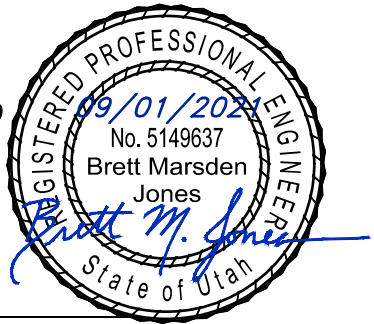


PERRY CITY CORPORATION PUBLIC WORKS STANDARD DRAWINGS

SUBMITTED & RECOMMENDED

BRETT M. JONES, P.E.
CITY ENGINEER



APPROVAL

DocuSigned by:
Robert Barnhill 9/23/2021
ROBERT BARNHILL DATE
CITY ADMINISTRATOR

DocuSigned by:
Tyler Wagstaff 9/23/2021
TYLER WAGSTAFF DATE
DIRECTOR OF PUBLIC WORKS

DocuSigned by:
Kevin Jeppsen 9/23/2001
KEVIN JEPPESEN DATE
CITY MAYOR



**3RD EDITION
SEPTEMBER 2021**



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- CS-30 GENERAL - LID CROSS SECTIONS
- CS-31 DECORATIVE LIGHT EXAMPLES

STREET NOTES:
① EXACT LOCATION OF STREET AND REGULATORY SIGNS SHALL BE SPECIFIED BY THE PUBLIC WORKS DEPARTMENT FOR SPECIFIC INTERSECTIONS.

② THE NUMBER OF SECONDARY WATER VALVES REQUIRED AT EACH INTERSECTION SHALL BE DETERMINED BY THE CITY ENGINEER.

③ CITY UTILITY LINES MUST BE LOCATED IN A PUBLIC RIGHT-OF-WAY. NO CITY UTILITIES MAY BE CONSTRUCTED ON PRIVATE PROPERTY ANY UTILITY LINES MAINTAINED BY THE CITY MUST ALSO BE IN A PUBLIC RIGHT-OF-WAY.

④ THE NUMBER OF REQUIRED LIGHT POLES, FIXTURE TYPE AND LOCATION IS DETERMINED BY THE PERRY CITY. (SEE SHEET CS-32 & 33 FOR STREETLIGHT STANDARD)

20' RADIUS FOR RESIDENTIAL; 30' RADIUS FOR STATE ROADS OR AS APPROVED BY UDOT



4' FROM TBC

CONC. CURB & GUTTER CONSTRUCTION JOINTS EVERY 10' (TYP.)

CULINARY WATER

STORM DRAIN SD/LD

10'-0"

SANITARY SEWER

SECONDARY WATER IRR

STORM DRAIN SD

3'-6"

STOP SIGN LOCATION (TYP.)

7'-6"

STREET

MINIMUM ACCESS DISTANCE

STREET

10' FROM BCR

8' FROM TBC

10' FROM TBC

10' (TYP.) OR AS DIRECTED CITY ENGINEER

10' FOOT NO PARKING ZONE (SEE SHEET CS-08)

2' FROM TBC

10'-0"

10'-0"

10'-0"

10'-0"

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HIGHEST CAPACITY STREET DESIGNATION*	COMMERCIAL DRIVE APPROACH	RESIDENTIAL DRIVE APPROACH
MINOR	80'	50'
RESIDENTIAL	80'	50'
COLLECTOR	150'	70'
ARTERIAL	PER CITY ENGINEER	
UDOT	PER ACCESS PERMIT	

* AS PER CURRENT STREETS MASTER PLAN



APPROVED
CITY ENGINEER
Brett M. Jones
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

SCALE:
N.T.S.

DESIGNED
DRAWN
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
PUBLIC ROADS - TYPICAL INTERSECTION & STREET DETAILS

SHEET:
CS-03
OF 1 SHEETS
0

MAILBOX/CBU NOTES:

- A1. MAILBOXES SHALL NOT BE PLACED IN THE SIDEWALK. NO MAILBOX OR CBU BOX EDGES SHALL EXTEND PAST THE TBC.
- B1. CONTACT THE LOCAL POSTMASTER FOR APPROVAL ON THE LOCATION OF THE MAILBOX OR CBU PRIOR TO INSTALLATION.
- C1. FOLLOW USPS GUIDELINES & POLICIES FOR THE PLACEMENT, INSTALLATION, AND ACCESS REQUIREMENTS FOR ALL MAILBOX AND CBU UNITS.

INDIVIDUAL MAILBOXES ALLOWED ONLY FOR SINGLE HOMES BEING BUILT IN SUBDIVISIONS THAT WERE PREVIOUSLY ALLOWED INDIVIDUAL BOXES

STREET SIGN NOTES:

- A. SIGNS SHALL BE FURNISHED & INSTALLED BY THE DEVELOPER AT LOCATIONS DESIGNATED BY THE CITY. INSTALLATION SHALL BE IN ACCORDANCE WITH CURRENT "MUTCD" STANDARDS.
- B. STREET SIGN BACKGROUND SHALL BE REGULATORY BLUE (STATE ROADS SHALL BE GREEN), BOTH STREET AND TRAFFIC SIGNS SHALL BE AT THE VERY LEAST HIGH INTENSITY REFLECTIVE SHEETING (9FP-85 TYPE IIIA)
- C. LEGEND SHALL BE WHITE LETTERS (FONT: HIGHWAY C), HIGH INTENSITY REFLECTIVE SHEETING (9FP-85 TYPE IIIA)
- D. SIGN BLANK SHALL BE 6081-T6 HEAT TREATED HIGH TENSILE DECREASED ALUMINUM W/ ALODINE 1200 FINISH-THICKNESS SHALL BE 0.08"
- E. EACH SIGN SHALL CONSIST OF TWO PLATES RIVETED TOGETHER & MOUNTED AS SHOWN
- F. SIGNS ON PRIVATE ROADS SHALL MEET ALL SPECIFICATIONS FOR STANDARD SIGNS. (PRIVATE SIGNS WILL NOT BE MAINTAINED BY THE CITY.)
- G. ALL STREETS WITH NAMES MUST ALSO SHOW LOCATIONS COORDINATE DESIGNATION
- H. CONTACT CITY PRIOR TO MAKING SIGNS TO VERIFY PROPER NAMES AND COORDINATES

3" DIA. BRASS SURVEY MONUMENT POST - "D&L SUPPLY" K-9090

PEA GRAVEL SUMP

(3) #5 REBAR ASTM A615 GRADE 60

12"Ø x 9 3/4" LONG P.V.C. C-900 PIPE SECTION

CONCRETE COLLAR (SEE SHEET CS-15)

ASPHALT SURFACE

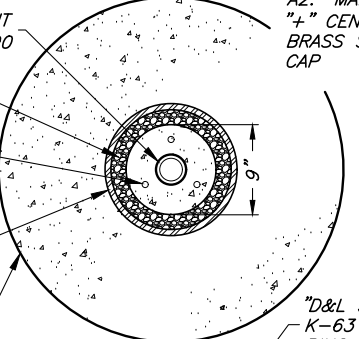
ROAD BASE

12"Ø x 9 3/4" LONG P.V.C. C-900 PIPE SECTION

WASHED PEA GRAVEL

CONCRETE BASE CLASS 4000 CONCRETE per APWA SECTION 03304

(3) #5 REBAR ASTM A615 GRADE 60



SURVEY MONUMENT NOTES:
A2. MARK POINT WITH AN "A" CENTER PUNCH ON BRASS SURVEY MONUMENT CAP

"D&L SUPPLY" MODEL K-6313 MONUMENT RING & COVER
3" DIA. BRASS SURVEY MONUMENT POST - "D&L SUPPLY" K-9090

BACKFILL ALL SIDES (COMPACT per APWA SECTION 02322)
COMPACT BOTTOM OF EXCAVATED HOLE BEFORE PLACING MONUMENT POST

SURVEY MONUMENT DETAIL

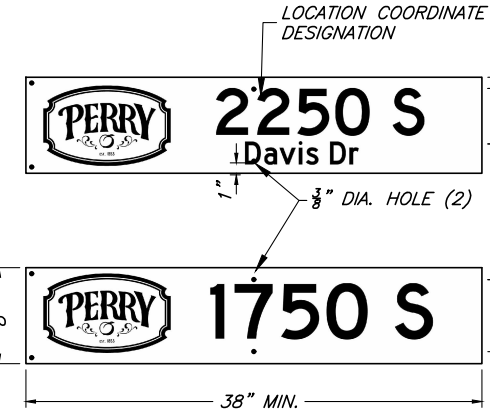
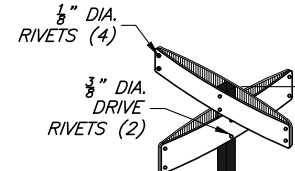


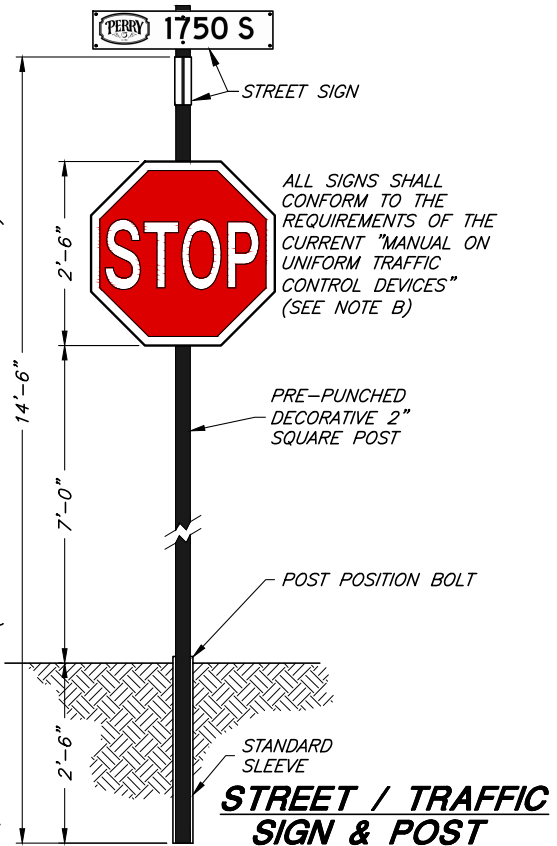
PLATE DETAIL



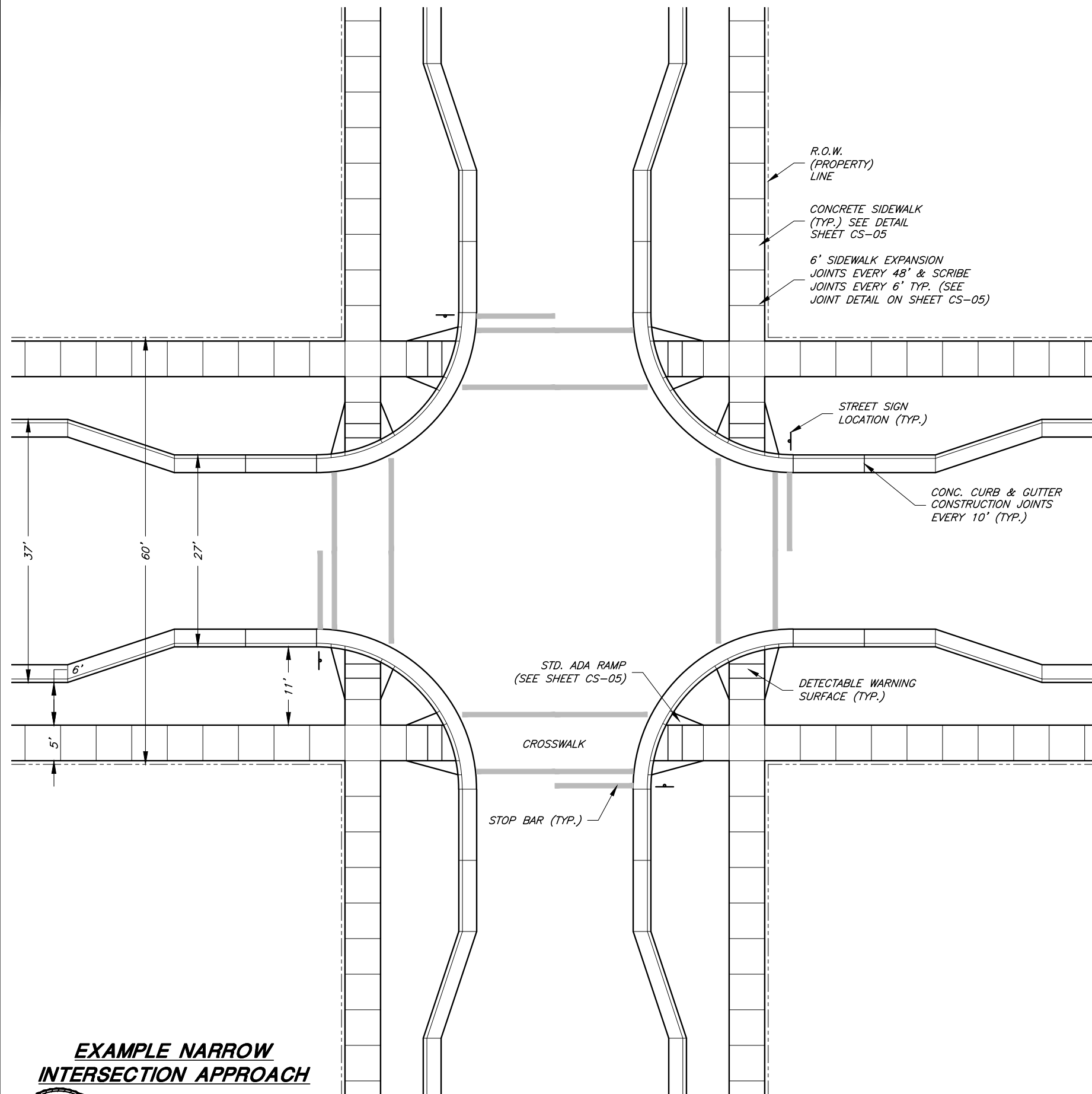
1/2" DIA. RIVETS (4)
3/8" DIA. DRIVE RIVETS (2)
PRE-PUNCHED DECORATIVE BAKED ENAMEL 2" SQUARE 14 GA. POST

STANDARD SLEEVE
BOLT POSITIONING POST

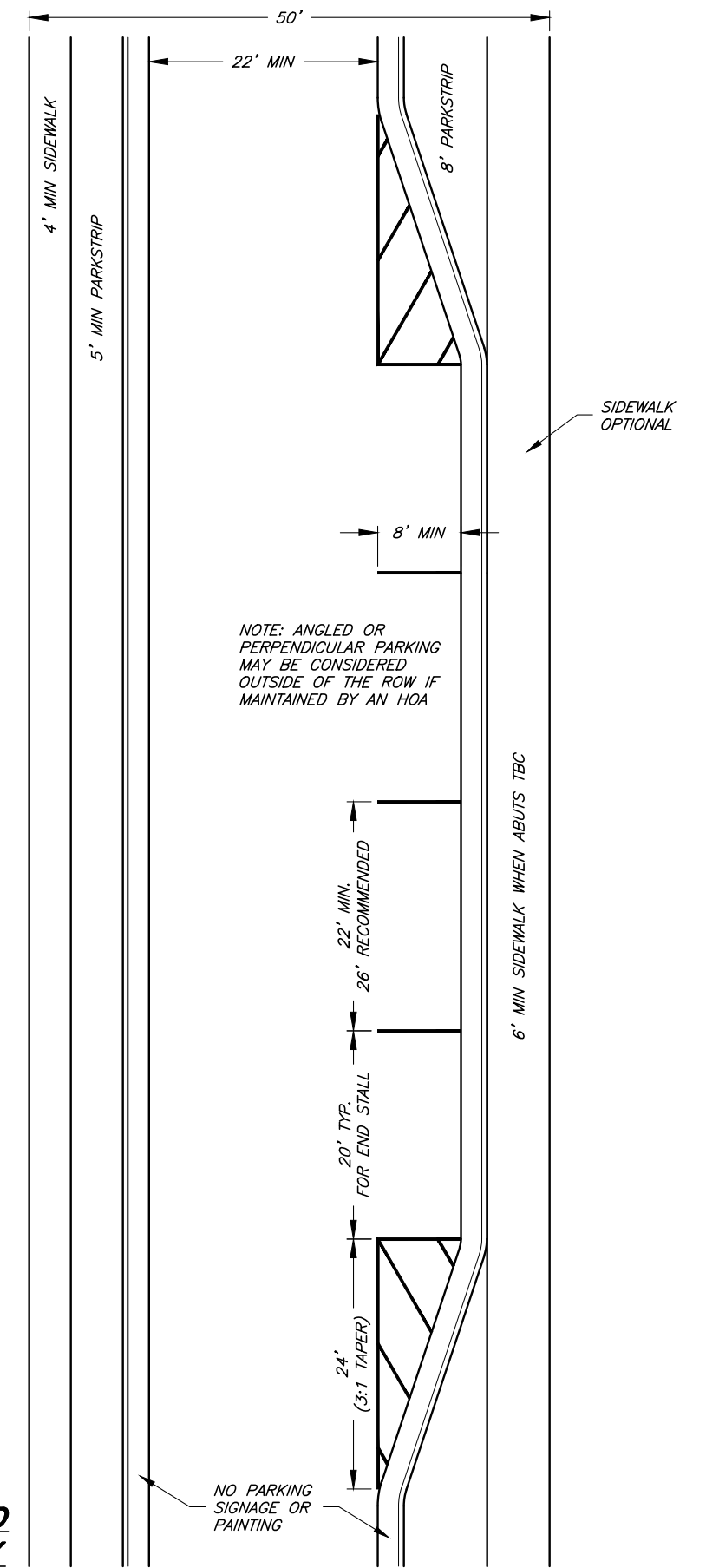
STREET SIGN & POST



STREET / TRAFFIC SIGN & POST



**EXAMPLE NARROW
INTERSECTION APPROACH**



**EXAMPLE LOW HARD
SURFACE ROADWAY**



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

SCALE:
N.T.S.

DESIGNED _____
DRAWN _____
CHECKED _____

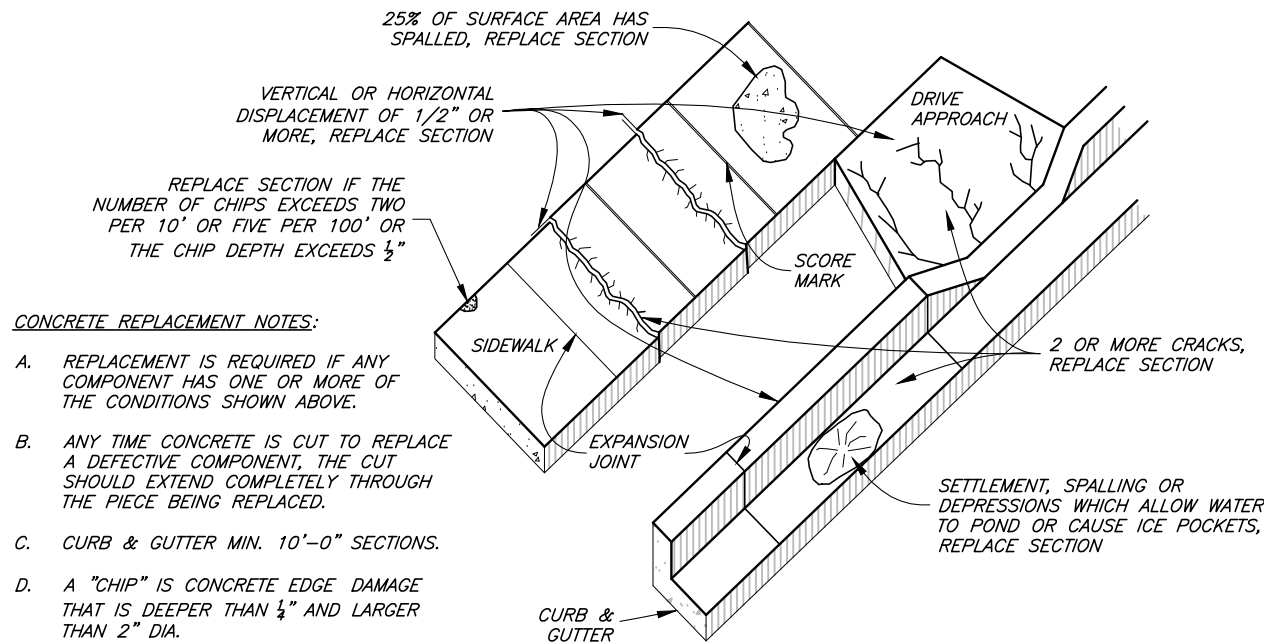


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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
**PUBLIC ROADS EXAMPLES - NARROW APPROACH
INTERSECTION & LOW HARD SURFACE ROADWAY**

SHEET:
CS-03A
OF 1 SHEETS
0



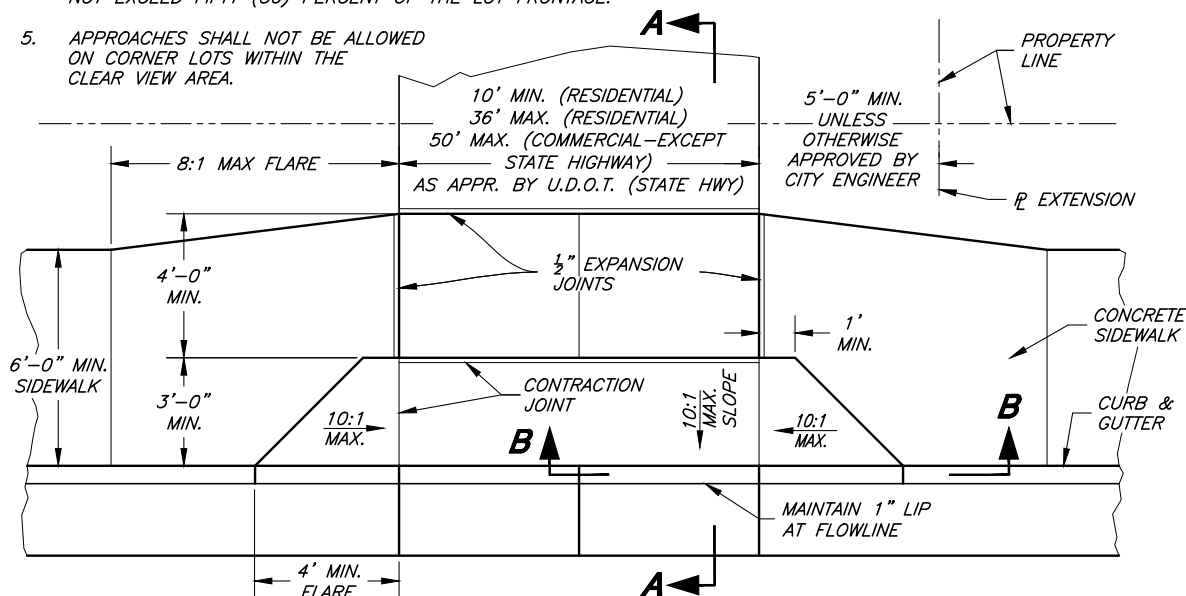
CONCRETE REPLACEMENT NOTES:

- REPLACEMENT IS REQUIRED IF ANY COMPONENT HAS ONE OR MORE OF THE CONDITIONS SHOWN ABOVE.
- ANY TIME CONCRETE IS CUT TO REPLACE A DEFECTIVE COMPONENT, THE CUT SHOULD EXTEND COMPLETELY THROUGH THE PIECE BEING REPLACED.
- CURB & GUTTER MIN. 10'-0" SECTIONS.
- A "CHIP" IS CONCRETE EDGE DAMAGE THAT IS DEEPER THAN 1/2" AND LARGER THAN 2" DIA.

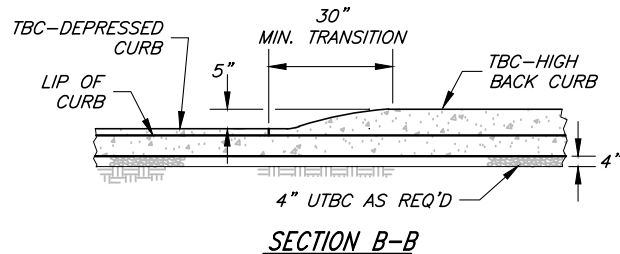
DEFECTIVE CONCRETE REPLACEMENT CRITERIA

DRIVEWAY APPROACH NOTES:

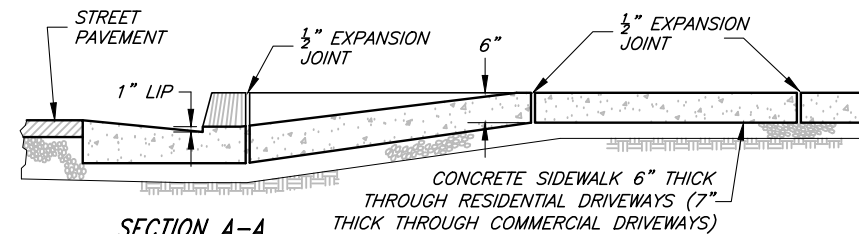
- IN NEW SUBDIVISIONS WHERE FUTURE DRIVEWAY LOCATIONS ARE UNKNOWN, THE DRIVEWAY APPROACH SHALL BE MADE BY SAW CUTTING THE BACK OF THE EXISTING CURB TO THE REQUIRED DRIVEWAY WIDTH. ALL SAW CUTTING SHALL BE ACCOMPLISHED BY A CITY APPROVED LICENSED CONTRACTOR.
- SCORE SIDEWALK 1/4" OF SIDEWALK THICKNESS AT EACH 4'-0" OR 6'-0" SECTION. EXPANSION JOINTS AT EACH 32'-0" (4'-0" SIDEWALK) OR 48'-0" (6'-0" SIDEWALK), PROVIDE ADDITIONAL CONTRACTION JOINTS ON OVERSIZED DRIVEWAYS AT 5'-0" MAX. SPACING
- FOR EACH SINGLE FAMILY OR TWO-FAMILY DWELLINGS, NOT MORE THAN TWO (2) APPROACHES SHALL BE ALLOWED, EXCEPT CORNER AND DOUBLE FRONTAGE LOTS, WHICH SHALL BE ALLOWED (3) APPROACHES. SEPARATION BETWEEN APPROACHES SHALL HAVE MINIMUM SEPARATION OF TWELVE (12) FEET MEASURED AT THE PROPERTY LINE
- THE COMBINED WIDTH OF ALL APPROACHES SERVING A LOT SHALL NOT EXCEED FIFTY (50) PERCENT OF THE LOT FRONTAGE.
- APPROACHES SHALL NOT BE ALLOWED ON CORNER LOTS WITHIN THE CLEAR VIEW AREA.



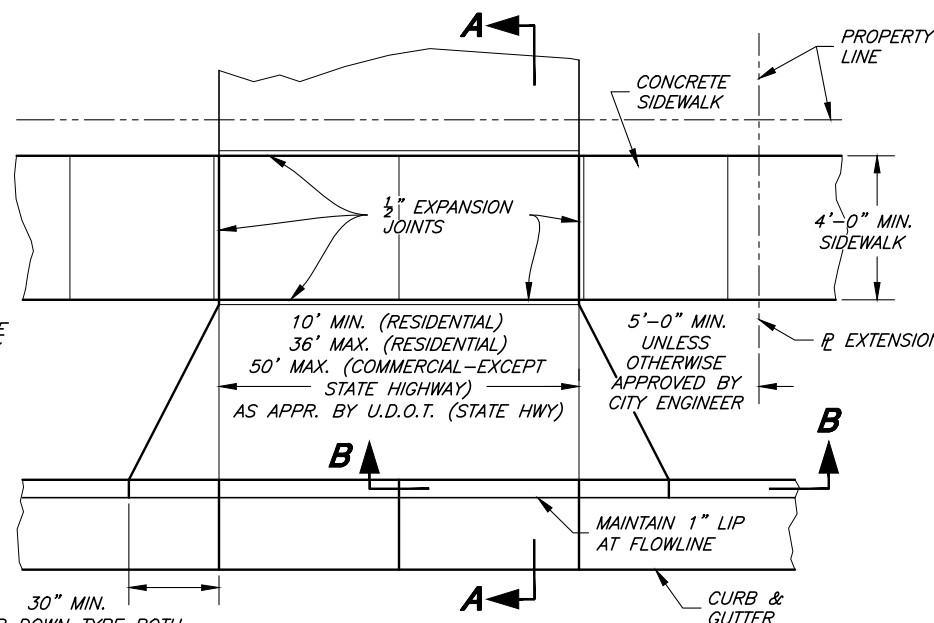
DRIVEWAY APPROACH W/ ADJACENT SIDEWALK



SECTION B-B

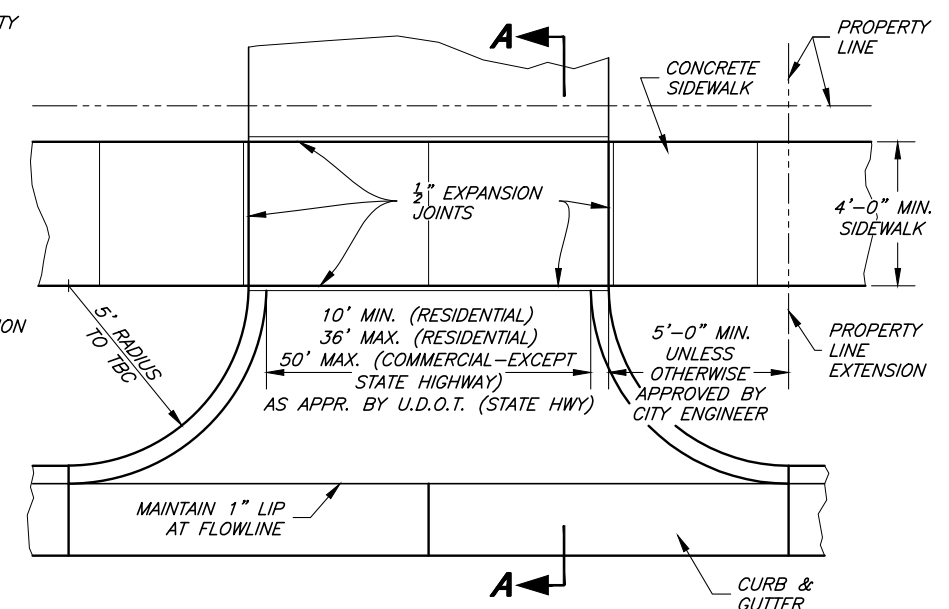


SECTION A-A



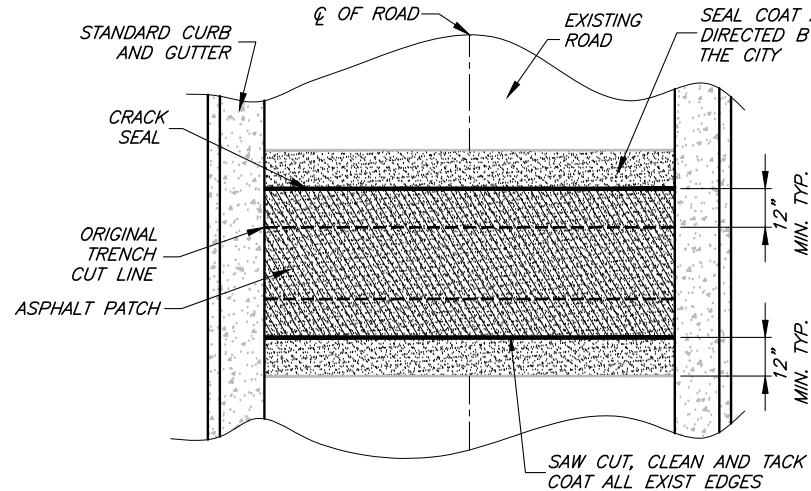
DRIVEWAY APPROACH W/ PARKSTRIP

DROP DOWN STYLE (CITY STANDARD)



CURB RADIUS STYLE DRIVEWAY APPROACH

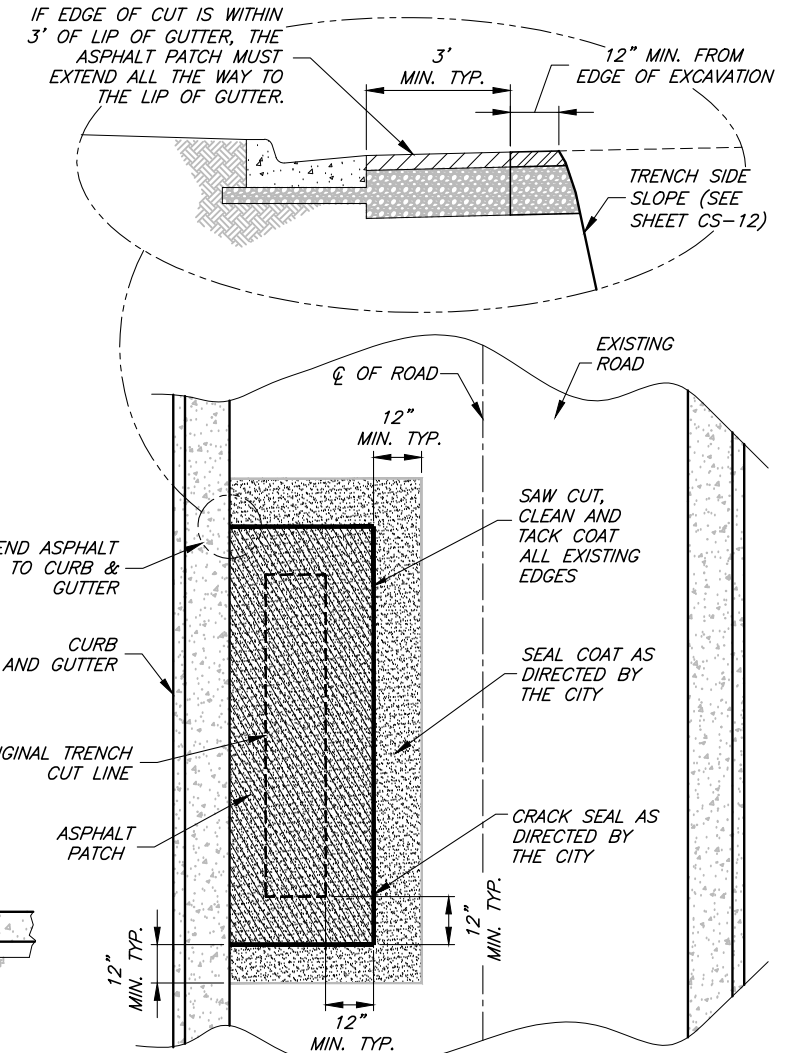
(FOR REPLACEMENTS ONLY - NO NEW CONSTRUCTION)



TYPICAL HORIZONTAL ASPHALT PATCH PLAN

ASPHALT PATCH NOTES:

- ON ANY ROAD PAVED OR OVERLAYED WITHIN THE LAST 10 YEARS, THE PATCH MUST BE COMPLETED PER APWA PLAN 255 (BITUMINOUS PAVEMENT T-PATCH).
- NO ANGLED ASPHALT PATCHING ALLOWED.



TYPICAL PARALLEL ASPHALT PATCH PLAN



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

SCALE:
N.T.S.

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CONSULTING ENGINEERS

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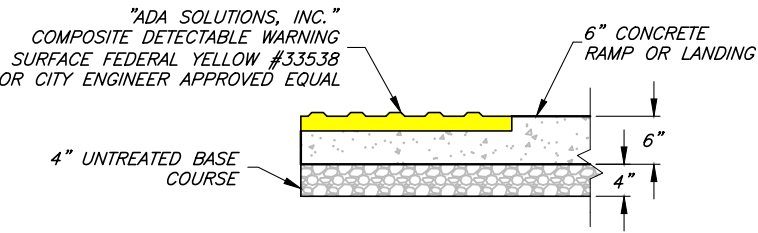


PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
PUBLIC ROADS - TYPICAL DRIVE APPROACH, ASPHALT PATCH & DEFECTIVE CONCRETE REPLACEMENT DETAILS

SHEET:
CS-04
OF 1 SHEETS
0

DETECTABLE WARNING SURFACE NOTES:

1. LOCATE THE DETECTABLE WARNING SURFACE SO THE OUTSIDE CORNER NEAREST THE STREET IS WITHIN 1 INCH OF THE BACK OF CURB (TBC). PROVIDE 2-FOOT MINIMUM DEPTH.
2. PROVIDE DETECTABLE WARNING SURFACE FOR FULL WIDTH OF CURB CUT.
3. THE DETECTABLE WARNING SURFACE DOMES SHALL BE ORIENTED SUCH THAT THE ROWS ARE PARALLEL WITH THE DIRECTION OF PEDESTRIAN TRAVEL TO THE RAMP ON THE OPPOSITE SIDE OF THE STREET.
4. THE STANDARD COLOR FOR THE DETECTABLE WARNING SURFACE SHALL BE RED OR PRE-APPROVED CONTRASTING COLOR. WHEN THE EXISTING SIDEWALK COLOR IS NOT STANDARD CONCRETE, THE COLOR OF THE DETECTABLE WARNING SURFACE SHALL BE DETERMINED BY THE CITY ENGINEER OR AUTHORIZED REPRESENTATIVE.
5. WHEN A DETECTABLE WARNING SURFACE DOME IS CUT, THE REMAINING PORTION OF THE DOME SHALL BE BEVELED TO A MAXIMUM SLOPE OF 1:2.



DETECTABLE WARNING SURFACE DETAIL

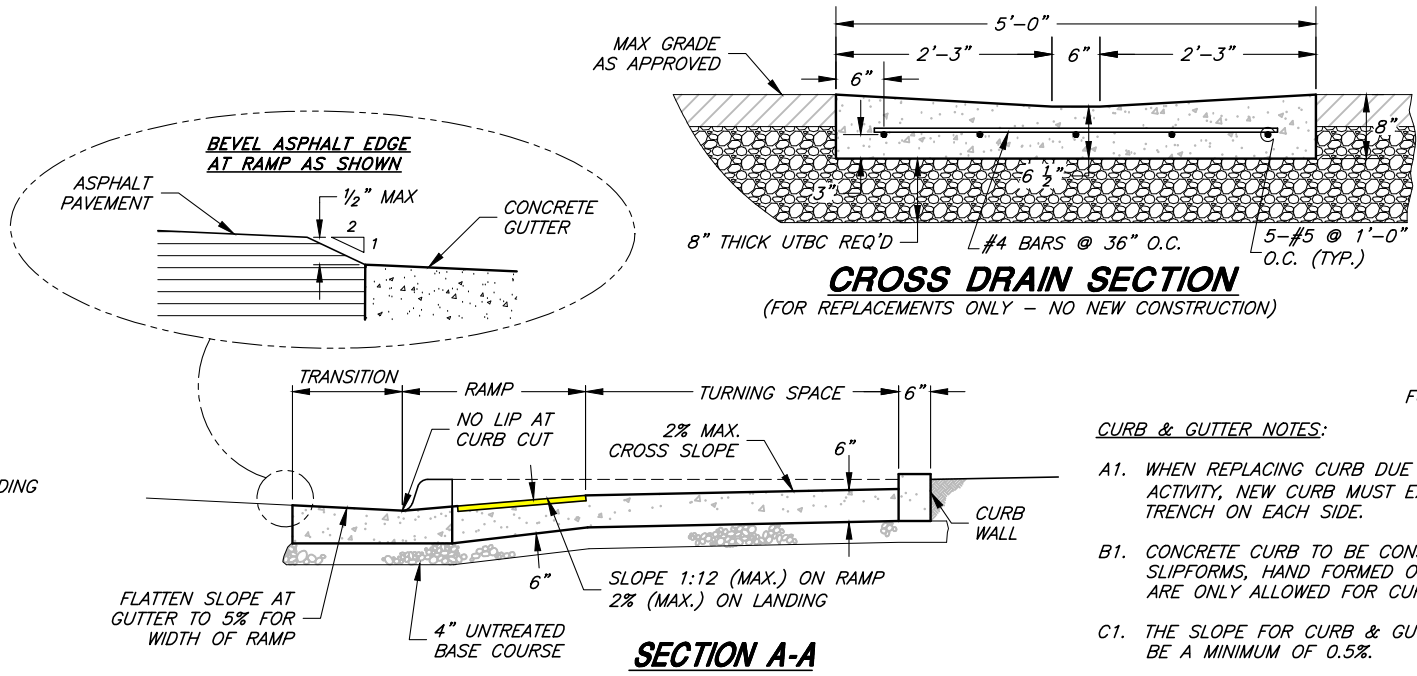
ADA RAMP NOTES:

- A. WHERE DESIGNATED BY THE CITY, ALTERNATE UDOT OR APWA RAMP DESIGNS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE CITY PUBLIC WORKS DEPARTMENT. SUBMIT ENGINEERED CONSTRUCTION PLANS TO CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.
- B. SITE CONDITIONS WILL VARY. CONFIGURATION OF RAMP, LANDING, AND TRANSITION MAY BE CHANGED, BUT THEY MUST MEET DIMENSIONS AND SLOPES AS SHOWN IN THE MOST RECENT EDITION OF THE U.D.O.T. STANDARDS & SPECIFICATIONS (SHEETS PA1 THROUGH PA5). THE USE OF FLARES, CURB WALLS, ETC. ARE AT THE DISCRETION OF THE ENGINEER.
- C. LOCATE CURB CUT WITHIN CROSSWALK.
- D. RAMP GRADE BREAK MUST BE PERPENDICULAR TO THE RUNNING SLOPE.
- E. A 5'x5' PASSING AREA MUST BE PROVIDED AT A MINIMUM SPACING OF 200' WHEN NO OTHER FEATURES MEET ADA PASSING ZONE REQUIREMENTS.

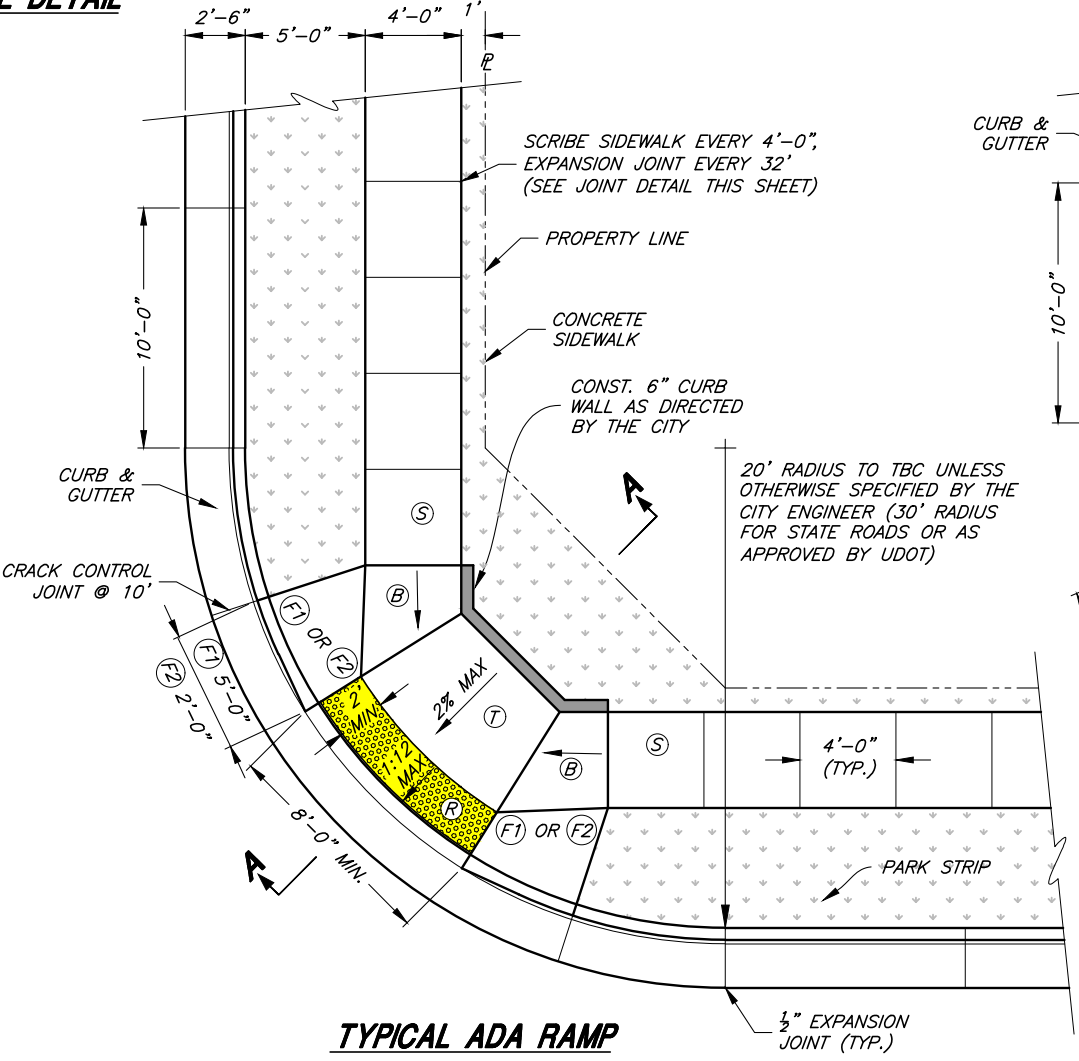
SLOPE TABLE			
	ITEM	MAX. RUNNING SLOPE*	MAX. CROSS SLOPE*
①	TURNING SPACE ²	2% (1V:48H)	2% (1V:48H)
②	RAMP	8.3% (1V:12H)	2% (1V:48H)
③	SIDEWALK	5% (1:20) ¹	2% (1V:48H)
④	TRAVERSABLE SURFACE	10% (1V:10H)	--
⑤	NON-TRAVERSABLE SURFACE	25% (1V:4H)	--
⑥	BLENDED TRANSITION	5% (1V:20H) 2% MIN.	2% (1V:48H)

* RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. CROSS SLOPE IS PERPENDICULAR TO PEDESTRIAN TRAVEL.

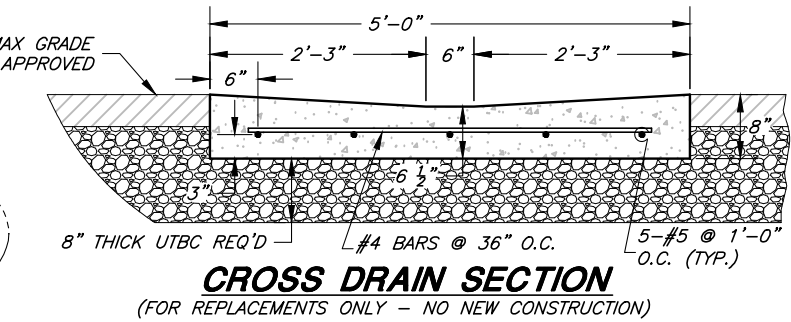
¹ 5% MAX OR NATURAL SLOPE OF LAND
² NOT TO EXCEED 2% IN ANY DIRECTION



SECTION A-A



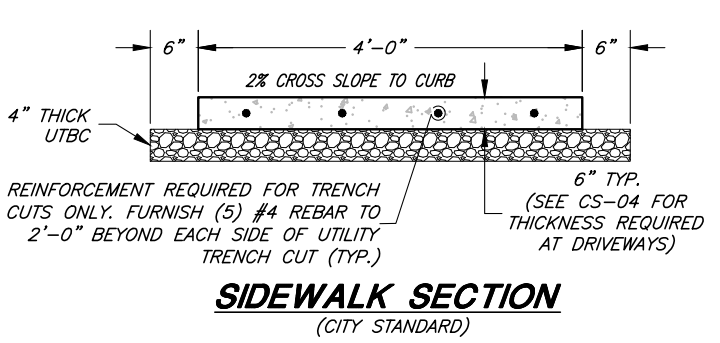
TYPICAL ADA RAMP



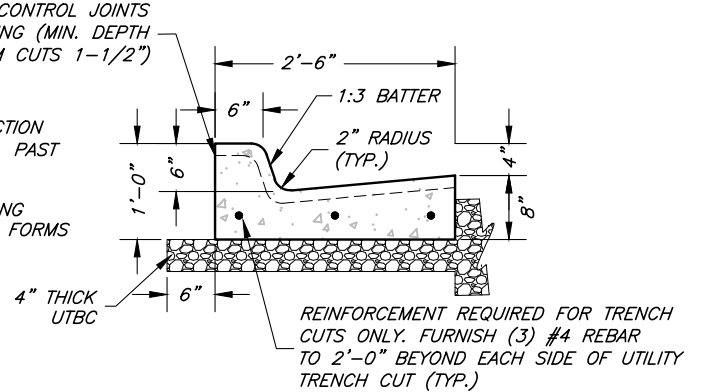
CROSS DRAIN SECTION
(FOR REPLACEMENTS ONLY - NO NEW CONSTRUCTION)

CURB & GUTTER NOTES:

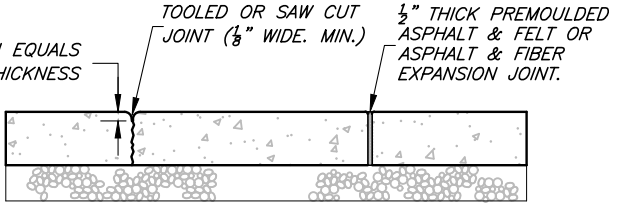
- A1. WHEN REPLACING CURB DUE TO CONSTRUCTION ACTIVITY, NEW CURB MUST EXTEND 5' MIN. PAST TRENCH ON EACH SIDE.
- B1. CONCRETE CURB TO BE CONSTRUCTED USING SLIPFORMS, HAND FORMED OR STATIONARY FORMS ARE ONLY ALLOWED FOR CURB TIE-INS.
- C1. THE SLOPE FOR CURB & GUTTER MUST BE A MINIMUM OF 0.5%.



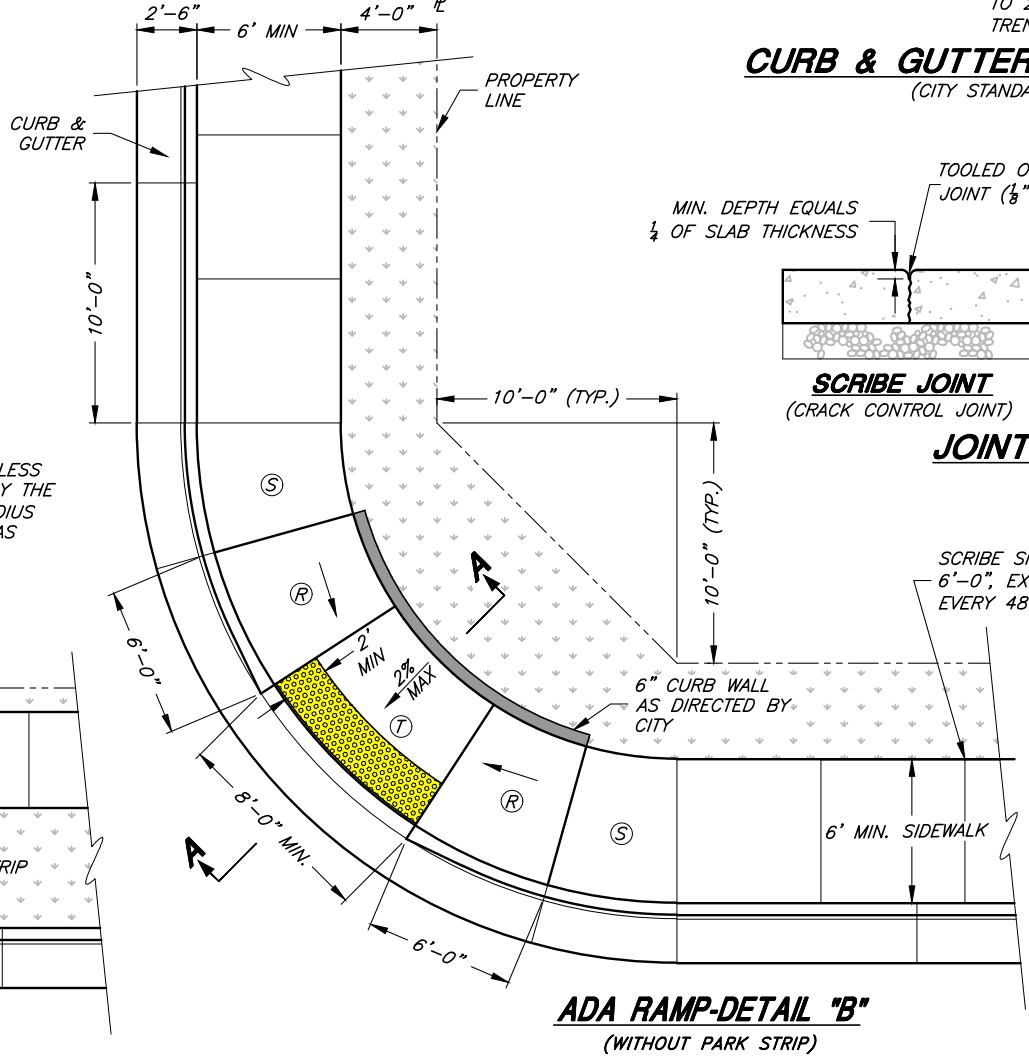
SIDEWALK SECTION
(CITY STANDARD)



CURB & GUTTER SECTION
(CITY STANDARD)



JOINT DETAIL
SCRIBE JOINT (CRACK CONTROL JOINT)
EXPANSION JOINT



ADA RAMP-DETAIL "B"
(WITHOUT PARK STRIP)

GENERAL NOTES:

- A2. INSTALLATION TOLERANCES ON CURB & GUTTER AND SIDEWALK PER APWA 32 16 13, 3.7.
- B2. AS-BUILT SURVEY MAY BE REQUIRED TO VERIFY COMPLIANCE WITH TOLERANCES.
- C2. GRINDING OF CONCRETE, TO MEET TOLERANCES, WILL NOT BE ALLOWED.



APPROVED
Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

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PUBLIC WORKS DIRECTOR
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SCALE:
N.T.S.

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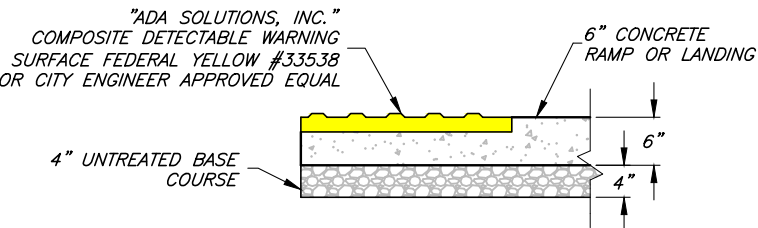


PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
PUBLIC ROADS - TYPICAL ADA RAMP, SIDEWALK
CURB & GUTTER, AND CONCRETE JOINT DETAILS

SHEET:
CS-05
OF 1 SHEETS
0

DETECTABLE WARNING SURFACE NOTES:

- 1. LOCATE THE DETECTABLE WARNING SURFACE SO THE OUTSIDE CORNER NEAREST THE STREET IS WITHIN 1 INCH OF THE BACK OF CURB (TBC). PROVIDE 2-FOOT MINIMUM DEPTH.
- 2. PROVIDE DETECTABLE WARNING SURFACE FOR FULL WIDTH OF CURB CUT.
- 3. THE DETECTABLE WARNING SURFACE DOMES SHALL BE ORIENTED SUCH THAT THE ROWS ARE PARALLEL WITH THE DIRECTION OF PEDESTRIAN TRAVEL TO THE RAMP ON THE OPPOSITE SIDE OF THE STREET.
- 4. THE STANDARD COLOR FOR THE DETECTABLE WARNING SURFACE SHALL BE RED OR PRE-APPROVED CONTRASTING COLOR. WHEN THE EXISTING SIDEWALK COLOR IS NOT STANDARD CONCRETE, THE COLOR OF THE DETECTABLE WARNING SURFACE SHALL BE DETERMINED BY THE CITY ENGINEER OR AUTHORIZED REPRESENTATIVE.
- 5. WHEN A DETECTABLE WARNING SURFACE DOME IS CUT, THE REMAINING PORTION OF THE DOME SHALL BE BEVELED TO A MAXIMUM SLOPE OF 1:2.



DETECTABLE WARNING SURFACE DETAIL

ADA RAMP NOTES:

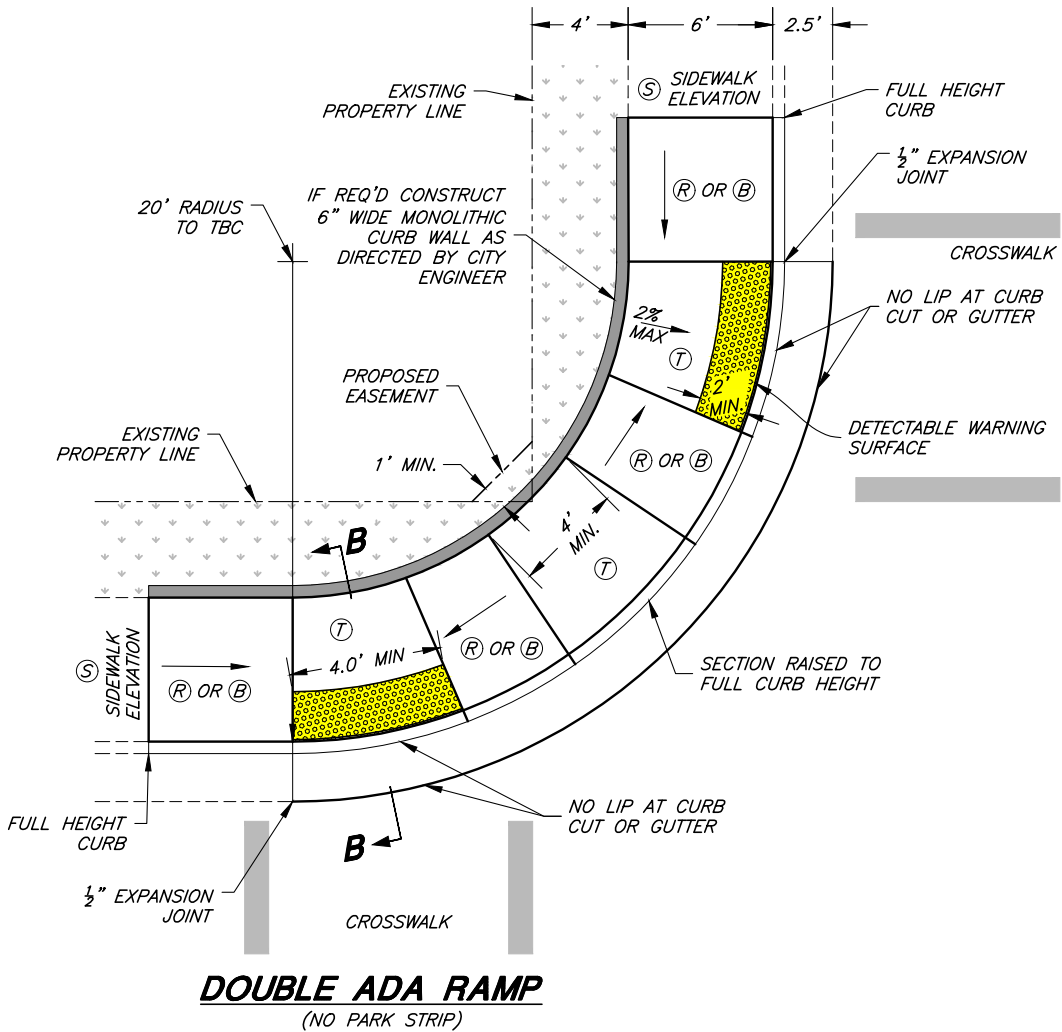
- A. WHERE DESIGNATED BY THE CITY, ALTERNATE UDOT OR APWA RAMP DESIGNS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE CITY PUBLIC WORKS DEPARTMENT. SUBMIT ENGINEERED CONSTRUCTION PLANS TO CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.
- B. SITE CONDITIONS WILL VARY. CONFIGURATION OF RAMP, LANDING, AND TRANSITION MAY BE CHANGED, BUT THEY MUST MEET DIMENSIONS AND SLOPES AS SHOWN IN THE MOST RECENT EDITION OF THE U.D.O.T. STANDARDS & SPECIFICATIONS (SHEETS PA1 THROUGH PA5). THE USE OF FLARES, CURB WALLS, ETC. ARE AT THE DISCRETION OF THE ENGINEER.
- C. LOCATE CURB CUT WITHIN CROSSWALK.
- D. RAMP GRADE BREAK MUST BE PERPENDICULAR TO THE RUNNING SLOPE.

SLOPE TABLE			
	ITEM	MAX RUNNING SLOPE*	MAX. CROSS SLOPE*
T	TURNING SPACE ²	2% (1V:48H)	2% (1V:48H)
R	RAMP	8.3% (1V:12H)	2% (1V:48H)
S	SIDEWALK	5% (1:20) ¹	2% (1V:48H)
F1	TRAVERSABLE SURFACE	10% (1V:10H)	--
F2	NON-TRAVERSABLE SURFACE	25% (1V:4H)	--
B	BLENDED TRANSITION	5% (1V:20H) 2% MIN.	2% (1V:48H)

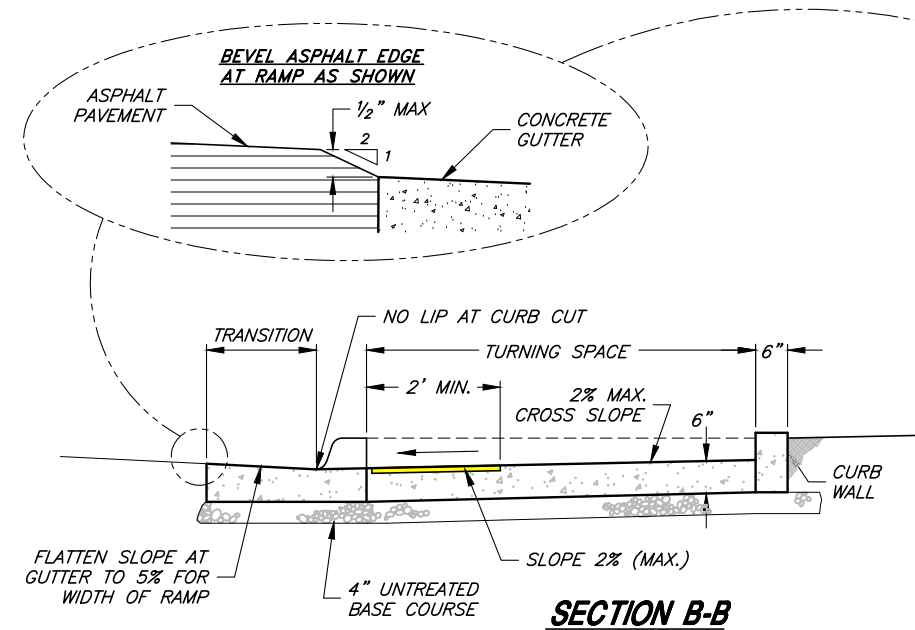
* RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. CROSS SLOPE IS PERPENDICULAR TO PEDESTRIAN TRAVEL.

¹ 5% MAX OR NATURAL SLOPE OF LAND

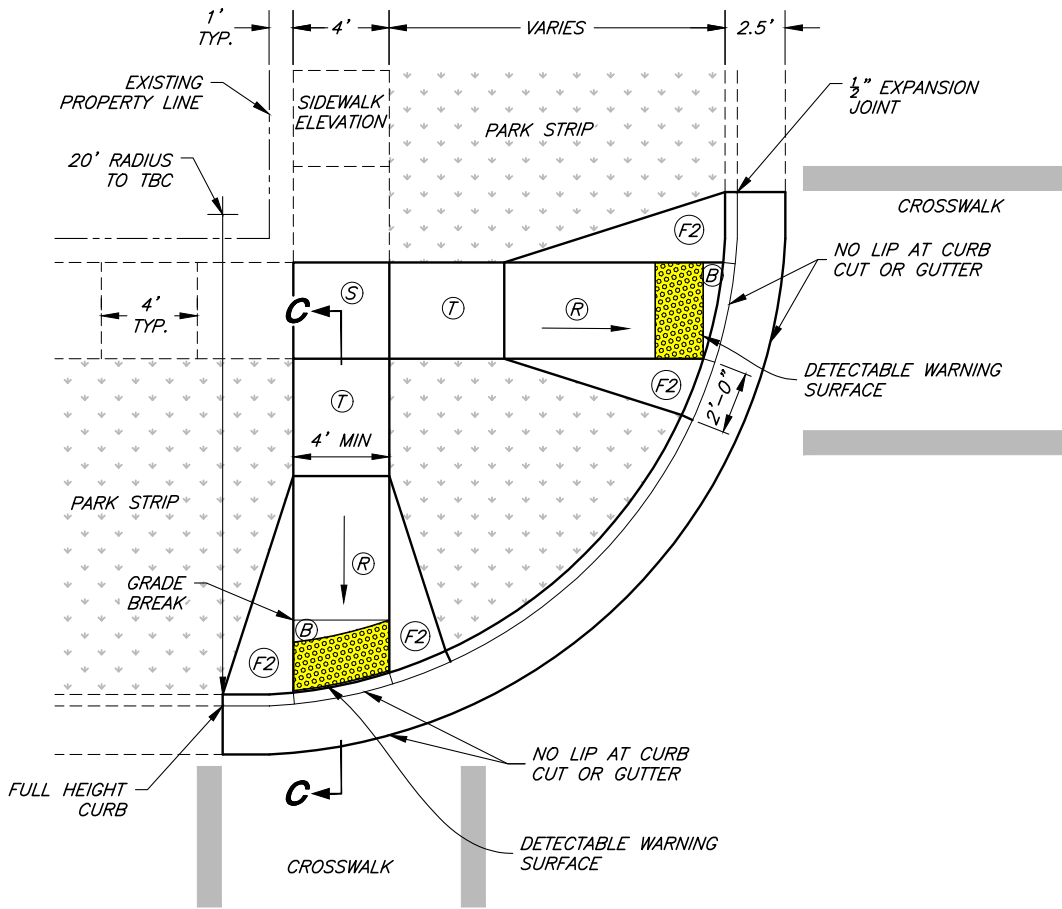
² NOT TO EXCEED 2% IN ANY DIRECTION



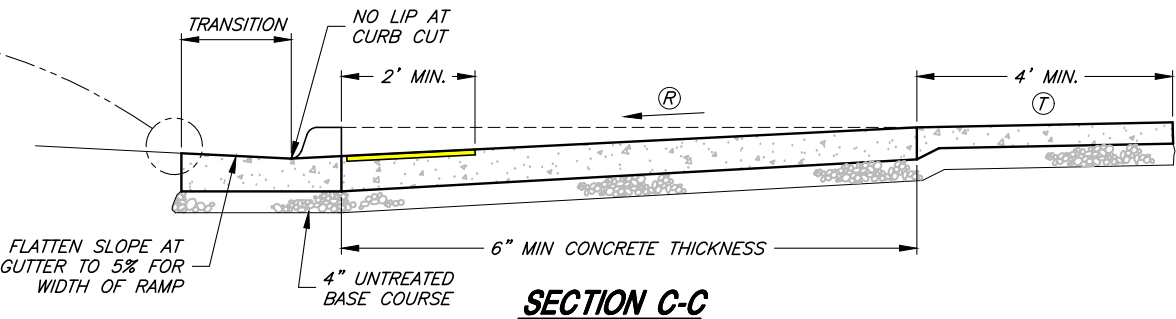
DOUBLE ADA RAMP
(NO PARK STRIP)



SECTION B-B



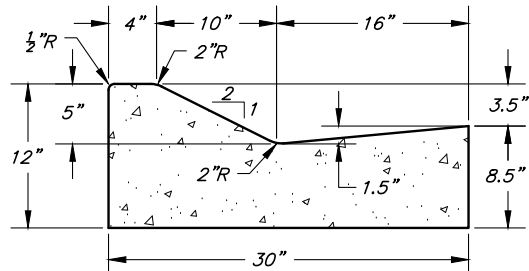
DOUBLE ADA RAMP



SECTION C-C

GENERAL NOTES:

- A2. INSTALLATION TOLERANCES ON CURB & GUTTER AND SIDEWALK PER APWA 32 16 13, 3.7.
- B2. AS-BUILT SURVEY MAY BE REQUIRED TO VERIFY COMPLIANCE WITH TOLERANCES.
- C2. GRINDING OF CONCRETE, TO MEET TOLERANCES, WILL NOT BE ALLOWED.



ROLL CURB & GUTTER SECTION
WHERE APPROVED BY PUBLIC WORKS DEPARTMENT



APPROVED
CITY ENGINEER
Brett M. Jones
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

SCALE:
N.T.S.

DESIGNED
DRAWN
CHECKED

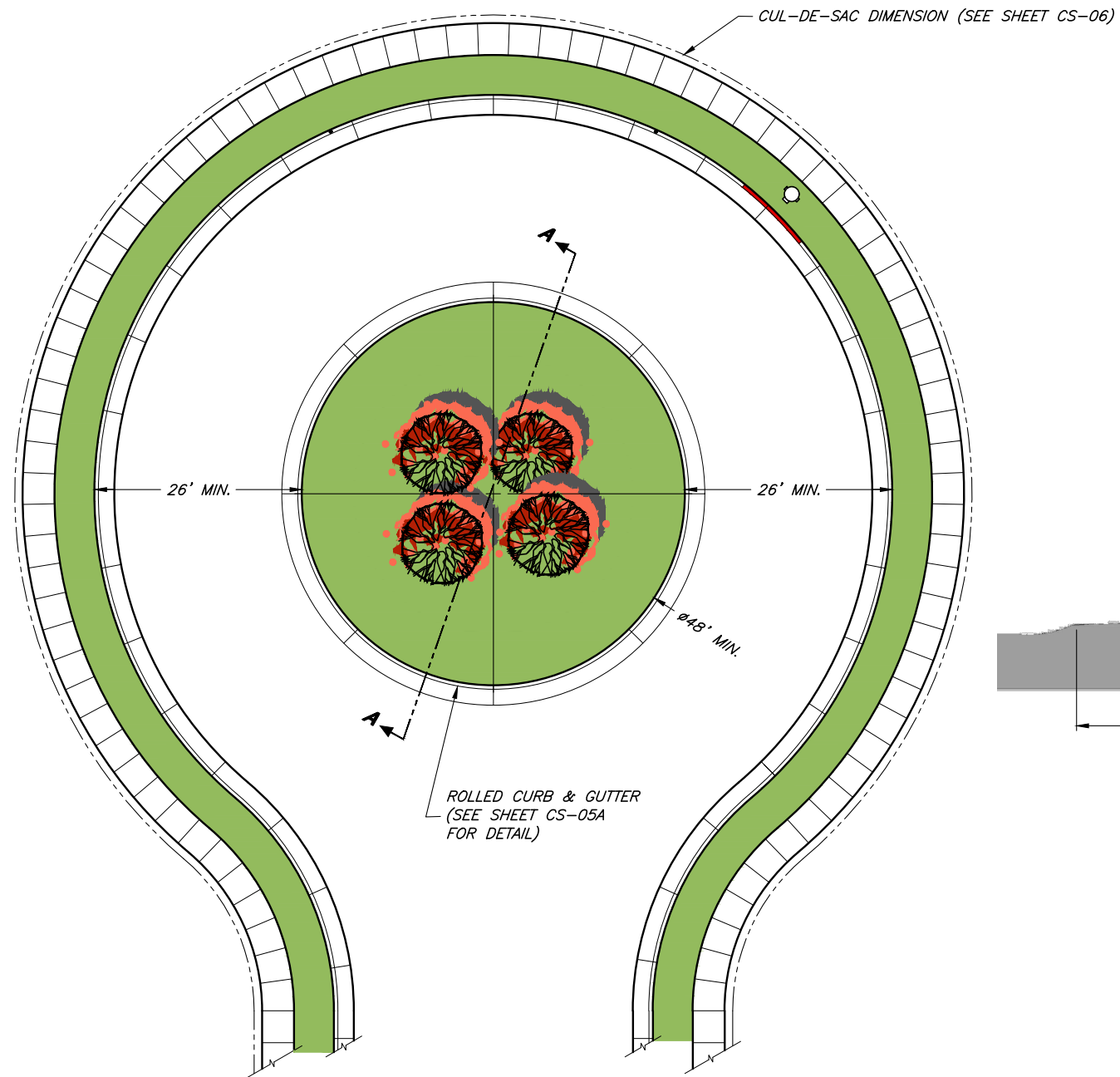


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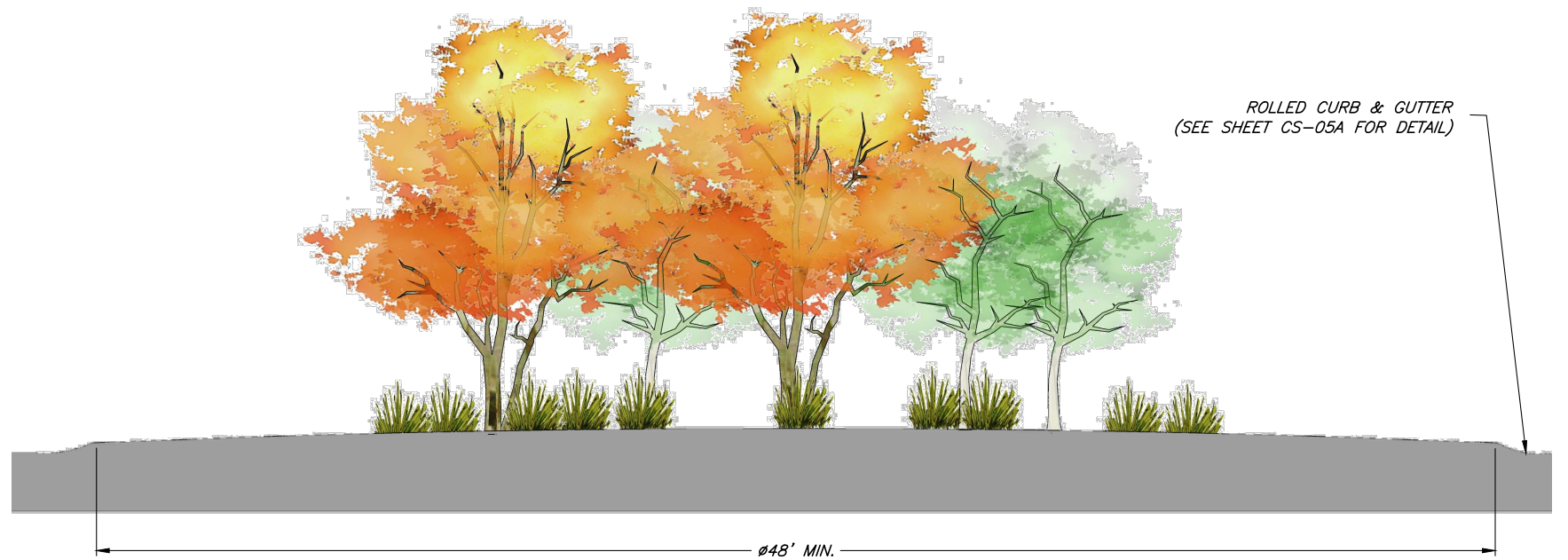


PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
PUBLIC ROADS - ALTERNATE ADA RAMP AND
ROLL CURB & GUTTER DETAILS

SHEET:
CS-05A
OF 1 SHEETS
0



CUL-DE-SAC ISLAND
30' DIA. ISLAND



SECTION A-A
ENLARGED ISLAND DETAIL



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

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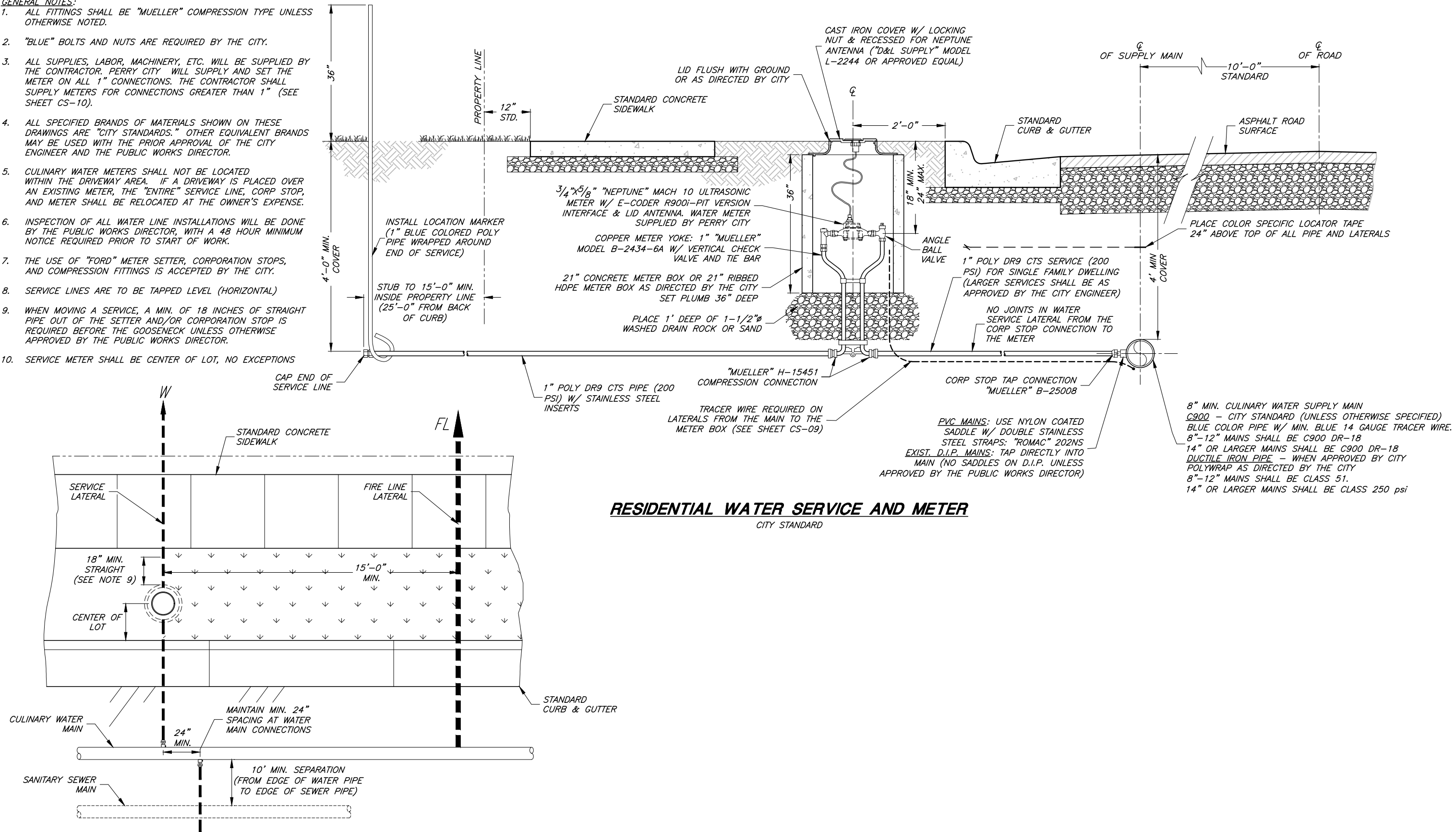
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
**PUBLIC ROADS - LANDSCAPE CUL-DE-SAC
AND DETAILS**

SHEET:
CS-06A
OF 1 SHEETS
0

- GENERAL NOTES:
1. ALL FITTINGS SHALL BE "MUELLER" COMPRESSION TYPE UNLESS OTHERWISE NOTED.
 2. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
 3. ALL SUPPLIES, LABOR, MACHINERY, ETC. WILL BE SUPPLIED BY THE CONTRACTOR. PERRY CITY WILL SUPPLY AND SET THE METER ON ALL 1" CONNECTIONS. THE CONTRACTOR SHALL SUPPLY METERS FOR CONNECTIONS GREATER THAN 1" (SEE SHEET CS-10).
 4. ALL SPECIFIED BRANDS OF MATERIALS SHOWN ON THESE DRAWINGS ARE "CITY STANDARDS." OTHER EQUIVALENT BRANDS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE PUBLIC WORKS DIRECTOR.
 5. CULINARY WATER METERS SHALL NOT BE LOCATED WITHIN THE DRIVEWAY AREA. IF A DRIVEWAY IS PLACED OVER AN EXISTING METER, THE "ENTIRE" SERVICE LINE, CORP STOP, AND METER SHALL BE RELOCATED AT THE OWNER'S EXPENSE.
 6. INSPECTION OF ALL WATER LINE INSTALLATIONS WILL BE DONE BY THE PUBLIC WORKS DIRECTOR, WITH A 48 HOUR MINIMUM NOTICE REQUIRED PRIOR TO START OF WORK.
 7. THE USE OF "FORD" METER SETTER, CORPORATION STOPS, AND COMPRESSION FITTINGS IS ACCEPTED BY THE CITY.
 8. SERVICE LINES ARE TO BE TAPPED LEVEL (HORIZONTAL)
 9. WHEN MOVING A SERVICE, A MIN. OF 18 INCHES OF STRAIGHT PIPE OUT OF THE SETTER AND/OR CORPORATION STOP IS REQUIRED BEFORE THE GOOSENECK UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.
 10. SERVICE METER SHALL BE CENTER OF LOT, NO EXCEPTIONS



RESIDENTIAL WATER SERVICE AND METER
CITY STANDARD

STANDARD WATER METER LOCATION



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

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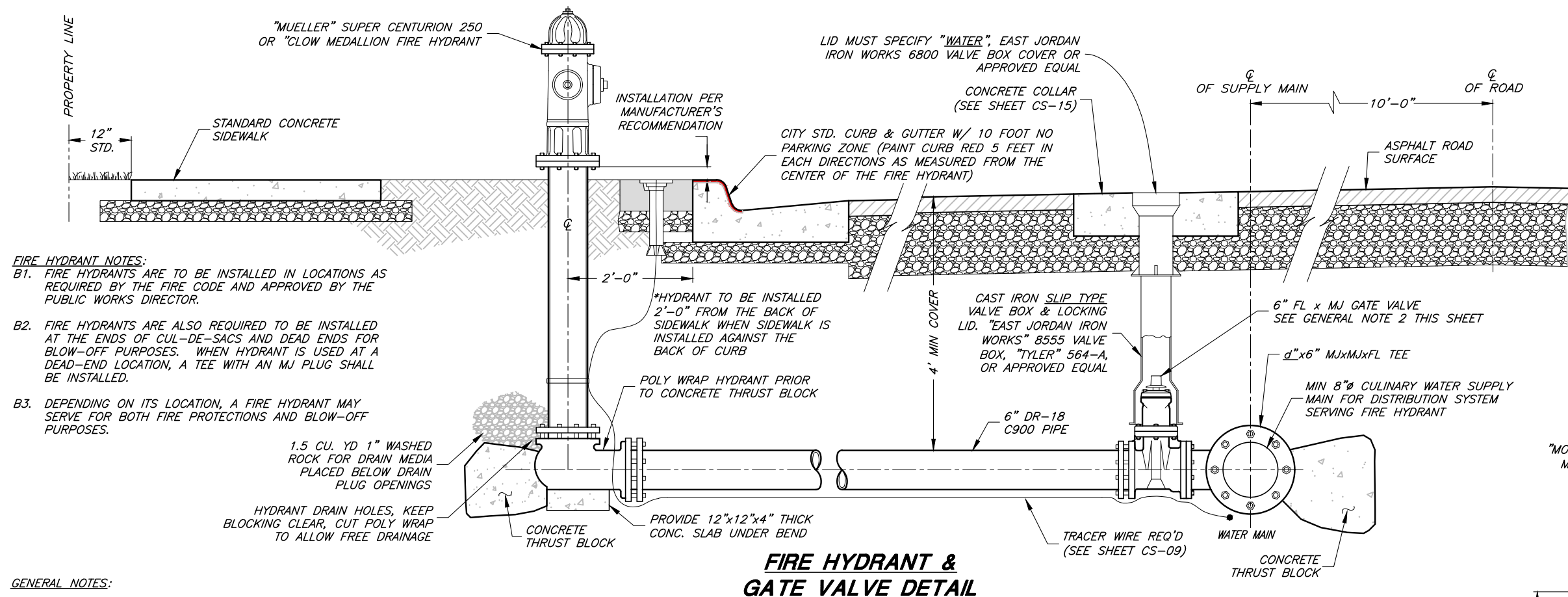


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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
CULINARY WATER - RESIDENTIAL WATER SERVICE DETAILS

SHEET:
CS-07
OF 1 SHEETS
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- FIRE HYDRANT NOTES:

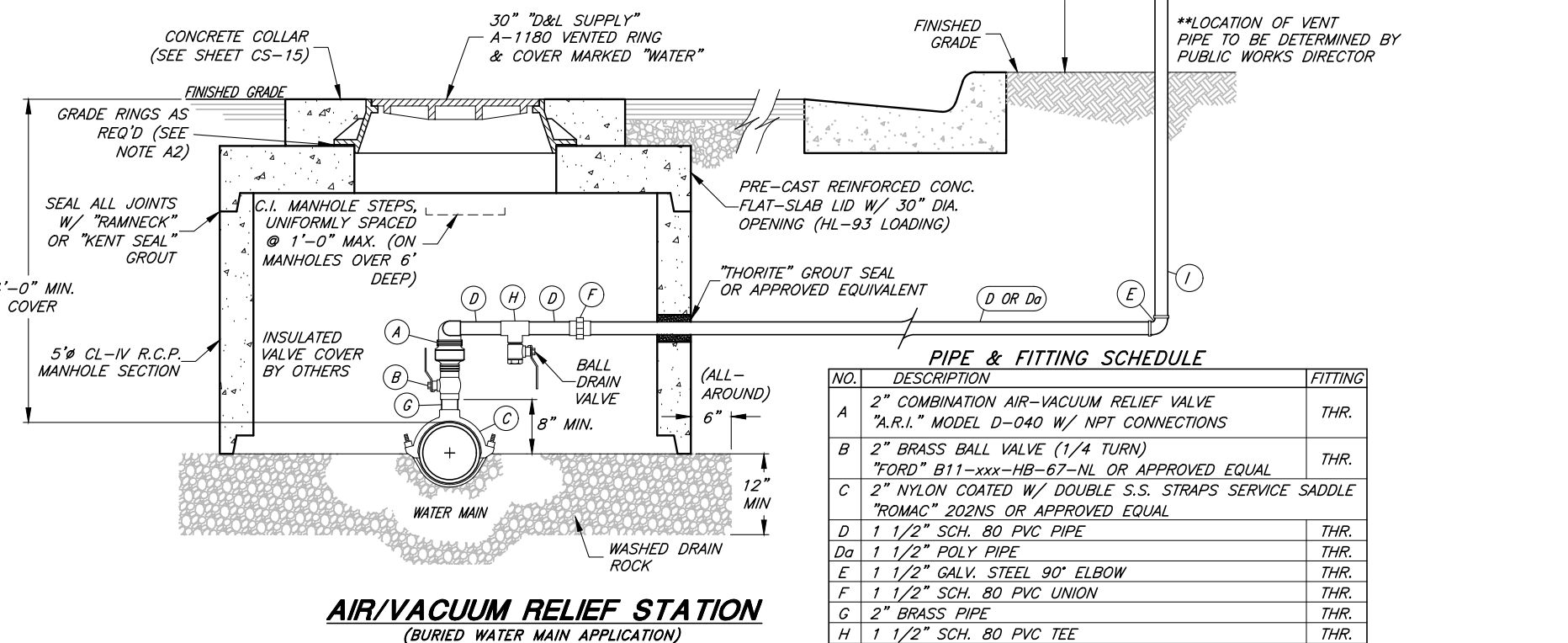
- B1. FIRE HYDRANTS ARE TO BE INSTALLED IN LOCATIONS AS REQUIRED BY THE FIRE CODE AND APPROVED BY THE PUBLIC WORKS DIRECTOR.
- B2. FIRE HYDRANTS ARE ALSO REQUIRED TO BE INSTALLED AT THE ENDS OF CUL-DE-SACS AND DEAD ENDS FOR BLOW-OFF PURPOSES. WHEN HYDRANT IS USED AT A DEAD-END LOCATION, A TEE WITH AN MJ PLUG SHALL BE INSTALLED.
- B3. DEPENDING ON ITS LOCATION, A FIRE HYDRANT MAY SERVE FOR BOTH FIRE PROTECTIONS AND BLOW-OFF PURPOSES.

- GENERAL NOTES:

1. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
2. ALL WATER MAIN AND HYDRANT GATE VALVES TO BE AWWA C509 RESILIENT WEDGE "MUELLER" A-2361 OR "CLOW" 2639 VALVES (ANY CHIPS IN THE VALVE FACTORY COATING DUE TO SHIPPING/INSTALLATION MUST BE REPAIRED USING AN APPROVED EPOXY COATING)
3. VALVES OVER 6' FEET DEEP REQUIRE A NUT EXTENSION.
4. ALL SPECIFIED BRANDS OF MATERIALS SHOWN ON THESE DRAWINGS ARE "CITY STANDARDS." OTHER EQUIVALENT BRANDS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE PUBLIC WORKS DIRECTOR.
5. PIPES, JOINTS, FITTINGS, VALVES, & FIRE HYDRANTS SHALL CONFORM TO ANSI / NSF 61.
6. FIRE HYDRANTS SHALL NOT BE LOCATED WITHIN 10 FEET OF A SANITARY SEWER OR WITHIN 10 FEET OF STORM DRAIN WHERE POSSIBLE.
7. ALL WATER SYSTEM MATERIALS SHALL BE NEW (DISCOLORED PIPE OR PIPE MATERIALS STOCKPILED LONGER THAN 1 YEAR WILL NOT BE ACCEPTED BY THE PUBLIC WORKS DIRECTOR); USED MATERIALS ARE NOT ALLOWED.


AIR/VACUUM RELIEF STATION NOTES:

- A1. THE USE OF AN "APCO" 145C HEAVY-DUTY COMBINATION AIR VAC IS ACCEPTED WHEN APPROVED BY THE CITY. UPSIZE VENT PIPE, AIR VENT AND FITTINGS (ITEMS D, E, F, H AND I) TO 2" DIA. AND GALVANIZED STEEL WHEN USING ALTERNATE VALVES.
- A2. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE.
- A3. A DECORATIVE AIR VENT COVER W/ A TAMPER RESISTANT CAP MAY BE USED, WHEN APPROVED BY THE PUBLIC WORKS DIRECTOR. THIS IS A CASE SPECIFIC ITEM AND THE DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY PRIOR TO INSTALLATION.



NO.	DESCRIPTION	FITTING
A	2" COMBINATION AIR-VACUUM RELIEF VALVE "A.R.I." MODEL D-040 W/ NPT CONNECTIONS	THR.
B	2" BRASS BALL VALVE (1/4 TURN) "FORD" B11-xxx-HB-67-NL OR APPROVED EQUAL	THR.
C	2" NYLON COATED W/ DOUBLE S.S. STRAPS SERVICE SADDLE "ROMAC" 202NS OR APPROVED EQUAL	
D	1 1/2" SCH. 80 PVC PIPE	THR.
Da	1 1/2" POLY PIPE	THR.
E	1 1/2" GALV. STEEL 90° ELBOW	THR.
F	1 1/2" SCH. 80 PVC UNION	THR.
G	2" BRASS PIPE	THR.
H	1 1/2" SCH. 80 PVC TEE	THR.
I	1 1/2" GALV. STEEL PIPE	THR.



	APPROVED
CITY ENGINEER	PUBLIC WORKS DIRECTOR
09/01/2021	09/01/2021
DATE	DATE

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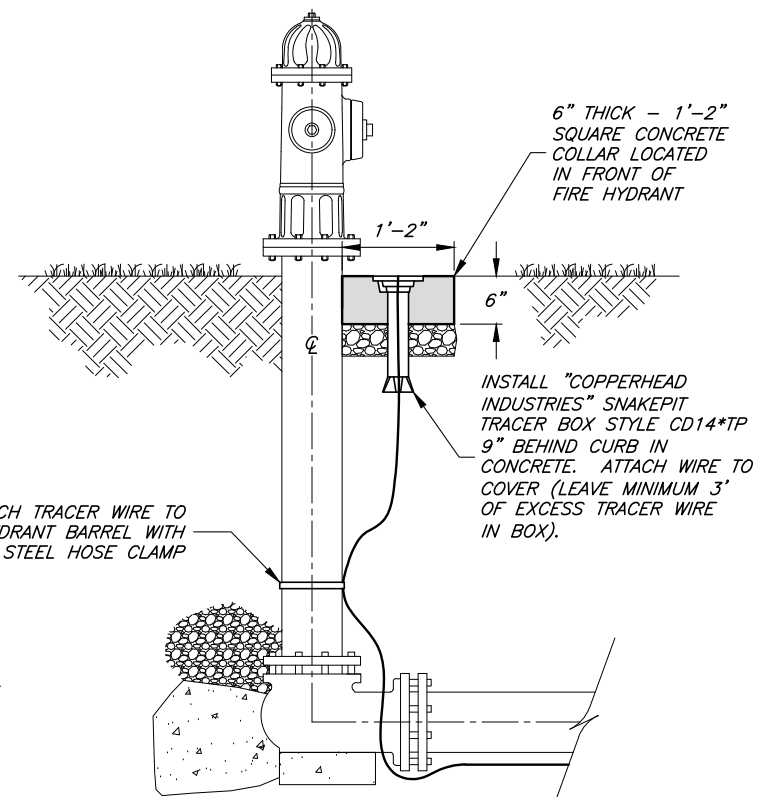
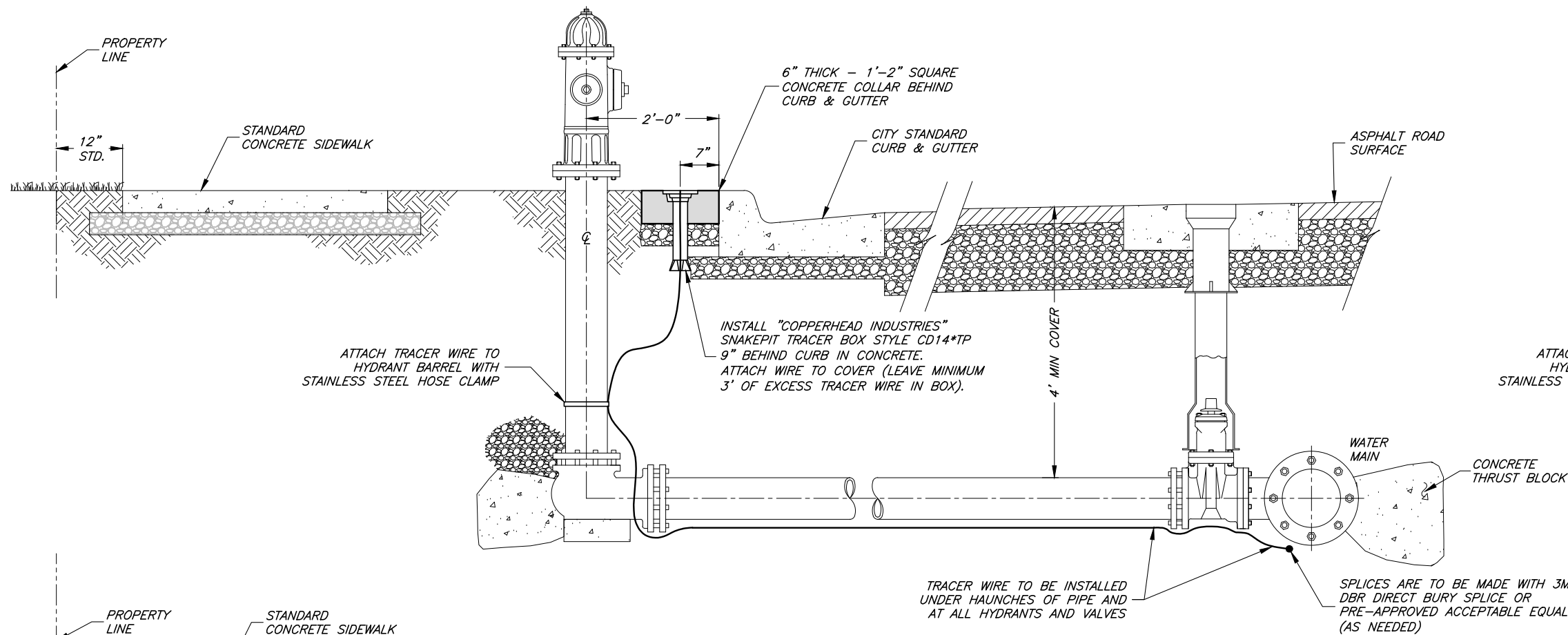
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PUBLIC WORKS STANDARDS

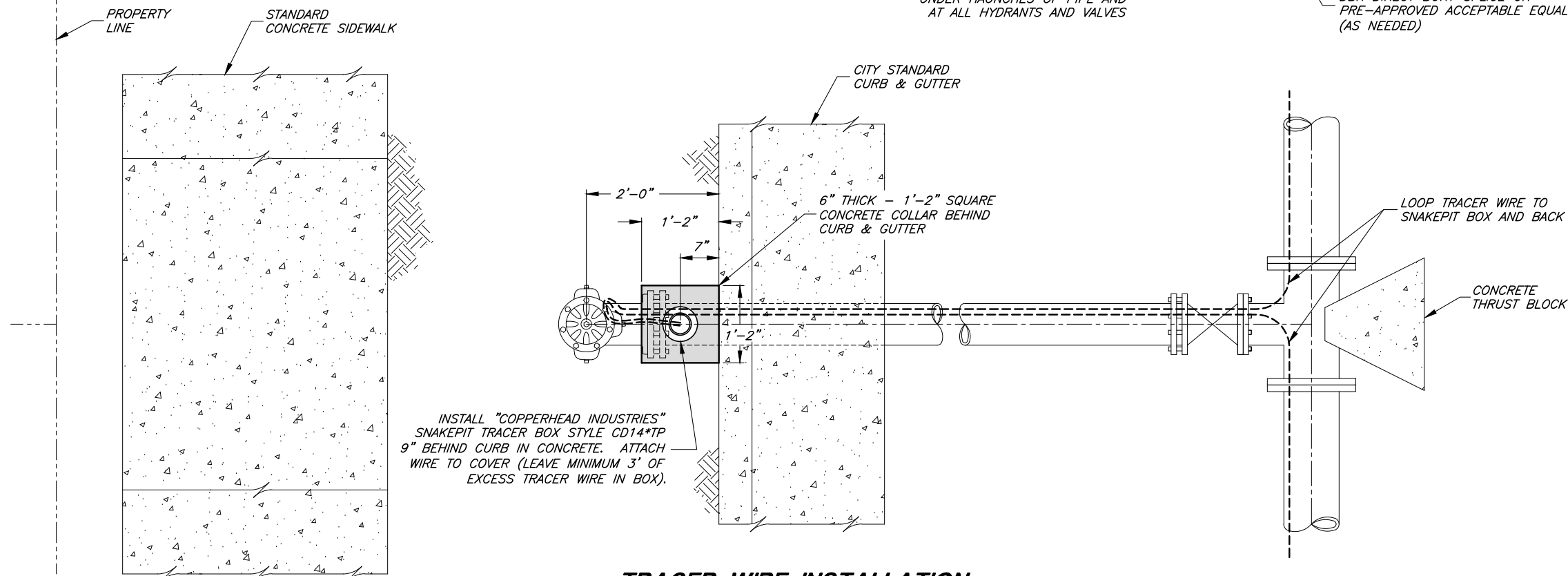
**CULINARY WATER - FIRE HYDRANT, GATE VALVE, AND
AIR/VACUUM RELIEF STATION DETAILS**

EET:
-08
SHEETS



ALTERNATE TRACER WIRE INSTALLATION

WHERE APPROVED BY THE PUBLIC WORKS DIRECTOR ON STREET SECTIONS WITH NO CURB & GUTTER



TRACER WIRE INSTALLATION

CITY STANDARD STREET SECTION (CURB & GUTTER)

NOTES:

1. ALL WATERLINES SHALL HAVE A MINIMUM 14 GA. INSULATED TRACER WIRE INSTALLED UNDER THE HAUNCHES OF THE PIPE PRIOR TO BACKFILLING.
2. TRACER WIRES SHALL TERMINATE AT ALL FIRE HYDRANTS. AT SERVICE SADDLES AND TAPPING SLEEVES, THE TRACER WIRE SHALL NOT BE ALLOWED TO BE PLACED BETWEEN THE SADDLE AND THE PIPE. A GROUNDING ROD SHALL BE INSTALLED AT ALL TRACER SYSTEM TERMINAL POINTS.
3. TRACER WIRE SHALL BE COPPER WIRE WITH BLUE INSULATION RATED FOR DIRECT BURIAL. ALL WIRE CONNECTORS SHALL BE 3M DBR DIRECT BURY SPLICE OR PRE-APPROVED ACCEPTABLE EQUAL AND SHALL BE WATERTIGHT TO PROVIDE ELECTRICAL CONTINUITY.
4. ALL TRACER WIRE SHALL BE TESTED FOR CONTINUITY IN THE PRESENCE OF THE PUBLIC WORKS INSPECTOR PRIOR TO ASPHALT PLACEMENT. ANY TRACER WIRE FOUND NOT TO BE CONTINUOUS AFTER TESTING SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR PRIOR TO ASPHALT PLACEMENT.



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED

PUBLIC WORKS DIRECTOR

09/01/2021
DATE

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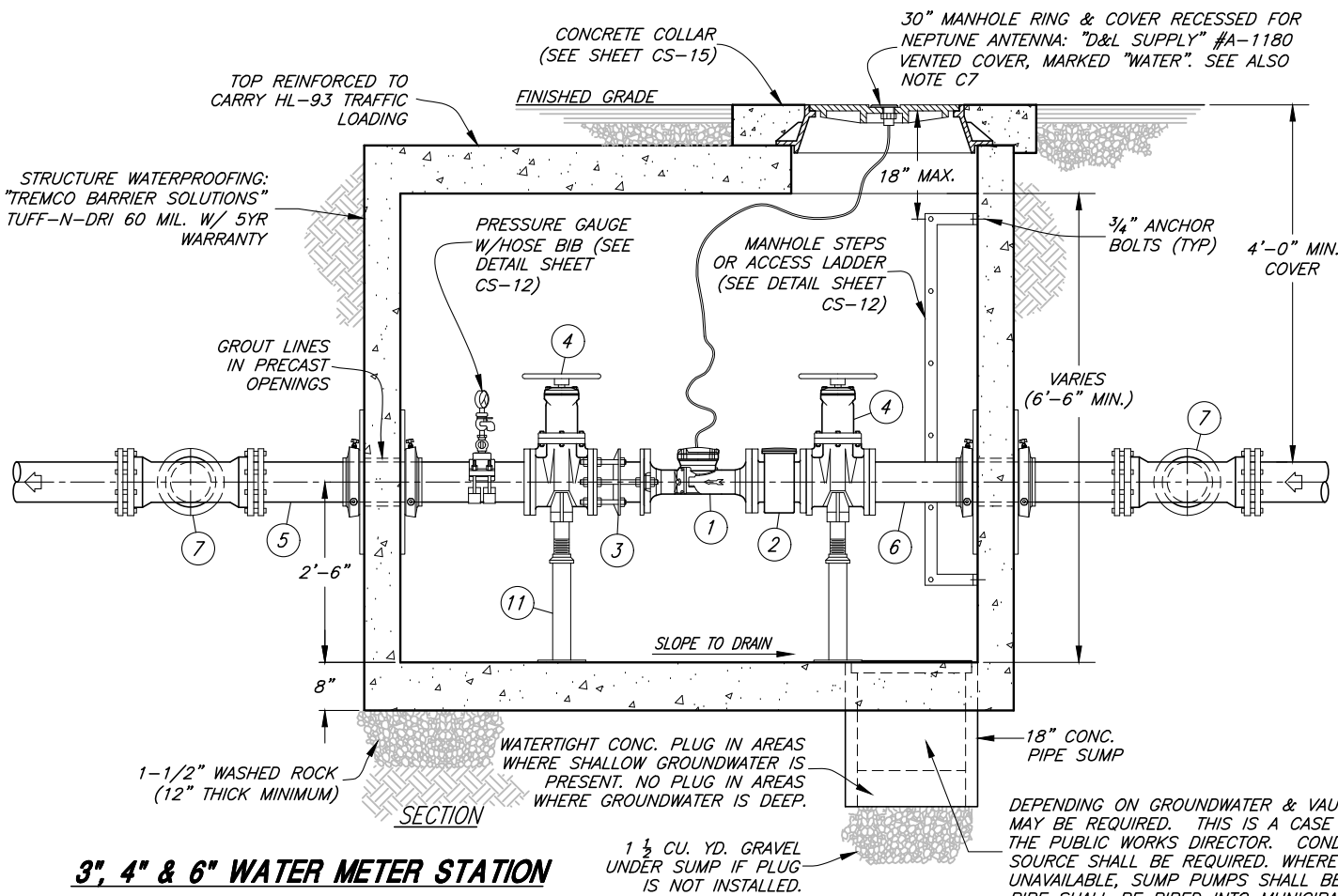
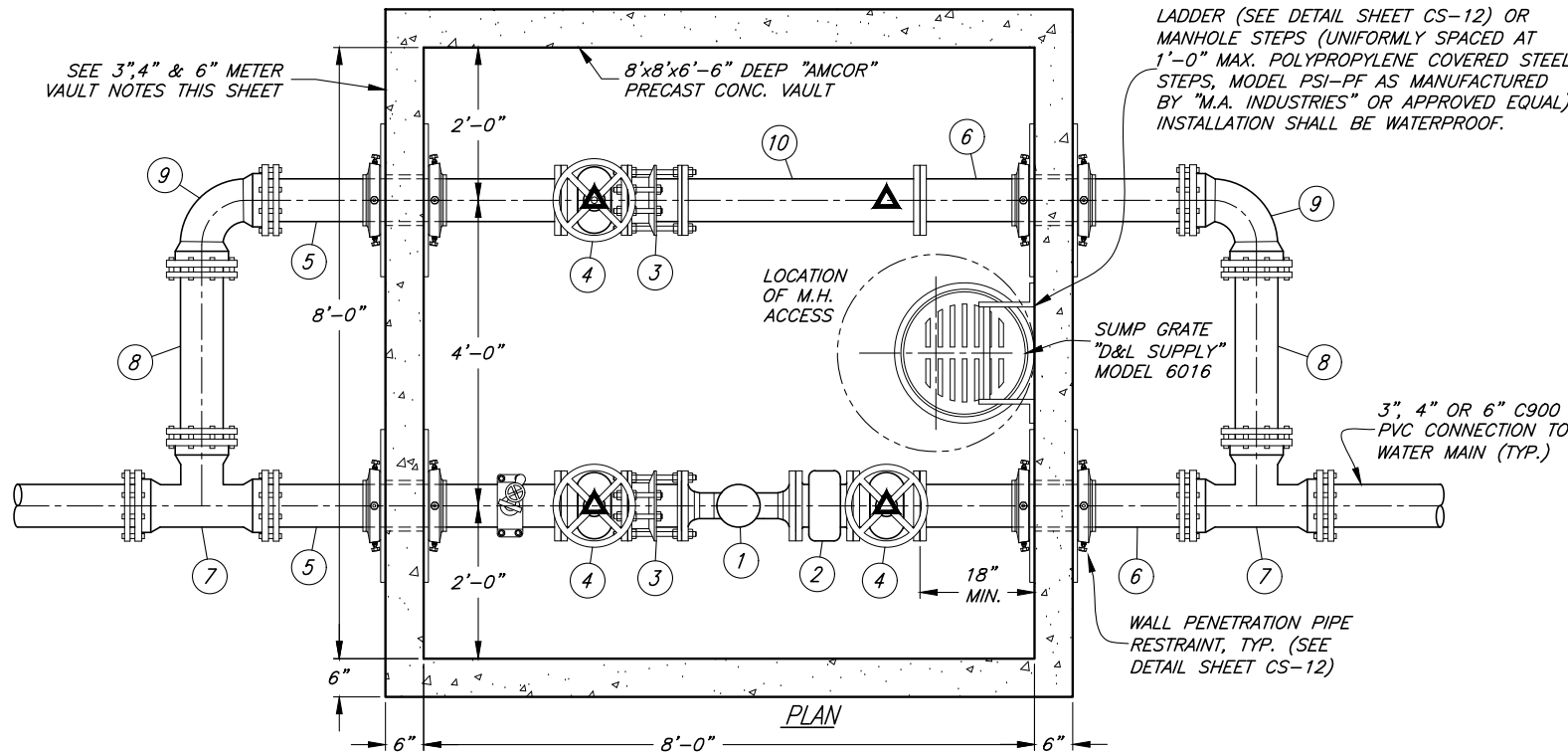
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS

CULINARY WATER - TRACER WIRE INSTALLATION DETAILS

SHEET:

CS-09

OF 1 SHEETS
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3", 4" & 6" WATER METER STATION

3", 4" & 6" METER VAULT NOTES:

- A1. ALL FITTINGS OUTSIDE OF THE VAULT ARE TO BE DUCTILE IRON MJ WITH THRUST RESTRAINT RETAINER GLANDS ("ROMAC", MJRG, OR APPROVED EQUAL)
- A2. PENETRATION WALLS NEED TO BE ADEQUATELY DESIGNED STRUCTURALLY FOR ANTICIPATED THRUST.
- A3. THE PRECAST VAULT MANUFACTURER IS RESPONSIBLE FOR DESIGN RELATED TO TRAFFIC LOADING AND THRUST. VERIFICATION OF PROPER DESIGN MUST BE PROVIDED TO THE CITY BY THE DEVELOPER, CONTRACTOR, OR PROPERTY OWNER AS THE CASE MAY BE.
- A4. ALL FITTINGS SHALL BE AWWA C-110 WITH 125 LB. FLANGES. ALL PIPING SHALL BE DUCTILE IRON PIPE CLASS 350 P.S.I. MIN.
- A5. ALL WALL PIPE PENETRATIONS AND JOINTS SHALL BE SEALED TO PREVENT WATER INFILTRATION. USE "LINK-SEAL" ON CAST-IN-PLACE VAULTS. PRECAST VAULTS SEAL AS DIRECTED BY PUBLIC WORKS DIRECTOR. APPROVED PRODUCTS ARE:
(a) "PRIME RESIN"- PRIMEFLEX 900XLV
(b) "MANUS PRODUCTS"- MANUS BOND 75AM
- A6. A "NEPTUNE" OR "BADGER" ULTRASONIC METER WITH 4-20MA OUTPUT AND STRAINER IS AN ACCEPTED ALTERNATIVE TO THE CITY STANDARD. LENGTHEN CONC. VAULT TO COMPLY WITH THE UP AND DOWNSTREAM METER INSTALLATION REQUIREMENTS.
- A7. ALL METERS TO BE COMPATIBLE WITH "NEPTUNE" E-CODER) R900i PIT VERSION INTERFACE AND EQUIPPED W/ LID ANTENNA

GENERAL NOTES:

- C1. PROPERTY OWNER OR CONTRACTOR SHALL PAY FOR ALL COSTS OF INSTALLATION INCLUDING ALL MATERIALS, ALL EXCAVATION AND FILL, ASPHALT REPLACEMENT AND WATER MAIN CONNECTION.
- C2. INSPECTION OF ALL WATER LINE INSTALLATIONS WILL BE DONE BY THE PUBLIC WORKS DIRECTOR, WITH A 48 HOUR MINIMUM NOTICE REQUIRED PRIOR TO START OF WORK.
- C3. IF APPLICABLE, A CITY EXCAVATION PERMIT MUST BE REQUESTED AND APPROVED PRIOR TO START OF WORK.
- C4. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
- C5. CONTRACTOR TO SUPPLY ALL METERS 1 1/2" OR LARGER.
- C6. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE OR STRUCTURE.
- C7. ALL RADIO-READ ANTENNAS ARE TO BE INSTALLED ABOVE THE ACCESS LID, RECESSED INTO THE MANHOLE OR METER PIT COVER.
- C8. ALL SPECIFIED BRANDS OF MATERIALS SHOWN ON THESE DRAWINGS ARE "CITY STANDARDS." OTHER EQUIVALENT BRANDS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE PUBLIC WORKS DIRECTOR.

DEPENDING ON GROUNDWATER & VAULT DRAINAGE, A SUMP PUMP MAY BE REQUIRED. THIS IS A CASE BY CASE ITEM DETERMINED BY THE PUBLIC WORKS DIRECTOR. CONDUIT FOR DRAINLINE & POWER SOURCE SHALL BE REQUIRED. WHERE POWER SOURCE IS UNAVAILABLE, SUMP PUMPS SHALL BE SOLAR POWERED. DRAIN PIPE SHALL BE PIPED INTO MUNICIPAL STORM DRAIN SYSTEM.

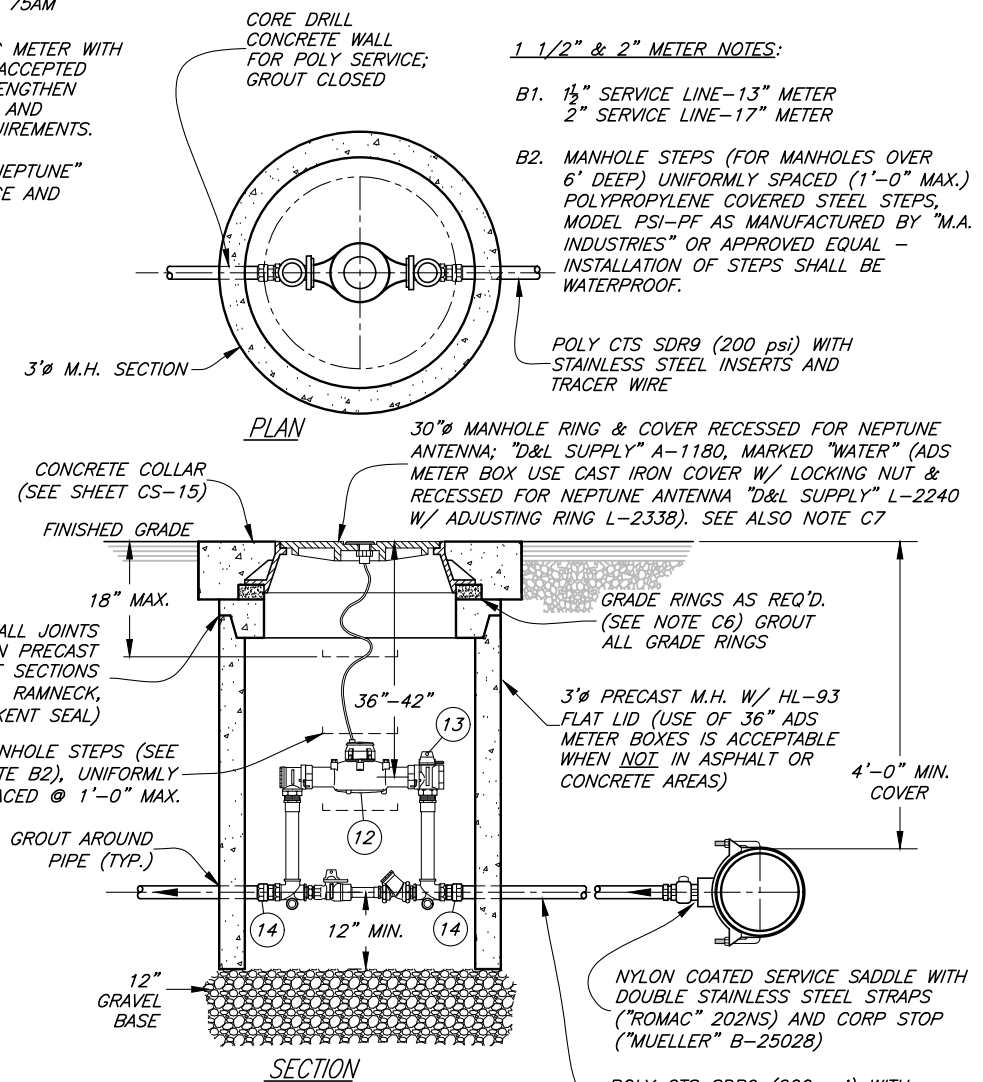
PIPE & FITTING SCHEDULE					
NO.	DESCRIPTION (3", 4" & 6" METER STA.)	JOINT TYPE	3" LINE	4" LINE	6" LINE
1	"MASTER METER" OCTAVE ULTRASONIC METER (SEE NOTE A6 AND A7)	FL	3"	4"	6"
2	LEAD-FREE BRONZE STRAINER	FL	3"	4"	6"
3	"ROMAC" DJ400 DISMANTLING JOINT (2)	FL	3"	4"	6"
4	"MUELLER" RESILIENT WEDGE GATE VALVE W/ HANDWHEEL (3)	FL	A-2362	A-2361	A-2361
5	D.I. NIPPLE PIECE (2)	FLxPE	3"	4"	6"
6	D.I. NIPPLE PIECE (2)	FLxPE	3"	4"	6"
7	D.I. TEE (2)	MJ	3"x3"x3"	4"x4"x4"	6"x6"x6"
8	D.I. PIPE SECTION (2)	PE	3"	4"	6"
9	D.I. 90° ELBOW (2)	MJ	3"	4"	6"
10	D.I. SPOOL PIECE	FL	3"	4"	6"
11	"CLOW" F-1608 OR "ANVIL" #264 GALV. PIPE SUPPORT W/ 3" COMPANION FLANGE & VARIABLE HEIGHT 3" NIPPLE (4 EA REQ'D.)				

△ SYMBOL

NO.	DESCRIPTION (1 1/2" & 2" METER STA.)	JOINT TYPE	1 1/2" LINE	2" LINE
12	"NEPTUNE" MACH 10 ULTRASONIC METER W/ E-CODER) R900i PIT VERSION INTERFACE & EQUIPPED W/ LID ANTENNA	OVAL FL	1 1/2"	2"
13	"MUELLER" B-2423-2 METER YOKE (18" HEIGHT) OR APPROVED EQUIVALENT	--	1 1/2"	2"
14	"MUELLER" 110 COMPRESSION CONNECTION COUPLING OR APPROVED EQUIVALENT	--	1 1/2"	2"

1 1/2" & 2" METER NOTES:

- B1. 1 1/2" SERVICE LINE-13" METER
2" SERVICE LINE-17" METER
- B2. MANHOLE STEPS (FOR MANHOLES OVER 6' DEEP) UNIFORMLY SPACED (1'-0" MAX.) POLYPROPYLENE COVERED STEEL STEPS, MODEL PSI-PF AS MANUFACTURED BY "M.A. INDUSTRIES" OR APPROVED EQUAL - INSTALLATION OF STEPS SHALL BE WATERPROOF.



1 1/2" & 2" WATER METER STATION



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
CULINARY WATER - STANDARD WATER METER STATIONS
SHEET: **CS-10**
OF 1 SHEETS
0

**WHEN DIRECTED BY CITY ENGINEER, PRV
VAULTS ARE TO BE PROVIDED WITH A
GRAVITY DRAIN TO THE NEAREST STORM
DRAIN. PIPE TO BE MIN. 4" PVC SDR-35

MIN 10'-0" FOR 8" & 10" MAIN LINE
MIN 12'-0" FOR 12" MAIN LINE

STRUCTURE WATERPROOFING:
"TREMCO BARRIER SOLUTIONS"
TUFF-N-DRI 60 MIL. W/ 5YR
WARRANTY

PIPE & FITTING SCHEDULE

NO.	DESCRIPTION	JOINT TYPE	8" LINE	10" LINE	12" LINE
1	D.I. REDUCER (2)	MJ	8"x6"	10"x8"	12"x10"
2	D.I. REDUCING TEE (2)	MJ	6"x6"x4"	8"x8"x4"	10"x10"x4"
3	D.I. NIPPLE PIECE	FLxPE	6"	8"	10"
4	"MUELLER" A-2361 GATE VALVE W/ HANDWHEEL (2)	FL	6"	8"	10"
5	12" D.I. SPOOL PIECE	FL	6"	8"	10"
6	"CLA-VAL" 90-01 PRESSURE REDUCTION VALVE	FL	6"	8"	10"
7	"ROMAC" DJ400 DISMANTLING JOINT	FL	6"	8"	10"
8	D.I. NIPPLE PIECE	FLxPE	6"	8"	10"
9	D.I. PIPE SECTION	PE	4"	4"	4"
10	D.I. 90° ELBOW (2)	MJ	4"	4"	4"
11	D.I. NIPPLE PIECE	FLxPE	4"	4"	4"
12	"MUELLER" A-2361 GATE VALVE W/ HANDWHEEL (2)	FL	4"	4"	4"
13	BLIND FLANGE W/ THREADED CONNECTION (2)	FLxTHR.	4"x2 1/2"	--	--
14	D.I. SPOOL PIECE	FL	--	4"	4"
15	D.I. SPOOL PIECE	FL	--	4"	4"
16	"ROMAC" DJ400 DISMANTLING JOINT	FL	--	4"	4"
17	"CLA-VAL" 90-01 PRESSURE REDUCTION VALVE	THR.	2 1/2"	--	--
18	"CLOW" F-1608 OR "ANVIL" #264 GALV. PIPE SUPPORT W/ 3" COMPANION FLANGE & VARIABLE HEIGHT 3" NIPPLE (6 EA REQD.)	THR.	2 1/2"	--	--

△ SYMBOL

PRV GENERAL SPECIFICATIONS:

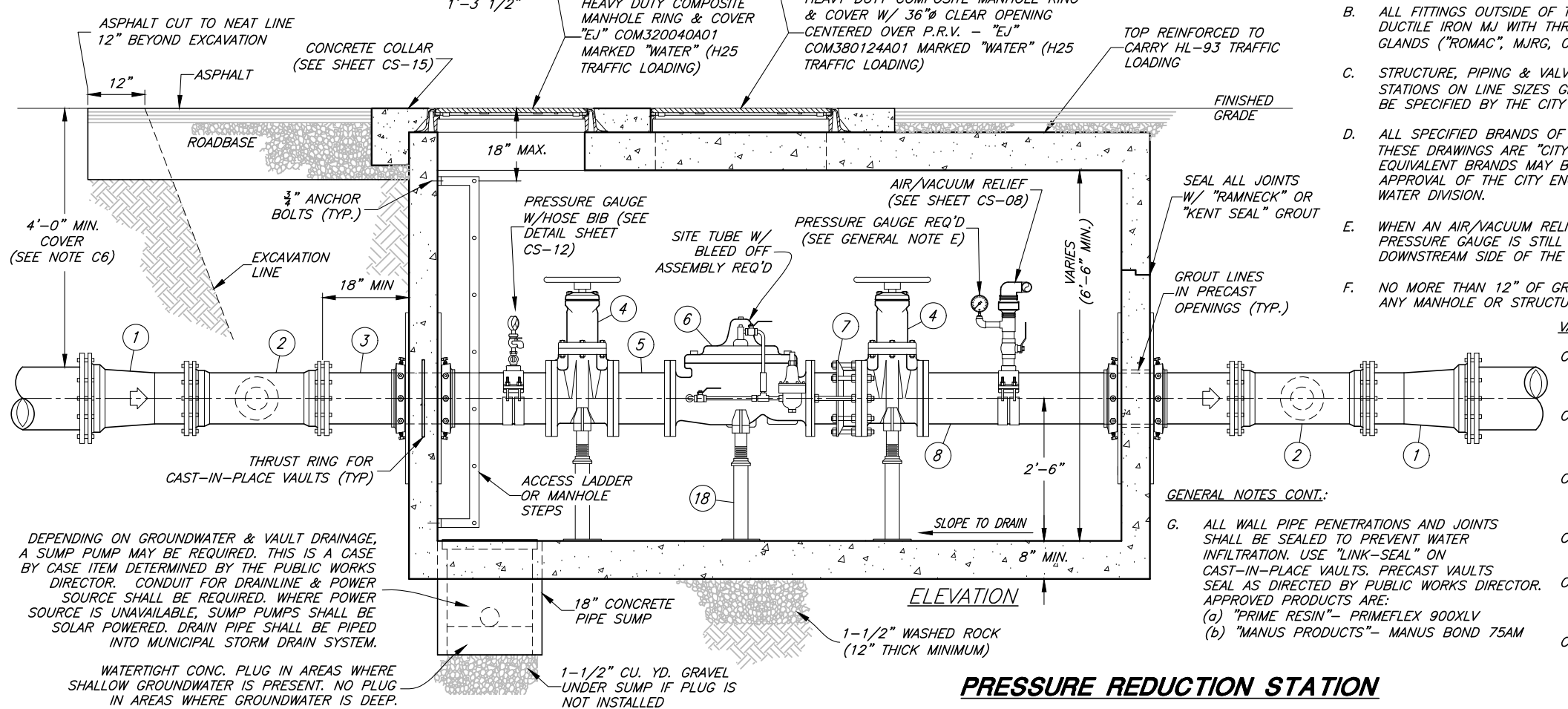
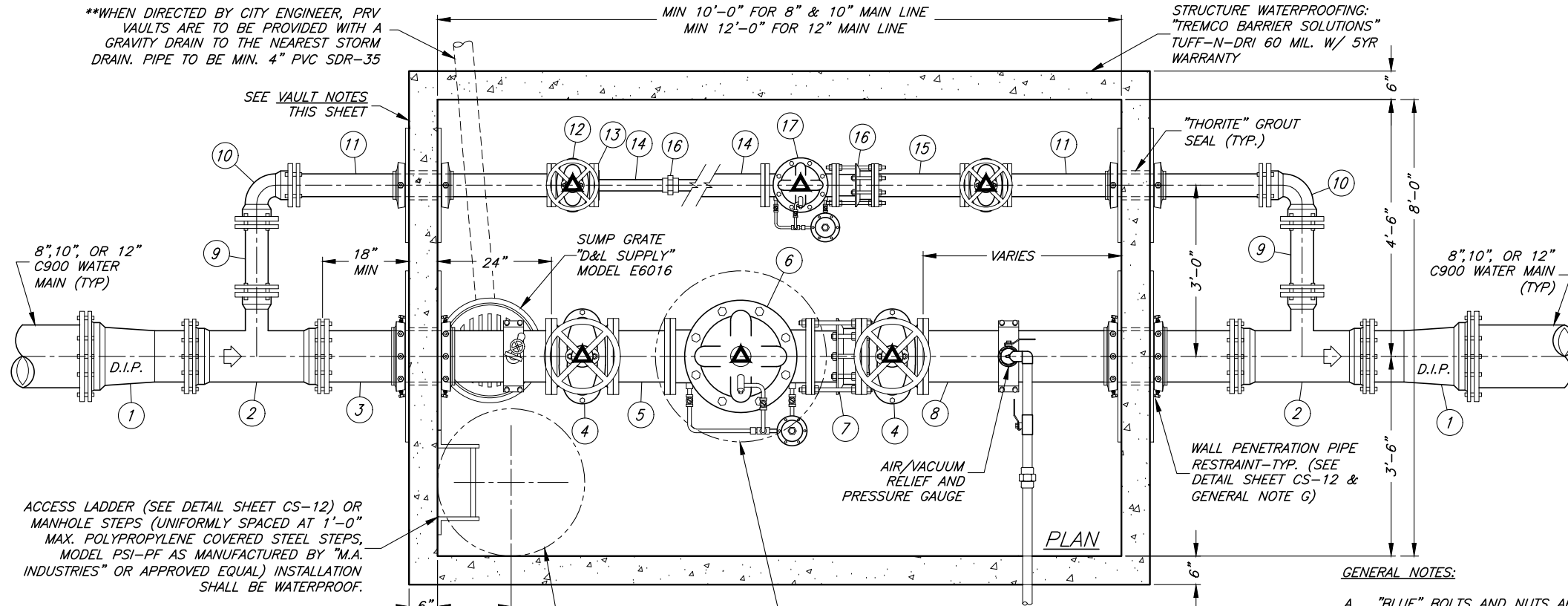
1. PRV TO BE CLA-VAL #90-01 YBCSKC
2. 150 # FLANGED FOR 250 PSI WORKING PRESSURE, 300# FLANGED IF GREATER THAN 250 PSI
3. DUCTILE IRON BODY GLOBE PATTERN
4. EPOXY LINED AND COATED
5. STAINLESS STEEL INTERNAL TRIM
6. BRONZE PILOT CONTROLS
7. STAINLESS STEEL TUBES & FITTINGS
8. SPRING RANGES FOR PRESSURE REDUCING PILOT
9. X101 VALVE POSITION INDICATOR
10. CK2 ISOLATION BALL VALVES (STAINLESS)
11. CV FLOW CONTROL (OPENING)

COATING NOTES:

- B1. THE P.R.V. VALVE SHALL INCLUDE FACTORY INSTALLED INTERIOR EPOXY COATING.
- B2. ALL NEW AND EXISTING PIPING, VALVES, FITTINGS, METERS, ETC, INSIDE THE VAULT SHALL BE EPOXY PAINTED BLUE.
- B3. METAL SURFACES TO BE PAINTED SHALL BE PRIMED AND THEN PAINTED W/ TWO COATS OF BLUE EPOXY PAINT.

VAULT NOTES:

- C1. PRE-PLUMBED PRV VAULTS ARE THE PREFERRED OPTION FOR INSTALLATION. THE USE AND LOCATION OF A PRE-PLUMBED PRV VAULT SHALL BE AS DIRECTED BY THE CITY ENGINEER FOLLOWING REVIEW OF CURRENT SITE CONDITIONS.
- C2. WHERE APPLICABLE, PRESSURE RELIEF VALVE ASSEMBLY MAY BE REQUIRED. THIS IS A CASE BY CASE ITEM DETERMINED BY THE PUBLIC WORKS DIRECTOR (PRV VAULT WILL NEED TO BE LENGTHENED TO ACCOMMODATE SUCH VALVE).
- C3. PRECAST CONCRETE STRUCTURE CAN BE REPLACED WITH CAST-IN-PLACE CONCRETE VAULT. SUBMIT ENGINEERED CONSTRUCTION PLANS WITH REBAR DETAILS TO CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.
- C4. PENETRATION WALLS NEED TO BE ADEQUATELY DESIGNED STRUCTURALLY FOR ANTICIPATED THRUST.
- C5. THE PRECAST VAULT MANUFACTURER IS RESPONSIBLE FOR DESIGN RELATED TO HL-93 TRAFFIC LOADING AND THRUST. VERIFICATION OF PROPER DESIGN MUST BE PROVIDED TO THE CITY BY THE DEVELOPER, CONTRACTOR, OR PROPERTY OWNER AS THE CASE MAY BE.
- C6. THE DEPTH OF COVER OVER THE UPSTREAM AND DOWNSTREAM PIPES MUST BE ADJUSTED TO MATCH THE DEPTH OF THE LINE THROUGH THE VAULT FOR A SUFFICIENT DISTANCE OUTSIDE THE VAULT TO AVOID ANY HIGH POINT IN THE LINE OUTSIDE THE VAULT. ANY OTHER OPTION MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.



PRESSURE REDUCTION STATION

GENERAL NOTES CONT.:

- G. ALL WALL PIPE PENETRATIONS AND JOINTS SHALL BE SEALED TO PREVENT WATER INFILTRATION. USE "LINK-SEAL" ON CAST-IN-PLACE VAULTS. PRECAST VAULTS SEAL AS DIRECTED BY PUBLIC WORKS DIRECTOR. APPROVED PRODUCTS ARE:
(a) "PRIME RESIN"- PRIMEFLEX 900XLV
(b) "MANUS PRODUCTS"- MANUS BOND 75AM



APPROVED
CITY ENGINEER
Brett M. Jones
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

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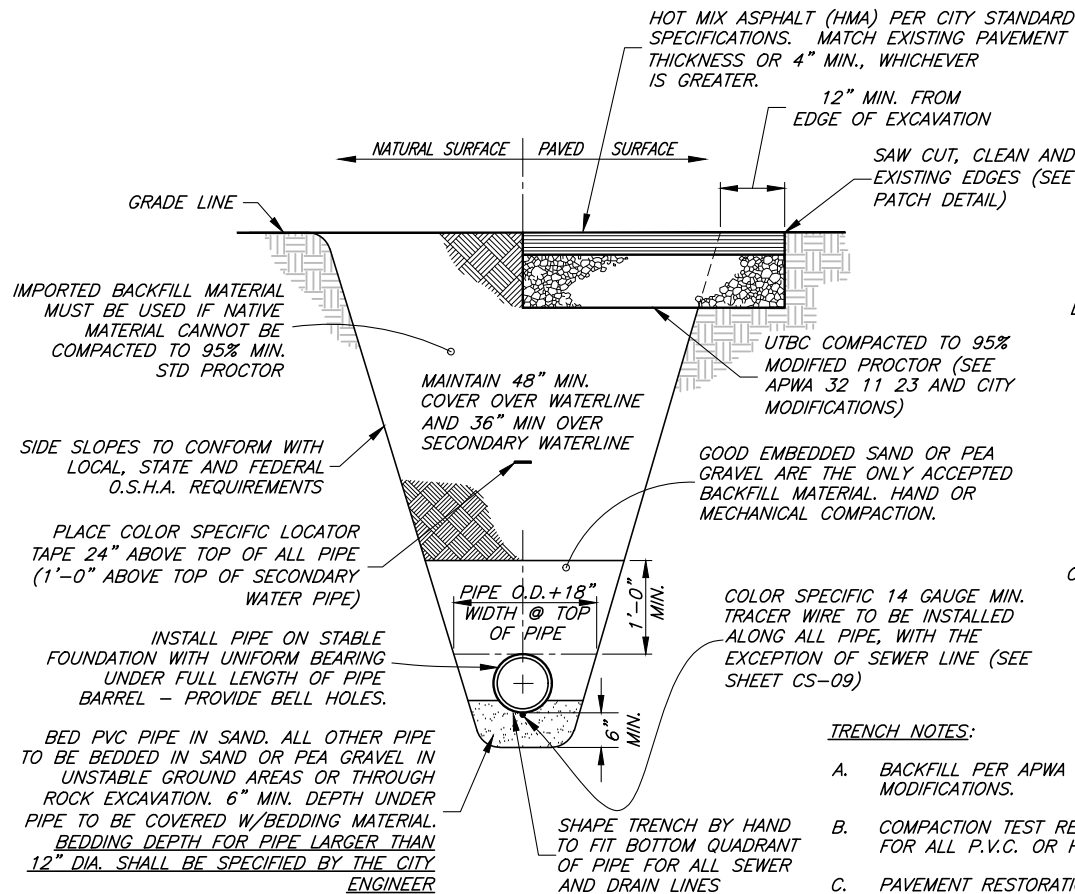
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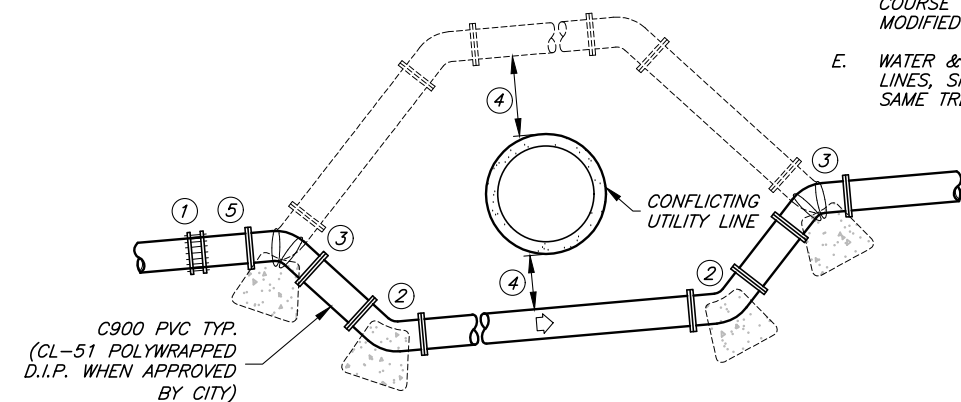
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
CULINARY WATER - PRESSURE REDUCTION STATION
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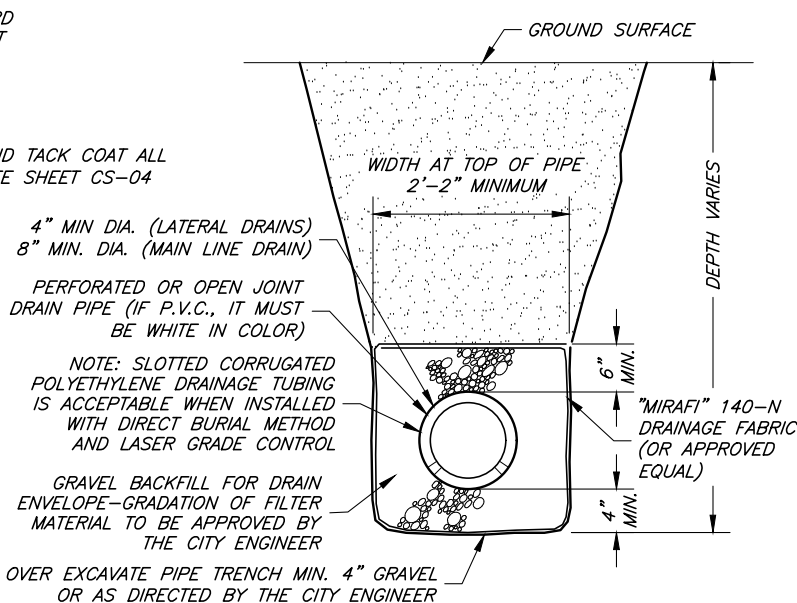


TYPICAL TRENCH SECTION
(WATER, IRRIGATION, SEWER, STORM DRAIN, AND LAND DRAIN)



TYPICAL WATERLINE LOOP

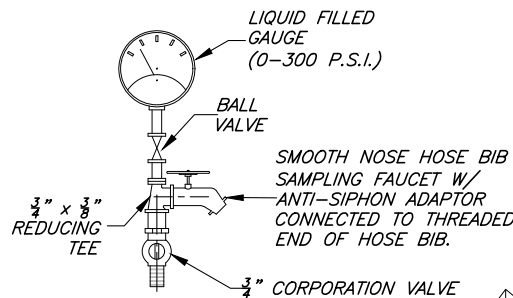
- ① TRANSITION COUPLING; "ROMAC" ALPHA, "ROMAC" MACRO, OR APPROVED EQUAL
- ② MJ 45° BEND W/RETAINER GLANDS
- ③ CONSTRUCT THRUST BLOCKS AT EACH 45° BEND W/(3) #6 REBAR SECURING BLOCK TO FITTING (EPOXY COATING)
- ④ MINIMUM OF 12" COVER BETWEEN THE WATERLINE AND CONFLICTING UTILITY LINE TO BE CROSSED, EXCEPT LOOPS INVOLVING SEWER MAINS WHERE A MINIMUM OF 18" VERTICAL COVER ABOVE THE SEWER MAIN IS REQUIRED. EXCEPTIONS MUST BE APPROVED BY THE UTAH DIVISION OF DRINKING WATER (DDW).
- ⑤ AN AIR/VACUUM RELIEF VALVE MAY BE REQUIRED ON A CASE BY CASE BASIS AS DIRECTED BY THE PUBLIC WORKS DIRECTOR.



OPEN JOINT LAND DRAIN
USE ONLY UPON APPROVAL FROM THE CITY ENGINEER

TRENCH NOTES:

- A. BACKFILL PER APWA 33 05 20 AND CITY MODIFICATIONS.
- B. COMPACTION TEST REQUIRED AT SPRING-LINE FOR ALL P.V.C. OR H.D.P.E. PIPES.
- C. PAVEMENT RESTORATION PER APWA 33 05 25 AND CITY MODIFICATIONS.
- D. GRAVEL SURFACED AREAS, SUCH AS ROADS AND SHOULDERS, PARKING AREAS, AND UNPAVED DRIVEWAYS, SHALL BE REPAIRED WITH 8" THICK (MIN.) 1" UNTREATED BASE COURSE COMPACTED TO 95% MODIFIED PROCTOR.
- E. WATER & SEWER LINES, INCLUDING SERVICE LINES, SHALL NOT BE INSTALLED IN THE SAME TRENCH.



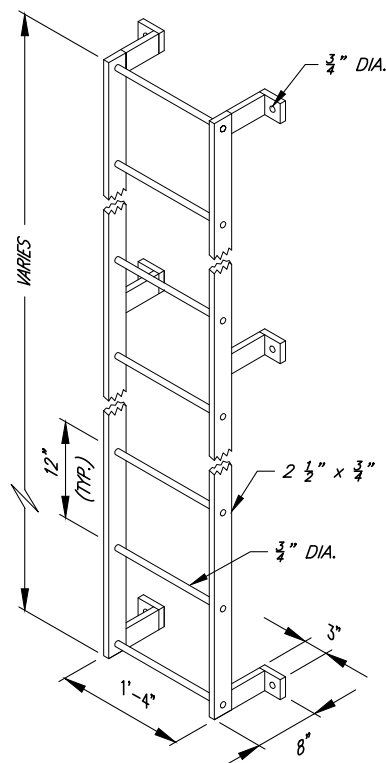
PRESSURE GAUGE
W/SAMPLING FAUCET DETAIL

PIPE RESTRAINT

- A1. FOR NOMINAL PIPE DIAMETERS 8" AND GREATER, ALL BENDS, CROSSES, TEES, REDUCERS, AND VALVES SHALL BE INSTALLED WITH RESTRAINING JOINTS ("MEGA-LUG", "ALPHA" OR APPROVED EQUAL).
- A2. DESIGN SHALL ALSO BE REQUIRED TO ENSURE ADEQUATE RESTRAINT FOR PIPING JOINTS NEAR FITTINGS BASED ON PIPE DIAMETER AND PIPE PRESSURE.

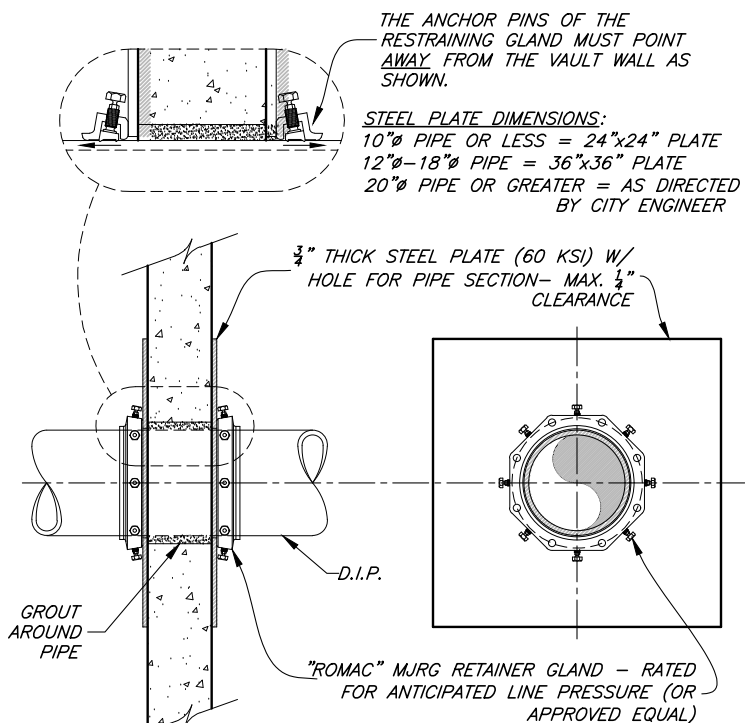
THRUST BLOCKING NOTES:

- B1. CONCRETE SHALL NOT BE PLACED WITHIN 1-1/2" OF JOINTS AND BOLTS. COVER ALL METAL CONTACT AREAS WITH A POLY WRAP PRIOR TO CONCRETE PLACEMENT.
- B2. IN THE ABSENCE OF A SOILS REPORT, ALL THRUST BLOCKS SHALL BE SIZED ON THE BASIS OF A MAXIMUM LATERAL BEARING VALUE FOR 2000 P.S.F. AND A THRUST RESULTING FROM 200% OF THE WATER LINE STATIC LINE TEST.
- B3. THRUST BLOCKS AND RESTRAINT JOINT ARE REQUIRED AT ALL BENDS OF 22-1/2° OR MORE. 11-1/4° BENDS SHALL HAVE RETAINER GLANDS.
- B4. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.



LADDER DETAIL

HOT DIP GALVANIZE AFTER FABRICATION



WALL PENETRATION DETAIL

FOR PRECAST VAULT (TYP)

THRUST PER PSI OF WATER PRESSURE AT VARIOUS FITTINGS

PIPE SIZE (IN.)	DEAD END OR TEE (LB.)	90° ELBOW (LB.)	45° ELBOW (LB.)	22-1/2° ELBOW (LB.)
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	296	161	82
16	272	383	209	106
18	351	494	269	137
20	434	611	333	169
24	623	878	487	244
30	947	1,332	722	377
36	1,356	1,905	1,032	542

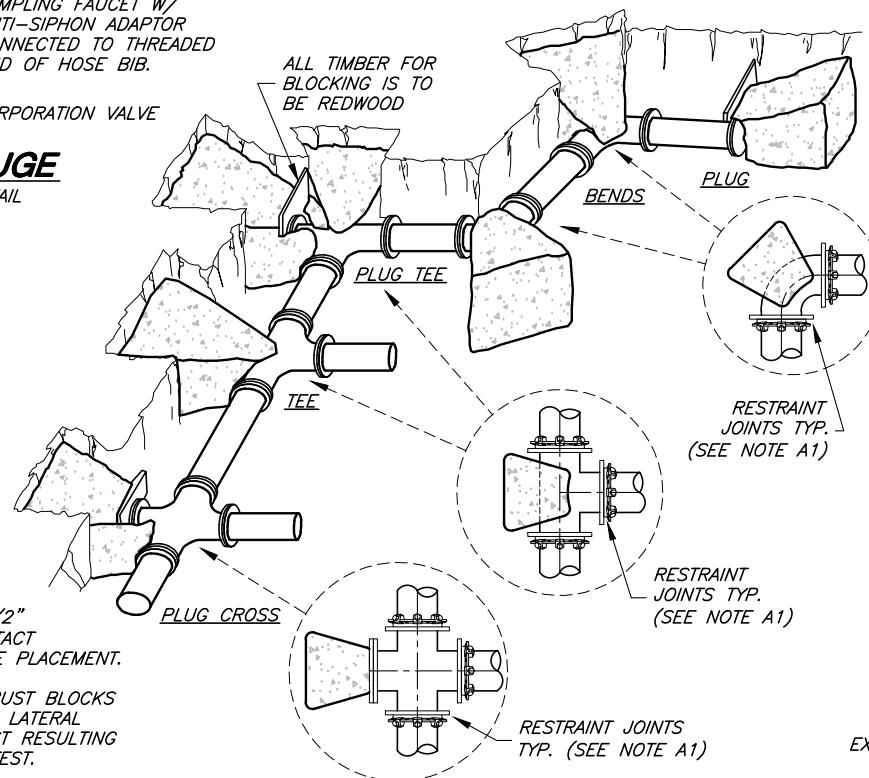
NOTES:

- C1. IN USING THE ABOVE TABLE, USE THE MAXIMUM INTERNAL PRESSURE ANTICIPATED (I.E. HYDROSTATIC TEST PRESSURE, POSSIBLE SURGE PRESSURE DUE TO PUMP SHUT OFF, ETC.).
- C2. SEE SOILS REPORT FOR BEARING STRENGTH OF SOIL. IN THE ABSENCE OF A SOILS REPORT, AN AVERAGE SOIL (SPADABLE MEDIUM CLAY) CAN BE ASSUMED TO HAVE A BEARING STRENGTH OF 2000 P.S.F.

EXAMPLE:

8-INCH 90° ELBOW, PRESSURE 200 LB./SQ. IN.
FROM TABLE: THRUST = 94 X 200 = 18,800 LB.
ASSUME BEARING STRENGTH = 2,000 LB./SQ. FT.

$\frac{18,800}{2,000} = 9.4$ SQ. FT. AREA OF BEARING REQUIRED FOR THRUST BLOCK



TYPICAL RETAINER GLANDS & THRUST BLOCKING



APPROVED

Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

PUBLIC WORKS DIRECTOR
09/01/2021
DATE

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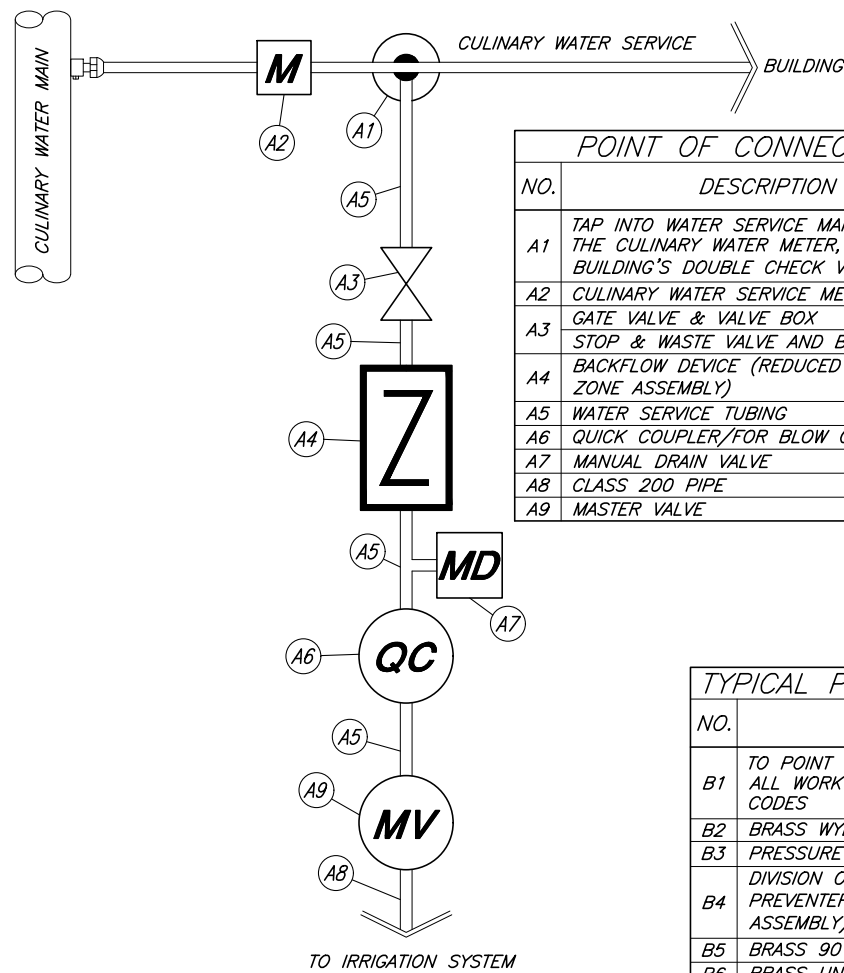
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
CULINARY WATER - THRUST BLOCK, WATERLINE LOOP, PIPE TRENCH, & MISC. VAULT DETAILS

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**TYPICAL POINT OF CONNECTION
SCHEMATIC DIAGRAM**
NOT TO SCALE

NO.	DESCRIPTION
A1	TAP INTO WATER SERVICE MAINLINE, AFTER THE CULINARY WATER METER, BEFORE BUILDING'S DOUBLE CHECK VALVE
A2	CULINARY WATER SERVICE METER
A3	GATE VALVE & VALVE BOX
A4	STOP & WASTE VALVE AND BOX
A5	BACKFLOW DEVICE (REDUCED PRESSURE ZONE ASSEMBLY)
A6	WATER SERVICE TUBING
A7	QUICK COUPLER/FOR BLOW OUT
A8	MANUAL DRAIN VALVE
A9	CLASS 200 PIPE
	MASTER VALVE

NO.	DESCRIPTION
B1	TO POINT OF CONNECTION - ADAPT AS NECESSARY. ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES
B2	BRASS WYE STRAINER W/ 60 MESH SCREEN
B3	PRESSURE REDUCING VALVE (AS REQUIRED)
B4	DIVISION OF DRINKING WATER APPROVED BACKFLOW PREVENTER UNIT (REDUCED PRESSURE ZONE ASSEMBLY)
B5	BRASS 90 DEGREE ELBOW (TYP.)
B6	BRASS UNION (TYP.)
B7	BRASS PIPE (TYP.)
B9	BRASS COUPLING
B10	PIPE ADAPTER AND MAINLINE PIPE

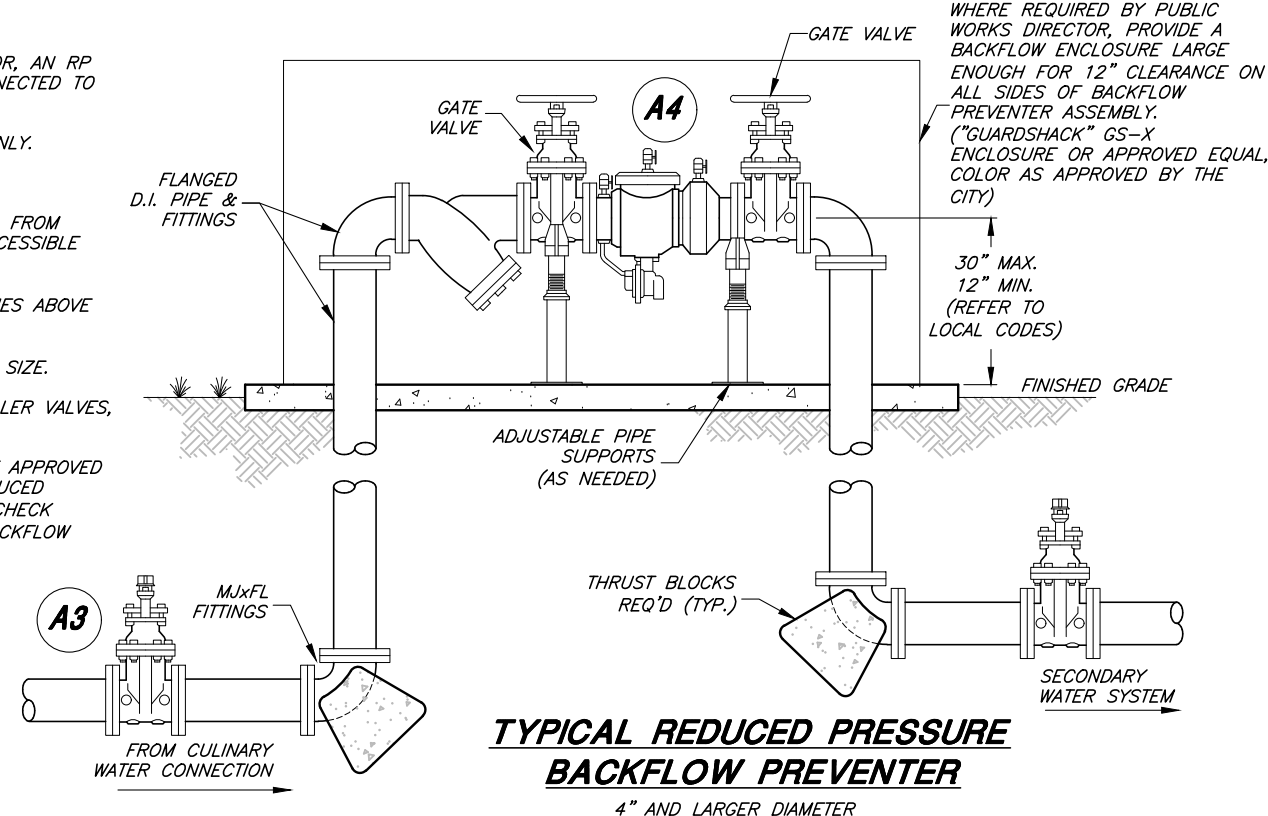
THE USE OF GALVANIZED STEEL PIPE & FITTINGS IS ACCEPTED WHEN APPROVED BY THE PUBLIC WORKS DIRECTOR

GENERAL NOTES:

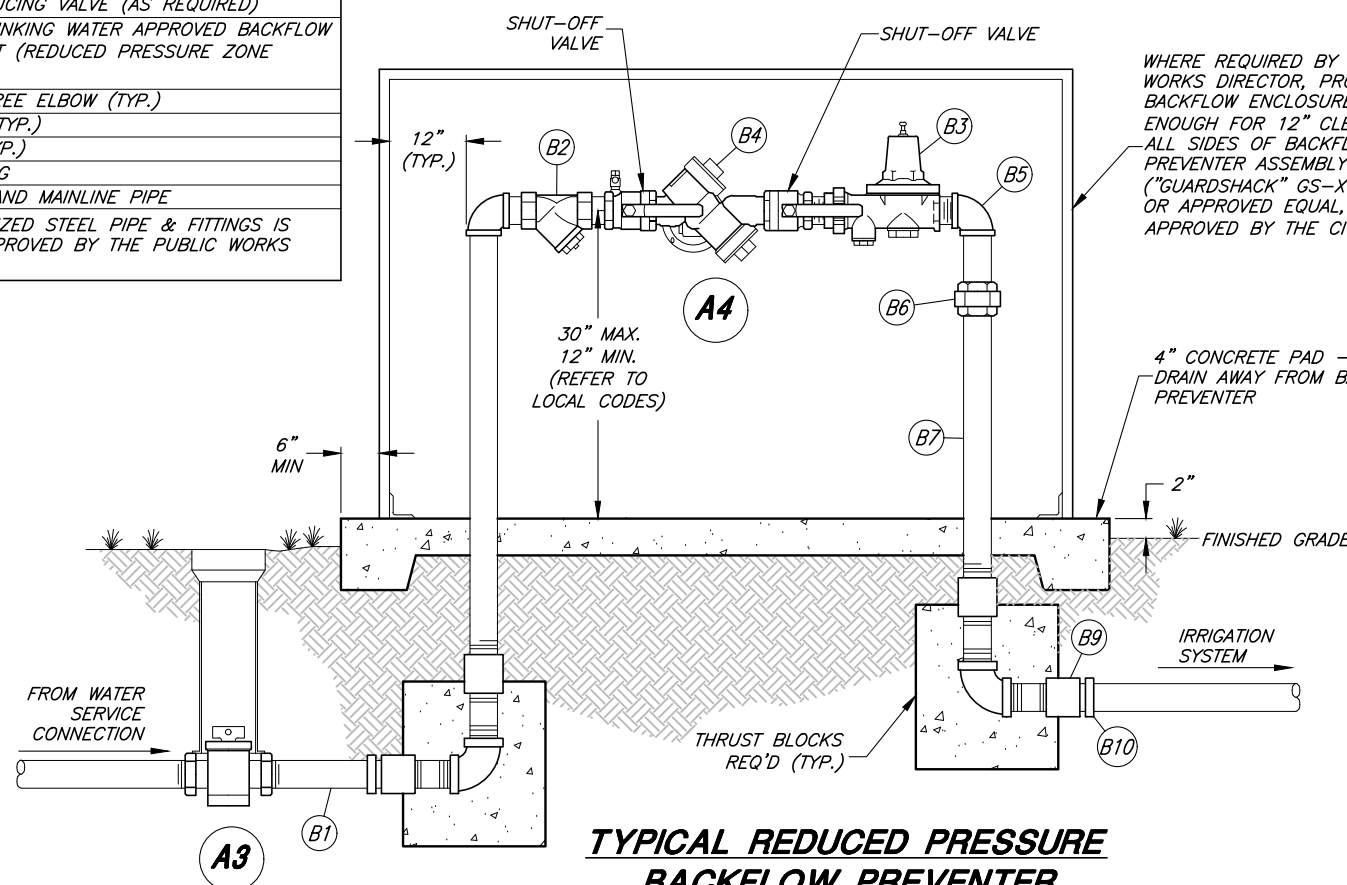
- DESIGN, CONSTRUCTION, AND INSTALLATION SHALL BE DONE ACCORDING TO AND COMPLY WITH ALL CURRENT ADOPTED BUILDING AND PLUMBING CODES, AND TO MANUFACTURERS WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.
- ALL TESTING, MAINTENANCE, AND/OR REPAIR SHALL BE PERFORMED BY A STATE CERTIFIED BACKFLOW ASSEMBLY TECHNICIAN.
- THE ASSEMBLY MUST BE THOROUGHLY DRAINED AND WINTERIZED EACH WINTER.
- THE RP ASSEMBLY SHALL BE PROTECTED FROM FREEZING AND VANDALISM WHERE APPLICABLE.
- ABOVE GROUND FITTINGS TO BE EPOXY PAINTED BLUE ON THE CULINARY SIDE AND PURPLE ON THE SECONDARY SIDE.
- PROVIDE BOLLARDS OR OTHER PROTECTION IF AND AS DIRECTED BY THE CITY.
- RP ASSEMBLY DESIGN AND CONSTRUCTION DETAILS/DRAWINGS TO BE SUBMITTED TO THE CITY ENGINEER AND THE PUBLIC WORKS DIRECTOR FOR APPROVAL PRIOR TO INSTALLATION.
- LOCATION OF BACKFLOW ASSEMBLY SHALL BE APPROVED BY THE PUBLIC WORKS DIRECTOR PRIOR TO INSTALLATION.
- ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED WITHIN 10 DAYS OF INITIAL USE BY A LICENSED BACKFLOW DEVICE TESTER.
- ALL BACKFLOW PREVENTION ASSEMBLIES ARE TO BE TESTED ANNUALLY BY A CERTIFIED TESTER AND REPAIRS OR MAINTENANCE COMPLETED AS NEEDED. ANNUALLY SUBMIT TEST RESULTS TO THE PUBLIC WORKS DIRECTOR.

REDUCED PRESSURE ASSEMBLY (RP) NOTES:

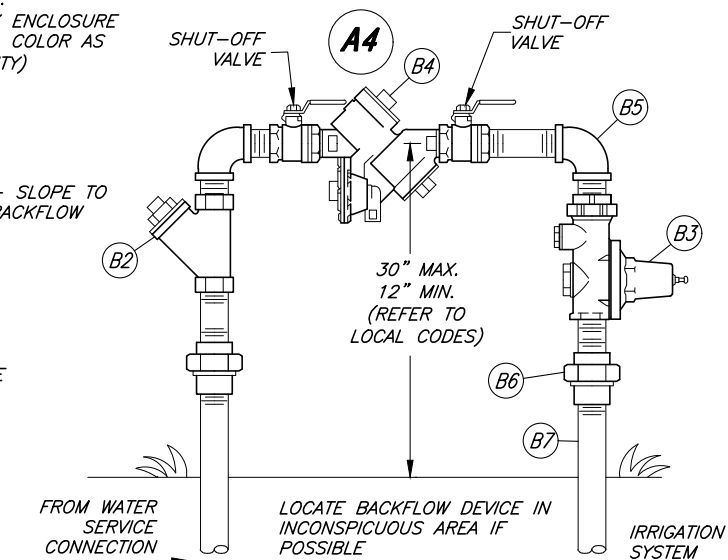
- WHERE REQUIRED OR WHEN DIRECTED BY THE PUBLIC WORKS DIRECTOR, AN RP ASSEMBLY SHALL BE INSTALLED WHEN A SECONDARY SERVICE IS CONNECTED TO THE CULINARY WATER SYSTEM.
- THE RP ASSEMBLY SHALL BE INSTALLED IN A HORIZONTAL POSITION ONLY.
- RP ASSEMBLIES SHALL NOT BE INSTALLED IN A PIT.
- THE BODY OF THE RP ASSEMBLY SHALL BE A MINIMUM OF 12 INCHES FROM ANY WALLS, CEILINGS, OR ENCUMBRANCES AND SHALL BE READILY ACCESSIBLE FOR TESTING, REPAIR AND/OR MAINTENANCE.
- THE BOTTOM OF THE RP ASSEMBLY SHALL BE A MINIMUM OF 12 INCHES ABOVE THE GROUND FLOOR.
- RP VALVE ASSEMBLY AND PIPES TO MATCH SECONDARY LATERAL/MAIN SIZE.
- THE BACKFLOW PREVENTER SHALL BE BRONZE FOR 6-INCH AND SMALLER VALVES, AND EPOXY COATED DUCTILE IRON FOR 8-INCH AND LARGER VALVES.
- BACKFLOW PREVENTION DEVICES SHALL BE SELECTED FROM A LIST OF APPROVED DEVICES SET FORTH BY THE UTAH DIVISION OF DRINKING WATER. REDUCED PRESSURE ASSEMBLIES (RP) AND CITY ENGINEER APPROVED DOUBLE CHECK VALVE ASSEMBLIES (DCA) WILL BE THE ONLY ACCEPTED STYLES OF BACKFLOW PREVENTION DEVICES.



**TYPICAL REDUCED PRESSURE
BACKFLOW PREVENTER**
4" AND LARGER DIAMETER



**TYPICAL REDUCED PRESSURE
BACKFLOW PREVENTER**
LESS THAN 3" DIAMETER



**ALTERNATE REDUCED PRESSURE
BACKFLOW PREVENTER**
OPTIONAL ALTERNATE FOR RESIDENTIAL CONNECTIONS
AND COMMERCIAL DEVELOPMENTS LESS THAN ONE ACRE



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED

PUBLIC WORKS DIRECTOR

09/01/2021
DATE

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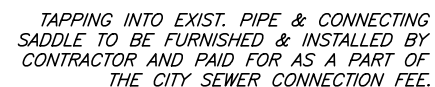


PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
**CULINARY WATER - REDUCE PRESSURE (RP)
BACKFLOW PREVENTION ASSEMBLY**

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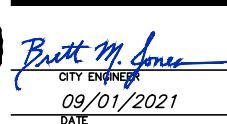


A1. CLEANOUT EVERY 100' OR LESS.

B1. CLEANOUT REQUIRED FOR EACH CHANGE OF DIRECTION
IF THE TOTAL AGGREGATE CHANGE EXCEEDS 135'.

1. ALL SANITARY SEWER LATERAL CONNECTIONS ON SEWER MAINS IN NEW SUBDIVISIONS SHALL BE MADE WITH IN LINE PRE-FORMED WYES OR TEES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
2. FLOWLINE ELEVATION OF LATERALS SHALL EQUAL THE INSIDE TOP OF PIPE ON MAINLINE AT THE CONNECTING POINT (THE LATERAL TAP SHALL BE IN THE TOP QUARTER OF THE SEWER MAIN LINE PREFERABLY IN THE 10:00 OR 2:00 POSITION).

3. SANITARY SEWER SERVICE LATERAL CONNECTIONS SHALL NOT BE ALLOWED IN SEWER MANHOLES.
4. SANITARY SEWER MAINS AND LATERALS SHALL BE "GREEN" IN COLOR. LAND DRAIN MAINS AND LATERALS SHALL BE SCHEDULE 40 "WHITE" IN COLOR. IRRIGATION PIPES SHALL BE "PURPLE" IN COLOR. PREVIOUS YEARS PIPE COLORS MAY VARY THROUGHOUT THE CITY. CONTRACTOR TO VERIFY EXISTING PIPE PRIOR TO MAKING ANY CONNECTION.
5. INSERTA TEE PRODUCT IS NOT ALLOWED BY THE CITY.
6. ALL CLEANOUTS SHALL BE MARKED AND FITTED WITH A BRASS PLUG OR METAL LID FOR LOCATION PURPOSES.
7. ALL CULINARY WATER MAINS AND SERVICES MUST MAINTAIN A MINIMUM SEPARATION ABOVE ALL SEWER MAINS AND LATERALS OF 18" VERTICAL AND 10'-0" HORIZONTAL IN ACCORDANCE WITH THE STATE OF UTAH DIVISION OF DRINKING WATER (DDW) RULES SECTION R309-550-7. EXCEPTIONS MUST BE APPROVED BY DDW.
8. ALL SANITARY SEWER LINES SHALL BE INSPECTED BY MEANS OF VIDEO CAMERA WHEN CONSTRUCTED.
9. DOWNSTREAM LAND DRAIN CONNECTION TO AN EXISTING STORM DRAIN SYSTEM IS REQUIRED.
10. TRACER WIRE SHALL BE INSTALLED ON ALL LAND DRAIN LATERALS.
11. THE LOCATION OF THE SEWER LATERAL MUST BE DOCUMENTED AND SUBMITTED TO THE CITY ON SCALED AS-BUILT DRAWINGS.
12. REQUESTS FOR INSPECTION ON WORK SHALL BE GIVEN 24 HOURS IN ADVANCE OF THE WORK STARTING.
13. IT SHALL BE THE RESPONSIBILITY OF THE PERSON RESPONSIBLE FOR CONSTRUCTION TO ENSURE THAT INSPECTIONS TAKE PLACE WHERE AND WHEN REQUIRED.
14. IT SHALL BE THE RESPONSIBILITY OF THE PERSON RESPONSIBLE FOR CONSTRUCTION TO FOLLOW THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION CONSTRUCTION STANDARDS FOR EXCAVATIONS.
15. A CUT PERMIT FROM PERRY CITY CORPORATION MUST BE ON JOB SITE ANYTIME WORK IS IN THE PUBLIC RIGHT-OF-WAY.



DATE _____

N.T.S.



**JONES &
ASSOCIATES**



PERRY
CITY
PUBLIC WORKS

**SANITARY SEWER - SEWER / LAND DRAIN LATERAL
& MAIN LINE CONNECTION DETAILS**

1 SHEETS

A1. ALL CONCRETE COLLARS TO BE INSTALLED WITHIN 14 DAYS AFTER PAVING.

B1. COLLARS AROUND MANHOLES AND CULINARY WATER VALVES ARE TO BE ROUND.

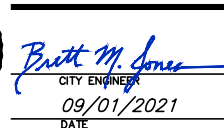
C1. COLLARS AROUND IRRIGATION VALVES AND MANHOLES ARE TO BE SQUARE.



- A. *USE DROP MANHOLE ONLY WHEN DROP EXCEEDS 2'-0". (UAC R317-3)*
- B. *DROP MANHOLE SHALL CONSIST OF ASTM D3034 SDR 35 PVC PIPE WITH SDR 35 PVC GASKETED FITTINGS.*
- C. *DUE TO THE UNEQUAL EARTH PRESSURES THAT WOULD RESULT FROM THE BACKFILLING OPERATION IN THE VICINITY OF THE MANHOLE, THE ENTIRE OUTSIDE DROP CONNECTIONS SHALL BE ENCASED IN FLOWABLE FILL.
(UAC R317-3)*



1. SECURE INVERTS IN ALL MANHOLES DURING CONSTRUCTION SO AS TO PREVENT GRAVEL AND OTHER DEBRIS FROM COLLECTING INSIDE.
2. A LARGER DIAMETER MANHOLE MAY BE REQUIRED BY THE DESIGN ENGINEER AFTER EVALUATION OF THE NUMBER, SIZE, AND ANGLE OF THE PIPES THAT CONNECT TO THE MANHOLE.
3. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE.
4. ALL TERMINATING SEWER & LAND DRAIN MAINS SHALL END WITH A CITY STANDARD MANHOLE.
5. SERVICE LATERAL CONNECTIONS SHALL NOT BE ALLOWED IN SEWER MANHOLES.
6. ALL SANITARY SEWER LINES SHALL BE INSPECTED BY MEANS OF VIDEO CAMERA AND AIR TESTED WHEN CONSTRUCTED. SEE APWA 33 08 00 AND CITY MODIFICATIONS FOR MORE INFORMATION.
7. WHERE THE DIFFERENCE IN ELEVATION BETWEEN THE INCOMING SEWER AND MANHOLE INVERT IS LESS THAN 24 INCHES, THE INVERT SHOULD BE FILLETED.
8. FLAT MANHOLE RINGS & COVERS (SLAB CONSTRUCTION) ARE NOT ALLOWED ON ANY MANHOLE CONE SECTION.



09/01/2021

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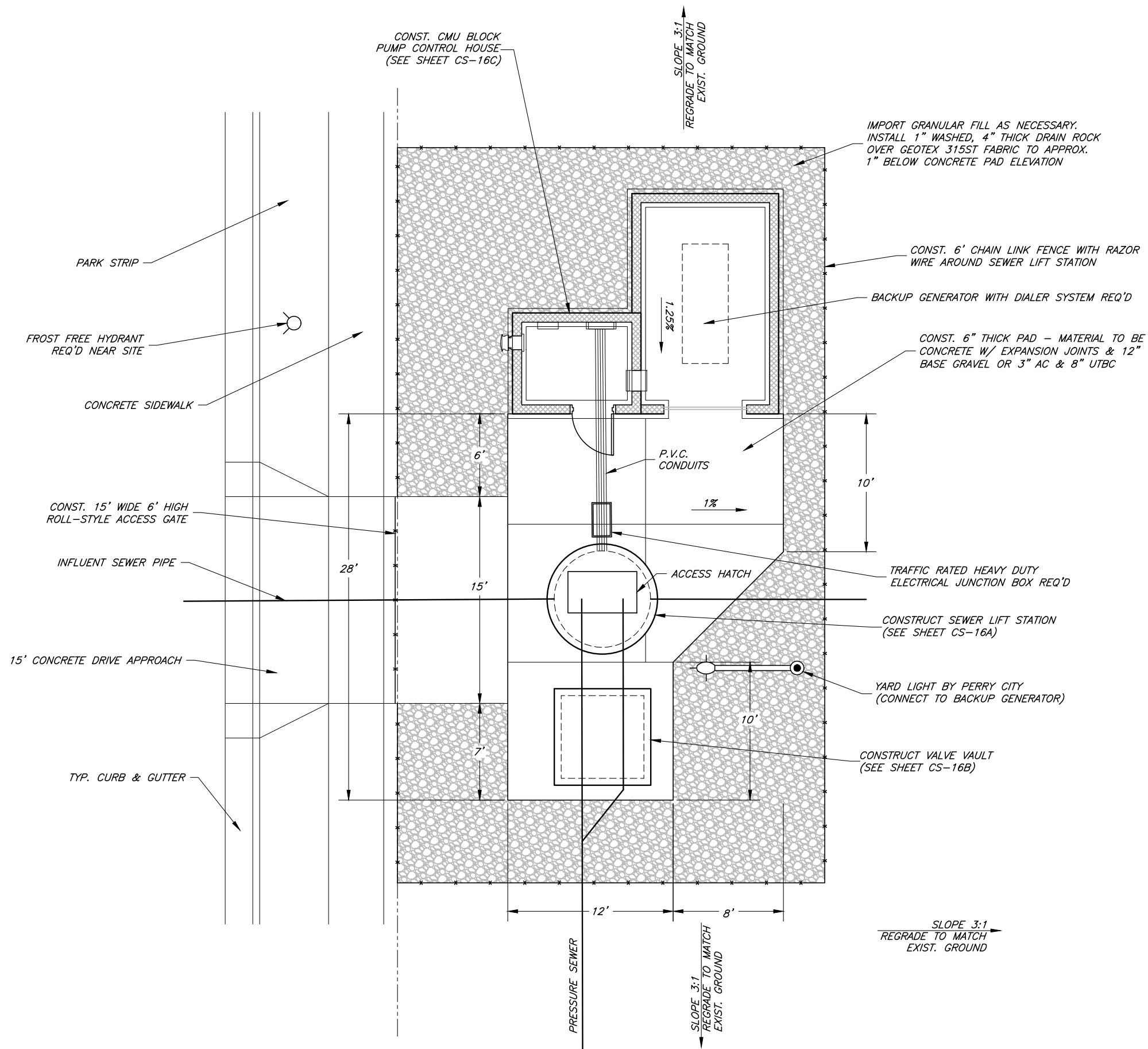
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SANITARY SEWER - TYPICAL MANHOLES & DETAILS

CS-15

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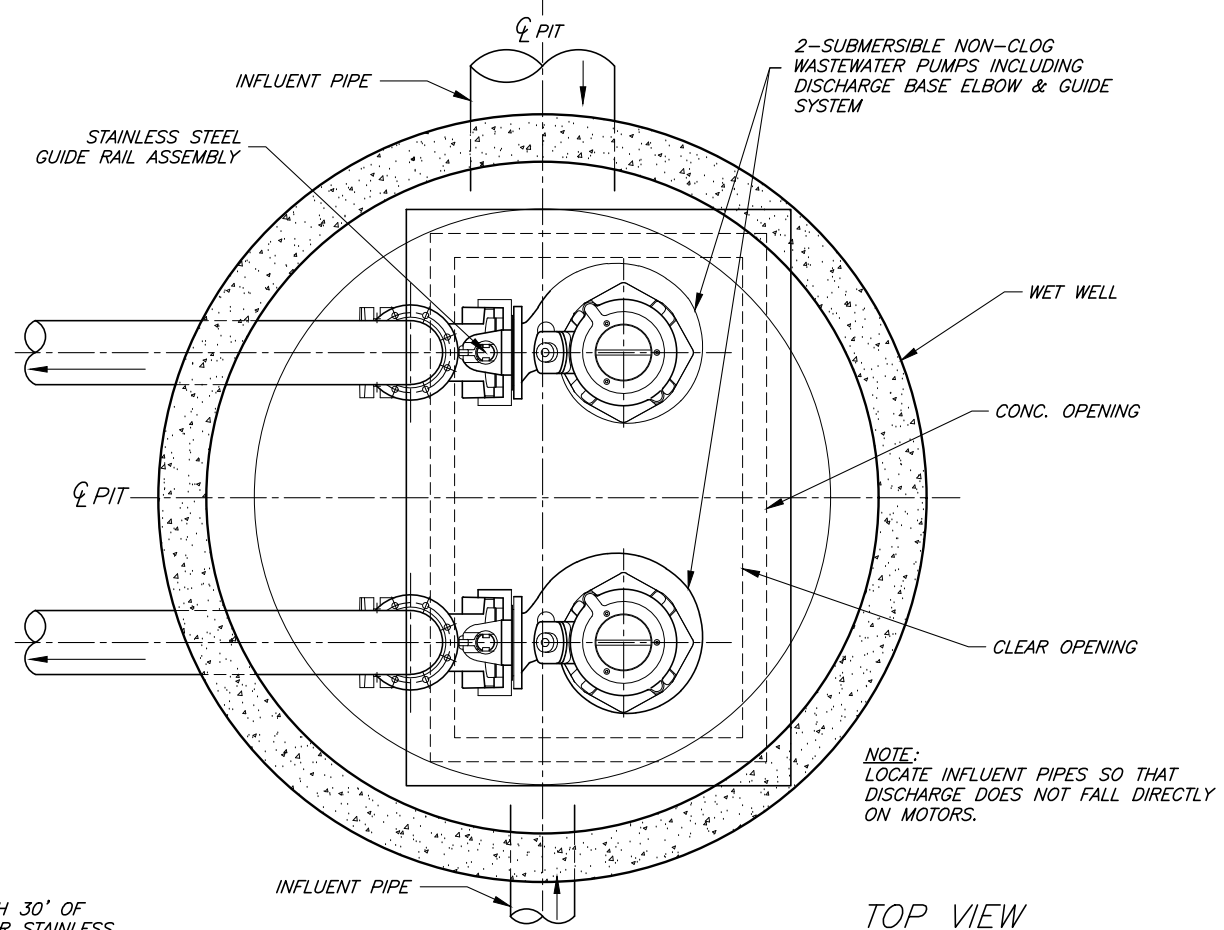
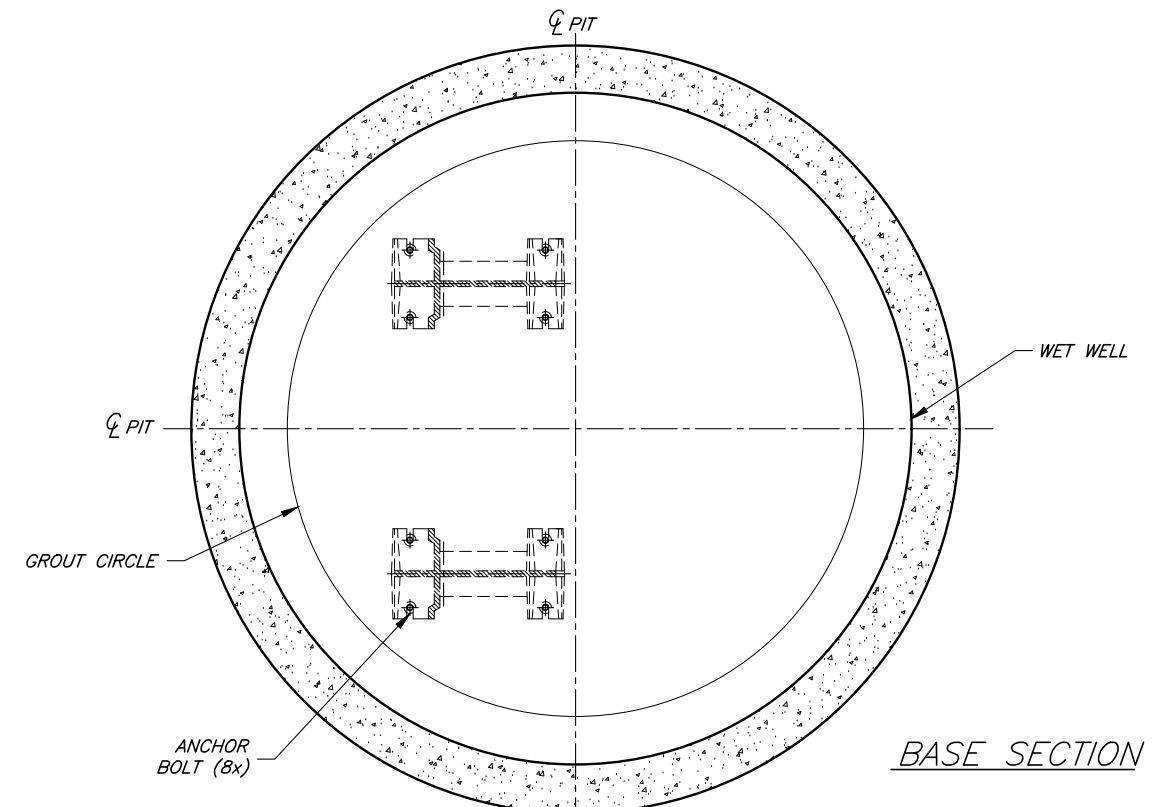
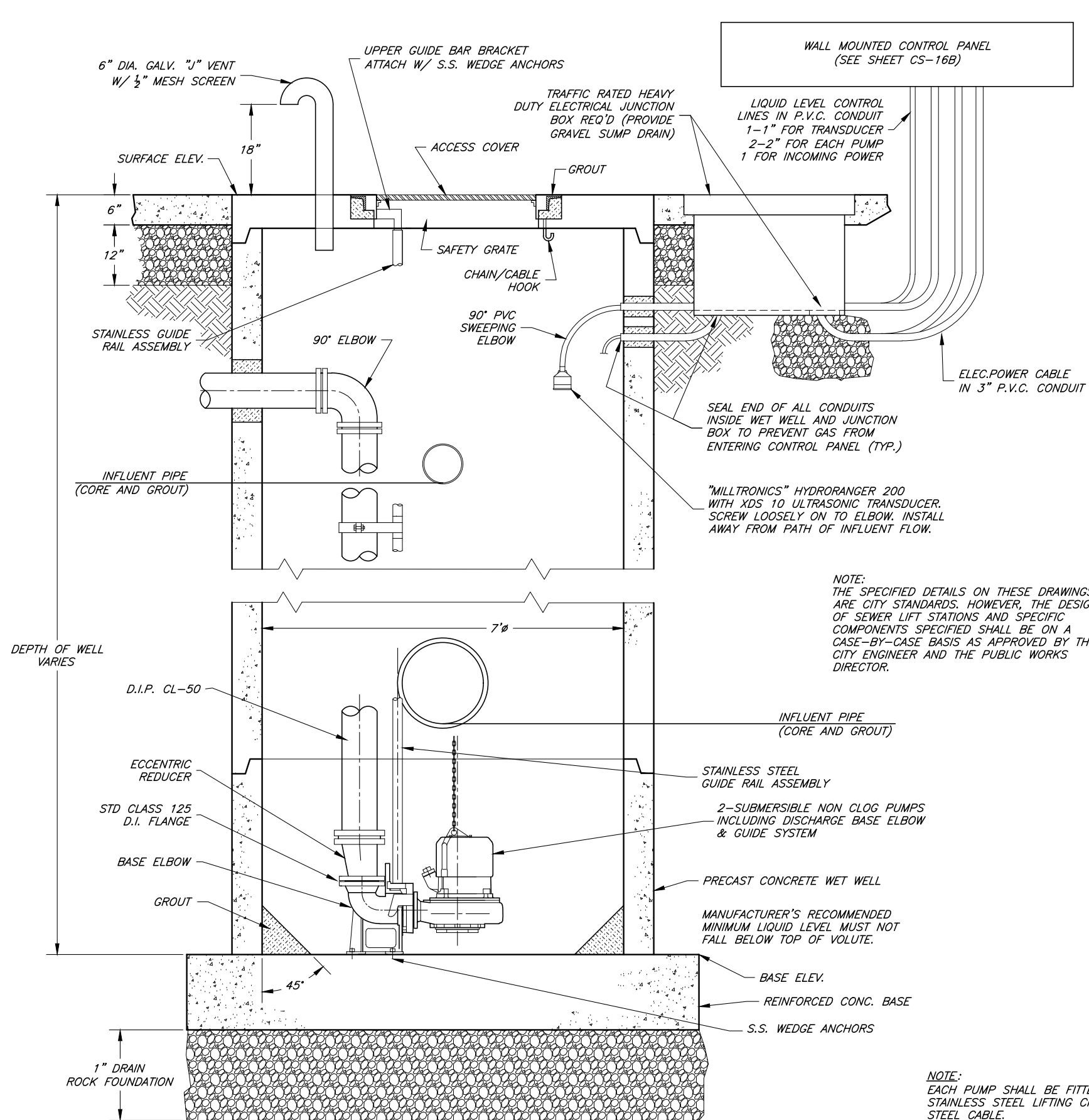
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	DESIGNED _____ DRAWN _____ CHECKED _____
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS



SANITARY SEWER - TYPICAL LIFT STATION SITE PLAN		SHEET: CS-16 OF 1 SHEETS 0
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NOTE:
EACH PUMP SHALL BE FITTED WITH 30' OF
STAINLESS STEEL LIFTING CHAIN OR STAINLESS
STEEL CABLE.



Brett M. Jones
CITY ENGINEER
09/01/2021
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APPROVED
PUBLIC WORKS DIRECTOR
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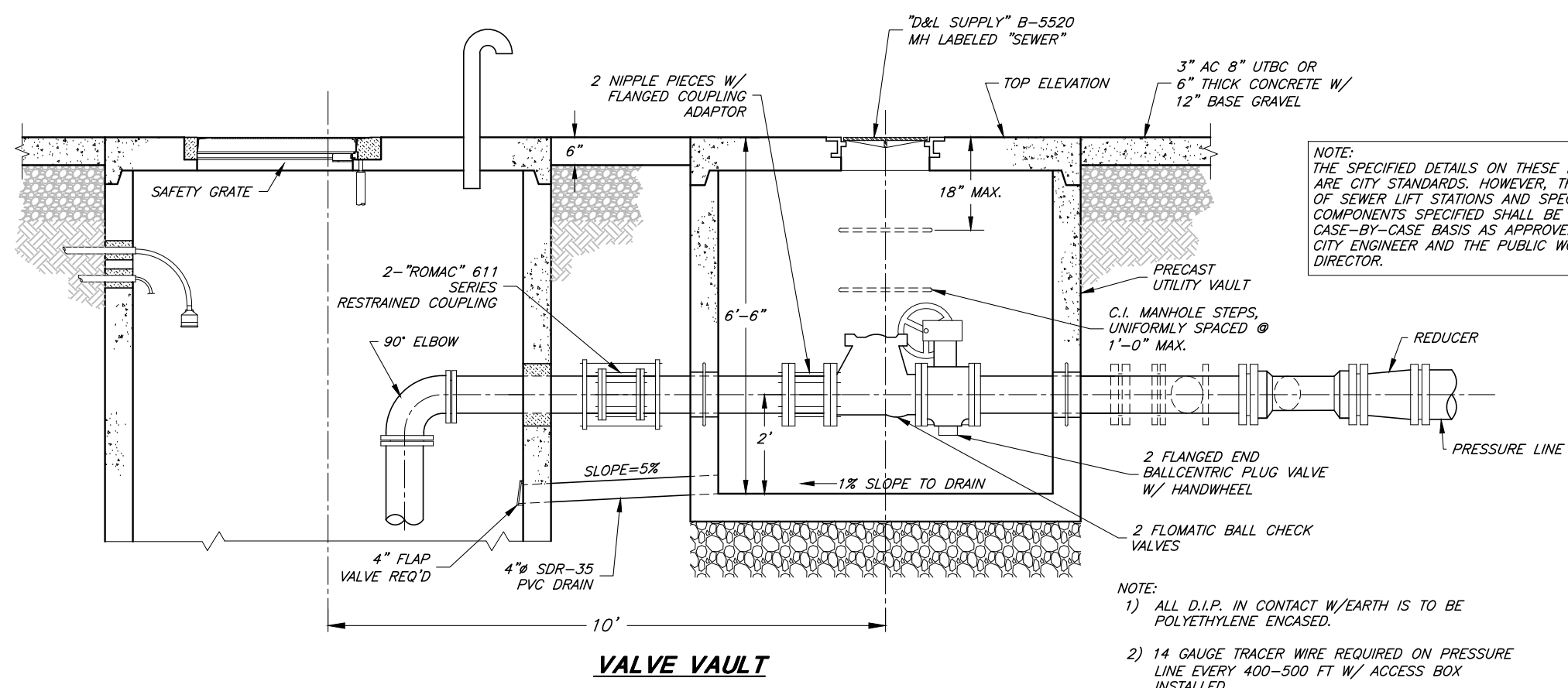
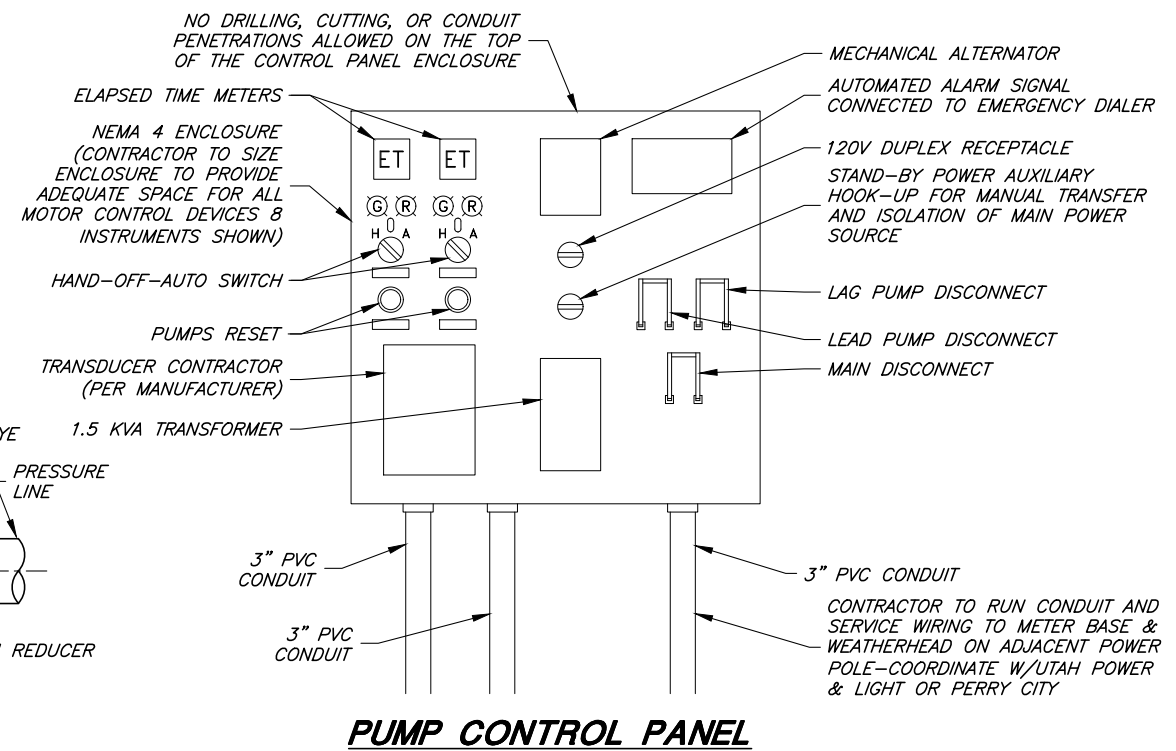
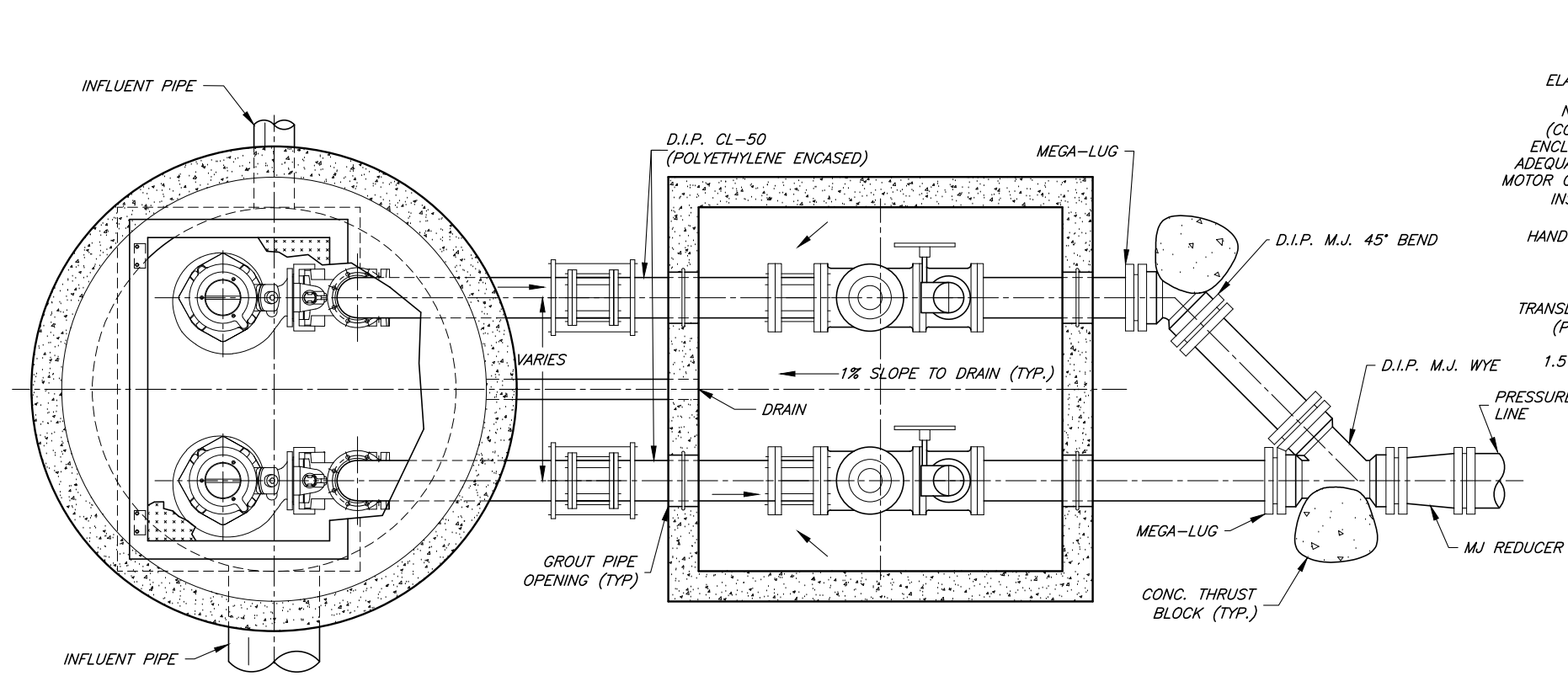


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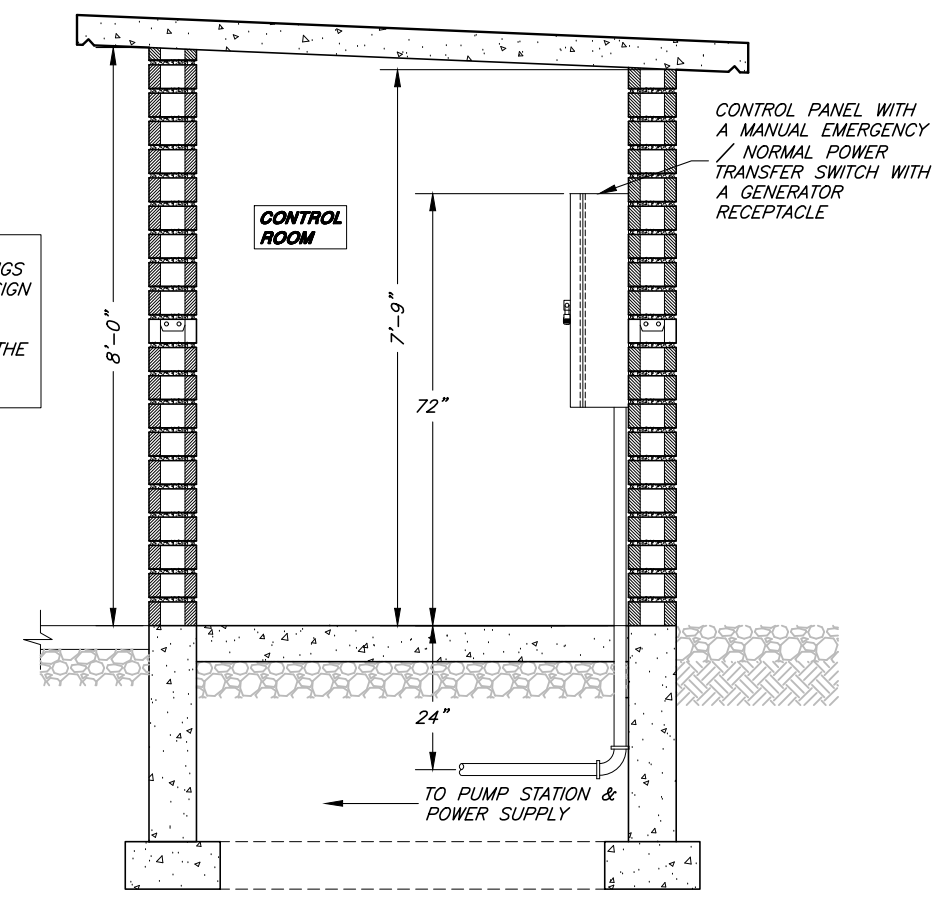
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
SANITARY SEWER - TYPICAL LIFT STATION

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NOTE:
THE SPECIFIED DETAILS ON THESE DRAWINGS ARE CITY STANDARDS. HOWEVER, THE DESIGN OF SEWER LIFT STATIONS AND SPECIFIC COMPONENTS SPECIFIED SHALL BE ON A CASE-BY-CASE BASIS AS APPROVED BY THE CITY ENGINEER AND THE PUBLIC WORKS DIRECTOR.

- NOTE:
- 1) ALL D.I.P. IN CONTACT W/EARTH IS TO BE POLYETHYLENE ENCASED.
 - 2) 14 GAUGE TRACER WIRE REQUIRED ON PRESSURE LINE EVERY 400-500 FT W/ ACCESS BOX INSTALLED.



PANEL WALL

CONTRACTOR SHALL PROVIDE 3/4" BARE COPPER GROUNDING ROD & 1/0 BARE COPPER GROUNDING CONDUCTOR FOR CONTINUOUS GROUND.



APPROVED

Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

PUBLIC WORKS DIRECTOR
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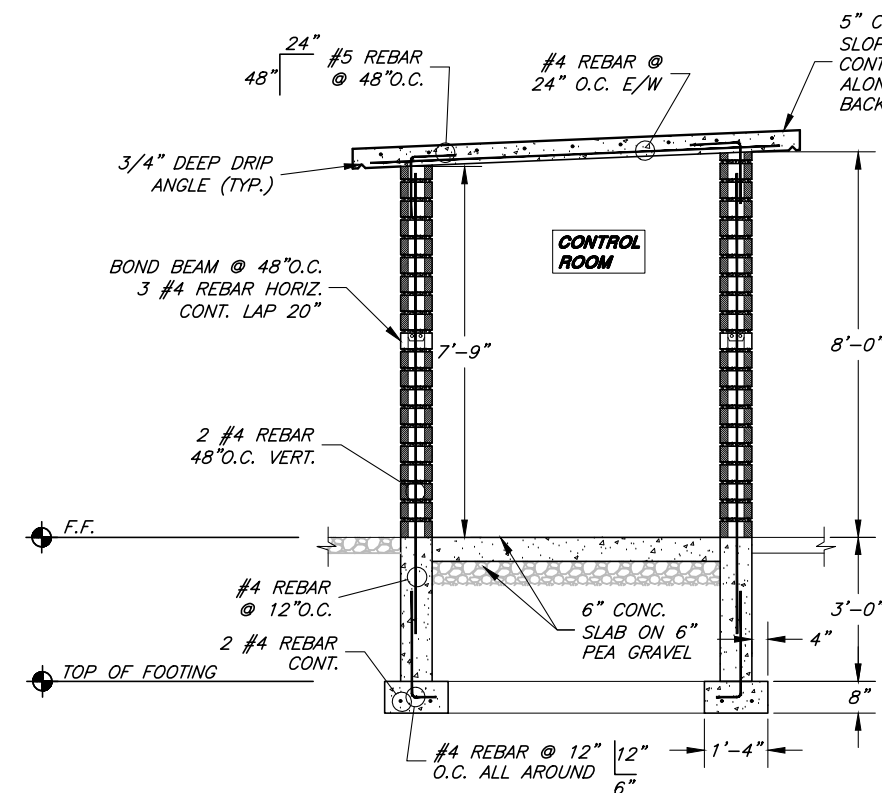
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS

SANITARY SEWER - LIFT STATION VALVE VAULT & CONTROL PANEL

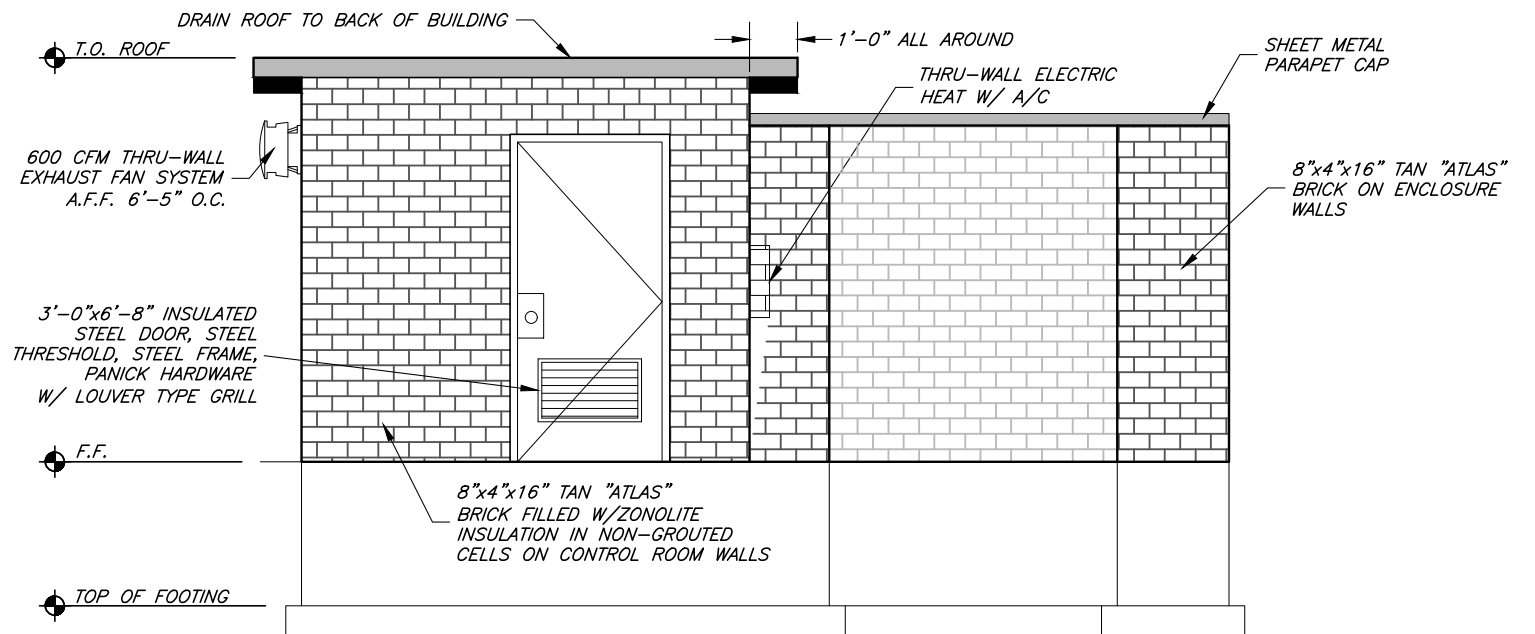
SHEET:
CS-16B
OF 1 SHEETS
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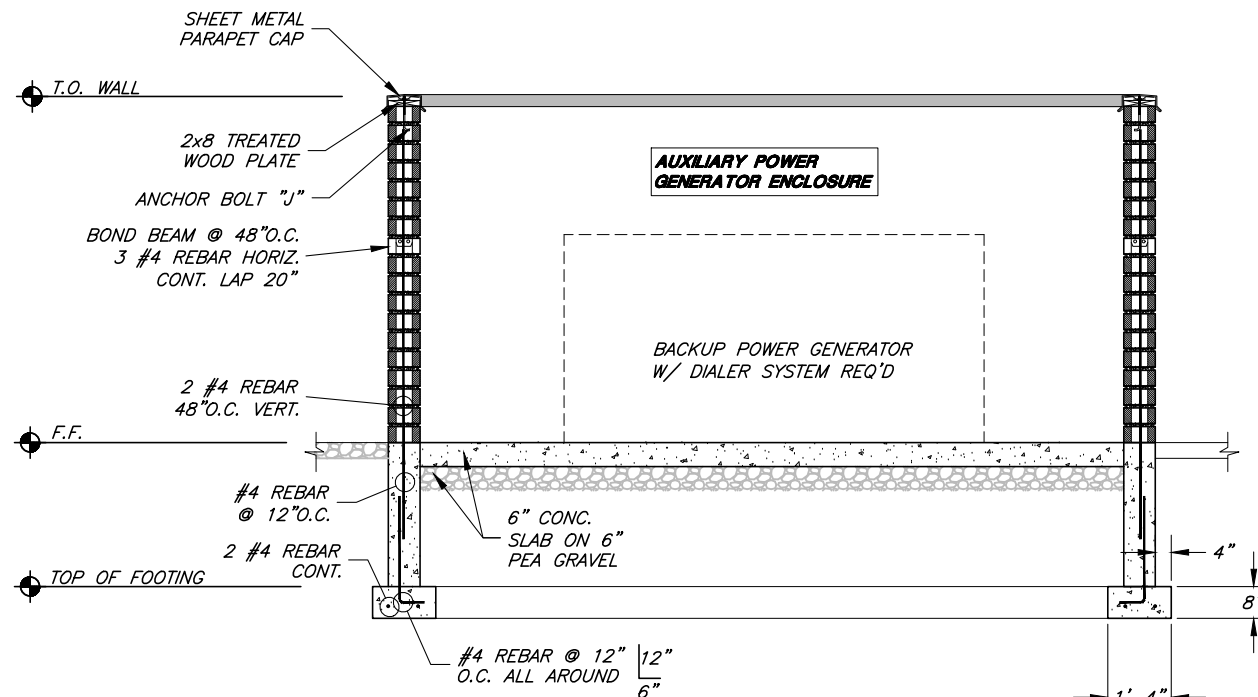
BUILDING SECTION 16 B

NOTES:

1. ALL ELECTRICAL WIRING TO BE ENCLOSED IN CONDUIT.
2. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH 2006 I.B.C. AND AND OTHER APPLICABLE CODES.
3. ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
4. ALL REINFORCED BARS #4 OR GREATER SHALL BE GRADE 60.
5. ELECTRICAL SYSTEM BY OTHERS. GENERAL CONTRACTOR TO COORDINATE LOCATION OF ELECTRICAL APPURTENANCES WITH ELECTRICAL CONTRACTOR. TRENCHING, CONDUIT, AND BACKFILLING IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
6. ALL EXPOSED CONCRETE EXTERIOR SURFACES SHALL HAVE A HAND RUBBED CONCRETE FINISH.
7. FOOTINGS SHALL REST ON UNDISTURBED GROUND OR SHALL SIT ON IMPORTED GRANULAR BACKFILL COMPACTED TO 95% MAX. DRY DENSITY.
8. DOOR SHALL BE PAINTED W/ 1 PRIMER COAT AND 2 FINISH COATS OF ENAMEL PAINT. COLOR TO BE SPECIFIED BY THE PUBLIC WORKS DIRECTOR.

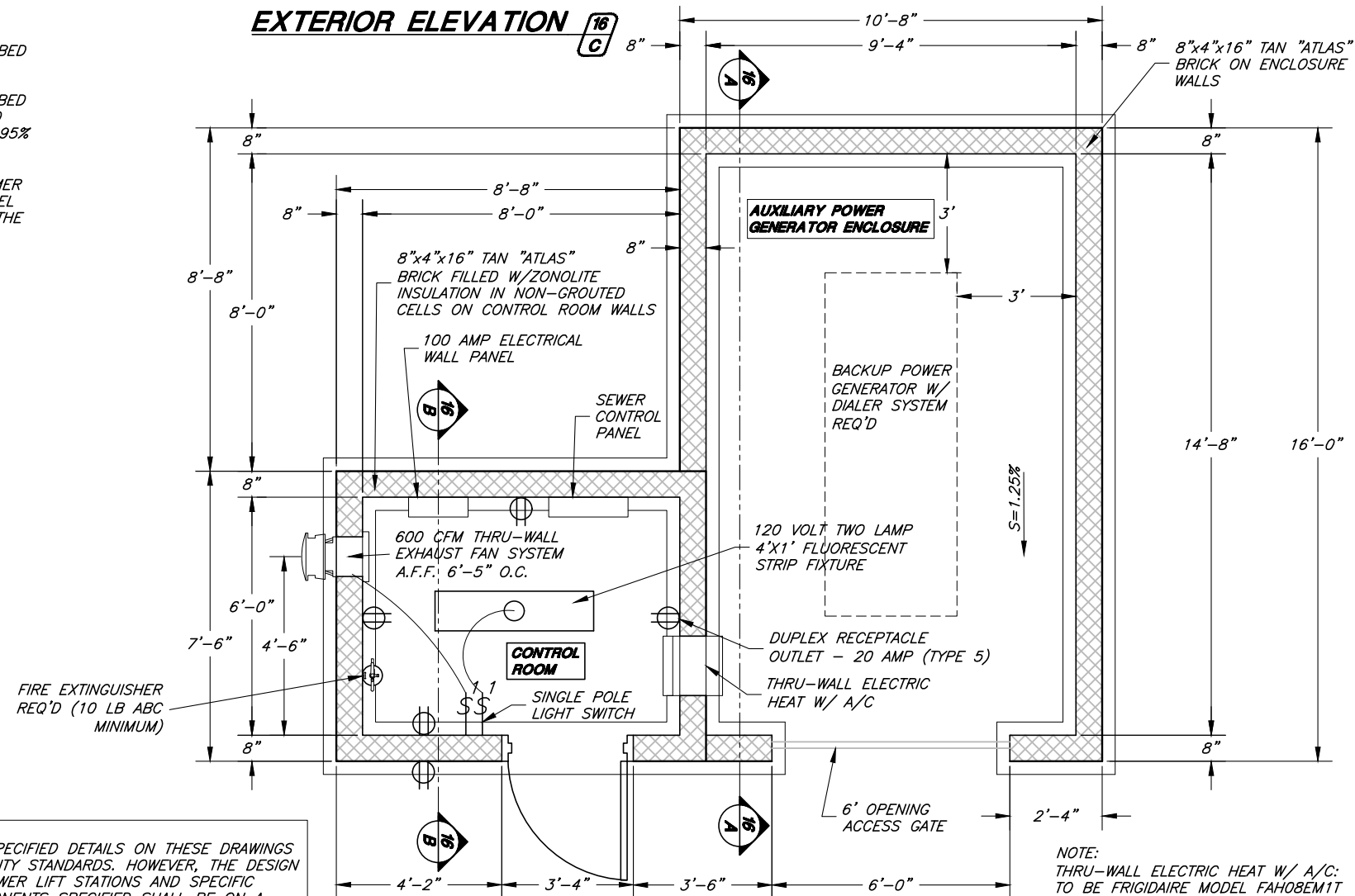


EXTERIOR ELEVATION 16 C



BUILDING SECTION 16 A

NOTE:
THE SPECIFIED DETAILS ON THESE DRAWINGS ARE CITY STANDARDS. HOWEVER, THE DESIGN OF SEWER LIFT STATIONS AND SPECIFIC COMPONENTS SPECIFIED SHALL BE ON A CASE-BY-CASE BASIS AS APPROVED BY THE CITY ENGINEER AND THE PUBLIC WORKS DIRECTOR.



FLOOR PLAN

NOTE:
THRU-WALL ELECTRIC HEAT W/ A/C:
TO BE FRIGIDAIRE MODEL FAH08EM1T
W/ OUTDOOR SLEEVE MODEL EA108T &
GRILL MODELEA109T PROVIDING 8000
BTU OF COOL & 4200 BTU OF HEAT
CAPACITY OR APPROVED EQUAL



APPROVED
PUBLIC WORKS DIRECTOR
DATE 09/01/2021

SCALE:
N.T.S.
DESIGNED
DRAWN
CHECKED



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6080 Fashion Point Drive
South Ogden, Utah 84403 www.jonescivil.com



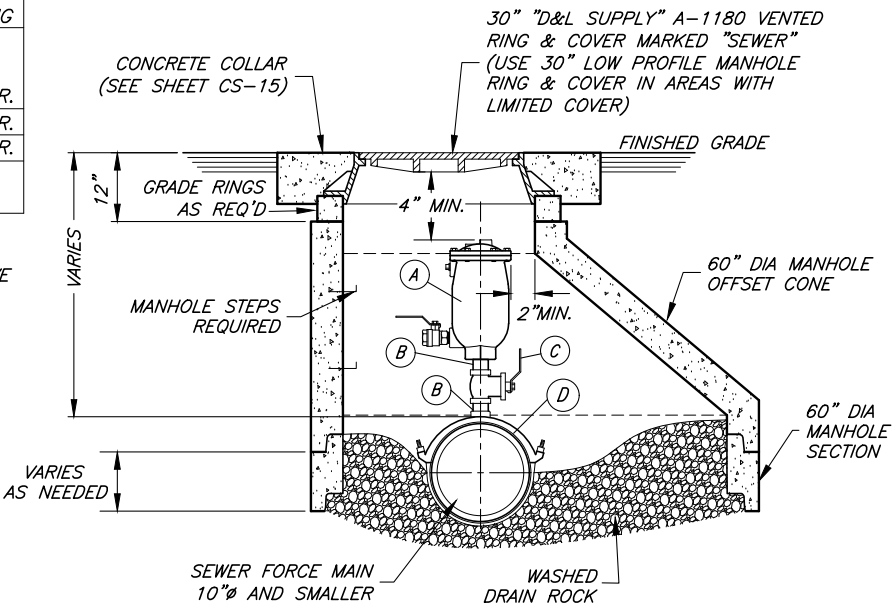
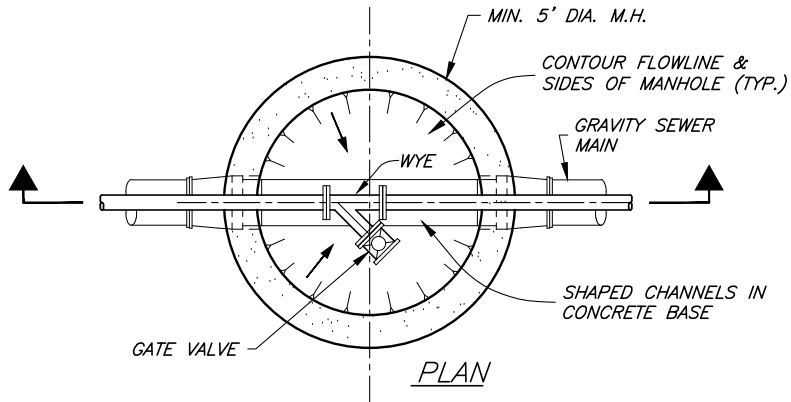
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
SANITARY SEWER - TYPICAL LIFT STATION
CONTROL BUILDING

SHEET:
CS-16C
OF 1 SHEETS
0

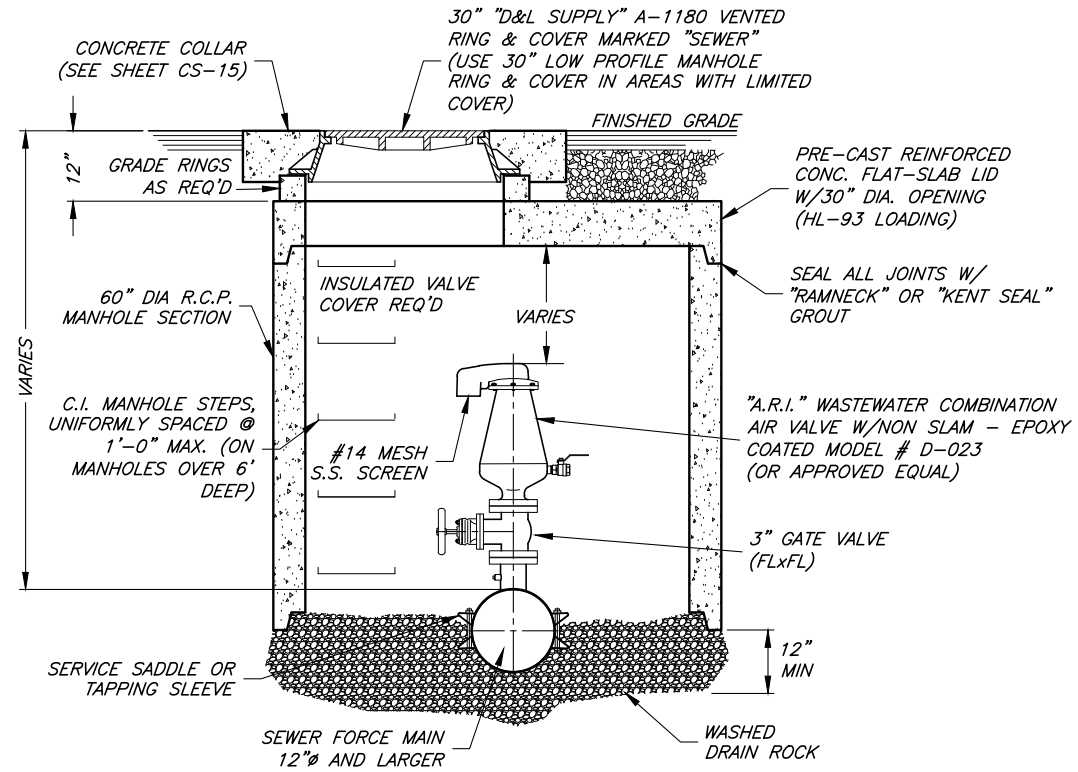
PIPE & FITTING SCHEDULE

NO.	DESCRIPTION	FITTING
A	2" WASTEWATER AIR RELEASE VALVE "VAL MATIC" MODEL # 49A W/ OPTIONAL VACUUM CHECK ON THE OUTLET	THR.
B	2" BRASS PIPE	THR.
C	2" BALL VALVE (1/4 TURN 200 PSI MIN.)	THR.
D	2" NYLON COATED SERVICE SADDLE W/ STAINLESS STEEL STRAPS "ROMAC" MODEL # 202NS	

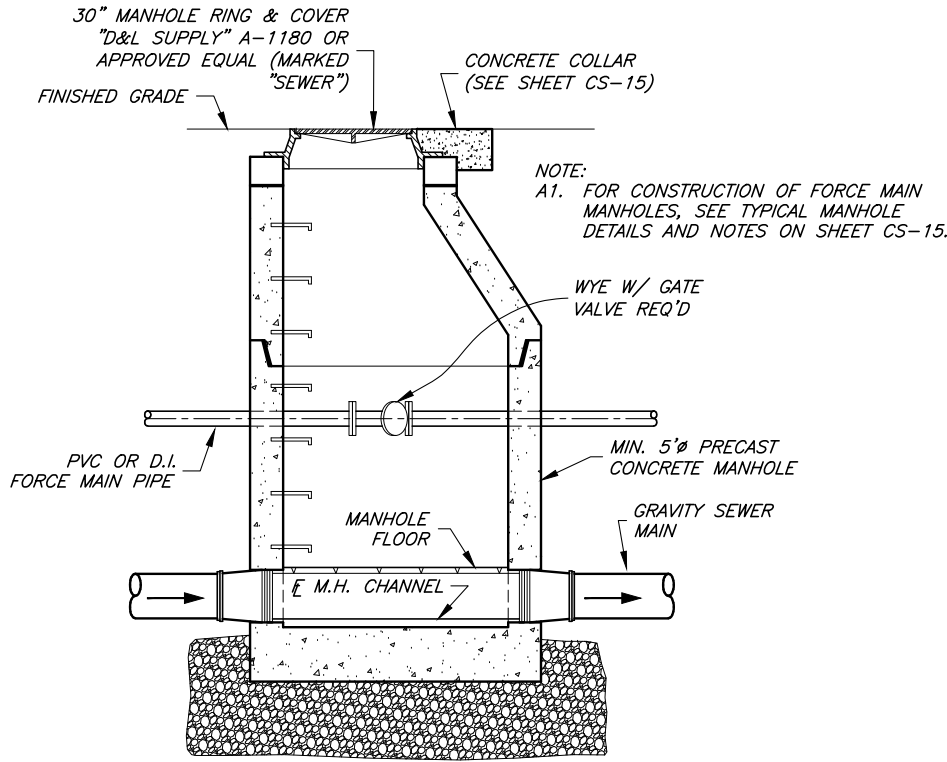
NOTES:
1. WHERE SEWAGE WATER QUALITY IS ADEQUATE AS DICTATED BY THE CITY ENGINEER, AN A.R.I. D040 OR APPROVED EQUAL VALVE MAY BE SPECIFIED.



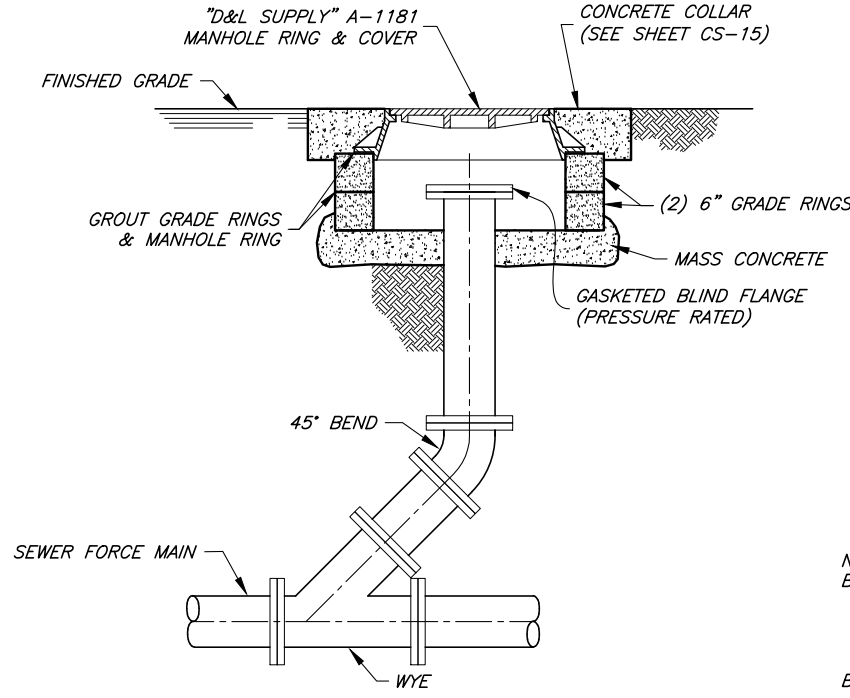
TYPICAL 2" WASTEWATER AIR RELEASE VALVE STATION
10" MAINS AND UNDER



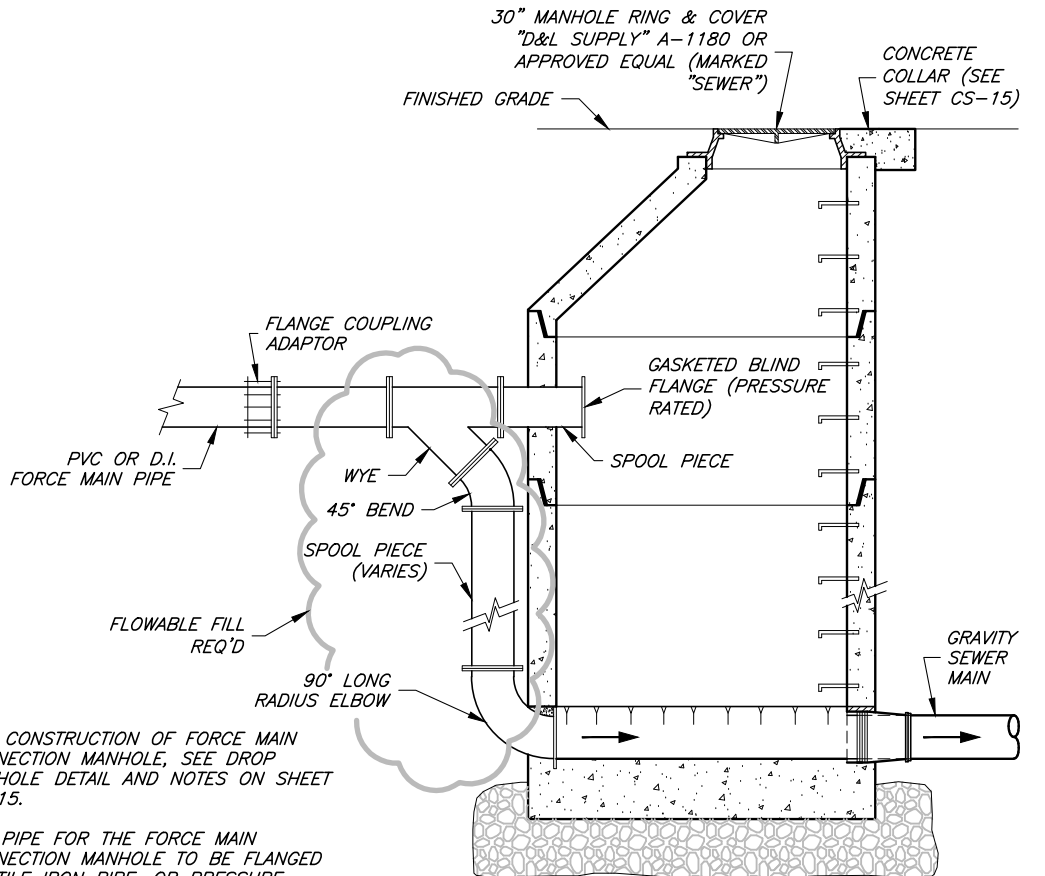
TYPICAL 3" WASTEWATER AIR/VACUUM RELIEF STATION
12" MAINS AND LARGER



FORCE MAIN CLEANOUT MANHOLE
WHERE SPECIFIED BY THE WASTEWATER TREATMENT DIVISION



STANDARD SEWER FORCE MAIN CLEANOUT
4" TO 12" MAINS



NOTES:
B1. FOR CONSTRUCTION OF FORCE MAIN CONNECTION MANHOLE, SEE DROP MANHOLE DETAIL AND NOTES ON SHEET CS-15.
B2. ALL PIPE FOR THE FORCE MAIN CONNECTION MANHOLE TO BE FLANGED DUCTILE IRON PIPE, OR PRESSURE RATED PVC AS SPECIFIED BY A LICENSED PROFESSIONAL ENGINEER.

FORCE MAIN CONNECTION MANHOLE
FORCE MAIN CONNECTION TO GRAVITY SEWER SYSTEM



APPROVED
Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

PUBLIC WORKS DIRECTOR
09/01/2021
DATE

SCALE:
N.T.S.

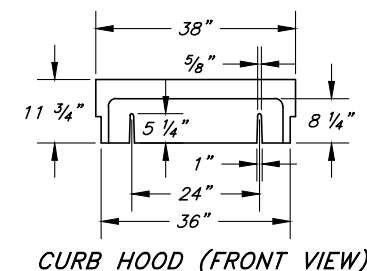
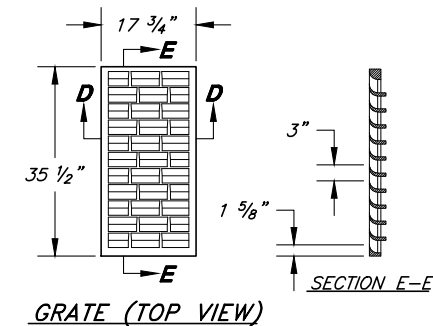
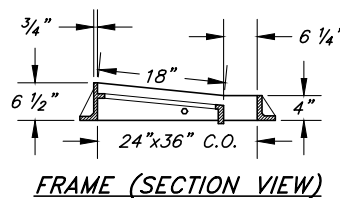
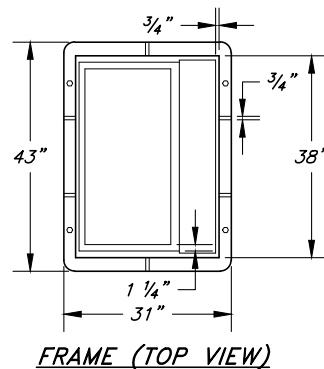
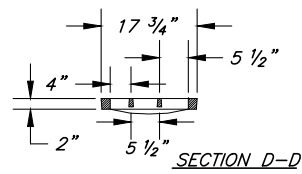
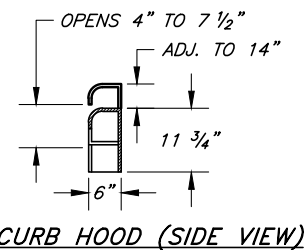
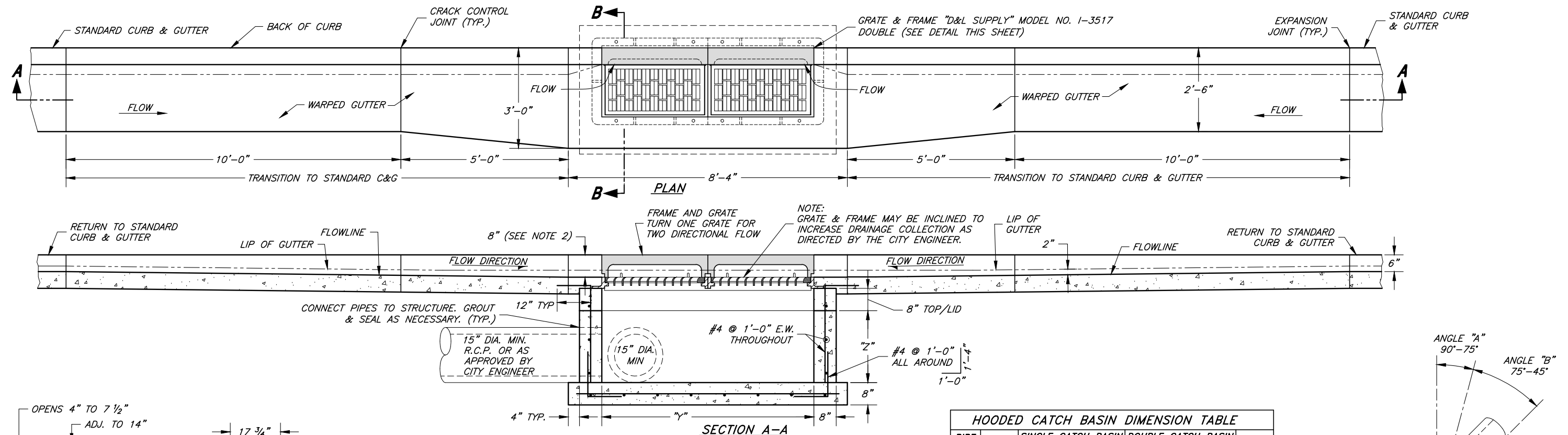
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
SANITARY SEWER - FORCE MAIN DETAILS

SHEET:
CS-17
OF 1 SHEETS
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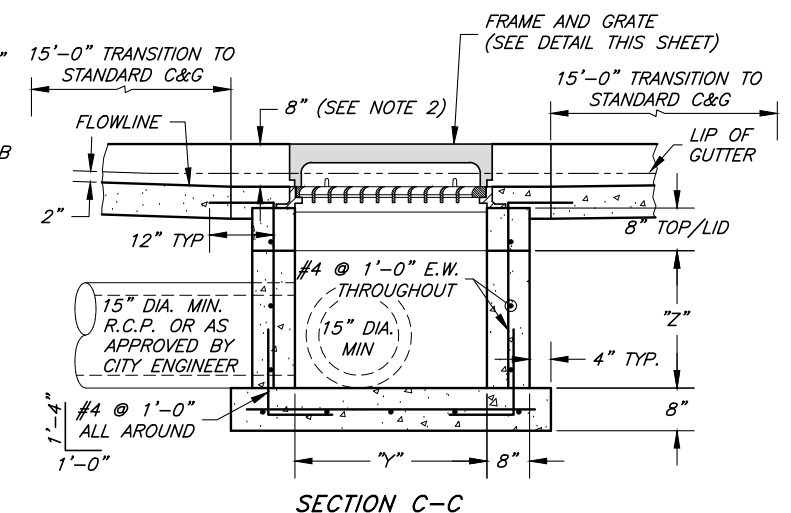
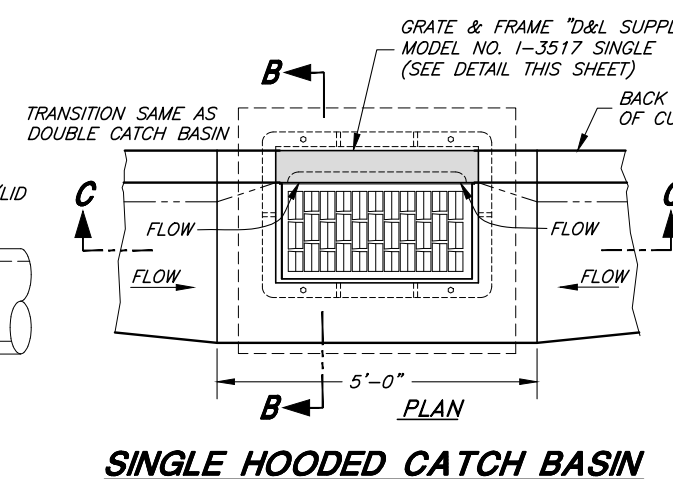
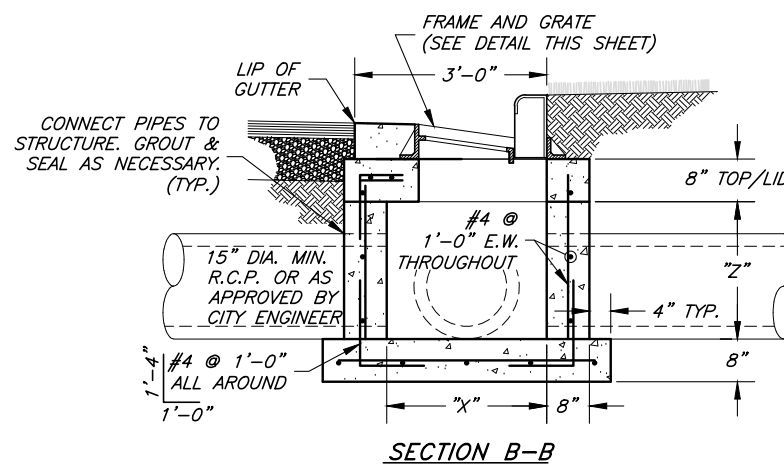
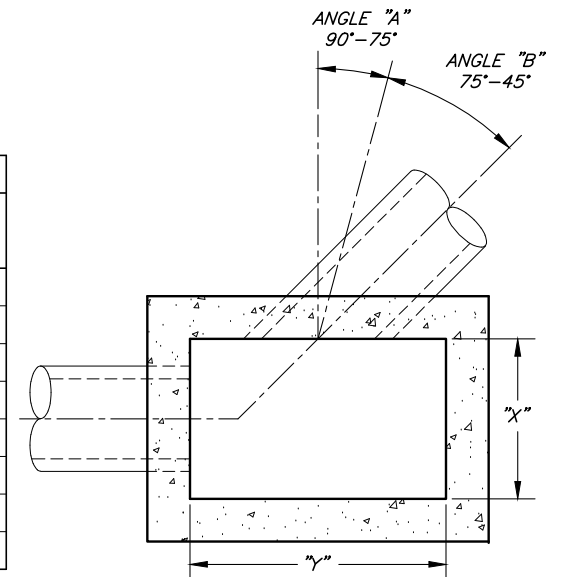
FRAME, REINFORCED CURB HOOD, AND TYPE "L" GRATE
"D&L SUPPLY" I-3517

GENERAL NOTES:

- ALL CATCH BASIN BOX SIZES REFLECT DIMENSIONS FOR THE MINIMUM 15"Ø PIPE SIZE. BOX DIMENSIONS MUST INCREASE PROPORTIONALLY TO ACCOMMODATE LARGER PIPE SIZES.
- DEPTH MAY VARY FROM 6" TO 10" AS DIRECTED BY THE CITY ENGINEER.
- CAST-IN-PLACE CONCRETE CATCH BASINS CAN BE REPLACED WITH PRECAST CONCRETE CATCH BASINS WITH HL-93 DECK LOADING AND COMPARABLE SIZE.
- ALL BOXES SHALL BE FORMED ON THE INSIDE AND OUTSIDE OF THE BOX AND INSPECTED BY THE CITY PRIOR TO THE PLACING OF CONCRETE.
- DOUBLE CATCH BASINS WILL BE REQUIRED IN LOCATIONS SPECIFIED BY THE CITY ENGINEER (TYPICALLY IN LOW SPOTS OR WHERE ADDITIONAL INLET CAPACITY IS NEEDED).
- STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.
- ALTERNATE STRUCTURE (E.G. COMBO BOXES) MAY BE USED WITH APPROVAL OF THE CITY ENGINEER. STRUCTURES SHALL FOLLOW APWA STANDARD PLANS AND BE A COMMON SIZE.

DOUBLE HOODED CATCH BASIN

PIPE SIZE (IN.)	SINGLE CATCH BASIN		DOUBLE CATCH BASIN		"Z" MIN.
	"X"	"Y"	"X"	"Y"	
15	2'-6"	3'-0"	3'-0"	6'-4"	2'-0"
18	2'-6"	3'-0"	4'-0"	6'-4"	2'-6"
21	4'-0"	4'-0"	4'-0"	6'-4"	3'-0"
24	4'-0"	4'-0"	5'-0"	6'-4"	3'-0"
30	4'-0"	4'-0"	6'-0"	6'-4"	3'-6"
36	4'-0"	5'-0"	6'-0"	6'-4"	4'-0"
42	6'-0"	6'-0"	7'-0"	8'-0"	5'-0"
48	6'-0"	6'-0"	8'-0"	8'-0"	5'-6"



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

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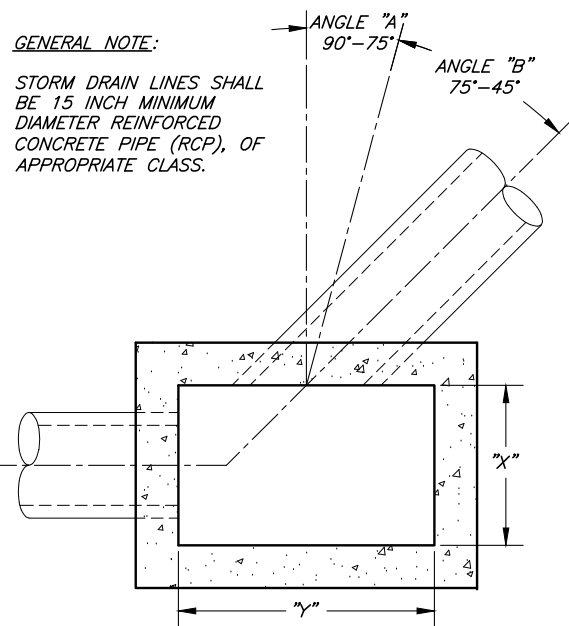
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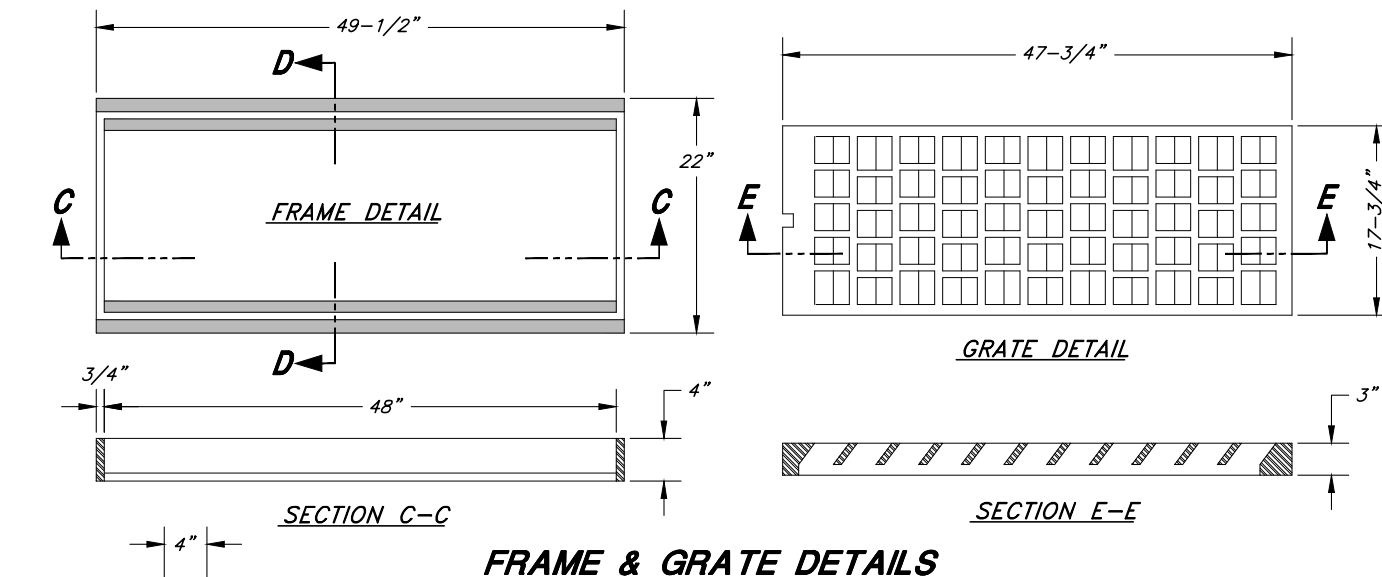
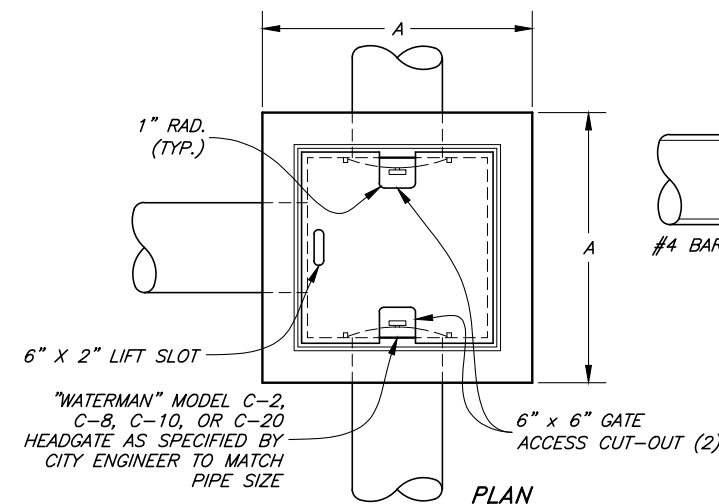
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
STORM DRAIN - SINGLE AND DOUBLE CATCH BASIN DETAILS
SHEET: **CS-18**
OF 1 SHEETS
0

GENERAL NOTE:

STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.



PIPE SIZE (IN.)	INLET BOX			"Z" MIN.
	"X"	"Y" (ANGLE A)	"Y" (ANGLE B)	
15	2'-6"	4'-0"	4'-0"	2'-0"
18	2'-6"	4'-0"	4'-0"	2'-6"
21	4'-0"	4'-0"	4'-0"	3'-0"
24	4'-0"	4'-0"	5'-0"	3'-0"
30	4'-0"	4'-0"	6'-0"	3'-6"
36	4'-0"	4'-0"	6'-0"	4'-0"
42	6'-0"	6'-0"	7'-0"	5'-0"
48	6'-0"	6'-0"	8'-0"	5'-6"

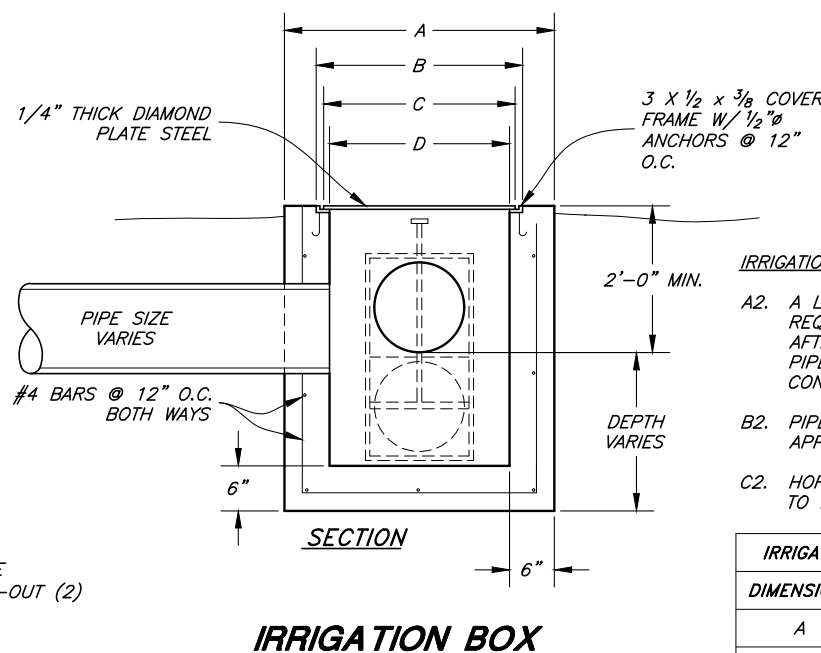
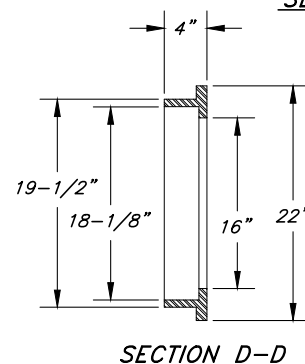


FRAME AND GRATE NOTES:

- GRATE AND FRAME SHALL BE AS MANUFACTURED BY "D&L SUPPLY" I-1803
- BICYCLE SAFE GRATE REQUIRED.
- "OR EQUAL" GRATES AND FRAMES WILL BE CONSIDERED AS APPROVED BY THE CITY ENGINEER.

INLET BOX NOTES:

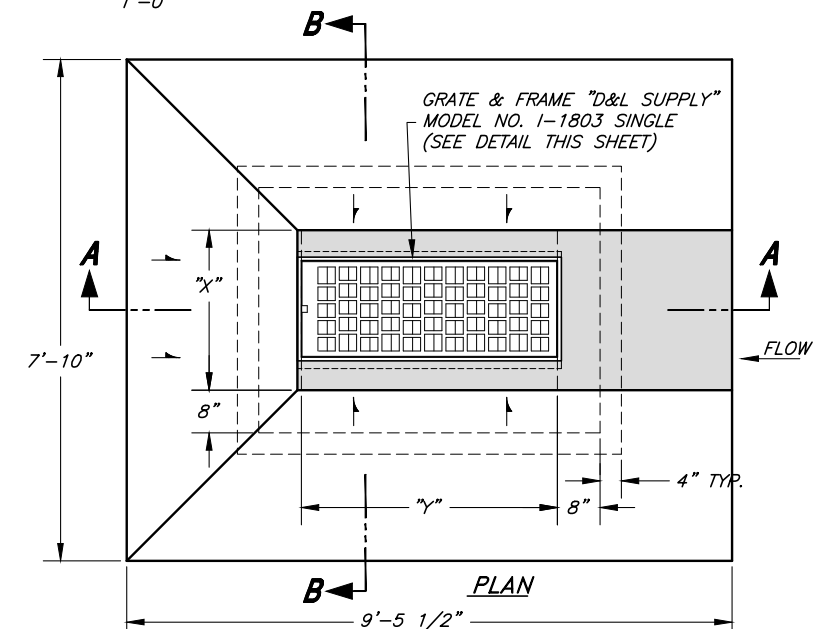
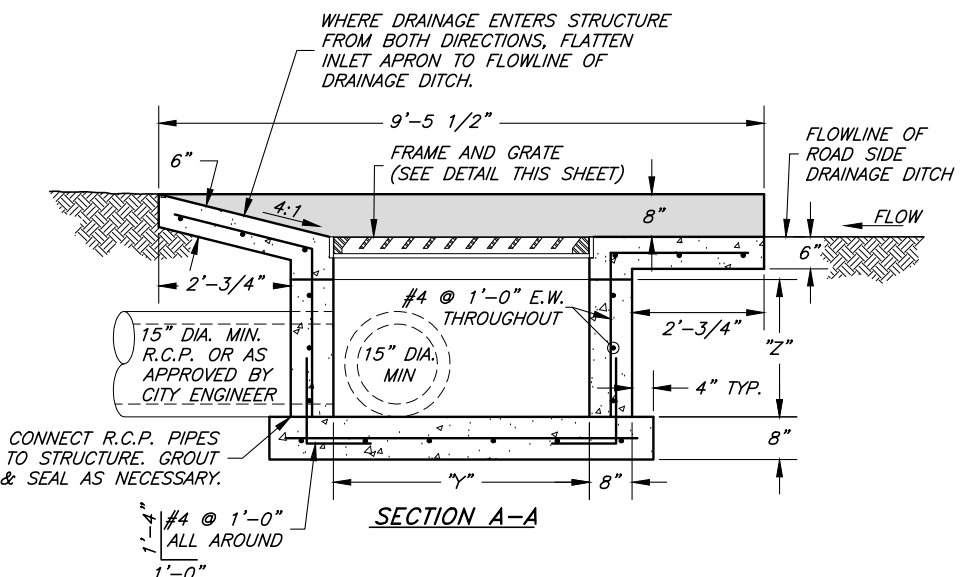
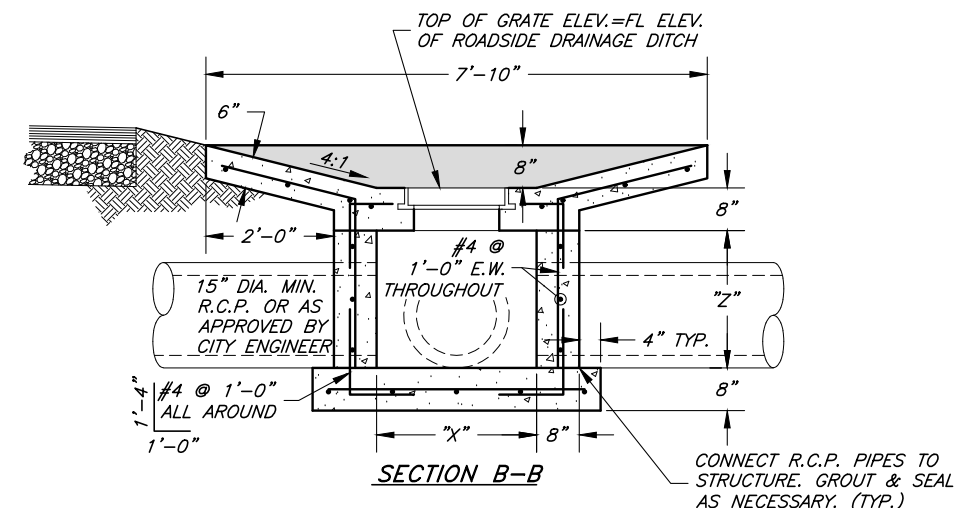
- ALL BOX SIZES REFLECT DIMENSIONS FOR THE MINIMUM 15"Ø PIPE SIZE. BOX DIMENSIONS MUST INCREASE PROPORTIONALLY TO ACCOMMODATE LARGER PIPE SIZES. (SEE TABLE THIS SHEET)
- CAST-IN-PLACE CONCRETE STRUCTURES CAN BE REPLACED WITH PRECAST CONCRETE STRUCTURES WITH HL-93 DECK LOADING AND COMPARABLE SIZE.
- ALL BOXES SHALL BE FORMED ON THE INSIDE AND OUTSIDE OF THE BOX AND INSPECTED BY THE CITY PRIOR TO THE PLACING OF CONCRETE.



IRRIGATION BOX NOTES:

- A LARGER IRRIGATION BOX MAY BE REQUIRED BY THE DESIGN ENGINEER AFTER EVALUATION OF THE SIZE OF THE PIPES AND GATES TO BE ATTACHED OR CONNECTED TO THE STRUCTURE.
- PIPE MATERIALS & SIZE SHALL BE APPROVED BY IRRIGATION COMPANY.
- HORIZONTAL & VERTICAL ALIGNMENT TO BE APPROVED BY PERRY CITY.

IRRIGATION BOX DIMENSION TABLE		
DIMENSION	TYPE I	TYPE II
A	3'-0"	4'-0"
B	2'-1 1/2"	3'-1 1/2"
C	2'-1"	3'-1"
D	2'-0"	3'-0"



DRAINAGE DITCH / PARKING LOT INLET BOX



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

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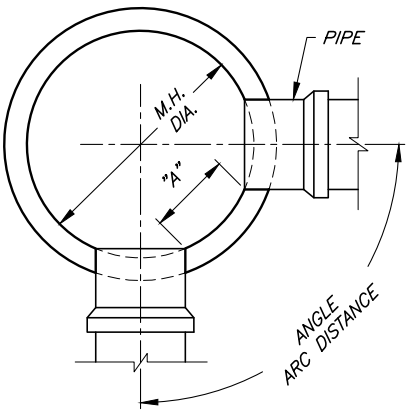
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
STORM DRAIN - DRAINAGE INLET BOX, GRATE AND FRAME, AND IRRIGATION BOX DETAILS

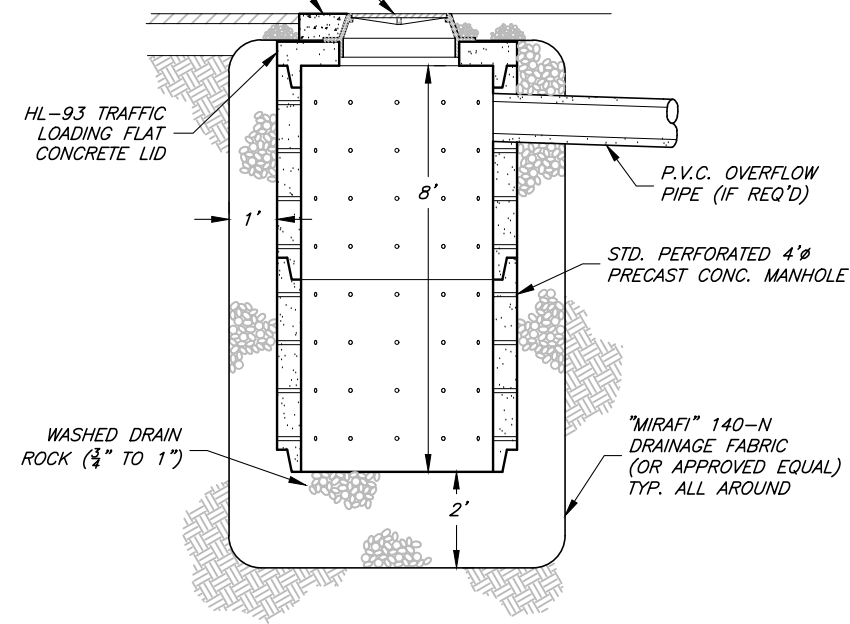
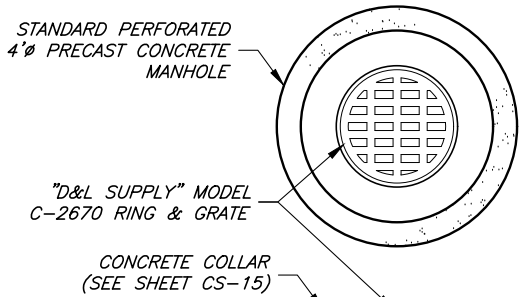
SHEET:
CS-19
OF 1 SHEETS
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PIPE SIZES												
M.H. SIZE	IN-LINE M.H. 180°	JUNCTION MANHOLE (ANGLE / ARC DISTANCE)										
		90°	85°	80°	75°	70°	65°	60°	55°	50°	45°	
4" M.H.	15"-24"	15"-18"	15"-18"	15"	15"	--	--	--	--	--	--	--
5" M.H.	27"-30"	21"-24"	21"-24"	18"-21"	18"-21"	15"-18"	15"-18"	15"	--	--	--	--
6" M.H.	36"-48"	27"-30"	27"-30"	24"-27"	24"	21"-24"	21"	18"	15"-18"	15"	--	--
7" M.H.	54"	36"	36"	30"	27"-30"	27"	24"	21"-24"	21"	18"	15"	--
8" M.H.	60"	42"	42"	36"	36"	30"	27"-30"	27"	24"	21"	18"	--

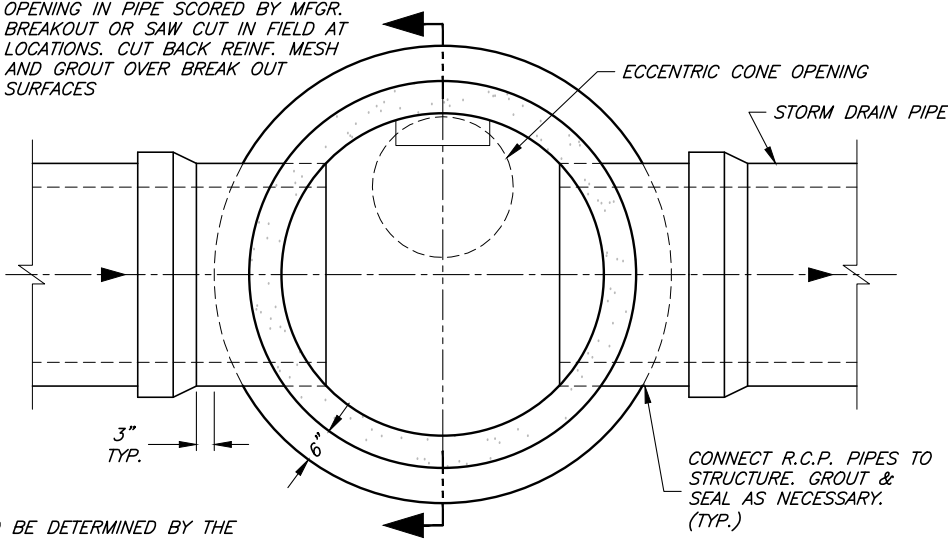


- SIZING NOTES:**
1. SUGGESTED "A" DISTANCE IS 6" OR GREATER FOR 48", 60" AND 72" DIAMETER MANHOLES
 2. SUGGESTED "A" DISTANCE IS 8" OR GREATER FOR 84" AND 96" DIAMETER MANHOLES

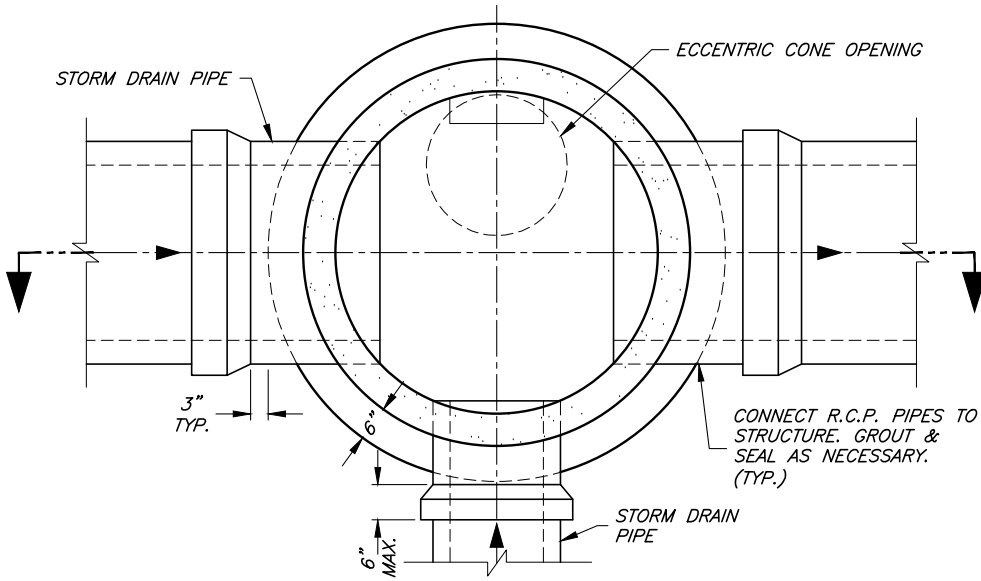
- GENERAL NOTES:**
- A. STORM DRAIN MANHOLE DIAMETER TO BE DETERMINED BY THE DESIGN ENGINEER AFTER EVALUATION OF THE NUMBER, SIZE, AND PIPE ENTRY ANGLE OF THE PIPES THAT CONNECT TO THE MANHOLE.
 - B. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE
 - C. PLYWOOD COVERS SHALL BE USED AT MANHOLE FLOOR TO COVER FLOWLINE DURING CONSTRUCTION AND MAINTENANCE ACTIVITIES.
 - D. ALL INTERIOR JOINTS SHALL BE SMOOTH AND EVENLY GROUTED WITH NON-SHRINK GROUT MIX.
 - E. MANHOLE STEPS UNIFORMLY SPACED (1'-0" MAX.) POLYPROPYLENE COVERED STEEL STEPS, MODEL PSI-PF AS MANUFACTURED BY "M.A. INDUSTRIES" OR APPROVED EQUAL - INSTALLATION OF STEPS SHALL BE WATERPROOF.
 - F. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.
 - G. FLAT MANHOLE RINGS & COVERS (SLAB CONSTRUCTION) ARE NOT ALLOWED ON ANY MANHOLE CONE SECTION.



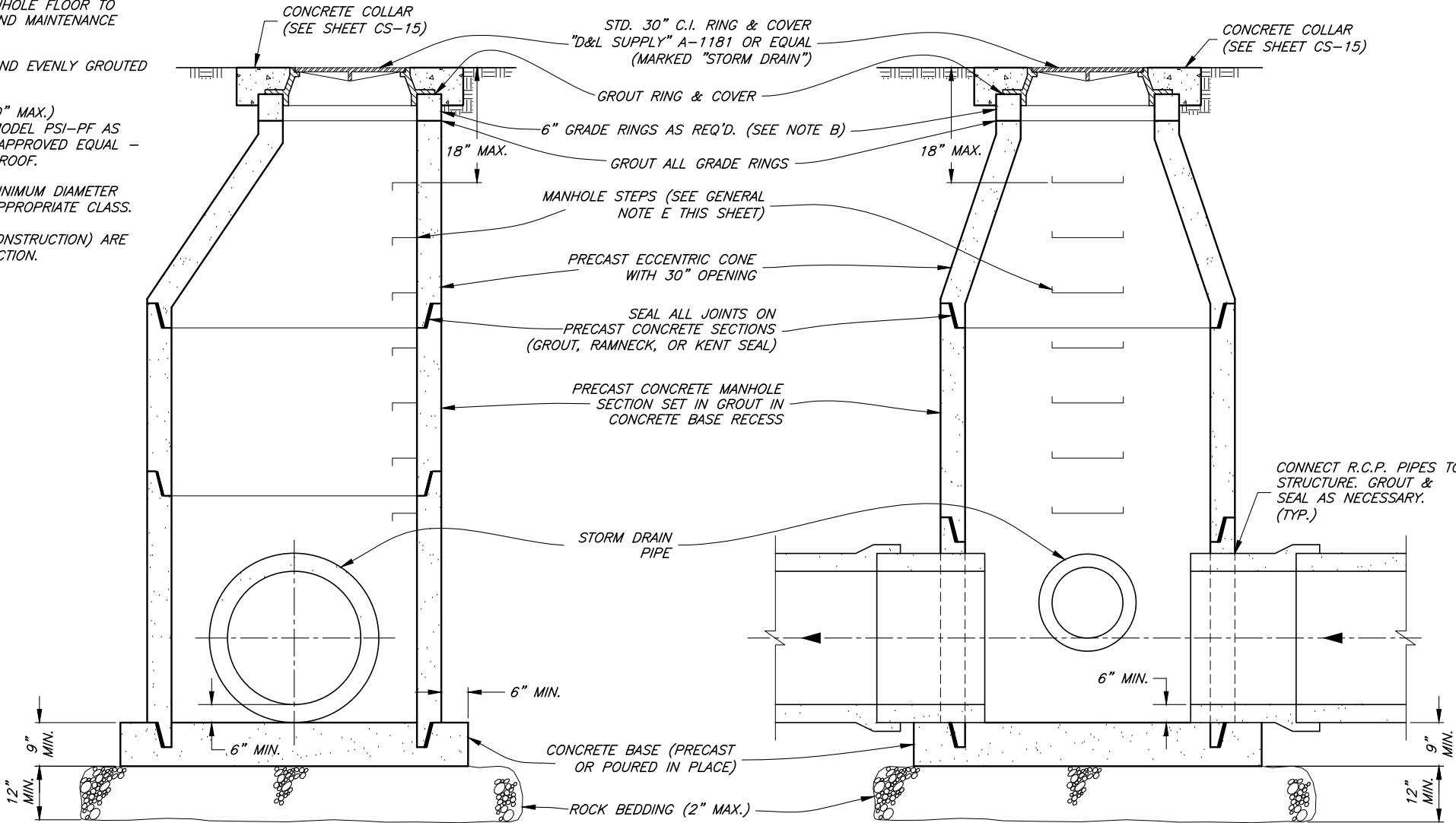
TYPICAL SUMP DETAIL
USE ONLY UPON APPROVAL FROM THE CITY ENGINEER



TYPICAL LINE MANHOLE



TYPICAL JUNCTION MANHOLE



APPROVED

Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

PUBLIC WORKS DIRECTOR
09/01/2021
DATE

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CONSULTING ENGINEERS

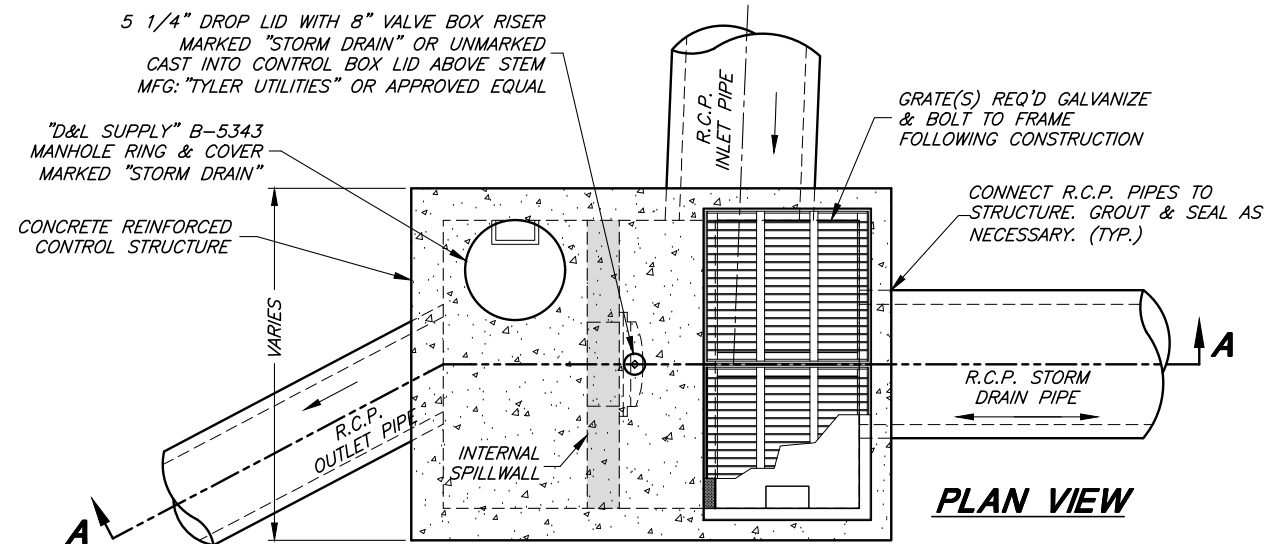
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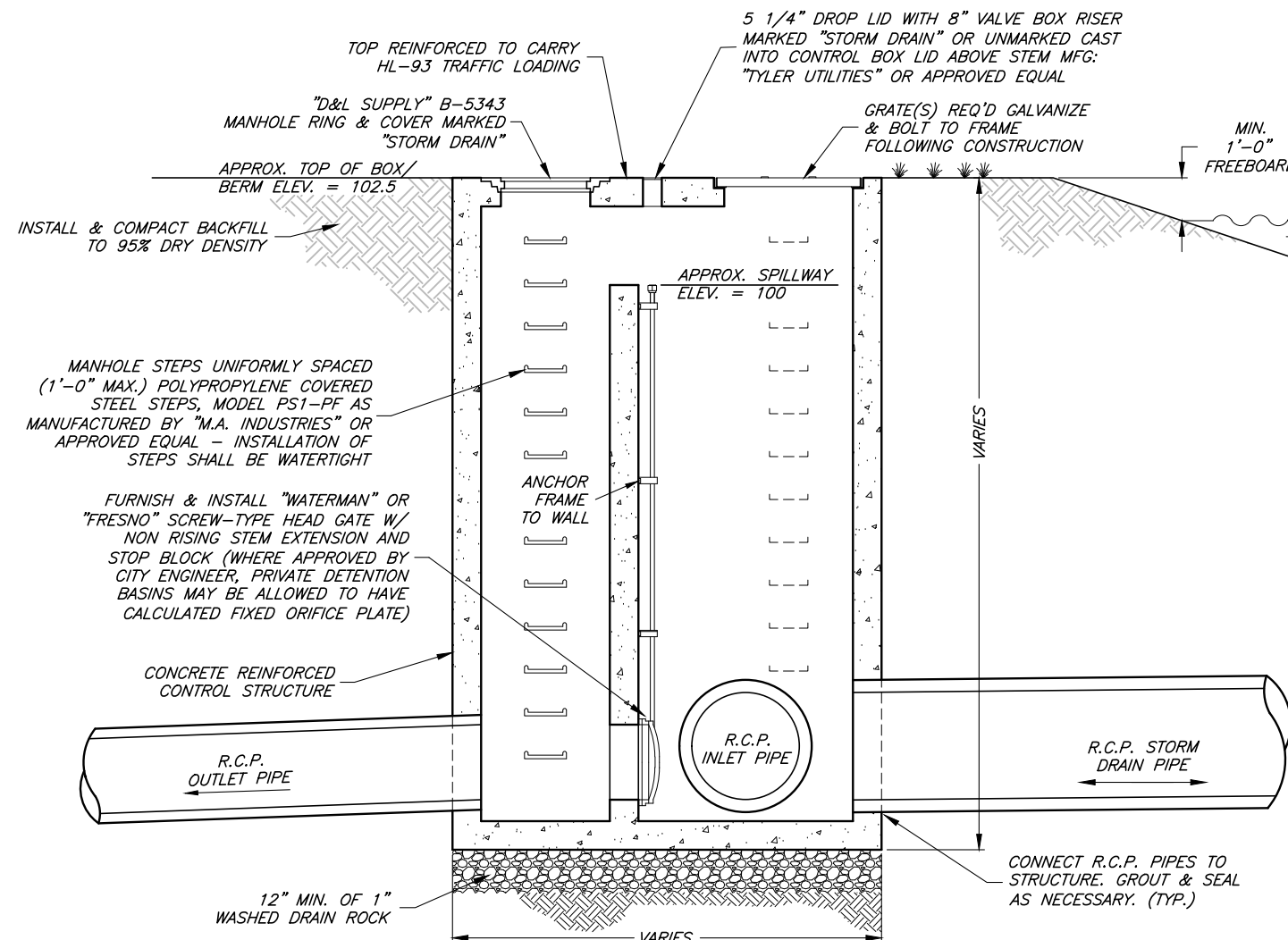
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS

STORM DRAIN - TYPICAL MANHOLE AND SUMP DETAILS

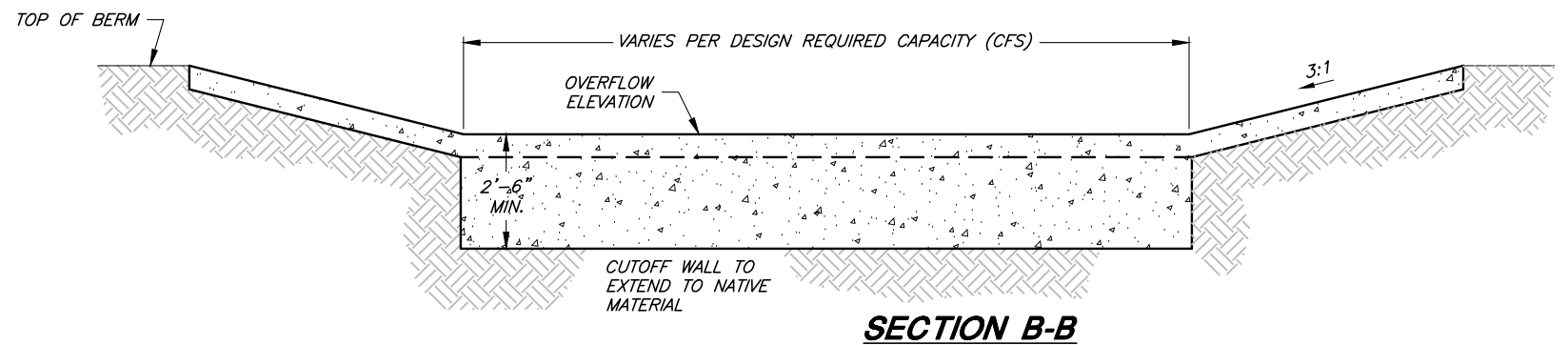
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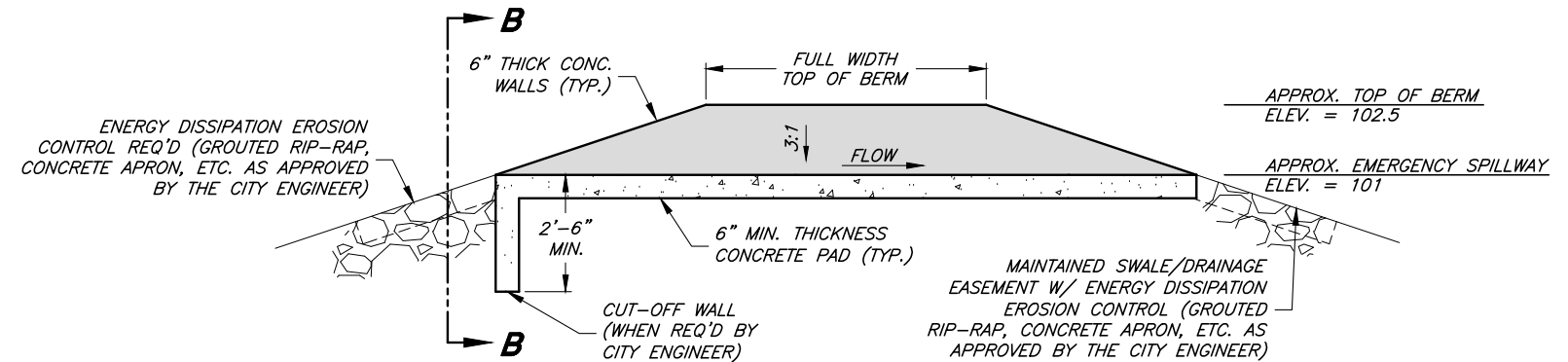
DETENTION INLET/OUTLET CONTROL STRUCTURE
(PRECAST OR CAST-IN-PLACE)



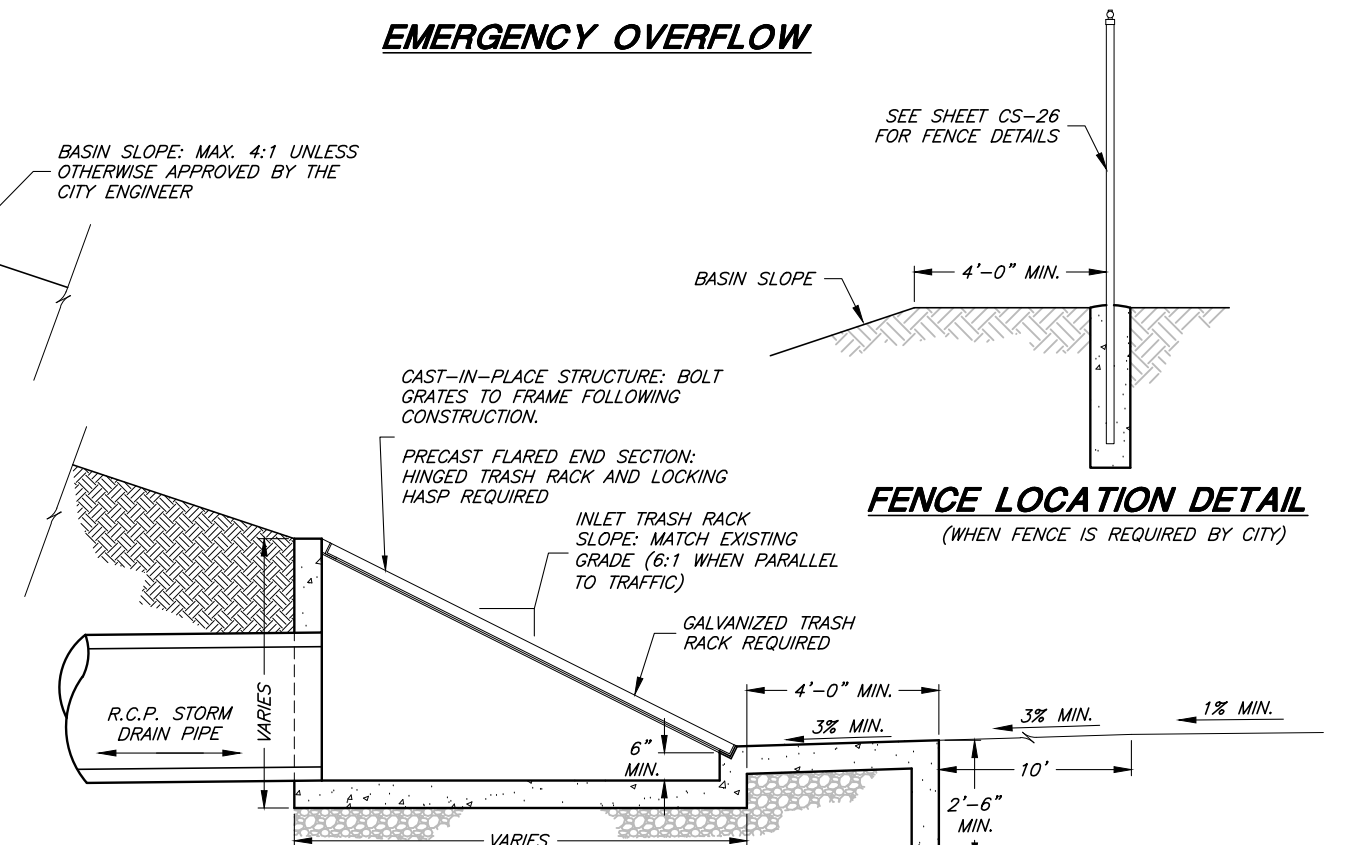
SECTION A-A



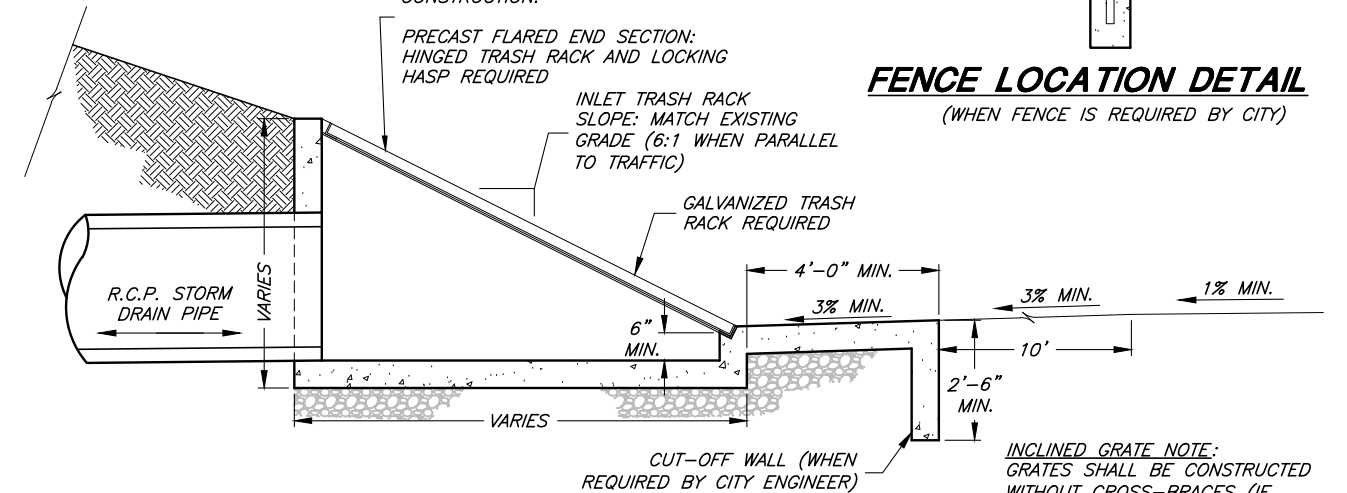
SECTION B-B



EMERGENCY OVERFLOW



FENCE LOCATION DETAIL
(WHEN FENCE IS REQUIRED BY CITY)



INCLINED GRATE STORM DRAIN INLET

**INCLINED GRATES ARE REQ'D ON ALL PIPES/INLETS WHERE OPEN CHANNELS, DITCHES, OR PONDS DISCHARGE DIRECTLY INTO THE STORM DRAIN SYSTEM.

GENERAL AND STRUCTURAL NOTES:
SEE SHEET CS-22



APPROVED
CITY ENGINEER
09/01/2021
DATE

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PUBLIC WORKS DIRECTOR
09/01/2021
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CONSULTING ENGINEERS

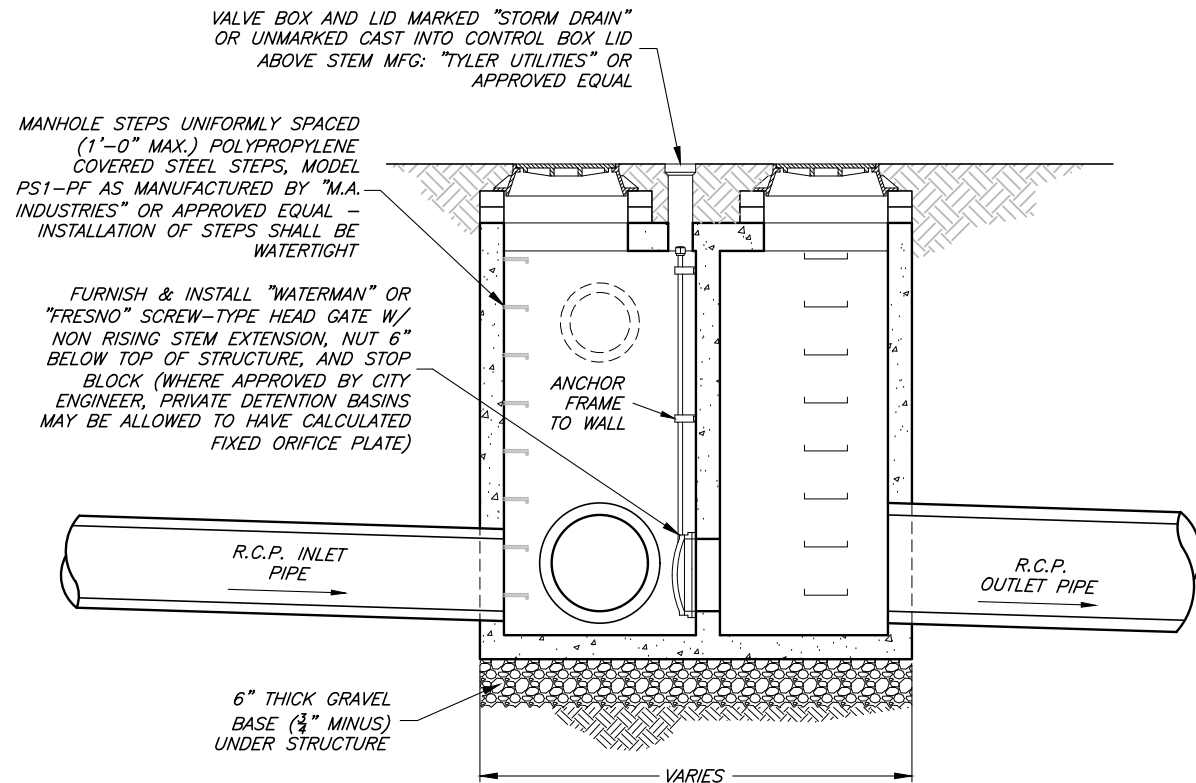
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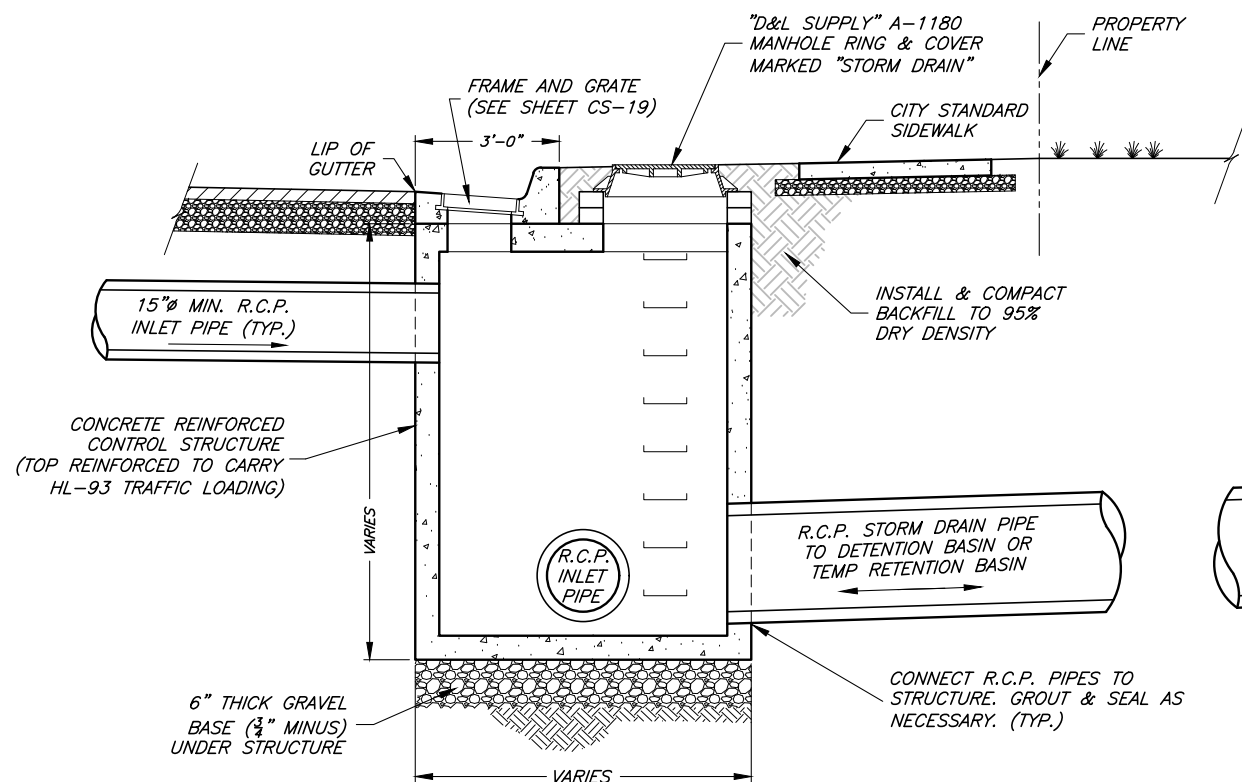
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS

STORM DRAIN - LARGE DETENTION BASIN DETAILS

SHEET:
CS-21
OF 1 SHEETS
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SECTION B-B



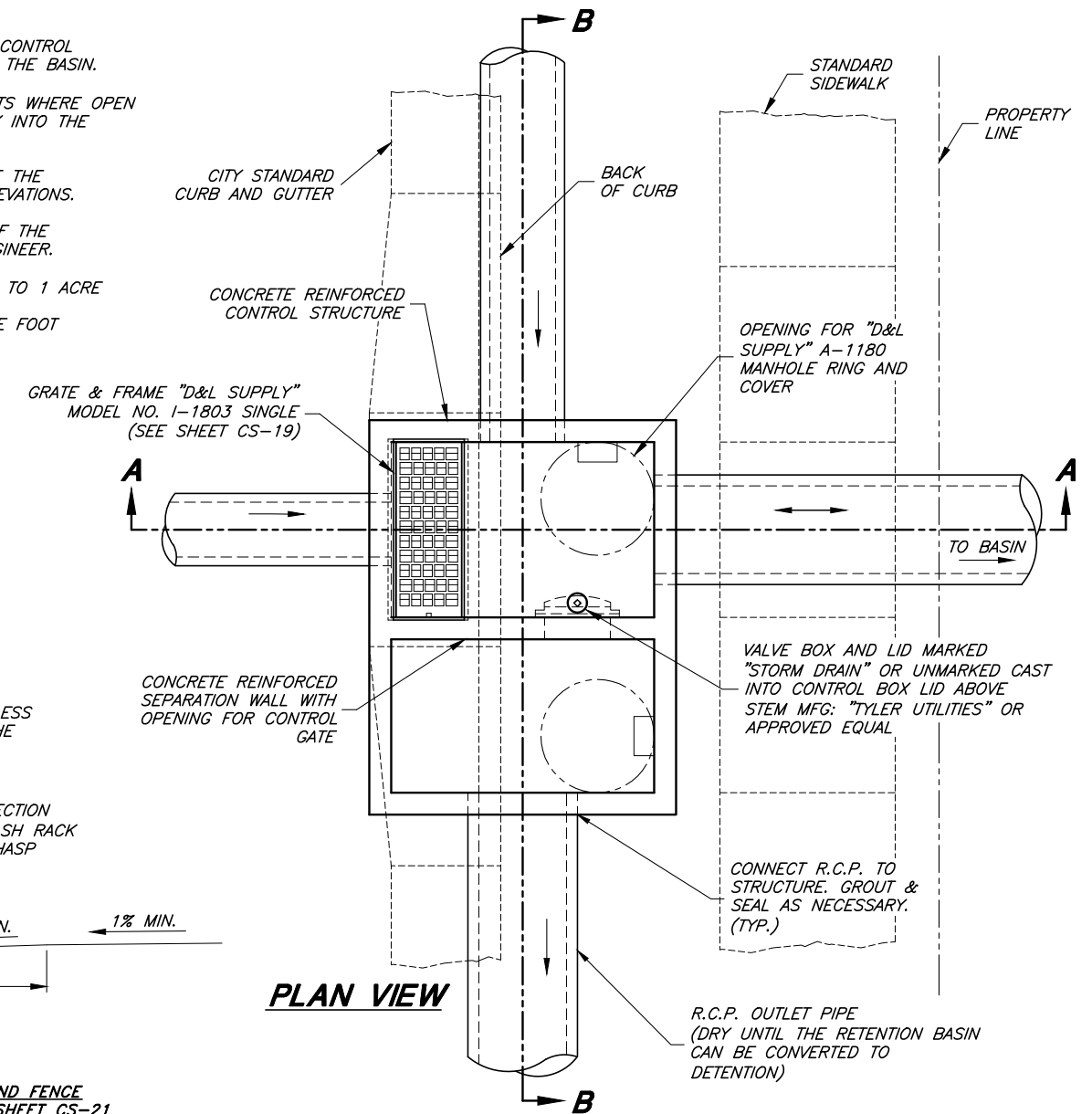
SECTION A-A

GENERAL NOTES:

1. ALL BASINS REGARDLESS OF LOCAL OR REGIONAL SHALL BE DESIGNED TO ACCOMMODATE A 100 YEAR STORM EVENT.
2. A DAM SAFETY (UTAH DIVISION OF WATER RIGHTS) HAZARD PERMIT MAY BE REQUIRED.
3. STRUCTURE DESIGN AND FLOW CALCULATIONS MUST BE APPROVED BY CITY ENGINEER PRIOR TO CONSTRUCTION.
4. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.
5. THE SURFACE AREA OF THE BASIN SHALL BE SODDED AND SHALL BE PROVIDED WITH AN AUTOMATED SPRINKLER SYSTEM APPROVED BY THE CITY ENGINEER.
6. GRATES SHALL BE REMOVABLE FOR MAINTENANCE PURPOSES
7. GRATES SHALL BE HOT DIPPED GALVANIZED WITH BARS AT MAXIMUM 3 INCH SPACING.
8. LOW FLOWS MUST BE PIPED CONTINUOUSLY TO THE CONTROL STRUCTURE. NO OPEN FLOW IS PERMITTED THROUGH THE BASIN.
9. INCLINED GRATES ARE REQUIRED ON ALL PIPES/INLETS WHERE OPEN CHANNELS, DITCHES, OR PONDS DISCHARGE DIRECTLY INTO THE STORM DRAIN SYSTEM.
10. AN INTERNAL SPILLWAY MAY BE CONSTRUCTED INSIDE THE STRUCTURE DEPENDING ON SITE CONDITIONS AND ELEVATIONS.
11. BASIN STRUCTURES ARE DETERMINED BY THE SIZE OF THE DETENTION BASIN OR AS REQUIRED BY THE CITY ENGINEER. (SEE SHEET CS-21 OR CS-22)
 - a. SMALL DETENTION BASIN: LESS THAN OR EQUAL TO 1 ACRE FOOT
 - b. LARGE DETENTION BASIN: GREATER THAN 1 ACRE FOOT

STRUCTURAL NOTES:

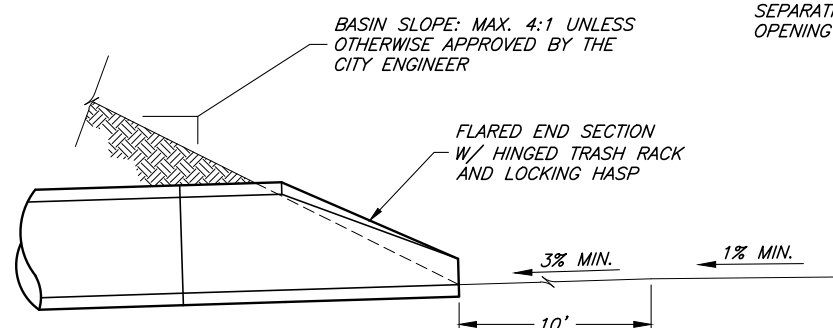
- A. PRECAST CONCRETE STRUCTURE CAN BE REPLACED WITH CAST-IN-PLACE CONCRETE VAULT. SUBMIT ENGINEERED CONSTRUCTION PLANS WITH REBAR DETAILS TO CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.
- B. ADD REINFORCEMENT AROUND OPENINGS EQUAL TO REINFORCEMENT DISPLACED BY OPENING.
- C. THE PRECAST VAULT MANUFACTURER IS RESPONSIBLE FOR DESIGN RELATED TO TRAFFIC LOADING AND THRUST. VERIFICATION OF PROPER DESIGN MUST BE PROVIDED TO THE CITY BY THE DEVELOPER, CONTRACTOR, OR PROPERTY OWNER AS THE CASE MAY BE.
- D. REINFORCEMENT TO CONFORM WITH ASTM A 615 GRADE 60
- E. CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI
- F. USE AN AIR-ENTRAINING AGENT ON ALL CONCRETE EXPOSED TO THE WEATHER.
- G. HL-93 LOADING



PLAN VIEW

INLET/OUTLET CONTROL STRUCTURE

(PRECAST OR CAST-IN-PLACE)



EMERGENCY OVERFLOW AND FENCE LOCATION DETAIL: SEE SHEET CS-21



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<i>Brett M. Jones</i>	N.T.S.
CITY ENGINEER	DESIGNED _____
09/01/2021	DRAWN _____
DATE	CHECKED _____
PUBLIC WORKS DIRECTOR	
09/01/2021	
DATE	



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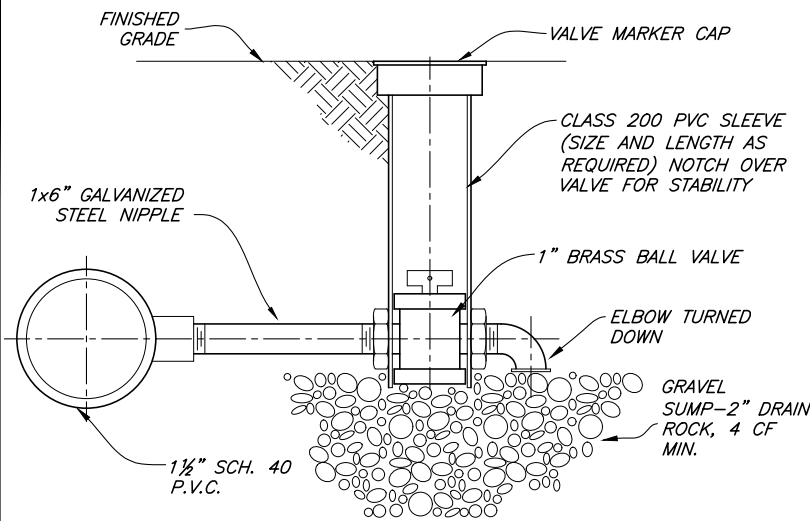
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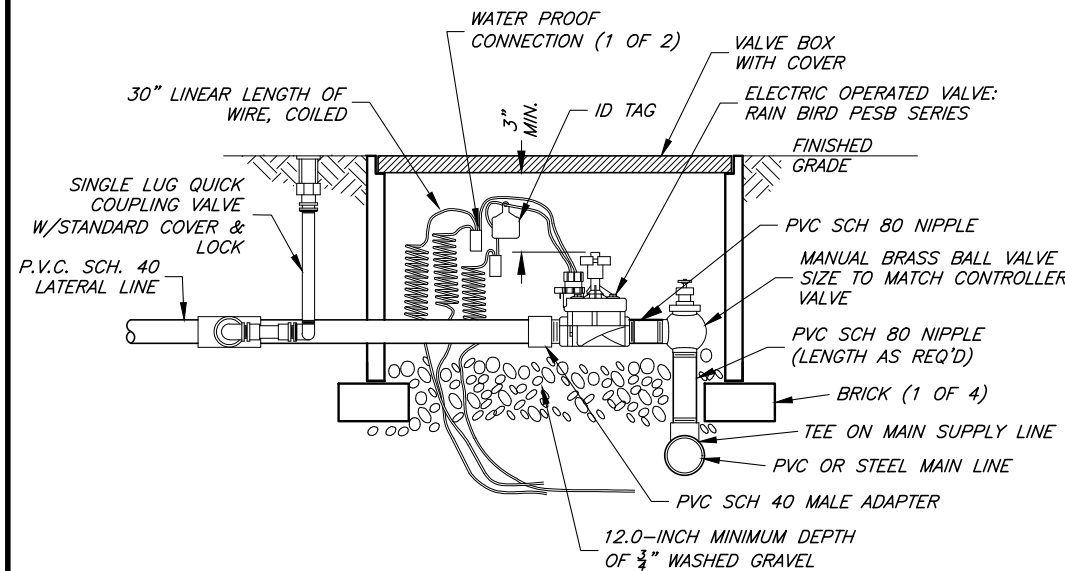
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS

STORM DRAIN - SMALL DETENTION BASIN DETAILS

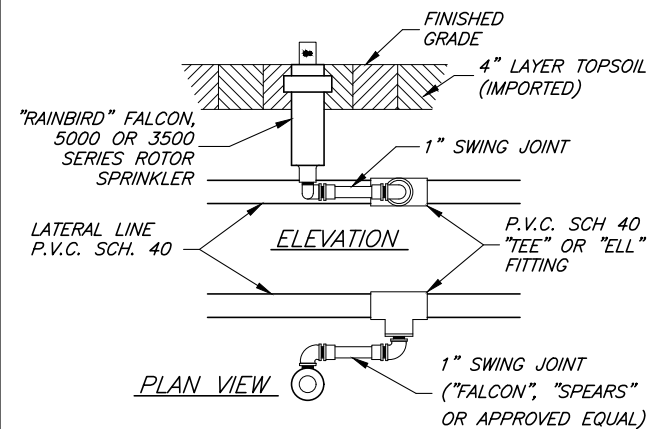
SHEET:
CS-22
OF 1 SHEETS
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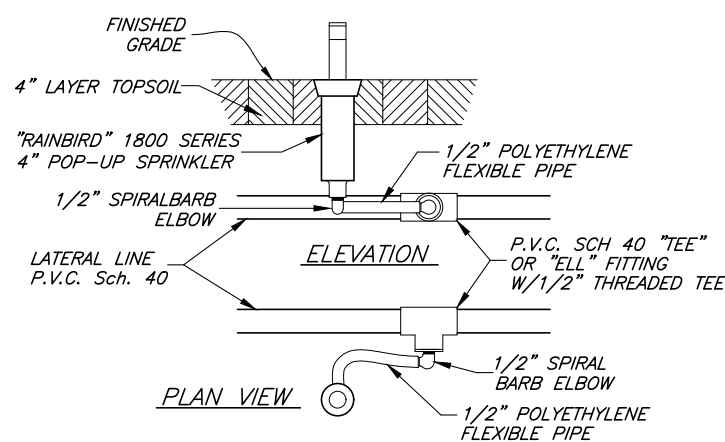
MANUAL DRAIN VALVE



CONTROL VALVE STATION

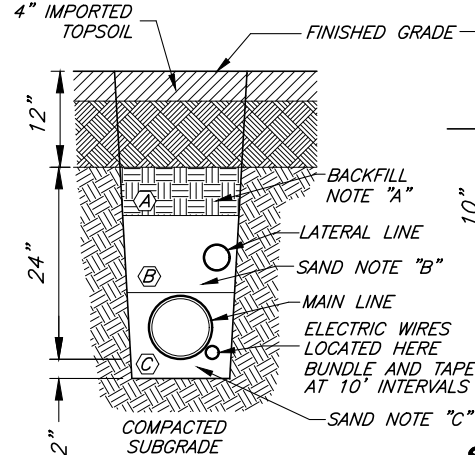


ROTOR HEAD CONNECTION DETAIL

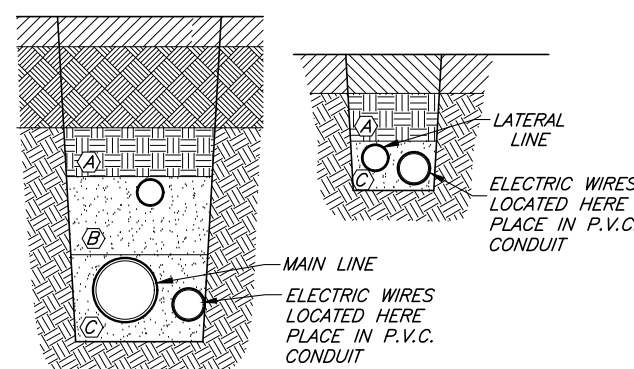


1800 SERIES HEAD CONNECTION DETAIL

TRENCH WITH DIRECT BURY WIRE



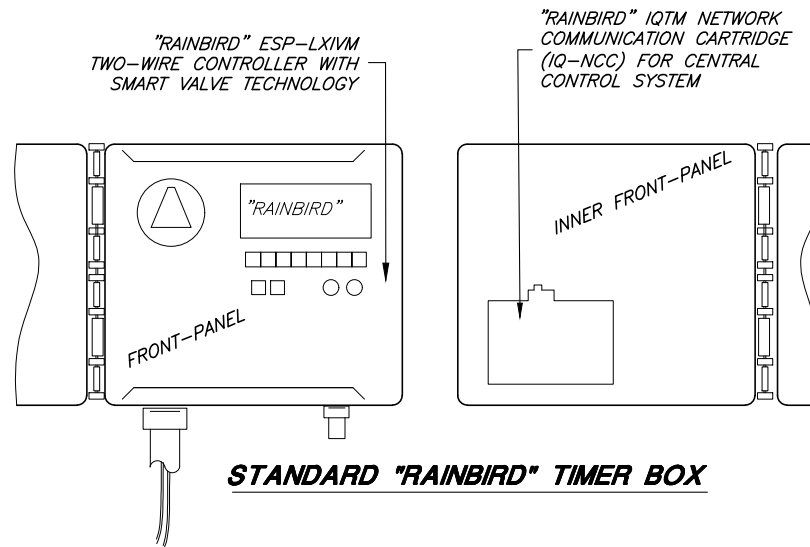
TRENCH WITH ELECTRICAL CONDUIT



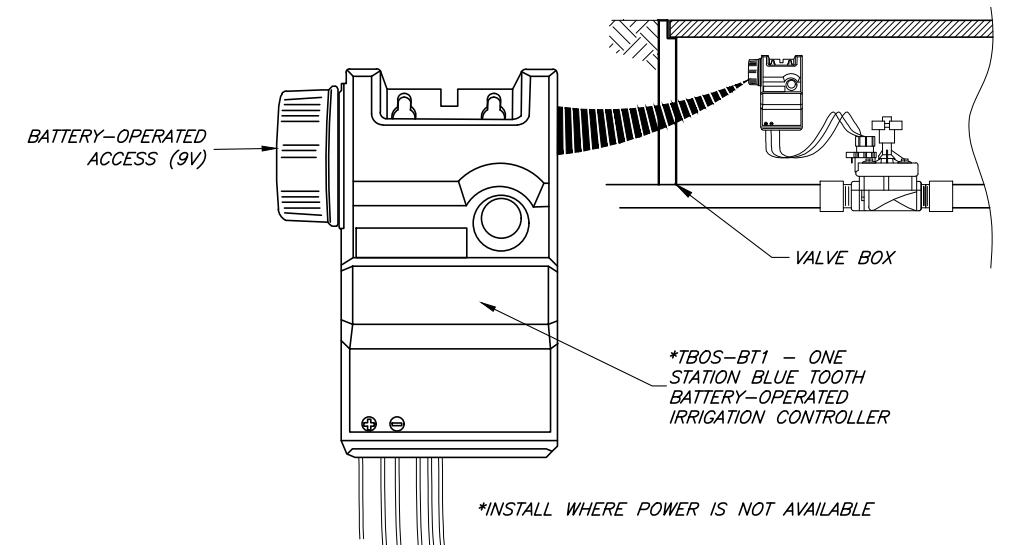
SPRINKLER TRENCH DETAILS

SPRINKLER NOTES:

1. INSTALL ALL WIRING ACCORDING TO LOCAL CODES. ALL WIRES ABOVE FINISHED GRADE TO BE INSTALLED IN METAL CONDUITS.
2. SPACE SPRINKLER HEADS AT A MAXIMUM OF 95% OF COVERAGE DISTANCE.



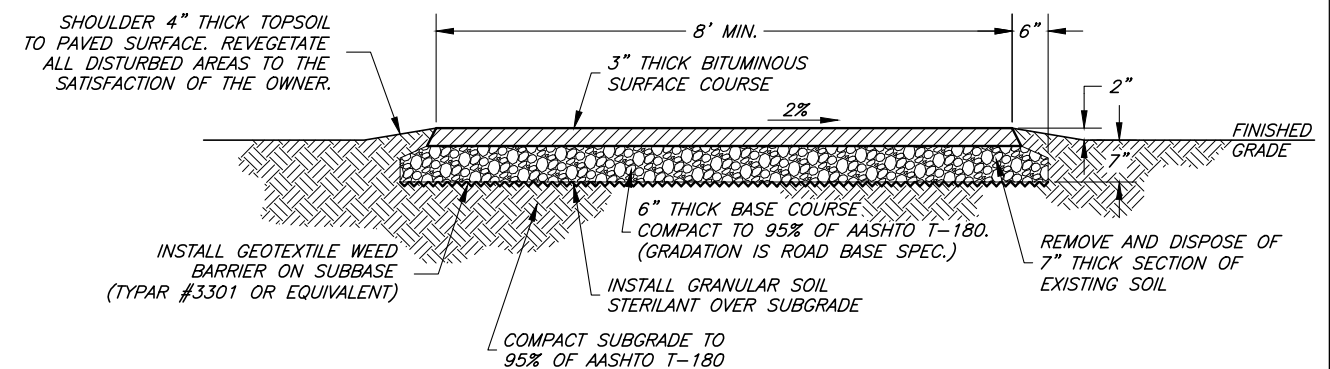
STANDARD "RAINBIRD" TIMER BOX



"RAINBIRD" CONTROL MODULE

TRAIL NOTES:

- A1. TRAILS SHOULD BE DESIGNED AND CONSTRUCTED AT GRADES LESS THAN 8% GRADE TO PROMOTE ACCESSIBLE USE.
- B1. GRADE AVERAGES OF LESS THAN 6% WILL PROVIDE THE MOST USER FRIENDLY EXPERIENCE AND ARE PREFERRED.
- C1. WHERE POSSIBLE A SLIGHT MEANDERING ALIGNMENT SHOULD BE USED.
- D1. WHERE REQUIRED BENCHES SHOULD BE SPACED APPROXIMATELY EVERY 1/2 MILE



8' ASPHALT TRAIL CROSS SECTION



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
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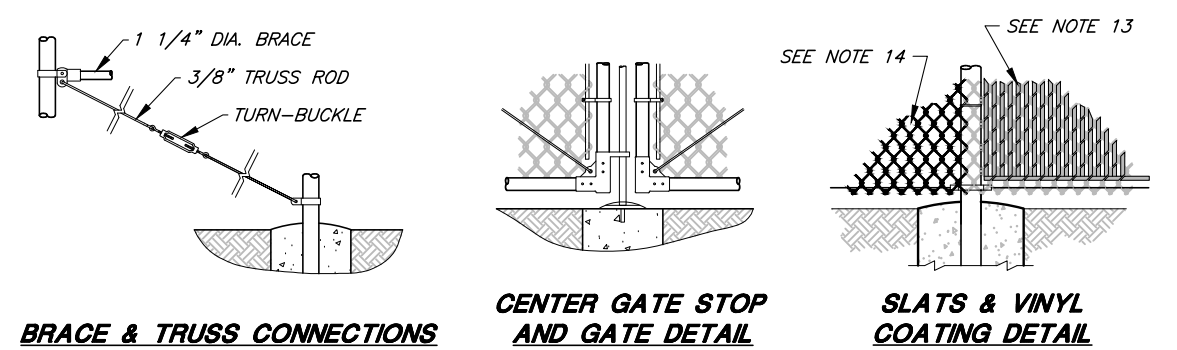
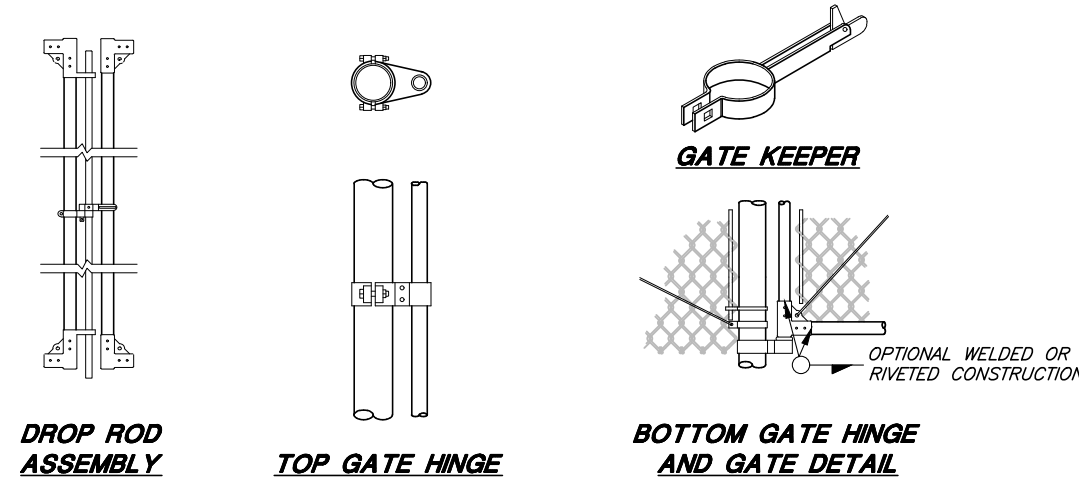
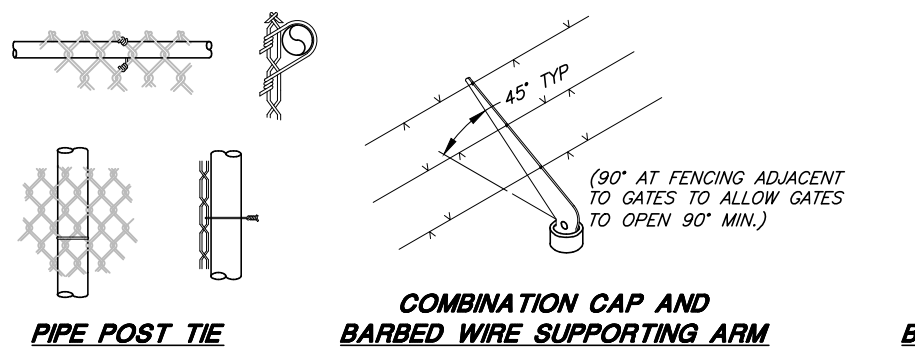
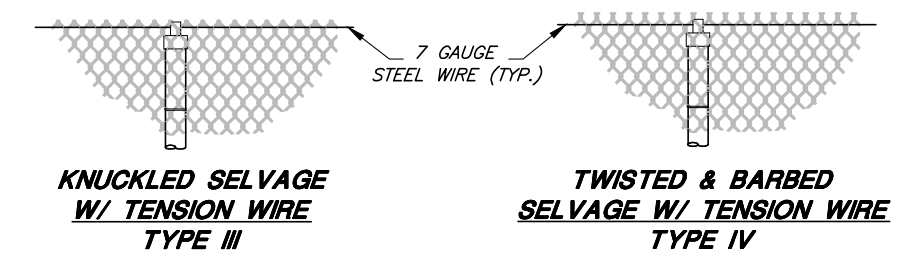
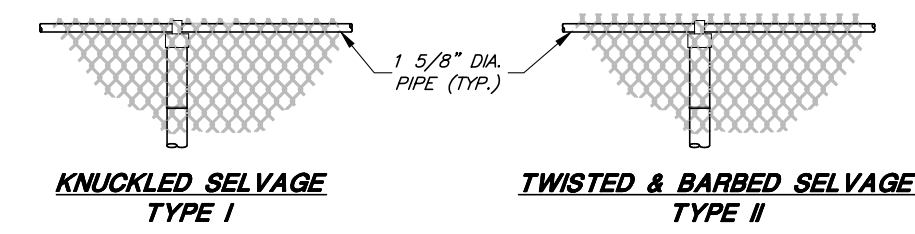
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PUBLIC WORKS STANDARDS
GENERAL - MUNICIPAL SPRINKLER IRRIGATION & TRAIL SECTION DETAILS

SHEET:
CS-23
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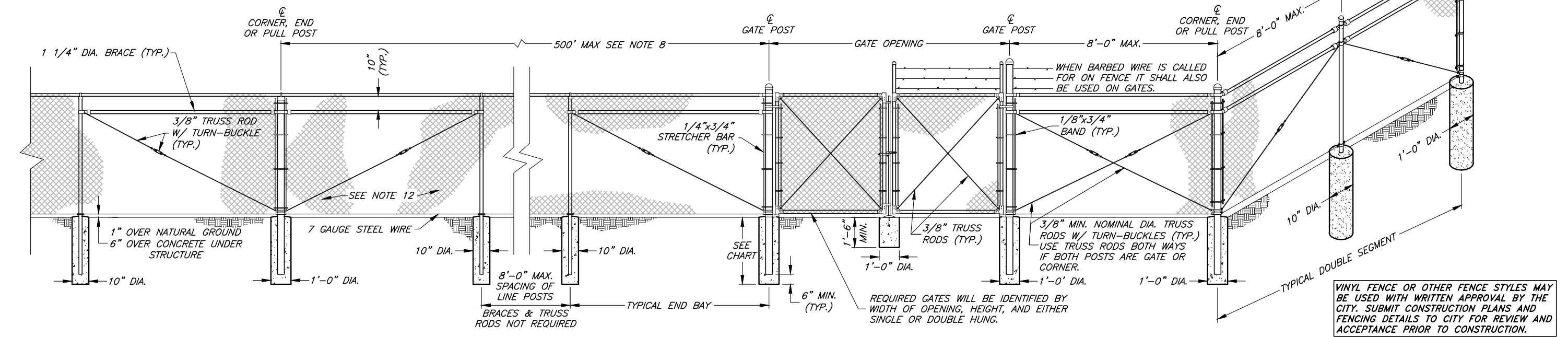


HEIGHT	GATE OPENING	GATE POST	GATE FRAME
UNDER 6 FEET	SINGLE TO 6' OR DOUBLE TO 12'	2"	1"
	SINGLE OVER 6' TO 8' OR DOUBLE OVER 12' TO 16'	2 1/2"	1 1/2"
	SINGLE OVER 8' TO 12' OR DOUBLE 16' TO 24'	4"	1 1/2"
6 FEET AND OVER	SINGLE TO 6' OR DOUBLE TO 12'	3 1/2"	1 1/2"
	SINGLE OVER 6' TO 12' OR DOUBLE OVER 12' TO 24'	4"	1 1/2"
	SINGLE OVER 12' TO 18' OR DOUBLE OVER 24' TO 36'	6"	1 1/2"
	SINGLE OVER 18' OR DOUBLE OVER 36'	8"	1 1/2"

HEIGHT OF FABRIC	DEPTH OF POSTS	LENGTH OF END, CORNER OR PULL POST	LENGTH OF LINE POST	SIZE OF POSTS	
				END, CORNER, & PULL POSTS	LINE POST
				NOM. SIZE	NOM. SIZE
7'	3'	10'	9'-8"	2 1/2"	2"
6'	3'	9'	8'-8"	2 1/2"	2"
5'	3'	8'	7'-8"	2"	1 1/2"
4'	3'	6'	5'-8"	2"	1 1/2"
3'	3'	5'	4'-8"	2"	1 1/2"

- GENERAL NOTES:**
1. MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH PROJECT STANDARD SPECIFICATIONS.
 2. THE TYPE OF TOP SUPPORT IS SPECIFIED IN THE BIDDING SCHEDULE, TYPES I AND II TUBULAR RAIL, TYPES III AND IV TENSION WIRE.
 3. BARB WIRE SHALL BE USED ONLY WHEN DESIGNATED ON THE PLANS OR IN THE SPECIFICATIONS.
 4. TWISTED AND BARBED SELVAGE TOP AND BOTTOM SHALL BE USED ON FENCES 5- FEET HIGH OR GREATER.
 5. KNUCKLED SELVAGE ON TOP AND TWISTED AND BARBED ON BOTTOM SHALL BE USED ON FENCES LESS THAN 5- FEET.
 6. ALL STEEL PIPE MEMBERS SHALL CONFORM TO ASTM A53 HOT DIPPED ZINC COATED HIGH TENSILE STEEL PIPE.
 7. POSTS SHALL BE SCHEDULE 40 PIPE.
 8. LINE POSTS SHALL BE LOCATED AT EQUAL SPACING FOR EACH SEGMENT WITH A MAXIMUM SPACING AS FOLLOWS:

a.	TANGENT SECTIONS TO 500-FOOT RADIUS NOT MORE THAN 8- FEET.
b.	UNDER 500-FOOT RADIUS TO 200-FOOT RADIUS NOT MORE THAN 8- FEET.
c.	UNDER 200-FOOT RADIUS TO 100-FOOT RADIUS NOT MORE THAN 6- FEET.
d.	UNDER 100-FOOT RADIUS NOT MORE THAN 5- FEET.
 9. TRUSS RODS AND BRACES SHALL NOT BE REQUIRED FOR FABRIC HEIGHT LESS THAN 5- FEET.
 10. TENSION WIRE SHALL BE 7 GAUGE ZINC- OR ALUMINUM- COATED COIL SPRING STEEL TENSION WIRE.
 11. ALL POSTS SHALL BE SET IN 3000 PSI CONCRETE AND SHALL BE TOPPED WITH BALL TYPE OR OTHER APPROVED ORNAMENT.
 12. ALL FABRIC SHALL BE 2" GALVANIZED 9 GAUGE MESH.
 13. VERTICAL SEMI-PRIVACY VINYL SLATS WITH BOTTOM- LOCKING SLAT, WHEN REQUIRED BY THE CITY. COLOR AS APPROVED BY THE CITY.
 14. VINYL COATED CHAINLINK FENCING WHEN REQUIRED BY THE CITY. COLOR AS APPROVED BY THE CITY.
 15. ALL FENCING SHALL CONFORM TO LOCATION AND HEIGHT LIMITATIONS AS STATED IN PERRY CITY FENCING ORDINANCE.



APPROVED

CITY ENGINEER
Brett M. Jones
09/01/2021
DATE

PUBLIC WORKS DIRECTOR

DATE 09/01/2021

SCALE:
N.T.S.

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DRAWN _____
CHECKED _____

JA JONES & ASSOCIATES

CONSULTING ENGINEERS

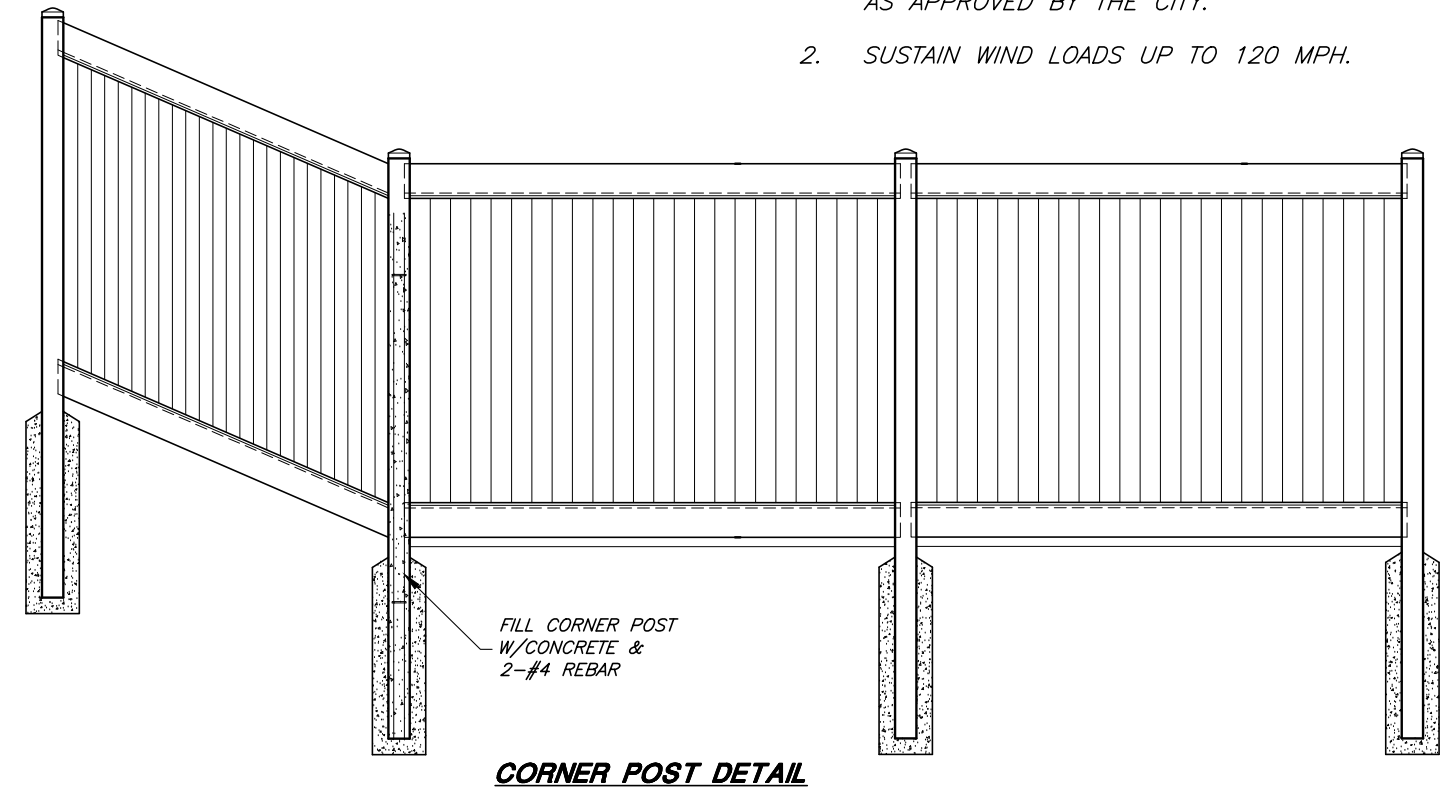
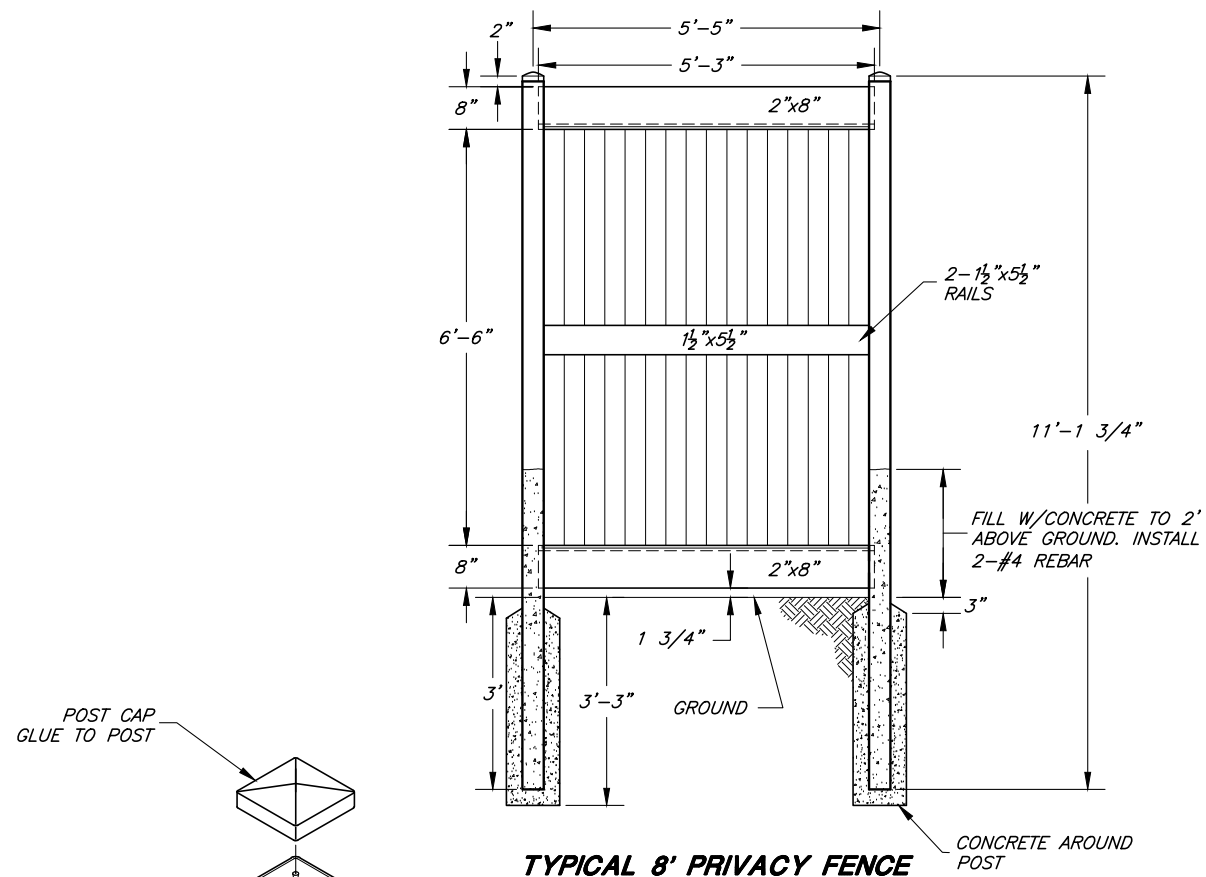
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PUBLIC WORKS STANDARDS

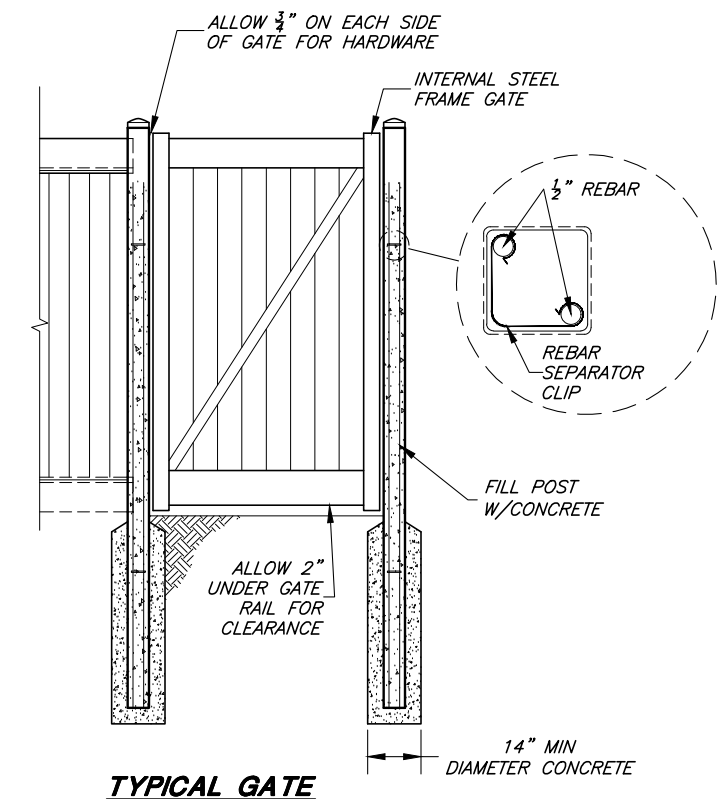
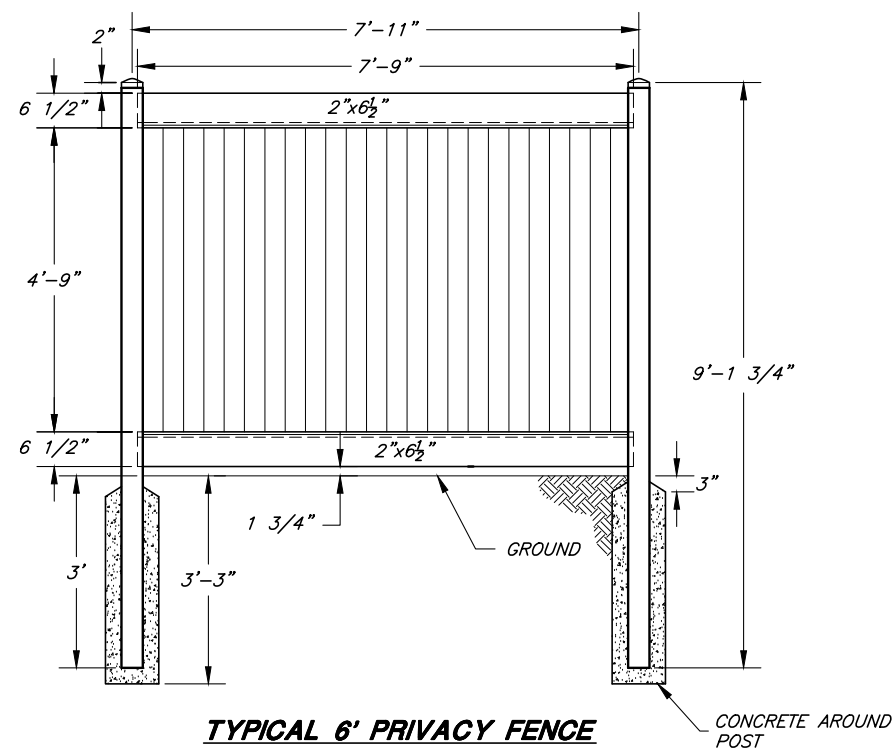
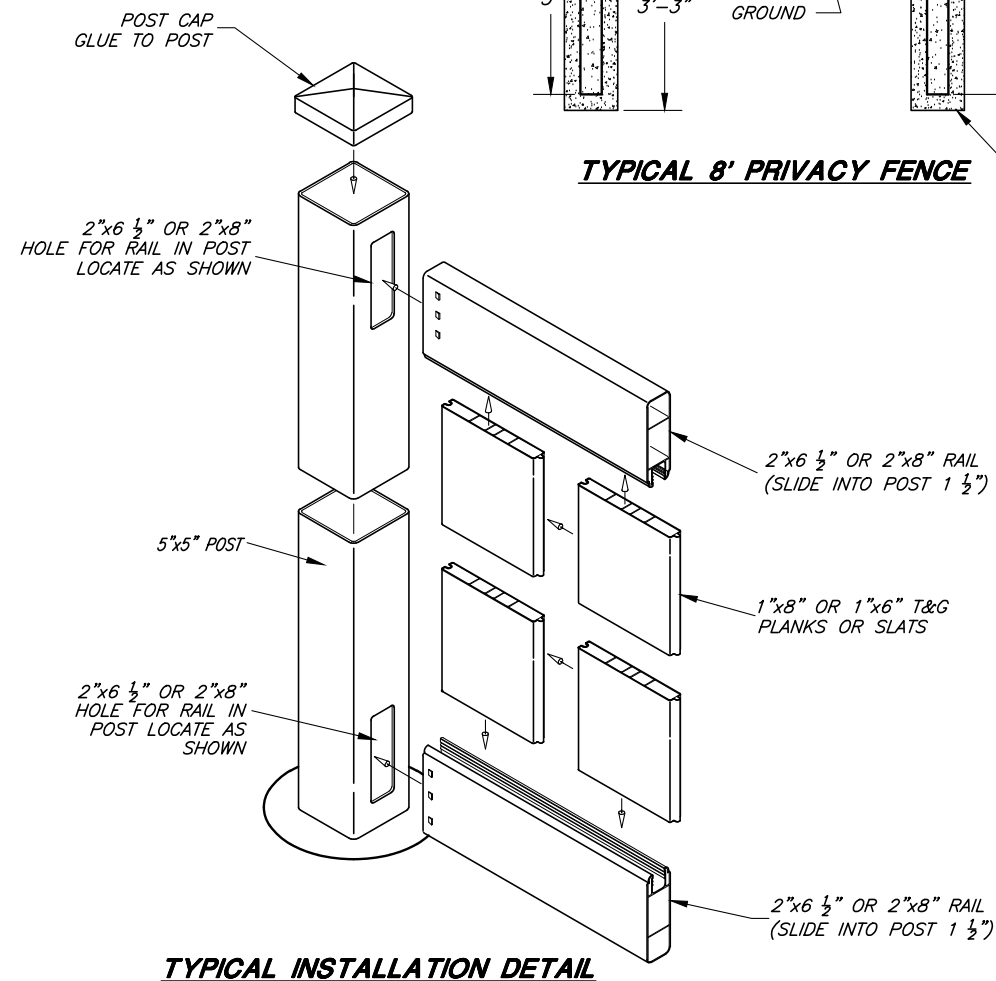
GENERAL - CHAIN LINK FENCE DETAILS

SHEET:
CS-24
OF 1 SHEETS
0



- VINYL FENCE NOTES:

1. OTHER VINYL FENCE STYLES & DIMENSIONS AS APPROVED BY THE CITY.
2. SUSTAIN WIND LOADS UP TO 120 MPH.



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CITY ENGINEER
09/01/2021
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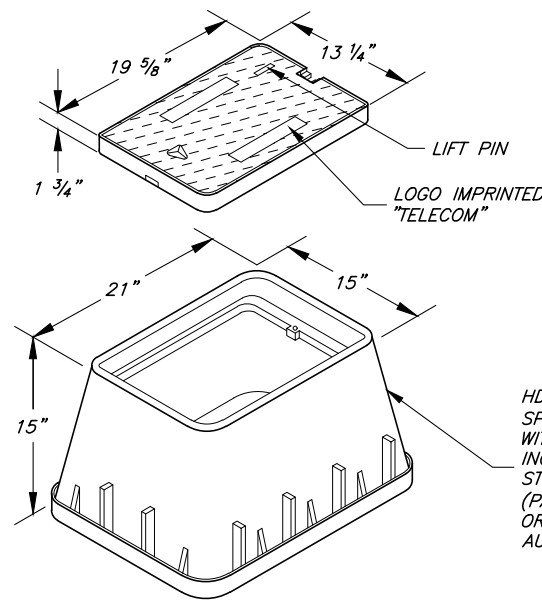
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS

GENERAL - VINYL FENCE DETAILS

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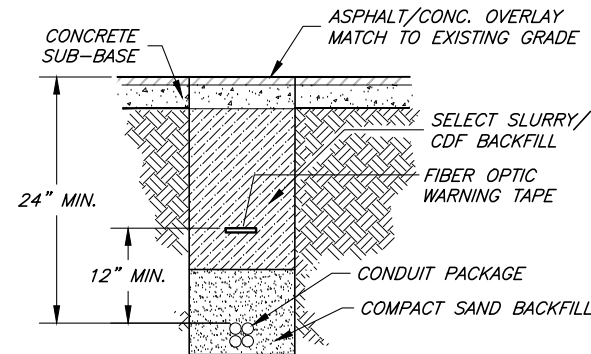
CS-25

OF 1 SHEETS

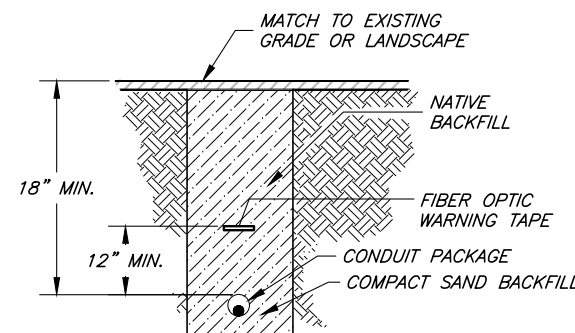


BASE OUTER DIMENSIONS: 20" X 26"
LOAD: STATIC, 2,500 LBS

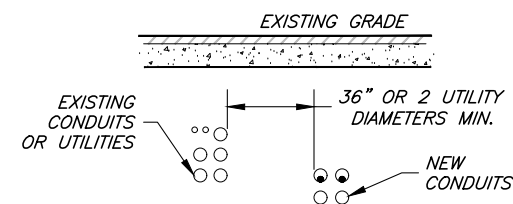
TYPICAL FIBER OPTIC SERVICE BOX



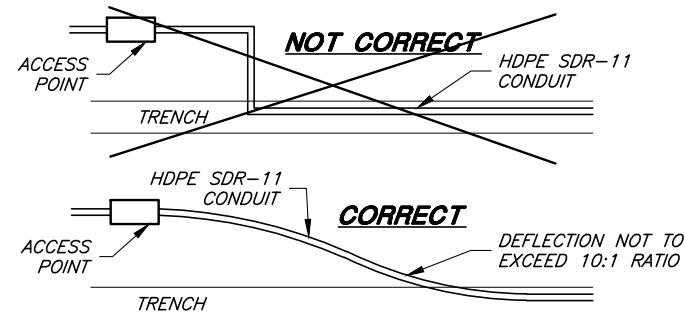
TYPICAL FIBER OPTIC TRENCH



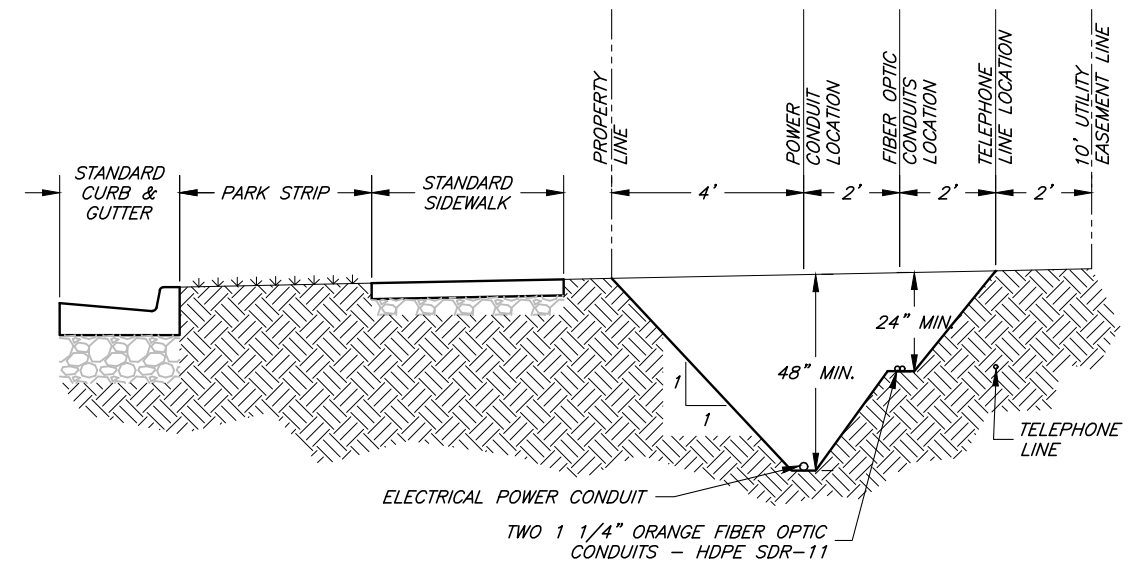
**TYPICAL BUILDING/
SUBSCRIBER LATERAL**



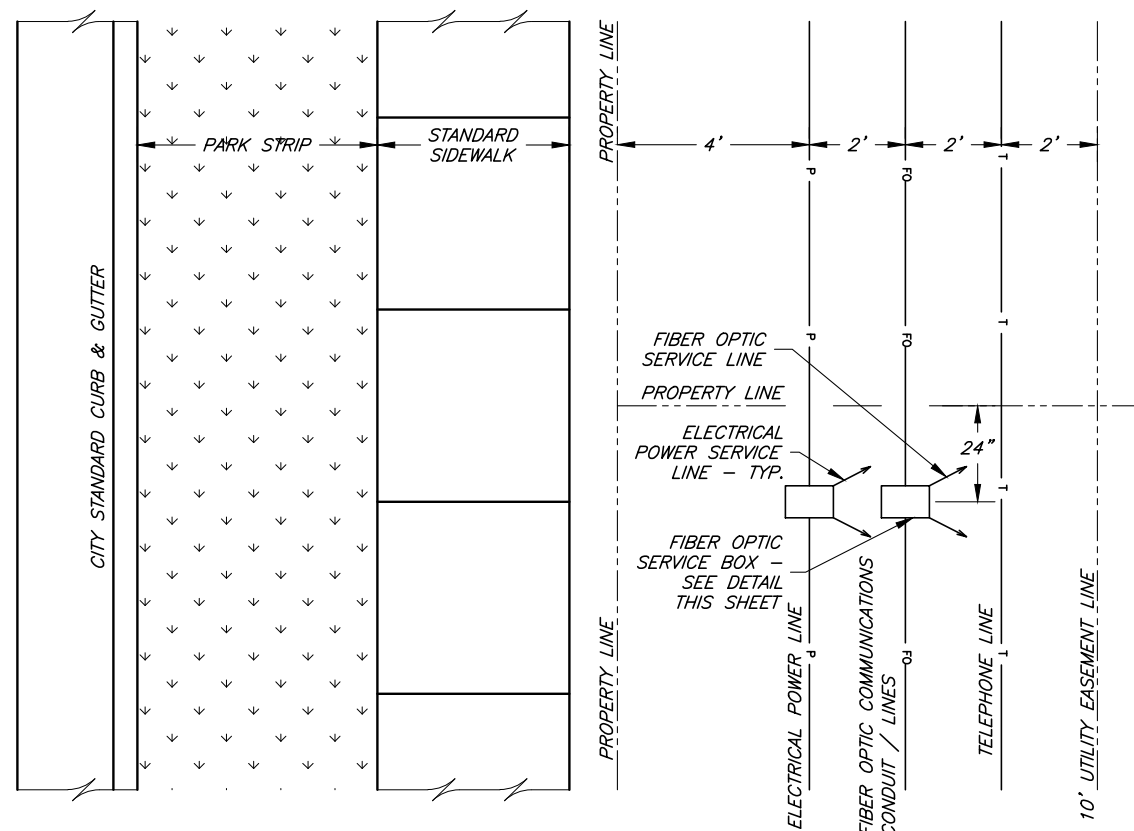
**TYPICAL CONDUIT LOCATION
NEAR EXISTING UTILITIES**



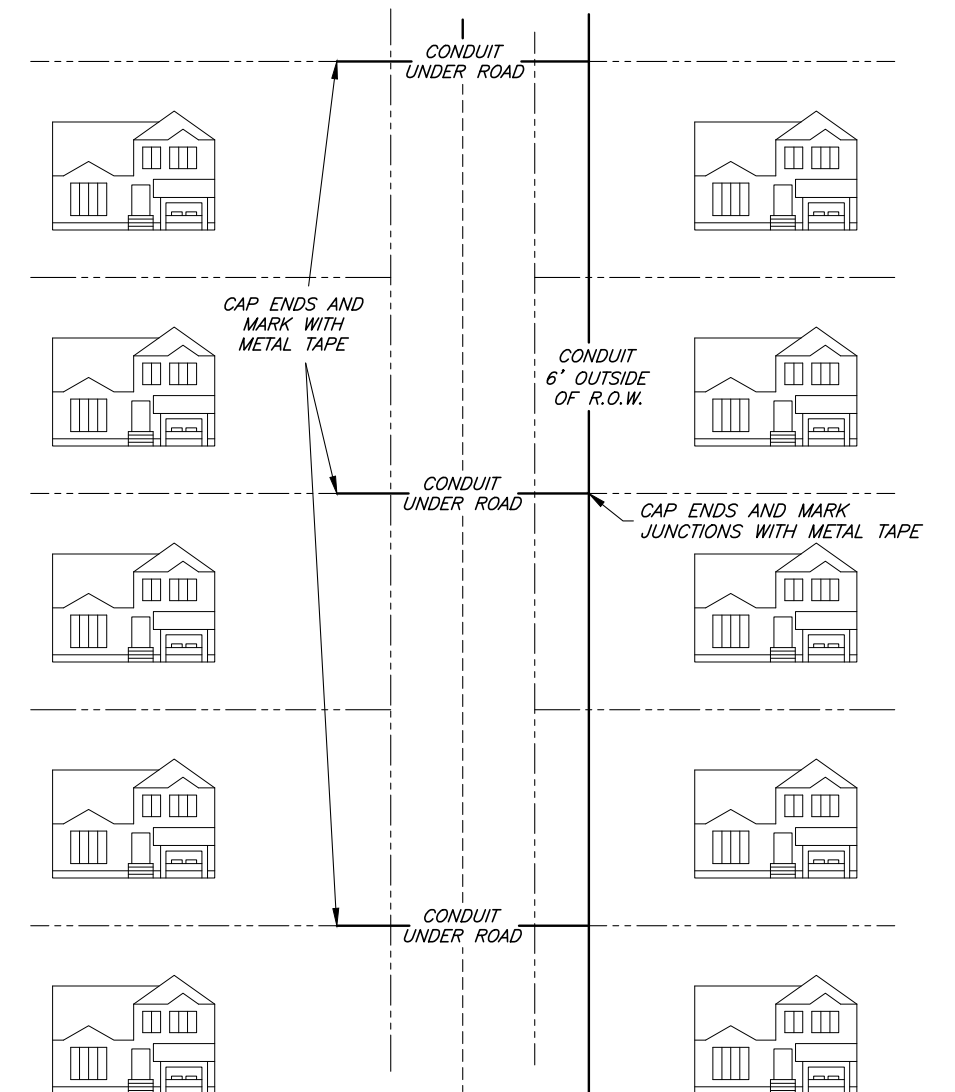
CONDUIT BENDS



TYPICAL NEW UTILITY LOCATION TRENCH SECTION



TYPICAL FIBER OPTIC LINE LOCATION DETAIL



TYPICAL STREET LAYOUT FOR CONDUIT PLACEMENT



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
**GENERAL - STANDARD FIBER OPTIC COMMUNICATION
LINE DETAILS**

SHEET:
CS-26
OF 1 SHEETS
0

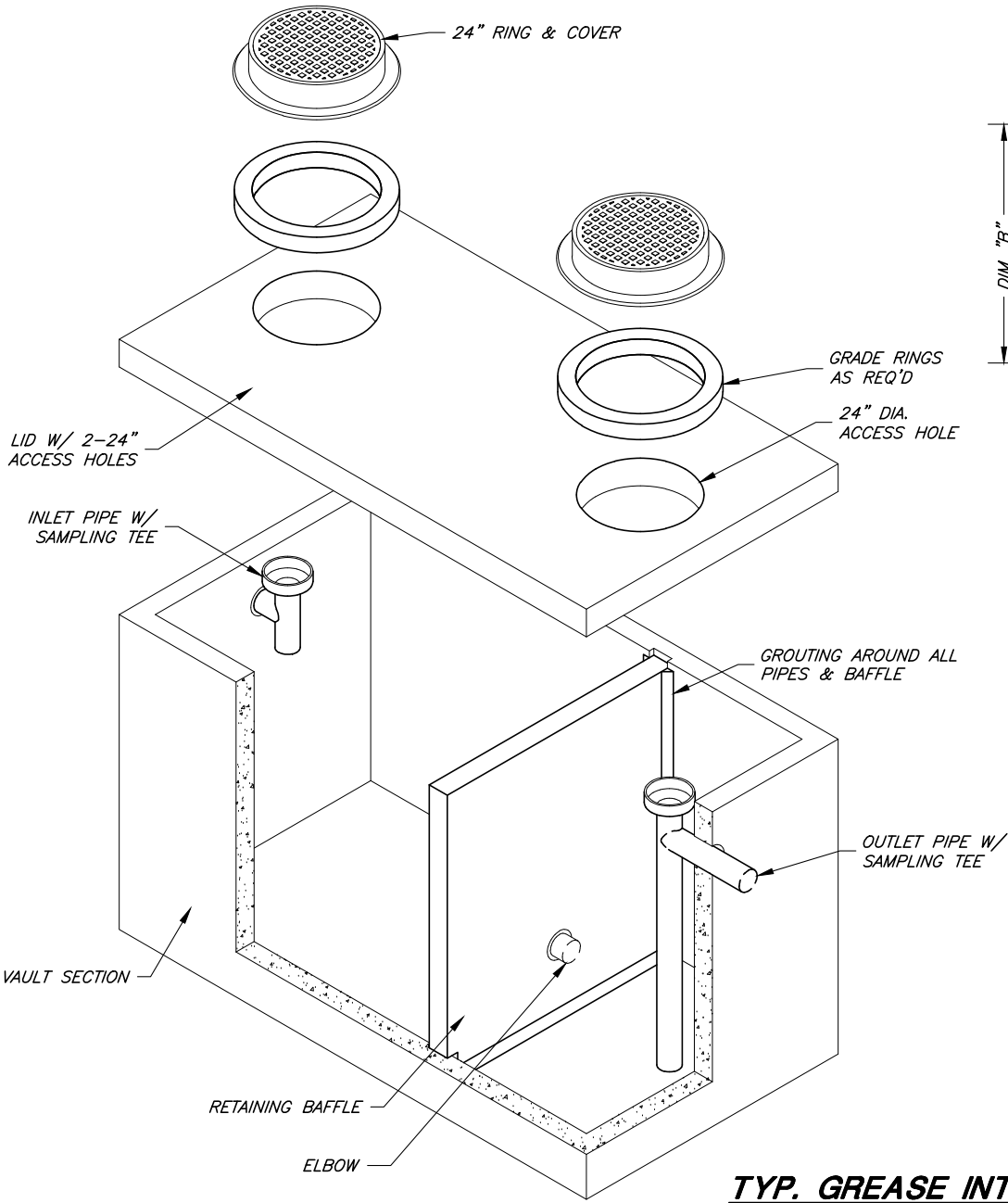
GREASE INTERCEPTOR NOTES:

- 1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH f'_c = 4500 psi
- 2. REBAR: ASTM A-615 GRADE 60
- 3. MESH: ASTM A-185 GRADE 65
- 4. DESIGN: ACI-318-83 BUILDING CODE ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
- 5. LOADS: H-20 TRUCK WHEEL w/ 30% IMPACT PER AASHTO
- 6. FILL w/ CLEAN WATER PRIOR TO START-UP OF SYSTEM
- 7. CONTRACTOR TO SUPPLY & INSTALL ALL PIPING & SAMPLING TEES
- 8. GRAY WATER ONLY, BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER

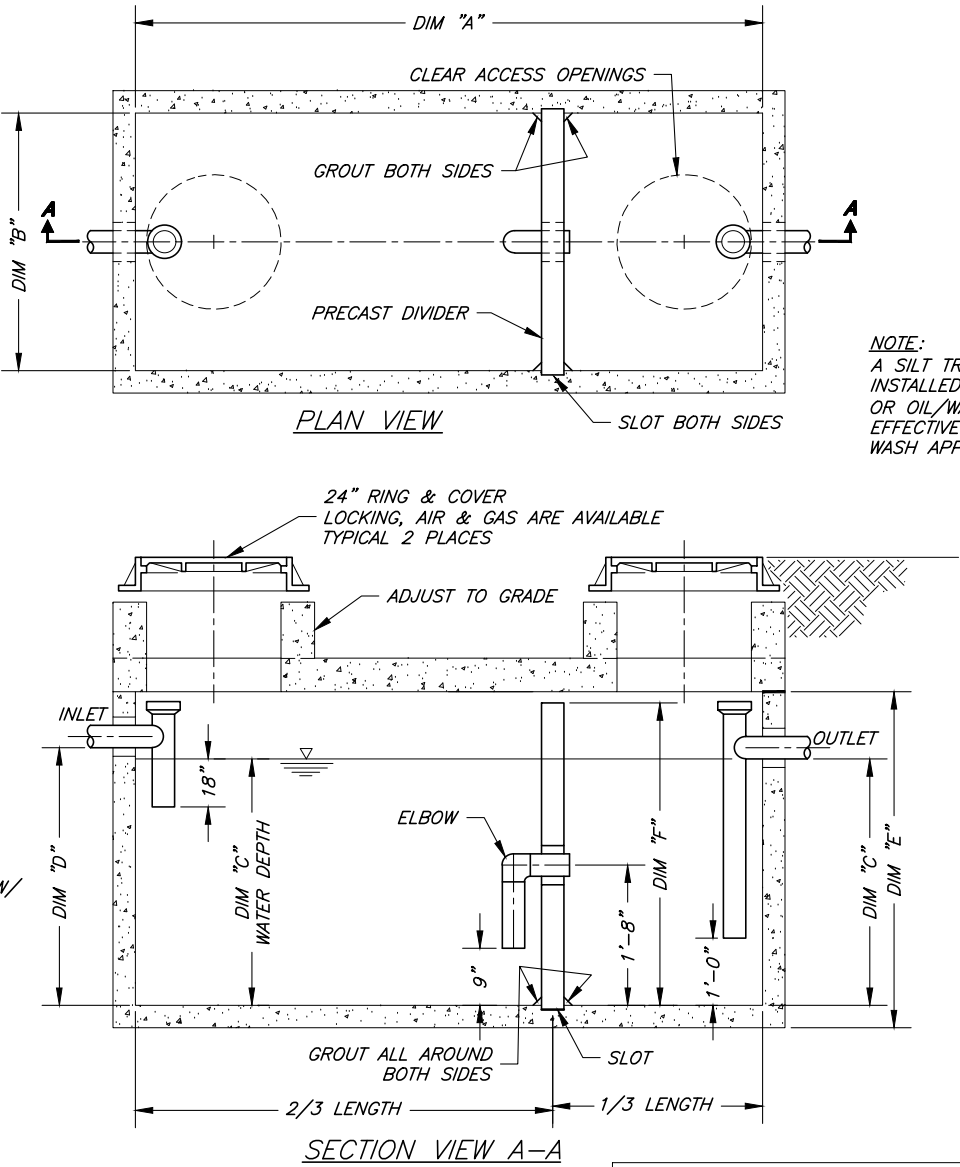
GREASE INTERCEPTOR DIMENSION TABLE								
GALLON CAPACITY	430	890	1375	1800	2175	2550	5000	
DIM "A"	6'-0"	8'-0"	12'-0"	10'-0"	12'-0"	14'-0"	14'-0"	
DIM "B"	4'-0"	6'-0"	6'-0"	8'-0"	8'-0"	8'-0"	8'-0"	
WATER DEPTH DIM "C"	2'-8"	2'-8"	2'-8"	3'-2"	3'-2"	3'-2"	7'-2"	
DIM "D"	2'-10"	2'-10"	2'-10"	3'-4"	3'-4"	3'-4"	7'-4"	
DIM "E"	3'-6"	3'-6"	3'-6"	4'-0"	4'-0"	4'-0"	8'-0"	
DIM "F"	3'-4"	3'-4"	3'-4"	3'-10"	3'-10"	3'-10"	7'-10"	
WEIGHT	12,760	20,510	27,740	31,485	35,980	40,475	43,840	
DESIGN CRITERIA: UNIFORM PLUMBING CODE - APPENDIX H								
NUMBER OF MEALS PER PEAK HOURS x WASTE FLOW RATE x RETENTION TIME x STORAGE CAPACITY IN GALLONS								

OIL/WATER SEPARATOR NOTES:

- 1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH f'_c = 4500 psi
- 2. REBAR: ASTM A-615 GRADE 60
- 3. MESH: ASTM A-185 GRADE 65
- 4. DESIGN: ACI-318-83 BUILDING CODE ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
- 5. LOADS: H-20 TRUCK WHEEL w/ 30% IMPACT PER AASHTO
- 6. FILL w/ CLEAN WATER PRIOR TO START-UP OF SYSTEM
- 7. CONTRACTOR TO SUPPLY & INSTALL ALL PIPING & SAMPLING TEES
- 8. ALL BAFFLES/WEIR PLATES TO BE GALVANIZED STEEL OR CONCRETE.
- 9. WATER DEPTH = 4'-0"
- 10. GROUT AROUND ALL PIPES & BAFFLES

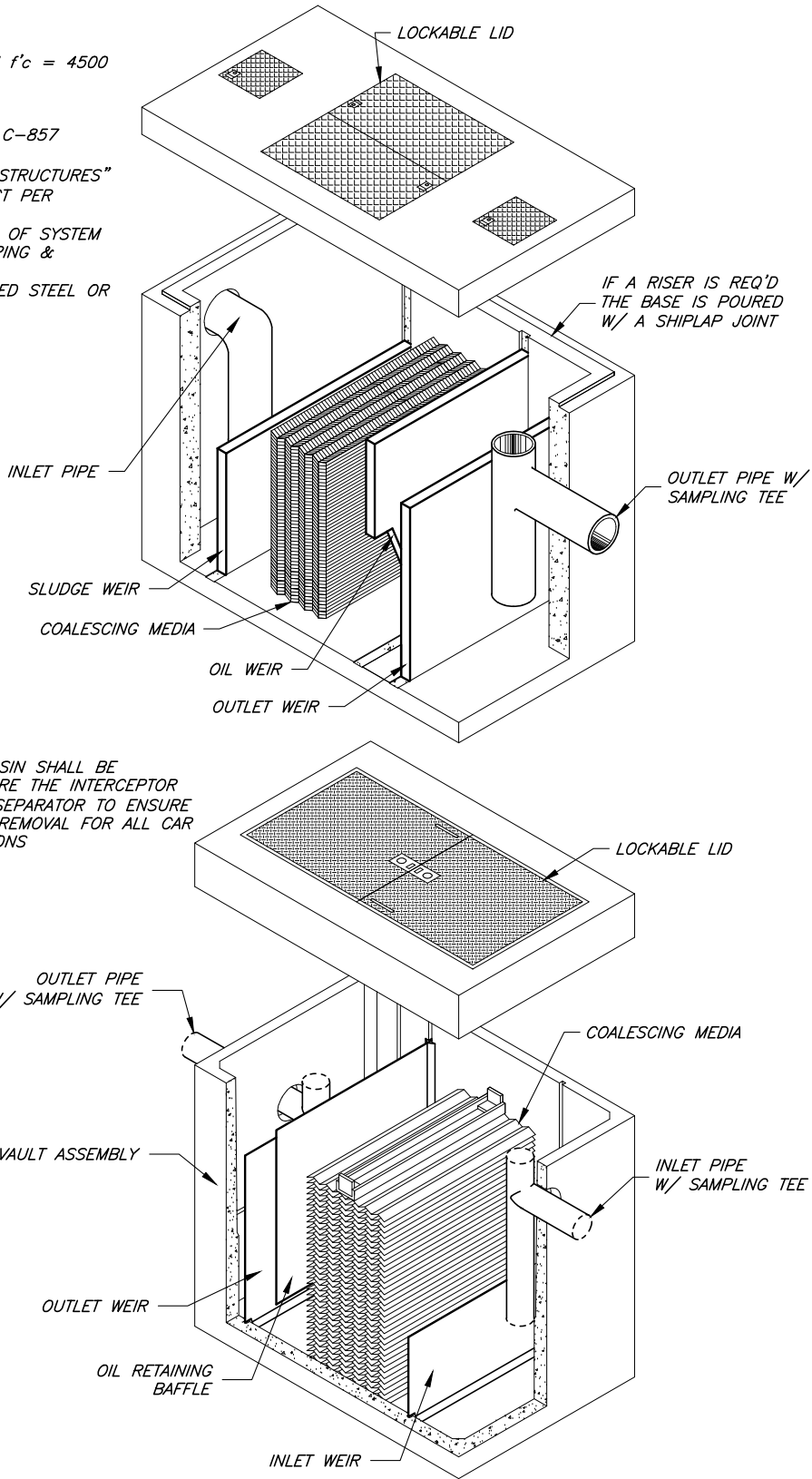


TYP. GREASE INTERCEPTOR
430 - 5,000 GALLON CAPACITIES



SECTION VIEW A-A

GENERAL NOTE: ALL GREASE & OIL/WATER SEPARATORS ARE TO BE SIZED BY THE DEVELOPING ENGINEER AND TO BE REVIEWED AND GIVEN FINAL APPROVAL FROM THE PERRY CITY PUBLIC WORKS DEPARTMENT



TYP. OIL/WATER SEPARATORS



APPROVED
CITY ENGINEER
Brett M. Jones
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
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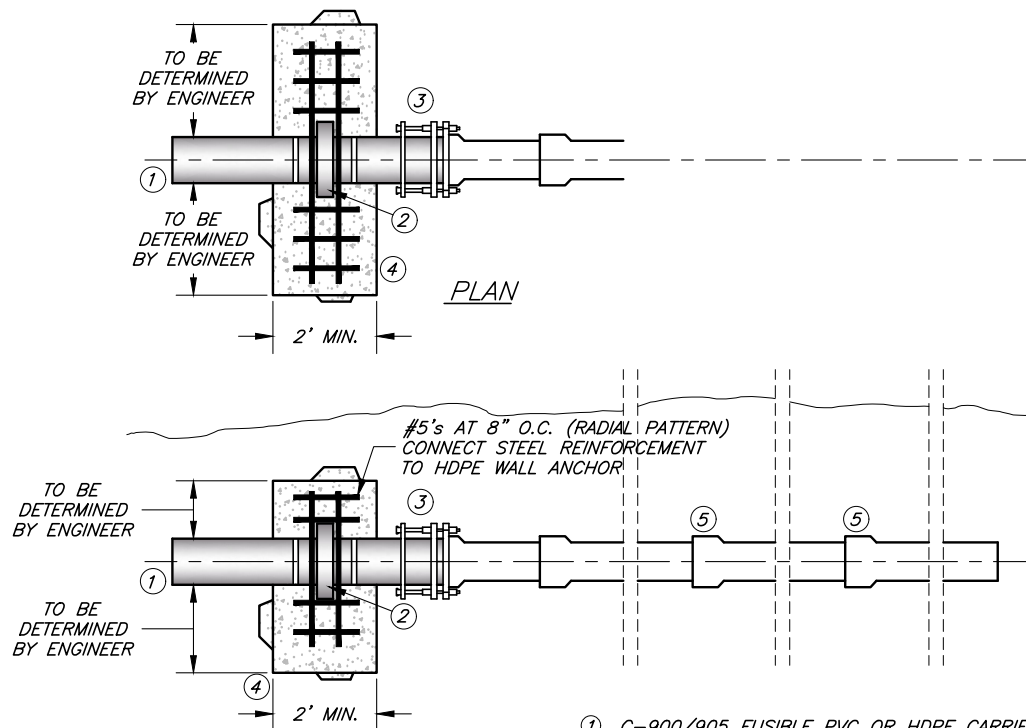


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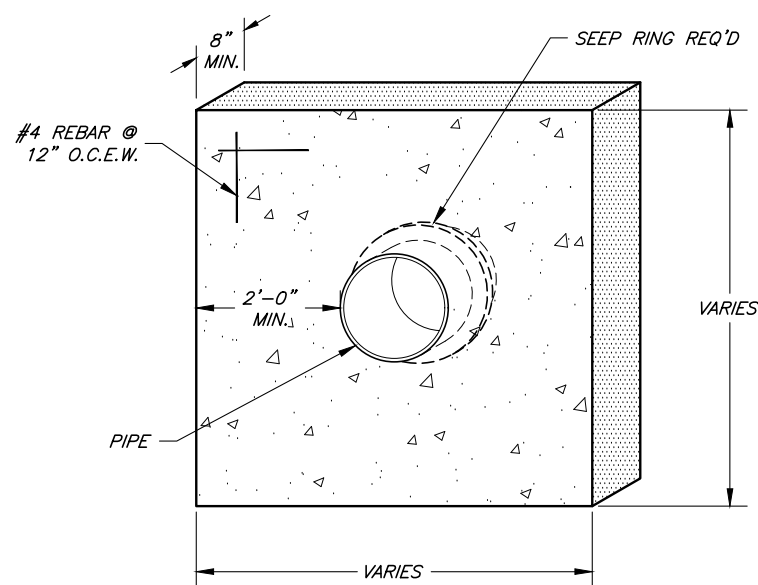
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
GENERAL - TYPICAL GREASE & OIL/WATER SEPARATORS

SHEET:
CS-27
OF 1 SHEETS
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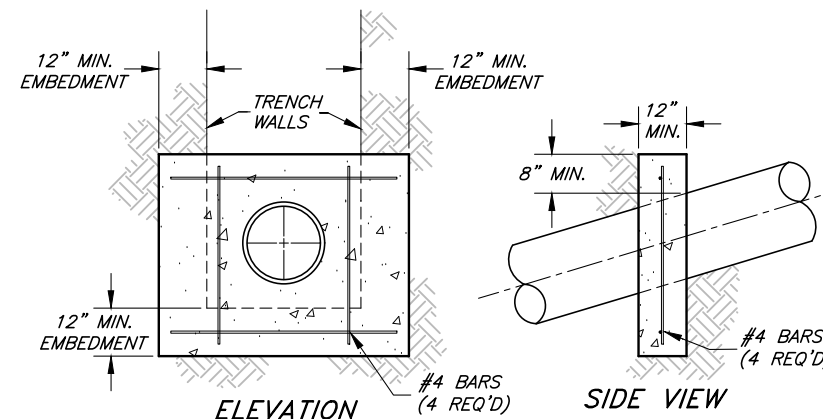
TYPICAL THRUST RESTRAINT FOR DIRECTIONAL DRILLS AND CASING CARRIER PIPE

- ① C-900/905 FUSIBLE PVC OR HDPE CARRIER PIPING
- ② HDPE OR C-900/905 WALL ANCHOR
- ③ RESTRAINED JOINT CONNECTIONS ("MEGALUG" OR APPROVED EQUAL)
- ④ CONCRETE ANCHOR
- ⑤ STANDARD PIPE JOINT (E.G., BELL+SPIGOT CONNECTIONS)



CONCRETE CUTOFF WALL

NOTE: CUTOFF WALLS ARE TO BE INSTALLED CENTERED ON A PIPE JOINT

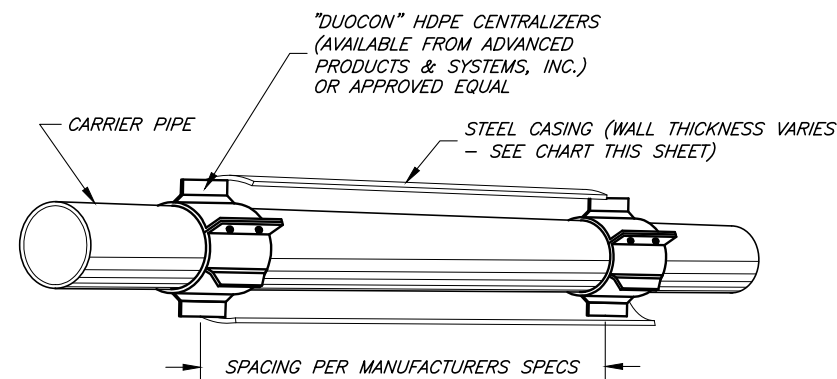


ANCHOR BLOCK

ANCHOR BLOCK NOTES:

- A. PIPE ANCHOR BLOCKS SHALL BE INSTALLED ON ALL CULINARY WATER, STORM DRAIN, SANITARY SEWER, AND IRRIGATION WATER LINES WHERE SLOPE EXCEEDS 20%.
- B. SPACING:

SLOPE	SPACING
20%-35%	36'
35%-50%	24'
50%+	16'

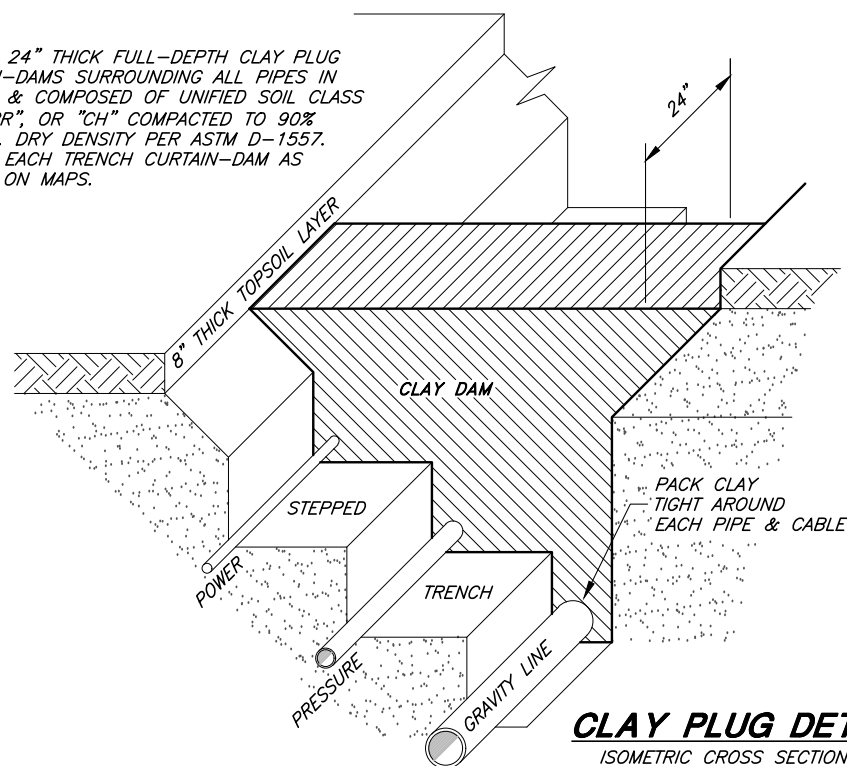


CENTERING GUIDE

WITH CASING CUT AWAY TO SHOW DETAIL (NTS)

STEEL CASING WALL THICKNESS CHART		
MINIMUM THICKNESS		DIAMETER OF CASING PIPE
.2500"	1/4"	12" OR LESS
.3125"	5/16"	OVER 12" - 18"
.3750"	3/8"	OVER 18" - 22"
.4375"	7/16"	OVER 22" - 28"
.5000"	1/2"	OVER 28" - 34"
.5625"	9/16"	OVER 34" - 42"
.6250"	5/8"	OVER 42" - 48"
OVER 48" MUST BE APPROVED BY CITY ENGINEER		

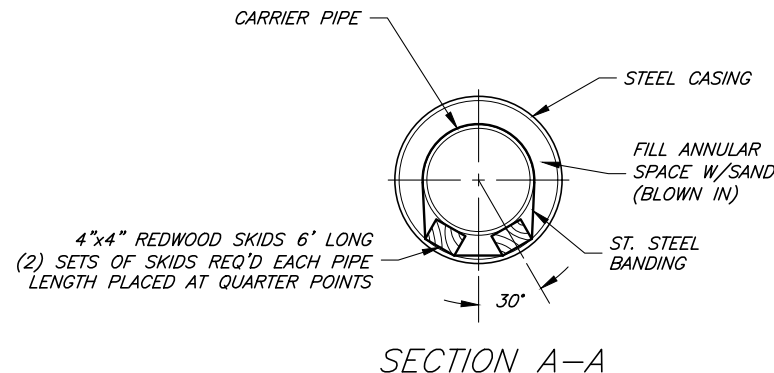
INSTALL 24" THICK FULL-DEPTH CLAY PLUG CURTAIN-DAMS SURROUNDING ALL PIPES IN TRENCH & COMPOSED OF UNIFIED SOIL CLASS "CL", "PR", OR "CH" COMPACTED TO 90% OF MAX. DRY DENSITY PER ASTM D-1557. LOCATE EACH TRENCH CURTAIN-DAM AS SHOWN ON MAPS.



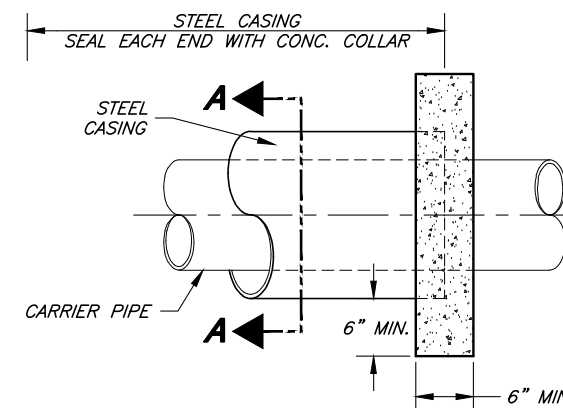
CLAY PLUG DETAIL ISOMETRIC CROSS SECTION

CASEMENT DETAIL NOTES:

1. CARRIER PIPE TO BE SPECIFIED BY CITY ENGINEER.
2. CARRIER PIPE SHALL BE TESTED BEFORE FILLING CASING WITH SAND.
3. SKIDS SHALL BE SECURELY ATTACHED TO CARRIER PIPE WITH ST. STEEL BANDS. MINIMUM OF TWO BANDS PER SKID.
4. SKIDS SHALL BE NOTCHED TO RECEIVE STEEL BANDS.
5. SKIDS SHALL BE GREASED BEFORE CARRIER PIPE INSTALLATION.
6. SKIDS SHALL BE ROUNDED OR BEVELED ON LEADING EDGE.
7. AS AN ALTERNATE TO REDWOOD SKIDS, THE CONTRACTOR MAY USE PREFABRICATED PLASTIC CASING SKIDS ATTACHED AROUND THE CARRIER PIPE. (SEE CENTERING GUIDE DETAIL THIS SHEET)
8. CASING PIPE SHALL BE SMOOTH STEEL WITH MINIMUM YIELD STRENGTH = 35,000 P.S.I.
9. METHOD OF INSTALLATION OF CARRIER PIPE IN CASING SHALL BE AS RECOMMENDED BY CARRIER PIPE MANUFACTURER.



SECTION A-A



CASEMENT DETAIL FOR PIPELINE BORE PROJECTS



Brett M. Jones
CITY ENGINEER
09/01/2021
DATE

APPROVED
PUBLIC WORKS DIRECTOR
09/01/2021
DATE

SCALE:
N.T.S.

DESIGNED _____
DRAWN _____
CHECKED _____



CONSULTING ENGINEERS

6080 Fashion Point Drive
South Ogden, Utah 84403 www.jonescivil.com



PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
GENERAL - TYPICAL CLAY PLUG, ANCHOR BLOCK,
CONCRETE CUTOFF WALL, AND PIPELINE CASING DETAILS

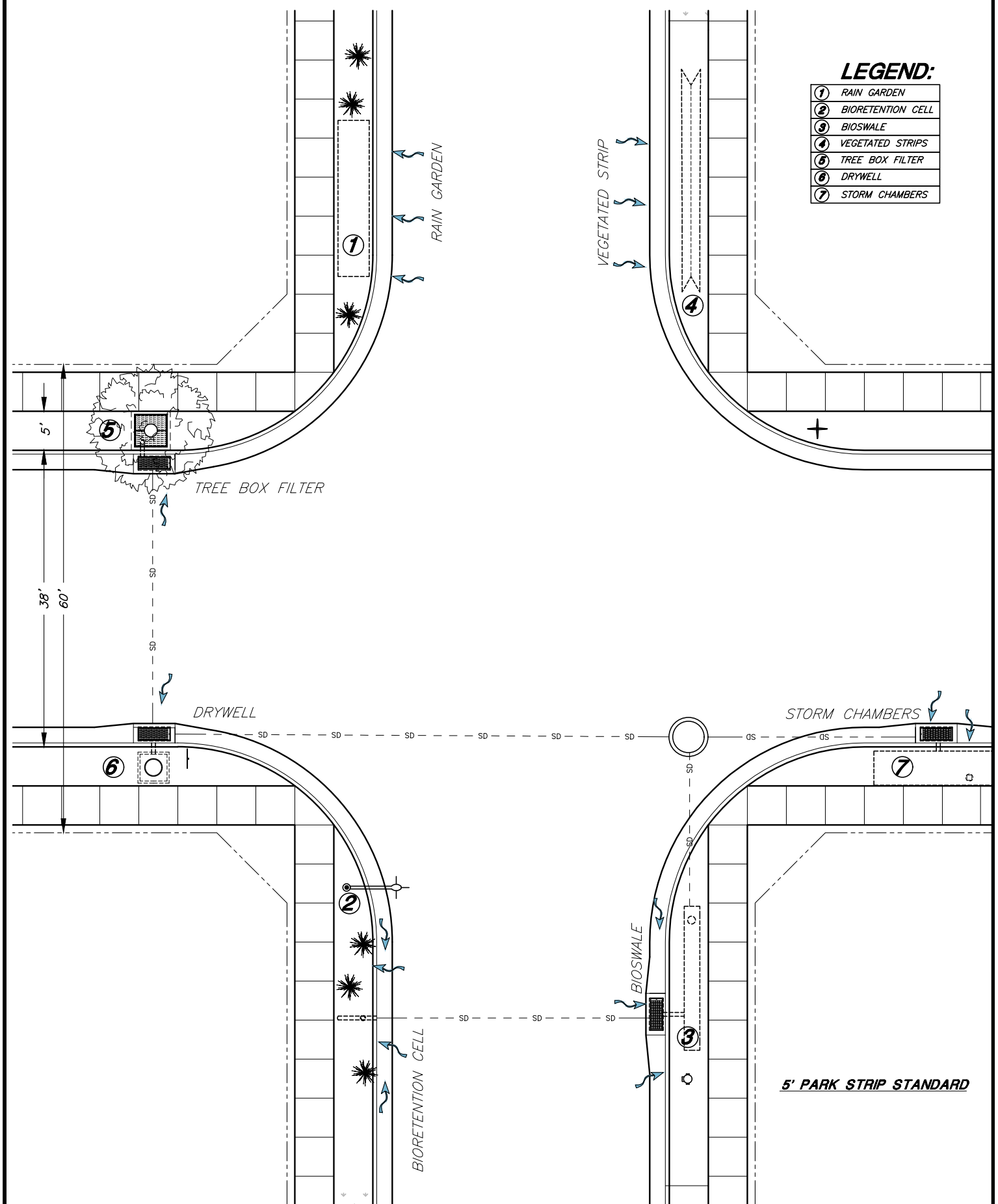
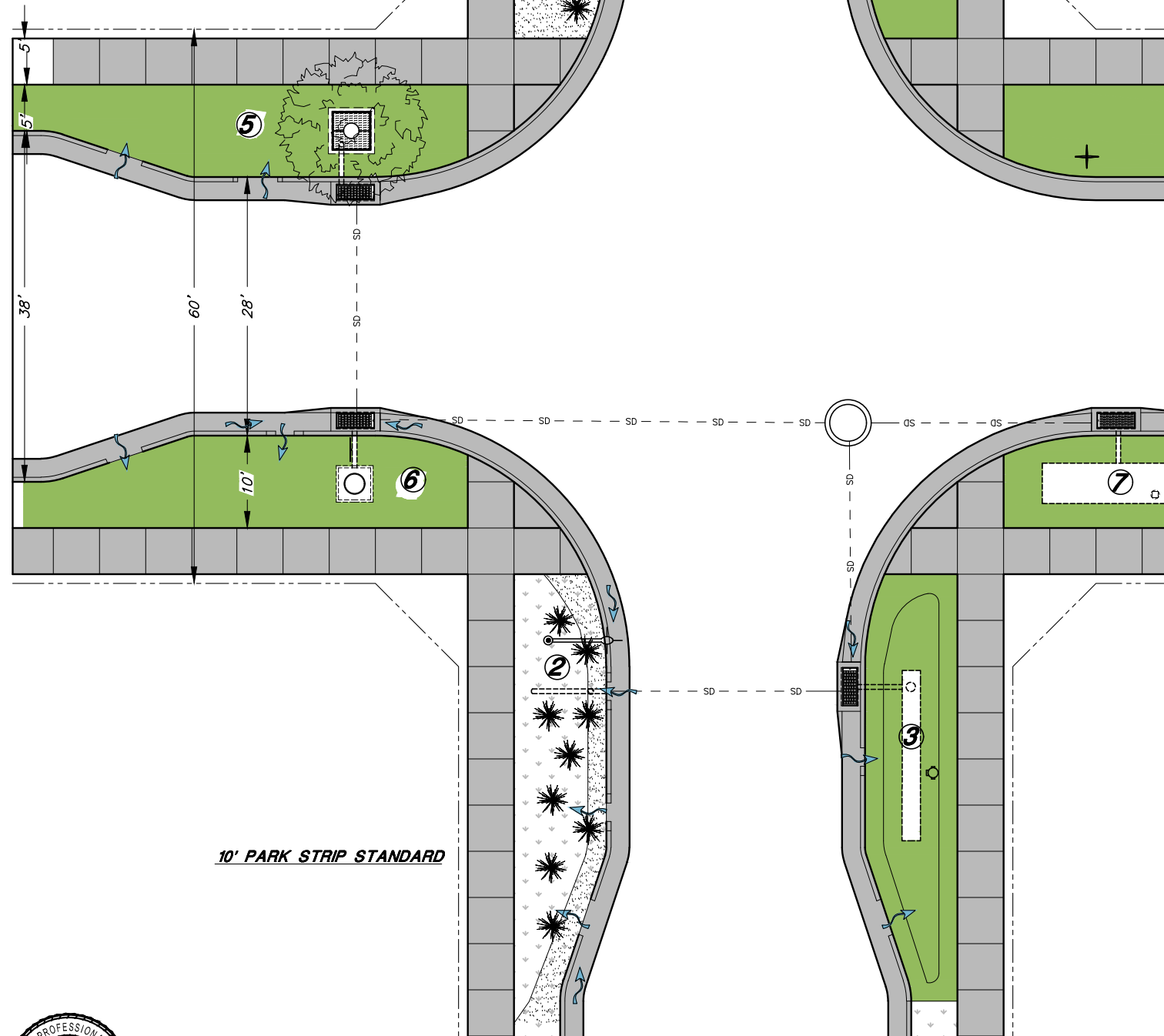
SHEET:
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OF 1 SHEETS
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LEGEND:

- ① RAIN GARDEN
- ② BIOTENTION CELL
- ③ BIOSWALE
- ④ VEGETATED STRIPS
- ⑤ TREE BOX FILTER
- ⑥ DRYWELL
- ⑦ STORM CHAMBERS

LEGEND:

- ① RAIN GARDEN
- ② BIOTENTION CELL
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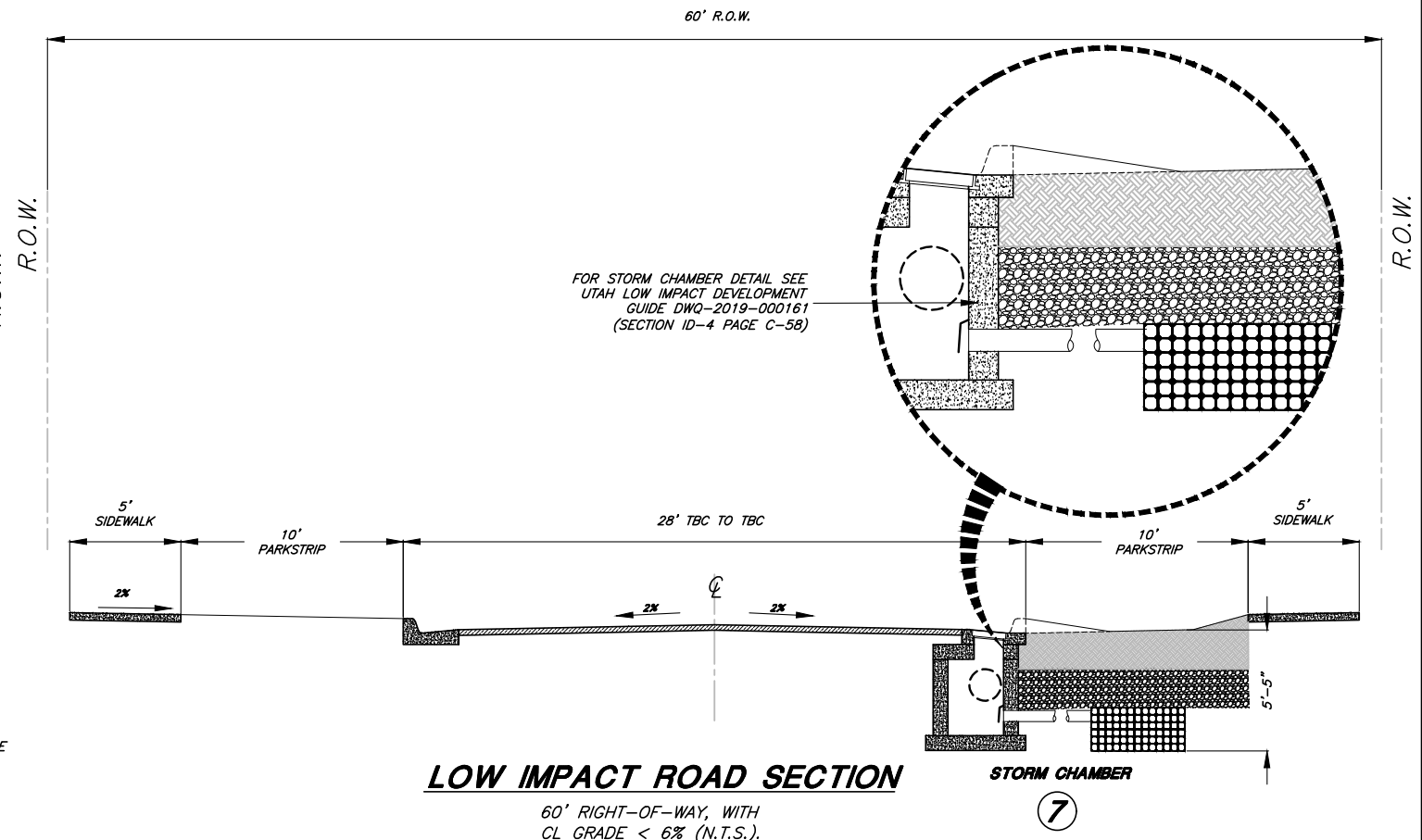
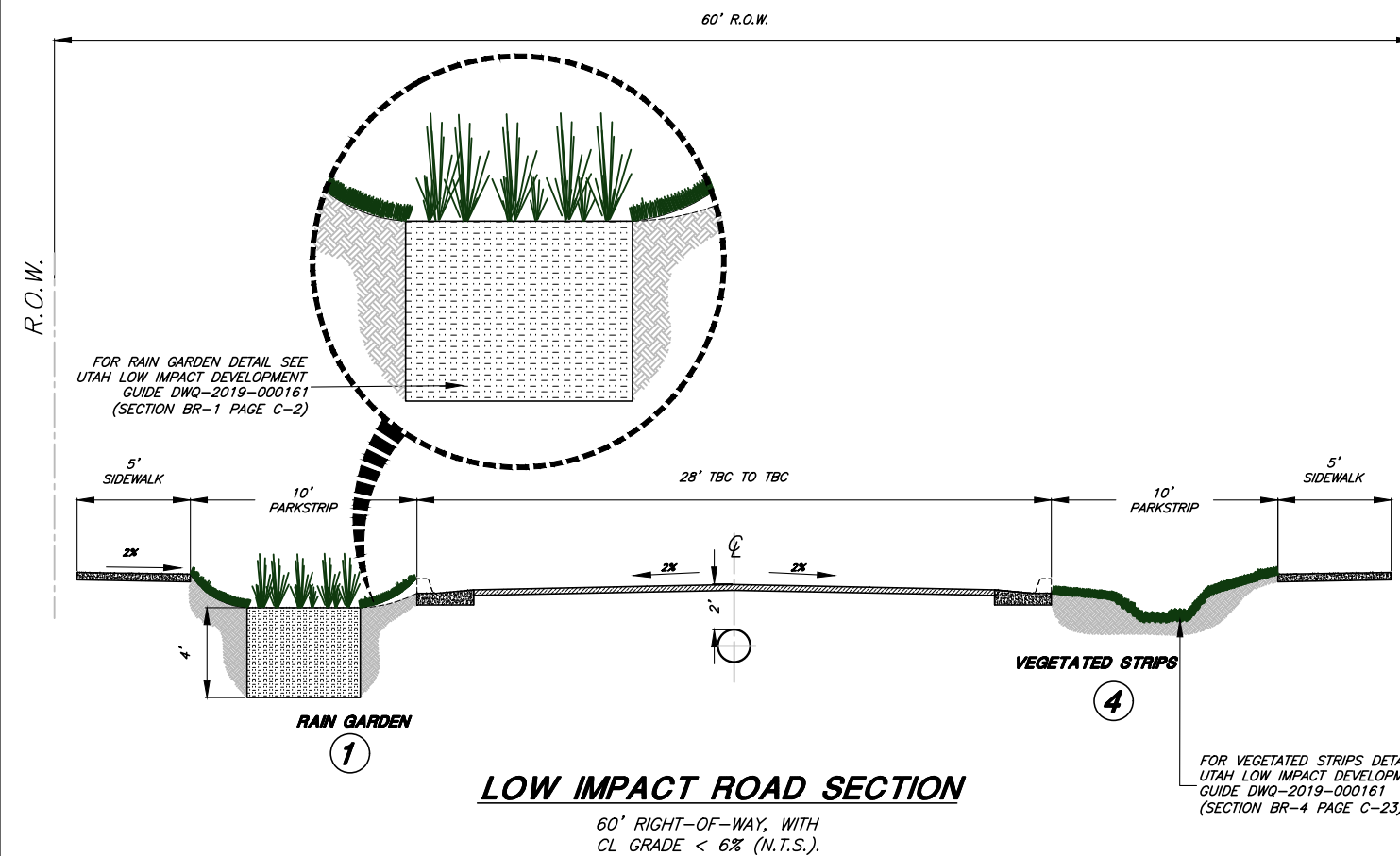
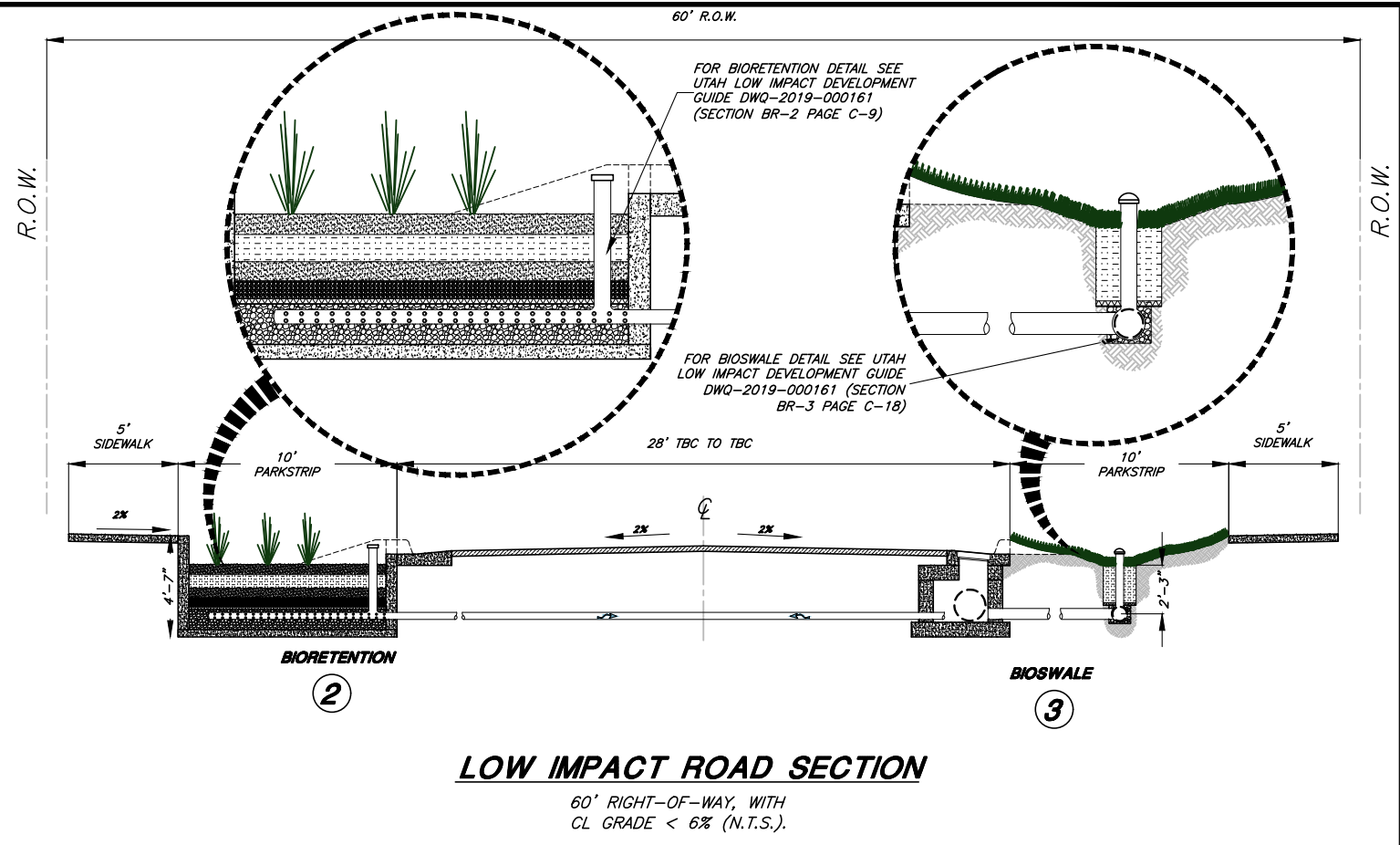
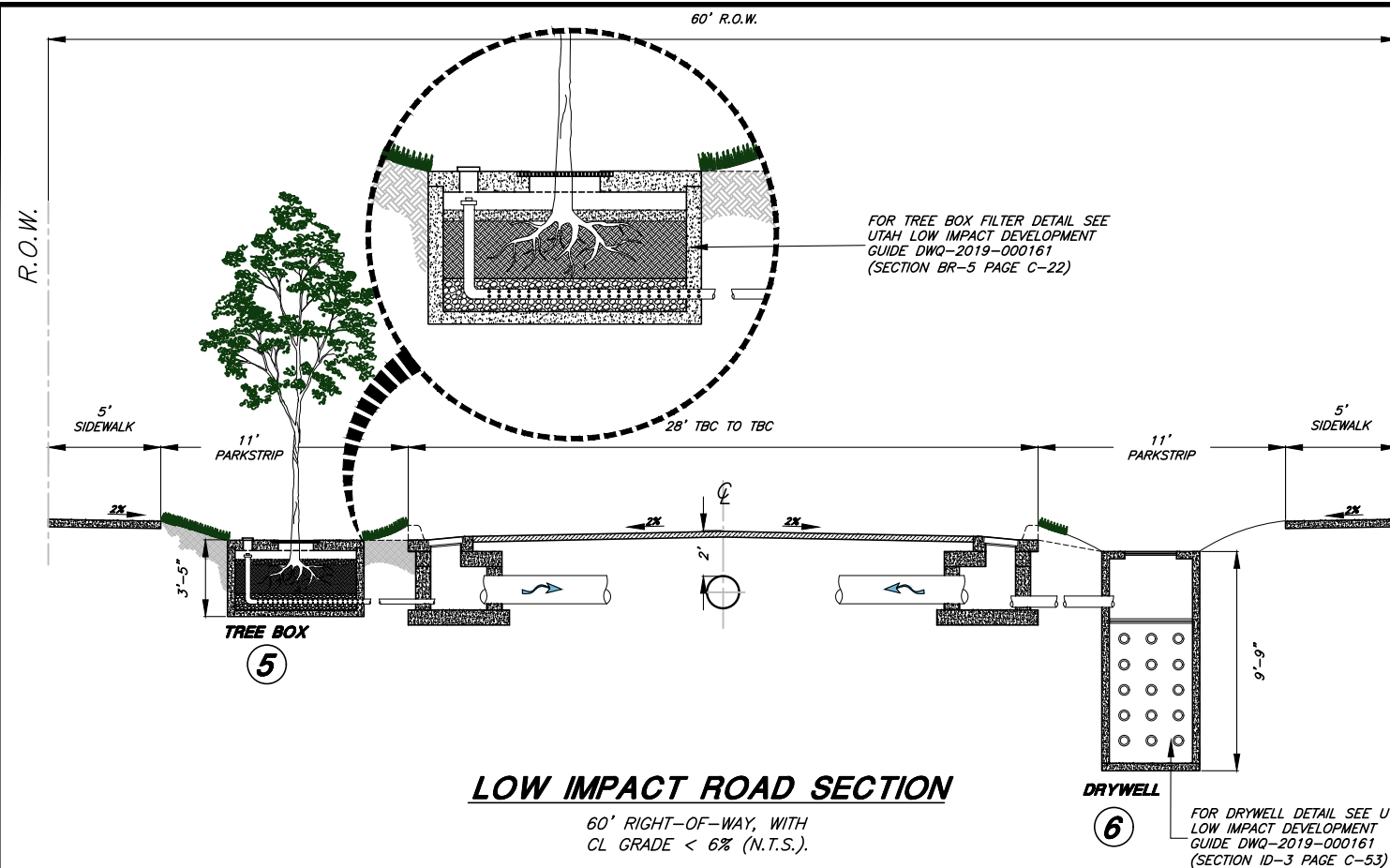
PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS

GENERAL - LID (LOW IMPACT DEVELOPMENT) EXAMPLES

SHEET:

CS-29

OF 1 SHEETS
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Brett M. Jones
CITY ENGINEER
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS
GENERAL - LID (LOW IMPACT DEVELOPMENT) EXAMPLES

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OF 1 SHEETS
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ATTENTION

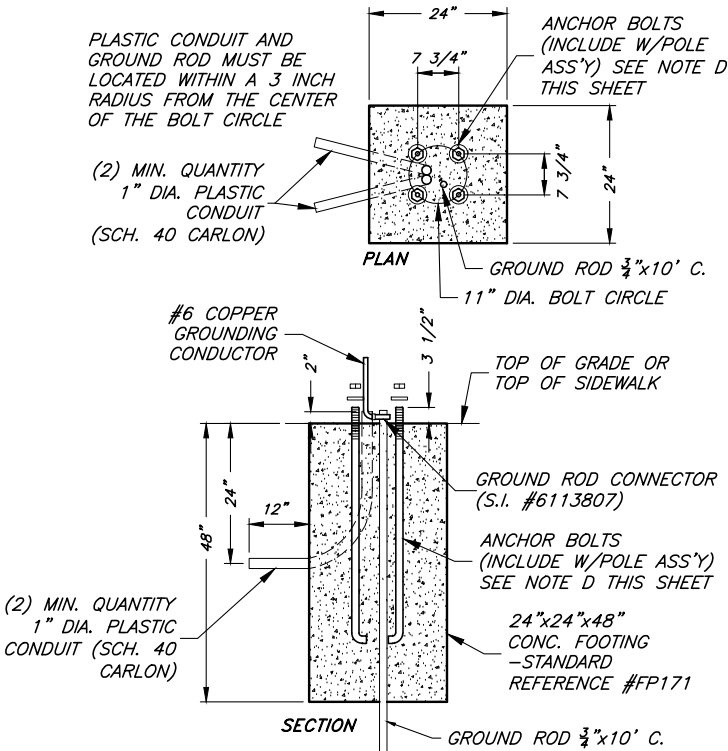
DEVELOPED/CONTRACTOR SHALL NOTIFY ROCKY MOUNTAIN POWER DESIGN OFFICE PRIOR TO LIGHTING INSTALLATION TO ARRANGE FOR POWER TO BE PROVIDED ON SITE, AS WELL AS APPROVAL OF LIGHTING UNIT LOCATIONS AND APPROVAL OF ACTUAL COMPONENT SELECTION.

ROCKY MOUNTAIN POWER
1-888-221-7070

ALL FINAL WORK AND MATERIALS TO BE APPROVED BY THE CITY AND THE CITY ENGINEER.

GENERAL NOTES:

1. THE DEVELOPER/CONTRACTOR MUST SUBMIT A WRITTEN REQUEST INCLUDING A MAP SHOWING THE LOCATION OF ALL STREET LIGHTS TO THE CITY. THE CITY WILL THEN SUBMIT A STREET LIGHT WORK ORDER TO ROCKY MOUNTAIN POWER.



TYPICAL CONCRETE FOOTING
STANDARD REFERENCE #FP171

THE FOOTING AS SPECIFIED ON THIS STANDARD IS DESIGNED FOR USE WITH THE STD. 11 GA. (OR 10 GA.) METAL STREET LIGHT POLES FOR MOUNTING HEIGHTS UP TO 32 FEET. IT SHOULD NOT BE APPLIED IN LOCATIONS WHICH REQUIRE A POLE OF HIGHER STRENGTH (SUCH AS A DEAD-END POLE, COMBINATION STREET LIGHT/TRAFFIC SIGNAL POLE, OR ETC.)

FOOTING NOTES:

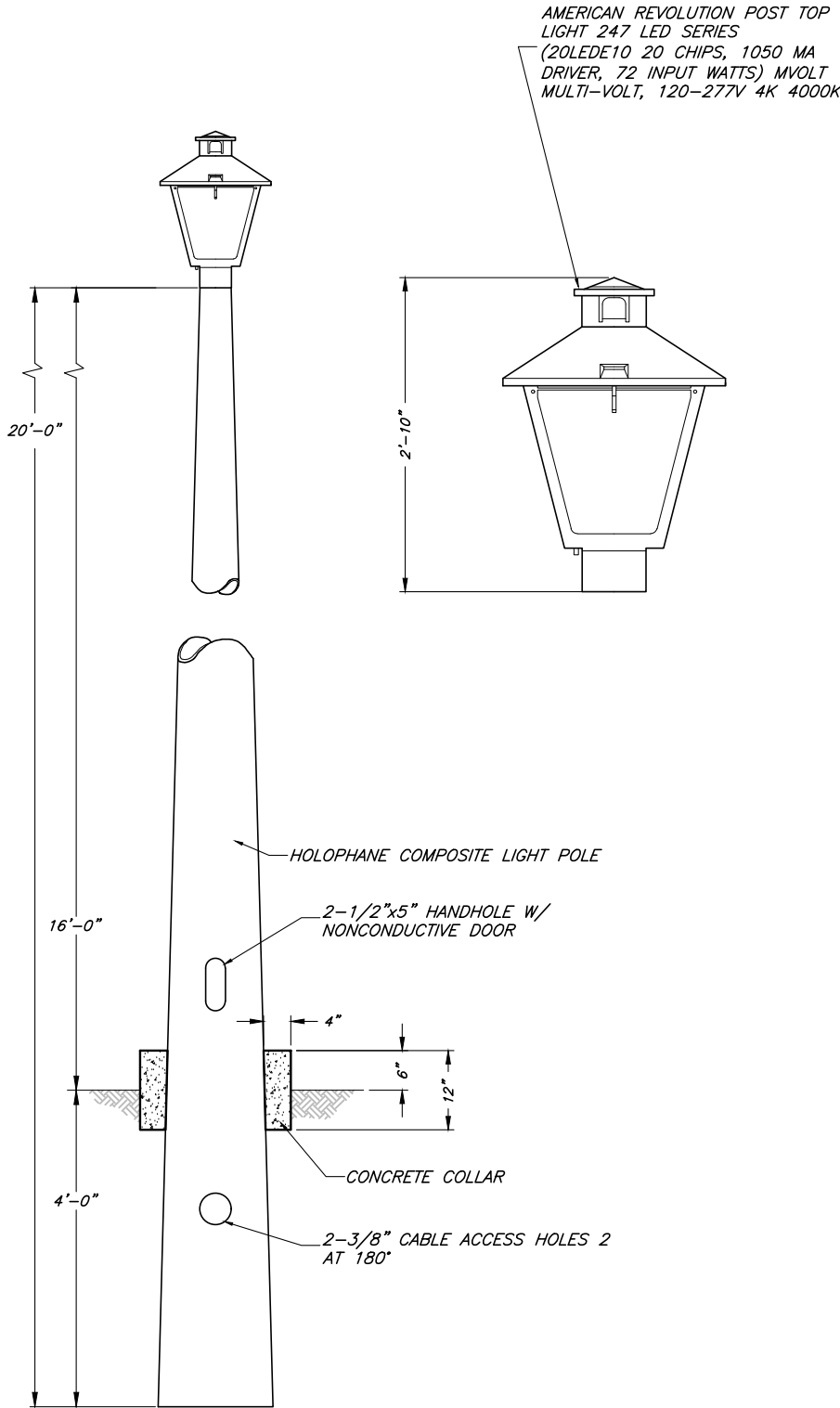
- (A) FOOTINGS WILL GENERALLY BE INSTALLED BY A CONTRACTOR. FOOTINGS SHOULD BE LOCATED WITH THE VERTICAL ϕ 24" + BACK FROM THE EDGE OF CURB.
- (B) THE MANUFACTURER SHALL FURNISH (4) ANCHOR BOLTS, (1) GROUND ROD & PLASTIC CONDUITS FOR EACH FOOTING AS REQ'D.
- (C) NUMBER AND ORIENTATION OF THE PLASTIC CONDUITS ARE INFLUENCED BY THE UNDERGROUND CIRCUIT ROUTE AND SHOULD BE DETERMINED IN EACH LOCATION FOR THE MOST PRACTICAL SOLUTION.
- (D) ANCHOR BOLTS SHALL BE FURNISHED WITH 6" MIN. THREAD LENGTH AND SHALL BE HOT DIP GALV.

OR EQUAL PRODUCTS

OTHER LIGHT POLES AND LUMINAIRES CAN BE USED UPON APPROVAL OF THE PUBLIC WORKS DIRECTOR. OR EQUAL PRODUCTS SHOULD BE OF SIMILAR QUALITY AND DURABILITY. DIRECT BURY COMPOSITE LIGHT POLES HAVE NOT BEEN AS DURABLE AND THEREFORE ARE NOT EXPECTED TO BE USED.

SPACING AND LOCATION REQUIREMENTS

- A. STREET LIGHTS MUST BE LOCATED AT ALL INTERSECTIONS, CORNERS, AND CUL-DE-SACS FOR ALL STREET TYPES AT LOCATIONS SHOWN ON APPROVED CONSTRUCTION PLANS.
- B. STREET LIGHTS MUST BE SPACED AT A MAXIMUM 400 FOOT SPACING AND SHOULD ALTERNATE EACH SIDE OF THE STREET ON THE PROPERTY LINE AT LOCATIONS SHOWN ON APPROVED CONSTRUCTION PLANS.



CITY STANDARD RESIDENTIAL STREET LIGHT



Brett M. Jones
CITY ENGINEER
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PERRY CITY CORPORATION
PUBLIC WORKS STANDARDS

DECORATIVE LIGHT EXAMPLES

SHEET:

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