

CITY OF ANN ARBOR

GEDDES DAM - TAINTER GATE #4 REPLACEMENT

OCTOBER 2014

ITB#: 4356

Stantec Project Number: 2075129506

BID SET

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Notes

- 1 NEW WORK AREA.
- 2 PROTECT EXISTING TREE.
- 3 INSTALL 6" CONSTRUCTION FENCE IF EQUIPMENT OR MATERIALS ARE STORED OVERNIGHT.
- 4 BAYS TO REMAIN ACTIVE DURING CONSTRUCTION.
- 5 BRIDGE SHALL NOT BE USED FOR STAGING OR AS A LIFT PLATFORM.
- 6 FASTEN DEBRIS BARRIER TO CONCRETE SILL, MIN 18" HIGH.
- 7 PROTECT PATHWAY FROM DAMAGE.
- 8 RESTORE STAGING AREA AND ROUTE OF EGRESS. GRADE, TOPSOIL, SEED AND MULCH AS REQUIRED.

	CONCRETE PAVEMENT
	BITUMINOUS PAVEMENT
	GRAVEL SURFACE
	RIP RAP

C	BID SET	BWA	PJM	14.10.22
B	95% PLANS	BWA	PJM	14.10.02
A	60% PLANS	BWA	PJM	14.06.05

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CITY OF ANN ARBOR

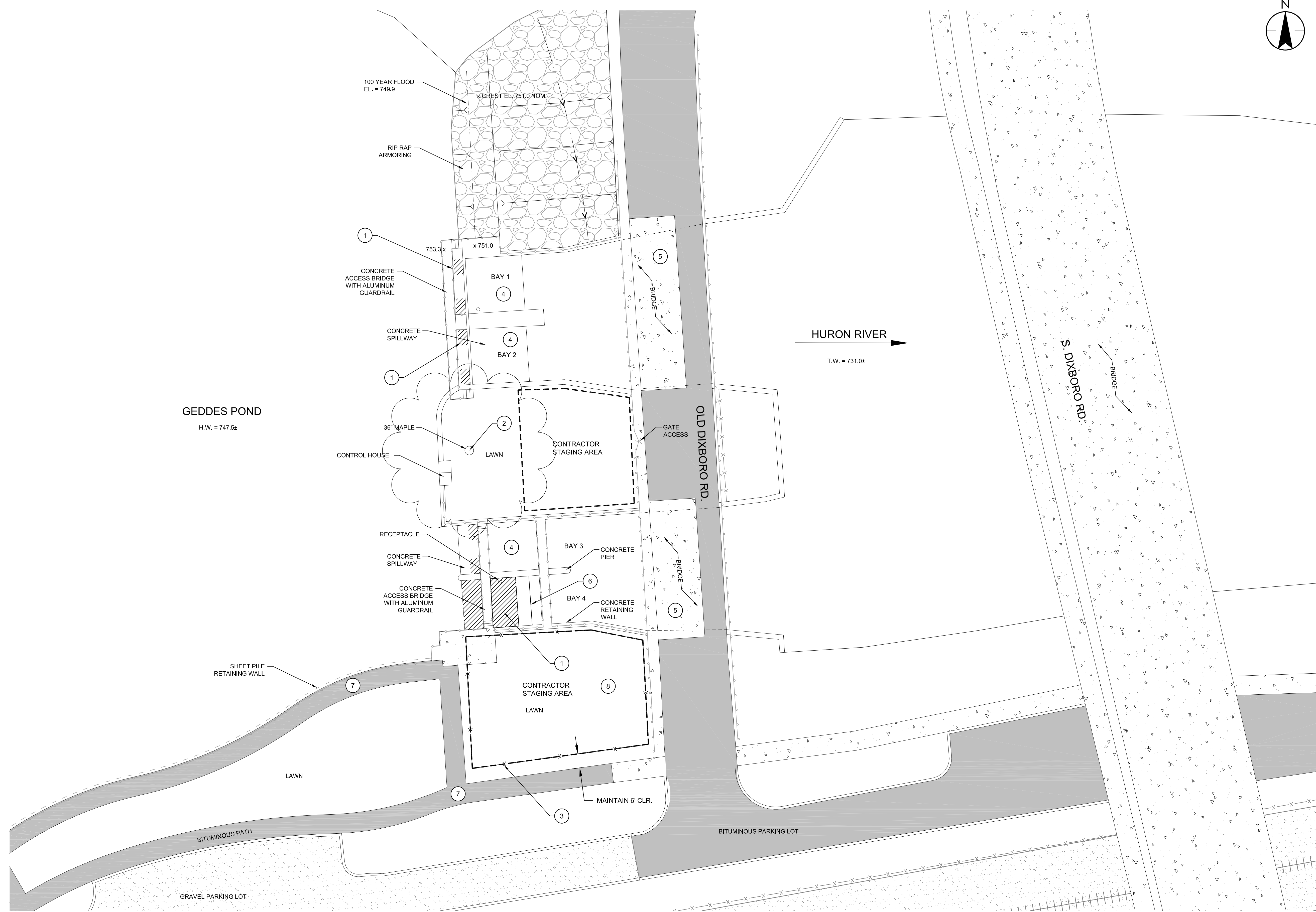
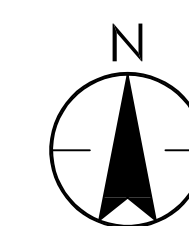
GEDDES DAM - TAINTER
GATE #4 REPLACEMENT
Ann Arbor, Michigan

Title

GENERAL SITE PLAN

Project No. 2075129506
Drawing No. Sheet Revision

C-101 2 of 8 0



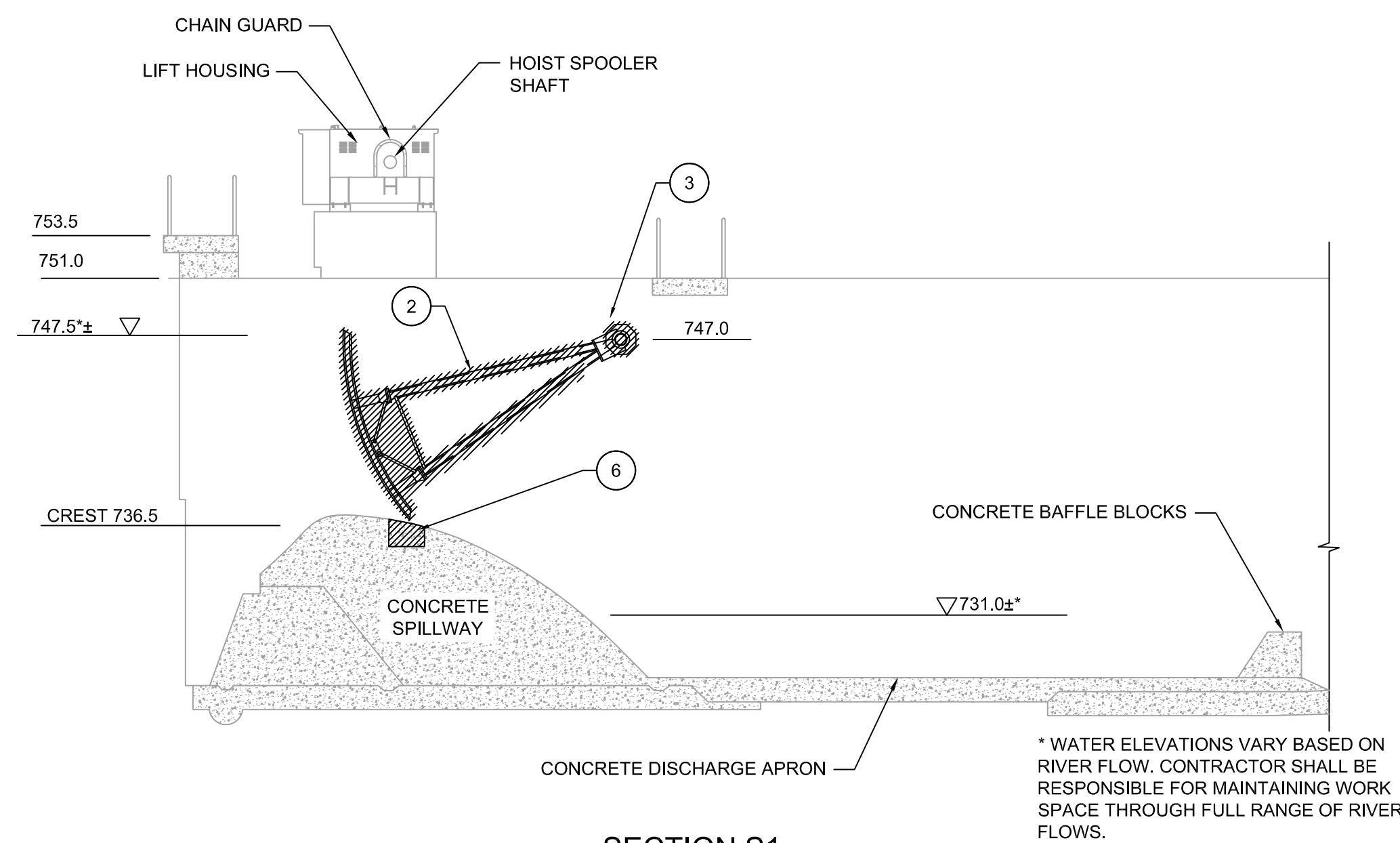
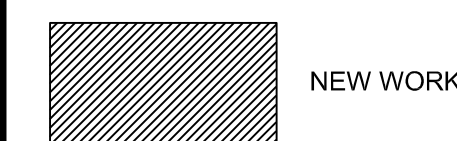
NOTE:
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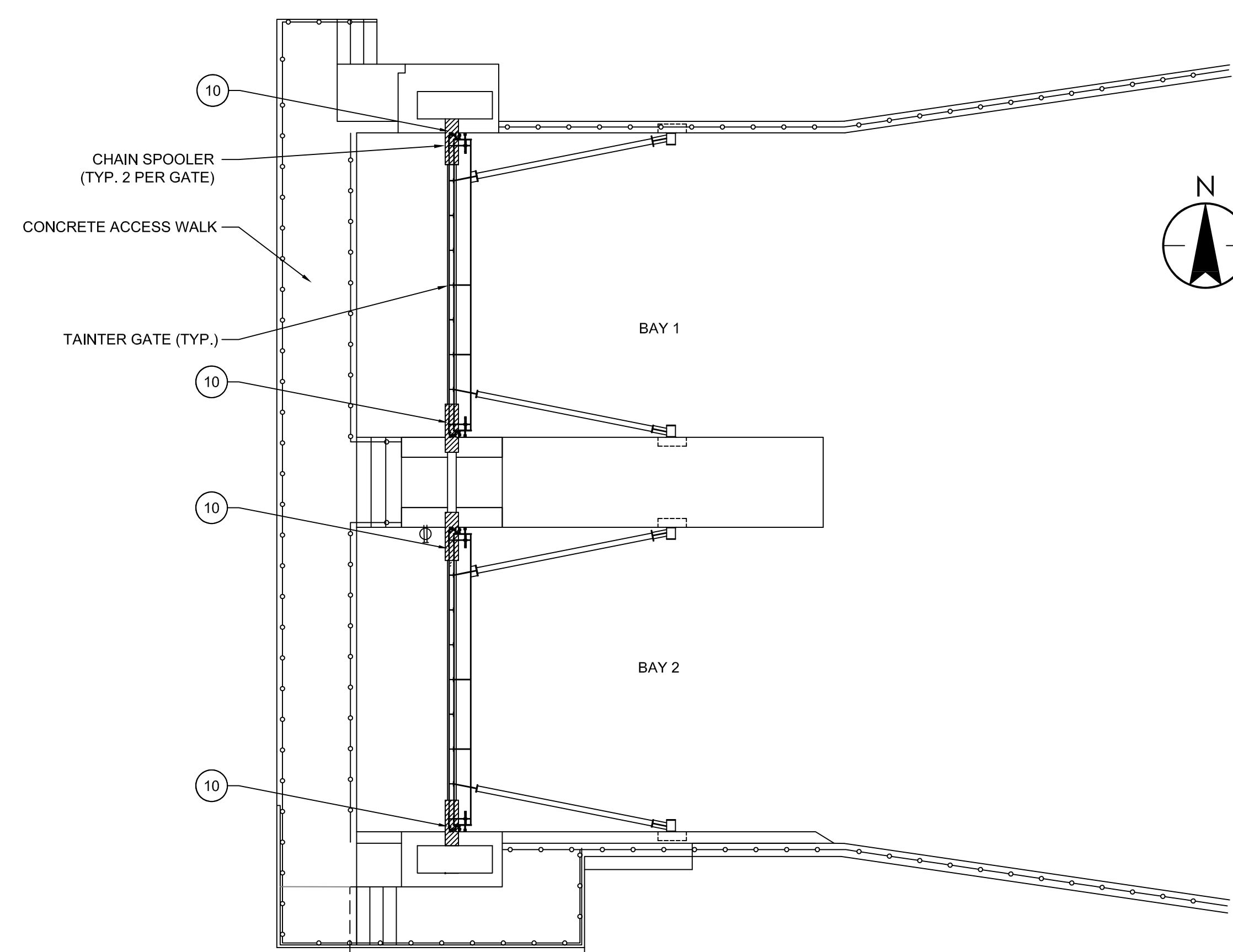
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Notes

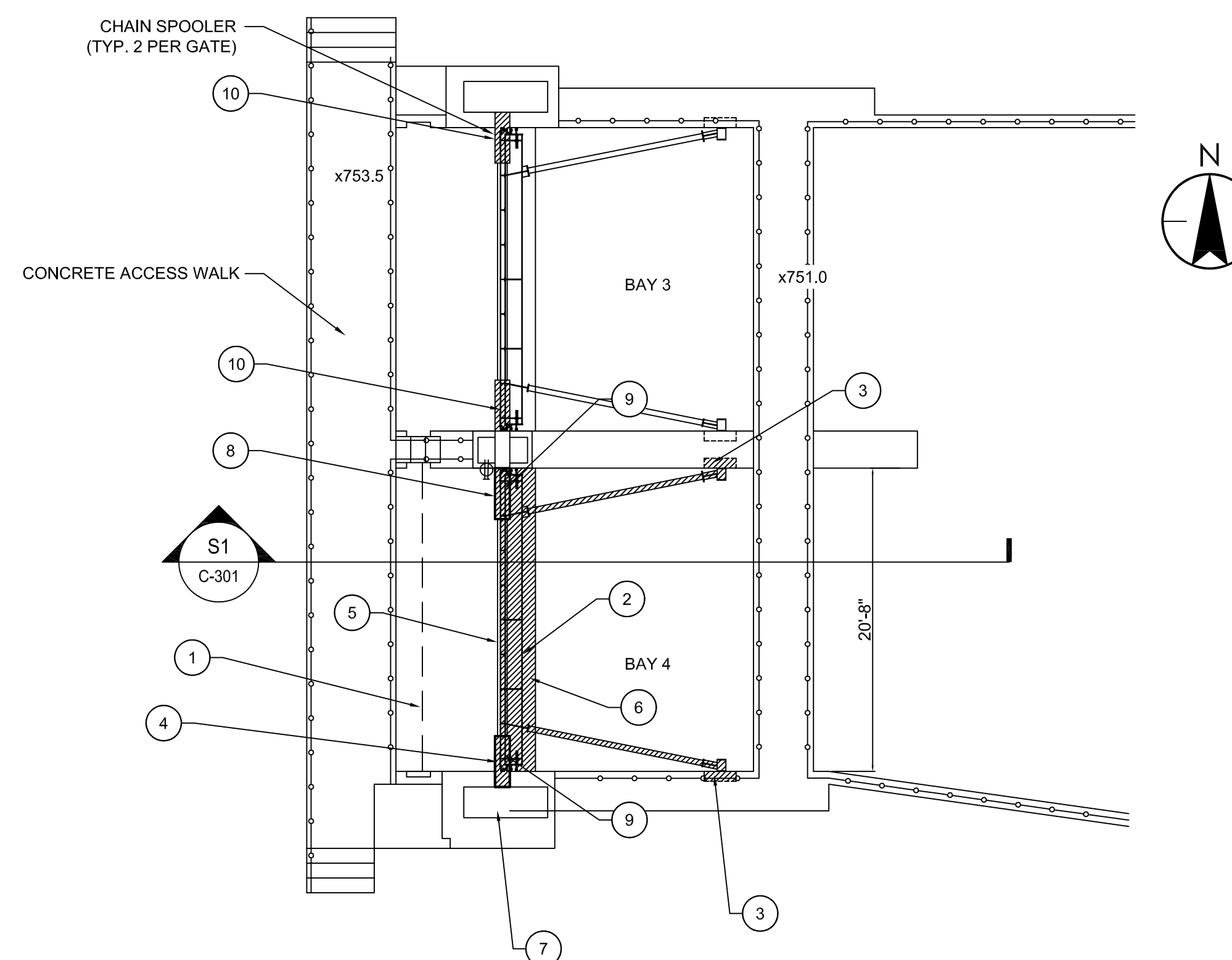
- 1 INSTALL TEMPORARY STOPLOGS. REMOVE STOPLOGS UPON COMPLETION OF PROJECT AND RETURN TO OWNER'S STORAGE LOCATION. (STOPLOGS ARE LOCATED AT BARTON PUMP STATION).
- 2 DEMOLISH EXISTING TAINTER GATE. FURNISH AND INSTALL NEW TAINTER GATE.
- 3 SAW CUT AND REMOVE EXISTING CONCRETE AND DEMOLISH TRUNNION PIN. INSTALL NEW PIN AND CAST INTO CONCRETE. SEE DETAILS ON DWG S-303. TYP. BOTH SIDES.
- 4 REMOVE AND REPAIR CHAIN GUARD, THIS SIDE ONLY. BLAST TO BARE METAL AND REPAINT.
- 5 BLAST AND REPAINT HOIST SPOOLER SHAFT. NOM. 8"Ø.
- 6 DEMOLISH EXISTING SILL AND RECONSTRUCT NEW SILL PER DETAIL 7 S-302, 8 S-302.
- 7 RE-CALIBRATE HOIST POSITION INDICATOR, LIMIT SWITCHES AND ALARMS UPON INSTALLATION OF NEW GATE.
- 8 REMOVE EXISTING CHAIN GUARD AND RE-INSTALL AFTER PAINTING.
- 9 ATTACH NEW CHAIN TO EXISTING SPOOLS.
- 10 REPLACE CHAIN, MASTER LINK AND COUPLING. NOTE: LIFT LUG AND COUPLING ARE SUBMERGED, DIVING REQUIRED AT EACH LOCATION.



SECTION S1
SCALE: 1/8" = 1'-0"



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



SOUTH SPILLWAY
SCALE: 1/8" = 1'-0"

C. BID SET	BWA	PJM	14.10.22
B. 95% PLANS	BWA	PJM	14.10.02
A. 60% PLANS	BWA	PJM	14.06.05

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GEDDES DAM - TAINTER GATE #4 REPLACEMENT
Ann Arbor, Michigan

Title

NEW WORK PLAN

Project No. 2075129506 Scale AS SHOWN

Drawing No. Sheet Revision

C-301 3 of 8 0

NOTE:
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Notes

1 - GENERAL NOTES

- A. ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH OTHER PROJECT DRAWINGS AND SPECIFICATIONS.
- B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS, ETC., IN FIELD AND NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION OR SHOP DRAWINGS.
- C. THE DRAWINGS ARE INTENDED TO REQUIRE AND TO INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT PROPER FOR THE WORK.
- D. ALL WORK SHALL COMPLY WITH ALL LOCAL, STATE AND NATIONAL CODES AND REQUIREMENTS.
- E. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND SAFETY PROCEDURES. THE ARCHITECT/ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR THEIR AGENTS OR EMPLOYEES OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK.
- F. OBSERVE ALL OSHA AND OTHER APPLICABLE SAFETY REQUIREMENTS INCLUDING THE USE OF SAFETY GLASSES, HARD HATS, AND PROTECTION OF AREA WHEN WORKING OVERHEAD. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CONSTRUCTION SAFETY AT ALL TIMES.
- G. COORDINATE WORK OF ALL DISCIPLINES (ARCH., STRUCT., ELECT., ETC.) WITH EXISTING CONDITIONS, SPECIAL REQUIREMENTS, CONSTRUCTION SCHEDULE AND OTHER CONTRACTORS PERFORMING WORK AT THE SITE.
- H. THE CONTRACTOR SHALL DESIGN AND PROVIDE ANY TEMPORARY SHORING, BRACING, ETC., AS NEEDED FOR THE WORK SO AS NOT TO ENDANGER THE STRUCTURAL INTEGRITY OF ANY EXISTING FEATURE.
- I. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ANY DAMAGE DONE TO EXISTING FEATURES AS A RESULT OF THIS WORK. DAMAGED ITEMS SHALL BE REPLACED IN KIND AND AT NO ADDITIONAL COST TO THE OWNER.
- J. SEE SPECIFICATIONS FOR FULL SCOPE OF REQUIREMENTS APPLICABLE TO THIS PROJECT.
- K. SHOP DRAWINGS: REPRODUCTION OF DESIGN DRAWINGS SHALL NOT BE PERMITTED FOR SHOP DRAWING SUBMISSIONS. THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL REVIEW AND PROVIDE REVIEW STAMP ON SHOP DRAWING SUBMISSIONS PRIOR TO SUBMITTAL TO ARCHITECT/ENGINEER INDICATING UNDERSTANDING AND ACCEPTANCE OF SUBMITTAL AND CONFIRMING CONFORMANCE TO PROJECT PLANS/SPECIFICATIONS.
- L. NO DEBRIS, DEMOLISHED ITEMS, CONSTRUCTION MATERIALS, ETC. SHALL BE PERMITTED TO ENTER THE RIVER. ANY ITEMS FALLING IN THE RIVER SHALL BE RETRIEVED IMMEDIATELY AND REMOVED THE SITE.
- M. TEMPORARY CLOSURES OF OLD GEDDES ROAD SHALL NOT BE PERMITTED.

2 - DESIGN CRITERIA

- A. HORIZONTAL ICE LOAD = 2,000 #/FT.
- B. NORMAL LIFTING PULL = 16,000 # TOTAL.
- C. MAXIMUM OVERLOAD PULL ON SINGLE STOP = 36,400#.

3 - STRUCTURAL STEEL

- A. STRUCTURAL STEEL WORK INCLUDES ALL STRUCTURAL STEEL TO BE FURNISHED AND ERECTED, BEAMS, COLUMNS, CHANNELS, ANGLES, JOISTS, LINTELS, BEARING PLATES, ETC., AS INDICATED ON THE DRAWINGS.
- B. COMPLY WITH THE FOLLOWING CODES AND STANDARDS:
 - 1. AISC STEEL CONSTRUCTION MANUAL, ASD, 9TH EDITION
 - 2. AMERICAN WELDING SOCIETY (AWS) D1.1 "STRUCTURAL WELDING CODE STEEL", 2000.
 - 3. CURRENT OSHA ERECTION AND FABRICATION REQUIREMENTS.
- C. MATERIALS:
 - 1. BEAMS, GIRDERS AND COLUMNS: ASTM A992
 - 2. ANGLES, BARS AND PLATES: ASTM A572 Gr50.
 - 3. TUBE STEEL: ASTM A500, GRADE B Fy=42 KSI
 - 4. PIPE: SCHEDULE 40 CONFORMING TO ASTM A53, GRADE B. U.N.O.
 - 5. HIGH STRENGTH BOLTS: ASTM A 325.
 - 6. WELDS: E70XX ELECTRODES.
- D. ALL STRUCTURAL STEEL SHOP CONNECTIONS SHALL BE WELDED AND ALL FIELD CONNECTIONS SHALL BE HIGH-STRENGTH BOLTED UNLESS SHOWN OTHERWISE.
- E. ALL BOLTS SHALL BE TIGHTENED TO THE SNUG TIGHT CONDITION UNLESS NOTED OTHERWISE. SLIP CRITICAL BOLTS SHALL BE USED AT ALL MOMENT CONNECTIONS.
- F. PROVIDE S.S. ANCHORS AND OTHER DEVICES TO BE BUILT INTO CONCRETE WORK.
- G. STEEL SHALL RECEIVE PAINT SYSTEM AS PER PAINT SPECIFICATIONS (SECTION 09900). IT IS ANTICIPATED THAT ALL PAINTING EXCEPT FOR TOUCH UP SHALL BE SHOP PERFORMED. ANY FIELD PAINTING SHALL BE FULLY CONTAINED.
- H. SHOP DRAWINGS: SUBMIT SHOP DRAWINGS INCLUDING COMPLETE DETAILS AND SCHEDULES FOR FABRICATION AND ASSEMBLY OF STRUCTURAL STEEL MEMBERS, PROCEDURES AND DIAGRAMS.
- I. PIPE SCHEDULE DIMENSIONS AS FOLLOWS:

SCH	NOM. SIZE	O.D.	WALL
80	24	2.875	0.276
80	5	5.563	0.375
160	8	8.625	0.906

4 - FABRICATION

- A. GATE TO BE SHOP WELDED AND FIELD BOLTED.
- B. ALL WELDS TO BE CONTINUOUS FILLET. RIB TO SKIN PLATE WELDS TO BE 3/16". OTHER WELDS TO BE 1/4" UNLESS NOTED.
- C. ALL CORNERS AND EDGES IN CONTRACT WITH RUBBER SEALS TO BE ROUNDED.
- D. ENDS OF ALL PIPE MEMBERS TO BE CLOSED AND WELDED WATERTIGHT.
- E. FOR TOLERANCES SEE SPECIFICATIONS.
- F. SEALS SHALL BE CONTINUOUS, WATERTIGHT AND SPLICES IF REQUIRED SHALL BE VULCANIZED.
- G. SKIN PL JOINTS TO BE WATERTIGHT, FULL PENETRATION BEVEL BUTT WELDS WELDED FROM BOTH SIDES. WELDS TO BE GROUND FLUSH WHERE IN CONTACT WITH SEALS.
- H. ALL SURFACE FINISHES SPECIFIED IN μ-INCHES (MICRONS) TEXTURE.
- I. SURFACE FINISH ON BEARING PINS FOR RUNNING FIT SUBJECT TO RECOMMENDATIONS OF BEARING MANUFACTURER. GATE FABRICATOR SHALL COORDINATE WITH BEARING MANUFACTURER.
- J. UNLESS NOTED OTHERWISE, FAYING SURFACES SHALL BE FINISHED TO 125μ-INCHES.

C	BID SET	BWA	PJM	14.10.22
B	95% PLANS	BWA	PJM	14.10.02
A	60% PLANS	BWA	PJM	14.06.05

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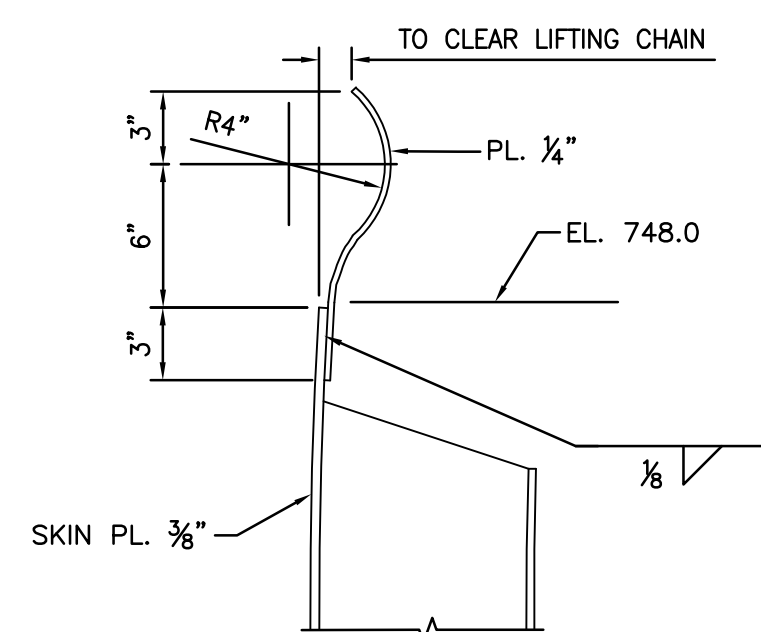
GEDDES DAM - TANTER
GATE #4 REPLACEMENT
Ann Arbor, Michigan

Title
NOTES

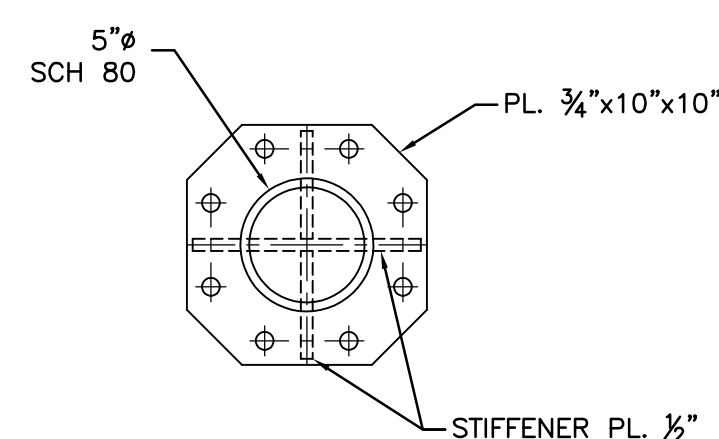
Project No. 2075129506 Scale

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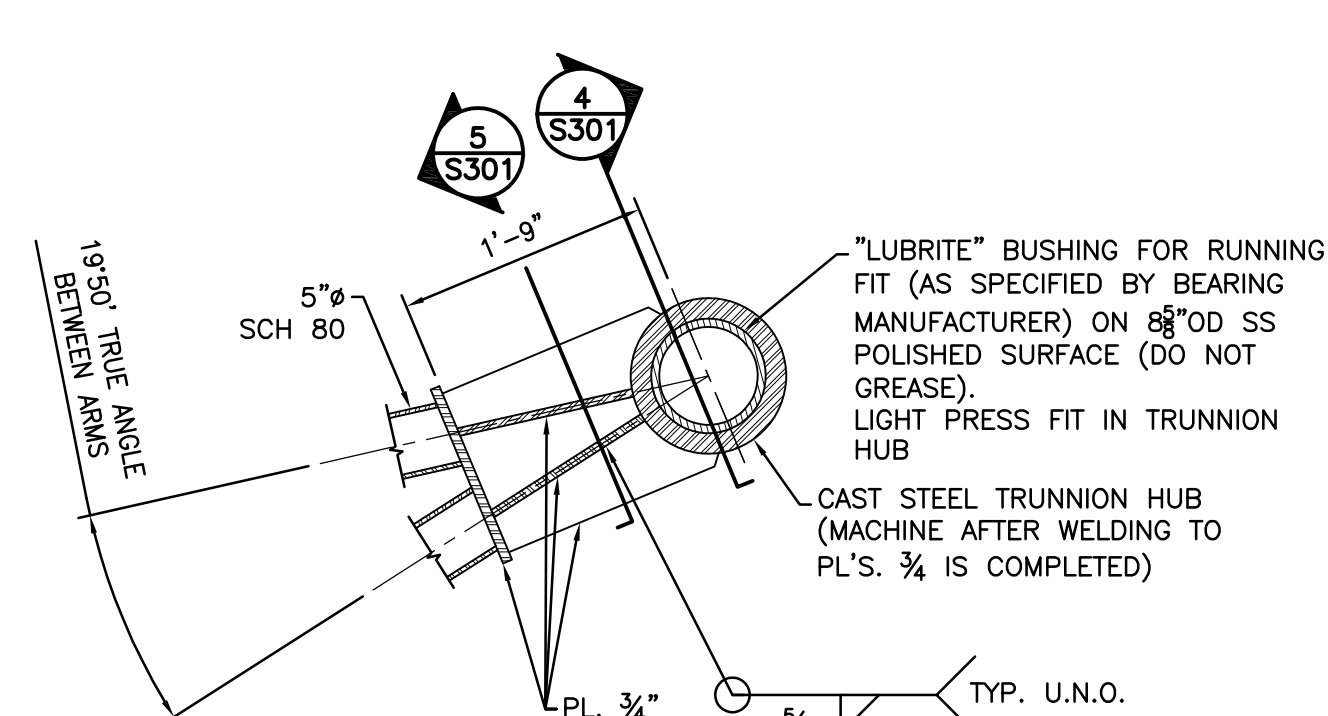
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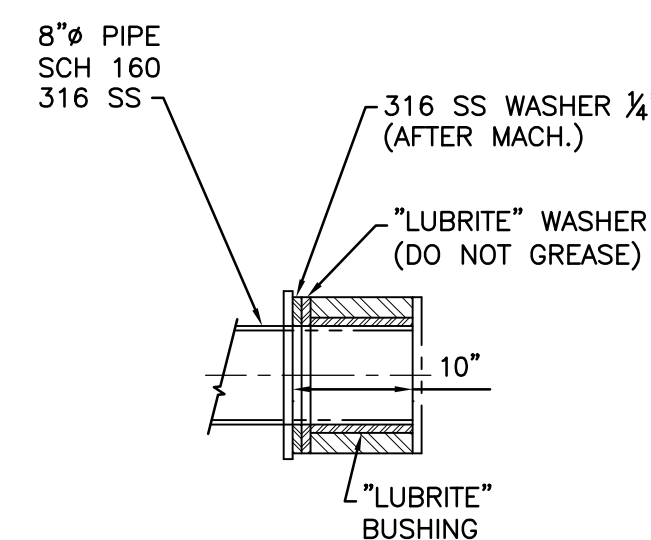
1 DETAIL
S301 1 1/2"=1'-0"



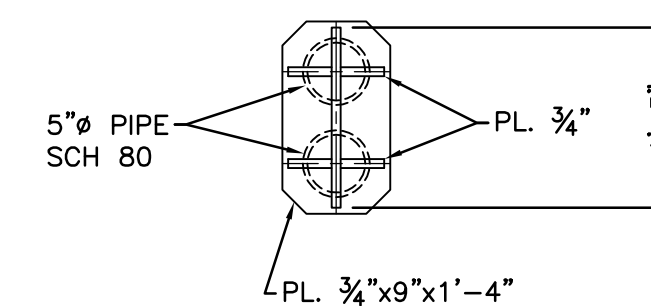
2 SECTION
S301 1 1/2"=1'-0"



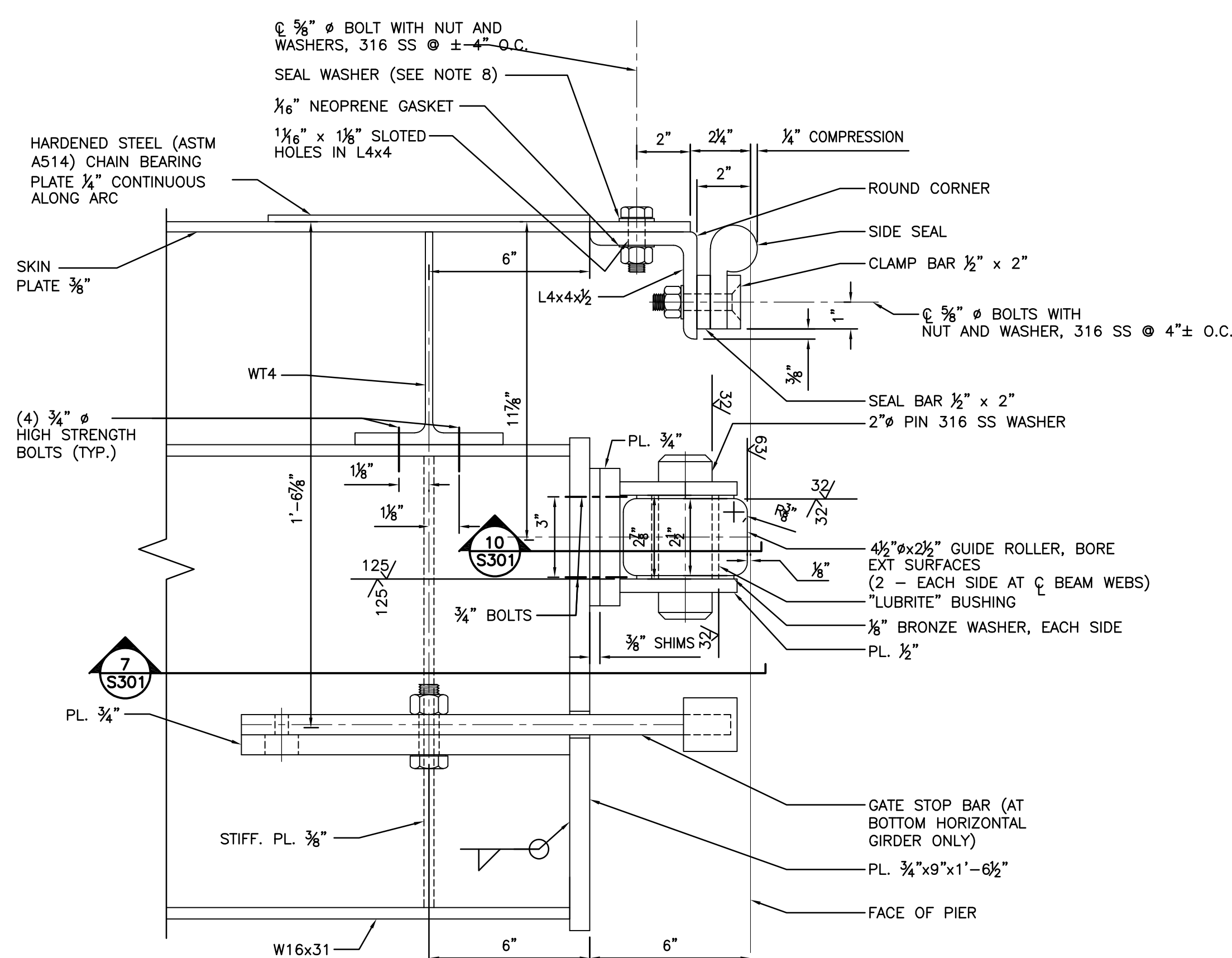
3 SECTION
S301 3/4"=1'-0"



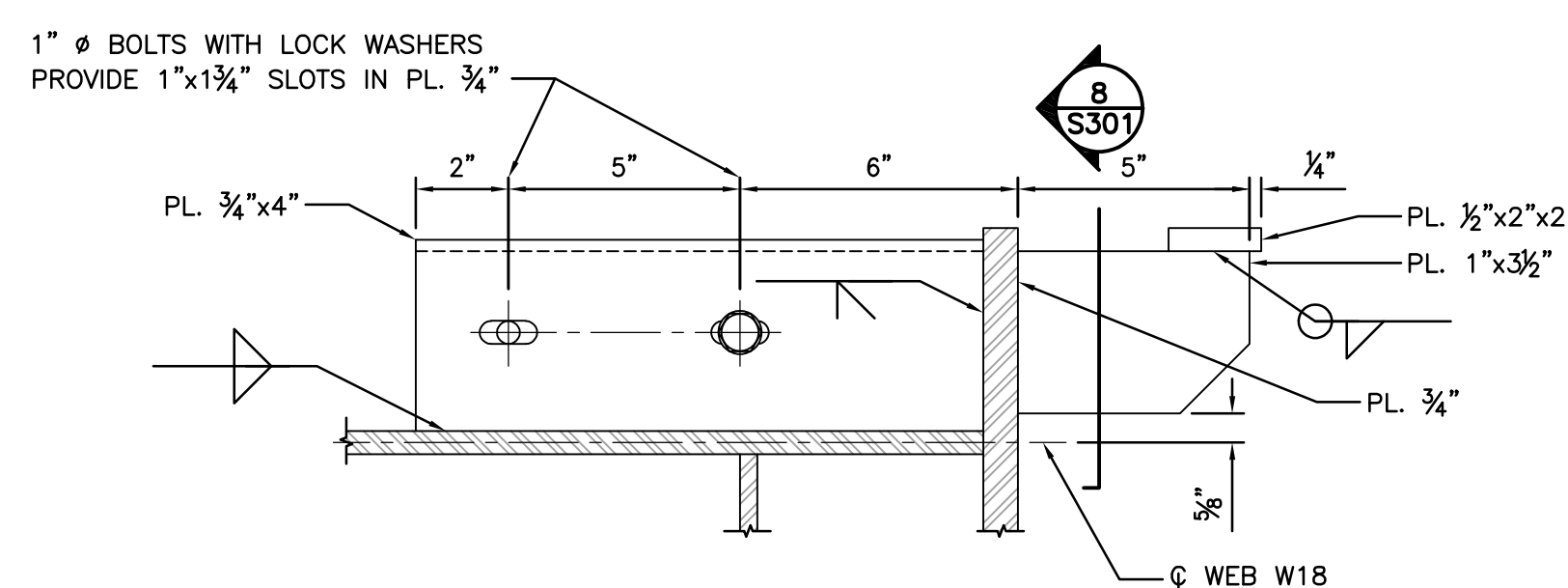
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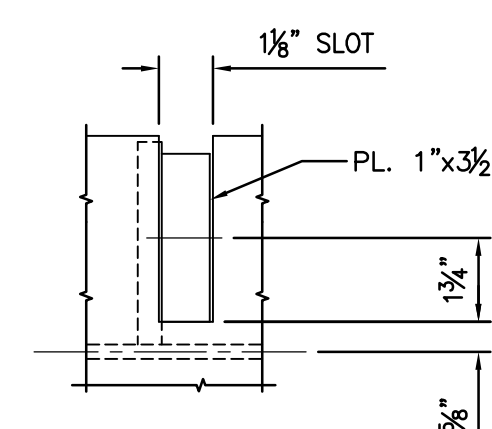
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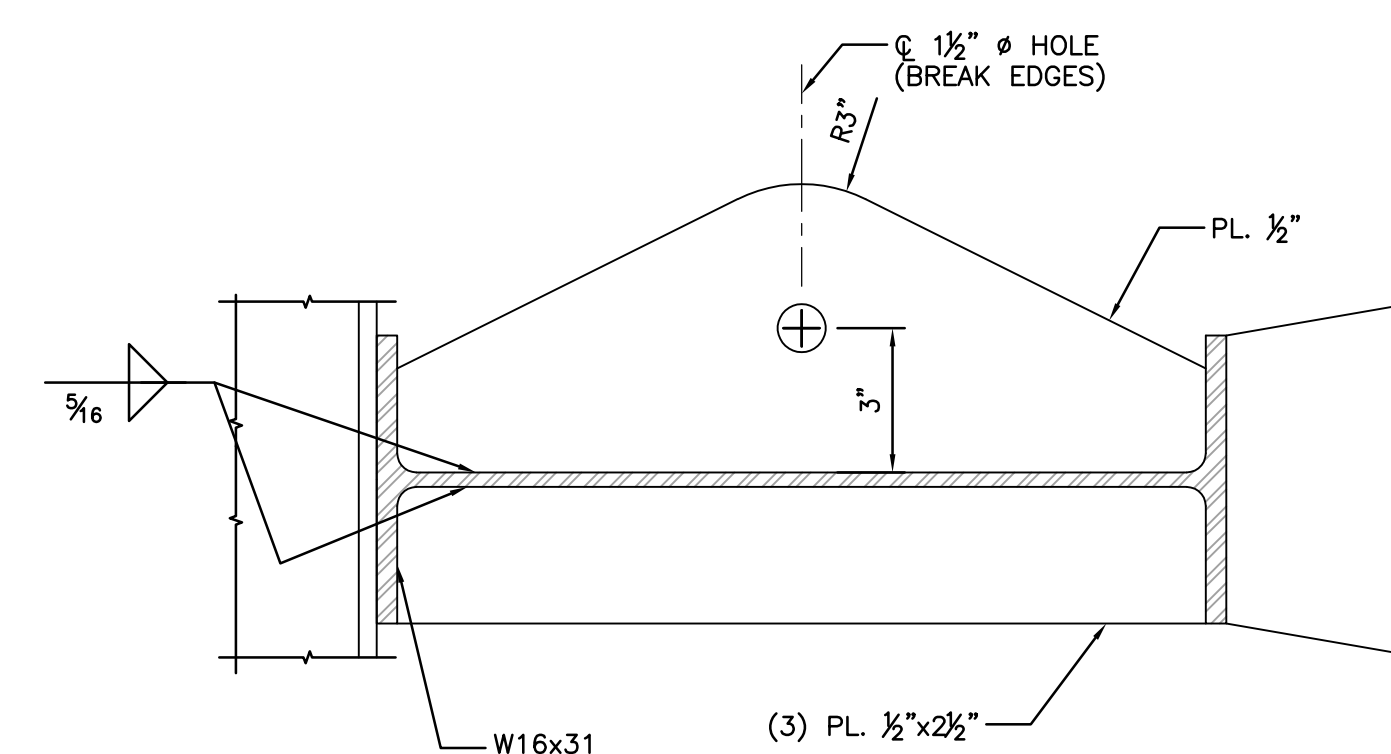
6 DETAIL
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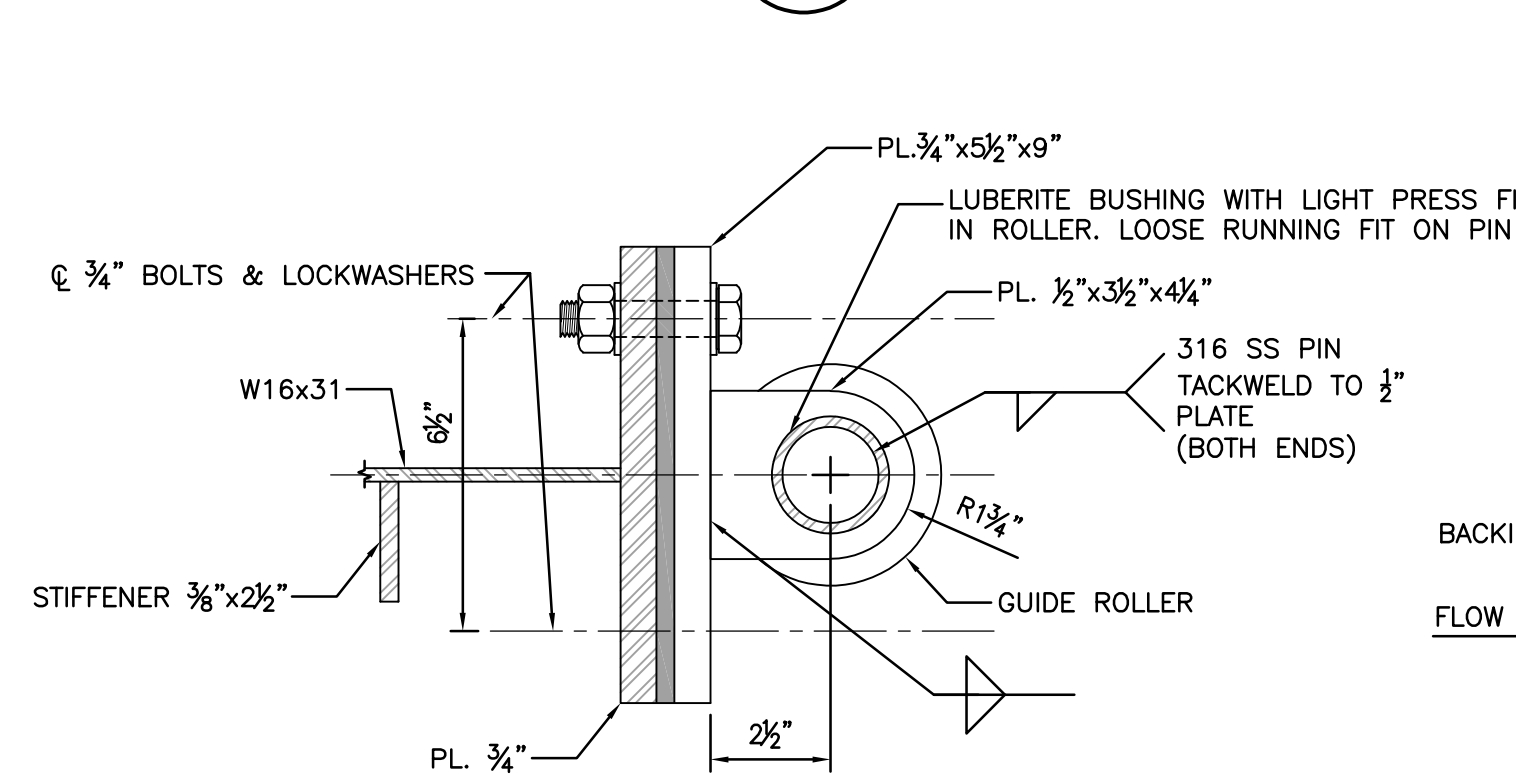
7 SECTION
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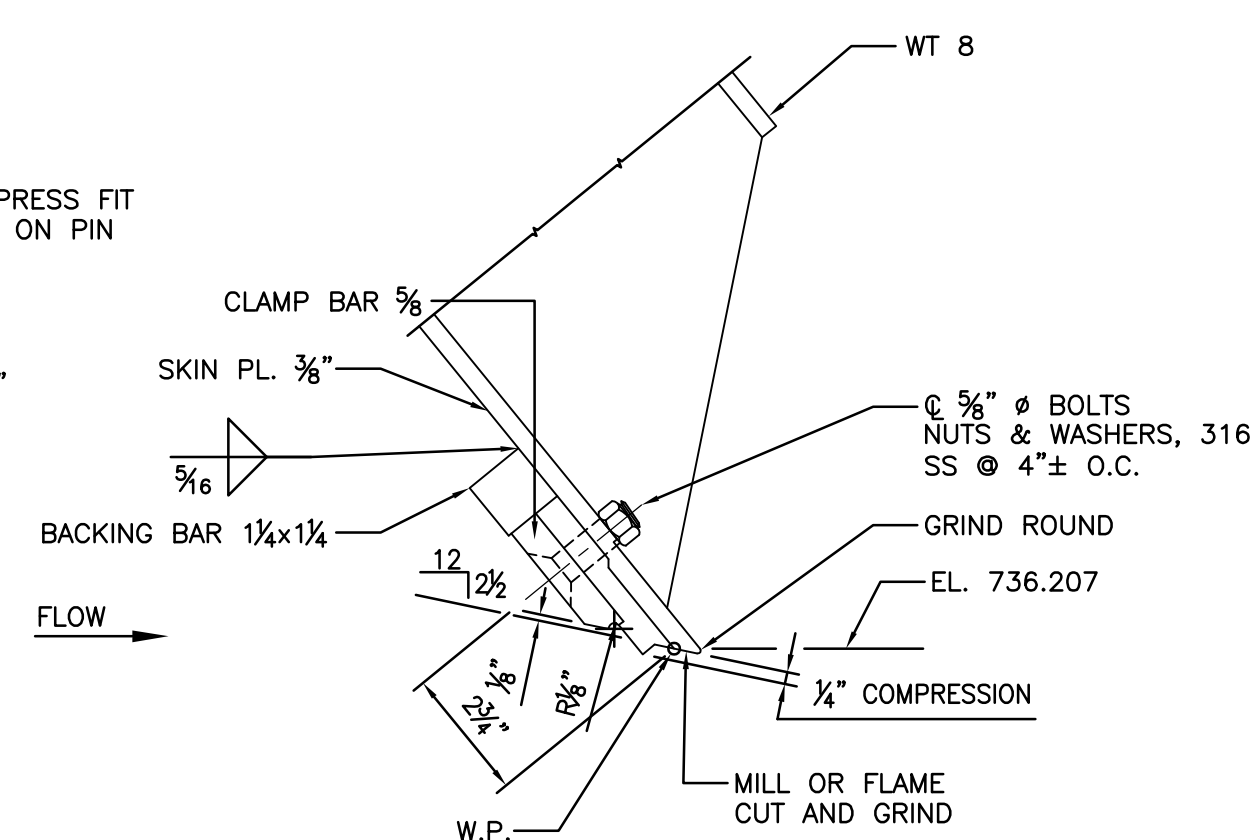
8 SECTION
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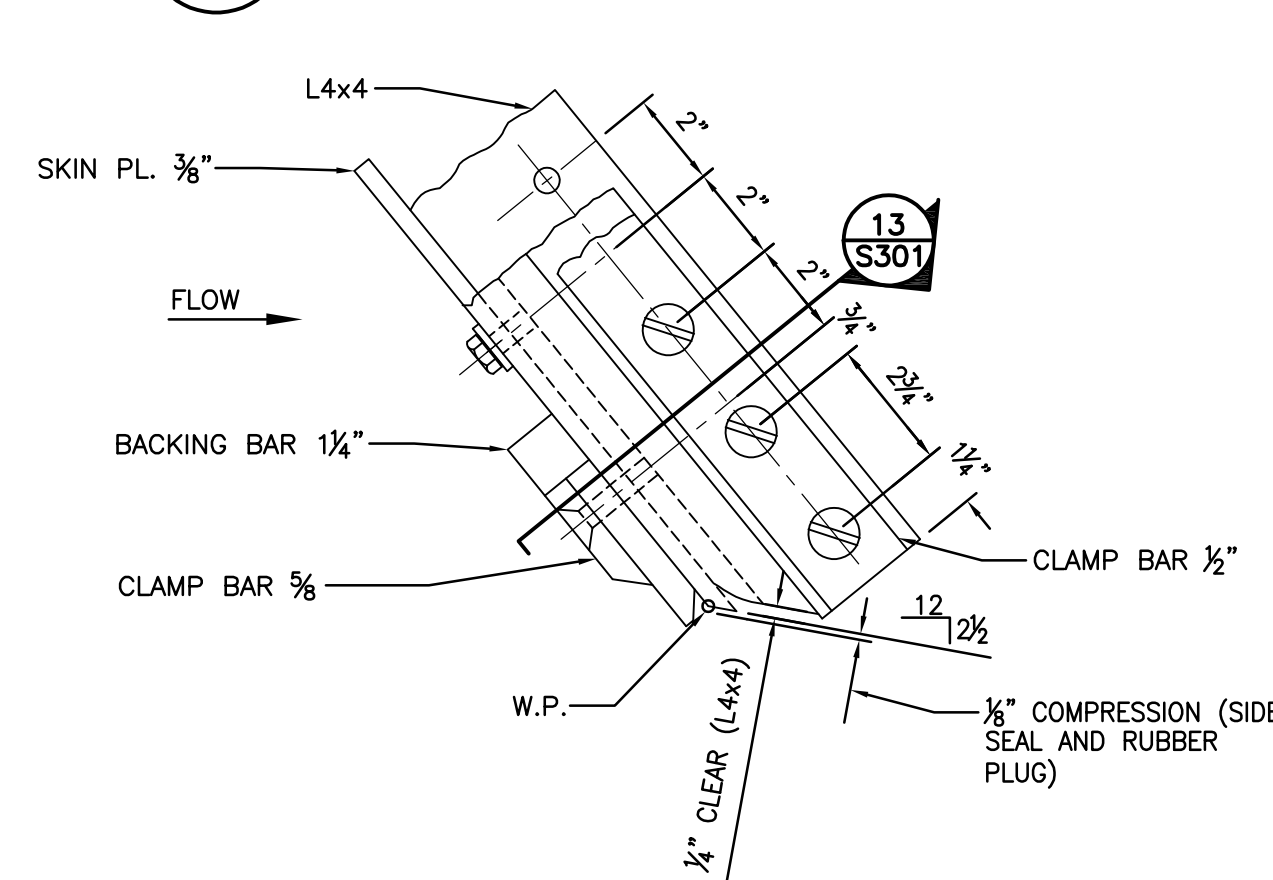
9 SECTION
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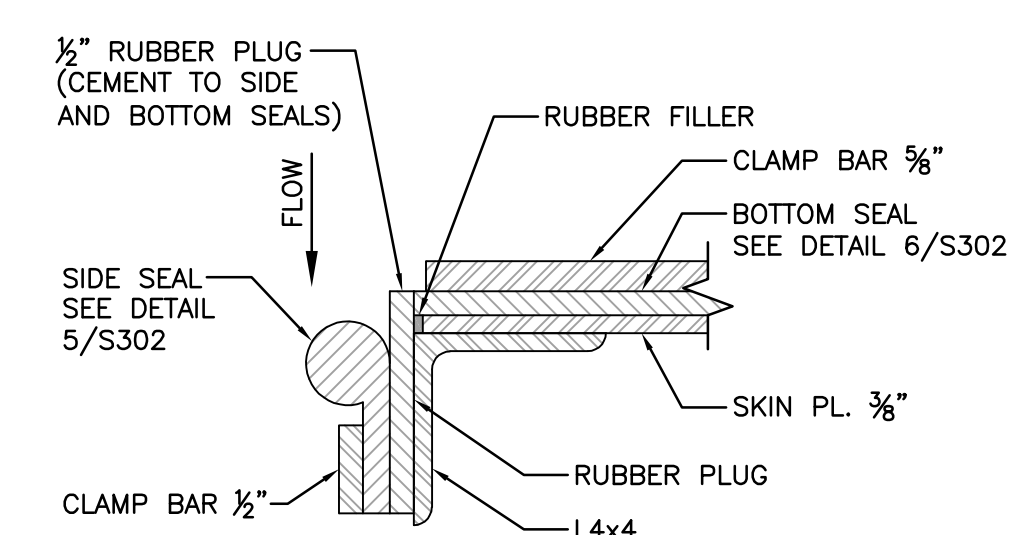
10 SECTION
S301 3"=1'-0"



11 DETAIL
S301 3"=1'-0"



12 BOTTOM SEAL CONER
S301 3"=1'-0"



13 SECTION
S301 3"=1'-0"

C	BID SET	BWA	PJM	14.10.22
B	95% PLANS	BWA	PJM	14.10.02
A	60% PLANS	BWA	PJM	14.06.05

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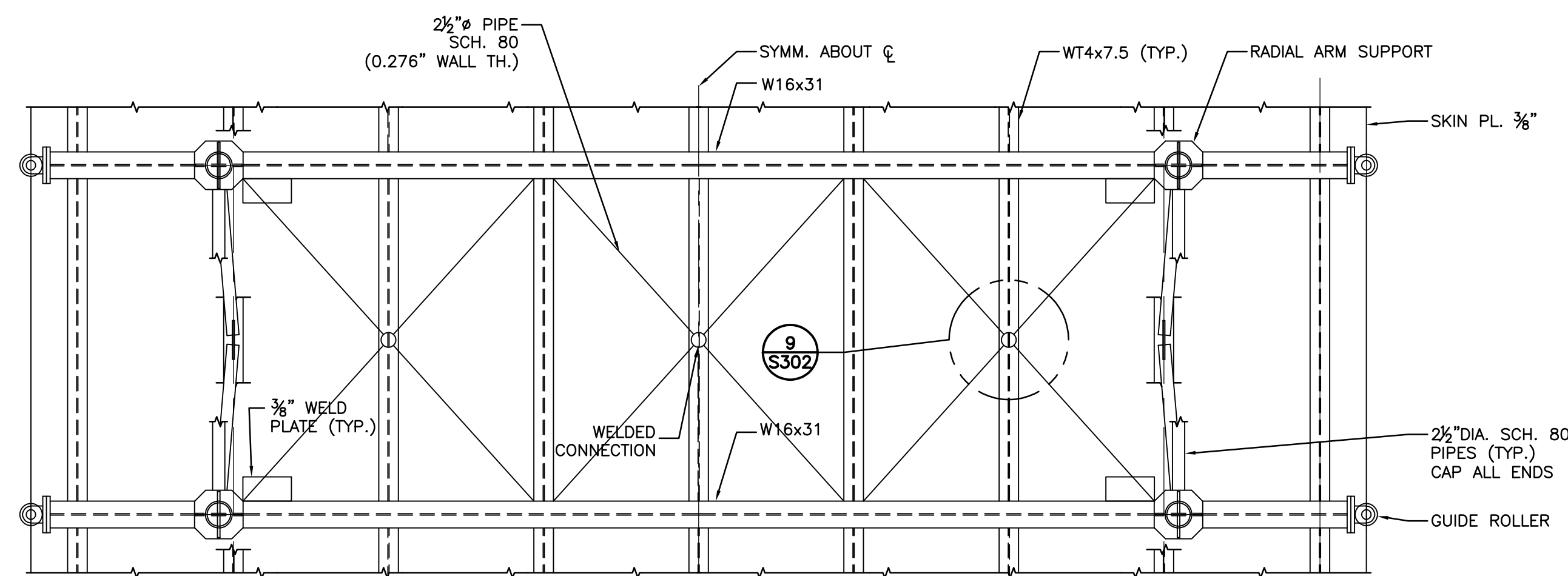
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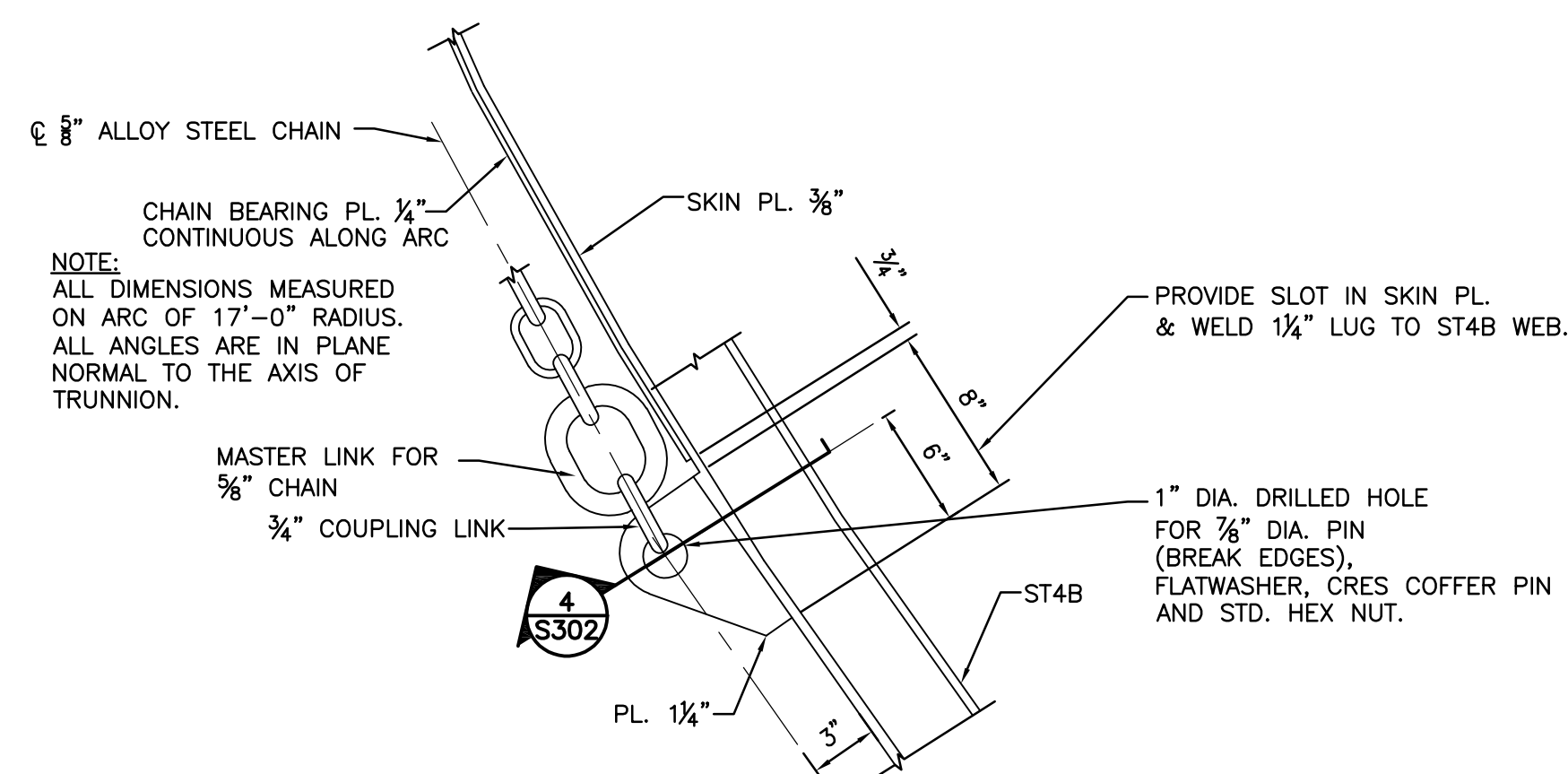
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SECTIONS & DETAILS I

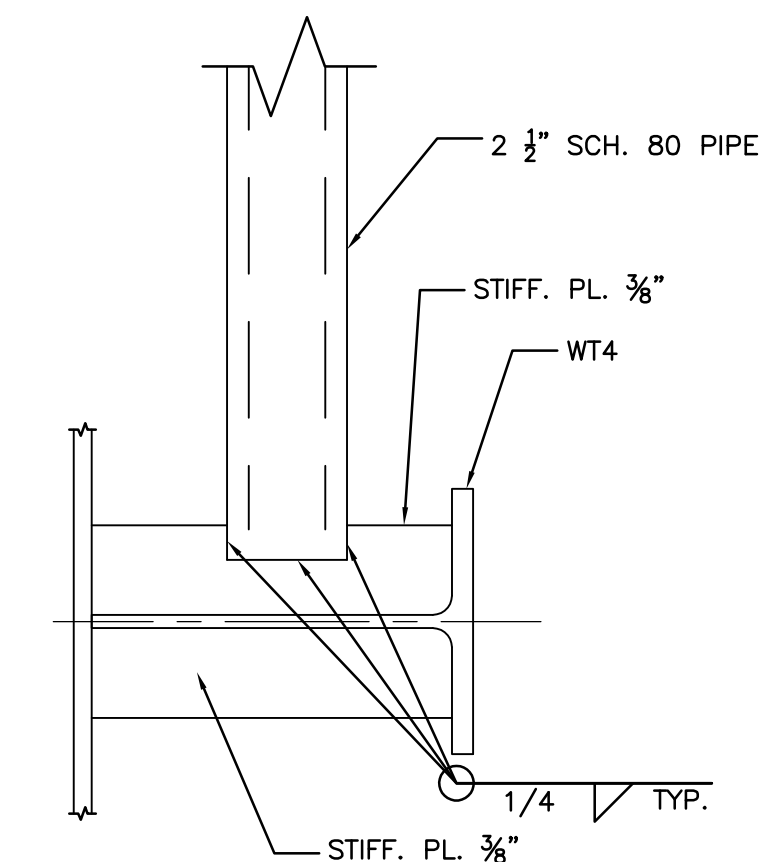
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Drawing No.	Sheet
	Revision



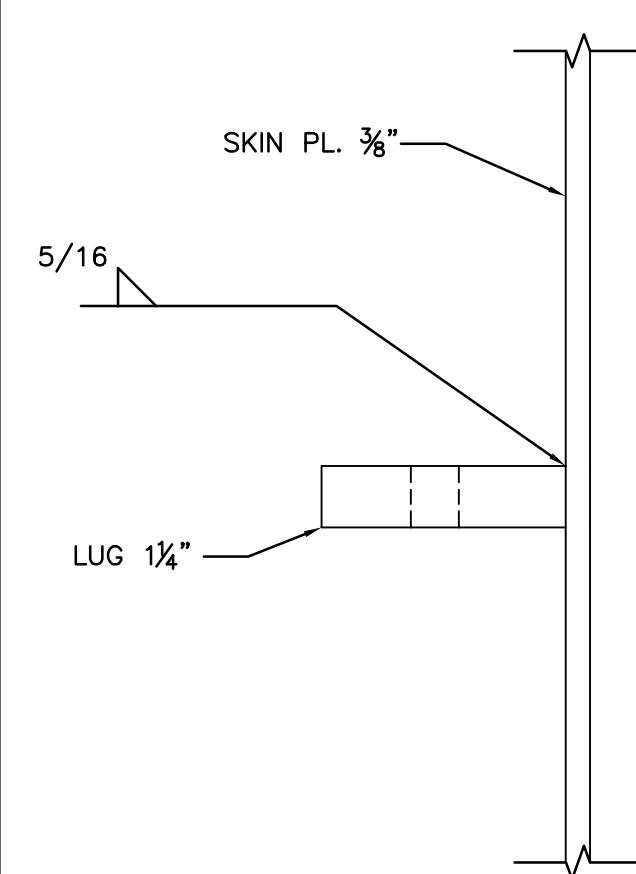
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S302 1/4"=1'-0"



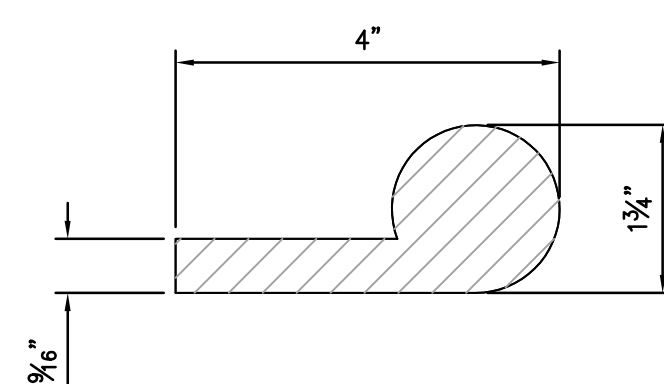
2 DETAIL
S302 1 1/2"=1'-0"



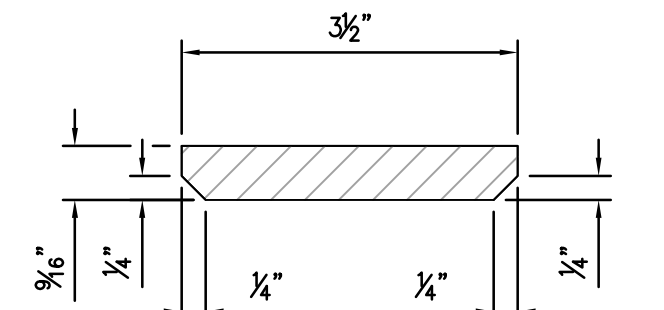
3 SECTION
S302 3"=1'-0"



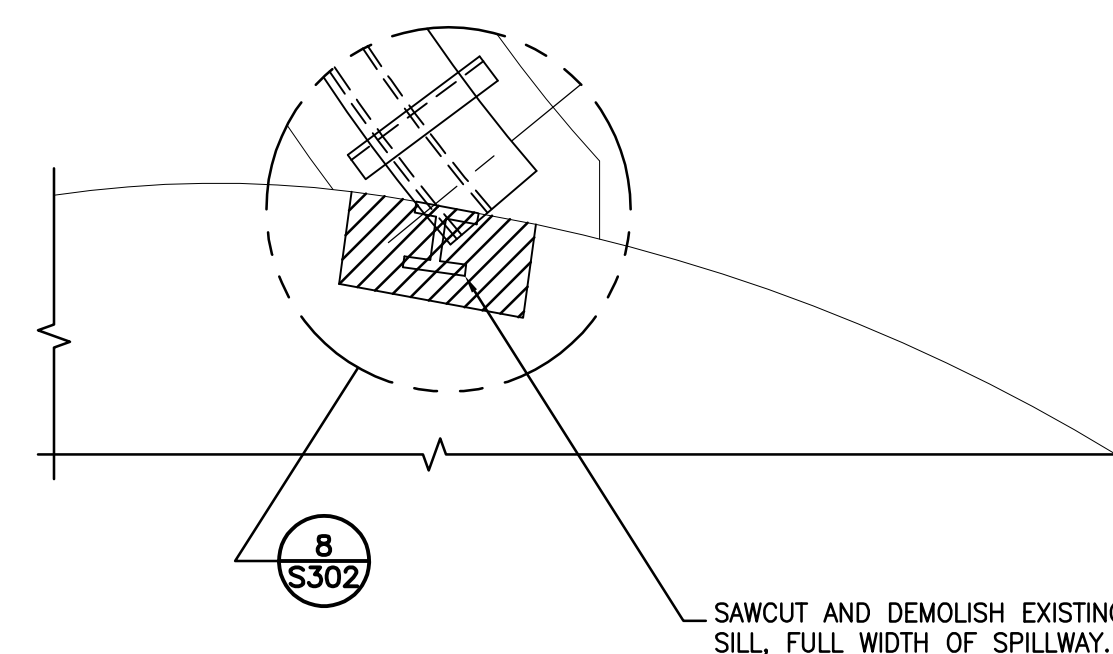
4 SECTION
S302 3"=1'-0"



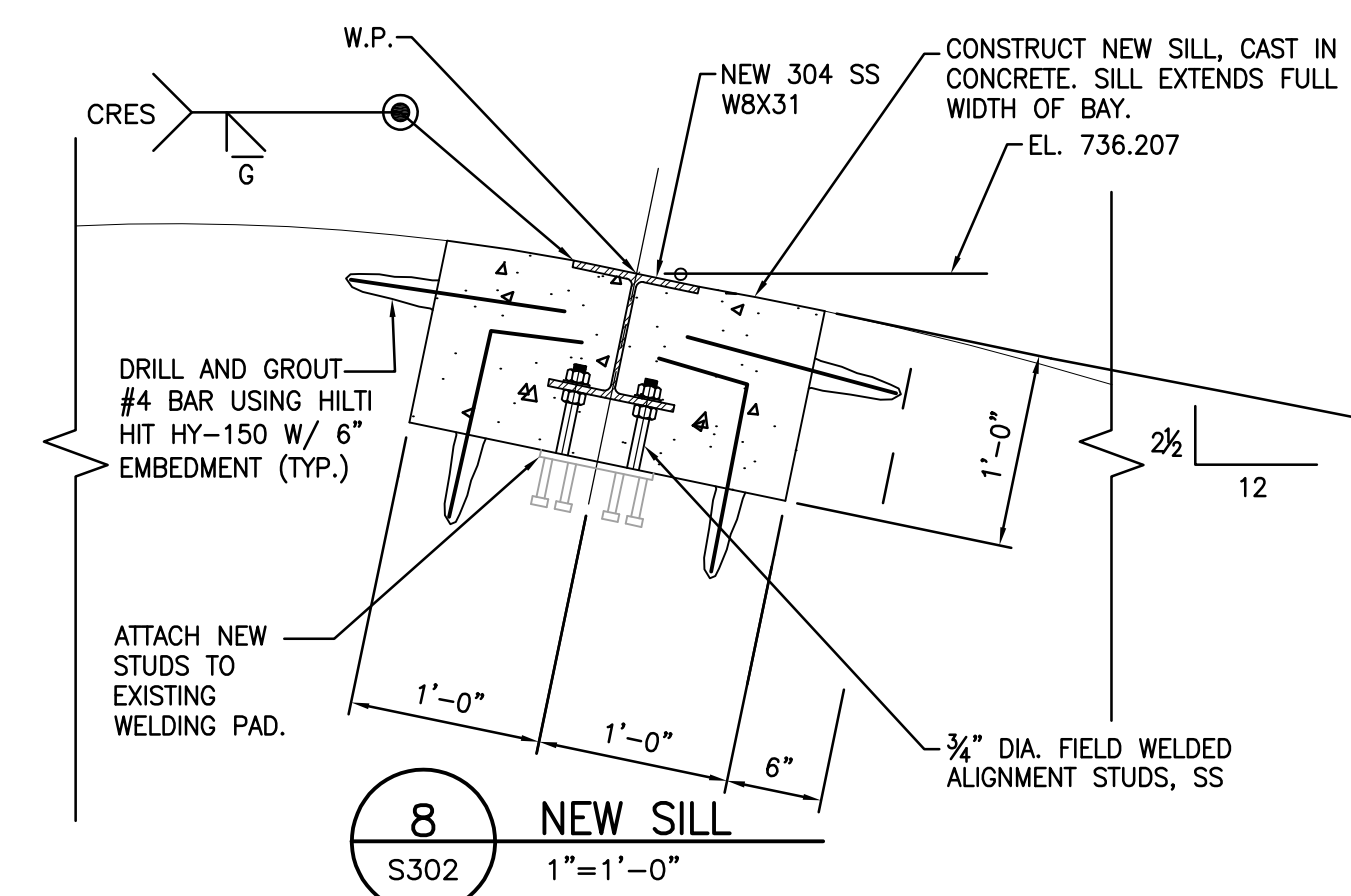
5 SIDE SEAL
S302 6"=1'-0"



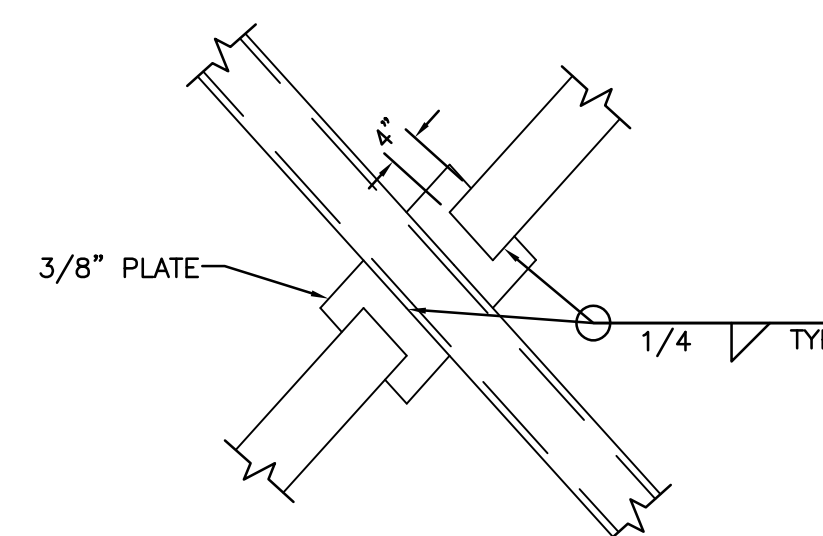
6 BOTTOM SEAL
S302 6"=1'-0"



7 ELEVATION - EXISTING SILL DEMOLITION
S302 1/2"=1'-0"



8 NEW SILL
S302 1"=1'-0"



9 SECTION
S302 1"=1'-0"

C	BID SET	BWA	PJM	14.10.22
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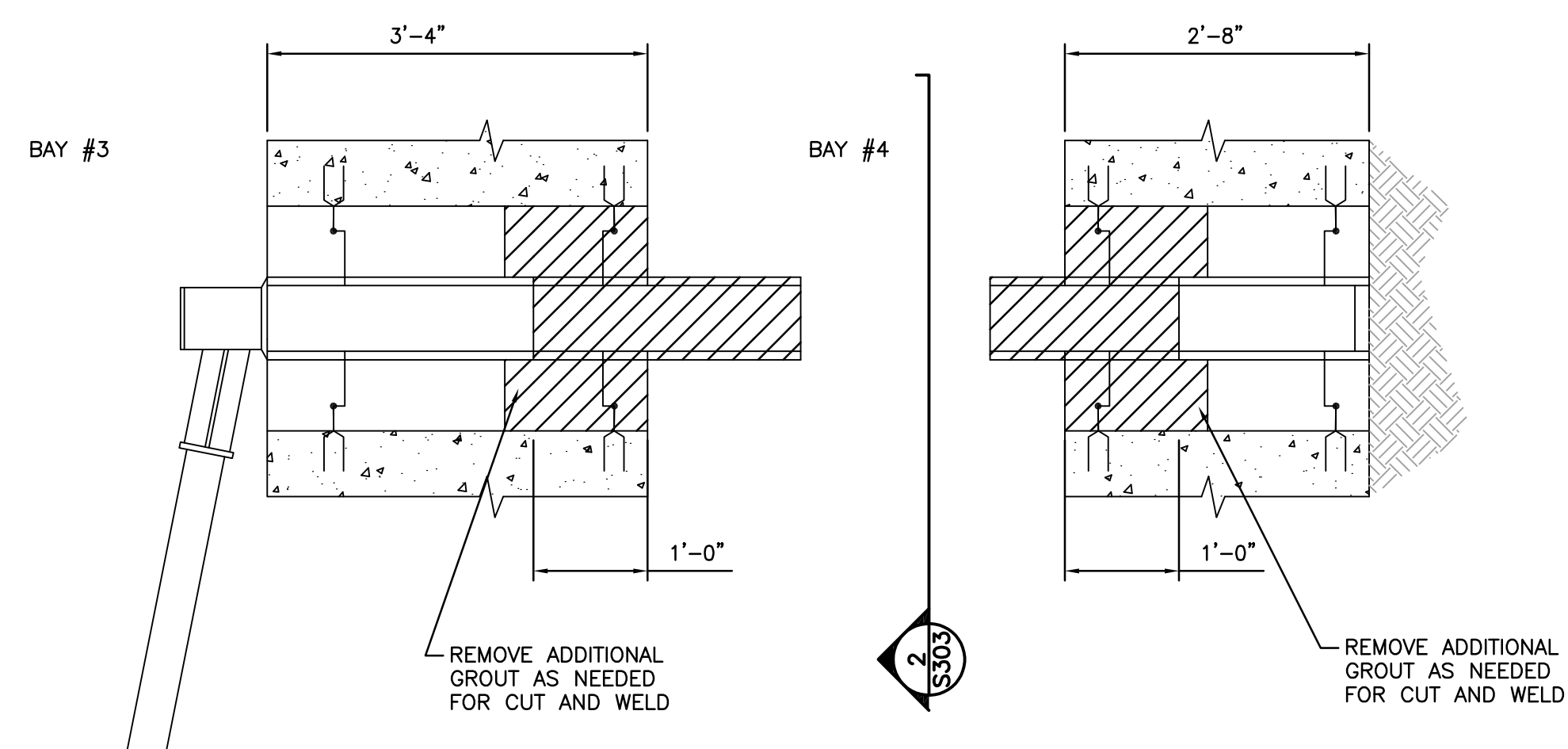
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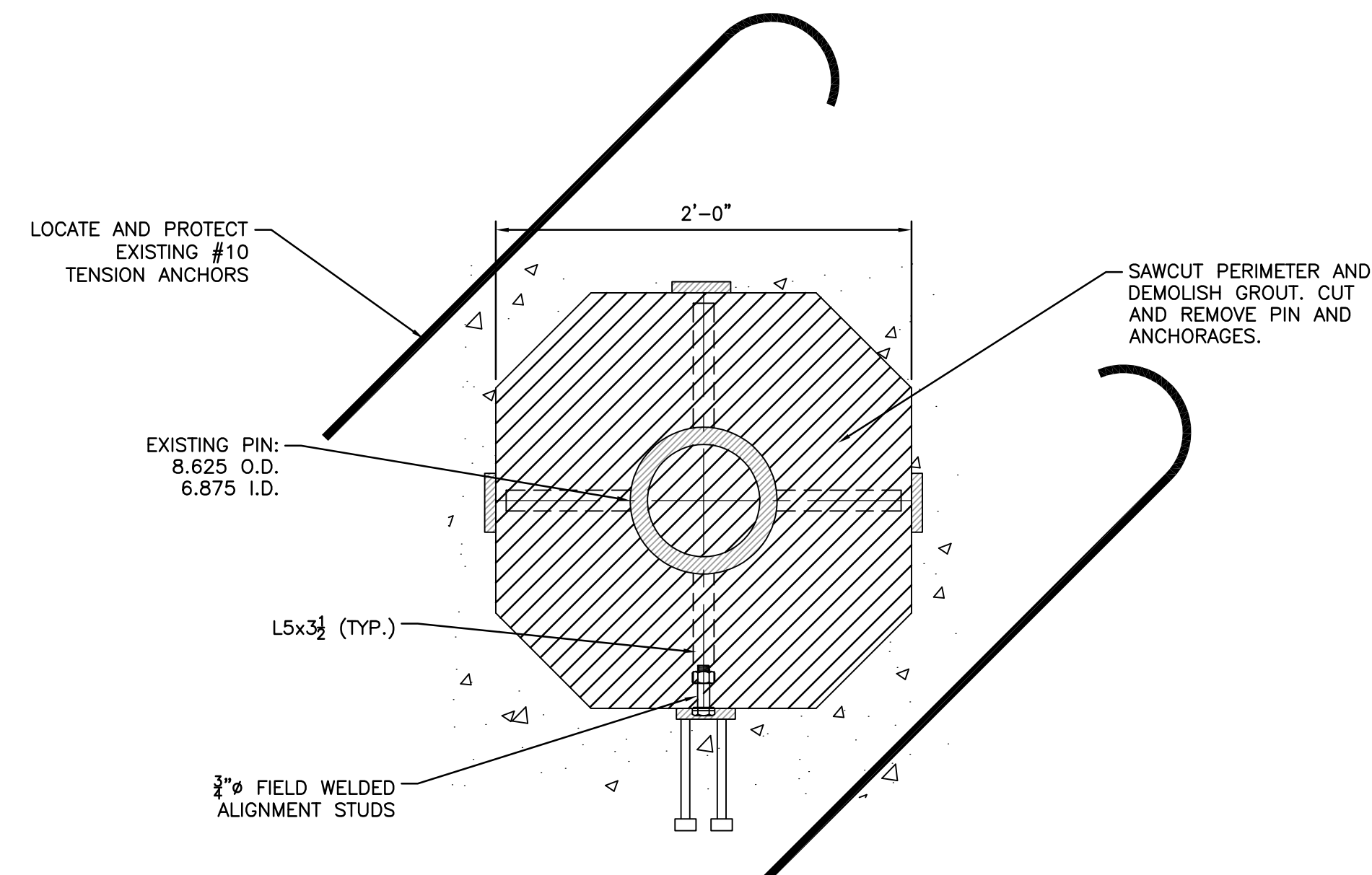
SECTIONS & DETAILS II

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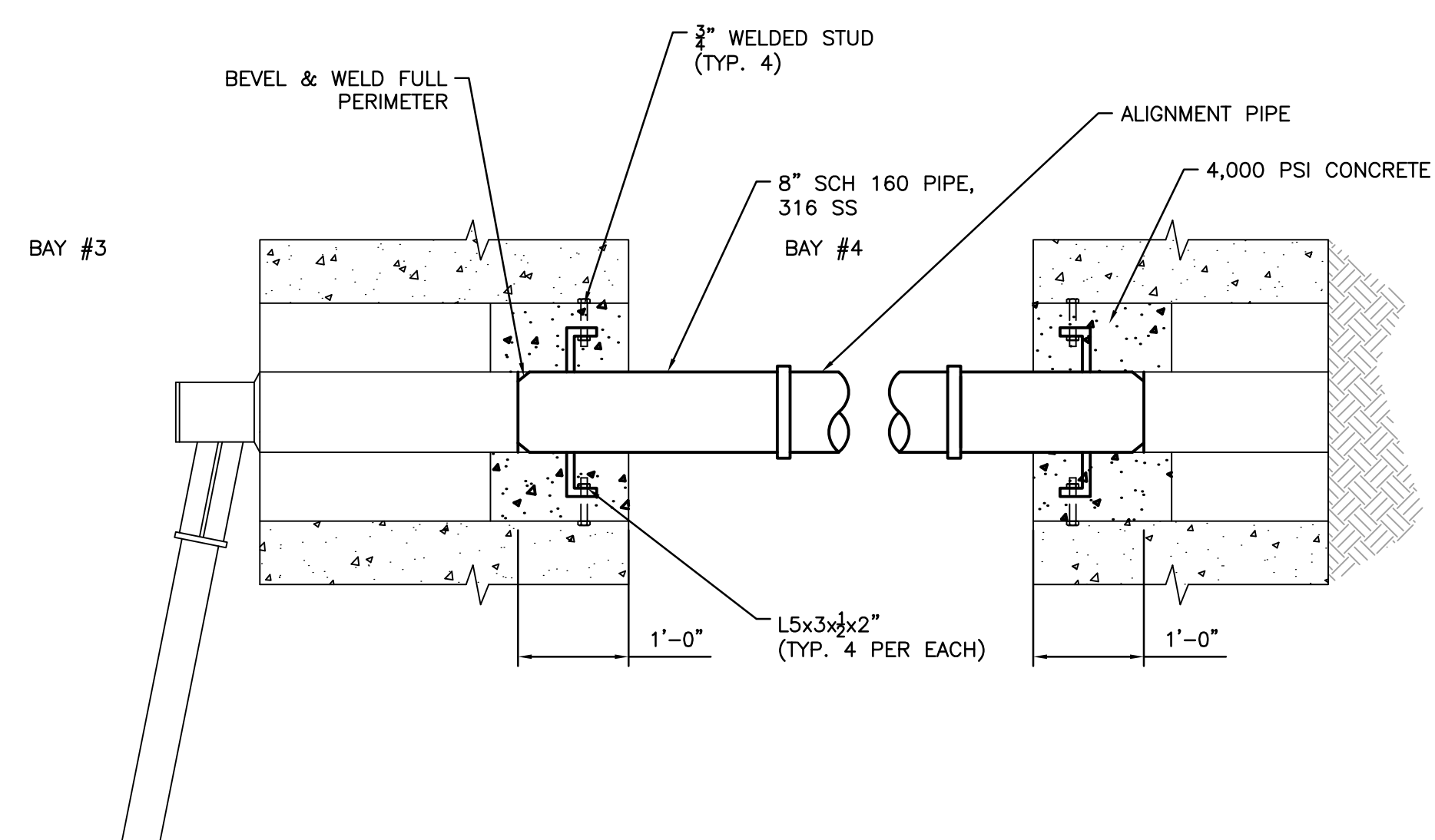
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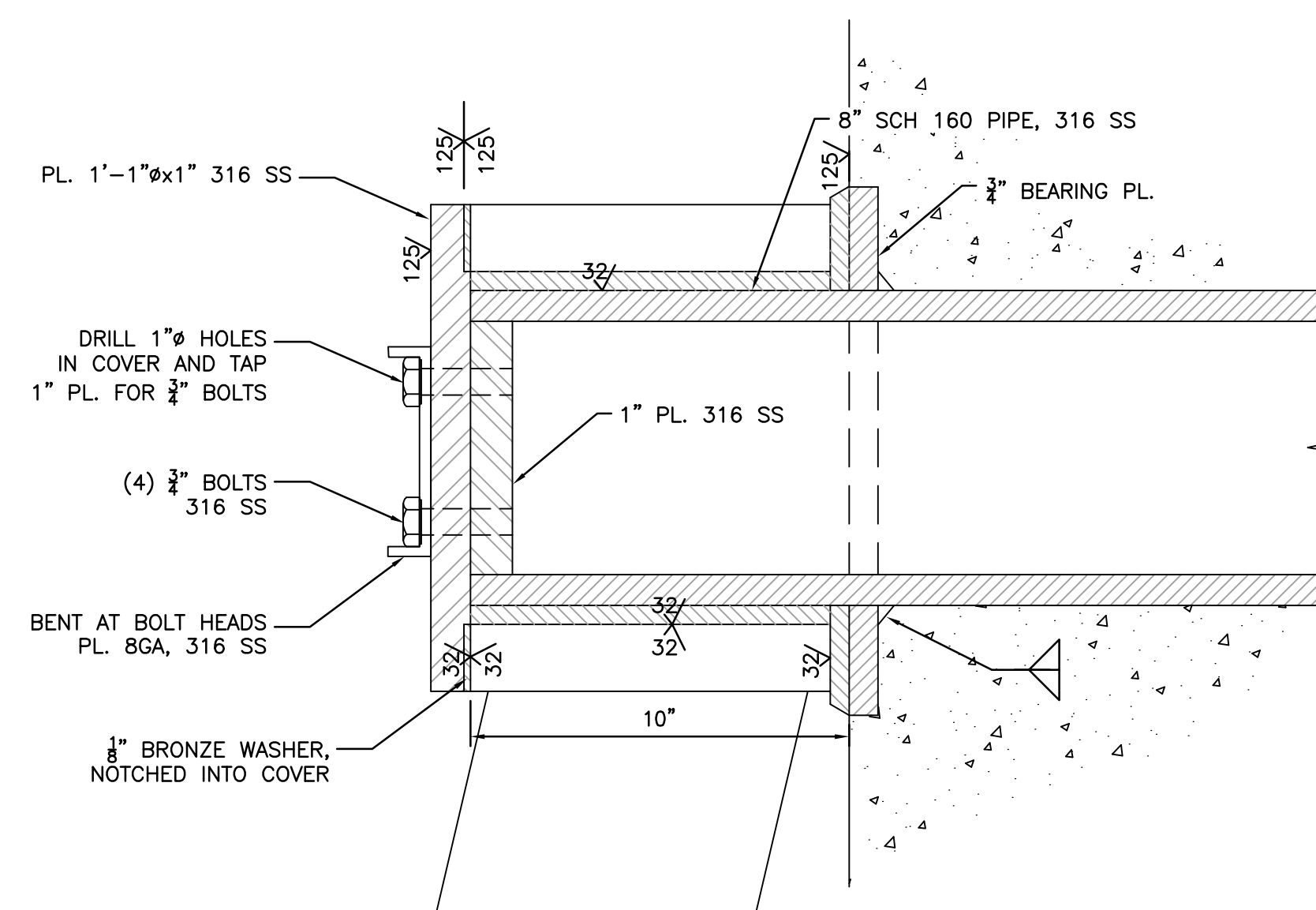
1 TRUNNION PIN DEMOLITION
S303 3/4"=1'-0"



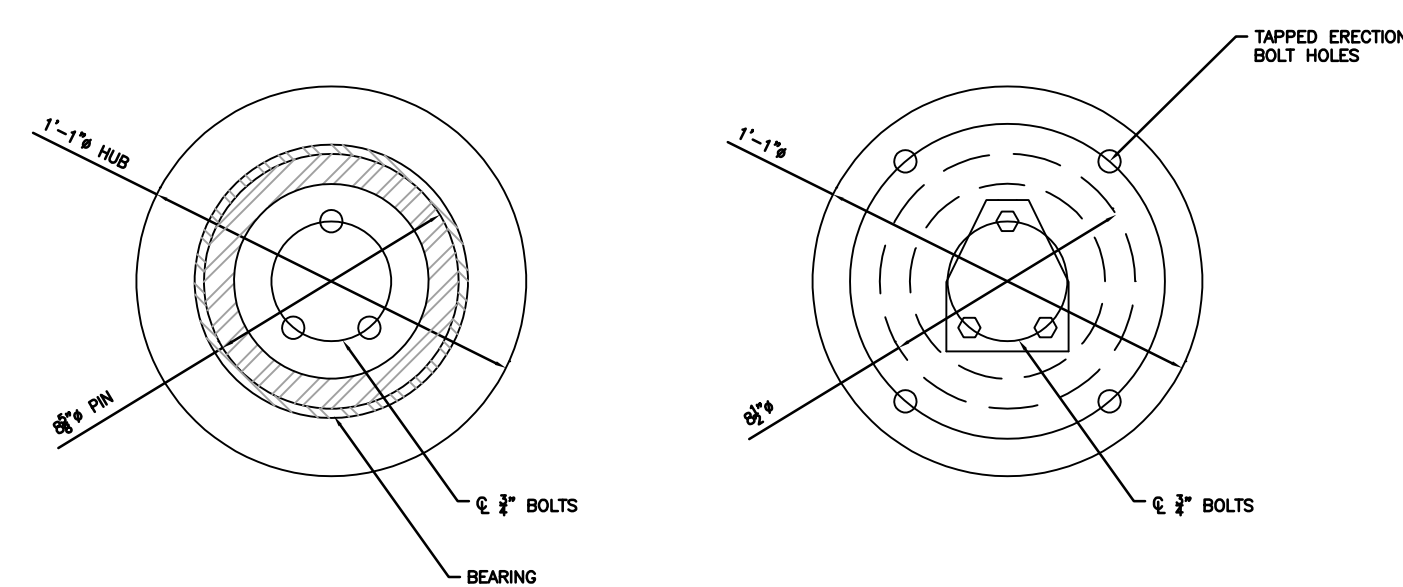
2 TRUNNION PIN DEMOLITION
S303 1 1/2"=1'-0"



3 TRUNNION PIN INSTALLATION
S303 3/4"=1'-0"



4 TRUNNION PIN
S303 3"=1'-0"



5 DETAIL
S303 3"=1'-0"

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