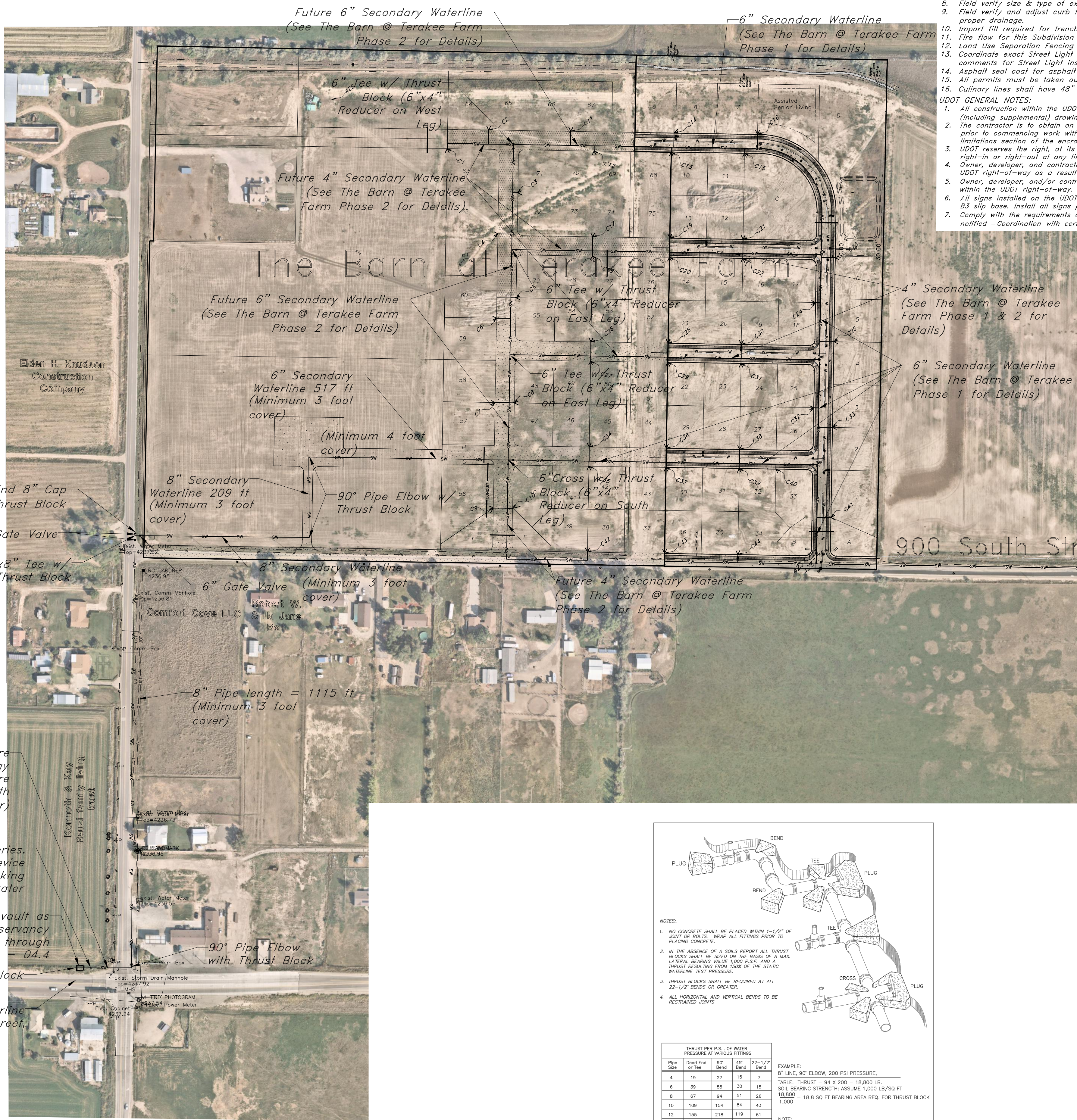
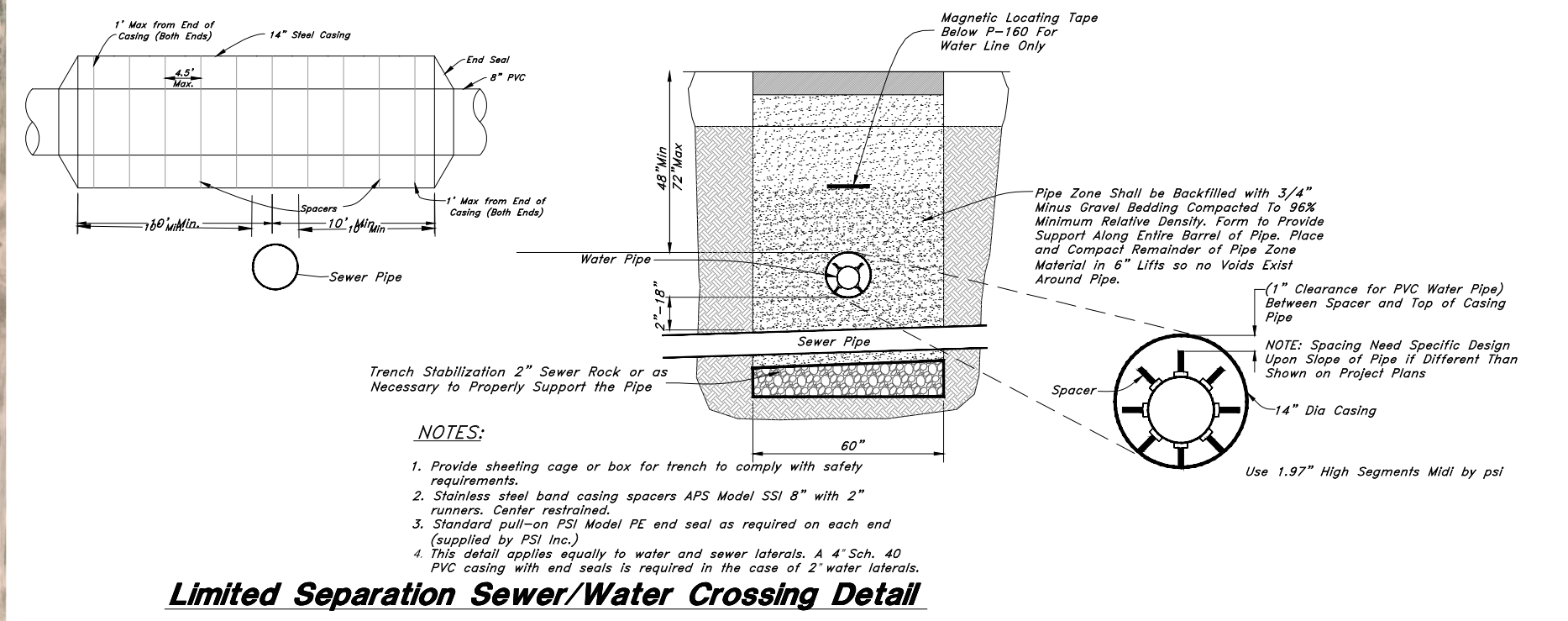
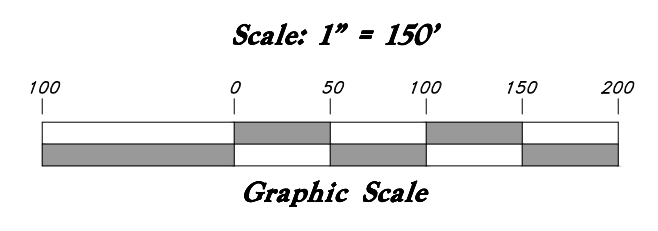
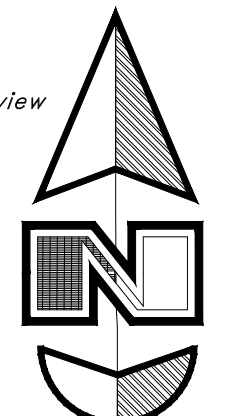


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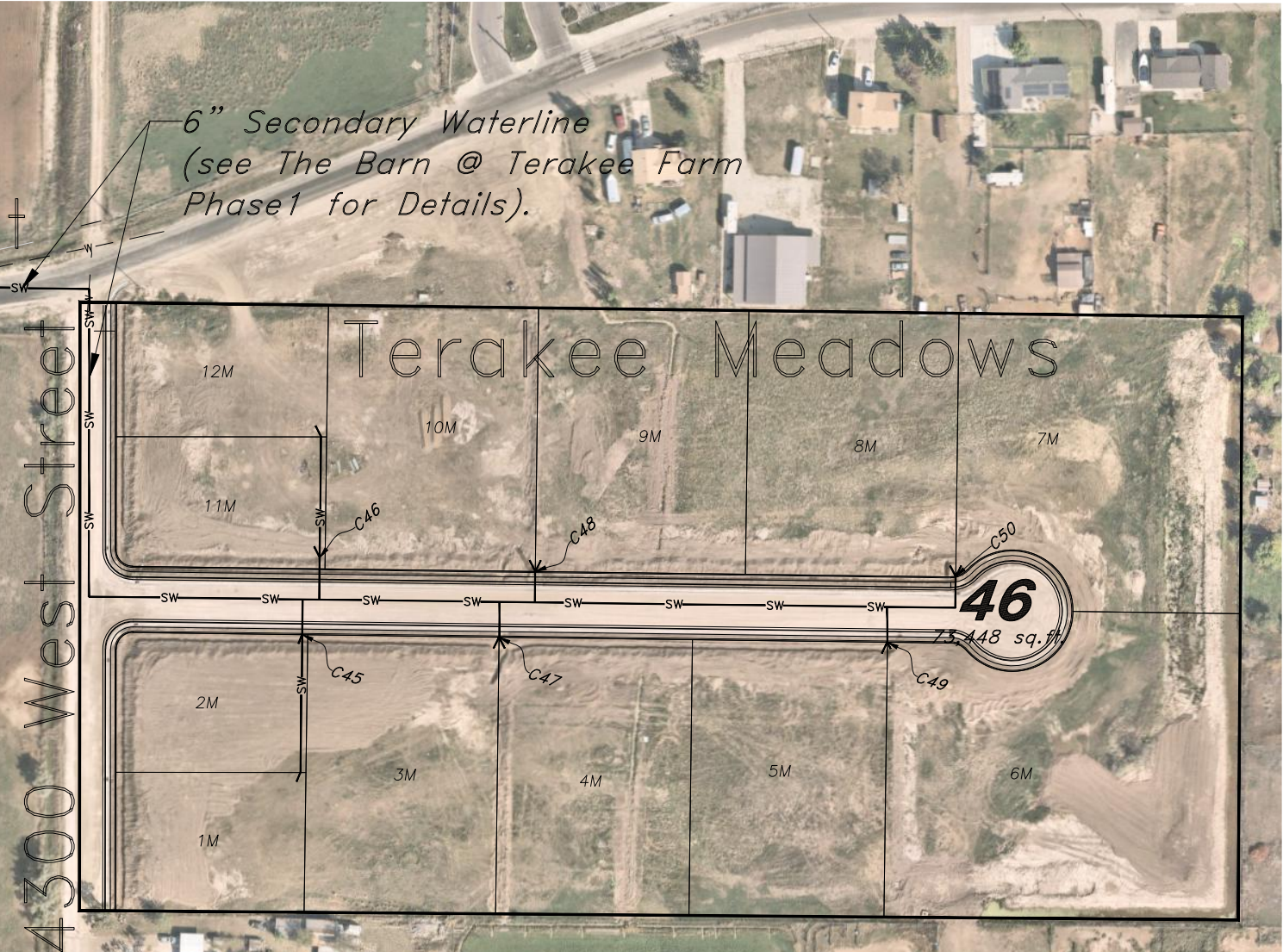
February 14th, 2022



- GENERAL NOTES:**
- All construction within the UDOT right-of-way shall conform to the most current UDOT Standard (including supplemental) drawings and specifications.
 - All construction on Secondary Waterlines and Services to meet or exceed Weber Basin Water Conservancy District Standards and Specifications.
 - Contractor to Verify Vault Dimensions and Pipe Filling sizes prior to Construction, Contractor should Submit Shop drawings for review.
 - All secondary water piping in public roads to be purple in color (36" min. cover).
 - Verify the Depth & Location of all utility crossings & connections prior to their Construction.
 - Contractor is responsible for Looping Culinary and Secondary Waterlines to Maintain depth of cover and separation between gravity fed utility lines.
 - Saw Cut existing Asphalt to expose a smooth clean edge and a minimum 1 foot of undisturbed road base from under existing asphalt.
 - Field verify size & type of exist. utilities prior to construction of Waterline.
 - Field verify and adjust curb to maintain a minimum of 1.5% and a maximum of 4.0% cross slope or overlay existing asphalt to ensure proper drainage.
 - Import fill required for trenches within the Right of Way unless on site material is approved by UDOT with proper testing.
 - Fire flow for this Subdivision shall be 1000 GPM.
 - Land Use Separation Fencing will be required along the East Boundary of the Subdivision.
 - Coordinate exact Street Light locations with West Haven City and the Street Light installation with Rocky Mountain Power. Contractor to review comments for Street Light installation process with West Haven City.
 - Asphalt seal coat for asphalt preservation to be coordinated with UDOT.
 - All permits must be taken out with UDOT and Weber County prior to any work on in existing public right of ways.
 - Culinary lines shall have 48" minimum cover



Limited Separation Sewer/Water Crossing Detail



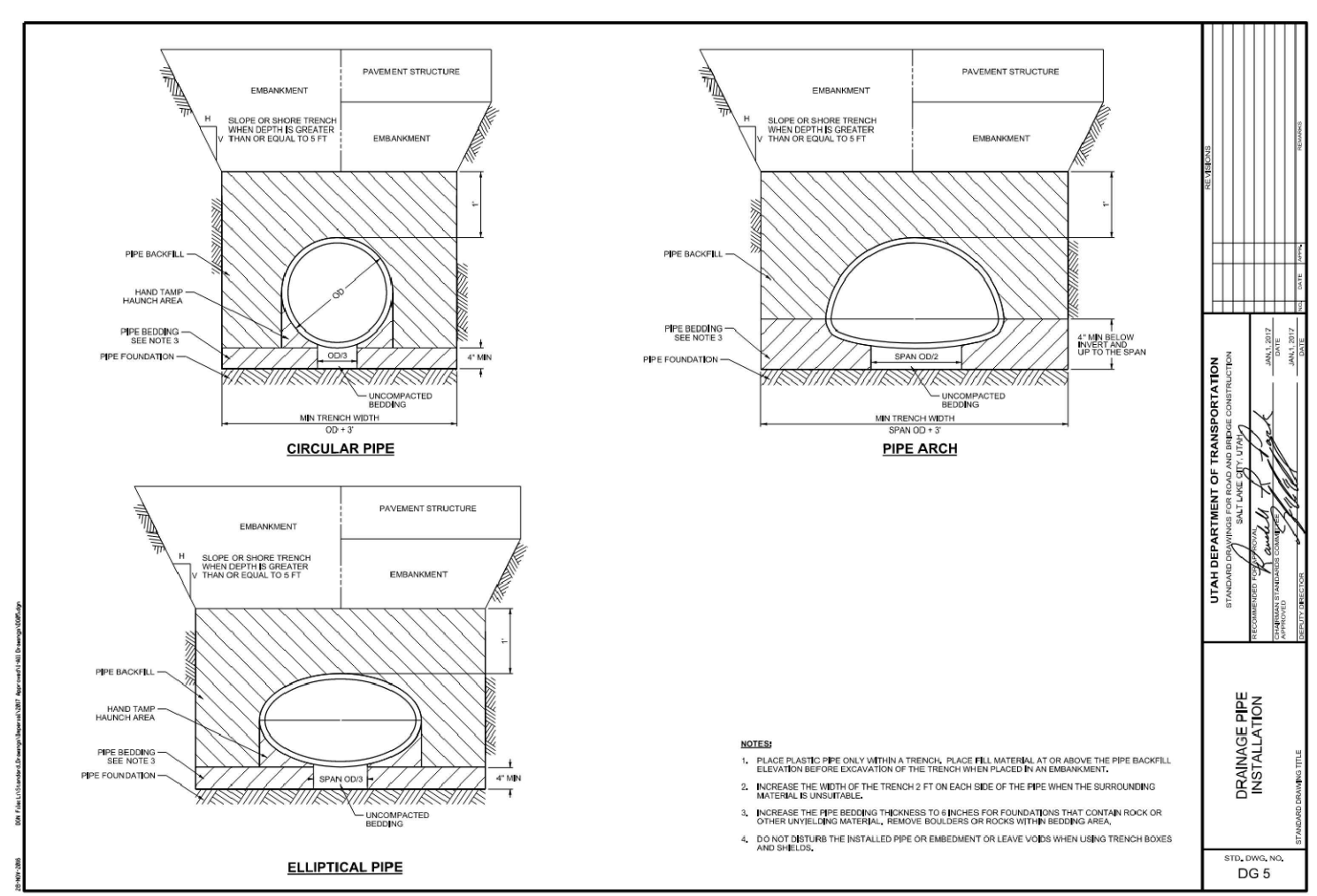
NOTES:

- NO CONCRETE SHALL BE PLACED WITHIN 1-1/2" OF JOINT OR BENDS. MAKE ALL FITTINGS PROOF TO PLACING CONCRETE.
- IN THE ABSENCE OF A SOIL REPORT ALL THRUST BLOCKS SHALL BE SIZED ON THE BASIS OF A MAX. LATERAL BEARING VALUE 1,000 P.S.F. AND A THRUST BEARING FROM 50% OF THE STATIC AVERAGE BEST PRESSURE.
- THRUST BLOCKS SHALL BE REQUIRED AT ALL 22-1/2" BENDS OR GREATER.
- ALL HORIZONTAL AND VERTICAL BENDS TO BE RESTRAINED JOINTS.

THRUST PER P.S.F. OF WATER PRESSURE AT VARIOUS FITTINGS				
Pipe Size	90° Bend	45° Bend	22-1/2° Bend	Example
4	19	27	15	7
6	39	55	30	15
8	67	94	51	26
10	109	154	84	43
12	155	218	119	61
14	210	298	161	82
16	272	383	209	106
18	351	494	269	137
20	434	611	333	169
24	623	878	478	244

EXAMPLE: 8" LINE, 90° ELBOW, 200 PSI PRESSURE, TABLE: THRUST = 94 X 200 = 18,800 LB. SOIL BEARING STRENGTH ASSUME: 1,000 LB./SQ. FT. 18,800 = 18.8 SQ. FT. BEARING AREA REQ. FOR THRUST BLOCK 1,000

NOTE: IN USING THE ADJACENT TABLE, USE THE MAX. INTERNAL PRESSURE ANTICIPATED (I.E., HYDROSTATIC TEST PRESSURE, POSSIBLE SURGE PRESSURE, ETC.)

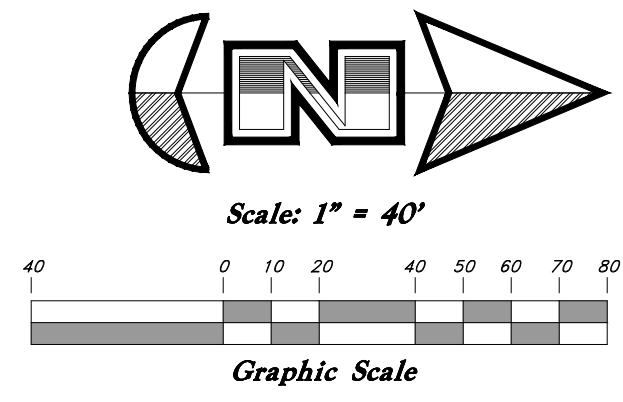
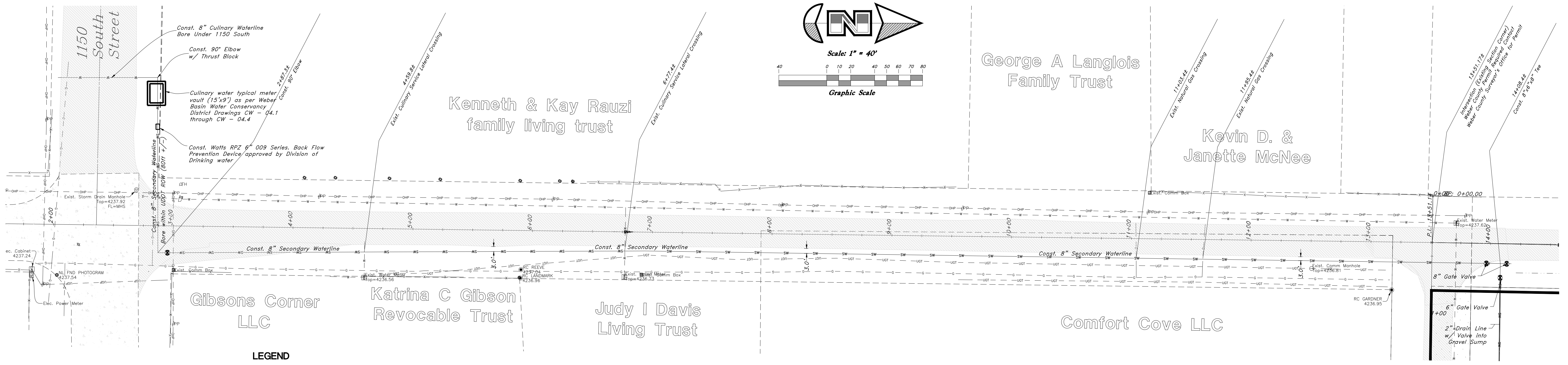


- Temp End 8" Cap Tee w/ Thrust Block
- 8" Gate Valve
- 8"x6"x8" Tee w/ Thrust Block
- 8" Secondary Waterline (Bore Under UDOT Right of Way 185 ft Total 80ft Min Bore Length (Minimum 3 foot cover)
- Const. Watts RPZ 6" 009 Series, Back Flow Prevention Device approved by Division of Drinking water
- Culinary water typical meter vault as per Weber Basin Water Conservancy District Drawings CW - 04.1 through CW - 04.4
- Const. 90° Elbow w/ thrust block
- Const. 8" Culinary Waterline Bore Under 1150 South Street.

GREAT BASIN ENGINEERING

5746 SOUTH 1475 EAST OGDEN, UTAH 84403
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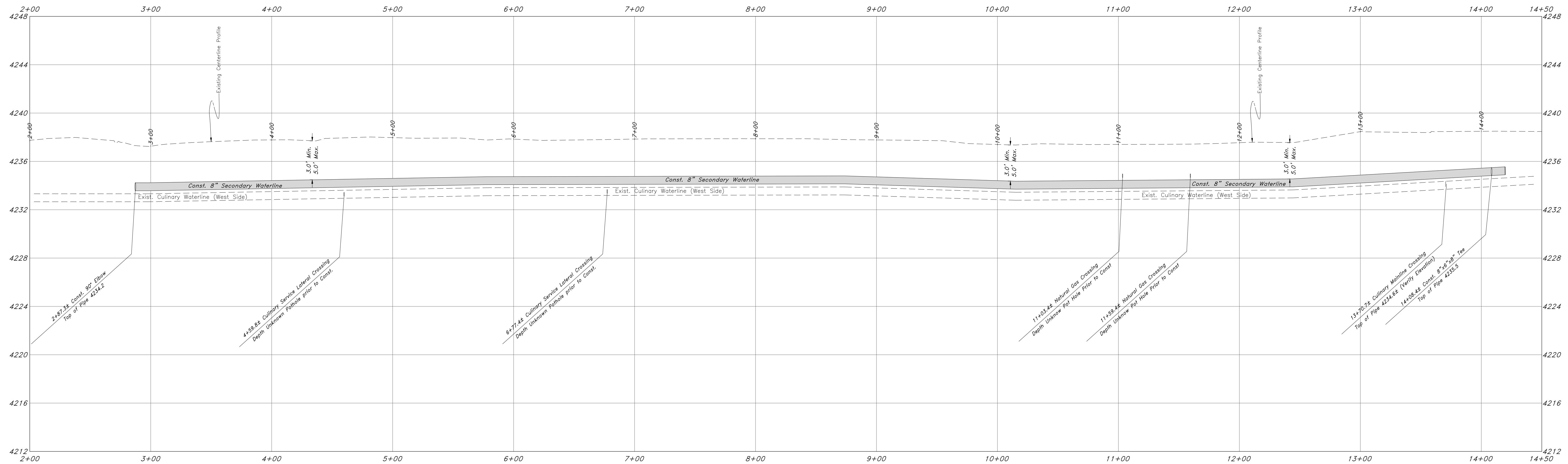
Secondary Waterline Extension
The Barn at Terakee Farms No. 1
 Approx. 900 South 4500 West
 Weber County, Utah
 A part of Section 17, T6N, R2W, S16&18M, U.S. Survey



LEGEND

- | | | | | | |
|---------|-------------------------|--------|-------------------|--------|--------------------------|
| -C- | Centerline | TA | Top of Asphalt | C.M.P. | Corrugated Metal Pipe |
| -UGT- | Buried Telephone line | EA | Edge of Asphalt | R.C.P. | Reinforced Concrete Pipe |
| -OHT- | Overhead Telephone line | NG | Natural Ground | CONC | Edge of Concrete |
| -OHP- | Overhead Power line | LG | Lip of Gutter | RWALL | Retaining Wall |
| -UGP- | Power line | SP | Service Pole | SMH | Sewer Manhole |
| -S- | Sanitary Sewer line | LP | Light Pole | WV | Water Valve |
| -W- | Culinary Water line | PP | Power Pole | CB | Catch Basin |
| -G- | Gas line | TP | Telephone Pole | DV | Diversion Box |
| -SD- | Storm Drain line | FH | Fire Hydrant | TC | Top of Curb |
| -SW- | Secondary Waterline | DIT | Flowline of Ditch | SW | Sidewalk |
| -LD- | Land Drain line | TOE | Toe of Slope | GAS | Gas line Marker |
| -IW- | Irrigation Waterline | TOP | Top of Slope | GUY | Guy Wire |
| -X-X-X- | Fence | CO | Cleanout | BLDG | Building Corner |
| ● | Power Pole | TC | Fence | NG | Natural Ground |
| ○ | Post | DMH | Drain Manhole | Fire | Fire Hydrant |
| ○ | Water Meter | DMH | Drain Manhole | LP | Light Pole |
| ○ | Gas Meter | x99.00 | Spot Elevation | ○ | Power Pole w/guy |
| ○ | Telephone Box | ○ | Contour | ○ | Deciduous Tree |
| ○ | Sewer Manhole | ○ | Asphalt | ○ | Coniferous Tree |
| ○ | Drain Manhole | ○ | Concrete | | |
| ○ | Water Manhole | ○ | Building | | |
| ○ | Cleanout Box | ○ | Catch Basin | | |

4700 West Street



GREAT BASIN ENGINEERING
 574 SOUTH 1475 EAST, BOULEVARD, UTAH 84403
 NEW 801-994-4451 FAX 801-994-7543
 WWW.GREATBASINENGINEERING.COM

Secondary water network - Extension
 Profile Sheet
The Barn at Terakee Farms No. 1
 Approx. 900 South 4500 West
 Weber County, Utah
 A part of Section 17, T6N, R2W, SLB&M, U.S. Survey

15 Oct, 2021
 SHEET NO. **1**
 16N719

GENERAL NOTES:

1. GENERAL:
THE INFORMATION ON THESE DRAWINGS SHOULD BE CONSIDERED GENERAL IN NATURE AND NOT NECESSARILY ALL INCLUSIVE. THIS DETAIL IS TO BE USED AS A GUIDE FOR DESIGN AND SHALL NOT BE USED FOR ANY SPECIFIC SITE OR PROJECT. PRIOR TO BIDDING OUT ANY PROJECT AFFECTING EXISTING OR PROPOSED DISTRICT-OWNED FACILITIES, THE CUSTOMER SHALL SUBMIT TO THE DISTRICT COMPLETE SITE AND PROJECT SPECIFIC PLANS AND SPECIFICATIONS (COLLECTIVELY REFERRED TO AS "CONSTRUCTION DRAWINGS") FOR REVIEW AND APPROVAL. THE CONSTRUCTION DRAWING SUBMITTAL SHALL INCLUDE WRITTEN CERTIFICATION FROM THE CUSTOMER THAT THE CUSTOMER HAS THOROUGHLY REVIEWED THE SUBMITTAL, AND THAT THE CONSTRUCTION DRAWINGS MEET OR EXCEED DISTRICT REQUIREMENTS IN ALL ASPECTS, AND IF NECESSARY, CLEARLY NOTING AND REQUESTING APPROVAL OF ANY AND ALL DEVIATIONS FROM DISTRICT SPECIFICATIONS. UNLESS NOTED OTHERWISE HEREIN, THE CUSTOMER SHALL PROVIDE ALL LABOR AND EQUIPMENT NECESSARY FOR A COMPLETE AND OPERABLE INSTALLATION.

2. CHANGES:
IT SHALL BE THE RESPONSIBILITY OF THE CUSTOMER TO PERFORM CONSTRUCTION AS PER DISTRICT SPECIFICATIONS AND THE APPROVED CONSTRUCTION DRAWINGS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL BE APPROVED BY THE DISTRICT.

3. DISCREPANCIES:
PROJECT PLANS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES AND SPECIFICATIONS IN THE EVENT OF A CONFLICT BETWEEN THE TWO. DISTRICT ENGINEER SHALL BE NOTIFIED IN REGARD TO THE CONFLICT PRIOR TO EXECUTION.

4. EXISTING FACILITIES:
THE CUSTOMER SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING DISTRICT IMPROVEMENTS, WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE. ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CUSTOMER'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED TO ORIGINAL OR BETTER CONDITION TO THE SATISFACTION OF THE DISTRICT AT THE EXPENSE OF THE CUSTOMER.

5. EASEMENTS:
THE CUSTOMER SHALL BE REQUIRED TO PROVIDE ALL RIGHTS-OF-WAY AS DEEMED NECESSARY BY THE DISTRICT PRIOR TO CONSTRUCTION, AND TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN SAID RIGHTS-OF-WAY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO VEHICLES AND EQUIPMENT, LIMITS OF TRENCH EXCAVATION, AND EXCAVATED MATERIAL AND BACK FILL STORAGE. IF THE CUSTOMER REQUIRES ADDITIONAL CONSTRUCTION EASEMENTS, IT SHALL BE SOLELY THE CUSTOMER'S RESPONSIBILITY TO OBTAIN SUCH EASEMENTS FROM INDIVIDUAL PROPERTY OWNERS.

6. SEISMIC:
VAULT SHALL NOT BE LOCATED WITHIN 100 FEET OF A KNOWN ACTIVE EARTHQUAKE FAULT SCARP. CONCRETE PAD AND ANCHOR BOLTS FOR SUPPORT OF POWER CONTROL BOX SHALL BE ADEQUATELY SIZED FOR SEISMIC OVERTURNING. IN AREAS WHERE VAULT FLOOR IS WITHIN 5 FEET OF GROUND WATER LEVEL, CUSTOMER SHALL PROVIDE CALCULATIONS VERIFYING VAULT FLOATATION WILL NOT OCCUR DUE TO SEISMICALLY INDUCED LIQUIFACTION.

6. CONCRETE:
DESIGN OF CONCRETE MUST MEET APPLICABLE REQUIREMENTS FOR SITE AND LOADING CONDITIONS EXPECTED. CUSTOMER SHALL SUBMIT COMPLETE CONCRETE AND REINFORCING STEEL DESIGN PREPARED BY A LICENCED PROFESSIONAL ENGINEER TO THE DISTRICT FOR APPROVAL PRIOR TO COMMENCING WITH CONSTRUCTION.

7. PIPELINE CONSTRUCTION:
LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS AND ALONG HORIZONTAL ALIGNMENT AS DEFINED IN THE APPROVED CONSTRUCTION DRAWINGS. CUSTOMER SHALL NOT DEVIATE FROM APPROVED ALIGNMENT WITHOUT WRITTEN APPROVAL OF REQUESTED CHANGE BY THE DISTRICT ENGINEER. CUSTOMER SHALL ALSO VERIFY IN THE FIELD ALL DIMENSIONS SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS AGAINST THOSE DIMENSIONS ACTUALLY STAKED ON THE GROUND. IF ANY DISCREPANCY IS DISCOVERED, CUSTOMER SHALL DISCONTINUE ALL WORK AND IMMEDIATELY NOTIFY THE DISTRICT ENGINEER OF SAID DISCREPANCY. CONSTRUCTION WORK SHALL ONLY RESUME UPON RESOLVING SAID DISCREPANCY.

8. PIPE DEFLECTIONS:
ANGLES IN THE PROJECT PIPING MAY BE MADE USING COMBINATIONS OF BEND FITTINGS AS SPECIFIED IN THE DISTRICT APPROVED CONSTRUCTION DRAWINGS AND/OR PIPE DEFLECTIONS SO LONG AS DEFLECTIONS ARE WITHIN THE PIPE MANUFACTURERS RECOMMENDED LIMITS.

9. PIPE CONNECTIONS:
SPECIFIC MECHANICAL LAYOUT DETAILS OF PIPE CONNECTIONS, AIR-VAC STRUCTURES, DRAIN STRUCTURES, ETC., CAN BE ALTERED TO INCLUDE OTHER TYPES OF JOINT RESTRAINTS THAN THOSE THAT ARE SHOWN ON THE DRAWINGS. USE OF VICTAULIC COUPLINGS, FLANGED ADAPTERS, MEGA-LUG BOLTING, LOCKING MECHANICAL JOINTS AND FLANGED END PIPE MAY BE USED IN COMBINATIONS AS NEEDED TO AID IN CONSTRUCTION. CUSTOMER SHALL SUBMIT A MECHANICAL LAYOUT DETAIL TO THE DISTRICT FOR APPROVAL PRIOR TO CONSTRUCTION.

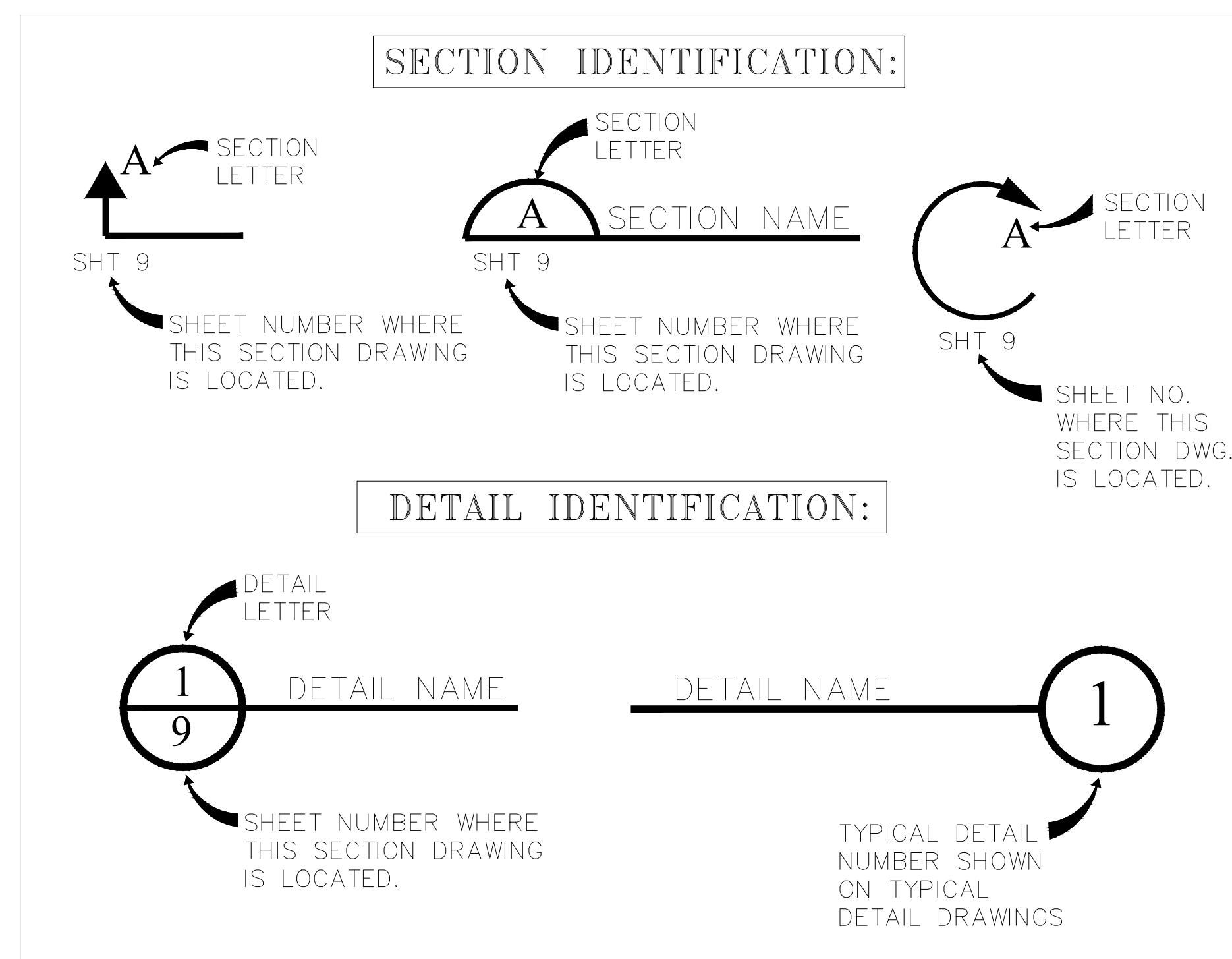
10. THRUST RESTRAINT:
CUSTOMER SHALL PROTECT ADJACENT PRESSURE PIPELINES AND PROVIDE TEMPORARY THRUST RESTRAINT AS NECESSARY DURING CONSTRUCTION. ALL NEW PRESSURE PIPE AND FITTINGS SHALL HAVE THRUST RESTRAINED JOINTS, THRUST BLOCKS, THRUST TIES, OR OTHER APPROVED RESTRAINT MECHANISMS, WHICH SHALL BE ADEQUATE FOR THE GREATER OF 1.5 TIMES THE OPERATING PRESSURE OR A TEST PRESSURE OF 200 PSI. SEEP RINGS SHALL NOT BE CONSIDERED AS A THRUST RESTRAINT. VAULT MUST BE ENGINEERED WITH A THRUST RESTRAINT TO HOLD STATIC HEAD. CUSTOMER SHALL SUBMIT RESTRAINT CALCULATIONS PREPARED BY A LICENSED PROFESSIONAL ENGINEER TO THE DISTRICT FOR APPROVAL PRIOR TO COMMENCING WITH CONSTRUCTION.

11. PRESSURE REDUCING VALVES
PRESSURE REDUCING VALVES (PRVs) ARE THE RESPONSIBILITY OF THE CUSTOMER. IF DESIRED, CUSTOMER IS TO COORDINATE DESIGN REQUIREMENTS WITH PROJECT AND DISTRICT ENGINEER FOR APPROVAL. PRV IS TO BE INSTALLED ON MAIN AND BYPASS LEG AND OVERALL VAULT DESIGN WILL NEED TO BE MODIFIED TO INCORPORATE VALVES.

12. AS-CONSTRUCTED DRAWINGS:
ACTUAL ARRANGEMENT OF EQUIPMENT, QUANTITIES, AND/OR DIMENSIONS MAY VARY FROM THAT SHOWN DEPENDING UPON PROJECT SPECIFIC REQUIREMENTS AND SPECIFIC MATERIALS SELECTED. FOLLOWING CONSTRUCTION AND TESTING BUT PRIOR TO OPERATION, CUSTOMER SHALL PROVIDE THE DISTRICT WITH ONE (1) FULL PDF SET OF COMPLETE STRUCTURAL, MECHANICAL, AND ELECTRICAL AS-CONSTRUCTED DRAWINGS OR A COPY IN AUTO-CAD OR OTHER DISTRICT APPROVED ELECTRONIC FORMAT.

13. SUBMITTAL REVIEW:
SUBMITTALS FOR ALL APPURTENANCES ASSOCIATED WITH THE DISTRICT'S EXISTING OR PROPOSED FACILITIES SHALL BE REVIEWED AND APPROVED BY THE DISTRICT PRIOR TO PURCHASE OR INSTALLATION. THIS SHALL INCLUDE ALL ELECTRICAL EQUIPMENT, INSTRUMENTATION, PIPING, FITTINGS, AND MATERIALS.

SECTION AND DETAIL IDENTIFICATION:

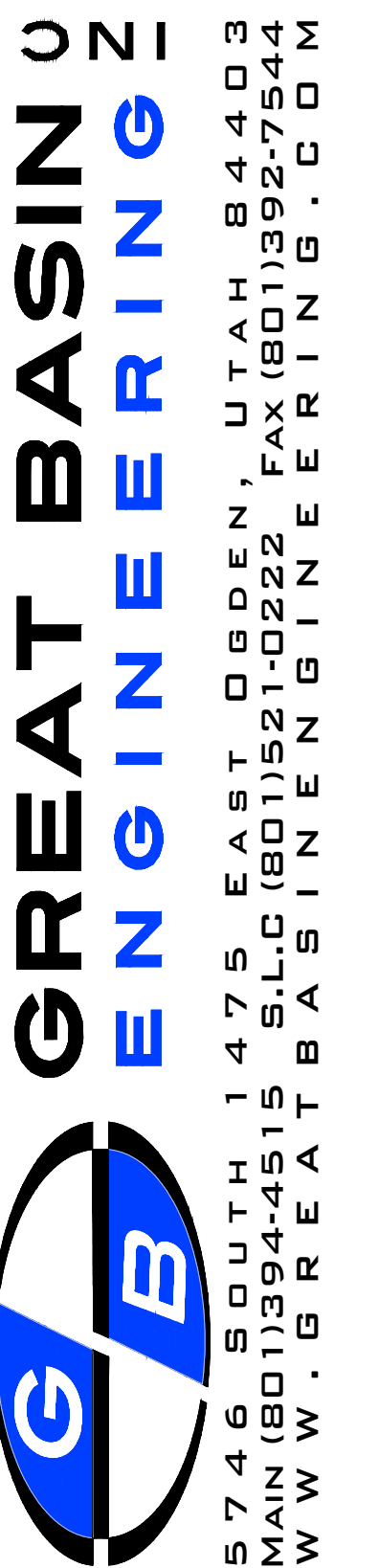


CULINARY WATER
TYPICAL METER VAULT

STANDARD DRAWING

CW-04.1

APPROVED BY:



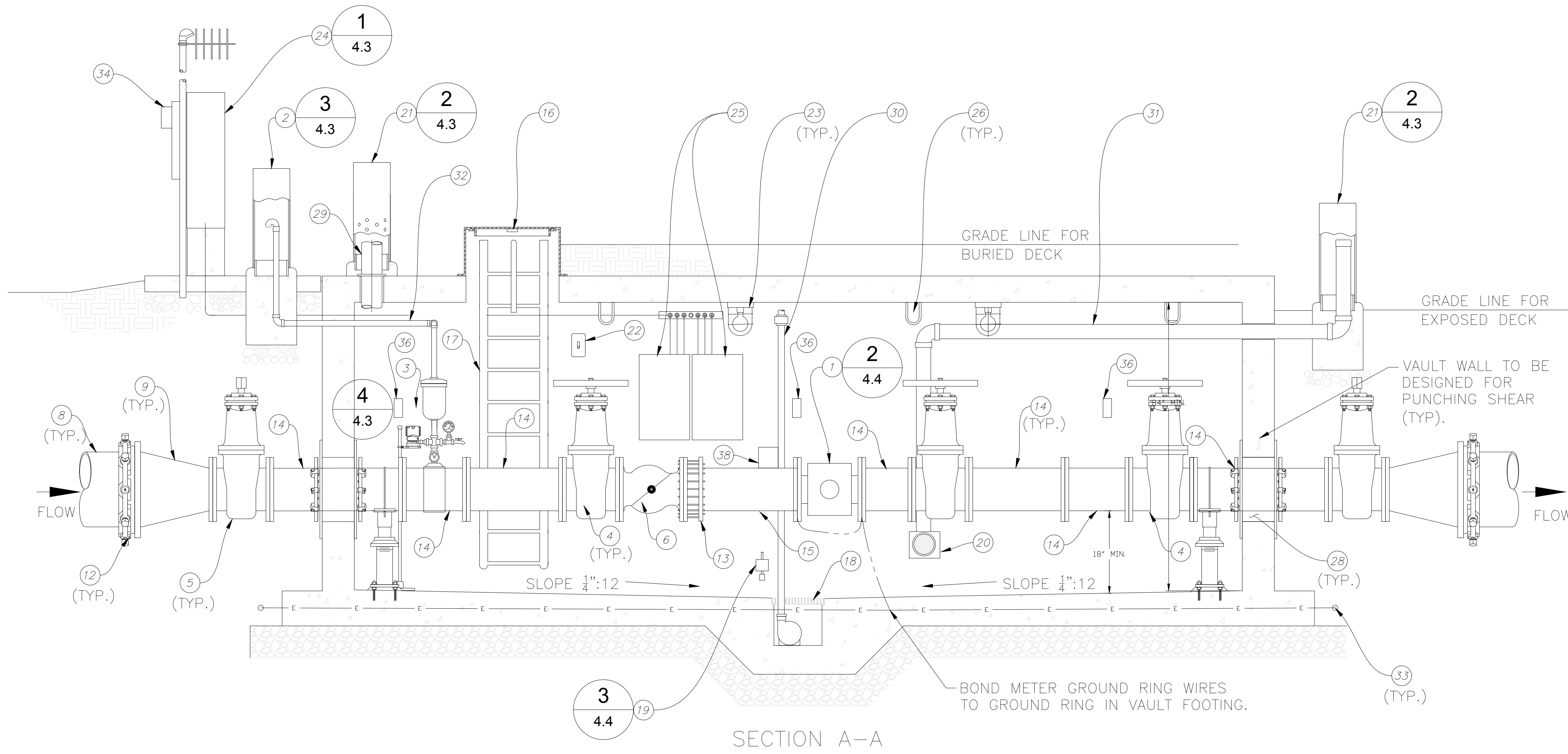
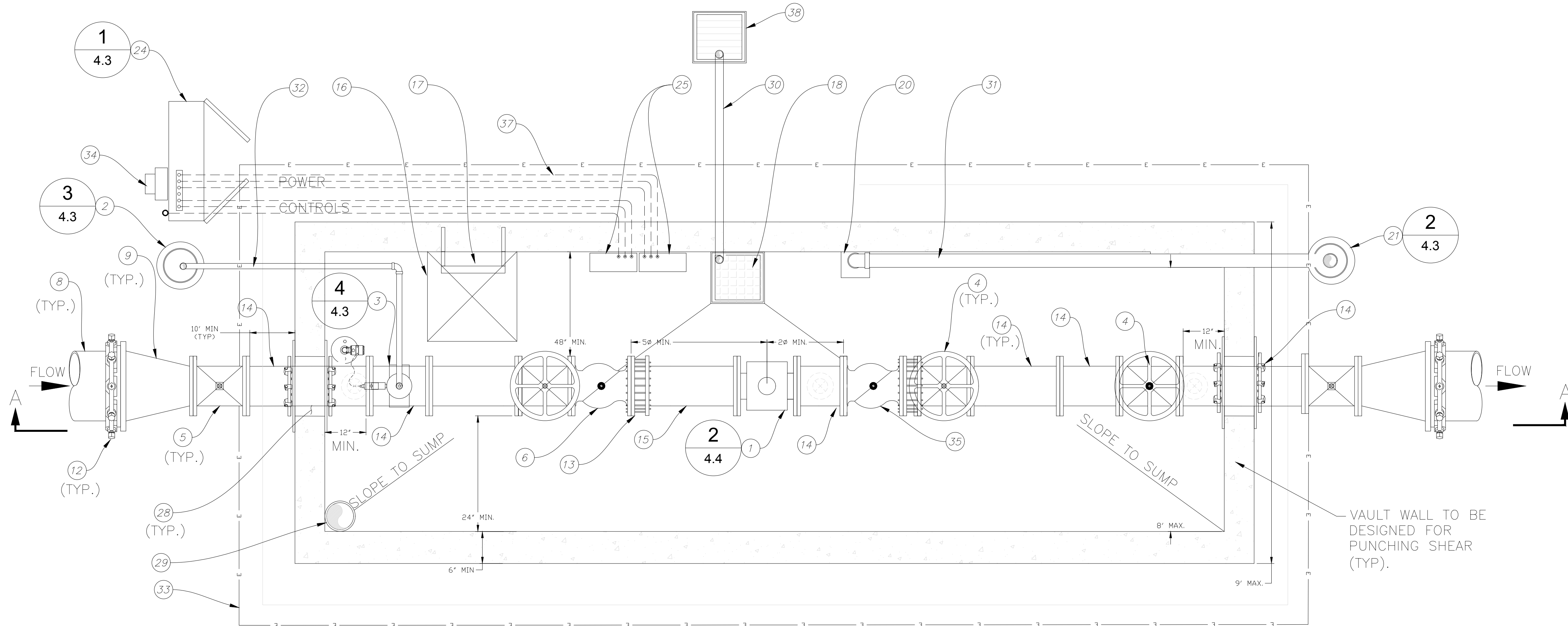
ISSUE DATE
03/2021

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OF 4

LIST OF MATERIALS		
ITEM NO.	QTY.	DESCRIPTION
1	2	MAGNETIC FLOW METER 6". SEE NOTE 2. PART NUMBER 8750WDMW1A1FTSA060CA1DA1M4G1DWR10
2	1	AIR VAC VENT STRUCTURE DETAIL
3	1	COMBINATION AIR-VAC. RELIEF VALVE AND PRESSURE TRANSDUCER ASSEMBLY
4	4	FLXFL GATE VALVE W/HANDWHEEL OPERATOR. SEE NOTE 3.
5	2	FLXFL GATE VALVE W/SQUARE OPERATING NUT, VALVE BOX, & CONCRETE COLLAR. SEE NOTE 3.
6	2	FLXFL CHECK VALVE.
7	1 (or 0)	FLXFL PLUG VALVE W/MOTOR ACTUATOR TO RTU (ELIMINATE IF NOT NEEDED).
8	-	C900 DR-14 PVC PIPE (OR EXISTING).
9	2	MJxFL REDUCER (MJ ON LARGE SIDE, FL ON SMALL SIDE)
10	2	FLxFLxFL TEE
11	2	FLXFL 90° BEND
12	2	MECHANICAL JOINT RESTRAINT
13	4	RESTRAINED FLANGE COUPLER ADAPTER
14	6	FLXFL SPOOL (LENGTH VARIES)
15	2	FLxPE SPOOL (LENGTH VARIES)
16	1	36"x36" WATER-TIGHT ALUMINUM ACCESS HATCH. SEE NOTE 6.
17	1	ACCESS LADDER WITH EXTENDING SAFETY POST.
18	1	18"x18"x18" SUMP W/GRATE & SUMP PUMP.
19	1	FLOAT SWITCH GEMS 01702
20	1	SWITCH FOR LIGHTS AND FAN
21	2	VENT PIPE STRUCTURE
22	1	LIGHT SWITCH FOR FAN AND LIGHTS
23	2	VAPOR TIGHT LED LIGHT FIXTURE
24	1	NEMA 4X STAINLESS STEEL ENCLOSURE W/DOUBLE DOORS & PADLOCK HASP. SEE NOTES 5 & 8. 3 POINT LOCKING HANDLE 316 SS
25	2	NEMA 4X STAINLESS STEEL ENCLOSURES. SEE NOTE 8. 316 SS 16"x12"x6"
26	AS REQ'D	CAST-IN EYE-BOLTS SIZED & LOCATED FOR REMOVAL OF COMPONENTS DURING MAINTENANCE.
27	AS REQ'D	PIPE SUPPORT
28	2	LINK-SEAL TRIPAC W/ THRUST RESTRAINT- STEEL PLATE WITH MEGALUG STYLE JOINT RESTRAINT OR APPROVED EQUAL ON INSIDE & OUTSIDE OF THE VAULT.
29	1	8" MIN. SCH. 80 PVC FRESH AIR INTAKE. SEE NOTE 7.
30	1	2" HDPE DRAIN PIPE W/CHECK VALVE ROUTED TO OUTSIDE SUMP OR STORM DRAIN.
31	1	4" MIN. SCH. 80 PVC EXHAUST VENT. SEE NOTE 7.
32	1	2" MIN. SCH. 80 PVC AIR-VACUUM RELIEF DISCHARGE PIPING.
33	1	2/O COPPER GROUND RING IN VAULT FOOTING. SEE NOTE 9.
34	1	POWER METER. COORDINATE W/POWER COMPANY & DISTRICT.
35	2	PRESSURE REDUCING VALVES ROSEMOUNT 2088 0-88 PSI SET TO 200 PSI PART NUMBER 2088G3S22A1M5B4DW
36	2	120 VOLT 20 AMP GFCI OUTLETS AT 48" ABOVE FLOOR
37	6	200 FEET CABLE
38	1	OUTLET FOR SUMP

NOTES:

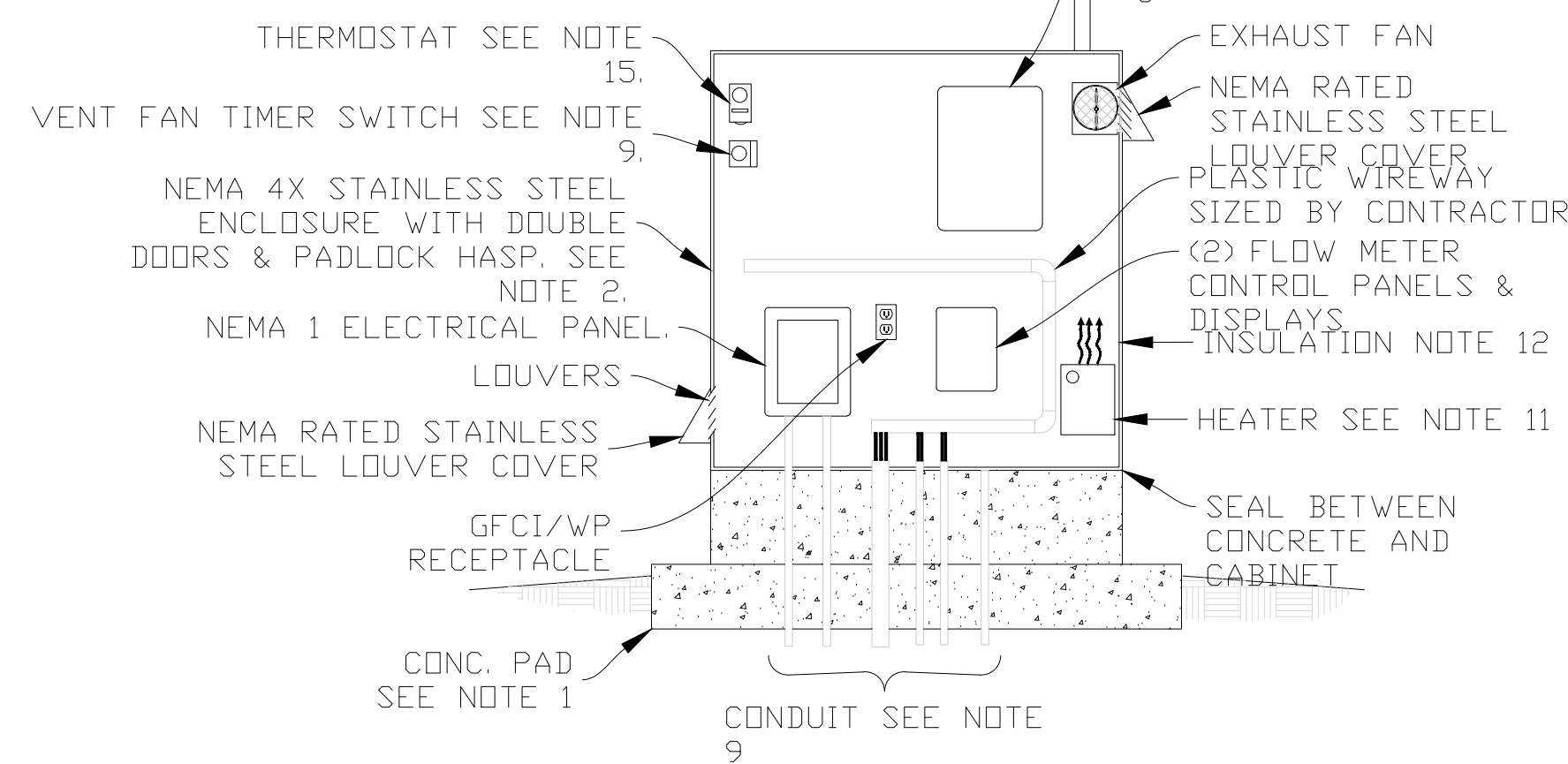
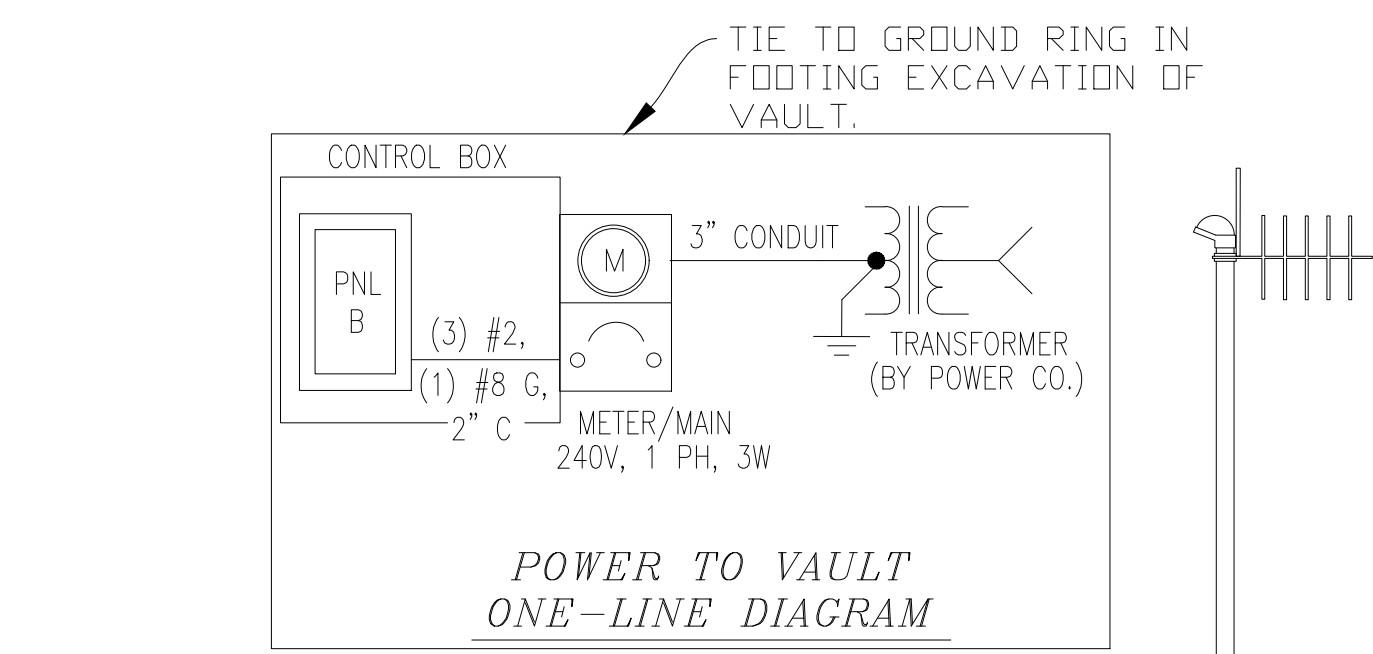
- ALL EXPOSED PIPE INSIDE THE VAULT SHALL BE PRIMED AND PAINTED WITH TWO (2) COATS OF EPOXY PAINT. COLOR TO BE ROYAL BLUE.
- MAG METERS TO BE ROSEMOUNT 8750W OR ENDRESS-HAUSER PROMAG W400 MODELS. METERS SHALL INCLUDE THE FOLLOWING: TEFLON LINER (PTFE) AND ENCAPSULATION IP68, STAINLESS STEEL GROUND RINGS, ENCAPSULATED CABLE IN SUFFICIENT LENGTH TO REACH REMOTE MOUNTED CONVERTER WITH NO SPLICING, AND NSF DRINKING WATER CERTIFICATION. REMOTE WALL MOUNTED CONVERTER TO BE MOUNTED IN PLC ENCLOSURE. GROUND CONNECTIONS AND MAKEUP PER MANUFACTURER'S RECOMMENDATIONS. METER TO BE 4-20 MA HART OUTPUT AND PULSE OUTPUT COMPATIBLE. ENSURE 5Ø OF STRAIGHT PIPE (AND FITTINGS/VALVES ETC) UPSTREAM AND 2Ø DOWNSTREAM OF METER.
- GATE VALVES SHALL BE USED WHEN THE MAIN AND BYPASS LINES ARE 12" DIAMETER OR SMALLER. BUTTERFLY VALVES SHALL BE USED ON LINES 14" DIAMETER OR LARGER. WHEN BUTTERFLY VALVES ARE USED ON THE BYPASS SIDE, THE VALVES SHALL BE MOVED TO THE OPPOSITE SIDE OF THE 90° BENDS AND 12" LONG FLXFL SPOOL PIECES SHALL BE INSTALLED BETWEEN THE TEES AND 90° BENDS.
- VAULT SHALL BE SUPPLIED WITH POWER FOR ALL EQUIPMENT WHERE SHOWN AND/OR NOTED, FOR A COMPLETE AND OPERABLE INSTALLATION. CUSTOMER/CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE POWER COMPANY AND PROVIDING POWER SOURCE.
- PLC AND ASSOCIATED TELEMETERING EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR IN COORDINATION WITH THE DISTRICT. CONTRACTOR SHALL FURNISH ABOVE GRADE CONTROL BOX AS SHOWN AND NOTED, AND SHALL INSTALL ALL NECESSARY WIRING FROM CONTROL BOX TO VAULT, LEAVING ONE (1) PULL STRING IN SPARE CONDUITS.
- ABOVE GRADE ACCESS HATCH SHOWN FOR CLARITY. ACCESS HATCH SHALL BE DESIGNED AND LOCATED ACCORDING TO SPECIFIC PROJECT REQUIREMENTS.
- EXHAUST FAN AND AIR INTAKE AND EXHAUST PIPING SHALL BE ADEQUATELY SIZED TO PROVIDE THE REQUIRED NUMBER OF AIR EXCHANGES IN ACCORDANCE WITH THE GOVERNING CODE.
- ALL CONNECTIONS TO ELECTRICAL ENCLOSURES TO BE BY A WATER-TIGHT 3-PIECE GASKETED HUB. ALL PENETRATIONS THROUGH CONCRETE AND ELECTRICAL FITTINGS THAT ARE DIRECT BURIED SHALL BE PVC COATED GRC TO A MINIMUM OF 12 INCHES BEYOND THE OUTSIDE WALL OF THE VAULT. TAPED FITTINGS WILL NOT BE ALLOWED.
- GROUND RING TO BE TIED TO TWO SEPARATE REBARS IN VAULT FOOTING. PLC POWER PANEL GROUND AND FLOW METER GROUNDS TO BE BONDED TO GROUND RING.
- INSTALL LINK-SEAL WITH BOLT HEADS INSIDE VAULT. BOLTS SHALL BE STAINLESS STEEL.
- THE DISTRICT APPROVED SCADA CONTRACTORS THAT ARE ALLOWED TO WORK ON THIS SCADA SYSTEM ARE:
MB AUTOMATION
SKM
- ALL MATERIAL SUBJECT TO WB/C/D DISCRETION
PLC ALLEN BRADLEY 1400 PART # (1766-L32AWAA) OR (1766-L32BWAA)
1762-IF4 ANALOG INPUT MODULE
1762-OF4 ANALOG OUTPUT MODULE
- RADIO
MICROWAVE DATA SYSTEMS (MDS)
(DEPENDS ON RADIO SURVEY)
LICENSED
MICROWAVE DATA SYSTEM RADIO SD09MDCESNNSN
LONG RANGE IP ETHERNET AND SERIAL, 900MHZ TRANSCEIVER MODEL, 928 960MHZ, ETHERNET PORT AND 2 SERIAL PORTS, AES 128 BIT ENCRYPTION AND MANAGED, FCC IC AND ETSI CE REGULATORY, STANDARD POWER MOUNTING, OPTIONAL 9710 A OR B EMULATION MODE.
- SPREAD SPECTRUM
MICROWAVE DATA SYSTEM RADIO TRANSNET 900
MDS EL805 HL SPREAD SPECTRUM XCVR (HARD CASE)



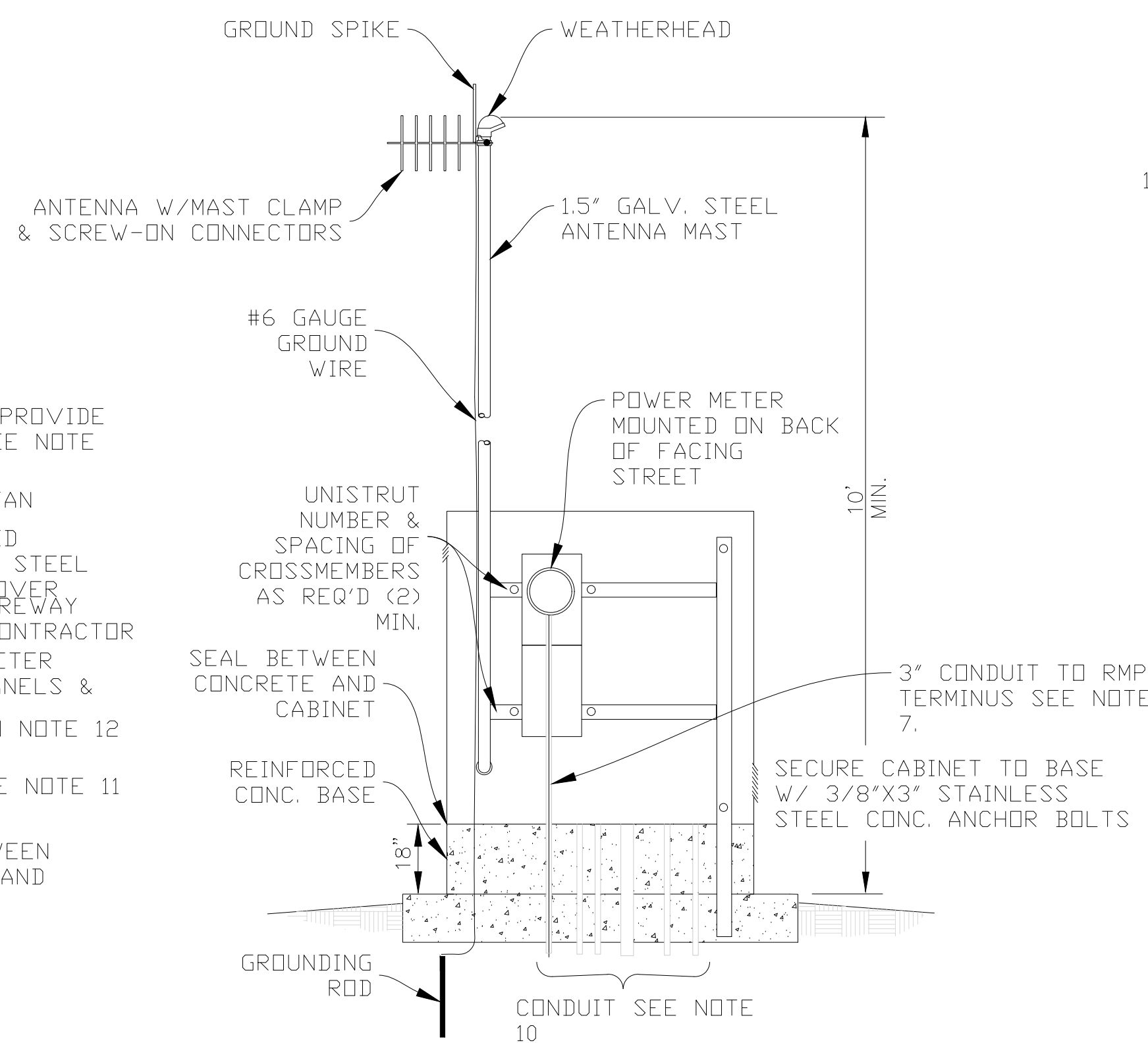
STANDARD DRAWING
 CULINARY WATER
 TYPICAL METER VAULT
 CW-04.2
 APPROVED BY:

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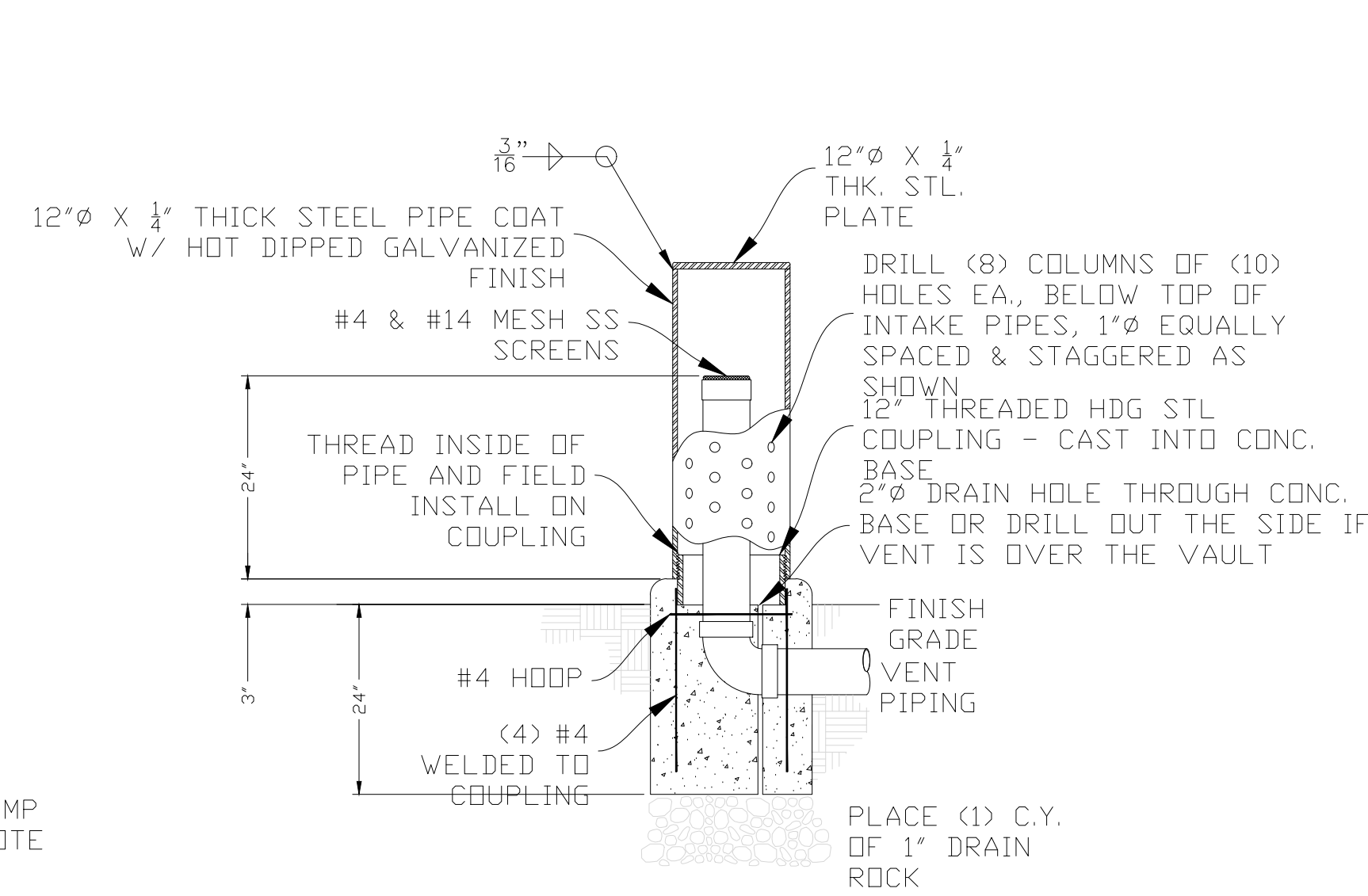
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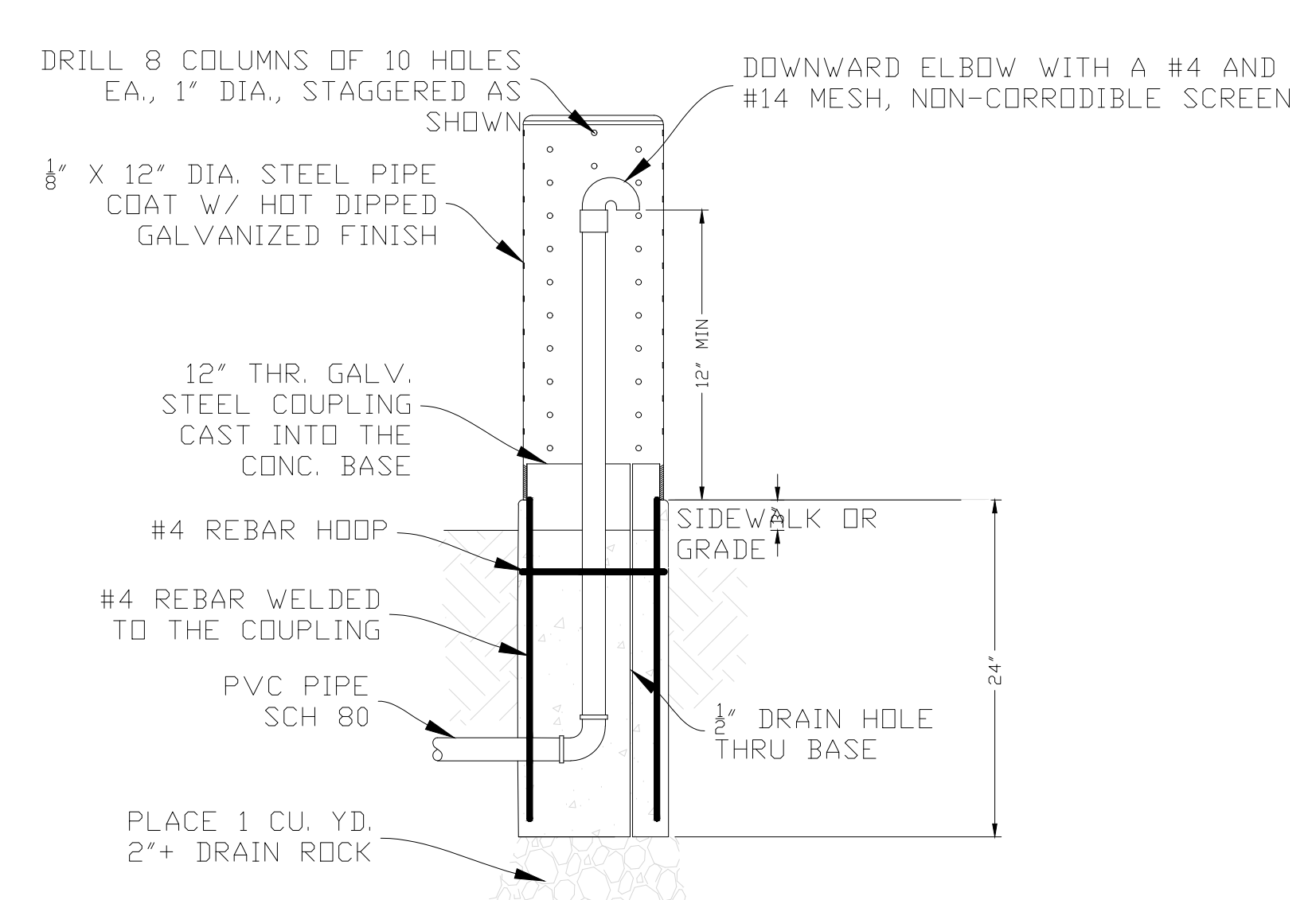
FRONT



BACK



2 VENT PIPE STRUCTURE DETAIL
NTS



3 AIR VAC VENT STRUCTURE DETAIL
NTS

NOTES:

- PROVIDE 6" THICK CONCRETE PAD EXTENDING 3' IN FRONT & 6' TO BACK & SIDES OF CABINET. RUN #4 REBAR 9" O.C. EACH WAY. SECURE CABINET TO PAD W/ (4) MIN. 1/2" DIA. x 6" LG. STAINLESS 304 SS SEISMIC RATED ANCHOR BOLTS W/ MIN. 3" EMBEDMENT. SLOPE GRADE TO DRAIN AWAY FROM SLAB.
- CONTRACTOR SHALL BE RESPONSIBLE TO SIZE ENCLOSURE FOR EQUIPMENT. ENCLOSURE SHALL BE 316 NEMA 4X STAINLESS STEEL, & SHALL HAVE DOUBLE DOORS W/ 3 POINT LOCKING HANDLE THAT WILL ACCEPT A PADLOCK. INCLUDE A BACK PANEL FOR ENCLOSURE.
- PROVIDE & INSTALL 24"x24"x12" HOFFMAN NEMA 1 ENCLOSURE W/BACKPLATE FOR PLC & RADIO.
- CONTRACTOR SHALL FURNISH AND INSTALL PLC, RADIO, ANTENNA & CONNECTIONS. CONTRACTOR SHALL PROVIDE GROUNDING ROD & GROUNDING CONDUIT ALONG ENCLOSURE STAND. CONTRACTOR SHALL PROVIDE TERMINAL STRIP FOR ALL CONNECTIONS TO PLC CABINET FROM FLOW METER CONVERTERS, PRESSURE TRANSDUCER, ALARM, ETC. PROVIDE 2 EACH TSP #16 AWG TO EACH FLOW METER CONVERTER (ONE FOR 4-20 mA-DC FLOW, ONE FOR PULSE TOTAL). ALSO PROVIDE RELAY FOR PULSE TOTAL.
- SEPARATE CONDUITS SHALL BE USED FOR POWER LINES & CONTROL/INSTRUMENTATION LINES.
- ALL ELECTRICAL CONDUITS IN VAULT SHALL BE GRC OR SCHEDULE 80 PVC.
- CONTRACTOR SHALL PROVIDE 3" CONDUIT FOR MAIN POWER FROM CONTROL BOX METER MAIN TO POWER COMPANY TERMINUS, WITH REQUIRED FITTINGS AND APPURTENANCES, AND SHALL PROVIDE A PULL STRING INSIDE CONDUIT. POWER COMPANY SHALL PROVIDE 120/240 VOLT SINGLE PHASE 100 AMP SERVICE (TO BE COORDINATED BY CUSTOMER AND CUSTOMER'S CONTRACTOR W/ POWER COMPANY AND DISTRICT).
- CONTRACTOR SHALL PROVIDE (2) 1" CONDUITS TO VAULT FOR FLOW METERS AND (1) #16 TSP IN 3/4" CONDUIT FOR 4-20 mA-DC SIGNAL FROM PRESSURE TRANSDUCER TRANSMITTER TO PLC. SEE DETAIL 2/D-5 FOR METER SPECIFICATION.
- CONTRACTOR SHALL PROVIDE (1) 20 AMP 1 PHASE CB & (3) #12 CONDUCTORS IN 3/4" CONDUIT FOR (2) VAPOR-TIGHT LED LIGHT FIXTURES INSIDE OF VAULT. INSTALL LIGHT SWITCH W/ WP COVER IN CLOSE PROXIMITY TO HATCH ENTRY. PROVIDE (1) 20 AMP 1 PHASE CB & (3) #12 CONDUCTORS IN 3/4" CONDUITS FOR (2) GFCI OUTLETS IN WEATHERPROOF ENCLOSURES AND IN-USE COVERS INSIDE OF VAULT. INSTALL OUTLETS & SWITCHES 4' MIN. ABOVE FLOOR. PROVIDE (1) 20 AMP 1 PHASE CB & (3) #12 WIRE IN 3/4" CONDUIT FOR SUMP PUMP W/NEMA 5-20R SINGLE RECEPTACLE OUTLET (LEVITON 5801-W) WITH IN-SERVICE COVER OVER SUMP FOR PUMP. PROVIDE (1) 20 AMP 1 POLE CB & (3) #12 WIRE IN 3/4" CONDUIT FOR EXHAUST FAN. PROVIDE TORK TIMER 1101 24-HOUR ADJUSTABLE TIMER SWITCH WITH 2 SETS OF ON/OFF PINS TO CYCLE THE FAN & LIGHTS ON FOR ONE HOUR INCREMENTS TWO TIMES PER DAY. PROVIDE BY-PASS FROM TIMER CONTROL FOR HATCH ACCESS LIGHT SWITCH. ALL OUTLETS, EXCEPT THE ONE FOR THE SUMP PUMP, TO HAVE GFCI PROTECTION.
- CONDUIT NUMBER & SIZE SHOWN ON DRAWING DETAIL ARE ONLY REPRESENTATIONAL. ACTUAL NUMBER & SIZE SHALL BE AS REQ'D. (2) MIN. ADDITIONAL 2" SPARE CONDUITS SHALL BE INSTALLED FROM THE CONTROL BOX TO THE VAULT J-BOXES 1-2" TO EACH J-BOX IN VAULT W/PULL STRINGS.
- SIZE & PROVIDE HEATER TO MAINTAIN TEMPERATURE FOR INTERNAL EQUIPMENT ABOVE 40°F (5°C).
- PROVIDE 2" THICK FOAM INSULATION INSIDE OF ENCLOSURE TOP, BOTTOM, BACK, SIDES & DOORS. SECURE INSULATION W/ADHESIVE.
- ALL JUNCTION BOXES IN VAULT SHALL BE 316 STAINLESS STEEL NEMA 4X BOXES (16"x12"x6").
- ALL WIRE SHALL BE XHHW-2 COPPER WIRE.
- PROVIDE THERMOSTAT FOR PANEL EXHAUST FAN TO KEEP TEMPERATURE BELOW 80° F.

1 POWER CONTROL BOX DETAIL
NTS

TRANSDUCER & AIR VAC ASSEMBLY SCHEDULE			
ITEM NO.	QTY.	SIZE	DESCRIPTION
1	1	2" PIPE SIZE	APPROVED TAPPING SADDLE.
2	3	2"x3" LONG	Sch. 40 GALV. THREADED STEEL NIPPLE Th.xTh.
3	1	2"	BRONZE BALL VALVE WITH LEVER OPERATOR.
4	1	2"	Sch. 40 GALV. STEEL THREADED CROSS
5	1	2"x2 1/2"	BRASS BUSHING
6	1	1/2"x2" LONG	Sch. 40 GALV. THREADED STEEL NIPPLE Th.xTh.
7	1	1 1/2"	Sch. 40 GALV. STEEL THREADED TEE
8	1	1 1/2"	HOSE BIB WITH SMOOTH OUTLET
9	1	1/2"x1 1/4"	BRASS BUSHING
10	1	1/4"	GLYCERIN FILLED PRESSURE GAUGE, 0-200 psi
11	1	1"x3/8"	BRASS BUSHING
12	1	3/8"	Sch. 40 GALV. THREADED STEEL NIPPLE Th.xTh.
13	1	3/8"	COMPRESSION COUPLING
14	1	3/8"	TYPE K COPPER PIPE (LENGTH DETERMINED BY ENGINEER)
15	1	2"	COMBINATION AIR/VAC. RELIEF VALVE ASSEMBLY
16	1	2"	COMPRESSION ADAPTOR FITTING
17	1	2"	CL-200 PVC PIPE (LENGTH DETERMINED BY ENGINEER)
18	1	2"	90° PVC BEND
19	1	1 1/2"	STANDARD STEEL THREADED FLANGE BOLTED TO FLOOR.
20	1	1/2"x60"	Sch. 40 GALV. STEEL PIPE, Th.xTh.
21	1	1 1/2"	Sch. 40 GALV. STEEL END CAP
22	1	1 1/2"	PIPE CLAMP ASS'Y.
23	1	1 1/2"	ROSEMOUNT MODEL 2088G3S22A1M5B4DW PRESSURE TRANSDUCER (SEE NOTE 1)
24	1	3/8"	CONNECT COPPER PIPE W/ COMP. COUPLING PER MANUFACTURER'S DIRECTIONS

NOTES:

- SET PRESSURE TRANSDUCER AT 300 PSI AND WIRE 4-20 mA-DC SIGNAL FROM TRANSMITTER TO PLC W/ #16 TSP IN A 3/4" CONDUIT.

4 PRESSURE TRANSDUCER ASS'Y. DETAIL
NTS

ELECTRICAL INSPECTIONS:

- GROUNDING: INSPECTION OF COMPLETED GROUND RING.
- INSPECTION OF ALL CONDUIT PENETRATIONS AND ALL CONDUIT TO BE RAN IN CONCRETE AND OR BURIED IN THE GROUND BEFORE CONCRETE POUR OR BURYING.
- INSPECTION OF CONDUIT RUNS IN VAULTS BEFORE AND AFTER WIRE PULLS.
- FINAL INSPECTION.

CULINARY WATER
TYPICAL METER VAULT

STANDARD DRAWING
CW-04.3

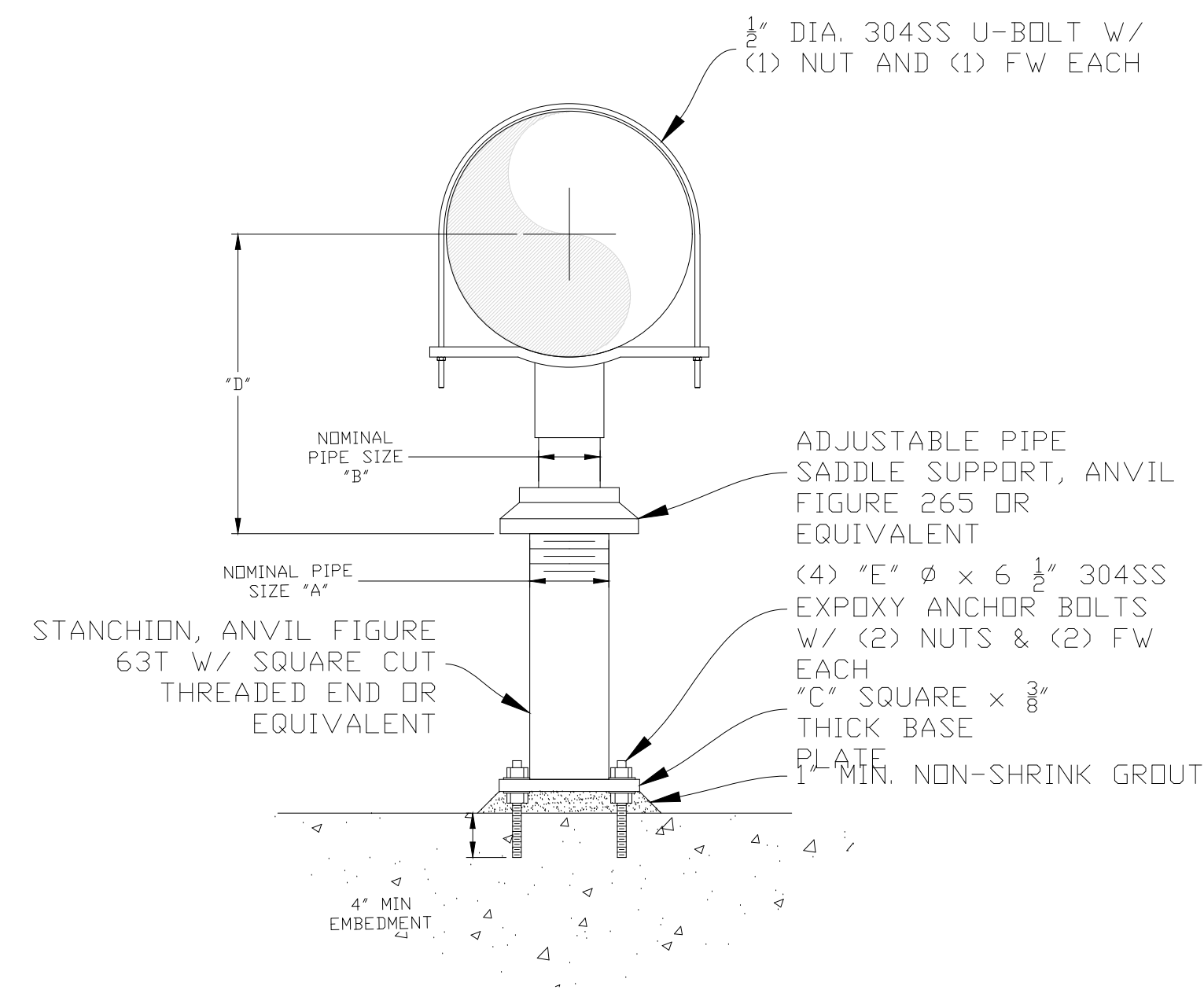
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ISSUE DATE
07/2021

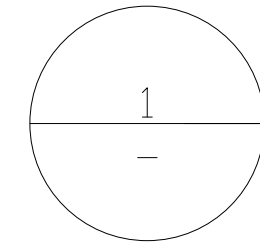
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ADJUSTABLE PIPE SUPPORT SCHEDULE						
DIMENSIONS IN INCHES						
PIPE SIZE	A	B	C	D		E
				MINIMUM	MAXIMUM	
4	4	3	8	9-1/2	14	1/2
6				10-3/4	15-1/4	
8				12-1/4	16-3/4	
10				13-3/4	18-1/4	
12				14-5/8	19-1/8	
14				15-13/16	20-5/16	
16				16-13/16	21-5/16	
18	6	3 1/2	10	19-1/8	23-5/8	5/8
20				20-1/8	24-5/8	
24				23-5/16	27-13/16	
30				26-7/16	30-15/16	
32				27-7/16	31-15/16	
36				29-7/16	33-15/16	



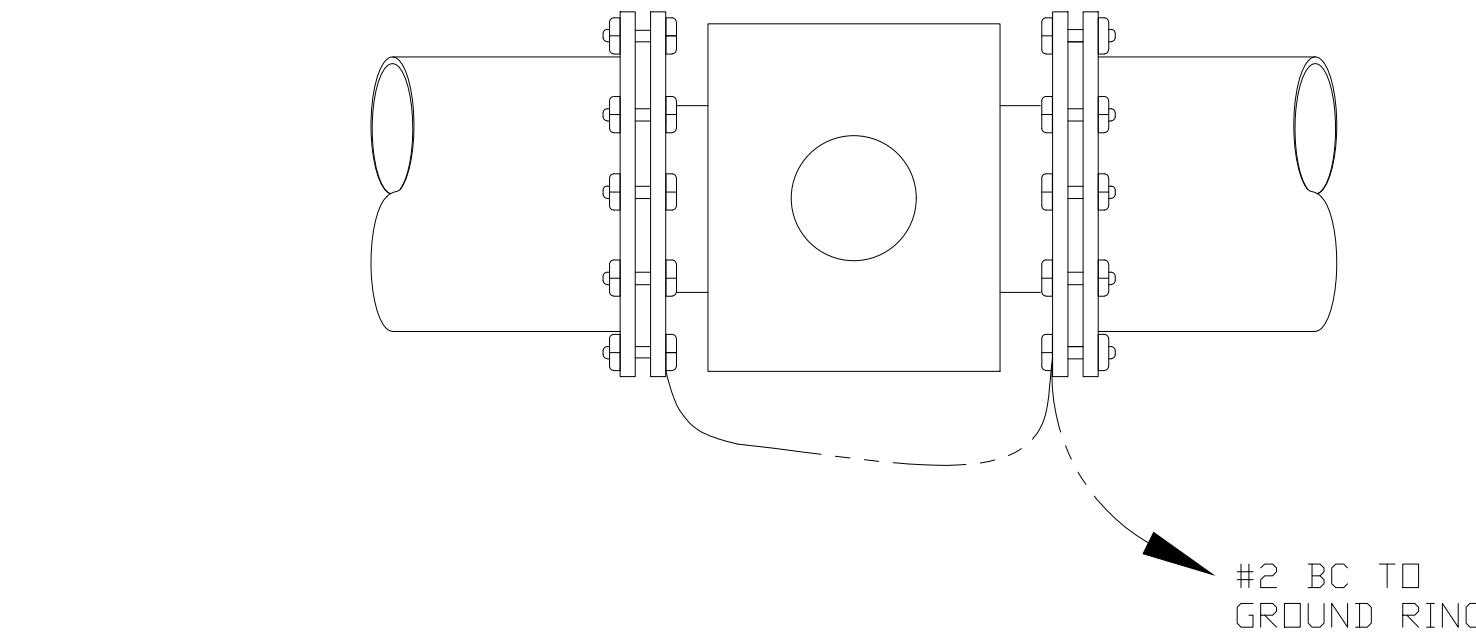
NOTES:

- HOT DIP GALVANIZE ALL PARTS FOLLOWING FABRICATION
- THIS PIPE SUPPORT IS LIMITED TO PIPE FROM 4" THROUGH 36" IN DIAMETER INCLUSIVE.



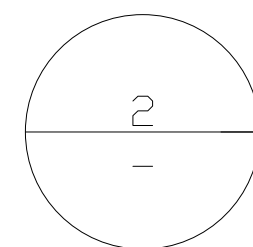
FLOOR SUPPORT DETAIL

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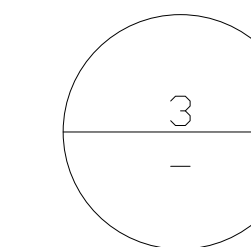
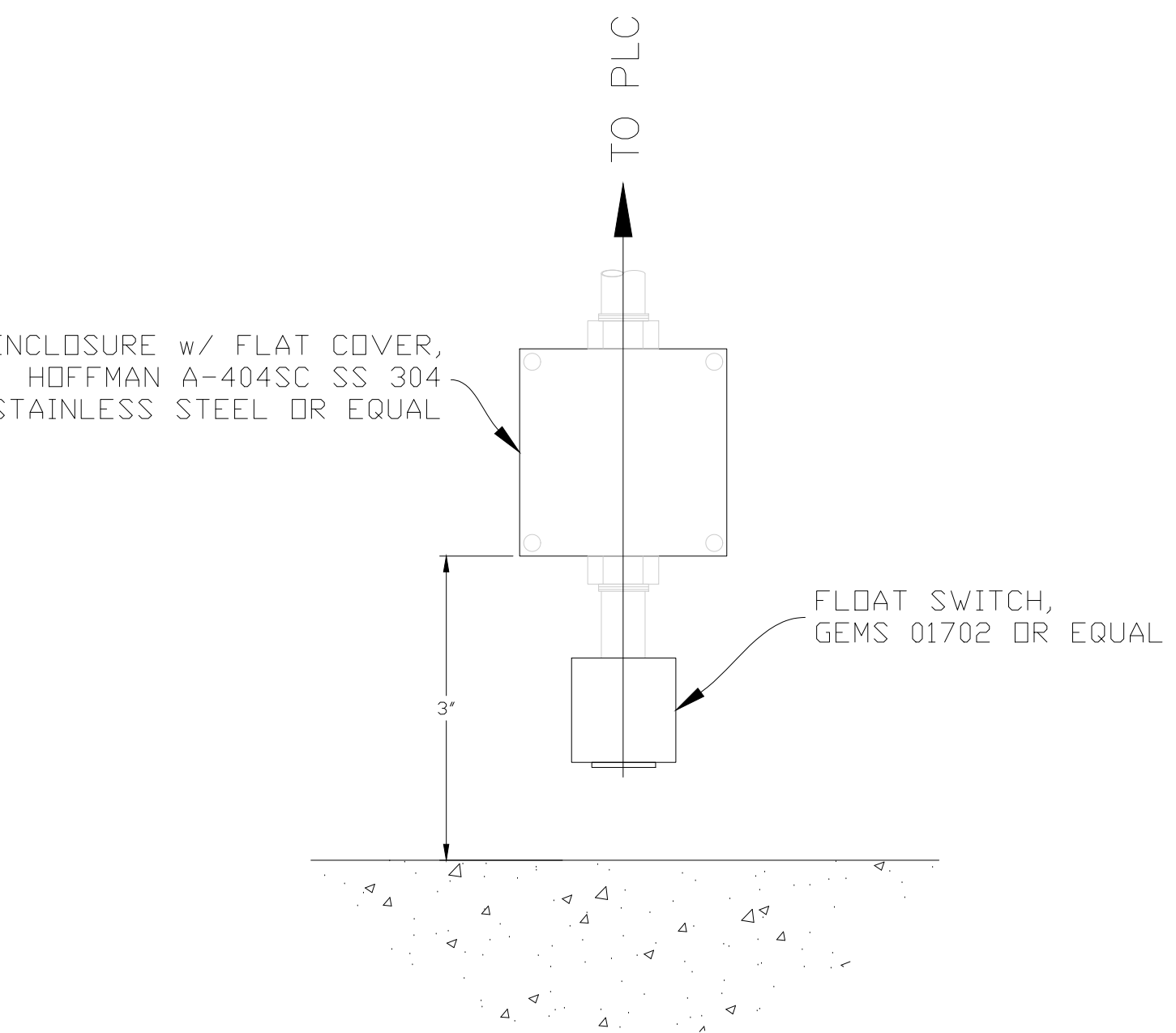
NOTES:

- MAG METERS TO BE ROSEMOUNT 8750W OR ENDRESS-HAUSER PROMAG W400 MODELS. METERS SHALL INCLUDE THE FOLLOWING: TEFLON LINER (PTFE) AND ENCAPSULATION, STAINLESS STEEL GROUND RINGS, ENCAPSULATED CABLE IN SUFFICIENT LENGTH TO REACH REMOTE MOUNTED CONVERTER WITH NO SPLICING, AND NSF DRINKING WATER CERTIFICATION. REMOTE WALL MOUNTED CONVERTER TO BE MOUNTED IN RTU ENCLOSURE. GROUND CONNECTIONS AND MAKEUP PER MANUFACTURER'S RECOMMENDATIONS. METERS TO BE 4-20 MA WITH PULSE OUTPUT AND HART OUTPUT COMPATIBLE. ENSURE 5 DIAMETERS OF STRAIGHT PIPE (NO FITTINGS, VALVES, ETC.) UPSTREAM, AND 2 DIAMETERS DOWNSTREAM.



MAGNETIC FLOW METER DETAIL

NTS



FLOAT SWITCH DETAIL

NTS

MISCELLANEOUS SPECIFICATIONS

CONCRETE

- VAULT IS TO BE CAST IN PLACE, PVC GREENSTREAK WATER STOPS OR APPROVED EQUAL NEED TO BE AT THE CONSTRUCTION JOINTS.
- FOUNDATION SEALANT SHALL BE PLACED ON THE BURIED PORTION OF ALL VAULTS PER THE FLUID APPLIED WATERPROOFING SPEC.

PAINTING

SYSTEM NO. 2: APPLIED TO INTERIOR AND EXTERIOR OF VENT STRUCTURES.

SURFACE PREPARATION: SSPC-SP6

SURFACE PROFILE: 1.5 - 2.0 MILS

COATING SYSTEM:

PRIMER: TNEMEC SERIES N140, 3.0 - 5.0 MDFT

INTERMEDIATE: TNEMEC SERIES N140, 3.0 - 5.0 MDFT

FINISH: TNEMEC SERIES 750, 2.5 - 5.0 MDFT

SYSTEM NO. 3: APPLIED TO INTERIOR OF ACCESS MANWAYS AND COVERS, INTERIOR AND EXTERIOR OF WELDED STEEL PIPE, WELDED STEEL FITTINGS AND SPECIALS.

SURFACE PREPARATION: SSPC-SP10

SURFACE PROFILE: 1.5 - 2.0 MILS

COATING SYSTEM:

PRIMER: SERIES 91-H2O, 2.5 - 3.5 MDFT

INTERMEDIATE: TNEMEC SERIES N140, 4.0 - 6.0 MDFT

FINISH: TNEMEC SERIES N140, 4.0 - 6.0 MDFT

COUPLINGS

GENERAL:

- COUPLINGS SHALL BE RATED FOR APPROPRIATE OPERATING PRESSURE AND HYDROSTATIC TEST PRESSURE.
- COUPLINGS SHALL BE FACTORY LINED AND COATED WITH FUSION BONDED EPOXY.
- BOA TAPE ON JOINTS SPEC ON BOA TAPE.

FOR PIPE WITH GROOVED ENDS:

- GROOVED COUPLINGS, IN ACCORDANCE WITH AWWA C606. SYSTEM SHALL PROVIDE FOR RIGID JOINTS.
- EXPOSED COUPLINGS SHALL BE LINED AND COATED WITH LIQUID EPOXY IN ACCORDANCE WITH AWWA C210.

DISMANTLING JOINTS:

- DISMANTLING JOINTS FOR CONNECTING FLANGED PIPE SHALL BE AWWA C219 COMPLIANT.
- DISMANTLING JOINT SHALL CONSIST OF A SELF-CONTAINED FLANGED RESTRAINED JOINT FITTING THAT ALLOWS FOR LONGITUDINAL ADJUSTMENT. PROVIDE AS A COMPLETE ASSEMBLY CONSISTING OF FLANGED SPIGOT PIECE, FLANGE ADAPTER, FOLLOWER RING AND BOLTS, TIE BARS, AND GASKET.

BOLTING/FASTENING

- BOLTS OR THREADED ROD: STAINLESS STEEL ASTM A193, GRADE B7, OR BLUE BOLTS.
- NUTS: STAINLESS STEEL, ASTM A194 GRADE 2H HEX HEAD NUTS, OR BLUE NUTS.

VALVES

GENERAL:

- VALVES SHALL INCLUDE OPERATOR, ACTUATOR, HANDWHEEL, CHAIN WHEEL, EXTENSION STEM, FLOOR STAND, OPERATING NUT, CHAIN, WRENCH, AND ALL ACCESSORIES REQUIRED TO ALLOW A COMPLETE OPERATION FROM THE INTENDED OPERATING LEVEL, AND SHALL BE SUITABLE FOR INTENDED SERVICE.
- VALVES SHALL BE FACTORY LINED AND COATED WITH FUSION BONDED EPOXY IN FULL COMPLIANCE WITH ANSI/NSF STANDARD 61 FOR DRINKING WATER SYSTEM COMPONENTS. MINIMUM 7-MIL DRY FILM THICKNESS EXCEPT WHERE LIMITED BY VALVE OPERATING TOLERANCES.

GATE VALVES 3-24 INCHES: IRON BODY, RESILIENT SEAT, BRONZE STEM AND STEM NUT, ANSI CLASS 125 FLANGED ENDS OR MECHANICAL JOINT ENDS AS INDICATED ON THE DRAWINGS, NON-RISING STEM, IN ACCORDANCE WITH AWWA C509, MINIMUM DESIGN WORKING WATER PRESSURE 200 PSIG, FULL PORT.

- MUELLER RESILIENT WEDGE; NSF 61

BALL VALVES 3 INCHES AND SMALLER-THREE-PIECE BODY TYPE, BRONZE BODY AND END PIECES, HARD-CHROME PLATED BRONZE OR BRASS BALL, FULL BORE PORT, RTFE SEATS AND PACKING, BLOWOUT-PROOF STEM, ZINC-PLATED STEEL HAND LEVER OPERATOR WITH VINYL GRIP, RATED 600-POUND WOG, 150 PSI SWP.

- MILWAUKEE; BA-300.
- NIBCO; T-595-Y.

MISCELLANEOUS SPECIFICATIONS (CONT.)

VALVES (CONT.)

PLUG VALVES 3-12 INCHES: NONLUBRICATED TYPE RATED 175 PSIG CWP, DRIP-TIGHT SHUTOFF WITH PRESSURE FROM EITHER DIRECTION, CAST IRON BODY, EXPOSED SERVICE FLANGED ENDS PER ASME B16.1, PLUG CAST IRON WITH ROUND OR RECTANGULAR PORT OF NO LESS THAN 80 PERCENT OF CONNECTING PIPE AREA AND COATED WITH BUNA-N, SEATS WELDED NICKEL, STEM BEARINGS LUBRICATED STAINLESS STEEL OR BRONZE, STEM SEAL MULTIPLE V-RINGS, OR U-CUPS WITH O-RINGS OF NITRILE RUBBER, GRIT SEALS ON BOTH UPPER AND LOWER BEARINGS.

- PRATT; BALLCENTRIC.
- DEZURIK; STYLE PEC.

BUTTERFLY VALVES 3-48 INCHES:AWWA C504, CLASS 150B. SHORT BODY TYPE WITH FLANGED ENDS, CAST IRON BODY, CAST OR DUCTILE IRON DISC, 304 STAINLESS STEEL SHAFTS, BUNA-N OR EPDM RUBBER SEAT BONDED OR MOLDED IN BODY ONLY, AND STAINLESS STEEL SEATING SURFACE; NO TRAVEL STOPS FOR DISC ON INTERIOR OF BODY; SELF-ADJUSTING V-TYPE OR O-RING SHAFT SEALS; ISOLATE METAL-TO-METAL THRUST BEARING SURFACES FROM FLOWSTREAM. ELASTOMER SEATS SHALL HAVE ADHESIVE INTEGRITY OF BOND BETWEEN SEAT AND BODY ASSURED BY TESTING, WITH MINIMUM 75-POUND PULL IN ACCORDANCE WITH ASTM D429, METHOD B; BUBBLE-TIGHT WITH RATED PRESSURE APPLIED FROM EITHER SIDE. TEST VALVES WITH PRESSURE APPLIED IN BOTH DIRECTIONS. PROVIDE TRAVELING NUT OR WORM GEAR ACTUATOR WITH HANDWHEEL. VALVE ACTUATORS TO MEET THE REQUIREMENTS OF AWWA C504.

- PRATT; MODEL 2FII, TRITON XR-70, OR GROUNDHOG.
- DEZURIK; AWWA VALVE, OR BURIED AWWA VALVE.
- MUELLER; LINESEAL SERIES

CHECK VALVES 2-12 INCHES: GLOBE STYLE SILENT CHECK VALVE CONSTRUCTED OF ASTM A126 CLASS B CAST IRON FOR CLASS 125 VALVES. THE SEAT AND DISC SHALL BE ASTM B584 ALLOY BRONZE. THE COMPRESSION SPRING SHALL BE ASTM A313 TYPE 316 STAINLESS STEEL WITH GROUND ENDS. A BUNA-N SEAL SHALL BE PROVIDED ON THE SEAT TO PROVIDE ZERO LEAKAGE AT BOTH HIGH AND LOW PRESSURES WITHOUT OVERLOADING OR DAMAGING THE SEAL..

- APCO; SERIES 600
- VAL-MATIC; SERIES 1800

COMBINATION AIR VALVES 1-16 INCHES: SUITABLE FOR WATER SERVICE, COMBINES THE OPERATING FEATURES OF BOTH AN AIR AND VACUUM VALVE AND AIR RELEASE VALVE. AIR AND VACUUM PORTION TO AUTOMATICALLY EXHAUST AIR DURING FILLING OF SYSTEM AND ALLOW AIR TO RE-ENTER DURING DRAINING OR WHEN VACUUM OCCURS. THE AIR RELEASE PORTION TO AUTOMATICALLY EXHAUST ENTRAINED AIR THAT ACCUMULATES IN SYSTEM. VALVE SINGLE BODY OR DUAL BODY, AIR RELEASE VALVE MOUNTED ON AIR AND VACUUM VALVE, ISOLATION VALVE MOUNTED BETWEEN THE DUAL VALVES. NPT THREADED INLET AND OUTLET, RATED 200 PSI WORKING PRESSURE, CAST IRON OR DUCTILE IRON BODY AND COVER, STAINLESS STEEL FLOAT AND TRIM, BUILT AND TESTED TO AWWA C512.

- APCO VALVE AND PRIMER CORP.; SERIES 143C TO 147C OR 1804 TO 1816.
- VAL-MATIC VALVE; SERIES 140-C.

OPERATORS AND ACTUATORS

MANUAL OPERATORS: FOR AWWA VALVES, OPERATOR FORCE NOT TO EXCEED THE REQUIREMENTS OF THE APPLICABLE VALVE STANDARD. FOR NON-AWWA VALVES, OPERATOR FORCE NOT TO EXCEED APPLICABLE INDUSTRY STANDARD OR 80 POUNDS, WHICHEVER IS LESS, UNDER ANY OPERATING CONDITION, INCLUDING INITIAL BREAKAWAY. PROVIDE GEAR REDUCTION OPERATOR WHEN FORCE EXCEEDS REQUIREMENTS. WORM AND GEAR OPERATORS ONE-PIECE, DESIGN WORM-GEARS OF GEAR BRONZE MATERIAL. WORM HARDENED ALLOY STEEL WITH THREAD GROUND AND POLISHED. TRAVELING NUT TYPE OPERATORS THREADER STEEL REACH RODS WITH INTERNALLY THREADED BRONZE OR DUCTILE IRON NUT.

TESTING

HYDROSTATIC TEST FOR PRESSURE PIPING: MAINTAIN HYDROSTATIC TEST PRESSURE CONTINUOUSLY FOR 2 HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME AS NECESSARY TO CONDUCT EXAMINATIONS FOR LEAKAGE. EXAMINE JOINTS AND CONNECTIONS FOR LEAKAGE. CORRECT VISIBLE LEAKAGE AND RETEST AS SPECIFIED.

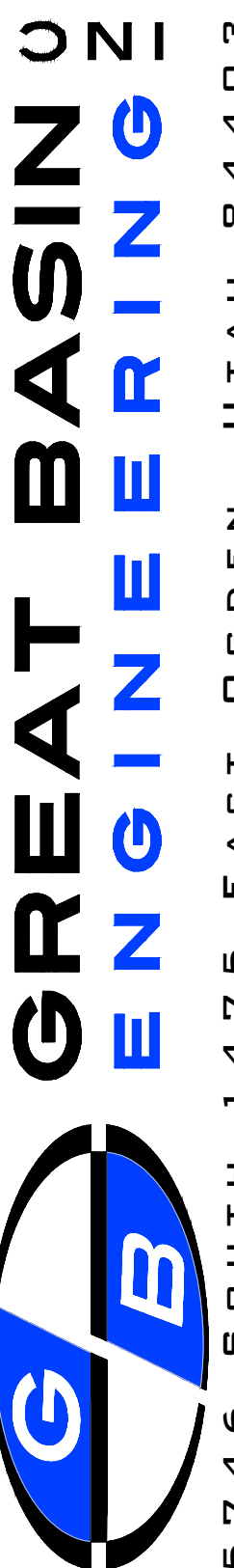
CULINARY WATER

TYPICAL METER VAULT

STANDARD DRAWING

CW-04.4

APPROVED BY:



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