GENERAL STRUCTURAL NOTES

I. GENERAL

A. The contractor shall be responsible for all final dimensions and fit-up of the structure, including verifying all existing conditions and dimensions before commencing work. No change in size or dimension of structural members shall be made without the written approval of the professional of record.
B. The contractor shall verify the location of all existing utilities before commencing any work. Any interference shall be brought to the attention of the structural engineer.
C. The contractor shall be responsible for the design, placement, maintenance, etc. of any and all shoring, bracing, tie backs, etc. needed to support any part of the new or existing construction during the entire construction process to ensure the safety and integrity of the structure until the necessary permanent elements are in place. The contractor is responsible for limiting the amount of construction load imposed upon structural framing. Construction loads shall not exceed the design capacity of the framing at the time the loads are imposed.
D. Structural drawings are intended to be used with architectural,mechanical, and electrical drawings. See these drawings for exact location of all depressions, slopes, openings, penetrations, etc. Penetrations not shown on the structural drawings shall be brought to the attention of the structural engineer.
E. Dimensions - Do not scale these drawings, use written dimensions only. Verify all dimensions at job site before commencing work and report any discrepancies. Where no dimensions are provided obtain clarification prior to proceeding with work.
F. Omissions & Conflicts - Omissions or conflicts between various elements of the construction documents should be brought to the attention of the design team. If certain features are not fully delineated in the construction documents, their construction shall be of the same character as for similar conditions that are delineated.
G. Existing Conditions - The Contractor shall verify the existing conditions and dimensions in the field. The Contractor shall report any discrepancies between the drawings and the actual existing conditions and dimensions to the Engineer.
H. With the exception of defects discovered by us or pointed out to us by others to date, our design and the work shown here assumes that the existing structural elements are sound and capable of supporting loads to their full, theoretical, code-allowed capacities. EOR is not responsible for any additional costs, damages, or injuries resulting from discovery or failure of any element that is found to be damaged, deteriorated, or otherwise structurally impaired.
I. The Contractor shall inform the professional of record in writing of any deviation from the Contract Documents. The Contractor shall not be relieved of the responsibility of such deviation by the professional of record review of shop drawings, product data, etc., unless the contractor has specifically informed the professional of record of such deviation at the time of submission, and the professional of record has given written approval to the specific deviation.
J. Note: if any items herein are not understandable or clear as to intent, the contractor must notify the Engineer of Record for clarification and/or supplemental information prior to actual installation.

II. DESIGN BASIS

A. Applicable Codes and Standards
International Residential Code 2021; ASCE 7-2016

B. Design Loads
Decks

Dead Load	10 psf
Live Load	850 psf

A. STRUCTURAL STEEL
1. Fabrication and erection of structural steel shall conform to "The Manual of Steel Construction", Fourteenth Edition, American Institute of Steel Construction (AISC) including Specifications for Structural Steel Buildings, Specification for Structural Joints Using ASTM A325 or A490 Bolts, and AISC Code of Standard Practice.
2. All welding shall be performed by certified welders and shall conform to "Structural Welding Code ANSI/AWS D1.1-92", American Welding Society (AWS).
3. Wide flange and S- shapes: ASTM A992 or A572, Grade 50
4. Structural C and L shapes & plates: ASTM A36
5. Steel pipe: ASTM A53, Grade B (35 ksi yield)
6. Steel tubing (square or rect.): ASTM A500, Grade B (46 ksi yield)
7. Steel tubing (round): ASTM A501
8. Galvanized structural steel:
A. Structural shapes and rods ASTM A123
B. Bolts, fasteners and hardware ASTM A153
9. Anchor rods shall conform to ASTM F1554, unless noted otherwise.
10. Anchor bolts shall be headed with a nut and washer at the lower end.
11. Steel members shown on plan shall be equally spaced unless noted otherwise.
12. The Fabricator shall be responsible for the design and adequacy of all connections that are not designed or fully detailed on the Contract Documents. Shop Drawings, depicting the configuration and fabrication details, along with calculations sealed by a Registered Professional Engineer licensed to practice in the state in which the project is located, shall be submitted to the structural Engineer of Record for review. Delegated design connections include, but are not limited to, moment connections shown on plans and column splices as requested by erector.
13. Erector shall provide a Certified Welding Inspector and Quality Control Expert (AWS Certified) for the visual inspection welds.
14. All bolted connections shall be with ASTM A325 high strength bolts, $\frac{3}{4}$" minimum diameter, unless noted otherwise.
15. All bolts are considered snug-tightened, unless noted otherwise.
16. Oversized holes shall not be provided without approval of the EOR. If oversized holes are elected and approved, bolts shall be slip-critical.
17. Where possible, all bolt holes in structural steel shall be drilled or punched in the shop. Any holes required to be made a the project site shall be mechanically drilled or punched. No burning of holes shall be allowed.
18. All connections shall be symmetrical about the axis of the member connected. Provide only one grade of bolt for each bolt diameter to be used in the connections. Do not mix grades of bolts.
19. Unless noted otherwise, all cap and base plates shall be welded to the columns continuously all around with a 1/4" fillet weld.
20. Welding electrodes shall be E70XX for manual arc welding and F7X-EXXX for submerged arc welding. All welders shall be certified by the AWS. Minimum weld size shall be 3/16" unless noted otherwise.
21. Provide temporary shoring when welding to existing steel.
22. Use low-hydrogen electrodes when welding to existing steel.
23. Field welded surfaces within 4 inches of weld shall be cleaned and ground smooth. After welding coat the exposed area with appropriate primer/paints as specified.
24. All welds shall be visually inspected as required by AWSD1.1 and in accordance with AWS B1.1 "Guide for the Visual Inspection of Welds", unless noted otherwise.
25. Unless noted otherwise, every weld shall develop the full strength of the lesser of the members it joints. All butt, groove, or bevel welds shall be complete, full penetration.
26. Submit shop drawings for fabrication and erection of structural steel. Clearly indicate coordinated dimensions of mechanical unit and roof penetration sizes. Shop and Erection drawings must show all shop/floor and field welds. Initial shop drawing submittal shall include proposed connection details and job standards. Provide signed and sealed calculations for all non-standard connection details showing design capacities.
27. Splices in structural steel not shown on the structural drawings will not be accepted without specific approval of the Structural Engineer. Submitted splices shall be designed by the Fabricator's delegated design engineer and stamped by an Engineer licensed in the State where the project is located.
28. The General Contractor and Steel Erector shall notify the Structural Engineer of any fabrication or erection errors or deviations and receive written approval before any field corrections are made.
29. Alternate connection details may be used if such details are submitted to the engineer for review and approval. However, the engineer shall be the sole judge of acceptance and the Contractor's bid shall anticipate the use of those details shown on the drawings. The Contractor is responsible for the design of such alternate details which they propose and provide stamped drawings for approval.
30. All steel shall be painted with shop standard primer unless noted otherwise.
31. All dissimilar metals shall be treated or properly separated to prevent galvanic and/or corrosive effects.

ABBREVIATIONS

@	AT
CMU	CONCRETE MASONRY UNIT
EA	EACH
GALV	GALVANIZED
GEN	GENERAL
MIN	MINIMUM
O.C.	ON CENTER
PT	PRESSURE TREATED
REF	REFERENCE
TYP	TYPICAL
V.I.F.	VERIFY IN FIELD

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GOVERNOR NICHOLLS WHARF
PILE REPAIRS
Slidell, Louisiana

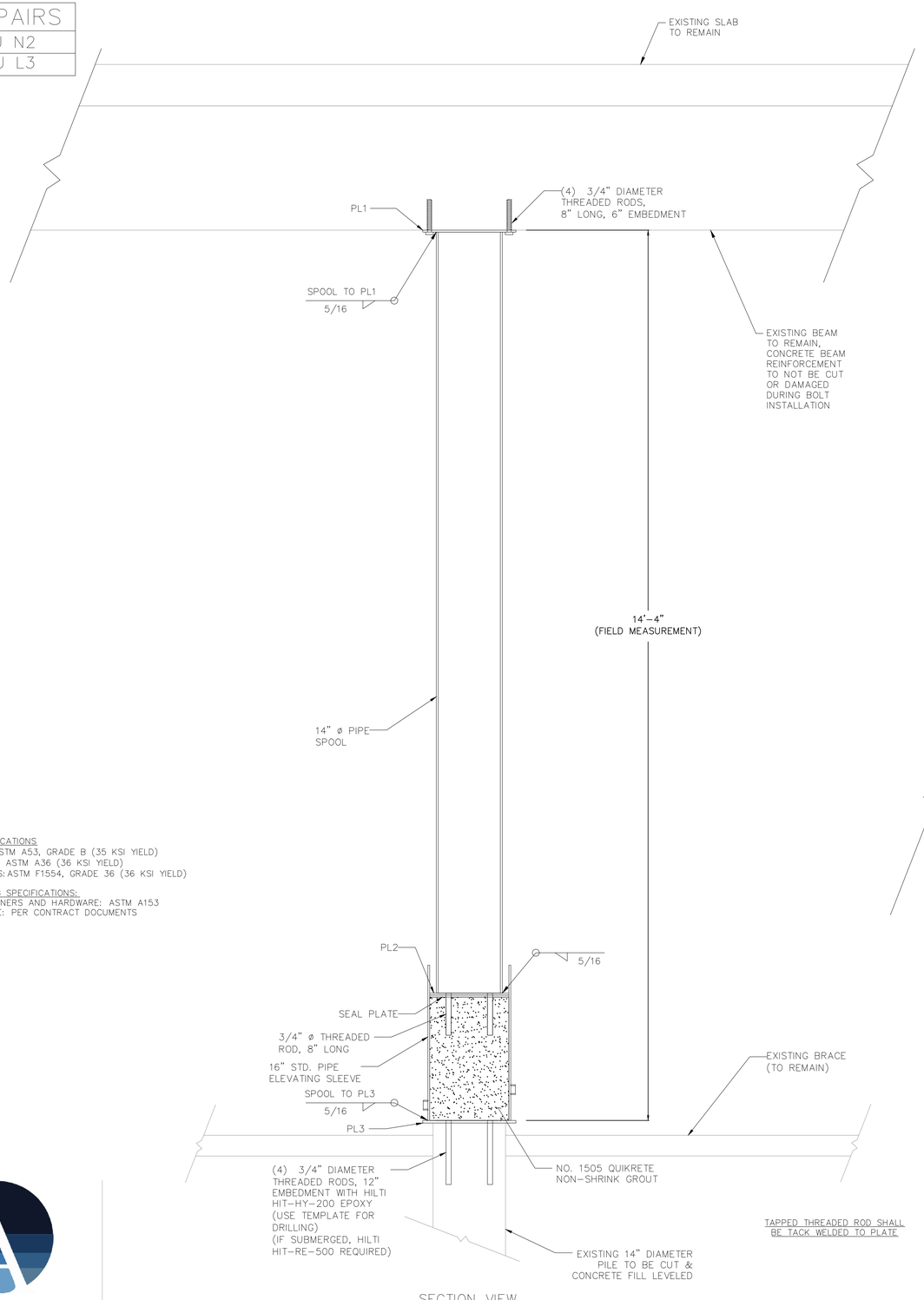
DRAWN BY: TJP
CHECKED BY: JMS
DATE: JANUARY 9, 2025
ISSUE: FOR CONSTRUCTION

STATE OF LOUISIANA
JENNIFER M. SNAPE
License No. 35470
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
1-9-2025

GENERAL STRUCTURAL NOTES

SHEET:
S1

PILE REPAIRS
E2 THRU N2
H3 THRU L3



TAPPED THREADED ROD SHALL BE TACK WELDED TO PLATE

SECTION VIEW
1" = 1'-0"

MATERIAL SPECIFICATIONS
1. STEEL PIPE: ASTM A53, GRADE B (35 KSI YIELD)
2. STEEL PLATE: ASTM A36 (36 KSI YIELD)
3. ANCHOR RODS: ASTM F1554, GRADE 36 (36 KSI YIELD)

PAINT & COATING SPECIFICATIONS:
1. BOLTS, FASTENERS AND HARDWARE: ASTM A153
2. PIPE & PLATE: PER CONTRACT DOCUMENTS

THIS MEMBER IS DESIGNED CONSIDERING AXIAL LOADING, AND THE DESIGN INTENT IS TO PROVIDE A CONTINUOUS LOAD PATH FROM THE DECK TO THE EXISTING PILES.

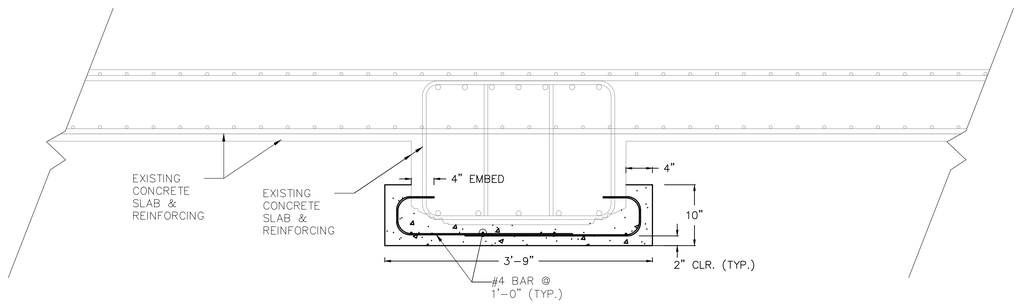
ESTIMATED DESIGN LOADING:
DEAD:
CONCRETE SLAB WEIGHT=(0.150kcf)(90 sf)(1' thick)=13.5k
CONCRETE BEAM WEIGHT=(0.150kcf)(3')(1.167')(9')=4.8k
LIVE:
850 PSF PER DESIGN DRAWINGS=(0.850ksf)(90 sf)=76.5k

DEAD+LIVE=94.8k

DESIGN OF MEMBERS FOR COMPRESSION:
CH. E OF AISC STEEL MANUAL,
$\Omega_c=1.67$
$P_n=F_nA_g$
k=1.0
$L_c=147$ in
r=4.83 in
$L_c/r<4.71(E/F_y)^{.5}$
$F_e=308.99$
$Fn=(0.658^{(35/309)})(35ksi)=33.38ksi$
$P_n/\Omega_c=(33.38ksi)(15in^2)/1.67=314.3k>94.8k$, therefore 14"ø OK.

AVAILABLE WELD STRENGTH:
$R_n/\Omega=(0.928kips/in)Dl$
$R_n/\Omega=(0.928kips/in)(5\ sixteenths)(14")(\pi)=204$ kips for 14"ø
$R_n/\Omega=(0.928kips/in)(5\ sixteenths)(16")(\pi)=233$ kips for 14"ø

FOR ANCHORAGE CALCULATIONS, SEE HILTI REPORTS.



TYPICAL BEAM REPAIR
1" = 1'-0"

GENERAL REPAIR NOTES:

1. LOOSE CONCRETE SHALL BE REMOVED PRIOR TO ENCAPSULATION OF EXISTING CONCRETE BEAM.
2. DETAIL SHOWS MINIMUM DIMENSIONS FOR REPAIR OF CONCRETE BEAM.
3. BEAM REPAIR SHALL EXTEND 6" MINIMUM BEYOND DAMAGED CONCRETE BEAM.
4. REBAR DOWELS SHALL BE ADHERED USING HILTI HIT-HY-200 EPOXY, OR APPROVED EQUAL.
5. ENCAPSULATION MATERIAL SHALL BE NO. 1505 QUIKRETE NON-SHRINK GROUT OR APPROVED 4,000 PSI CONCRETE.

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GOVERNOR NICHOLLS WHARF
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Slidell, Louisiana

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CHECKED BY: JMS
DATE: JANUARY 9, 2025
ISSUE: FOR CONSTRUCTION

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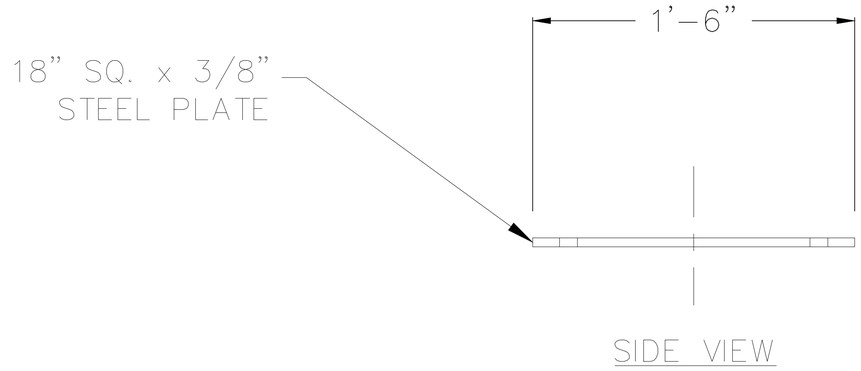
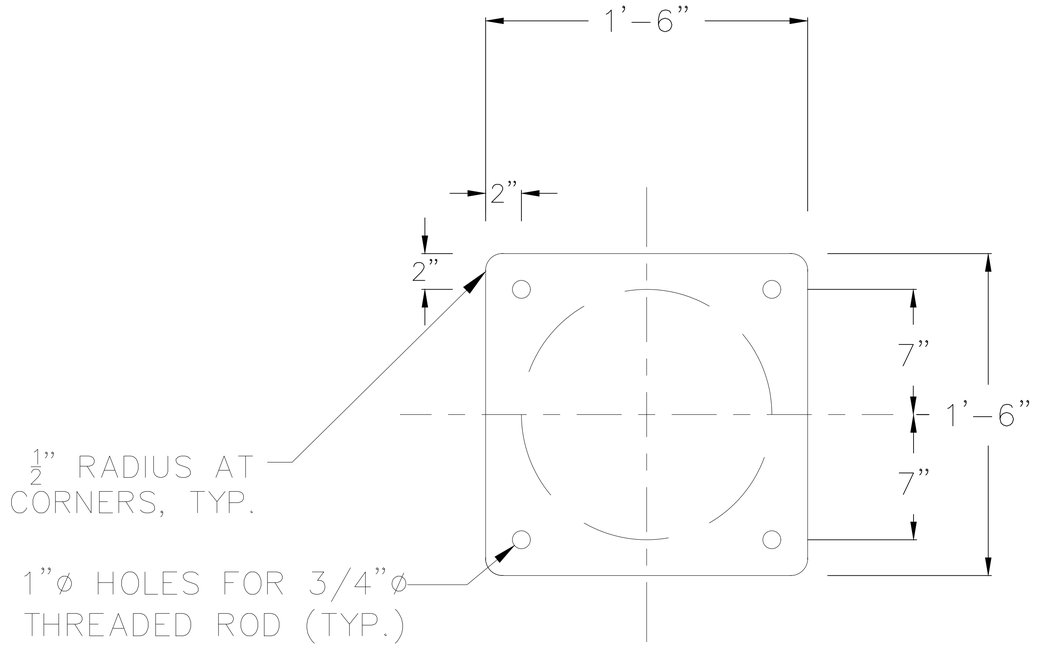
IN
1-9-2025
CIVIL ENGINEERING

PLAN VIEW & SECTION VIEW

SHEET:
S2



SIDE VIEW



*PL1 WELDED TO
SPOOL PIECE*

PLAN VIEW

PLATE – PL1
3" = 1'-0"

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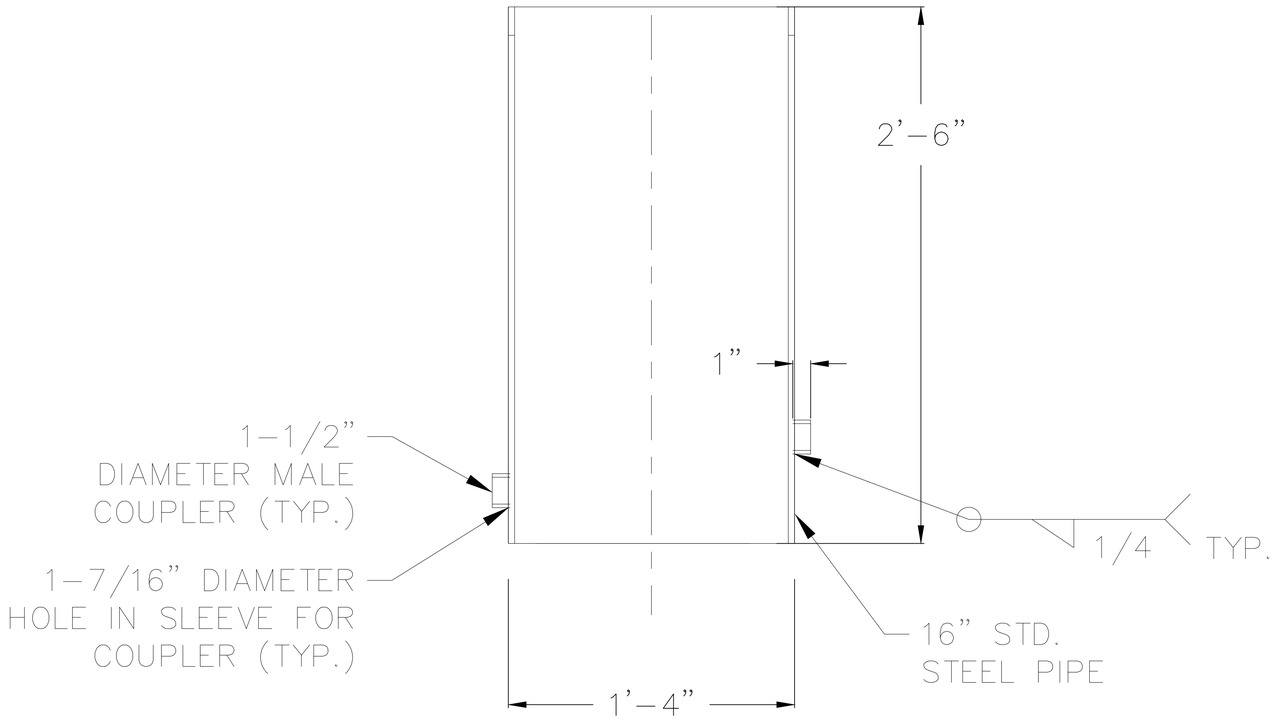
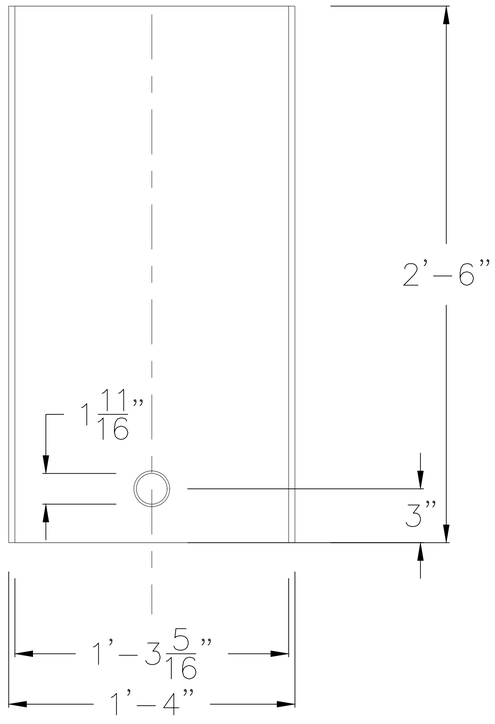
PLATE - PL1

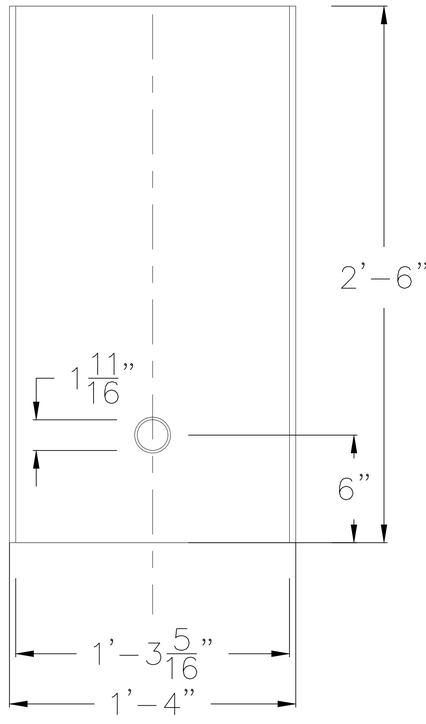
SHEET:
S3



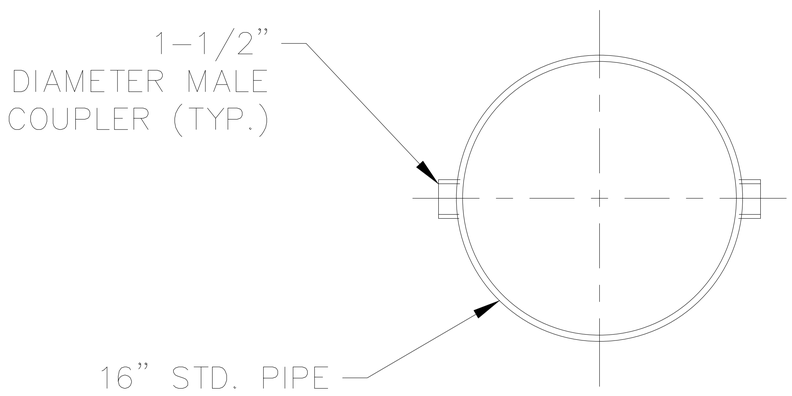
SIDE VIEW



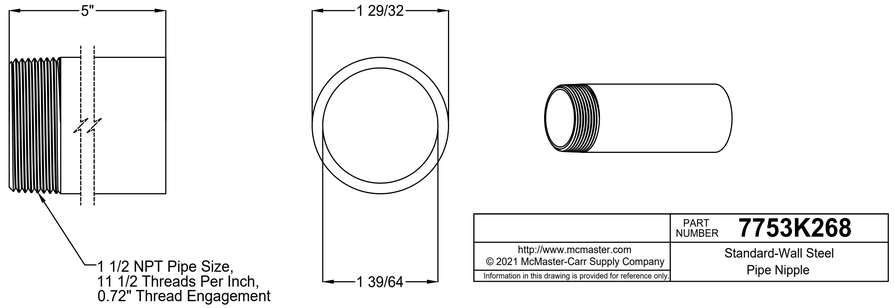
GROUT PORT
SIDE VIEW



VENT
SIDE VIEW



PLAN VIEW



ELEVATING SLEEVE
3" = 1'–0"

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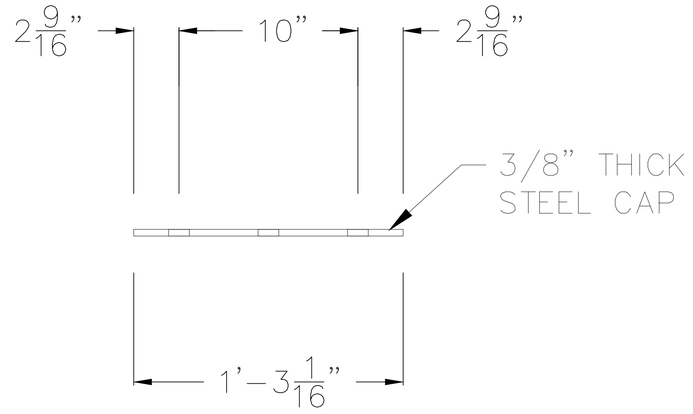
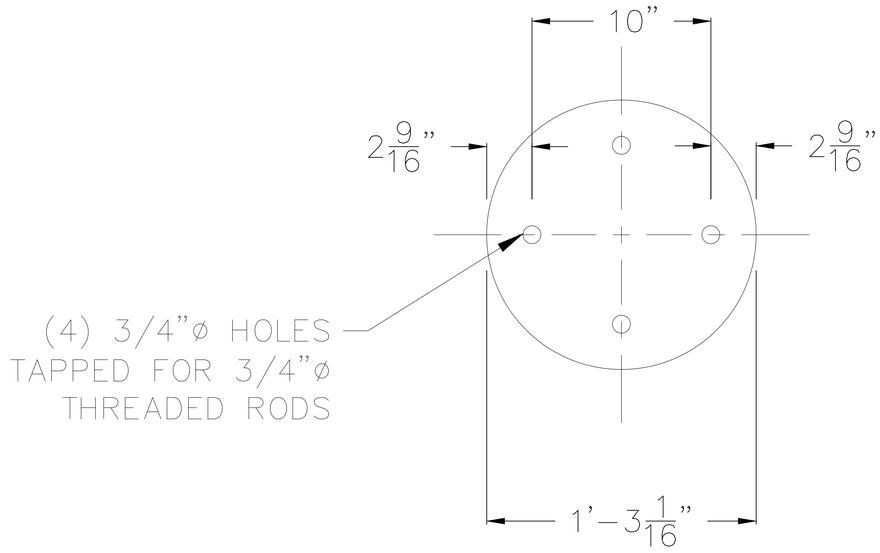
ELEVATING SLEEVE

SHEET:
S4



SIDE VIEW



PLAN VIEW

*PL2 WELDED TO
SPOOL PIECE*

PLATE – PL2
3" = 1'-0"

TAPPED THREADED ROD SHALL
BE TACK WELDED TO PLATE

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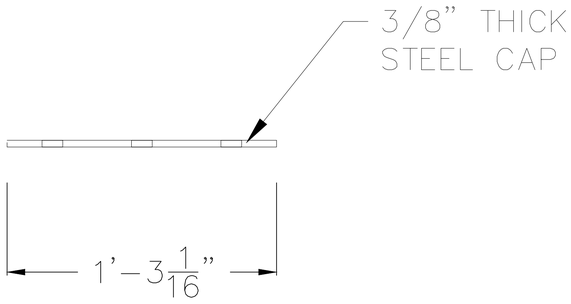
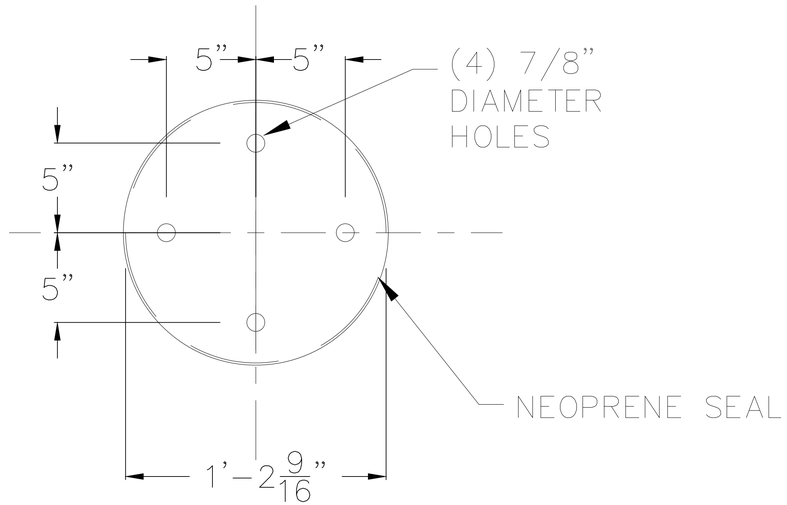
PLATE - PL2

SHEET:
S5



SIDE VIEW



SEAL PLAN VIEW

PLATE – SEAL PLATE
3" = 1'-0"

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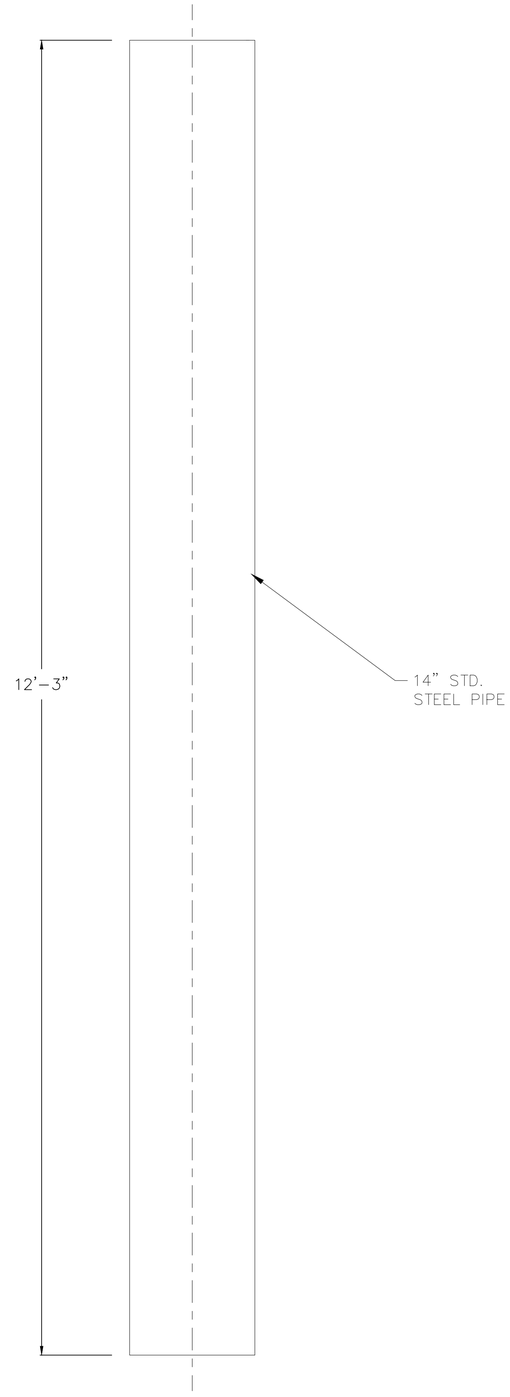
PLATE - SEAL PLATE

SHEET:
S6



PIPE SPOOL

$1\frac{1}{2}'' = 1'-0''$

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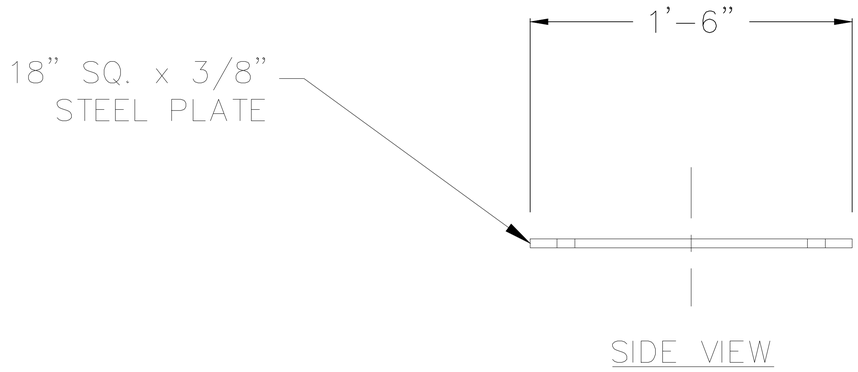
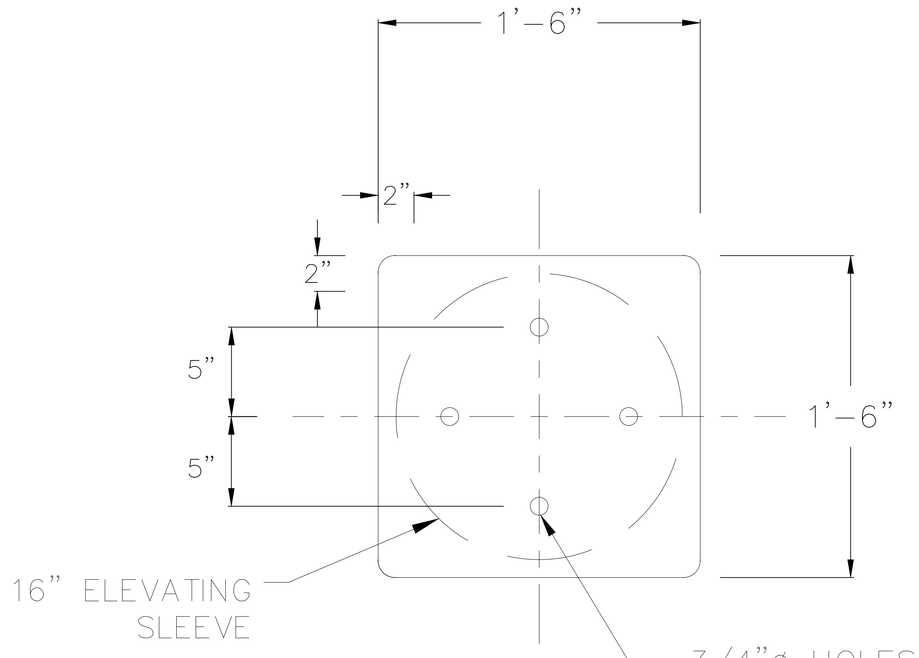
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
1-9-2025

PIPE SPOOL

SHEET:
S7



SIDE VIEW



PLAN VIEW

TAPPED THREADED ROD SHALL
BE TACK WELDED TO PLATE

PLATE – PL3
3" = 1'-0"

ANDERS CONSTRUCTION

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PLATE - PL3

SHEET:
S8