

**METER FACILITY NAME**  
 OFFICIAL ADDRESS, FLORIDA 33100-0000

**PROJECT TITLE**  
**CONTRACT/ PROJECT No.**  
**SEWER METER STATION DESIGN GUIDE**  
**CASE OF MAGMETER ONLY (6"-4")-NO VENTURI PIPING, STRUCTURAL AND DETAILS**

**LIST OF MATERIALS**

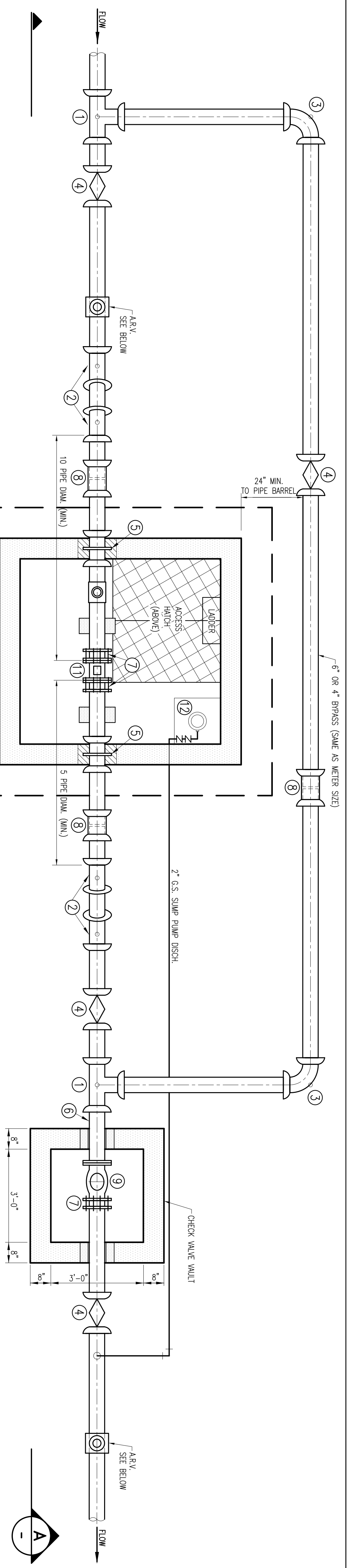
| MARK | DESCRIPTION  | SIZE (in)     | QTY. |
|------|--|---------------|------|
| 1    | TEL. M.L.  | 6 x 6 x 4 x 4 | 2    |
| 2    | 22.5" BEND, M.L.   | 6             | 4    |
| 3    | 90° BEND, M.L.   | 6             | 4    |
| 4    | WALL VALVE, M.L. W/NO. 53                                | 6             | 4    |
| 5    | WALL VALVE BOX & COVER                                   | 6             | 4    |
| 6    | WALL VALVE ASSEMBLY COLLAR                               | 6             | 4    |
| 7    | MECHANICAL ADAPTER                                       | 6             | 4    |
| 8    | SOLID STEEL, M.L.  | 6             | 4    |
| 9    | CHECK VALVE, SWING TYPE                                  | 6             | 4    |
| 10   | S.S. 316 THD. OUTLET TAPPING STEEL, 1/2" DIA. 458 OR EQ. | 6x1/2"        | 4x1  |
| 11   | MAGNETIC METERS  | 6             | 4    |
| 12   | SUMP PUMP  | SEE NOTES     | 1    |

**LIST OF MATERIALS NOTES AND GENERAL NOTES:**

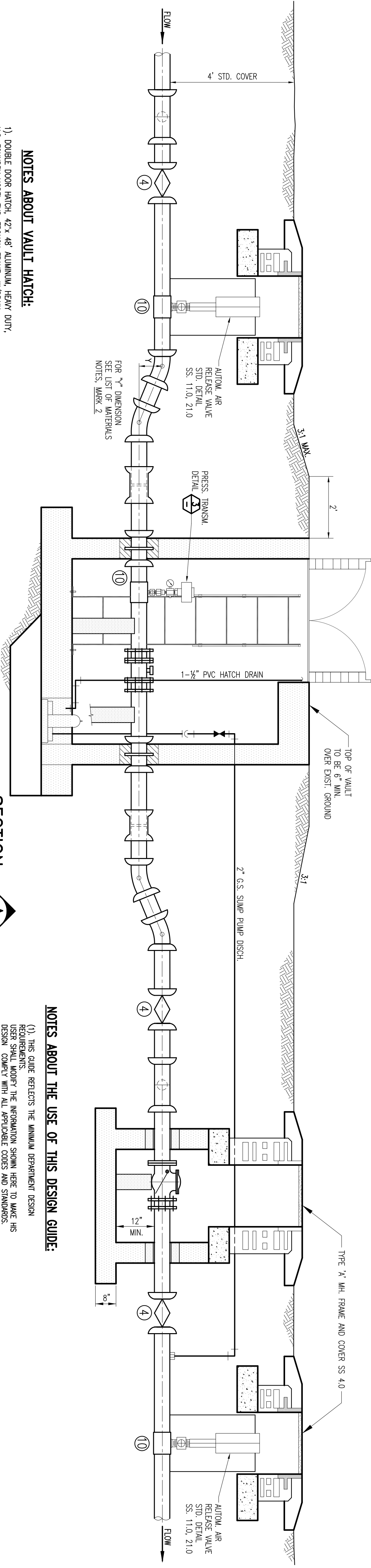
- THE SPLIT COLUMN UNDER THE SIZE HEADER INDICATES: ON THE LEFT SIDE, THE SIZES FOR A 6" AND ON THE RIGHT FOR A 4" MAGNETIC METER QUANTITIES (QTY.) ARE FOR EITHER SIZE. MARK NUMBERS ARE AS SHOWN ON THE LIST OF MATERIALS.
- TO OBTAIN ACCURATE READINGS, THE METERS MUST BE INSTALLED IN A FULL-AT-ALL TIMES DEPRESSION SECTION, WITH THE DROP ON THE SEWER MAIN EQUIVALENT, AT LEAST, TO ONE PIPE OUTSIDE DIAMETER. WHEN USING 22.5" BENDS, THE DROP IN THE APPROACH PIPE (V), MUST BE AT LEAST, 8" FOR 4" PIPE AND 9" FOR 6" PIPE. IN ORDER TO ALLOW SUFFICIENT LENGTH FOR THE P.E. X P.E. PIPE BETWEEN BENDS, IF A LESSER DROP IS DESIRED, MIN. 4.8" FOR 4" PIPE; 6.9" FOR 6" PIPE; USE 11.25" BENDS.
- MARK 5 - CHECK VALVE.
- MARK 6 - CHECK VALVE.
- MARK 7 - CHECK VALVE.
- MARK 8 - CHECK VALVE.
- MARK 9 - CHECK VALVE.
- MARK 10 - CHECK VALVE.
- MARK 11 - MAGNETIC TYPE METERS, WITH 304 S.S. METER BODY AND FLANGES, NEOPRENE LINER AND 316 S.S. FLUSH TYPE ELECTRICAL SHIELDS, OR APPROVED EQUAL.
- MARK 12 - SUMP PUMP, 1/2" DIA. CO. PUMPED FROM W/OUT/VALVE, 24" V., D.C. POWER SUPPLY, AUTOMATIC CHECK VALVE, 3/2", OR APPROVED EQUAL.
- MARK 13 - SUMP PUMP - HIGH HEAD, TSURUMI MODEL 50P5F42Z55, 1 HP., 115 V., AC, 60 HZ., 1 PH.

**GENERAL NOTES:**

- ALL PIPE AND FITTINGS SHALL BE DUCTILE IRON, CERAMIC EPOXY UNDED POLYETHYLENE (CPVC) OR APPROVED EQUAL.
- RESISTOR ALL MECHANICAL JOINT FITTINGS WITH METALIC GRANS OR APPROVED EQUAL.
- ALL WALL PIPES SHALL BE GROUDED WITH EPOXY NON-SHINK GROUT AT WALLS AFTER COMPLETION OF INSULATION.
- ON EXISTING SEWER FORCE MAINS, METERS SHALL BE INSTALLED ON A BRASS WORKED AROUND THE EXISTING MAIN WHICH WILL THEN SERVE AS BRASS (PREVIOUS INSERTION OF ISOLATION VALVE).
- ALL REPAIRS AND SWITCHES SHALL BE MOUNTED AWAY FROM WALLS.



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



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

**REINFORCEMENT SCHEDULE**

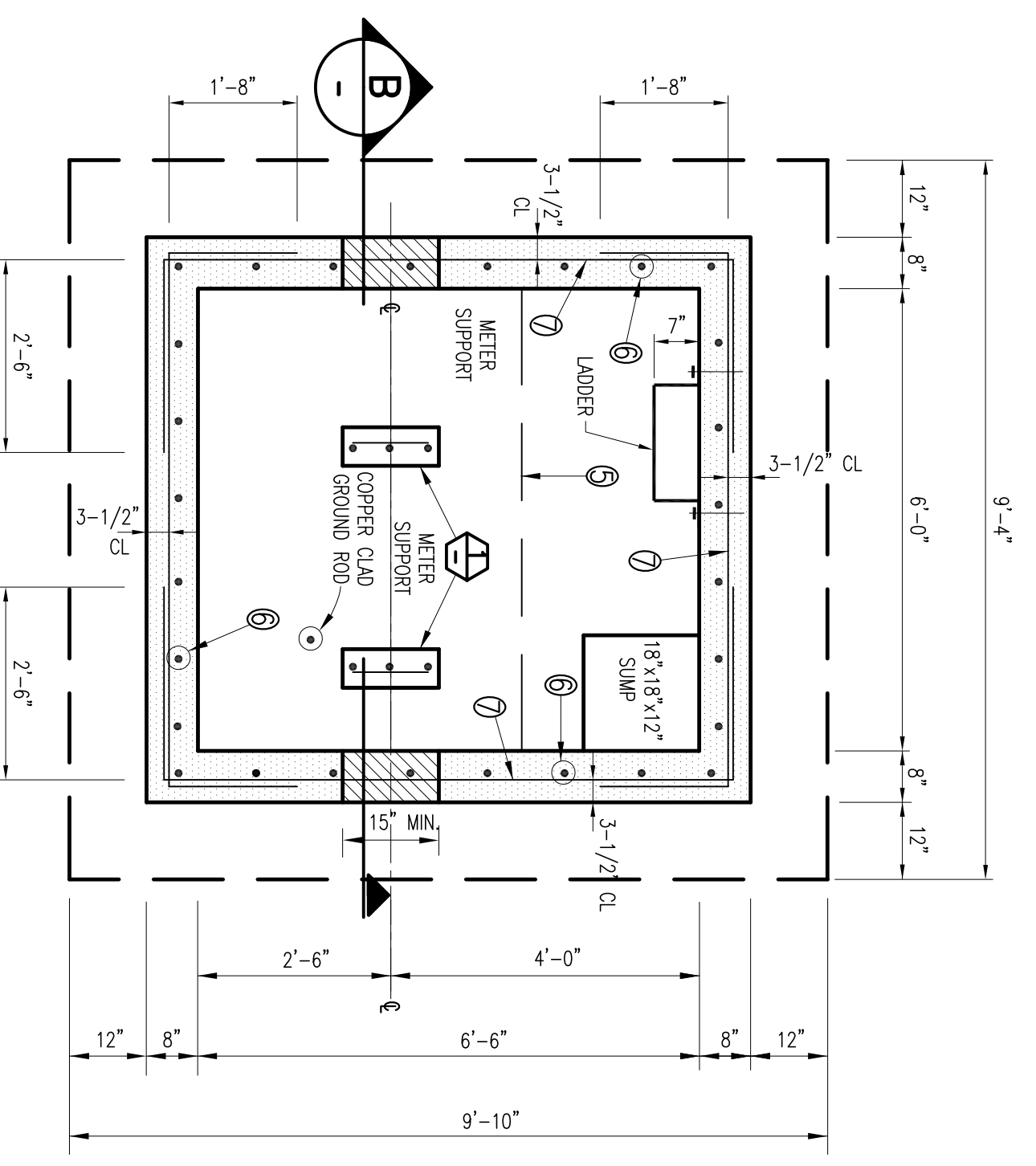
- 1 - 4 #5 T&B
  - 2 - 2 #5 @ 4" T&B
  - 3 - #4 @ 12" T&B
  - 4 - 5 #5 T&B
  - 5 - #4 @ 12" EA. W/1 T&B
  - 6 - #4 @ 12" VERT.
  - 7 - #5 @ 10" HORIZ.
  - 8 - 3 #4 @ 9"
  - 9 - 4 #4
- TOP SLAB  
 BOTTOM SLAB  
 WALLS  
 PIPE SUPPORT

**NOTES ABOUT THE USE OF THIS DESIGN GUIDE:**

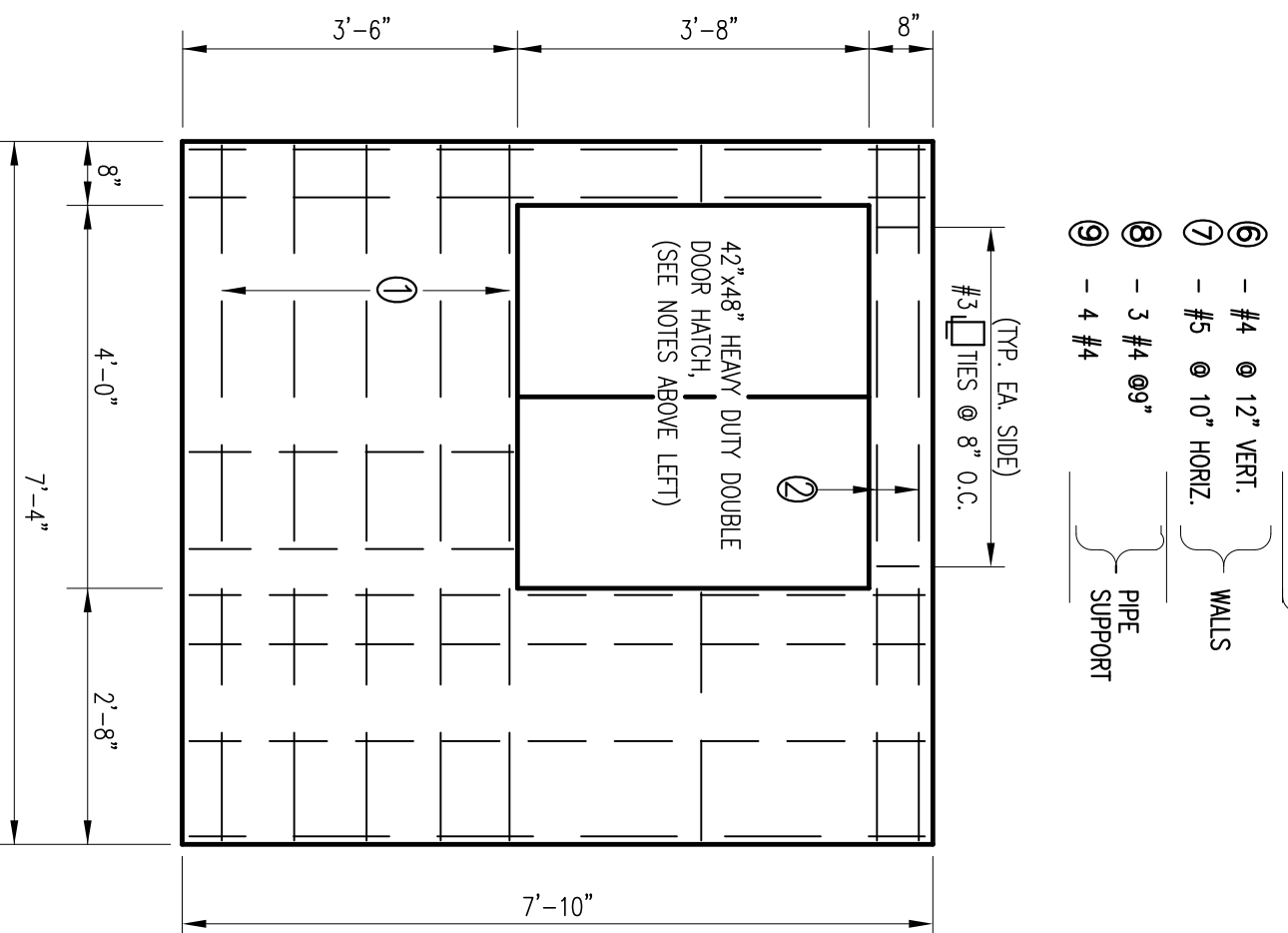
- THIS GUIDE REFLECTS THE MINIMUM DEPARTMENT DESIGN REQUIREMENTS. USER SHALL VERIFY THE INFORMATION SHOWN HERE TO MAKE HIS DESIGN COMPLY WITH ALL APPLICABLE CODES AND STANDARDS. SPECIAL ATTENTION MUST BE PAID TO GENERAL NOTE NO. 4.
- THE DEPARTMENT HAS THE RIGHT TO CALL FOR ADDITIONAL REQUIREMENTS.
- THE COMPLETE SUBMITTAL FOR EACH METERING STATION MUST INCLUDE, BESIDES THIS SHEET MS-2, ELECTRICAL SHEETS E-1, E-2, AND E-3.
- FOR LARGER METER SIZES (8" TO 36") A VENTURI AND MAGNETIC METER ARE REQUIRED (SEE SEWER METER STATION SHEET MS-1).

**NOTES ABOUT VAULT HATCH:**

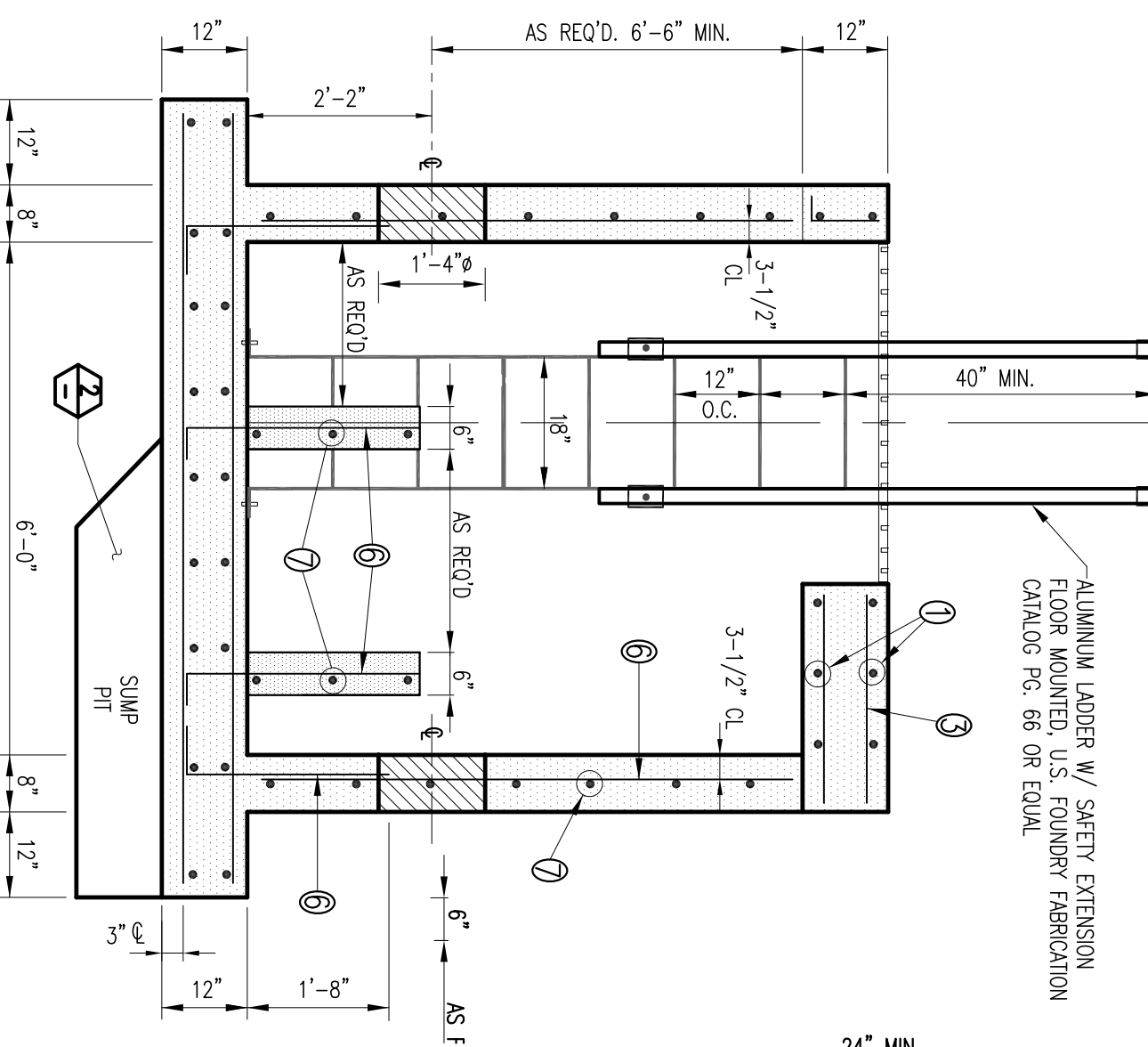
- DOUBLE DOOR HATCH, 42" x 48" ALUMINUM, HEAVY DUTY, U.S. DOUBLE HATCH, THROUGH FRAME, W/NO. 53 CONNECTION, S.S. VERTICAL COMPRESSION SPRINGS, W/COVER LOCK IN THE OPEN POSITION, S.S. ACCESSORIES AND FLUSH CAST ALUMINUM DROP HANDLE DOORS SHALL HAVE A WATERPROOF S.S. SWIM LOCK OPERATED BY A REMOVABLE KEY FROM THE OUTSIDE AND BY A FIXED HANDLE INSIDE.
- PER MANUFACTURER, U.S. FOUNDRY (OR APPROVED EQUAL), THESE HATCHES ARE INTENDED FOR USE ON OR-SHIELD LOCATIONS THAT MAY, OCCASIONALLY, RECEIVE AHS10 H-20 WHEEL LOADS.



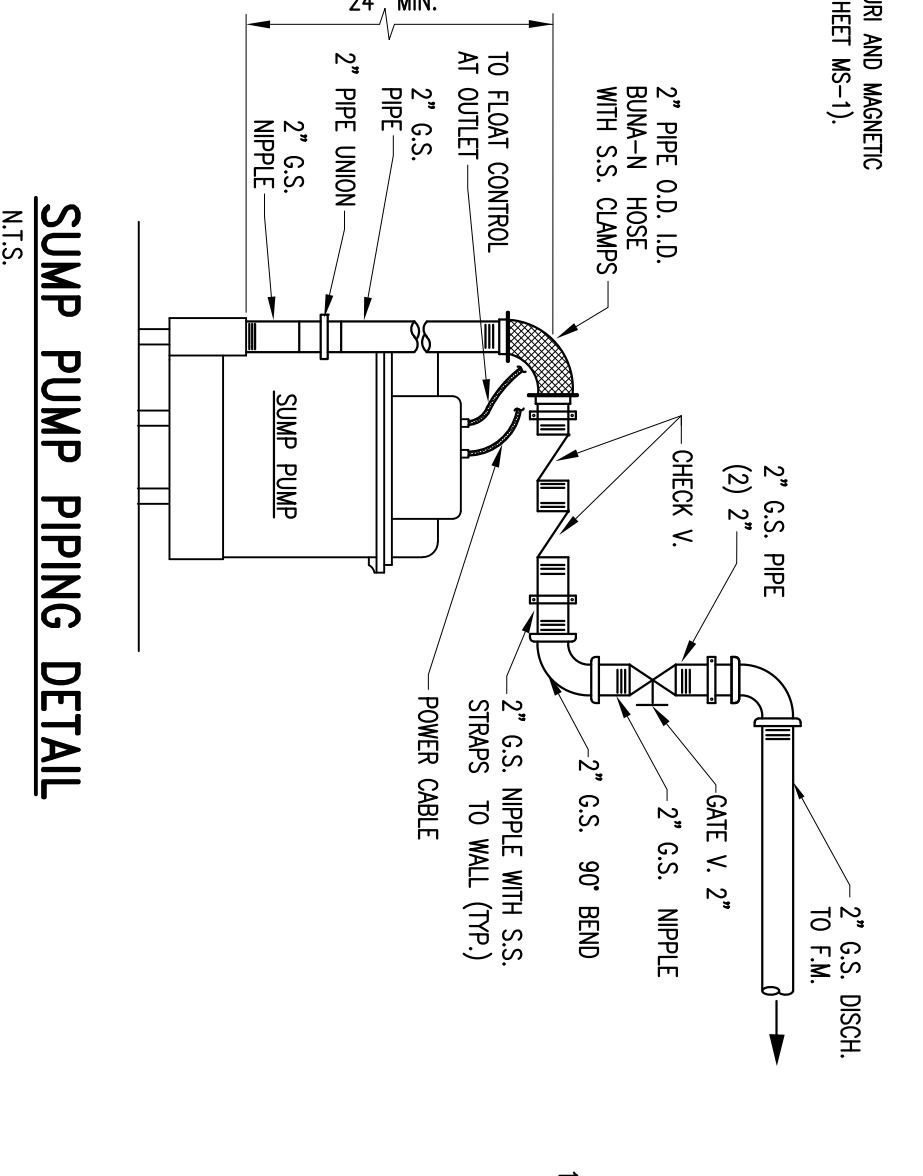
**PLAN/VAULT**  
 SCALE: 1/2"=1'-0"



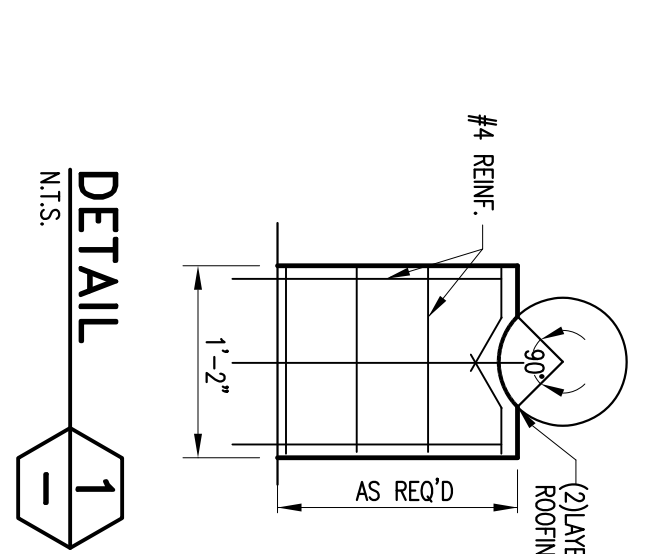
**PLAN/VAULT COVER**  
 SCALE: 1/2"=1'-0"



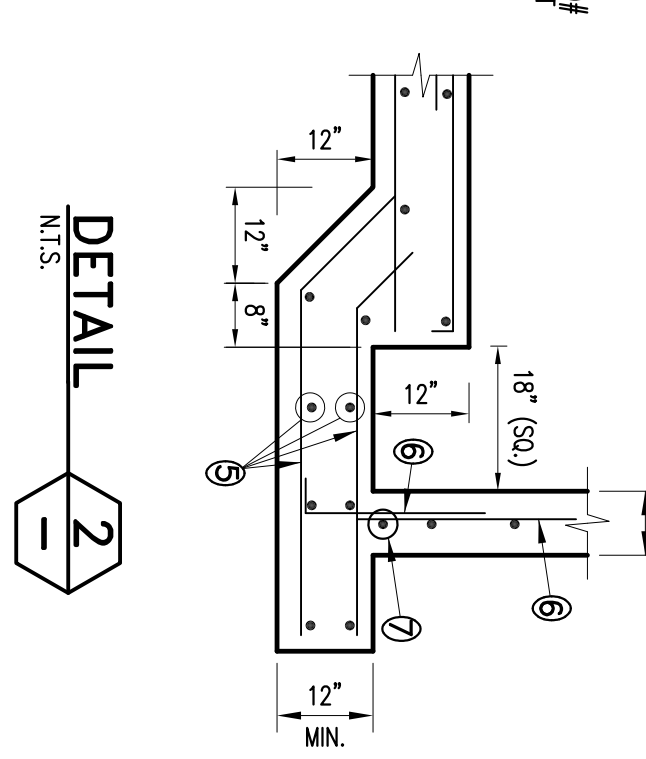
**SECTION B-B**  
 SCALE: 1/2"=1'-0"



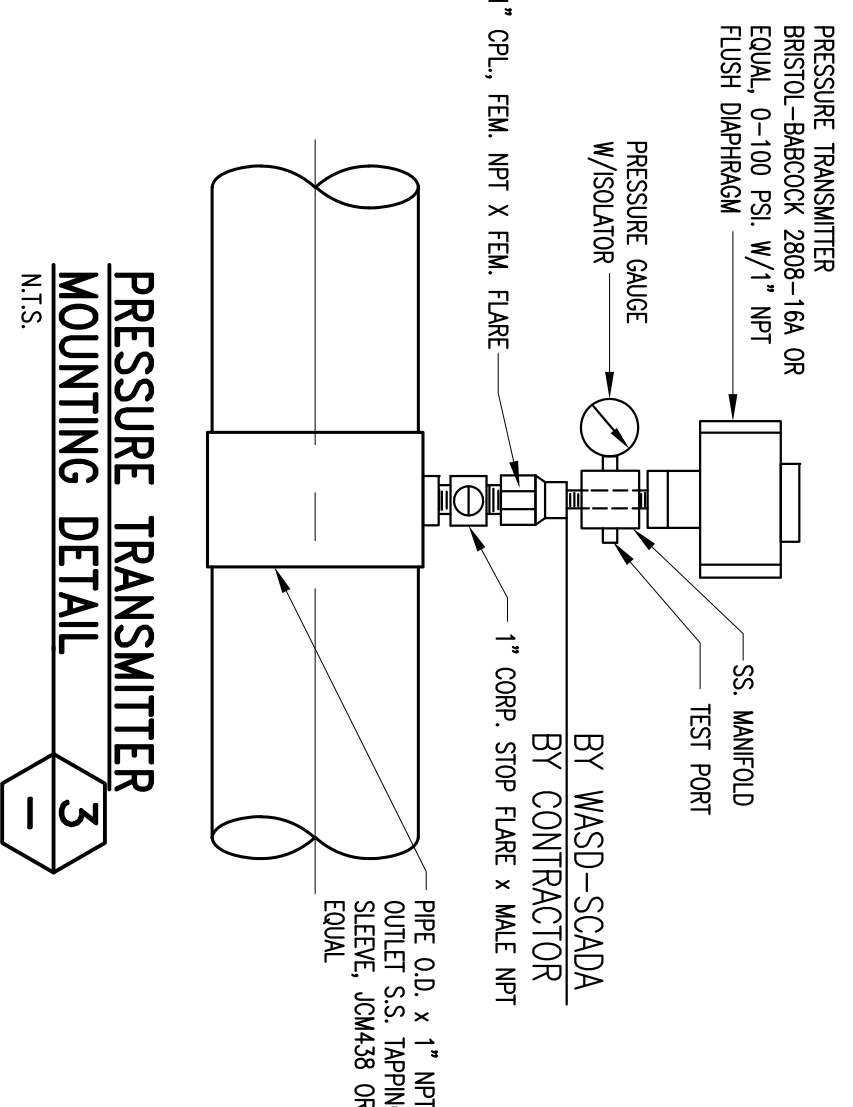
**SUMP PUMP PIPING DETAIL**  
 N.T.S.



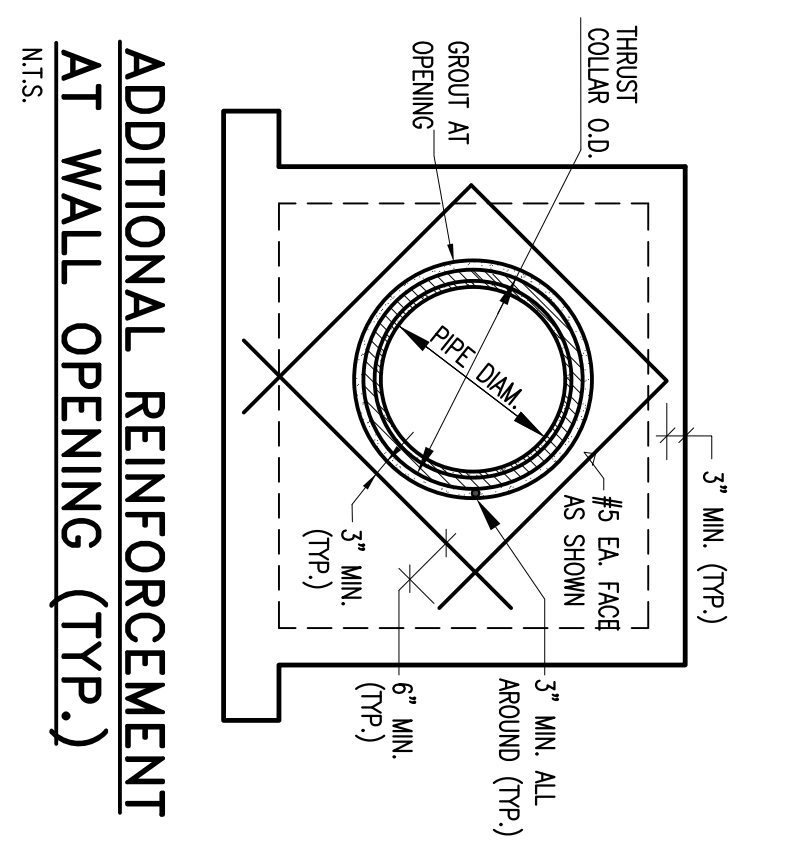
**DETAIL 1**  
 N.T.S.



**DETAIL 2**  
 N.T.S.



**PRESSURE TRANSMITTER MOUNTING DETAIL**  
 N.T.S.



**ADDITIONAL REINFORCEMENT AT WALL OPENING (TYP.)**  
 N.T.S.

**DRAWING HISTORY**

| RELEASED FOR | DATE | BY |
|--------------|------|----|
| REVISION 00% |      |    |
| REVIEW 00%   |      |    |
| PERMIT       |      |    |
| BD           |      |    |
| AS-BUILT     |      |    |

**REVISIONS**

| DESCRIPTION | DATE | BY |
|-------------|------|----|
|             |      |    |

**APPROVALS**

| PROJECT MGR. / AS | CHECKED / LB |
|-------------------|--------------|
| DESIGNED / AS     | DRAWN / M.P. |
| OWNER ENGINEER    |              |
| SECTION HEAD      |              |
| UNIT HEAD         |              |

**FILE NAME:** MS-2-RWG  
**DATE:** OCT. 17, 2016  
**SCALE:** AS NOTED  
**SHEET:** MS-2  
**DWG. No.:** S-26405-D