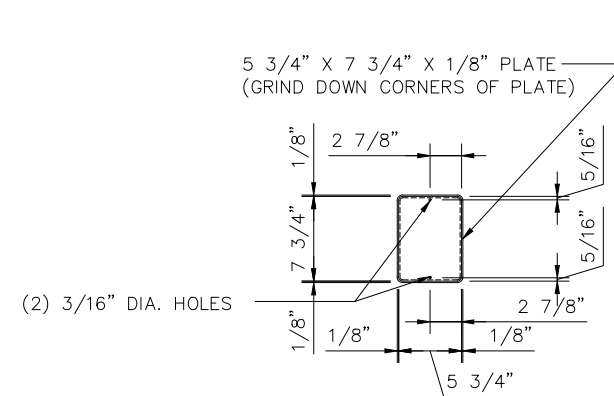
314114

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



12/09/2021



DESIGNATION:  
A500 GRADE B - TUBES  
A36 - ANGLES/PLATES

FIRE FACILITIES INC.

THIS DRAWING AND ALL PARTS THEREOF IS THE  
EXCLUSIVE PROPERTY OF FIRE FACILITIES INC.  
P.O. BOX 834, ANTIOCH, IL 60002-9998  
PHONE: (708) 279-6660 FAX (708) 279-2291  
AND MAY NOT BE REPRODUCED IN WHOLE OR IN  
PART WITH OUT WRITTEN PERMISSION.

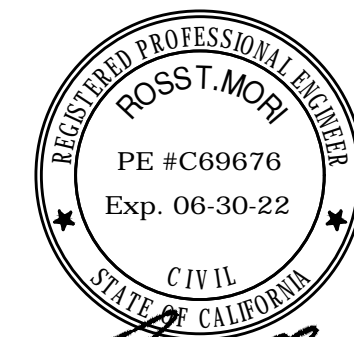
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		8" X 6" X 1/4" TUBE	135#
TITLE:			
SPEC. BALCONY BEAM			
NAME:	S.P.W.	DATE: 6/16/98	PART NO.
SCALE:	1 1/2 SCALE		
			314114



314115

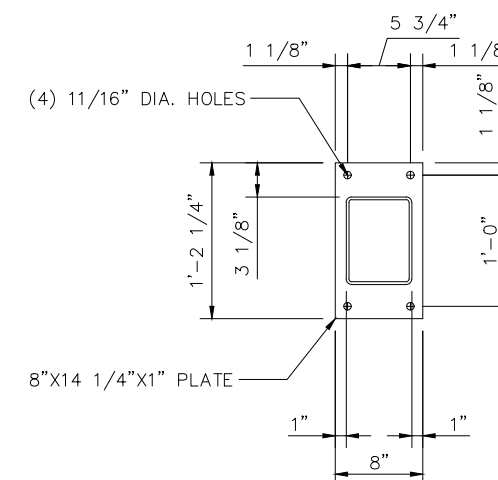
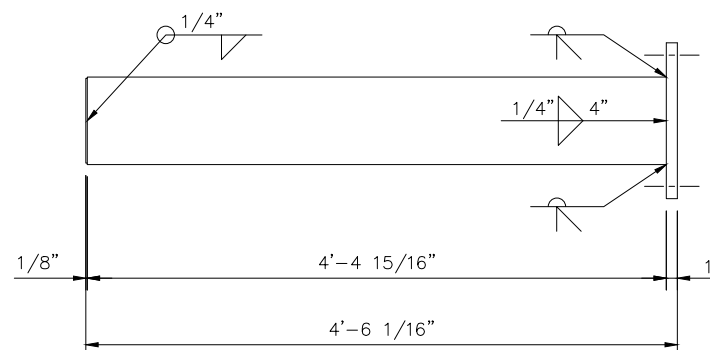
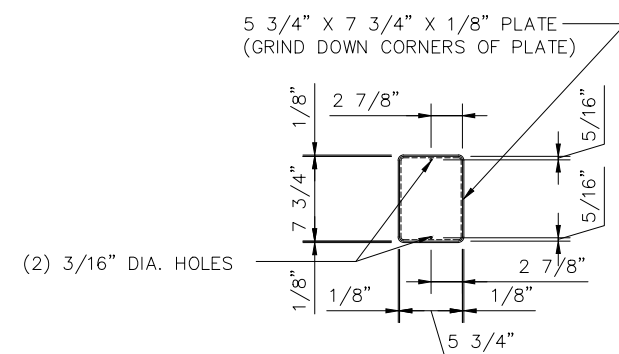
FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



*Ros T. Mori*

12/09/2021



DESIGNATION:  
A500 GRADE B - TUBES  
A36 - ANGLES/PLATES

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AND MAY NOT BE REPRODUCED IN WHOLE OR IN  
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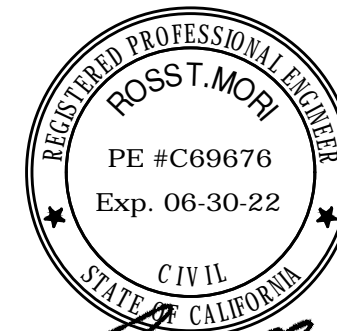
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		8" X 6" X 1/4" TUBE	136#
TITLE:			
SPEC. BALCONY BEAM			
NAME:	S.P.W.	DATE:	6/16/98
SCALE:	1 1/2 SCALE		PART NO.
			314115



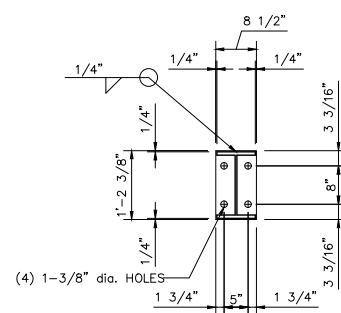
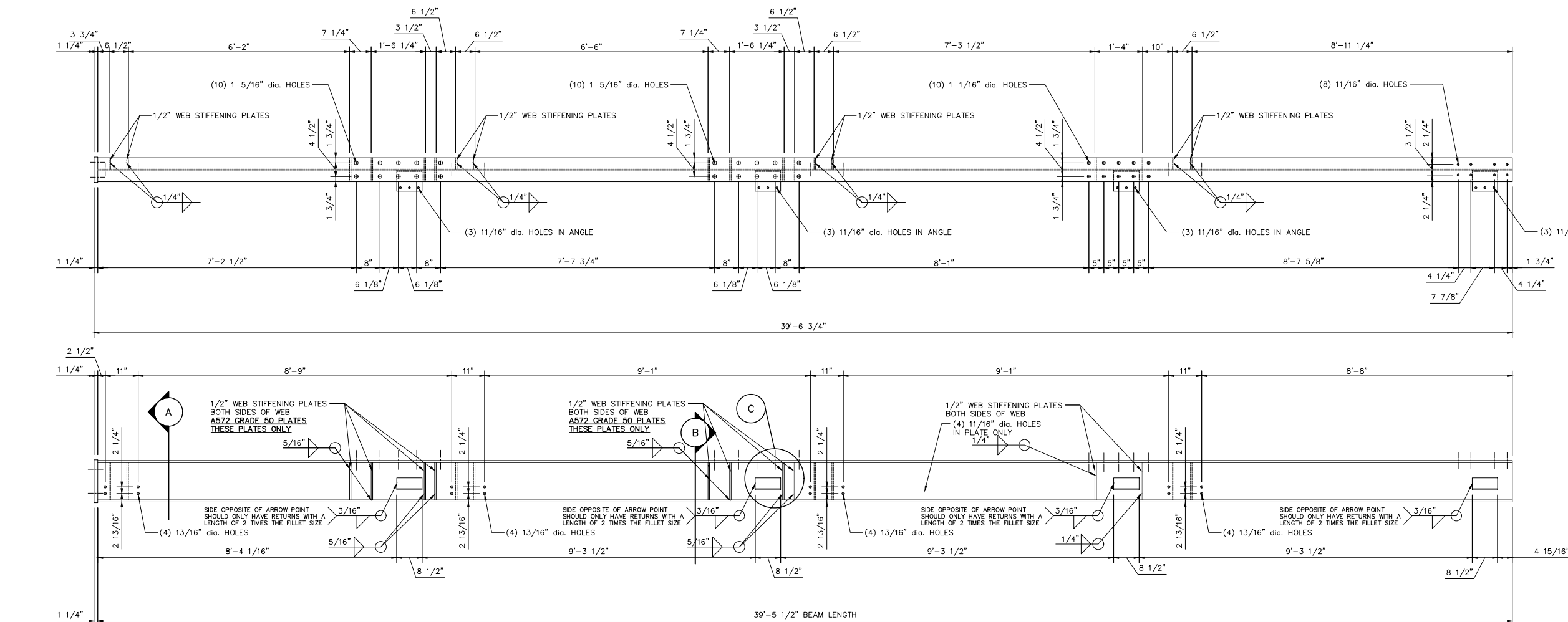
314388

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:

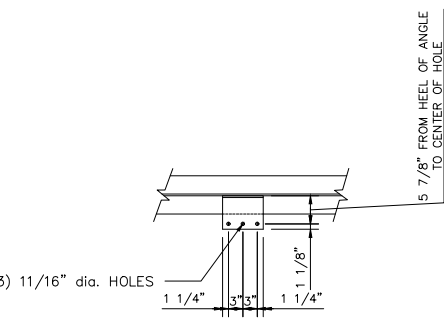


12/09/2021



**"A" BASE PLATE DETAIL**  
8 1/2" X 14 3/8" X 1 1/4" PLATE

**"B" ANGLE DETAIL (SIDE)**  
4" X 7" X 3/8" (8-1/2" LONG) ANGLE



**"C" ANGLE DETAIL (TOP)**  
4" X 7" X 3/8" (8-1/2" LONG) ANGLE

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES  
A572 - PLATES

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PHONE: (708) 279-6660 FAX (708) 279-2291  
AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITH OUT WRITTEN PERMISSION.

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		W 14" X 53# BEAM	2365.1#
		TITLE:	
		CORNER COLUMN (SEISMIC) for WH-4	
		NAME: DWK	DATE: 07/02/21
		SCALE: 5/8 SCALE	PART NO.
			314388



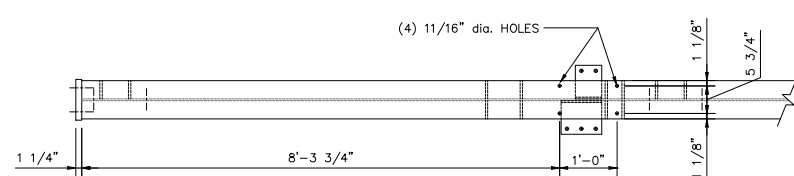
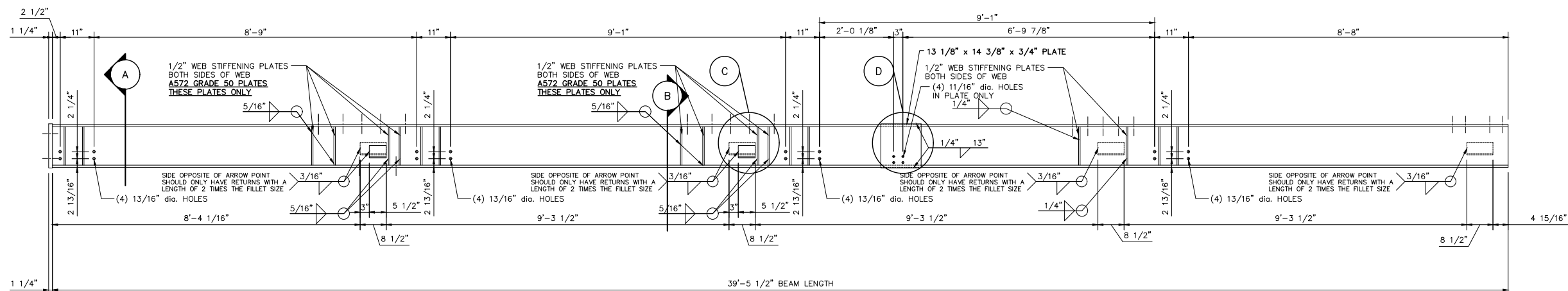
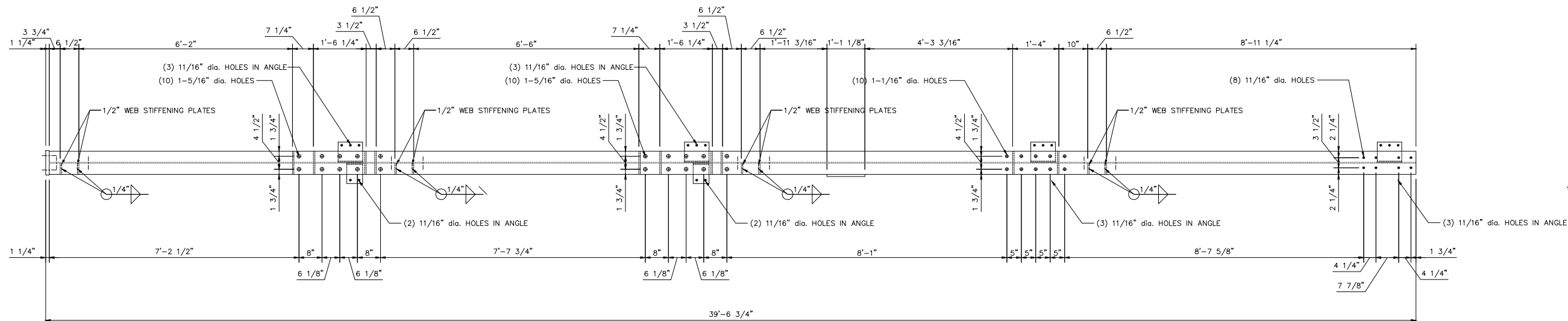
314389

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

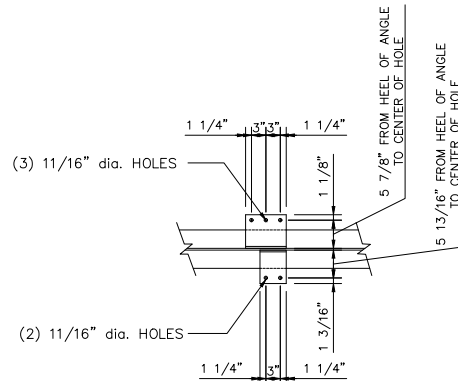
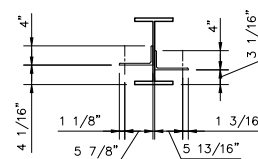
PART NO:



12/09/2021

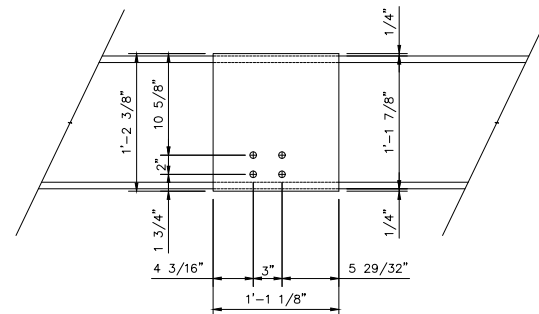


IMPORTANT: ANGLES ARE STAGGERED  
(SEE BELOW)



### "C" ANGLE DETAIL (TOP)

4" X 7" X 3/8" (5-1/2" LONG) ANGLE  
4" X 7" X 3/8" (8-1/2" LONG) ANGLE



### "D" PLATE DETAIL

13 1/8" X 14 3/8" X 3/4" PLATE

SCALE: 1.5" = 1'

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES  
A572 - PLATES

### "A" BASE PLATE DETAIL

8 1/2" X 14 3/8" X 1 1/4" PLATE

### "B" ANGLE DETAIL (SIDE)

4" X 7" X 3/8" (5-1/2" LONG) ANGLE  
4" X 7" X 3/8" (8-1/2" LONG) ANGLE

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PART WITH OUT WRITTEN PERMISSION.

REVISIONS: BY:		MATERIAL DESCRIPTION:		WEIGHT
		W 14" X 53# BEAM		2417.7#
		TITLE:		
		CORNER COLUMN (SEISMIC) for WH-4		
		NAME: DWK	DATE: 07/02/21	PART NO.
		SCALE: 5/8 SCALE		
		314389		



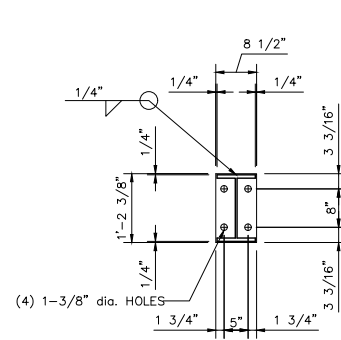
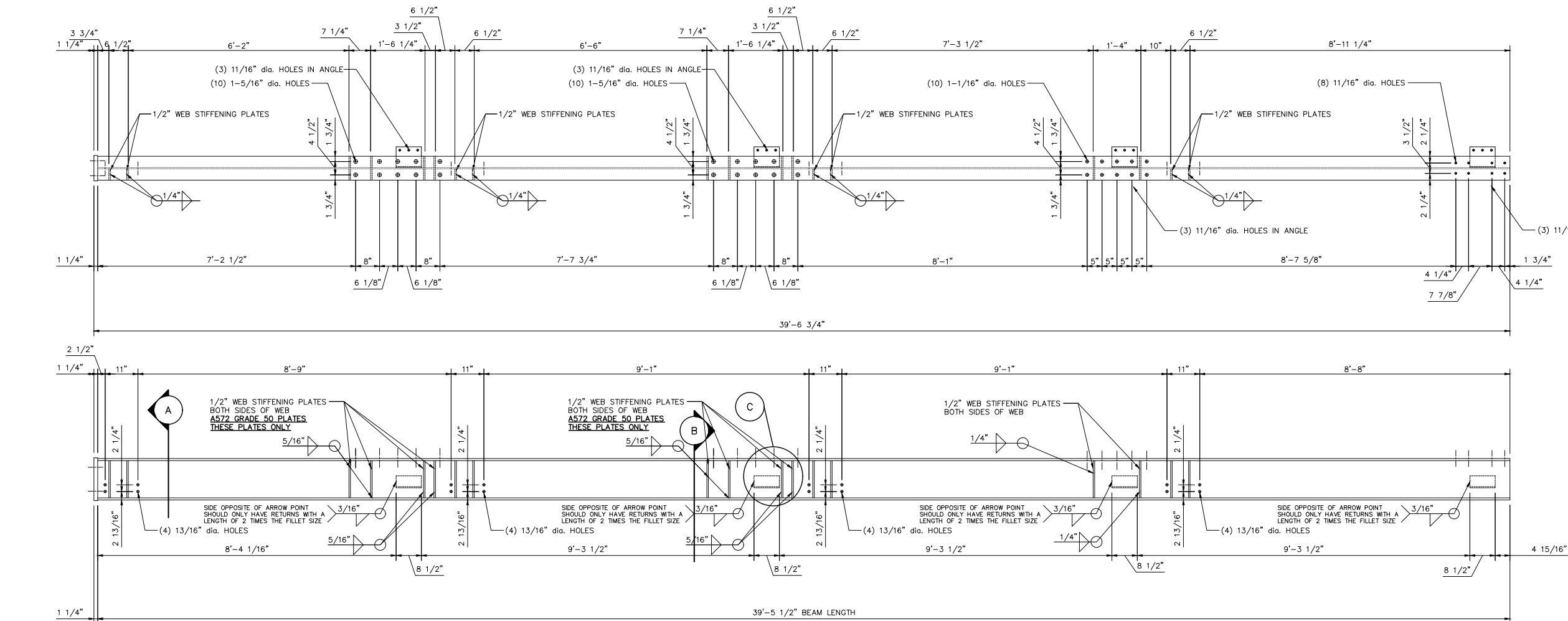
314390

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

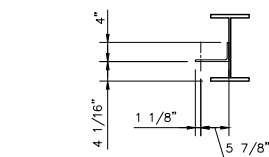
PART NO:



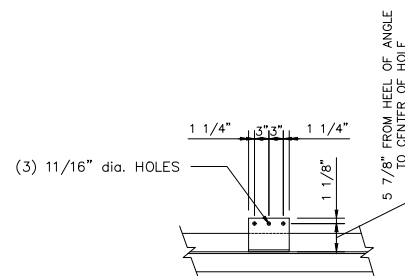
12/09/2021



**"A" BASE PLATE DETAIL**  
8 1/2" X 14 3/8" X 1 1/4" PLATE



**"B" ANGLE DETAIL (SIDE)**  
4" X 7" X 3/8" (5-1/2" LONG) ANGLE  
4" X 7" X 3/8" (8-1/2" LONG) ANGLE



**"C" ANGLE DETAIL (TOP)**  
4" X 7" X 3/8" (5-1/2" LONG) ANGLE  
4" X 7" X 3/8" (8-1/2" LONG) ANGLE

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES  
A572 - PLATES

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REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		W 14" X 53# BEAM	2365.1#
		TITLE:	
		CORNER COLUMN for WT-4	
	NAME: DWK	DATE: 07/02/21	PART NO.
	SCALE: 5/8 SCALE		314390

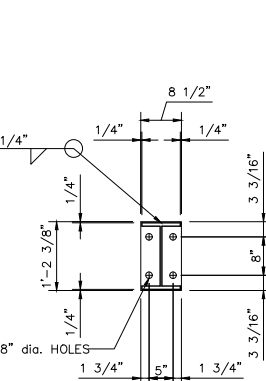


PART NO:

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

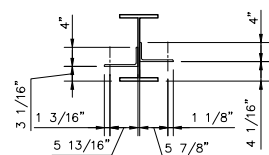


12/09/2021

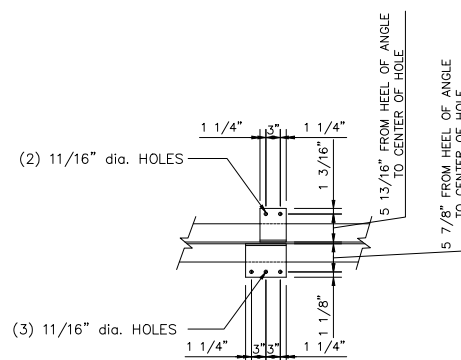


8 1/2" X 14 3/8" X 1 1/4" PLATE

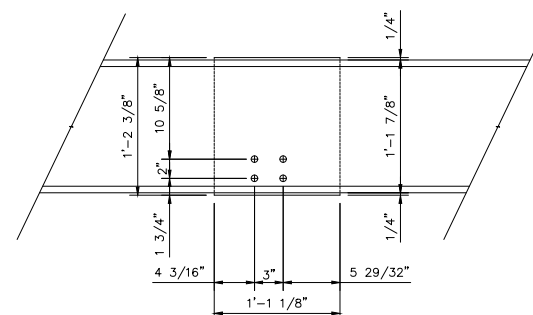
IMPORTANT: ANGLES ARE STAGGERED  
(SEE BELOW)



4" X 7" X 3/8" (5-1/2" LONG) ANGLE  
4" X 7" X 3/8" (8-1/2" LONG) ANGLE



4" X 7" X 3/8" (5-1/2" LONG) ANGLE  
4" X 7" X 3/8" (8-1/2" LONG) ANGLE



13 1/8" x 14 3/8" x 3/4" PLATE

SCALE: 1.5" = 1'

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES  
A572 - PLATES

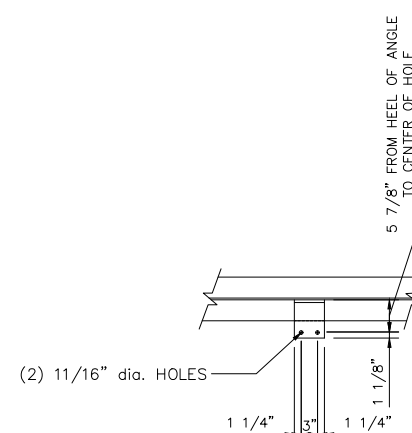
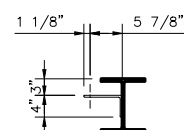
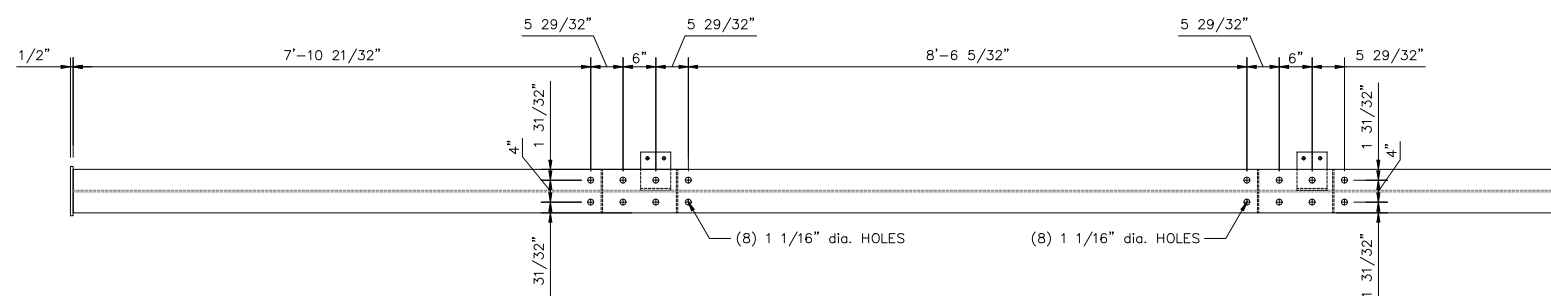
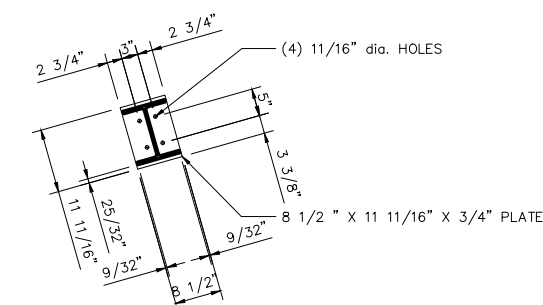
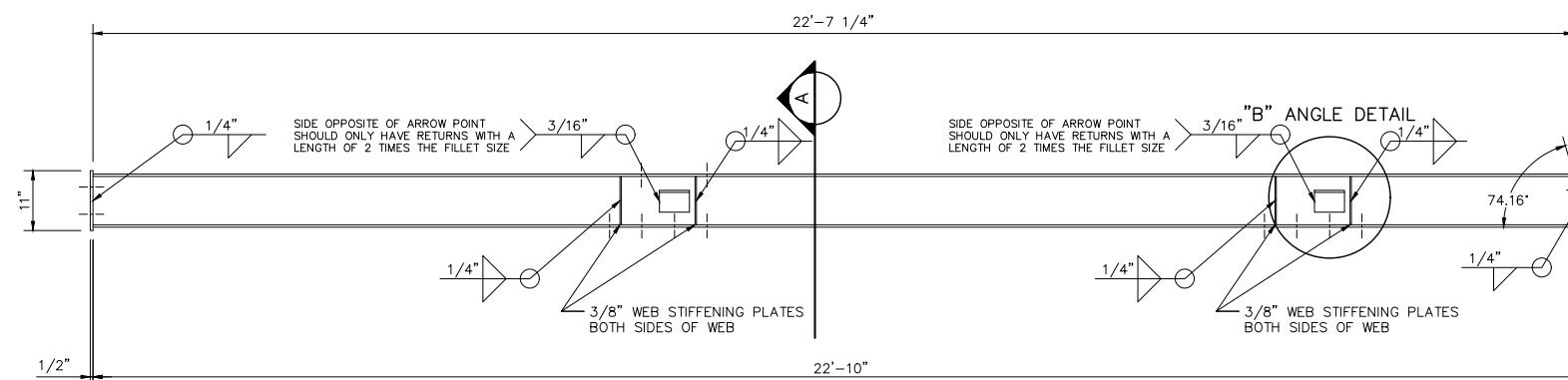
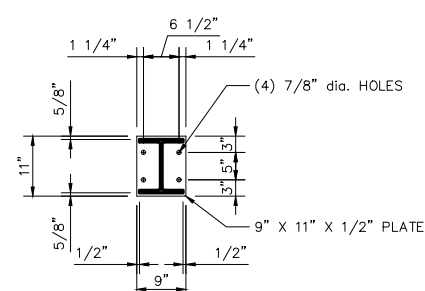
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			W 14" X 53# BEAM		2417.7#	
			TITLE:			
			CORNER COLUMN (SEISMIC) for WH-4			
			NAME: DWK	DATE: 07/02/21	PART NO.	
			SCALE: 5/8 SCALE		314391	



PART NO:

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS



**"B" ANGLE DETAIL (TOP)**  
4" X 7" X 3/8" ANGLE

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PART WITH OUT WRITTEN PERMISSION.

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		W 10" X 33# BEAM	818#
		TITLE:	
		<del>RESIDENCE</del> CORNER COLUMN for FF-4	
NAME: BJE		DATE: 10/04/05	PART NO.
SCALE: 3/4 SCALE			315022



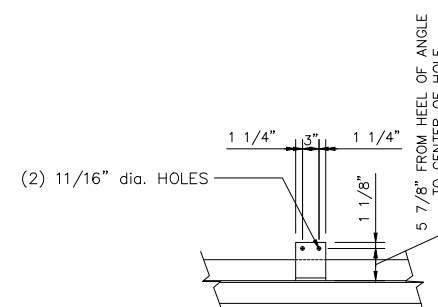
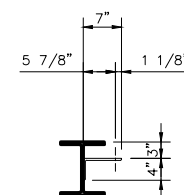
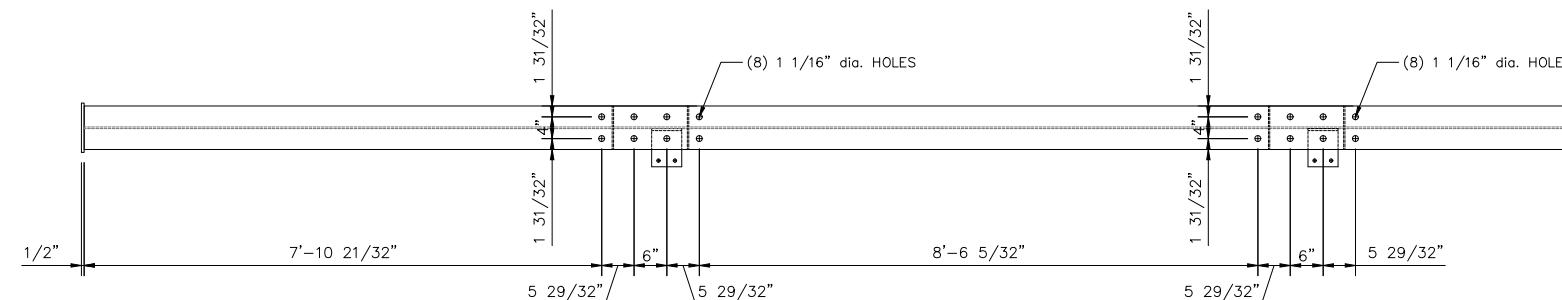
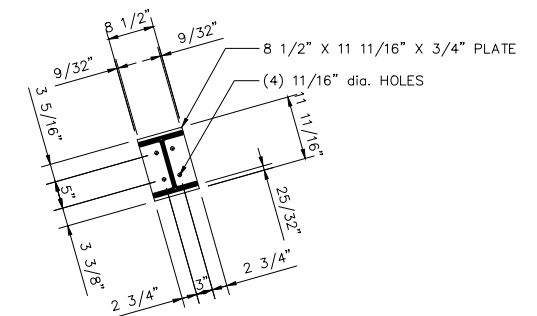
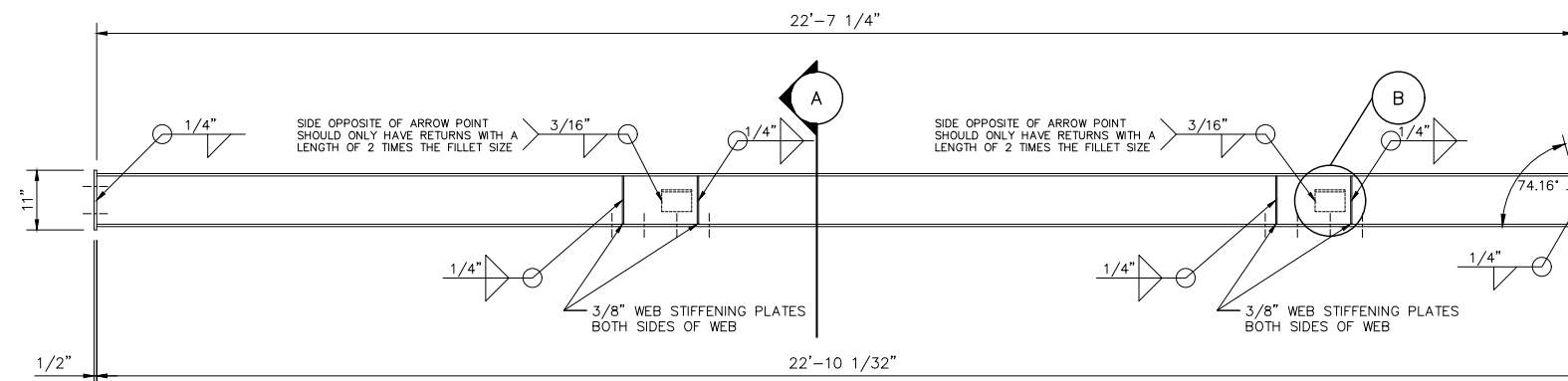
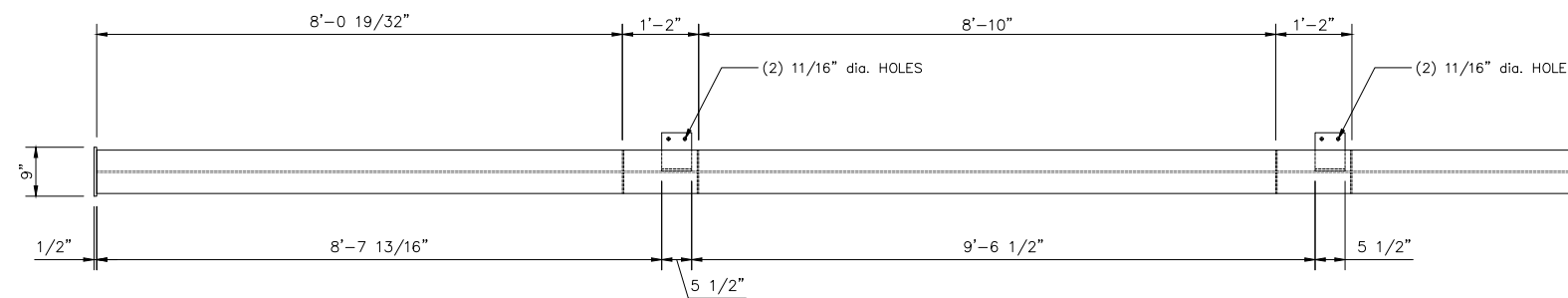
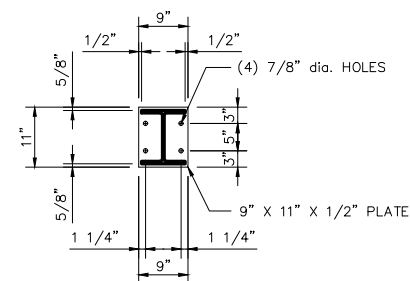
315116

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



12/09/2021



DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

FIRE FACILITIES INC.

"A" ANGLE DETAIL (SIDE) "B" ANGLE DETAIL (TOP)  
4" X 7" X 3/8" ANGLE 4" X 7" X 3/8" ANGLE

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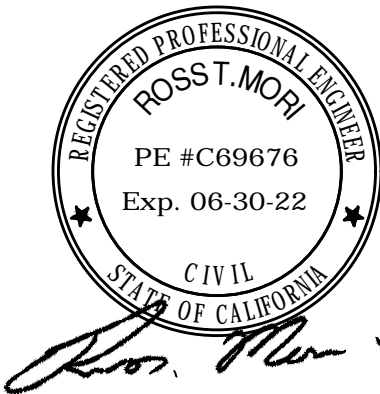
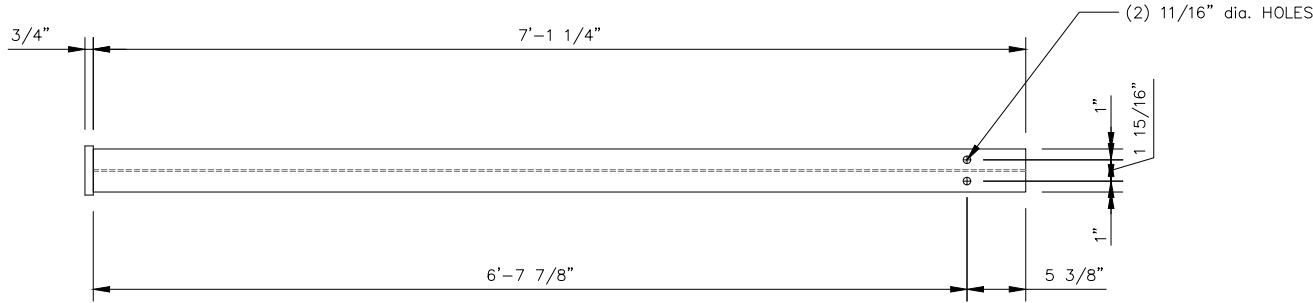
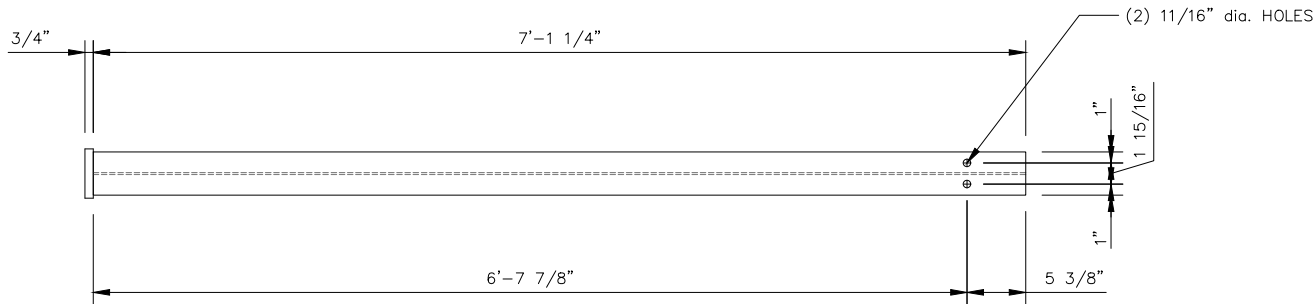
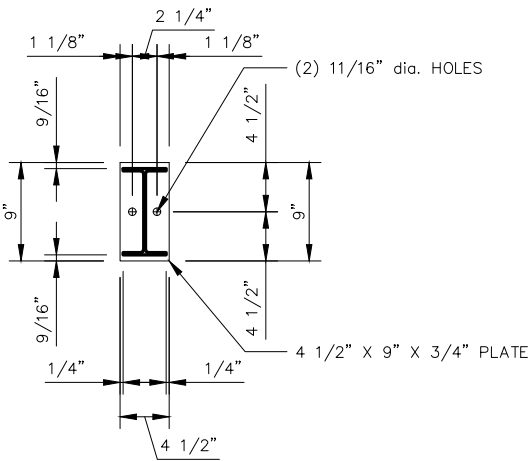
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
A.	6/14/01 SPW	W 10" X 33# BEAM	818#
TITLE:			
RESIDENCE CORNER COLUMN for WH-4			
NAME: S.P.W.		DATE: 4/4/95	PART NO.
SCALE: 3/4 SCALE			
			315116



315117

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



12/09/2021

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

FIRE FACILITIES INC.

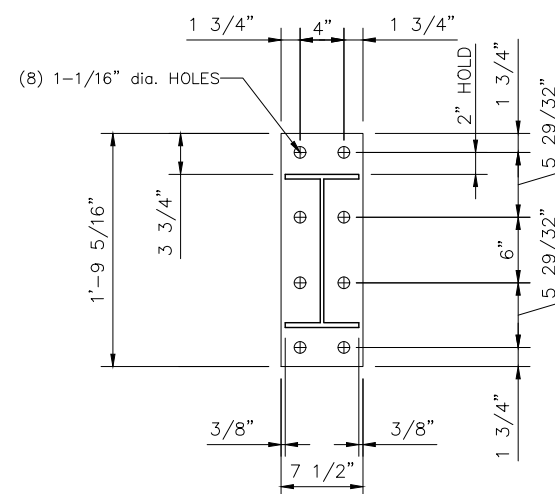
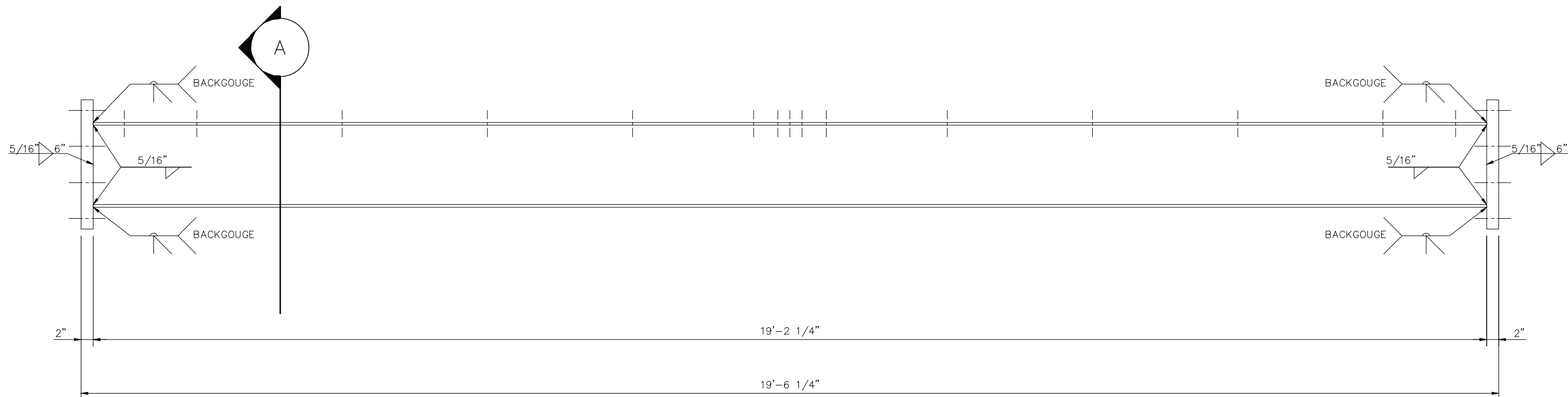
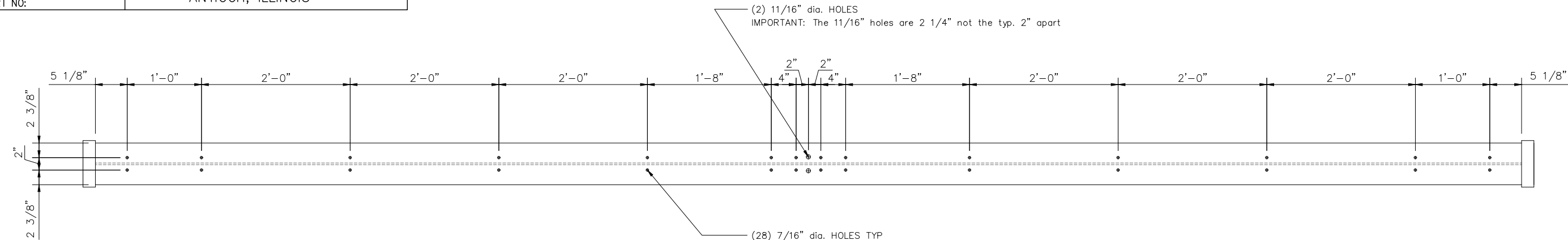
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			W 8" X 10# BEAM		75#
			TITLE:		
			TYP. <del>RESIDENCE</del> SUPPORT COLUMN for WH-4		
			NAME: S.P.W.	DATE: 4/2/95	PART NO.
			SCALE: 1 1/2 SCALE		
					315117



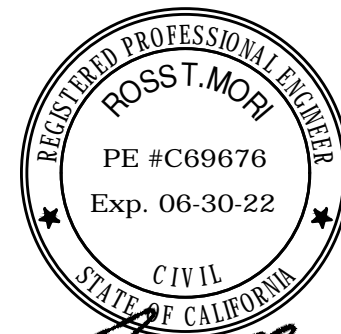
315121

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



END PLATE DETAIL "A"  
7 1/2" X 21 5/16" X 2" PLATE



12/09/2021

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

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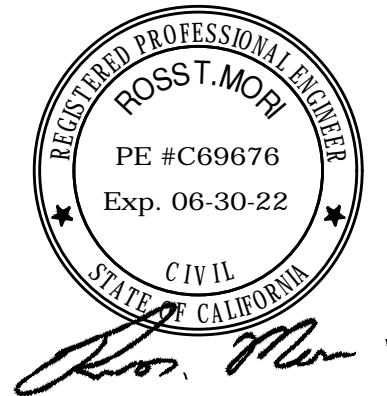
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
#1	9/16/98 SPW	W 14" X 34# BEAM	834#
CHANGED FROM W14X30			
TO A W14X34			
#2	2/01/10 - WELDS	TITLE:	
		RESIDENCE 2nd/3rd FLOOR TYP. BEAM for WH-4	
NAME: S.P.W.		DATE: 4/2/95	PART NO.
SCALE: 1 1/2 SCALE			315121



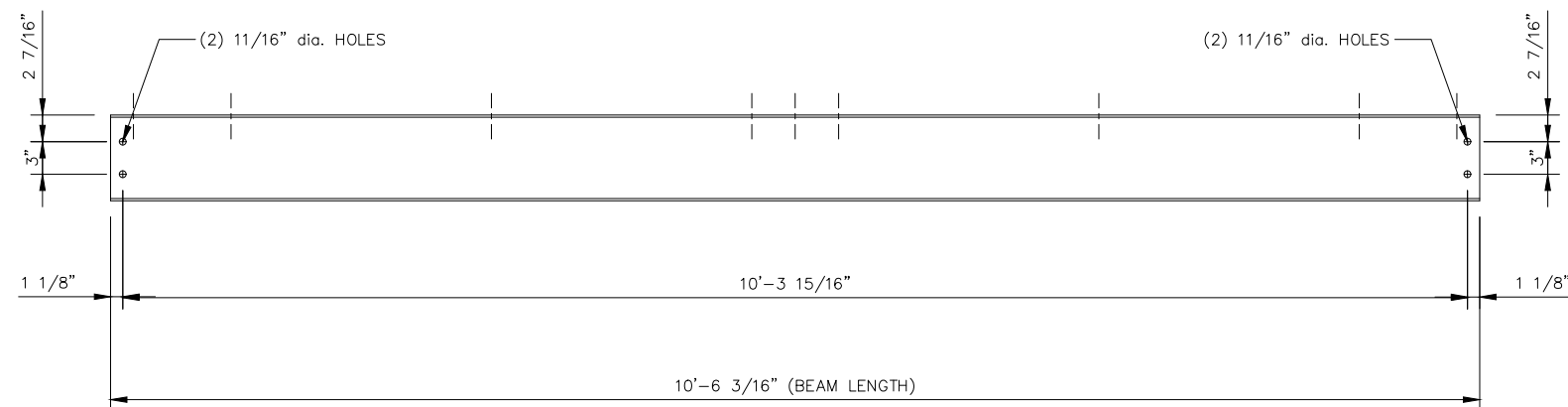
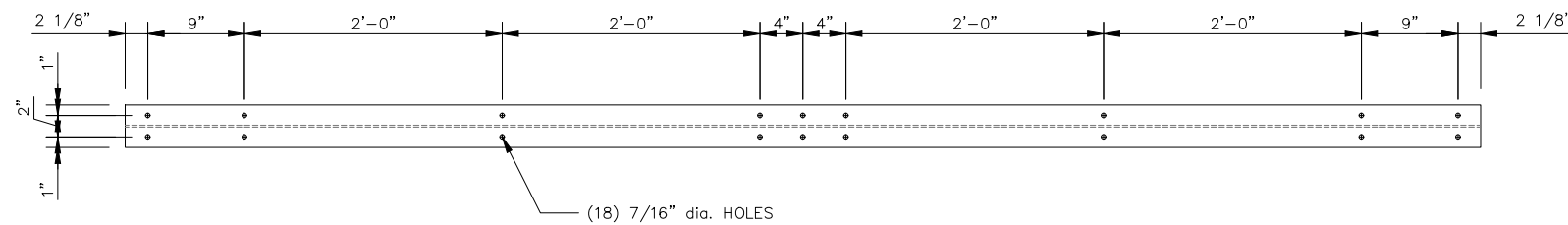
315123

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



12/09/2021



DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

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PHONE: (708) 279-6660 FAX (708) 279-2291  
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PART WITH OUT WRITTEN PERMISSION.

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		W 8" X 10# BEAM	105#
		TITLE:	
		TYP. <del>RESIDENCE</del> SIDE WALL BEAM for WH-4	
		NAME: S.P.W. DATE: 4/2/95	PART NO.
		SCALE: 1 1/2 SCALE	315123



315129

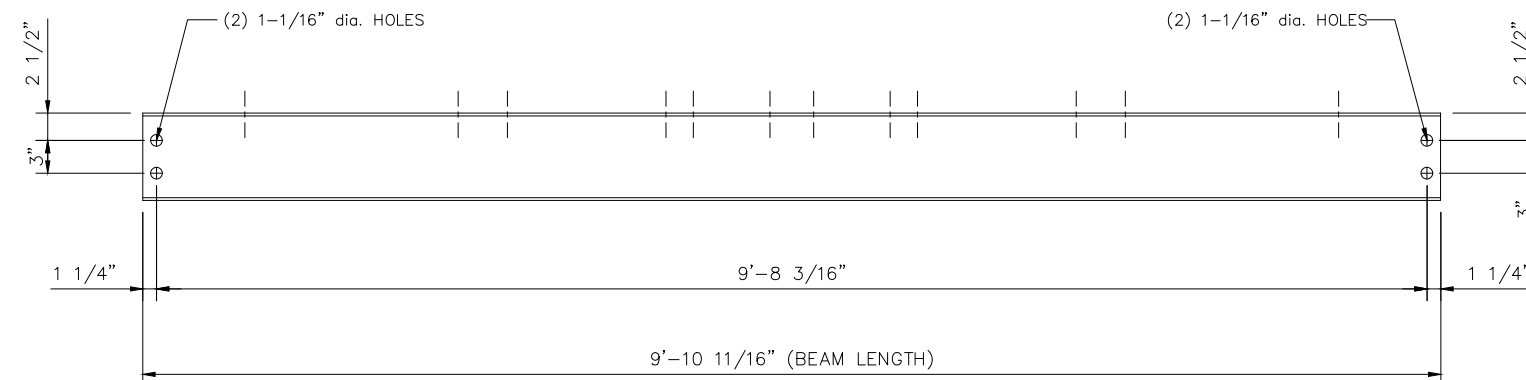
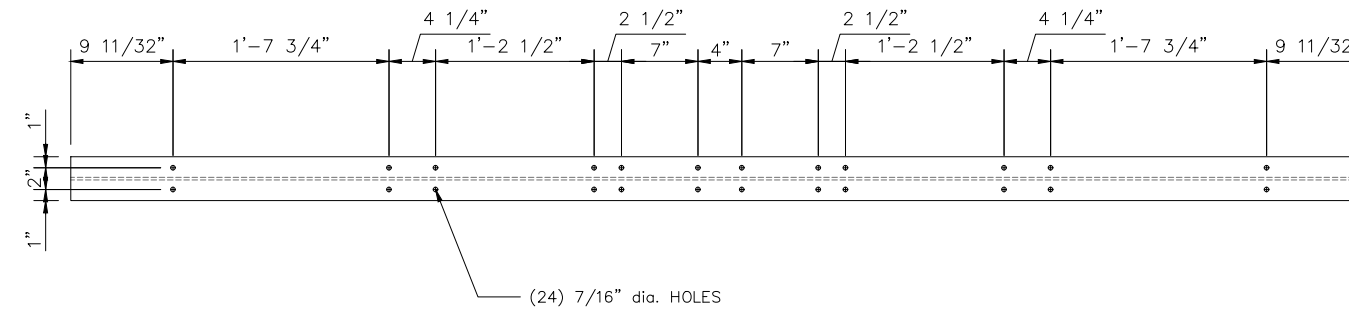
FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



*Ross T. Mori*

12/09/2021



DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

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PHONE: (708) 279-6660 FAX (708) 279-2291  
AND MAY NOT BE REPRODUCED IN WHOLE OR IN  
PART WITH OUT WRITTEN PERMISSION.

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
#1	12/31/97 SPW	W 8" X 13# BEAM	129#
#2	1/16/08 DWK		
#3	12/16/19 SPW		
TYP. TOWER INTERIOR BEAM for WH-4			
NAME: S.P.W.		DATE: 4/2/95	PART NO.
SCALE: 1 1/2 SCALE			

315129



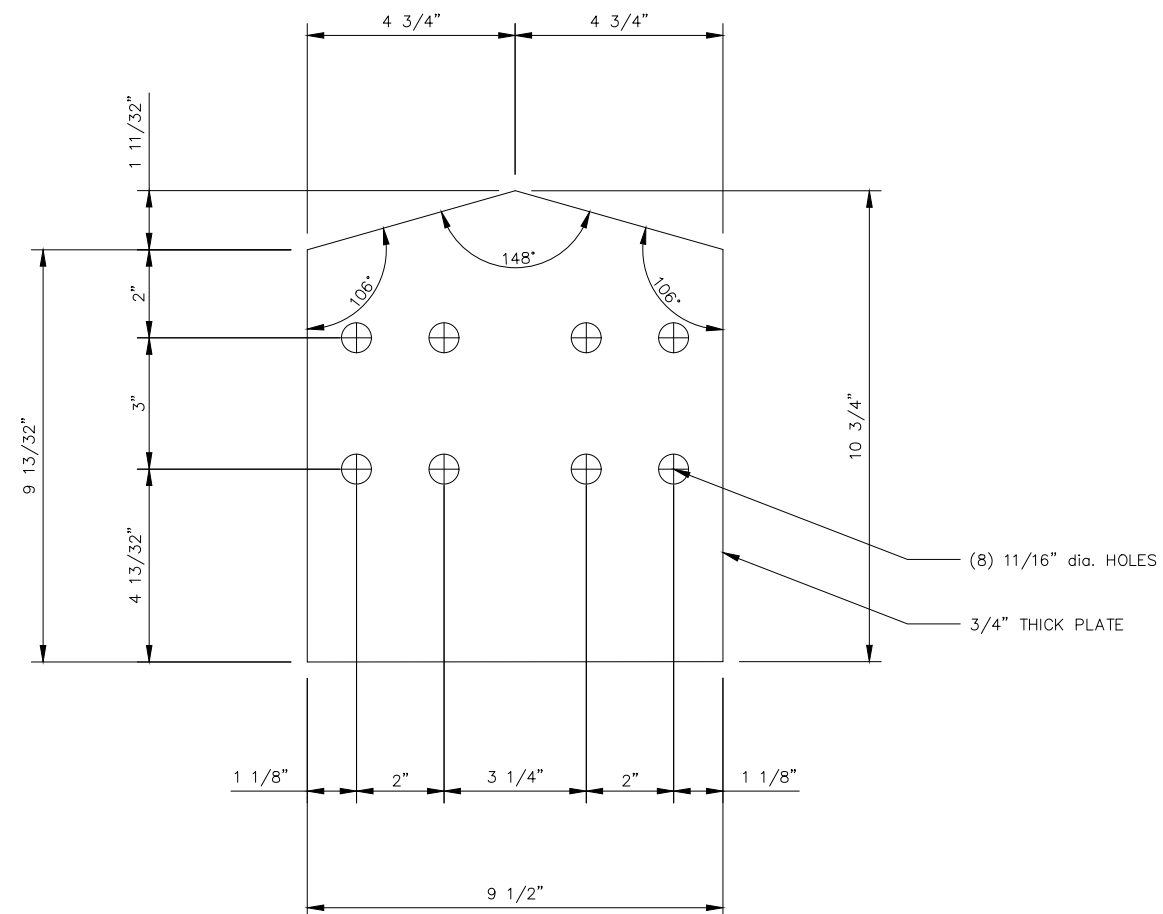
315135

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



12/09/2021



FIRE FACILITIES INC.

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PHONE: (708) 279-6660 FAX (708) 279-2291  
AND MAY NOT BE REPRODUCED IN WHOLE OR IN  
PART WITH OUT WRITTEN PERMISSION.

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		9 1/2" X 10 3/4" X 3/4" PLATE (A-36)	29#
TITLE:			
RAFTER CONNECTION PLATE for WH-4			
	NAME: S.P.W.	DATE: 4/2/95	PART NO.
	SCALE: 6 SCALE		

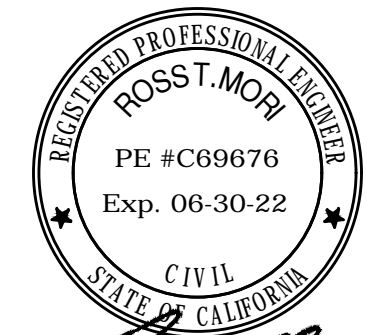
315135



315142

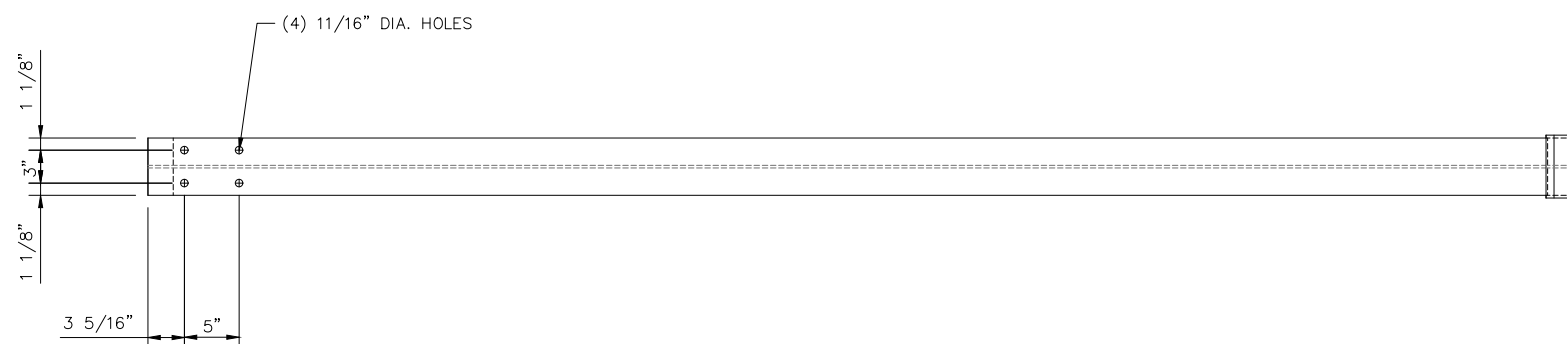
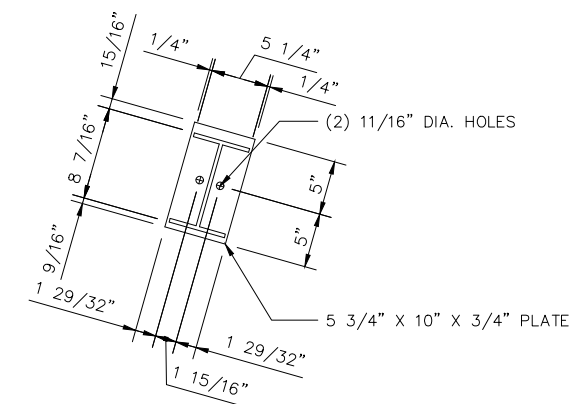
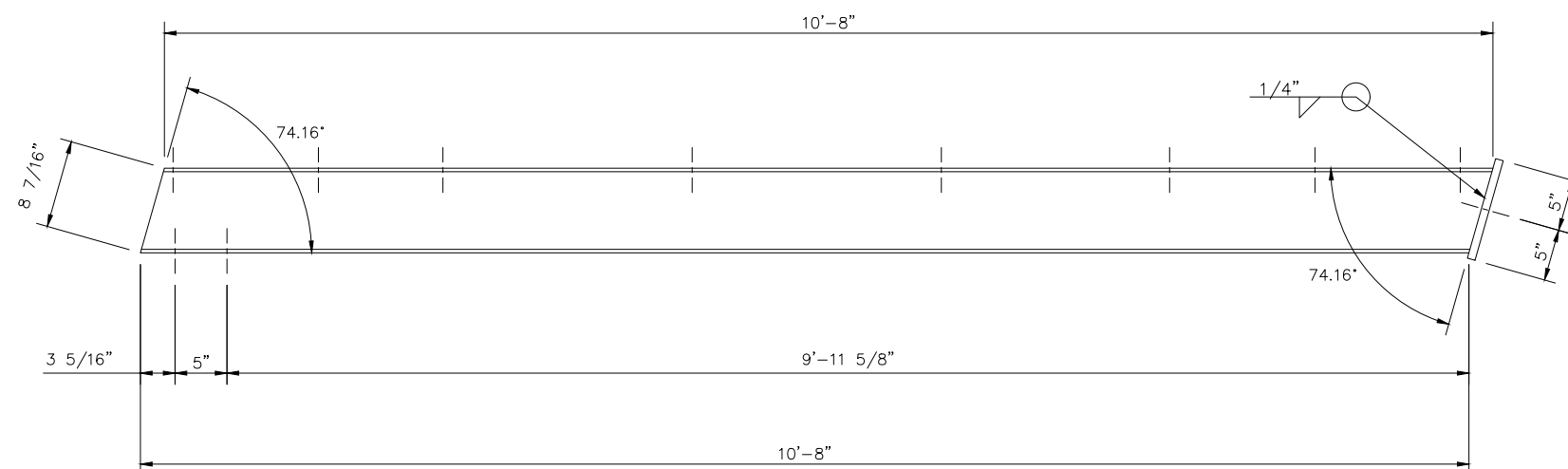
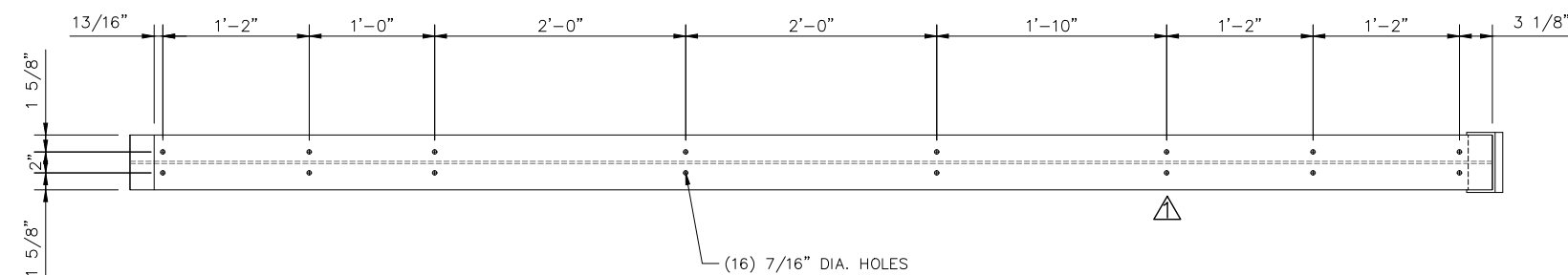
FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



*Rosst. Mori*

12/09/2021



DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

FIRE FACILITIES INC.

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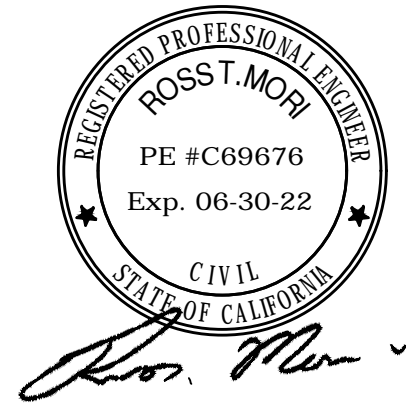
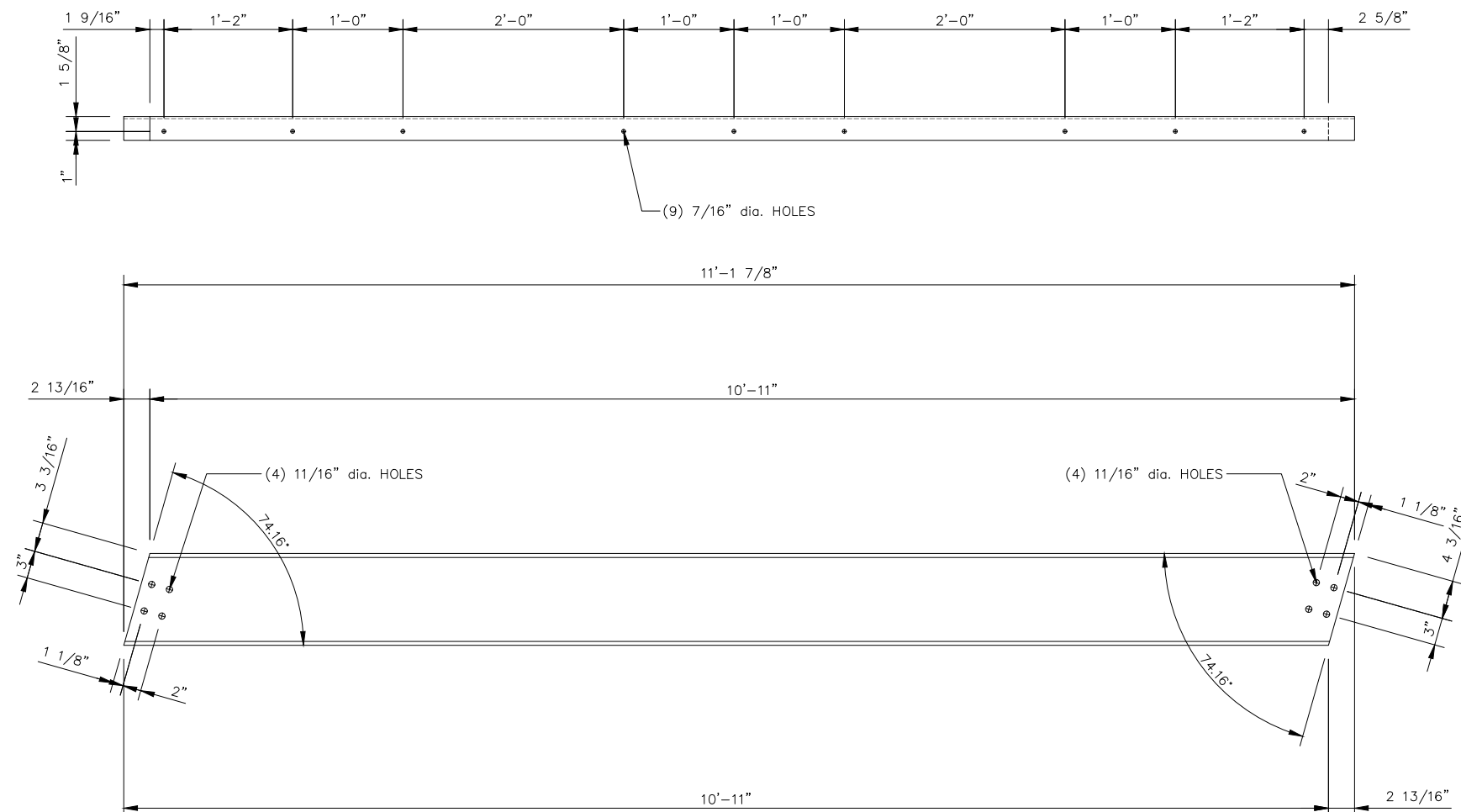
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
1.)	GWL 03-21-00	W 8" X 18# BEAM	204#
MOVED 1 SET OF HOLES & DELETED 1 SET			
TITLE:			
RESIDENCE ROOF TYP. BEAM for WH-4			
NAME: S.P.W.		DATE: 4/2/95	PART NO.
SCALE: 1 1/2 SCALE			

315142



PART NO:

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS



12/09/2021

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

FIRE FACILITIES INC.

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			C 10" X 15.3# BEAM		167#
	TITLE:				
	<del>RESIDENCE</del> /TOWER ROOF CHANNEL for WH-4				
	NAME: S.P.W.		DATE: 4/2/95	PART NO.	
	SCALE: 1 1/2" SCALE		315143		



PART NO:

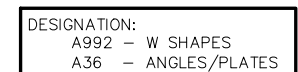
FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS



Diagram showing the elevation view of a steel beam with dimensions and hole locations. The beam has a total length of 25' 5/8". The dimensions are as follows:

- Left end: 1 5/8" (height)
- First hole: 2 5/8" from the left end
- Second hole: 1'-2" from the first hole
- Third hole: 1'-0" from the second hole
- Fourth hole: 2'-0" from the third hole
- Fifth hole: 1'-0" from the fourth hole
- Sixth hole: 1'-0" from the fifth hole
- Seventh hole: 2'-0" from the sixth hole
- Eighth hole: 1'-0" from the seventh hole
- Ninth hole: 1'-2" from the eighth hole
- Right end: 1 5/16" (height)

(9) 7/16" dia. HOLES



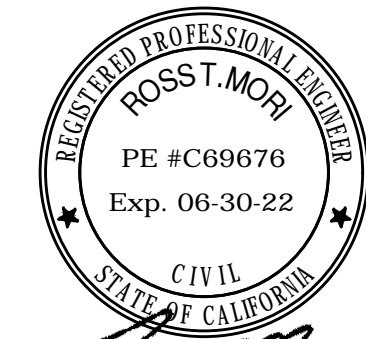
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PHONE: (708) 279-6660 FAX (708) 279-2291  
AND MAY NOT BE REPRODUCED IN WHOLE OR IN  
PART WITH OUT WRITTEN PERMISSION.

REVISIONS:	BY:	MATERIAL DESCRIPTION:		WEIGHT
		C 10" X 15.3# BEAM		167#
		TITLE:		
		<del>RESIDENCE</del> /TOWER ROOF CHANNEL for WH-4		
		NAME: S.P.W.	DATE: 4/2/95	PART NO.
		SCALE: 1 1/2 SCALE		315144

315249

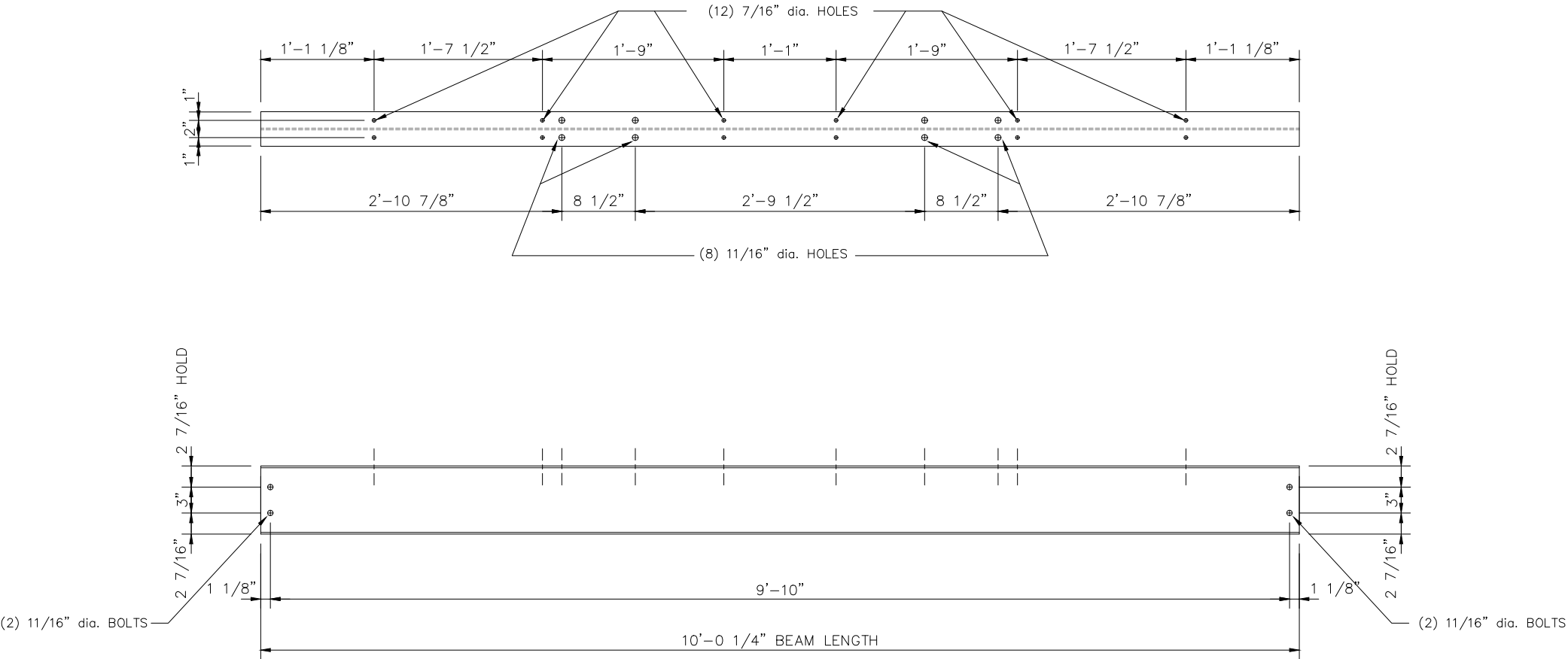
FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



*Rosst. Mori*

12/09/2021



FIRE FACILITIES INC.

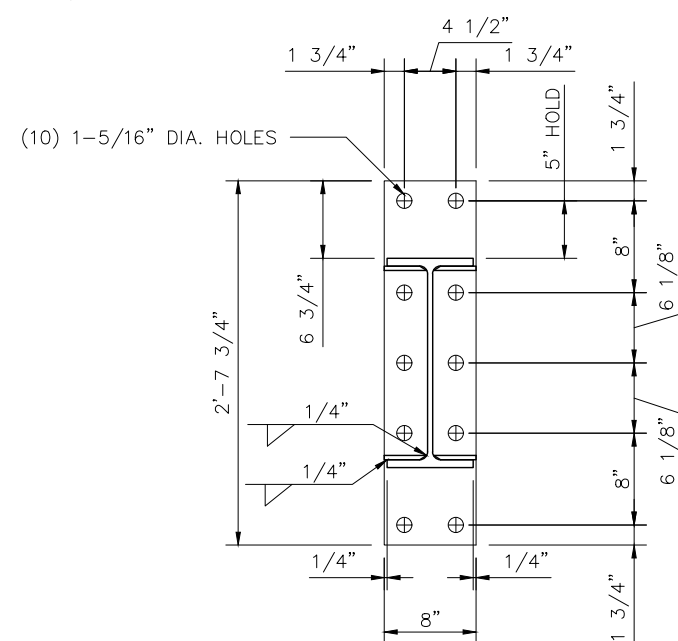
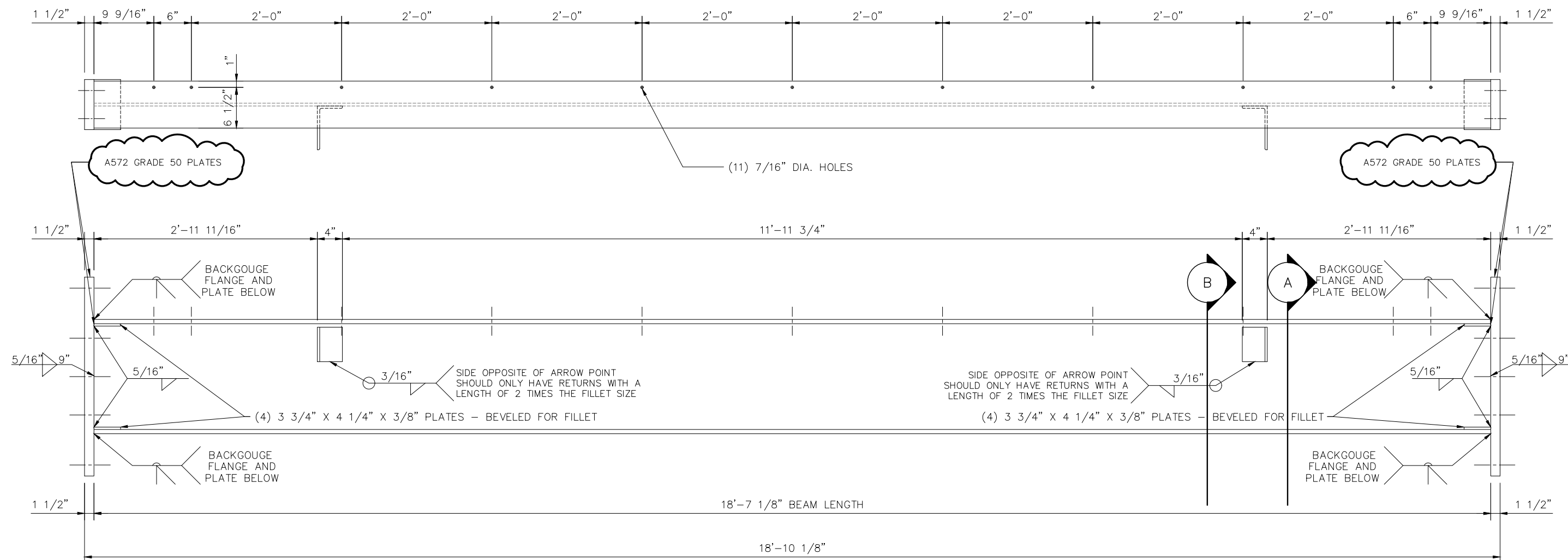
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			W 8" X 10# BEAM (A-36)	100.21#
			TITLE:	
			TOWER ROOF BEAM for WH-4 W/ RAPP. PLATFORM	
			NAME: S.P.W. DATE: 4/21/99	PART NO.
			SCALE: 1 1/2 SCALE	315249



315957

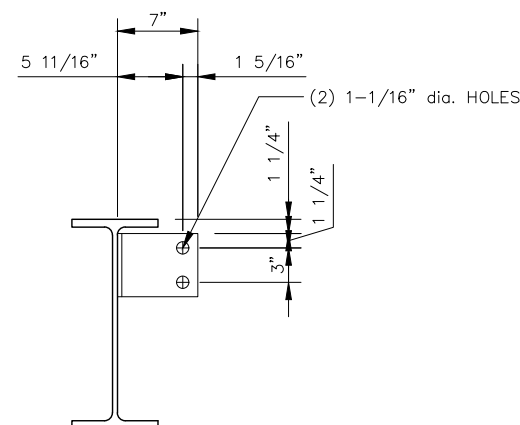
FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



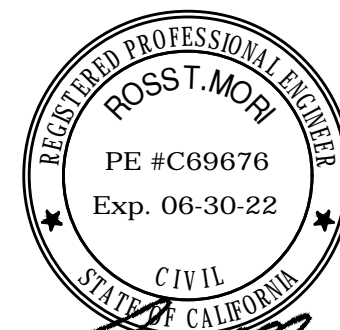
END PLATE DETAIL "A"

8" X 31 3/4" X 1 1/2" PLATE



CLIP ANGLE DETAIL "B"

4" X 7" X 3/8" (5-1/2" LONG) ANGLE



12/09/2021

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES  
A572 GRADE 50 - PLATES

FIRE FACILITIES INC.

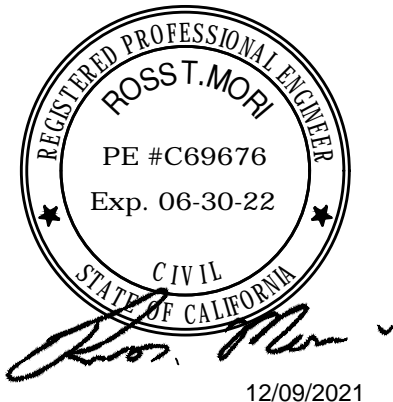
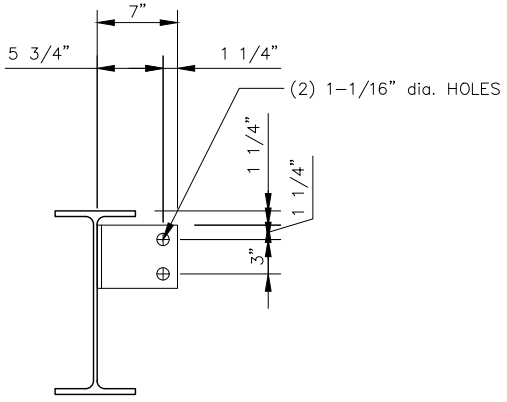
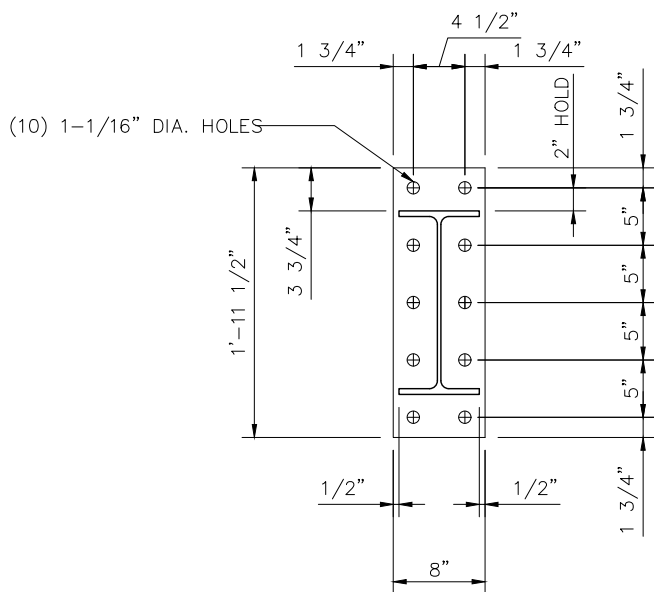
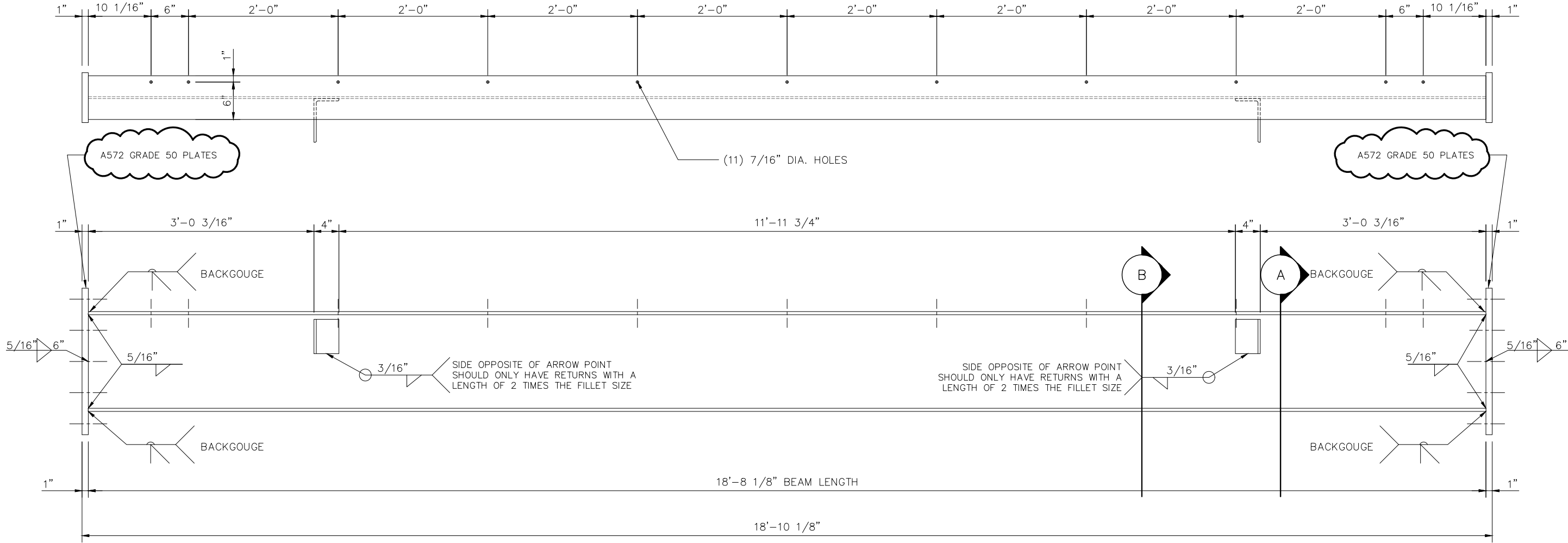
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AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITH OUT WRITTEN PERMISSION.

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		W 18" X 60# BEAM	1357.7#
TITLE:			
2nd FLR END BEAM (SEISMIC) for WH-4			
NAME: D.W.K.		DATE: 07/19/17	PART NO.
SCALE: 1 1/2 SCALE			
			315957

315958

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES  
A572 GRADE 50 - PLATES

FIRE FACILITIES INC.

END PLATE DETAIL "A"  
8" X 23 1/2" X 1" PLATE

CLIP ANGLE DETAIL "B"  
4" X 7" X 3/8" (5-1/2" LONG) ANGLE

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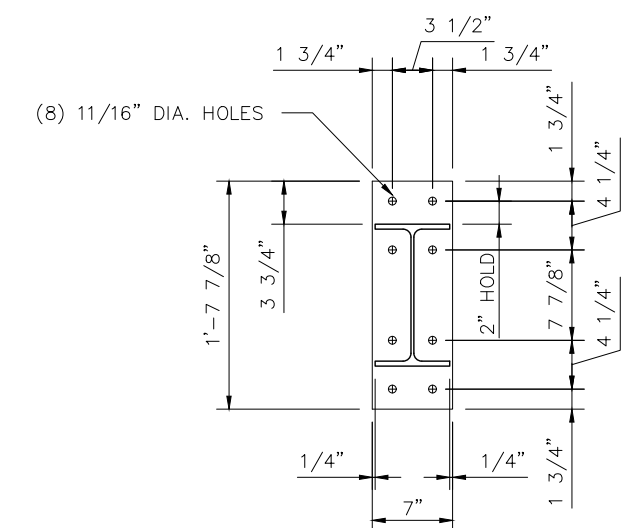
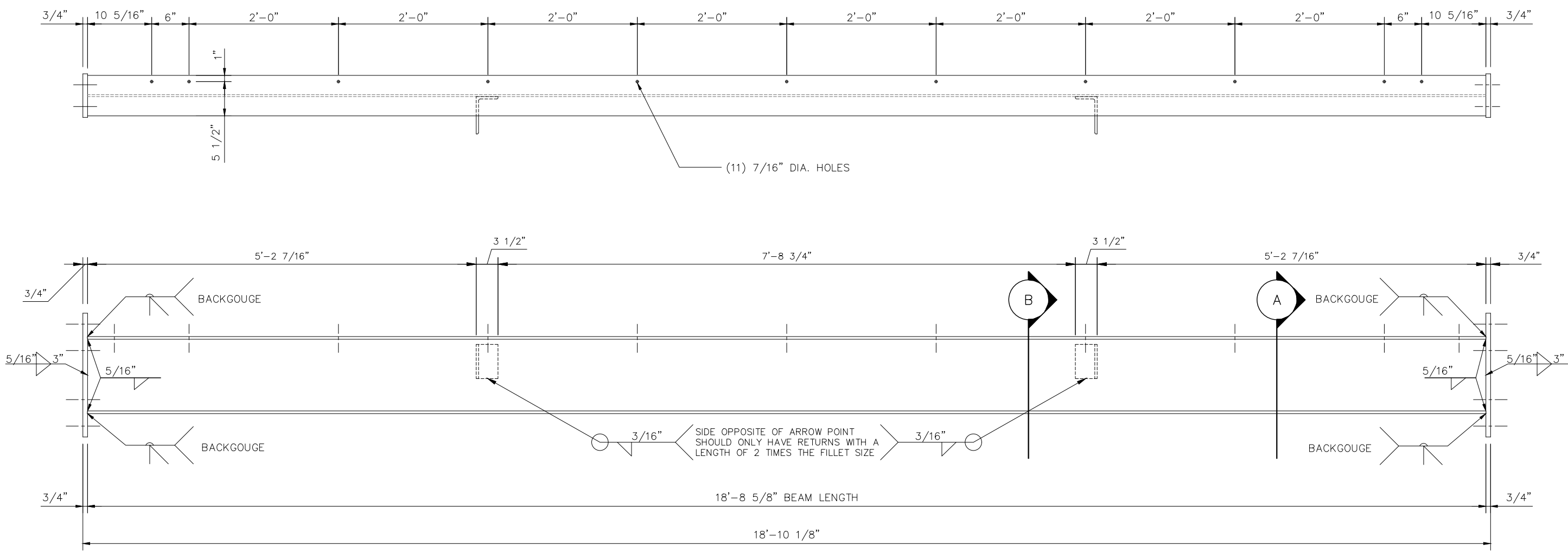
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		W 16" X 40# BEAM	866.2#
		TITLE:	
		3rd/4th FLR END BEAM (SEISMIC) for WH-4	
	NAME: D.W.K.	DATE: 07/19/17	PART NO.
	SCALE: 1 1/2 SCALE		315958



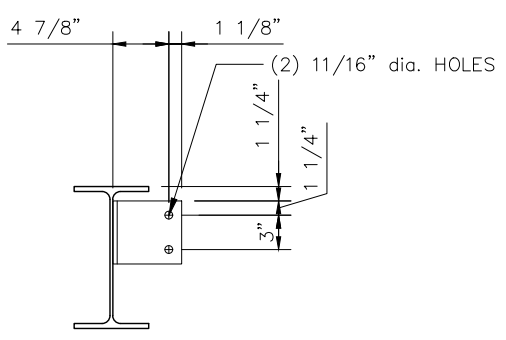
315959

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

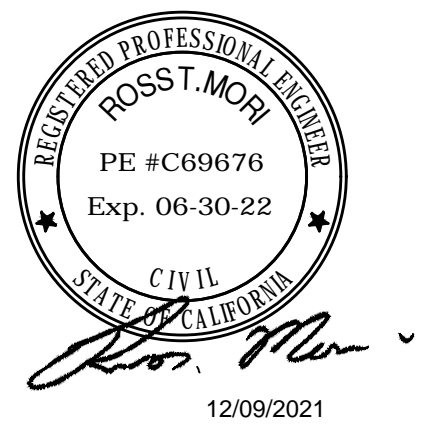
PART NO:



END PLATE DETAIL "A"  
7" X 19 7/8" X 3/4" PLATE



CLIP ANGLE DETAIL "B"  
3.5" X 6" X 3/8" ANGLE (5 1/2" LONG)



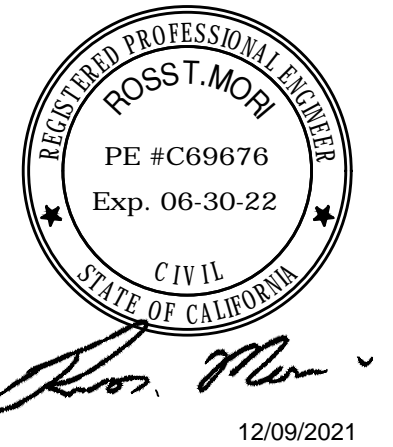
DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

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				W 12" X 30# BEAM	631.5#
		TITLE:			
		ROOF END BEAM (SEISMIC) for WH-4			
		NAME: D.W.K.	DATE: 07/19/17	PART NO.	
		SCALE: 1 1/2 SCALE		315959	

PART NO:

PART NO:



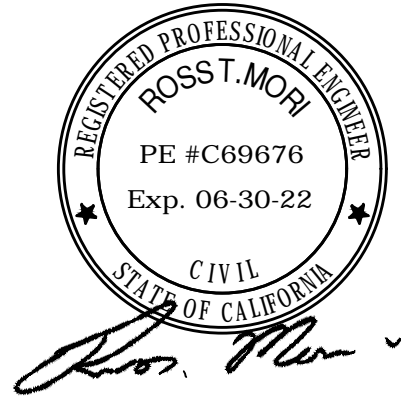
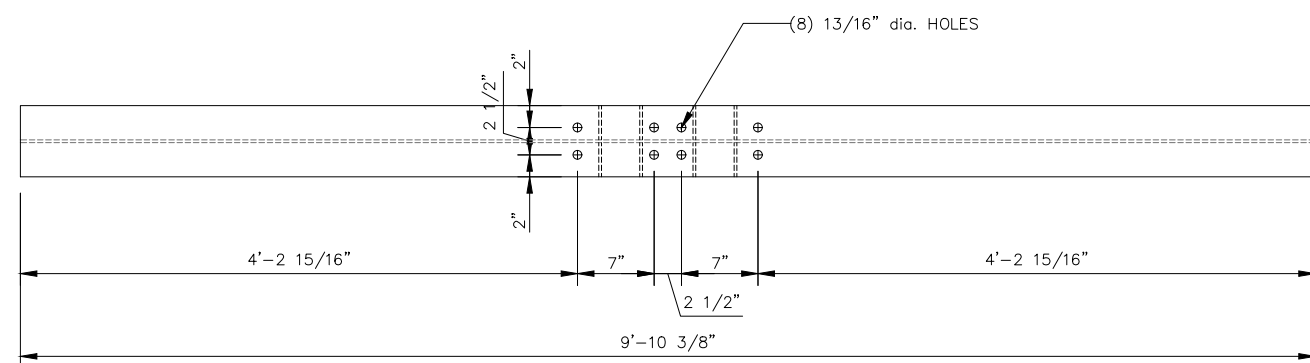
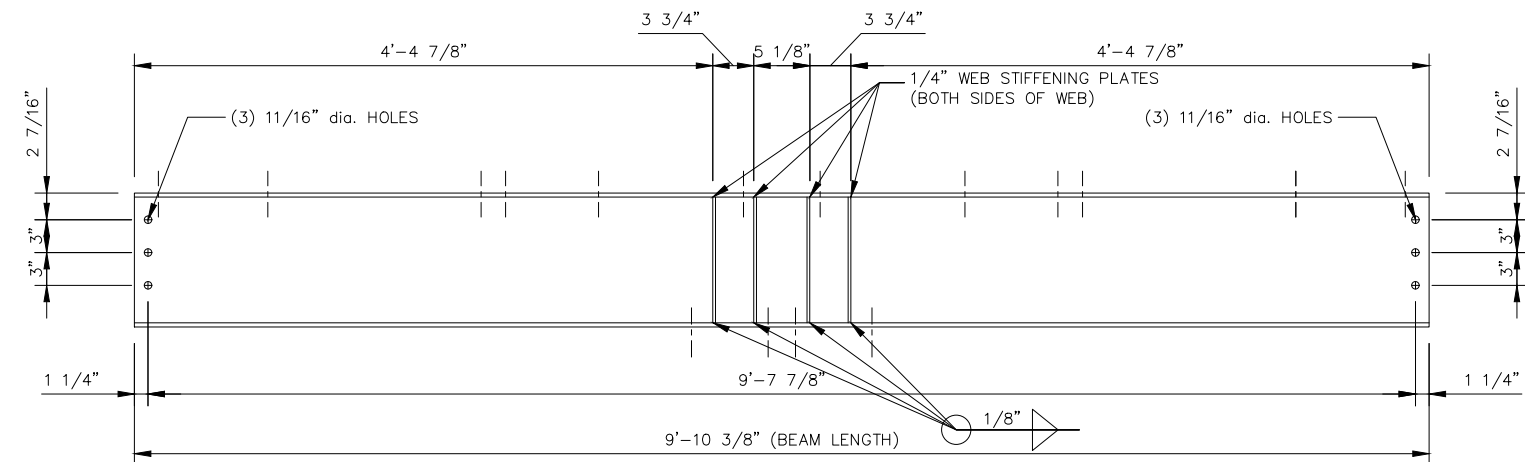
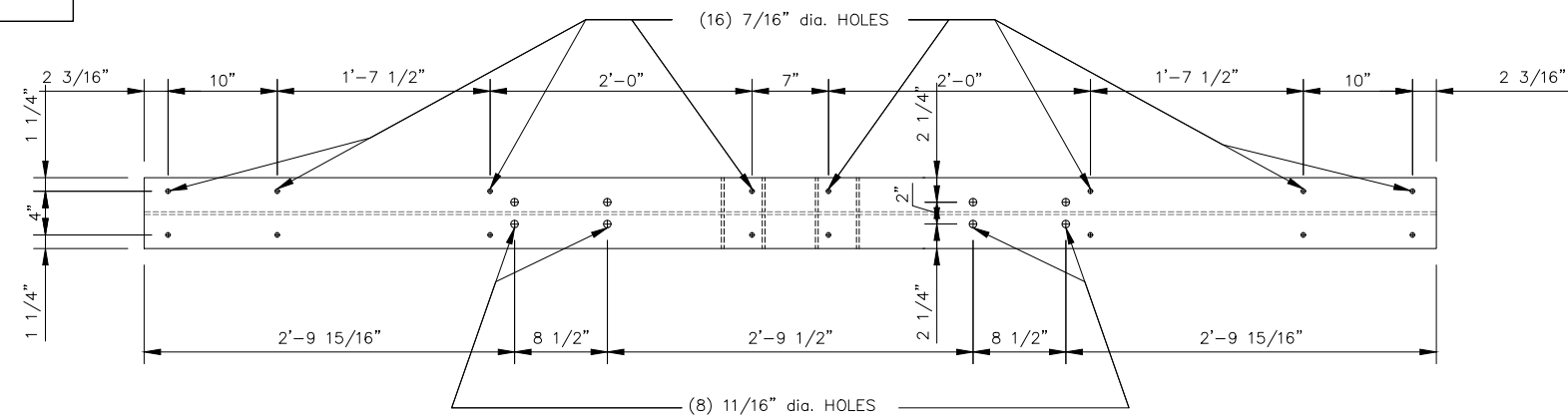
FIRE FACILITIES INC.

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
A) NODE STIFFENERS		W 12" X 26# BEAM	276.8#
07/02/2021 : DWK			
		TITLE:	
		BRACED TOWER (SEISMIC) SIDE WALL BEAM for WH-4	
	NAME: D.W.K.	DATE: 07/19/17	PART NO.
	SCALE: 1 1/2 SCALE		315960



PART NO:

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS



12/09/2021

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

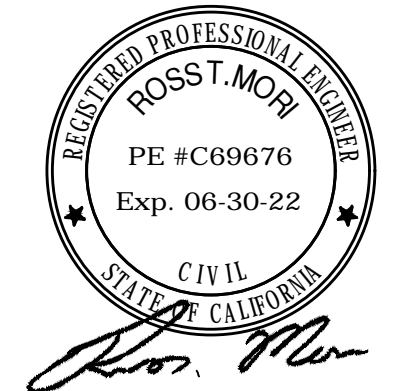
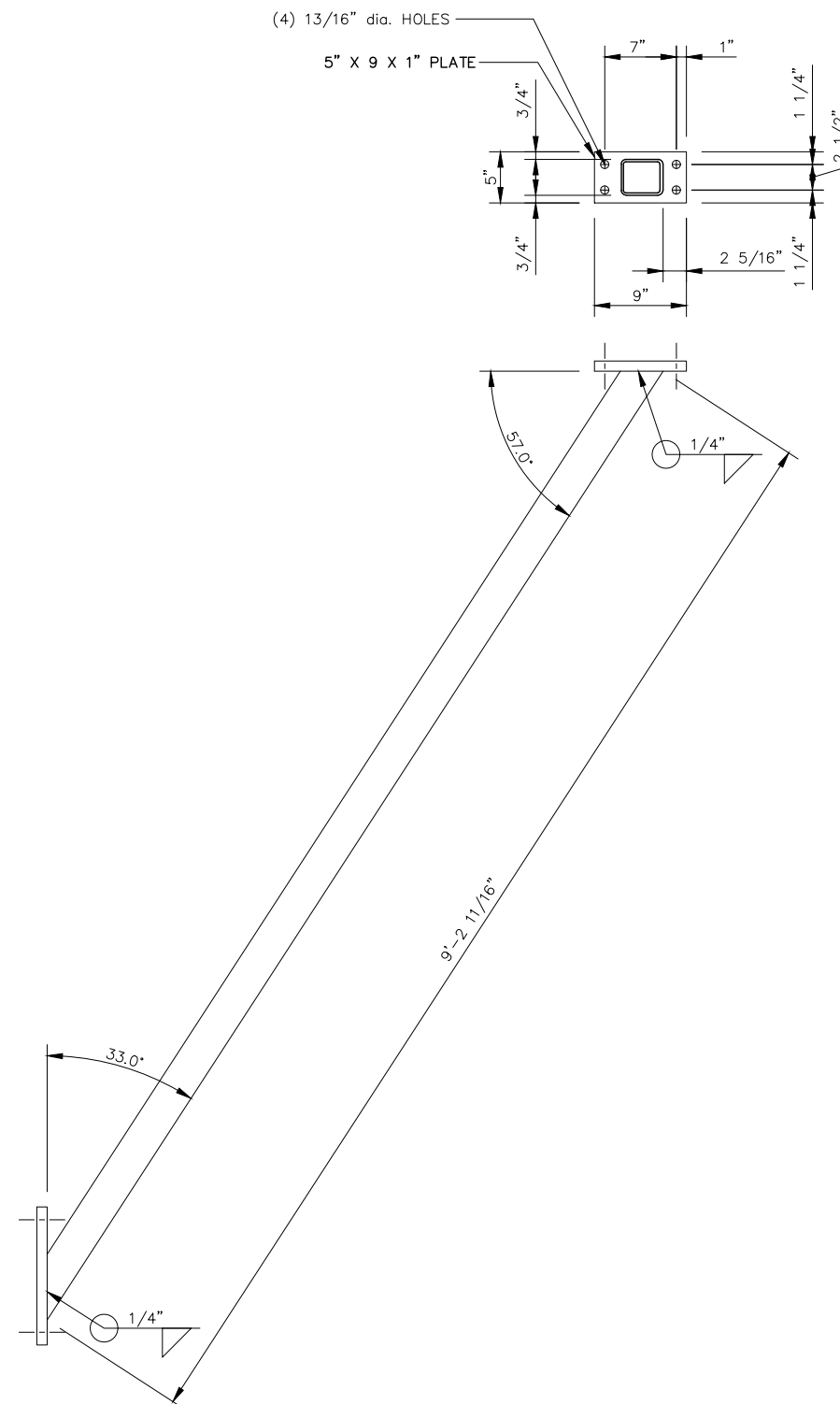
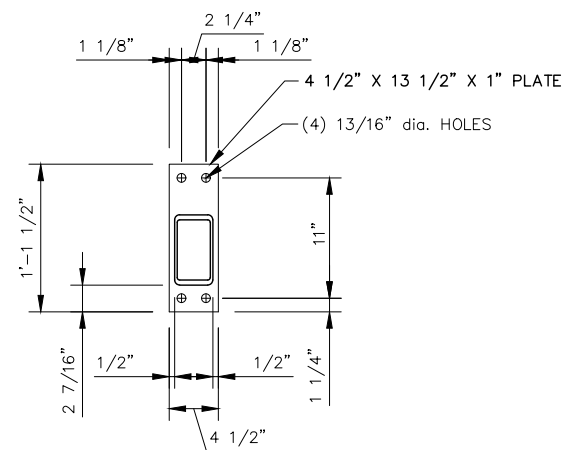
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	A) NODE STIFFENERS 07/02/2021 : DWK	W 12" X 26# BEAM		276.8#
		TITLE:		
		SPEC BRACED TOWER ROOF BEAM for WH-4 (SEIS)		
		NAME: D.W.K.	DATE: 07/19/17	PART NO.
		SCALE: 1 1/2 SCALE		315961

315962

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



12/09/2021

DESIGNATION:  
A500 GRADE B - TUBES  
A36 - ANGLES/PLATES

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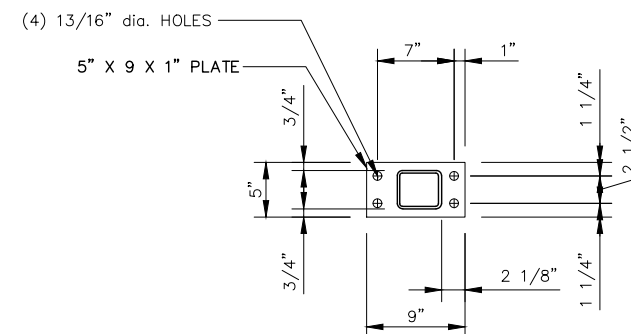
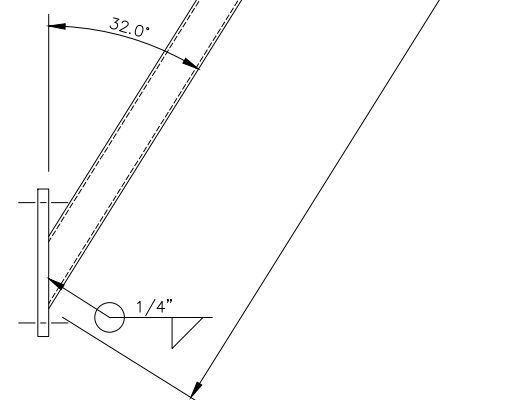
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		3-1/2" X 3-1/2" X 1/4" TUBE	123.3#
TITLE:			
SPEC 1ST FLOOR (SEISMIC) BRACE for WH-4			
NAME: D.W.K.		DATE: 07/19/17	PART NO.
SCALE: 1 1/2" SCALE			

315962



PART NO:

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS



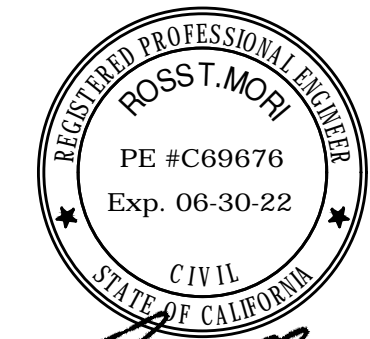
FIRE FACILITIES INC.

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		3-1/2" X 3-1/2" X 1/4" TUBE	126.2#
		TITLE:	
		SPEC UPPER FLOOR (SEISMIC) BRACE for WH-4	
		NAME: D.W.K.	DATE: 07/19/17
		SCALE: 1 1/2 SCALE	PART NO.
			315963

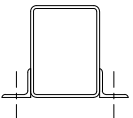
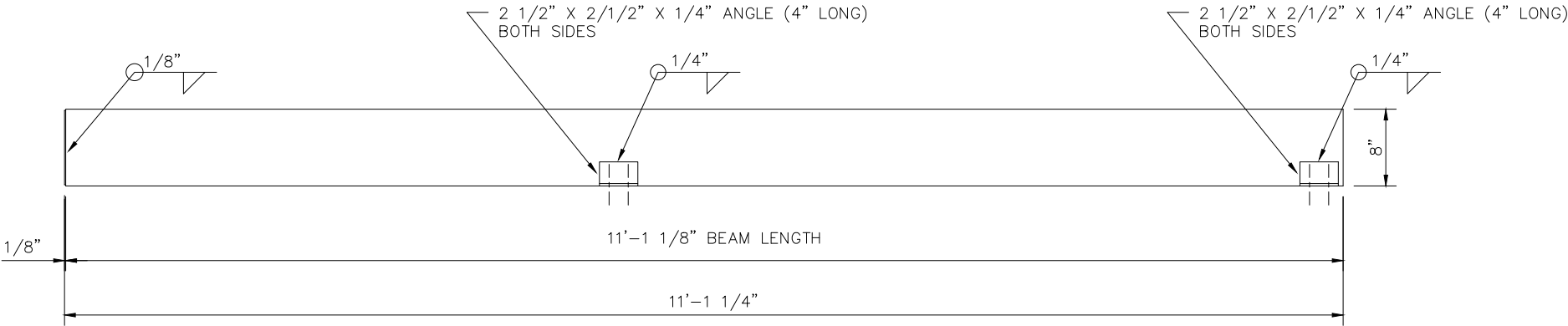
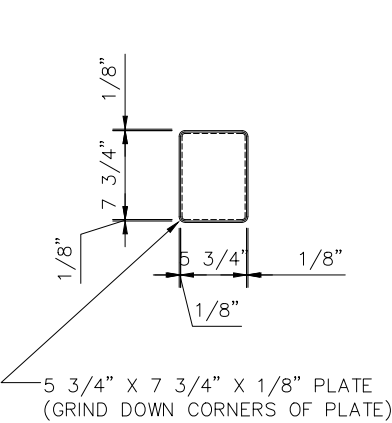
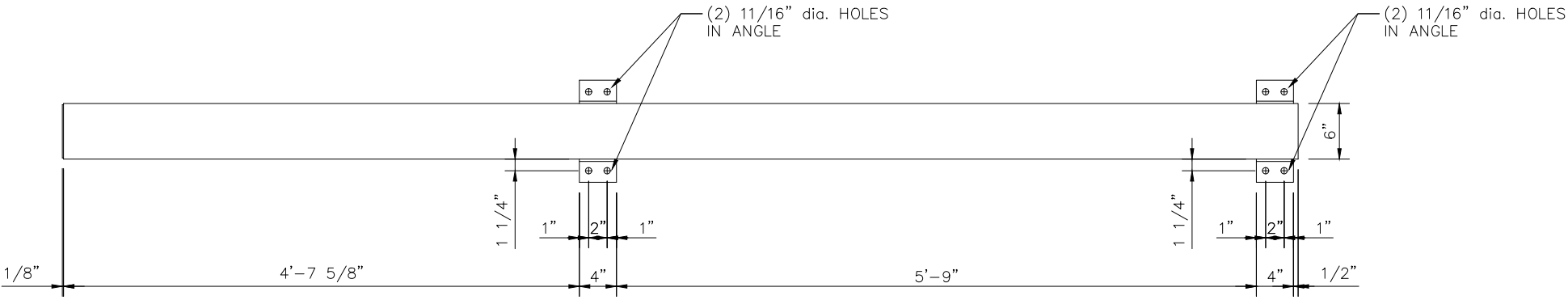
315964

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



*Rosst. Mori*  
12/09/2021



MAKE SURE ANGLES AND FILLET WELDS  
ARE FLUSH WITH BOTTOM OF TUBE

DESIGNATION:  
A500 GRADE B - TUBES  
A36 - ANGLES/PLATES

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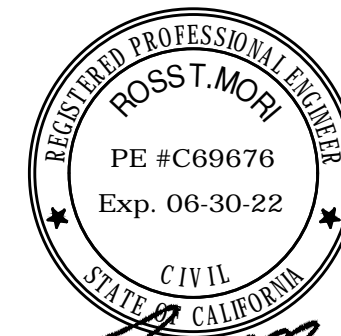
REVISIONS: BY:		MATERIAL DESCRIPTION:	WEIGHT
		8" X 6" X 1/4" TUBE	255.4#
		TITLE:	
		RAPPELLING PLATFORM BEAM	
		NAME: D.W.K.	DATE: 07/19/17
		SCALE: 1 1/2 SCALE	PART NO.
			315964



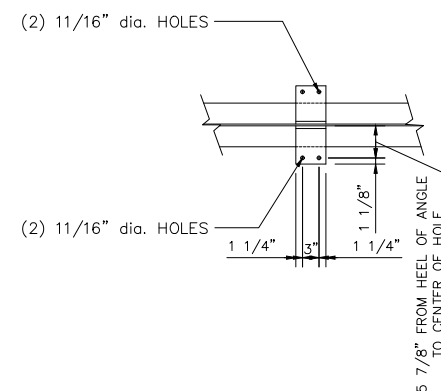
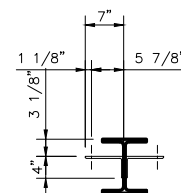
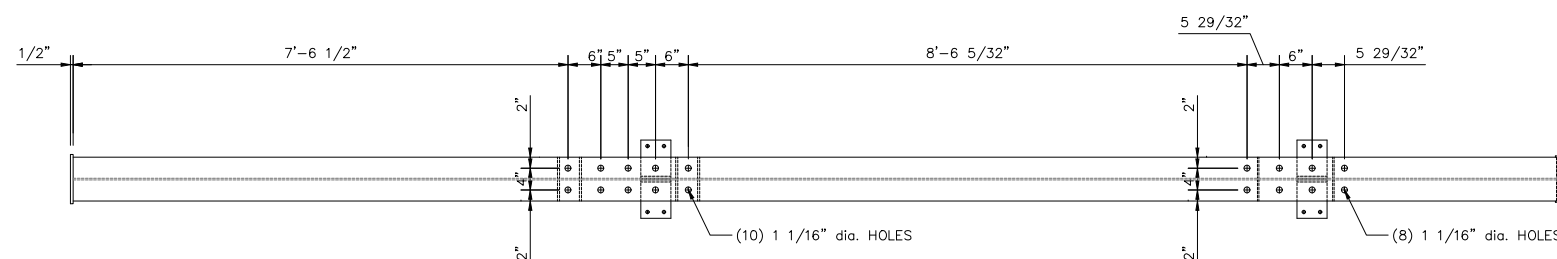
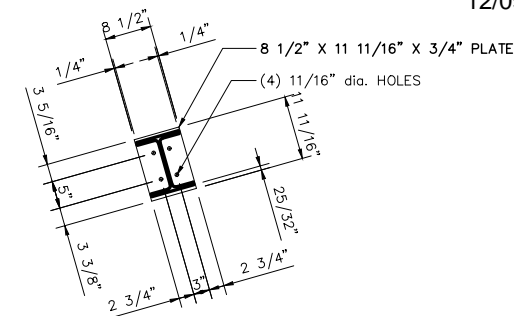
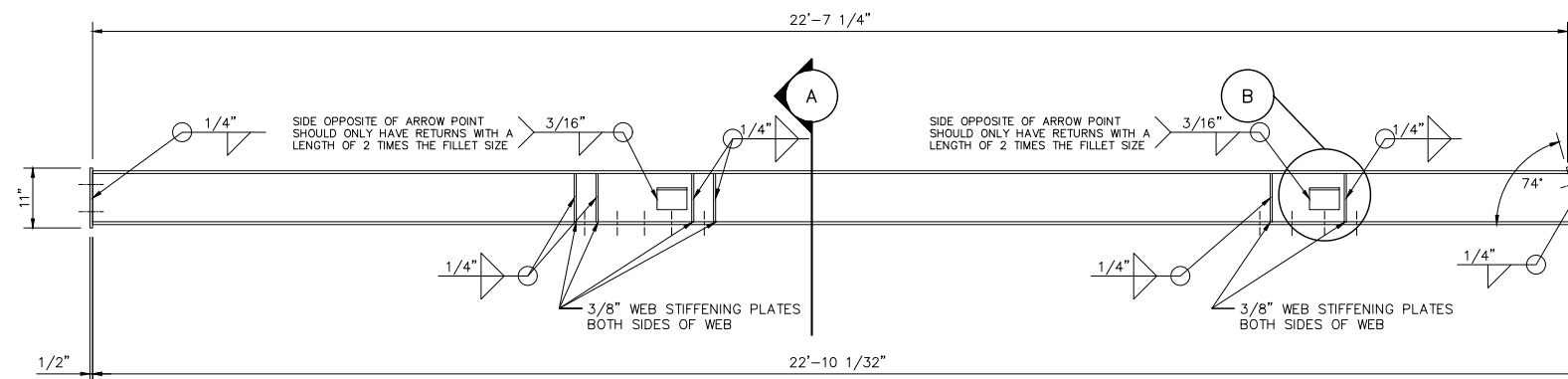
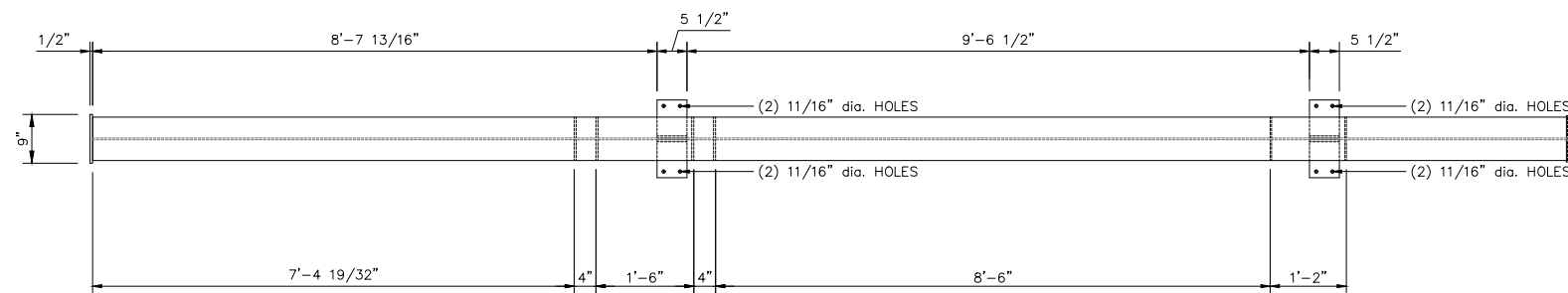
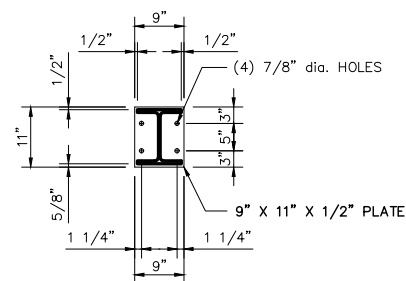
315965

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



12/09/2021



**"A" ANGLE DETAIL (SIDE)**  
4" X 7" X 3/8" ANGLE

**"B" ANGLE DETAIL (TOP)**  
4" X 7" X 3/8" ANGLE

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES


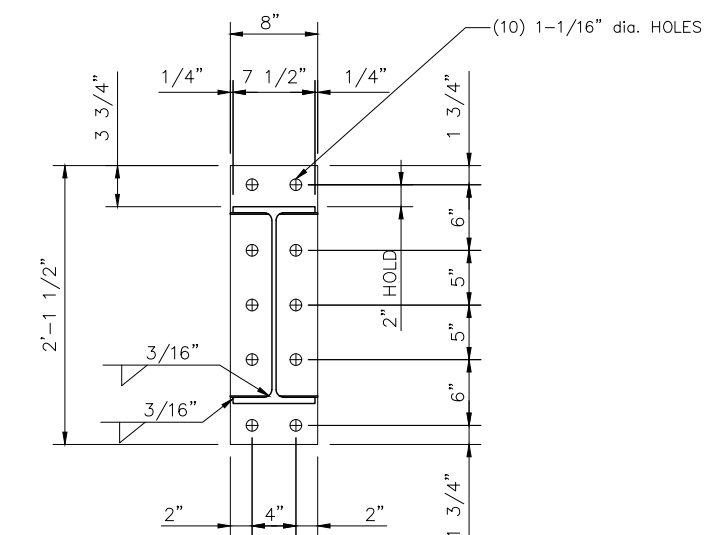
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REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		W 10" X 39# BEAM	989.5#
TITLE:			
RESIDENCE INTERIOR COLUMN (SEISMIC) for WH-4			
NAME: D.W.K.	DATE: 07/19/17	PART NO.	
SCALE: 3/4 SCALE		315965	

PART NO:

PART NO:



DESIGNATION:  
A992 - W SHAPES  
A572 GRADE 50 - PLATES

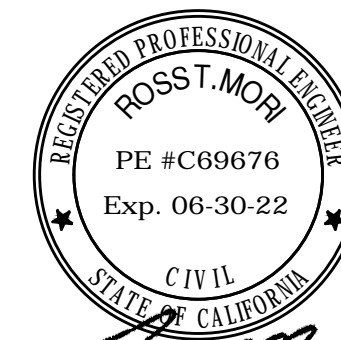
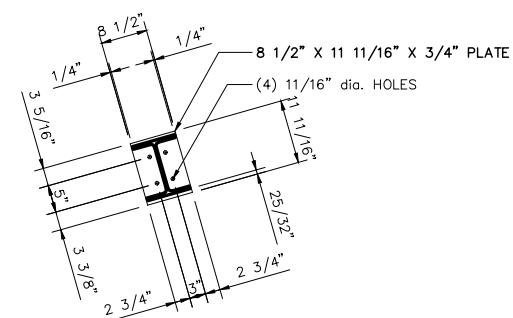
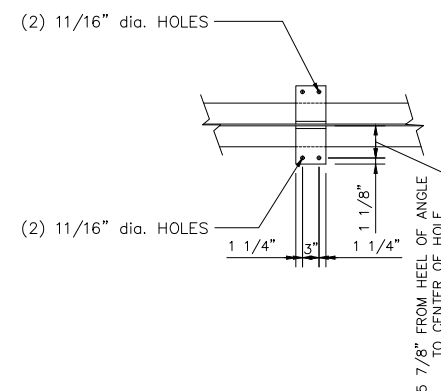
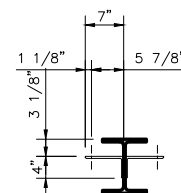
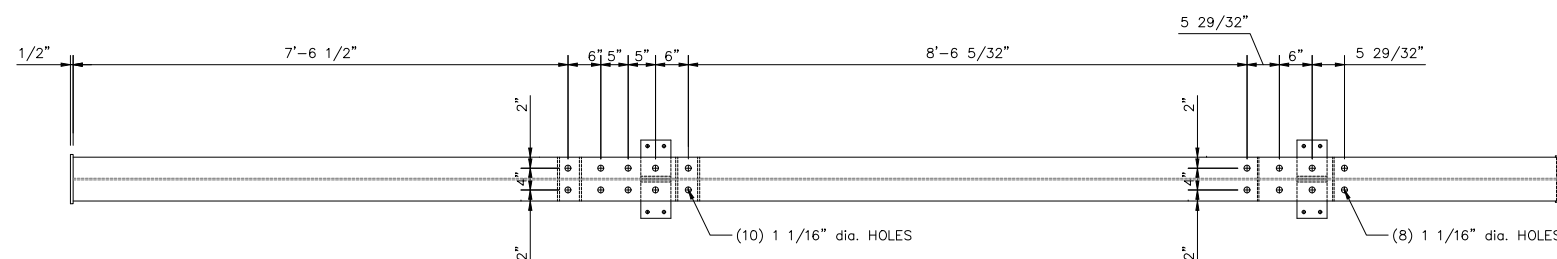
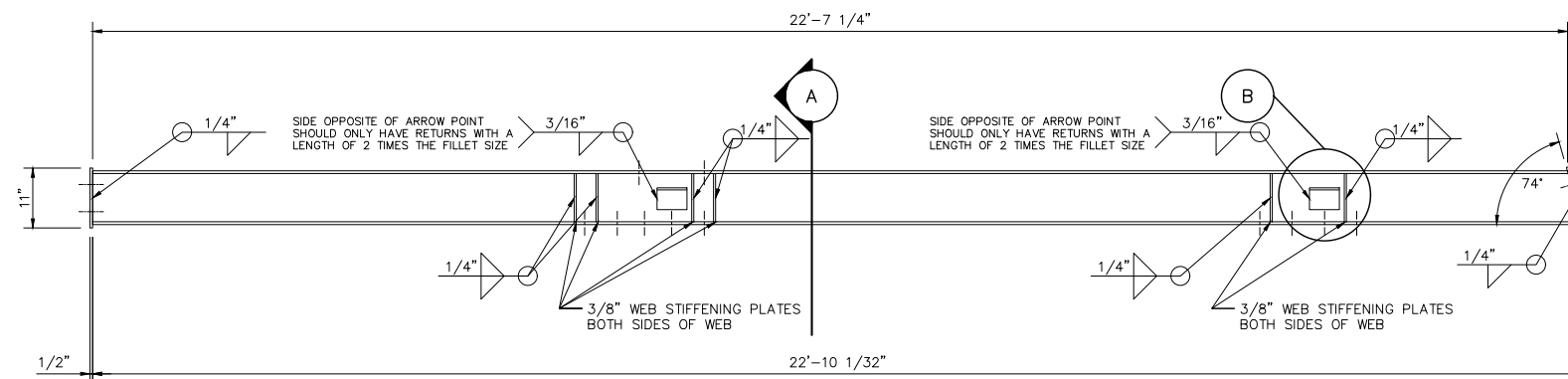
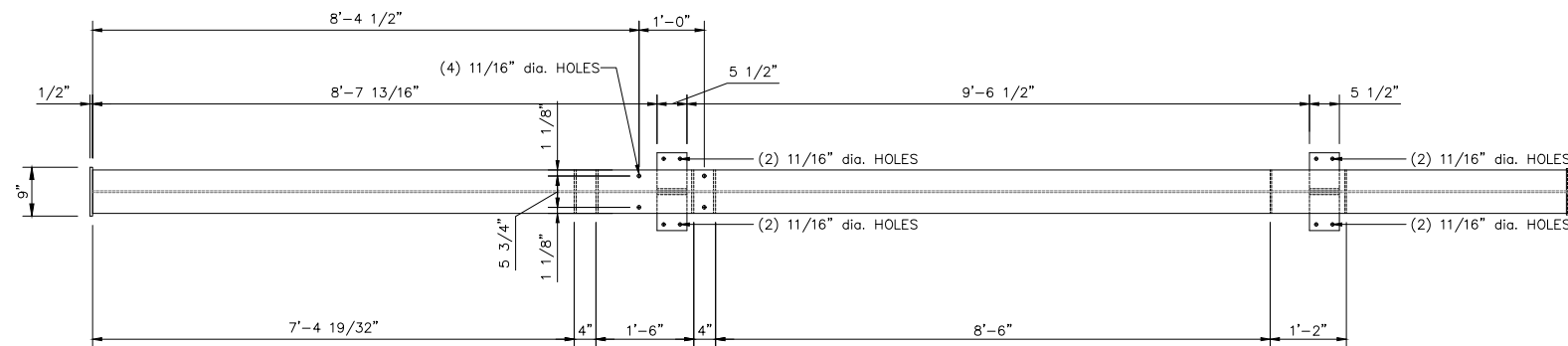
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			W 18" X 50# BEAM		1084.9	
			TITLE:			
			RESIDENCE-2nd FLOOR BEAM (SEISMIC) for WH-4			
			NAME: D.W.K.	DATE: 07/19/17	PART NO.	
			SCALE: 1 1/2 SCALE		315966	



PART NO:

FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS



12/09/2021

DESIGNATION:  
A992 - W SHAPES  
A36 - ANGLES/PLATES

FIRE FACILITIES INC.

"A" ANGLE DETAIL (SIDE)      "B" ANGLE DETAIL (TOP)  
 4" X 7" X 3/8" ANGLE      4" X 7" X 3/8" ANGLE

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AND MAY NOT BE REPRODUCED IN WHOLE OR IN  
PART WITH OUT WRITTEN PERMISSION.

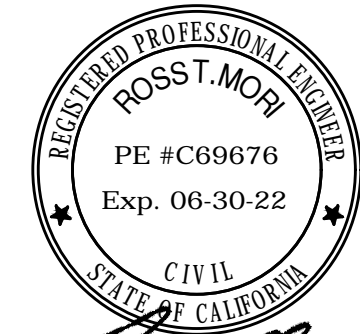
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		W 10" X 39# BEAM	989.5#
		TITLE:	
		<del>RESIDENCE</del> INTERIOR COLUMN (SEISMIC) for WH-4	
	NAME: D.W.K.	DATE: 07/09/19	PART NO.
	SCALE: 3/4 SCALE		315969

DRAWING NUMBER

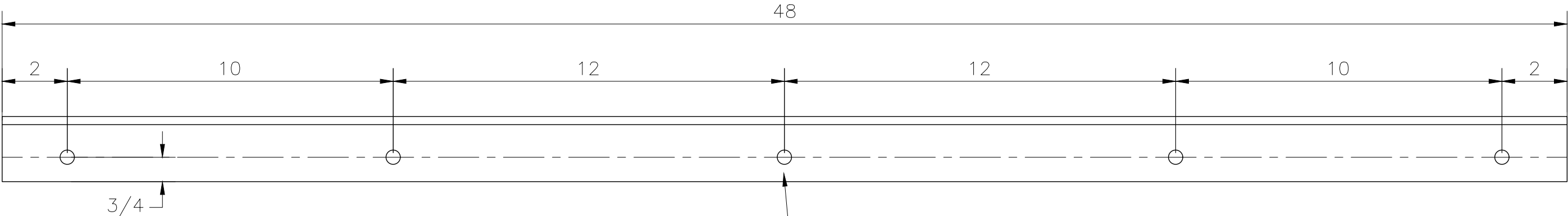
329764

FIRE FACILITIES, INC.  
SUN PRAIRIE, WISCONSIN

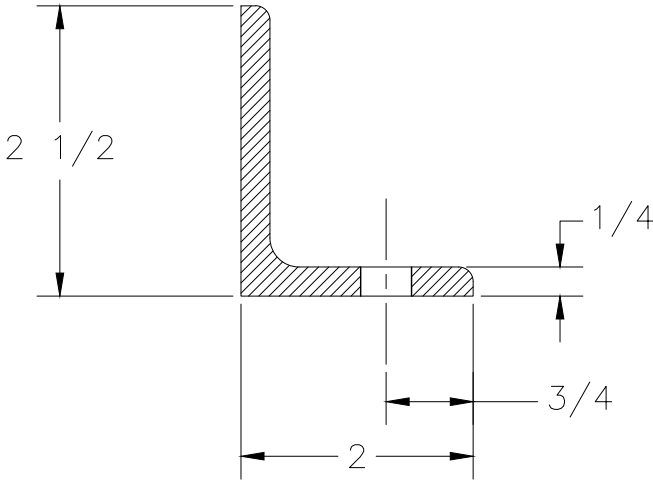
HOT DIPPED GALVANIZED



*Rosst. Mori*  
12/09/2021



7/16" DIA. HOLE (5 PLACES)



SECTION VIEW

SCALED 2X

ECN:	DESCRIPTION:	REV:	DATE:	BY:	MATERIAL: ANGLE, (A-36)	FIRE FACILITIES, INC.	
					GAUGE: 1/4"		
					FINISH: HOT DIPPED GAVL	COMPONENT: STR <del>BURN</del> PROP.	WEIGHT: 14.59#
						EXTENDED DESCRIPTION:	
					DRAWN BY: KAH	ANGLE, 2" X 2 1/4" X 1/4", NOVABRIK F.O. SUPPORT ANGLE	
					DATE: 04/22/16	DRAWING NUMBER	
					SCALE: 1:4 or as noted		
					TOLERANCE:	329764	
					0.000 +/- 0.032 UNLESS OTHERWISE NOTED		
					00" +/- 1" UNLESS OTHERWISE NOTED		

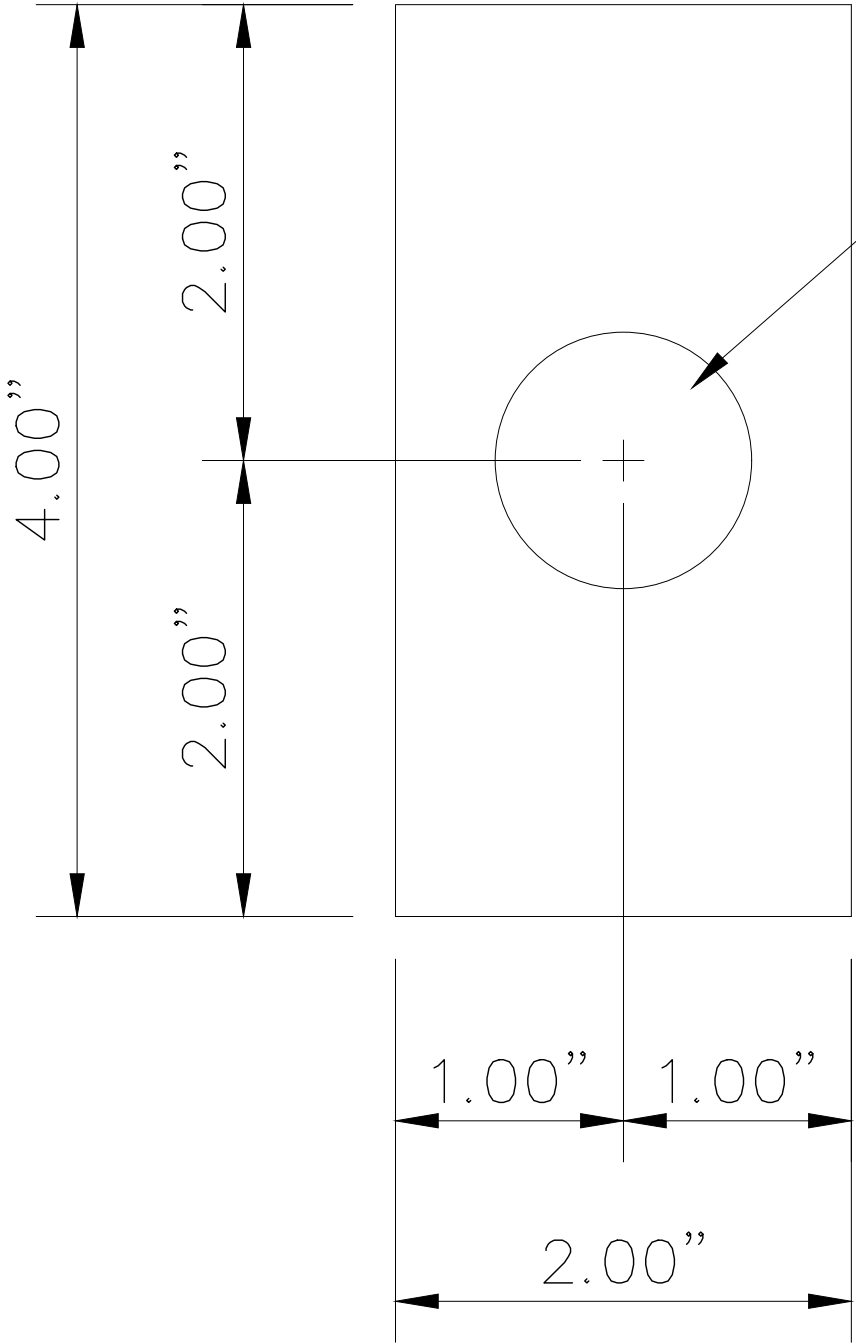


391004

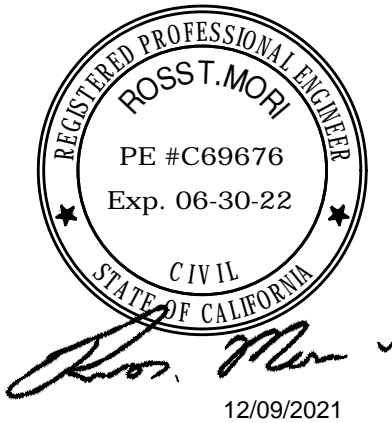
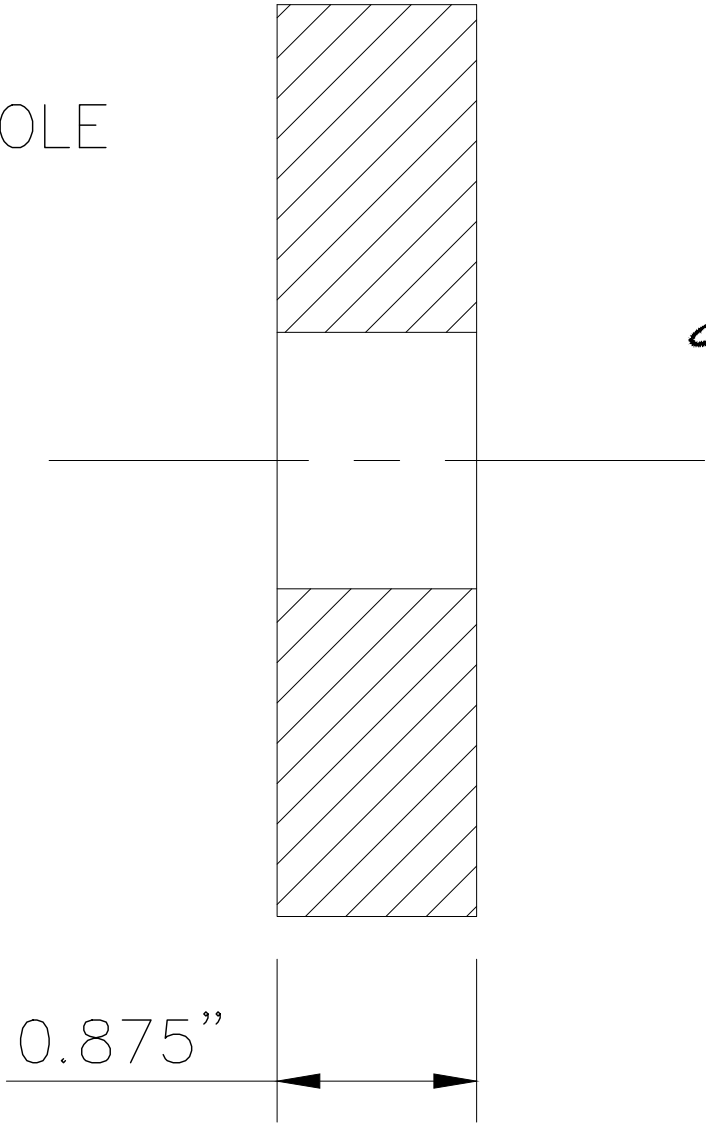
PART NO:

TRACHTE BUILDING SYSTEMS  
SUN PRAIRIE, WISCONSIN

SECTION THRU SPACER



1-1/8" DIA. HOLE



TRACHTE BLDG. SYSTEMS

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		2" X 4" X 7/8" PLATE (A-36)	1.98
		TITLE:	
		RAPPELLING RING SPACER	
	NAME: DWK	DATE: 06/09/17	PART NO.
	SCALE: 1" = 1"		391004
	TOLERANCE: +/- 1/32"		

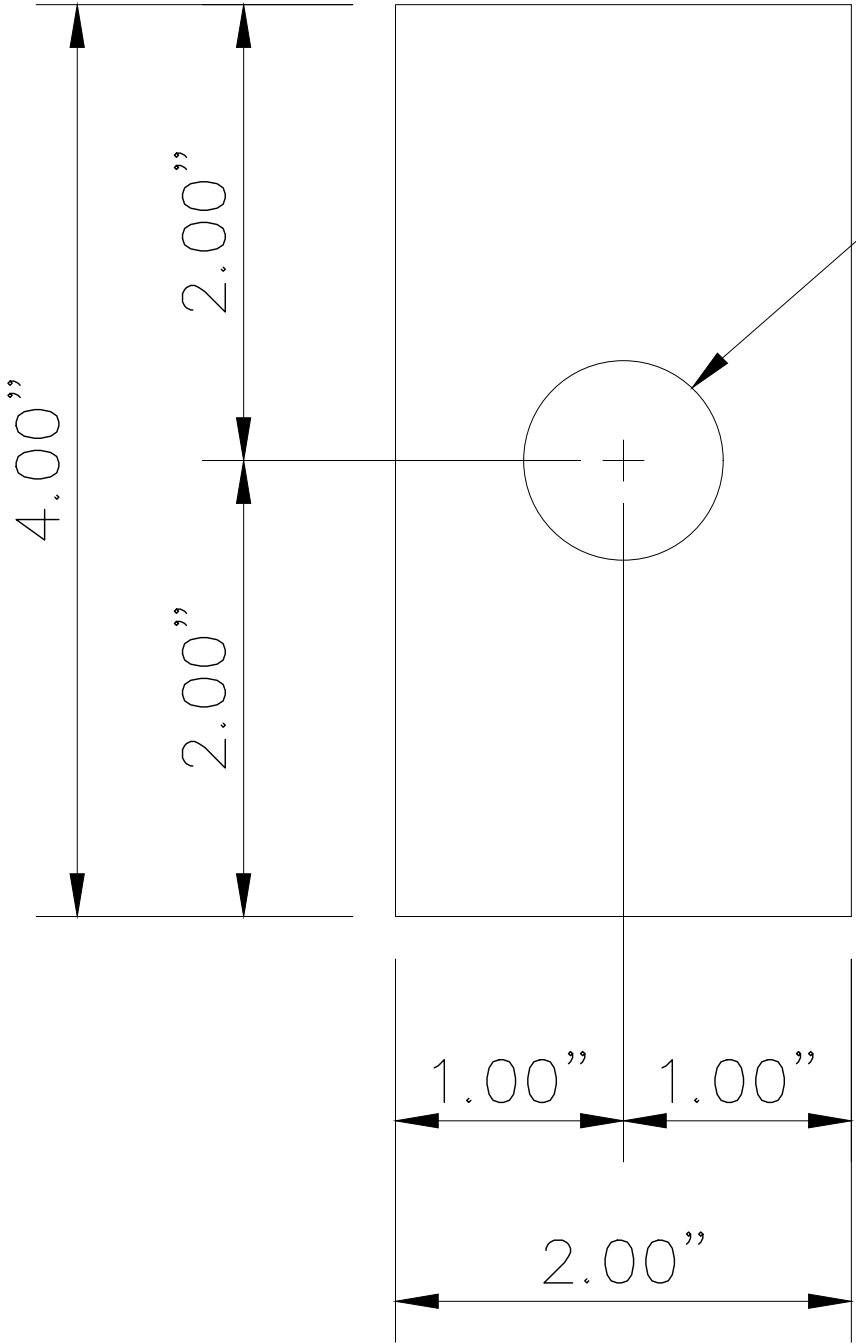
391008

PART NO:

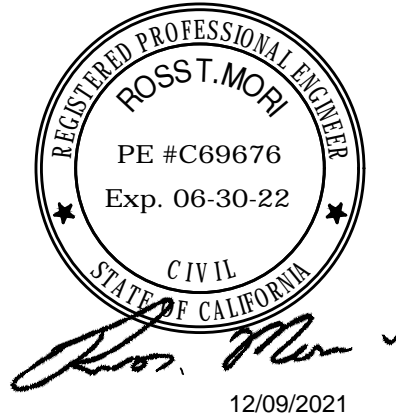
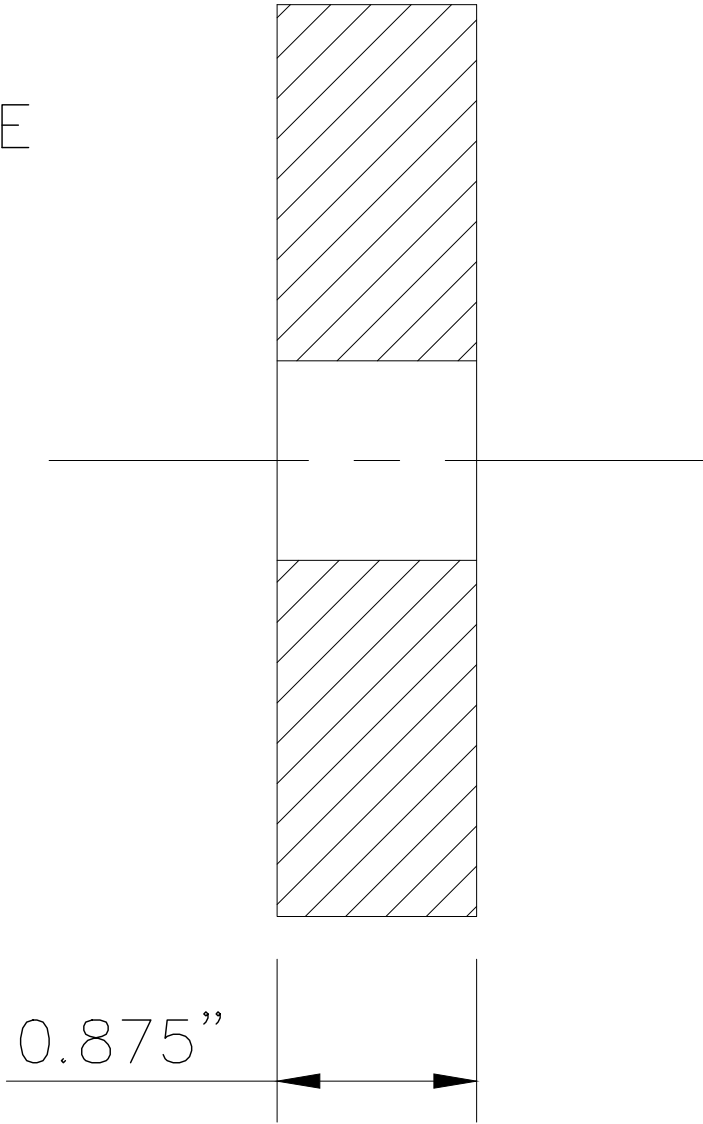
TRACHTE BUILDING SYSTEMS

SUN PRAIRIE, WISCONSIN

SECTION THRU SPACER



7/8" DIA. HOLE



TRACHTE BLDG. SYSTEMS

REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		2" X 4" X 7/8" PLATE (A-36)	1.98
		TITLE:	
		RAPPELLING RING SPACER	
		NAME: GWL	DATE: 04/04/00
		SCALE: 1" = 1"	PART NO.
		TOLERANCE: +/- 1/32"	391008



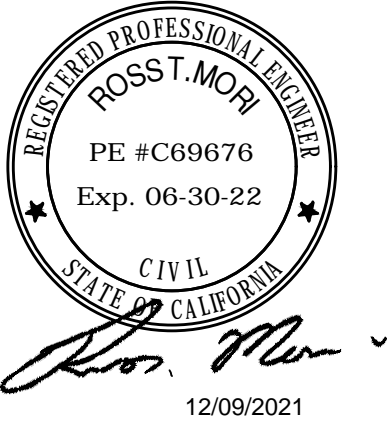
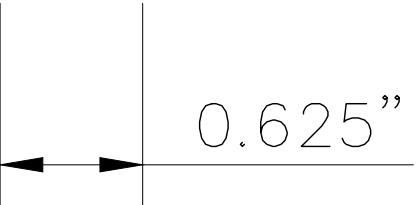
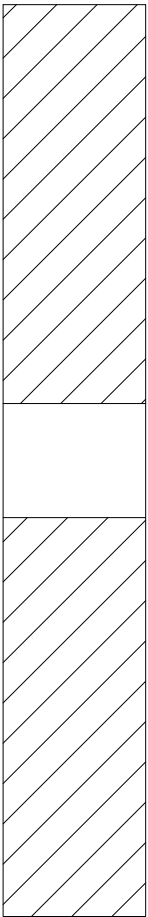
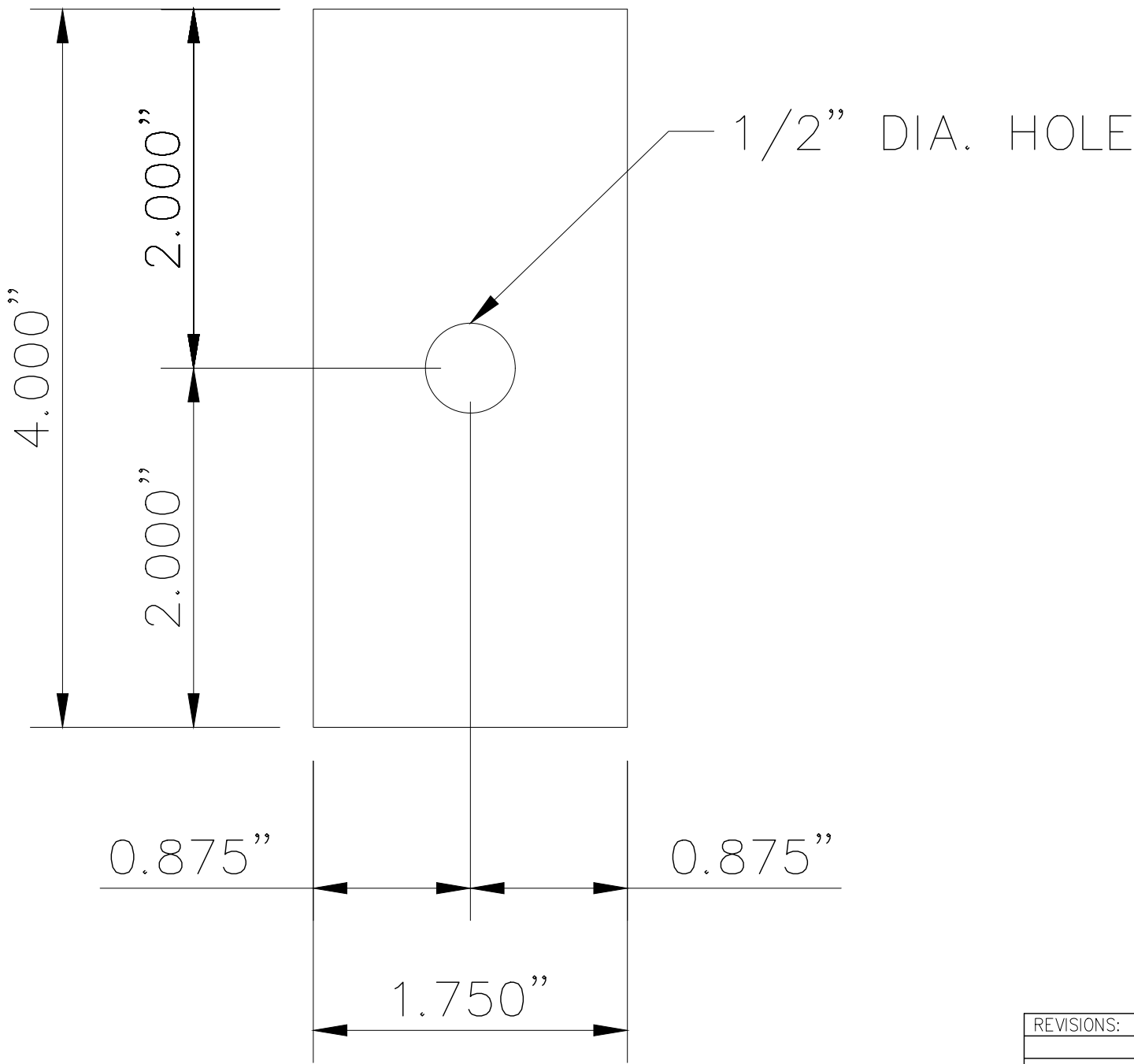
391009

PART NO:

TRACHTE BUILDING SYSTEMS

SUN PRAIRIE, WISCONSIN

SECTION THRU SPACER



TRACHTE BLDG. SYSTEMS

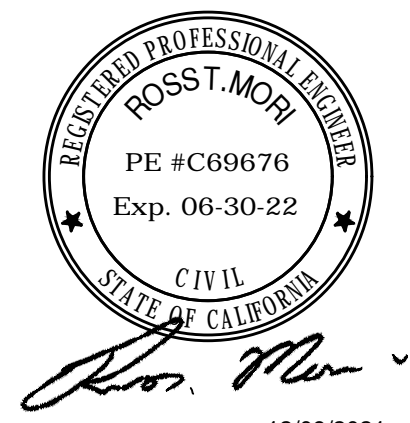
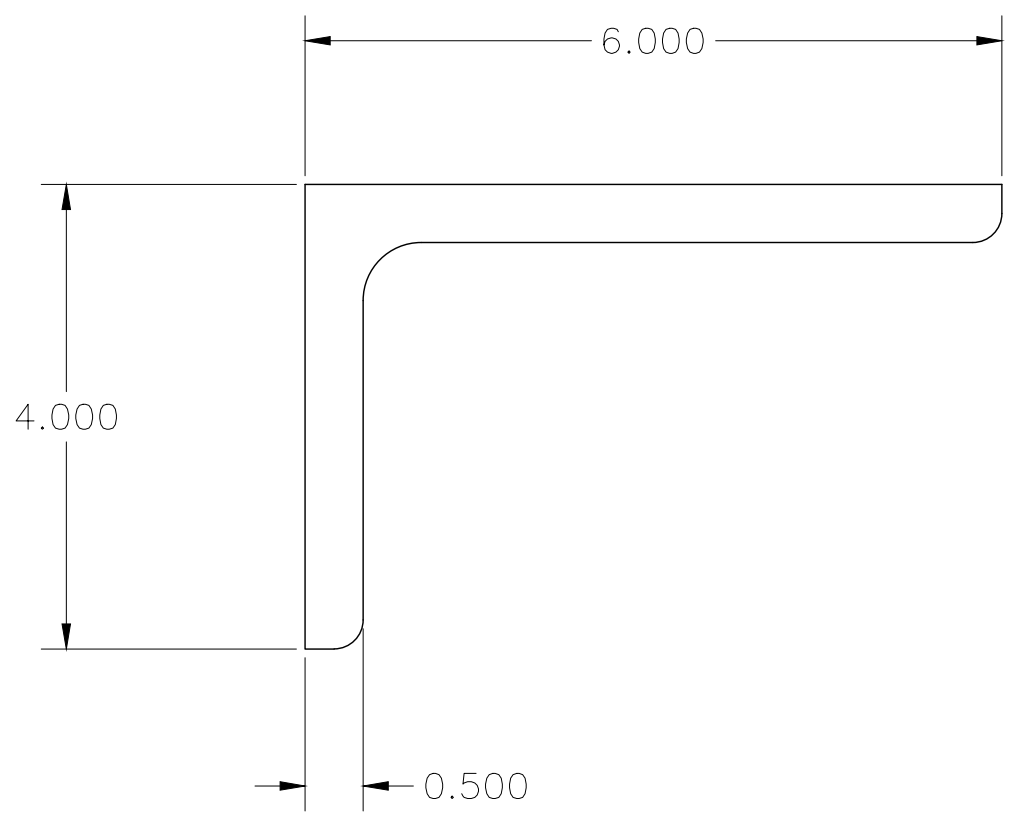
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
		1 3/4" X 4" X 5/8" PLATE (A-36)	1.24
		TITLE:	
		TIE SPACER	
	NAME: SPW	DATE: 7/29/97	PART NO.
	SCALE: 1" = 1"		391009
	TOLERANCE: +/- 1/32"		

391024

TRACHTE BUILDING SYSTEMS  
SUN PRAIRIE, WISCONSIN

PART NO:

LENGTH: 50 1/2"



12/09/2021

TRACHTE BLDG. SYSTEMS

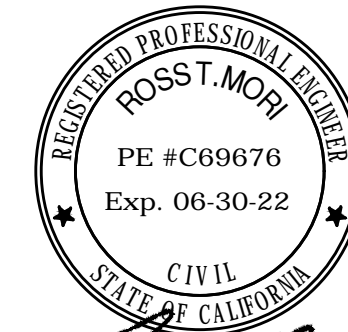
DESCRIPTION:	REV:	DATE:	BY:	MATERIAL DESCRIPTION:	WEIGHT
CHANGE DESCRIPTION	A	01/02/03	KH	ANGLE, A36	68.18
				TITLE:	
				ANGLE, 6" X 4" X 1/2" , RAPPELLING	
				NAME: KAH	DATE: 12/23/02
				SCALE: 1:10	PART NO.
				TOLERANCE: +/- 0.032 UNLESS NOTED	391024



812593

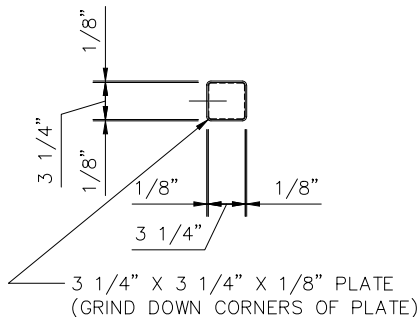
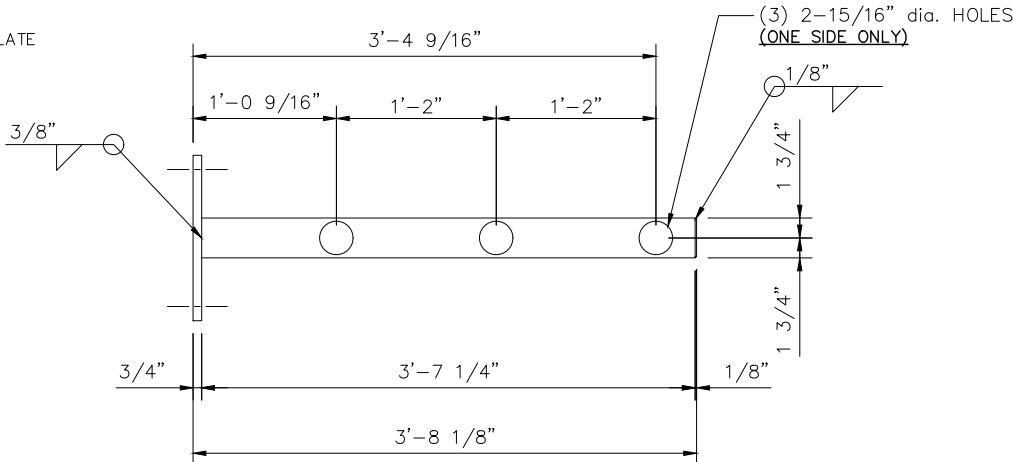
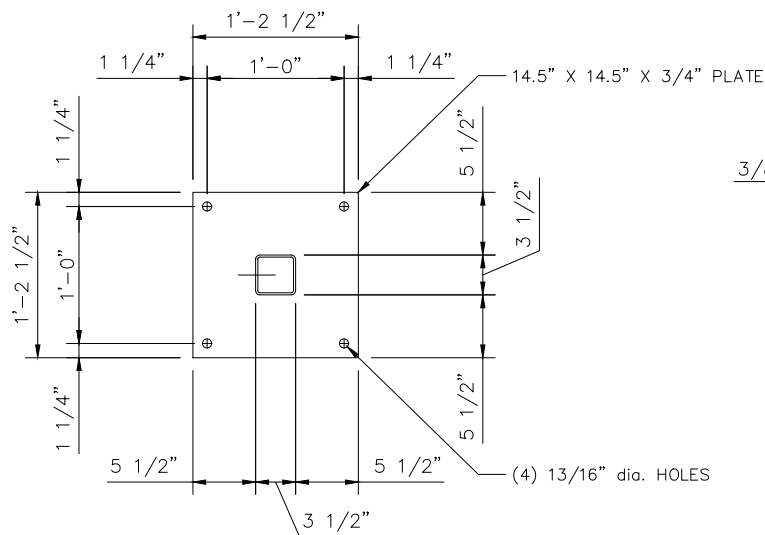
FIRE FACILITIES INC.

PART NO:



*Rosst. Mori*

12/09/2021



DESIGNATION:  
A500 GRADE B - STRUCT. TUBING  
A36 - ANGLES/PLATES

FIRE FACILITIES INC.

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PHONE: (708) 279-6660 FAX (708) 279-2291  
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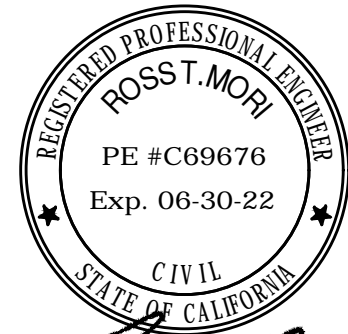
REVISIONS:	BY:	MATERIAL DESCRIPTION:	WEIGHT
A. 1/5/11	SPW	3 1/2" X 3 1/2" X 3/16" STRUCT. TUBING	74.5#
BASE PLATE SIZE INCR. WAS 12" SQUARE			
TITLE:			
COLUMN FOR RAIL RAPPELLING SYSTEM			
NAME: BJE		DATE: 08/23/04	PART NO.
SCALE: 1 1/2 SCALE			

812593

812594

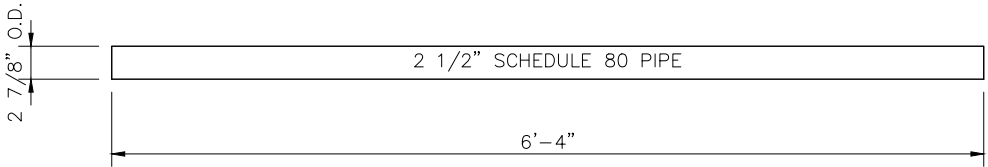
FIRE FACILITIES INC.  
ANTIOCH, ILLINOIS

PART NO:



*Ross Mori*

12/09/2021



DESIGNATION:  
A53 GRADE B – STRUCT. PIPE

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			2 1/2" SCHEDULE 80 PIPE	48.5#
			TITLE:	
			PIPE FOR RAIL RAPPELLING SYSTEM	
		NAME: BJE	DATE: 08/23/04	PART NO.
		SCALE: 1 1/2 SCALE		
				812594