

PORTABLE (JIB) CRANE NOTES:

1. ALL STEEL COMPONENTS SHALL BE POWDER COAT FINISH (RED OR YELLOW COLOR.)
2. PERFORM A NO-LOAD TEST AND A LOAD TEST ON EACH CRANE IN THE PRESENCE OF THE ENGINEER AND WOODLAND PULP.

a. NO-LOAD TEST:

i. RAISE EMPTY HOOK TO WITHIN ABOUT 2 FEET OF ITS UPPER POSITION AND STOP.

ii. RAISE EMPTY HOOK TO ITS MAXIMUM LIFT.

iii. LOWER THE HOOK TO ABOUT 2 FEET ABOVE ITS LOWER POSITION AND STOP.

b. LOAD TEST: WITH THE SHEAVE BLOCK AT THE FAR END OF THE BOOM, ROTATE THE BOOM TROUGH ITS FULL ROTATIONAL CAPABILITY. MOVE THE SHEAVE BLOCK TO INNER END OF THE BOOM AND ROTATE THE BOOM THROUGH ITS FULL ROTATIONAL CAPABILITY. LOWER LOAD CAREFULLY ONTO ITS SUPPORTS.
3. SYSTEM SHALL RUN SMOOTHLY, WITH NO BINDING, STOPPING, OR STICKING. ADJUST AND REALIGN EQUIPMENT AND RETEST IF BINDING, STOPPING OR STICKING OCCURS.
4. ENSIGN 500 MODEL 5PA5

a. CONTRACTOR TO PROVIDE 1 ENSIGN 500 MODEL 5PA5 OR APPROVED EQUAL:

b. 500 LB MINIMUM WORKING LOAD.

c. MINIMUM HOOK REACH SHALL BE 36 INCHES.

d. PROVIDE WORM GEAR HAND WINCH WITH BRAKE.

e. MEET OSHA AND ANSI STANDARDS.

f. ADJUSTABLE MAST MADE OF STRUCTURAL STEEL.

g. MAXIMUM WEIGHT OF EACH CRANE PIECE SHALL BE 100 LBS.

h. FLUSH FLOOR MOUNT SLEEVE, THERN MODEL 5BF5 OR APPROVED EQUAL:

i. MADE OF STRUCTURA STEEL.

ii. LOCATE FLUSH MOUNT SLEEVE WHERE SHOWN OR NOTED ON THE DRAWINGS.

iii. EACH MOUNT SHALL HAVE A CAP TO KEEP WATER AND DEBRIS OUT OF BASE WHEN CRANE IS REMOVED.
5. COMMANDER 2000 MODEL 5FT20

a. CONTRACTOR TO PROVIDE 2 COMMANDER 2000 MODEL 5FT20 OR APPROVED EQUAL:

b. 2000 LB MINIMUM WORKING LOAD.

c. MINIMUM HOOK REACH SHALL BE 82 INCHES.

d. PROVIDE WORM GEAR HAND WINCH WITH BRAKE.

e. MEET OSHA AND ANSI STANDARDS.

f. ADJUSTABLE MAST MADE OF STRUCTURAL STEEL.

g. FLUSH FLOOR MOUNT SLEEVE, THERN MODEL 5BF20 OR APPROVED EQUAL:

i. MADE OF STRUCTURA STEEL.

ii. LOCATE FLUSH MOUNT SLEEVE WHERE SHOWN OR NOTED ON THE DRAWINGS.

iii. EACH MOUNT SHALL HAVE A CAP TO KEEP WATER AND DEBRIS OUT OF BASE WHEN CRANE IS REMOVED.

h. WALL MOUNT SLEEVE, THERN MODEL 5BW20 OR APPROVED EQUAL:

i. MADE OF STRUCTURA STEEL.

ii. LOCATE FLUSH MOUNT SLEEVE WHERE SHOWN OR NOTED ON THE DRAWINGS.

iii. EACH MOUNT SHALL HAVE A CAP TO KEEP WATER AND DEBRIS OUT OF BASE WHEN CRANE IS REMOVED.

Staff Gauge					
Staff Gauge	Location	Drawings	Staff Gauge Top Elevation (FT)	Staff Gauge Bottom Elevation (FT)	Staff Gauge Length (FT)
1	Tailrace by Fish Lift Entrance	M-002 & M-200	109.5	94.0	15.5
2	Upstream Fish Lift Entrance	M-002 & M-200	109.5	94.0	15.5
3	Between Stilling Wall and Weir Wall	M-002 & M-200	109.5	94.0	15.5
4	Tailrace by Fish Ladder Entrance (NIC)	M-002 & M-200	109.5	94.0	15.5
5	Fish Ladder Entrance (NIC)	M-002 & M-200	109.5	94.0	15.5
6	Fish Ladder Weir Pool # 63 (NIC)	M-002 & M-200	146.0	140.0	6.0
7	Fish Ladder Weir Pool # 64 (NIC)	M-002 & M-200	146.0	140.0	6.0
8	Fish Ladder Weir Pool # 65 (NIC)	M-002 & M-200	146.0	140.0	6.0
9	Fish Ladder Exit Pool (NIC)	M-002 & M-200	146.0	140.0	6.0
10	Exit Flume near Viewing Window	M-002 & M-200	146.0	140.0	6.0
11	Downstream Bypass Trough	M-002 & M-200	146.5	140.0	6.5
12	Exit Flume near Hopper	M-002 & M-200	146.0	140.0	6.0

Water Level Sensor (WLS)					
Water Sensor	Location	Drawings	Sensor Top Elevation (FT)	Sensor Bottom Elevation (FT)	Water Level Probe Length (FT)
1	Tailrace by Fish Lift Entrance	M-002 & M-200	110.0	92.0	18.0
2	Upstream Fish Lift Entrance	M-002 & M-200	110.0	92.0	18.0
3	Between Stilling Wall and Weir Wall	M-002 & M-200	110.0	92.0	18.0
4	Tailrace by Fish Ladder Entrance (NIC)	M-002 & M-200	110.0	92.5	17.5
5	Upstream Fish Ladder Entrance (NIC)	M-002 & M-200	110.0	92.5	17.5
6	Fish Ladder Exit Pool (NIC)	M-002 & M-200	146.0	140.0	6.0
7	Exit Flume	M-002 & M-200	146.0	138.0	8.0
8	Downstream Bypass Trough	M-002 & M-200	146.0	139.0	7.0

Stilling Well Information		
Stilling Well	Invert Elevation	Orientation
1	92.0	Bottom Opening Facing Centerline of Fish Lift Entrance
2	92.0	Bottom Opening Facing Centerline of Fish Lift Entrance
3	92.0	Bottom Opening Facing Centerline of Fish Lift Flume
4	92.5	Bottom Opening Facing Tailrace Near Fish Ladder Entrance (NIC)
5	92.5	Bottom Opening Facing Centerline of Fish Ladder (NIC)
6	140.0	Bottom Opening Facing Centerline of Fish Ladder (NIC)
7	138.0	Bottom Opening Facing Centerline of Exit Flume
8	139.0	Bottom Opening Facing Centerline of Downstream Bypass Flume

Gate Schedule							
Gate ID	Gate Name	Drawings	Material	Opening Width	Gate Height	Operating Head	Discharge
IG1	Fish Lift Isolation Gate	M-002 & M-100	Painted Carbon Steel	8.0'	12.6'	9.7'	Upward Opening
EG2	Fish Lift Entrance Gate	M-002 & M-101	Painted Carbon Steel	8.0'	12.5'	3.0'	Downward Opening
VG3	Fish Lift V-Gate	M-002 & M-102	Painted Carbon Steel	14.0'	15.5'	11.2'	Swing
HG5	Fish Lift Hopper Gate	M-002 & M-112	Painted Carbon Steel	3.0'	5.66'	5.66'	Downward Opening
IG6	Exit Flume Isolation Gate	M-002 & M-120	Painted Carbon Steel	8.0'	11.0'	10.0'	Upward Opening
IG10	Exit Flume Isolation Gate	M-002 & M-131	Painted Carbon Steel	6.0'	5.1'	4.4'	Upward Opening
(NIC) OWG11	Fish Ladder Automatic Entrance Gate	M-002 & M-141	Painted Carbon Steel	2.0'	Adjustable	3.0'	Downward Opening
(NIC) IG12	Fish Ladder Isolation Gate	M-002 & M-140	Painted Carbon Steel	2.0'	11.0'	8.1'	Upward Opening
(NIC) OWG13	Fish Ladder Automatic Exit Gate	M-002 & M-142	Painted Carbon Steel	2.0'	Adjustable	3.0'	Downward Opening
DSG14	Downstream Bypass Knife Gate	M-002 & M-160	Painted Carbon Steel	3.0'	3.0'	7.5'	Upward Opening
DSG15	Downstream Bypass Knife Gate	M-002 & M-160	Painted Carbon Steel	3.0'	3.0'	7.5'	Upward Opening
(NIC) IG16	Downstream Isolation Gate	M-002 & M-163	Painted Carbon Steel	6.0'	6.75'	5.4'	Upward Opening
(NIC) IG17	Fish Ladder Exit Isolation Gate	M-002 & M-143	Painted Carbon Steel	2.0'	7.75'	6.8'	Upward Opening
TG18	Exit Flume Trap Gate	M-002 & M-124	Painted Carbon Steel	2.083'	10.292'	10.0'	Swing
TG19	Exit Flume Trap Gate	M-002 & M-124	Painted Carbon Steel	2.083'	10.292'	10.0'	Swing

Permanent Stoplogs (SL) and Spacer Frames (SF)						
ID	Location	Type	Quantity	Drawing	Material	Opening Width
SF1	Spare for Fish Lift Concrete Flume	1' High Spacer Frame	2	M-118	Aluminum	14.0'
SF2	Spare for Fish Lift Concrete Flume	2' High Spacer Frame	1	M-118	Aluminum	14.0'
SF3	Fish Lift Stilling Wall	2' High Spacer Frame	3	M-118	Aluminum	14.0'
SF4	Fish Lift Curtain Wall	2' High Spacer Frame	3	M-118	Aluminum	14.0'
SL1	Fish Lift Stilling Wall	12" High Stoplog	9	S-101	Aluminum	14.0'
SL2	Fish Lift Stoplog Weir	12" High Stoplog	11	S-101	Aluminum	14.0'
SL3	Fish Lift Sill Wall	12" High Stoplog	3	S-101	Aluminum	14.0'
SL4	Fish Lift Curtain Wall	12" High Stoplog	9	S-101	Aluminum	14.0'
SL5	Bypass 1 Flume (NIC)	6" High Stoplog	5	S-174	Aluminum	5.5'
SL6	Fish Lift Steel Flume	6" High Stoplog	5	S-137	Aluminum	6.0'

Hoist and Crane Schedule (Refer to Portable Jib Crane Notes)						
Name	Location	Lifting Capacity	Crane/ Hoist/Base Model	Reach	Drawing	What is it lifting
HH4	Fish Lift Tower	30-Tons	See Spec 41 22 00	N/A	M-110	Hopper
CH1	Exit Flume Crowder	2-Ton	Harrington 2-Ton Electric Hoist Hook-Mounted (SNERM020L-20)	N/A	S-126	Moving Floor
CH2	Exit Flume Crowder	1/2-Ton	Harrington 1/2 Ton Chain Hoist with Trolley (SNERM005S-L)	N/A	S-129	Crowder Screens
JH1	Bypass Trough	1/2-Ton	Harrington Heavy-Duty Pillar Base Mounted Jib Crane 351-1000-20-12	20 ft	S-160	Backwash Pump
(NIC) JH2	Bypass Trough	1/2-Ton	Harrington Heavy-Duty Pillar Base Mounted Jib Crane 351-1000-20-12	20 ft	S-160	Stoplogs
JH3	Fish Ladder/Exit Flume	1/2-Ton	Harrington Mast Type Jib Crane 314FC-1000-10-10	10 ft	C-142	Adjustable Weirs
5PT20_FM_1	Fish Lift Concrete Flume	1-Ton	Commander 2000 Series 5PT20 - Flush Mounted Base	N/A	S-100	Stoplogs
5PT20_FM_2	Exit Flume	1-Ton	Commander 2000 Series 5PT20 - Flush Mounted Base	N/A	S-121	Bar Rack and Stoplogs
5PT20_FM_3	Fish Ladder Entrance	1-Ton	Commander 2000 Series 5PT20 - Flush Mounted Base	N/A	C-144	Stoplogs
5PT20_WM_1	Fish Lift Concrete Flume	1-Ton	Commander 2000 Series 5PT20 - Wall Mounted Base	N/A	S-100	V-Gate Screens
5PT20_WM_2	Fish Lift Concrete Flume	1-Ton	Commander 2000 Series 5PT20 - Wall Mounted Base	N/A	S-100	V-Gate Screens
5PT20_WM_3	Fish Lift Concrete Flume	1-Ton	Commander 2000 Series 5PT20 - Wall Mounted Base	N/A	S-100	Perforated Plate Screen
5PT20_WM_4	Fish Lift Concrete Flume	1-Ton	Commander 2000 Series 5PT20 - Wall Mounted Base	N/A	S-100	Perforated Plate Screen
5PT20_WM_5	Fish Lift Concrete Flume	1-Ton	Commander 2000 Series 5PT20 - Wall Mounted Base	N/A	S-100	Perforated Plate Screen
5PT20_WM_6	Fish Lift Concrete Flume	1-Ton	Commander 2000 Series 5PT20 - Wall Mounted Base	N/A	S-100	Perforated Plate Screen
(NIC) 5PA5_FM_0	Fish Ladder Entrance	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-144	Safety Retrieval
(NIC) 5PA5_FM_1	Fish Ladder Pool 1	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-144	Safety Retrieval
(NIC) 5PA5_FM_2	Fish Ladder Pool 2	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-144	Safety Retrieval
(NIC) 5PA5_FM_3	Fish Ladder Pool 3	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-143	Safety Retrieval
(NIC) 5PA5_FM_4	Fish Ladder Pool 4	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-143	Safety Retrieval
(NIC) 5PA5_FM_5	Fish Ladder Pool 5	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-143	Safety Retrieval
(NIC) 5PA5_FM_6	Fish Ladder Pool 6	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-142	Safety Retrieval
(NIC) 5PA5_FM_7	Fish Ladder Pool 7	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-142	Safety Retrieval
5PA5_FM_8	Fish Ladder Exit	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-142	Safety Retrieval
5PA5_FM_9	Exit Flume	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	C-142	Safety Retrieval
5PA5_FM_10	Fish Lift Concrete Flume	1/4 Ton	Ensign 500 Series 5PA5 - Flush Mounted Base	N/A	S-100	Safety Retrieval



ISSUED FOR BID
NOT FOR CONSTRUCTION
SEPTEMBER 3, 2025

9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

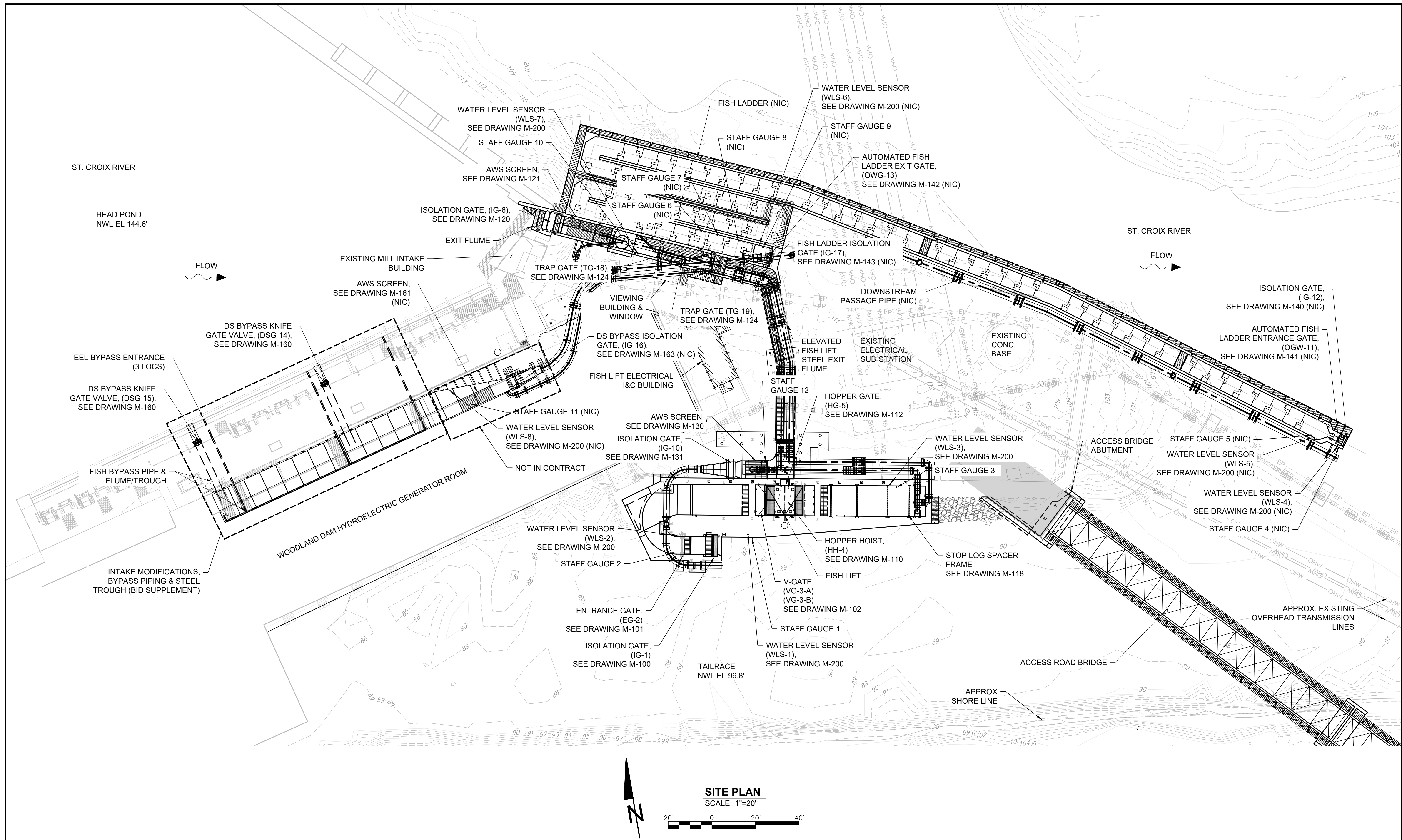
VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY

WOODLAND FISH LIFT PASSAGE DESIGN

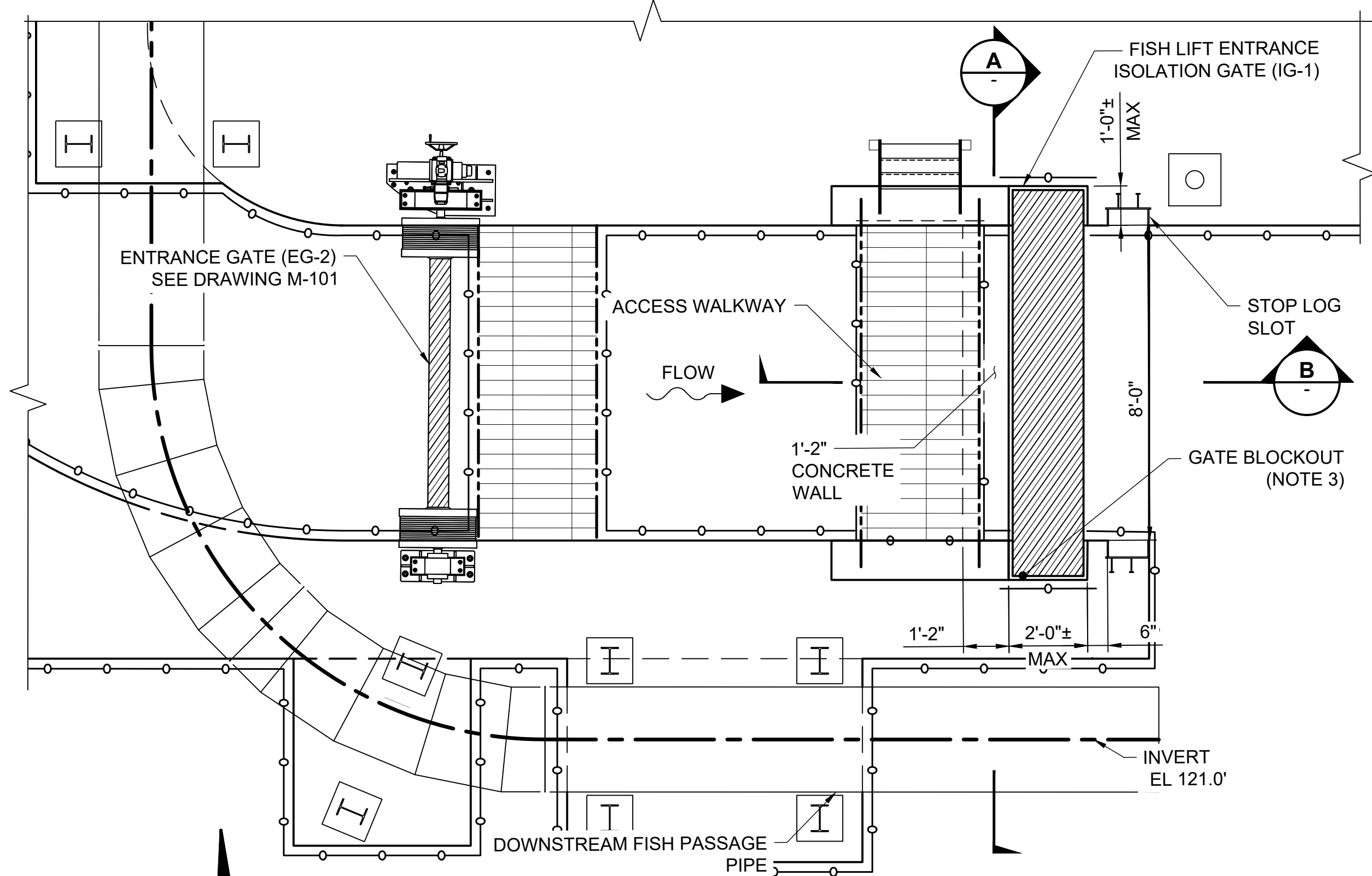
MAINE DEPARTMENT OF MARINE
RESOURCES

GENERAL MECHANICAL NOTES

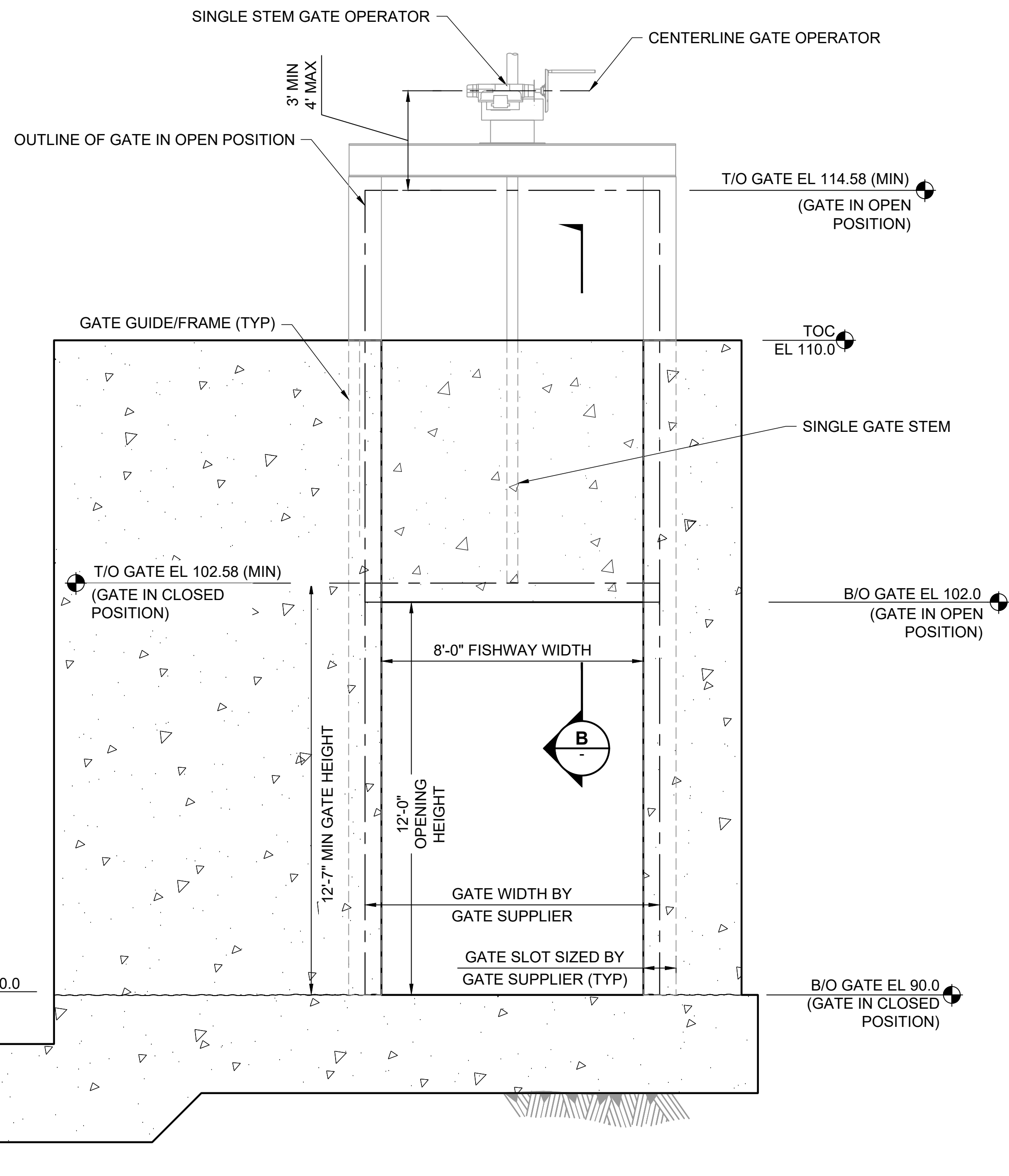
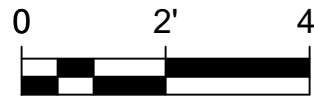
PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	201 OF 240
DRAWING:	M-001



 	ISSUED FOR BID NOT FOR CONSTRUCTION SEPTEMBER 3, 2025				VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	WOODLAND FISH LIFT PASSAGE DESIGN MAINE DEPARTMENT OF MARINE RESOURCES	GENERAL MECHANICAL LAYOUT	PROJECT: 16667
								DRAWN BY: C. HAGLER
								DESIGNER: A. MENGERT
								APPROVED BY: M. GRAESER
		9/3/2025	ISSUED FOR BID	M. GRAESER				SHEET: 202 OF 240
		REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY				DRAWING: M-002



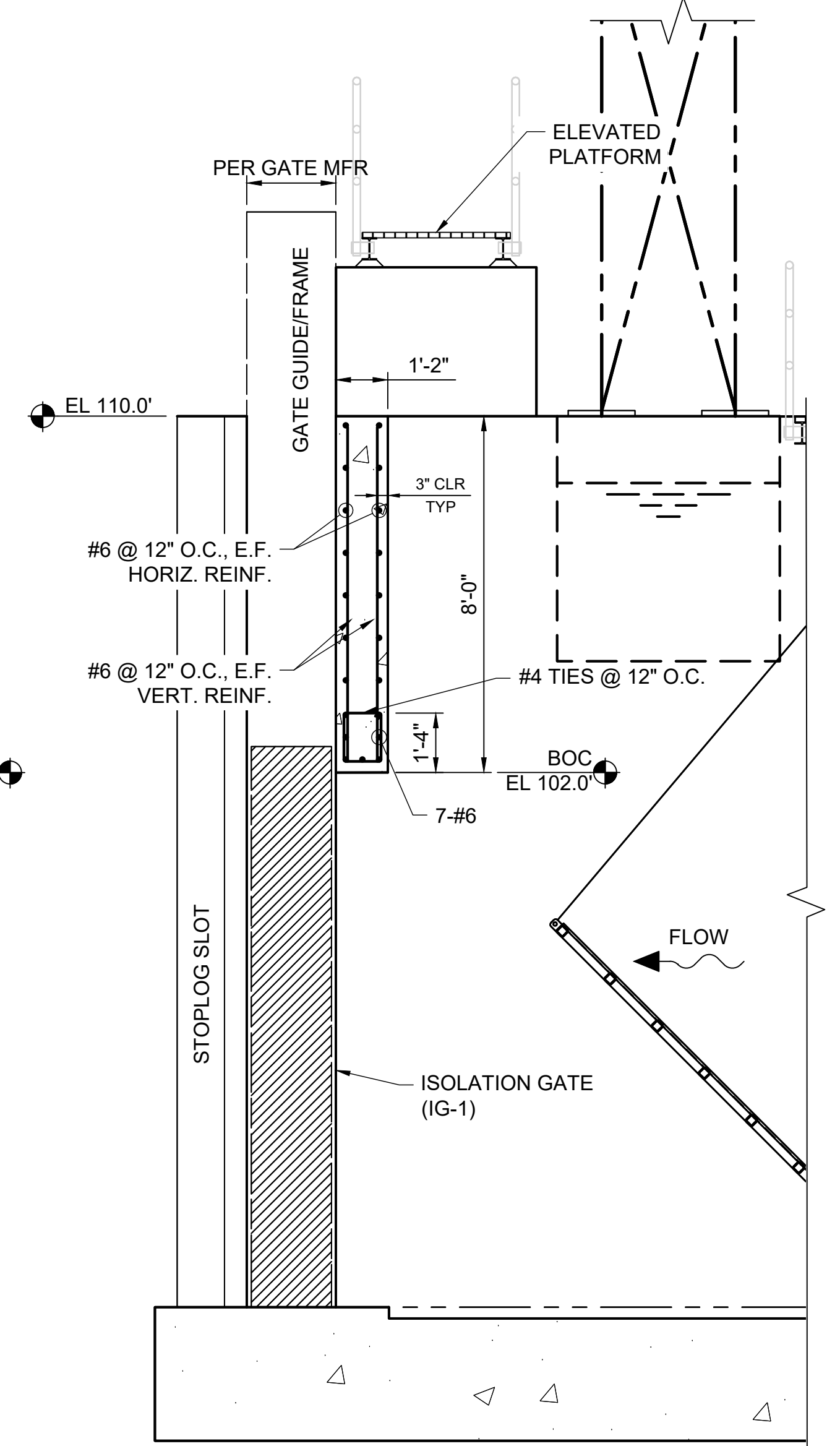
ENLARGED PLAN
SCALE: 3/8"=1'



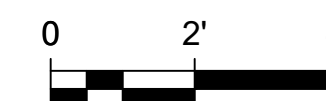
A FISHWAY ENTRANCE ISOLATION GATE
SCALE: 3/8"=1'-0"



- NOTES:**
- GENERAL OVERVIEW OF FISH LIFT ENTRANCE ISOLATION GATE (IG-1):
 - SIZE OF OPENING, 8.0'W x 12.0'H
 - MOVEMENT OF GATE: UPWARD OPENING.
 - OPERATION OF GATE: OPEN / CLOSE
 - TAILWATER ELEVATIONS:
 - DESIGN LOW 95.6 FT
 - NORMAL 96.8 FT
 - DESIGN HIGH 99.7 FT
 - 100 YR FLOOD 109.0 FT
 - APPROXIMATE BLOCKOUT DIMENSIONS SHOWN FOR GATE IG-1. UPDATE WITH ACTUAL BLOCKOUT DIMENSIONS FOR GATE SUPPLIED.
 - THE GATE SHALL HAVE A FILL GATE THAT SHALL OPEN WITH THE MAIN OPERATOR TO REDUCE THE DIFFERENTIAL HEAD ON THE GATE WHEN THE CHANNEL IS IN A DEWATERED STATE.

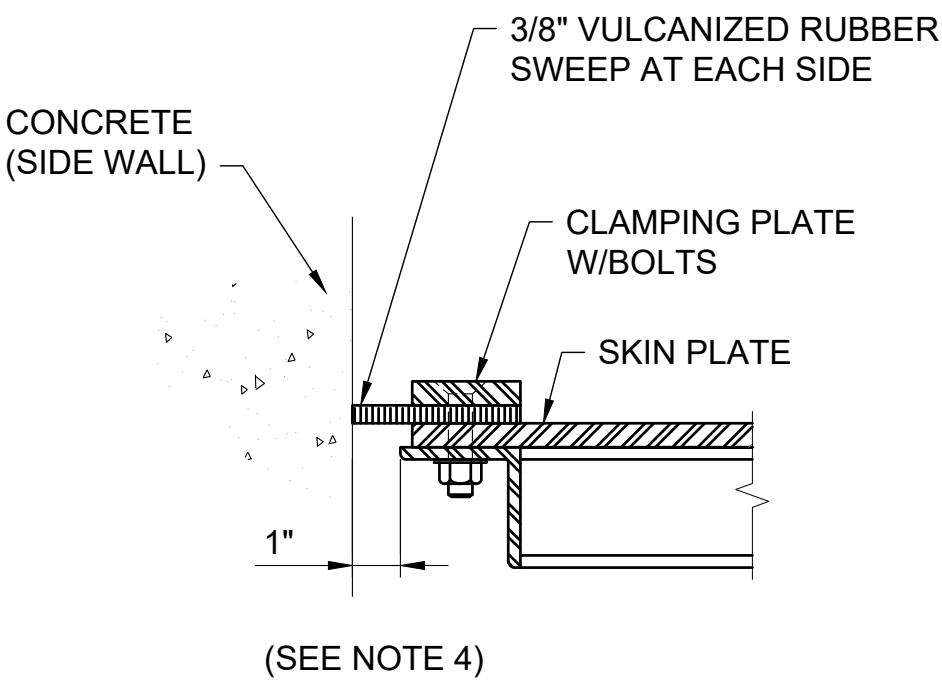
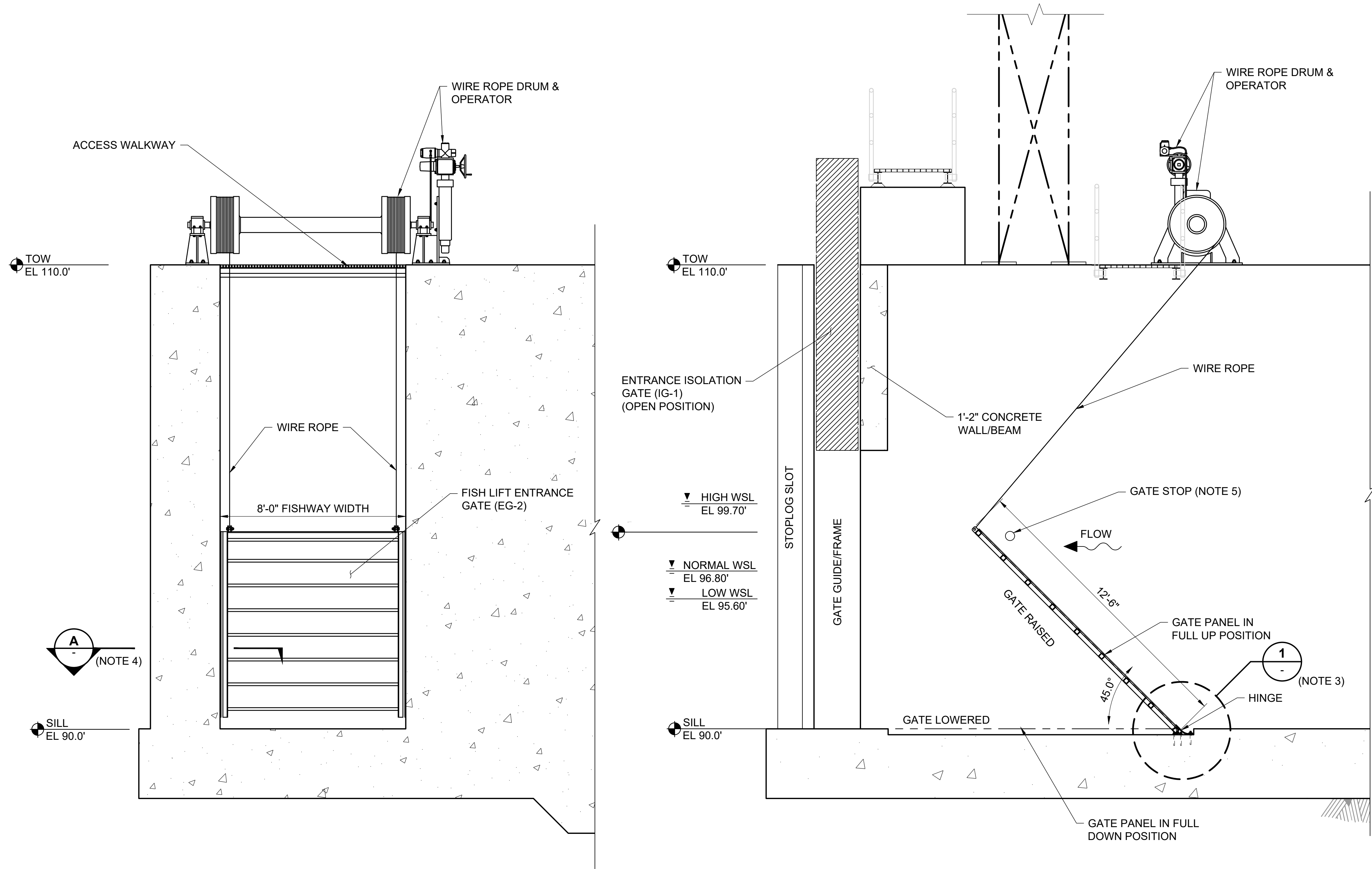


B SECTION
SCALE: 3/8"=1'-0"

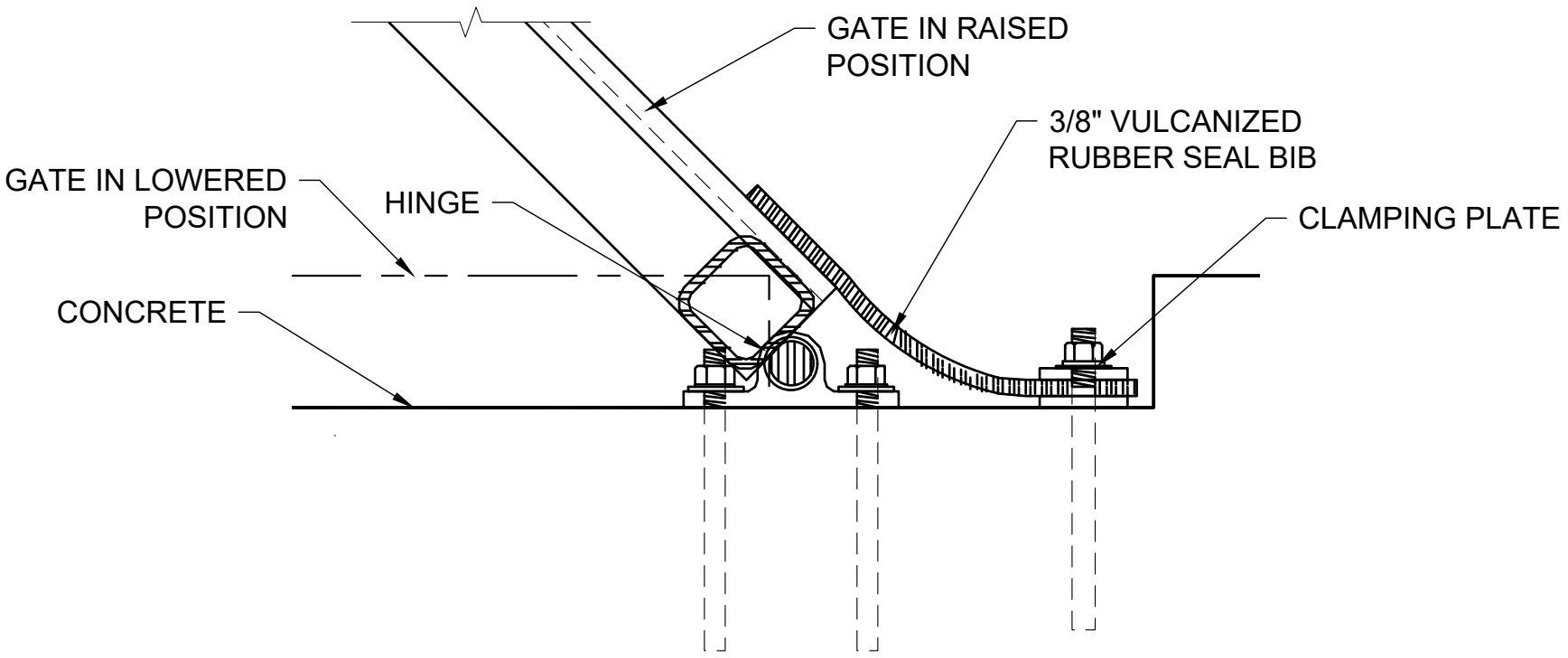


9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

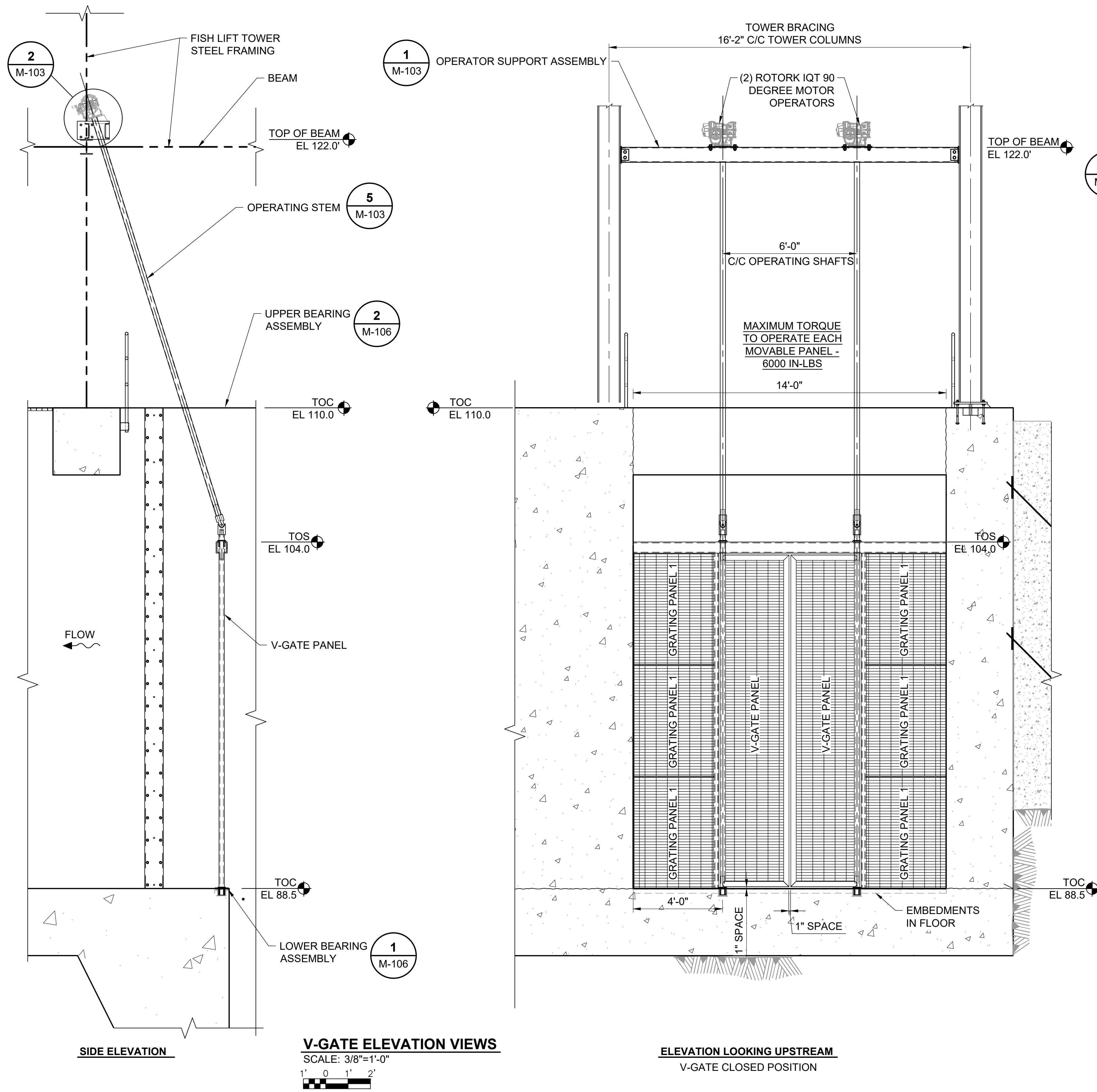
- NOTES:**
1. GENERAL OVERVIEW OF ENTRANCE GATE (EG-2):
 - MOVEMENT OF HINGE FLAP GATE: DOWNWARD OPENING, UPWARD CLOSING.
 - APPROXIMATE GATE SIZE 8.0' W x12.5'L
 2. FISHWAY WATER ELEVATIONS:
 - LOW WSL 95.6'
 - NORMAL WSL 96.8'
 - HIGH WSL 99.7'
 - 100 YR FLOOD 109.0'
 3. GENERAL GATE HINGE CONFIGURATION IS PROVIDED. THE FINAL GATE HINGE DETAILS WILL BE PER THE GATE MANUFACTURER.
 4. GENERAL GATE SIDE SWEEP CONFIGURATION IS PROVIDED. THE FINAL GATE SIDE SWEEP DETAILS WILL BE PER THE GATE MANUFACTURER.
 5. GATE MANUFACTURE TO PROVIDE GATE STOP IN WALL.



A SECTION
SCALE: 3"=1'-0"
0 6" 1'

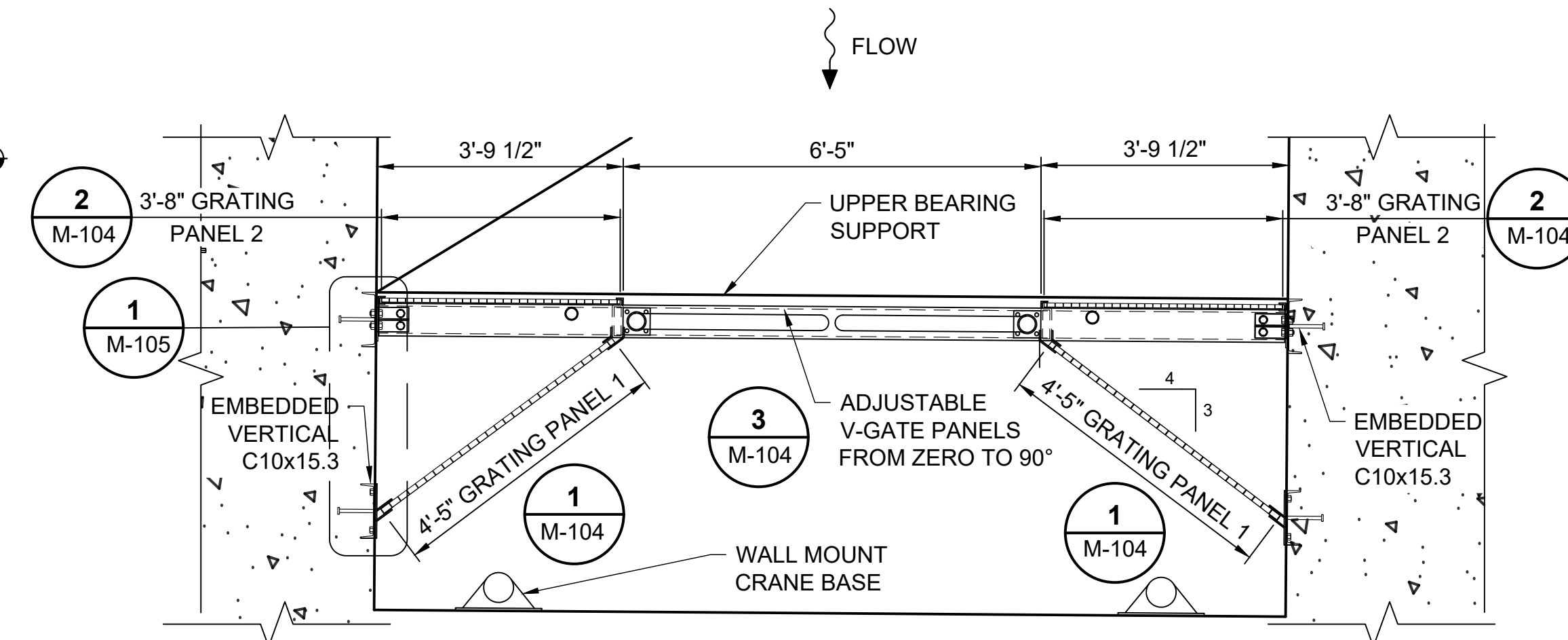


1 DETAIL
SCALE: 3"=1'-0"
0 6" 1'



NOTE:

1. THE GRATING PANELS TYPE 1 & 2 ARE REMOVABLE FOR CLEANING.

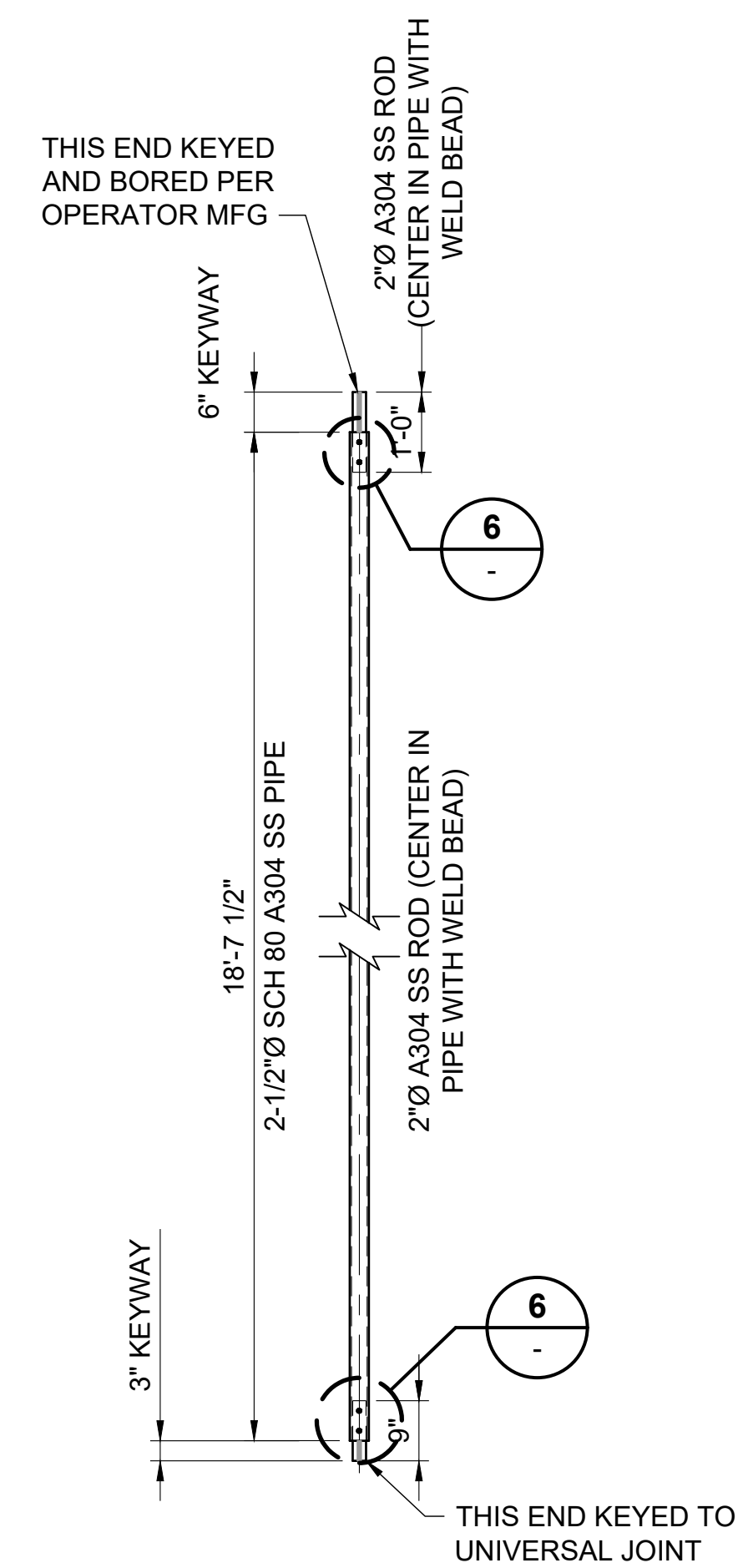


ENLARGED PLAN

SCALE: 1/2"=1'



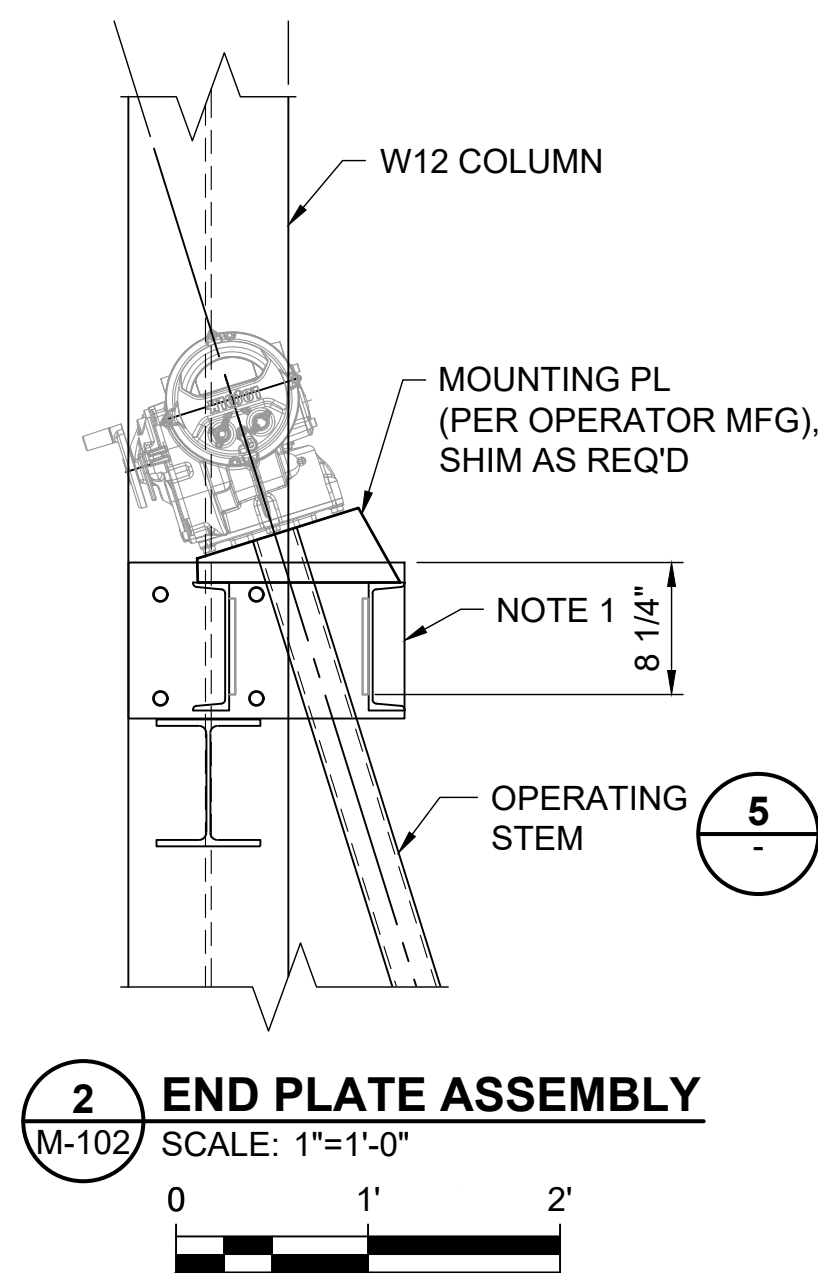
-
- PLAN**
- ELEVATION**



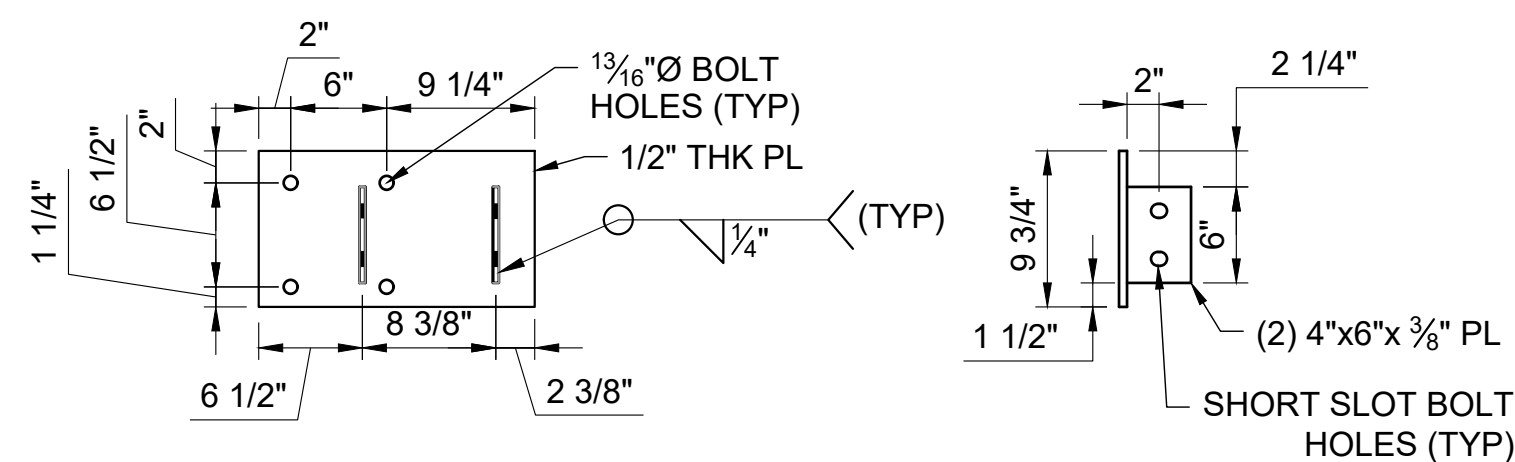
1 OPERATOR SUPPORT ASSEMBLY
M-102 SCALE: 1"=1'-0"
0 1' 2'

5 OPERATING STEM (2 REQUIRED)

M-102 SCALE: 1/2"=1'-0"



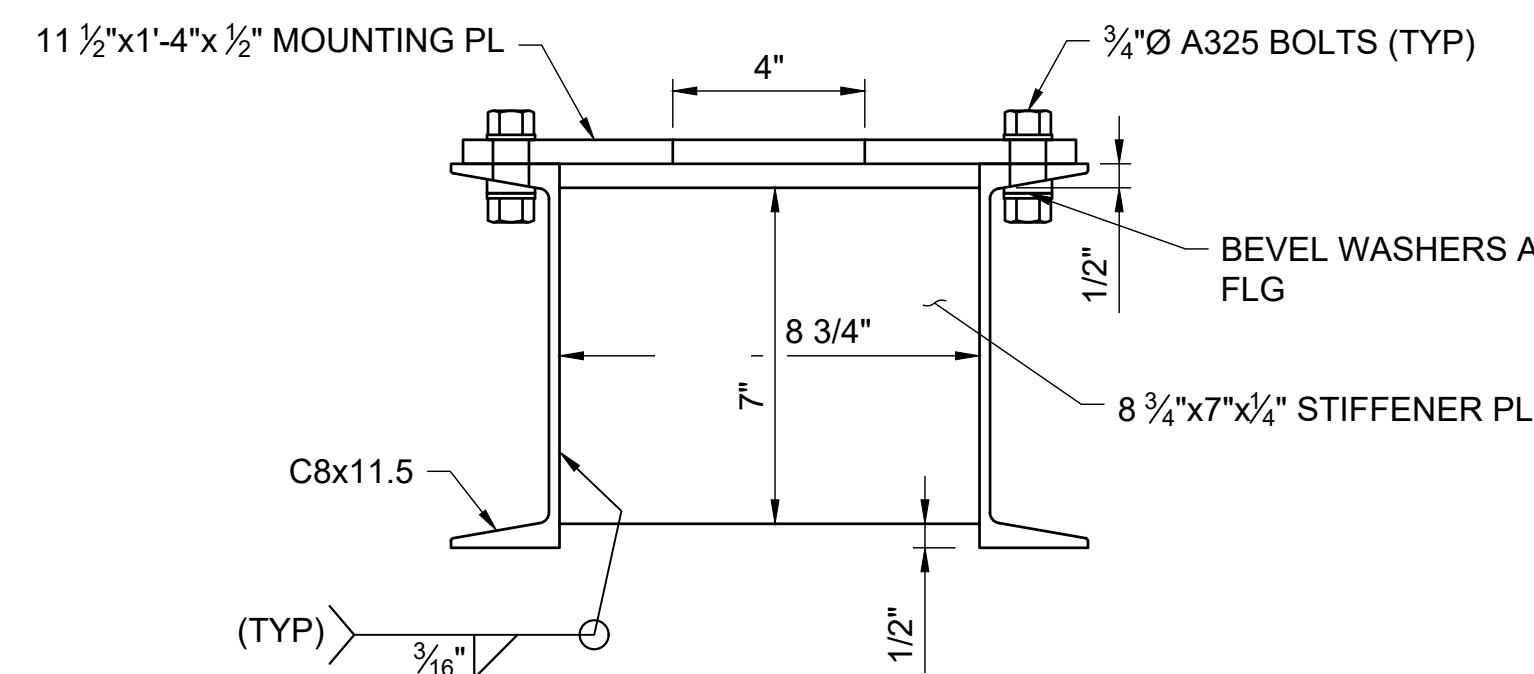
3 END PLATE DETAIL (2 REQUIRED)
SCALE: 1"=1'-0"



4 STIFFENER DETAIL (TYPICAL)
SCALE: 3"=1'-0"

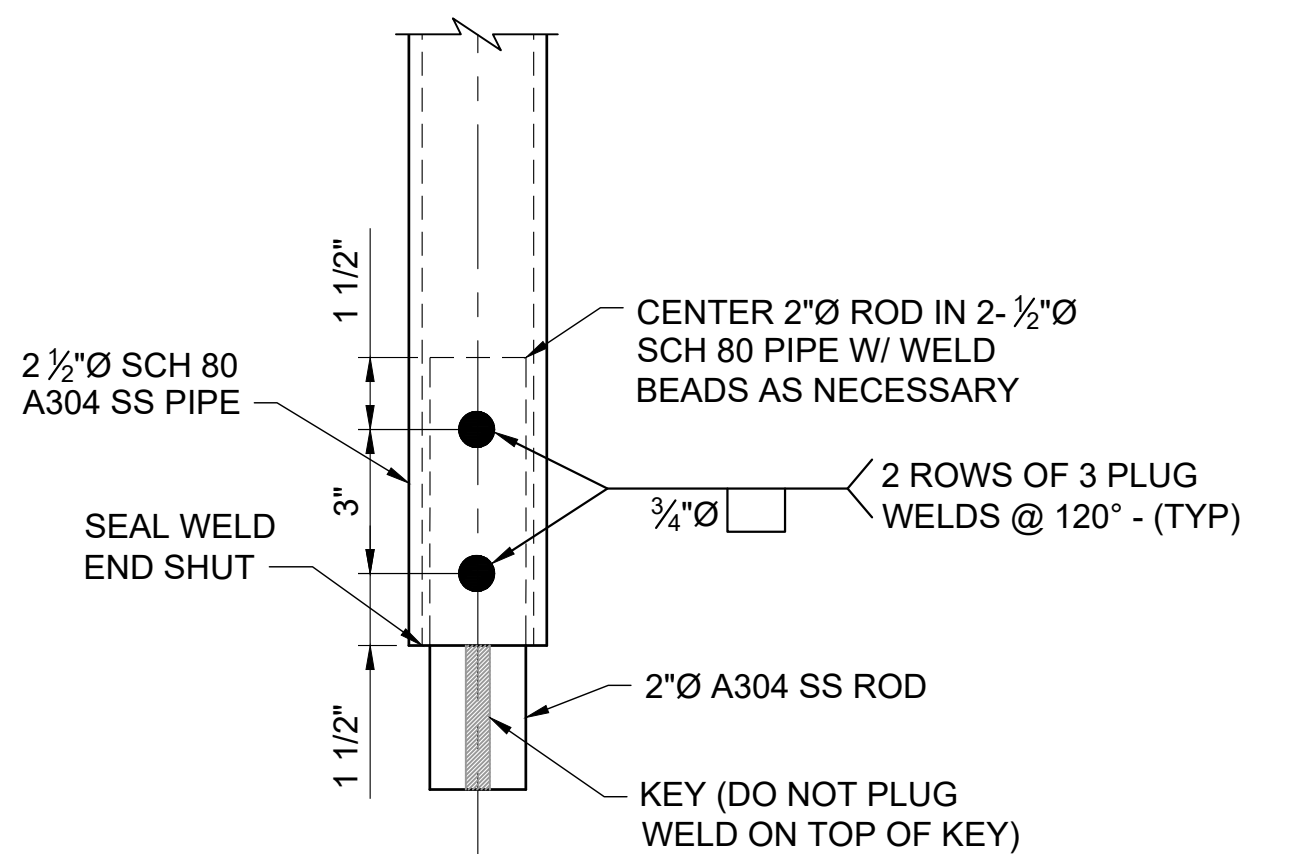


The diagram shows a cross-section of a stiffener. It consists of a vertical rectangular section with a width of 6 inches and a height of 1 foot. The top of the section is labeled '6"' and the right side is labeled '1'.



6 PLUG WELD DETAIL (2 LOC)
SCALE: 3'=1'-0"

0 6" 1'



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VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING



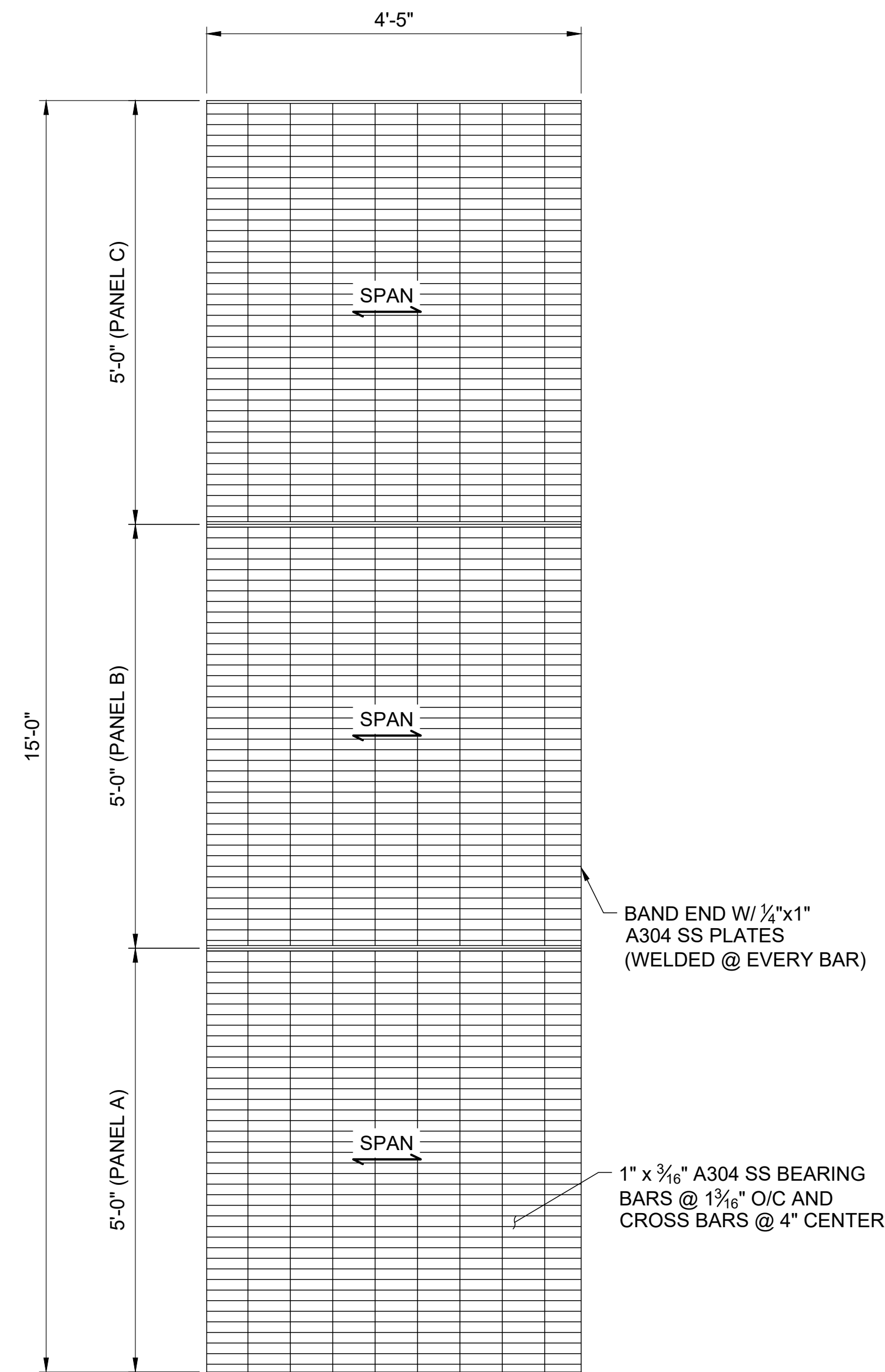
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY

WOODLAND FISH LIFT PASSAGE DESIGN

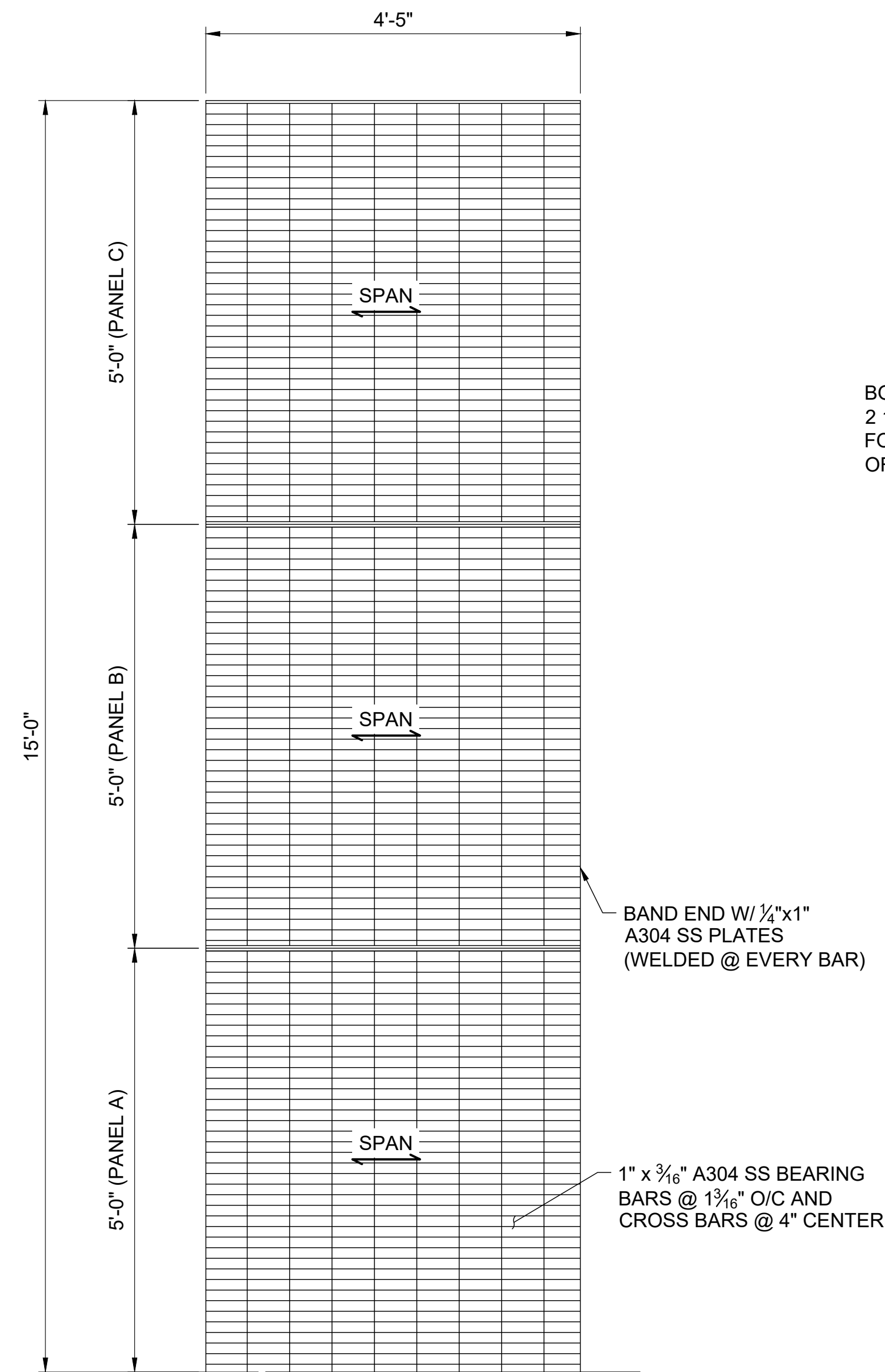
MAINE DEPARTMENT OF MARINE
RESOURCES

FISH LIFT V-GATE (VG-3) OPERATOR SUPPORT ASSEMBLY

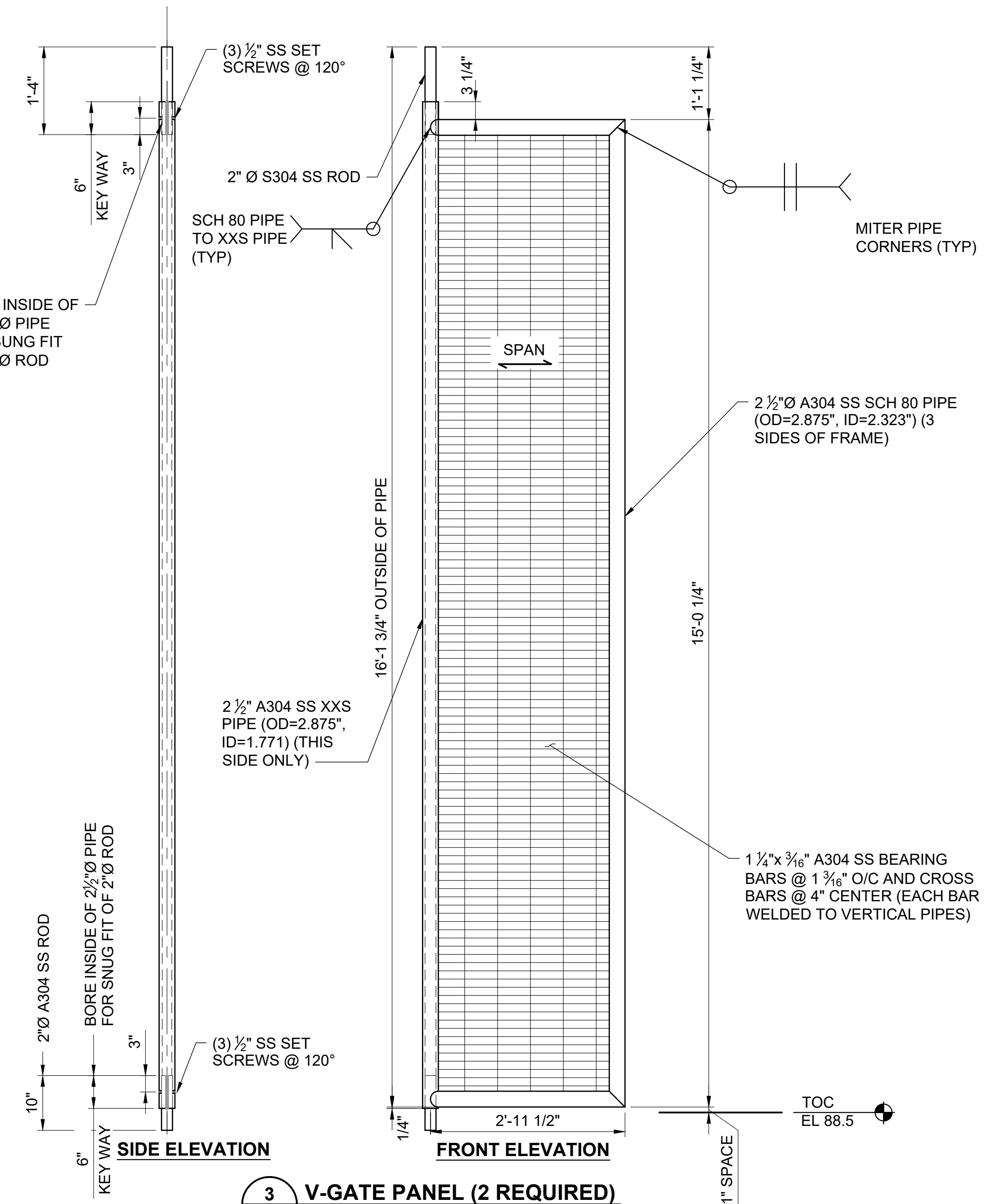
PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	206 OF 240
DRAWING:	M-103



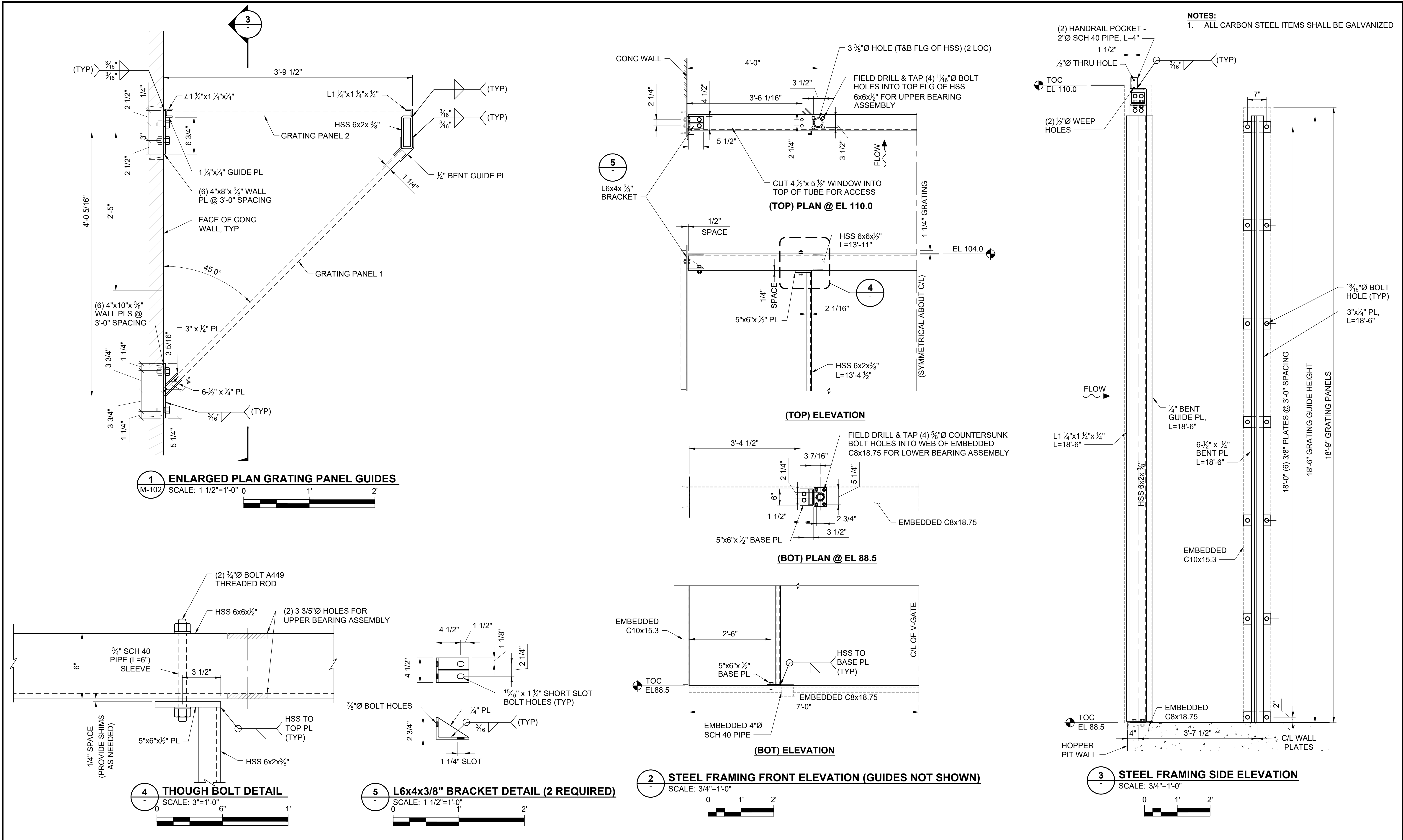
1 GRATING PANEL 1 (2 REQUIRED)
 M-102 SCALE: 3/4"=1'-0"
 0 1' 2'
 3/4" = 1'-0"

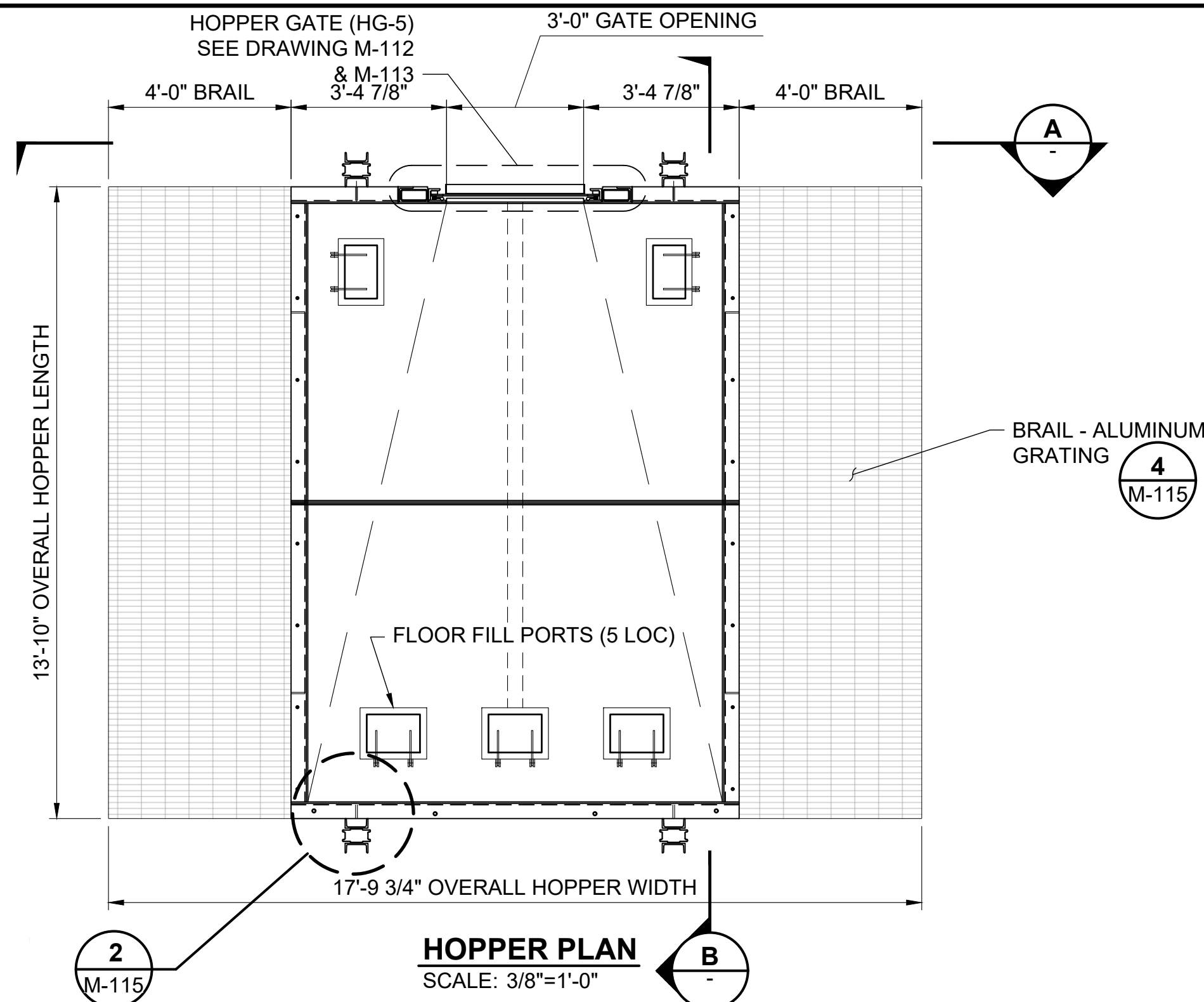


2 GRATING PANEL 2 (2 REQUIRED)
 M-102 SCALE: 3/4"=1'-0"
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 3/4" = 1'-0"

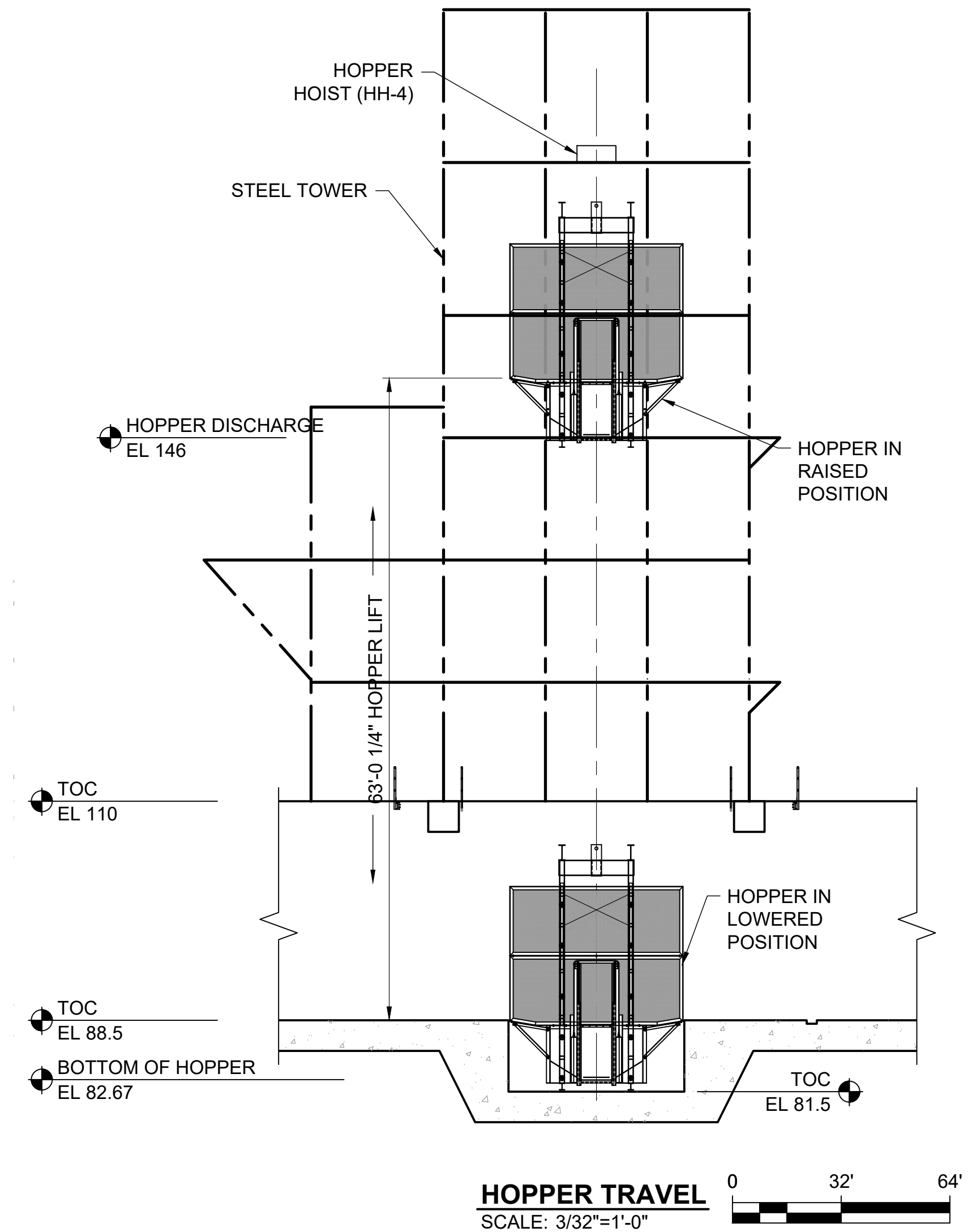
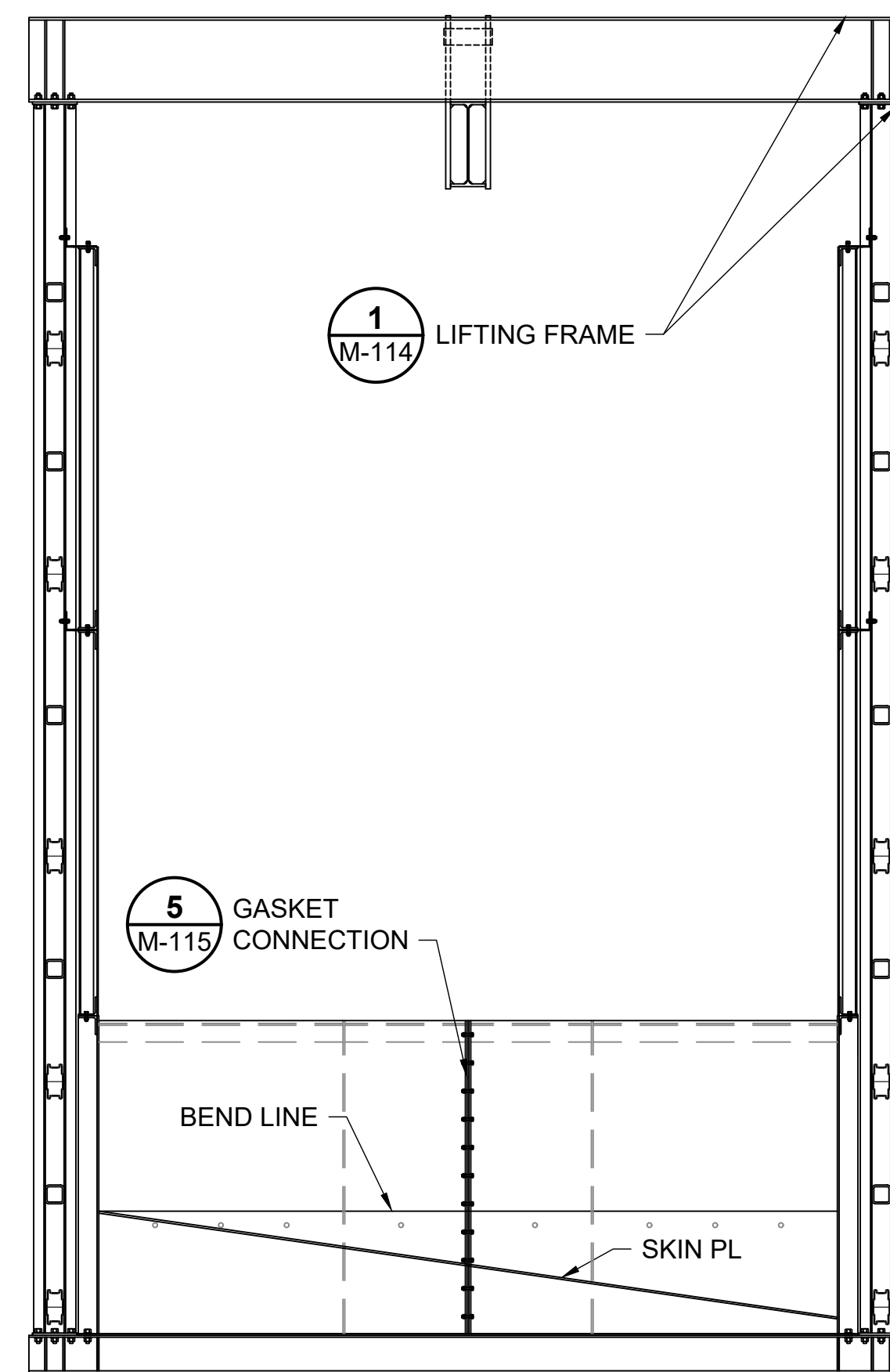
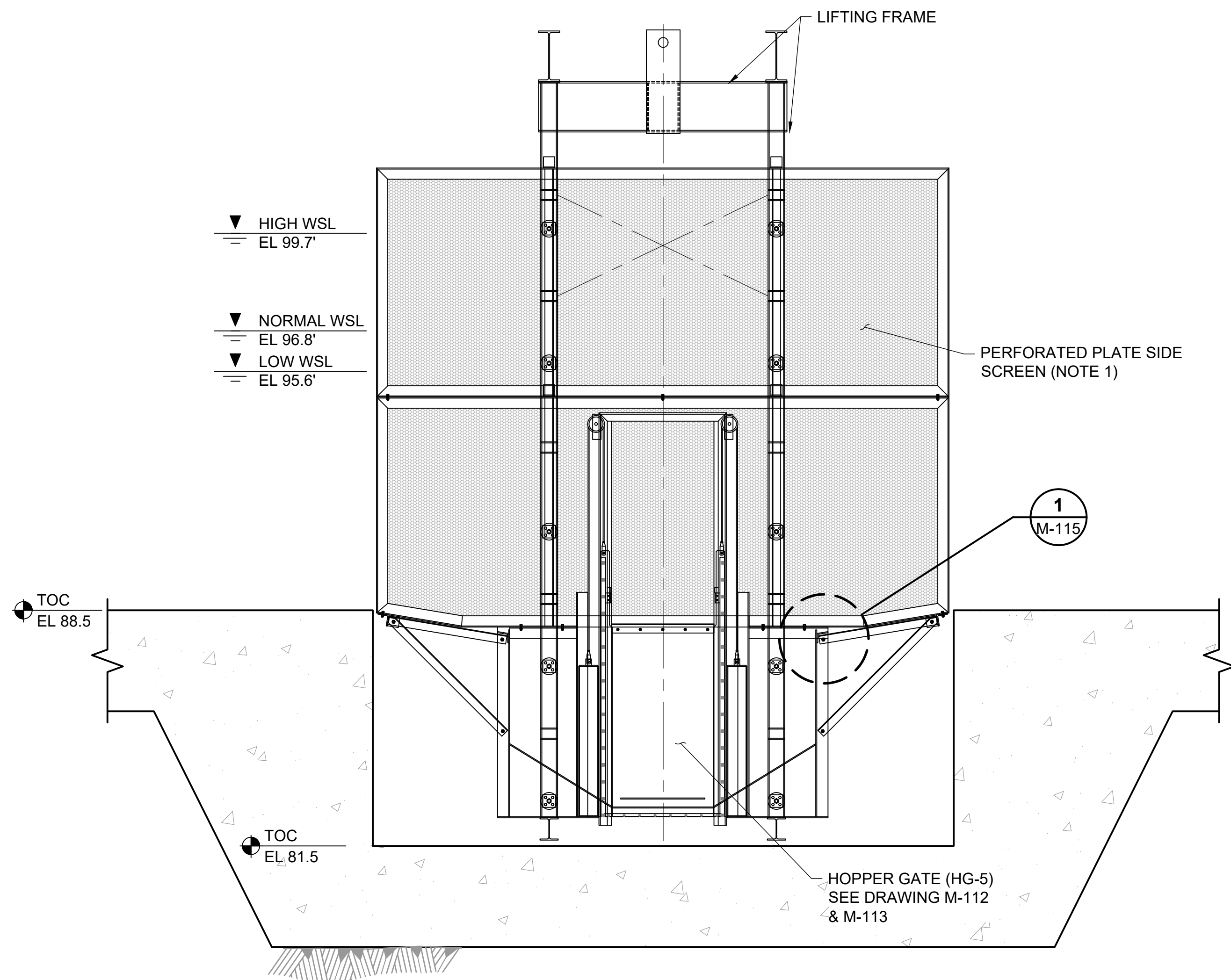


3 V-GATE PANEL (2 REQUIRED)
 M-102 SCALE: 3/4"=1'-0"
 0 1' 2'
 3/4" = 1'-0"





- NOTES:**
1. SMOOTH SIDE OF PERFORATED PLATE SHALL FACE THE INSIDE OF THE HOPPER.
 2. HOPPER MATERIALS SHALL BE GALVANIZED STEEL EXCEPT FOR ITEMS NOTED OTHERWISE.



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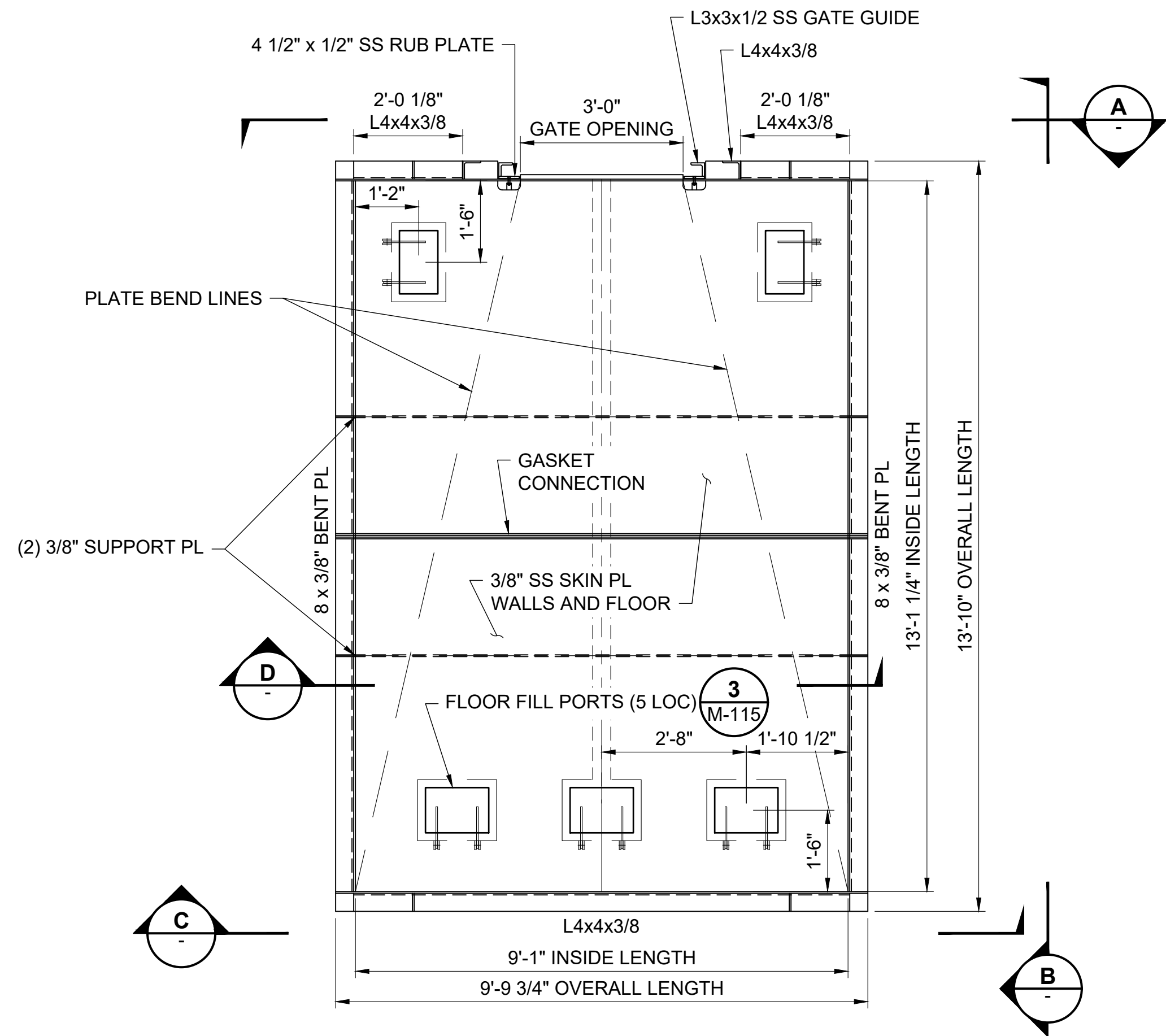
9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY

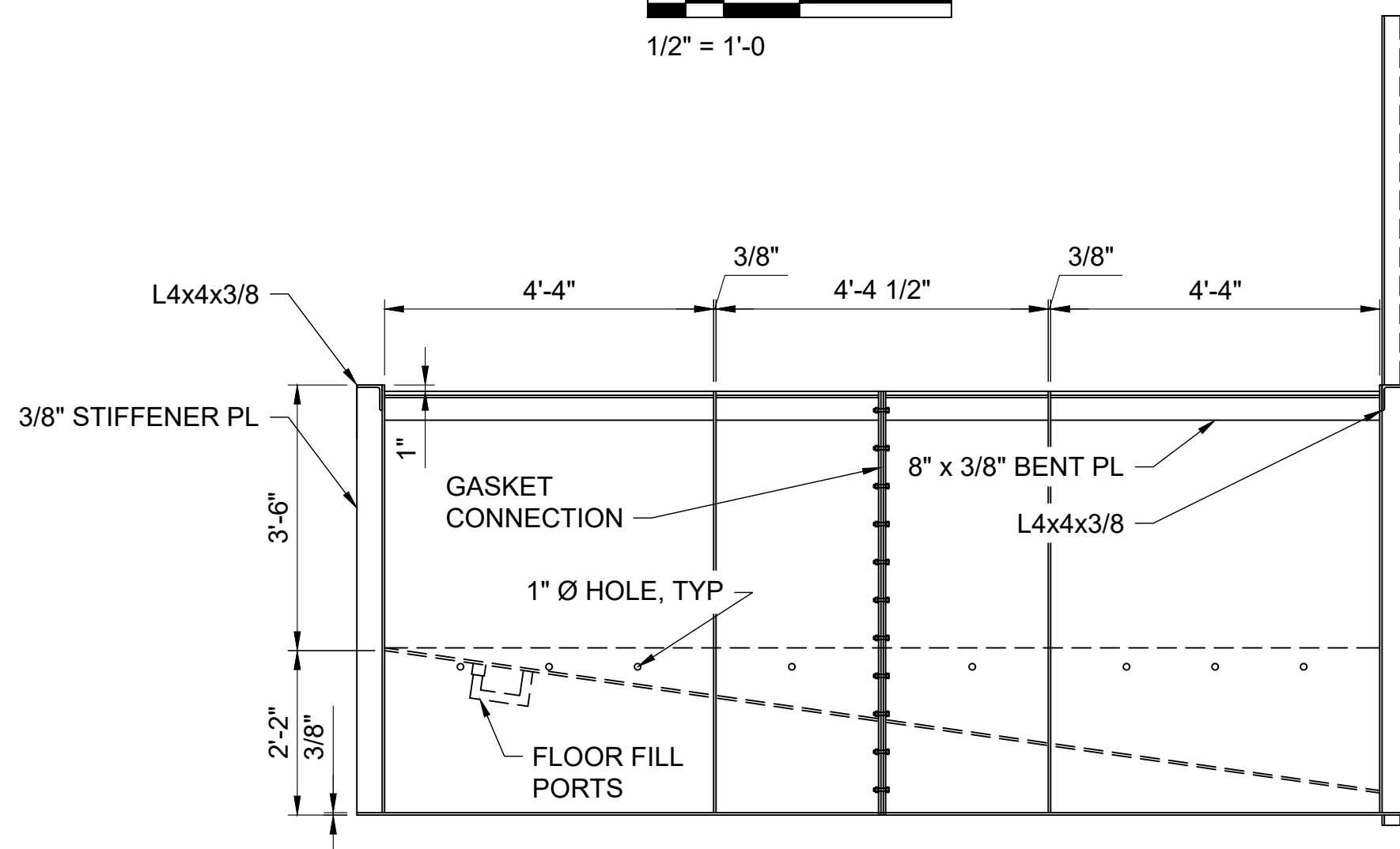
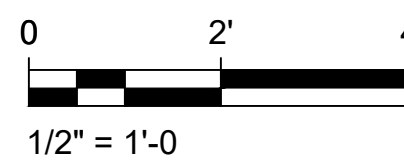
WOODLAND FISH LIFT PASSAGE DESIGN
MAINE DEPARTMENT OF MARINE
RESOURCES

FISH LIFT HOPPER - GENERAL LAYOUT
AND INFORMATION

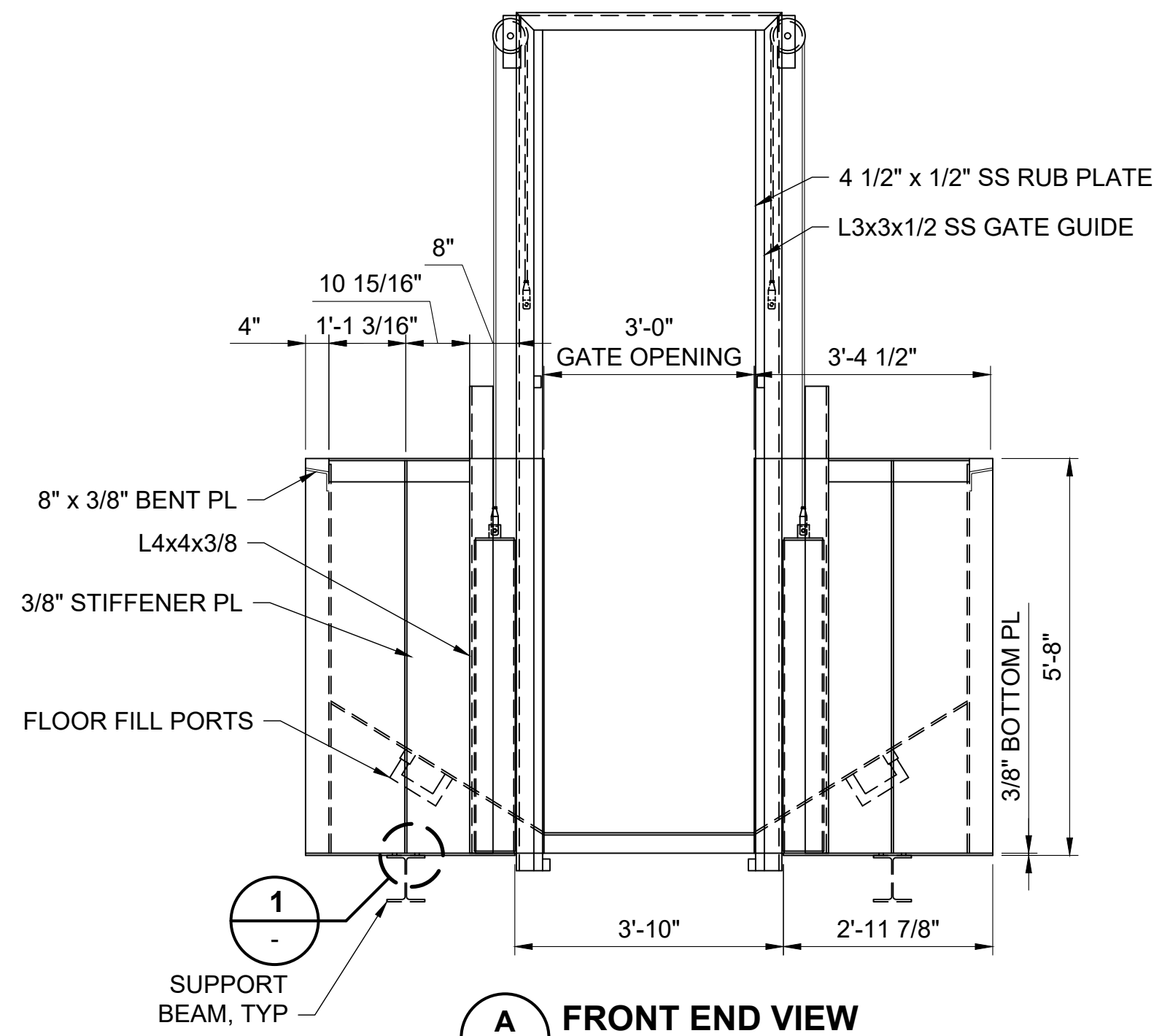
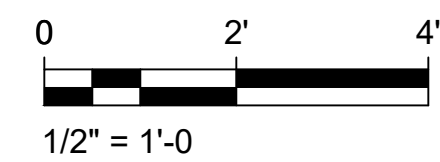
PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	210 OF 240
DRAWING:	M-110



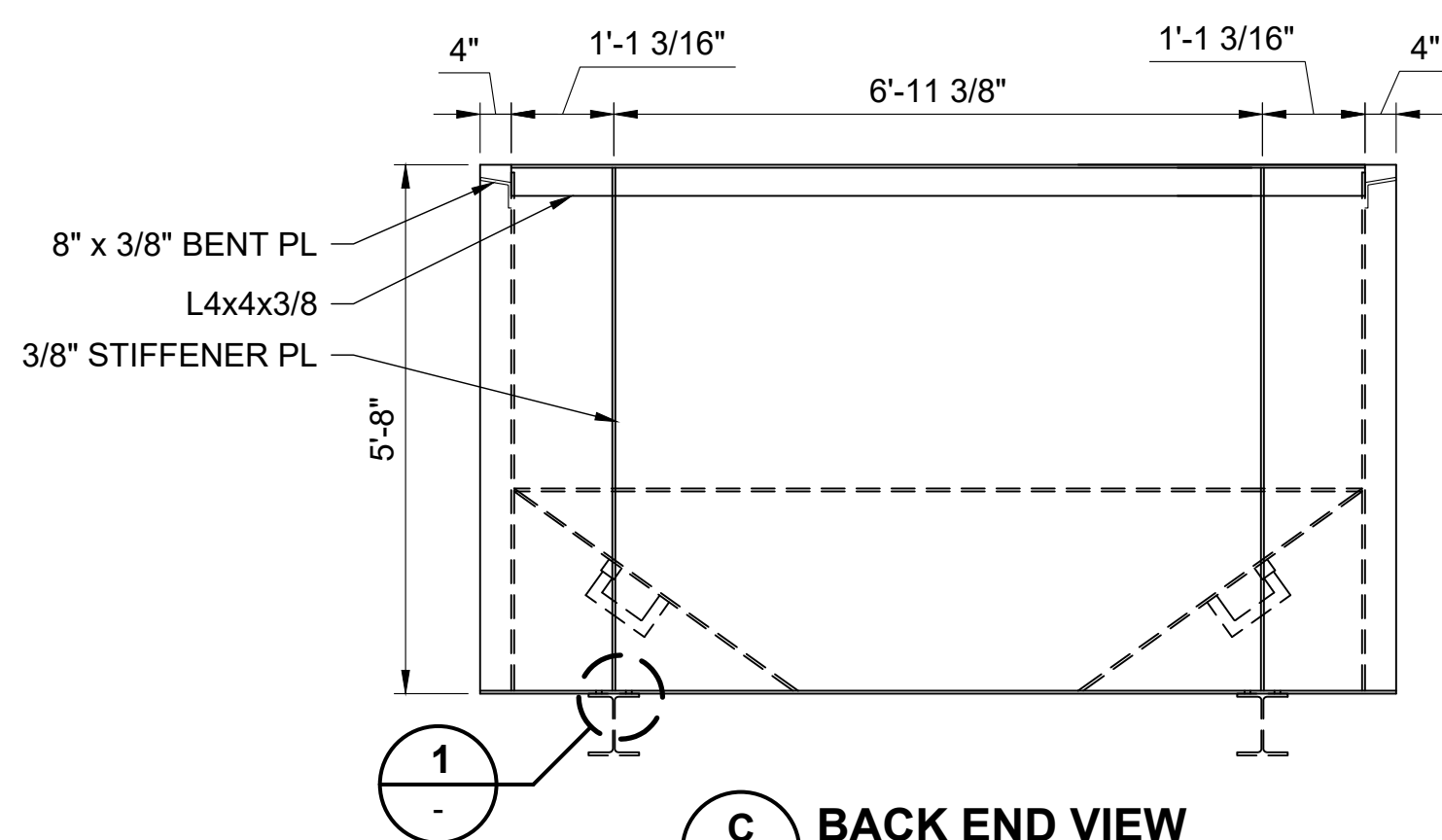
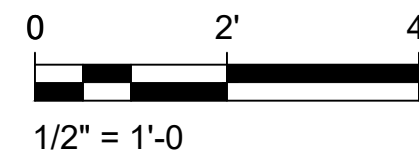
HOPPER PLAN
SCALE: 1/2" = 1'-0"



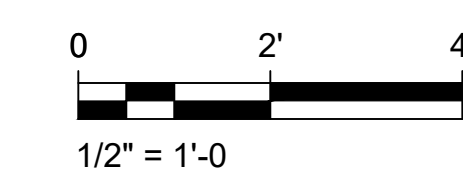
B SIDE VIEW
SCALE: 1/2" = 1'-0"



A FRONT END VIEW
SCALE: 1/2" = 1'-0"

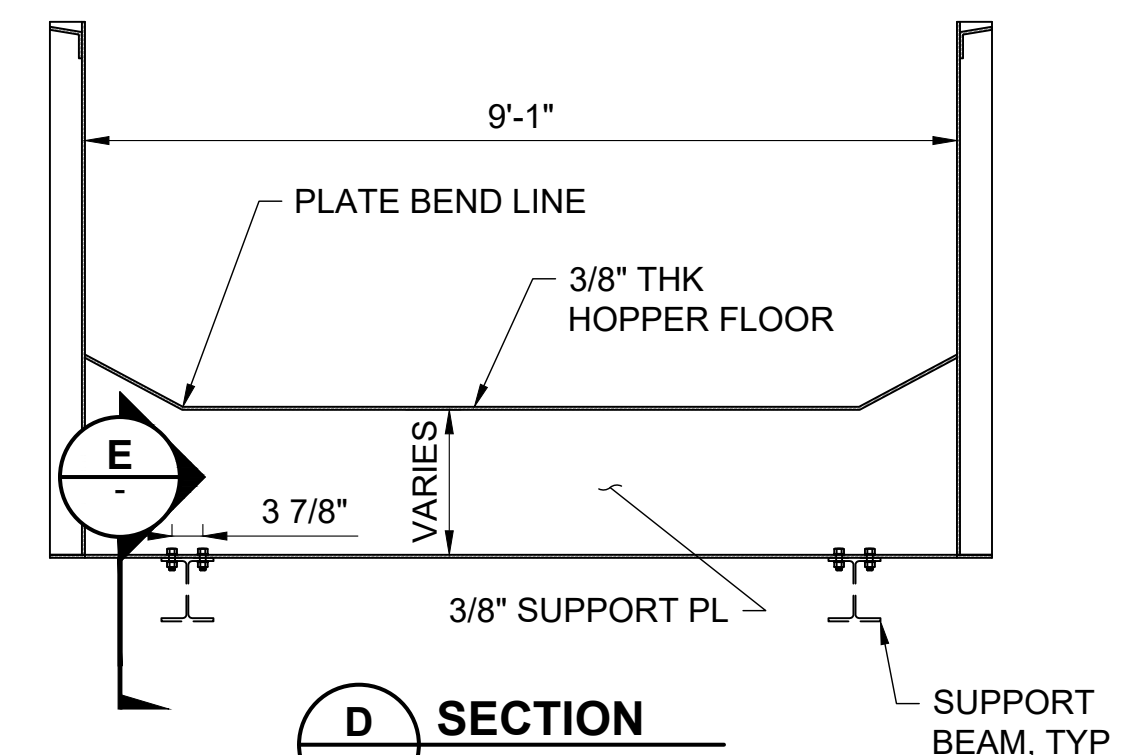


C BACK END VIEW
SCALE: 1/2" = 1'-0"

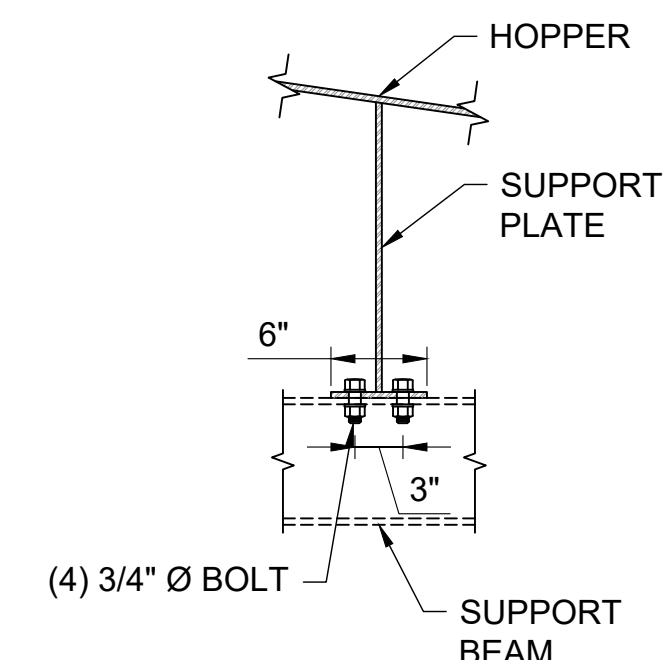
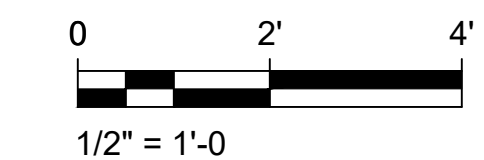


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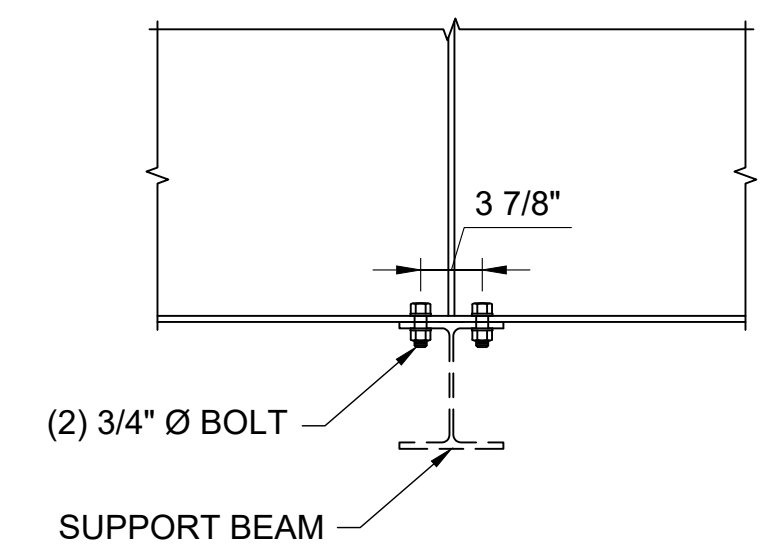
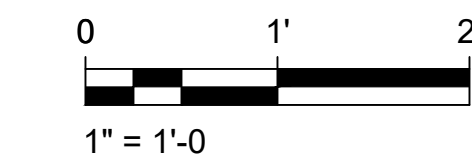
1. NET HOPPER VOLUME=490 CUBIC FEET
2. ALL INTERIOR HOPPER PLATE JOINTS SHALL BE SEAL WELDED.
3. ALL INTERIOR SURFACES & FISH CONTACT AREAS SHALL BE SMOOTH & BURR FREE.
4. GRIND ALL INTERIOR EDGES TO MINIMUM 1/8"R.
5. HOPPER SHALL BE GALVANIZED STEEL EXCEPT FOR ITEMS NOTED OTHERWISE.



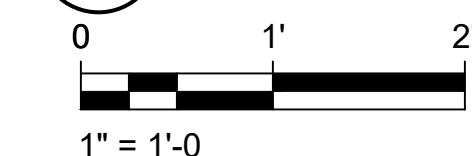
D SECTION
SCALE: 1/2" = 1'-0"

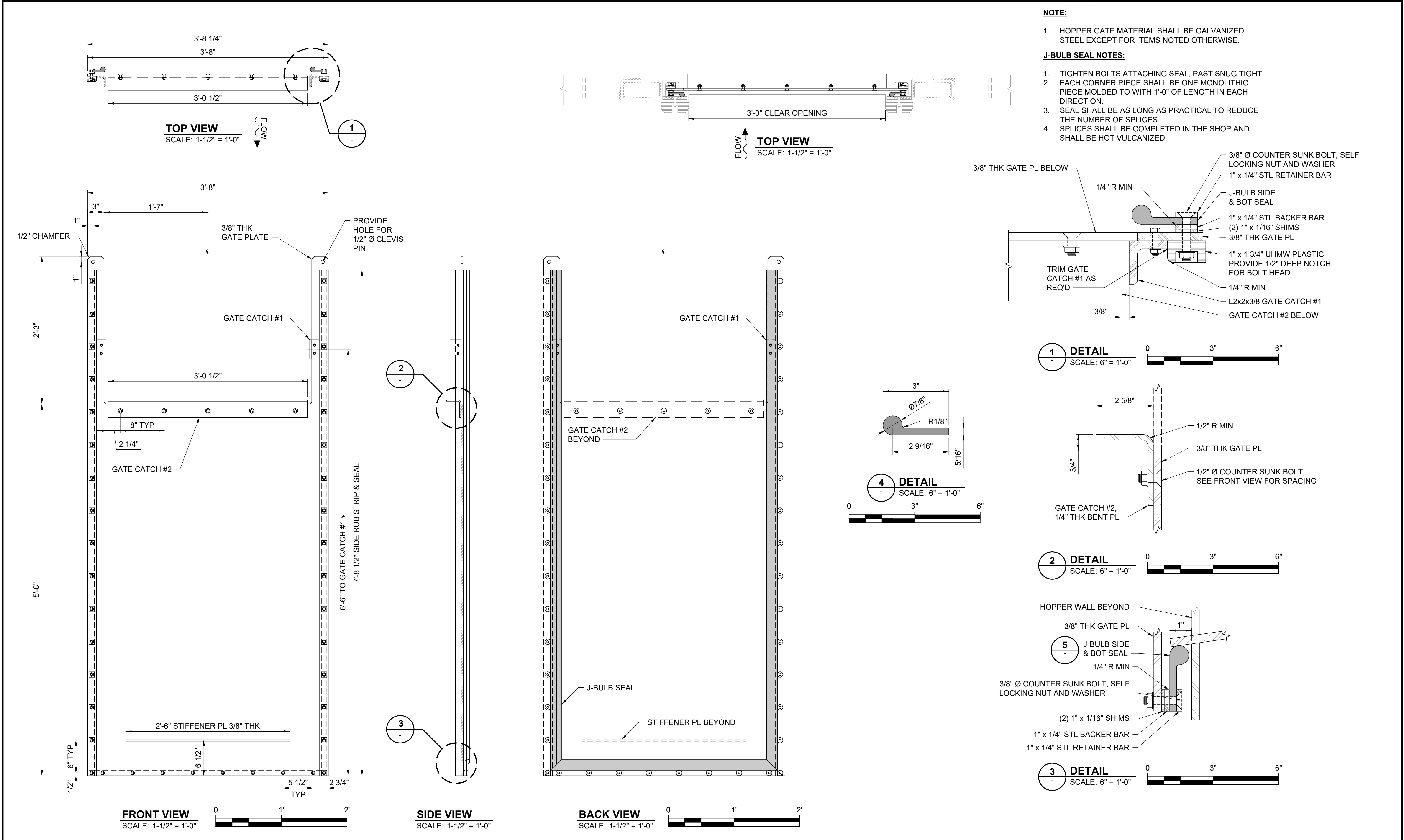


E SECTION
SCALE: 1" = 1'-0"



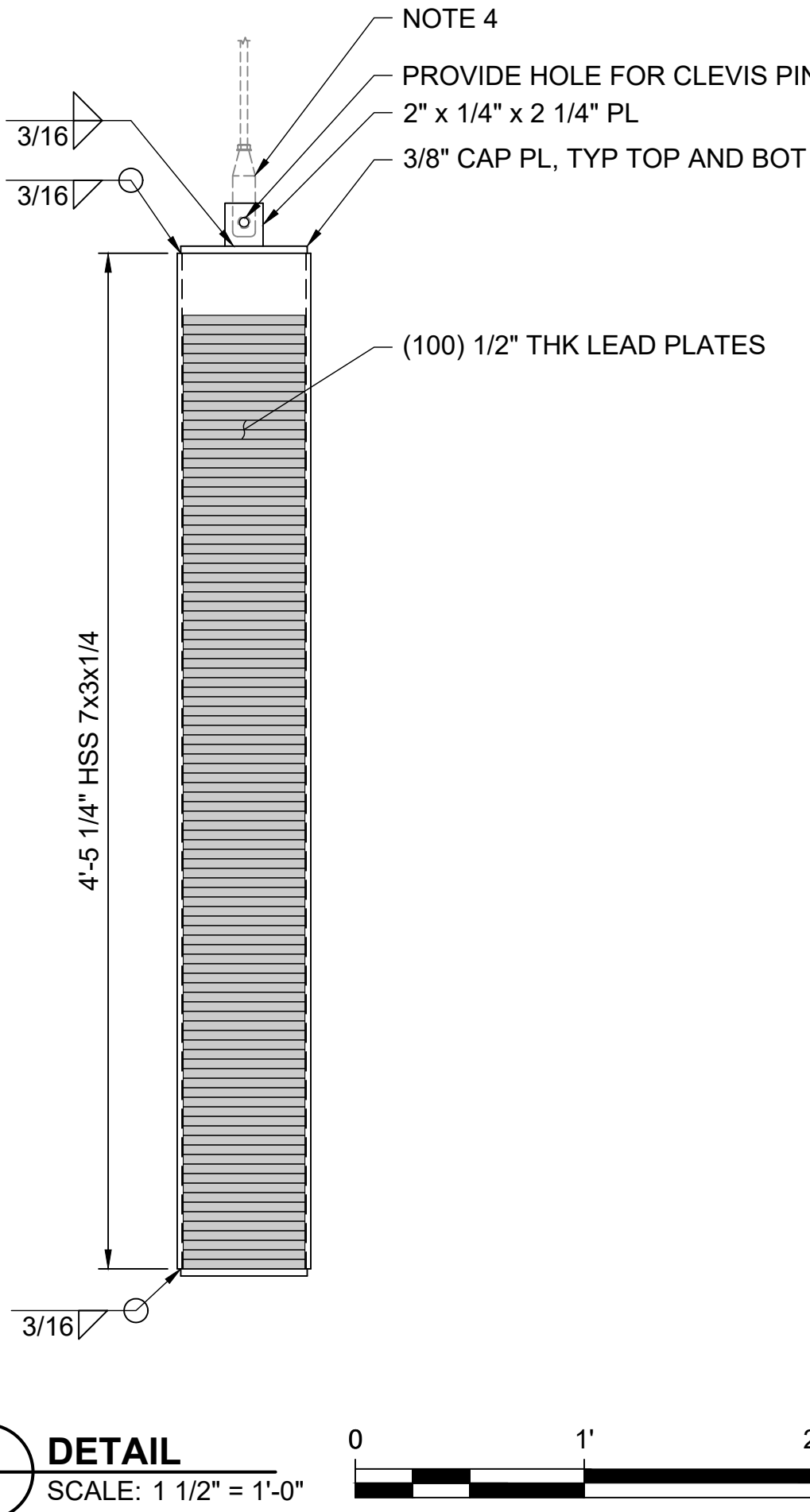
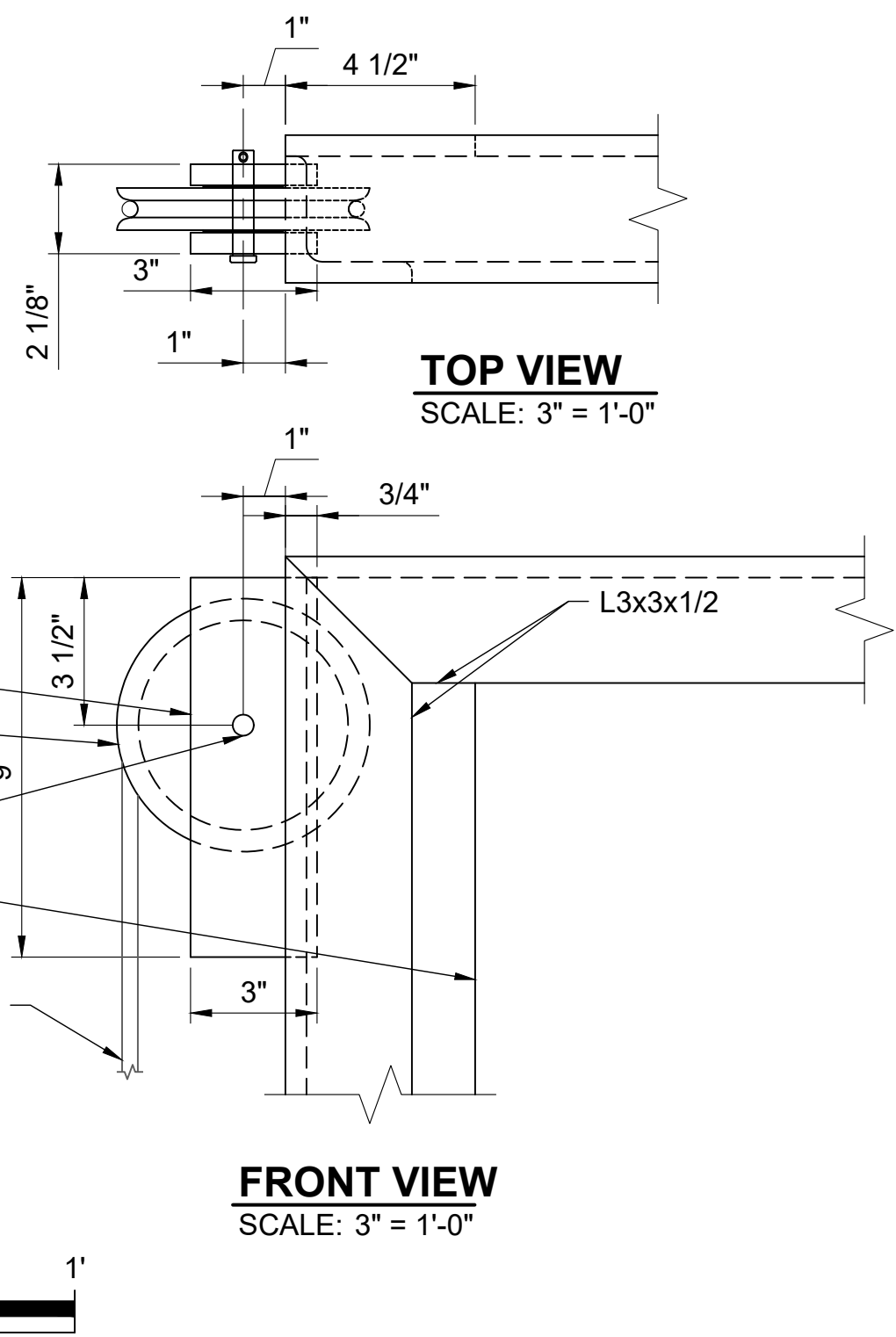
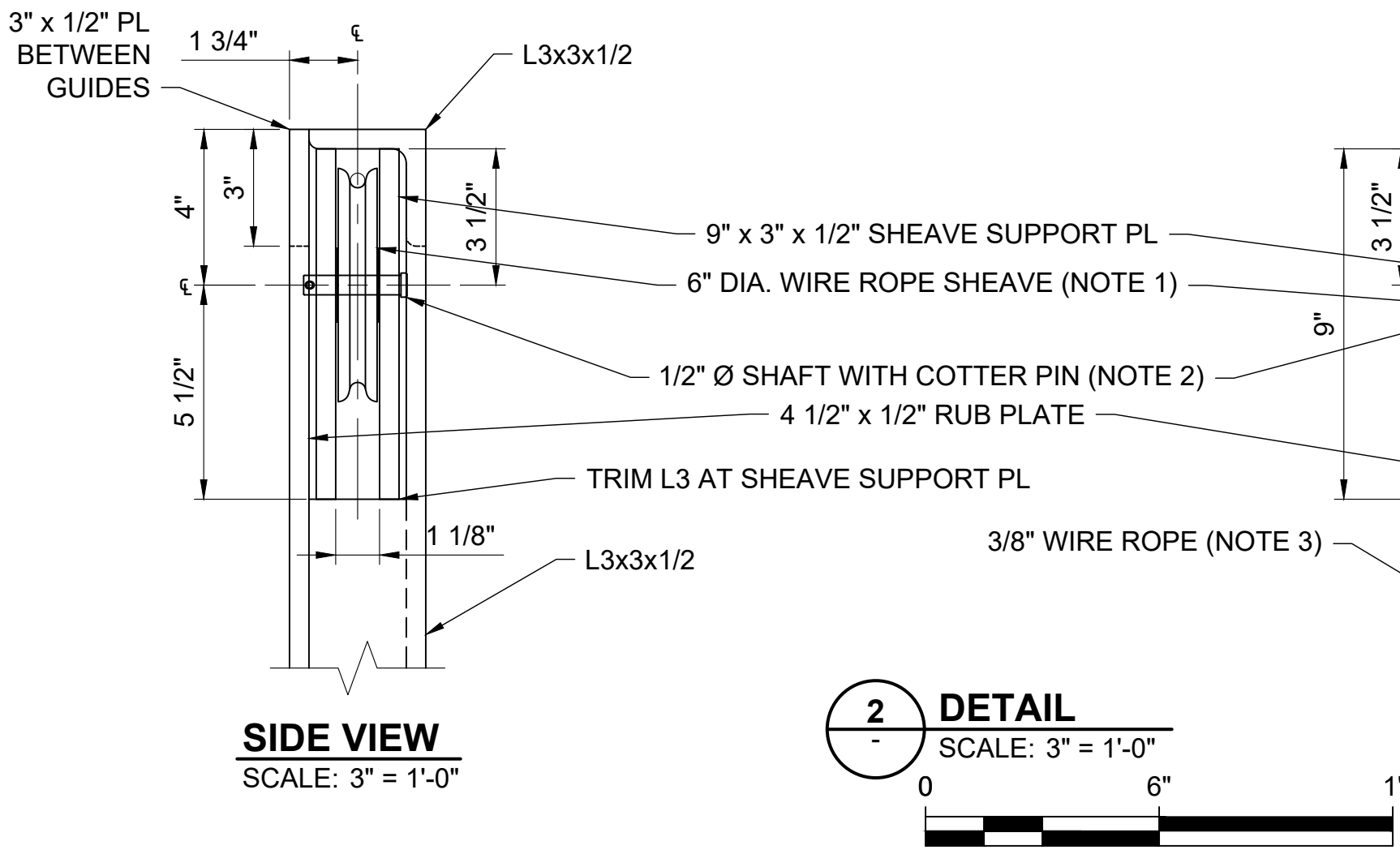
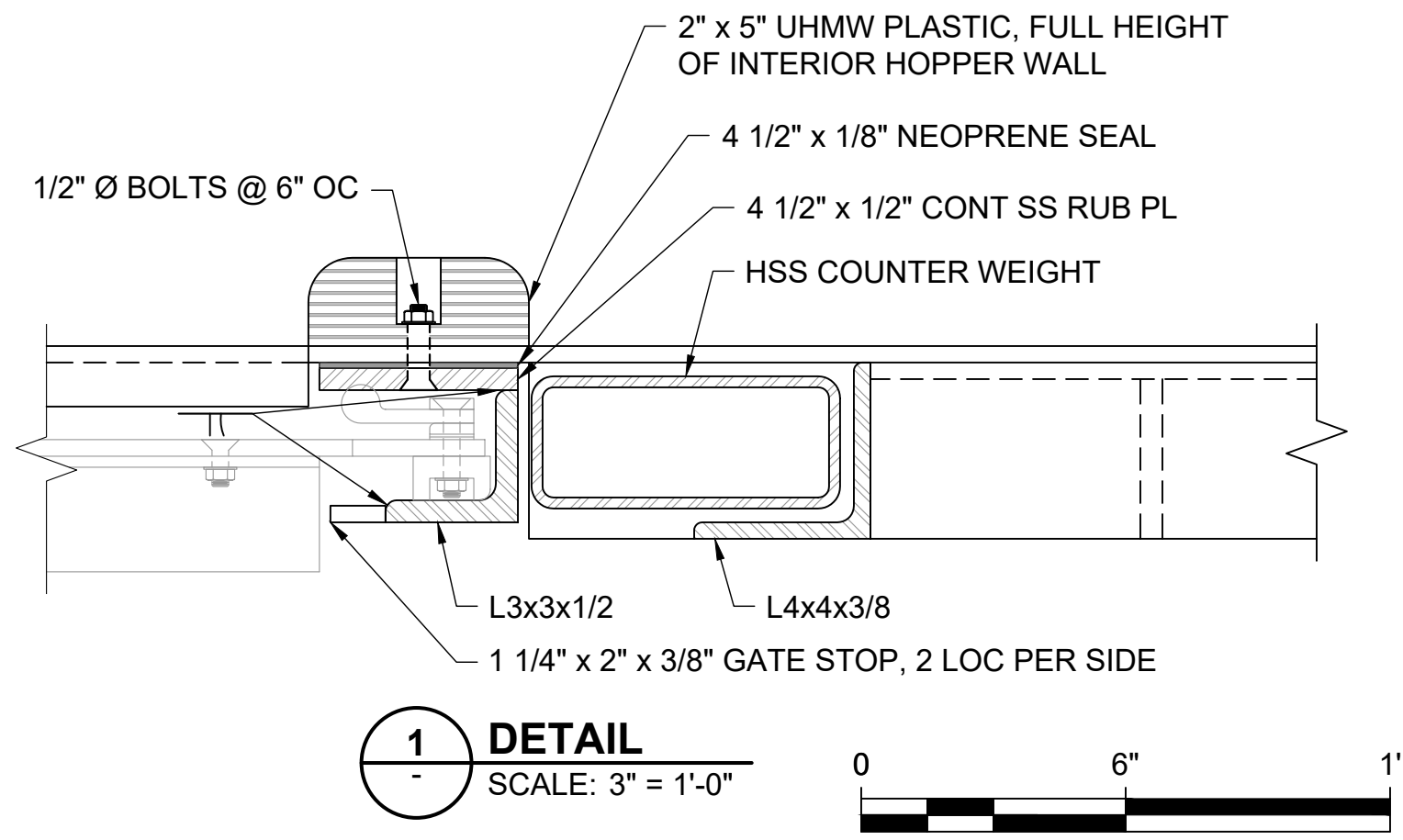
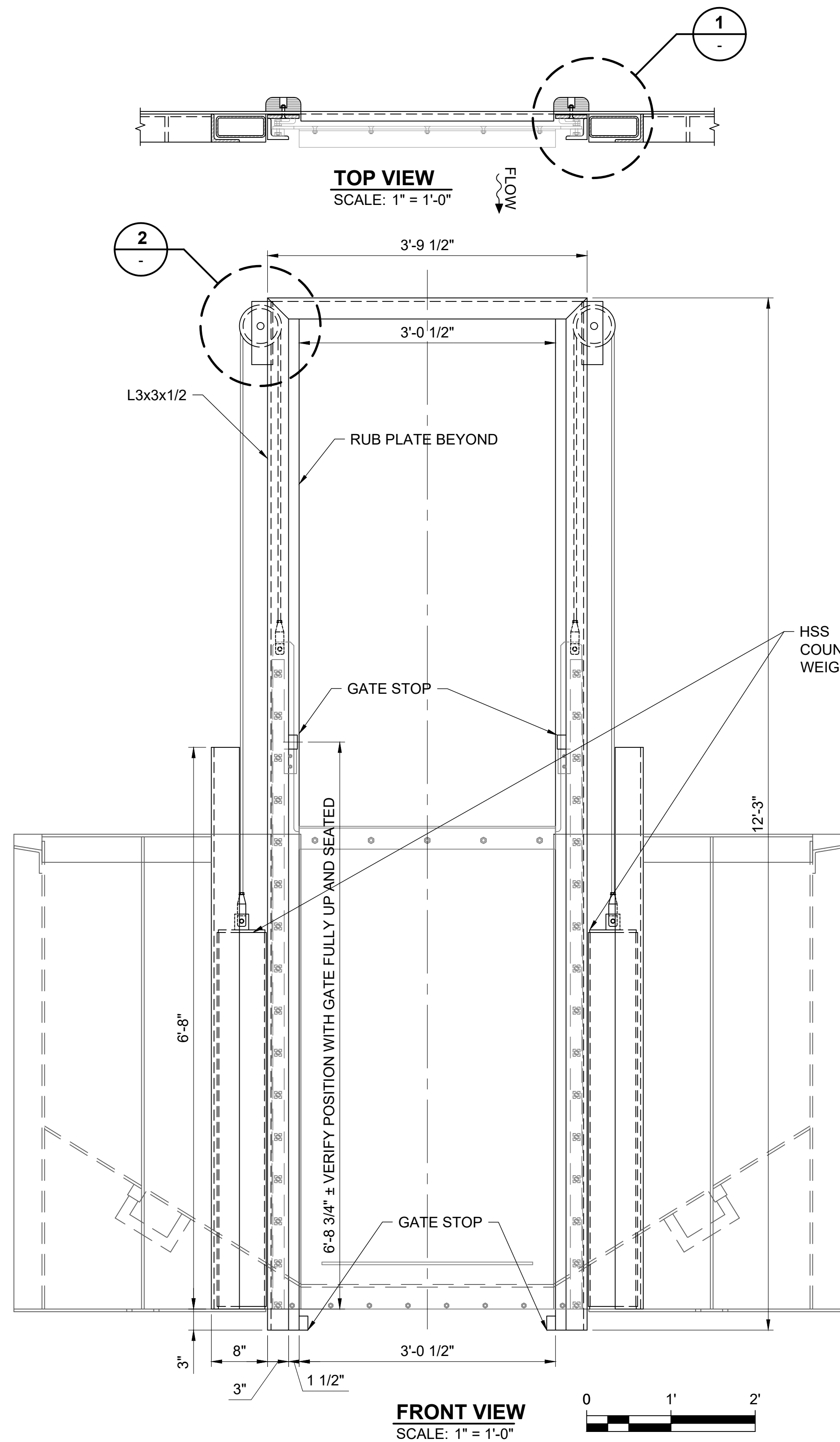
1 DETAIL
SCALE: 1" = 1'-0"

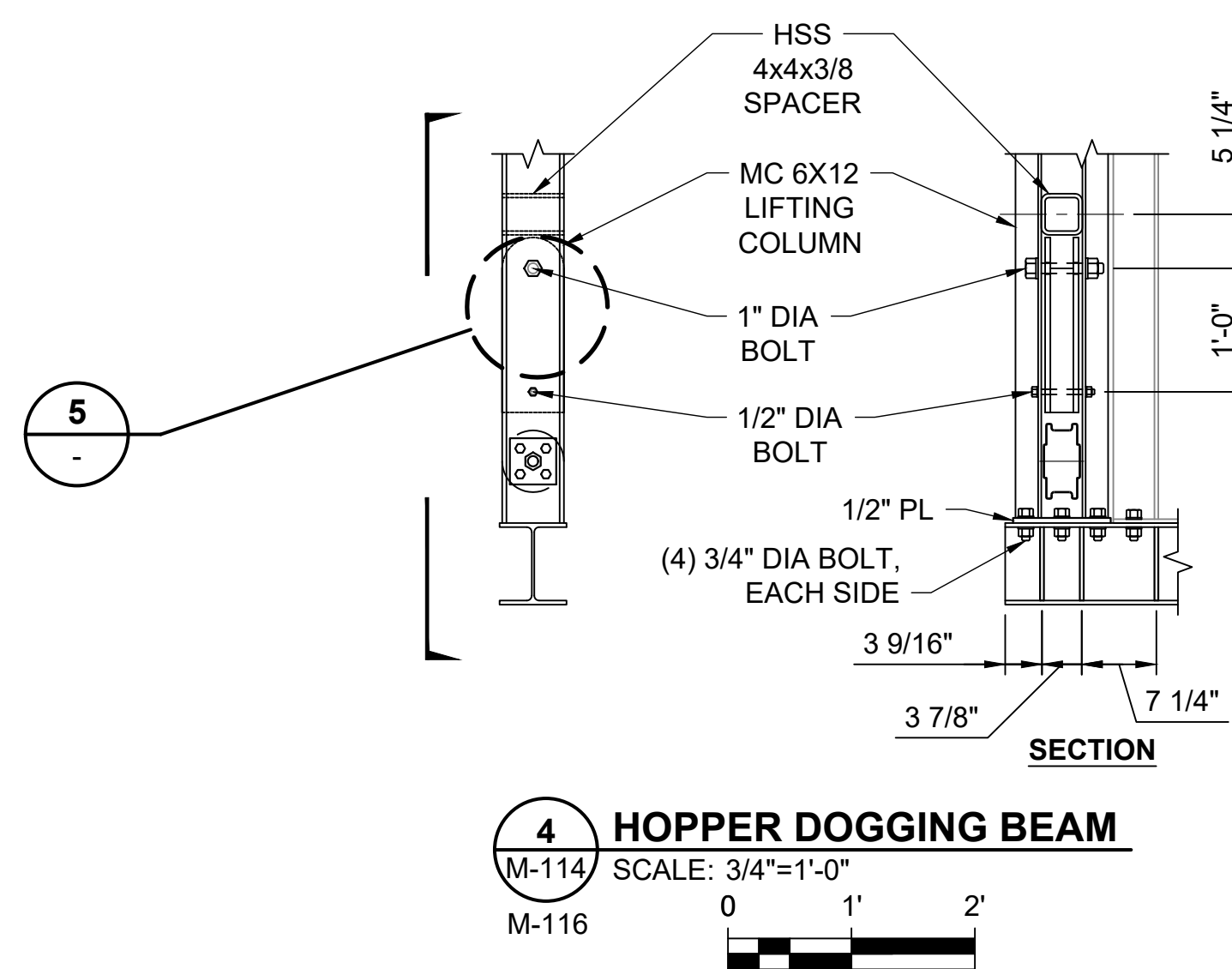
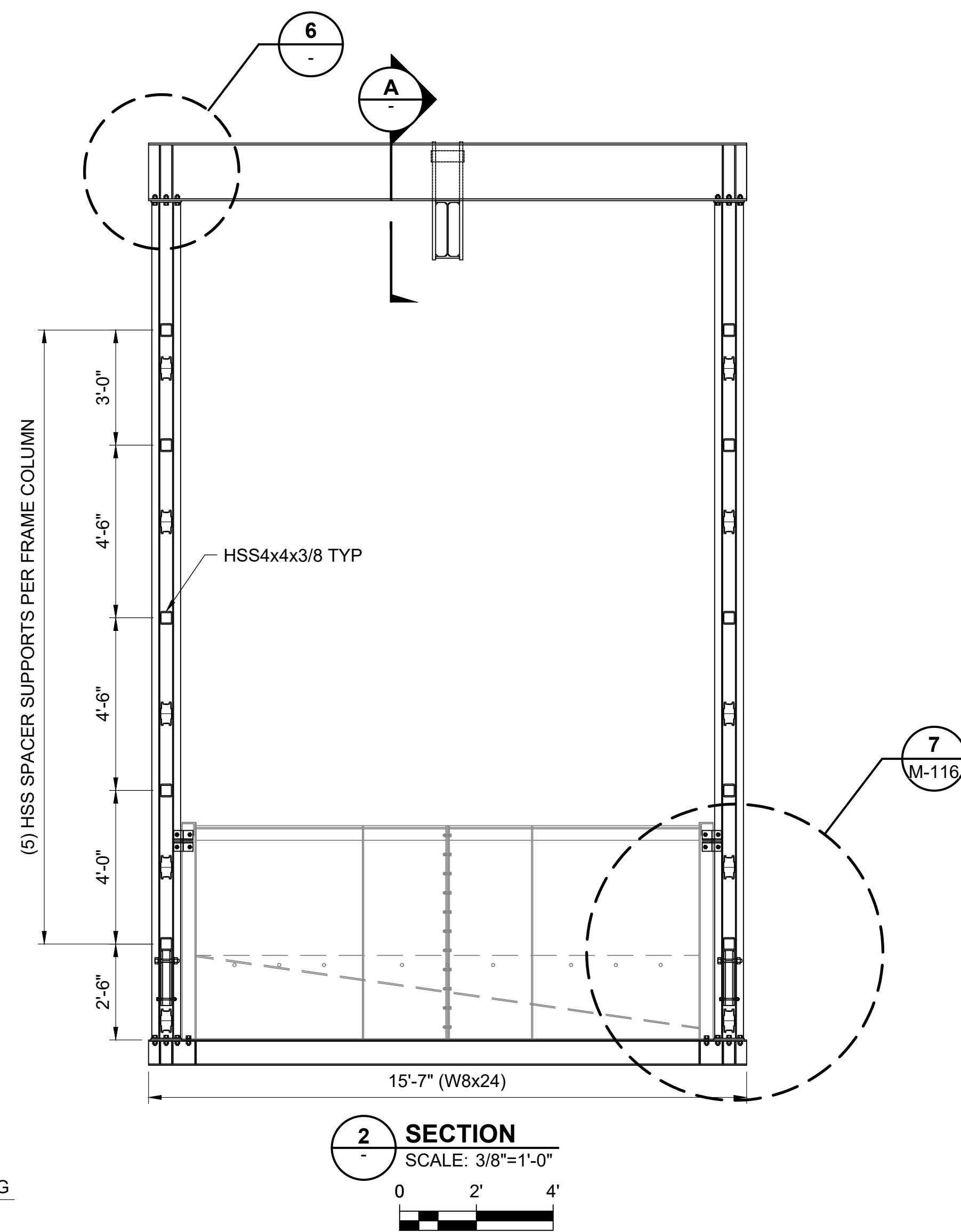
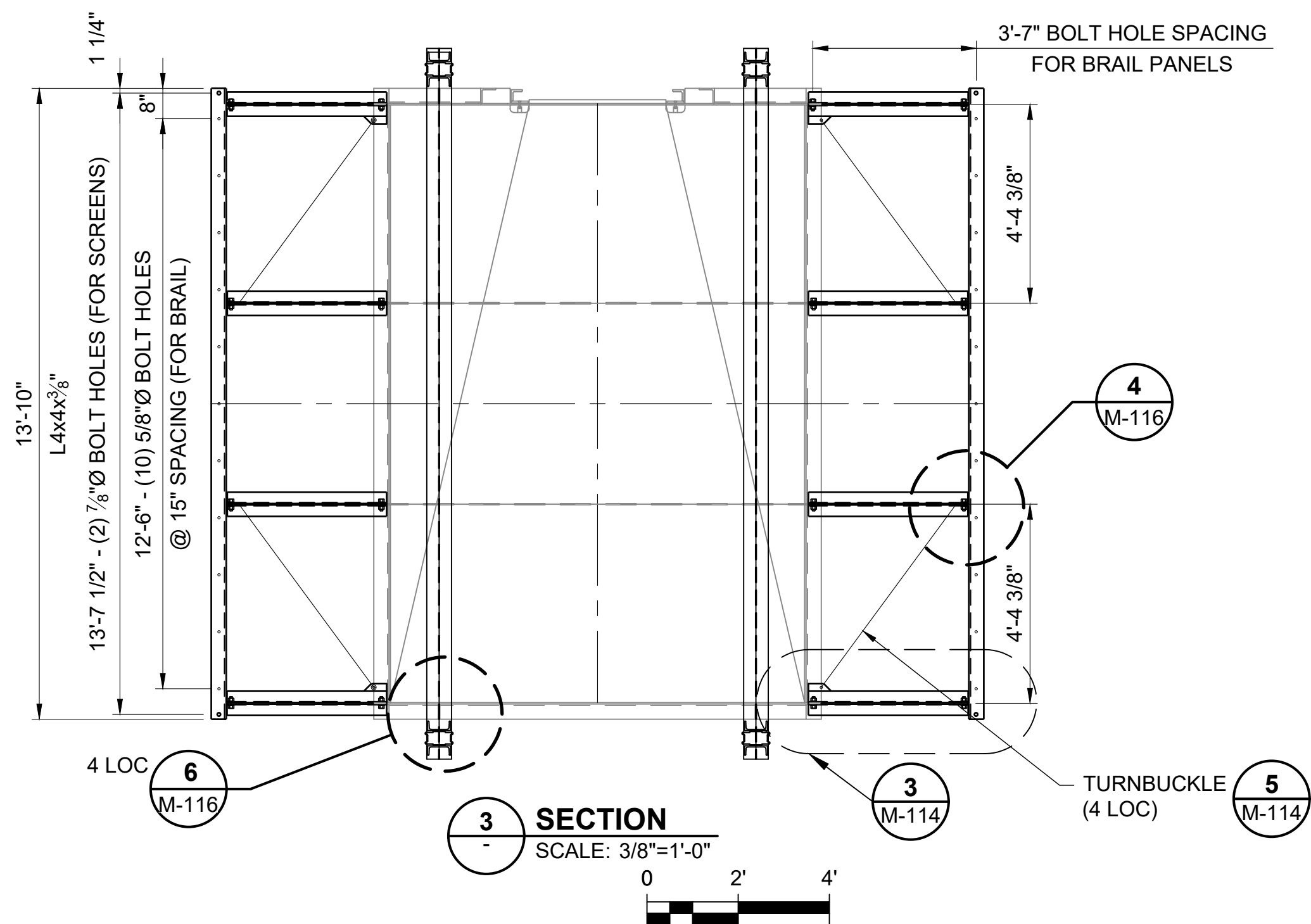
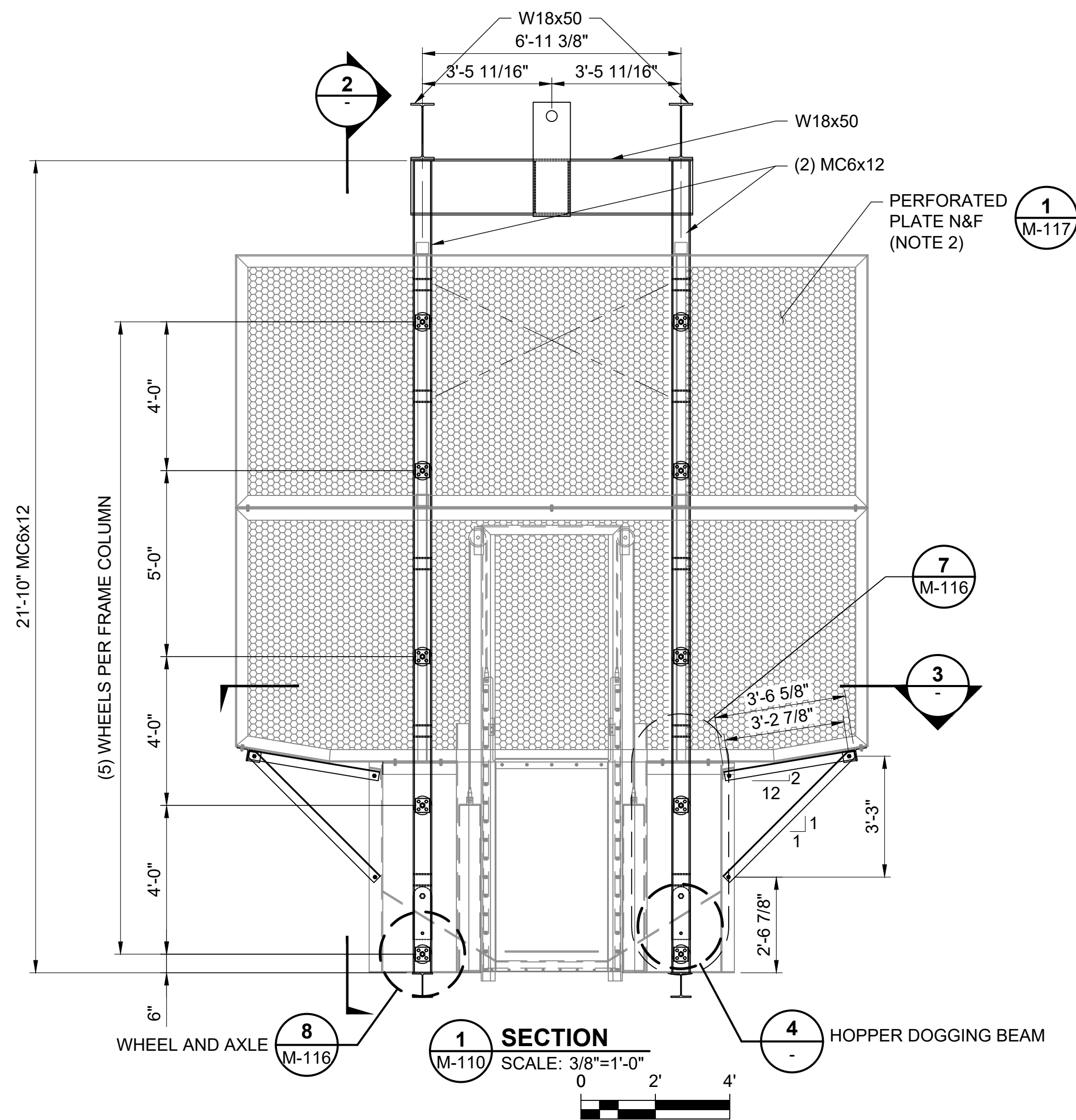




NOTES:

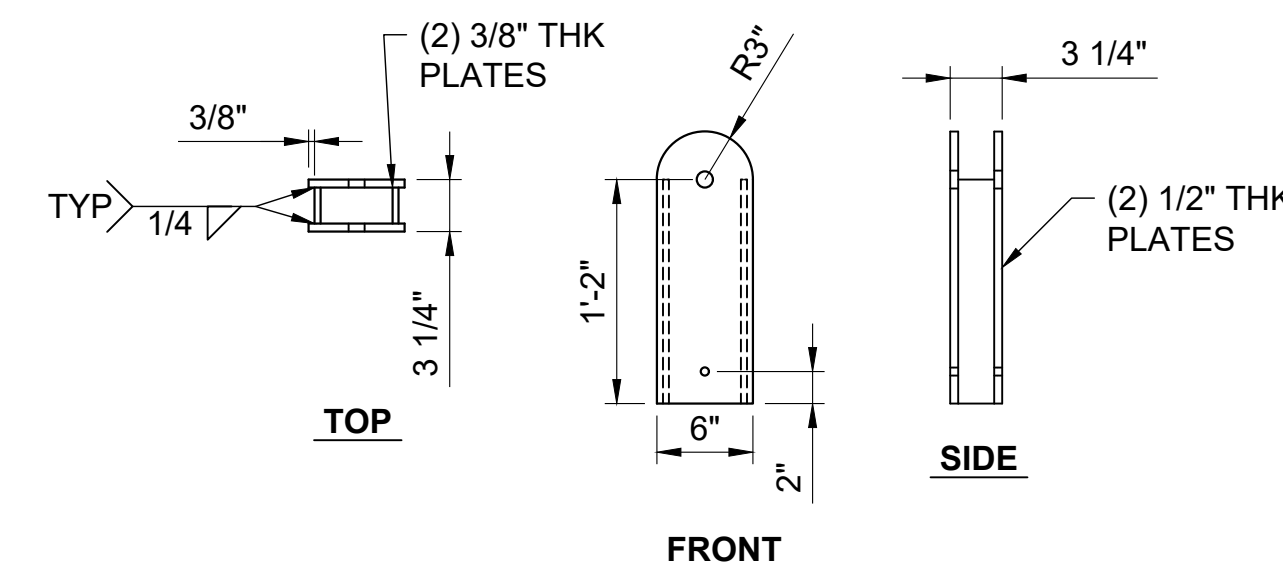
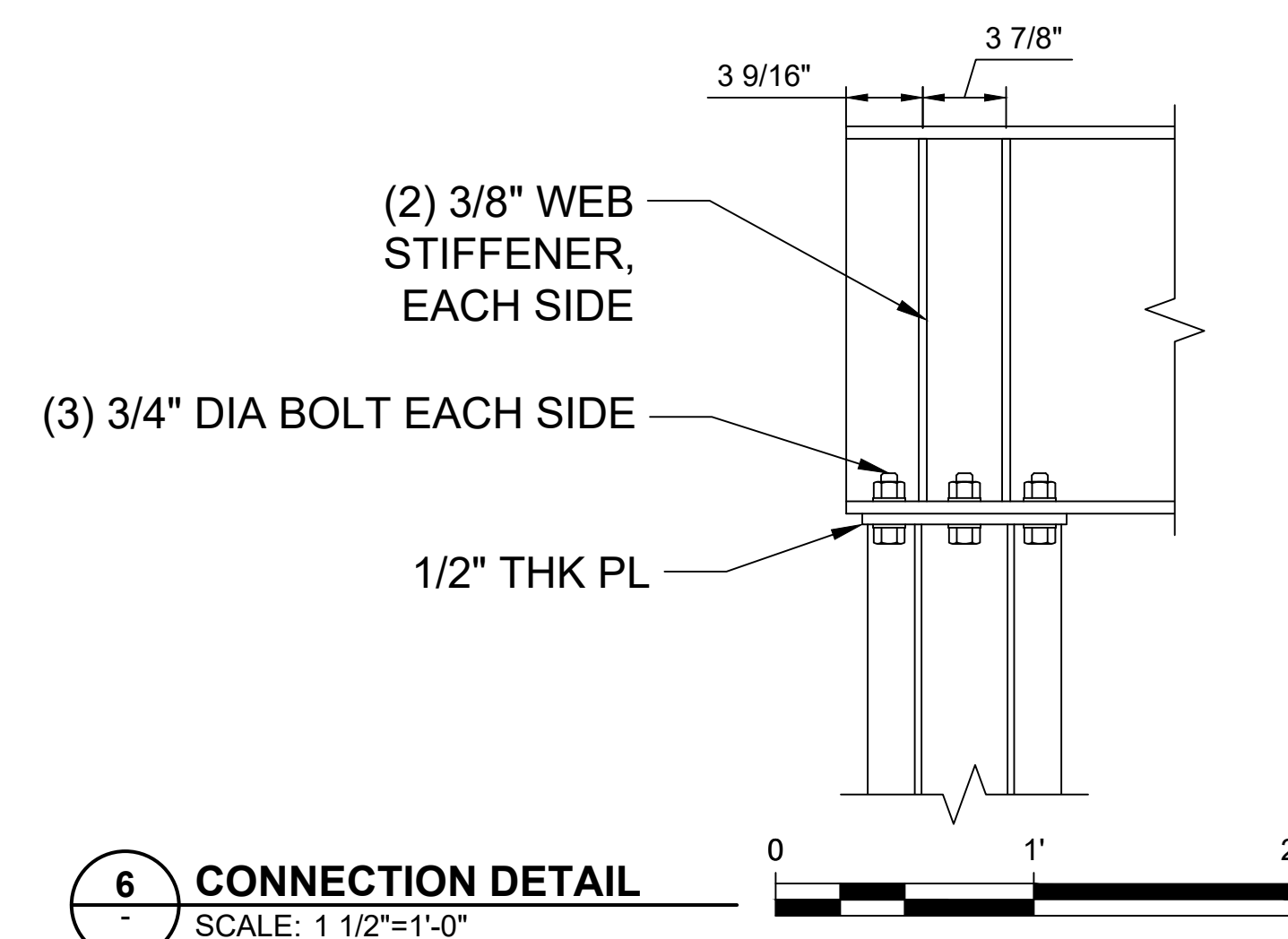
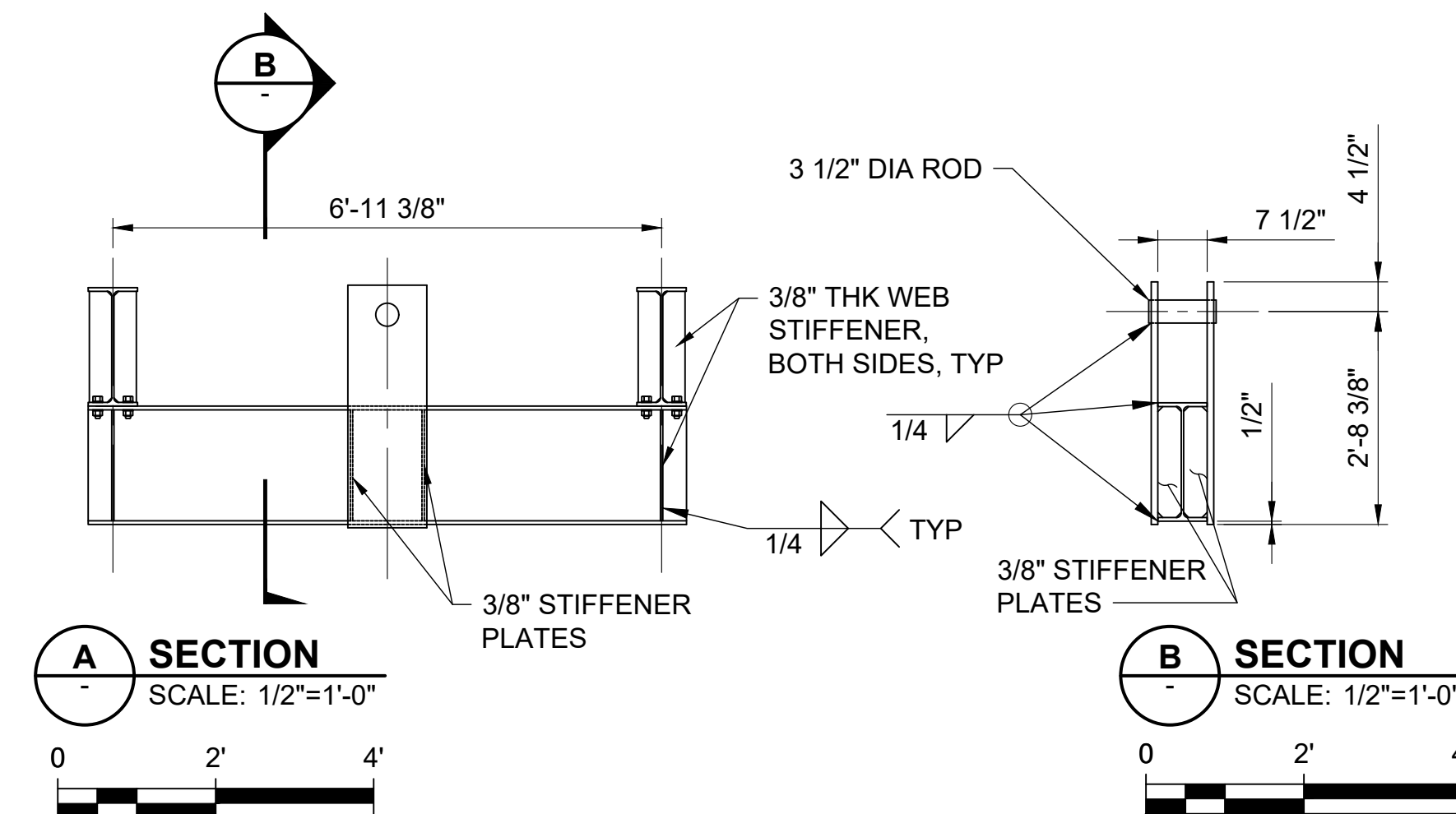
1. CROSBY SHEAVE FOR 3/8" WIRE ROPE PART NO. 907424.
2. ZINC PLATED CARBON STEEL WITH COTTER PIN, 2 1/4" USABLE LENGTH. MCMASTER CARR PART NO. 97245A721.
3. 3/8" Ø WIRE ROPE GALVANIZED STEEL. MCMASTER CARR PART NO. 1549N14.
4. PLUG-LOCK WIRE ROPE FITTING WITH CLEVIS. MCMASTER CARR PART NO. 3473T441.
5. HOPPER GATE FRAME MATERIALS SHALL BE GALVANIZED STEEL EXCEPT FOR ITEMS NOTED OTHERWISE.





NOTES:

- HOPPER LIFTING FRAME MATERIALS SHALL BE GALVANIZED STEEL EXCEPT FOR ITEMS NOTED OTHERWISE.
- SMOOTH SIDE OF PERFORATED PLATE SHALL FACE THE INSIDE OF THE HOPPER.



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SEPTEMBER 3, 2025

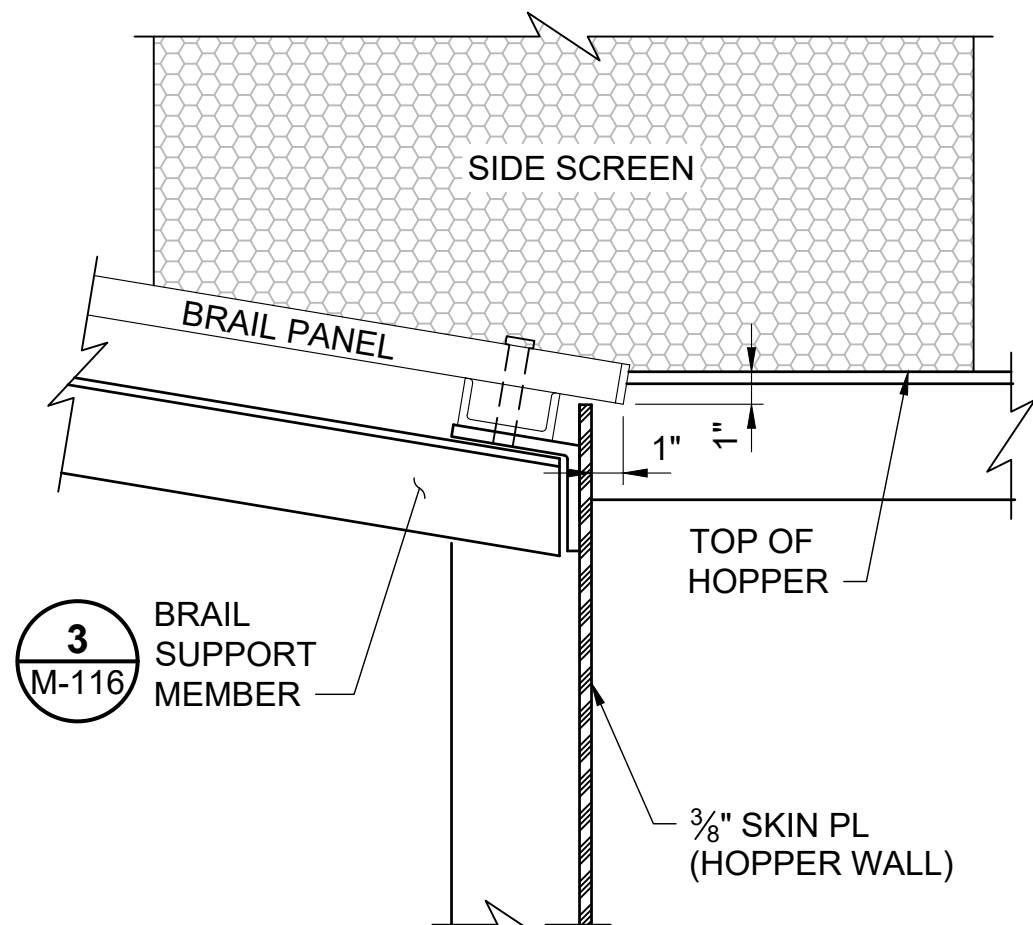
9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
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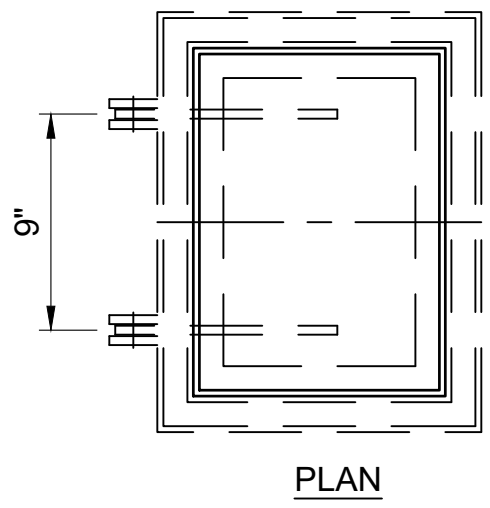
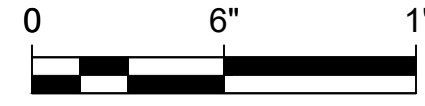
WOODLAND FISH LIFT PASSAGE DESIGN
MAINE DEPARTMENT OF MARINE
RESOURCES

FISH LIFT HOPPER LIFTING FRAME

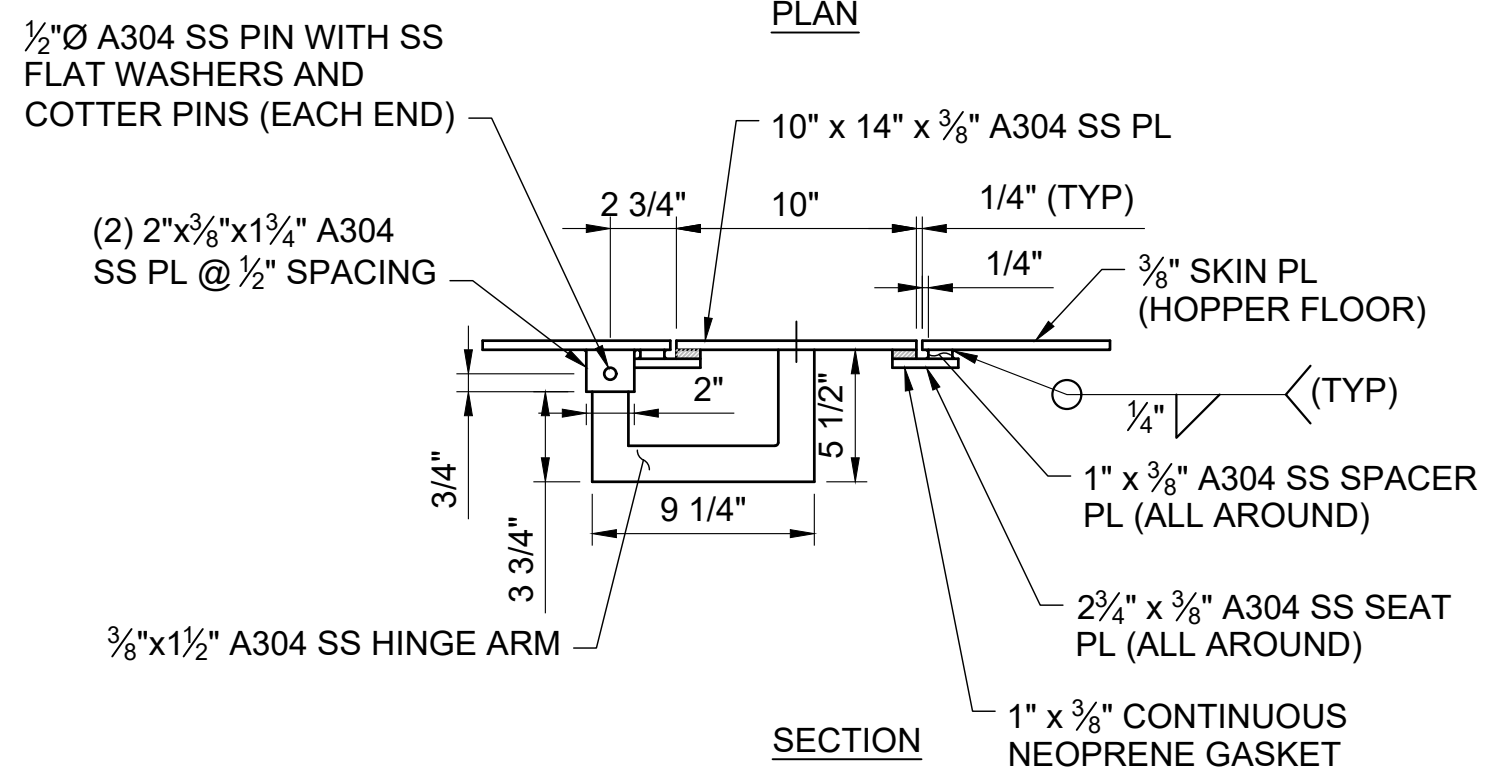
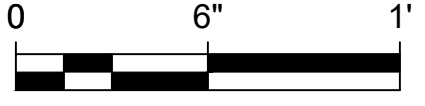
PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	214 OF 240
DRAWING:	M-114



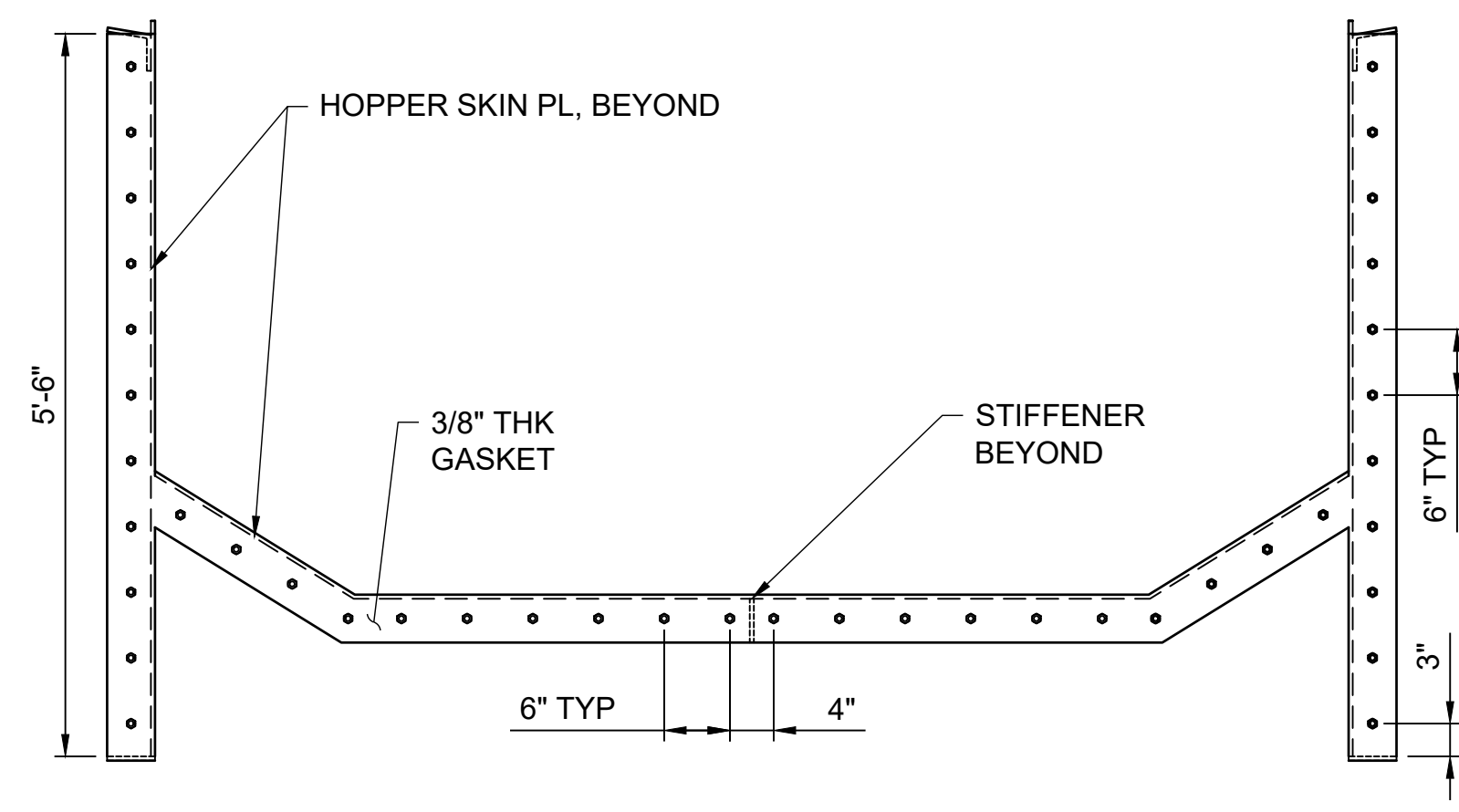
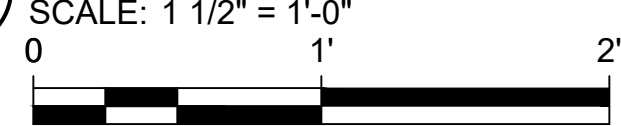
1 BRAIL TO HOPPER DETAIL
M-110 SCALE: 2"=1'-0"



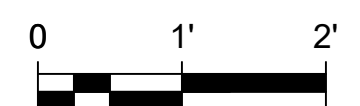
2 ASCE 30 LB RAIL CONNECTION DETAILS
M-110 SCALE: 2"=1'-0"



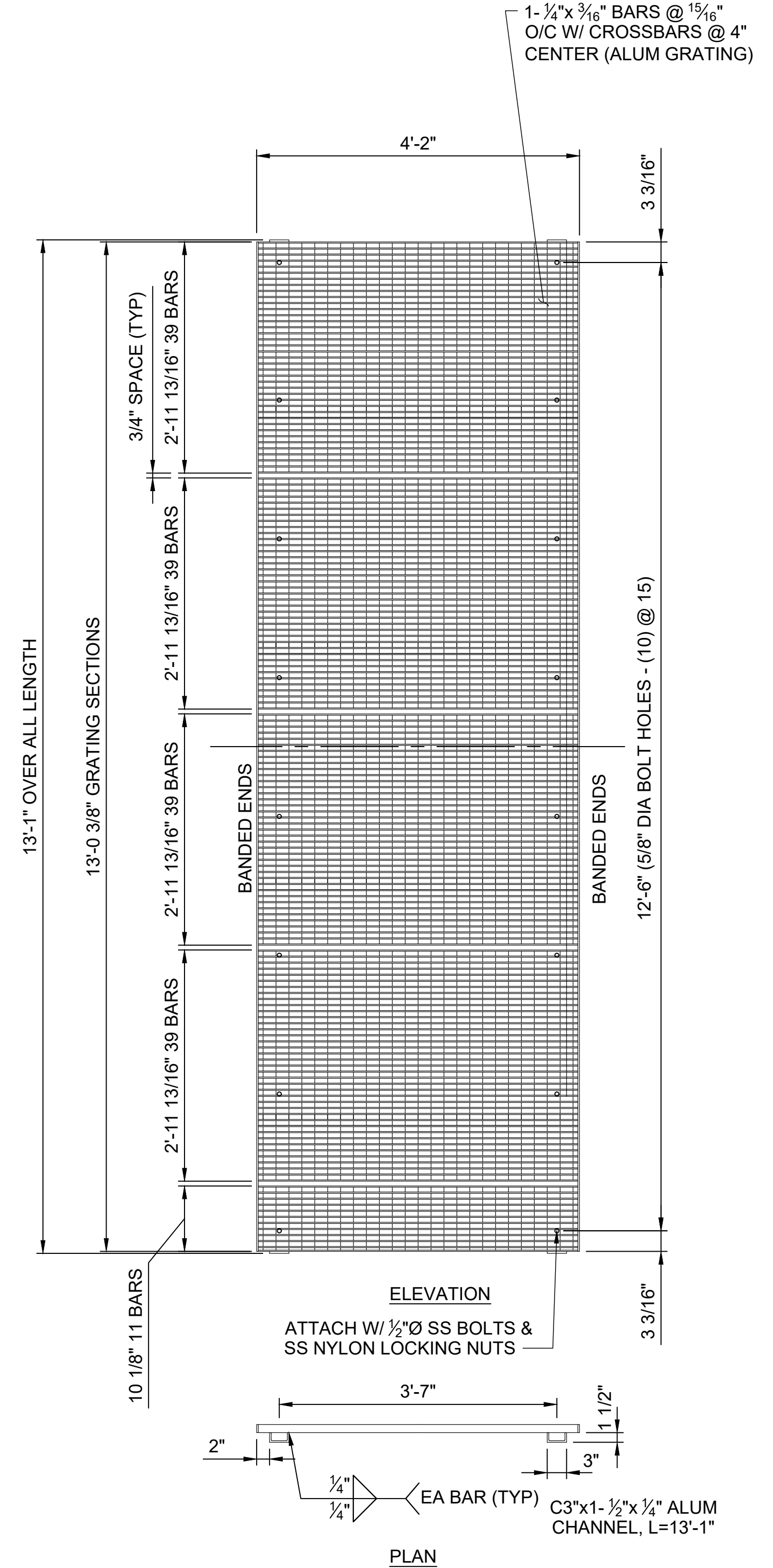
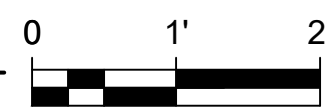
3 FLOOR FILL PORT
M-111 SCALE: 1 1/2"=1'-0"

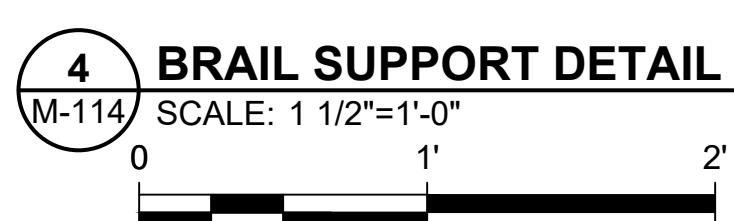
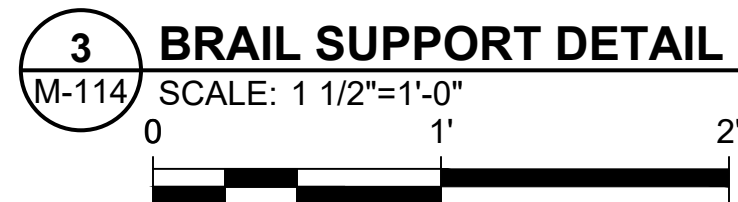


4 BRAIL DETAIL (2 PANELS REQUIRED)
M-110 SCALE: 3/4"=1'-0"

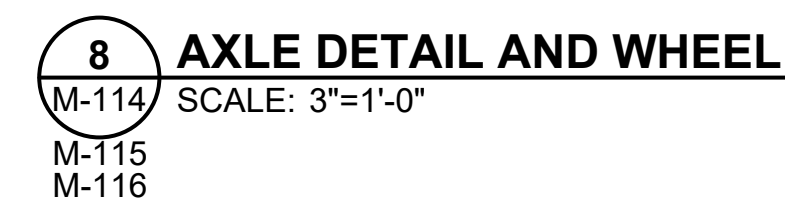
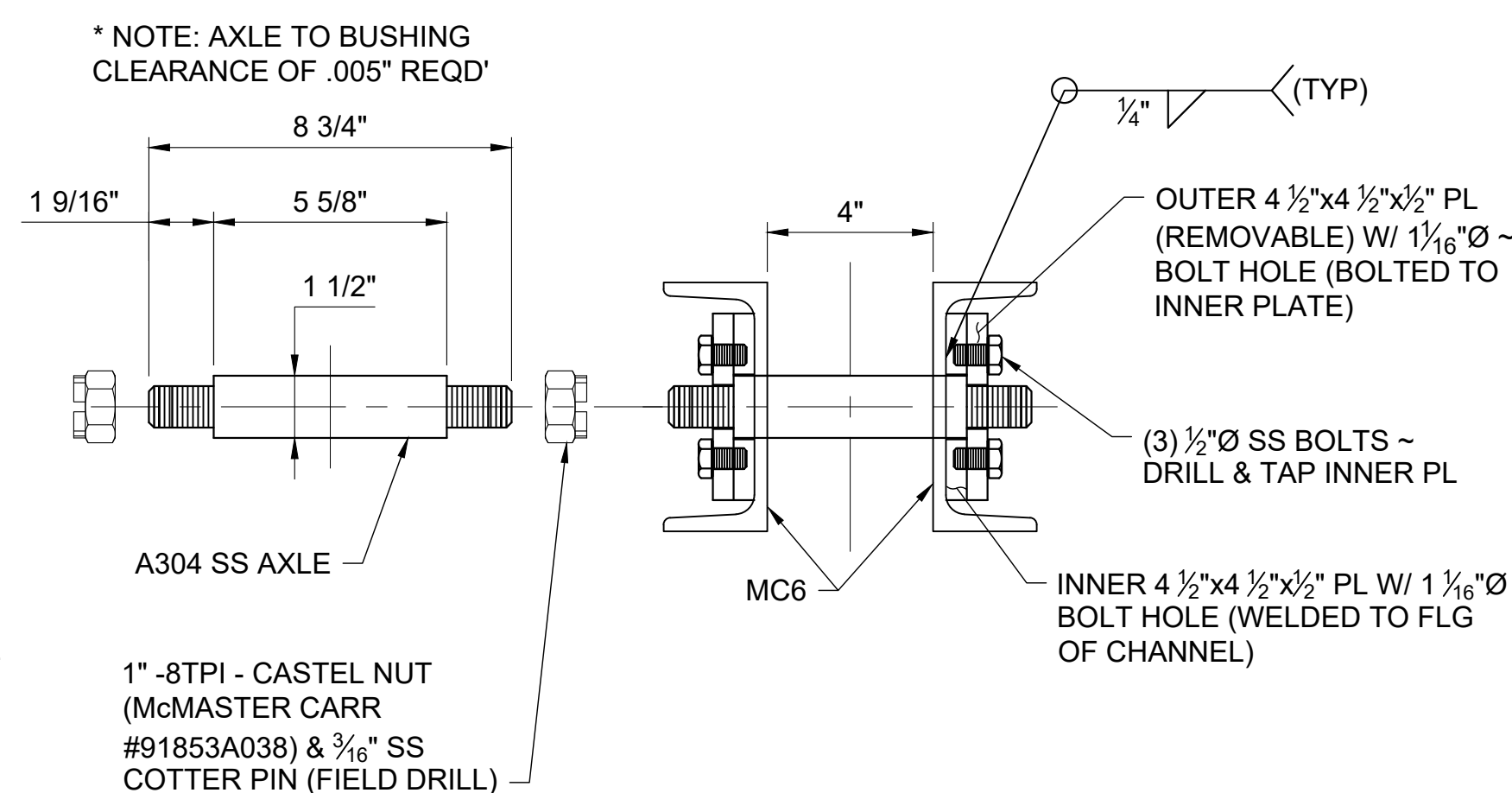
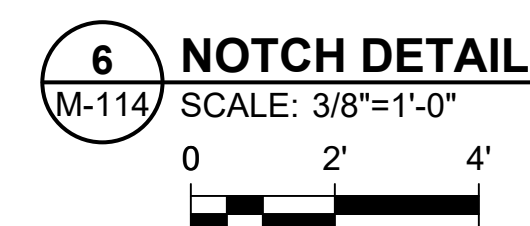
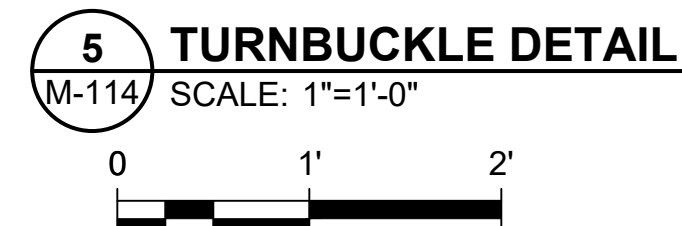
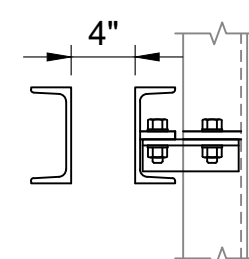


5 GASKET DETAIL
M-110 SCALE: 3/4"=1'-0"





1. HOPPER STRUCTURAL ITEMS SHALL BE GALVANIZED STEEL EXCEPT FOR ITEMS NOTED OTHERWISE.
2. 1/2" GALVANIZED TURNBUCKLE - (McMASTER CARR #3001T57) AND JAM NUT SET (#300T56), 5/8" DIA (11 TP1) GALVANIZED THREADED EXTENSION ROD, AND GALVANIZED COUPLING.



VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING



IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY

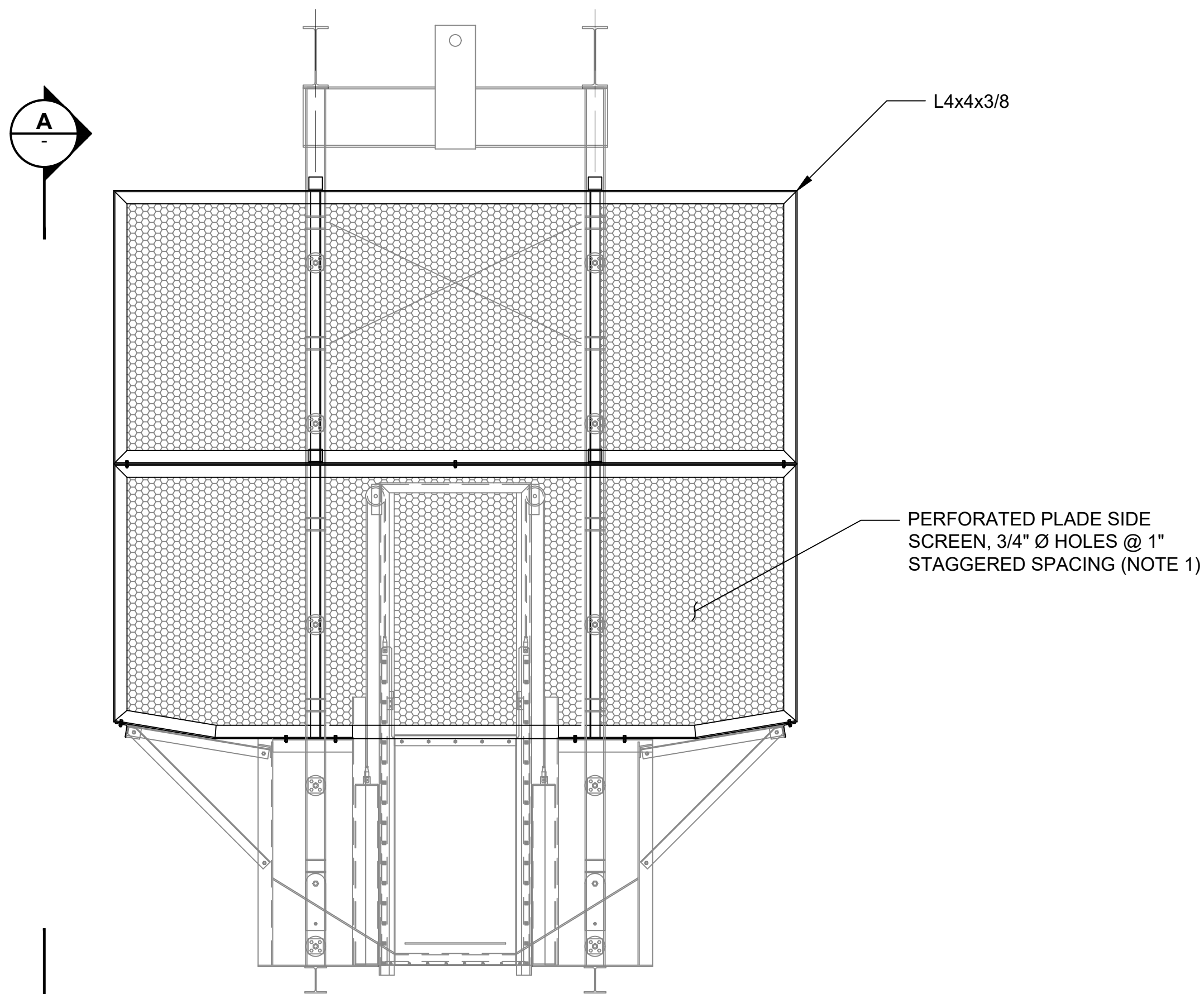
WOODLAND FISH LIFT PASSAGE DESIGN

MAINE DEPARTMENT OF MARINE
RESOURCES

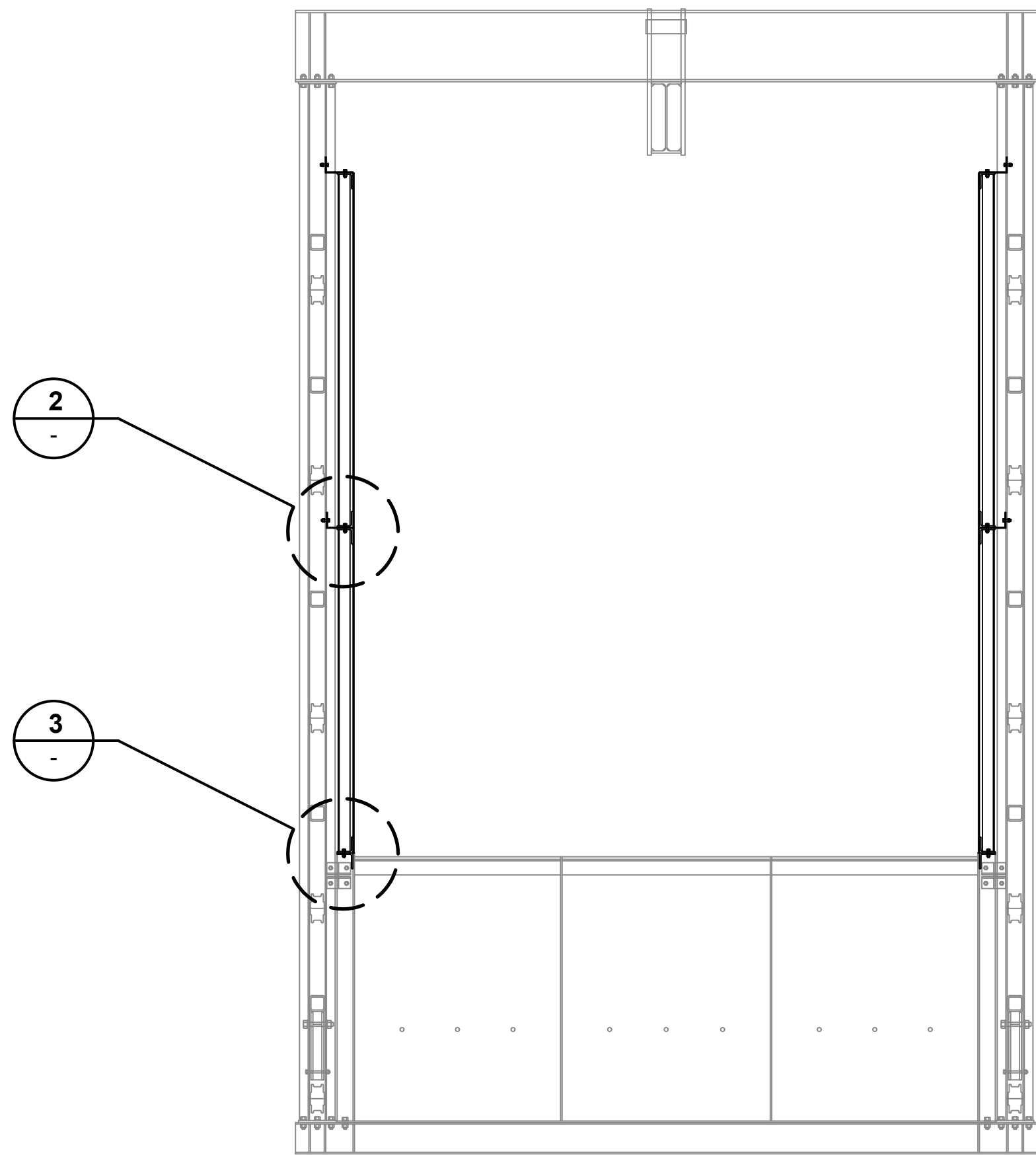
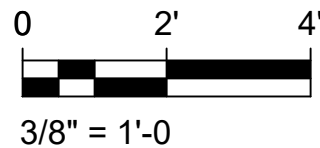
FISH LIFT HOPPER DETAILS

PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	216 OF 240
DRAWING:	M-116

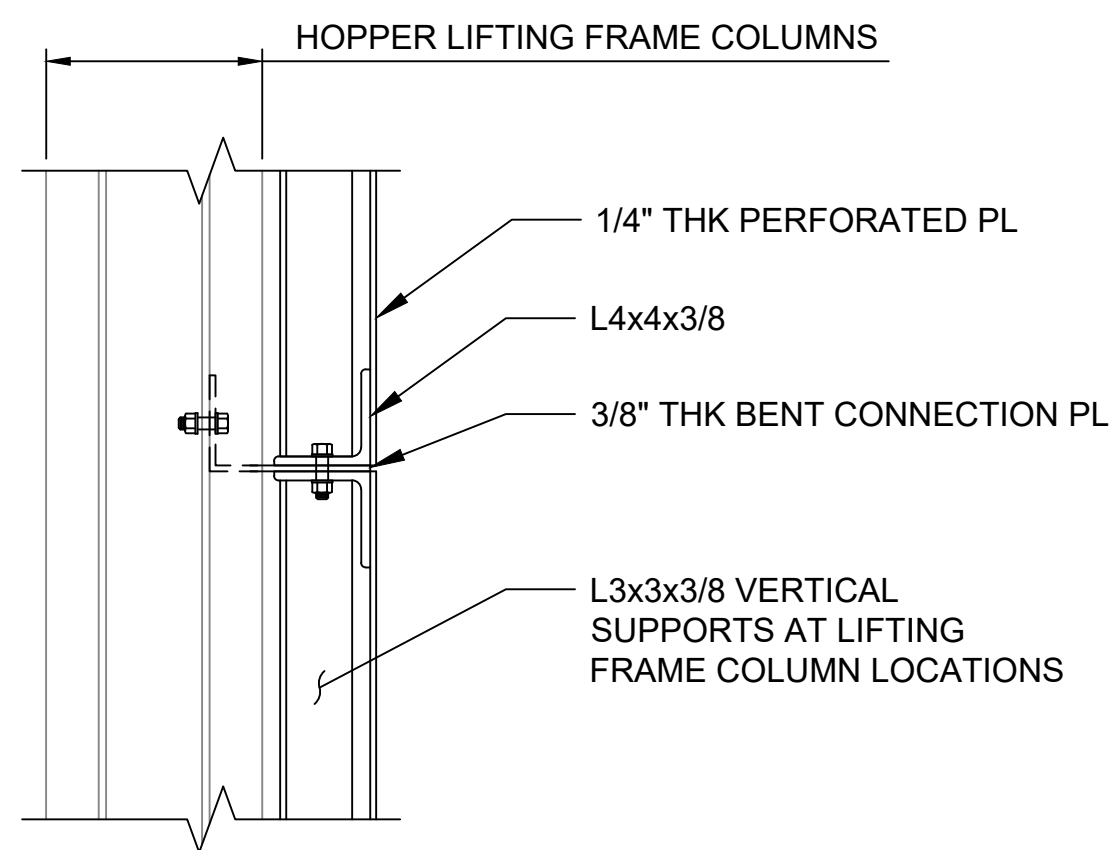
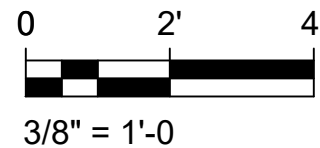
- NOTES:
1. SMOOTH SIDE OF PERFORATED PLATE SHALL FACE THE INSIDE OF THE HOPPER.



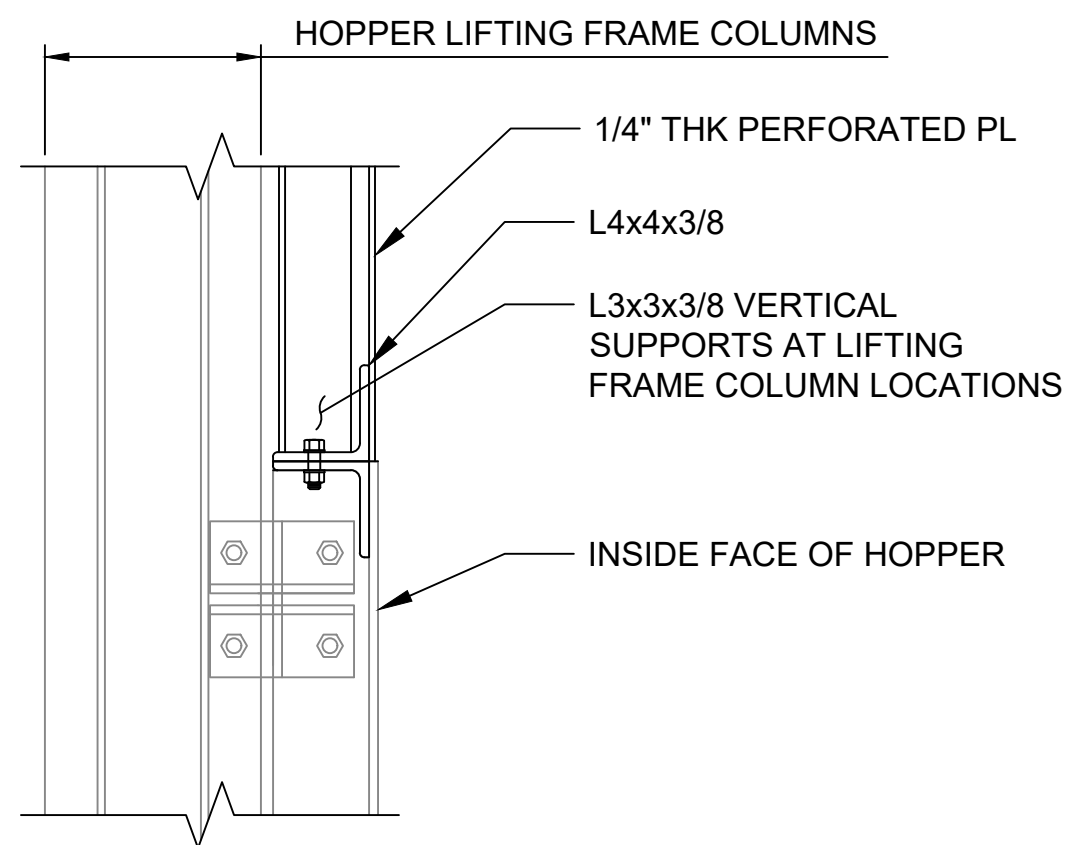
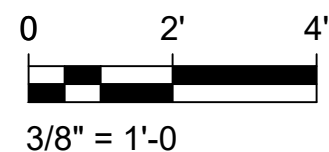
1 HOPPER PERFORATED PLATE
M-114 SCALE: 3/8"=1'-0"



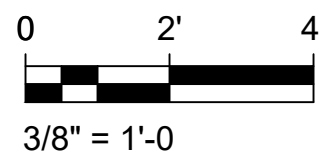
A ELEVATION
SCALE: 3/8"=1'-0"



2 CONNECTION DETAIL
SCALE: 1 1/2"=1'-0"



3 CONNECTION DETAIL
SCALE: 1 1/2"=1'-0"

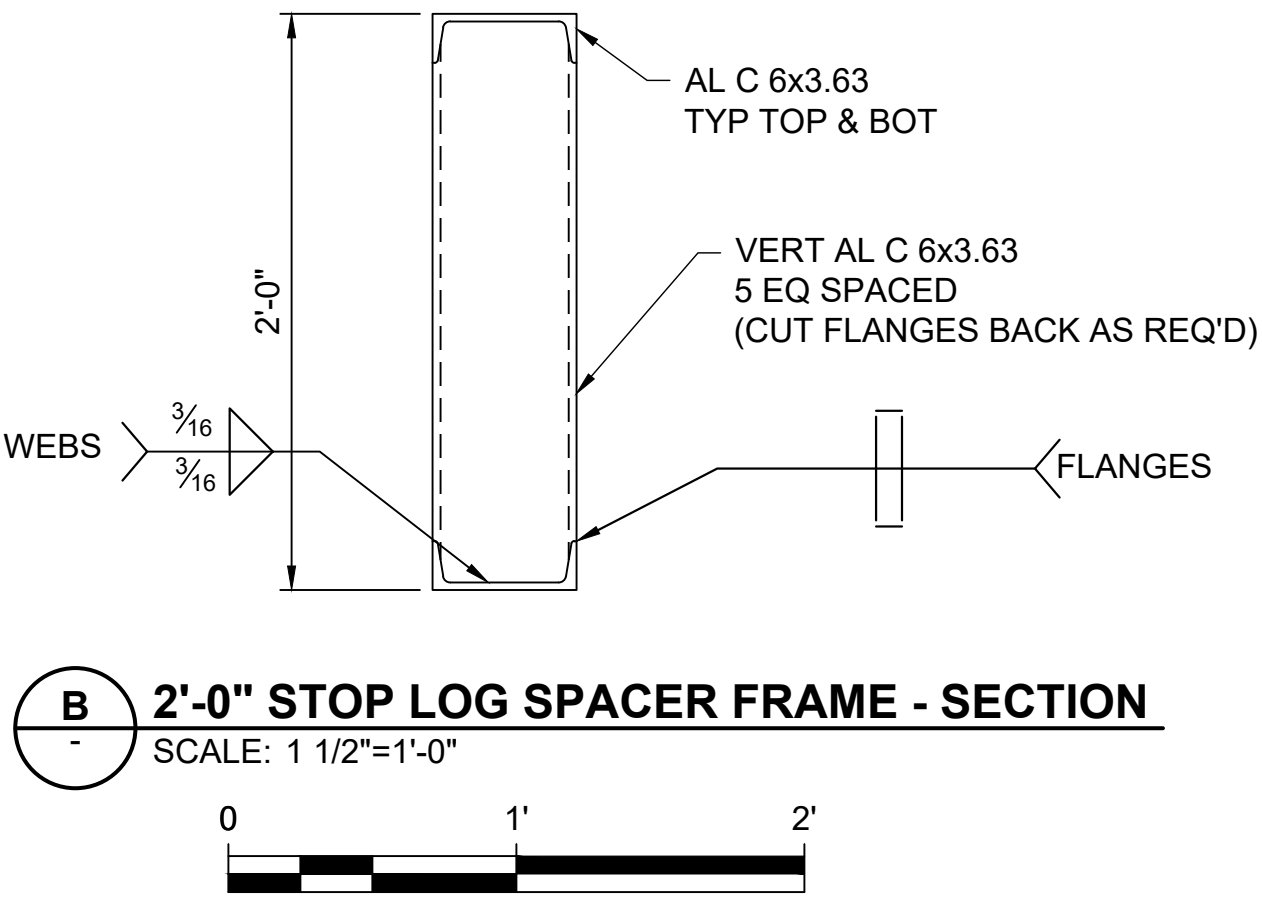
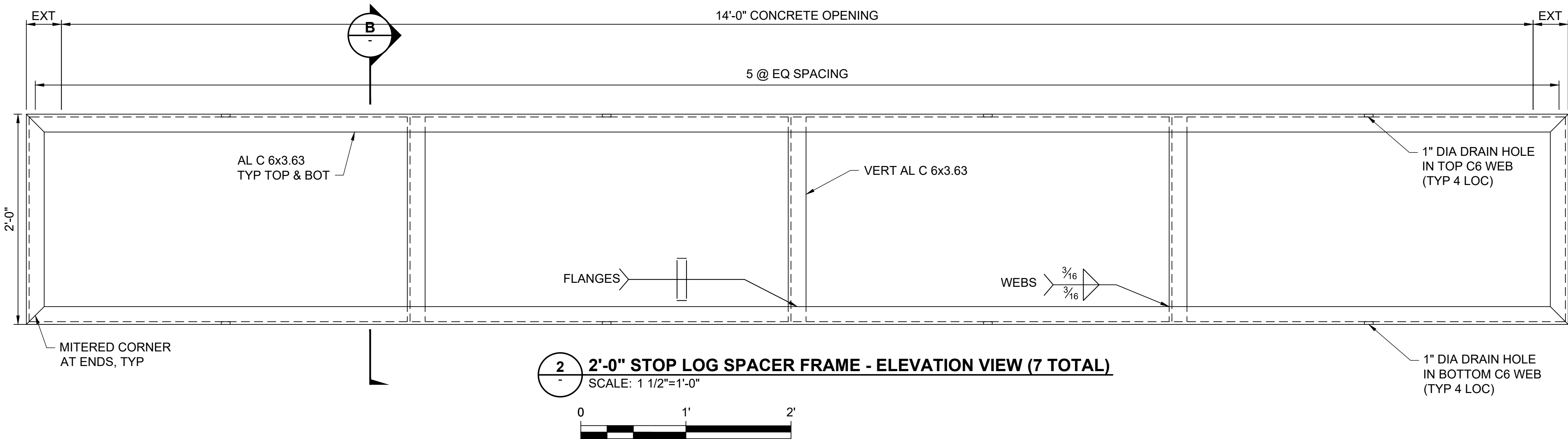
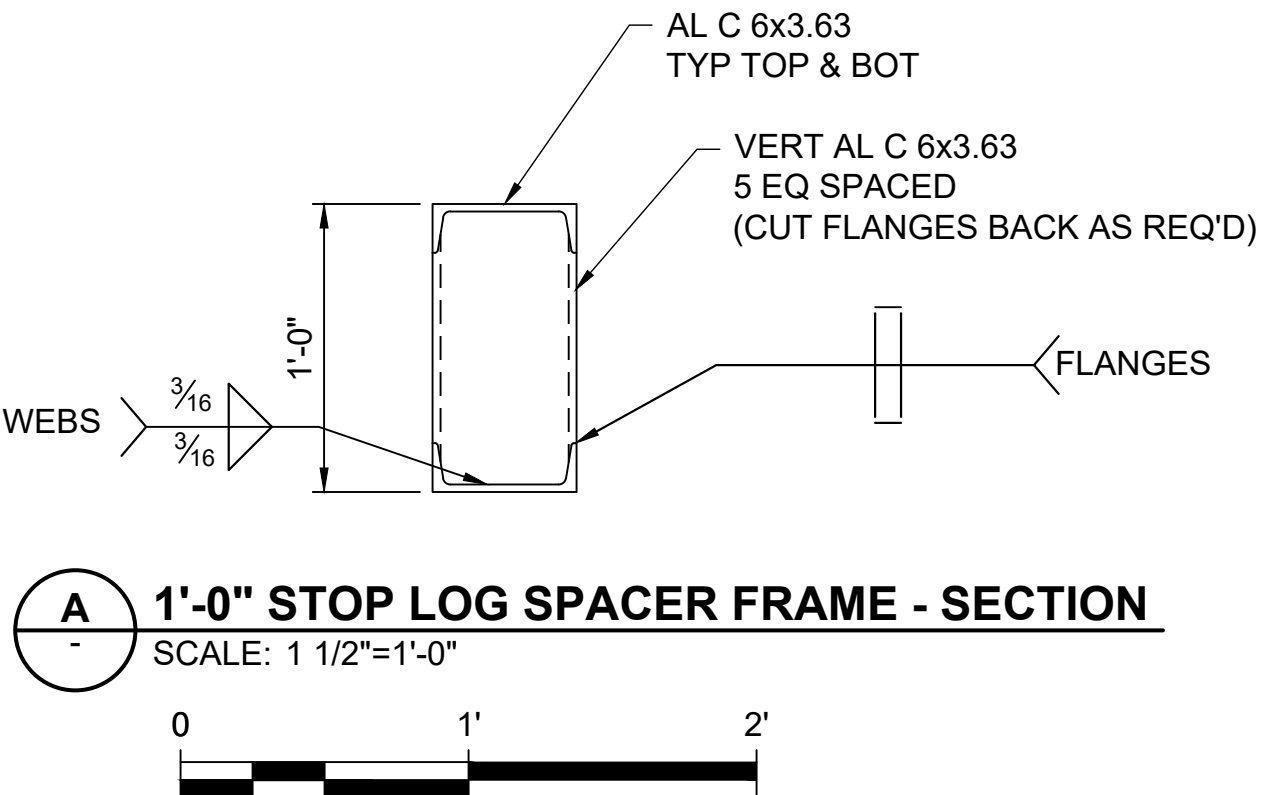
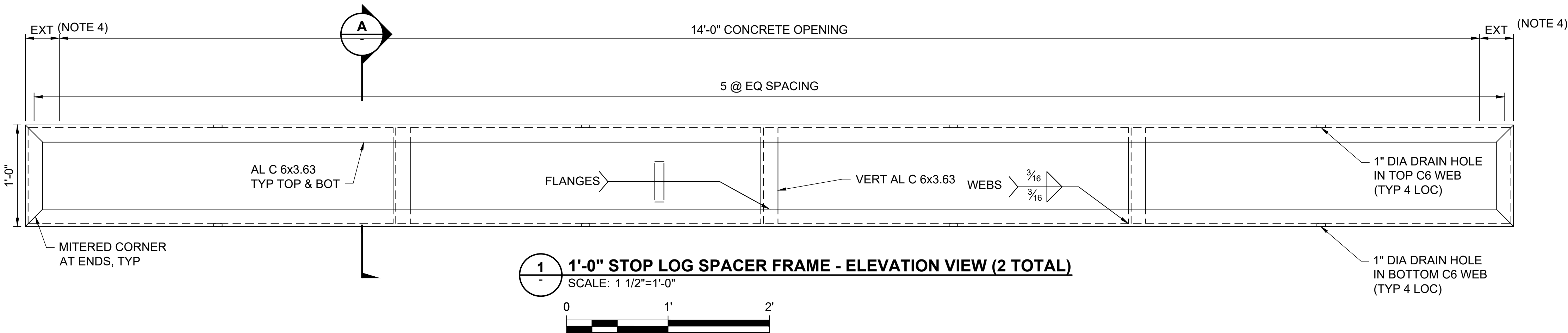


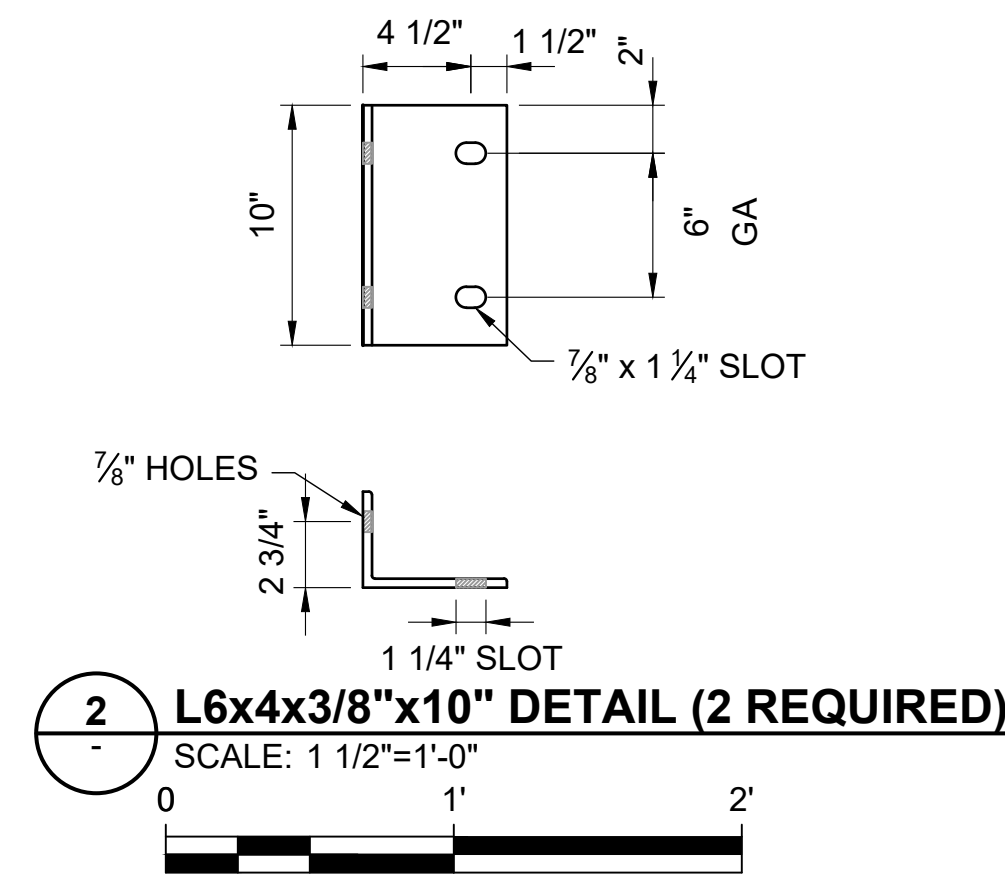
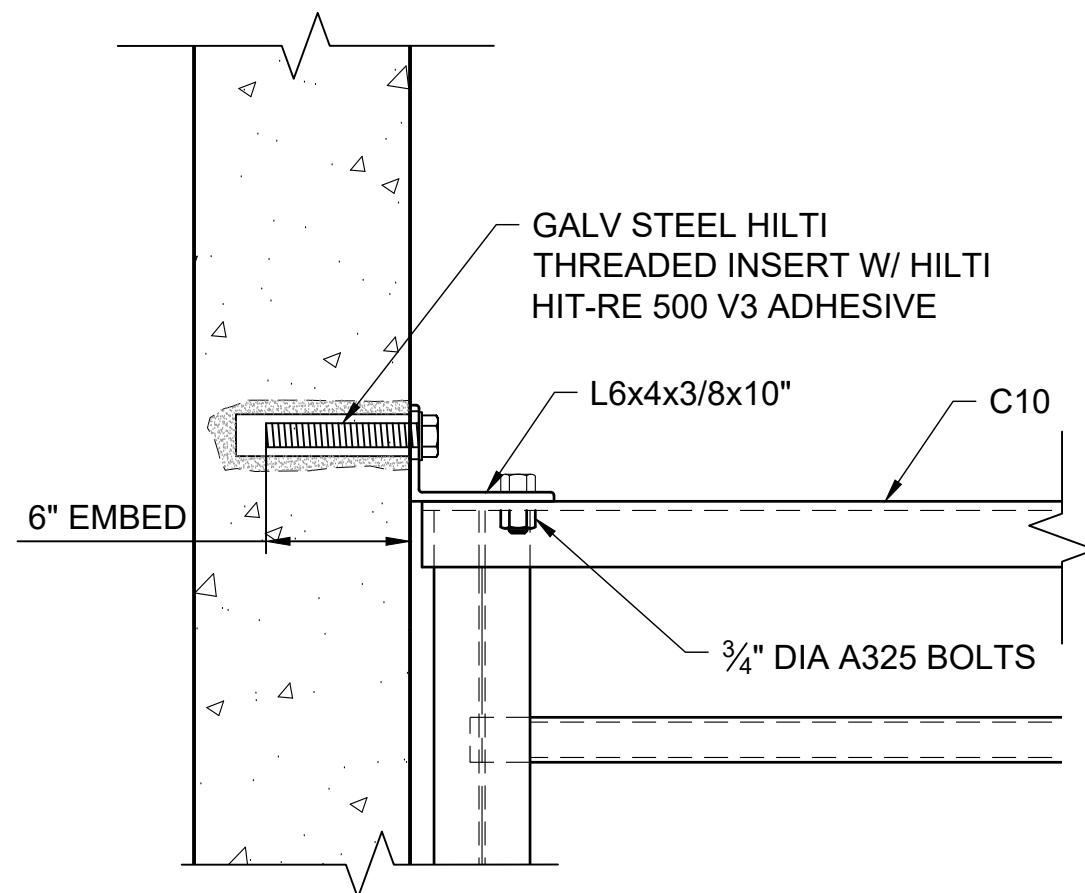
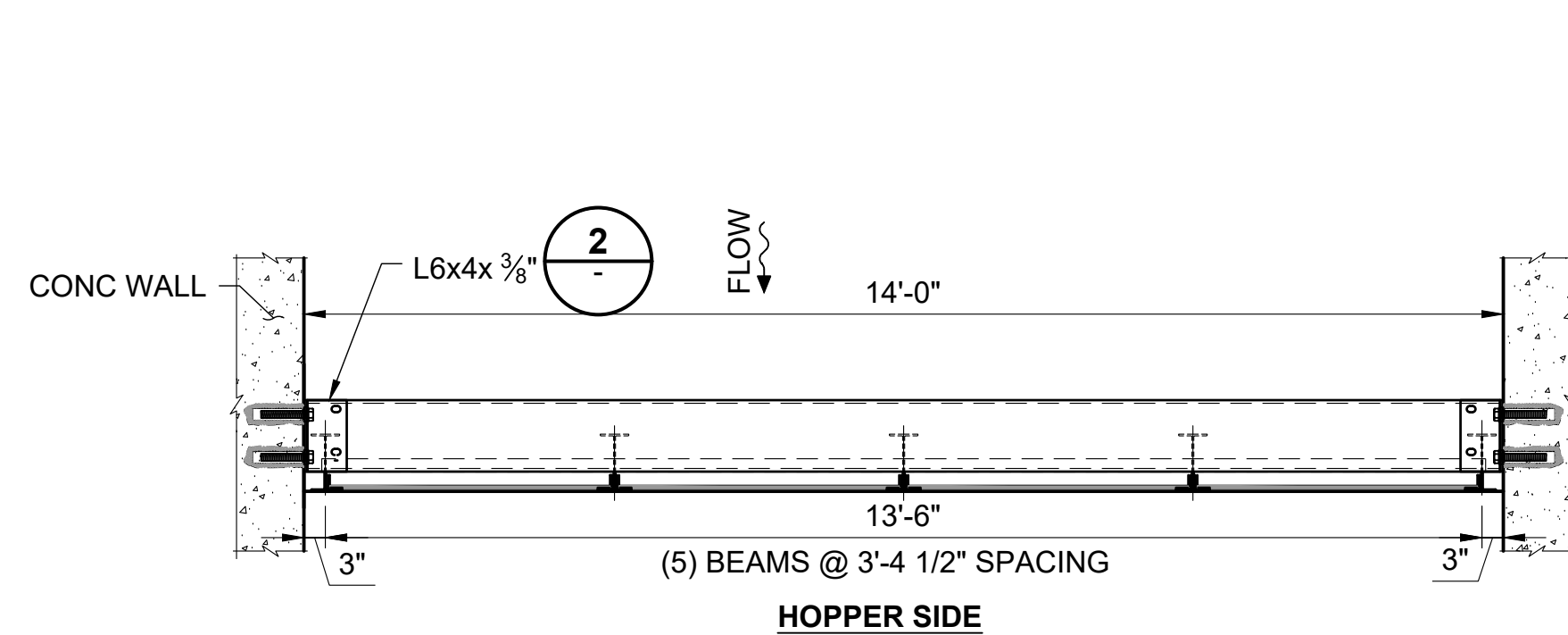
ALUMINUM NOTES:

1. ALUMINUM SHAPES SHALL BE ALLOY TYPE 6061-T6.
2. ALUMINUM WELDING SHALL BE PER AWS D1.2
3. ALL ALUMINUM SURFACES IN CONTRACT WITH DISSIMILAR METALS AND MATERIALS SHALL BE COATED IN ACCORDANCE WITH THE SPECIFICATIONS.

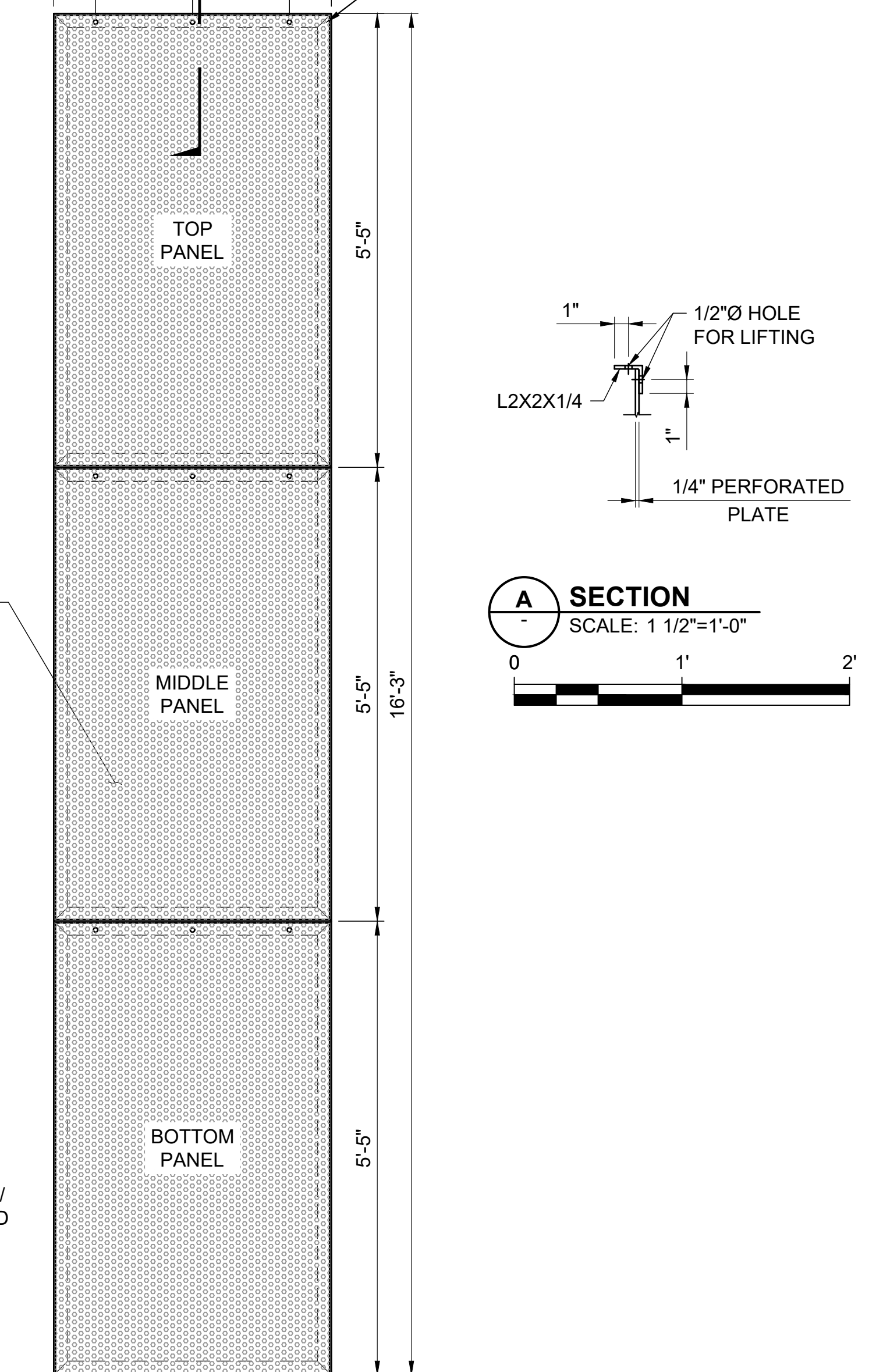
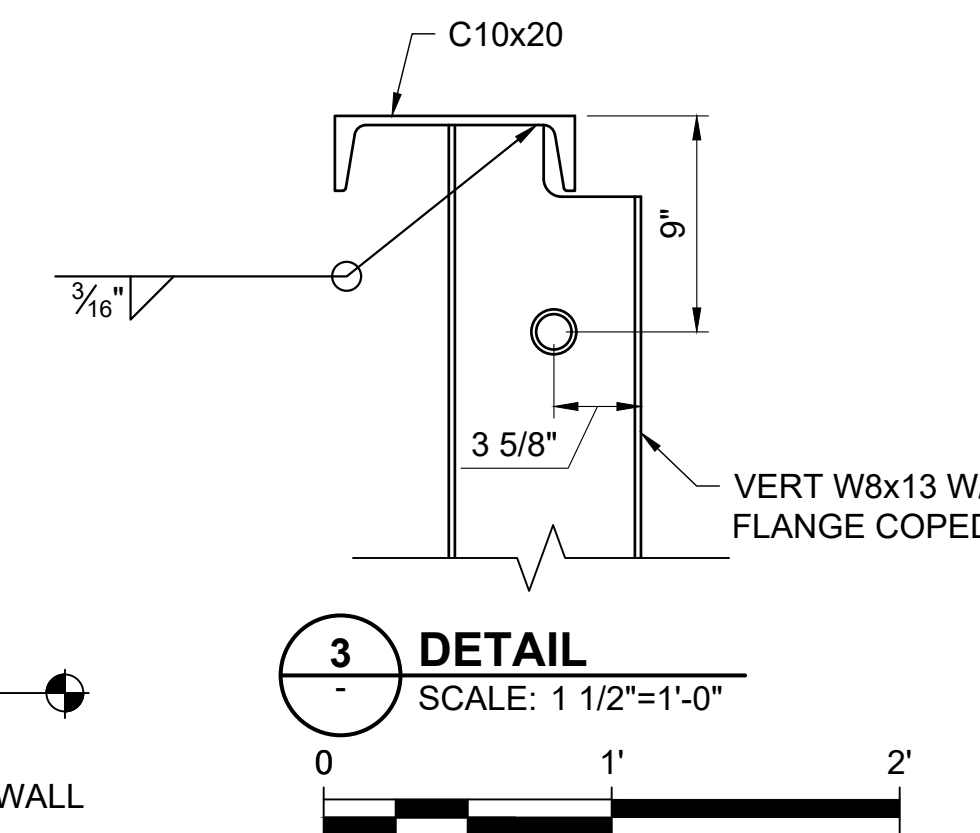
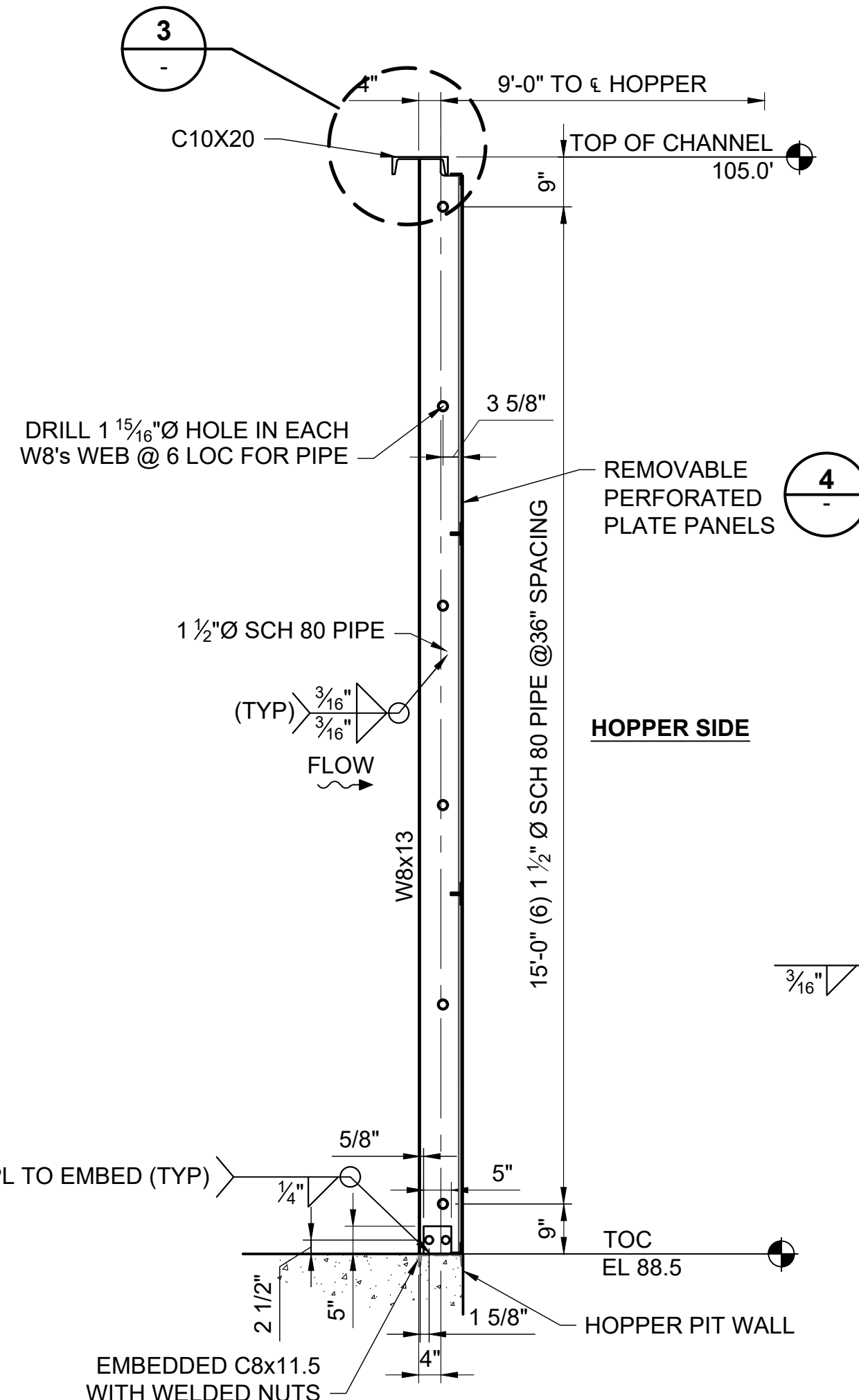
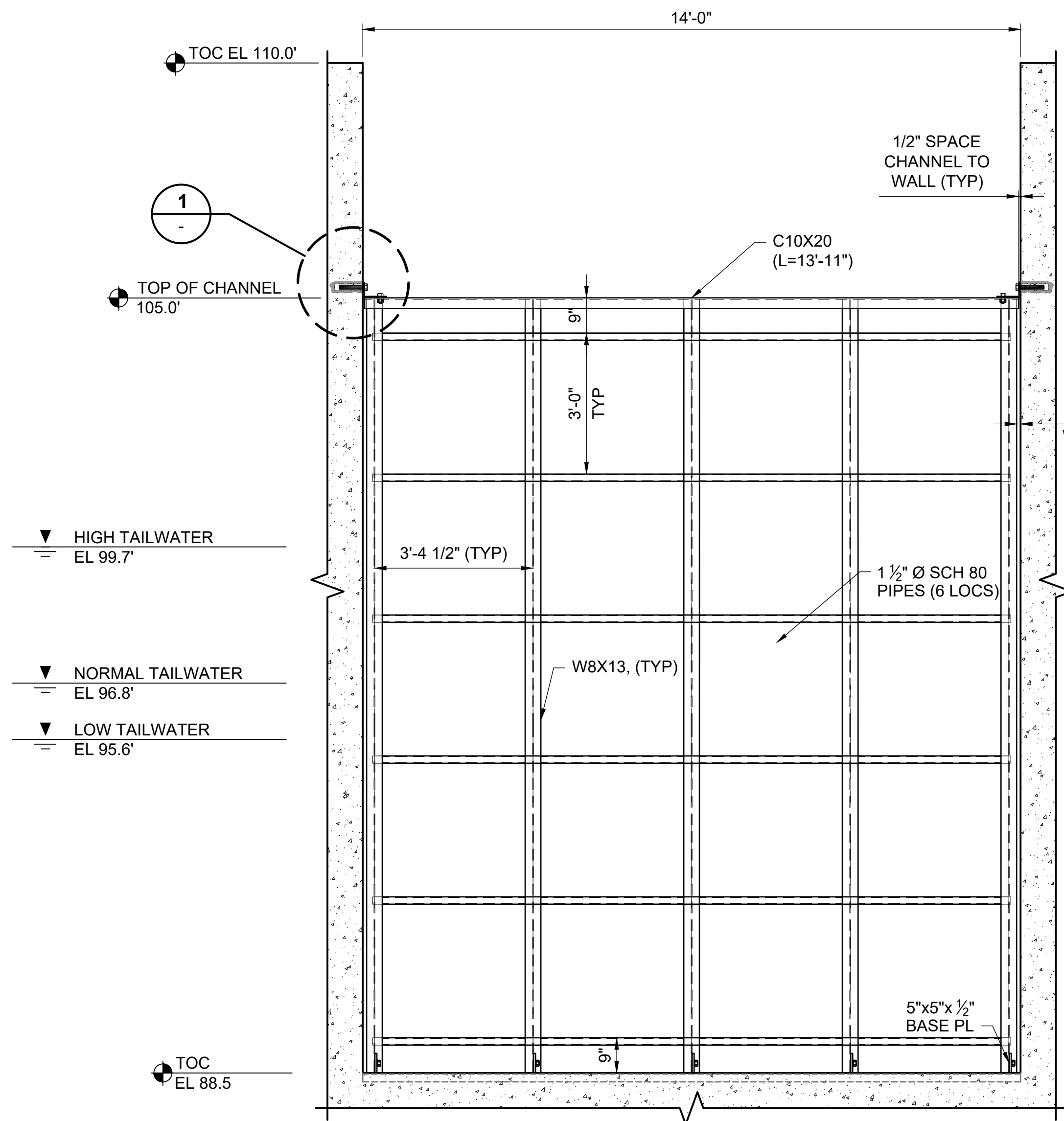
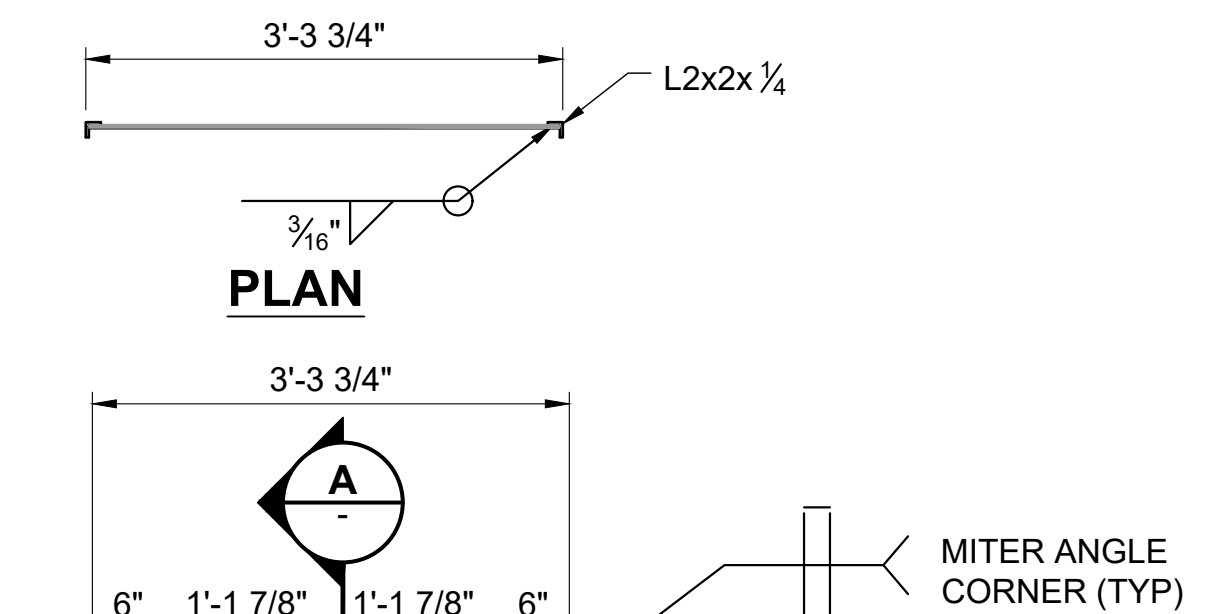
NOTES:

1. PROVIDE (2) 1'-0" SPACER FRAMES.
2. PROVIDE (7) 2'-0" SPACER FRAMES.
3. DESIGN ASSUMES 6" WIDE STOP LOG. PRIOR TO SPACER FRAME FABRICATION, COORDINATE CHANNEL DEPTH WITH STOP LOG MANUFACTURER.
4. MATCH STOP LOG SPACER FRAME LENGTH WITH STOP LOG LENGTH.
5. STOP LOG SPACER FRAME SHALL ALUMINUM.
6. APPROXIMATE WEIGHT OF 1'-0" SPACER FRAME = 125 LBS.
7. APPROXIMATE WEIGHT OF 2'-0" SPACER FRAME = 145 LBS.





- NOTES:**
1. ALL CARBON STEEL ITEMS SHALL BE GALVANIZED.
 2. APPROXIMATE WEIGHT OF EACH PERFORATED PLATE PANEL =150 LBS.



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SEPTEMBER 3, 2025

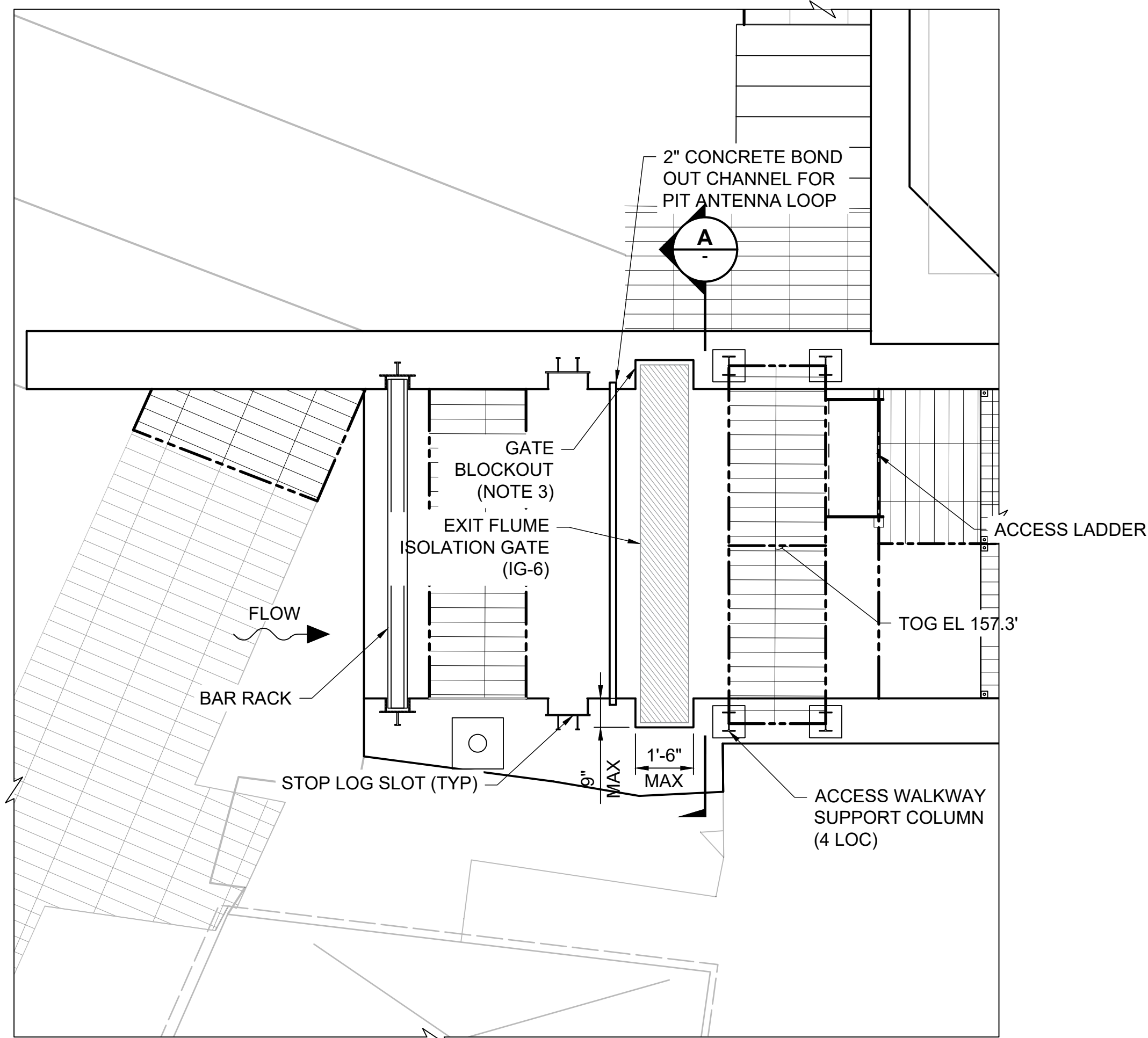
9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

VERIFY SCALE
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WOODLAND FISH LIFT PASSAGE DESIGN
MAINE DEPARTMENT OF MARINE
RESOURCES

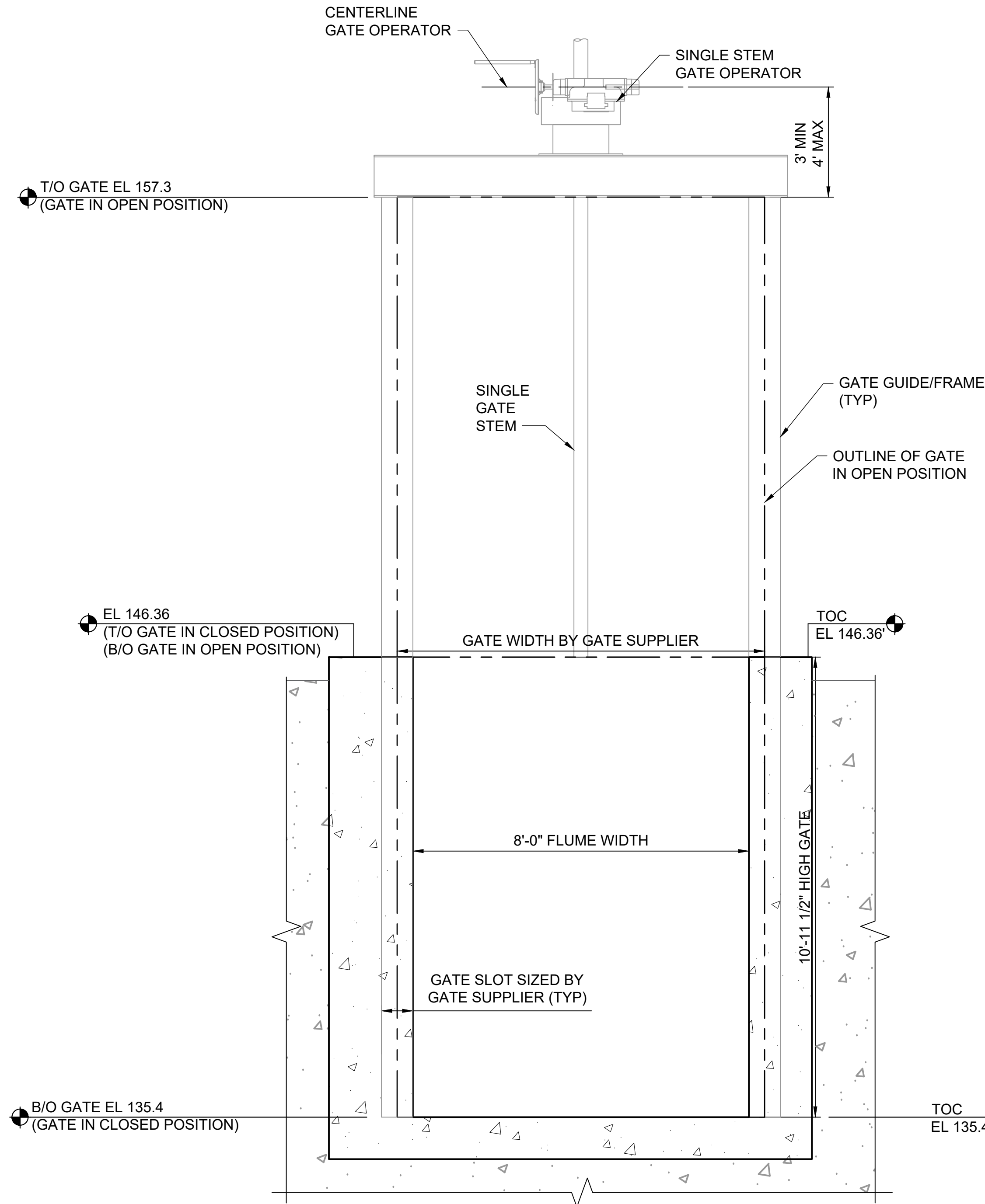
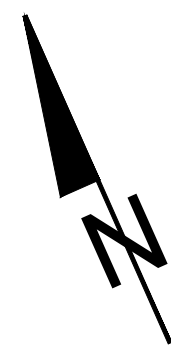
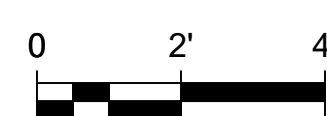
FISH LIFT PERFORATED PLATE

PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	219 OF 240
DRAWING:	M-119



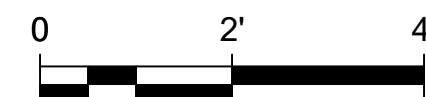
ENLARGED PLAN

SCALE: 3/8"=1'



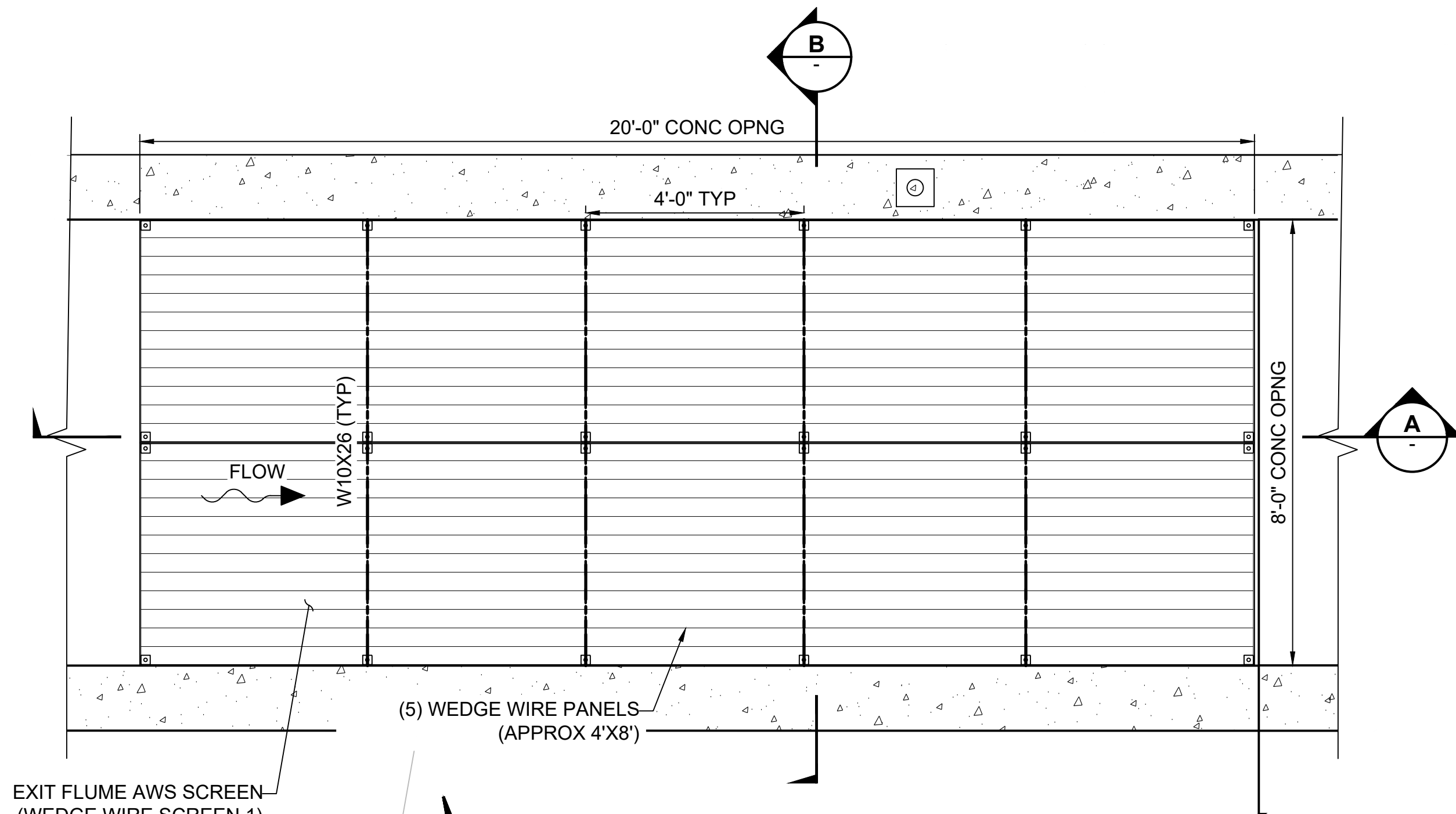
A EXIT FLUME ISOLATION GATE

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



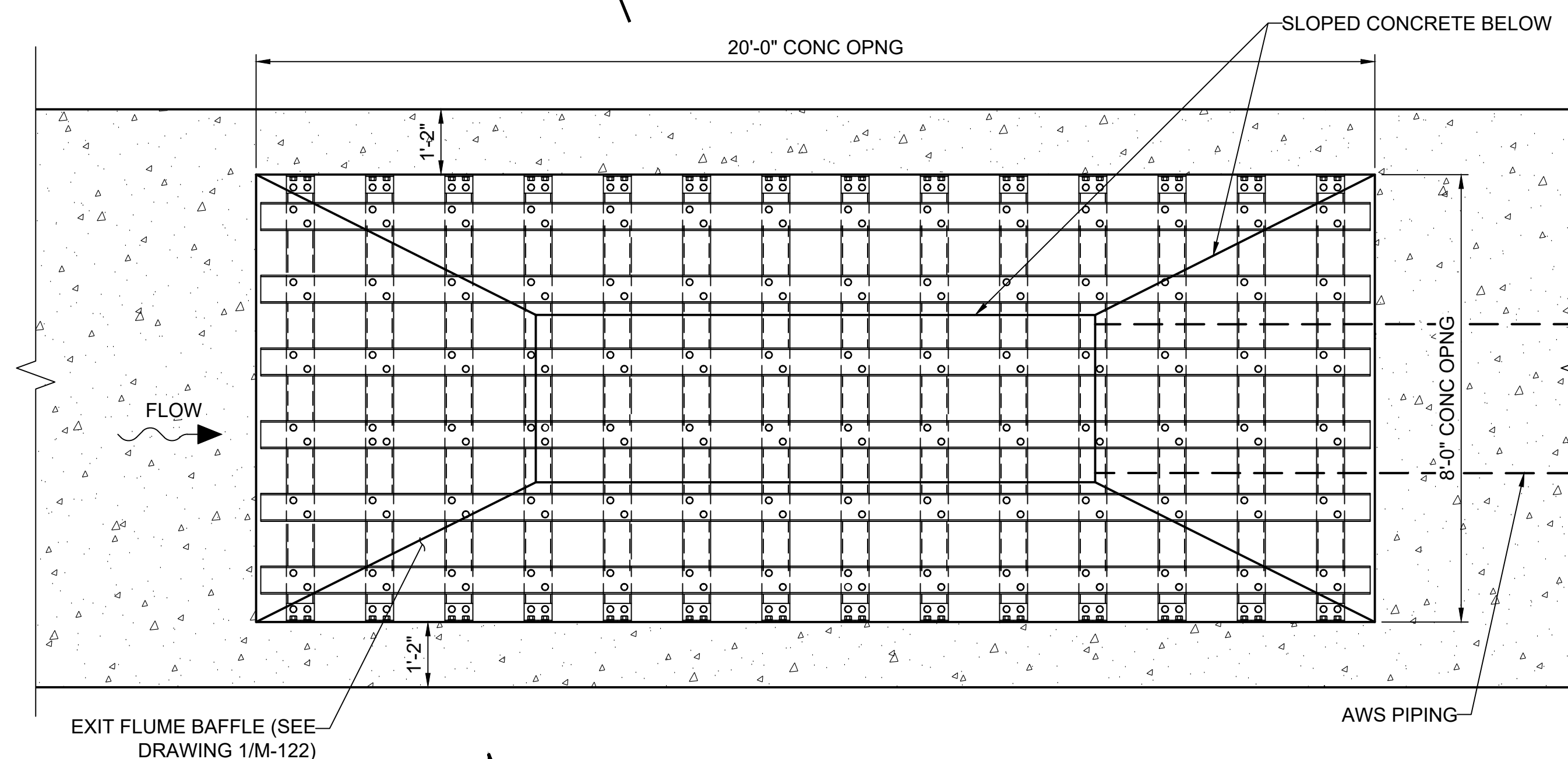
NOTES:

- GENERAL OVERVIEW OF EXIT FLUME ENTRANCE ISOLATION GATE (IG-6):
 - SIZE OF OPENING, 8.00'W x 10.96'H
 - MOVEMENT OF GATE, UPWARD OPENING.
 - OPERATION OF GATE: OPEN / CLOSE
- HEADPOND ELEVATIONS:
 - DESIGN LOW 144.0 FT
 - NORMAL 144.6 FT
 - DESIGN HIGH 145.4 FT
- APPROXIMATE BLOCKOUT DIMENSIONS SHOWN FOR GATE IG-6. UPDATE WITH ACTUAL BLOCKOUT DIMENSIONS FOR GATE SUPPLIED.



ENLARGED PLAN AT WEDGE WIRE SCREEN (EL 135.4)

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



ENLARGED PLAN AT BAFFLE (EL 134.1)

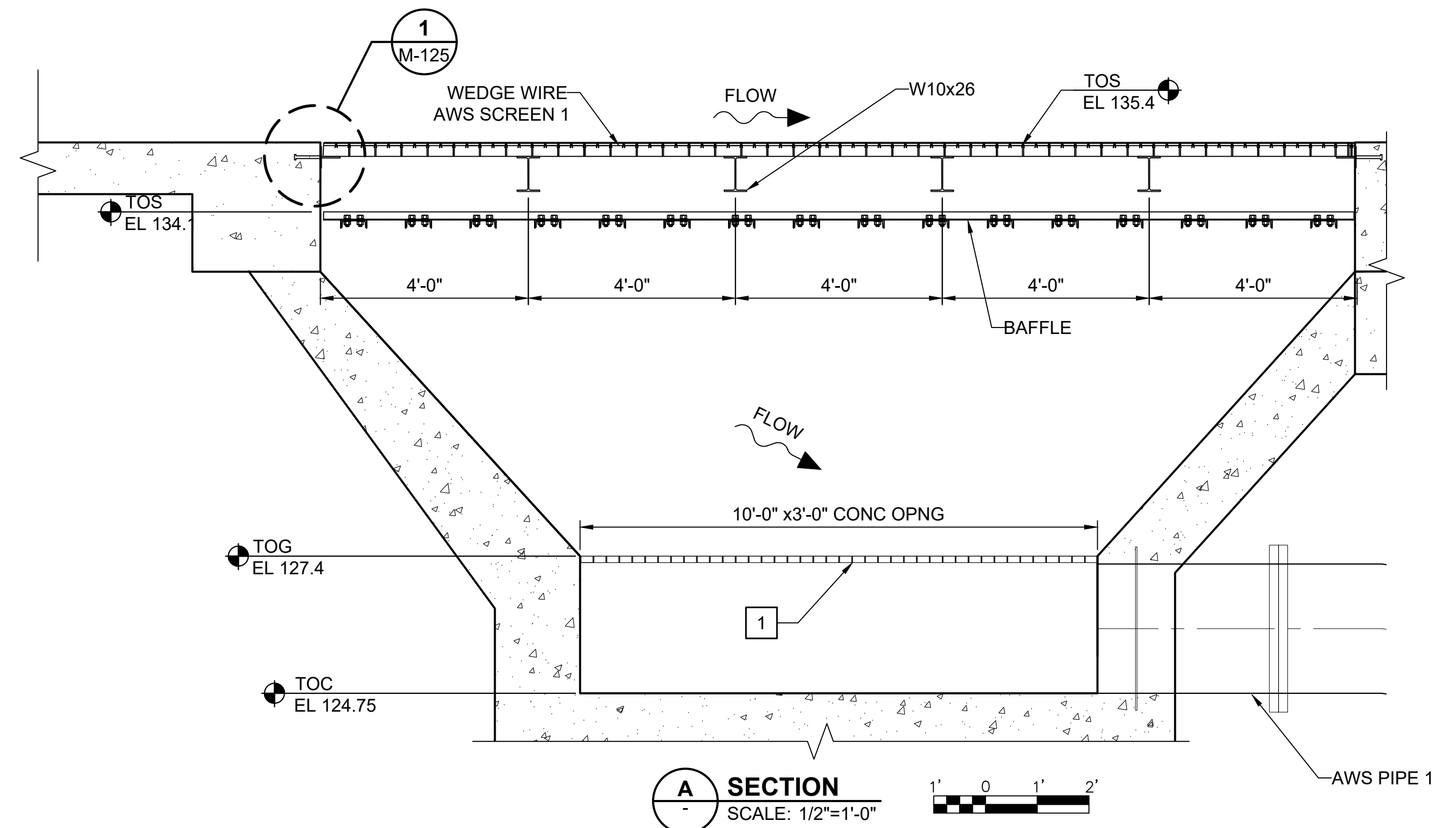
SCALE: 1/2"=1'-0"
1' 0 1' 2'

KEYED NOTES:

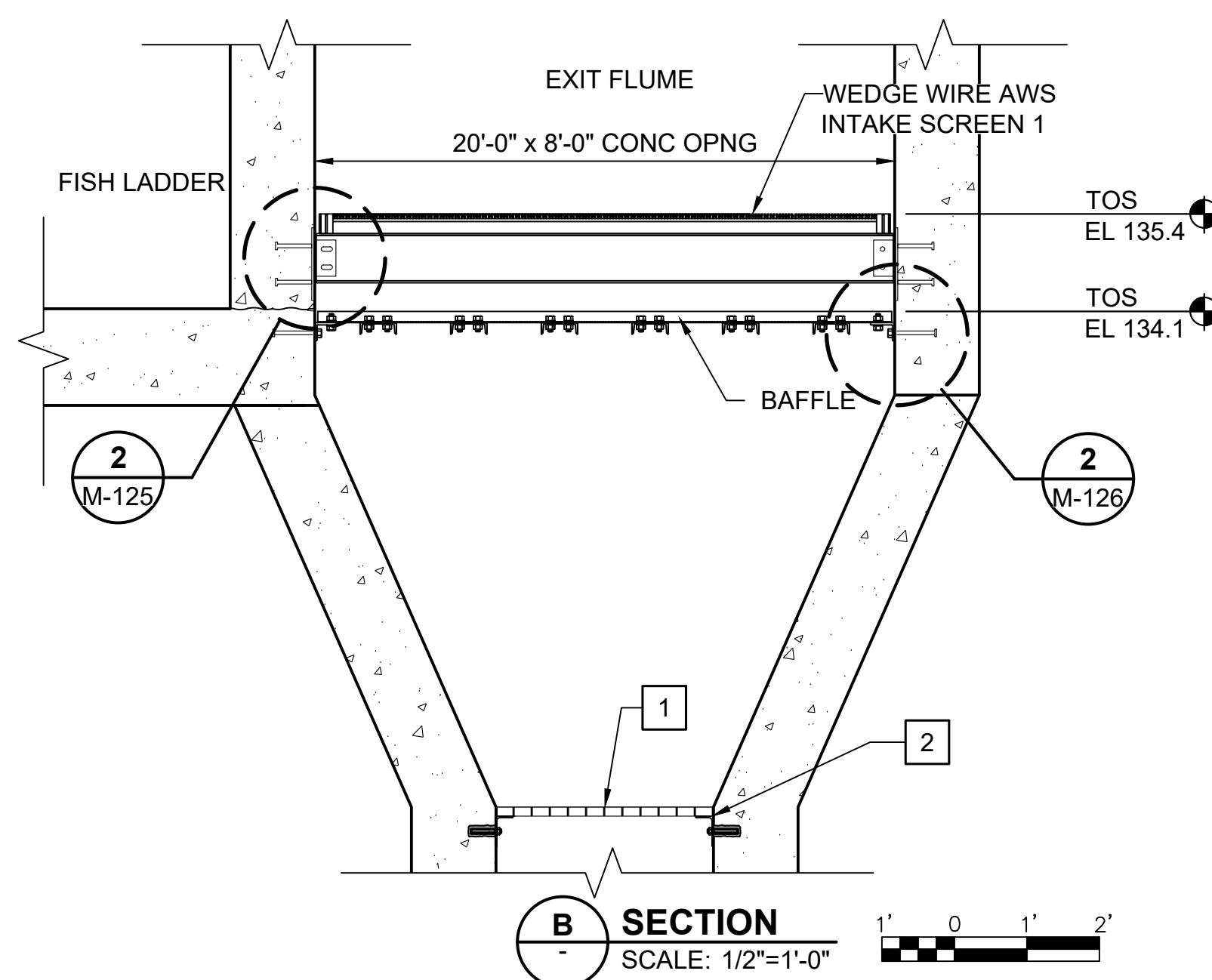
- 1 GALVANIZED STEEL GRATING, 1½"x¾" BEARING BARS @ 1 ⅝" O.C. AND CROSS BARS @ 4" O.C. BAND ALL EDGES OF GRATING. USE SADDLE CLIPS, MINIMUM 4 PER PANEL.
- 2 GRATING SUPPORT TYPE 2

NOTES:

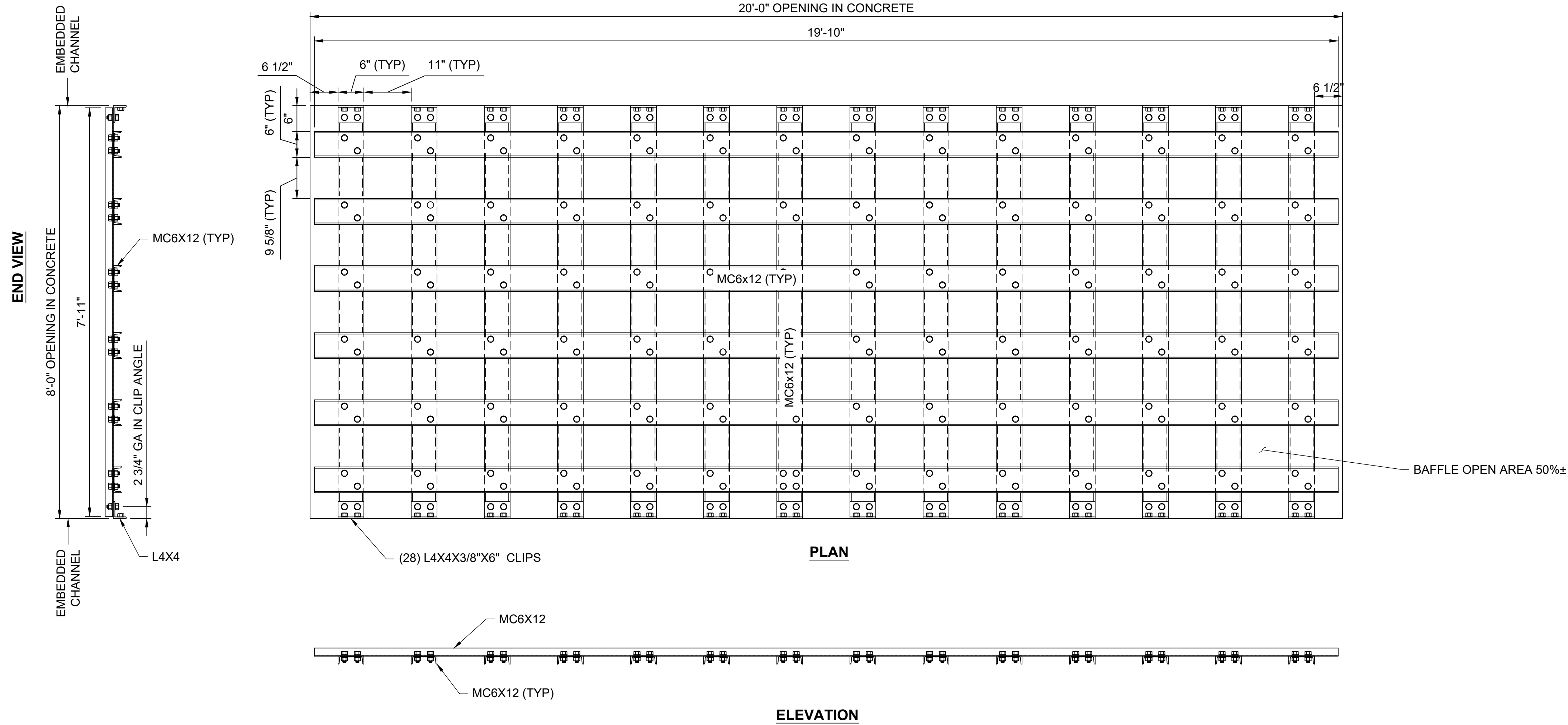
1. PROVIDE AIR BURST SYSTEM. SEE SPECIFICATION 35 20 13 FOR DETAILS.
2. WIRE ORIENTATION SHALL BE PARALLEL TO FLOW. THE SCREEN SHALL BE MOUNTED FLUSH WITH THE STRUCTURE AND NO GAPS GREATER THAN 1/4 INCH.
3. COORDINATE WITH MANUFACTURER FOR ANY REQUIRED SPACERS BETWEEN THE SCREENS. MANUFACTURER SHALL PROVIDE DETAIL FOR SMOOTH TRANSITION BETWEEN WEDGE WIRE SCREEN PANELS.
4. BAFFLES, CONNECTIONS, EMBEDS, AND BOLTS SHALL BE GALVANIZED STEEL.



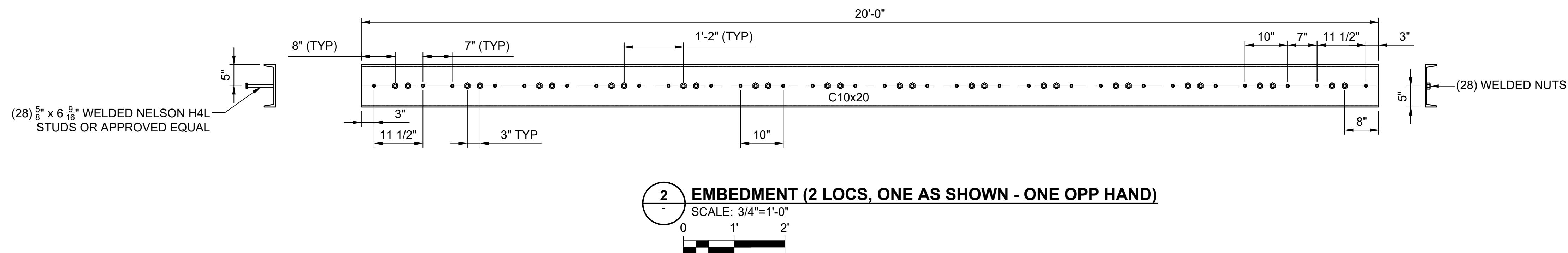
A SECTION
SCALE: 1/2"=1'-0"



B SECTION
SCALE: 1/2"=1'-0"



1 EXIT FLUME BAFFLE DETAIL
M-122 SCALE: 3/4"=1'-0"
0 1' 2'

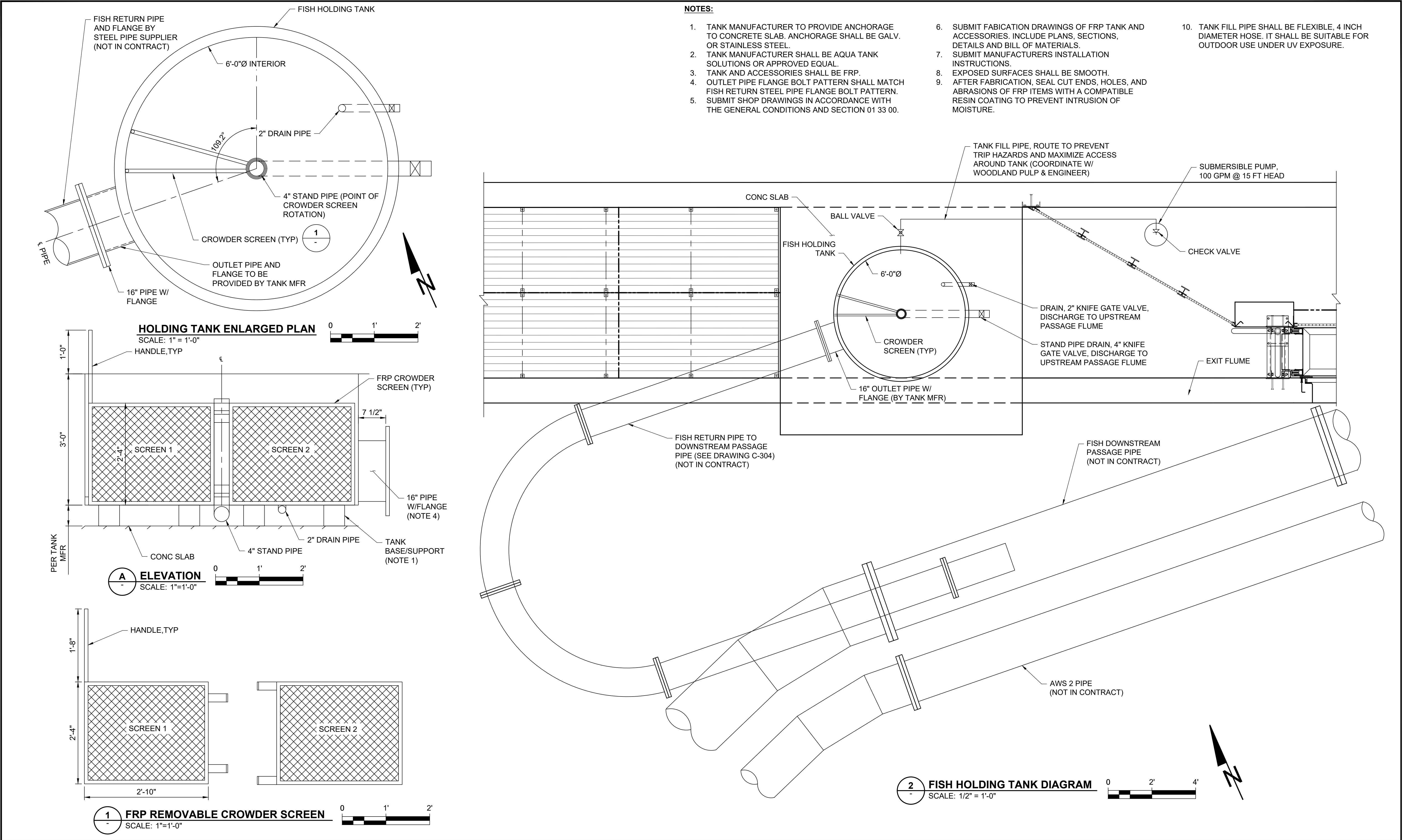


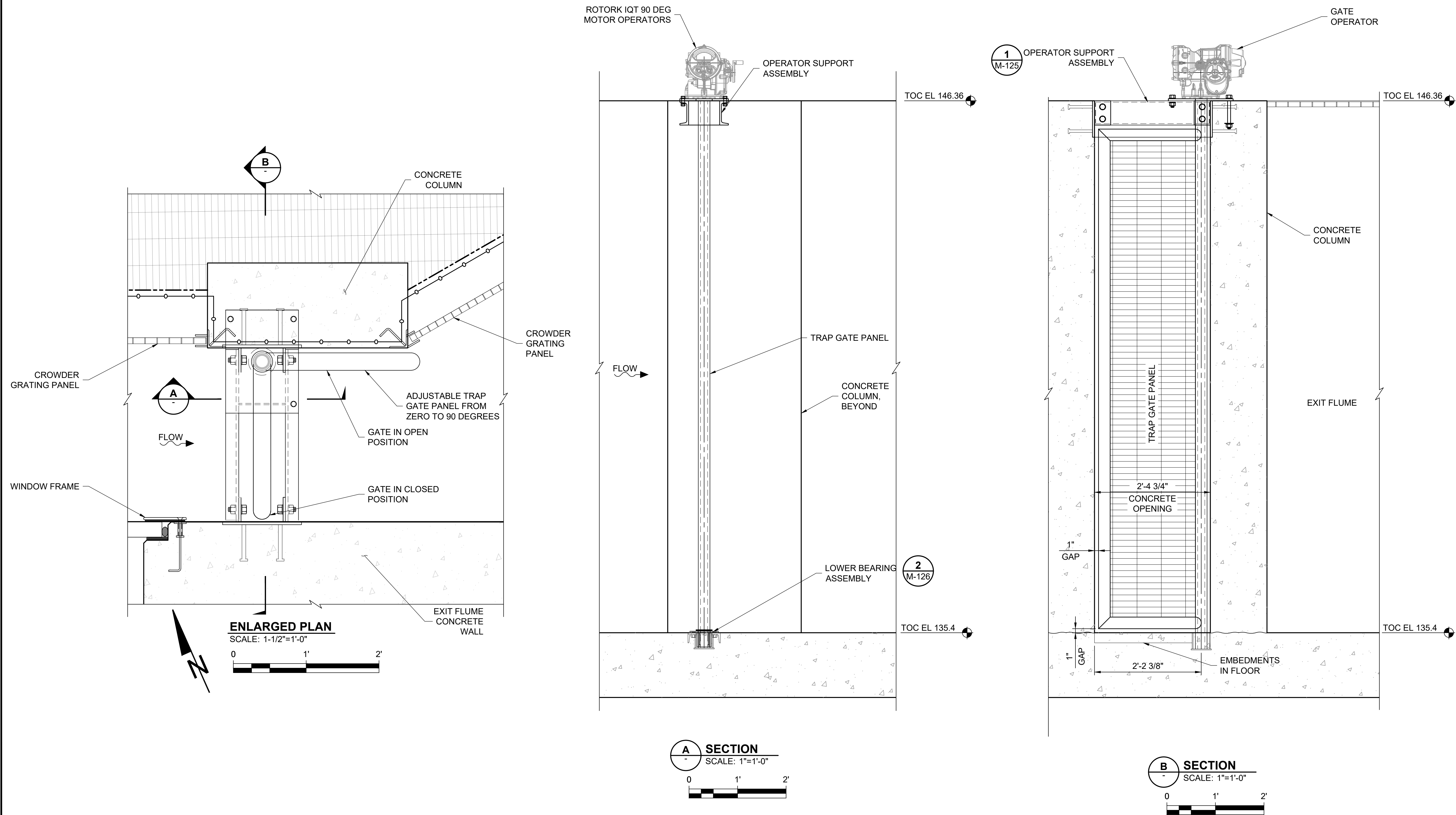
NOTE:

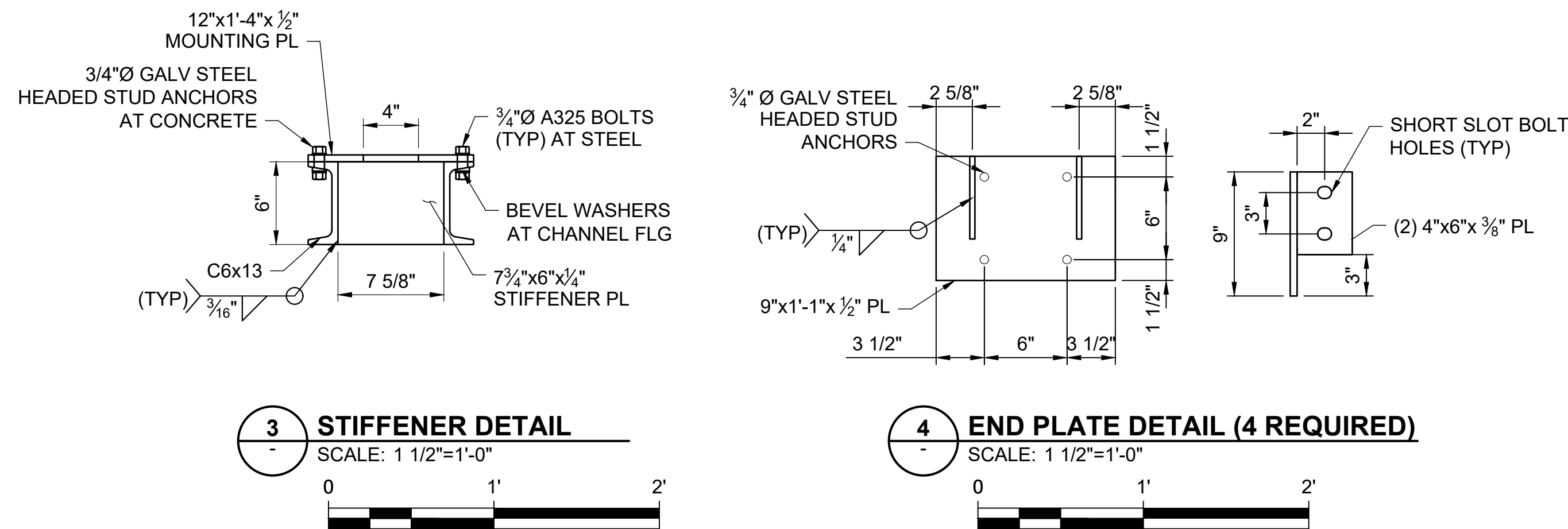
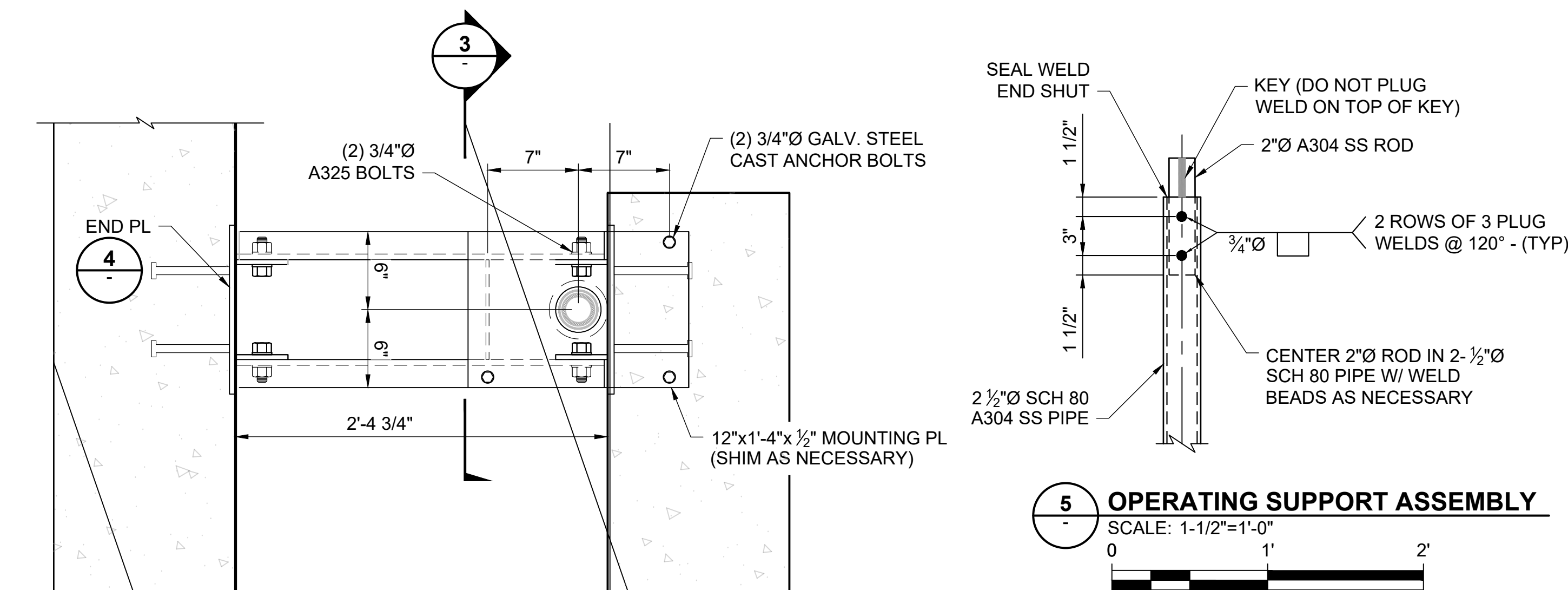
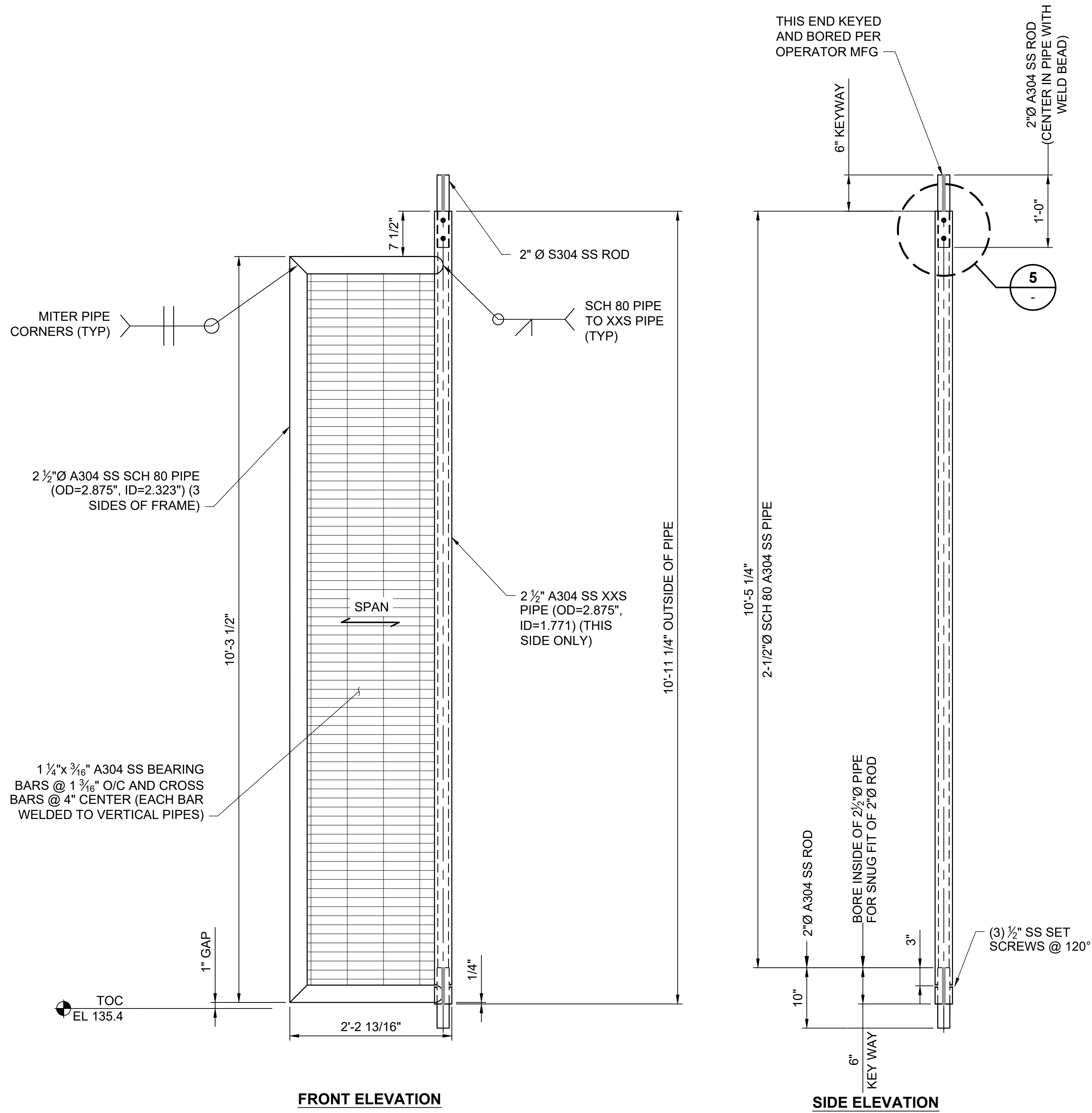
1. BAFFLES, CONNECTIONS, EMBEDS, AND BOLTS SHALL BE GALVANIZED STEEL.

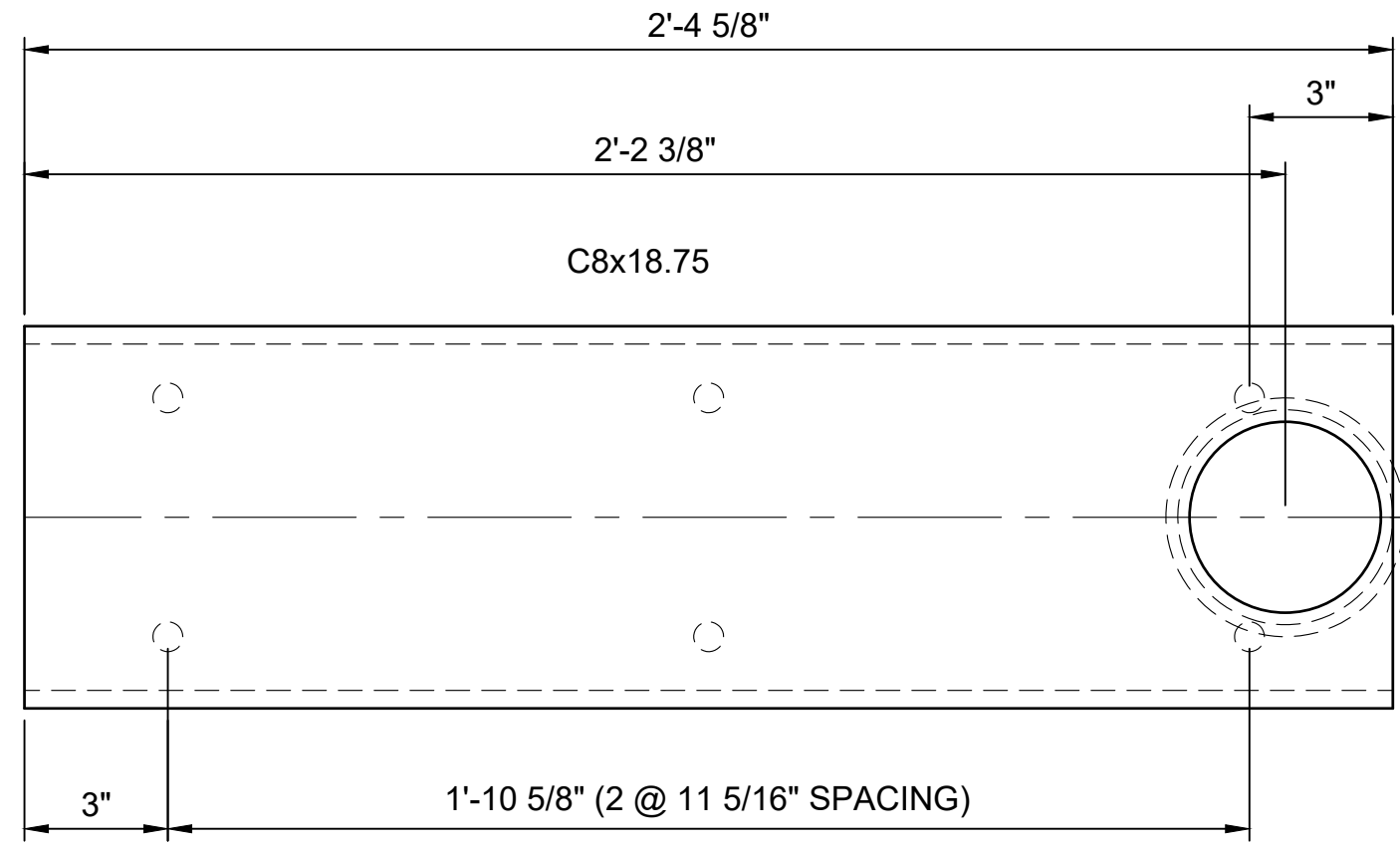
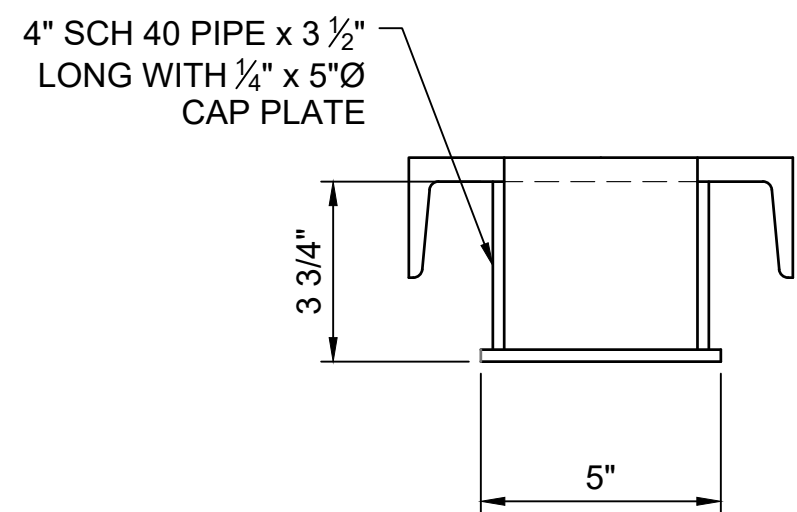
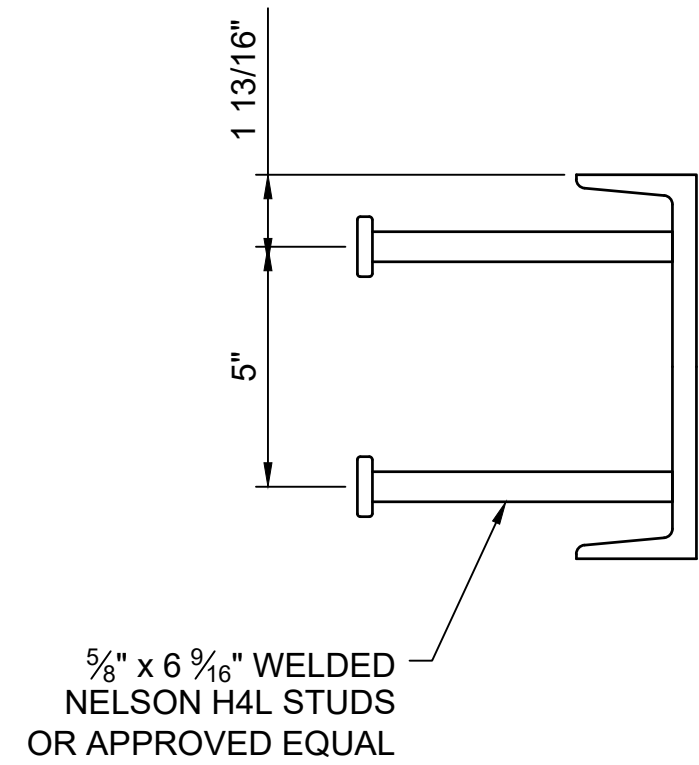
EMBEDMENT NOTE:

1. NUTS WELDED TO STRUCTURAL MEMBERS SHALL BE 3/4" DIAMETER, 10 TPI (UNO)-ALL AROUND FILLET WELD.

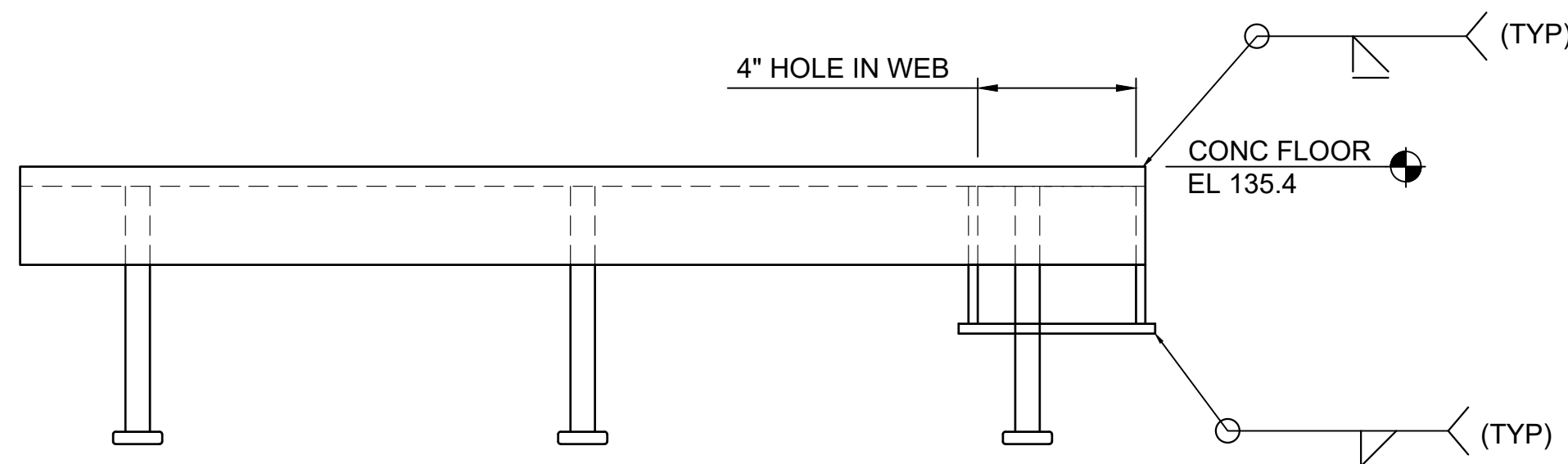






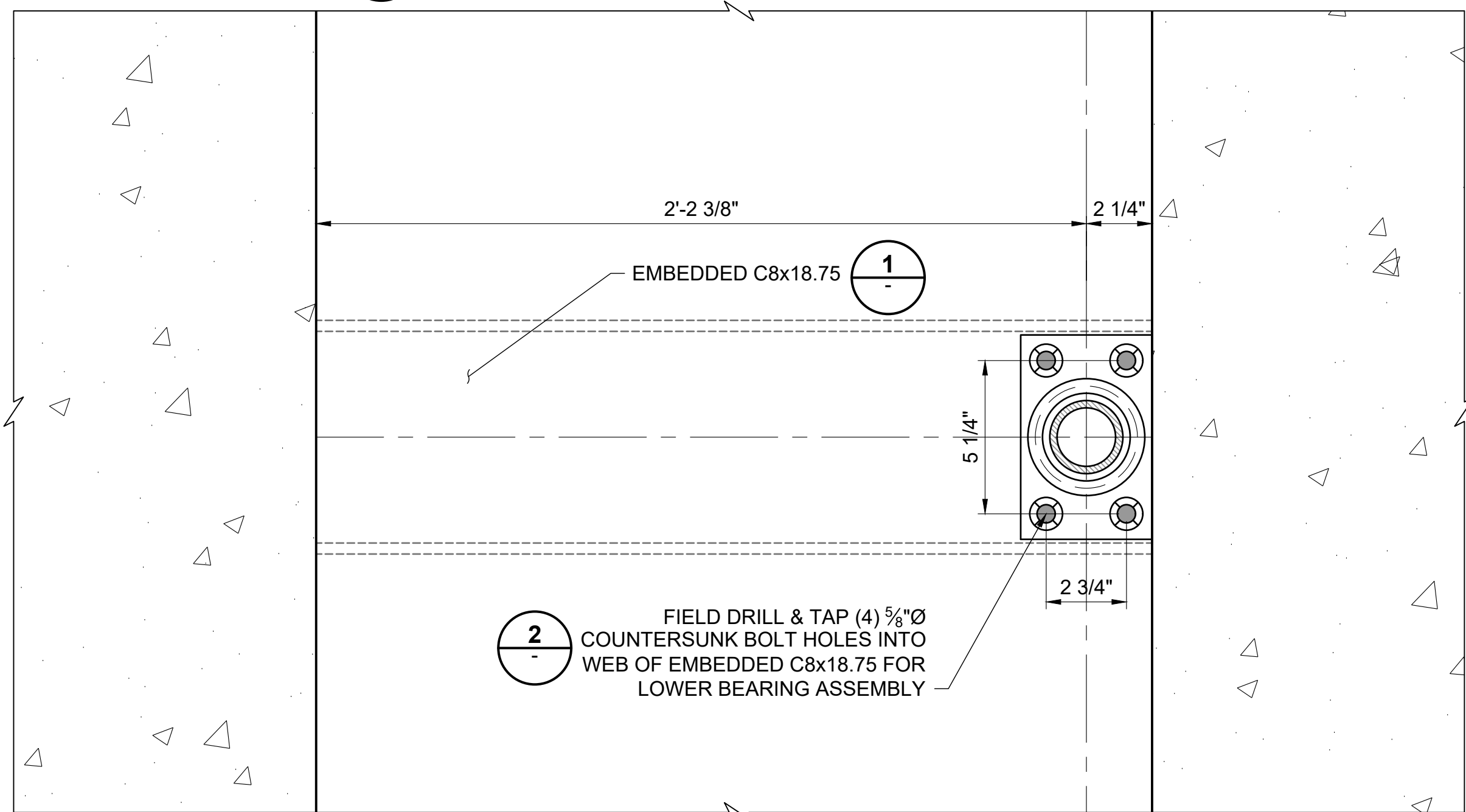


PLAN

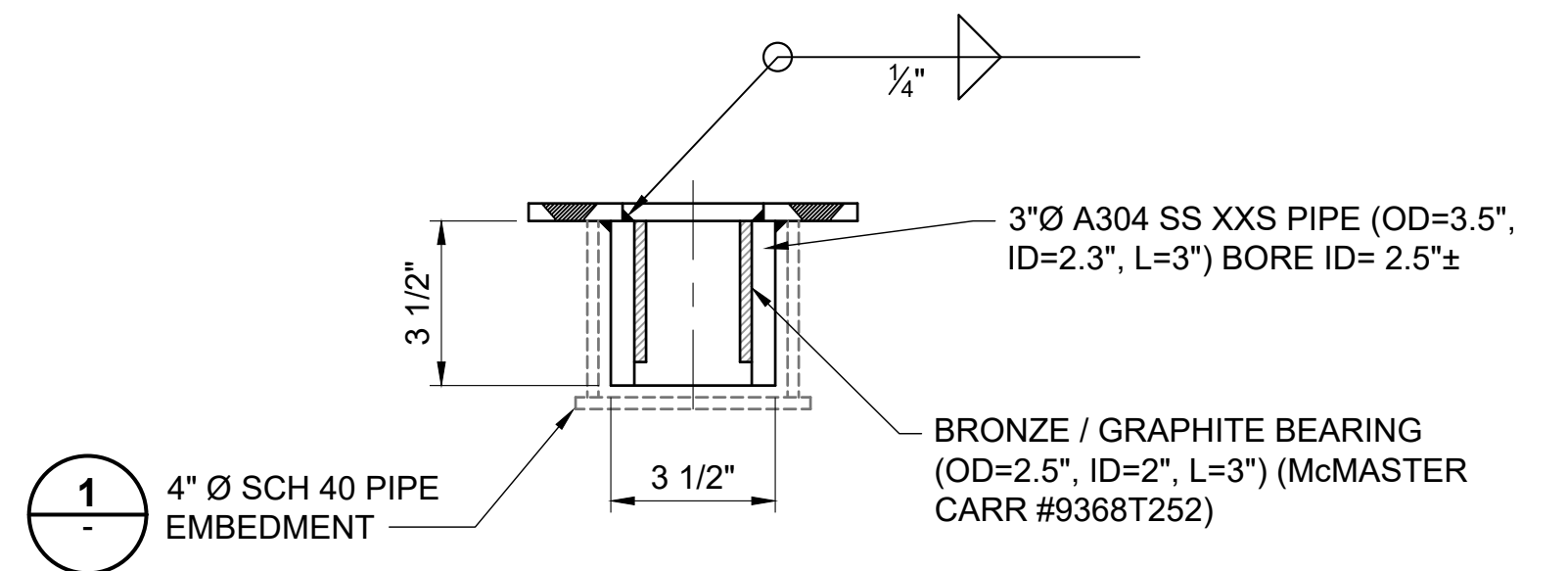
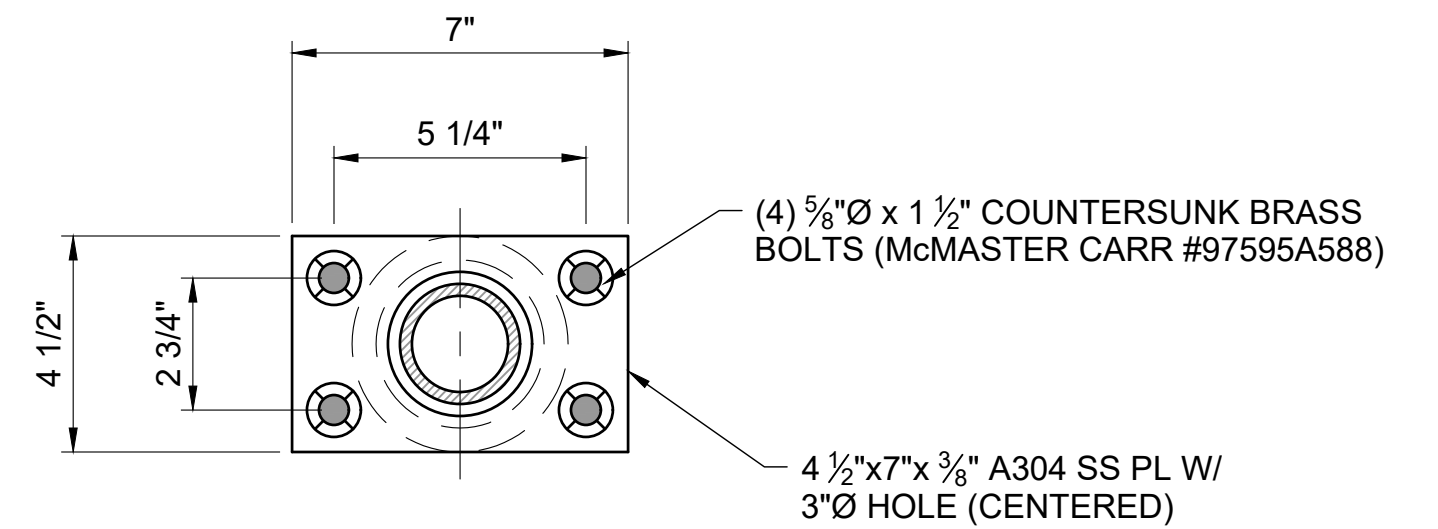
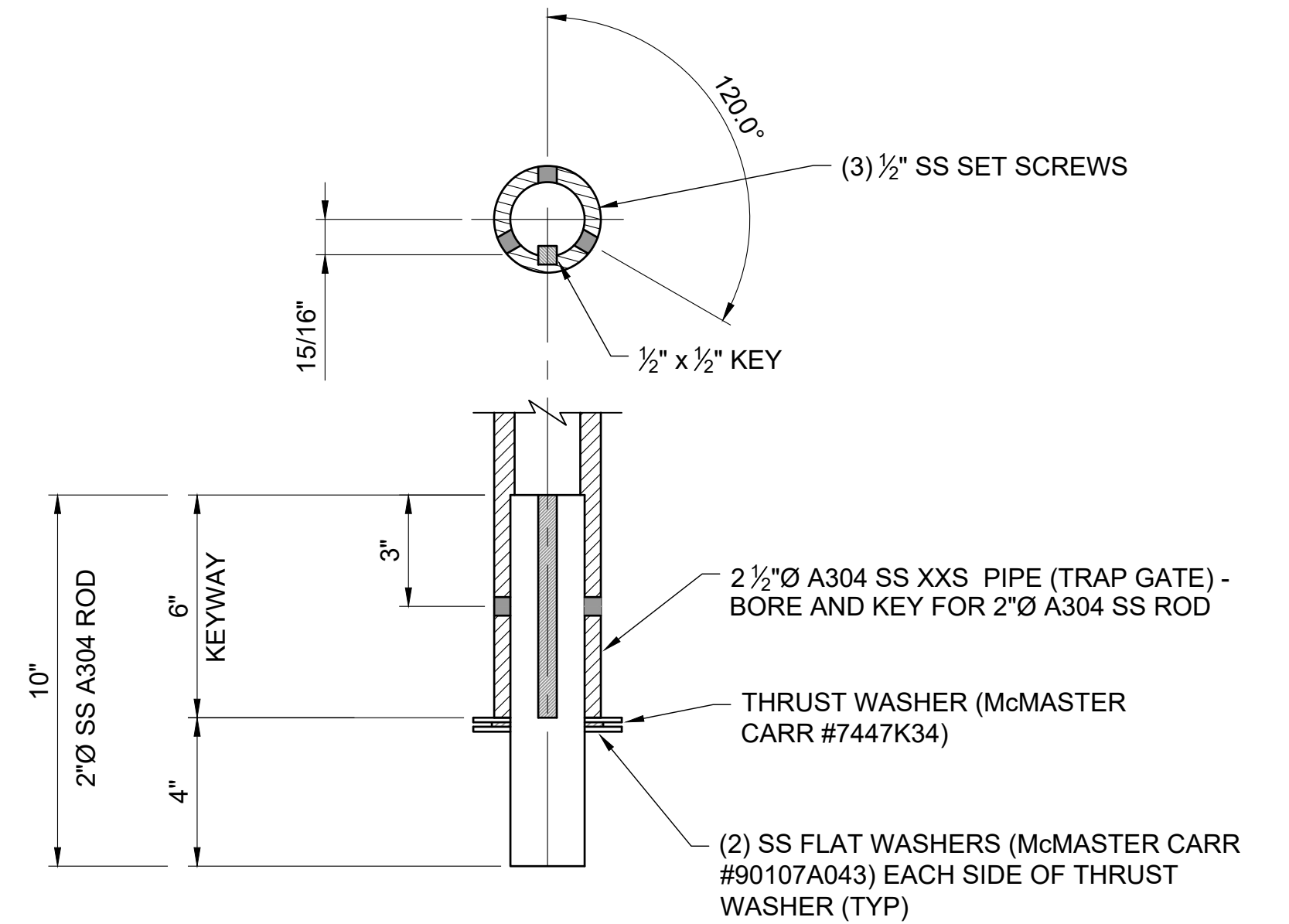


ELEVATION

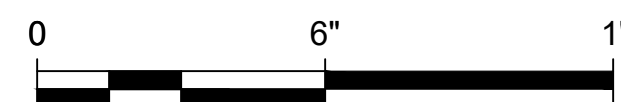
1 TRAP GATE FLOOR EMBEDMENT (2 LOC)
SCALE: 3"=1'-0"



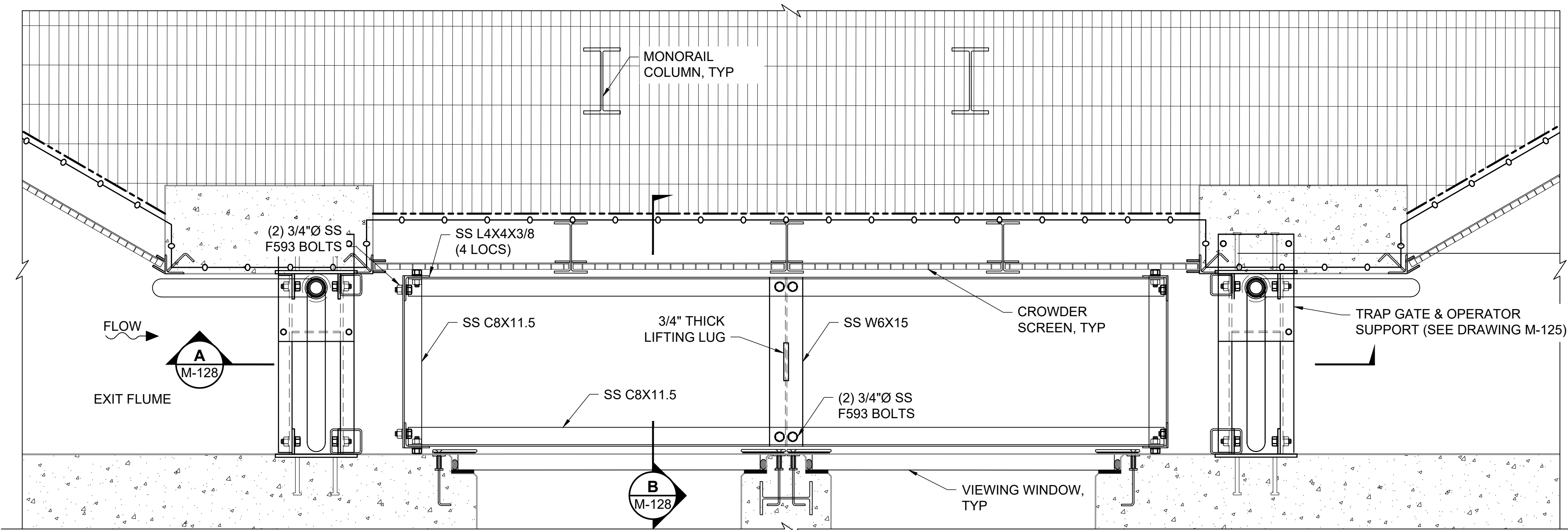
3 EMBEDMENT
SCALE: 3"=1'-0"



2 LOWER BEARING ASSEMBLY (2 REQUIRED)
SCALE: 3"=1'-0"

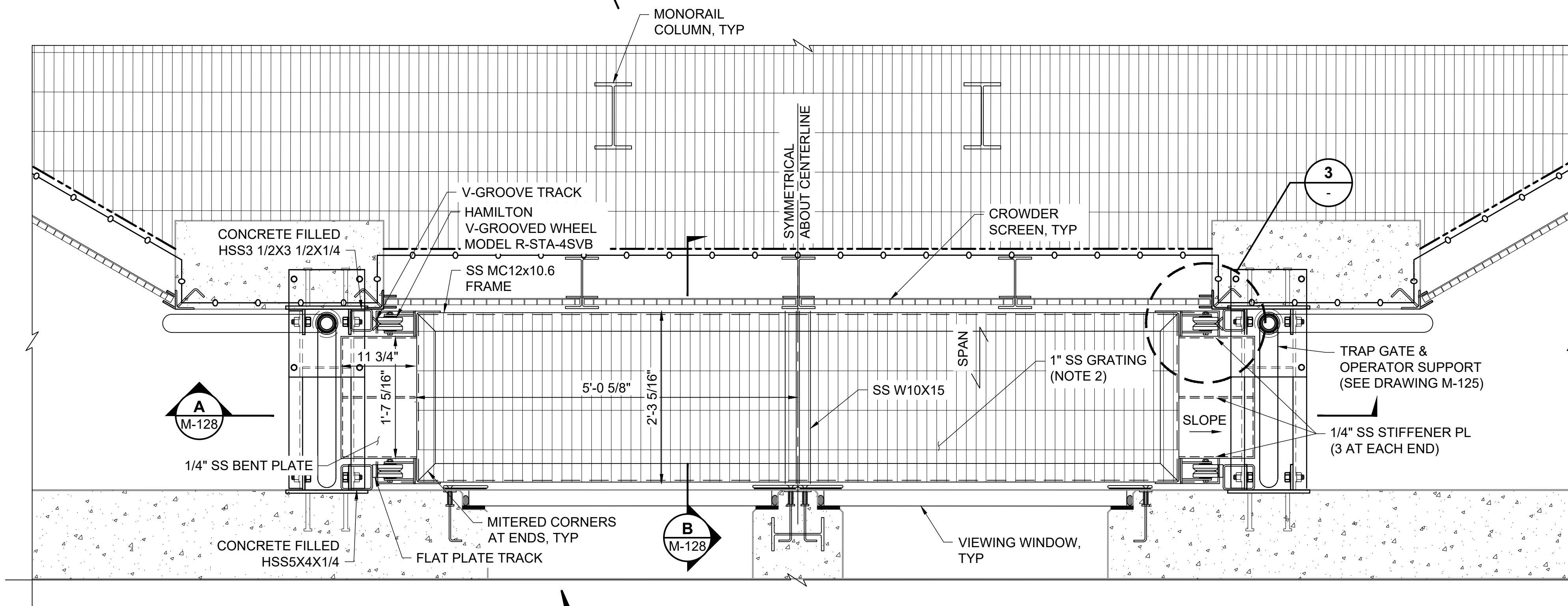
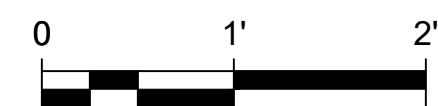


9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY



RAISABLE FLOOR TOP PLAN VIEW

SCALE: 1"=1'-0"



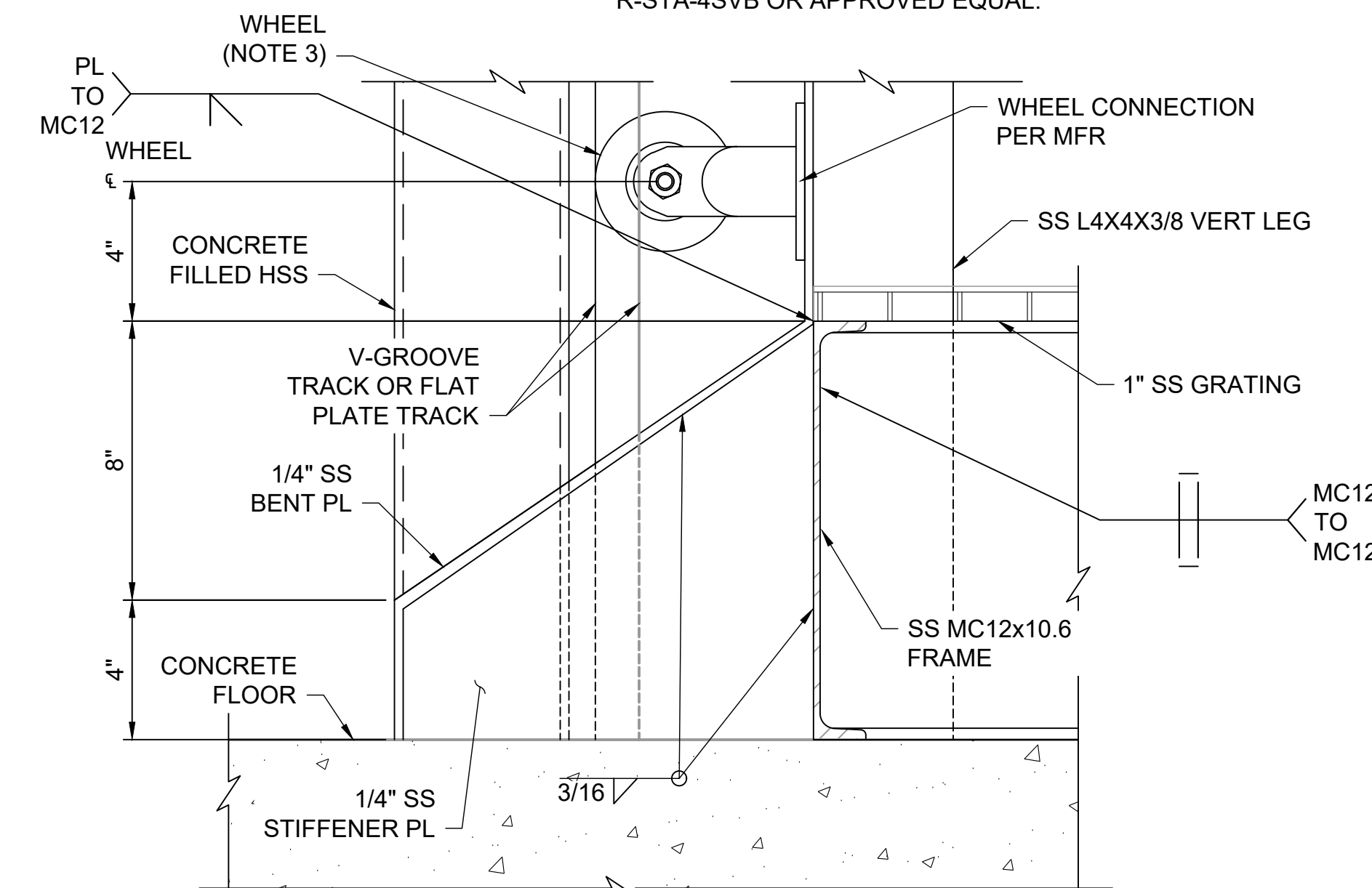
RAISABLE FLOOR PLAN VIEW

SCALE: 1"=1'-0"

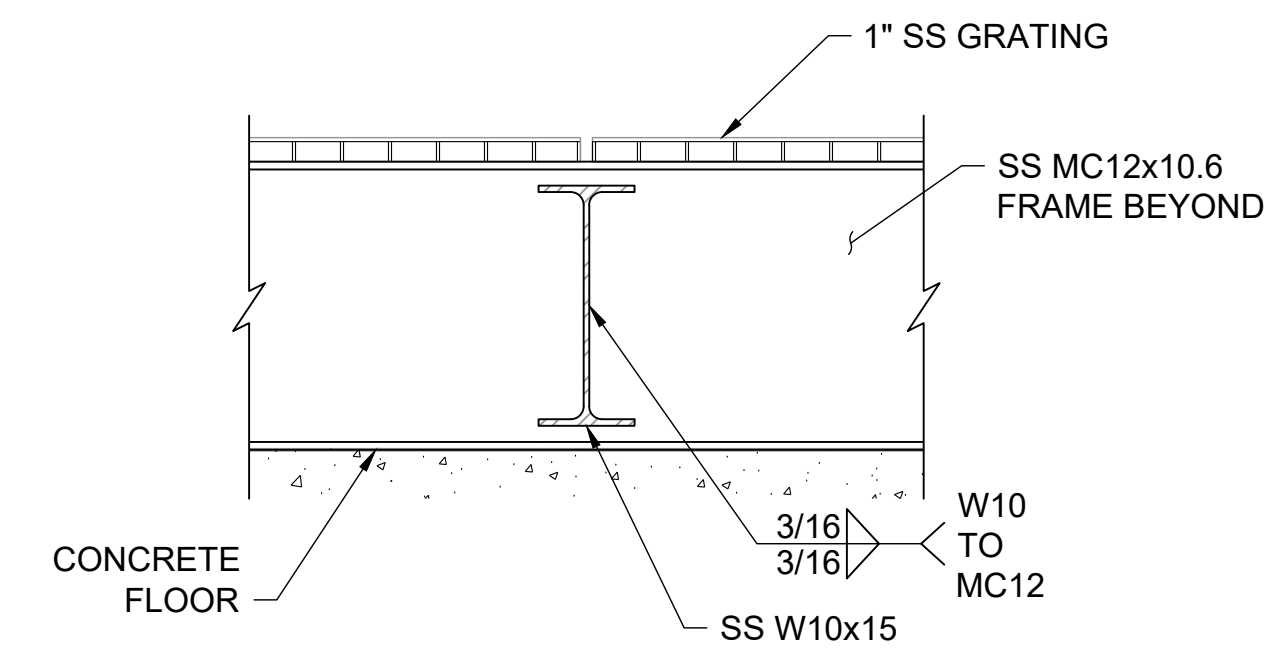


NOTES:

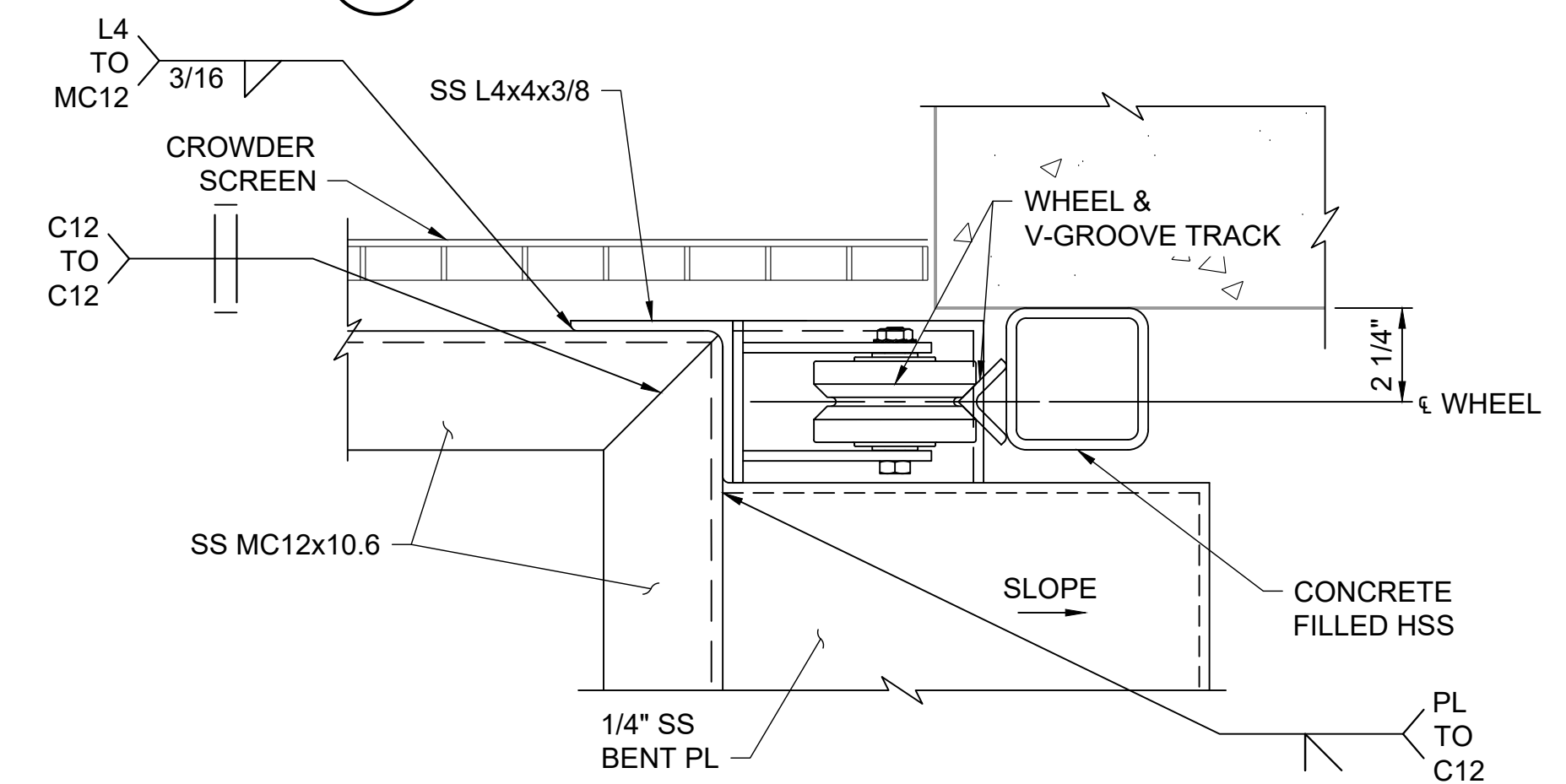
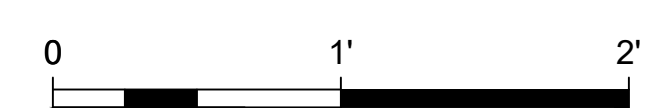
- COUNTING BUILDING NOT SHOWN FOR CLARITY.
- STAINLESS STEEL GRATING 1" X 3/16" BEARING BARS @ 1 3/16" O.C. AND CROSS BARS @ 4" O.C. BAND ALL EDGES OF GRATING. WELD TO THE FRAME.
- WHEELS SHALL BE HAMILTON V-GROOVED WHEEL MODEL R-STA-4SVB OR APPROVED EQUAL.



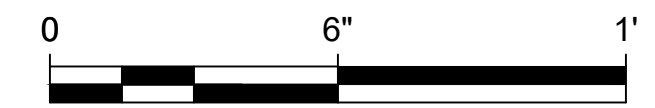
1 DETAIL
M-128 SCALE: 3"=1'-0"

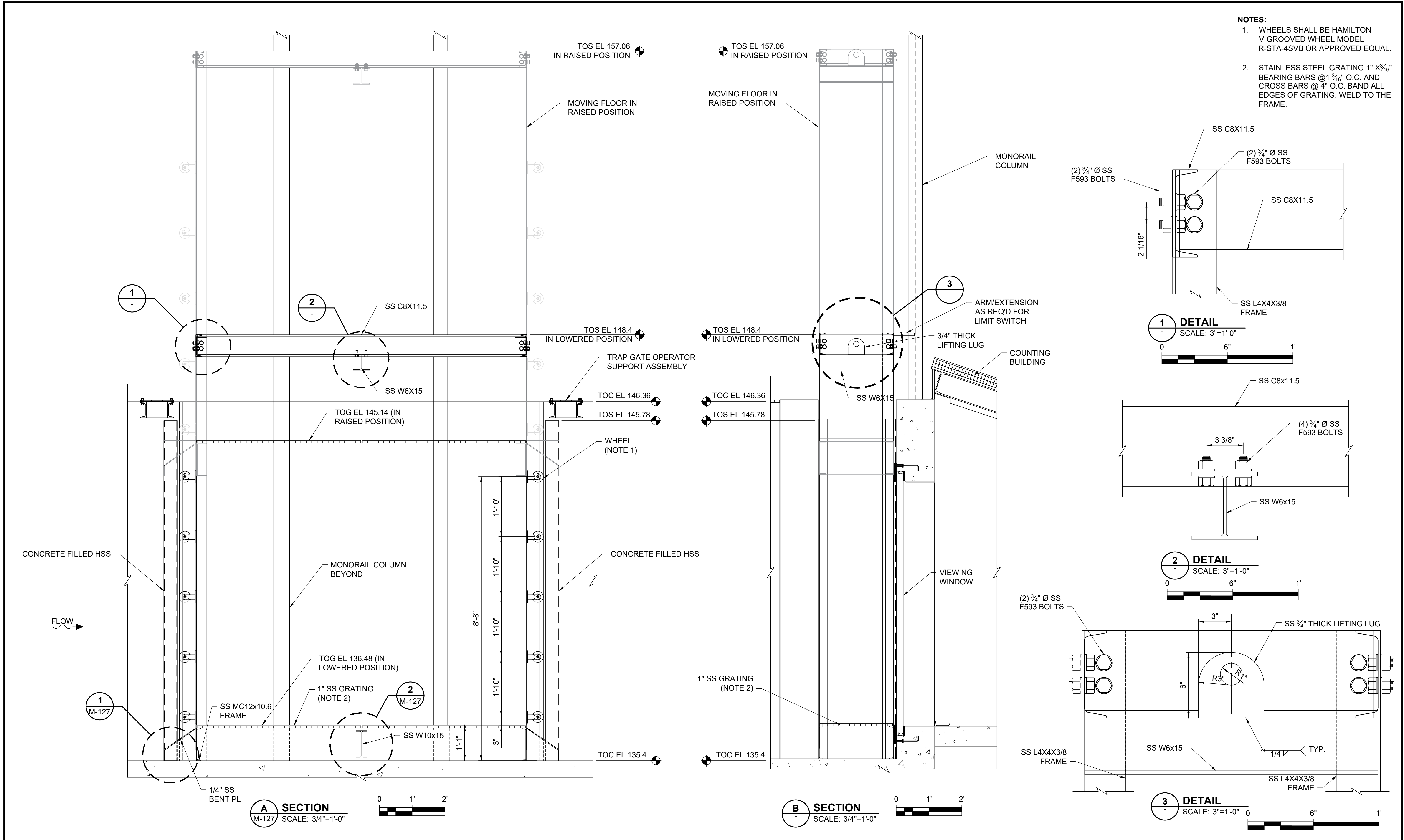


2 DETAIL
M-128 SCALE: 1 1/2"=1'-0"



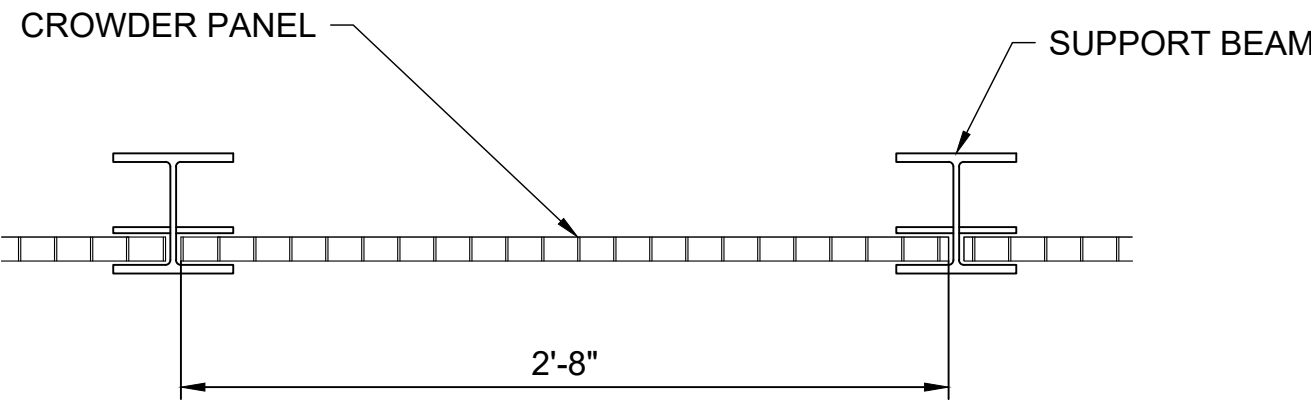
3 DETAIL
M-128 SCALE: 3"=1'-0"



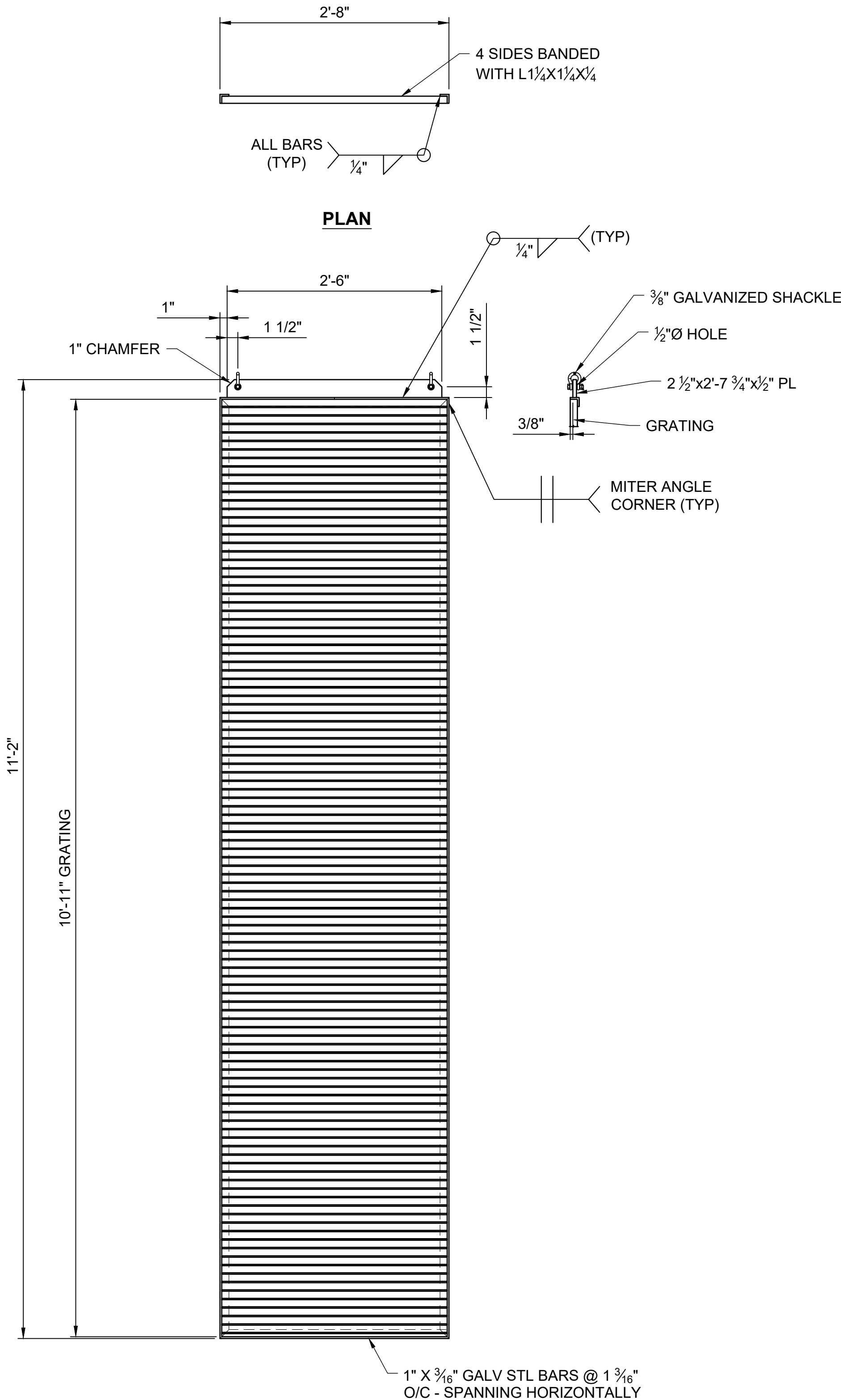
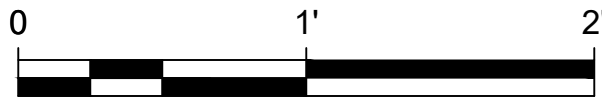


- NOTES:**
1. WHEELS SHALL BE HAMILTON V-GROOVED WHEEL MODEL R-STA-4SVB OR APPROVED EQUAL.
 2. STAINLESS STEEL GRATING 1" X 3/8" BEARING BARS @ 1 3/8" O.C. AND CROSS BARS @ 4" O.C. BAND ALL EDGES OF GRATING. WELD TO THE FRAME.

- NOTES:**
- 4 SCREENS SHALL HAVE REMOVABLE WHITE FIBERGLASS PANEL INSERTS.
 - ALL CARBON STEEL ITEMS SHALL BE GALVANIZED.
 - WEIGHT OF GRATING SCREEN = 230 LBS.

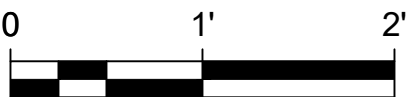


ENLARGED AREA PLAN
SCALE: 1 1/2"=1'-0"

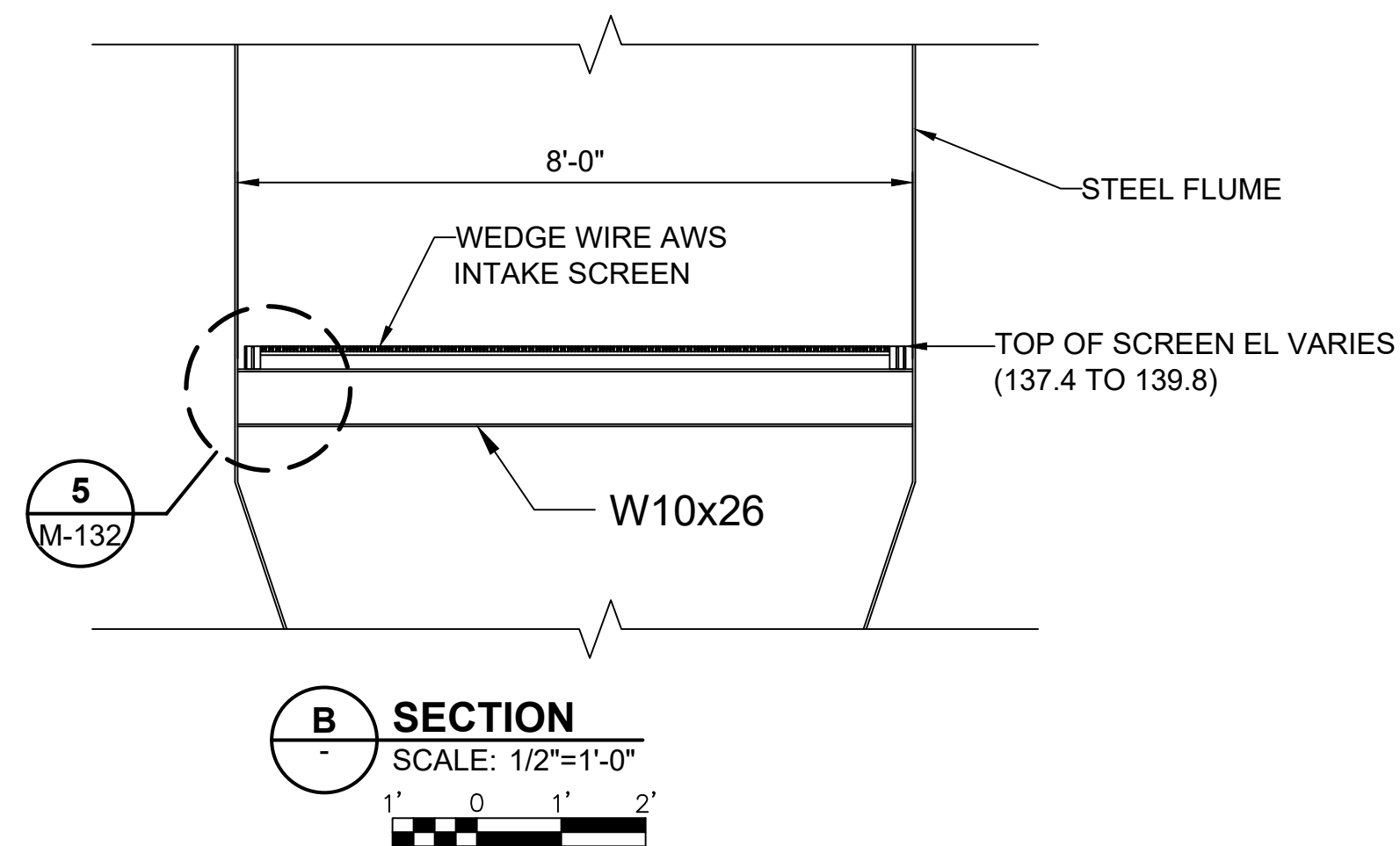
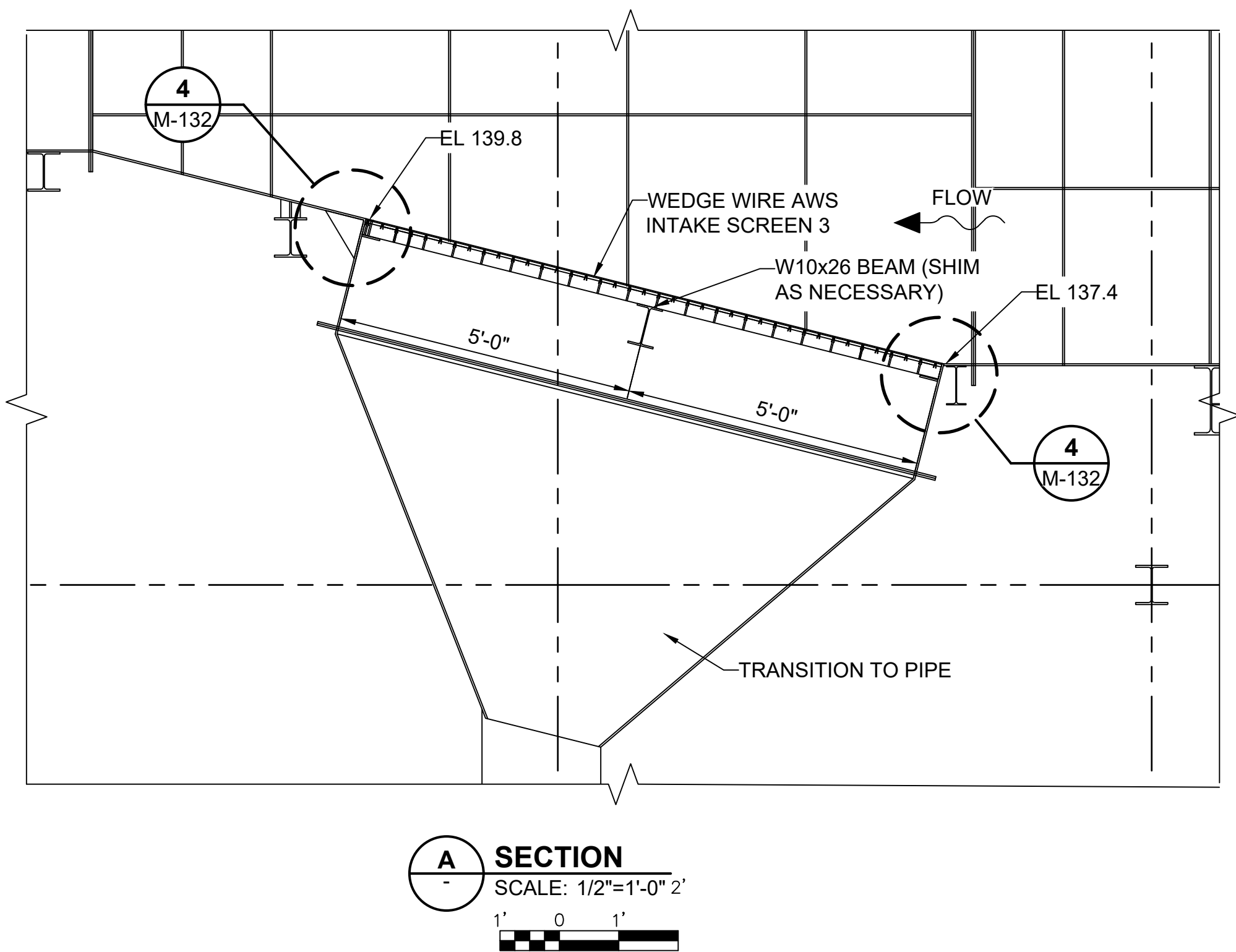
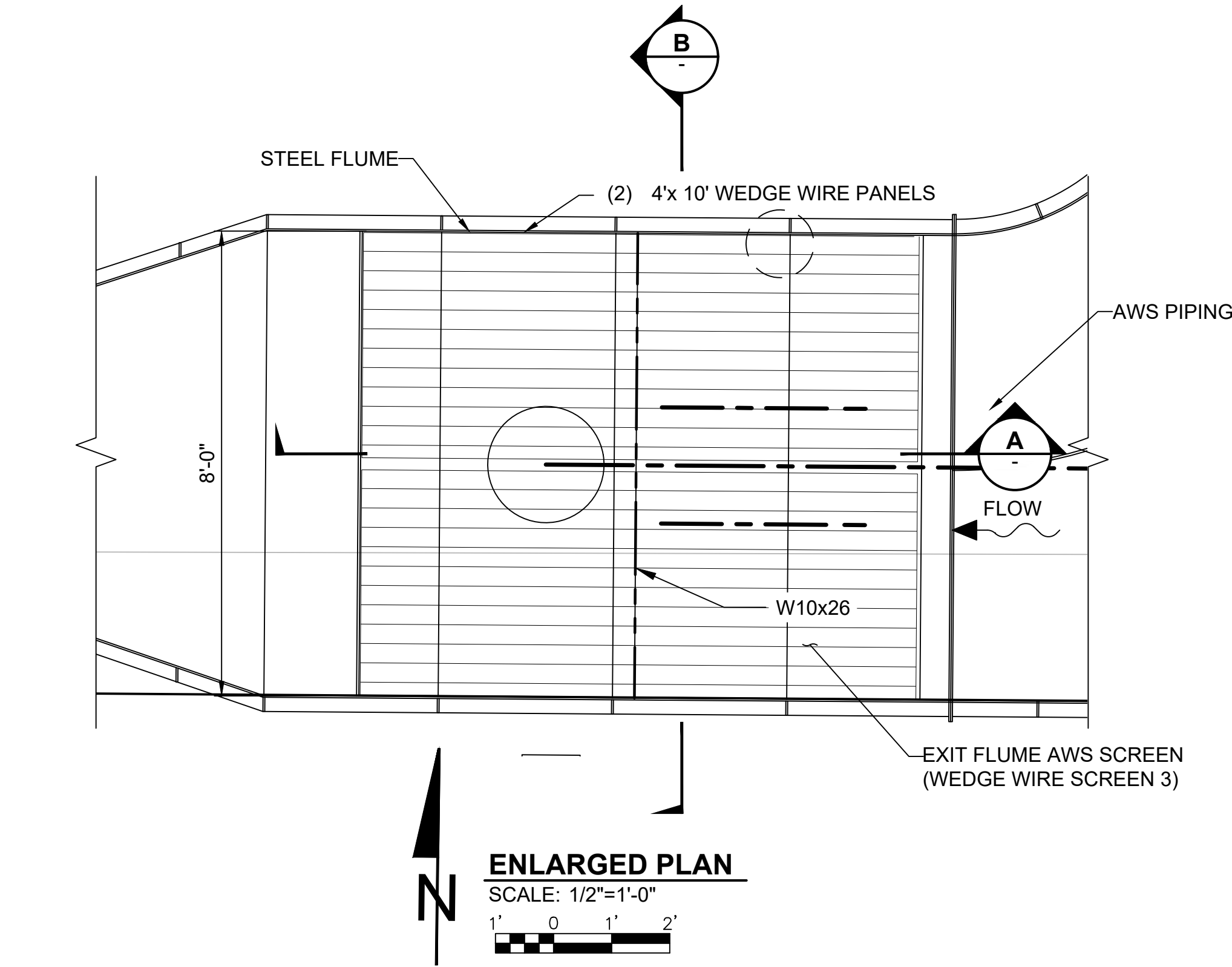


ELEVATION

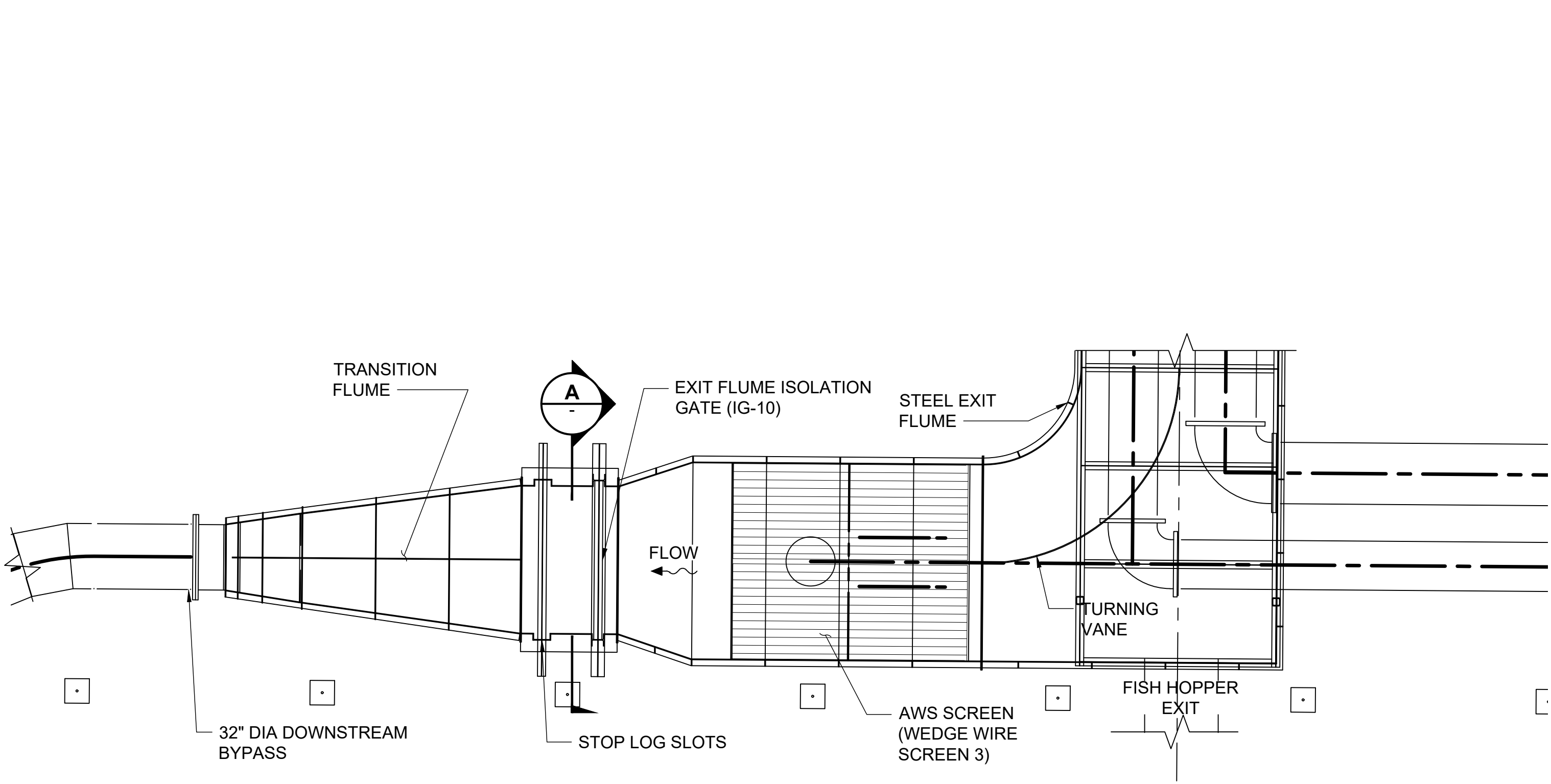
CROWDER REMOVABLE SCREEN PANELS (12 REQUIRED)
SCALE: 1"=1'



- NOTES:**
1. PROVIDE AIR BURST SYSTEM. SEE SPECIFICATION 35 20 13 FOR DETAILS.
 2. WIRE ORIENTATION SHALL BE PARALLEL TO FLOW. THE SCREEN SHALL BE MOUNTED FLUSH WITH THE STRUCTURE AND NO GAPS GREATER THAN 1/4 INCH.
 3. COORDINATE WITH MANUFACTURER FOR ANY REQUIRED SPACERS BETWEEN THE SCREENS. MANUFACTURER SHALL PROVIDE DETAIL FOR SMOOTH TRANSITION BETWEEN WEDGE WIRE SCREEN PANELS.

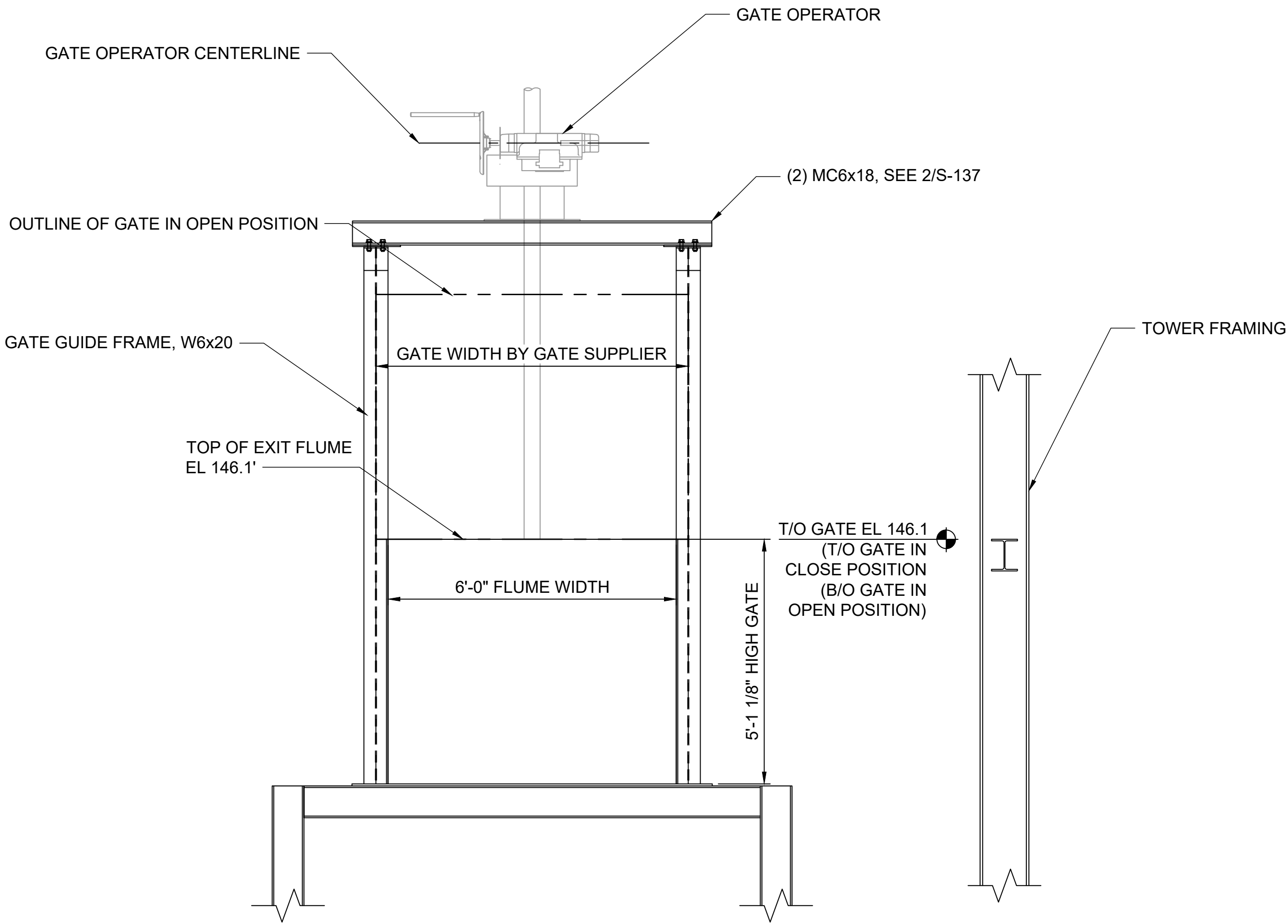


- NOTES:**
1. GENERAL OVERVIEW OF EXIT FLUME BYPASS ISOLATION GATE (IG-10)
 - SIZE OF OPENING, 6.00'W x 5.10'H
 - MOVEMENT OF GATE, UPWARD OPENING.
 - OPERATION OF GATE: OPEN / CLOSE
 2. FLUME WATER ELEVATIONS:
 - LOW WSL 144.0'
 - NORMAL WSL 144.6'
 - HIGH WSL 145.4'



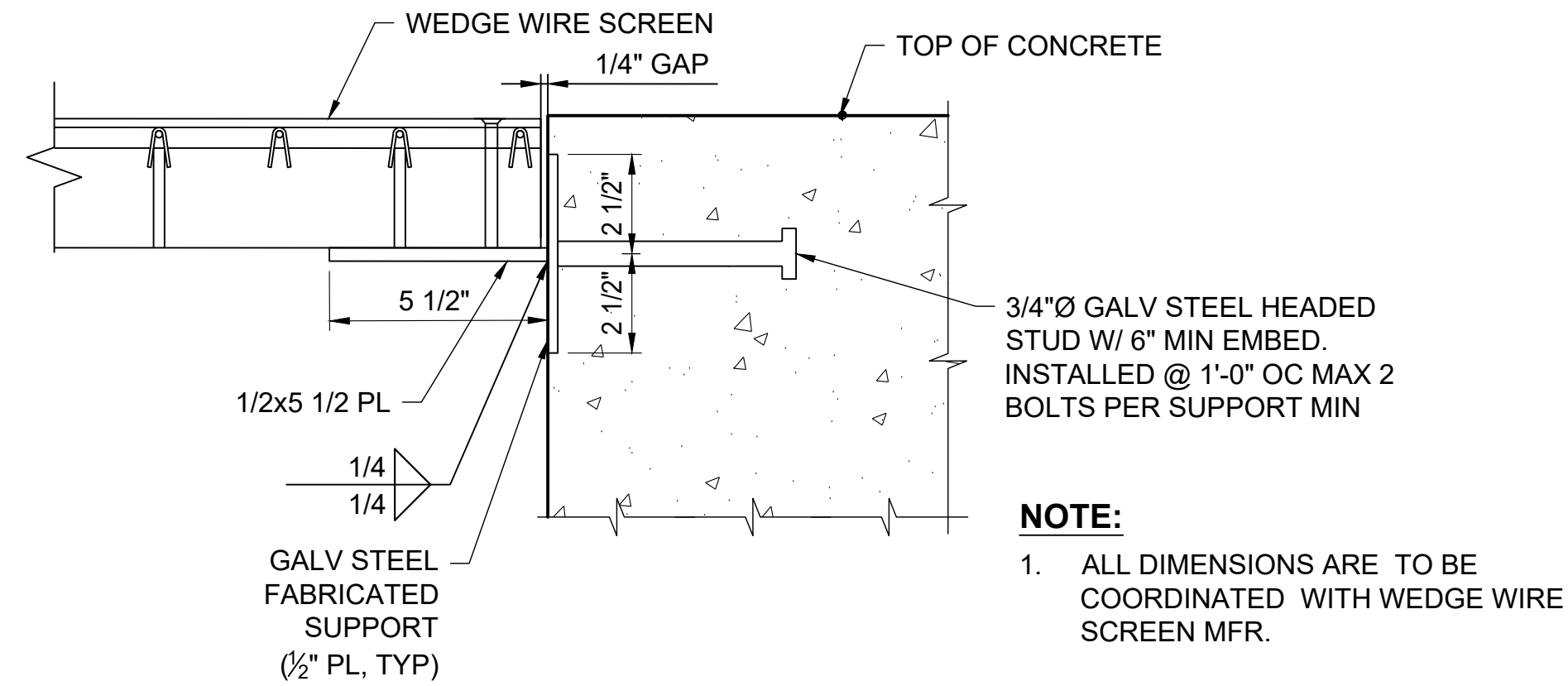
EXIT FLUME ENLARGED PLAN
SCALE: 1/4"=1'-0"

0 4' 8'

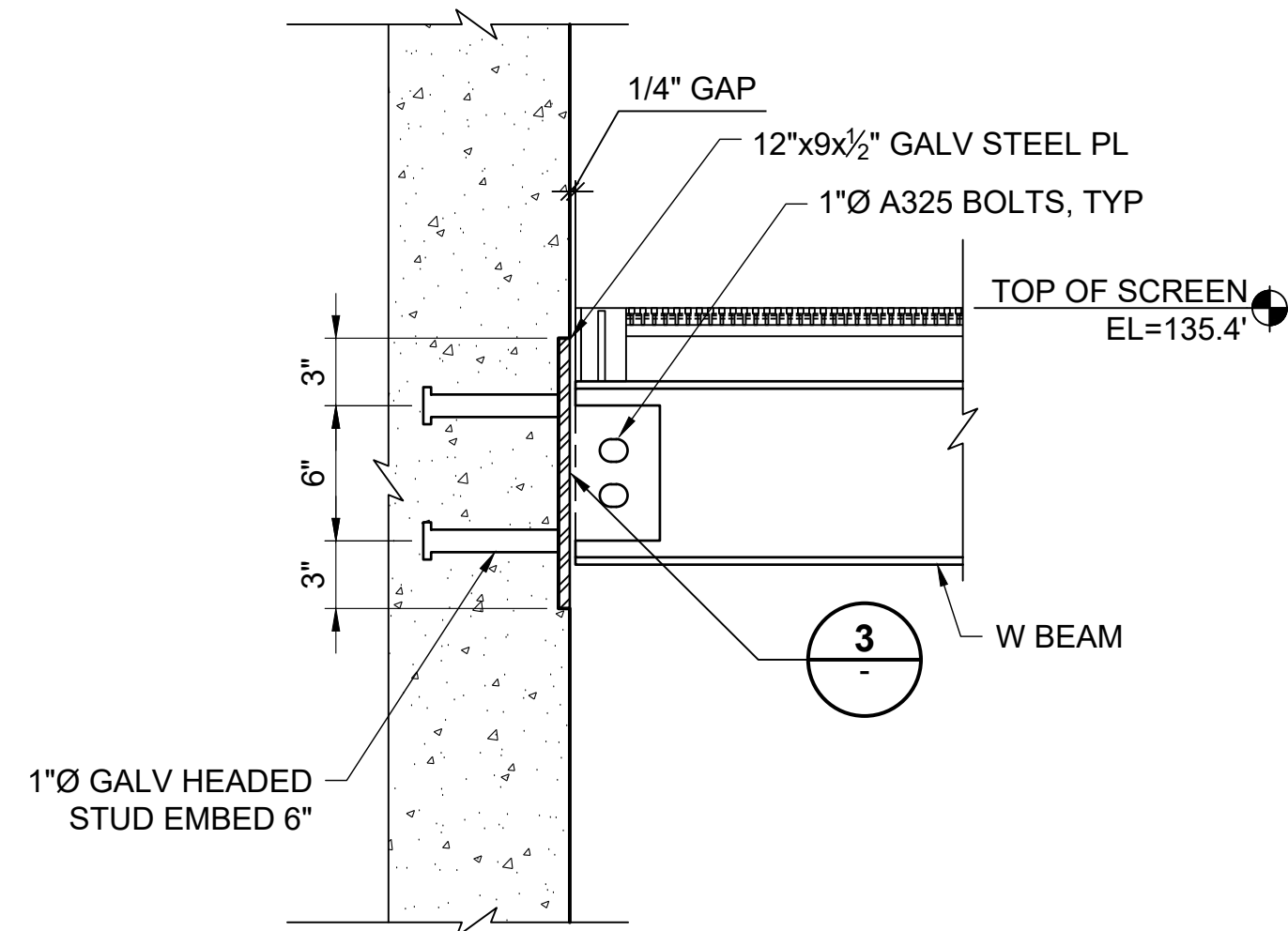


EXIT FLUME ISOLATION GATE
SCALE: 1/2"=1'-0"

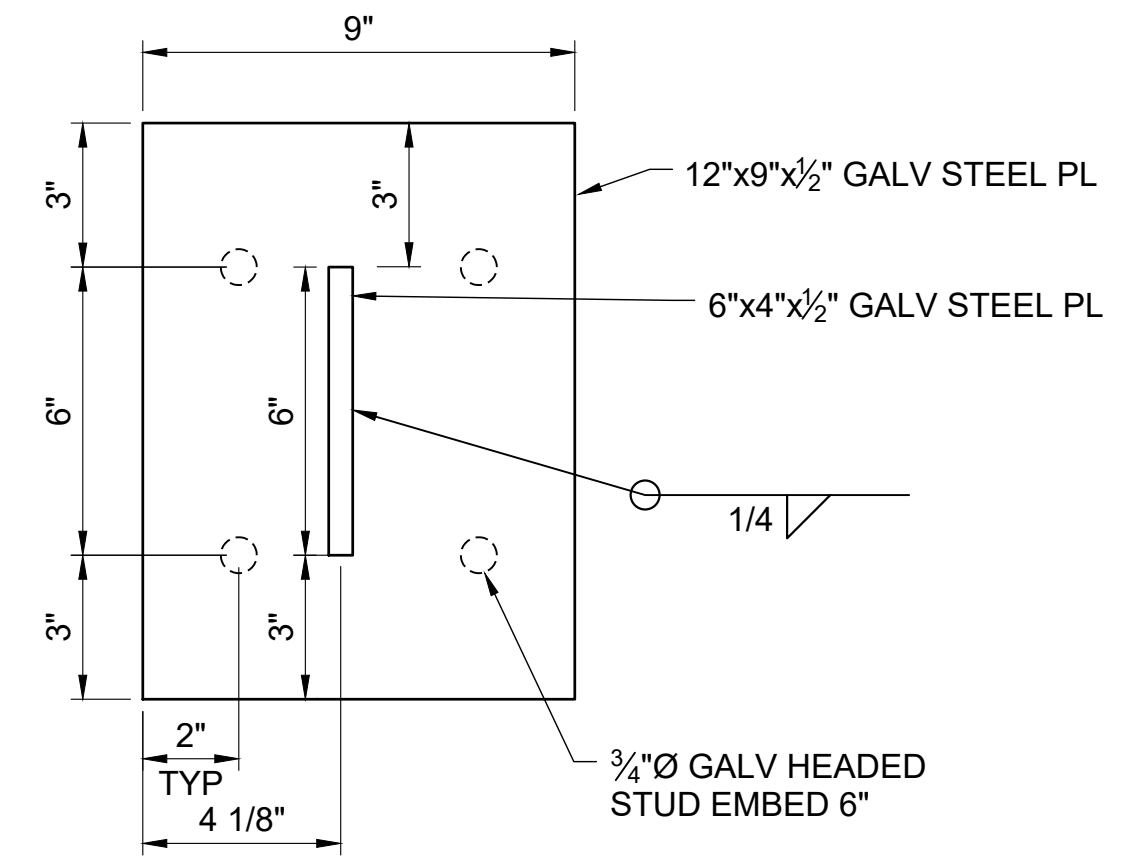
0 2' 4'



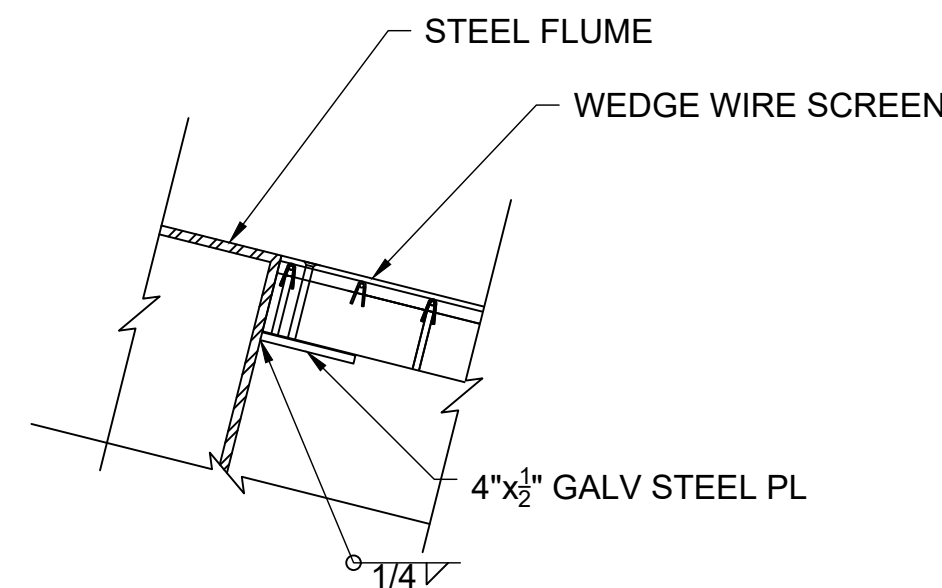
1 WEDGE WIRE SCREEN SUPPORT
M-122 SCALE: 3"=1'-0"
0 6" 1'



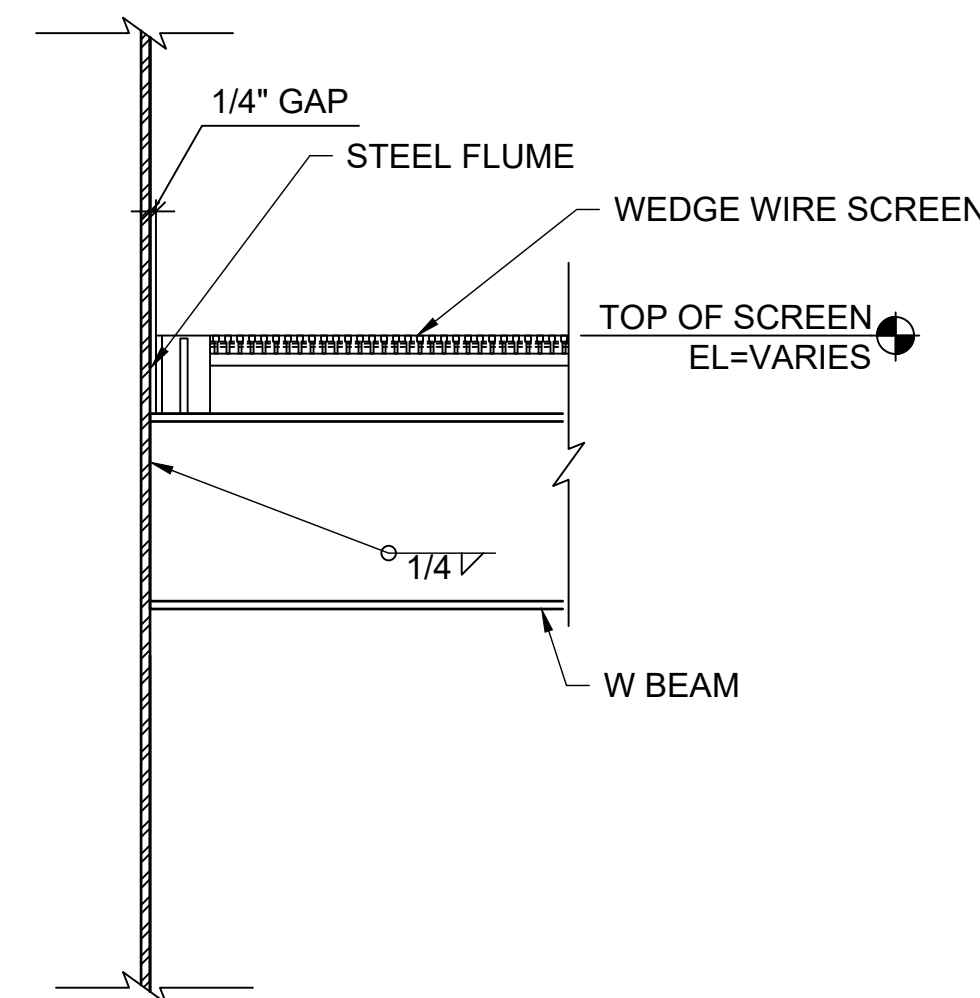
2 CONNECTION SECTION
M-122 SCALE: 1-1/2"=1'-0"
0 1' 2'



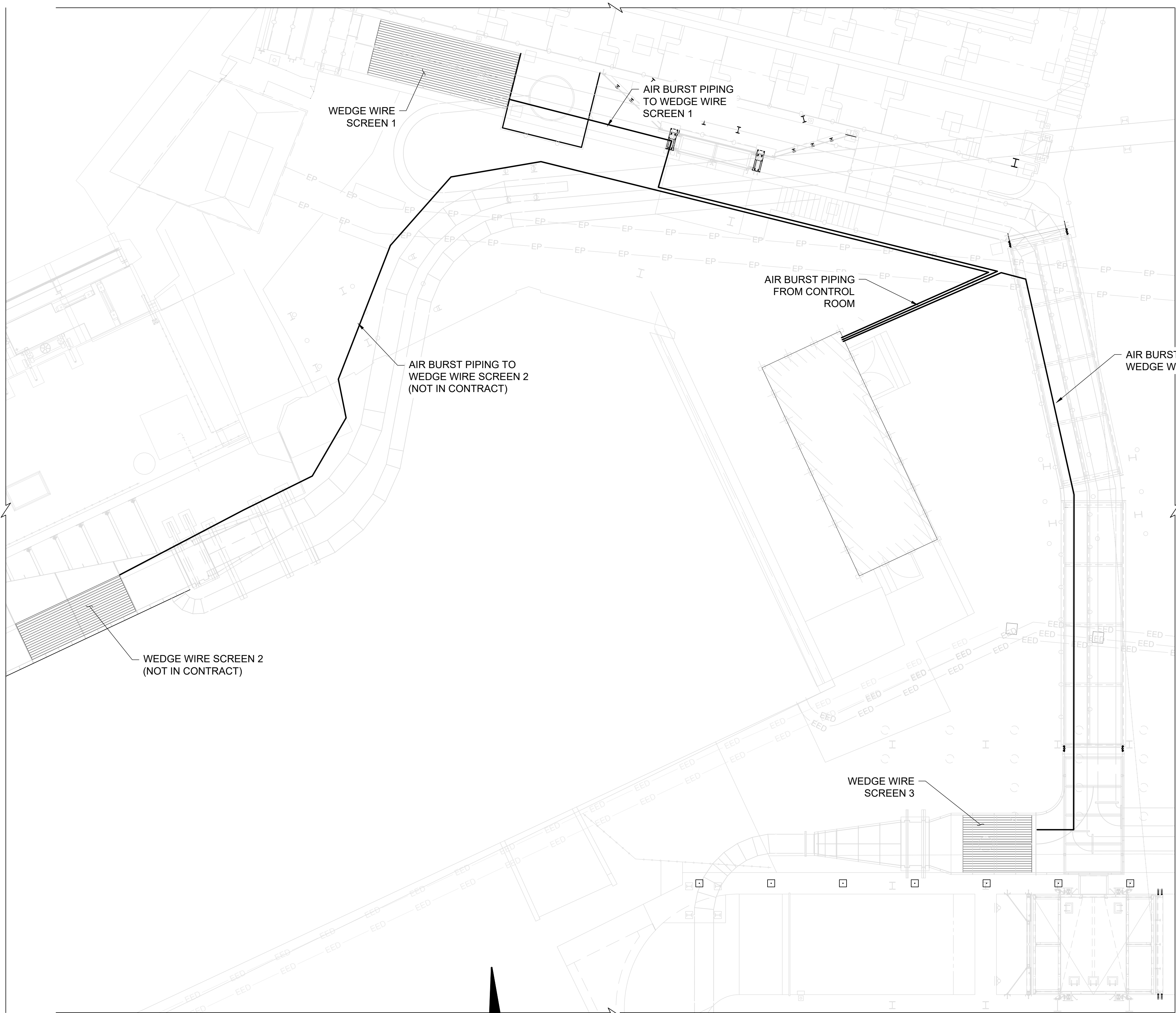
3 CONNECTION PLATE DETAIL
SCALE: 3"=1'-0"
0 6" 1'



4 CONNECTION SECTION
M-130 SCALE: 1-1/2"=1'-0"
M-161 0 1' 2'



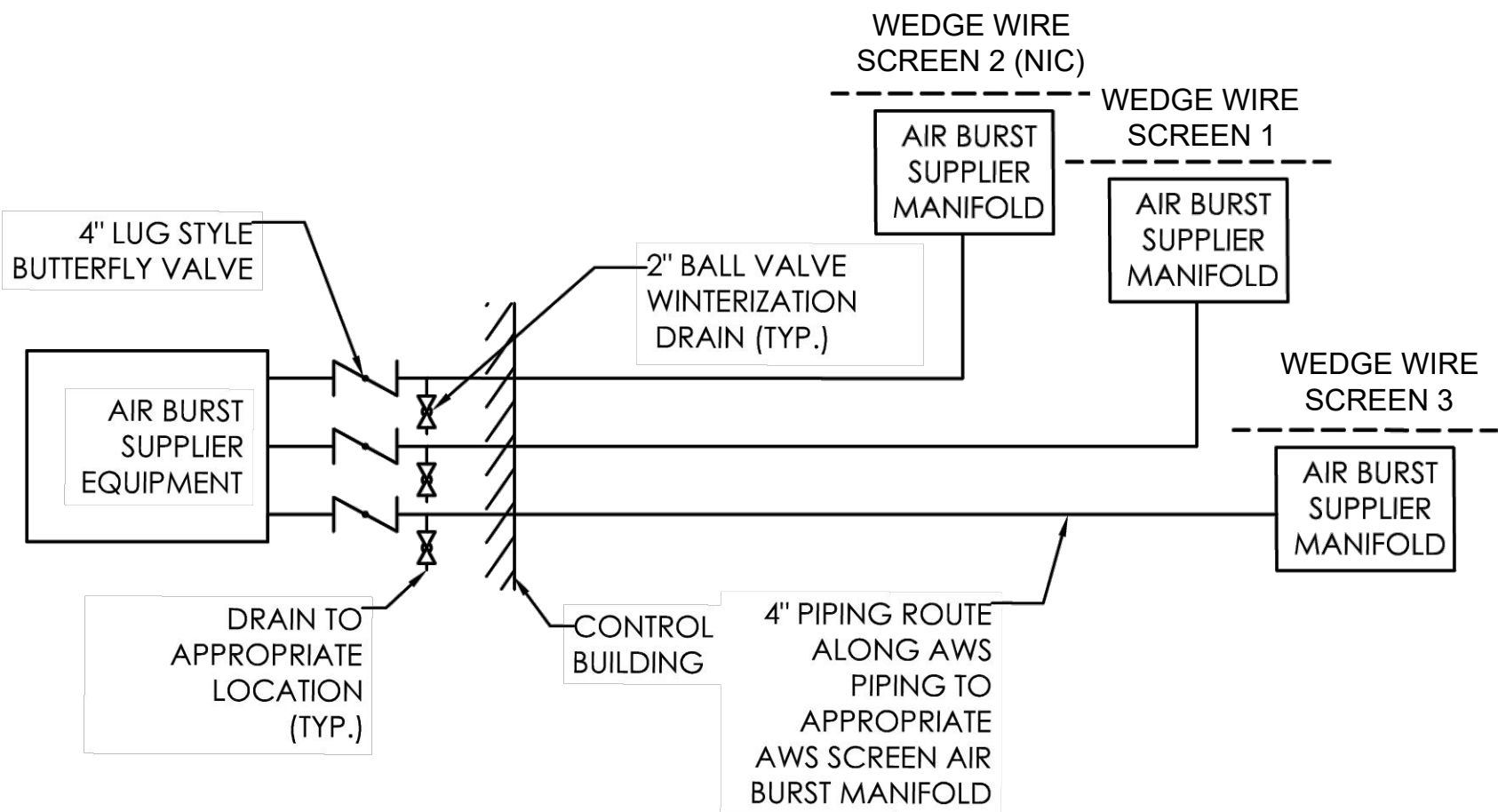
5 CONNECTION SECTION
M-130 SCALE: 1-1/2"=1'-0"
M-161 0 1' 2'



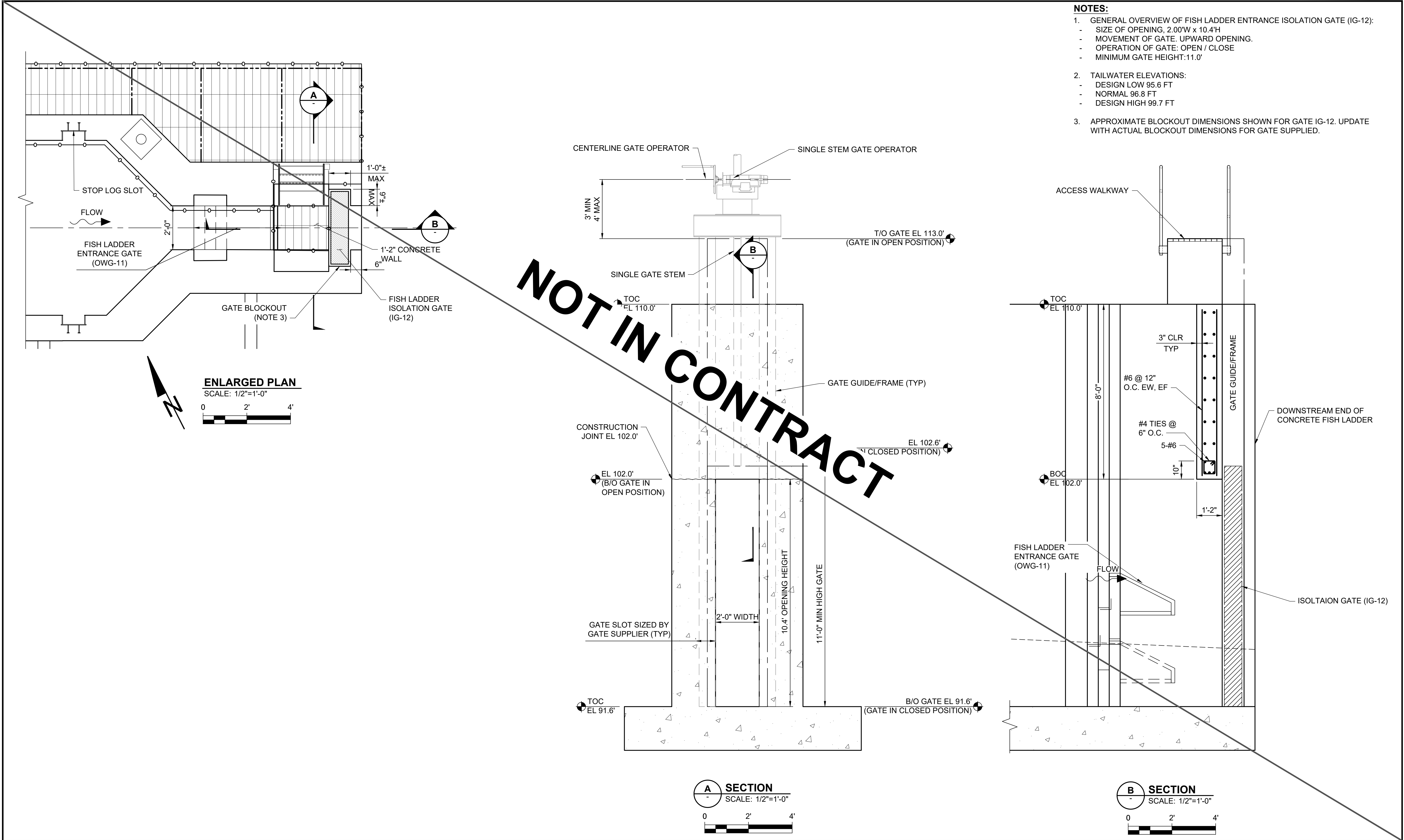
AIR PIPING PLAN
SCALE: 1/8"=1'-0"

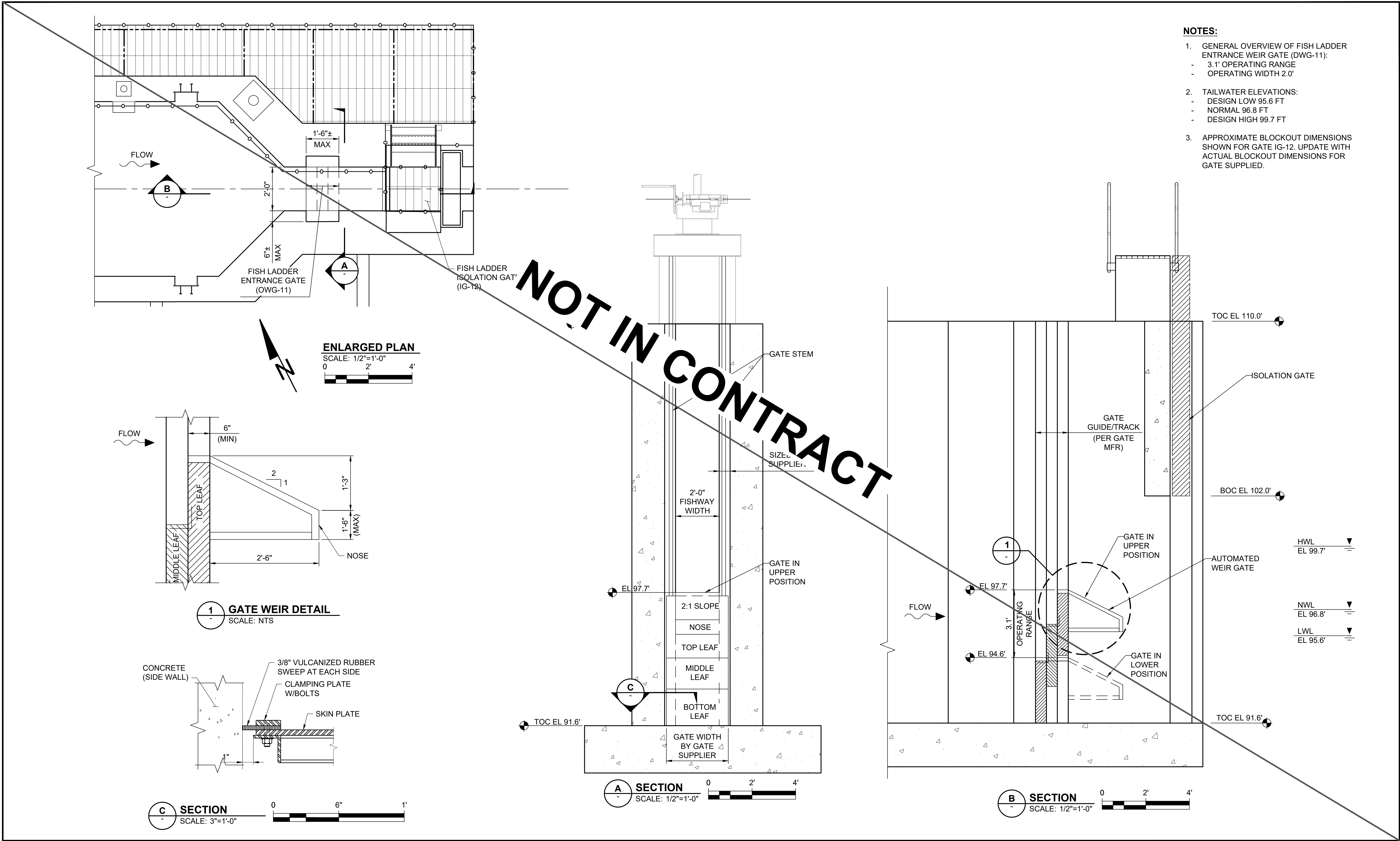
NOTES:

1. AIR BURST PIPING TO BE 4" STAINLESS STEEL, COMPATIBLE WITH 150# CLASS FLANGES ON VENDOR SUPPLIED EQUIPMENT.
2. ADDITIONAL DETAILED SPECIFICATIONS TO BE PROVIDED BY AIR BURST SUPPLIER.
3. AIR BURST SYSTEM COMPONENTS SUPPLIED BY VENDOR TO BE ASSEMBLED IN ACCORDANCE WITH VENDOR SPECIFICATIONS.
4. AIR BURST PIPING SHOULD BE ROUTED ALONG AWS PIPING TO UTILIZE SUPPORTS AS MUCH AS POSSIBLE.
5. AIR BURST PIPING TO BE INSTALLED TO FACILITATE DRAINING FOR WINTERIZING (SLOPED TO DRAINS IN CONTROL BUILDING.)

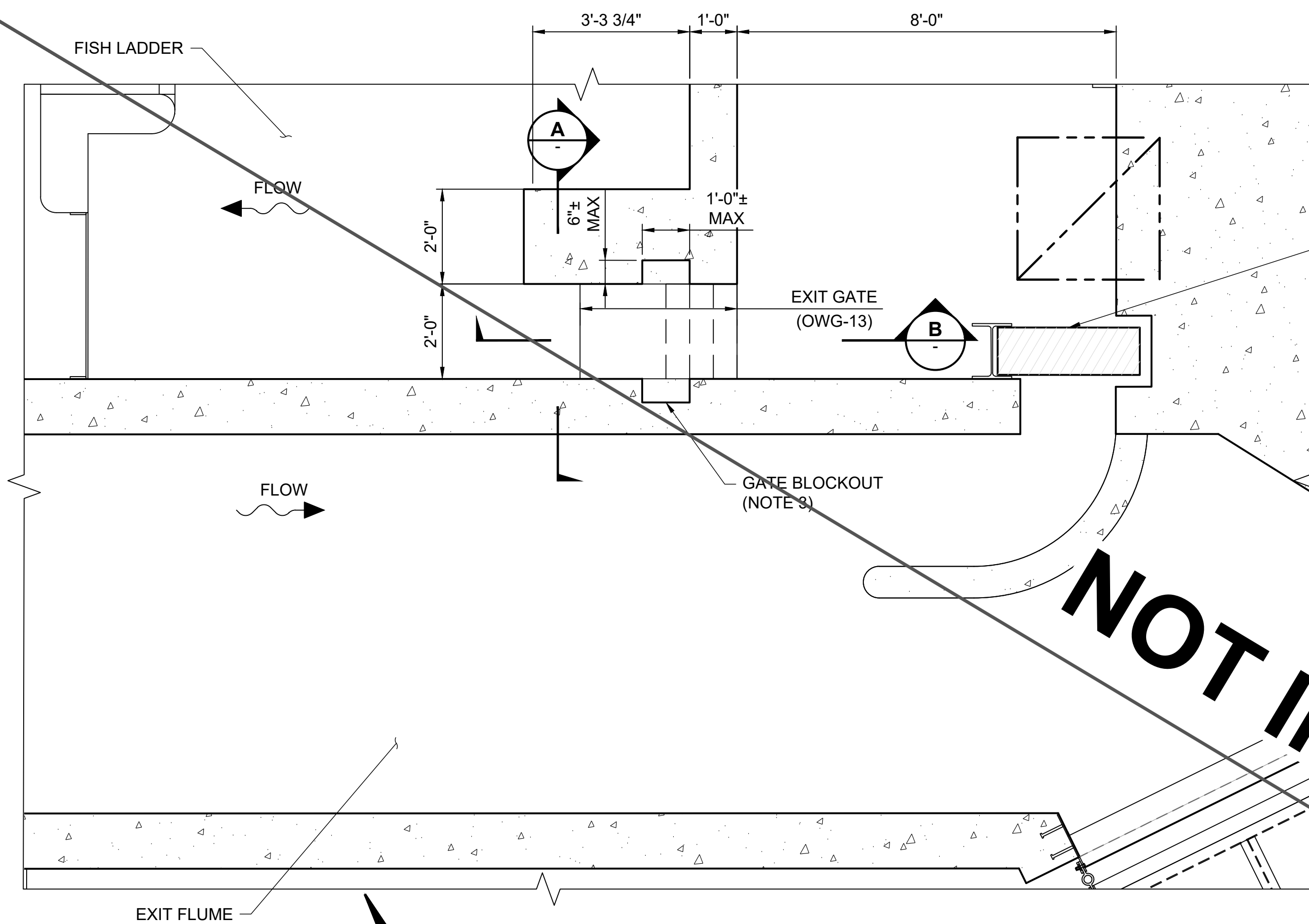


LINE DIAGRAM
SCALE: N.T.S.

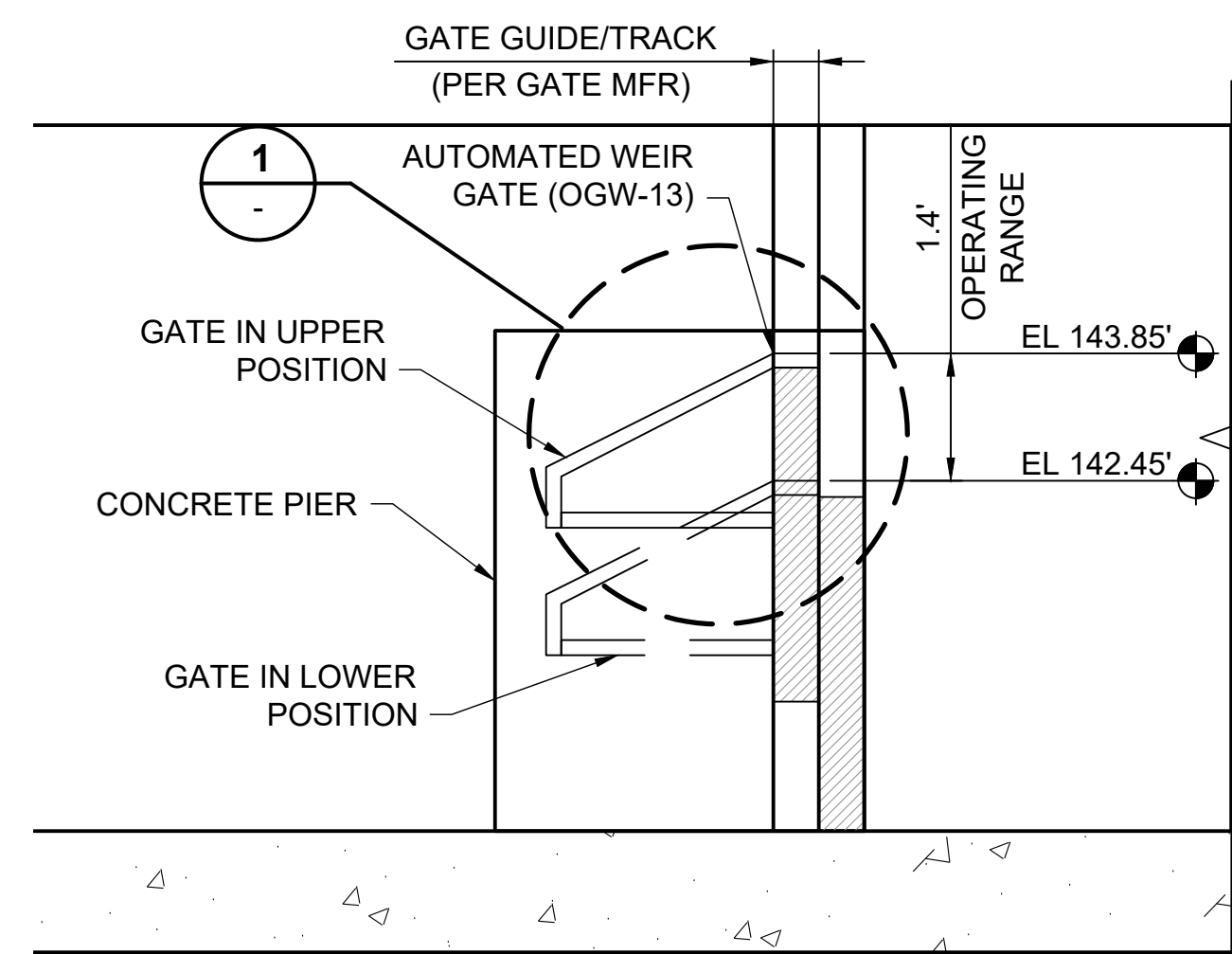




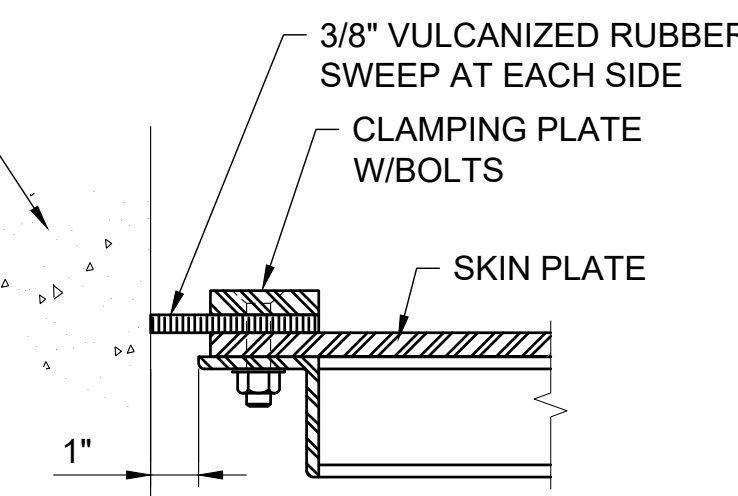
- NOTES:**
1. GENERAL OVERVIEW OF FISH LADDER ENTRANCE WEIR GATE (DWG-11):
 - 3.1' OPERATING RANGE
 - OPERATING WIDTH 2.0'
 2. TAILWATER ELEVATIONS:
 - DESIGN LOW 95.6 FT
 - NORMAL 96.8 FT
 - DESIGN HIGH 99.7 FT
 3. APPROXIMATE BLOCKOUT DIMENSIONS SHOWN FOR GATE IG-12. UPDATE WITH ACTUAL BLOCKOUT DIMENSIONS FOR GATE SUPPLIED.



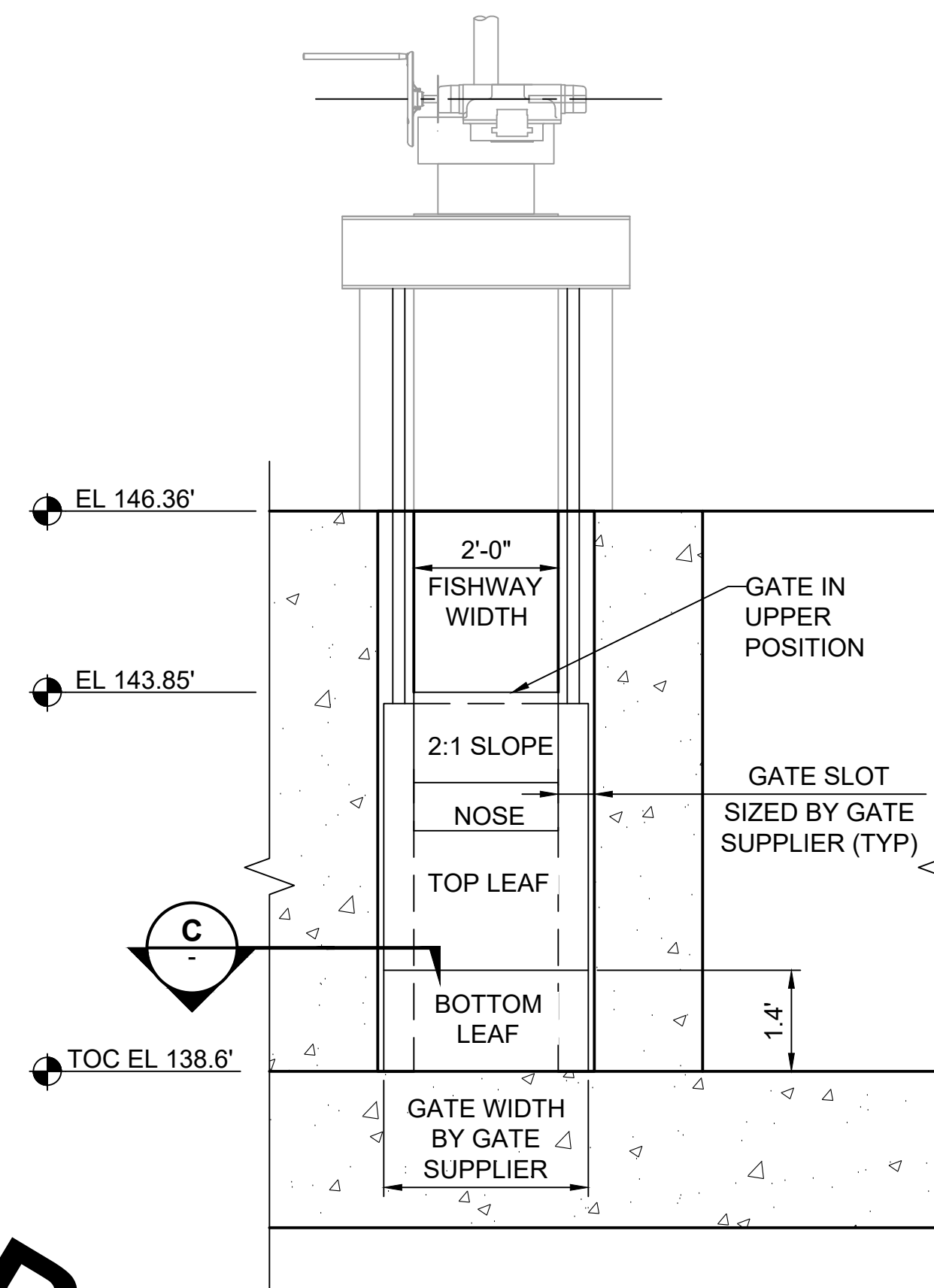
ENLARGED PLAN
SCALE: 1/2"=1'-0"



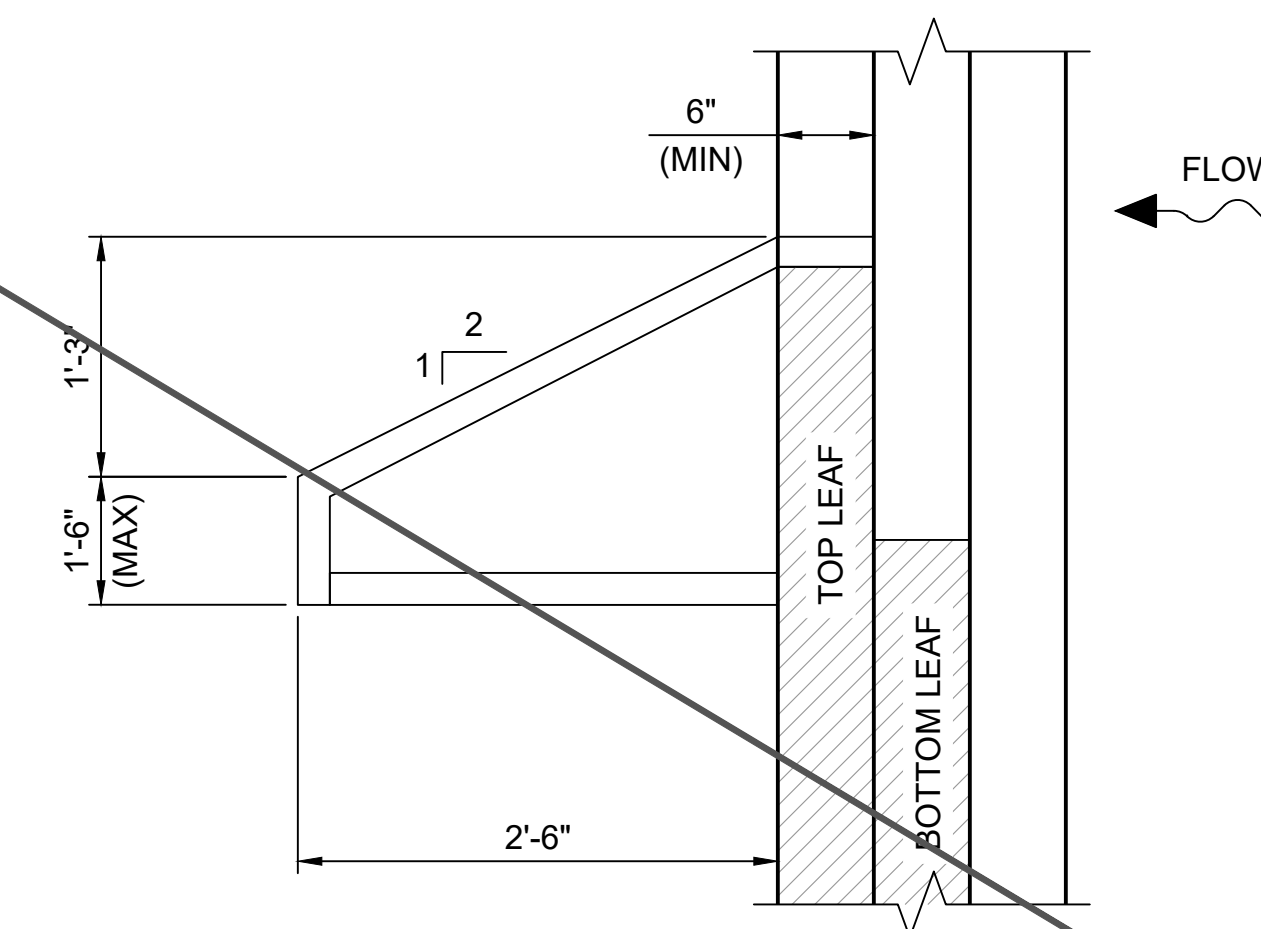
B SECTION
SCALE: 1/2"=1'-0"



C SECTION
SCALE: 3"=1'-0"



A SECTION
SCALE: 1/2"=1'-0"



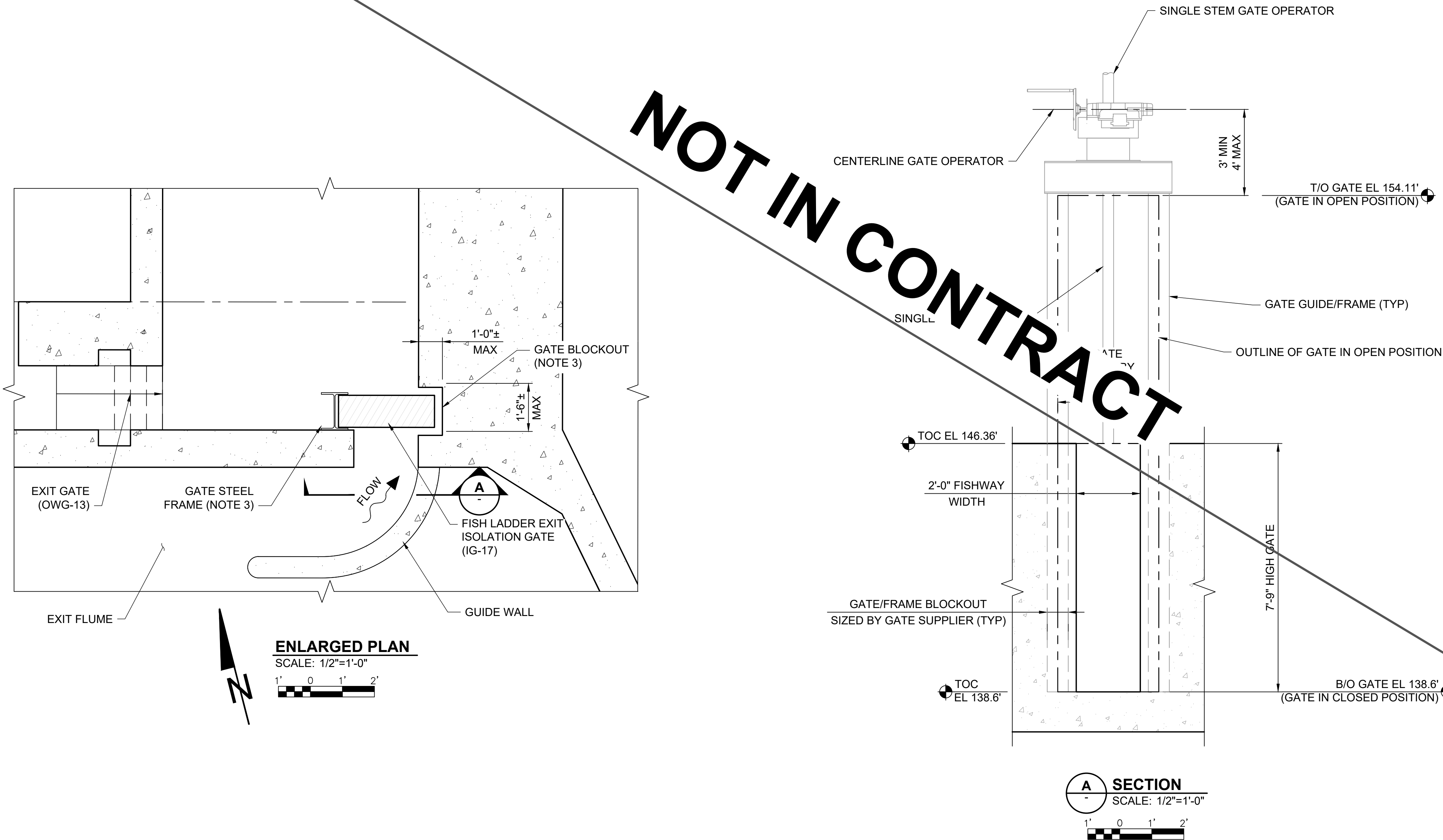
1 GATE WEIR DETAIL
SCALE: N.T.S.

NOTES:

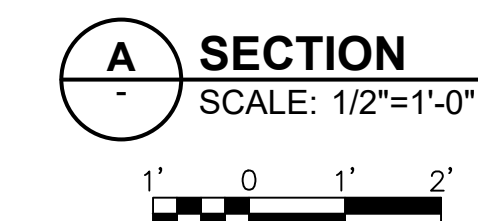
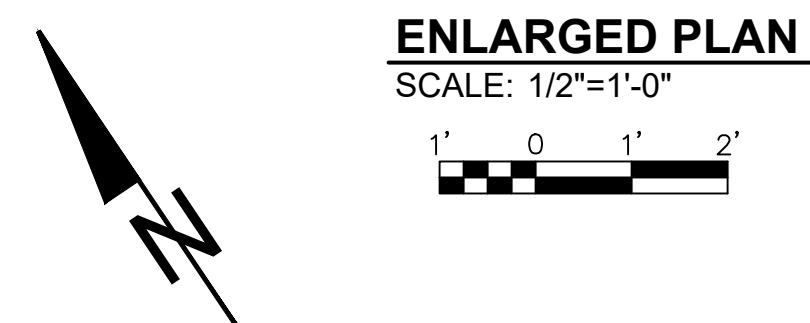
- GENERAL OVERVIEW OF FISH LADDER EXIT WEIR GATE (OWG-13):
 - 2 SECTION TELESCOPING LEAF GATE
 - 1.4' OPERATING RANGE
 - OPENING WIDTH 2.0'
 - MOVEMENT OF WEIR GATE:
 - DOWNWARD OPENING, UPWARD CLOSING
- HEAD POND ELEVATIONS:
 - DESIGN LOW 144.0 FT
 - NORMAL 144.6 FT
 - DESIGN HIGH 145.4 FT
- APPROXIMATE BLOCKOUT DIMENSIONS SHOWN FOR GATE OWG-13. UPDATE WITH ACTUAL BLOCKOUT DIMENSIONS FOR GATE SUPPLIED.
- GENERAL GATE SIDE SWEEP CONFIGURATION IS PROVIDED. THE FINAL GATE SIDE SWEEP DETAILS WILL BE PER THE GATE MANUFACTURER.

NOT IN CONTRACT

- NOTES:**
- GENERAL OVERVIEW OF FISH LADDER EXIT ISOLATION GATE (IG-17):
 - SIZE OF OPENING, 2.00'W x 7.75'H
 - MOVEMENT OF GATE: UPWARD OPENING.
 - OPERATION OF GATE: OPEN / CLOSE
 - FLUME WATER ELEVATIONS:
 - LOW WSL 144.0'
 - NORMAL WSL 144.6'
 - HIGH WSL 145.4'
 - APPROXIMATE STEEL FRAME AND BLOCKOUT DIMENSIONS SHOWN FOR GATE IG-17. UPDATE WITH ACTUAL BLOCKOUT DIMENSIONS FOR GATE SUPPLIED.



1. GENERAL OVERVIEW OF DOWNSTREAM
PASSAGE INTAKE SLIDE GATE (DSG-14 & DSG-15):
 - SIZE OF GATE, 3.0'W x 3.0'H
 - MOVEMENT OF GATE. UPWARD OPENING.
 - OPERATION OF GATE: OPEN / CLOSE
 - DESIGN HEAD - 7FT UNSEATING
2. HEAD POND ELEVATIONS:
 - DESIGN LOW 144.0 FT
 - NORMAL 144.6 FT
 - DESIGN HIGH 145.4 FT



ISSUED FOR BID
NOT FOR CONSTRUCTION
SEPTEMBER 3, 2025

9/3/2025	ISSUED FOR BID	M. GRAESER
REVISION	DESCRIPTION OF ISSUE / REVISION	REVISED BY

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING



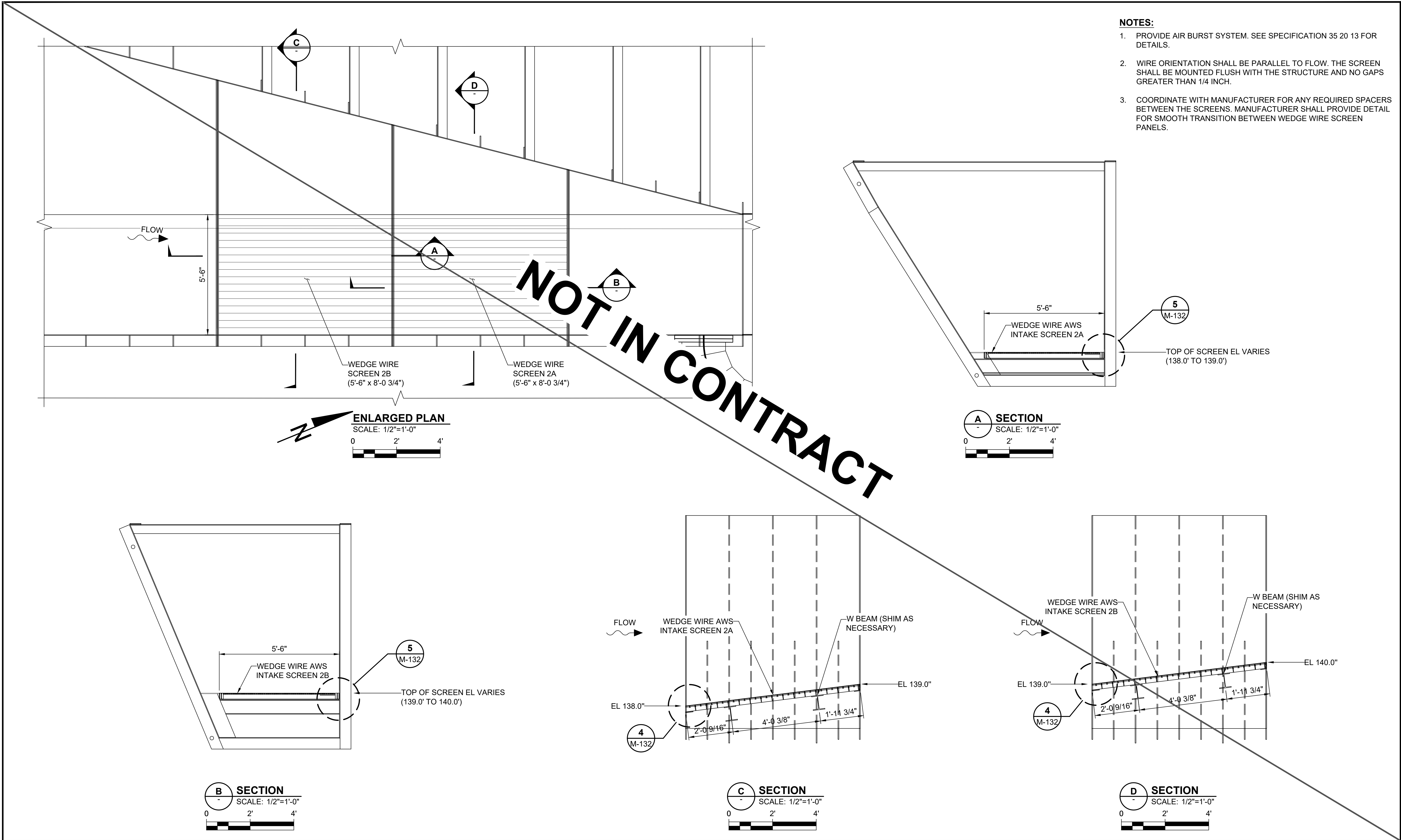
IF NOT ONE INCH ON THIS
SHEET, ADJUST SCALES
ACCORDINGLY

WOODLAND FISH LIFT PASSAGE DESIGN

MAINE DEPARTMENT OF MARINE
RESOURCES

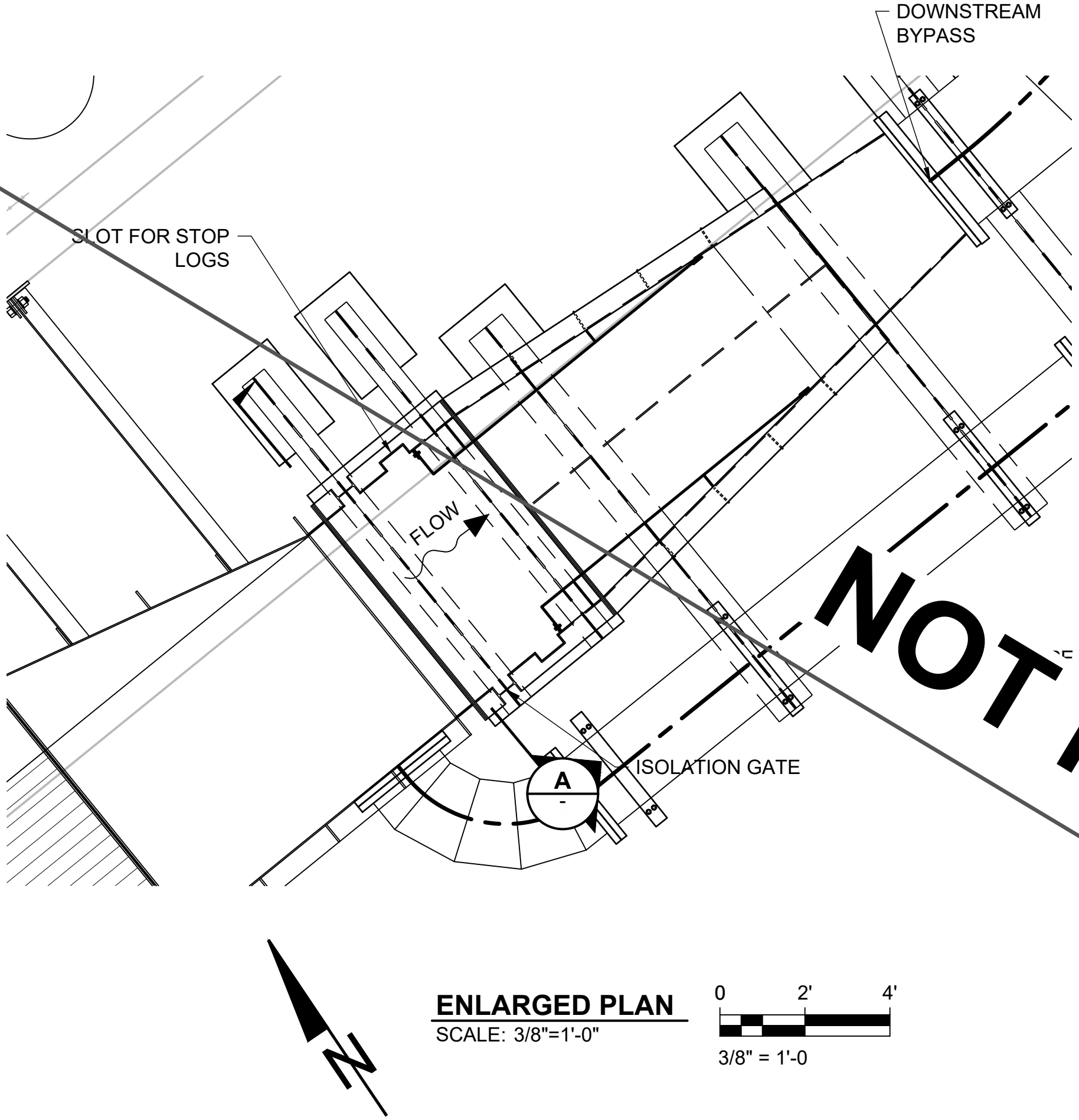
DOWNSTREAM BYPASS SLIDE
GATE (DSG-14 & DSG-15)
(BID SUPPLEMENT)

PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	238 OF 240
DRAWING:	M-160

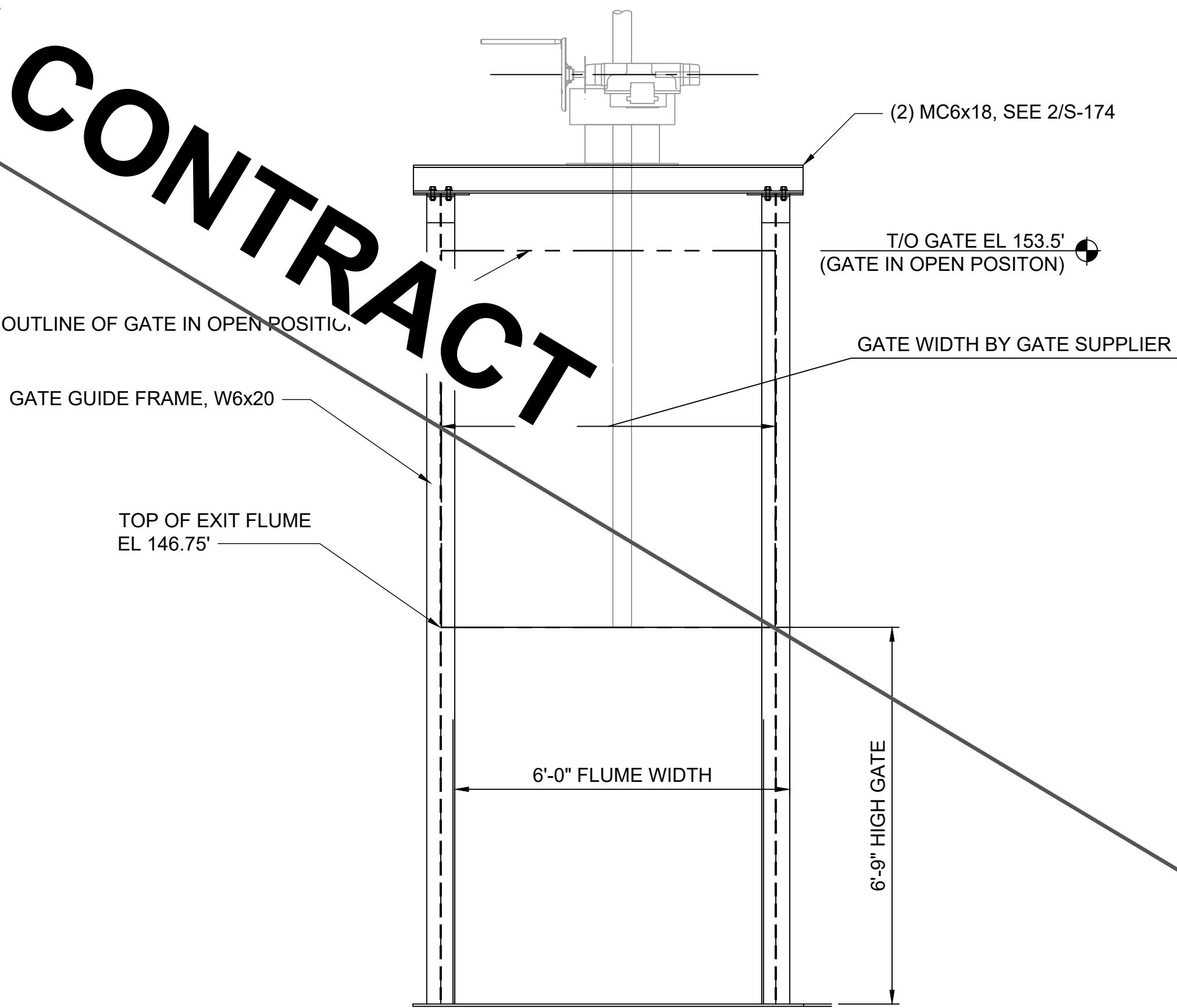


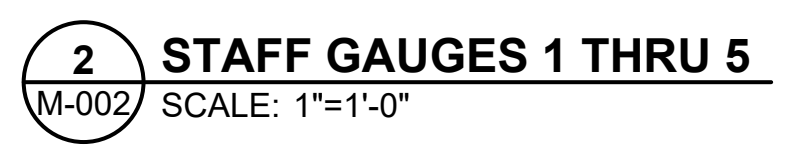
- NOTES:**
1. PROVIDE AIR BURST SYSTEM. SEE SPECIFICATION 35 20 13 FOR DETAILS.
 2. WIRE ORIENTATION SHALL BE PARALLEL TO FLOW. THE SCREEN SHALL BE MOUNTED FLUSH WITH THE STRUCTURE AND NO GAPS GREATER THAN 1/4 INCH.
 3. COORDINATE WITH MANUFACTURER FOR ANY REQUIRED SPACERS BETWEEN THE SCREENS. MANUFACTURER SHALL PROVIDE DETAIL FOR SMOOTH TRANSITION BETWEEN WEDGE WIRE SCREEN PANELS.

- NOTES:**
1. GENERAL OVERVIEW OF DOWNSTREAM PASSAGE INTAKE ISOLATION GATE (IG-16):
 - SIZE OF GATE, 5.5'W x 6.75'H
 - MOVEMENT OF GATE, UPWARD OPENING.
 - OPERATION OF GATE: OPEN / CLOSE
 2. HEAD POND ELEVATIONS:
 - DESIGN LOW 144.0 FT
 - NORMAL 144.6 FT
 - DESIGN HIGH 145.4 FT



NOT IN CONTRACT





5 STAFF GAUGE ANCHORAGE/CONNECTION

PROJECT:	16667
DRAWN BY:	C. HAGLER
DESIGNER:	A. MENGERT
APPROVED BY:	M. GRAESER
SHEET:	241 OF 240
DRAWING:	M-200