

# PLEASANT VIEW CITY CORPORATION

## PUBLIC WORKS STANDARD DRAWINGS

**SUBMITTED & RECOMMENDED**

\_\_\_\_\_  
 DANA Q. SHULER, P.E.  
 CITY ENGINEER

**APPROVAL**

\_\_\_\_\_  
 STEVE GIBSON  
 MAYOR DATE

\_\_\_\_\_  
 ANDREA STEINIGER  
 CITY ADMINISTRATOR DATE

\_\_\_\_\_  
 TYSON JACKSON  
 PUBLIC WORKS DIRECTOR DATE

\_\_\_\_\_  
 MIKE LITTLEFIELD  
 UTILITIES SUPERINTENDENT DATE

\_\_\_\_\_  
 ATTEST, CITY RECORDER DATE



**SPECIAL STANDARD NOTES:**

**A. THE CITY ADOPTS THE FOLLOWING AS STANDARDS FOR ALL ISSUES RELATED TO THE DESIGN, CONSTRUCTION, AND MAINTENANCE OF IMPROVEMENTS NOT SPECIFICALLY COVERED BY THIS MANUAL:**

- A1. APWA: MANUAL OF STANDARD SPECIFICATIONS (CURRENT EDITION) AND ALL ADOPTED AMENDMENTS**
- A2. APWA: MANUAL OF STANDARD PLANS (CURRENT EDITION)**

**B. AS TO ANY PARTICULAR ISSUE, IF A CONFLICT EXISTS BETWEEN ANY OF THE FOREGOING STANDARDS, THE CITY STANDARDS TAKE PRECEDENCE.**

**MAY 2026**

**ROAD IMPROVEMENT STANDARDS**

- R1.....TYPICAL STREET SECTION DETAILS
- R2.....LOW IMPACT RESIDENTIAL ROAD SECTION
- R3.....TYPICAL STREET INTERSECTION AND GENERAL LOT UTILITY LATERAL CONFIGURATION DETAILS
- R4.....NARROW APPROACH INTERSECTION & TEMPORARY TURNAROUND DETAILS
- R5.....CUL-DE-SAC DETAILS
- R6.....TYPICAL DRIVE APPROACH DETAILS
- R7.....DRIVE APPROACH ACCESS DISTANCE & INTERSECTION SIGHT TRIANGLE DETAILS
- R8.....DIRECTIONAL ADA RAMP DETAILS – PRIMARY
- R9.....OTHER ADA RAMP DETAILS
- R10....STREET SIGN DETAILS
- R11....TYPICAL SIDEWALK, CURB & GUTTER, AND CROSS DRAIN DETAILS
- R12....TYPICAL CONCRETE COLLAR, SURVEY MONUMENT, AND DEFECTIVE CONC. REPLACEMENT DETAILS
- R13....UTILITY TRENCH, UTILITY POTHOLING, AND STRUCTURE TO ASPHALT CLEARANCE DETAILS
- R14....ASPHALT PATCH PLAN DETAILS

**CULINARY WATER SYSTEM STANDARDS**

- CW1.....RESIDENTIAL WATER SERVICE CONNECTION DETAILS
- CW2.....STANDARD WATER METER LOCATION DETAILS
- CW3.....FIRE HYDRANT AND GATE VALVE DETAILS
- CW4.....TRACER WIRE INSTALLATION DETAILS
- CW5.....AIR/VACUUM RELIEF STATION DETAILS
- CW6.....HIGH TRAFFIC METER PIT AND CULINARY WATER SAMPLING STATION DETAILS
- CW7.....WATER METER MANIFOLD AND 1 1/2" & 2" METER STATION DETAILS
- CW8.... 3" & 4" METER STATION DETAILS
- CW9.....PRESSURE REDUCTION STATION (PRV)
- CW10...TAPPING SLEEVE AND MISCELLANEOUS VAULT DETAILS
- CW11...THRUST BLOCK AND WATERLINE LOOP DETAILS

**SANITARY SEWER SYSTEM STANDARDS**

- SS1.....SEWER / LAND DRAIN LATERAL & MAIN LINE CONNECTION DETAILS
- SS2.....SANITARY SEWER MANHOLE DETAILS
- SS3.....GREASE INTERCEPTOR EXAMPLE DETAIL
- SS4.....CAST-IN-PLACE MANHOLE DETAIL

**STORM DRAIN SYSTEM STANDARDS**

- SD1.....SINGLE CATCH BASIN DETAILS
- SD2....DOUBLE CATCH BASIN DETAILS
- SD3....AREA INLET BOX AND GENERAL GRATE & FRAME DETAILS
- SD4....STORM DRAIN MANHOLE & CLEANOUT DETAILS
- SD5....LARGE DETENTION BASIN DETAILS (> 1 ACRE FT)
- SD6....SMALL DETENTION BASIN DETAILS (≤1 ACRE FT)
- SD7....DETENTION BASIN ROCKSCAPE DETAILS
- SD8....HDS (HYDRODYNAMIC SEPARATOR) AND OIL/WATER SEPARATOR EXAMPLE DETAILS

**LID (LOW IMPACT DEVELOPMENT)**

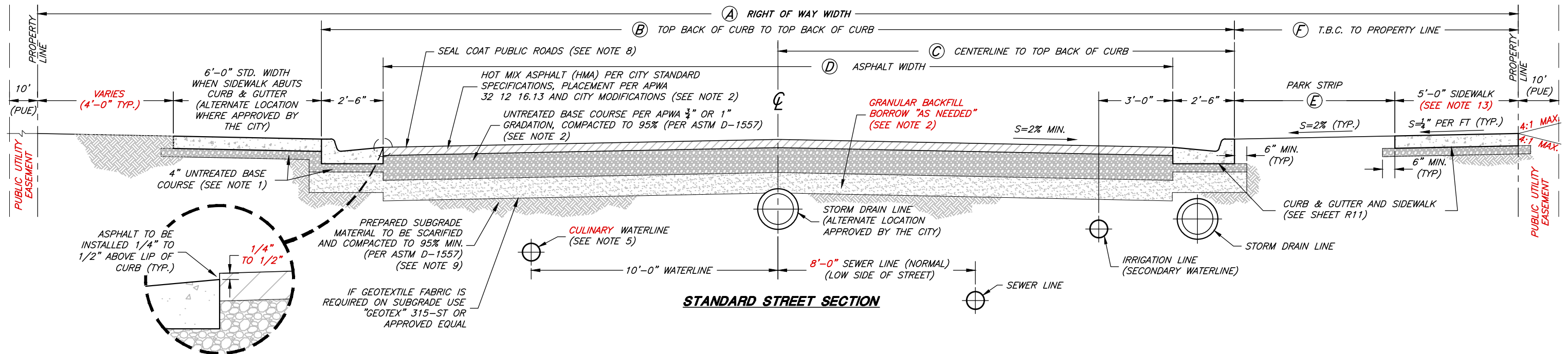
- LID1.....GENERAL LID (LOW IMPACT DEVELOPMENT) SITE PLANS
- LID2....GENERAL LID (LOW IMPACT DEVELOPMENT) EXAMPLES
- LID3....TREE TRIMMING AND DRY WELL DETAILS

**STREET LIGHTING STANDARDS**

- SL1.....POLES AND FIXTURES
- SL2.....STREETLIGHT STANDARDS
- SL3.....STREETLIGHT STANDARDS
- SL4.....LIGHT POLE SPREAD FOOTING DETAIL, AND ROCKY MOUNTAIN POWER CONNECTION DETAILS

**MISCELLANEOUS CONSTRUCTION STANDARDS**

- M1.....CHAIN LINK FENCE STANDARD DETAILS
- M2.....TYPICAL PIPELINE CASEMENT, PIPE ANCHOR BLOCK, AND BOLLARD DETAILS



**STANDARD STREET SECTION**

**GENERAL NOTES:**

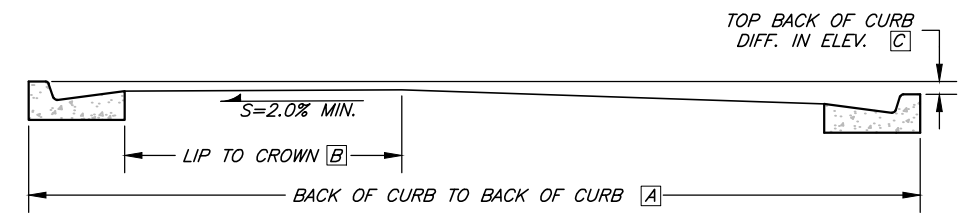
1. PROVIDE 4" THICKNESS OF 3/4" OR 1" UNTREATED BASE COURSE UNDER SIDEWALK, DRIVEWAY APPROACHES AND CURB & GUTTER, COMPACTED TO 95%, PER ASTM D-1557.
2. PAVEMENT COMPONENT THICKNESS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER BASED ON A DETAILED SOILS ANALYSIS AND USING THE MINIMUM DESIGN PARAMETERS AS FOUND IN APPENDIX B, AND APPROVED BY THE CITY. THE ABSOLUTE MINIMUM PAVEMENT SECTION IS 3-INCH THICK HMA WITH 8-INCH UTBC. IF NO GEOTECHNICAL REPORT IS AVAILABLE (EMERGENCY SITUATION, ETC.), 4-INCH THICK HMA WITH 12-INCH THICK UTBC SHALL BE USED. GRANULAR BACKFILL BORROW THICKNESS PER GEOTECHNICAL REPORT OR PROJECT PLANS.
3. ALL ROAD CUTS SHALL BE PATCHED PER SHEET R13 AND R14.
4. CURB & GUTTER AND SIDEWALKS SHALL BE CONSTRUCTED USING FIBER REINFORCED CONCRETE AND IN COMPLIANCE WITH PLEASANT VIEW CITY TECHNICAL SPECIFICATIONS AND THESE DRAWINGS.
5. ALL CULINARY WATER MAINS AND SERVICES MUST MAINTAIN A MINIMUM SEPARATION FROM ALL SEWER MAINS AND LATERALS OF 10'-0" HORIZONTAL AND 18" VERTICAL IN ACCORDANCE WITH THE STATE OF UTAH DIVISION OF DRINKING WATER RULES SECTION R309-550-7.
6. THE 5'-0" SIDEWALK SHOWN ABOVE IS THE "CITY STANDARD." OTHER LOCATIONS AND TYPES OF SIDEWALK AS REQUESTED BY THE DEVELOPER MUST BE APPROVED BY THE CITY. IF SIDEWALK IS LOCATED AGAINST THE TBC, IT MUST BE A MINIMUM OF 6'-0" IN WIDTH.
7. NATURAL GAS TYPICALLY LOCATED IN THE PARK STRIP, POWER AND COMMUNICATION LINES TYPICALLY LOCATED BEHIND PROPERTY LINES OR IN LOT EASEMENTS.
8. "SEAL COAT" CONSISTS OF THE FOLLOWING:
  - a. CHIP SEAL PER APWA 32 01 13.64 AND CITY MODIFICATIONS, AND
  - b. FOG SEAL PER APWA 32 01 13.50 AND CITY MODIFICATIONS.
9. IMPORTED FILL UNDER ROADWAY SHALL BE GRANULAR BORROW, 3" MINUS.
10. ROAD SECTION USED AS DETERMINED BY THE CITY ENGINEER AND PLANNING COMMISSION BASED UPON ZONING, GENERAL PLAN, SIZE OF DEVELOPMENT, ESTIMATED TRAFFIC VOLUME, AND AMOUNT OF OPEN SPACE ASSOCIATED WITH DEVELOPMENTS PROXIMITY TO HIGH VOLUME ROADS OR COMMERCIAL ZONING.
11. NO BUILDINGS OR STRUCTURES (SHEDS, ETC.) SHALL BE ERECTED WITHIN A PUBLIC UTILITY EASEMENT (PUEs).

**GENERAL NOTES CONT'D:**

12. SPECIAL RESIDENTIAL STREETS ARE THOSE STREETS WHICH QUALIFY TO BE WIDER:
  - TO ADDRESS SPECIFIC TRAFFIC FLOW CONSTRAINTS AT AN INTERSECTION, MID-BLOCK CROSSINGS, OR OTHER AREAS;
  - TO ADDRESS AN APPLICABLE GENERAL OR MASTER PLAN IMPROVEMENT, INCLUDING TRANSPORTATION, BICYCLE LANES, TRAILS, OR OTHER SIMILAR IMPROVEMENTS THAT ARE NOT INCLUDED WITHIN AN IMPACT FEE AREA;
  - TO ADDRESS TRAFFIC FLOW CONSTRAINTS FOR SERVICE TO OR ABUTTING HIGHER DENSITY DEVELOPMENTS OR USES THAT GENERATE HIGHER TRAFFIC VOLUMES, INCLUDING COMMUNITY CENTERS, SCHOOLS, AND OTHER SIMILAR USES;
  - AS NEEDED FOR THE INSTALLATION OR LOCATION OF A UTILITY WHICH IS MAINTAINED BY THE MUNICIPALITY AND IS CONSIDERED A TRANSMISSION LINE OR REQUIRES ADDITIONAL ROADWAY WIDTH;
  - FOR THIRD-PARTY UTILITY LINES THAT HAVE AN EASEMENT PREVENTING THE INSTALLATION OF UTILITIES MAINTAINED BY THE MUNICIPALITY WITHIN THE ROADWAY;
  - FOR UTILITIES OVER 12 FEET IN DEPTH;
  - FOR ROADWAYS WITH A DESIGN SPEED THAT EXCEEDS 25 MILES PER HOUR;
  - AS NEEDED FOR FLOOD AND STORMWATER ROUTING;
  - AS NEEDED TO MEET FIRE CODE REQUIREMENTS FOR PARKING AND HYDRANTS; OR
  - AS NEEDED TO ACCOMMODATES STREET PARKING.

[AS PER UTAH CODE 10-20-911(5)]
13. ALL SIDEWALK ALONG PLEASANT VIEW DRIVE SHALL BE 6'-0" WIDE. (DIM. E) = 4'-0"
14. SEE DESIGN STANDARDS FOR GUIDANCE ON STREET SECTION SELECTION.

STREET SECTION DESIGNATION	R.O.W. WIDTH (A)	T.B.C. TO T.B.C. (B)	CENTERLINE TO T.B.C. (C)	ASPHALT WIDTH (D)	PARK STRIP (E)	T.B.C. TO PROPERTY LINE (F)
LOCAL RESIDENTIAL	60'-0"	37'-0"	18'-6"	32'-0"	6'-6"	11'-6"
SPECIAL RESIDENTIAL	60'-0"	40'-0"	20'-0"	35'-0"	5'-0"	10'-0"
MINOR COLLECTOR	66'-0"	46'-0"	23'-0"	41'-0"	5'-0"	10'-0"
MAJOR COLLECTOR	70'-0"	50'-0"	25'-0"	45'-0"	5'-0"	10'-0"
MINOR ARTERIAL	80'-0"	60'-0"	30'-0"	55'-0"	5'-0"	10'-0"
LOW IMPACT ROADWAY	60'-0"					SEE SHEET R2



**CROWN NOTES:**

- A. MAXIMUM DIFFERENCE IN ELEVATION BETWEEN CURBS ON OPPOSITE SIDES OF THE STREET SHALL NOT EXCEED THOSE SHOWN IN DETAIL AND TABLE.
- B. ON ARTERIAL STREETS AND CERTAIN STREETS APPROVED BY THE CITY COUNCIL, THE CITY ENGINEER WILL PROVIDE A PAVEMENT DESIGN. LOCATION OF SIDEWALK AND CURB & GUTTER MAY VARY ON INDIVIDUAL ARTERIAL STREETS PER DIRECTION OF THE CITY ENGINEER.
- C. ALL OTHER PROPOSED STREET CROSS SECTIONS SHALL BE AS APPROVED BY THE CITY ENGINEER.

	A	B	C
40'-0"	17'-6"	0'-0"	
40'-0"	12'-0"	0'-6"	
40'-0"	10'-0"	1'-0"	
46'-0"	20'-6"	0'-0"	
46'-0"	10'-6"	0'-6"	
46'-0"	10'-6"	1'-0"	
CUL-DE-SAC			1'-0" MAX.

**CROWN LOCATION FOR VARIOUS CROSS SLOPES**

CITY ENGINEER	SCALE:
DATE	N.T.S.
REV.	DESIGNED _____
DATE	DRAWN _____
	CHECKED _____

SCALE: N.T.S.

DESIGNED \_\_\_\_\_

DRAWN \_\_\_\_\_

CHECKED \_\_\_\_\_

**JA**  
JONES & ASSOCIATES

**CONSULTING ENGINEERS**

6080 Fashion Point Drive  
South Ogden, Utah 84403 (801) 476-9767  
www.jonescivil.com



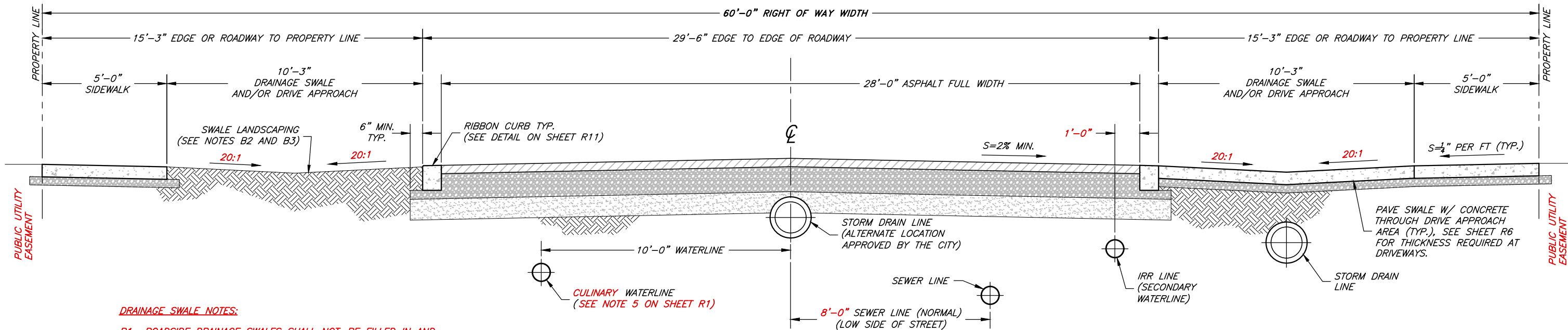
**PLEASANT VIEW CITY CORPORATION**

**PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS**

**TYPICAL STREET SECTION DETAILS**

SHEET: **R1**

OF X SHEETS  
0



**DRAINAGE SWALE NOTES:**

- B1. ROADSIDE DRAINAGE SWALES SHALL NOT BE FILLED IN AND SHALL BE MAINTAINED BY THE PROPERTY OWNER.
- B2. DRAINAGE SWALES ARE TO BE GRASSED UNLESS OTHERWISE DIRECTED BY THE CITY.

**LOW IMPACT ROAD SECTION (RESIDENTIAL)**

**LOW IMPACT ROADWAY NOTES:**

- 1. TO BE USED ONLY WHERE LONGITUDINAL SLOPE IS 5% OR LESS.

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

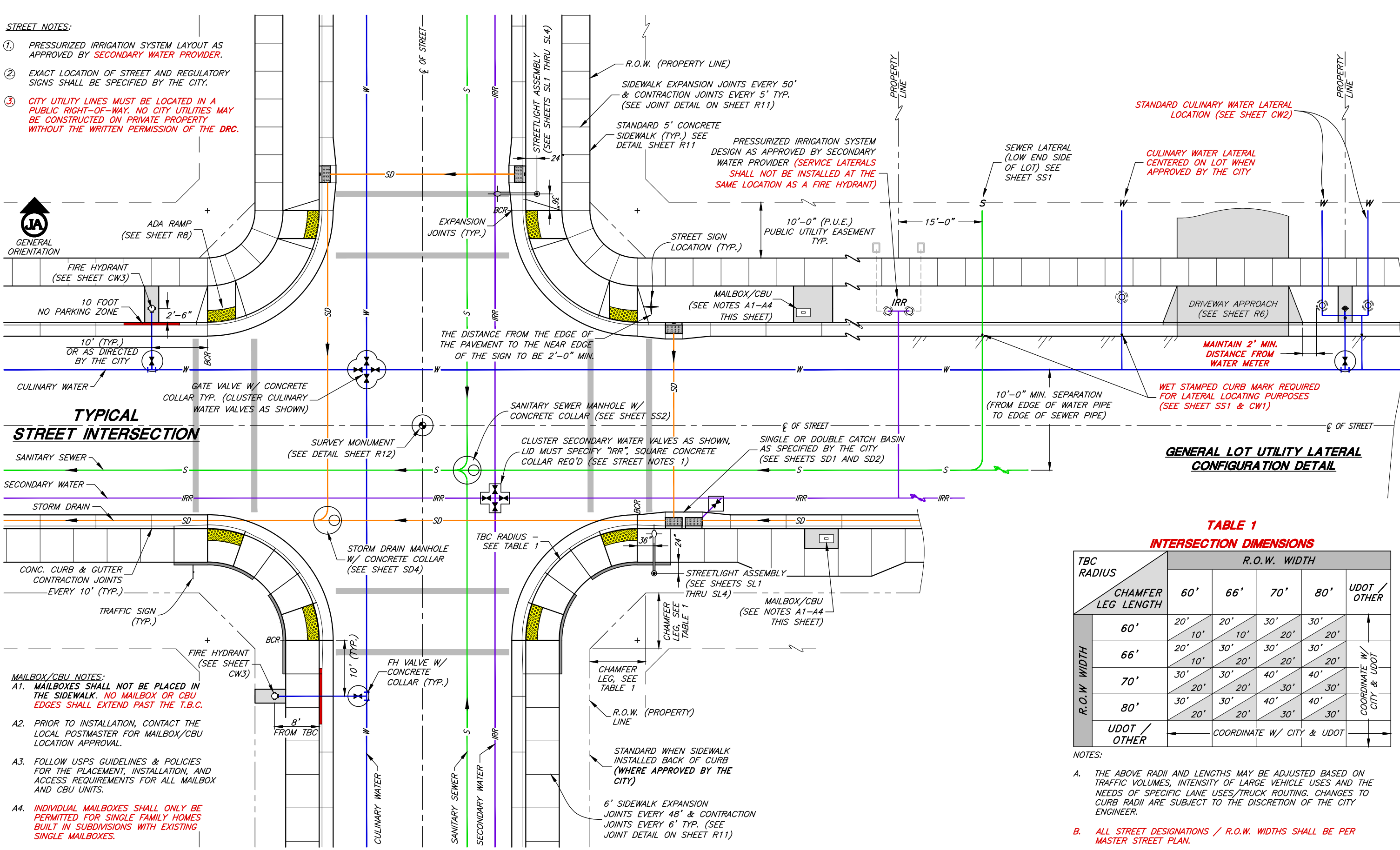

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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS**  
**LOW IMPACT RESIDENTIAL ROAD SECTION**

SHEET:
<b>R2</b>
OF X SHEETS
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**STREET NOTES:**

- ① PRESSURIZED IRRIGATION SYSTEM LAYOUT AS APPROVED BY SECONDARY WATER PROVIDER.
- ② EXACT LOCATION OF STREET AND REGULATORY SIGNS SHALL BE SPECIFIED BY THE CITY.
- ③ CITY UTILITY LINES MUST BE LOCATED IN A PUBLIC RIGHT-OF-WAY. NO CITY UTILITIES MAY BE CONSTRUCTED ON PRIVATE PROPERTY WITHOUT THE WRITTEN PERMISSION OF THE DRC.



**TYPICAL STREET INTERSECTION**

**GENERAL LOT UTILITY LATERAL CONFIGURATION DETAIL**

**TABLE 1  
INTERSECTION DIMENSIONS**

TBC RADIUS	R.O.W. WIDTH				UDOT / OTHER
	60'	66'	70'	80'	
R.O.W. WIDTH	60'	20' 10'	20' 10'	30' 20'	COORDINATE W/ CITY & UDOT
	66'	20' 10'	30' 20'	30' 20'	
	70'	30' 20'	30' 20'	40' 30'	
	80'	30' 20'	30' 20'	40' 30'	
UDOT / OTHER	COORDINATE W/ CITY & UDOT				

- NOTES:
- A. THE ABOVE RADII AND LENGTHS MAY BE ADJUSTED BASED ON TRAFFIC VOLUMES, INTENSITY OF LARGE VEHICLE USES AND THE NEEDS OF SPECIFIC LANE USES/TRUCK ROUTING. CHANGES TO CURB RADII ARE SUBJECT TO THE DISCRETION OF THE CITY ENGINEER.
  - B. ALL STREET DESIGNATIONS / R.O.W. WIDTHS SHALL BE PER MASTER STREET PLAN.

- MAILBOX/CBU NOTES:**
- A1. MAILBOXES SHALL NOT BE PLACED IN THE SIDEWALK. NO MAILBOX OR CBU EDGES SHALL EXTEND PAST THE T.B.C.
  - A2. PRIOR TO INSTALLATION, CONTACT THE LOCAL POSTMASTER FOR MAILBOX/CBU LOCATION APPROVAL.
  - A3. FOLLOW USPS GUIDELINES & POLICIES FOR THE PLACEMENT, INSTALLATION, AND ACCESS REQUIREMENTS FOR ALL MAILBOX AND CBU UNITS.
  - A4. INDIVIDUAL MAILBOXES SHALL ONLY BE PERMITTED FOR SINGLE FAMILY HOMES BUILT IN SUBDIVISIONS WITH EXISTING SINGLE MAILBOXES.

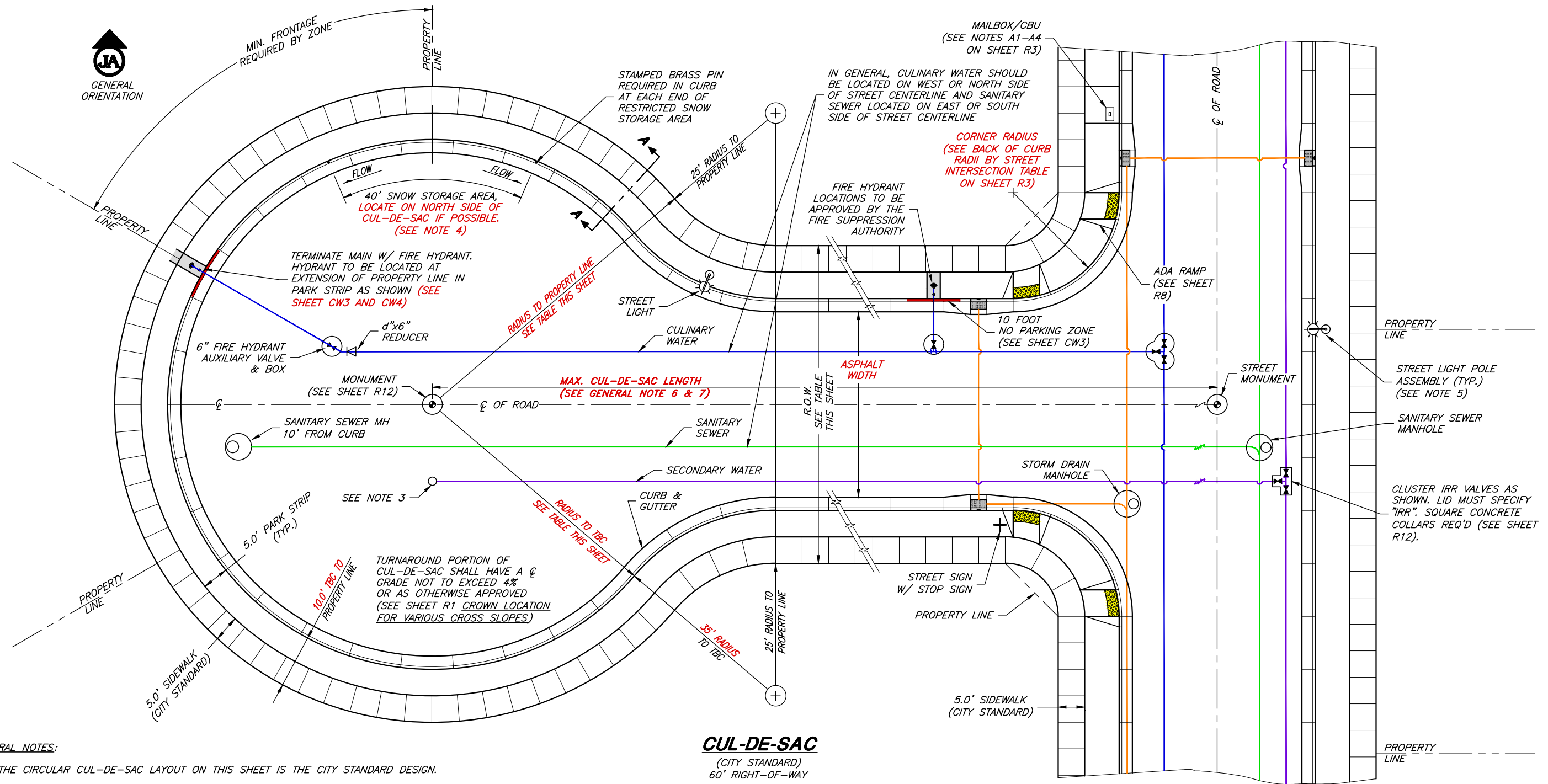
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 PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS  
**TYPICAL STREET INTERSECTION AND GENERAL LOT UTILITY LATERAL CONFIGURATION DETAILS**

SCALE: N.T.S.	DESIGNED: _____	CITY ENGINEER: _____
	DRAWN: _____	DATE: _____
	CHECKED: _____	REV. DATE: _____



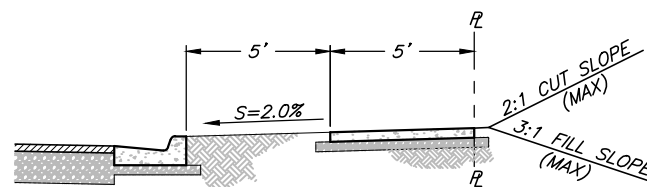


**GENERAL NOTES:**

1. THE CIRCULAR CUL-DE-SAC LAYOUT ON THIS SHEET IS THE CITY STANDARD DESIGN.
2. MODIFIED CUL-DE-SACS (KNUCKLE, EYEBROW, BULB, OR HALF CUL-DE-SACS) ARE NOT PERMITTED.
3. DEVELOPER SHALL PROVIDE AN AIR RELIEF OR BLOW-OFF AS DETERMINED BY THE SECONDARY WATER PROVIDER AND IN ACCORDANCE WITH THEIR STANDARDS AND APPROVED BY THE CITY.
4. NO DRIVEWAYS, STREET LIGHTS, FIRE HYDRANTS, OR MAIL BOXES ARE PERMITTED WITHIN THE SNOW STORAGE AREA.
5. 4-LEGGED INTERSECTIONS - LOCATE STREET LIGHT OUTSIDE OF CROSSWALKS, NOT ADJACENT TO STREET OR STOP SIGNS, AND NOT ON TOP OF THE STORM DRAIN UTILITY.
6. THE CUL-DE-SAC LENGTH SHALL BE MEASURED FROM THE CUL-DE-SAC CENTER MONUMENT TO THE CLOSEST INTERSECTION STREET CENTERLINE STREET MONUMENT.
7. CITY CODE - CUL-DE-SAC LENGTH GOVERNS.

**CUL-DE-SAC**

(CITY STANDARD)  
60' RIGHT-OF-WAY



**SECTION A-A**

REQUIRED GRADING BETWEEN TBC AND PROPERTY LINE

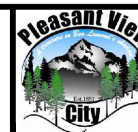
RIGHT-OF-WAY	TBC RADIUS	PROPERTY LINE RADIUS	ASPHALT WIDTH
60'-0"	50'-0"	60'-0"	35'-0"
70'-0"	60'-0"	70'-0"	45'-0"

CITY ENGINEER	DESIGNED	SCALE:
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REV.	CHECKED	
DATE		

DESIGNED	SCALE:
DRAWN	N.T.S.
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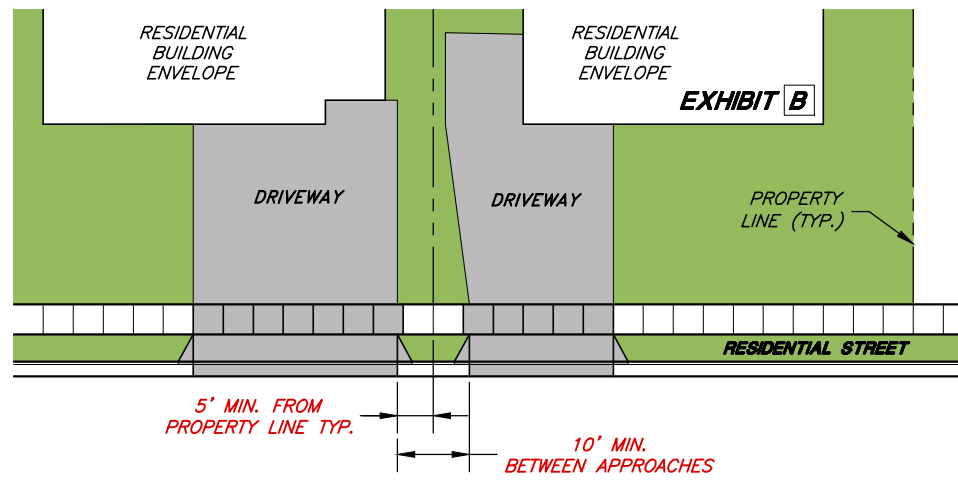


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PLEASANT VIEW CITY CORPORATION	
PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS	
<b>CUL-DE-SAC DETAILS</b>	

SHEET:
<b>R5</b>
OF X SHEETS
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**DRIVEWAY APPROACH NOTES:**

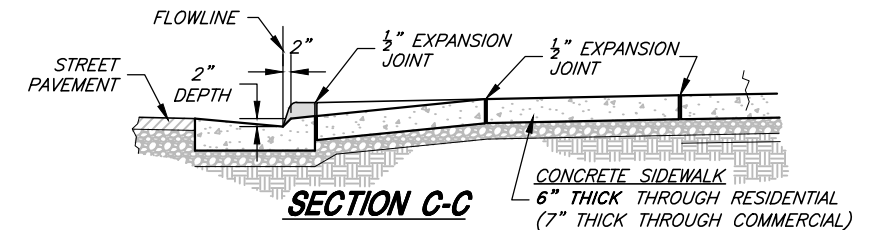
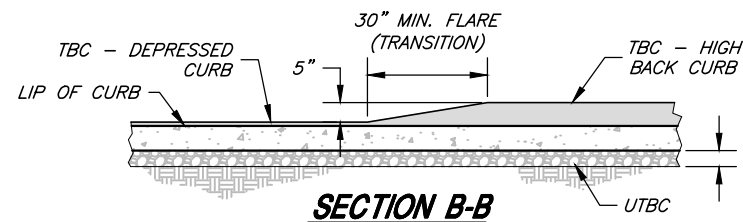
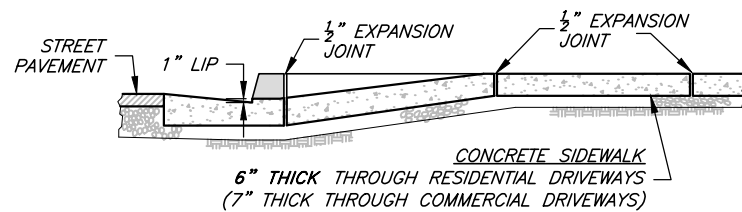
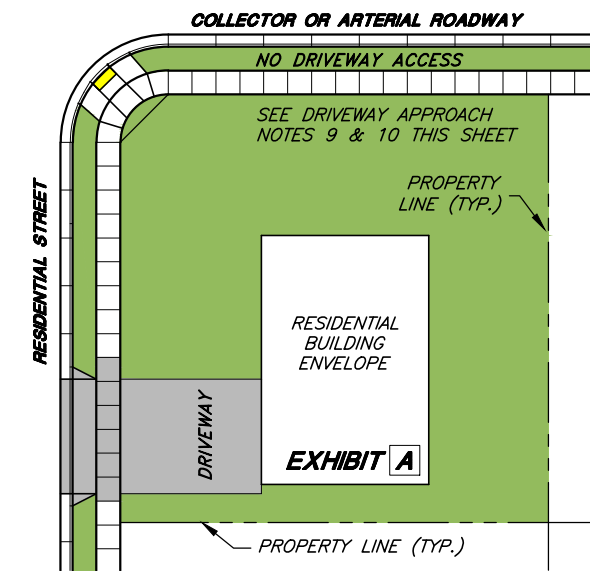
1. IN NEW SUBDIVISIONS WHERE FUTURE DRIVEWAY LOCATIONS ARE UNKNOWN, THE DRIVEWAY APPROACH SHALL BE MADE BY SAW CUTTING THE BACK OF THE EXISTING CURB TO THE REQUIRED DRIVEWAY WIDTH. OBTAIN CITY R.O.W. PERMIT PRIOR TO SAW CUTTING.
2. SCORE SIDEWALK 1/4 OF SIDEWALK THICKNESS AT EACH 5'-0" OR 6'-0" SECTION. EXPANSION JOINTS AT EACH 50'-0" (5'-0" SIDEWALK) OR 48'-0" (6'-0" SIDEWALK). PROVIDE ADDITIONAL CONTRACTION JOINTS ON OVERSIZED DRIVEWAYS.
3. APPROACHES SHALL NOT BE ALLOWED ON CORNER LOTS WITHIN THE CLEAR VIEW AREA AS DESCRIBED IN CITY CODE. (SEE DETAIL ON SHEET R7)
4. MAINTAIN 2'-0" MIN. DISTANCE FROM WATER METER (SEE SHEET CW2)
5. COMMERCIAL DRIVE APPROACHES PER CITY ORDINANCE 18.43
6. 35'-0" MAX. COMMERCIAL UNLESS OTHERWISE APPROVED BY CITY FOLLOWING SUBMITTAL OF TIS (TRAFFIC IMPACT STUDY) AND/OR TURNING PATHS.
7. **COMMERCIAL SHARED ACCESS:** TO REDUCE AND LIMIT THE NUMBER OF POINTS OF ACCESS ALONG CITY STREETS, SHARED ACCESS BETWEEN ADJOINING PARCELS IS STRONGLY ENCOURAGED. THE CITY MAY REQUIRE A SHARED ACCESS AS A CONDITION OF PROJECT APPROVAL. WHEN A SHARED ACCESS IS USED THE ADJACENT PROPERTY OWNERS SHALL:
  - a. RECORD A CROSS EASEMENT FOR THE APPROACH, SIGNED BY BOTH ADJACENT PROPERTY OWNERS, ALLOWING BOTH ADJACENT PROPERTY OWNER'S EQUAL AND UNRESTRICTED ACCESS TO THE APPROACH.
  - b. THE SHARED ACCESS SHALL BE ADEQUATELY SEPARATED TO ALLOW INDIVIDUAL MAINTENANCE AND REPAIR.

**DRIVEWAY APPROACH NOTES:**

**8. RESIDENTIAL ACCESSES & DRIVEWAY WIDTHS:**

LOT FRONTAGE	# ACCESS	TOTAL WIDTH
≤ 100'	1	30'-0"
100' < X ≤ 200'	2	40'-0"
> 200'	2	50'-0"

9. IF A RESIDENTIAL LOT HAS TWO FRONTAGES AND ONE OF THOSE FRONTAGES IS LOCATED ON A COLLECTOR OR ARTERIAL STREET, THE DRIVEWAY SHALL BE LOCATED ON THE RESIDENTIAL STREET ONLY. NO DRIVEWAY ACCESS WILL BE PERMITTED ONTO THE COLLECTOR OR ARTERIAL STREET. (SEE DRIVEWAY EXHIBIT A THIS SHEET)
10. **RESIDENTIAL CORNER LOT:**
  - a. ACCESS SHALL BE FROM ONE SIDE ONLY, OFF THE STREET WITH LESSER TRAFFIC VOLUME/CAPACITY.
  - b. DRIVEWAY SHALL BE LOCATED ON SIDE OF LOT CLOSER TO INTERIOR PROPERTY LINE. (SEE ALSO SHEET R7)

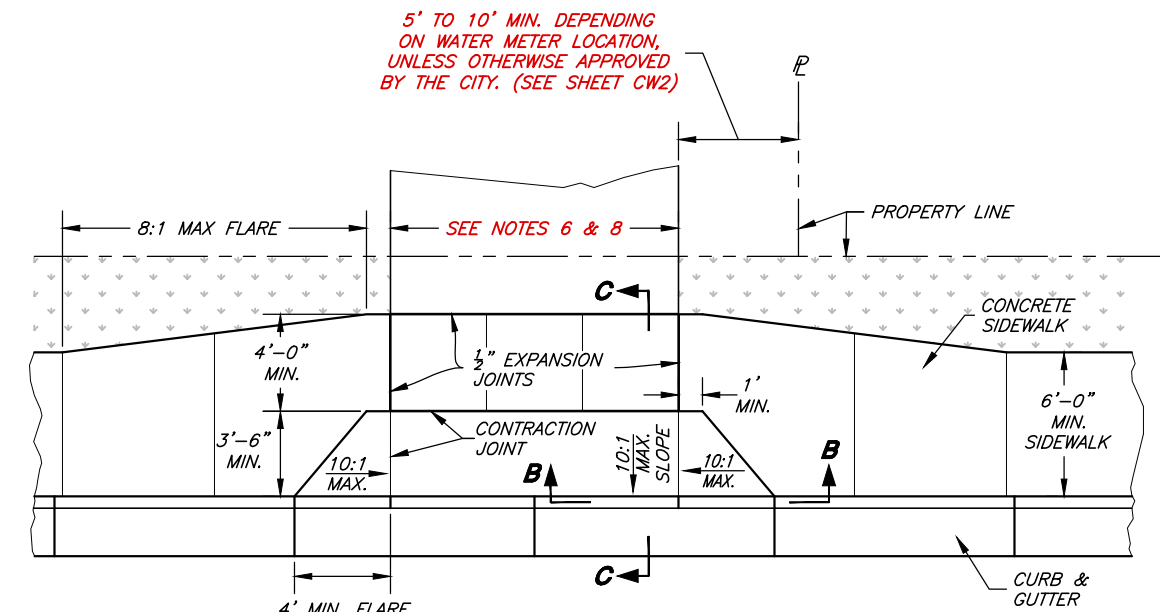
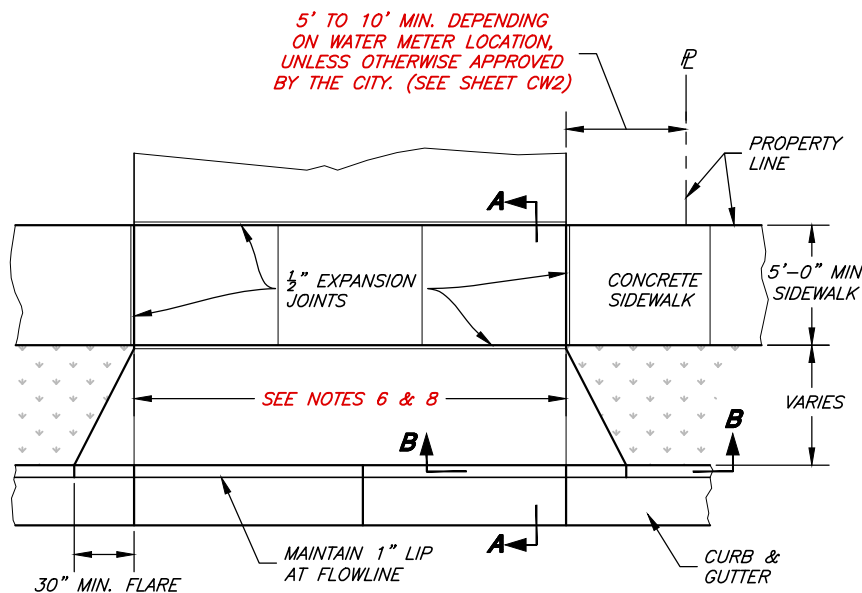
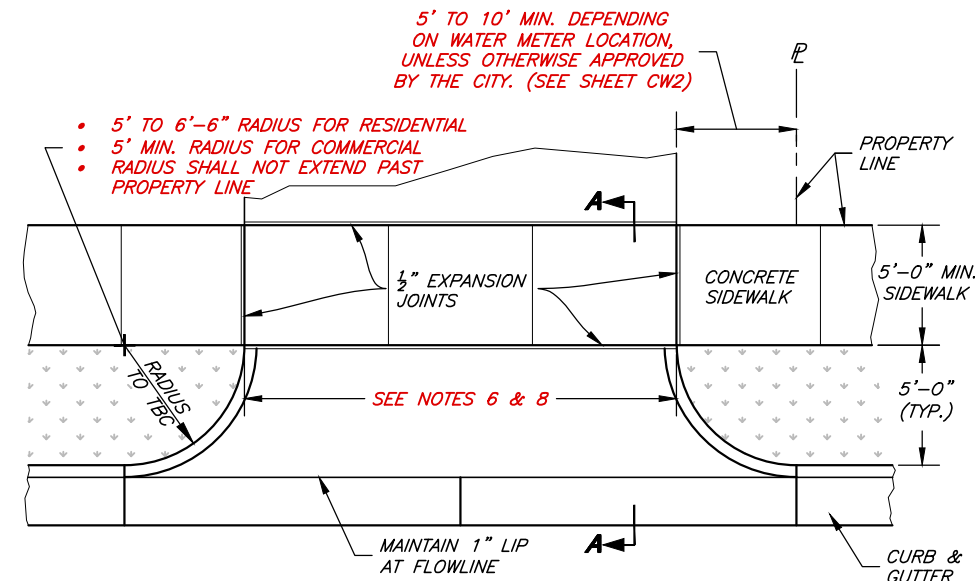


**DRIVEWAY EXHIBITS**

**SECTION A-A**

**SECTION B-B**

**SECTION C-C**



**CURB RADIUS STYLE DRIVEWAY APPROACH**

(FOR ALL NEW COMMERCIAL ENTRANCES, AND RESIDENTIAL DRIVEWAYS ON MAJOR COLLECTORS AND ALL ARTERIALS)

**DRIVEWAY APPROACH W/ PARK STRIP**

DROP DOWN STYLE (CITY STANDARD RESIDENTIAL)

**DRIVEWAY APPROACH W/ ADJACENT SIDEWALK**

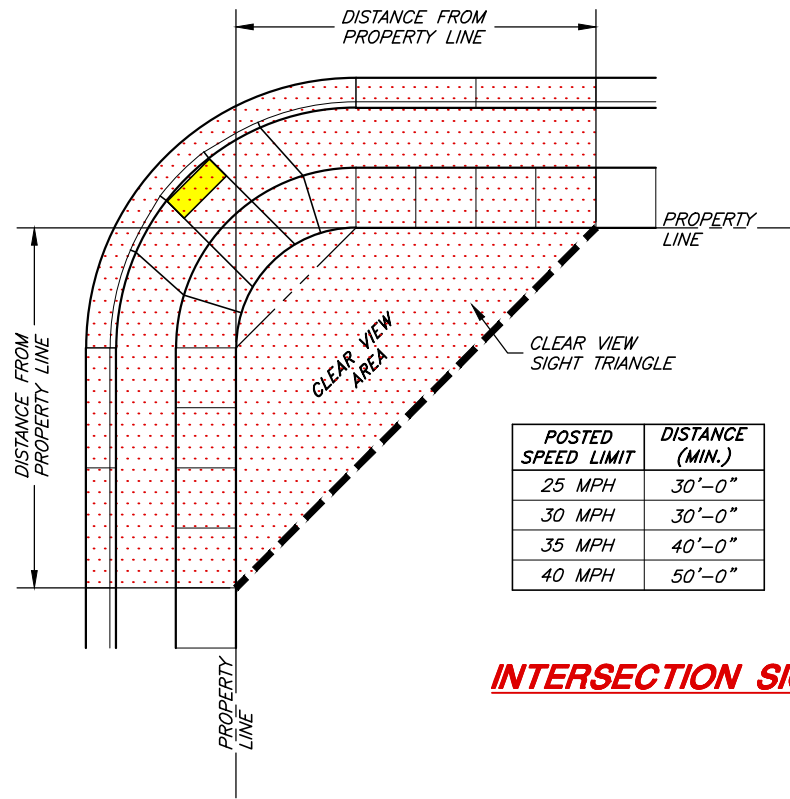
STANDARD WHEN SIDEWALK INSTALLED BACK OF CURB (WHERE APPROVED BY THE CITY)

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

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 PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS  
**TYPICAL DRIVE APPROACH DETAILS**

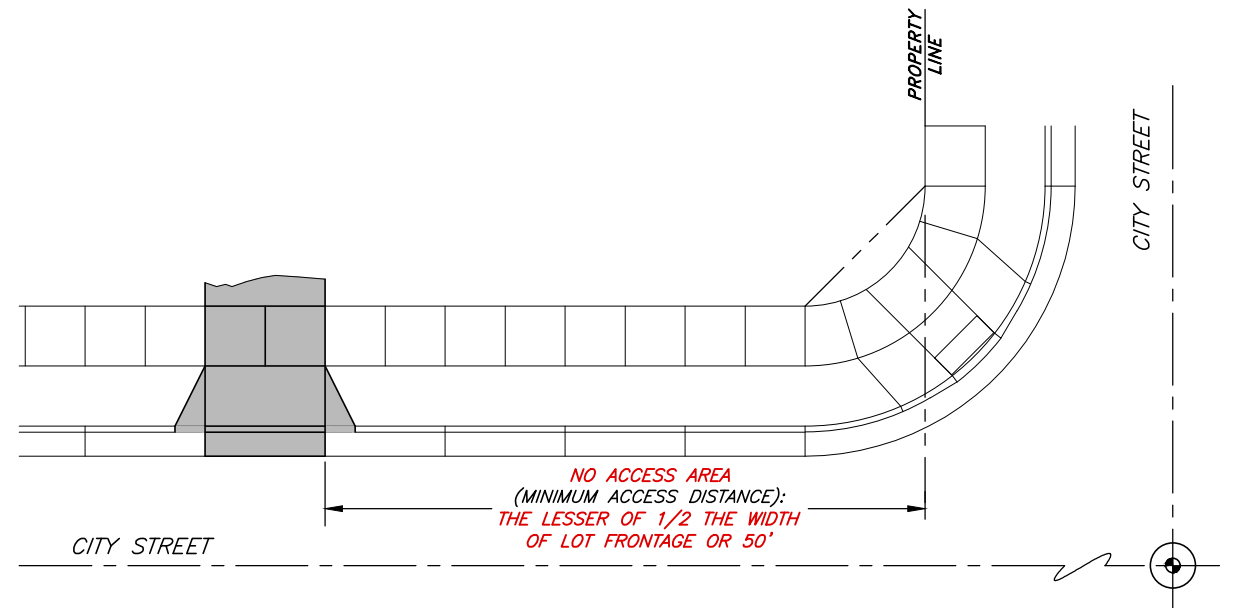


POSTED SPEED LIMIT	DISTANCE (MIN.)
25 MPH	30'-0"
30 MPH	30'-0"
35 MPH	40'-0"
40 MPH	50'-0"

**INTERSECTION SIGHT TRIANGLES**

**SIGHT TRIANGLE NOTES:**

- A1. FOR INTERSECTIONS WHERE EITHER THE MAJOR OR MINOR ROAD HAS A POSTED SPEED LIMIT OF 45 MPH OR HIGHER A SITE SPECIFIC ANALYSIS MUST BE PERFORMED USING THE CURRENT EDITION OF THE AASHTO DESIGN MANUAL FOR BOTH APPROACH AND DEPARTURE SIGHT TRIANGLES AT INTERSECTIONS.
- A2. ALL INTERSECTIONS OF CITY ROADS WITH STATE ROADS MUST MEET UDOT SIGHT TRIANGLE REQUIREMENTS.
- A3. DRIVEWAYS DIRECTLY CONNECTED TO ROADS WITH SPEED LIMITS OF 30 MPH OR HIGHER ARE SUBJECT TO THE SAME REQUIREMENTS FOR SIGHT TRIANGLES AS AN INTERSECTION.
- A4. SOLID FENCES, WALLS, SIGNS, SIGHT OBSCURING VEGETATION, AND/OR OTHER SIGHT OBSCURING DEVICES SHALL NOT EXCEED TWO FEET (2'-0") IN HEIGHT ABOVE THE LEVEL OF THE CURB.



**DRIVE APPROACH ACCESS DISTANCE**

- Ⓐ THE MINIMUM ACCESS DISTANCE (DRIVE APPROACH TO THE NEAREST CONNECTING STREET PROPERTY LINE) SHALL BE AS DESCRIBED IN THE DETAIL AND TABLE ABOVE.
- Ⓑ THE ABOVE DISTANCES SHALL BE CONSIDERED AS CITY MINIMUMS. DESIGNER AND/OR DEVELOPER MAY SUBMIT AN ALTERNATE DESIGN BASED ON A DETAILED TRAFFIC STUDY FOR APPROVAL BY THE CITY.

CITY ENGINEER	REV.	DATE
DATE		

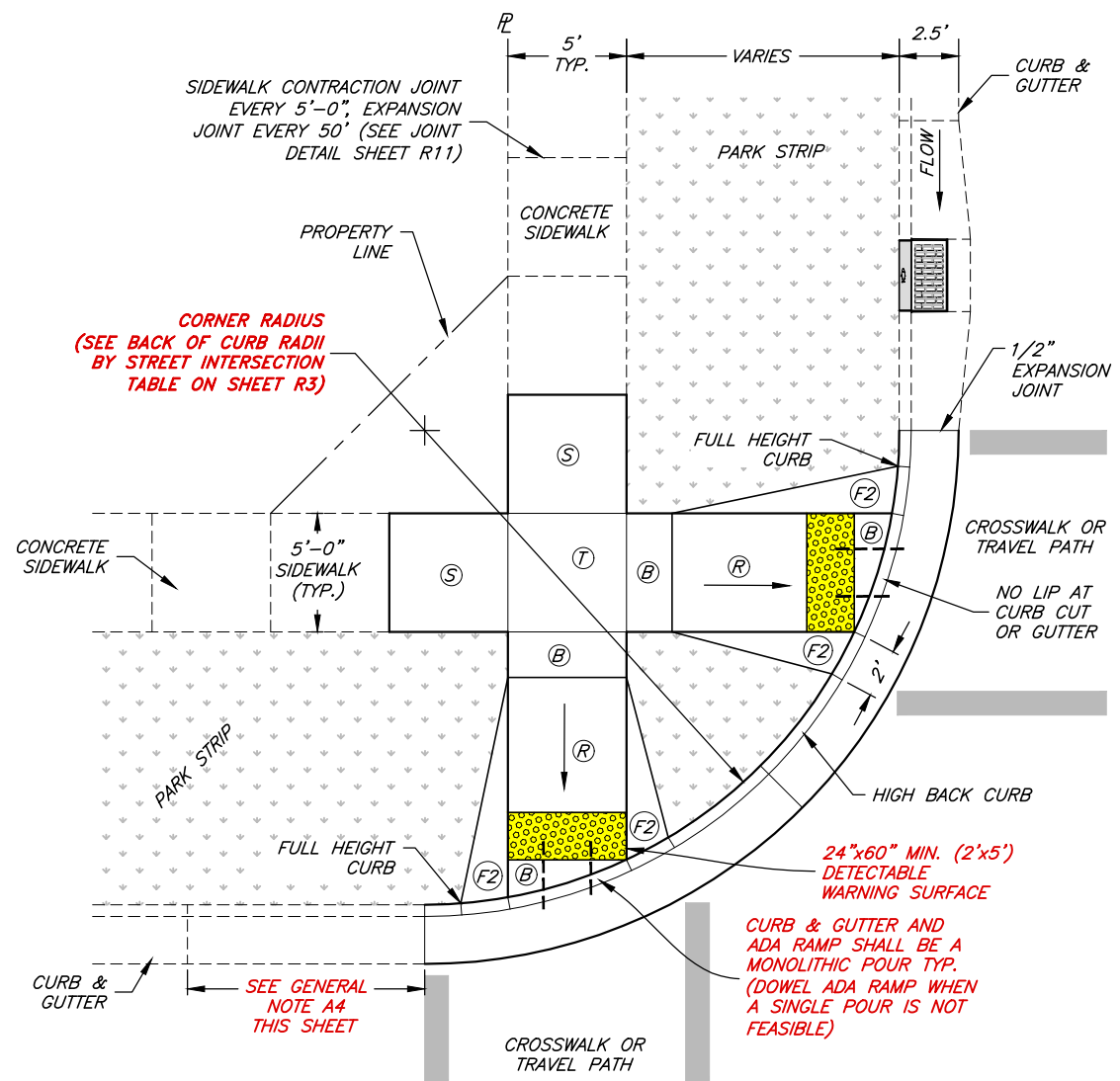
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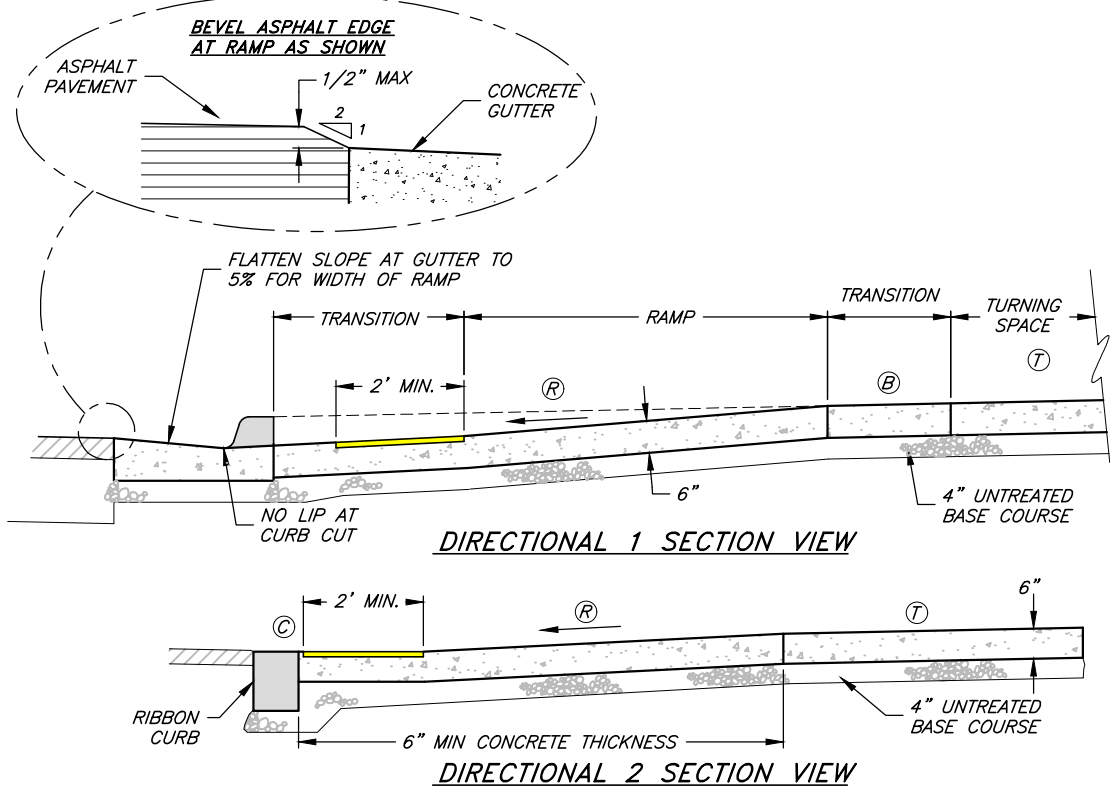
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**PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS**  
**DRIVE APPROACH ACCESS DISTANCE & INTERSECTION SIGHT TRIANGLE DETAILS**



**DIRECTIONAL 1**  
NARROW APPROACH ROADS



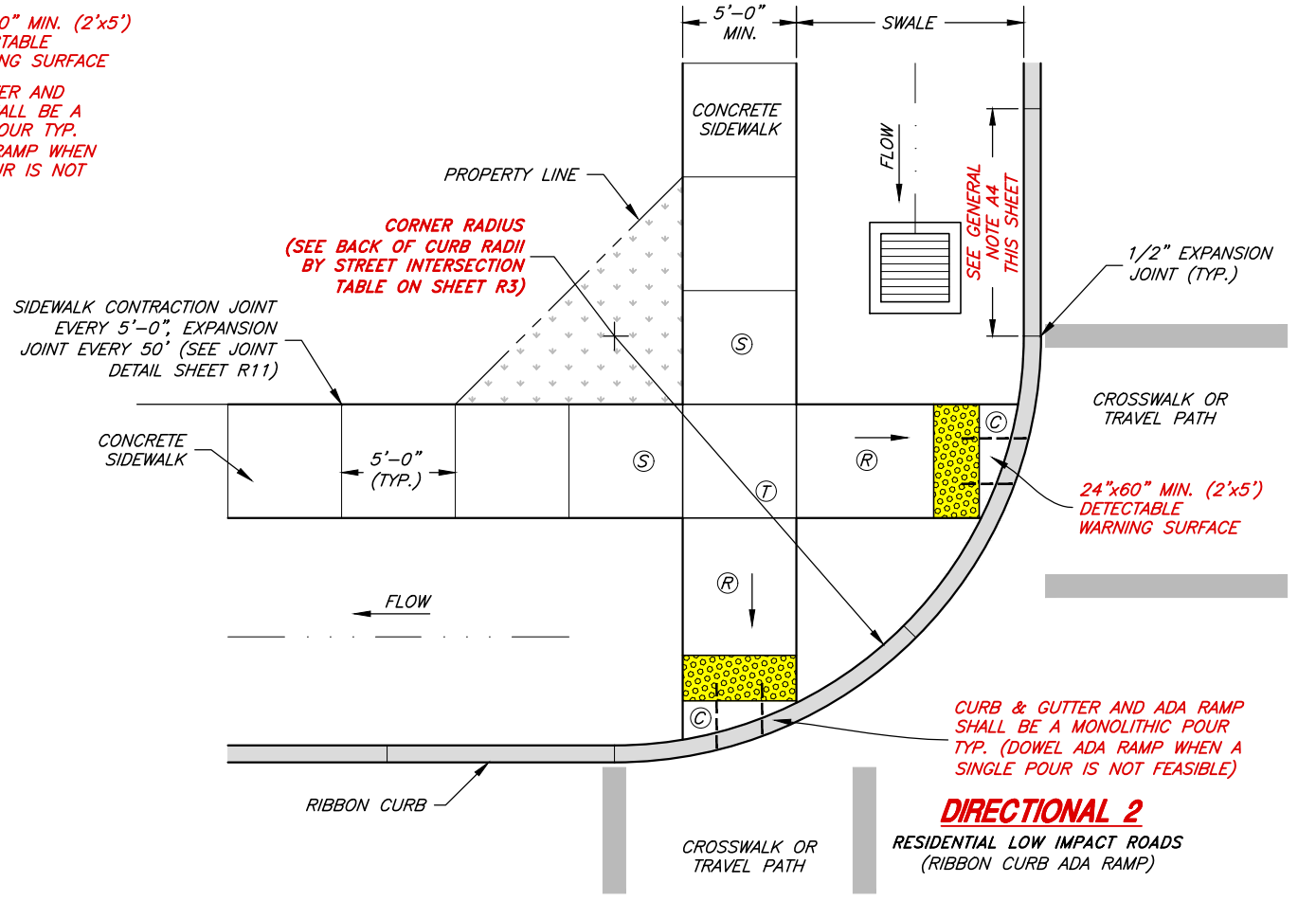
**ADA RAMP NOTES:**  
SEE SHEET R9 FOR DETECTABLE SURFACE WARNING NOTES.  
(APPLIES TO SHEETS R8 AND R9)

- C1. WHERE DESIGNATED BY THE CITY, ALTERNATE UDOT OR APWA RAMP DESIGNS MAY BE USED WITH PRIOR APPROVAL OF THE CITY. SUBMIT ENGINEERED CONSTRUCTION PLANS TO THE CITY FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.
- C2. 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. THE USE OF FLARES, CURB WALLS, ETC. ARE AT THE DISCRETION OF THE DESIGN ENGINEER.
- C3. LOCATE CURB CUT WITHIN CROSSWALK.
- C4. RAMP GRADE BREAK MUST BE PERPENDICULAR TO THE RUNNING SLOPE.

DIMENSIONS REFERENCE TABLE (PROWAG R302-R305)			
ITEM	MAX RUNNING SLOPE*	MAX. CROSS SLOPE*	
Ⓢ	RD GRADE (IN ROW) 5.0% (OUT OF ROW)	2.0%	
Ⓣ	2.0%	2.0% (A),(B)	
Ⓡ	8.3%	2.0% (A),(B)	
Ⓒ	5.0% (C)	2.0% (A),(B)	
Ⓕ	10% (D)	--	
Ⓕ	25% (D)	--	
Ⓑ	5%, 2% MIN.	2.0% (A),(B)	

- A. DO NOT EXCEED 2.0% CROSS SLOPE FOR CROSSINGS WHERE THERE IS STOP OR YIELD SIGN. DO NOT EXCEED 5% CROSS SLOPE FOR CROSSINGS WHERE THERE IS NOT STOP OR YIELD SIGN OR WHERE THERE IS A TRAFFIC SIGNAL DESIGNED FOR A GREEN PHASE. (PROWAG R302.6)
- B. MATCH THE HIGHWAY GRADE AT MIDBLOCK CROSSINGS (PROWAG R302.6.2)
- C. FLATTEN GUTTER SLOPE TO 5.0 PERCENT MAX AND MAINTAIN CLEAR SPACE RUNNING SLOPE ACROSS ENTIRE CURB CUT. (PROWAG R304.5.4)
- D. MEASURE FLARE SLOPE PARALLEL TO CURB LINE. FLARES NOT IN THE SIDEWALK ARE PERMITTED TO BE A VERTICAL CURB FACE WHEN ACCESS FROM PLOWS IS NOT EXPECTED.

- GENERAL NOTES:**  
(APPLIES TO SHEETS R8 AND R9)
- A1. INSTALLATION TOLERANCES ON CURB & GUTTER AND SIDEWALK PER APWA 32 16 13, 3.7.
  - A2. AS-BUILT SURVEY MAY BE REQUIRED TO VERIFY COMPLIANCE WITH TOLERANCES.
  - A3. GRINDING OF CONCRETE, TO MEET TOLERANCES, WILL NOT BE ALLOWED.
  - A4. CURB & GUTTER CONTRACTION JOINTS EVERY 10'-0", EXPANSION JOINTS EVERY 100'-0" (SEE JOINT DETAIL ON SHEET R11)
  - A5. DIRECTIONAL RAMPS SHALL BE USED AS FIRST OPTION. OTHER CONFIGURATION ONLY AS APPROVED BY DRG.
  - A6. SEE UDOT STD. DWGS. PA SERIES FOR ADDITIONAL DETAILS FOR DIRECTIONAL RAMPS.
  - A7. ALL WORK IN THE PUBLIC R.O.W. SHALL MEET PROWAG, CURRENT EDITION.
  - A8. FORMS SHALL BE INSPECTED PRIOR TO PLACEMENT OF CONCRETE.



**DIRECTIONAL 2**  
RESIDENTIAL LOW IMPACT ROADS  
(RIBBON CURB ADA RAMP)

CITY ENGINEER	REV.	DATE
DATE		

SCALE:	DESIGNED _____
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	CHECKED _____

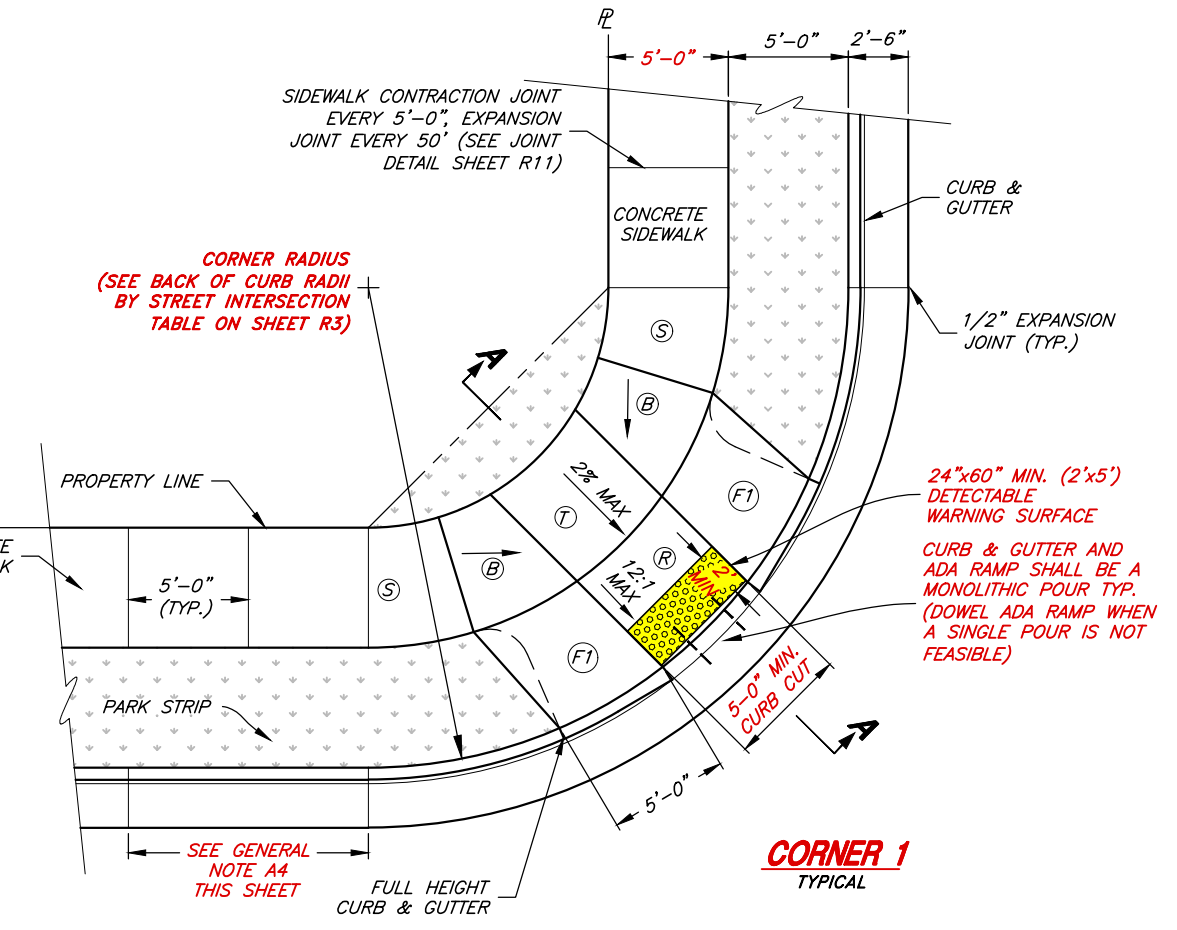
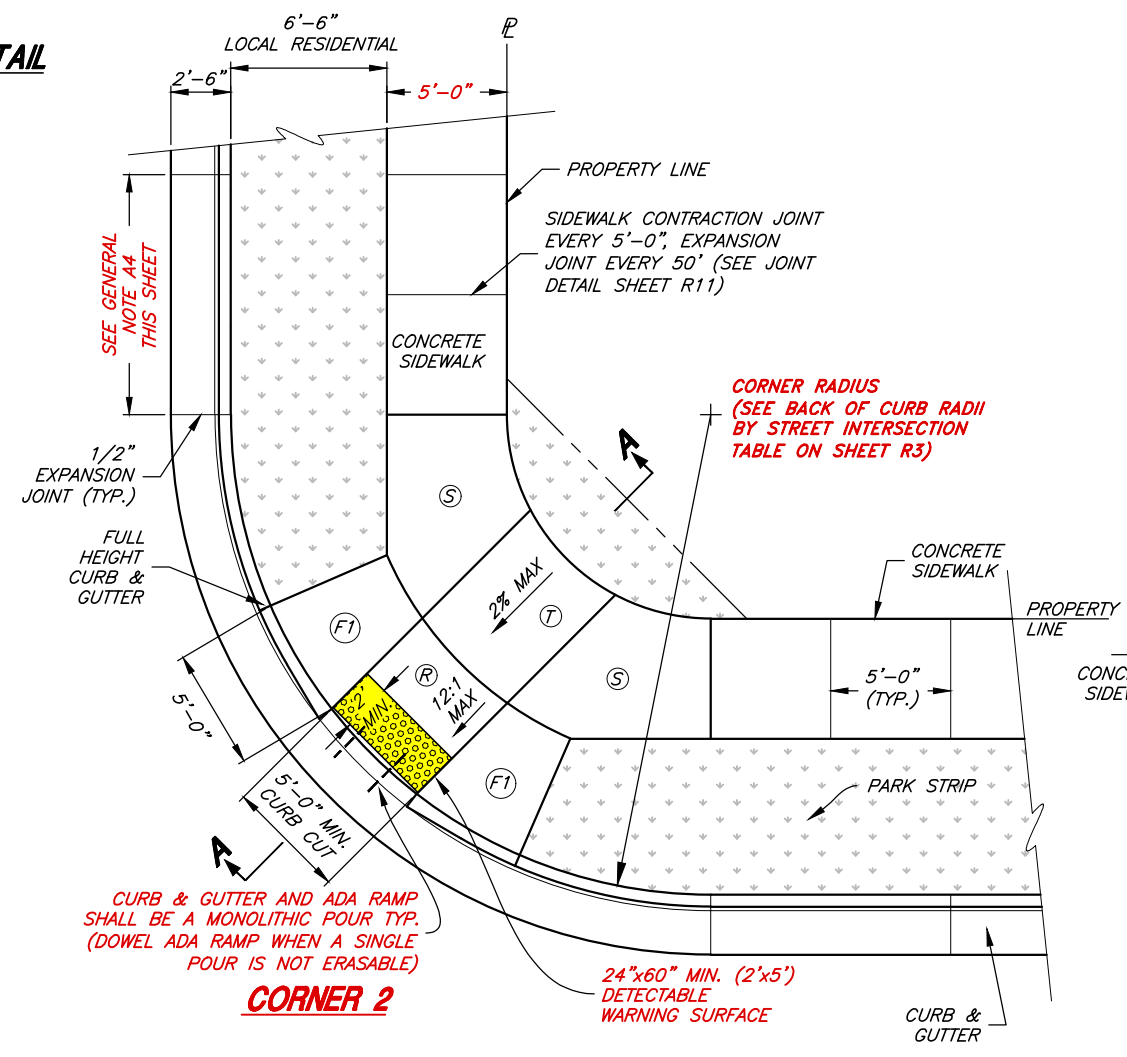
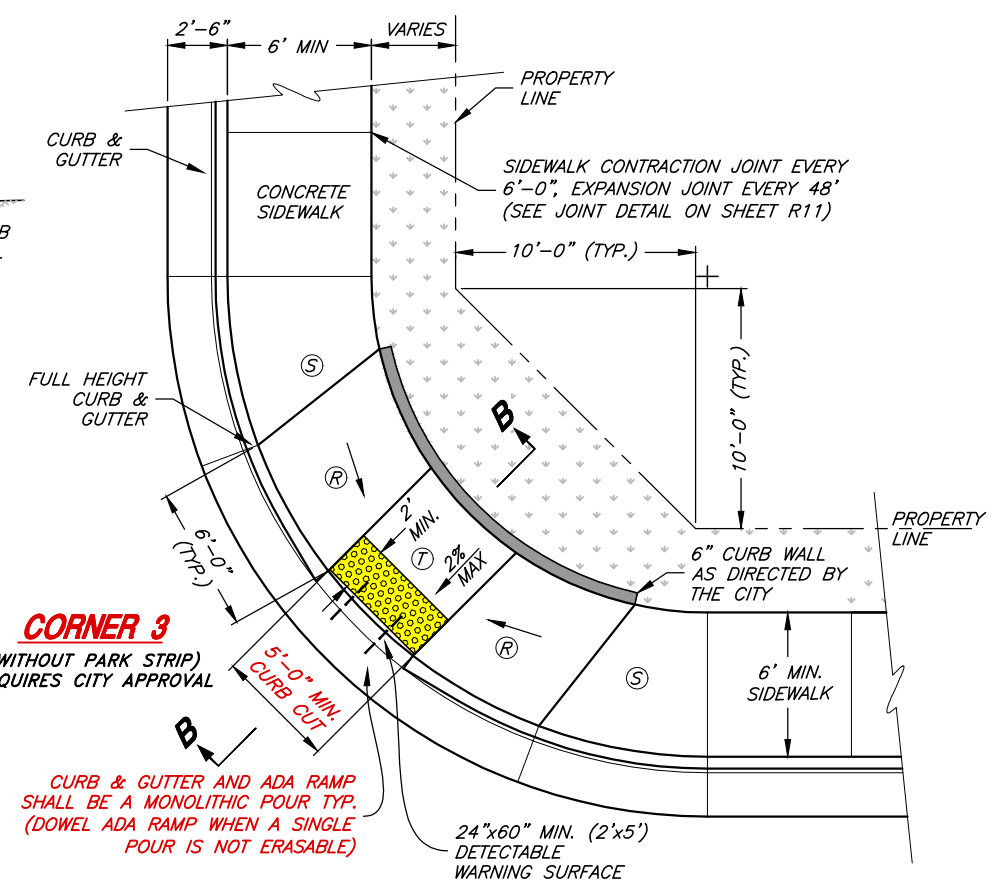
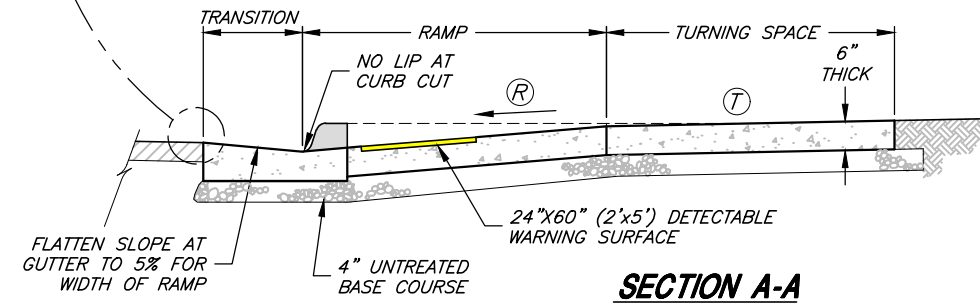
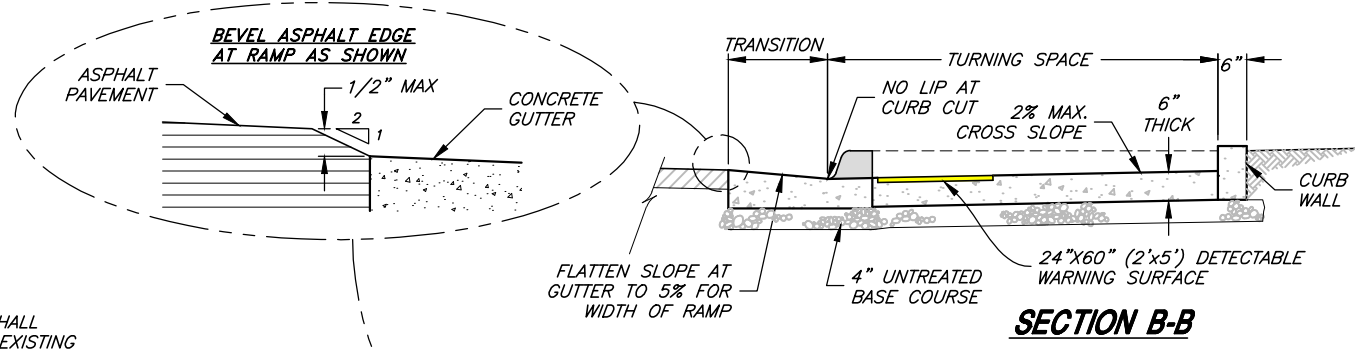
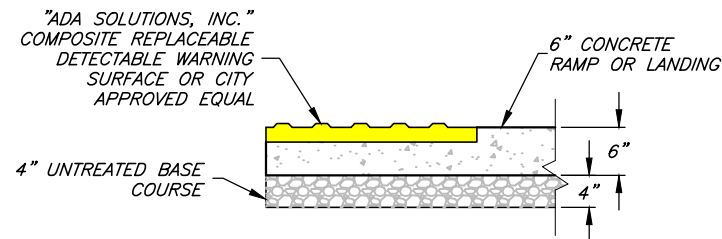
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**PLEASANT VIEW CITY CORPORATION**  
PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS  
**DIRECTIONAL ADA RAMP DETAILS - PRIMARY**

**DETECTABLE WARNING SURFACE NOTES:**  
 SEE SHEET R8 FOR GENERAL NOTES AND ADA RAMP NOTES.  
 (APPLIES TO SHEETS R8 AND R9)

- B1. LOCATE THE DETECTABLE WARNING SURFACE SO THE OUTSIDE CORNER NEAREST THE STREET IS WITHIN 1 INCH OF THE BACK OF CURB (T.B.C.). PROVIDE 2'-0" MINIMUM DEPTH.
- B2. PROVIDE DETECTABLE WARNING SURFACE FOR FULL WIDTH OF CURB CUT.
- B3. 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.
- B4. THE STANDARD COLOR FOR THE DETECTABLE WARNING SURFACE SHALL BE **YELLOW** 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.
- B5. WHEN A DETECTABLE WARNING SURFACE DOME IS CUT, THE REMAINING PORTION OF THE DOME SHALL BE BEVELED TO A MAXIMUM SLOPE OF 1:2.



CITY ENGINEER	DESIGNED	SCALE:
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DATE		

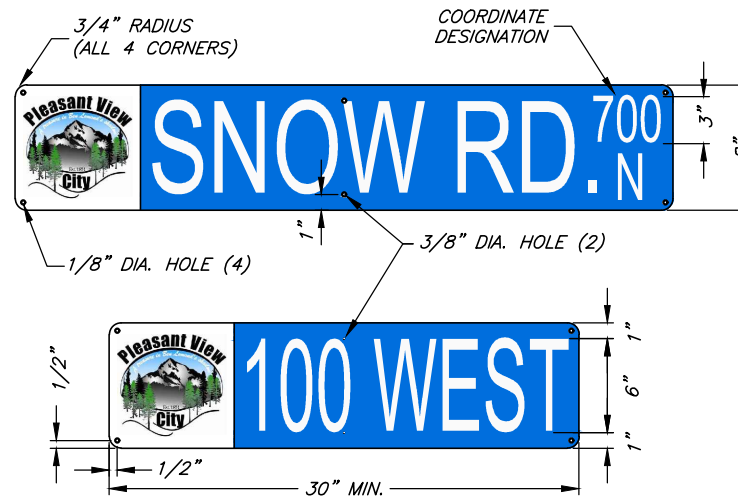
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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS**  
**OTHER ADA RAMP DETAILS**

**STREET SIGN NOTES:**

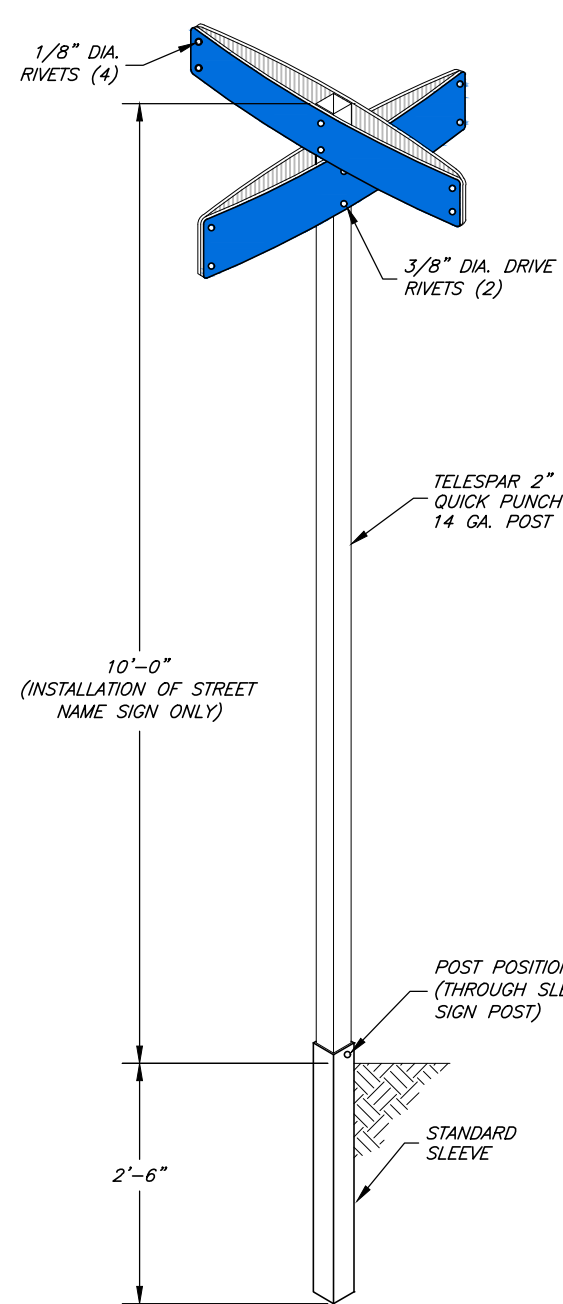
- A. STREET SIGN BACKGROUND SHALL BE REGULATORY BLUE, BOTH STREET AND TRAFFIC SIGNS SHALL BE AT THE VERY LEAST HIGH INTENSITY REFLECTIVE SHEETING (9FP-85 TYPE IIIA)
- B. LEGEND SHALL BE WHITE LETTERS (FONT: HIGHWAY C), HIGH INTENSITY REFLECTIVE SHEETING (9FP-85 IIIA)
- C. SIGN BLANK SHALL BE 6081-T6 HEAT TREATED HIGH TENSILE DECREASED ALUMINUM W/ ALODINE 1200 FINISH-THICKNESS SHALL BE 0.08"
- D. EACH SIGN SHALL CONSIST OF TWO PLATES RIVETED TOGETHER & MOUNTED AS SHOWN
- E. SIGNS ON PRIVATE ROADS SHALL MEET ALL SPECIFICATIONS FOR STANDARD SIGNS, EXCEPT IT SHALL CONTAIN "PRIVATE ROAD" SUBSCRIPT.
- F. ALL STREETS WITH NAMES MUST ALSO SHOW COORDINATE DESIGNATION
- G. ALL SIGNS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"



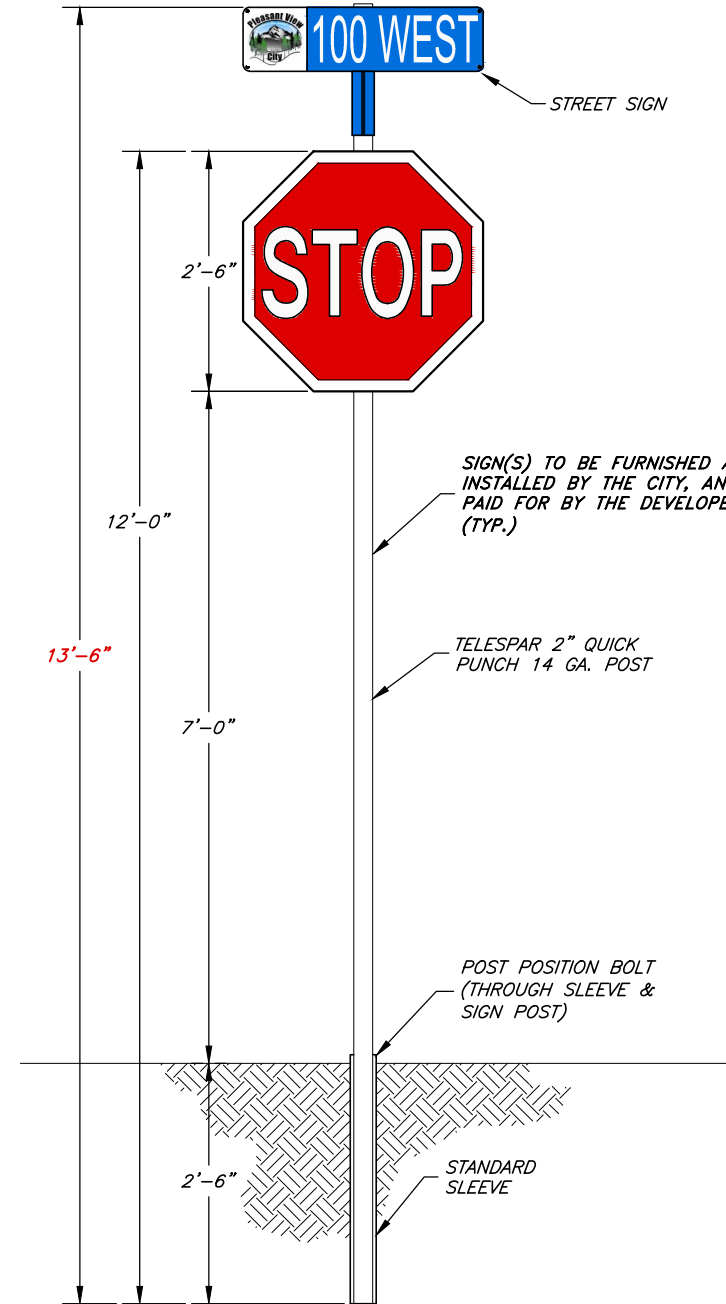
**CITY STANDARD PLATE DETAILS**



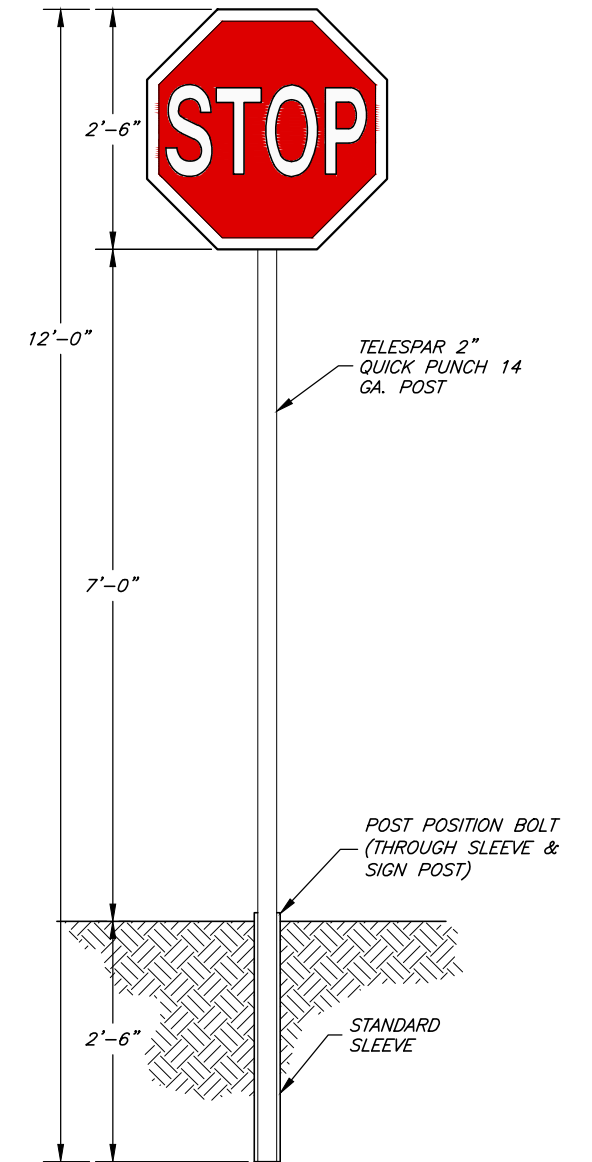
**PRIVATE ROAD PLATE DETAIL**  
(SEE STREET SIGN NOTE E THIS SHEET)



**STREET SIGN & POST**



**STREET / TRAFFIC SIGN & POST**



**TRAFFIC SIGN & POST**

CITY ENGINEER	REV.	DATE
DATE		

SCALE: N.T.S.



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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS**

**STREET SIGN DETAILS**

SHEET: **R10**  
OF X SHEETS  
0

**GENERAL NOTES:**

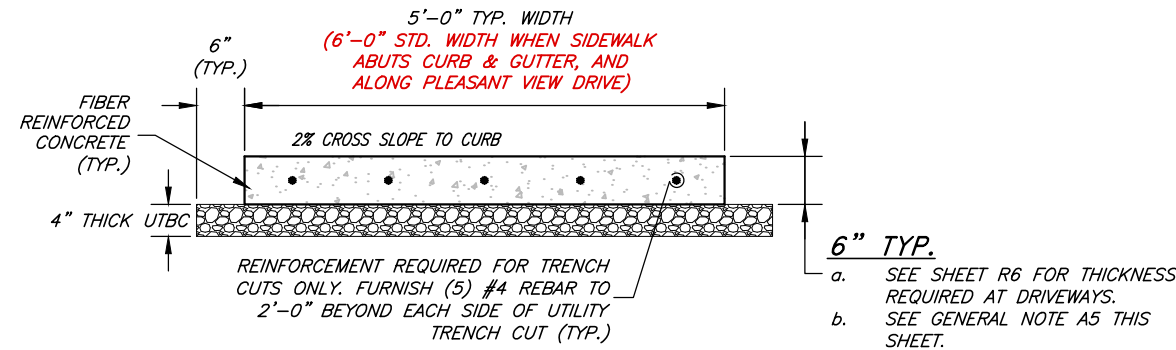
(APPLIES TO SHEETS R11 AND R12)

- A1. INSTALLATION TOLERANCES ON CURB & GUTTER AND SIDEWALK PER APWA 32 16 13, 3.7.
- A2. AS-BUILT SURVEY MAY BE REQUIRED TO VERIFY COMPLIANCE WITH TOLERANCES.
- A3. GRINDING OF CONCRETE, TO MEET TOLERANCES, WILL NOT BE ALLOWED.
- A4. FIBER MESH SHALL BE ADDED TO ALL CONCRETE (SEE TECHNICAL SPECIFICATIONS)
- A5. SCORE SIDEWALK 1/4" OF SIDEWALK THICKNESS AT EACH 4'-0", 5'-0", OR 6'-0" SECTION. EXPANSION JOINTS AS FOLLOWS:

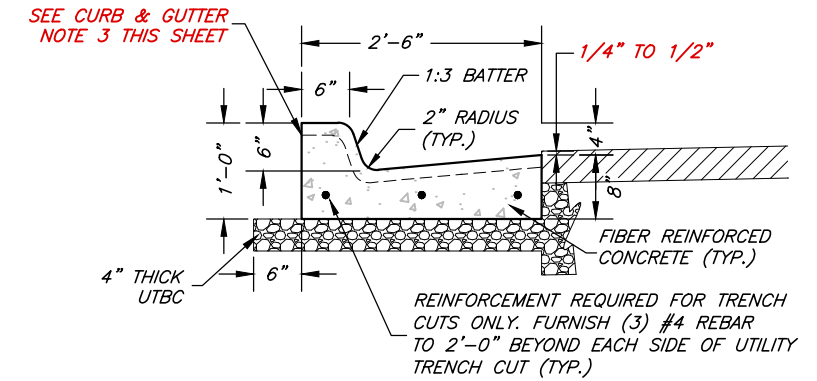
SIDEWALK WIDTH	EXPANSION JOINTS
4'-0"	32'-0"
5'-0"	50'-0"
6'-0"	48'-0"

- A6. CONCRETE CLASS: WHEN NOT SPECIFIED IN THE PLANS OR PROJECT SPECIFICATION, USE THE FOLLOWING TABLE TO SELECT THE CLASS OF CONCRETE REQUIRED FOR THE APPLICATION.

CONCRETE CLASS	APPLICATION
5,000	REINFORCED STRUCTURAL CONCRETE
4,000	SIDEWALKS, CURB, GUTTER, WATERWAYS CROSS GUTTERS, PAVEMENTS, AND UNREINFORCED FOOTINGS AND FOUNDATIONS
3,000 OR 4,000	THRUST BLOCKS, ANCHORS, AND MASS CONCRETE



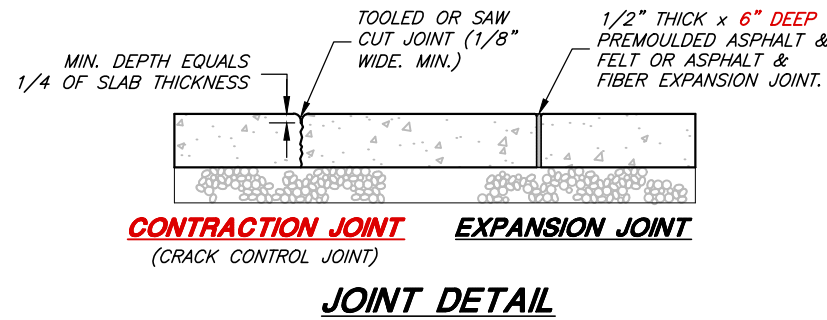
**SIDEWALK SECTION**  
(CITY STANDARD)



**CURB & GUTTER SECTION**  
(CITY STANDARD)

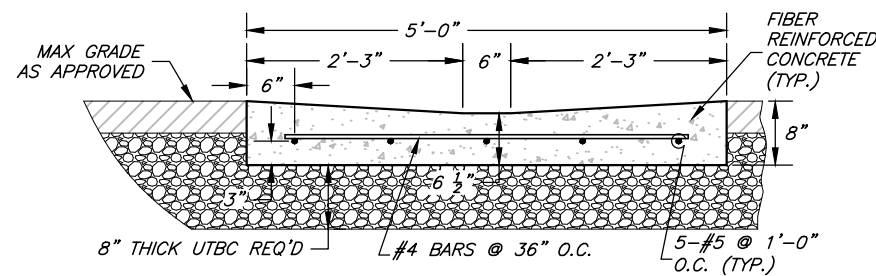
**CURB & GUTTER NOTES:**

- 1. WHEN REPLACING CURB DUE TO CONSTRUCTION ACTIVITY, NEW CURB MUST EXTEND 5' MIN. PAST TRENCH ON EACH SIDE.
- 2. THE SLOPE FOR CURB & GUTTER MUST BE A MINIMUM OF 0.5%.
- 3. CURB & GUTTER CONTRACTION JOINTS EVERY 10'-0" (MIN. DEPTH FOR SLIP FORM CUTS 1-1/2"), EXPANSION JOINTS EVERY 100'-0" (SEE JOINT DETAIL THIS SHEET)

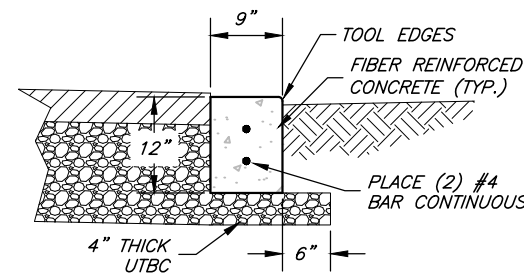


**CONTRACTION JOINT**      **EXPANSION JOINT**  
(CRACK CONTROL JOINT)

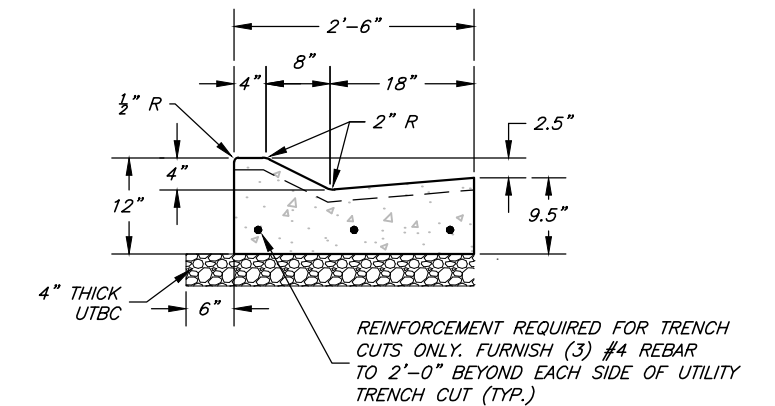
**JOINT DETAIL**



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



**RIBBON CURB & GUTTER SECTION**  
STANDARD FOR LOW IMPACT ROAD (RESIDENTIAL) AND THE 60' RURAL SUBDIVISION ROAD SECTIONS (CONCRETE EDGE FOR ASPHALT)



**ROLL CURB & GUTTER SECTION**  
REQUIRES PRE-APPROVAL BY THE CITY PRIOR TO CONSTRUCTION (UDOT TYPE M1, APWA TYPE F)

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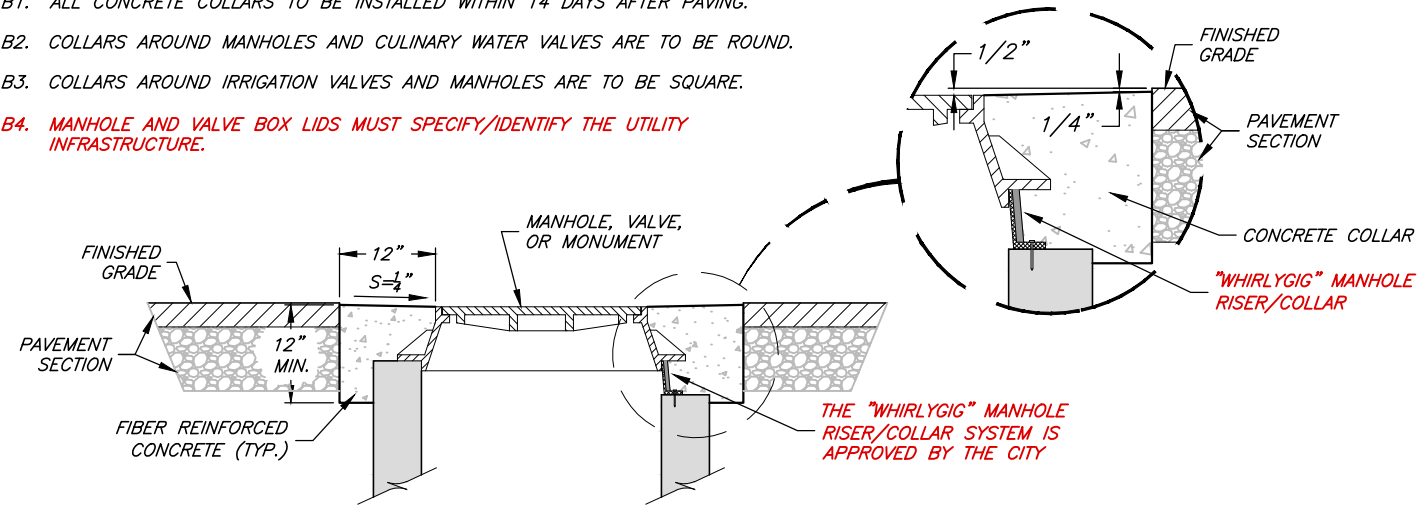
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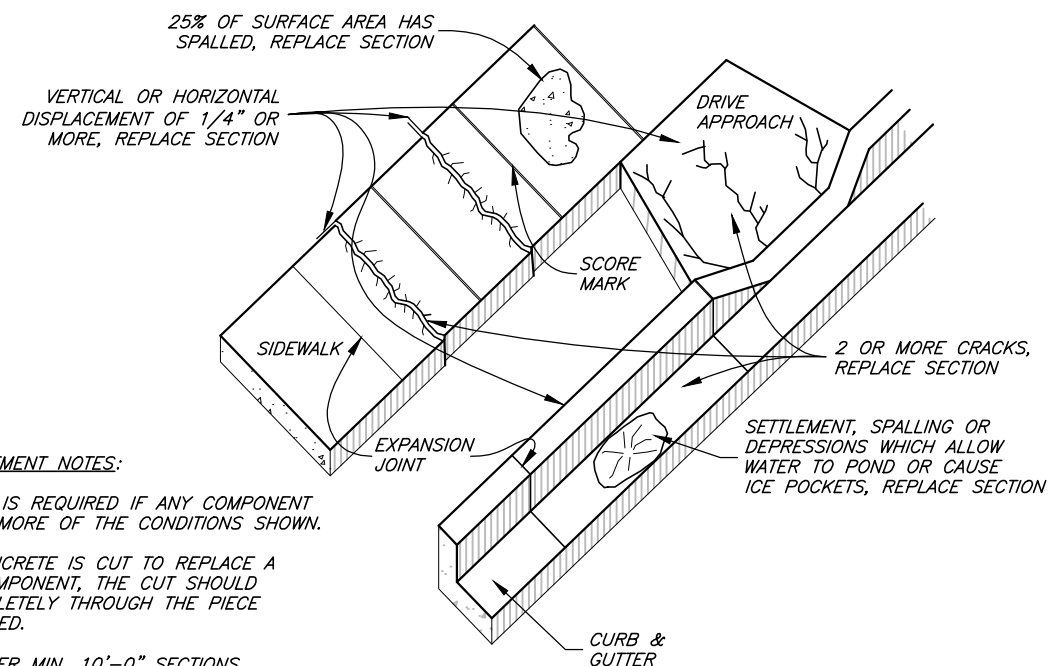
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**PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS**  
**TYPICAL SIDEWALK, CURB & GUTTER, AND CROSS DRAIN DETAILS**

**CONCRETE COLLAR NOTES:**

- B1. ALL CONCRETE COLLARS TO BE INSTALLED WITHIN 14 DAYS AFTER PAVING.
- B2. COLLARS AROUND MANHOLES AND CULINARY WATER VALVES ARE TO BE ROUND.
- B3. COLLARS AROUND IRRIGATION VALVES AND MANHOLES ARE TO BE SQUARE.
- B4. MANHOLE AND VALVE BOX LIDS MUST SPECIFY/IDENTIFY THE UTILITY INFRASTRUCTURE.**



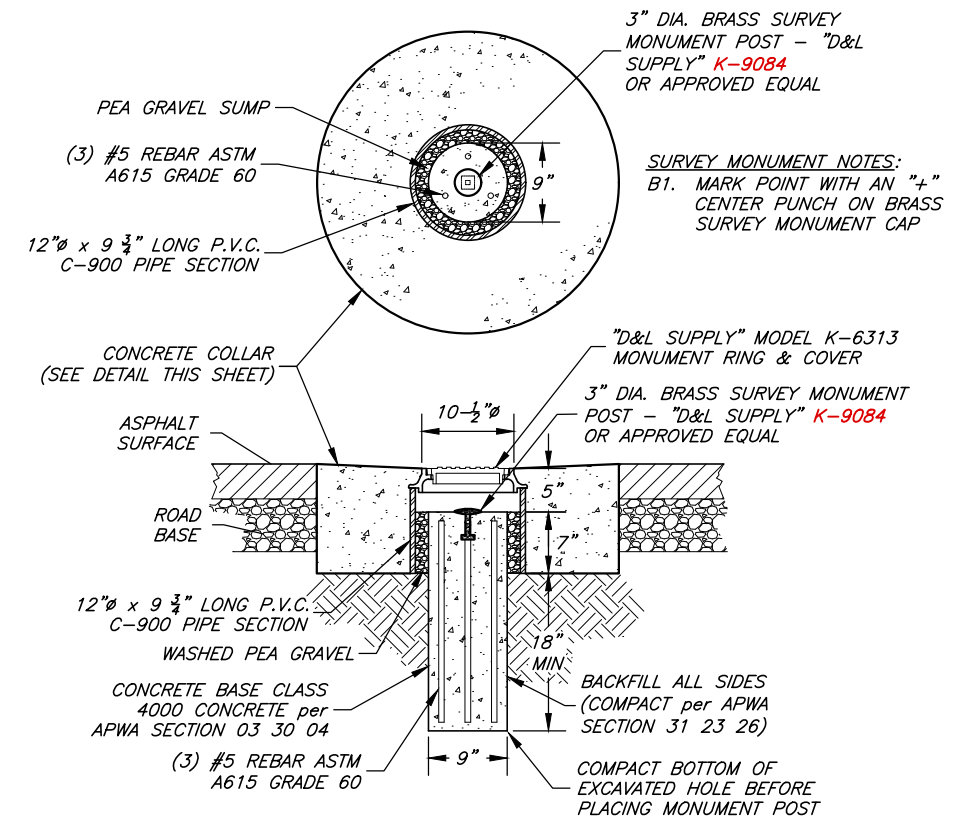
**CONCRETE COLLAR DETAIL**



**CONCRETE REPLACEMENT NOTES:**

- A. REPLACEMENT IS REQUIRED IF ANY COMPONENT HAS ONE OR MORE OF THE CONDITIONS SHOWN.
- B. ANY TIME CONCRETE IS CUT TO REPLACE A DEFECTIVE COMPONENT, THE CUT SHOULD EXTEND COMPLETELY THROUGH THE PIECE BEING REPLACED.
- C. CURB & GUTTER MIN. 10'-0" SECTIONS.
- D. WHEN REPLACING EXISTING SIDEWALK, MATCH THE EXISTING SIDEWALK WIDTH UNLESS OTHERWISE DIRECTED BY THE CITY.

**DEFECTIVE CONCRETE REPLACEMENT CRITERIA**



**SURVEY MONUMENT DETAIL**

CENTERLINE ROAD MONUMENTS ONLY

CITY ENGINEER	REV.	DATE
DATE		

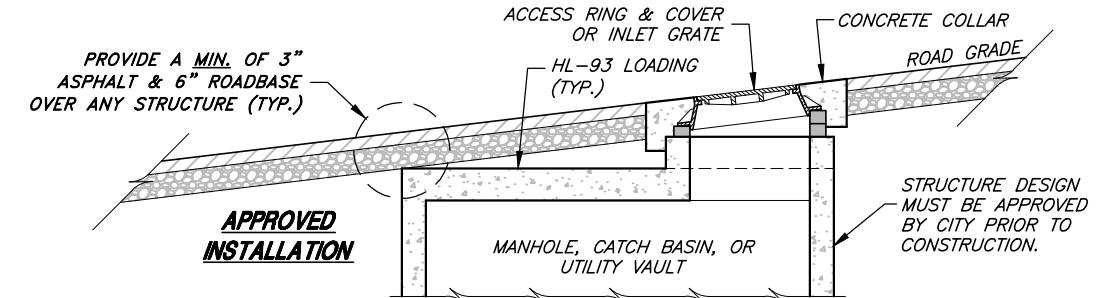
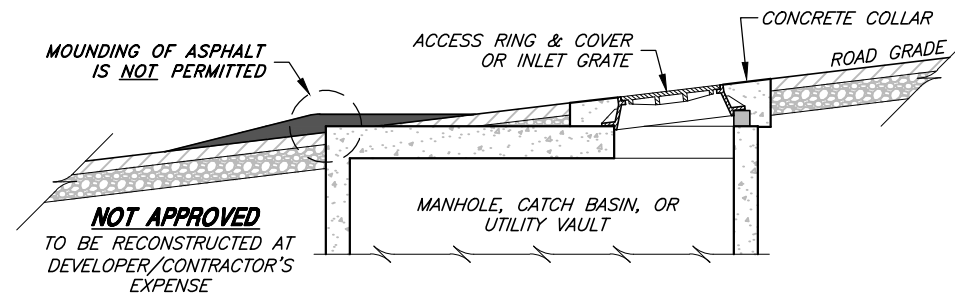
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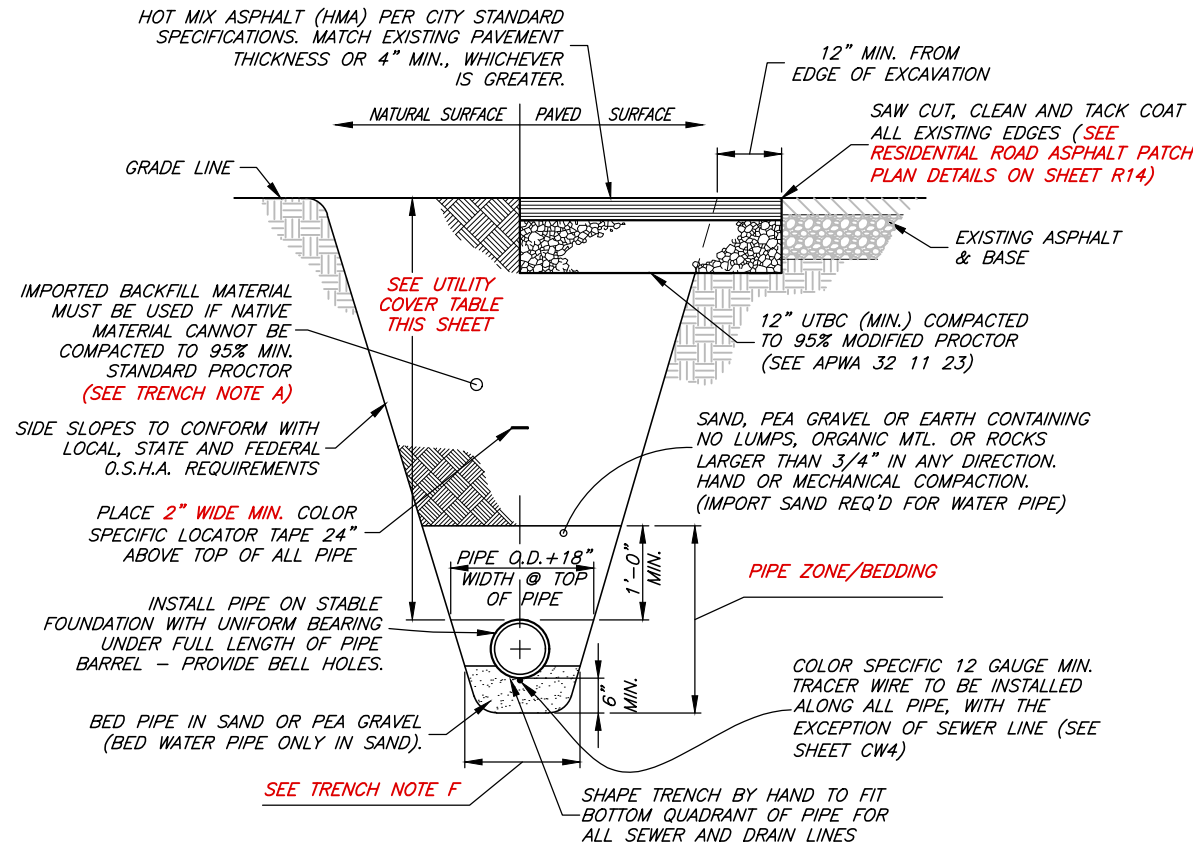


**PLEASANT VIEW CITY CORPORATION**  
 PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS  
**TYPICAL CONCRETE COLLAR, SURVEY MONUMENT, AND DEFECTIVE CONC. REPLACEMENT DETAILS**

UTILITY	COVER MIN.-MAX.
CULINARY WATER	48"-72"
SECONDARY WATER	36"-**"
STORM DRAIN	24"-60"
SANITARY SEWER	60"-**"
COMMUNICATIONS	18"-36"
GAS & ELECTRICAL	PER PROVIDER



**STRUCTURE TO ASPHALT DETAIL**



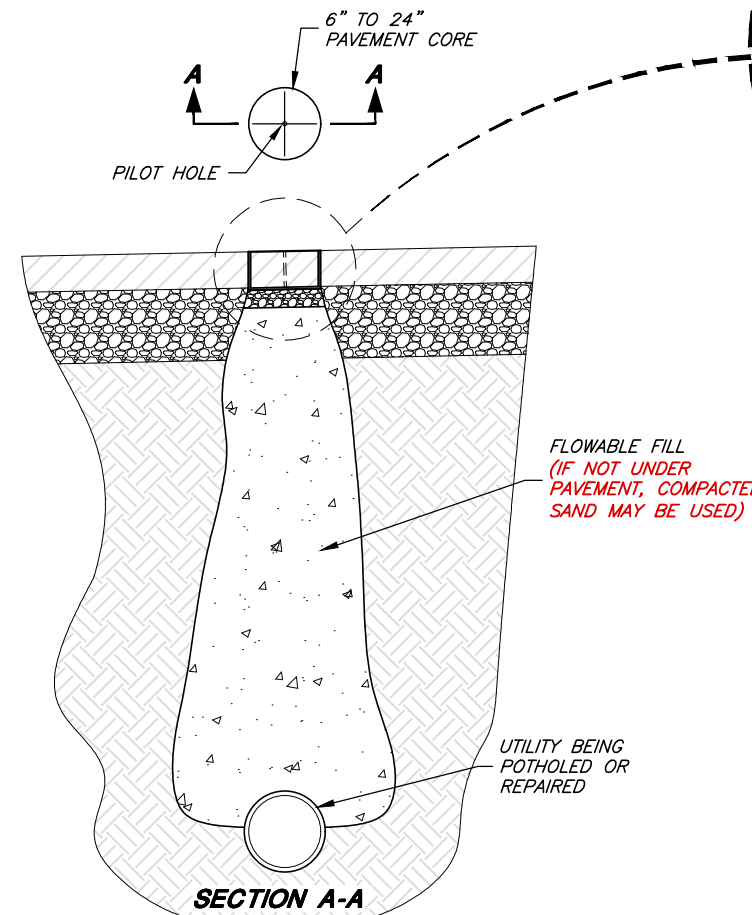
**TYPICAL TRENCH SECTION**

(WATER, IRRIGATION, SEWER, STORM DRAIN, AND LAND DRAIN)

**TRENCH NOTES:**

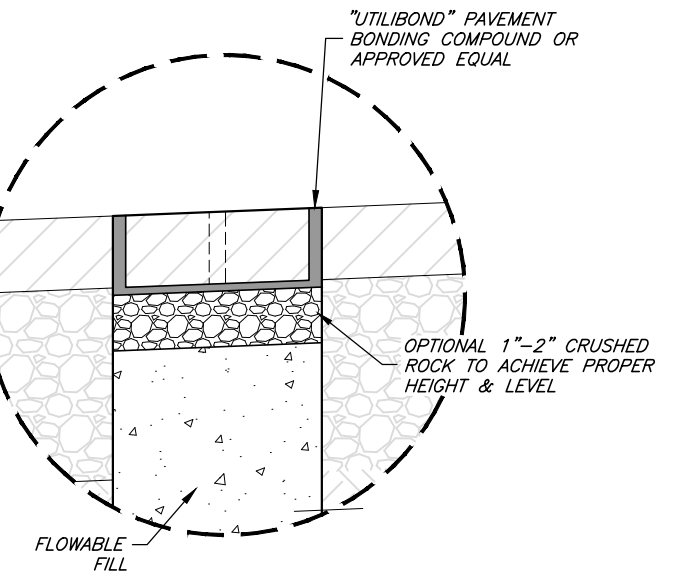
- BACKFILL PER APWA 33 05 20 - GRANULAR BORROW, 3" MAX, COMPACTED TO 95% PROCTOR REQ'D UNDER ALL PAVEMENT.
- COMPACTION TEST REQUIRED AT SPRING-LINE FOR ALL P.V.C. OR H.D.P.E. PIPES.
- PAVEMENT RESTORATION PER APWA 33 05 25 AND CITY MODIFICATIONS.
- GRAVEL SURFACED AREAS, SUCH AS ROADS AND SHOULDERS, PARKING AREAS, AND UNPAVED DRIVEWAYS, SHALL BE REPAIRED WITH 8" THICK (MIN.) 1" UNTREATED BASE COURSE COMPACTED TO 95% MODIFIED PROCTOR.
- WATER & SEWER LINES, INCLUDING SERVICE LINES, SHALL NOT BE INSTALLED IN THE SAME TRENCH.
- WHEN BEDROCK IS PRESENT, PIPE ZONE WIDTH SHALL BE 2'-0" EITHER SIDE OF PIPE.

BOND MATERIAL PROPERTIES		
PROPERTY	ASTM TEST METHOD	REQUIREMENTS
BOND STRENGTH, PSI (@ 70° F., 30 MIN. CURE)	C882	200 MIN.
COMPRESSIVE STRENGTH, PSI (@ 70° F., 60 MIN. CURE)	C109	1500 MIN.



**UTILITY POTHOLES DETAIL**

KEYHOLE METHOD



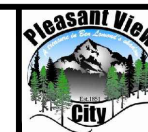
**UTILITY POTHOLES NOTES:**

- CONTRACTOR SHALL PLACE A TEMPORARY PAINT MARK ON THE PAVEMENT TO ASSURE CORE IS REPLACED IN THE SAME ORIENTATION.
- CORING SHALL BE COMPLETED PERPENDICULAR TO THE HORIZON (NOT THE PAVEMENT), AND SHALL EXTEND THE FULL ASPHALT DEPTH. CORING SHALL BE COMPLETED USING A KEYHOLE CORING SAW CAPABLE OF REMOVING AN INTACT CORE OF PAVEMENT.
- CORES SHALL NOT BE LESS THAN 6 INCHES IN DIAMETER AND NO MORE THAN 24 INCHES IN DIAMETER.
- SOIL SHALL BE REMOVED USING AIR/VACUUM EXTRACTION METHODS AND DISPOSED PROPERLY OFF SITE.
- FLOWABLE FILL SHALL BE USED TO BACKFILL THE HOLE TO WITHIN ONE TO TWO INCHES OF THE BOTTOM OF THE EXISTING PAVEMENT.
- COMPACTED GRAVEL IF NECESSARY SHALL BE USED TO BRING THE POTHOLE TO THE BOTTOM OF PAVEMENT GRADE. THE TEMPORARY PAINT MARK SHALL BE USED TO ALIGN THE CORE TO ITS ORIGINAL POSITION AND THE GRAVEL SHALL BE USED TO LEVEL THE CORE SO THE FINISH GRADE IS FLUSH WITH THE SURROUNDING ASPHALT.
- PAVEMENT BONDING COMPOUND SHALL BE USED TO RESTORE THE CORE TO ITS ORIGINAL CONDITION COMPLETELY FLUSH WITH THE SURROUNDING ASPHALT. THE COMPOUND SHALL BE POURED IN THE POTHOLE AND THE CORE PLACE IN AFTER CAUSING THE PAVEMENT BONDING COMPOUND TO FLOW TO THE SURFACE. ALL EXCESS BONDING AGENT SHALL BE REMOVED.
- CORES SHALL BE ALLOWED TO CURE PER MANUFACTURER'S RECOMMENDATIONS PRIOR TO OPENING TO TRAFFIC.

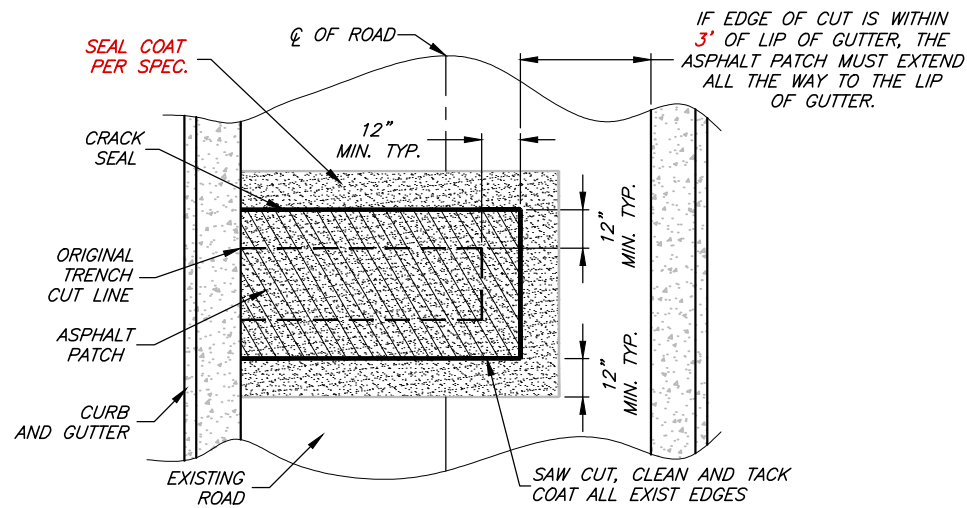
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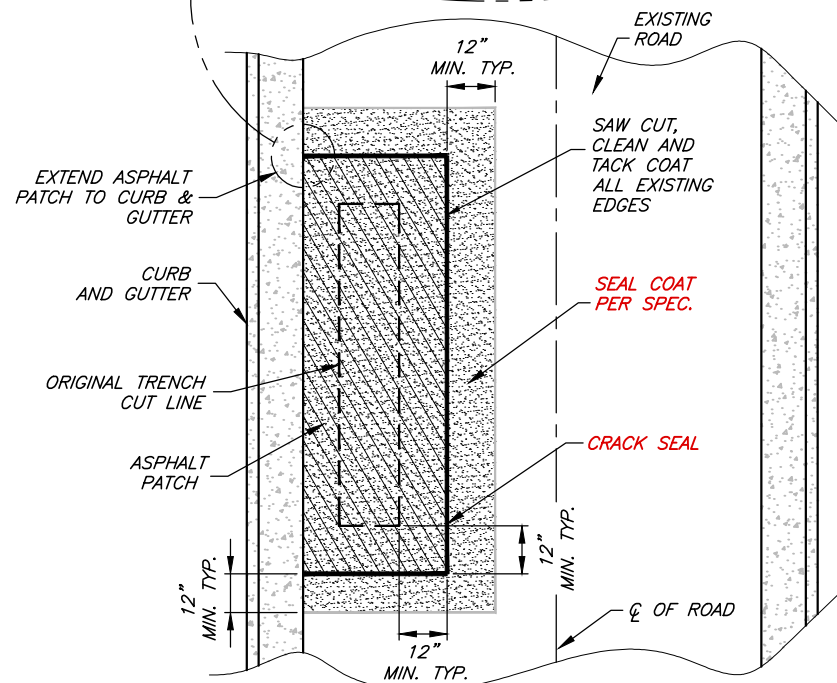
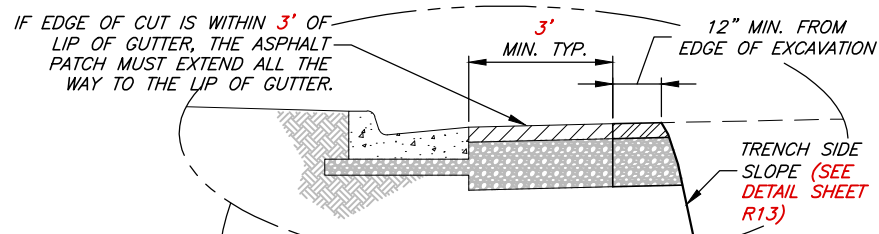
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**PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS**  
**UTILITY TRENCH, UTILITY POTHOLES, AND**  
**STRUCTURE TO ASPHALT CLEARANCE DETAILS**



**TYPICAL HORIZONTAL ASPHALT PATCH PLAN**  
RESIDENTIAL / LOCAL ROADWAYS



**TYPICAL PARALLEL ASPHALT PATCH PLAN**  
RESIDENTIAL / LOCAL ROADWAYS

**ASPHALT PATCH NOTES:**

- B1. ON ANY ROAD PAVED OR OVERLAYED WITHIN THE LAST 10 YEARS, THE PATCH MUST BE COMPLETED PER APWA PLAN 255 (BITUMINOUS PAVEMENT T-PATCH).
- B2. NO ANGLED ASPHALT PATCHING ALLOWED.

**BITUMINOUS PAVEMENT T-PATCH NOTES:**

**1. GENERAL:**

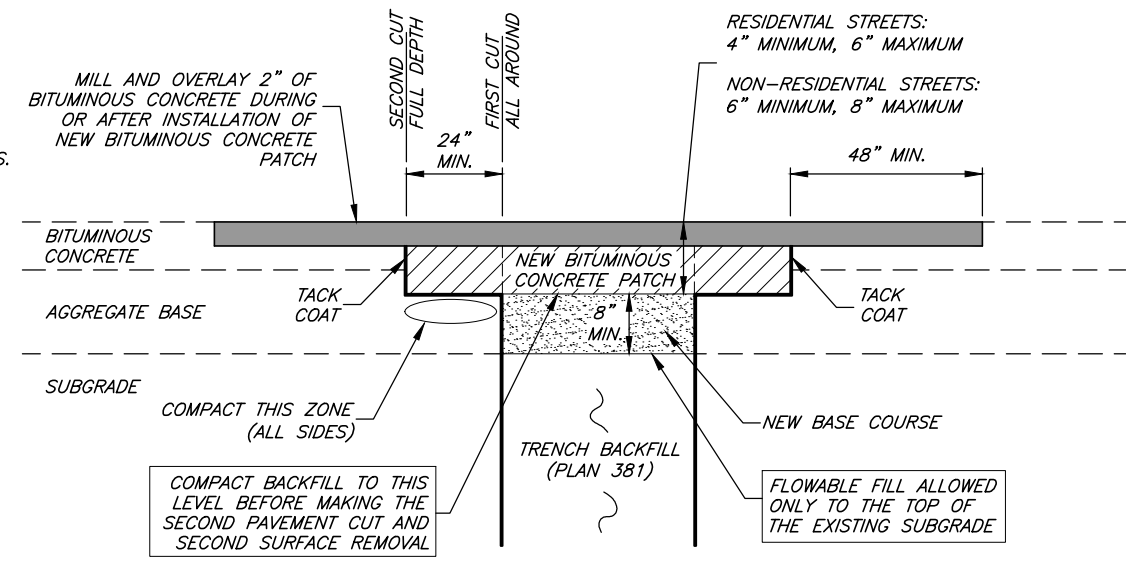
- A. VERTICAL CUTS IN BITUMINOUS PAVEMENT MAY BE DONE BY SAW OR PAVEMENT ZIPPING. IF CUTS GREATER THAN 6" ARE NECESSARY TO PREVENT PAVEMENT "BREAK OFF" CONSULT CITY ENGINEER FOR DIRECTION ON HANDLING ADDITIONAL COSTS.
- B. REPAIR A T-PATCH RESTORATION IF ANY OF THE FOLLOWING CONDITIONS OCCUR PRIOR TO FINAL PAYMENT OR AT THE END OF THE ONE YEAR CORRECTION PERIOD:
  - 1) PAVEMENT SURFACE DISTORTION EXCEEDS 1/4" DEVIATION IN 10'-0".  
REPAIR OPTION: PLANE OFF SURFACE DISTORTIONS. COAT PLANED SURFACE WITH A CATIONIC OR ANIONIC MULSION THAT COMPLIES WITH APWA SECTION 32 12 03.
  - 2) SEPARATION APPEARS AT A CONNECTION TO AN EXISTING PAVEMENT OR ANY STREET FIXTURE.  
REPAIR OPTION: BLOW SEPARATION CLEAN AND APPLY JOINT SEALANT, PLAN 265.
  - 3) CRACKS AT LEAST 1'-0" LONG AND 1/4" WIDE OCCUR MORE OFTEN THAN 1 IN 10 SQUARE FEET.  
REPAIR OPTION: BLOW CLEAN AND APPLY CRACK SEAL, PLAN 265.
  - 4) PAVEMENT RAVELING IS GREATER THAN 1 SQUARE FOOT PER 100 SQUARE FEET.  
REPAIR OPTION: MILL AND INLAY, APWA SECTIONS 32 01 16.71 AND 32 12 05.

**2. PRODUCTS:**

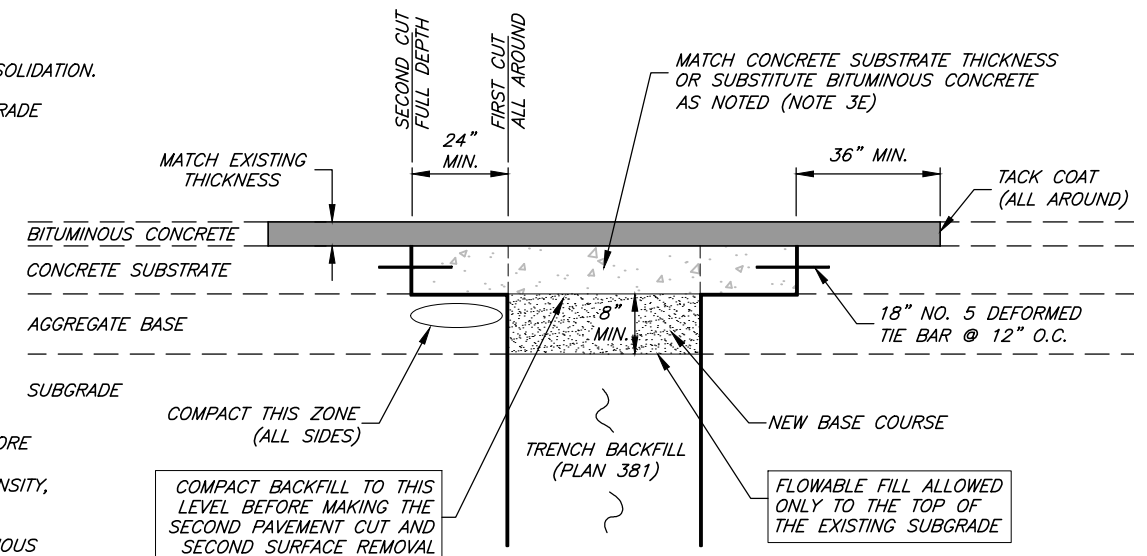
- A. **BASE COURSE:** UNTREATED BASE COURSE, APWA SECTION 32 11 23. DO NOT USE GRAVEL AS A BASE COURSE WITHOUT CITY ENGINEER'S WRITTEN APPROVAL.
- B. **FLOWABLE FILL:** TARGET IS 60 PSI IN 28 DAYS WITH 90 PSI MAXIMUM IN 28 DAYS, APWA SECTION 31 05 15. IT MUST FLOW EASILY REQUIRING NO VIBRATION FOR CONSOLIDATION.
- C. **REINFORCEMENT:** NO. 5 GALVANIZED OR EPOXY COATED, DEFORMED, 60 KSI YIELD GRADE STEEL, ASTM A615.
- D. **CONCRETE:** CLASS 4000, APWA SECTION 03 30 04.
- E. **TACK COAT:** APWA SECTION 32 12 05.
- F. **BITUMINOUS CONCRETE:** APWA SECTION 32 12 05.
  - 1) WARM WEATHER PATCH: PG64-22-DM-1/2, UNLESS INDICATED OTHERWISE.
  - 2) COLD WEATHER PATCH: MODIFIED MC-250-FM-1 AS INDICATED IN APWA SECTION 33 05 25.

**3. EXECUTION:**

- A. **BASE COURSE PLACEMENT:** APWA SECTION 32 05 10. MAXIMUM LIFT THICKNESS BEFORE COMPACTION IS 8" WHEN USING RIDING EQUIPMENT OR 6" WHEN USING HAND HELD EQUIPMENT. COMPACTION IS 95% OR GREATER RELATIVE TO A MODIFIED PROCTOR DENSITY, APWA SECTION 31 23 26.
- B. **FLOWABLE FILL:** CURE TO INITIAL SET BEFORE PLACING AGGREGATE BASE OR BITUMINOUS PAVEMENT. USE IN EXCAVATIONS THAT ARE TOO NARROW TO RECEIVE COMPACTION EQUIPMENT.
- C. **TACK COAT:** CLEAN ALL HORIZONTAL AND VERTICAL SURFACES. APPLY FULL COVERAGE ALL SURFACES.
- D. **PAVEMENT PLACEMENT:** FOLLOW APWA SECTION 32 12 16.13. UNLESS INDICATED OTHERWISE, LIFT THICKNESS IS 3" MINIMUM AFTER COMPACTION. COMPACT TO 94% OF ASTM D2041 (RICE DENSITY) PLUS OR MINUS 2%
- E. **BITUMINOUS CONCRETE SUBSTITUTION:** IF BITUMINOUS CONCRETE IS SUBSTITUTED FOR PORTLAND CEMENT CONCRETE SUBSTRATE, OMIT REBAR AND PROVIDE 1.25" OF BITUMINOUS CONCRETE FOR EACH 1" OF PORTLAND CEMENT CONCRETE. FOLLOW PARAGRAPH E REQUIREMENTS.
- F. **REINFORCEMENT:** REQUIRED IF THICKNESS OF EXISTING PORTLAND-CEMENT CONCRETE SUBSTRATE IS 6" OR GREATER. NOT REQUIRED IF:
  - 1) LESS THAN 6" THICK,
  - 2) IF EXISTING CONCRETE IS DETERIORATING,
  - 3) IF EXCAVATION IS LESS THAN 3'-0" SQUARE, OR
  - 4) IF BITUMINOUS PAVEMENT IS SUBSTITUTED FOR PORTLAND-CEMENT CONCRETE SUBSTRATE.
- G. **CONCRETE SUBSTRATE:** CURE TO INITIAL SET BEFORE PLACING NEW BITUMINOUS CONCRETE PATCH.



**BITUMINOUS CONCRETE RESTORATION**



**COMPOSITE RESTORATION**  
(PLEASANT VIEW DR.)



Bituminous pavement T-patch  
COLLECTOR / ARTERIAL STREETS

Plan  
**255**  
November 2015

CITY ENGINEER	REV.	DATE
DATE		

SCALE:  
N.T.S.

DESIGNED \_\_\_\_\_  
DRAWN \_\_\_\_\_  
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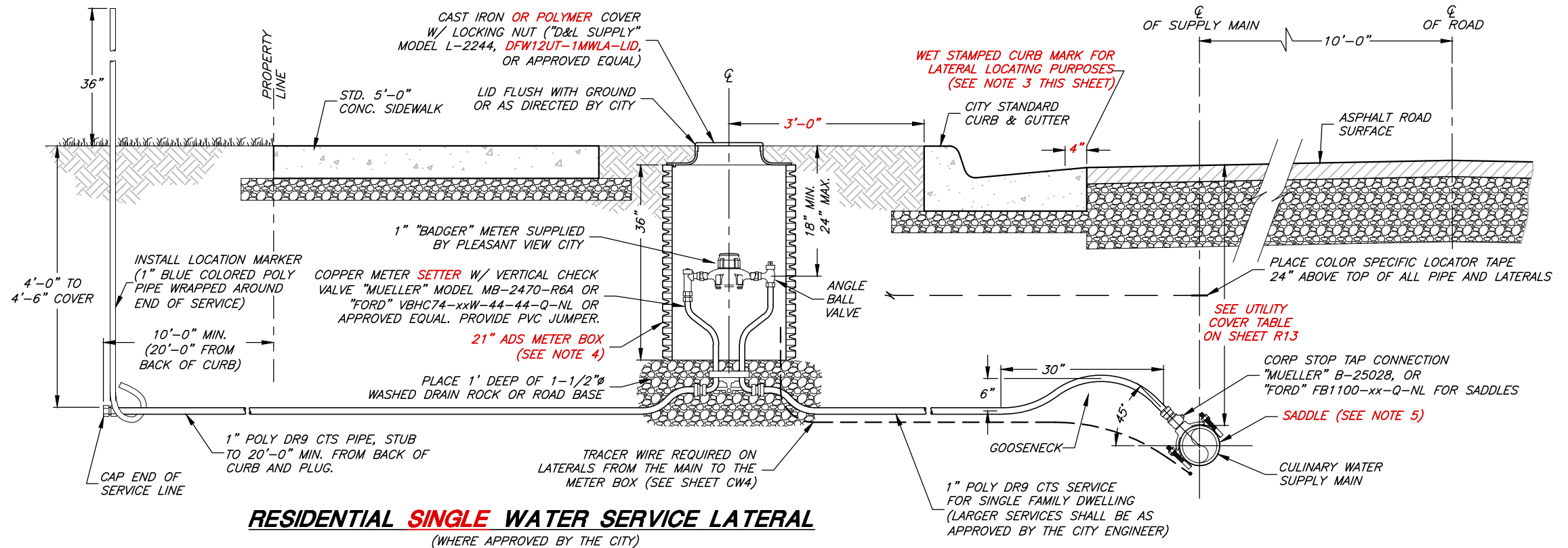
<b>PLEASANT VIEW CITY CORPORATION</b>		<b>ASPHALT PATCH PLAN DETAILS</b>
<b>PUBLIC WORKS - ROAD IMPROVEMENT STANDARDS</b>		
<b>ASPHALT PATCH PLAN DETAILS</b>		SHEET: <b>R14</b> OF X SHEETS 0

**SERVICE LATERAL NOTES:**

1. ALL FITTINGS SHALL BE "MUELLER" OR "FORD" COMPRESSION TYPE UNLESS OTHERWISE NOTED.
2. ALL SUPPLIES, LABOR, MACHINERY, ETC. WILL BE SUPPLIED BY THE CONTRACTOR. PLEASANT VIEW CITY WILL SUPPLY AND SET THE METER ONLY ON 1" CONNECTIONS. THE CONTRACTOR SHALL SUPPLY METERS FOR CONNECTIONS GREATER THAN 1".
3. WET STAMPED CONCRETE CURB MARKS USED FOR LATERAL LOCATING ARE REQUIRED BY THE CITY. STAMPED CURB MARKS SHALL BE INSTALLED DURING ALL NEW CONSTRUCTION OR RESTORED WHEN REPLACING DAMAGED CURB & GUTTER DUE TO ANY CONSTRUCTION RELATED ACTIVITY. STAMP "S" FOR SANITARY SEWER, "W" FOR CULINARY WATER, AND "L" FOR LAND DRAIN.
4. ALL CULINARY WATER METERS SHALL BE LOCATED AS SHOWN ON SHEET CW2 AND SHOULD NOT BE LOCATED WITHIN THE DRIVEWAY AREA. IF A DRIVEWAY IS PLACED OVER AN EXISTING METER, SEE DETAIL AND NOTES ON SHEET CW6.
5. SERVICE SADDLES:

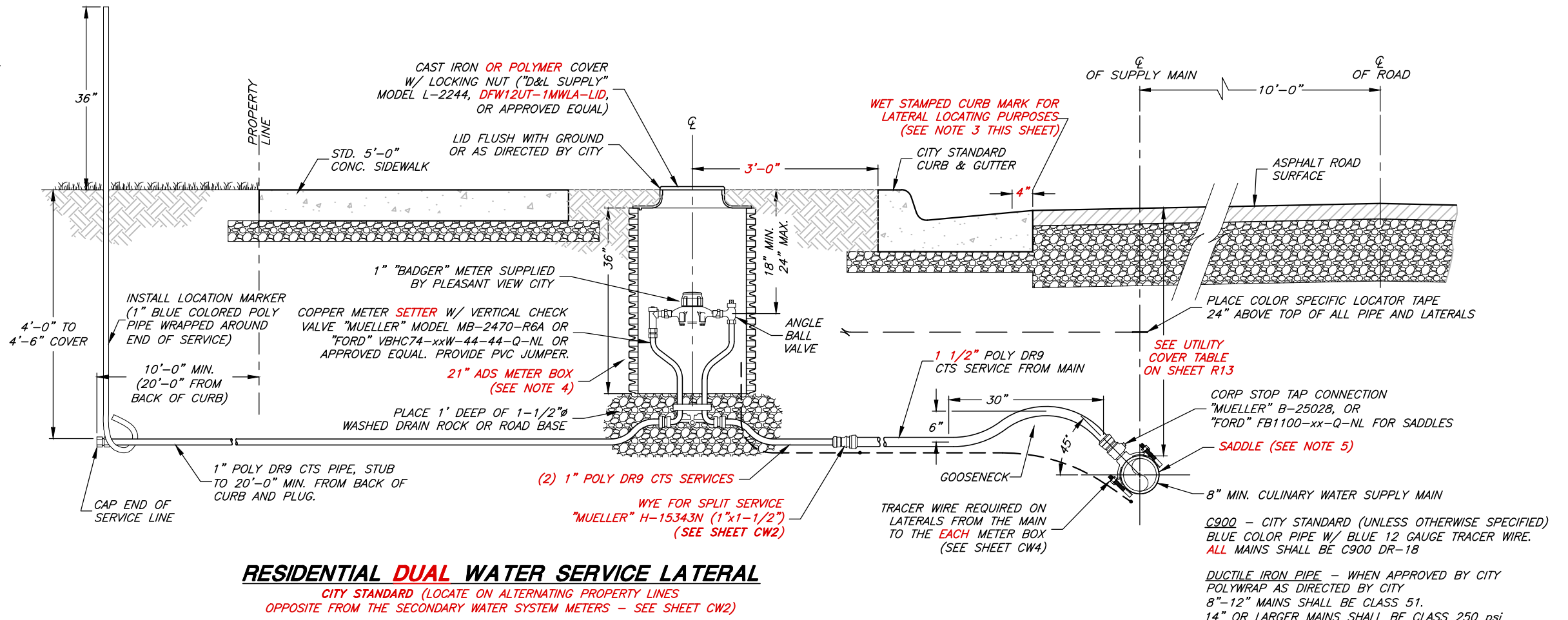
CITY APPROVED SERVICE SADDLES	
MAKE	MODEL
1. "ROMAC"	202BS 202S
2. "FORD"	202BSD FCD202
3. "MUELLER"	BR2S DR2S

ALL SERVICE SADDLE MODELS SHALL HAVE TWO (DOUBLE) STAINLESS STEEL STRAPS (TYP.)



**CULINARY WATER GENERAL NOTES:**

- A1. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
- A2. 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.
- A3. ALL PIPES, JOINTS, FITTINGS, VALVES, & FIRE HYDRANTS SHALL CONFORM TO ANSI / NSF 61.
- A4. ALL WATER SYSTEM MATERIALS SHALL BE NEW; USED MATERIALS ARE NOT ALLOWED.
- A5. 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.



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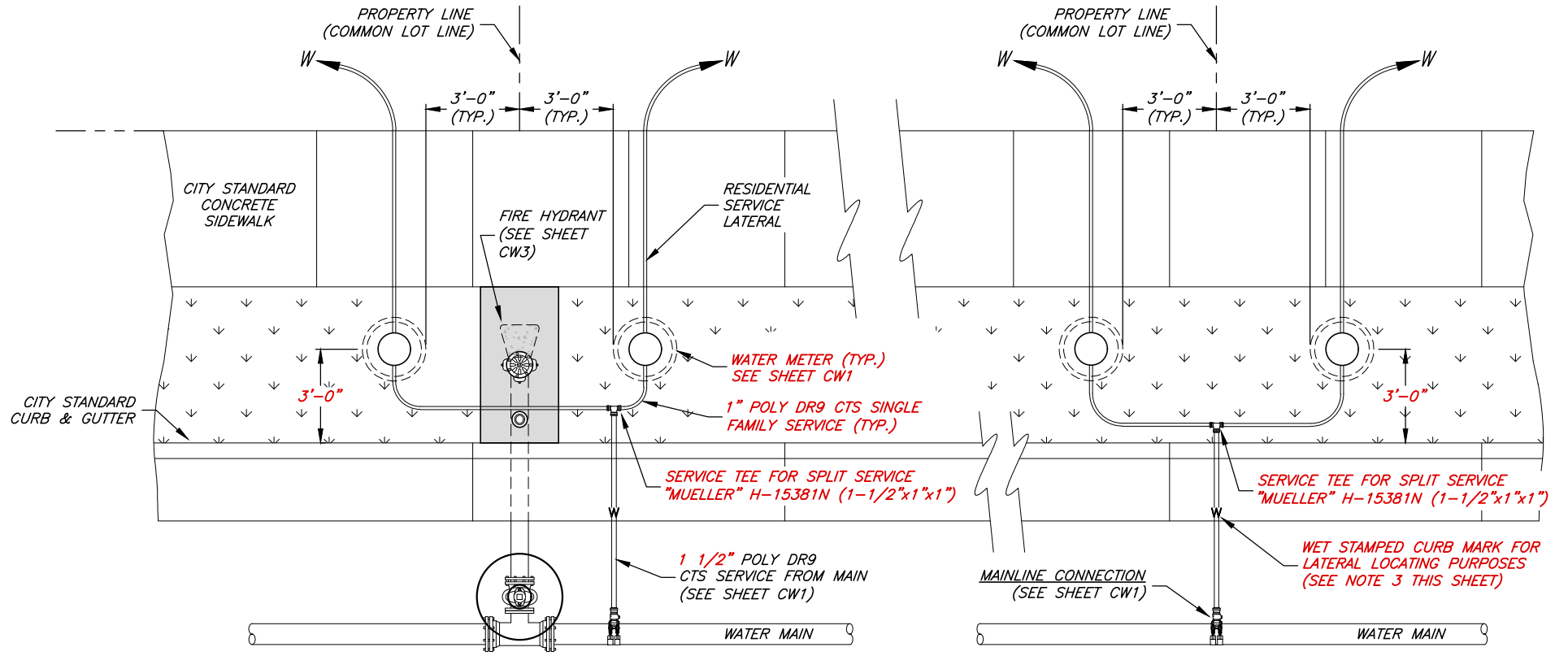

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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - CULINARY WATER SYSTEM STANDARDS**  
**RESIDENTIAL WATER SERVICE CONNECTION DETAILS**

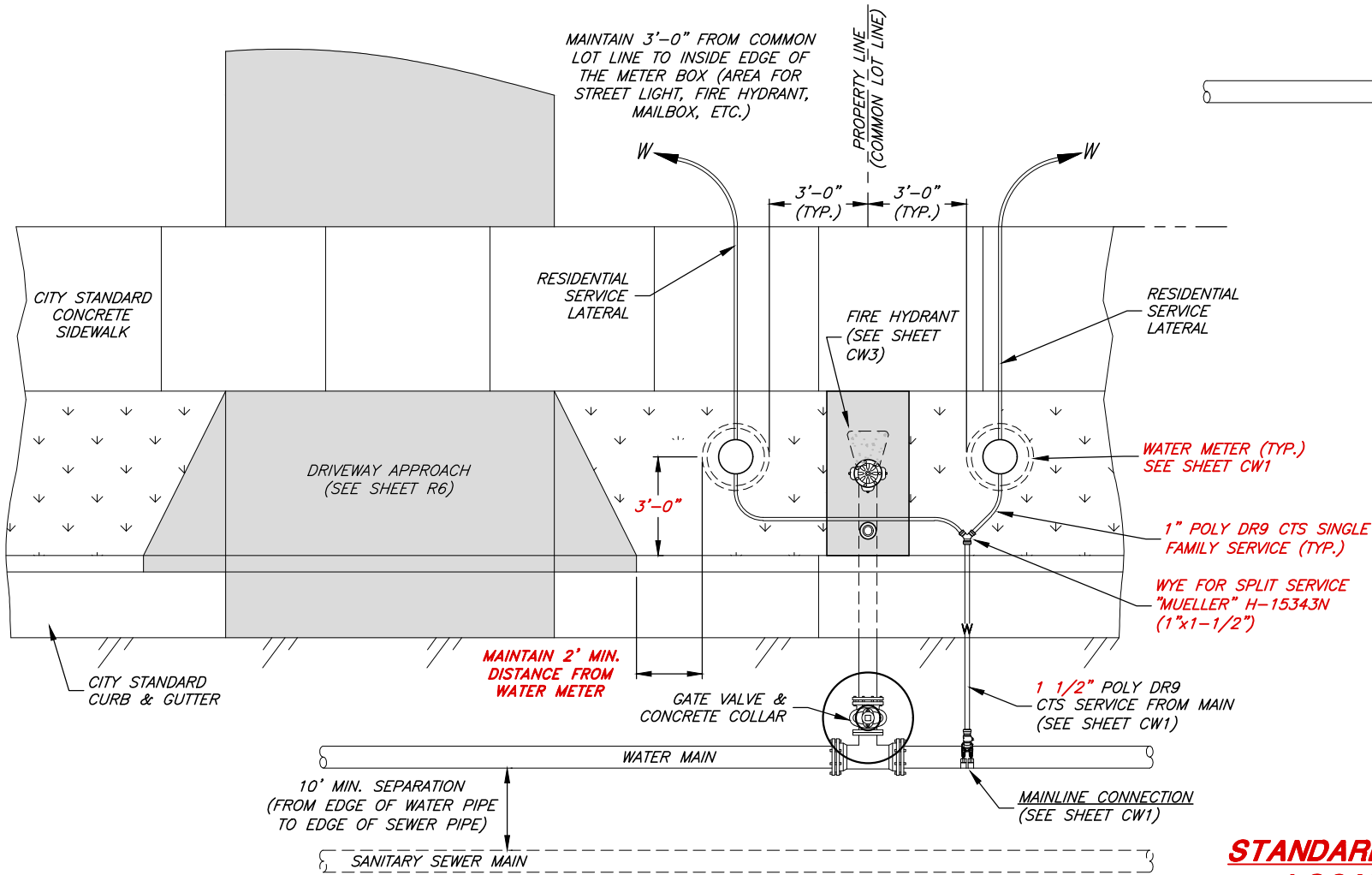
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**DUAL WATER SERVICE LATERAL NOTES:**

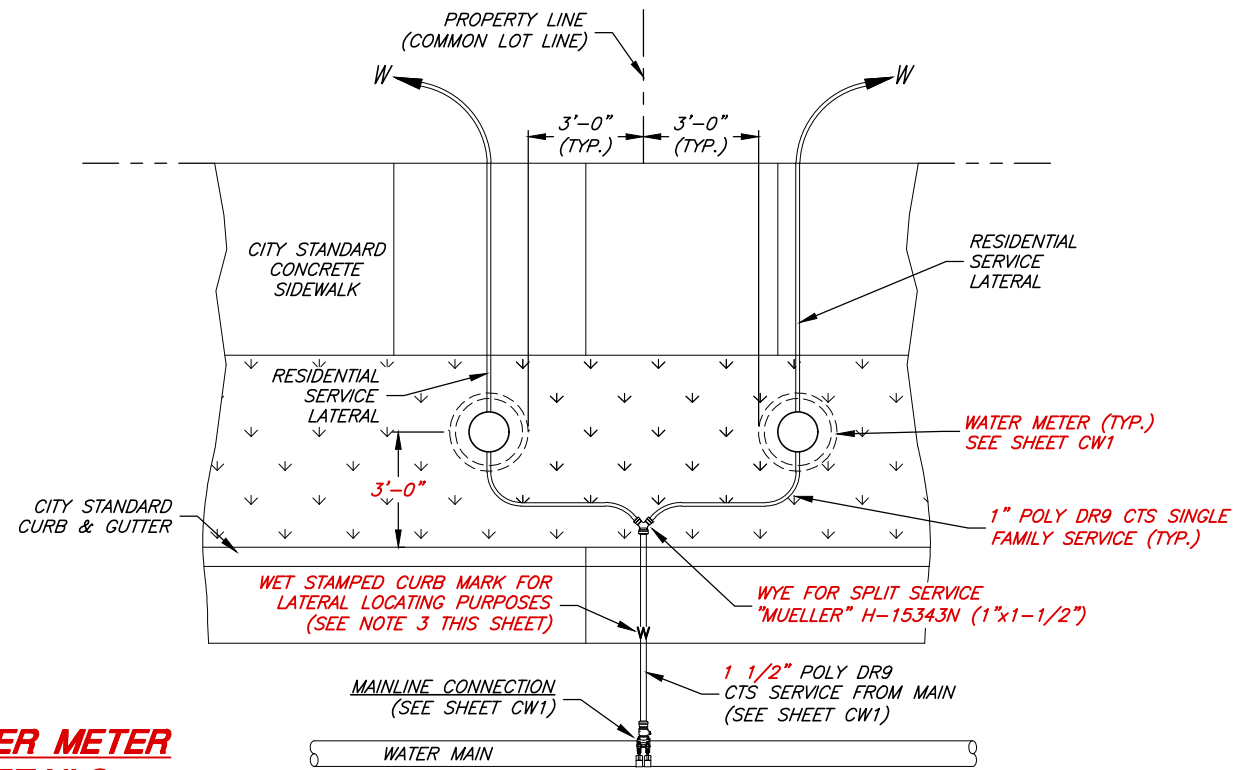
1. ALL FITTINGS SHALL BE "MUELLER" OR "FORD" COMPRESSION TYPE UNLESS OTHERWISE NOTED.
2. ALL SUPPLIES, LABOR, MACHINERY, ETC. WILL BE SUPPLIED BY THE CONTRACTOR. PLEASANT VIEW CITY WILL SUPPLY AND SET THE METER ONLY ON 1" CONNECTIONS. THE CONTRACTOR SHALL SUPPLY METERS FOR CONNECTIONS GREATER THAN 1".
3. WET STAMPED CONCRETE CURB MARKS USED FOR LATERAL LOCATING ARE REQUIRED BY THE CITY. STAMPED CURB MARKS SHALL BE INSTALLED DURING ALL NEW CONSTRUCTION OR RESTORED WHEN REPLACING DAMAGED CURB & GUTTER DUE TO ANY CONSTRUCTION RELATED ACTIVITY. STAMP "S" FOR SANITARY SEWER, "W" FOR CULINARY WATER, AND "L" FOR LAND DRAIN.
4. ALL CULINARY WATER METERS SHALL BE LOCATED AS SHOWN AND SHOULD NOT BE LOCATED WITHIN THE DRIVEWAY AREA. IF A DRIVEWAY IS PLACED OVER AN EXISTING METER, SEE DETAIL AND NOTES ON SHEET CW6.



**"TEE" ADAPTER DUAL WATER SERVICE LATERAL**



**"WYE" ADAPTER DUAL WATER SERVICE LATERAL  
(WITH AREA FOR FIRE HYDRANT, STREET LIGHT, MAILBOX, ETC.)**



**TYPICAL "WYE" ADAPTER DUAL WATER SERVICE LATERAL  
(CITY STANDARD)**

**STANDARD WATER METER LOCATION DETAILS**

CITY ENGINEER	REV.	DATE
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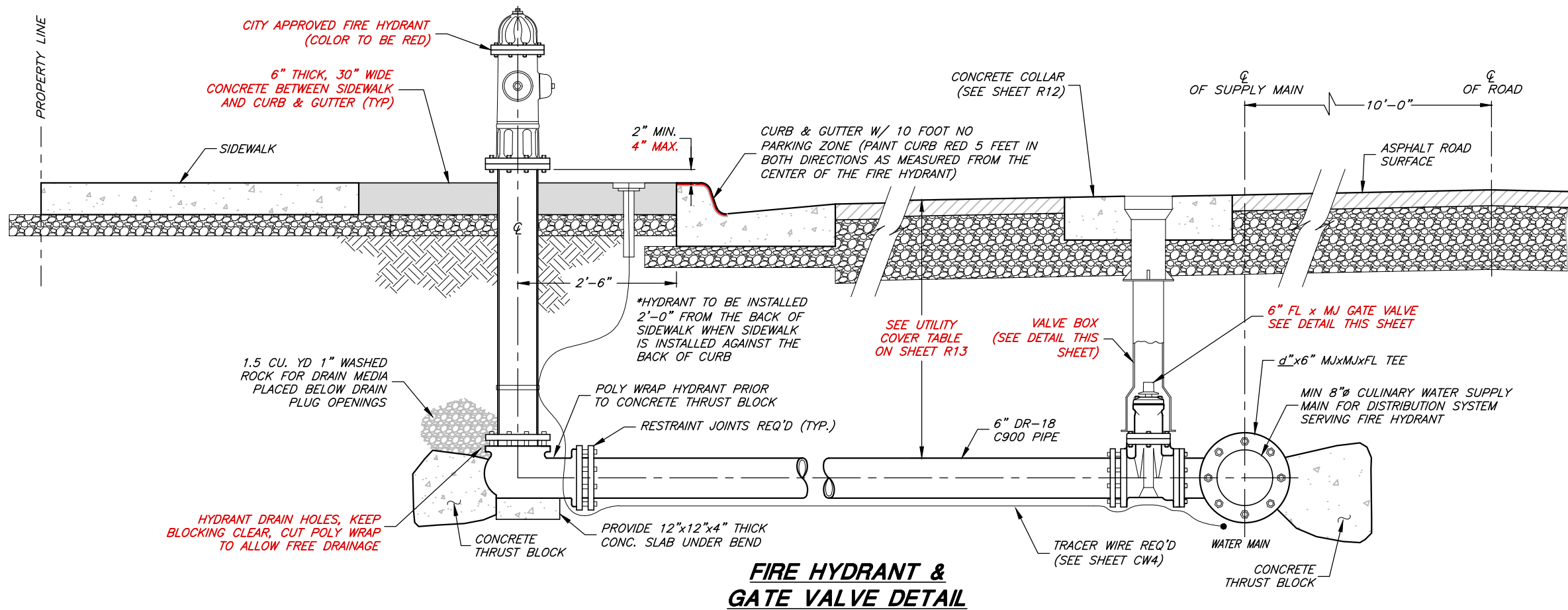


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**PUBLIC WORKS - CULINARY WATER SYSTEM STANDARDS**

**STANDARD WATER METER LOCATION DETAILS**

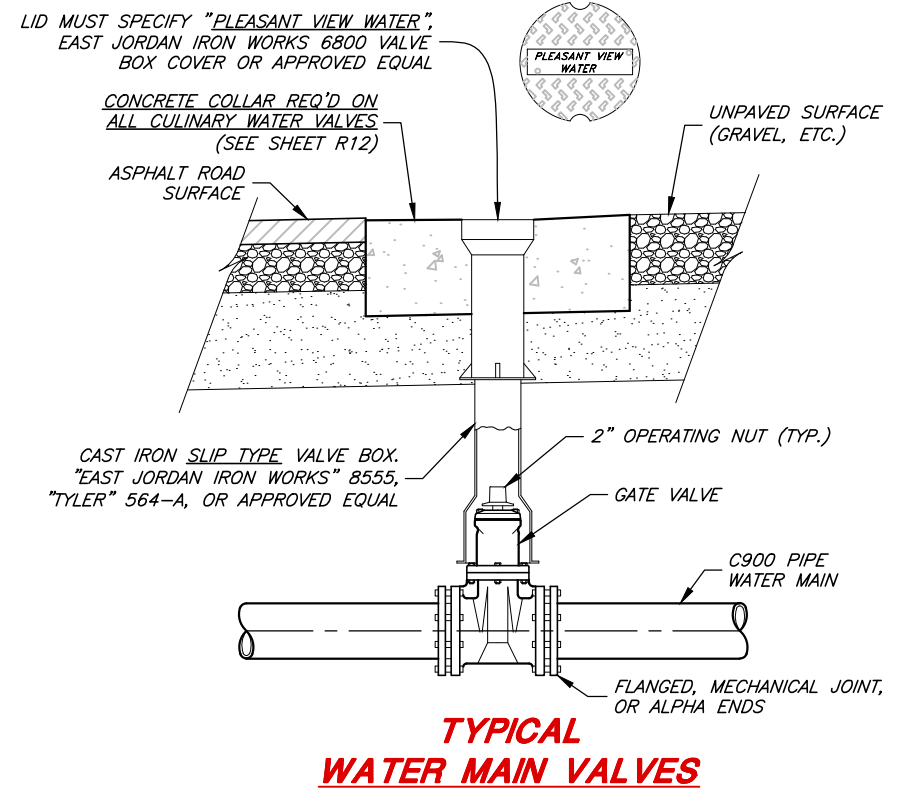


- FIRE LINE NOTES:**
- C1. NO WATER SERVICE OR FIRE LINES TO BUILDINGS ARE PERMITTED TO CONNECT TO AUXILIARY LINES SERVICING FIRE HYDRANTS.
  - C2. COMMERCIAL FIRE LINES FROM THE MAIN TO BUILDING SHALL BE SEPARATE LINES AND NOT PART OF THE WATER SERVICE LATERAL.
  - C3. FIRE LINES ARE TO BE MAINTAINED BY THE PROPERTY OWNER UP TO THE VALVE AT THE MAIN.

CITY APPROVED 250 PSI WORKING PRESSURE FIRE HYDRANTS			
	MAKE	MODEL	MAIN VALVE
1.	MUELLER	SUPER CENTURION A423	5-1/4"
2.	CLOW	MEDALLION F-2545	5-1/4"
3.	WATEROUS	CLASSIC PACER	5-1/4"

FIRE HYDRANTS LISTED ABOVE WITH ALPHA JOINT BASES ARE APPROVED BY THE CITY

- FIRE HYDRANT NOTES:**
- A1. FIRE HYDRANTS ARE TO BE INSTALLED IN LOCATIONS AS REQUIRED BY THE FIRE CODE AND APPROVED BY THE CITY.
    - a. HYDRANTS SHALL BE SPACED AT A MAXIMUM INTERVAL OF 500'-0", OR SO THAT EVERY DWELLING IS WITHIN 250'-0" OF A FIRE HYDRANT.
  - A2. 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 TEMPORARY DEAD-END LOCATION, A TEE WITH A BLIND FLANGE SHALL BE INSTALLED FOR FUTURE SYSTEM CONNECTION.
  - A3. DEPENDING ON ITS LOCATION, A FIRE HYDRANT MAY SERVE FOR BOTH FIRE PROTECTIONS AND BLOW-OFF PURPOSES.
  - A4. CLEAR DISTANCE AROUND THE HYDRANT (FENCES, BOULDERS, BOLLARDS, WALLS, STRUCTURES, ETC.) SHALL COMPLY WITH THE CURRENT FIRE CODE OR BE A MINIMUM OF 3 FEET, WHICHEVER IS GREATER.
  - A5. FIRE HYDRANTS SHALL NOT BE LOCATED WITHIN 10'-0" OF A SANITARY SEWER OR WITHIN 10'-0" OF STORM DRAIN WHERE POSSIBLE.



- VALVE NOTES:**
- B1. ANY CHIPS IN THE GATE VALVES FACTORY COATING DUE TO SHIPPING/INSTALLATION MUST BE REPAIRED USING AN APPROVED EPOXY COATING.
  - B2. VALVES OVER 6'-0" DEEP REQUIRE A NUT EXTENSION.
  - B3. THE NUMBER OF VALVES REQUIRED AT EACH STREET INTERSECTION SHALL BE DETERMINED BY THE CITY. (THE CITY MAY REQUIRE ADDITIONAL VALVE LOCATIONS IN ADDITION TO THOSE SPECIFIED BASED ON SPACING)

CITY APPROVED AWWA C509 RESILIENT WEDGE GATE VALVES		
	MAKE	MODEL
1.	MUELLER	A-2361
2.	CLOW	2639
3.	AMERICAN FLOW CONTROL	ALPHA x ALPHA

VALVES LISTED ABOVE WITH ALPHA RESTRAINT JOINT ENDS ARE APPROVED BY THE CITY

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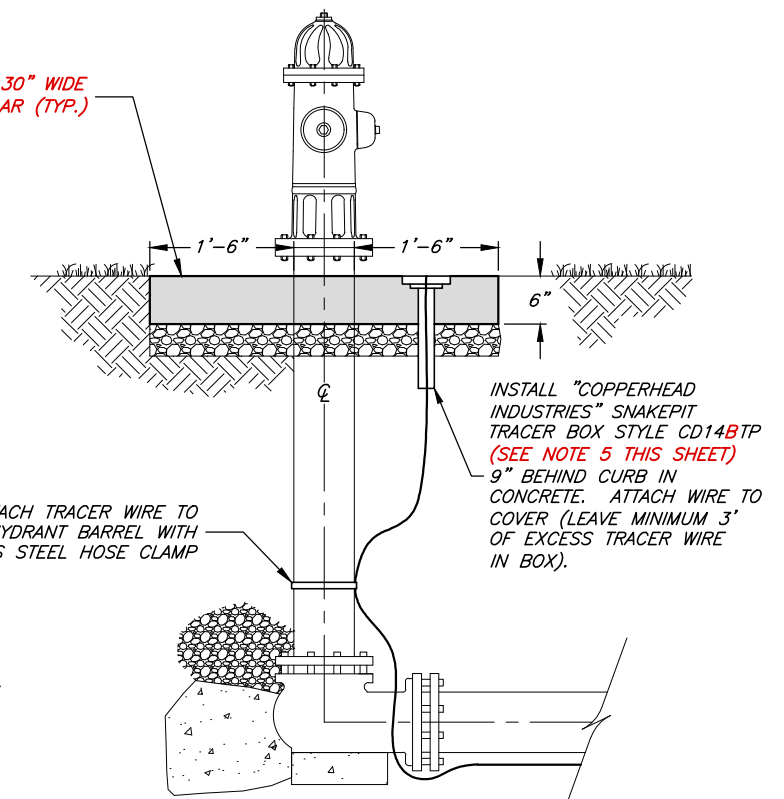
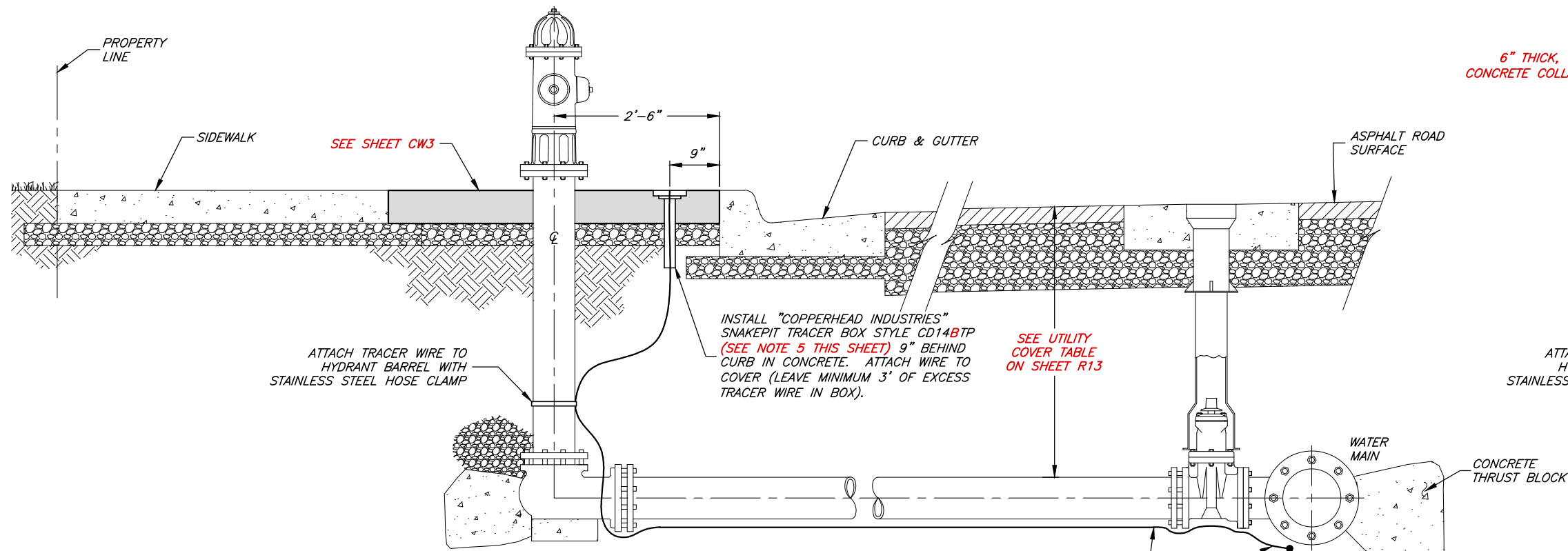
**JA**  
**JONES & ASSOCIATES**

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**Pleasant View City**

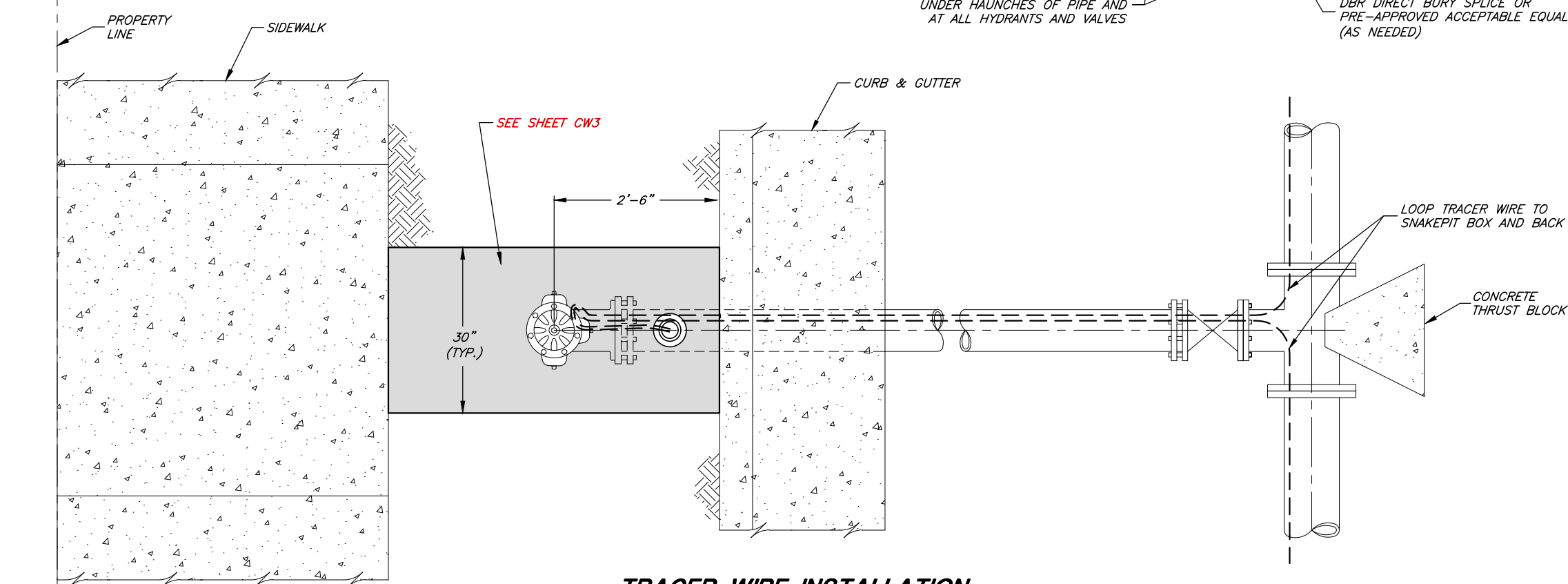
**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - CULINARY WATER SYSTEM STANDARDS**

**FIRE HYDRANT AND GATE VALVE DETAILS**



**ALTERNATE TRACER WIRE INSTALLATION**

WHERE APPROVED BY THE WATER SYSTEM SUPERINTENDENT ON STREET SECTIONS WITH NO CURB & GUTTER



**TRACER WIRE INSTALLATION**  
CITY STANDARD STREET SECTION (CURB & GUTTER)

NOTES:

1. ALL WATERLINES SHALL HAVE A MINIMUM 12 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.
5. ALL AT-GRADE ACCESS POINTS SHALL BE APPROPRIATELY IDENTIFIED ON THE CAP AND BE COLOR CODED PER AMERICAN PUBLIC WORKS (APWA) STANDARDS. CULINARY WATER SHALL HAVE A BLUE CAP LABELED "WATER" (TYP.).

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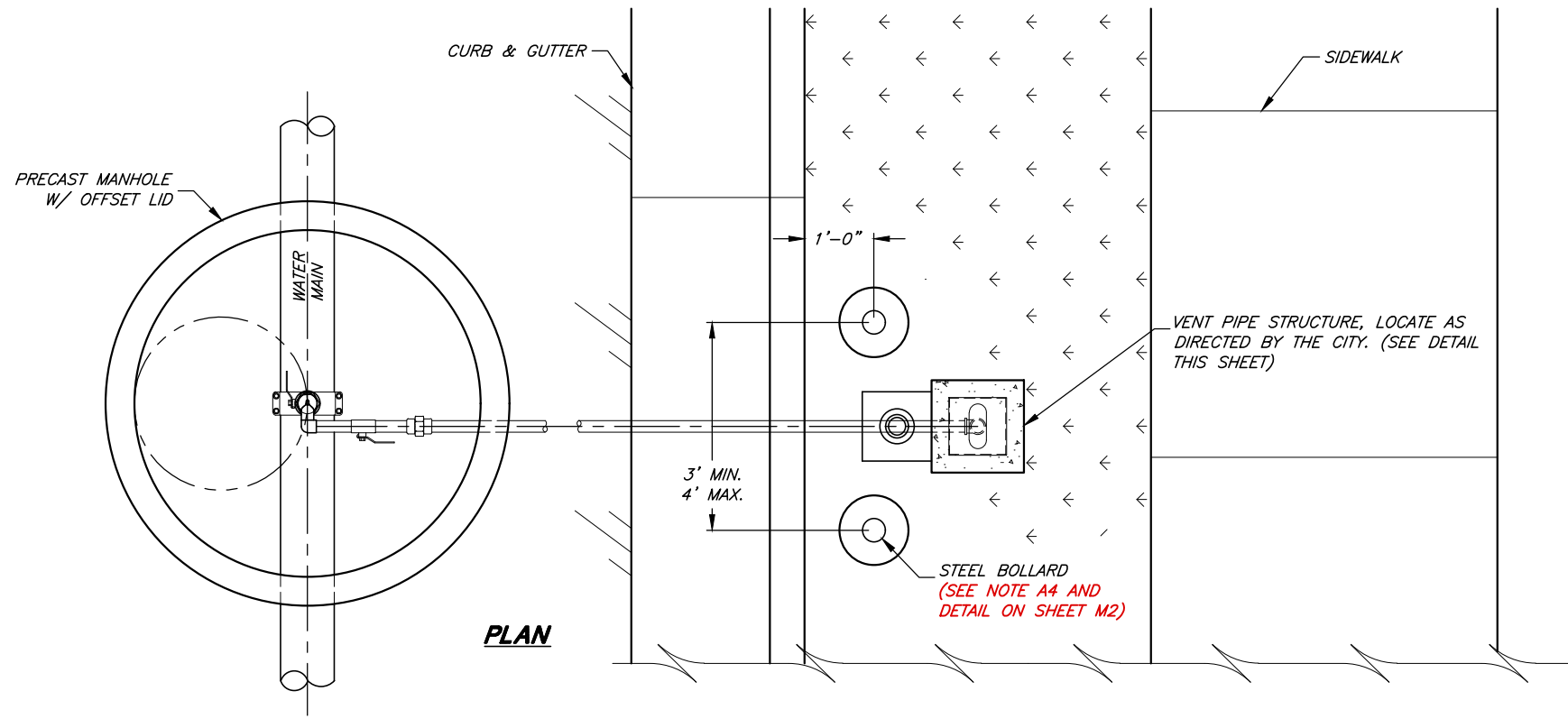
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**TRACER WIRE INSTALLATION DETAILS**

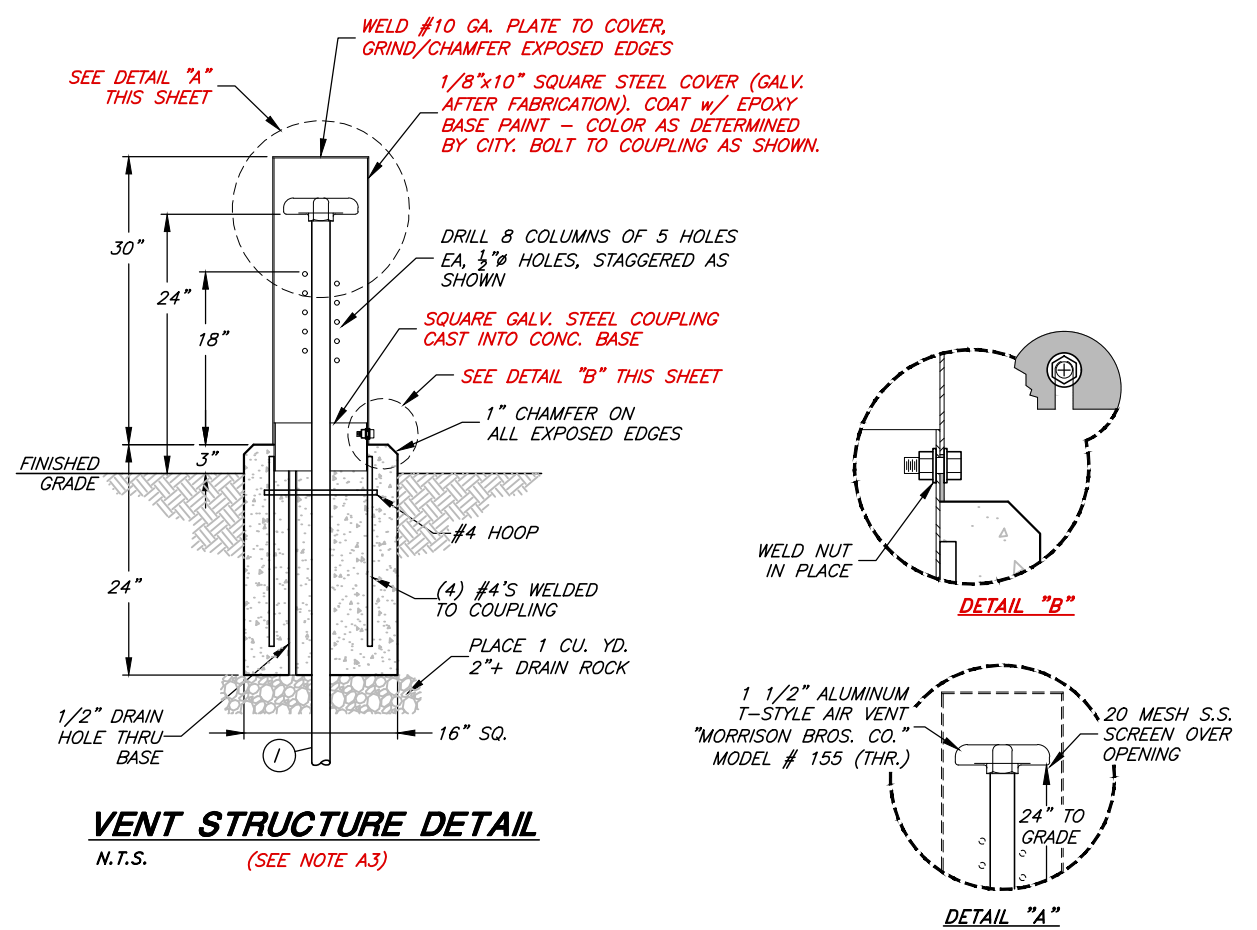
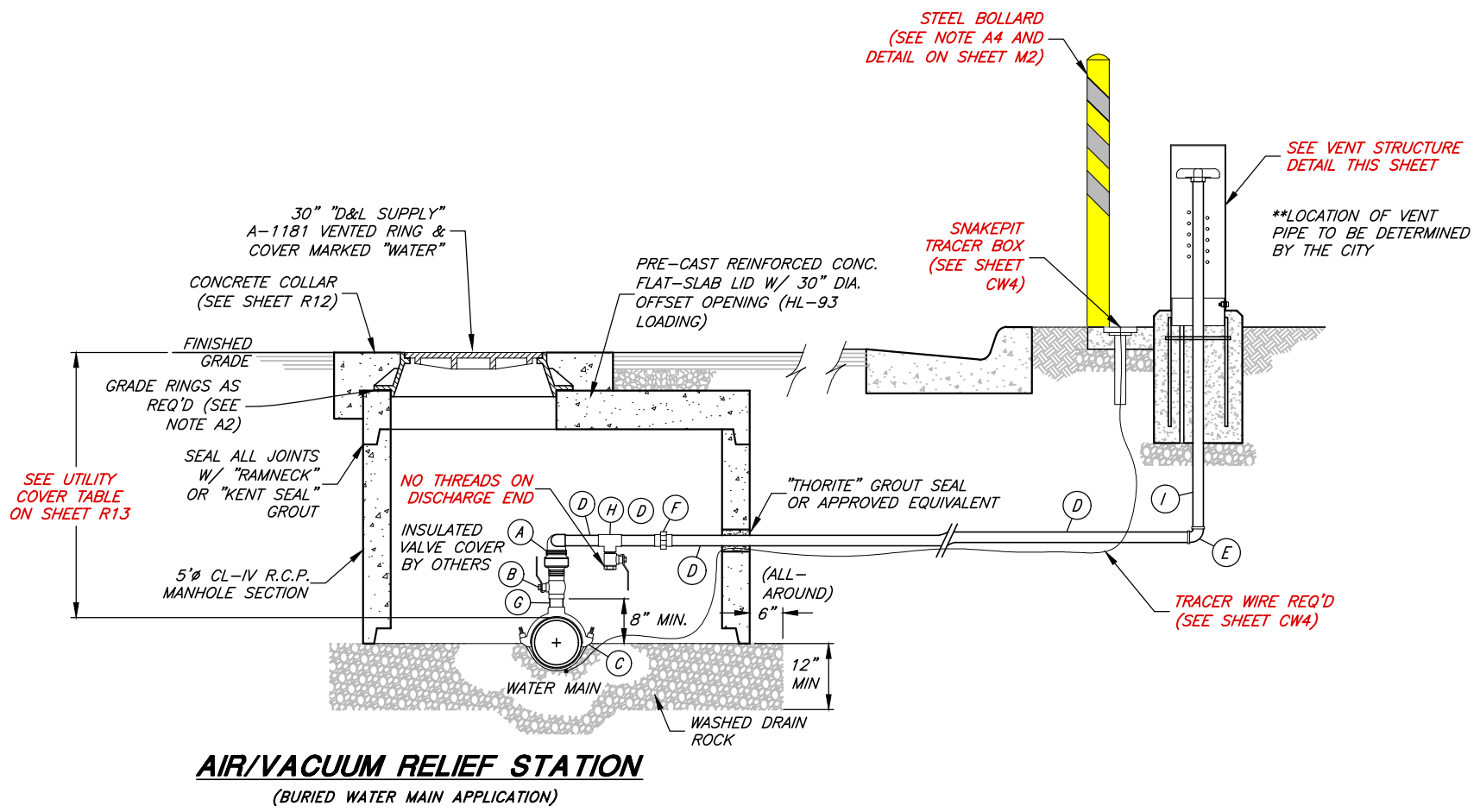
SHEET:
<b>CW4</b>
OF X SHEETS
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- AIR/VACUUM RELIEF STATION NOTES:**
- A1. THE USE OF AN "APCO" 145C, "VAL-MATIC" 202C, OR "CRISPIN" COMBINATION AIR VAC IS ACCEPTED WHEN APPROVED BY THE CITY. UPSIZE VENT PIPE, AIR VENT AND FITTINGS (ITEMS D, E, F, H AND I) TO 2" DIA. WHEN USING ALTERNATE VALVES.
  - A2. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE
  - A3. THE USE OF A 2" NEWSTYLE GALV. AIR-VAC STAND PIPE SPA\_12x6x36\_G (VENT STRUCTURE) IS ACCEPTED WHEN APPROVED BY THE CITY.
  - A4. PROVIDE 2 STEEL BOLLARDS TO PROTECT VENT PIPE (SEE SHEET M2). PLACE IN FRONT OF VENT PIPE STRUCTURE PER THE LOCATION DETAIL THIS SHEET.

**AIR VACUUM RELIEF STATION  
PIPE & FITTING SCHEDULE**

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	THR.
C	SERVICE SADDLE (SEE NOTE 5 ON SHEET CW1)	
D	1 1/2" POLY PIPE W/ TRACER WIRE	THR.
E	1 1/2" BRASS 90° ELBOW (OR STAINLESS)	THR.
F	1 1/2" BRASS UNION (OR STAINLESS STEEL)	THR.
G	2" BRASS PIPE	THR.
H	1 1/2" BRASS TEE (OR STAINLESS STEEL)	THR.
I	1 1/2" BRASS PIPE (OR STAINLESS STEEL)	THR.
J	1 1/2" BRASS BALL DRAIN VALVE (1/4 TURN) "FORD" B82-xxx-HB-67-NL	THR.xP.E.

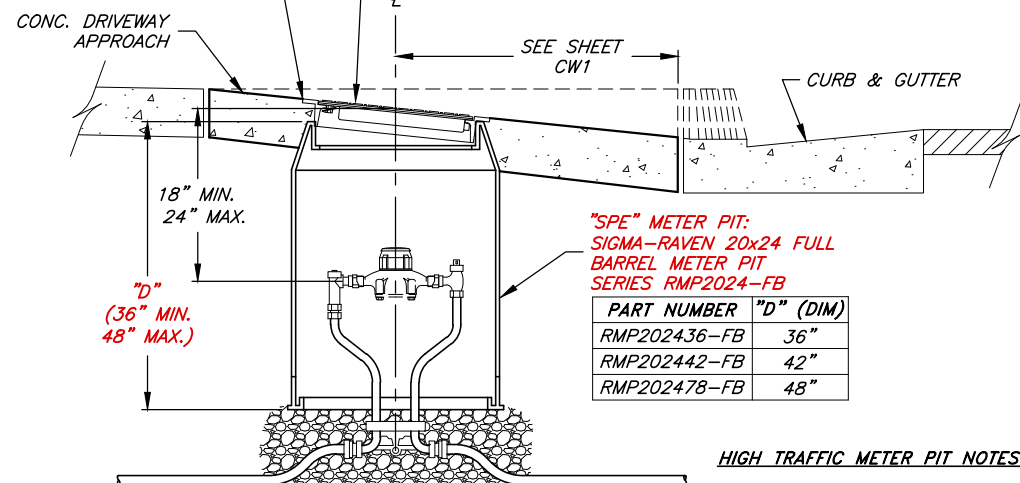


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**AIR/VACUUM RELIEF STATION DETAILS**

RIM/COVER TO BE HELD DOWN 1/4" BELOW TOP OF FINISHED DRIVEWAY APPROACH CONCRETE (TYP.)

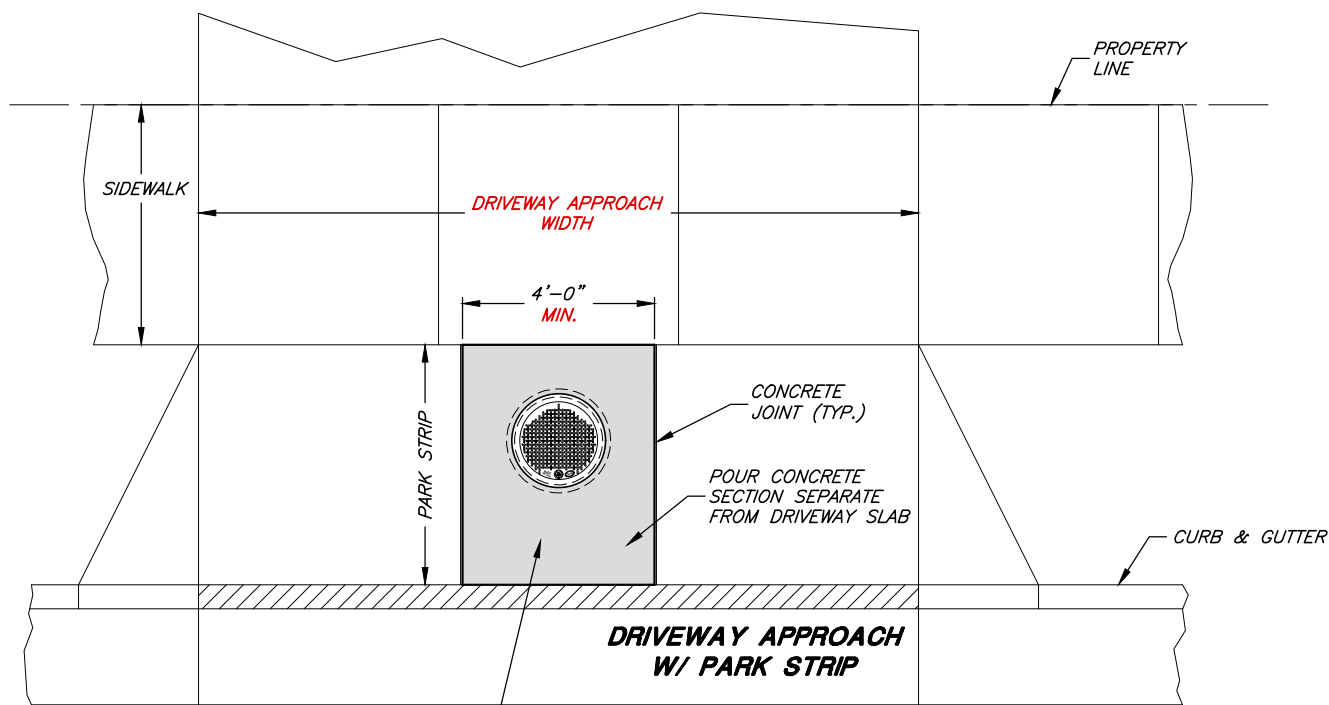


"SPE" METER PIT:  
SIGMA-RAVEN 20x24 FULL  
BARREL METER PIT  
SERIES RMP2024-FB

PART NUMBER	"D" (DIM)
RMP202436-FB	36"
RMP202442-FB	42"
RMP202478-FB	48"

**HIGH TRAFFIC METER PIT NOTES:**

- CULINARY WATER METERS SHALL NOT BE LOCATED WITHIN THE DRIVEWAY AREA.
- IF A DRIVEWAY IS TO BE PLACED OVER AN EXISTING METER, A HIGH TRAFFIC RESIDENTIAL METER PIT MAY BE INSTALLED. THIS IS DETERMINED ON A CASE BY CASE BASIS BY THE CITY AND TO BE PAID FOR BY THE OWNER. (SEE NOTE 3)
- THE USE OF A HIGH TRAFFIC RESIDENTIAL SERVICE METER PIT IS SITE SPECIFIC AND REQUIRES WRITTEN APPROVAL FROM THE CITY PRIOR TO ANY INSTALLATION.

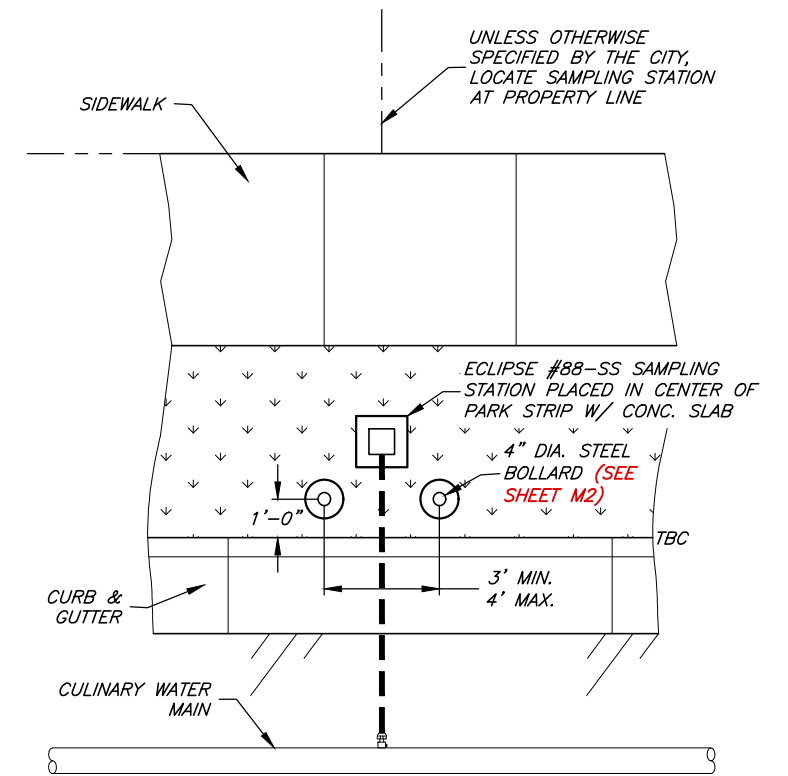


"D&L SUPPLY" B-5021  
W/DFW5021-1MWLA-LID

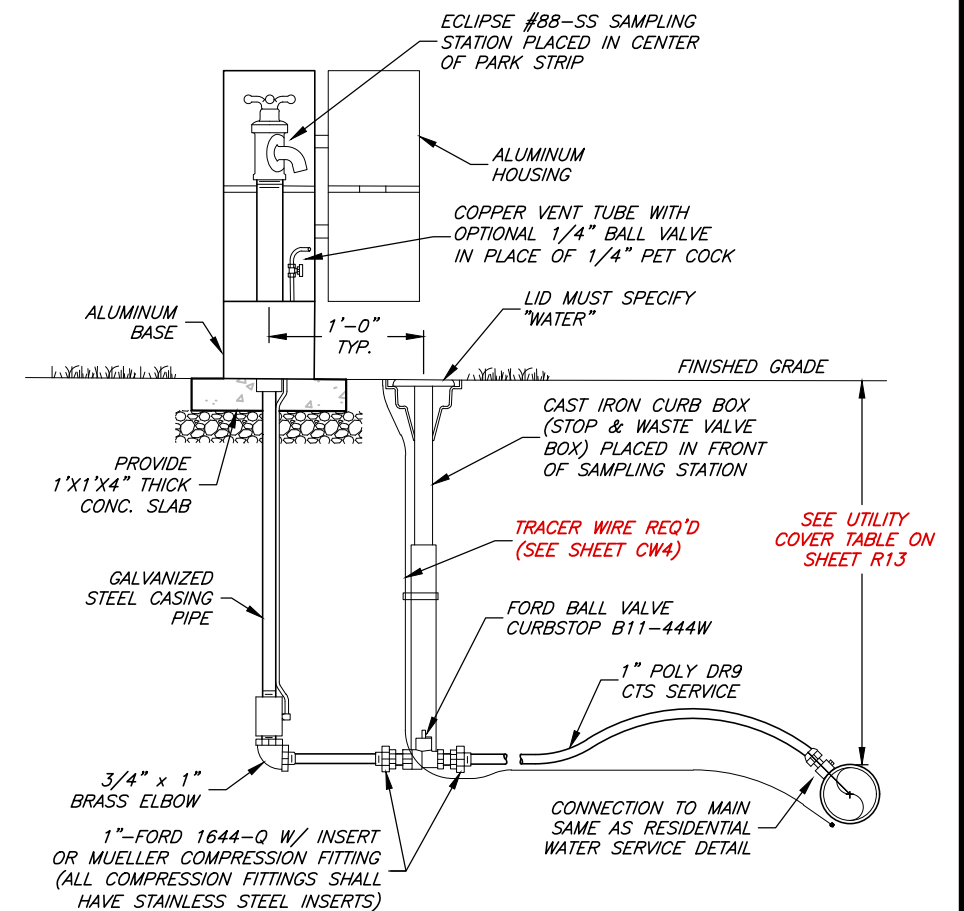
**HIGH TRAFFIC RESIDENTIAL METER PIT DETAIL**

**SAMPLING STATION NOTES:**

- SAMPLING STATIONS SHALL BE 4' BURY, WITH A 3/4" FIP INLET, AND A 3/4" UNTHREADED NOZZLE.
- ALL STATIONS SHALL BE ENCLOSED IN A LOCKABLE, NON-REMOVABLE, ALUMINUM-CAST HOUSING.
- WHEN OPENED, THE STATION SHALL REQUIRE NO KEY FOR OPERATION, AND THE WATER WILL FLOW IN AN ALL BRASS WATERWAY.
- ALL WORKING PARTS WILL ALSO BE OF BRASS AND BE REMOVABLE FROM ABOVE GROUND WITH NO DIGGING. EXTERIOR PIPING SHALL BE BRASS PIPE.
- A COPPER VENT TUBE WILL ENABLE EACH STATION TO BE PUMPED FREE OF STANDING WATER TO PREVENT FREEZING AND TO MINIMIZE BACTERIA GROWTH.
- ECLIPSE NO. 88-SS SAMPLING STATION SHALL BE MANUFACTURED BY KUPFERLE FOUNDRY, ST. LOUIS, MO 63102
- TYPICALLY, A SAMPLING STATION IS REQUIRED FOR EVERY 80 LOTS OR ONE PER DEVELOPMENT FOR DEVELOPMENTS SMALLER THAN 80 LOTS. LOCATION AS DIRECTED BY THE CITY.
- PROVIDE 2 STEEL BOLLARDS TO PROTECT SAMPLING STATION (SEE SHEET M2). PLACE IN FRONT OF SAMPLING STATION PER THE SAMPLING STATION LOCATION DETAIL THIS SHEET.



**STANDARD SAMPLING STATION LOCATION**

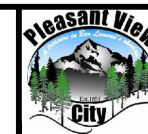


**CULINARY WATER SAMPLING STATION**

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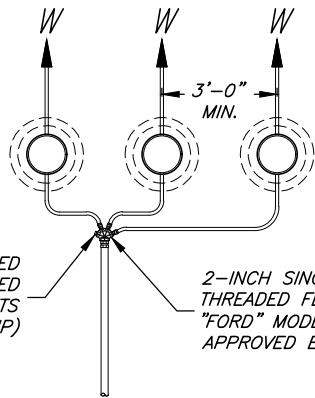
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**PLEASANT VIEW CITY CORPORATION**  
PUBLIC WORKS - CULINARY WATER SYSTEM STANDARDS  
**HIGH TRAFFIC METER PIT AND CULINARY WATER SAMPLING STATION DETAILS**

SHEET:
<b>CW6</b>
OF X SHEETS
0



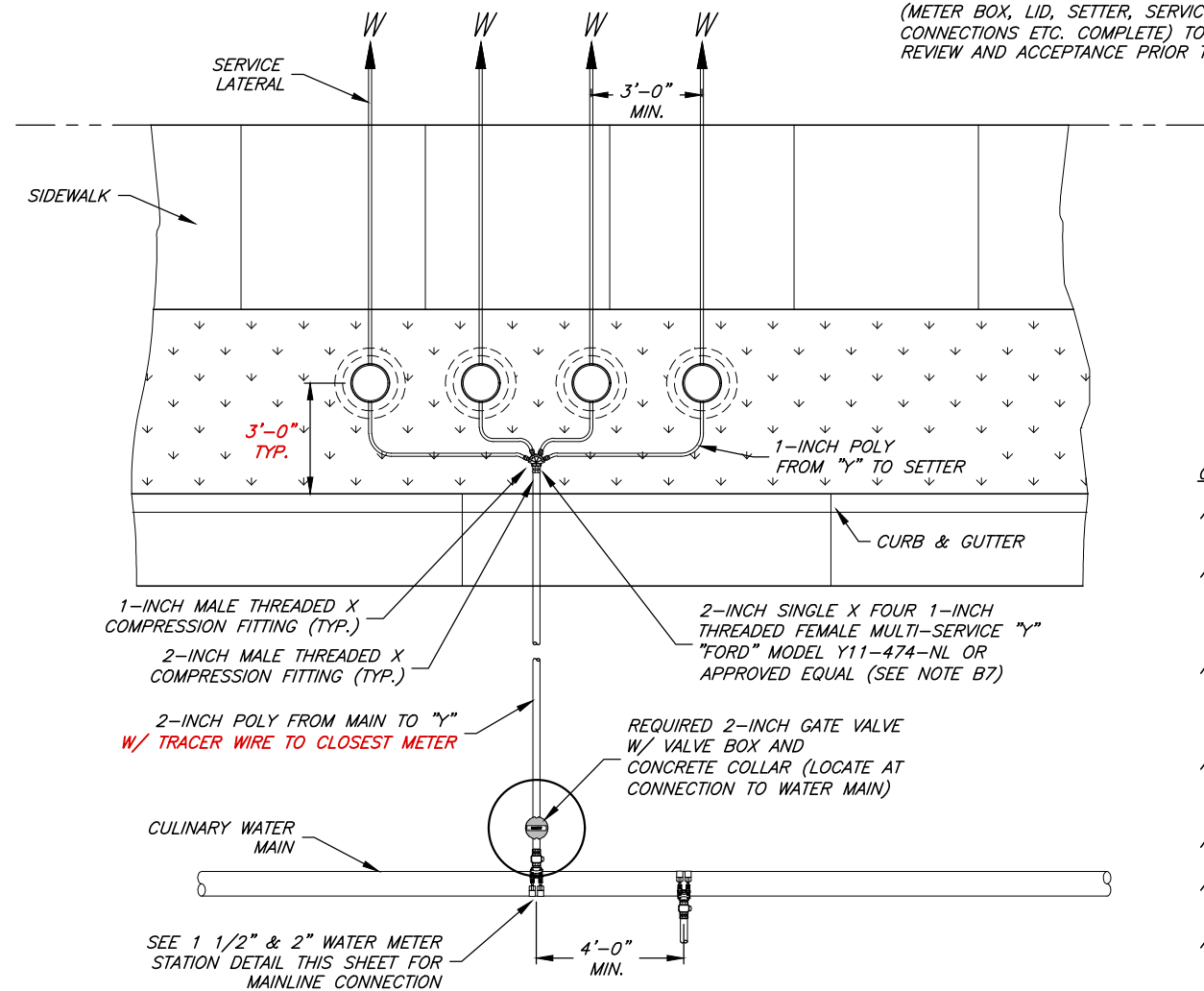
**METER MANIFOLD NOTES:**

- C1. PIPES AND PIPE FITTINGS MUST MEET THE SPECIFICATIONS OF ANSI/NSF 61
- C2. MINIMUM 4'-0" BETWEEN SERVICE SADDLES
- C3. TYPICAL 3'-0" MINIMUM BETWEEN METER BOXES
- C4. SEE STANDARD DETAIL SHEETS CW1 FOR WATER SERVICE AND METER BOX DETAILS
- C5. FOUR SERVICES MAXIMUM PER MAINLINE CONNECTION
- C6. PROVIDE AN IMPRINTED ALUMINUM TAG TO BE ATTACHED TO EACH YOKE WITH CORRESPONDING UNIT ADDRESS.
- C7. THE "FORD" METERING MANIFOLD MAY BE USED WITH WRITTEN APPROVAL BY THE CITY. SUBMIT ENGINEERED CONSTRUCTION PLANS, DETAILS, AND SPECIFICATIONS (METER BOX, LID, SETTER, SERVICE PIPING, CONNECTIONS ETC. COMPLETE) TO THE CITY FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.

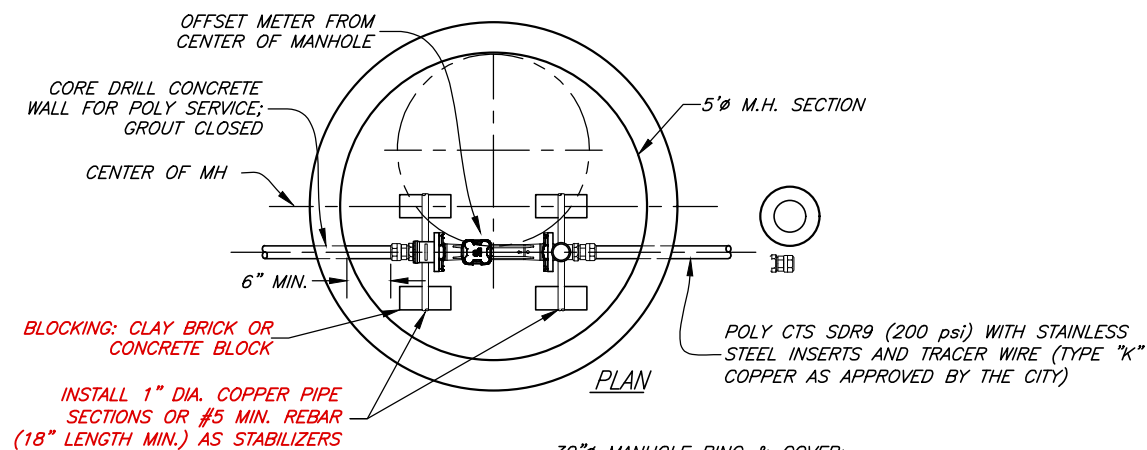
NO.	DESCRIPTION (1 1/2" & 2" METER STATIONS)	JOINT TYPE	1 1/2" LINE	2" LINE
10	"BADGER" DYNASONICS U500w SS ULTRASONIC FLOW METER WITH ELLIPTICAL HOUSING	FL	1 1/2"	2"
11	METER YOKE (18" HEIGHT) "MUELLER" B2423-2	-	1 1/2"	2"
	OR "FORD" VBHH77-xxBHC-11-77-NL OR "FORD" VBHH77-xxB-44-77-AWT-Q-NL	-	---	2"
12	"MUELLER" 110 COMPRESSION CONNECTION COUPLING OR "FORD" C84-xx-Q-NL	-	1 1/2"	2"

**1 1/2" & 2" METER NOTES:**

- B1. 1 1/2" SERVICE LINE-13" METER  
2" SERVICE LINE-17" METER
- B2. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE
- B3. MANHOLE STEPS (FOR MANHOLES OVER 6' DEEP.) UNIFORMLY SPACED (1'-0" MAX.) POLYPROPYLENE COVERED STEEL STEPS, MODEL PS1-PF AS MANUFACTURED BY "M.A. INDUSTRIES" OR APPROVED EQUAL - INSTALLATION OF STEPS SHALL BE WATERPROOF.

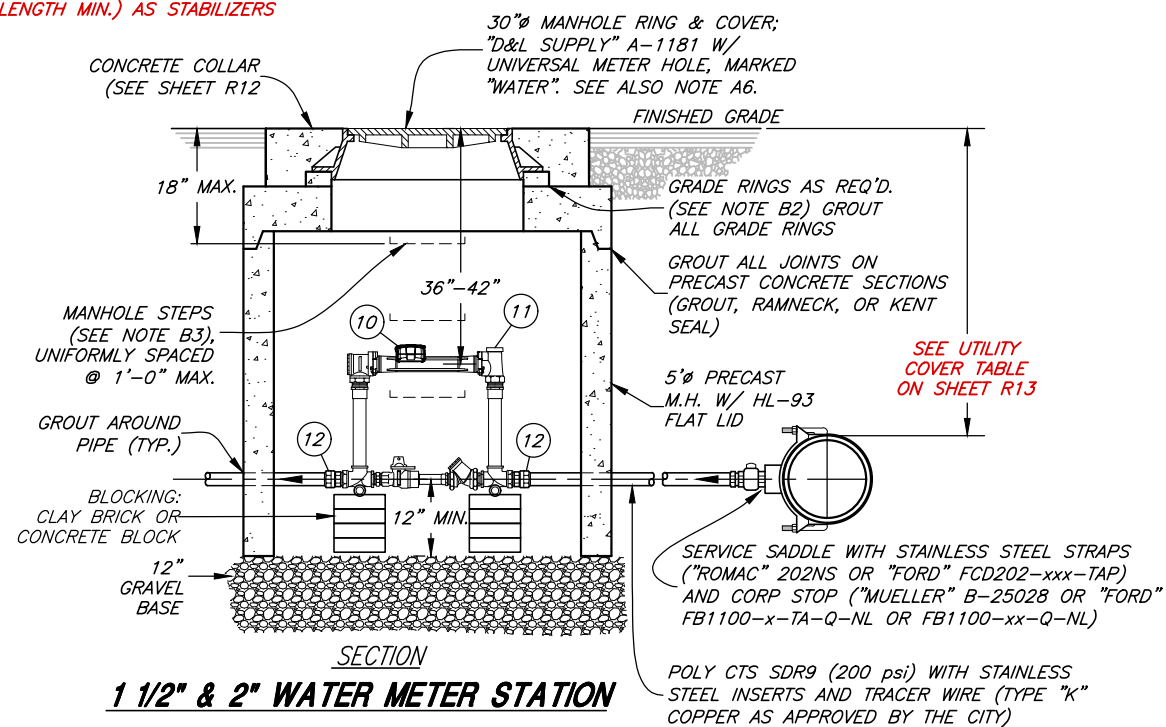


**WATER METER MANIFOLD DETAIL**  
FOR USE WITH TOWNHOME (INDIVIDUAL BILLING) TYPE DEVELOPMENTS (REQUIRES APPROVAL BY THE CITY)



**GENERAL NOTES:**

- A1. ALL FITTINGS SHALL BE "MUELLER" OR "FORD" COMPRESSION TYPE UNLESS OTHERWISE NOTED.
- A2. PROPERTY OWNER OR CONTRACTOR SHALL PAY FOR ALL COSTS OF INSTALLATION INCLUDING ALL MATERIALS, ALL EXCAVATION AND FILL, ASPHALT REPLACEMENT AND WATER MAIN CONNECTION.
- A3. INSPECTION OF ALL WATER LINE INSTALLATIONS WILL BE DONE BY THE CITY WATER DEPARTMENT, WITH A 48 HOUR MINIMUM NOTICE REQUIRED PRIOR TO START OF WORK.
- A4. IF APPLICABLE, A CITY EXCAVATION PERMIT MUST BE REQUESTED AND APPROVED PRIOR TO START OF WORK.
- A5. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
- A6. CONTRACTOR TO SUPPLY ALL METERS 1 1/2" OR LARGER.
- A7. FOR METER STATIONS LOCATED IN TRAFFIC AREAS, CONTACT CITY FOR METER LID SPECIFICATIONS.
- A8. 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.



**1 1/2" & 2" WATER METER STATION**

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

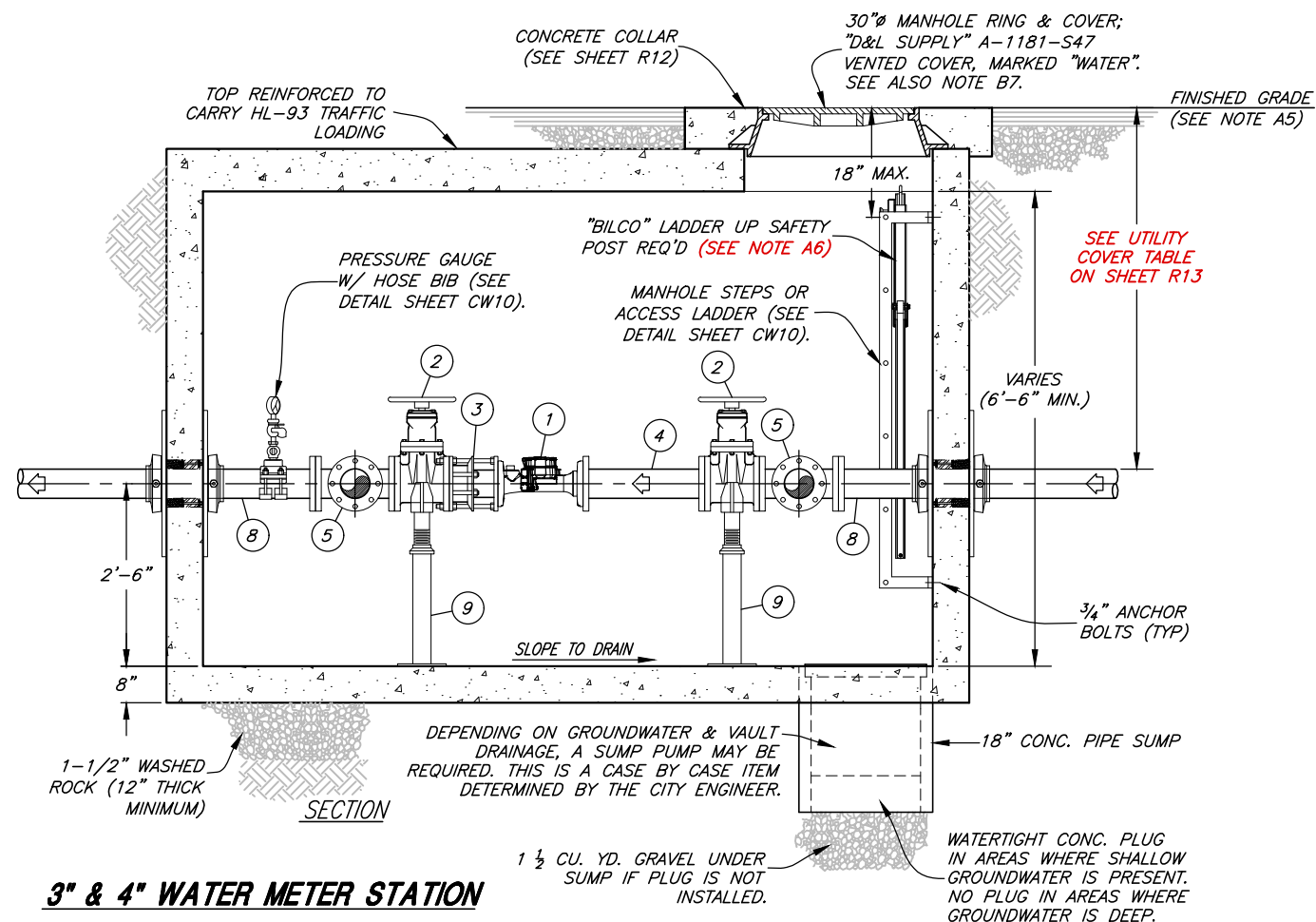
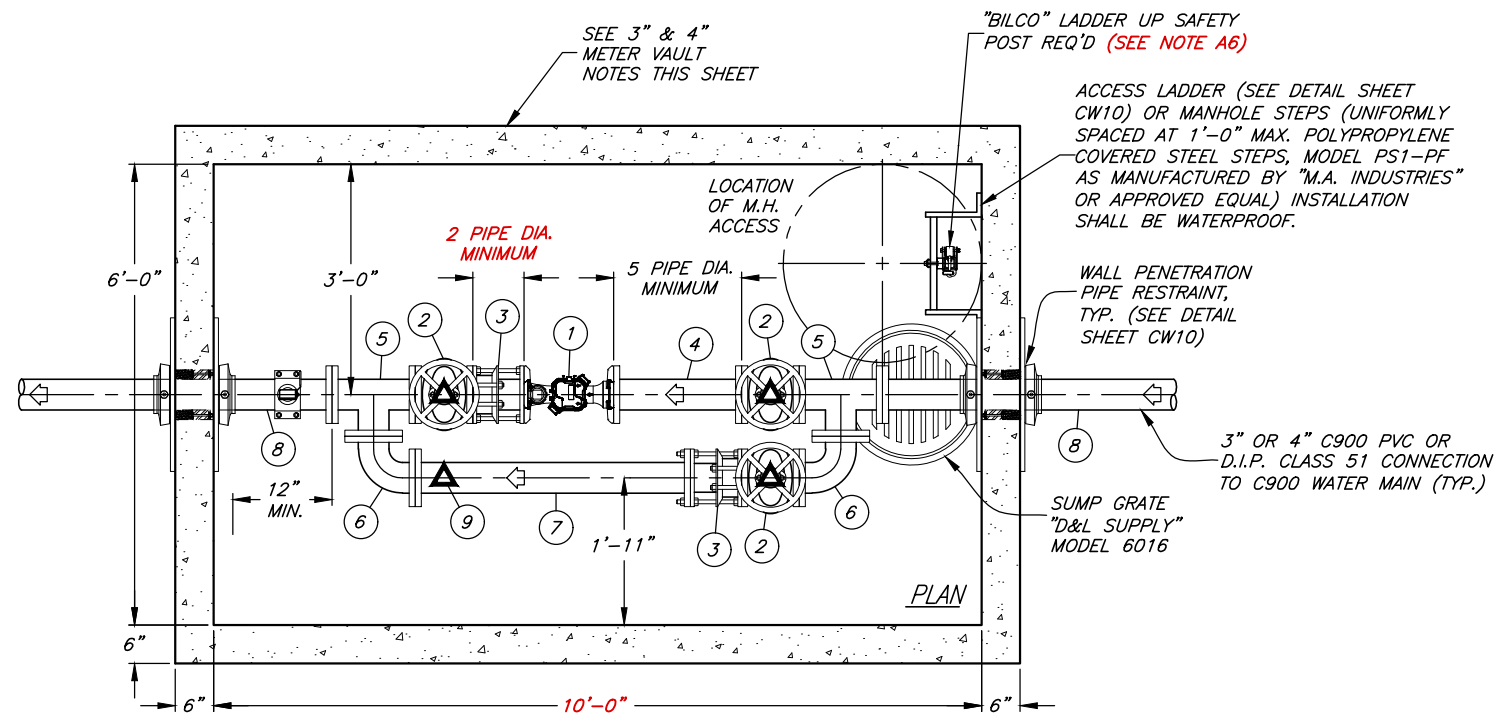
DESIGNED	SCALE:
DRAWN	N.T.S.
CHECKED	



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PLEASANT VIEW CITY CORPORATION		SHEET:
PUBLIC WORKS - CULINARY WATER SYSTEM STANDARDS		CW7
WATER METER MANIFOLD AND		OF X SHEETS
1 1/2" & 2" METER STATION DETAILS		0



**3" & 4" WATER METER STATION**

**PIPE & FITTING SCHEDULE**

NO.	DESCRIPTION (3" & 4" METER STATIONS)	JOINT TYPE	3" LINE	4" LINE
1	"BADGER" E-SERIES G2 ULTRASONIC METER	FL	3"	4"
2	"MUELLER" RESILIENT WEDGE GATE VALVE W/ HANDWHEEL	FL	A-2362	A-2361
3	"ROMAC" DJ400 DISMANTLING JOINT	FL	3"	4"
4	SPOOL PIECE	FL	3"	4"
5	TEE	FL	3"	4"
6	90° ELBOW	FL	3"	4"
7	SPOOL PIECE	FL	3"	4"
8	NIPPLE	FLxPE	3"	4"
9	"ANVIL" #264 GALV. PIPE SUPPORT W/ COMPANION FLANGE & VARIABLE HEIGHT NIPPLE (4 EA REQ'D) OR APPROVED EQUAL			

**3" & 4" 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. SEE "STRUCTURE TO ASPHALT" DETAIL, SHEET R12.
- A6. INSTALL LADDER UP ON FRONT SIDE OF LADDER IF NECESSARY TO CLEAR MANHOLE RING.

**GENERAL NOTES:**

- B1. 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.
- B2. PROPERTY OWNER OR CONTRACTOR SHALL PAY FOR ALL COSTS OF INSTALLATION INCLUDING ALL MATERIALS, ALL EXCAVATION AND FILL, ASPHALT REPLACEMENT AND WATER MAIN CONNECTION.
- B3. INSPECTION OF ALL WATER LINE INSTALLATIONS WILL BE DONE BY THE CITY WATER DEPARTMENT, WITH A 48 HOUR MINIMUM NOTICE REQUIRED PRIOR TO START OF WORK.
- B4. IF APPLICABLE, A CITY EXCAVATION PERMIT MUST BE REQUESTED AND APPROVED PRIOR TO START OF WORK.
- B5. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
- B6. CONTRACTOR TO SUPPLY ALL METERS 1 1/2" OR LARGER.
- B7. FOR METER STATIONS LOCATED IN TRAFFIC AREAS, CONTACT CITY FOR METER LID SPECIFICATIONS.

CITY ENGINEER	SCALE:
DATE	N.T.S.
REV.	DATE

DESIGNED	_____
DRAWN	_____
CHECKED	_____

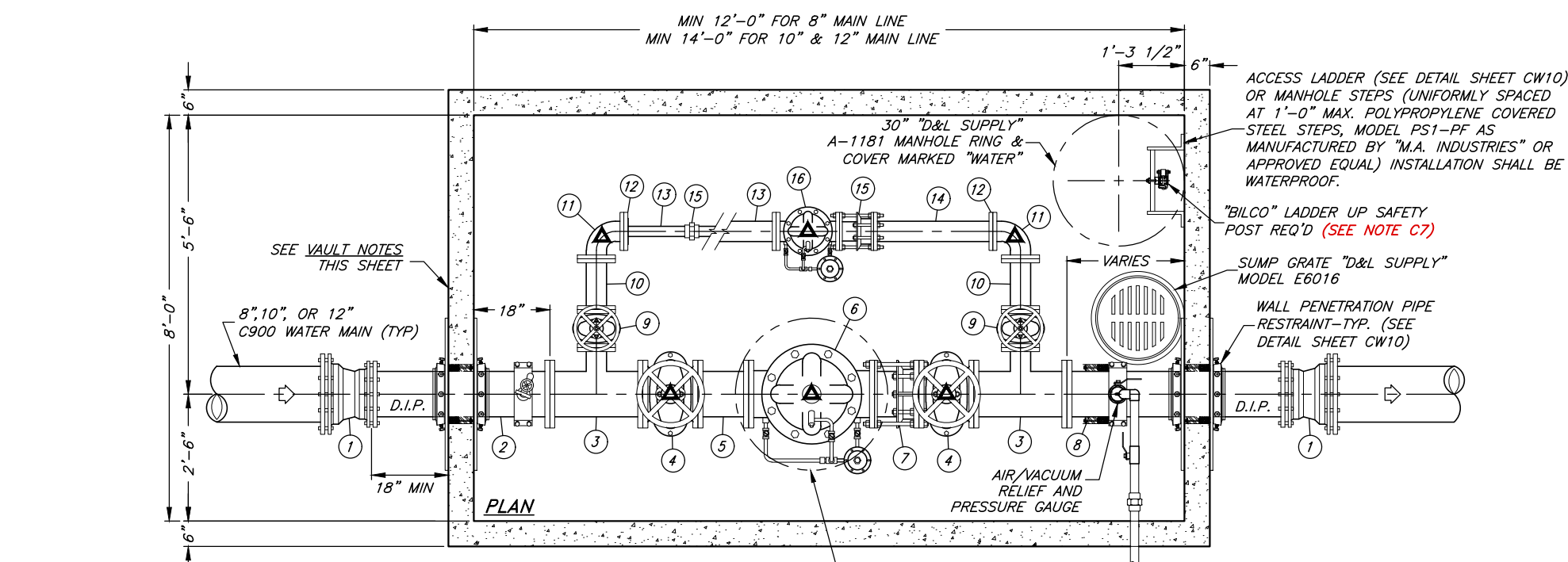


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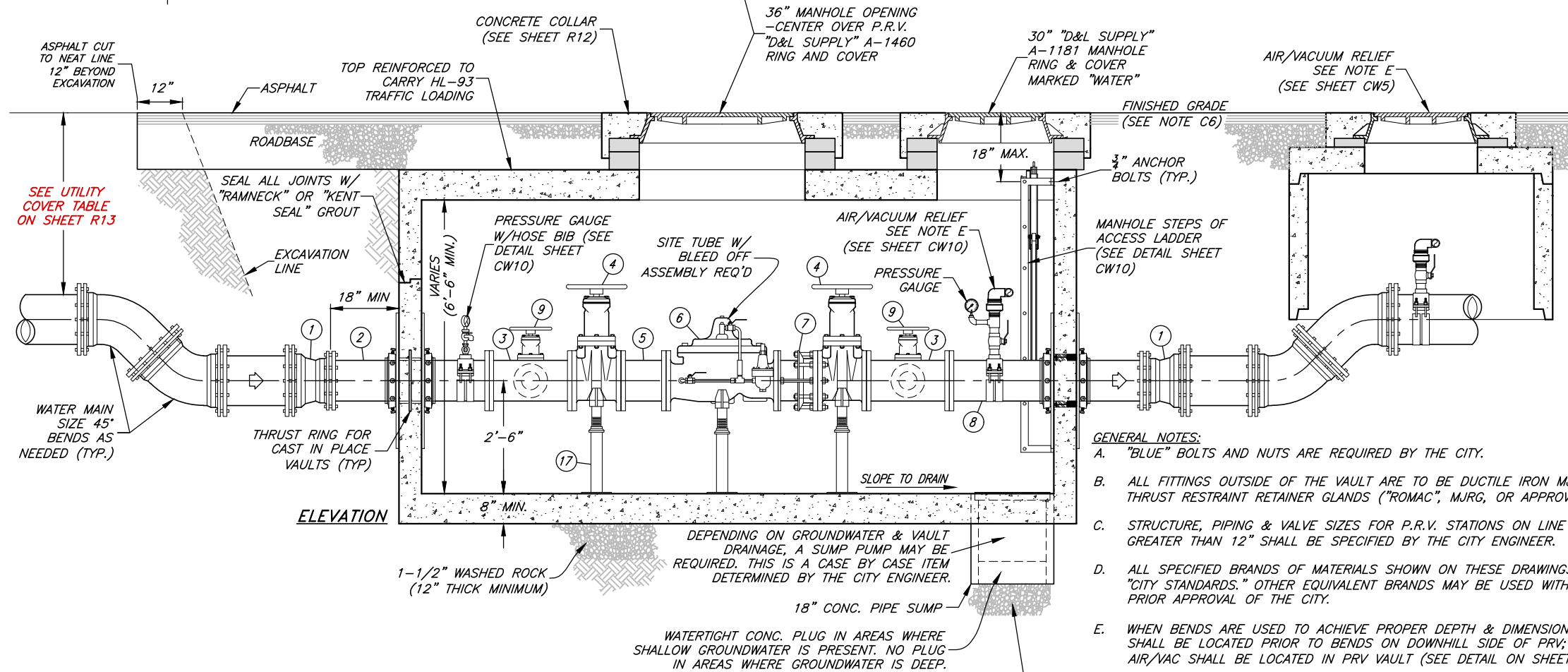


<b>PLEASANT VIEW CITY CORPORATION</b> <b>PUBLIC WORKS - CULINARY WATER SYSTEM STANDARDS</b>	
<b>3" &amp; 4" METER STATION DETAILS</b>	

SHEET:  
**CWB**  
 OF X SHEETS  
 0



PIPE & FITTING SCHEDULE					
NO.	DESCRIPTION	JOINT TYPE	8" LINE	10" LINE	12" LINE
1	D.I. REDUCER (2)	MJxMJ	8"x6"	10"x8"	12"x10"
2	D.I. NIPPLE PIECE	FLxPE	6"	8"	10"
3	D.I. REDUCING TEE (2)	FL	6"x6"x4"	8"x8"x4"	10"x10"x4"
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 W/ S.S. PARTS (TUBING)	FL	6"	8"	10"
7	"ROMAC" DJ400 DISMANTLING JOINT	FL	6"	8"	10"
8	D.I. NIPPLE PIECE	FLxPE	6"	8"	10"
9	"MUELLER" A-2361 GATE VALVE W/ HANDWHEEL (2)	FL	4"	4"	4"
10	12" D.I. SPOOL PIECE	FL	4"	4"	4"
11	D.I. 90° ELBOW (2)	FL	4"	4"	4"
12	BLIND FLANGE W/ THR. CONNECTION (2)	FLxTHR.	4"x2"	--	--
13	D.I. SPOOL PIECE STAINLESS STEEL PIPE (S.S.)	THR.	2"	--	--
14	D.I. SPOOL PIECE STAINLESS STEEL PIPE (S.S.)	FL	--	4"	4"
15	"ROMAC" DJ400 DISMANTLING JOINT S.S. UNION OR "ROMAC" MACRO COUPLING	THR.	2"	--	--
16	"CLA-VAL" 90-01 PRESSURE REDUCTION VALVE W/ S.S. PARTS (TUBING)	FL	--	4"	4"
17	"ANVIL" #264 GALV. PIPE SUPPORT W/ 3" COMPANION FLANGE & VARIABLE HEIGHT 3" NIPPLE (6 EA REQ'D) OR APPROVED EQUAL	THR.	2"	--	--



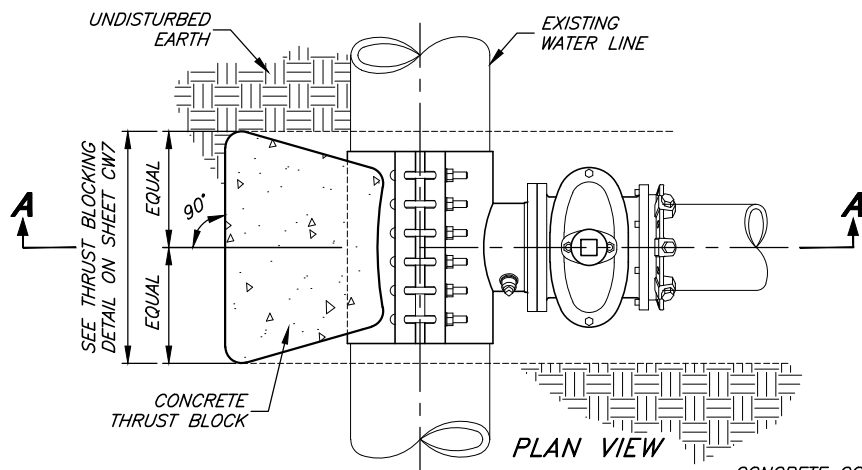
- PRV GENERAL SPECIFICATIONS:**
- A1. PRV TO BE CLA-VAL #90-01 YBCSKC
  - A2. 150 # FLANGED FOR 250 PSI WORKING PRESSURE, 300# FLANGED IF GREATER THAN 250 PSI
  - A3. DUCTILE IRON BODY GLOBE PATTERN
  - A4. EPOXY LINED AND COATED
  - A5. STAINLESS STEEL INTERNAL TRIM
  - A6. BRONZE PILOT CONTROLS
  - A7. STAINLESS STEEL TUBES & FITTINGS
  - A8. SPRING RANGES FOR PRESSURE REDUCING PILOT
  - A9. X101 VALVE POSITION INDICATOR
  - A10. CK2 ISOLATION BALL VALVES (STAINLESS)
  - A11. 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.
  - B3. METAL SURFACES TO BE PAINTED SHALL BE PRIMED AND THEN PAINTED W/ TWO COATS OF EPOXY PAINT. (EVERYTHING BUT VALVES & STAINLESS STEEL)
  - B4. COLORS AS DIRECTED BY THE CITY.

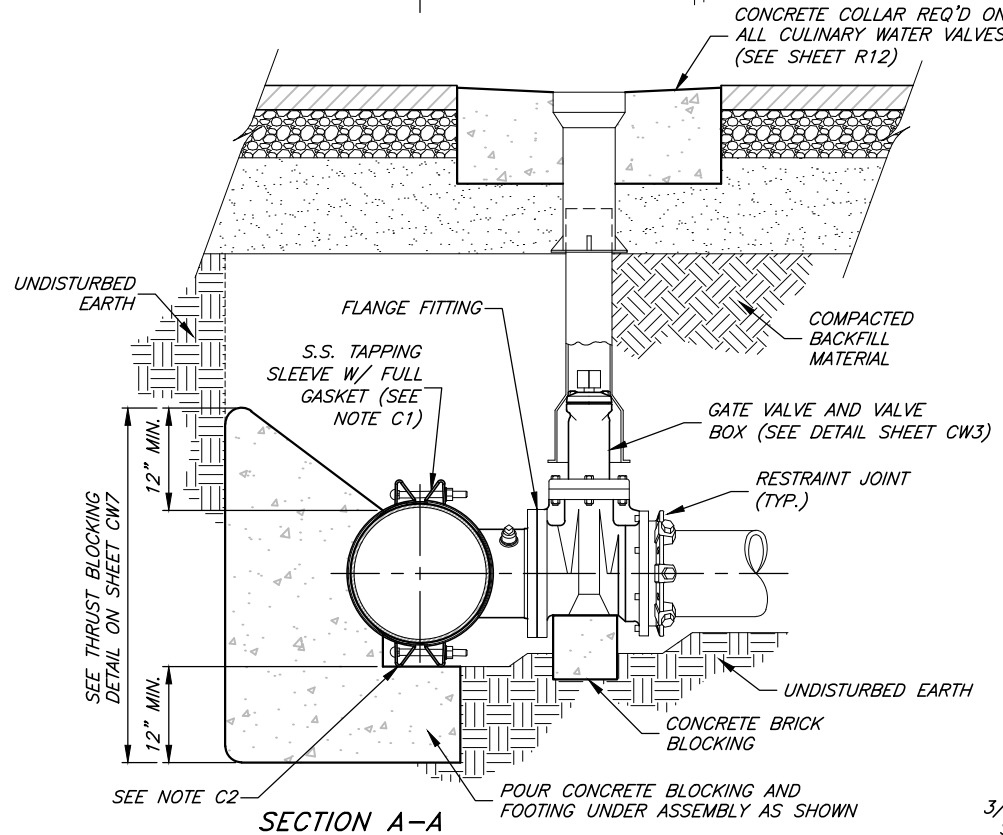
- VAULT NOTES:**
- C1. PRE-PLUMBED PRV VAULTS ARE THE PREFERRED OPTION FOR INSTALLATION. THE USE AND LOCATION OF A PRE-PLUMBED PRV VAULT SHALL BE AS DIRECTED BY THE CITY FOLLOWING REVIEW OF CURRENT SITE CONDITIONS.
  - C2. WHERE APPLICABLE, PRESSURE RELIEF VALVE ASSEMBLY MAY BE REQUIRED. THIS IS A CASE BY CASE ITEM DETERMINED BY THE CITY (PRV VAULT MAY NEED TO BE LENGTHENED TO ACCOMMODATE SUCH VALVE)
  - C3. PRECAST CONCRETE STRUCTURE CAN BE REPLACED WITH A CAST-IN-PLACE CONCRETE VAULT. SUBMIT ENGINEERED CONSTRUCTION PLANS WITH REBAR DETAILS TO THE CITY 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. SEE "STRUCTURE TO ASPHALT" DETAIL, SHEET R12.
  - C7. INSTALL LADDER UP ON FRONT SIDE OF LADDER IF NECESSARY TO CLEAR MANHOLE RING.

- GENERAL NOTES:**
- A. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
  - B. ALL FITTINGS OUTSIDE OF THE VAULT ARE TO BE DUCTILE IRON MJ WITH THRUST RESTRAINT RETAINER GLANDS ("ROMAC", MJRG, OR APPROVED EQUAL)
  - C. STRUCTURE, PIPING & VALVE SIZES FOR P.R.V. STATIONS ON LINE SIZES GREATER THAN 12" SHALL BE SPECIFIED BY THE CITY ENGINEER.
  - D. 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.
  - E. WHEN BENDS ARE USED TO ACHIEVE PROPER DEPTH & DIMENSIONS, AIR/VAC SHALL BE LOCATED PRIOR TO BENDS ON DOWNHILL SIDE OF PRV; OTHERWISE AIR/VAC SHALL BE LOCATED IN PRV VAULT (SEE DETAIL ON SHEET CW5).
  - F. ADD HIGH PRESSURE RELIEF VALVE IN PRVs WHEN DIRECTED BY CITY ENGINEER.
  - G. ADD SACRIFICIAL ANODE TO INTERIOR PIPE (CATHODIC PROTECTION) AS DIRECTED BY THE CITY.

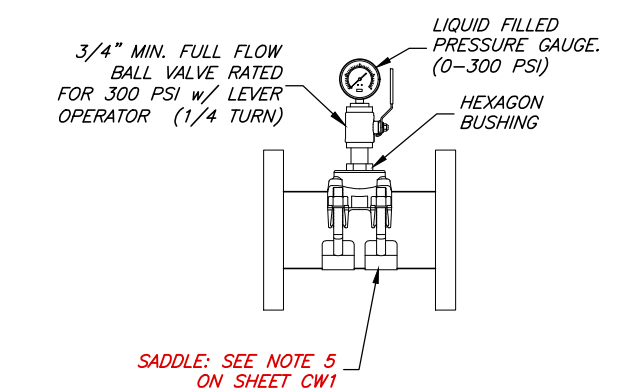
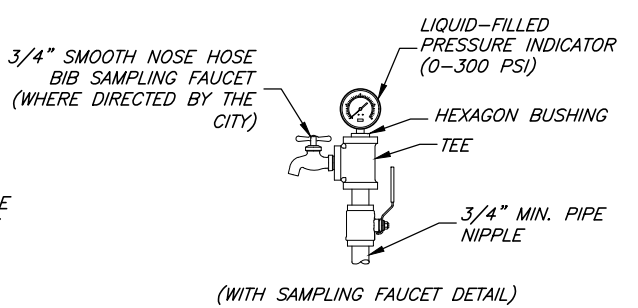
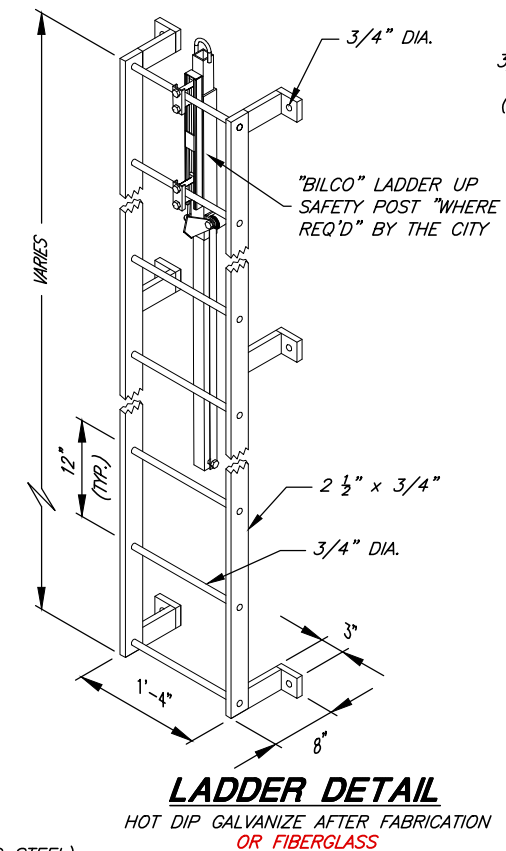
**PRESSURE REDUCTION STATION**



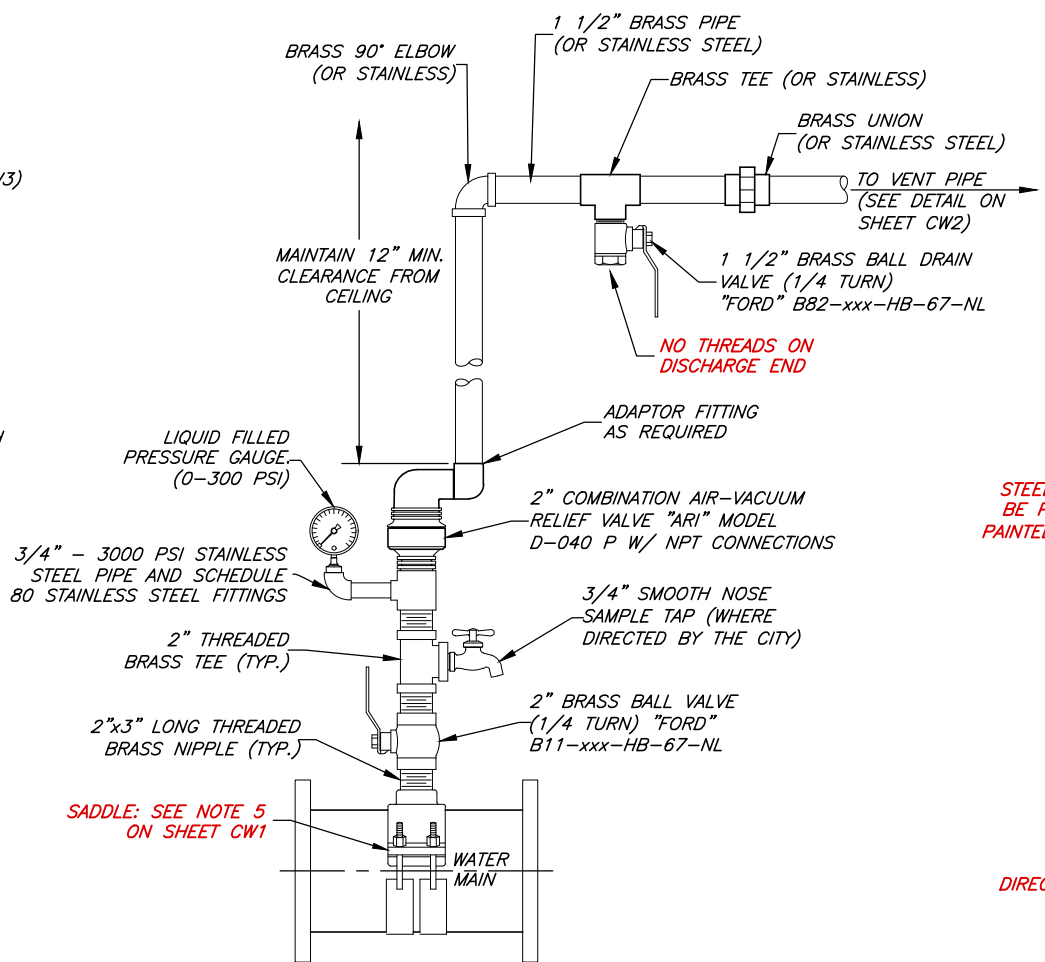
- TAPPING SLEEVE & VALVE NOTES:**
- C1. CONCRETE BLOCKING IS TO BE FORMED TO ENSURE ACCESSIBILITY TO FITTINGS AND POURED AGAINST UNDISTURBED EARTH.
  - C2. FITTINGS SHALL BE COMPLETELY WRAPPED WITH PLASTIC, PRIOR TO POURING CONCRETE.
  - C3. TAPPED WATER LINE SHALL BE AT LEAST ONE SIZE LARGER THAN TAPPING SIZE.



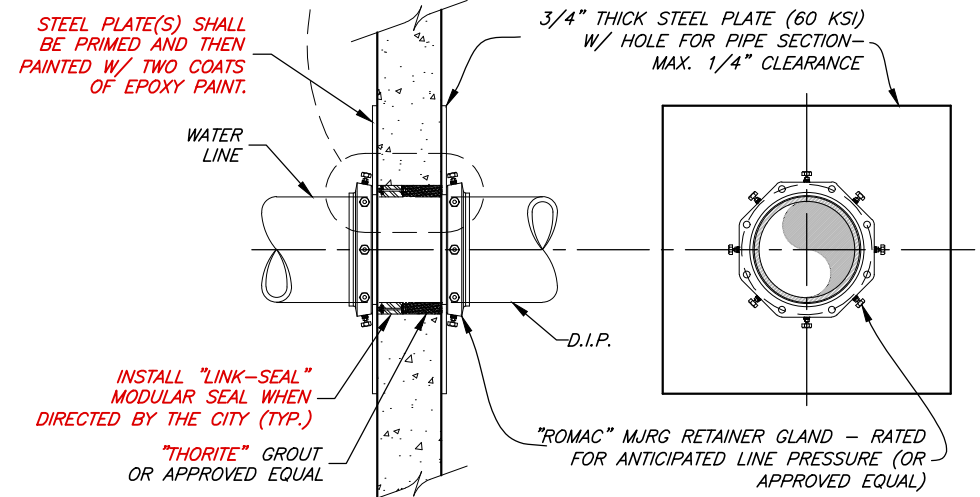
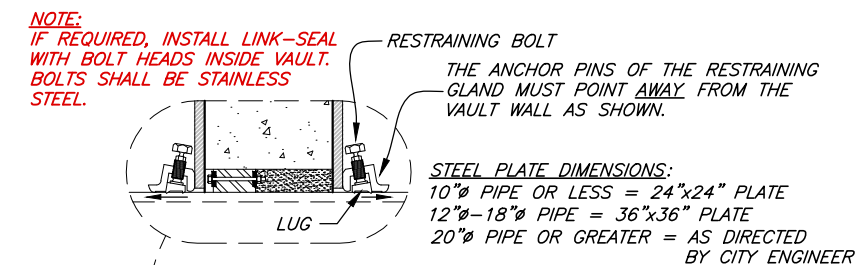
**4" TO 12" STANDARD TAPPING SLEEVE & VALVE ASSEMBLY DETAIL**



**PRESSURE GAUGE ASSEMBLY**  
N.T.S.



**PRV VAULT COMBINATION AIR-VAC RELIEF VALVE ASSEMBLY**  
N.T.S.



**WALL PENETRATION DETAIL**  
FOR PRECAST VAULT (TYP.)

CITY ENGINEER	REV.	DATE
DATE		

SCALE:	DESIGNED _____
N.T.S.	DRAWN _____
	CHECKED _____

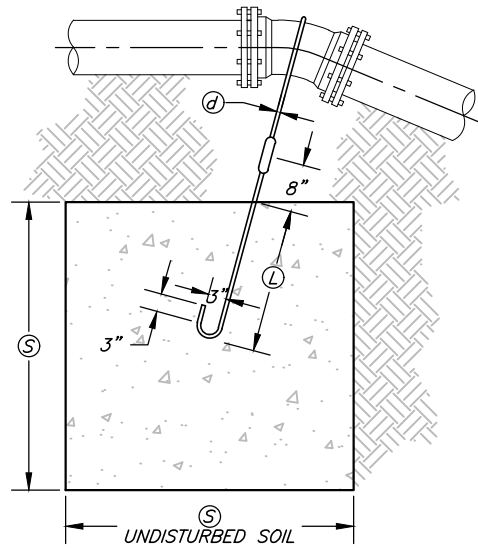
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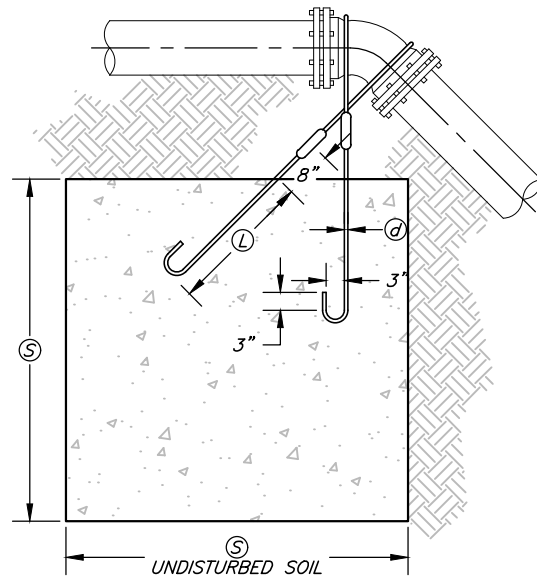
**PLEASANT VIEW CITY CORPORATION**  
PUBLIC WORKS - CULINARY WATER SYSTEM STANDARDS

**TAPPING SLEEVE AND MISCELLANEOUS VAULT DETAILS**

SHEET:	CW10
OF X SHEETS	0



**TYPE A RESTRAINT**  
FOR 11 1/4" - 22 1/2" VERTICAL BENDS



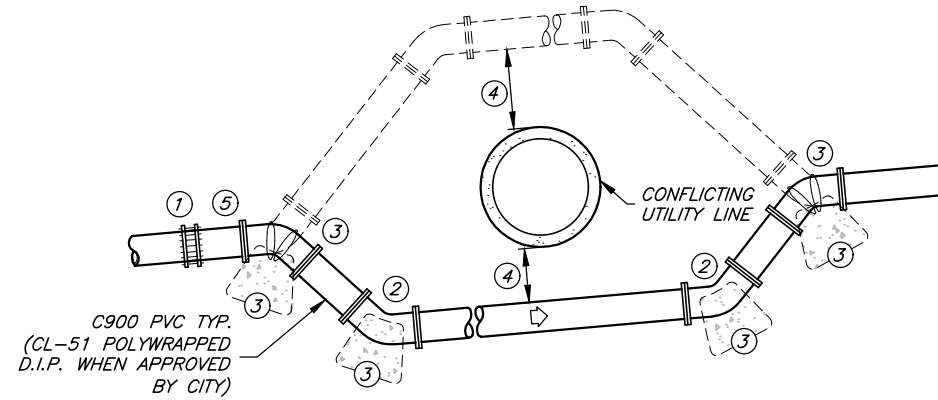
**TYPE B RESTRAINT**  
FOR 45° VERTICAL BENDS

PIPE SIZE NOMIN. DIAMETER - INCH	VB	NO. OF CU C.Y. OF CONC. BLOCKING	S	d	L
4"	11 1/4"	8	2.0	5/8"	1.5
	22 1/2"	15.6	2.5	5/8"	2.0
6"	11 1/4"	15.6	2.5	5/8"	2.0
	22 1/2"	34.3	3.25	5/8"	2.0
8"	11 1/4"	27	3.0	5/8"	2.0
	22 1/2"	64	4.0	5/8"	2.0
12"	11 1/4"	64	4.0	3/4"	2.0
	22 1/2"	125	5.0	3/4"	3.0
16"	11 1/4"	107	4.25	7/8"	3.0
	22 1/2"	216	6.0	7/8"	4.0
20"	11 1/4"	138	5.17	1"	3.5
	22 1/2"	334	6.94	1"	4.0
24"	11 1/4"	240	6.22	1"	4.0
	22 1/2"	476	7.81	1"	4.0
30"	11 1/4"	369	7.17	1"	4.0
	22 1/2"	733	9.02	1"	4.0

PIPE SIZE NOMIN. DIAMETER - INCH	VB	NO. OF CU C.Y. OF CONC. BLOCKING	S	d	L
4"	45°	1	3.0	5/8"	2.0
	45°	2.37	4.0	5/8"	2.5
6"	45°	3.97	4.75	5/8"	2.0
	45°	9.04	6.25	5/8"	4.0
12"	45°	17.24	7.75	3/4"	4.0
	45°	26.52	5.17	3/4"	4.0
20"	45°	37.82	10.07	3/4"	4.0
	45°	58.26	11.63	3/4"	4.0

**TIE-DOWN THRUST RESTRAINTS**

NOTE: LOCKING RESTRAINT DEVICES MAY BE USED IN CONJUNCTION WITH CONCRETE THRUST BLOCKING



**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/REBAR (EPOXY COATING) SECURING BLOCK TO FITTING, SEE TIE-DOWN THRUST RESTRAINT DETAIL THIS SHEET.
- 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 CITY.

**PIPE RESTRAINT**

A1. FOR NOMINAL PIPE DIAMETERS 8" AND GREATER, ALL BENDS, CROSSES, TEES, REDUCERS, AND VALVES SHALL BE INSTALLED WITH RESTRAINING JOINTS ("MEGALUG", "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.

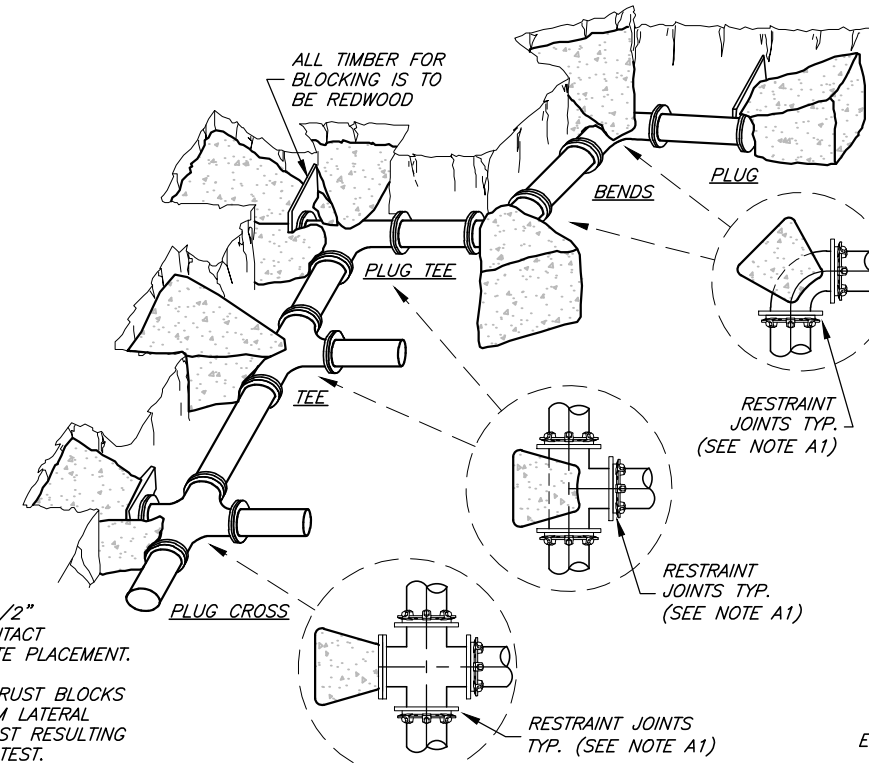
**THRUST BLOCKING NOTES:**

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 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 4000 PSI IN 28 DAYS.



**TYPICAL RETAINER GLANDS & THRUST BLOCKING**

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 PSI.  
FROM TABLE: THRUST = 94 X 200 = 18,800 LB.  
ASSUME BEARING STRENGTH = 2,000 PSF.

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

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

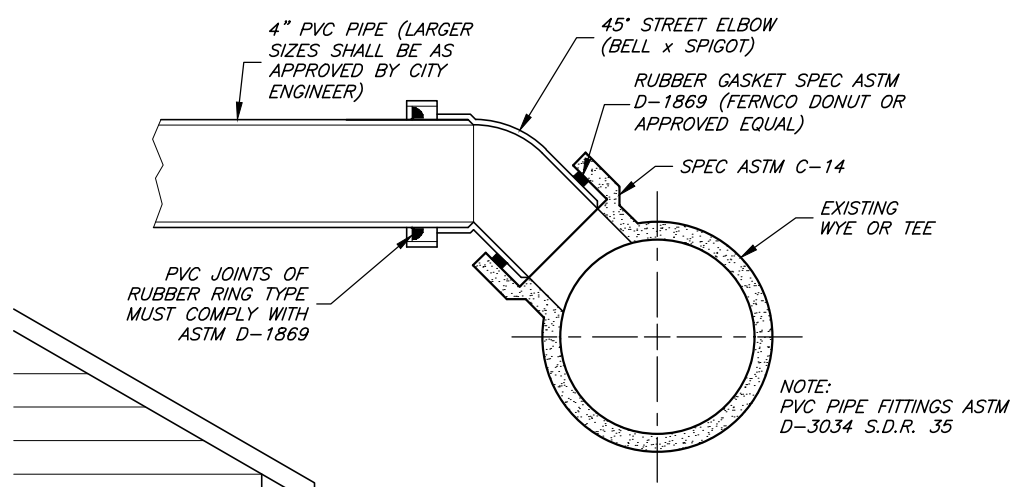
DESIGNED	SCALE:
DRAWN	N.T.S.
CHECKED	

**JONES & ASSOCIATES**  
CONSULTING ENGINEERS  
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South Ogden, Utah 84403 (801) 476-9767  
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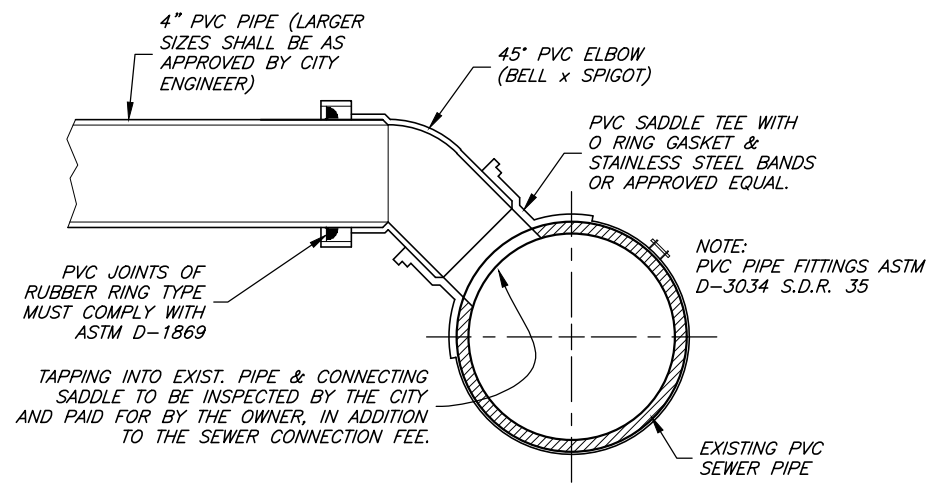


**PLEASANT VIEW CITY CORPORATION**  
PUBLIC WORKS - CULINARY WATER SYSTEM STANDARDS  
**THRUST BLOCK AND WATERLINE LOOP DETAILS**

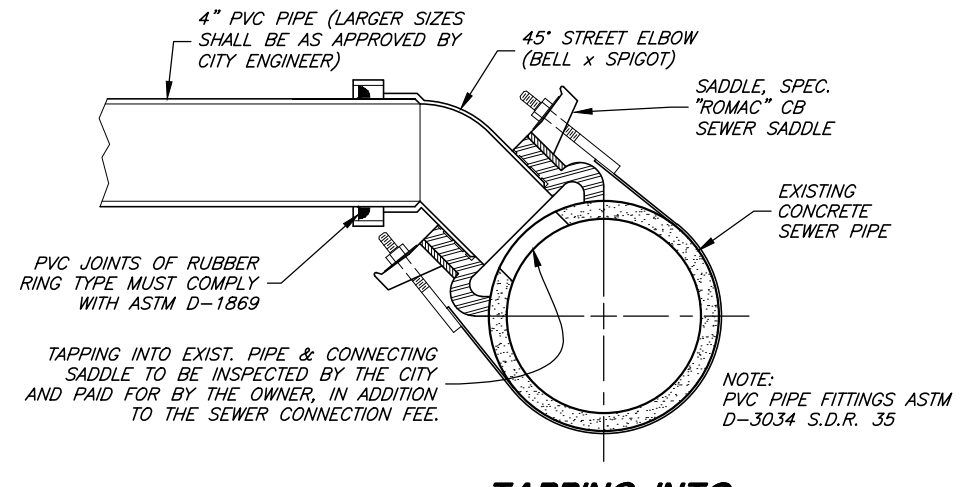
SHEET:
<b>CW11</b>
OF X SHEETS
0



**CONNECTING INTO EXISTING WYE OR TEE**



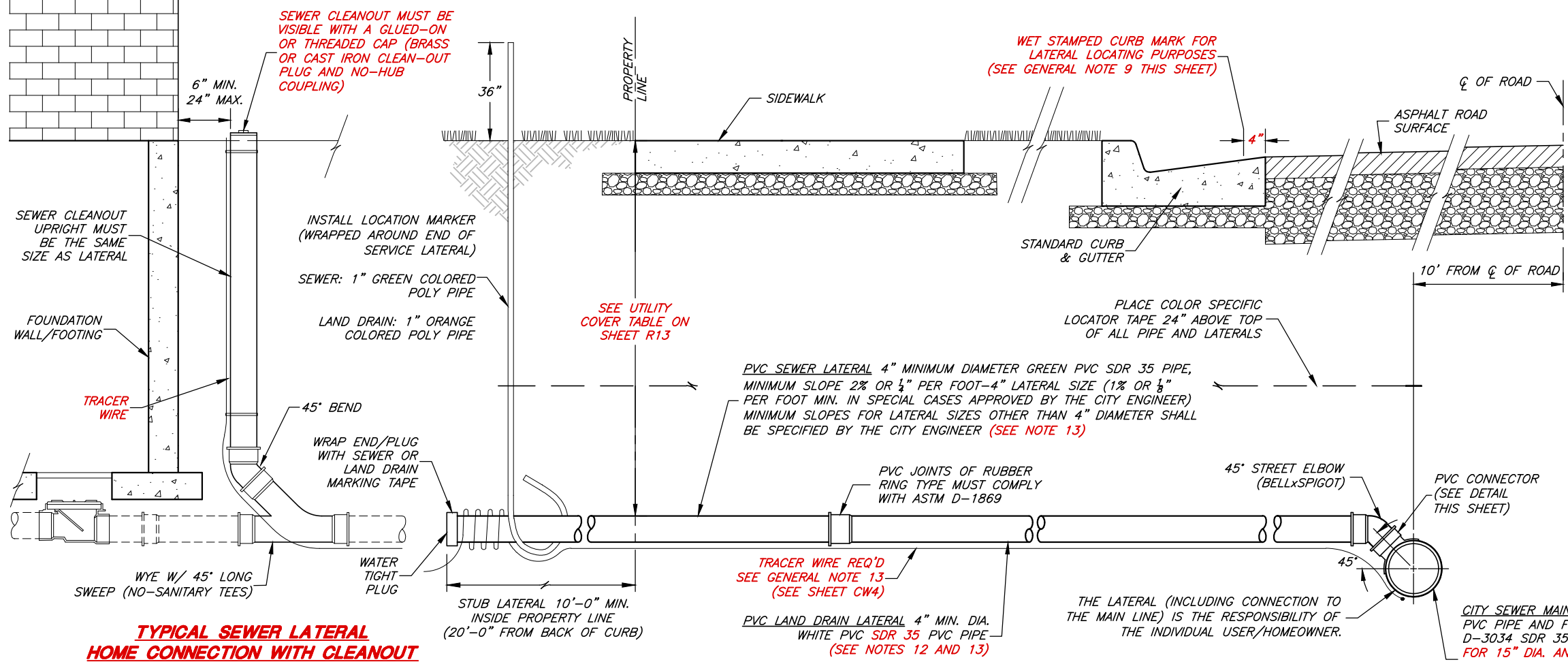
**TAPPING INTO EXISTING PVC PIPE**



**TAPPING INTO EXISTING CONCRETE PIPE**

**GENERAL NOTES:**

- 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.
- 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).
- SANITARY SEWER SERVICE LATERAL CONNECTIONS SHALL NOT BE ALLOWED IN SEWER MANHOLES.
- SANITARY SEWER MAINS AND LATERALS SHALL BE "GREEN" IN COLOR. LAND DRAIN MAINS AND LATERALS SHALL BE "WHITE" IN COLOR. IRRIGATION PIPES SHALL BE "PURPLE" IN COLOR. PREVIOUS YEARS PIPE COLORS VARY THROUGHOUT THE CITY. CONTRACTOR TO VERIFY EXISTING PIPE PRIOR TO MAKING ANY CONNECTION.
- INSERTA TEE PRODUCT IS NOT APPROVED BY THE CITY.
- ALL CLEANOUTS SHALL BE MARKED AND FITTED WITH A BRASS PLUG FOR LOCATION PURPOSES.
- 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.
- ALL SANITARY SEWER LINES SHALL BE INSPECTED BY MEANS OF VIDEO CAMERA WHEN CONSTRUCTED.
- WET STAMPED CONCRETE CURB MARKS USED FOR LATERAL LOCATING ARE REQUIRED BY THE CITY. STAMPED CURB MARKS SHALL BE INSTALLED DURING ALL NEW CONSTRUCTION OR RESTORED WHEN REPLACING DAMAGED CURB & GUTTER DUE TO ANY CONSTRUCTION RELATED ACTIVITY. STAMP "S" FOR SANITARY SEWER, "W" FOR CULINARY WATER, AND "L" FOR LAND DRAIN.**
- DOWNSTREAM LAND DRAIN CONNECTION TO AN EXISTING STORM DRAIN SYSTEM IS REQUIRED.
- SEWER REPAIR COUPLING SHALL BE "MAXADAPTOR" OR CITY APPROVED EQUAL.**
- NEW LAND DRAINS BY SPECIAL CITY APPROVAL ONLY.**
- TRACER WIRE SHALL BE INSTALLED ON ALL SEWER AND LAND DRAIN LATERALS.**



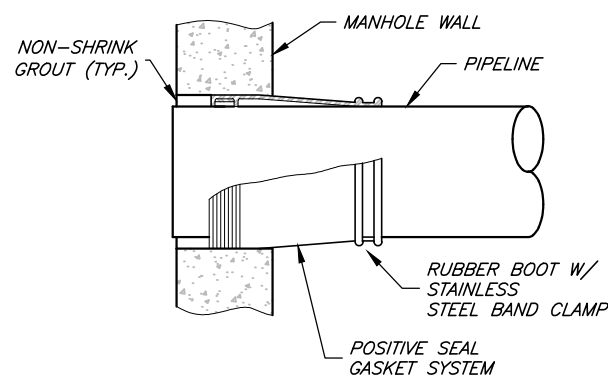
**TYPICAL SEWER / LAND DRAIN LATERALS CONNECTION**

**TYPICAL SEWER LATERAL HOME CONNECTION WITH CLEANOUT**

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

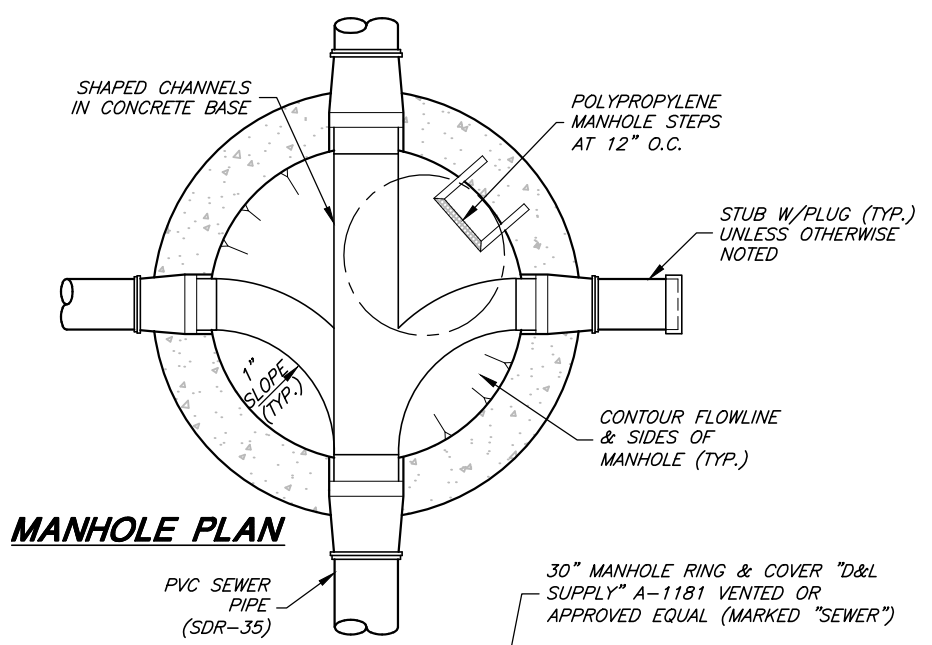
DESIGNED \_\_\_\_\_  
 DRAWN \_\_\_\_\_  
 CHECKED \_\_\_\_\_  
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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - SANITARY SEWER SYSTEM STANDARDS**  
**SEWER / LAND DRAIN LATERAL & MAIN LINE CONNECTION DETAILS**



**RUBBER BOOT DETAIL**

	PIPE SIZES (Ø)		
	8"	10"	12"+
IN-LINE 0°-45°	4" M.H.	4" M.H.	5" M.H.
IN-LINE 45°-90°	5" M.H.	5" M.H.	5" M.H.
> 2 PIPES	5" M.H.	5" M.H.	AS APPROVED

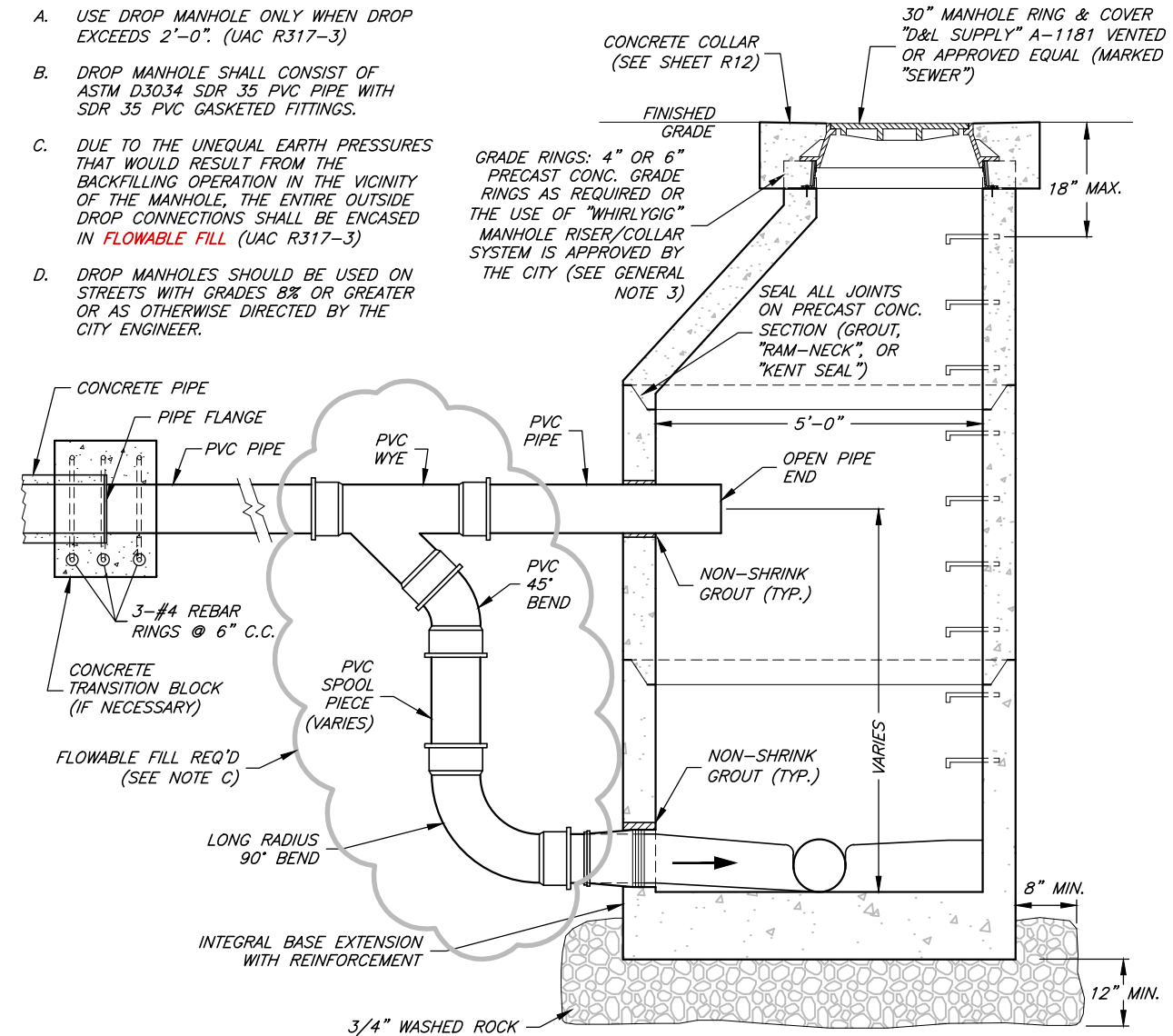


**MANHOLE PLAN**

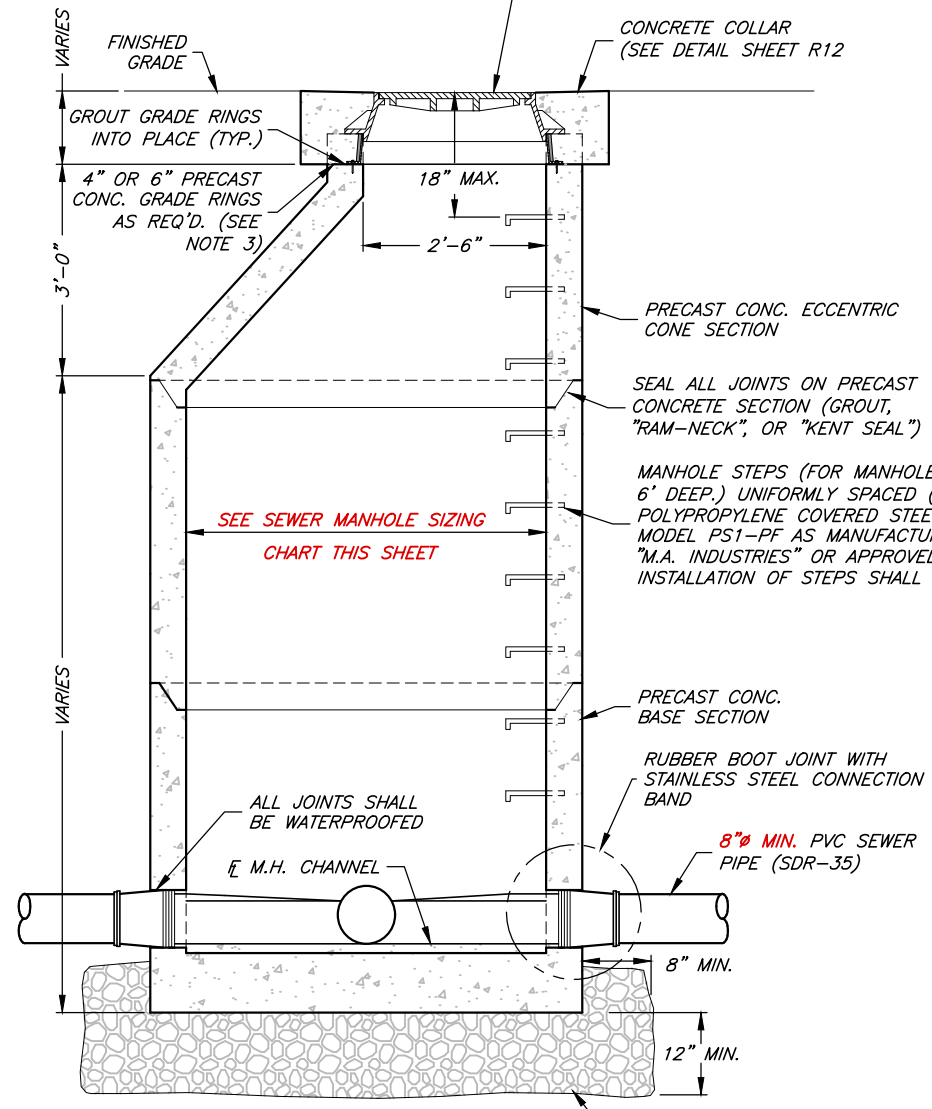
- GENERAL NOTES:**
1. SECURE INVERTS IN ALL MANHOLES DURING CONSTRUCTION SO AS TO PREVENT GRAVEL AND OTHER DEBRIS FROM COLLECTING INSIDE.
  2. A LARGER DIAMETER MANHOLE MAY BE REQUIRED BY THE CITY AFTER EVALUATION OF THE NUMBER, SIZE, AND ANGLE OF THE PIPES THAT CONNECT TO THE MANHOLE.
  3. NO MORE THAN 12" OF GRADE RINGS ("WHIRLYGIG" OR TAPERED CONCRETE GRADE RINGS) TO BE ALLOWED ON ANY MANHOLE.
  4. ALL TERMINATING SEWER 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. ALL SEWER MANHOLE COVERS TO BE VENTED UNLESS OTHERWISE NOTED.
  9. SEWER MANHOLES TO BE INSTALLED IN ACCORDANCE WITH R317-3-2.
  10. WHEN CONSTRUCTING A CAST-IN-PLACE MANHOLE BASE, ADD WATERSTOP (TYP.). "GREENSTREAK" OR APPROVED EQUAL. (SEE DETAIL SHEET SS4)

**DROP MANHOLE NOTES:**

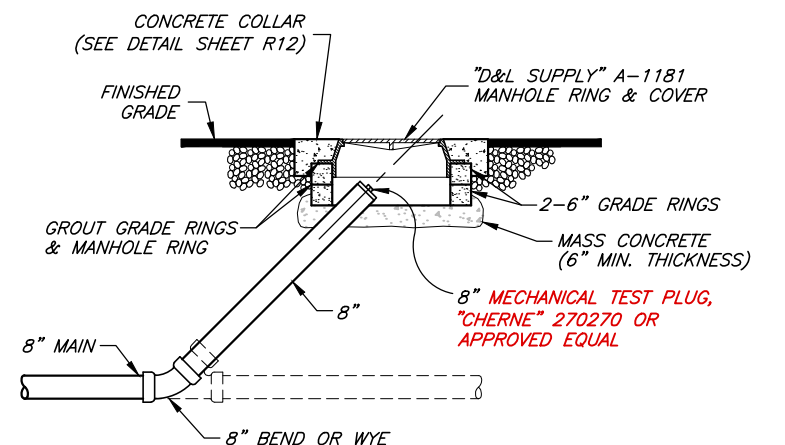
- A. USE DROP MANHOLE ONLY WHEN DROP EXCEEDS 2'-0". (UAC R317-3)
- B. DROP MANHOLE SHALL CONSIST OF ASTM D3034 SDR 35 PVC PIPE WITH SDR 35 PVC GASKETED FITTINGS.
- C. DUE TO THE UNEQUAL EARTH PRESSURES THAT WOULD RESULT FROM THE BACKFILLING OPERATION IN THE VICINITY OF THE MANHOLE, THE ENTIRE OUTSIDE DROP CONNECTIONS SHALL BE ENCASED IN **FLOWABLE FILL** (UAC R317-3)
- D. DROP MANHOLES SHOULD BE USED ON STREETS WITH GRADES 8% OR GREATER OR AS OTHERWISE DIRECTED BY THE CITY ENGINEER.



**TYPICAL DROP MANHOLE SECTION**



**TYPICAL MANHOLE SECTION**



**DRAIN/SEWER MAINLINE CLEANOUT**

TEMPORARY (USE ONLY UPON APPROVAL FROM THE CITY)

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

DESIGNED \_\_\_\_\_  
 DRAWN \_\_\_\_\_  
 CHECKED \_\_\_\_\_

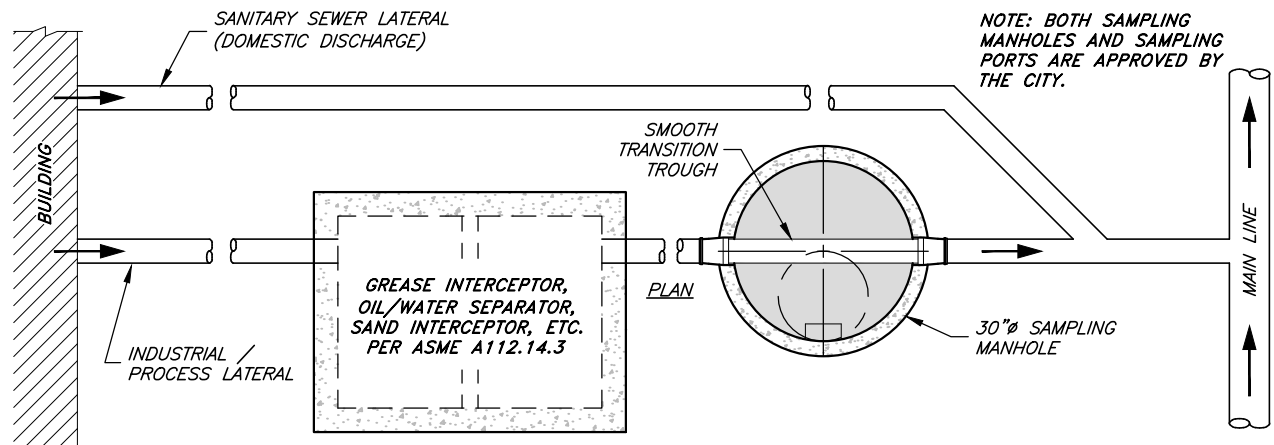
**JA**  
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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - SANITARY SEWER SYSTEM STANDARDS**

**SANITARY SEWER MANHOLE DETAILS**



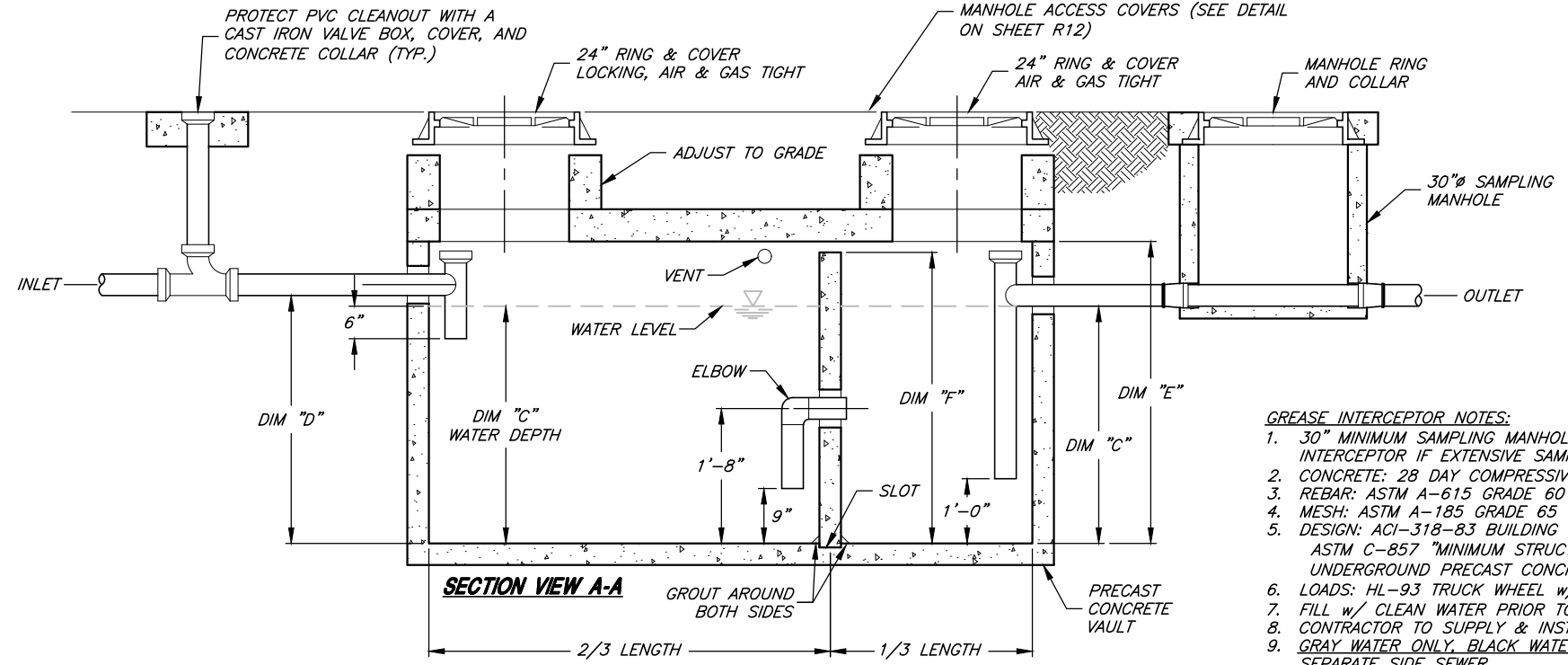
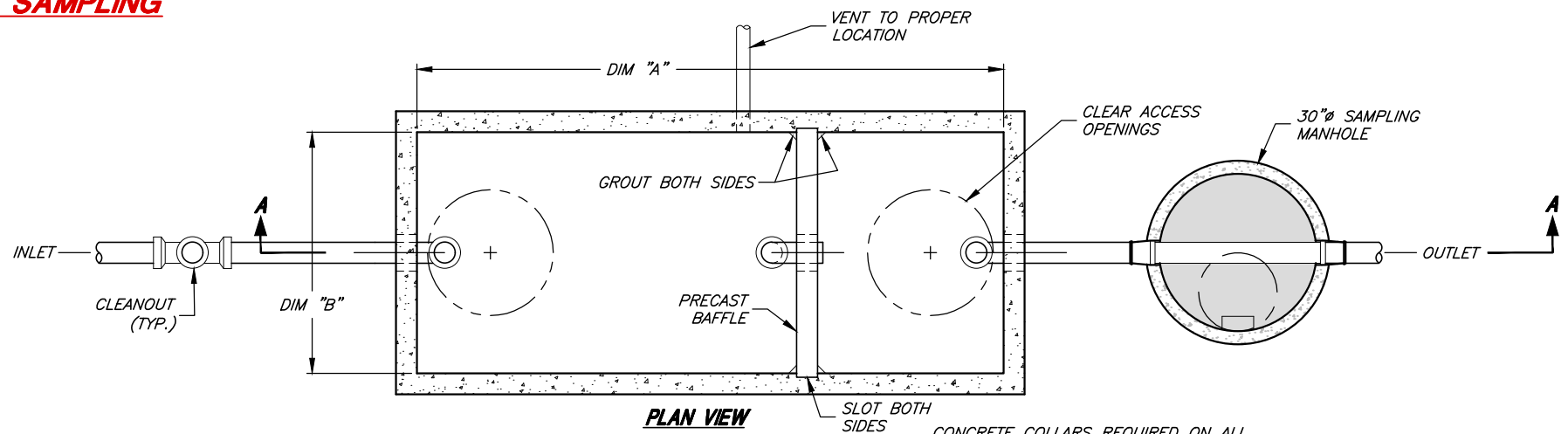
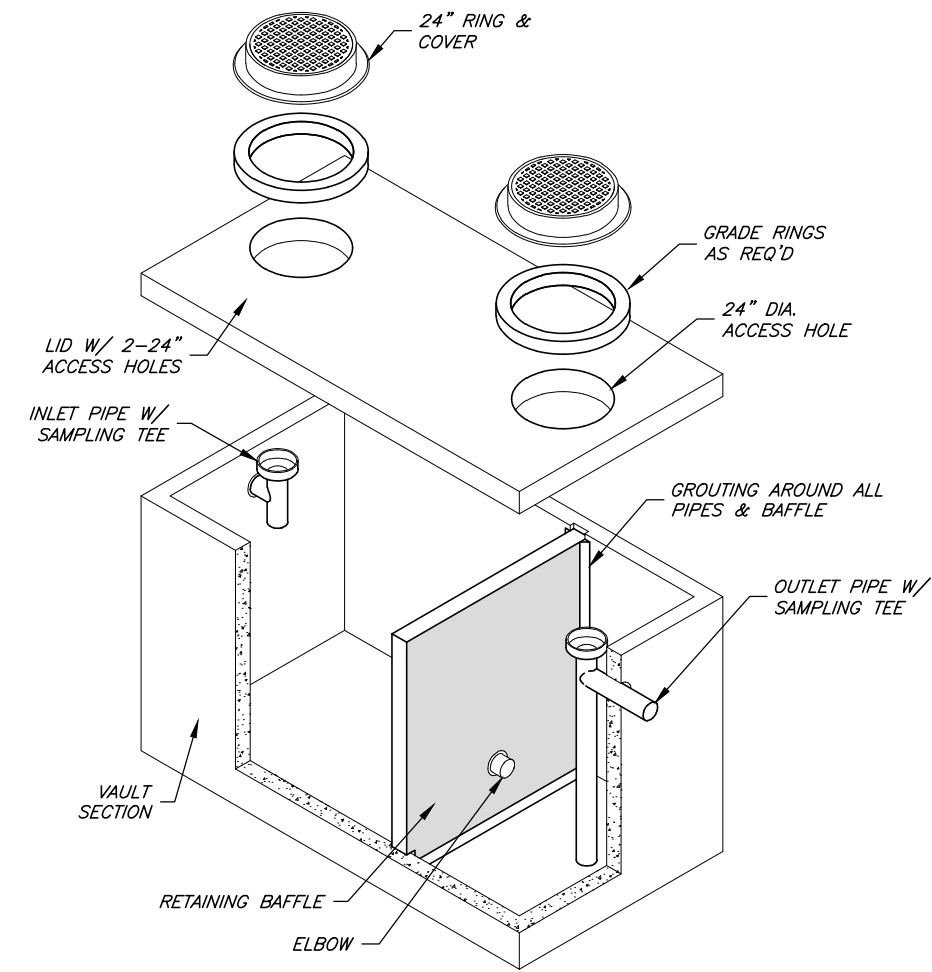
**WASTEWATER SAMPLING**

GREASE INTERCEPTOR DIMENSION TABLE							
GALLON CAPACITY	1000	1500	1800	2500	3000	3500	5000
DIM "A"	11'-0"	11'-0"	11'-0"	12'-0"	12'-0"	15'-0"	18'-0"
DIM "B"	4'-0"	4'-0"	4'-0"	6'-0"	6'-0"	6'-0"	6'-0"
DIM "C" WATER DEPTH	3'-2"	4'-7"	5'-6"	4'-6"	5'-6"	5'-4"	6'-2"
DIM "D"	3'-4"	4'-9"	5'-8"	4'-8"	5'-8"	5'-6"	6'-4"
DIM "E"	4'-0"	6'-0"	7'-0"	6'-0"	7'-0"	7'-0"	7'-0"
DIM "F"	3'-10"	5'-10"	6'-10"	5'-10"	6'-10"	6'-10"	6'-10"

NOTE: CITY MINIMUM CAPACITY OF 1,000 GALLONS REQUIRED

**GENERAL NOTES:**

- A1. ALL GREASE INTERCEPTORS ARE TO BE SIZED BY THE DEVELOPING ENGINEER OR ARCHITECT. STRUCTURE SIZE TO BE APPROVED BY THE CITY BUILDING OFFICIAL. SUBMIT ENGINEERED CONSTRUCTION PLANS AND DETAILS TO THE CITY FOR REVIEW AND FINAL APPROVAL PRIOR TO CONSTRUCTION.
- A2. THE GREASE INTERCEPTORS SHOWN ON THIS SHEET ARE EXAMPLES OF RECOMMENDED STRUCTURES FOR USE WITHIN THE CITY. OTHER OPTIONS, STYLES, AND TYPES OF STRUCTURES WILL BE REVIEWED ON A CASE BY CASE BASIS.
- A3. ALL HYDROMECHANICAL GREASE INTERCEPTORS; FATS, OILS, AND GREASES DISPOSAL SYSTEMS AND AUTOMATIC GREASE REMOVAL DEVICES SHALL BE SIZED, DESIGNED AND TESTED, AND INSTALLED IN COMPLIANCE WITH ASME A112.14.3



**GREASE INTERCEPTOR EXAMPLE**  
1,000 - 5,000 GALLON CAPACITIES

**GREASE INTERCEPTOR NOTES:**

- 30" MINIMUM SAMPLING MANHOLE REQUIRED DOWNSTREAM OF INTERCEPTOR IF EXTENSIVE SAMPLING IS NEEDED
- CONCRETE: 28 DAY COMPRESSIVE STRENGTH f'c = 4500 psi
- REBAR: ASTM A-615 GRADE 60
- MESH: ASTM A-185 GRADE 65
- DESIGN: ACI-318-83 BUILDING CODE  
ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
- LOADS: HL-93 TRUCK WHEEL w/ 30% IMPACT PER AASHTO
- FILL w/ CLEAN WATER PRIOR TO START-UP OF SYSTEM
- CONTRACTOR TO SUPPLY & INSTALL ALL PIPING & SAMPLING TEES
- GRAY WATER ONLY, BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER

CITY ENGINEER	REV.	DATE
DATE		

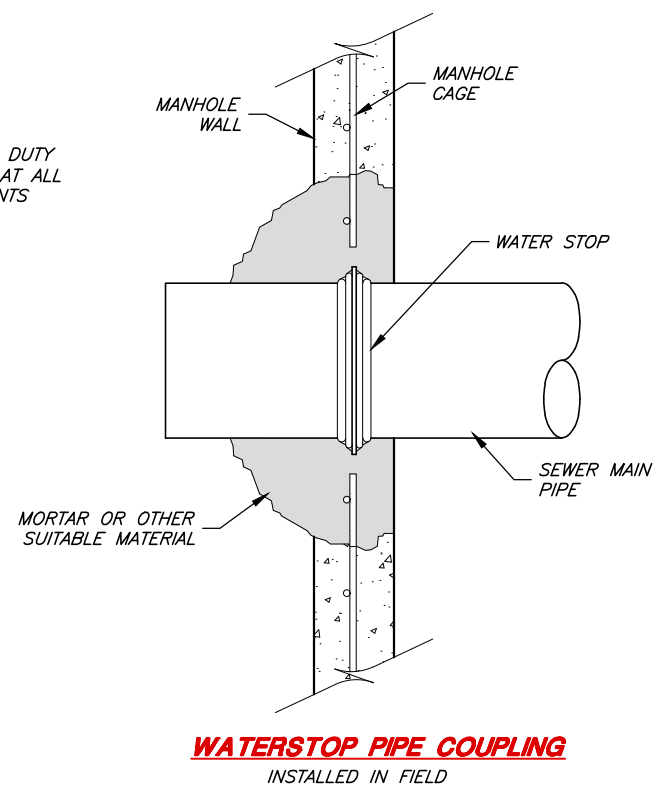
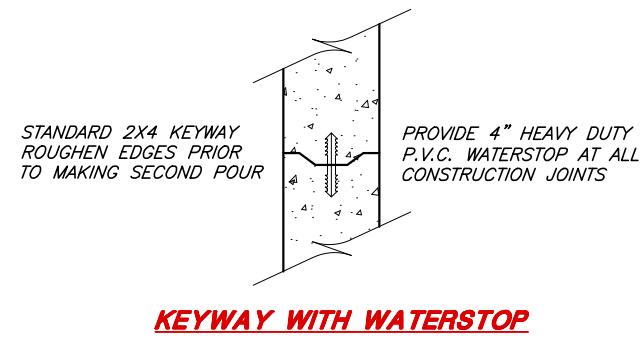
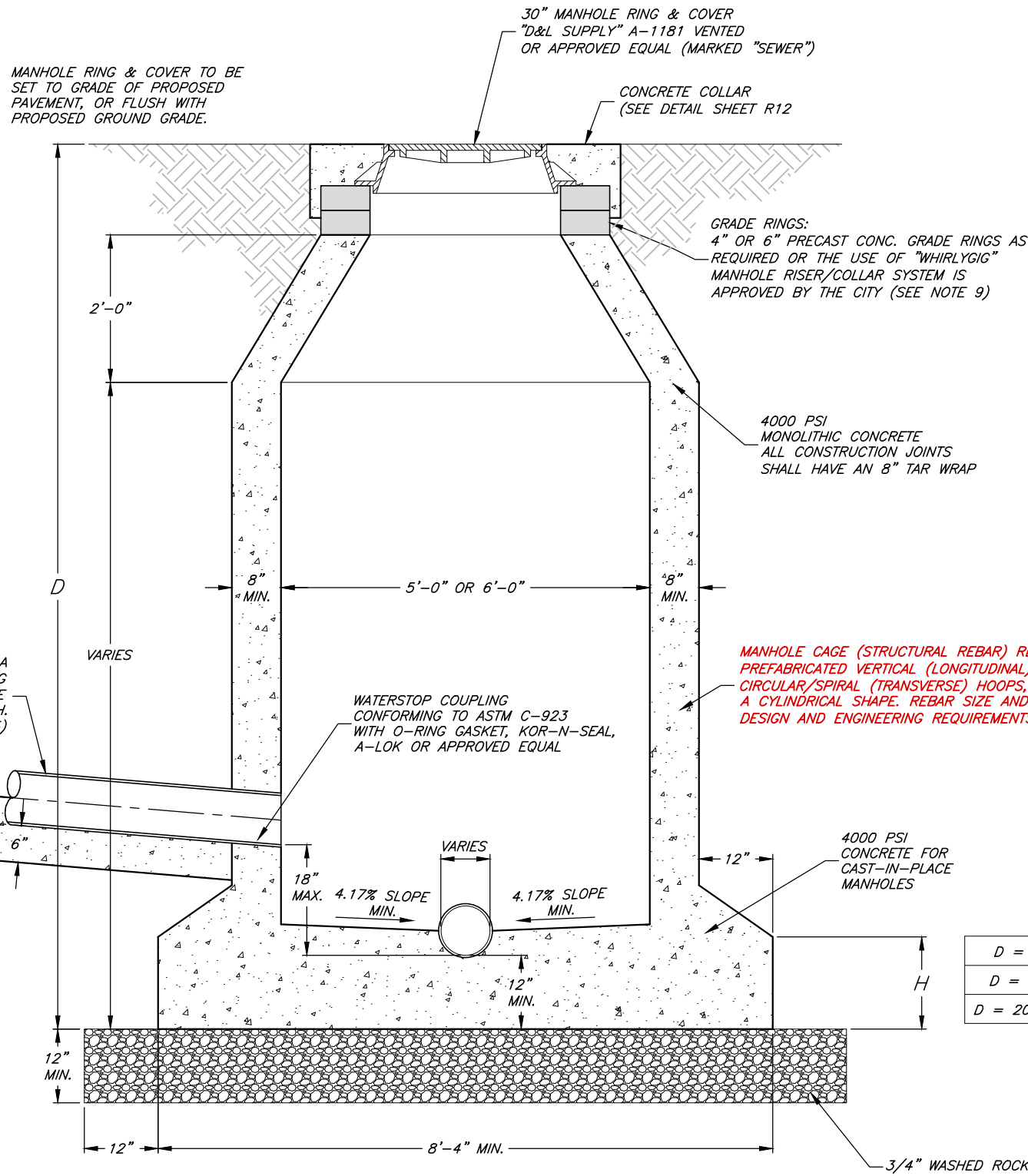
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PUBLIC WORKS - SANITARY SEWER SYSTEM STANDARDS  
**GREASE INTERCEPTOR EXAMPLE DETAIL**

SHEET:	SS3
OF X SHEETS	0



**CAST-IN-PLACE MANHOLE**

**CAST-IN-PLACE MANHOLE NOTES:**

- KEYWAYS REQUIRED FOR ALL CONSTRUCTION JOINTS.
- CONCRETE SHALL BE 4,000 PSI.
- IF GREATER THAN 6" DIFFERENCE IN ELEVATION OF INCOMING PIPE TO OUTFALL, BUT LESS THAN 18" IN ELEVATION DROP, PLACE GROUT TO CREATE A FILLETED INVERT FROM INCOMING FLOWLINE TO TOP OF CHANNEL OF EXISTING PIPE TO PREVENT SOLIDS DEPOSITION.
- DROP MANHOLE (EXTERNAL DROP CONNECTION) REQUIRED FOR CONNECTION OF 18" DRIP OR GREATER.
- ALL PIPES ENTERING & LEAVING A MANHOLE SHALL BE CRADLED FOR A DISTANCE OF 5 FEET OUTSIDE OF MANHOLE FOR FULL WIDTH OF TRENCH.
- PROVIDE A U-SHAPED CHANNEL THROUGH ALL MANHOLES:
  - FOR PIPES LESS THAN 15 INCHES DIAMETER, CHANNEL DEPTH MUST BE AT LEAST ONE-HALF THE PIPE DIAMETER;
  - FOR PIPES MORE THAN 15 INCHES BUT LESS THAN 24" DIAMETER, CHANNEL DEPTH MUST BE AT LEAST 3/4 THE PIPE DIAMETER.
  - FOR PIPES GREATER THAN 24 INCHES DIAMETER, CHANNEL DEPTH MUST BE AT LEAST EQUAL TO THE PIPE DIAMETER.
- ALL MANHOLE BENCH AREAS SHALL HAVE A SLOPE OF AT LEAST 0.5 INCHES PER FOOT.
- ALL JOINTS AND SEAMS ON SANITARY SEWER MANHOLES SHALL BE WRAPPED WITH "WRAPIDSEAL" OR APPROVED EQUAL.
- NO MORE THAN 12" OF GRADE RINGS ("WHIRLYGIG" OR TAPERED CONCRETE GRADE RINGS) TO BE ALLOWED ON ANY MANHOLE.
- THE DEVELOPER, CONTRACTOR, OR PROJECT ENGINEER IS RESPONSIBLE FOR DESIGN RELATED TO HL-93 TRAFFIC LOADING AND ENGINEERING REQUIREMENTS. VERIFICATION OF PROPER DESIGN MUST BE PROVIDED TO THE CITY BY THE DEVELOPER, CONTRACTOR, OR PROJECT ENGINEER AS THE CASE MAY BE.

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

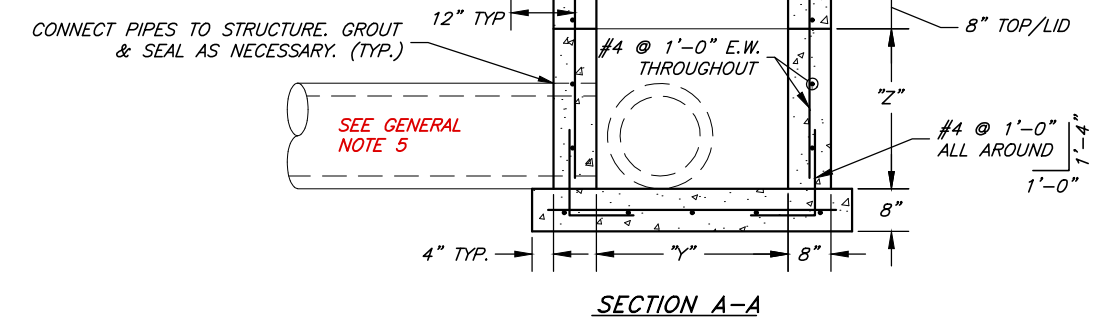
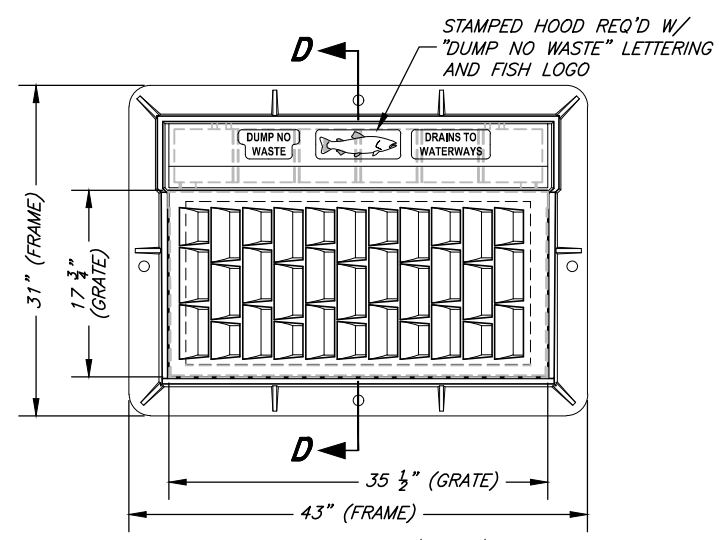
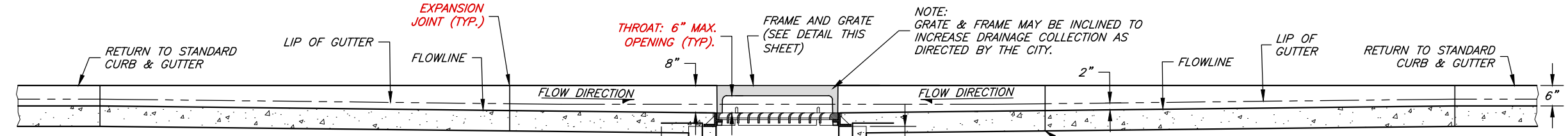
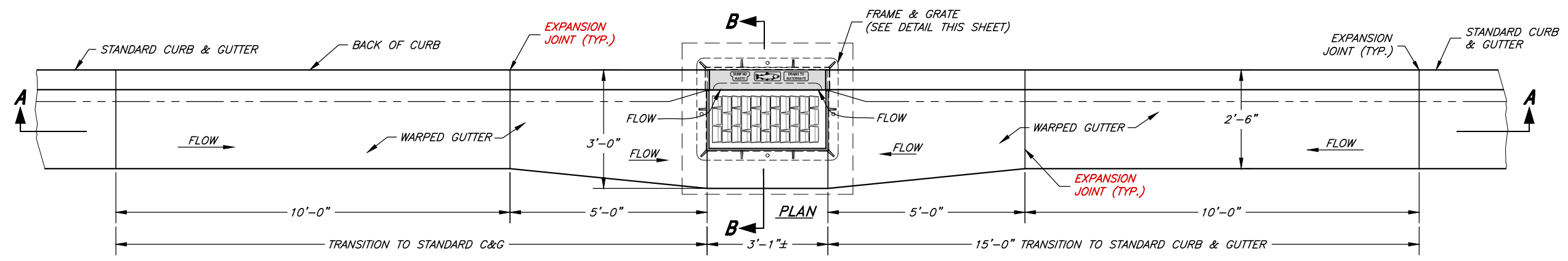
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Pleasant View City

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PUBLIC WORKS - SANITARY SEWER SYSTEM STANDARDS

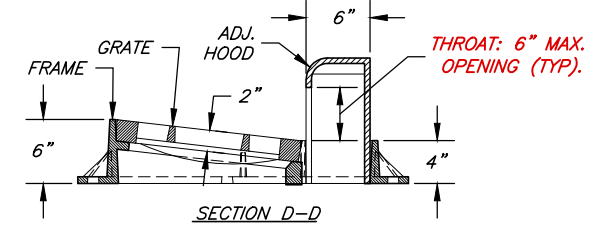
**CAST-IN-PLACE MANHOLE DETAIL**



**GENERAL NOTES:**

1. ALL CATCH BASIN BOX SIZES REFLECT DIMENSIONS FOR THE MINIMUM 15"Ø PIPE SIZE. BOX DIMENSIONS MUST INCREASE PROPORTIONALLY TO ACCOMMODATE LARGER PIPE SIZES.
2. CAST-IN-PLACE CONCRETE CATCH BASINS CAN BE REPLACED WITH PRECAST CONCRETE CATCH BASINS WITH HL-93 DECK LOADING AND COMPARABLE SIZE.
3. ALL BOXES SHALL BE FORMED ON THE INSIDE AND OUTSIDE OF THE BOX AND INSPECTED BY THE CITY PRIOR TO THE PLACING OF CONCRETE.
4. DOUBLE CATCH BASINS WILL BE REQUIRED IN LOCATIONS SPECIFIED BY THE CITY (TYPICALLY IN LOW SPOTS OR WHERE ADDITIONAL INLET CAPACITY IS NEEDED). FOR CONSTRUCTION OF DOUBLE CATCH BASIN, SEE DETAILS AND NOTES ON SHEET SD2.
5. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS, OR AS APPROVED BY THE CITY ON A CASE-BY-CASE BASIS.
6. ALTERNATE STRUCTURE (E.G. COMBO BOXES) MAY BE USED WITH APPROVAL OF THE CITY. STRUCTURES SHALL FOLLOW APWA STANDARD PLANS AND BE A COMMON SIZE.
7. CHANNEL CONTOURING - SEE A4.D.3 OF CITY STANDARDS.

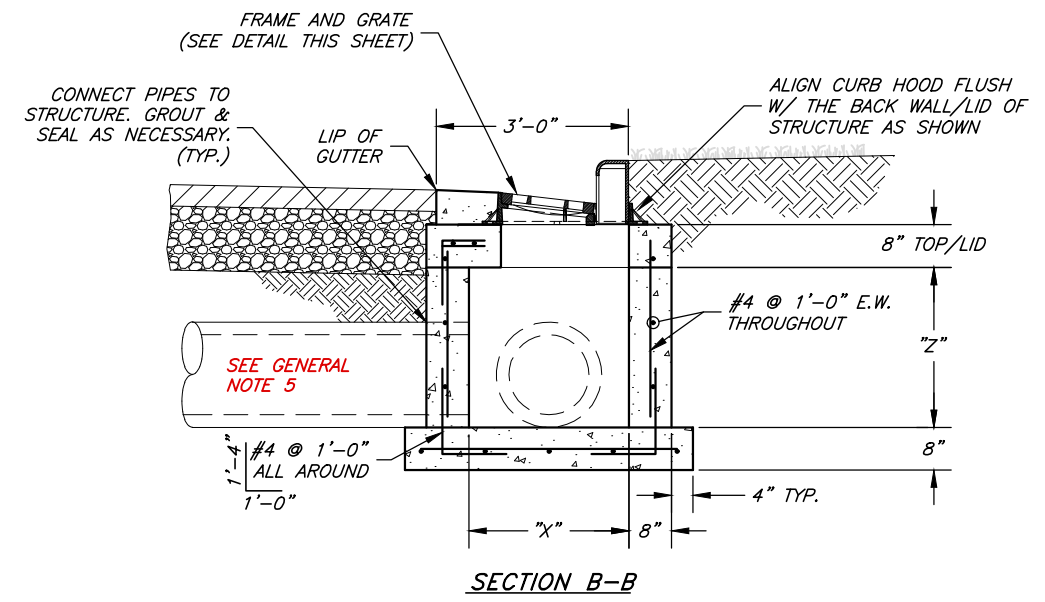
**SINGLE HOODED CATCH BASIN**



**CURB HOOD INLET FRAME & TYPE "L" GRATE**

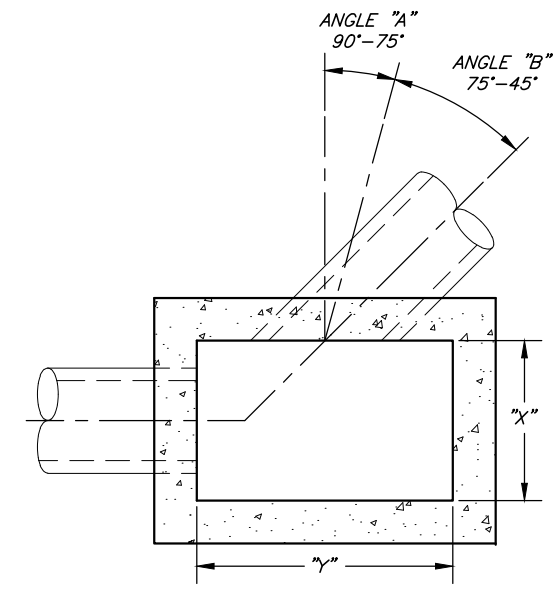
CITY APPROVED GRATE AND FRAMES

<b>"D&amp;L SUPPLY" I-3517</b> (SEE DETAIL THIS SHEET)		<b>"EJ" 7035 ASSEMBLY</b>	
PRODUCT NUMBER:		PRODUCT NUMBER:	
GRATE:	I-3517-02	GRATE:	TYPE M6
ADJ HOOD:	I-3516-13	ADJ HOOD:	TYPE T6
FRAME:	I-3516-R8	FRAME:	7035



PIPE SIZE (IN.)	SINGLE CATCH BASIN			"Z" MIN.
	"X"	"Y" (ANGLE A)	"Y" (ANGLE B)	
15	2'-6"	3'-0"	3'-0"	3'-0"
18	4'-0"	3'-0"	4'-0"	3'-0"
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"	5'-0"	6'-0"	4'-0"
42	6'-0"	6'-0"	7'-0"	5'-0"
48	6'-0"	6'-0"	8'-0"	5'-6"

NOTE: THE MINIMUM CATCH BASIN DIMENSIONS WILL NEED TO BE UPSIZED WHEN SNOOTS ARE USED (TYP.)



CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

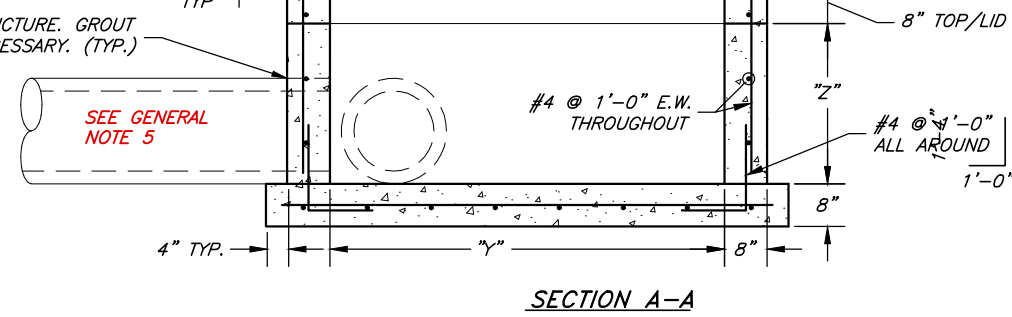
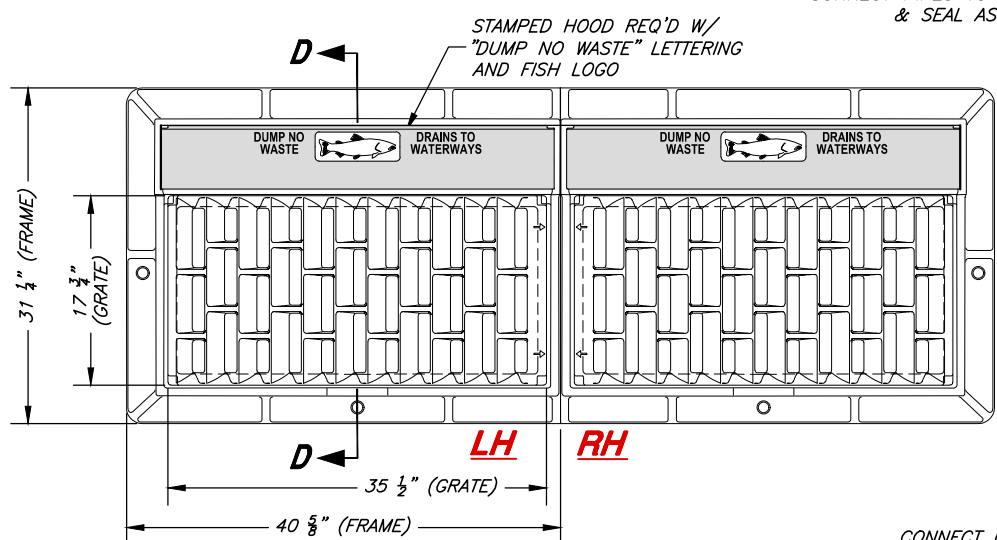
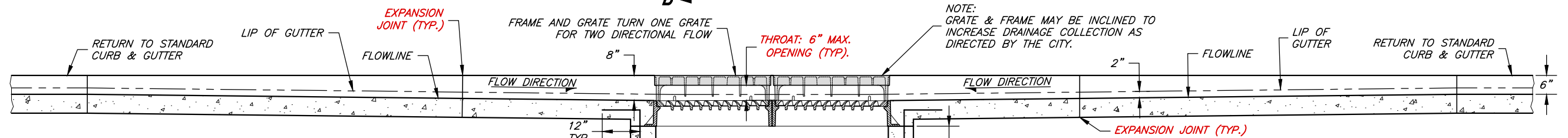
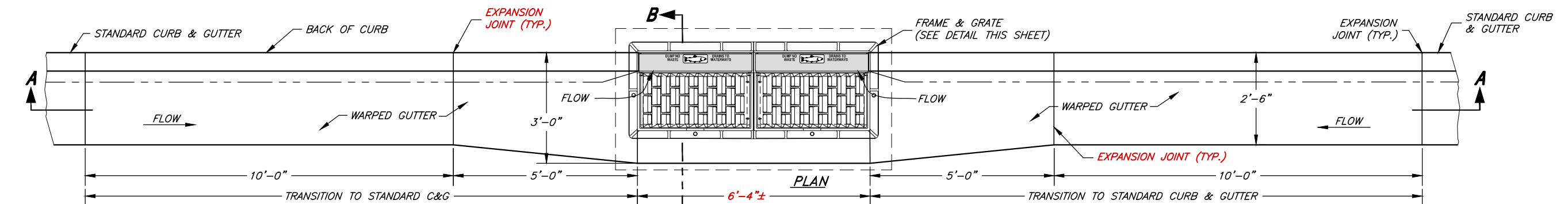
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Pleasant View City

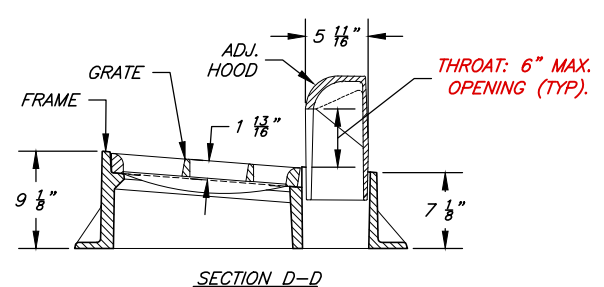
PLEASANT VIEW CITY CORPORATION  
PUBLIC WORKS - STORM DRAIN SYSTEM STANDARDS

**SINGLE CATCH BASIN DETAILS**



**DOUBLE HOODED CATCH BASIN**

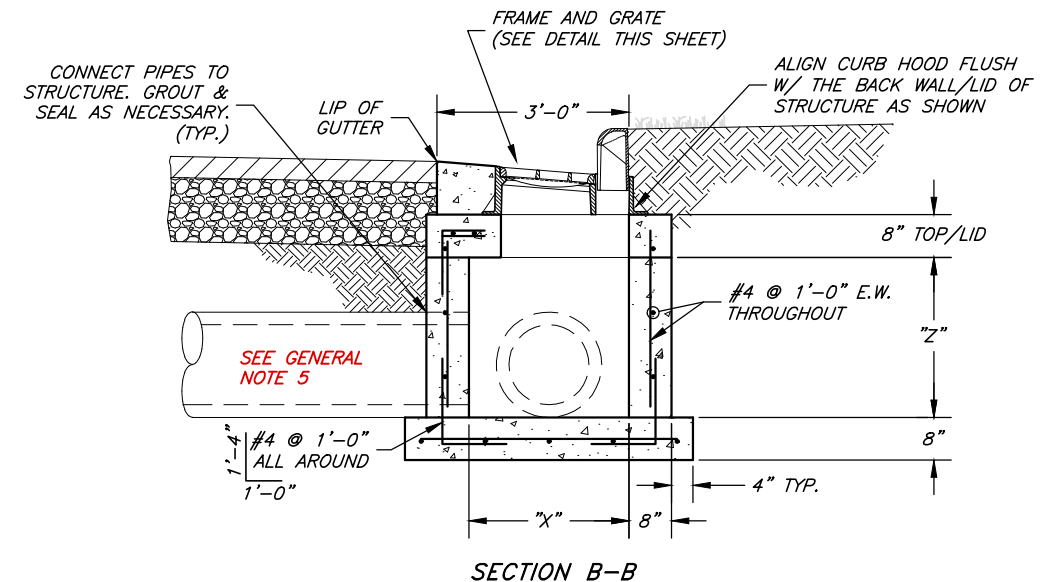
- GENERAL NOTES:**
1. ALL CATCH BASIN BOX SIZES REFLECT DIMENSIONS FOR THE MINIMUM 15" PIPE SIZE. BOX DIMENSIONS MUST INCREASE PROPORTIONALLY TO ACCOMMODATE LARGER PIPE SIZES.
  2. CAST-IN-PLACE CONCRETE CATCH BASINS CAN BE REPLACED WITH PRECAST CONCRETE CATCH BASINS WITH HL-93 DECK LOADING AND COMPARABLE SIZE.
  3. ALL BOXES SHALL BE FORMED ON THE INSIDE AND OUTSIDE OF THE BOX AND INSPECTED BY THE CITY PRIOR TO THE PLACING OF CONCRETE.
  4. DOUBLE CATCH BASINS WILL BE REQUIRED IN LOCATIONS SPECIFIED BY THE CITY (TYPICALLY IN LOW SPOTS OR WHERE ADDITIONAL INLET CAPACITY IS NEEDED).
  5. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS, OR AS APPROVED BY THE CITY ON A CASE-BY-CASE BASIS.
  6. ALTERNATE STRUCTURE (E.G. COMBO BOXES) MAY BE USED WITH APPROVAL OF THE CITY. STRUCTURES SHALL FOLLOW APWA STANDARD PLANS AND BE A COMMON SIZE.
  7. CHANNEL CONTOURING - SEE A4.D.3 OF CITY STANDARDS.



**CURB HOOD INLET FRAME**

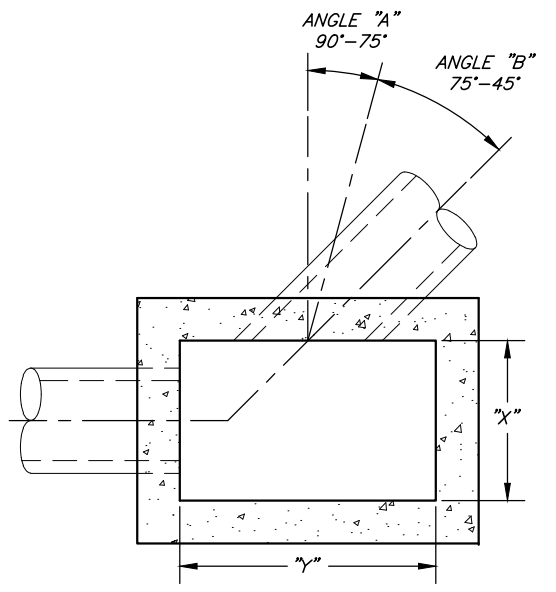
**"EJ" 7036 ASSEMBLY**

PRODUCT NUMBER:	
GRATE:	TYPE M6
ADJ HOOD:	TYPE T6
FRAME:	7036 RH
FRAME:	7036 LH



**CATCH BASIN DIMENSION TABLE**

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



**NOTE:** THE MINIMUM CATCH BASIN DIMENSIONS WILL NEED TO BE UPSIZED WHEN DRY WELLS OR SNOOTS ARE USED (TYP.)

CITY ENGINEER	REV.	DATE
DATE		

SCALE: \_\_\_\_\_

DESIGNED: \_\_\_\_\_

DRAWN: \_\_\_\_\_

CHECKED: \_\_\_\_\_

N.T.S.

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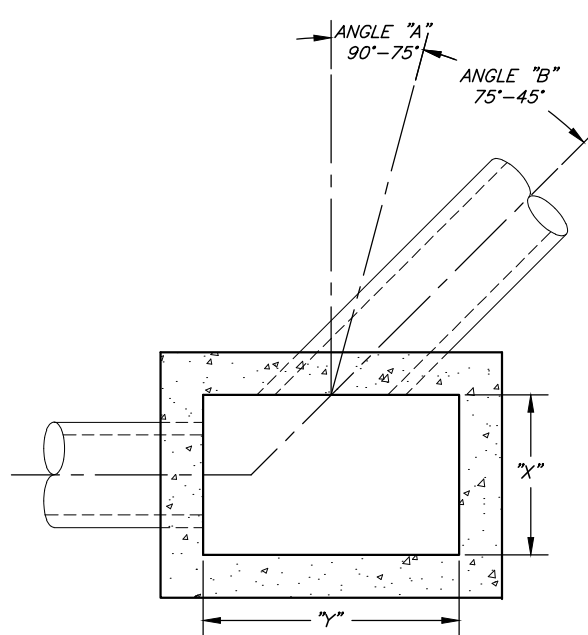
**PUBLIC WORKS - STORM DRAIN SYSTEM STANDARDS**

**DOUBLE CATCH BASIN DETAILS**

SHEET: **SD2**

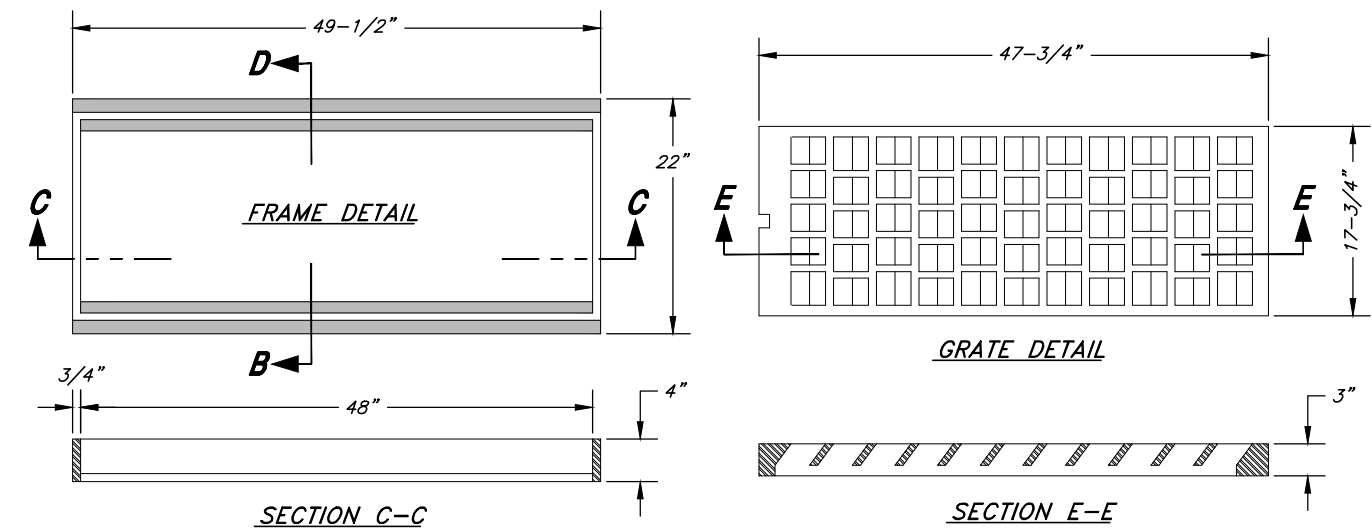
OF X SHEETS

0



**DRAINAGE DITCH INLET BOX  
DIMENSION TABLE**

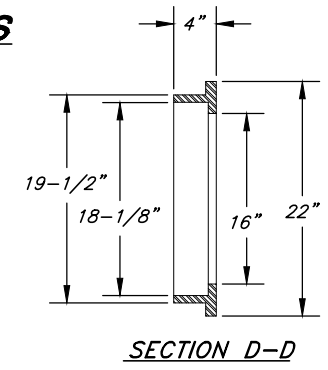
PIPE SIZE (IN.)	INLET BOX			"Z" MIN.
	"X"	"Y" (ANGLE A)	"Y" (ANGLE B)	
15	2'-6"	4'-0"	4'-0"	3'-0"
18	4'-0"	4'-0"	4'-0"	3'-0"
21	4'-0"	4'-0"	4'-0"	3'-0"
24	4'-0"	4'-0"	5'-0"	3'-0"
30	4'-0"	4'-0"	6'-0"	3'-6"
36	4'-0"	4'-0"	6'-0"	4'-0"
42	6'-0"	6'-0"	7'-0"	5'-0"
48	6'-0"	6'-0"	8'-0"	5'-6"



**FRAME & GRATE DETAILS**

- FRAME AND GRATE NOTES:
- A1. BICYCLE SAFE GRATE REQUIRED (TYP.)
  - A2. GRATE AND FRAME:

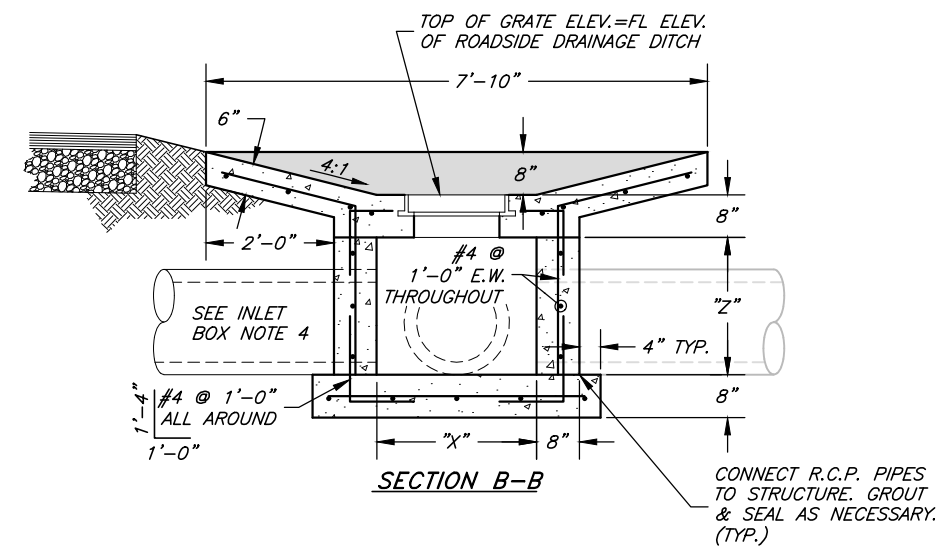
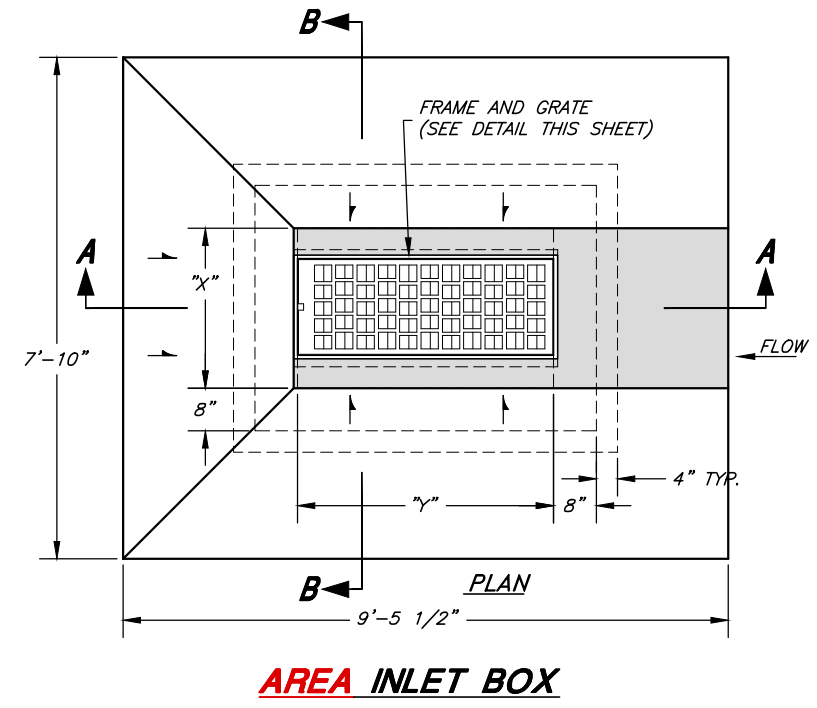
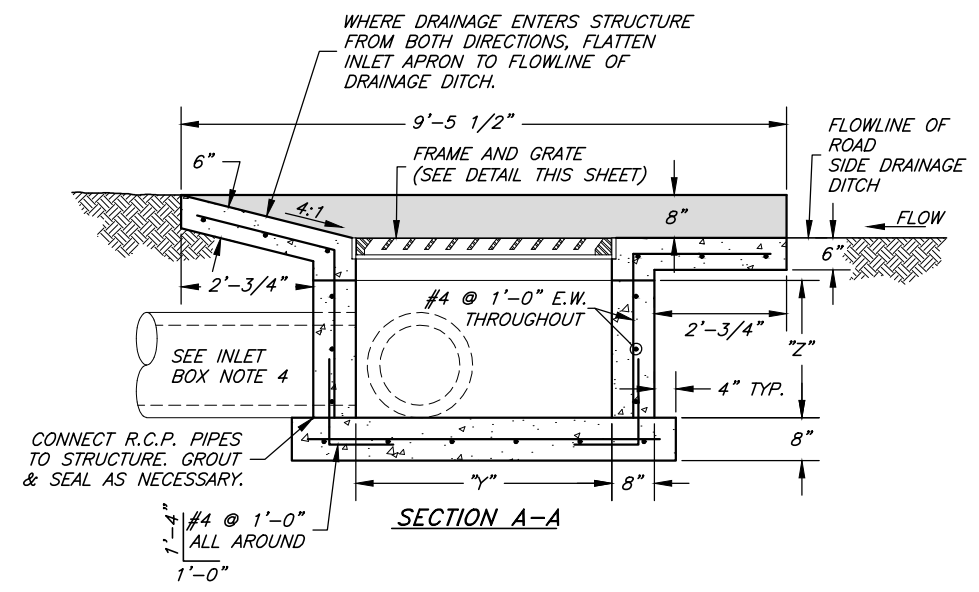
CITY APPROVED GRATE AND FRAMES	
MAKE	MODEL
"D&L SUPPLY"	I-1803 (SEE DETAIL THIS SHEET)
EJ	7803 ASSEMBLY
EJ	7805 ASSEMBLY



"OR EQUAL" GRATES AND FRAMES WILL BE CONSIDERED AS APPROVED BY THE CITY ENGINEER.

**INLET BOX NOTES:**

1. 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)
2. CAST-IN-PLACE CONCRETE STRUCTURES CAN BE REPLACED WITH PRECAST CONCRETE STRUCTURES WITH HL-93 DECK LOADING AND COMPARABLE SIZE.
3. ALL BOXES SHALL BE FORMED ON THE INSIDE AND OUTSIDE OF THE BOX AND INSPECTED BY THE CITY PRIOR TO THE PLACING OF CONCRETE.
4. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS, OR AS APPROVED BY THE CITY ON A CASE-BY-CASE BASIS.
5. CHANNEL CONTOURING - SEE A4.D.3 OF CITY STANDARDS.



CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

SCALE: N.T.S.

DESIGNED \_\_\_\_\_  
DRAWN \_\_\_\_\_  
CHECKED \_\_\_\_\_

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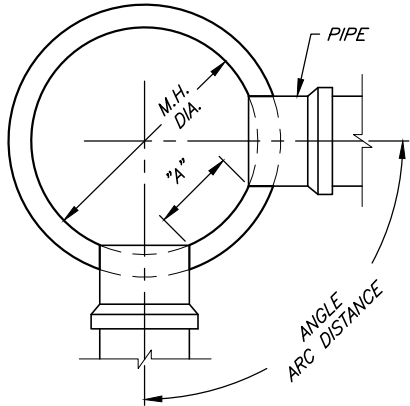
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**Pleasant View**  
**CITY**

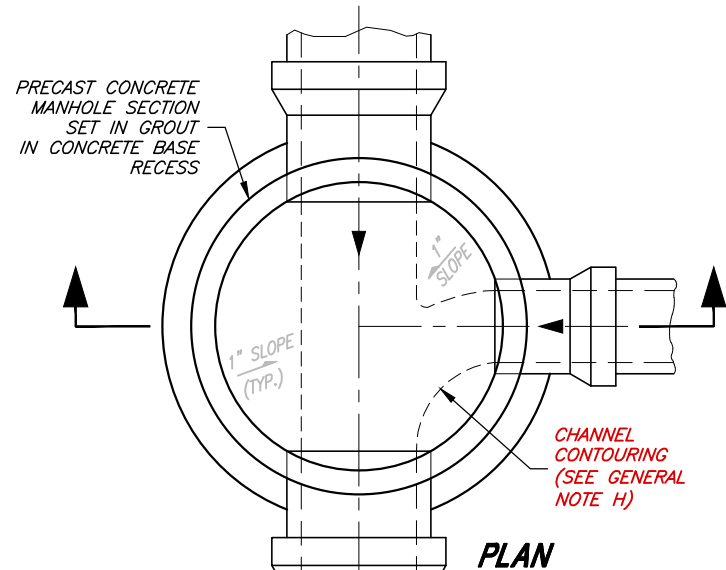
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**PUBLIC WORKS - STORM DRAIN SYSTEM STANDARDS**

**AREA INLET BOX AND GENERAL GRATE & FRAME DETAILS**

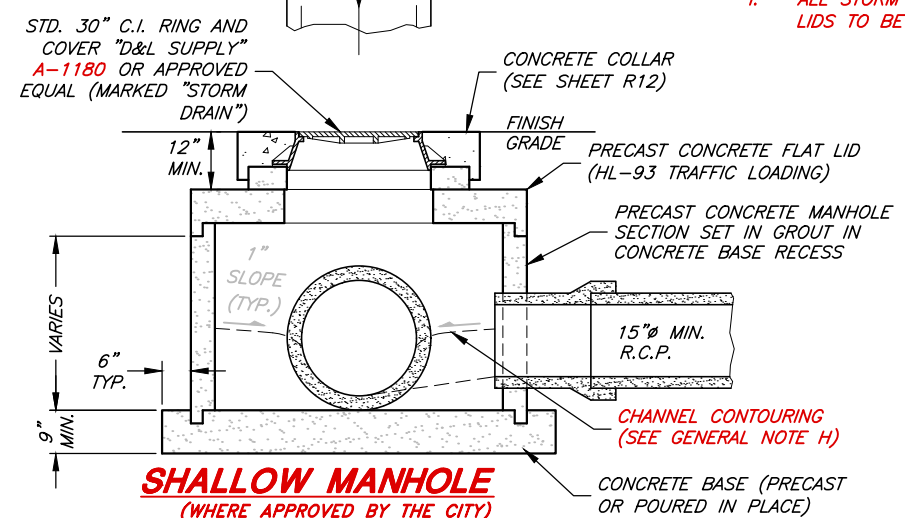
PIPE SIZES		JUNCTION MANHOLE (ANGLE / ARC DISTANCE)									
M.H. SIZE	IN-LINE M.H. 180°	90°	85°	80°	75°	70°	65°	60°	55°	50°	45°
4" M.H.	15"-24"	15"-18"	15"-18"	15"	15"	--	--	--	--	--	--
5" M.H.	27"-30"	21"-24"	21"-24"	18"-21"	18"-21"	15"-18"	15"-18"	15"	--	--	--
6" M.H.	36"-48"	27"-30"	27"-30"	24"-27"	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"



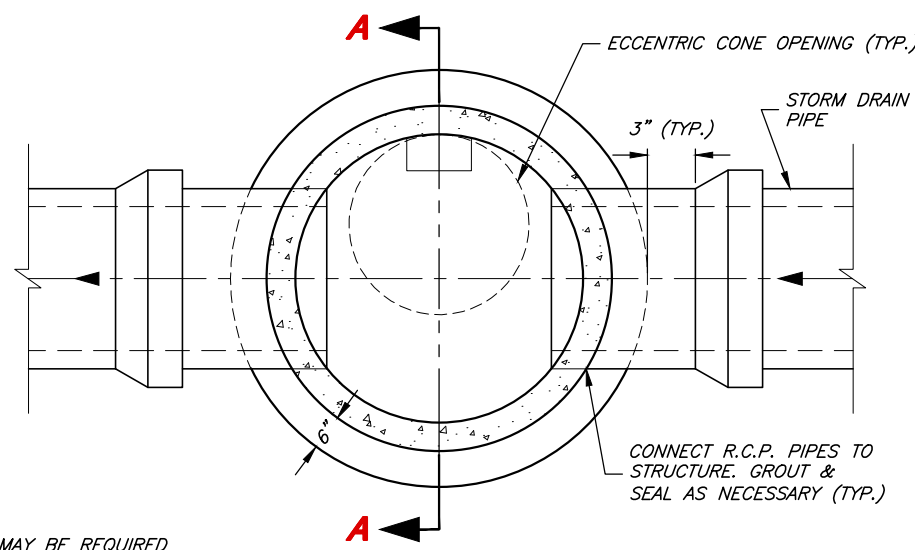
- SIZING NOTES:**
- SUGGESTED "A" DISTANCE IS 6" OR GREATER FOR 48", 60" AND 72" DIAMETER MANHOLES
  - SUGGESTED "A" DISTANCE IS 8" OR GREATER FOR 84" AND 96" DIAMETER MANHOLES



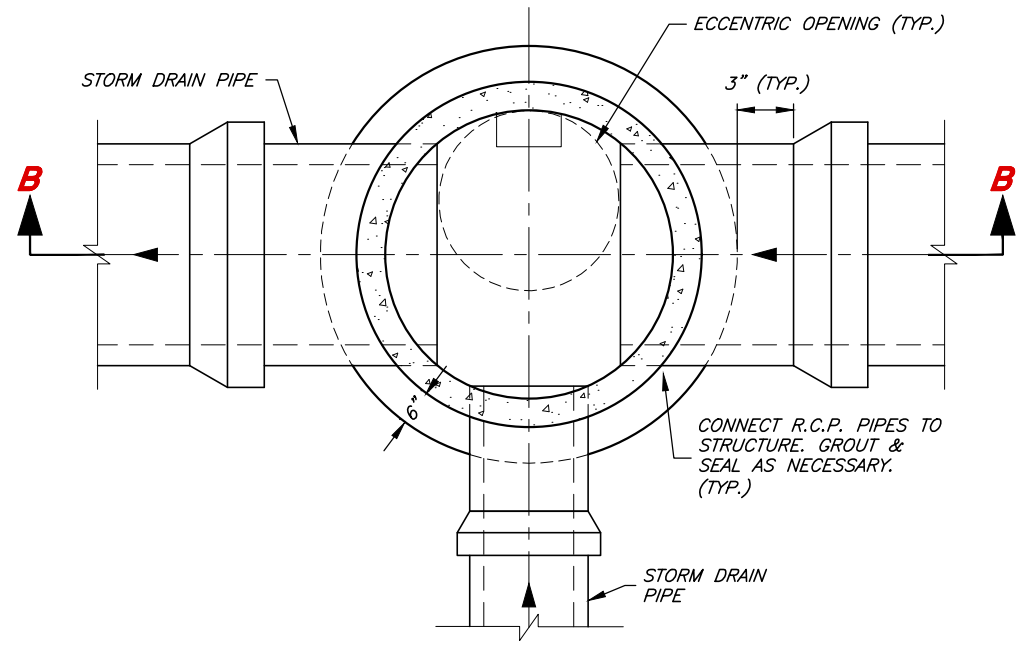
**PLAN**



**SHALLOW MANHOLE**  
(WHERE APPROVED BY THE CITY)

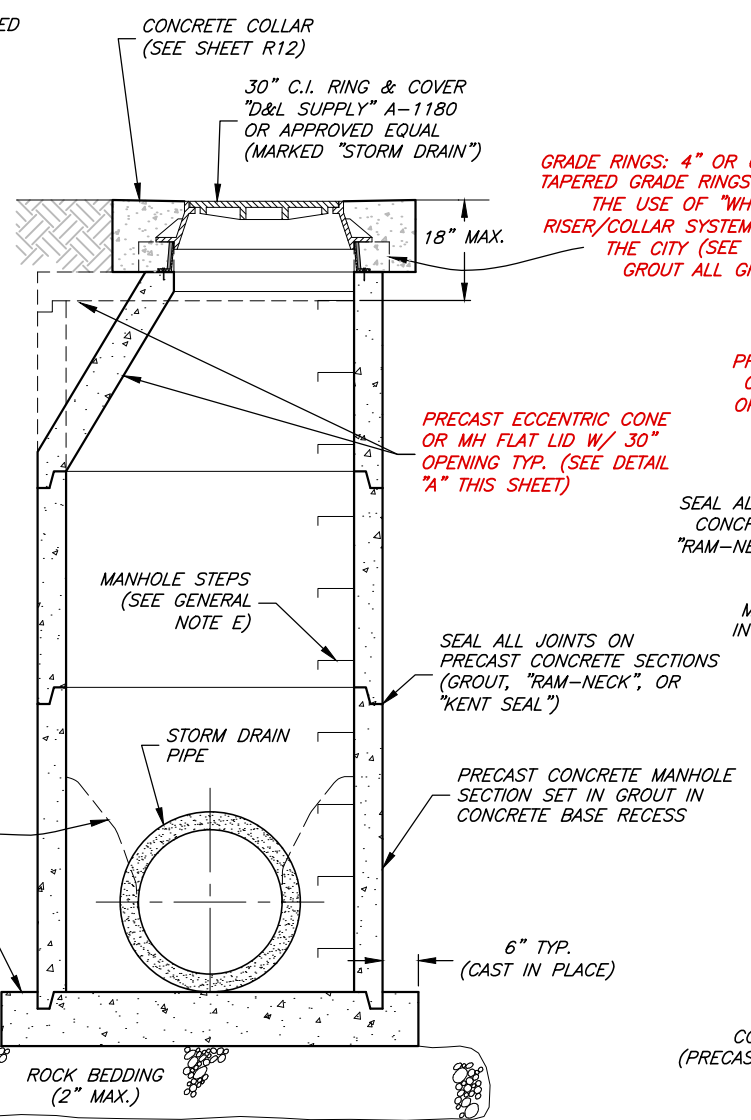


**TYPICAL LINE MANHOLE**

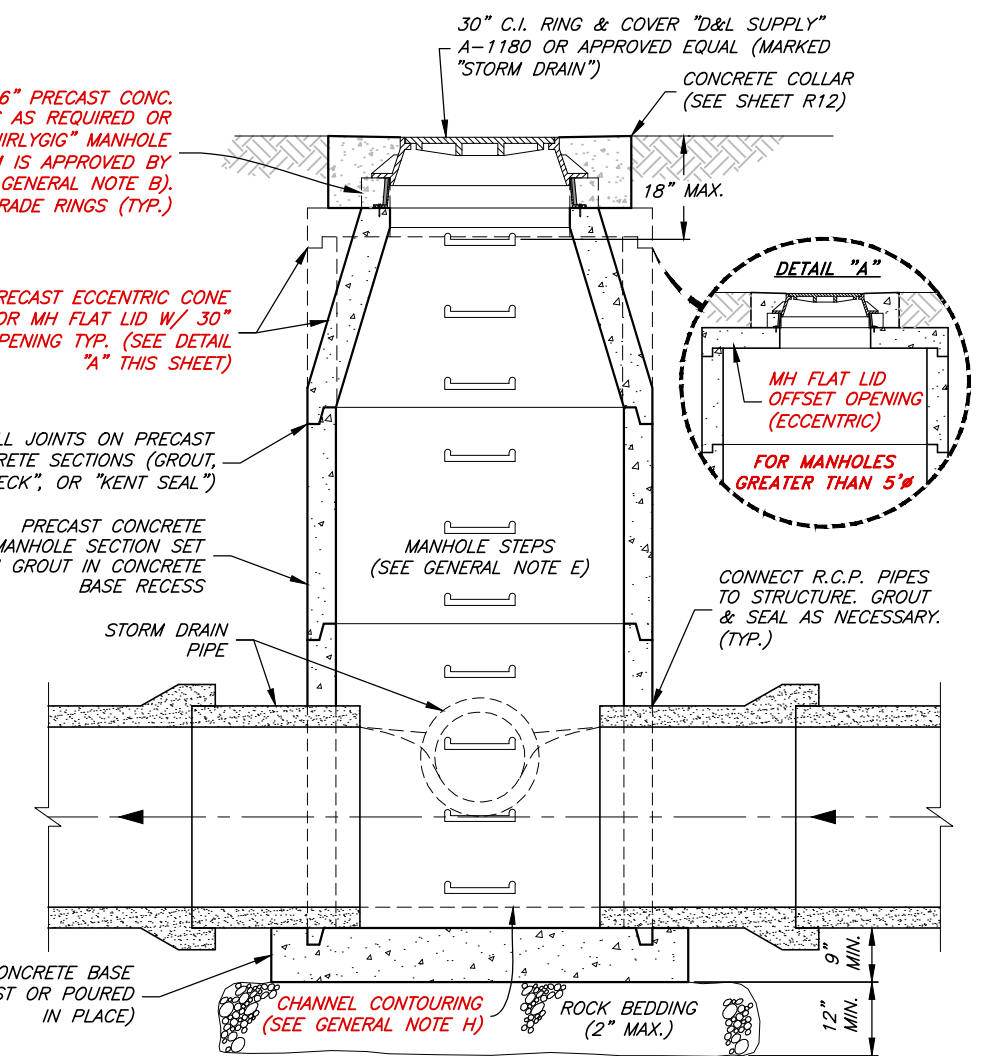


**TYPICAL JUNCTION MANHOLE**

- GENERAL NOTES:**
- LARGER DIAMETER MANHOLE MAY BE REQUIRED BY THE CITY ENGINEER AFTER EVALUATION OF THE NUMBER, SIZE, AND ANGLE OF THE PIPES THAT CONNECT TO THE MANHOLE.
  - NO MORE THAN 12" OF GRADE RINGS ("WHIRLYGIG" OR TAPERED CONCRETE GRADE RINGS) TO BE ALLOWED ON ANY MANHOLE
  - PLYWOOD COVERS SHALL BE USED AT MANHOLE FLOOR TO COVER FLOWLINE DURING CONSTRUCTION AND MAINTENANCE ACTIVITIES.
  - ALL INTERIOR JOINTS SHALL BE SMOOTH AND EVENLY GROUTED WITH NON-SHRINK GROUT MIX.
  - MANHOLE STEPS UNIFORMLY SPACED (1'-0" MAX.) POLYPROPYLENE COVERED STEEL STEPS, MODEL PS1-PF AS MANUFACTURED BY "M.A. INDUSTRIES" OR APPROVED EQUAL - INSTALLATION OF STEPS SHALL BE WATERPROOF.
  - STORM DRAIN LINES SHALL BE 15" MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS UNLESS OTHERWISE DIRECTED BY THE CITY.
  - THE USE OF STORM DRAIN UTILITY VAULTS (BOXES) WITH STD. 30" C.I. RING & COVER ("D&L SUPPLY" A-1180 MARKED "STORM DRAIN") AND A CONCRETE COLLAR IS ACCEPTED WHEN APPROVED BY THE CITY.
  - CHANNEL CONTOURING - SEE A4.D.3 OF CITY STANDARDS
  - ALL STORM DRAIN MANHOLES CONES AND/OR LIDS TO BE ECCENTRIC OPENINGS (TYP.)



**SECTION A-A**



**SECTION B-B**

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

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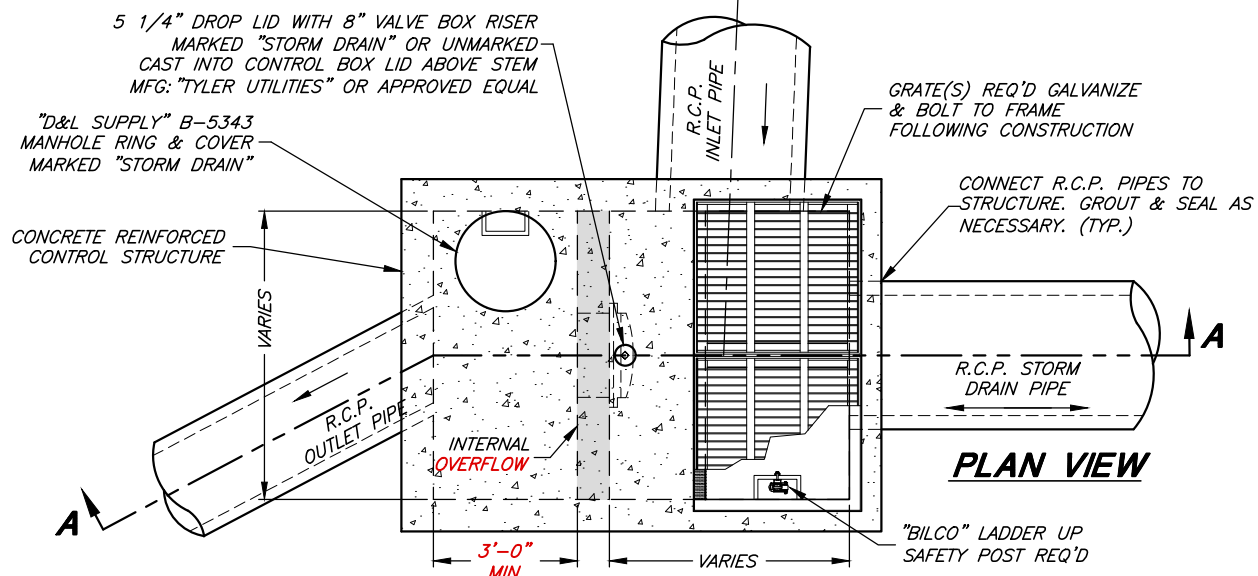
**JONES & ASSOCIATES**

Pleasant View City

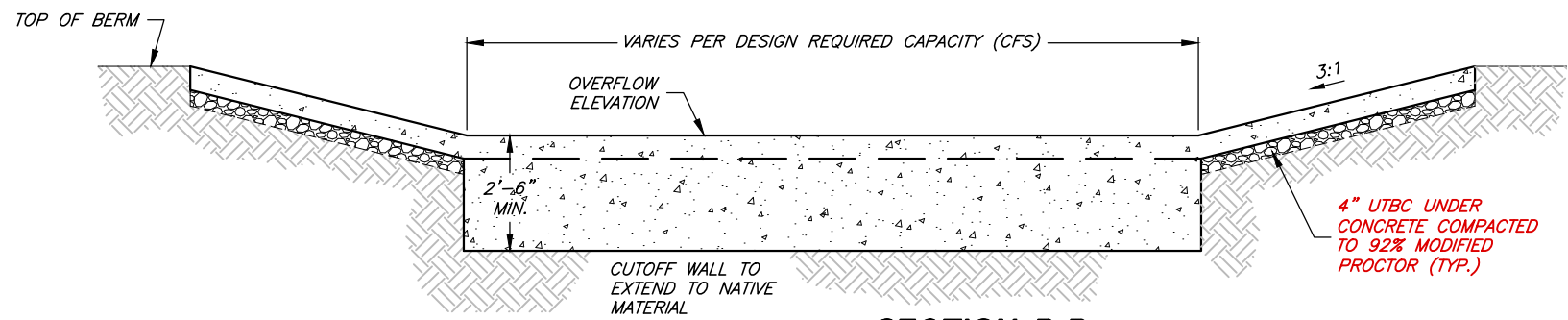
PLEASANT VIEW CITY CORPORATION  
PUBLIC WORKS - STORM DRAIN SYSTEM STANDARDS

**STORM DRAIN MANHOLE & CLEANOUT DETAILS**

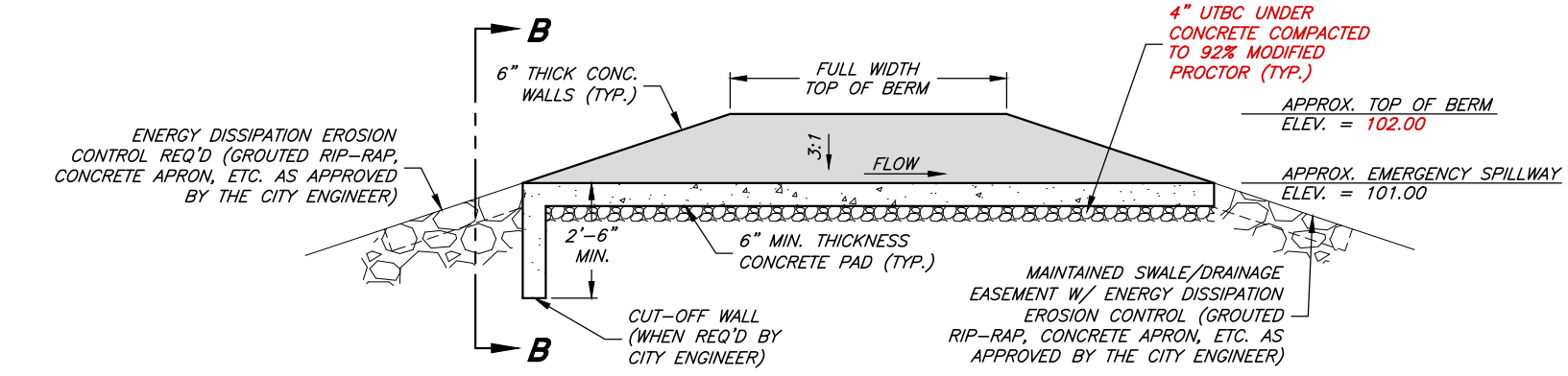
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OF X SHEETS  
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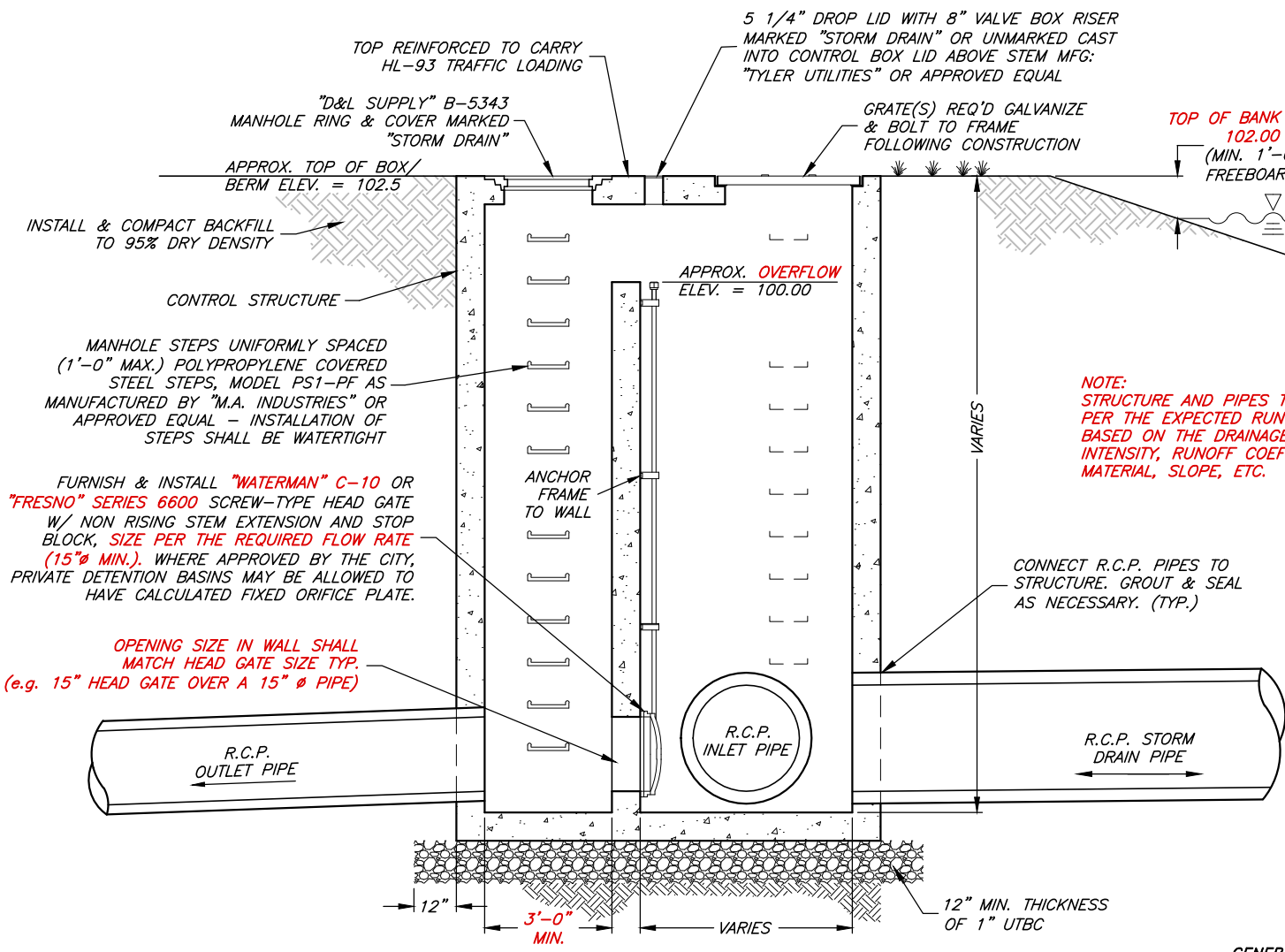
**DETENTION INLET/OUTLET CONTROL STRUCTURE**  
 GREATER THAN 1 ACRE FT (PRECAST OR CAST-IN-PLACE STRUCTURE)



**SECTION B-B**



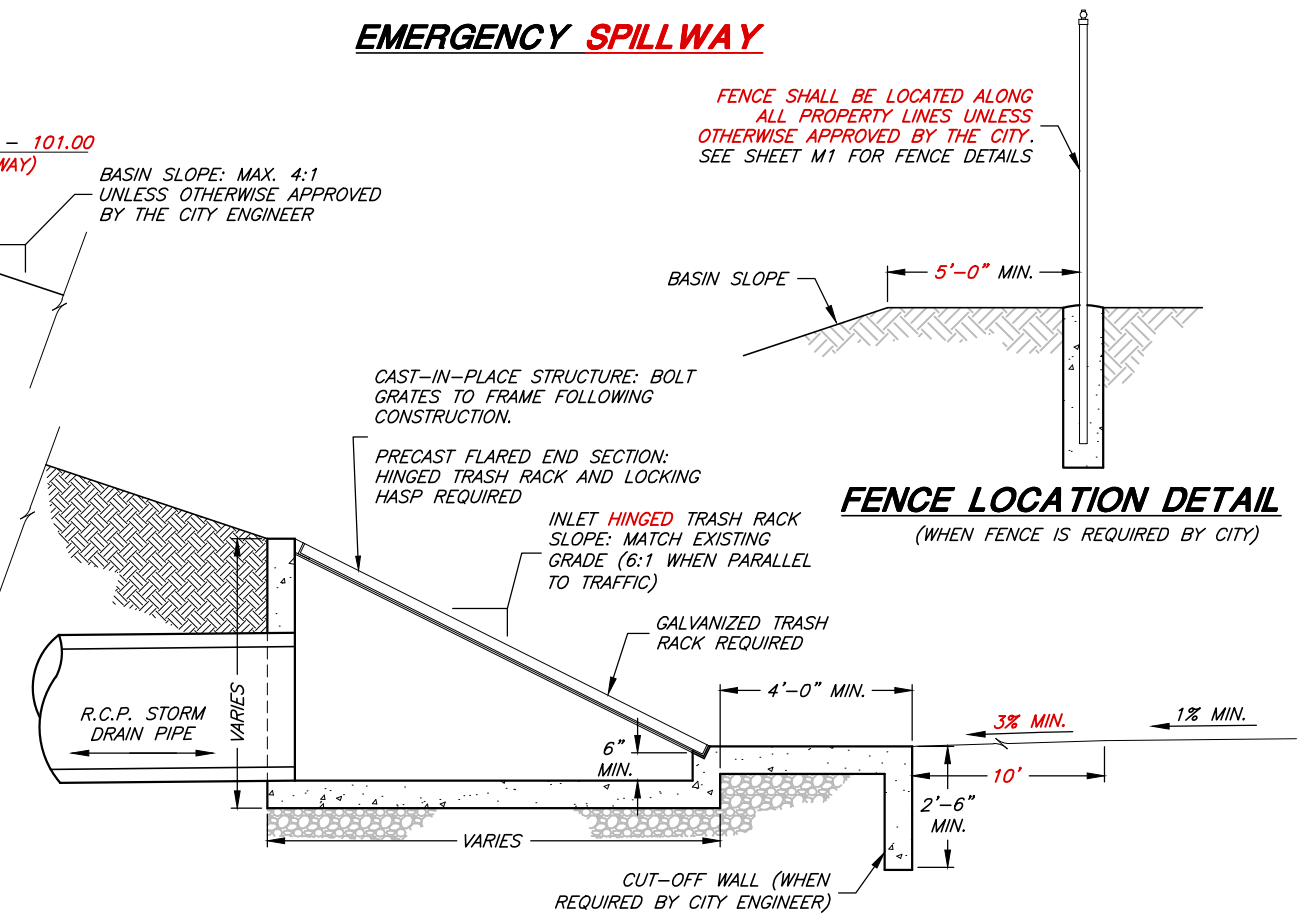
**EMERGENCY SPILLWAY**



**SECTION A-A**

**NOTE:**  
 STRUCTURE AND PIPES TO BE SIZED  
 PER THE EXPECTED RUNOFF VOLUME  
 BASED ON THE DRAINAGE AREA, RAINFALL  
 INTENSITY, RUNOFF COEFFICIENT, PIPE  
 MATERIAL, SLOPE, ETC.

GENERAL AND STRUCTURAL NOTES:  
 SEE SHEET SD6



**INCLINED GRATE STORM DRAIN INLET**

FENCE SHALL BE LOCATED ALONG  
 ALL PROPERTY LINES UNLESS  
 OTHERWISE APPROVED BY THE CITY.  
 SEE SHEET M1 FOR FENCE DETAILS

**FENCE LOCATION DETAIL**  
 (WHEN FENCE IS REQUIRED BY CITY)

CITY ENGINEER	REV.	DATE
DATE		

SCALE:	DESIGNED _____
N.T.S.	DRAWN _____
	CHECKED _____

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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - STORM DRAIN SYSTEM STANDARDS**  
**LARGE DETENTION BASIN DETAILS (> 1 ACRE FT)**

SHEET:	SD5
OF X SHEETS	0

**GENERAL NOTES:**

1. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.
2. GRATES SHALL BE REMOVABLE FOR MAINTENANCE PURPOSES.
3. GRATES SHALL BE HOT DIPPED GALVANIZED WITH BARS AT MAXIMUM 3 INCH SPACING.
4. INCLINED GRATES AND/OR FLARED END SECTIONS ARE REQUIRED ON ALL PIPES/INLETS WHERE OPEN CHANNELS, DITCHES, OR PONDS DISCHARGE DIRECTLY INTO THE STORM DRAIN SYSTEM.

**GENERAL NOTES CONTINUED:**

5. BASIN STRUCTURES ARE DETERMINED BY THE SIZE OF THE DETENTION BASIN OR AS REQUIRED BY THE CITY.
  - a. SMALL DETENTION BASIN: LESS THAN OR EQUAL TO 1 ACRE FOOT
  - b. LARGE DETENTION BASIN: GREATER THAN 1 ACRE FOOT
6. ALTERNATE BASIN AND STRUCTURE DESIGNS MAY BE APPROVED BY THE CITY BASED UPON CONDITIONS IN THE FIELD.

**STRUCTURAL NOTES:**

- A. PRECAST CONCRETE STRUCTURE CAN BE REPLACED WITH CAST-IN-PLACE CONCRETE VAULT. SUBMIT ENGINEERED CONSTRUCTION PLANS WITH REBAR DETAILS TO THE CITY 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

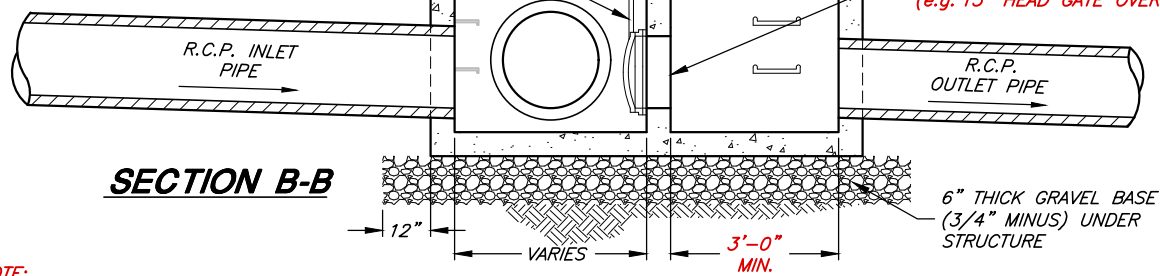
MANHOLE STEPS UNIFORMLY SPACED (1'-0" MAX.) POLYPROPYLENE COVERED STEEL STEPS, MODEL PS1-PF AS MANUFACTURED BY "M.A. INDUSTRIES" OR APPROVED EQUAL - STEPS SHALL BE WATERPROOF

FURNISH & INSTALL "WATERMAN" C-10 OR "FRESNO" SERIES 6600 SCREW-TYPE HEAD GATE W/ NON RISING STEM EXTENSION, NUT 6" BELOW TOP OF STRUCTURE, AND STOP BLOCK, SIZE PER THE REQUIRED FLOW RATE (15"Ø MIN.). (WHERE APPROVED BY THE CITY, PRIVATE DETENTION BASINS MAY BE ALLOWED TO HAVE CALCULATED FIXED ORIFICE PLATE)

TOP OF BANK (MIN.)  
APPROX. TOP OF BERM  
ELEV. = 102.00  
APPROX. EMERGENCY SPILLWAY  
OR TOP OF GRATE  
ELEV. = 101.00  
APPROX. INTERNAL OVERFLOW  
ELEV. = 100.00

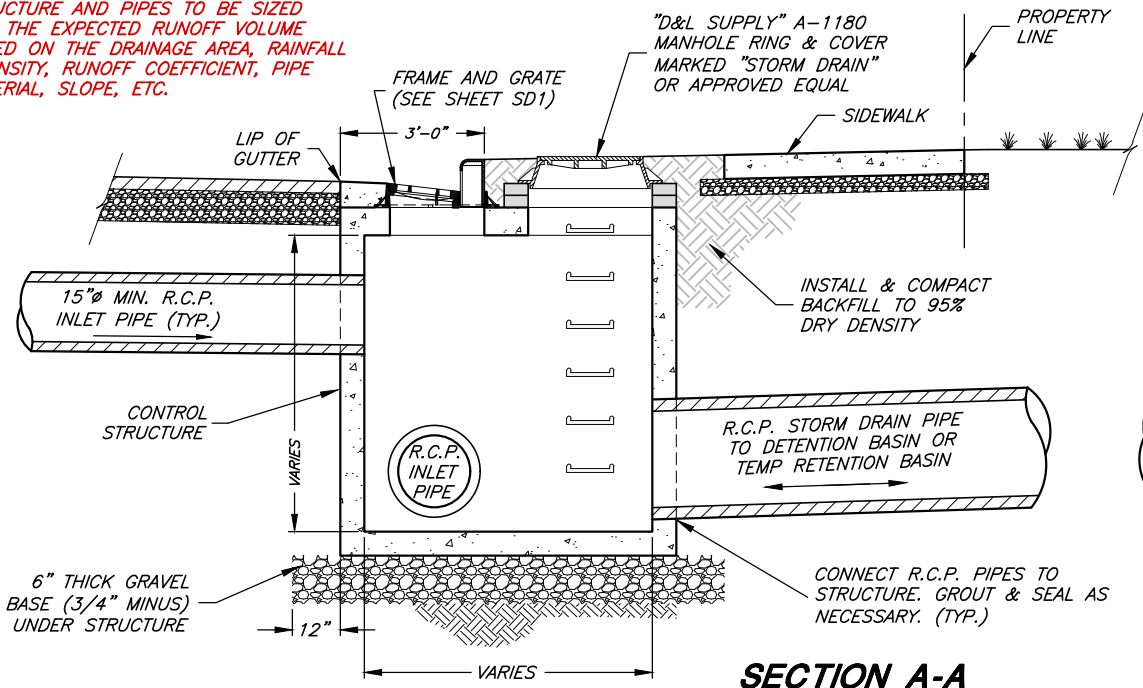
OVERFLOW AT HIGH WATER MARK (HWM) OF POND (BASIN TO HAVE MIN. 1'-0" FREEBOARD)

OPENING SIZE IN WALL SHALL MATCH HEAD GATE SIZE TYP. (e.g. 15" HEAD GATE OVER A 15" Ø PIPE)

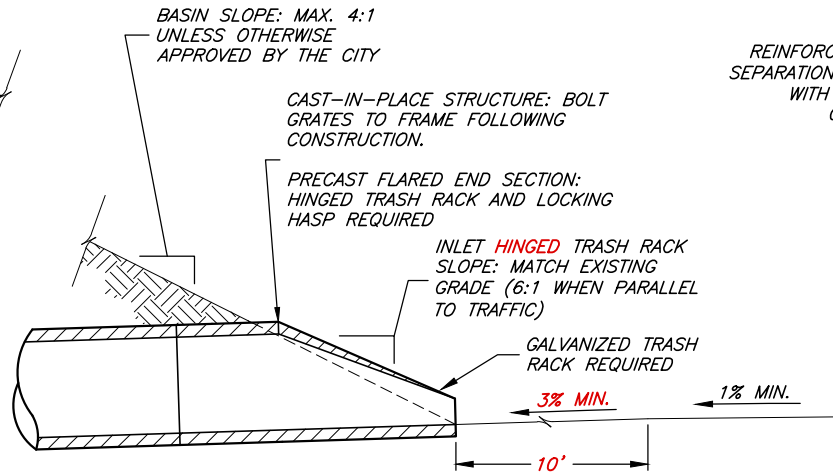


**SECTION B-B**

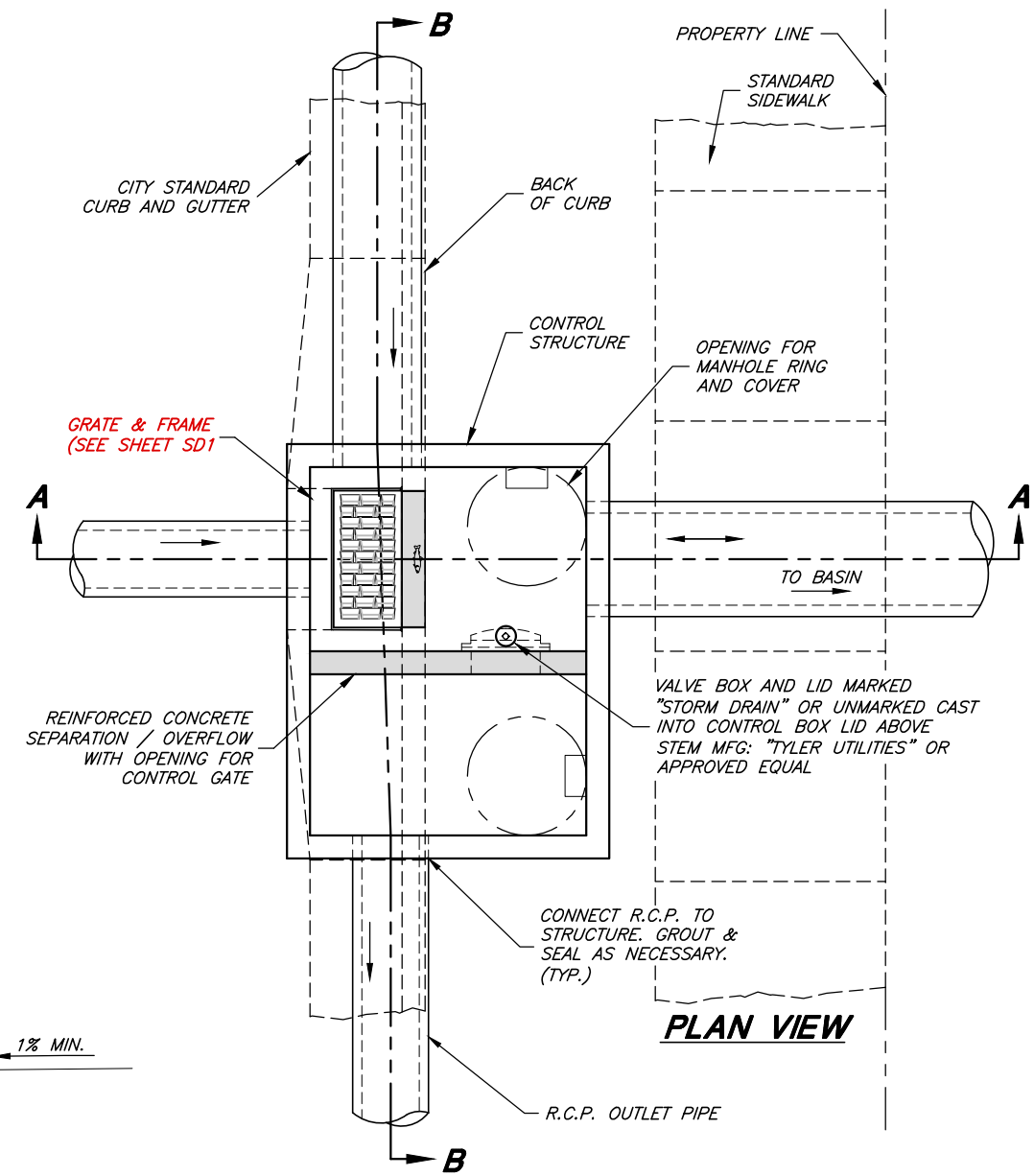
NOTE: STRUCTURE AND PIPES TO BE SIZED PER THE EXPECTED RUNOFF VOLUME BASED ON THE DRAINAGE AREA, RAINFALL INTENSITY, RUNOFF COEFFICIENT, PIPE MATERIAL, SLOPE, ETC.



**SECTION A-A**



**EMERGENCY OVERFLOW AND FENCE LOCATION DETAIL: SEE SHEET SD5**



**PLAN VIEW**

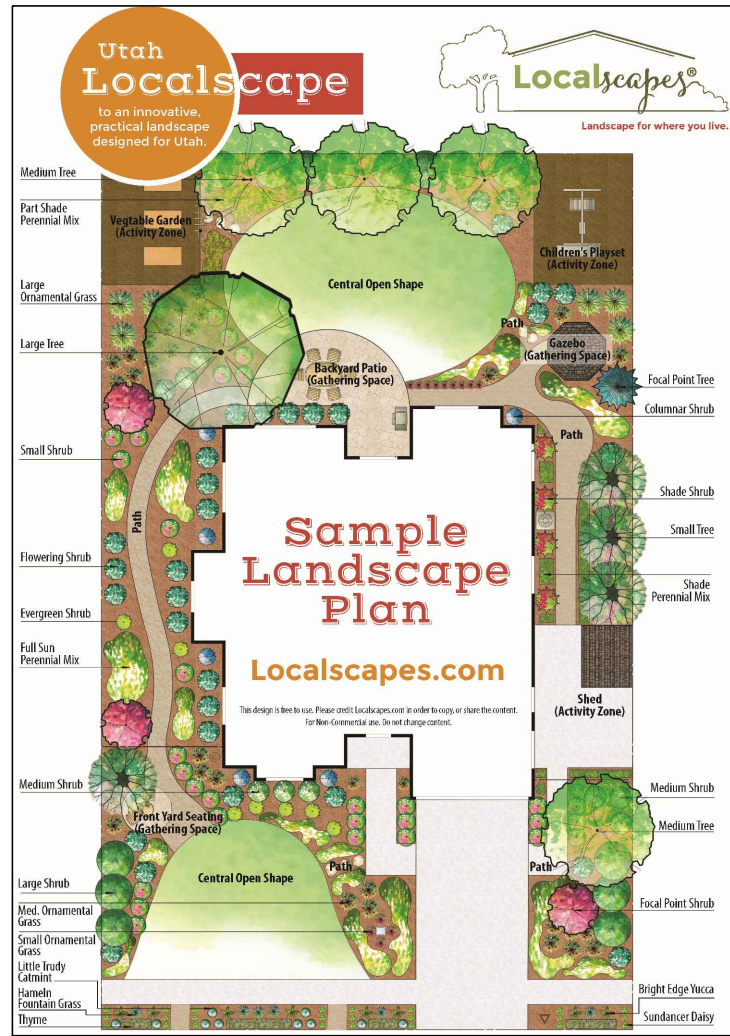
**INLET/OUTLET CONTROL STRUCTURE**  
LESS THAN OR EQUAL TO 1 ACRE FT (PRECAST OR CAST-IN-PLACE)

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

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PUBLIC WORKS - STORM DRAIN SYSTEM STANDARDS

**SMALL DETENTION BASIN DETAILS (≤ 1 ACRE FT)**



**Sample Landscape Plan**

Localscapes.com



<https://localscapes.com>  
<https://conservationgardenpark.org>  
<https://extension.usu.edu/cwel/principles>

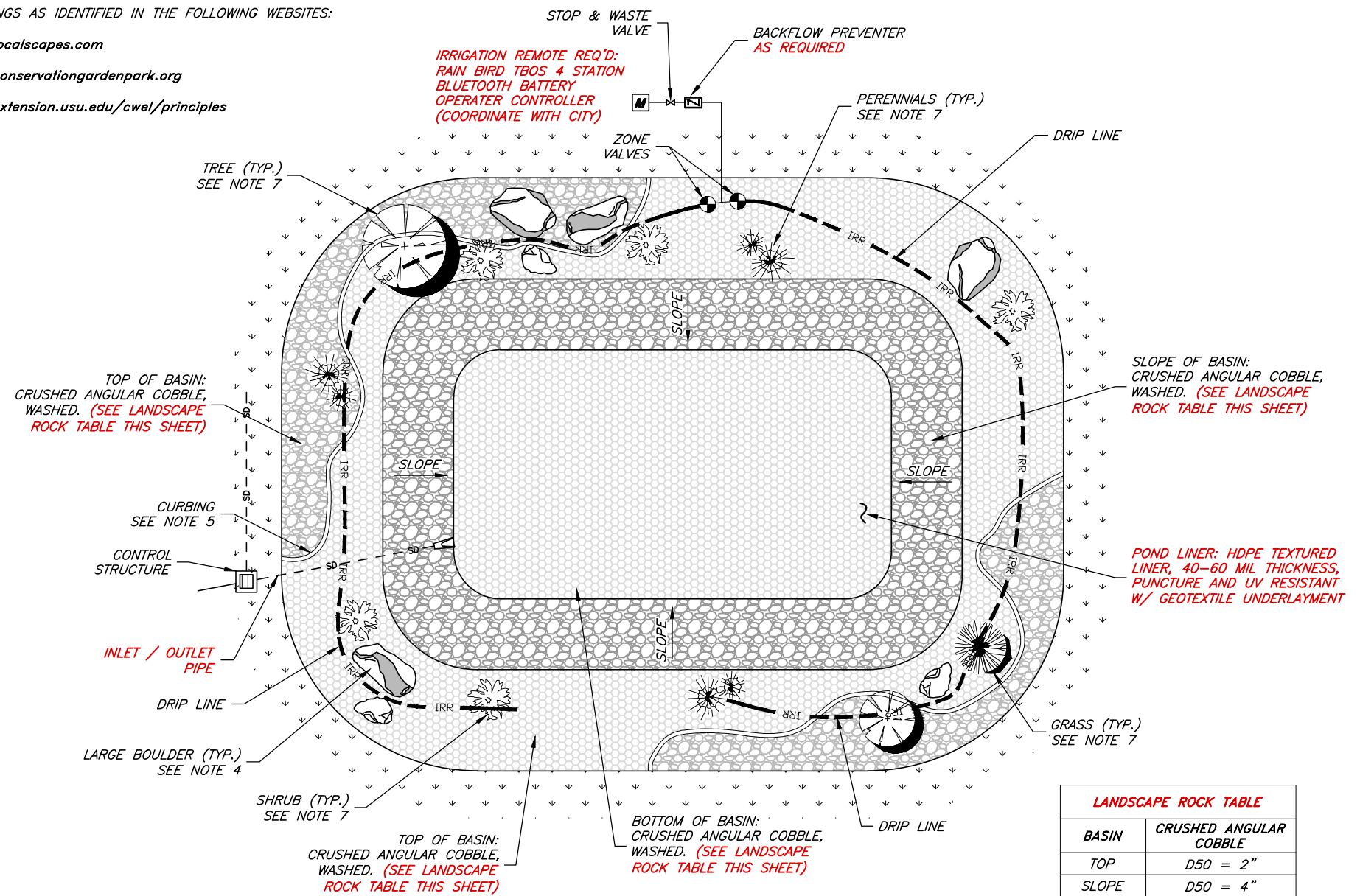
**ROCKSCAPE NOTES:**

1. WATER WISE LANDSCAPING REQUIRED FOR ALL BASINS IN DEVELOPMENTS OF 10 LOTS OR LESS. SOD AND SPRINKLERS REQUIRED FOR ALL OTHER STORM WATER BASINS. BASIN DESIGN TO BE SUBMITTED TO CITY FOR APPROVAL.
2. INSTALL WEED BARRIER FABRIC PER MANUFACTURER'S RECOMMENDATIONS. 8 OZ. (MIN.) NON-WOVEN GEOTEXTILE HANES GEO TERRA TEX N08, ACF ENVIRONMENTAL N080, OR APPROVED EQUAL. APWA 31 05 19.
3. PROVIDE A MINIMUM OF 2 DIFFERING ROCK MULCH STYLES. DECORATIVE ROCK MULCH SIZE AND COLOR WILL DEPEND ON THE DESIRED LOOK. THE ROCK MULCH DEPTH DEPENDS ON THE SIZE OF ROCK SELECTED, BUT TYPICALLY IS NO LESS THAN 3". THE FINISHED GRADE OF ROCK IS 1" TO 2" BELOW THE TOP OF ANY HARD SURFACE. (APWA 31 37 00)
4. PROVIDE BOULDERS THAT ARE BETWEEN 24" TO 48" IN DIAMETER MEASURED ALONG THE SMALLEST AXIS.
5. PROVIDE 12 GAUGE STEEL OR CONCRETE CURB EDGING.
6. DETAILS FOR ALL TREES, PLANTS, SOD, IRRIGATION SYSTEMS AND CONCRETE TO BE SUBMITTED FOR REVIEW AND APPROVED BY THE CITY PRIOR TO INSTALLATION.
7. USE WATER WISE PLANTINGS AS IDENTIFIED IN THE FOLLOWING WEBSITES:

- A. <https://localscapes.com>
- B. <https://conservationgardenpark.org>
- C. <https://extension.usu.edu/cwel/principles>

**ROCKSCAPE NOTES CONT.:**

- A. USE DEEP-ROOTING, WATER-CONSERVING PLANTS (NOT TURF GRASS) ON SLOPES GREATER THAN 25% (4H:1V).
- B. USE DRIP EMITTERS OR BUBBLERS TO IRRIGATE PLANTS IN NON-TURF AREAS.
- C. PLACE VALVES SO THAT EACH ZONE IS SIMILAR, WITH SIMILAR SLOPE AND SOIL CONDITIONS, PLAN MATERIALS, AND WATERING NEEDS. USE SEPARATE VALVES ON TURF AND NON-TURF AREAS. PLACE DRIP EMITTERS AND SPRINKLERS ON SEPARATE VALVES.
- D. USE A WATER SENSE LABELED SMART IRRIGATION CONTROLLER THAT AUTOMATICALLY ADJUSTS THE FREQUENCY AND/OR DURATION OF IRRIGATION IN RESPONSE TO CHANGING WEATHER CONDITIONS. USE CONTROLLERS EQUIPPED WITH AUTOMATIC RAIN DELAY OR RAIN SHUT-OFF CAPABILITIES.
- E. PROVIDE PLANTS THAT AT MATURITY PROVIDE AT LEAST 50% OF LIVING PLANT COVER AT THEIR GROUND PLANE (NOT INCLUDING TREE CANOPIES.)



LANDSCAPE ROCK TABLE	
BASIN	CRUSHED ANGULAR COBBLE
TOP	D50 = 2"
SLOPE	D50 = 4"
BOTTOM	D50 = 2"

NOTE: COBBLE COLOR(S) TO BE VARIED (AT LEAST 2 COLORS REQ'D)

**DETENTION POND ROCKSCAPE**  
(IN LIEU OF SOD)

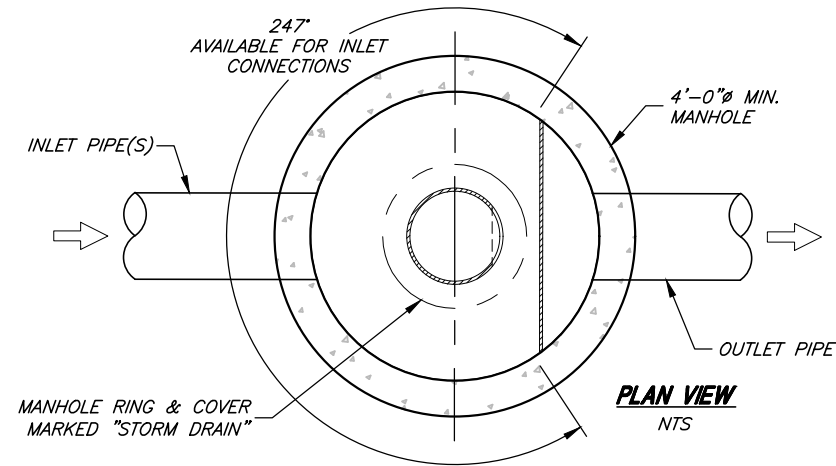
CITY ENGINEER	REV.	DATE
DATE		

SCALE:	DESIGNED _____
N.T.S.	DRAWN _____
	CHECKED _____

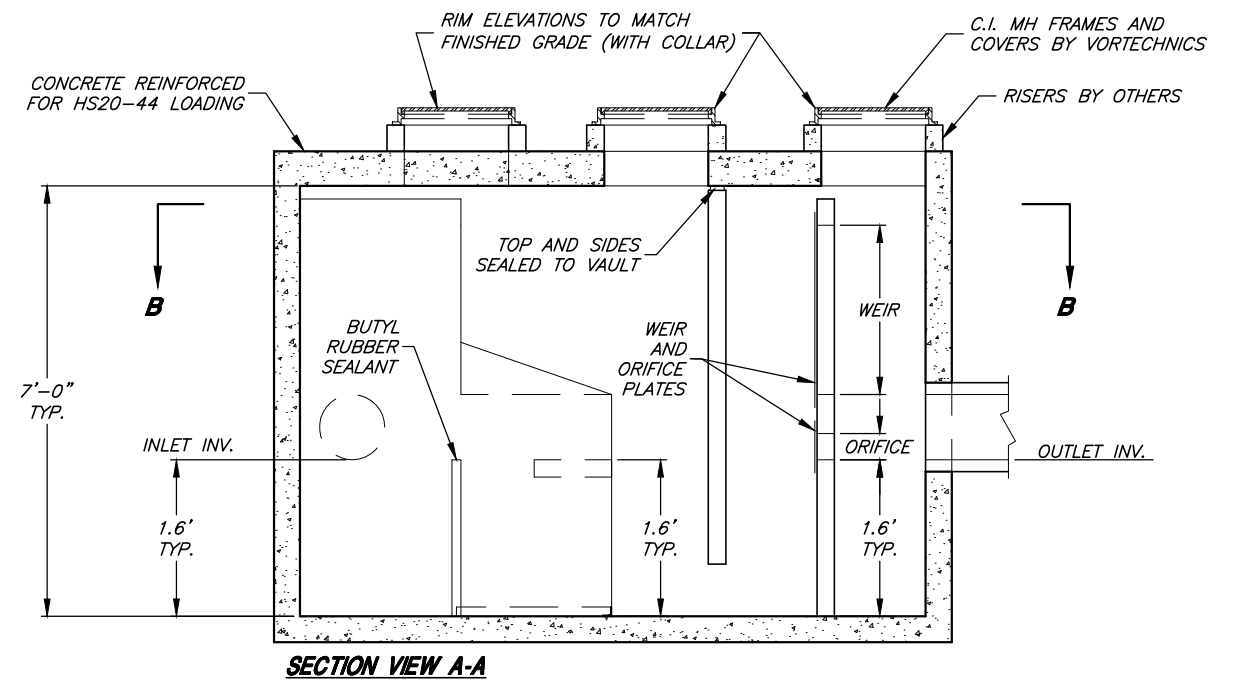
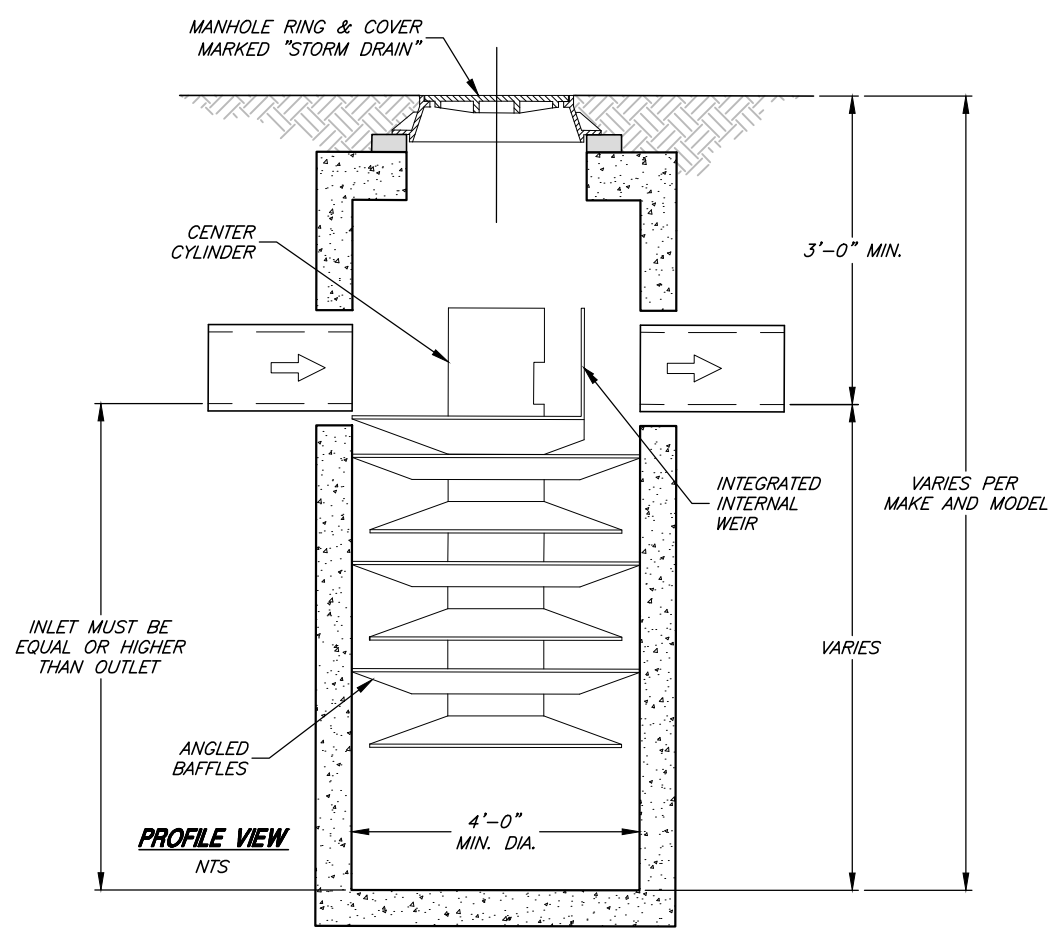
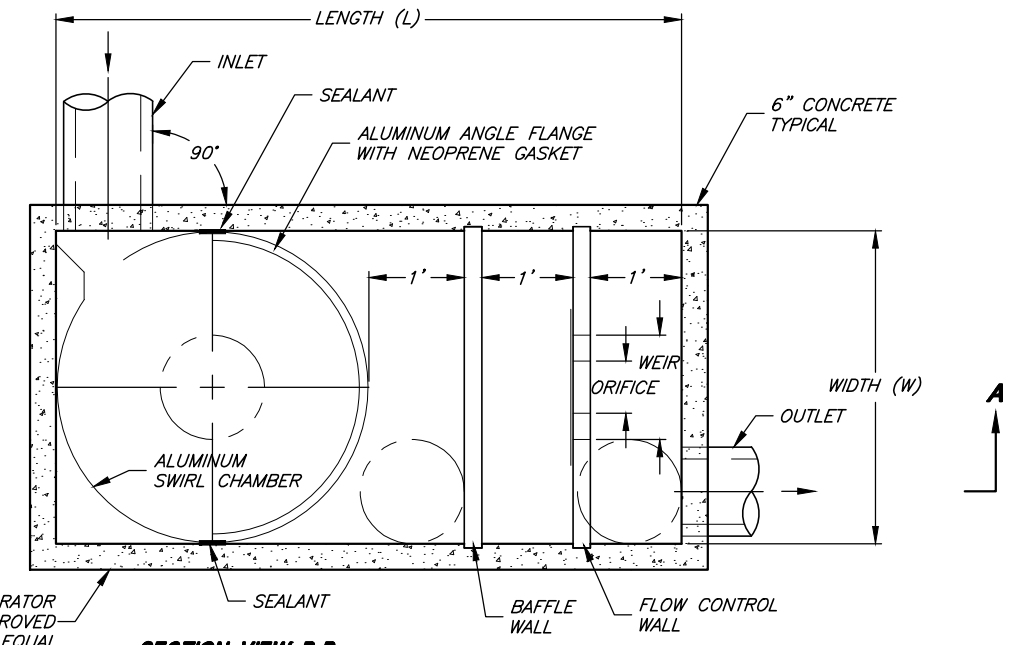
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**PUBLIC WORKS - STORM DRAIN SYSTEM STANDARDS**  
**DETENTION BASIN ROCKSCAPE DETAILS**



GREASE INTERCEPTOR DIMENSION TABLE				
Vortechs™ Model	Aluminum Swirl Chamber Diameter / Area (ft / ft <sup>2</sup> )	Treated Flow (cfs)	Sediment Storage (yds <sup>3</sup> )	Approx. Size L x W (ft)
1000	3 / 7	1.6	0.7	9 x 3
2000	4 / 13	2.8	1.2	10 x 4
3000	5 / 20	4.5	1.8	11 x 5
4000	6 / 28	6.0	2.4	12 x 6
5000	7 / 38	8.5	3.2	13 x 7
7000	8 / 50	11.0	4.0	14 x 8
9000	9 / 64	14.0	4.8	15 x 9
11000	10 / 79	17.5	5.6	16 x 10
16000	12 / 113	25.0	7.1	18 x 12



**HDS (HYDRODYNAMIC SEPARATOR) EXAMPLE**

**OIL/WATER SEPARATOR EXAMPLE**

**HDS NOTES:**

1. INSTALLATION OF THE STORMWATER TREATMENT UNIT(S) SHALL BE PERFORMED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. HDS UNITS ARE TO BE SIZED BY THE DEVELOPING ENGINEER. SUBMIT ENGINEERED CONSTRUCTION PLANS AND DETAILS TO THE CITY FOR REVIEW AND FINAL APPROVAL PRIOR TO CONSTRUCTION.
3. SEE A7.F.4 OF CITY STANDARDS FOR MORE INFORMATION.
4. UNIT SHALL CONFORM TO HS20 LOAD RATINGS.

**OIL/WATER SEPARATOR NOTE:**

ALL OIL/WATER SEPARATORS ARE TO BE SIZED BY THE DEVELOPING ENGINEER. SUBMIT ENGINEERED CONSTRUCTION PLANS AND DETAILS TO THE CITY FOR REVIEW AND FINAL APPROVAL PRIOR TO CONSTRUCTION.

CITY ENGINEER	REV.	DATE
DATE		

SCALE:	DESIGNED _____
N.T.S.	DRAWN _____
	CHECKED _____

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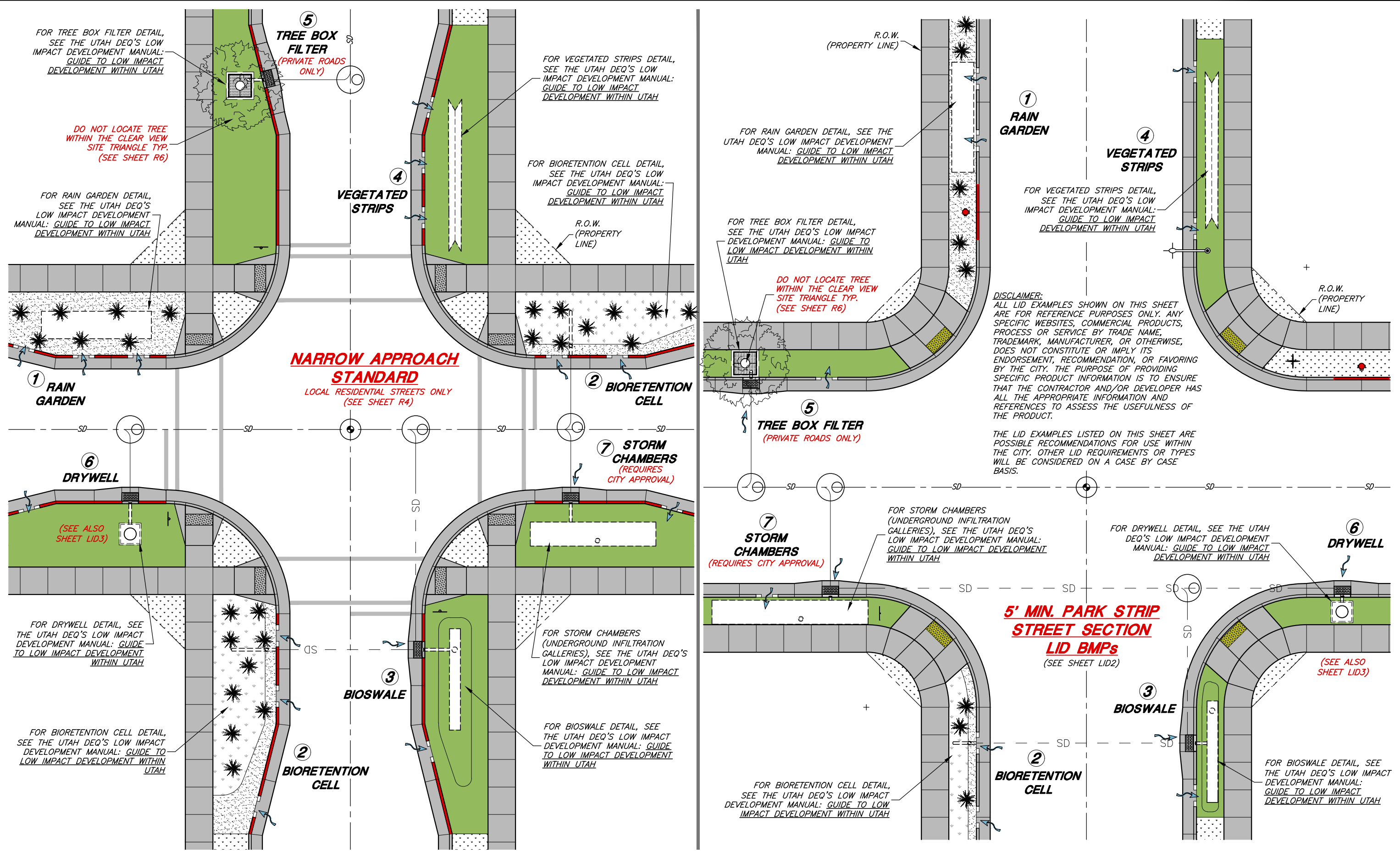


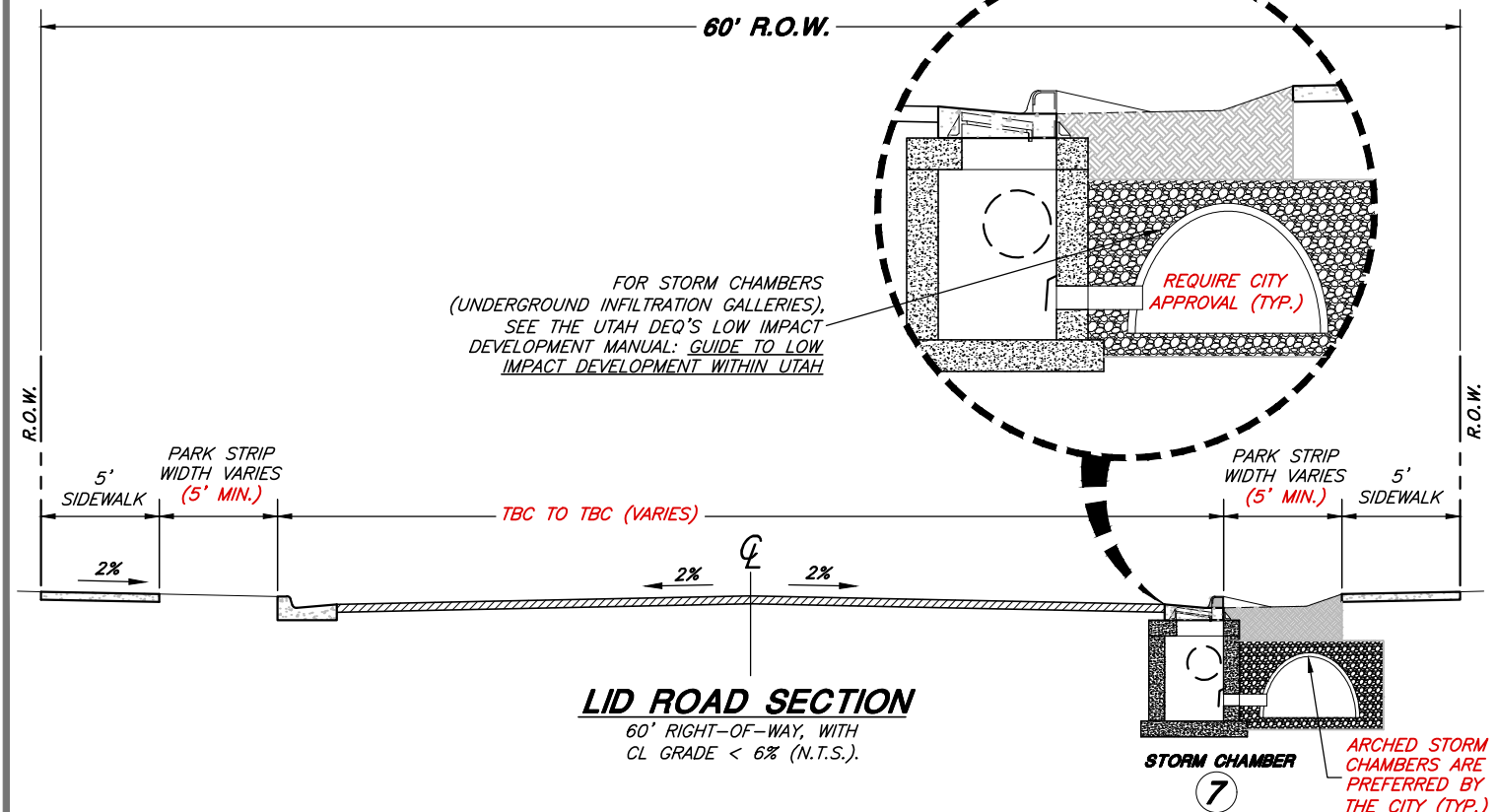
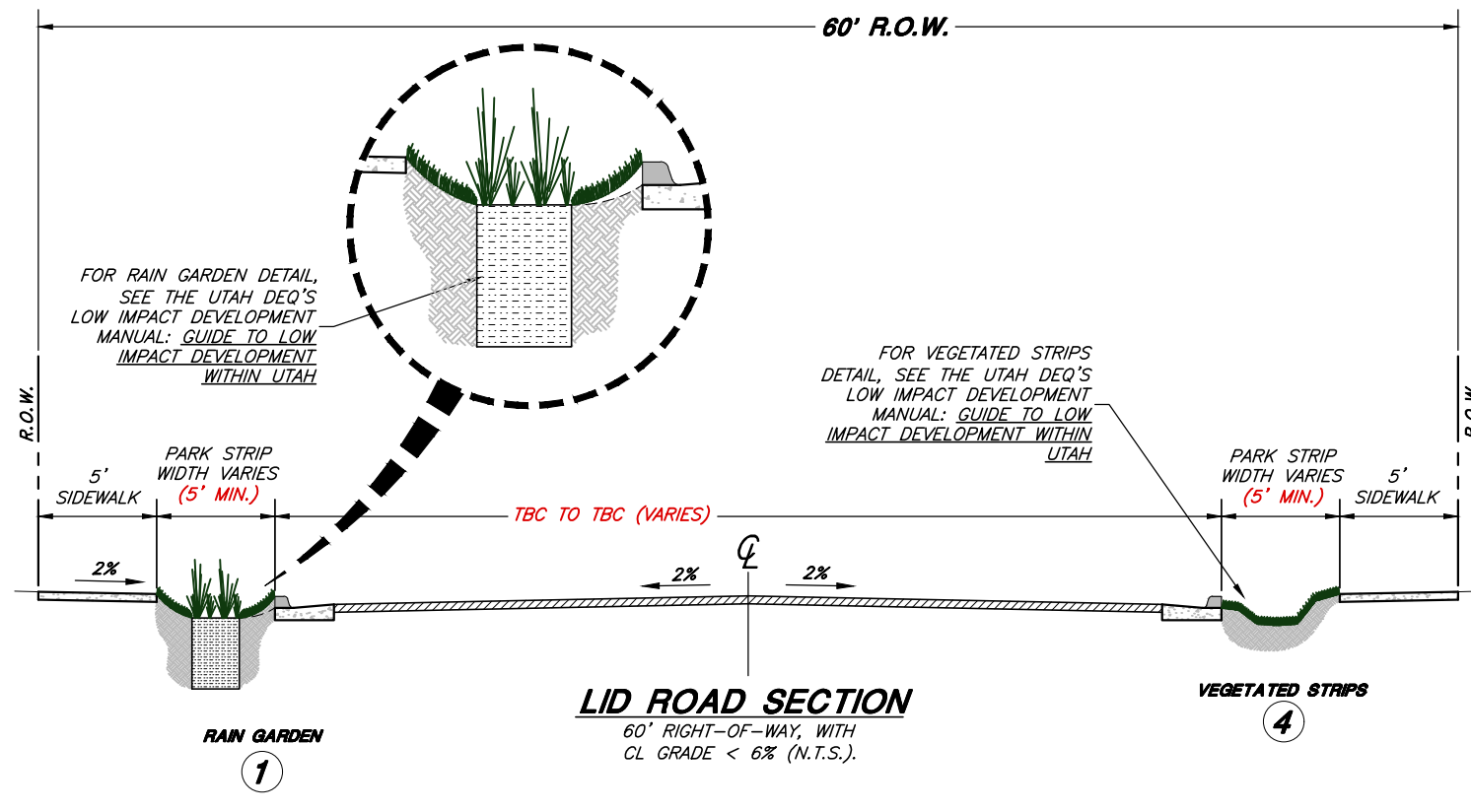
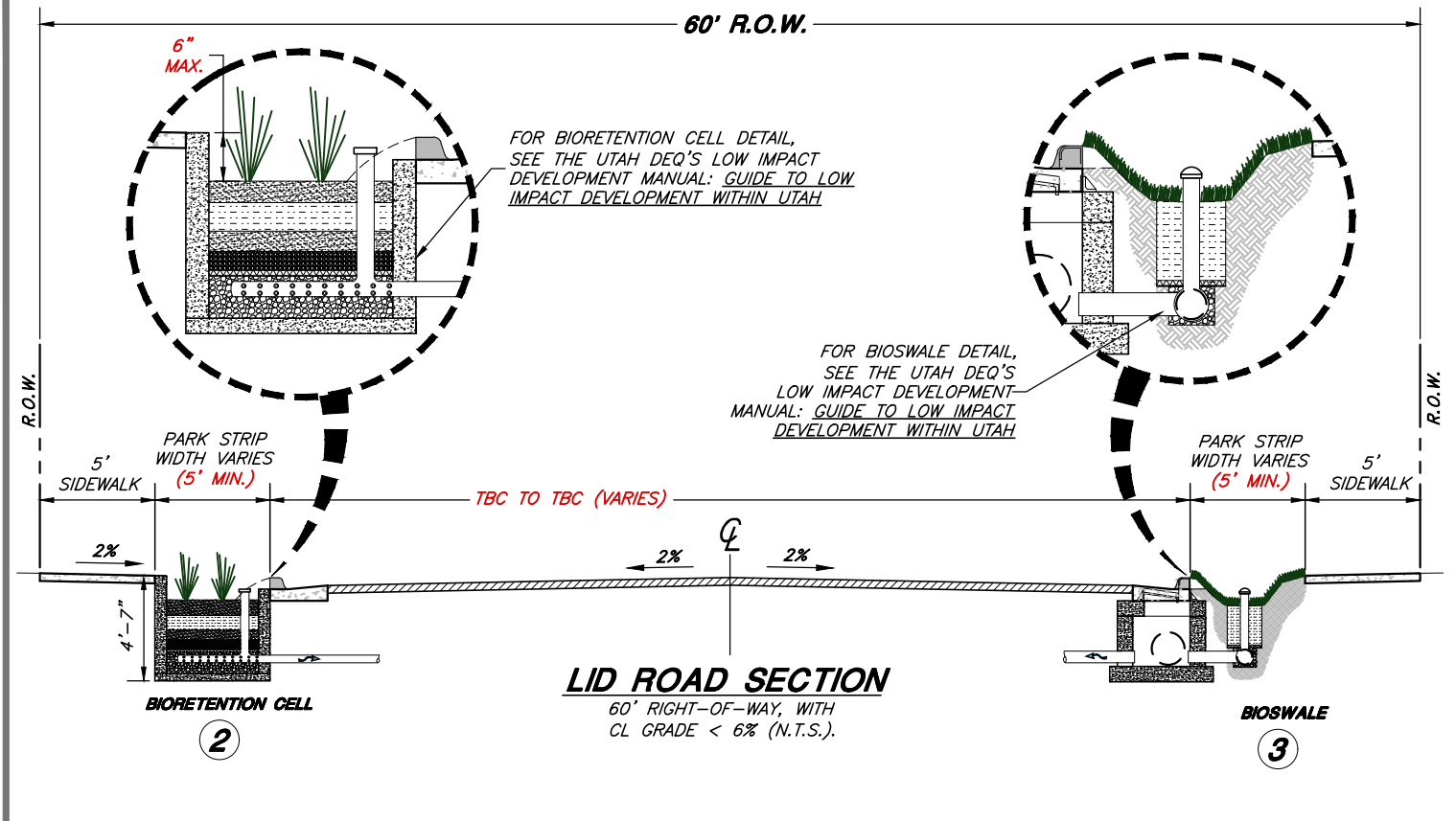
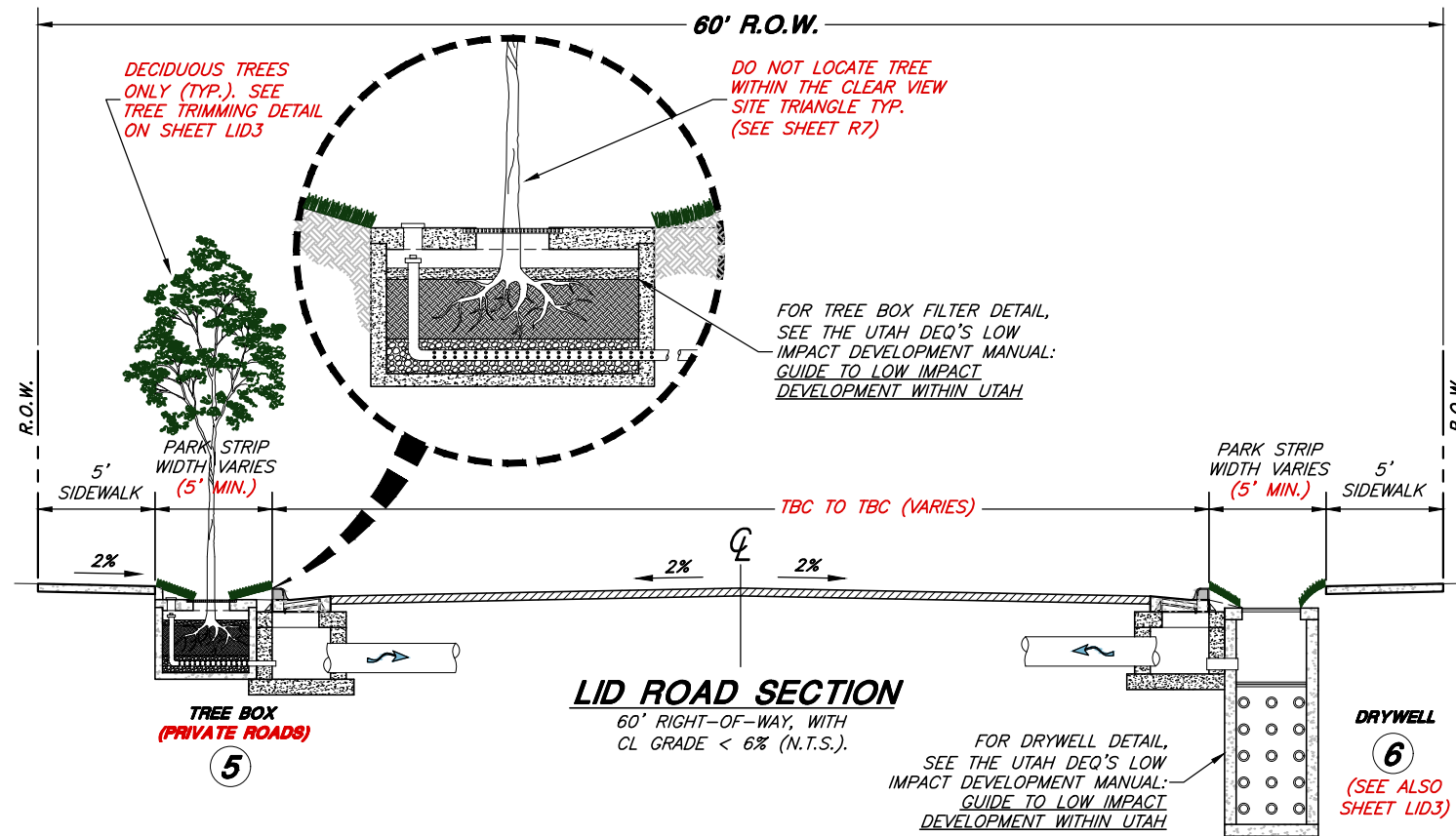
**PLEASANT VIEW CITY CORPORATION**

PUBLIC WORKS - STORM DRAIN SYSTEM STANDARDS

**HDS (HYDRODYNAMIC SEPARATOR) AND OIL/WATER SEPARATOR EXAMPLE DETAILS**

SHEET:	SD8
OF X SHEETS	0





CITY ENGINEER	REV.	DATE
DATE		

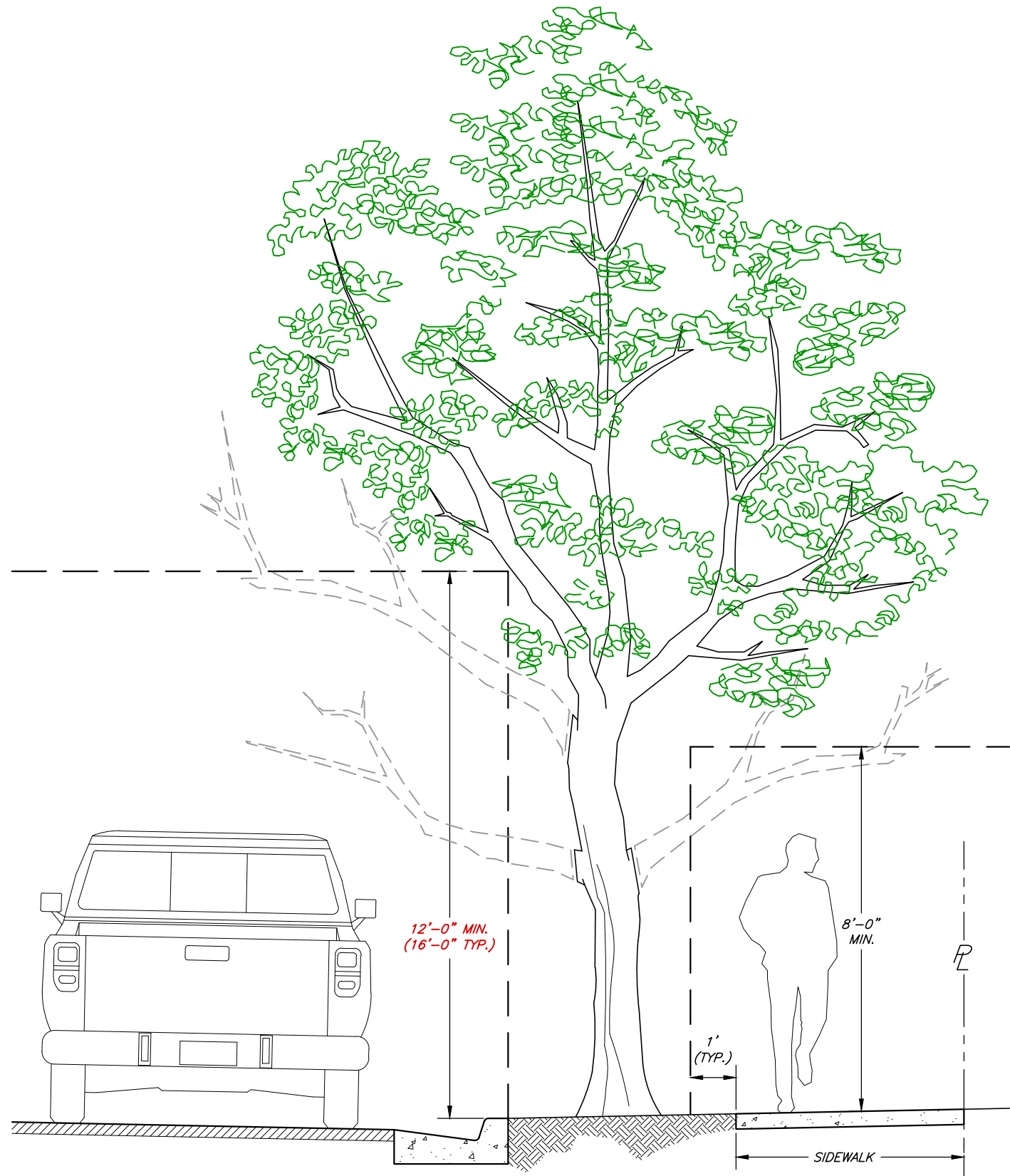
SCALE:	DESIGNED _____
N.T.S.	DRAWN _____
	CHECKED _____

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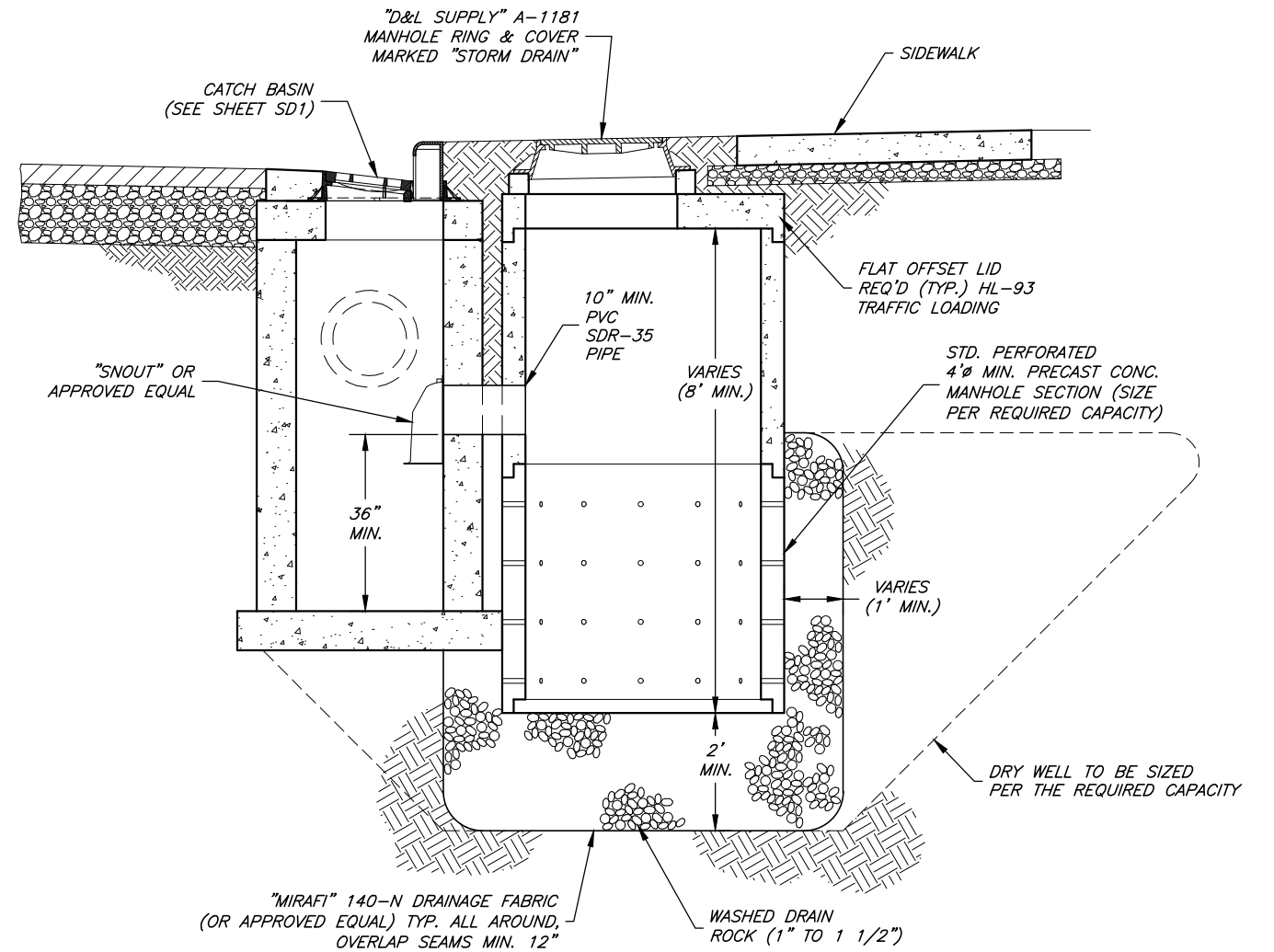


**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - LID (LOW IMPACT DEVELOPMENT) STANDARDS**  
**GENERAL LID (LOW IMPACT DEVELOPMENT) EXAMPLES**

SHEET:	LID2
OF X SHEETS	0



**TREE TRIMMING DETAIL**



**DRY WELL DETAIL**

**GENERAL NOTES:**

1. SUMPS ARE NOT ALLOWED IN THE STORM DRAIN SYSTEM, EXCEPT AS APPROVED BY THE CITY ON A CASE-BY-CASE BASIS.
2. DWQ CLASS V UIC PERMIT REQ'D
3. STRUCTURE AND PIPES TO BE SIZED PER THE EXPECTED RUNOFF VOLUME BASED ON THE DRAINAGE AREA, RAINFALL INTENSITY, RUNOFF COEFFICIENT, PIPE MATERIAL, SLOPE, ETC.
4. SEE A7.F.2 OF CITY STANDARDS FOR MORE INFORMATION.

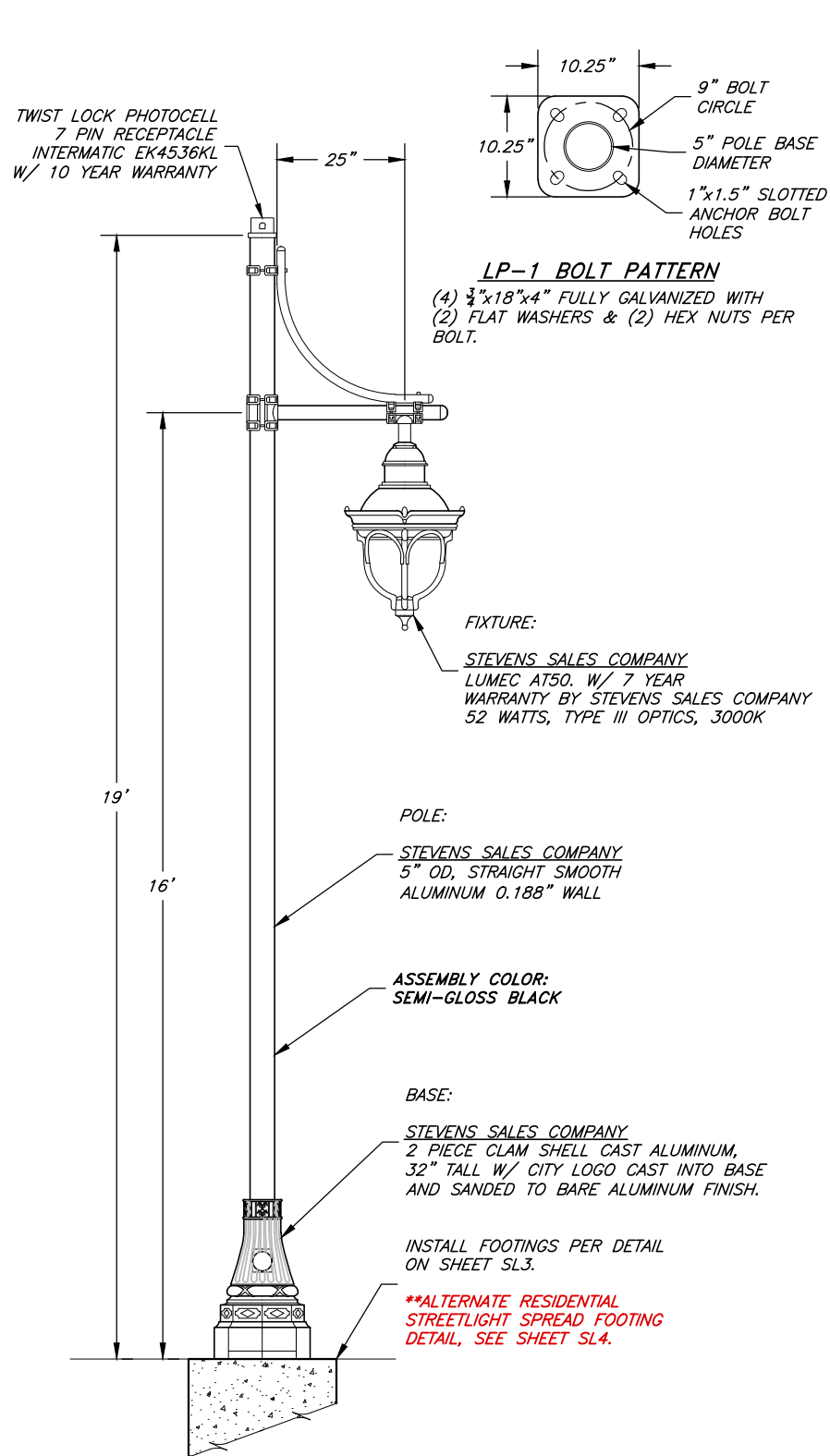
CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
REV.	CHECKED	
DATE		

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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - LID (LOW IMPACT DEVELOPMENT) STANDARDS**  
**TREE TRIMMING AND DRY WELL DETAILS**

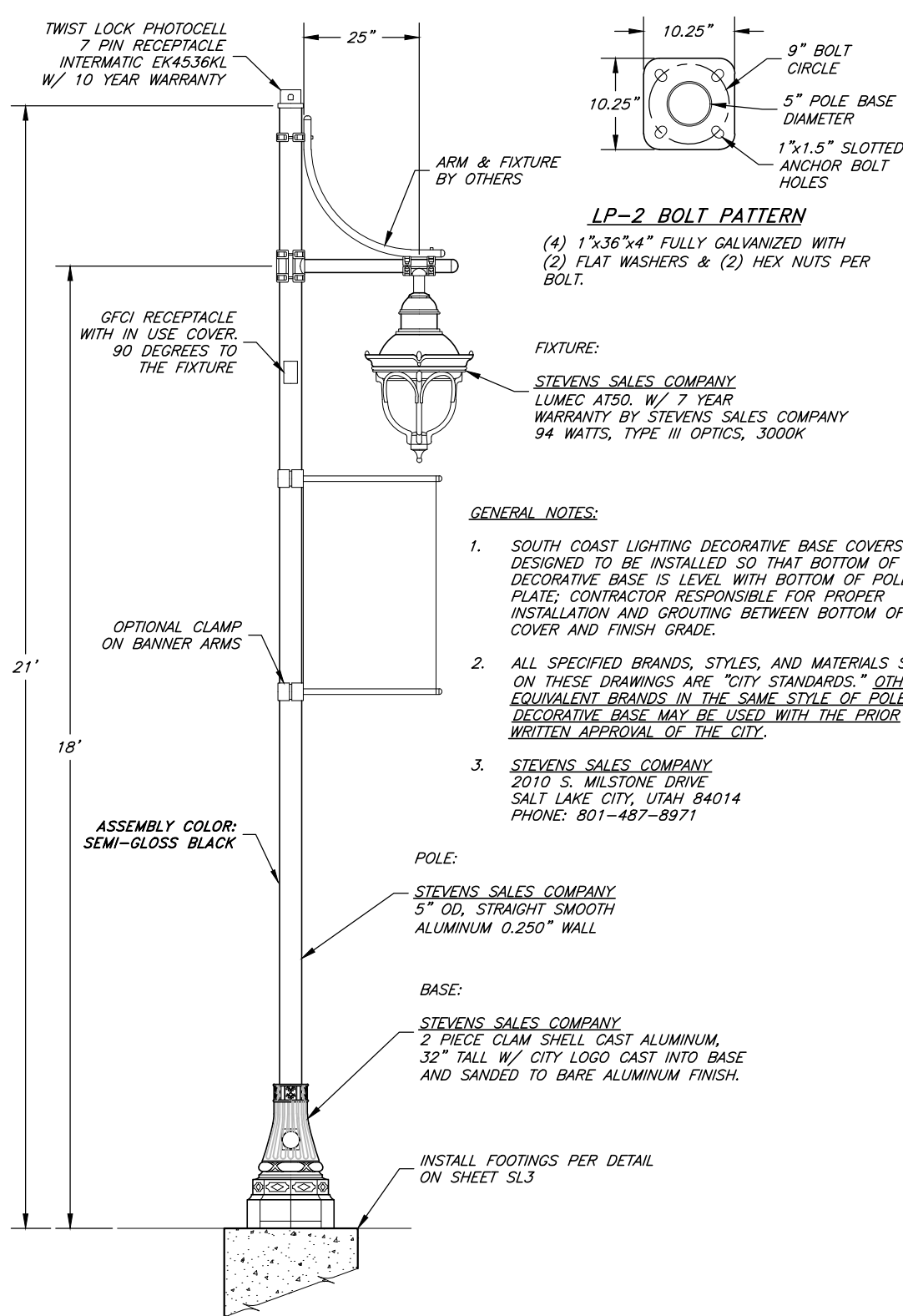


SHEET: **LID3**  
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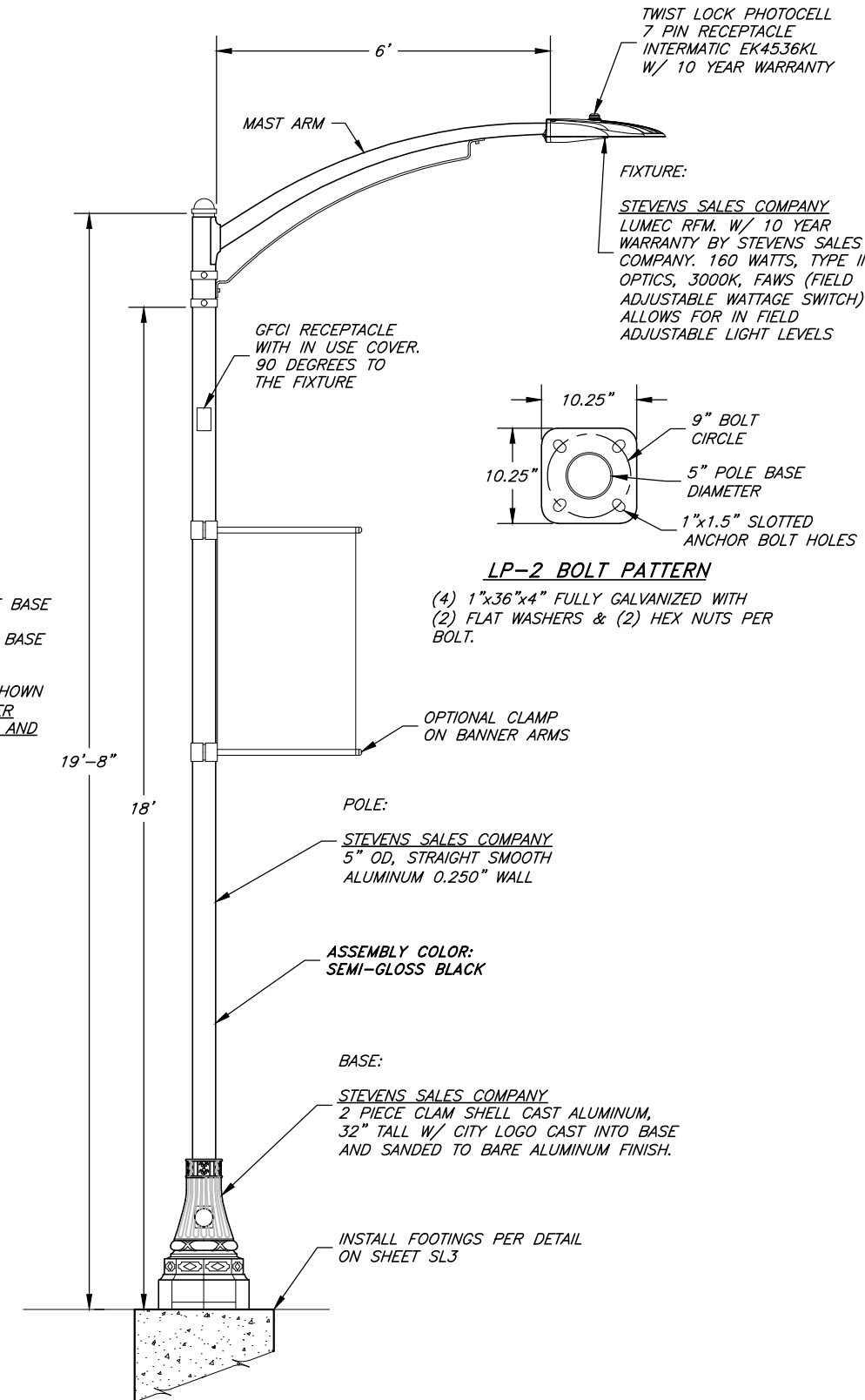
**LP-1 RESIDENTIAL STREETLIGHT**

- A. ALL HARDWARE STAINLESS STEEL
- B. ALL WELDS IN ACCORDANCE WITH AWS WELDING CODE
- C. ENTIRE ASSEMBLY FINISH COATED SEMI-GLOSS BLACK PER CITY SPECIFICATIONS



**LP-2 CORRIDOR STREETLIGHT**

- A. ALL HARDWARE STAINLESS STEEL
- B. ALL WELDS IN ACCORDANCE WITH AWS WELDING CODE
- C. ENTIRE ASSEMBLY FINISH COATED SEMI-GLOSS BLACK PER CITY SPECIFICATIONS



**LP-3 INTERSECTION STREETLIGHT**

- A. ALL HARDWARE STAINLESS STEEL
- B. ALL WELDS IN ACCORDANCE WITH AWS WELDING CODE
- C. ENTIRE ASSEMBLY FINISH COATED SEMI-GLOSS BLACK PER CITY SPECIFICATIONS

CITY ENGINEER	REV.	DATE
DATE		

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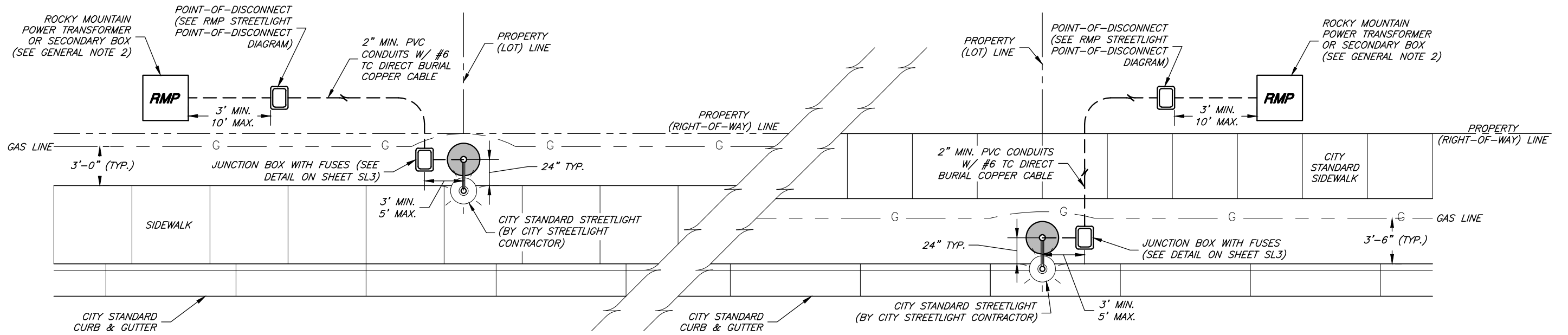
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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - STREET LIGHT STANDARDS**

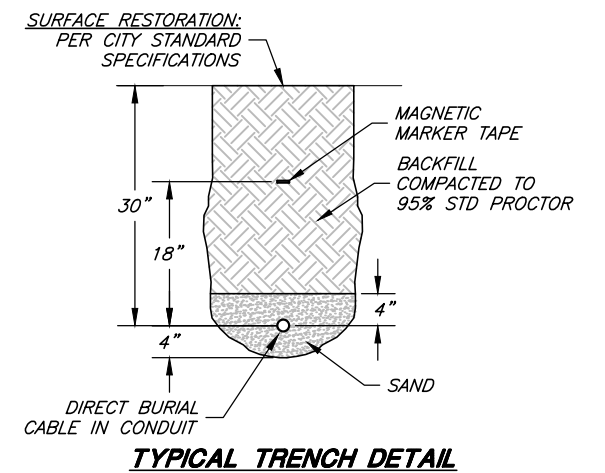
**STREET LIGHTING - POLES AND FIXTURES**

SHEET:
<b>SL1</b>
OF X SHEETS
0



**TYPICAL CONDUIT AND POWER LAYOUT "B"**  
(STANDARD LOCAL STREET SECTION WITHOUT PARK STRIP)

**TYPICAL CONDUIT AND POWER LAYOUT "A"**  
(STANDARD LOCAL STREET SECTION WITH PARK STRIP)



**TYPICAL TRENCH DETAIL**

**GENERAL NOTES:**

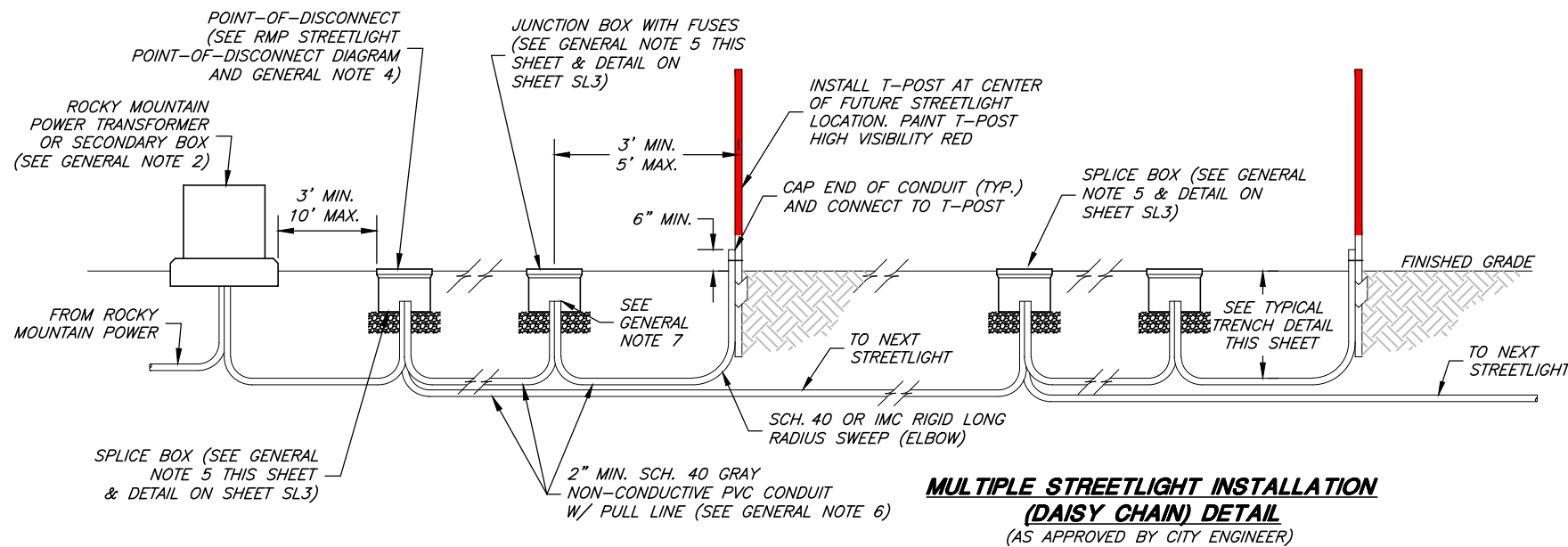
- SEE SECTION 26 56 19 M OF THE PLEASANT VIEW CITY DEVELOPMENT, DESIGN, & CONSTRUCTION STANDARDS FOR STREET LIGHTING SPECIFICATIONS.
- DEVELOPER/CONTRACTOR SHALL CONSULT THE POWER COMPANY ON THE JUNCTION BOX LOCATION, PEDESTAL LOCATION, CONDUIT LOCATION, AND DIGGING PRIOR TO INSTALLATION.
- WHERE POSSIBLE, LOCATE STREETLIGHT CONDUIT PARALLEL WITH RMP CONDUIT.
- JUNCTION BOX CONNECTING TO STREETLIGHT MAY ALSO SERVE AS POINT-OF-DISCONNECT IF LOCATED WITHIN 10' FROM THE POWER SOURCE.

**GENERAL NOTES CONT.:**

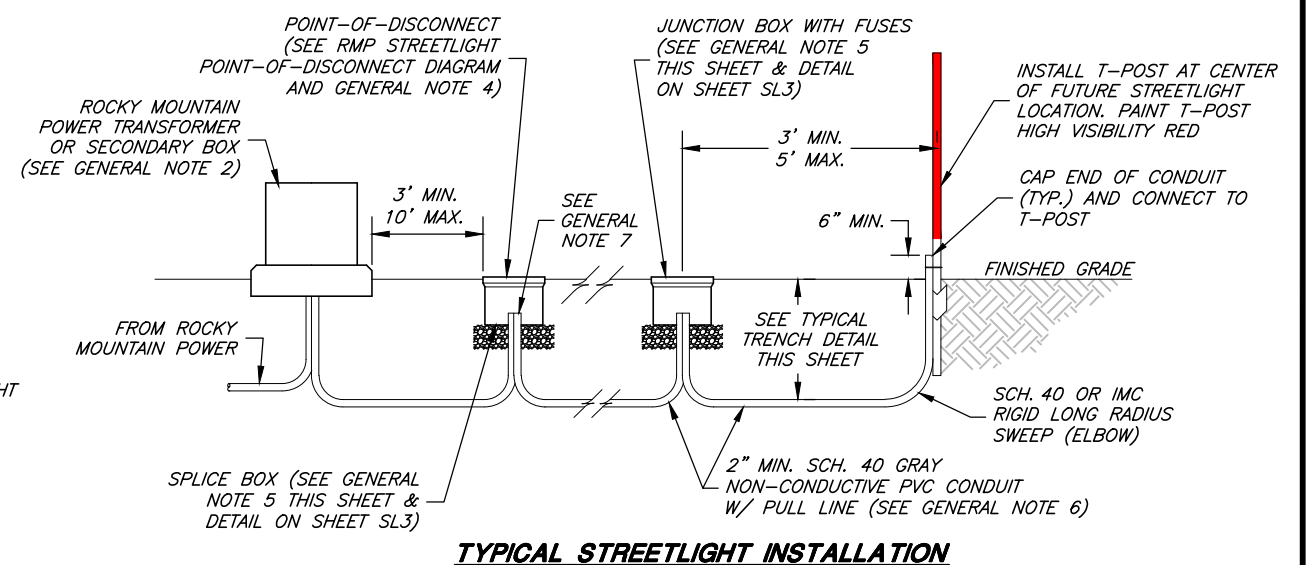
- INGROUND BOXES LOCATED WITHIN 20' OF APPROACHES OR INTERSECTIONS SHALL BE TRAFFIC RATED. WHERE APPROVED BY THE CITY, ANY BOX INSTALLATION IN SIDEWALK OR CONCRETE WILL REQUIRE THE GROUND BOX TO BE DESIGNED AND LISTED FOR USE IN CONCRETE. SUBMIT BOX SPECIFICATIONS TO THE CITY FOR APPROVAL PRIOR TO INSTALLATION. ALL BOXES SHALL HAVE THE WORDS "PLEASANT VIEW STREET LIGHTING" ON THE COVER.
- FLAT PULL LINE CAPABLE OF WITHSTANDING 1000 LBS OF TENSION, INSTALLED WITH 72 INCHES OF EXTRA LINE CAPABLE OF EXTENDING FROM EACH END OF CONDUIT. THE PULL LINE SHALL BE SECURED INSIDE THE ENDS OF THE CONDUIT AND BOTH ENDS SHALL BE CAPPED.
- CONDUIT SHALL EXTEND A MAX. OF 3 INCHES ABOVE THE GRAVEL IN THE BASE OF THE GROUND BOX AND A MINIMUM OF 2" ABOVE THE GRAVEL.

**GENERAL NOTES CONT.:**

- WHEN LOCATING STREET LIGHTING ALWAYS INSTALL ASSEMBLY WITH MAST ARM AT RIGHT ANGLES TO STREET.
  - SEE SHEET R5 FOR STREETLIGHT LOCATIONS.



**MULTIPLE STREETLIGHT INSTALLATION (DAISY CHAIN) DETAIL**  
(AS APPROVED BY CITY ENGINEER)



**TYPICAL STREETLIGHT INSTALLATION**

CITY ENGINEER	REV.	DATE
DATE		

SCALE:

N.T.S.

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DRAWN \_\_\_\_\_  
CHECKED \_\_\_\_\_



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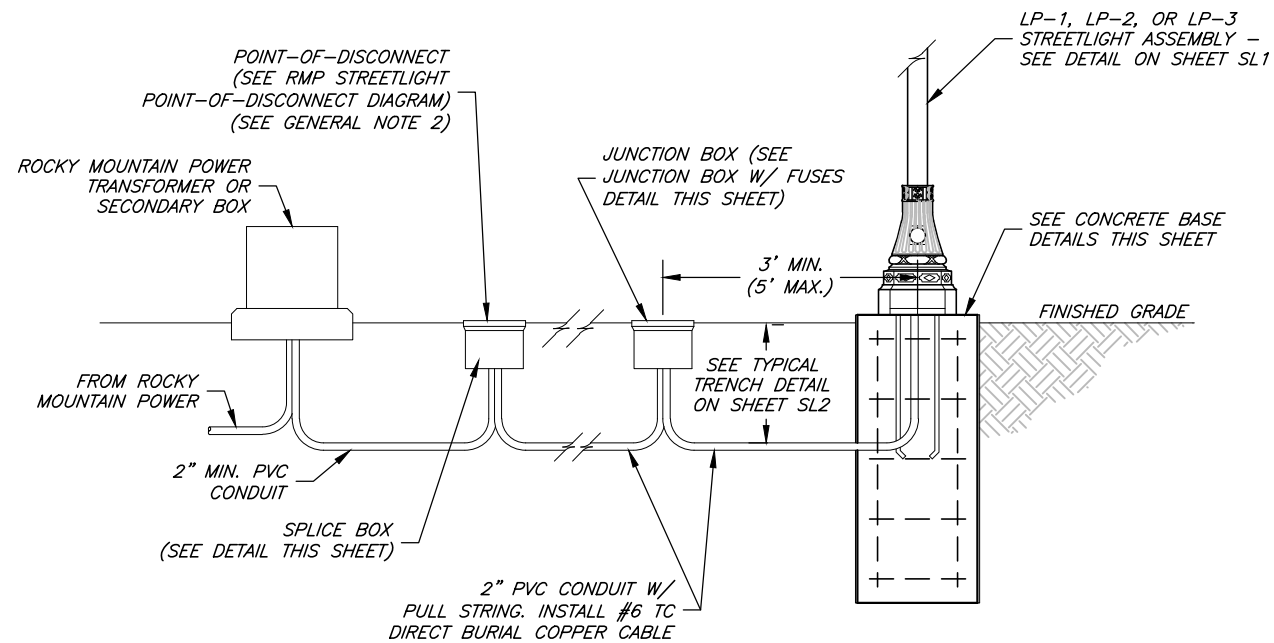
**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - STREET LIGHT STANDARDS**

**STREETLIGHT STANDARDS**

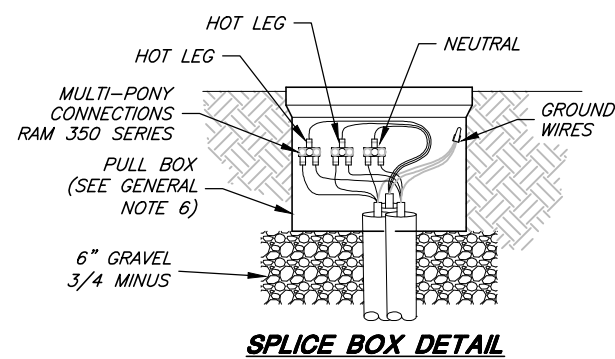
SHEET:

**SL2**

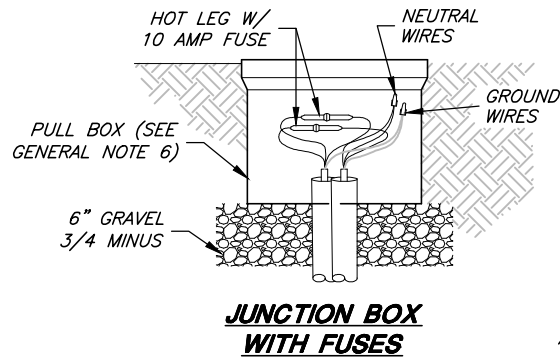
OF X SHEETS  
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**STANDARD STREETLIGHT WITH BASE**



**SPLICE BOX DETAIL**



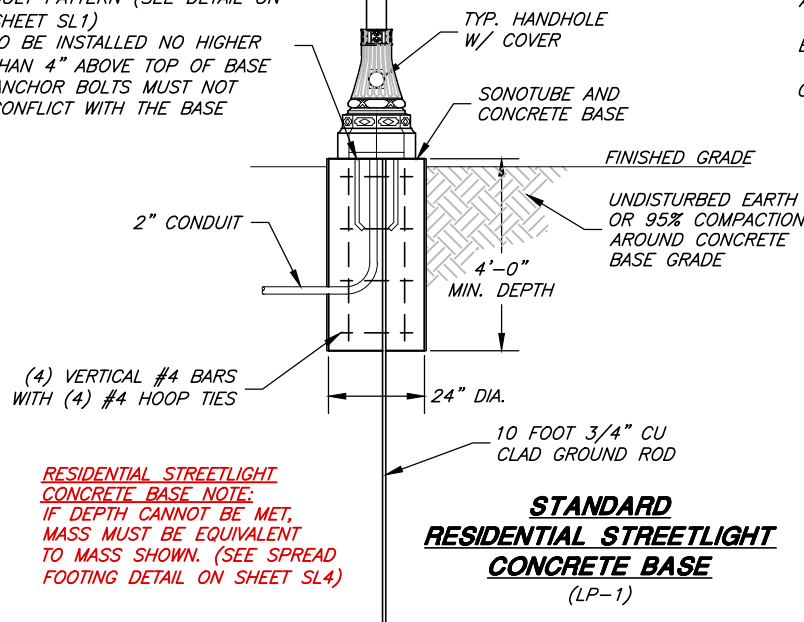
**JUNCTION BOX WITH FUSES**

**GENERAL NOTES:**

1. EACH LIGHT POLE ASSEMBLY SHALL HAVE A JUNCTION BOX WITH FUSES. FUSE HOT WIRES IN JUNCTION BOXES, SUPPLY SPLICE KIT FOR NEUTRAL CABLE.
2. LEAVE PIGTAIL 8 FEET LONG TO SECONDARY BOX; ROCKY MOUNTAIN POWER TO MAKE CONNECTION.
3. ALL CONDUCTORS SHALL BE OKONITE-FMR TYPE TC-CABLE #112-10-4054; OKONITE X-OLENE OKOSEAL #112-31-3747; OR ANIXTER VNTC #3H-0603 COPPER ONLY.
4. FUSE HOLDERS SHALL BE IN-LINE, WATER TIGHT LEC-AA
5. WIRE MUST EXTEND 18 INCHES ABOVE GRADE TO SPLICE IN GROUND BOX.
6. **PULL BOX SPECIFICATIONS:**
  - a. MODEL: "OLDCASTLE" CHRISTY N30 - RECTANGULAR CONCRETE PULL BOX
  - b. 13"x24"x12" (LxWxD)
  - c. FLUSH SOLID LID
  - d. LID SECURED WITH STAINLESS STEEL HEX BOLTS
  - e. BOLTS, NUTS, WASHERS, ACCESSORIES: STAINLESS STEEL, APWA SECTION 05 05 23.
  - f. LID MUST SPECIFY "PLEASANT VIEW STREET LIGHTING"
7. ALL BELOW GRADE SPLICING/FUSES SHALL BE WATERTIGHT.

- ANCHOR BOLTS (LP-1):**
- A. BOLT PATTERN (SEE DETAIL ON SHEET SL1)
  - B. TO BE INSTALLED NO HIGHER THAN 4" ABOVE TOP OF BASE
  - C. ANCHOR BOLTS MUST NOT CONFLICT WITH THE BASE

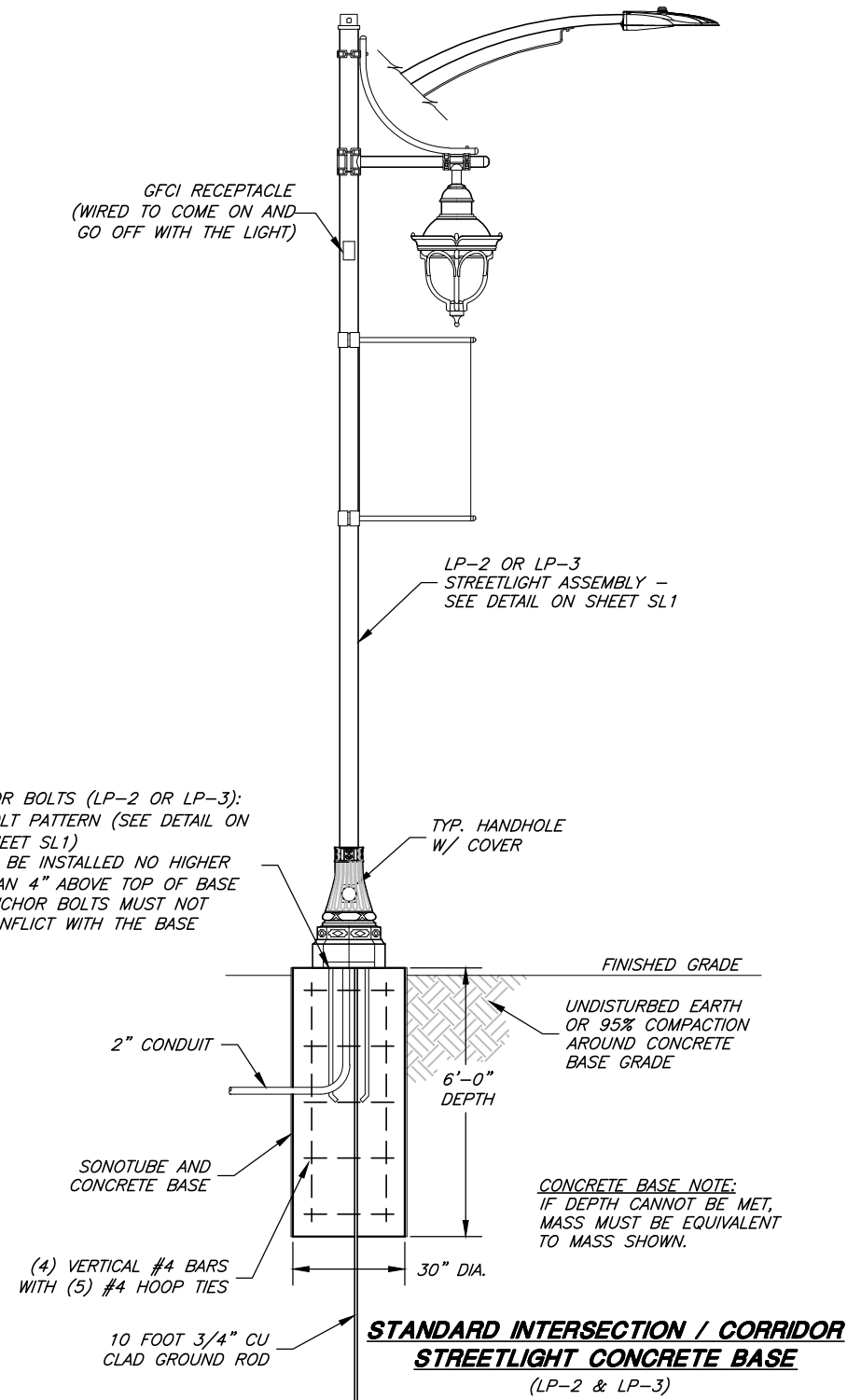
**RESIDENTIAL STREETLIGHT CONCRETE BASE NOTE:**  
IF DEPTH CANNOT BE MET, MASS MUST BE EQUIVALENT TO MASS SHOWN. (SEE SPREAD FOOTING DETAIL ON SHEET SL4)



**STANDARD RESIDENTIAL STREETLIGHT CONCRETE BASE (LP-1)**

- ANCHOR BOLTS (LP-2 OR LP-3):**
- A. BOLT PATTERN (SEE DETAIL ON SHEET SL1)
  - B. TO BE INSTALLED NO HIGHER THAN 4" ABOVE TOP OF BASE
  - C. ANCHOR BOLTS MUST NOT CONFLICT WITH THE BASE

**CONCRETE BASE NOTE:**  
IF DEPTH CANNOT BE MET, MASS MUST BE EQUIVALENT TO MASS SHOWN.



**STANDARD INTERSECTION / CORRIDOR STREETLIGHT CONCRETE BASE (LP-2 & LP-3)**

CITY ENGINEER	REV.	DATE
DATE		

SCALE:	DESIGNED _____
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	CHECKED _____



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<b>PLEASANT VIEW CITY CORPORATION</b>	
<b>PUBLIC WORKS - STREET LIGHT STANDARDS</b>	
<b>STREETLIGHT STANDARDS</b>	

SHEET:	<b>SL3</b>
OF X SHEETS	0

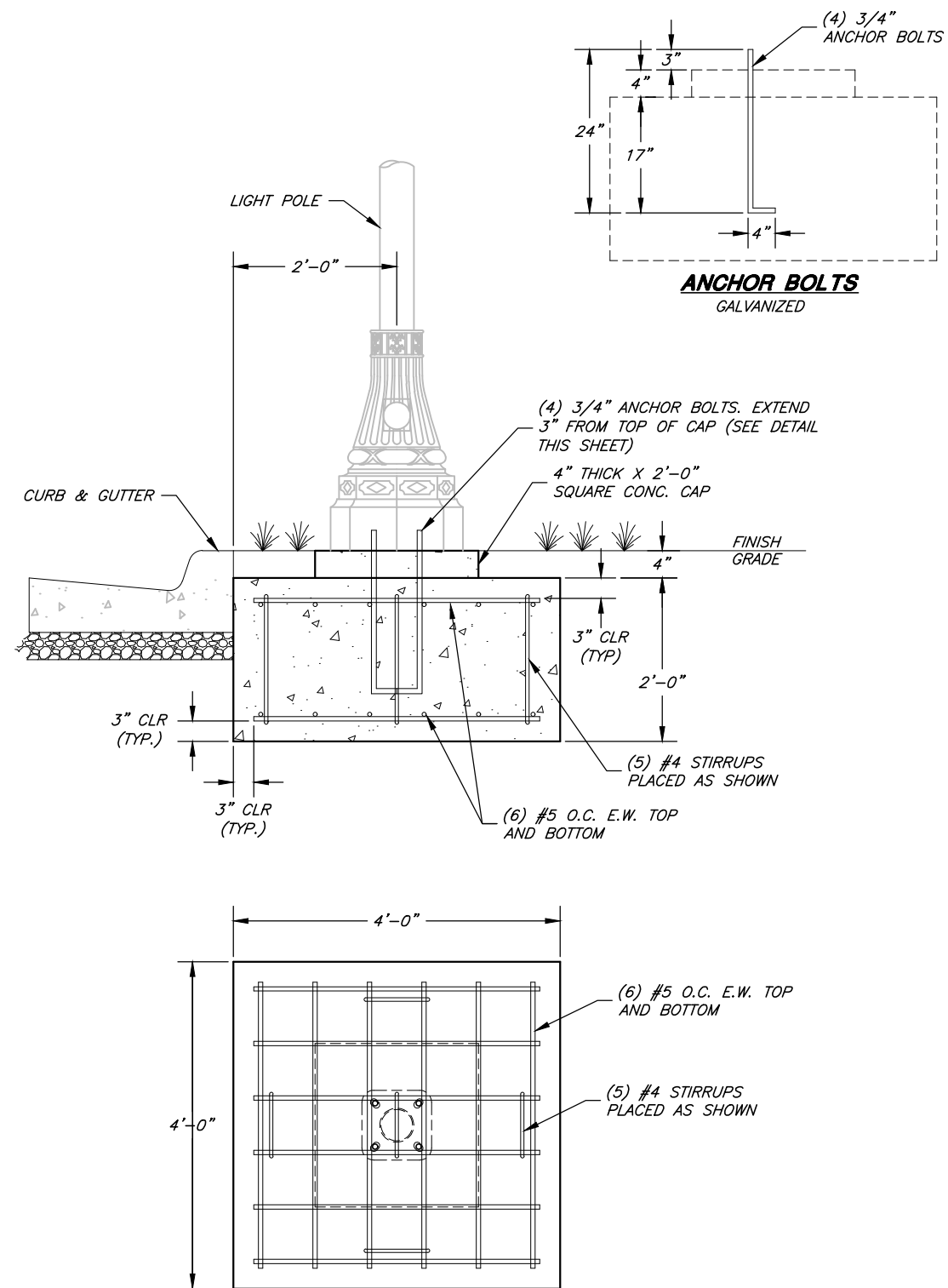
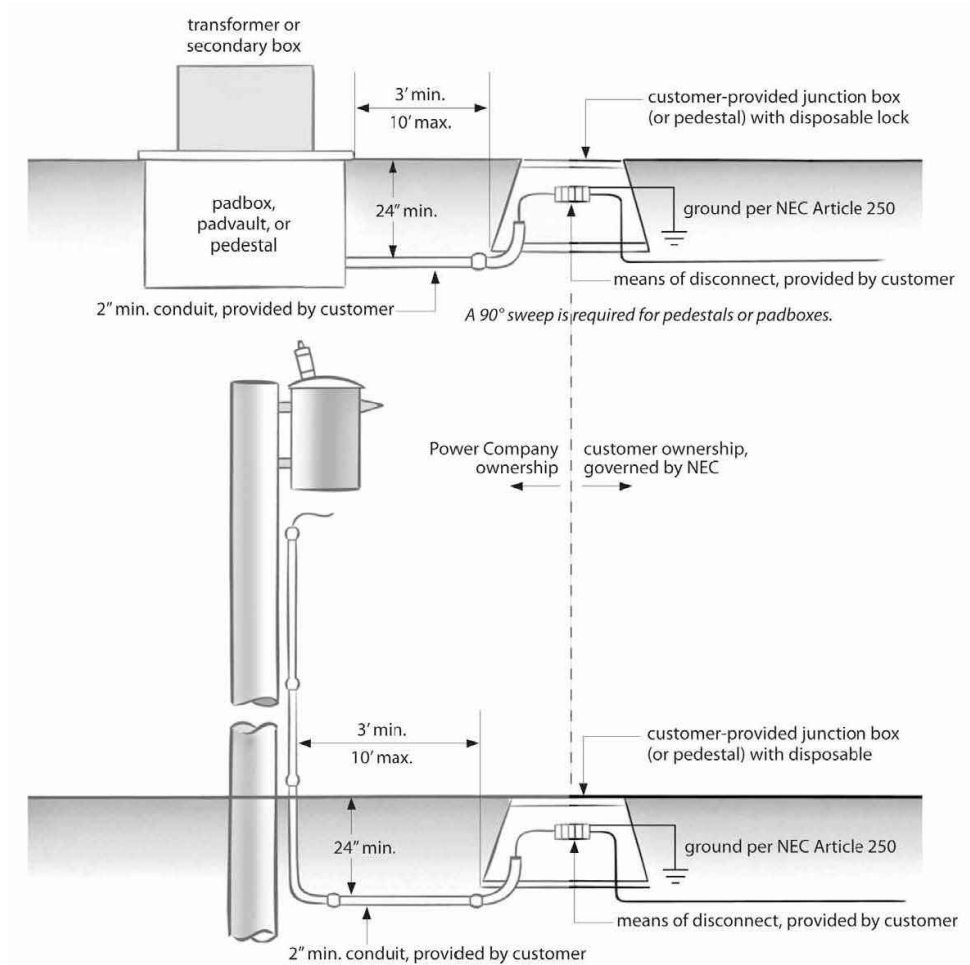


Figure 63—Street Lighting Points of Connection Diagram



More information on streetlights is posted online at: <https://www.pacificpower.net/working-with-us/municipalities.html> and <https://www.rockymountainpower.net/working-with-us/municipalities.html>.

**GENERAL NOTE:**

REFER TO THE MOST RECENT EDITION OF THE ROCKY MOUNTAIN POWER ELECTRIC SERVICE REQUIREMENTS MANUAL FOR GUIDANCE AND INSTRUCTIONS ON ELECTRIC SERVICE REQUIREMENTS.



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CITY ENGINEER	REV.	DATE
DATE		

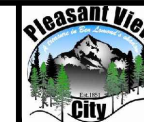
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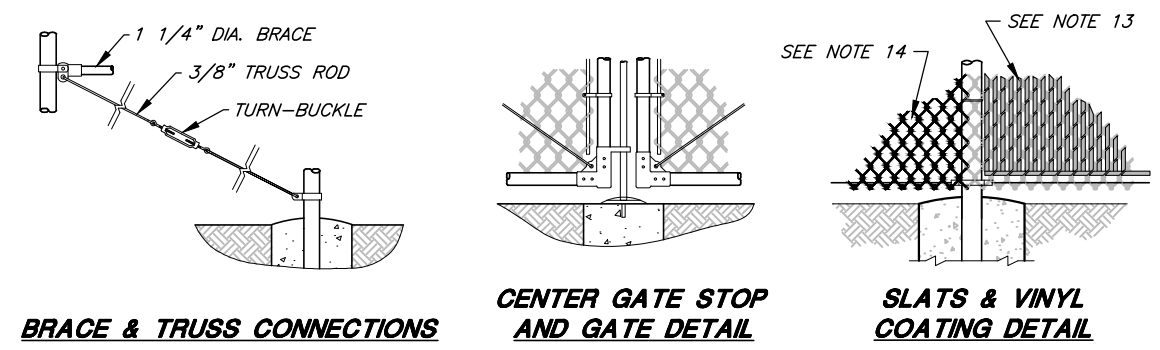
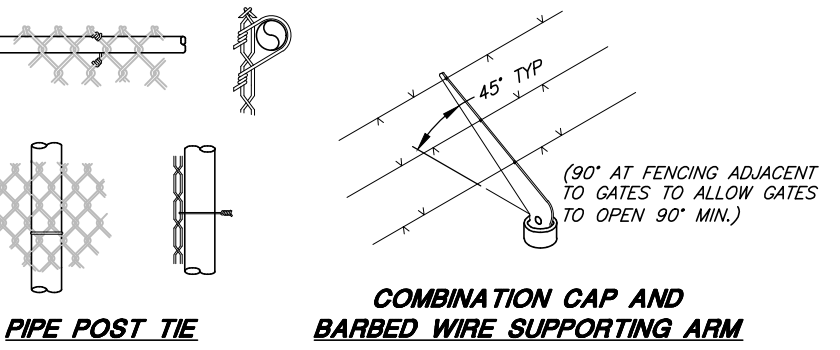
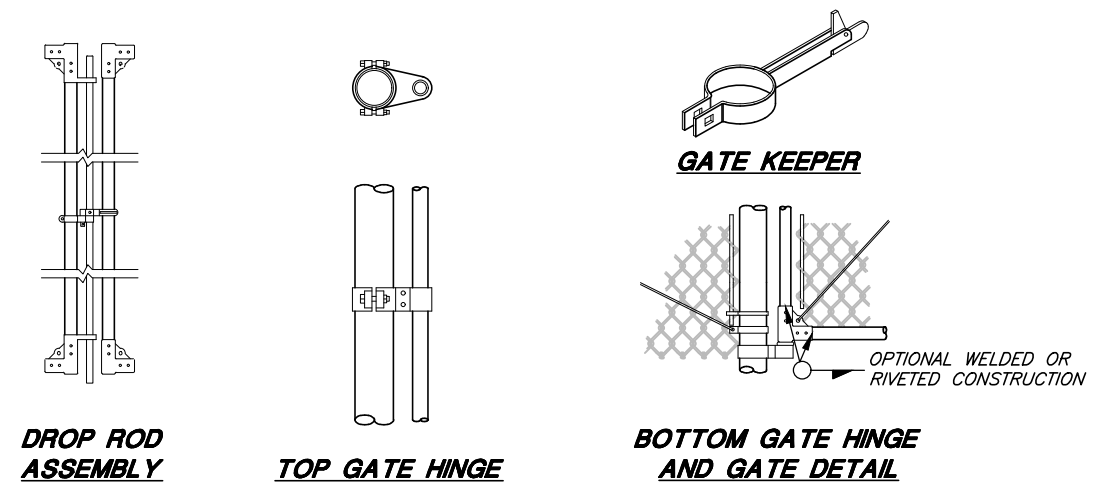
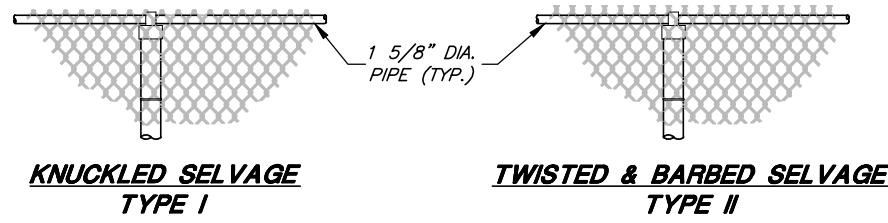


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**PLEASANT VIEW CITY CORPORATION**  
**PUBLIC WORKS - STREET LIGHT STANDARDS**  
**LIGHT POLE SPREAD FOOTING DETAIL, AND**  
**ROCKY MOUNTAIN POWER CONNECTION DETAILS**

SHEET:  
**SL4**  
OF X SHEETS  
0



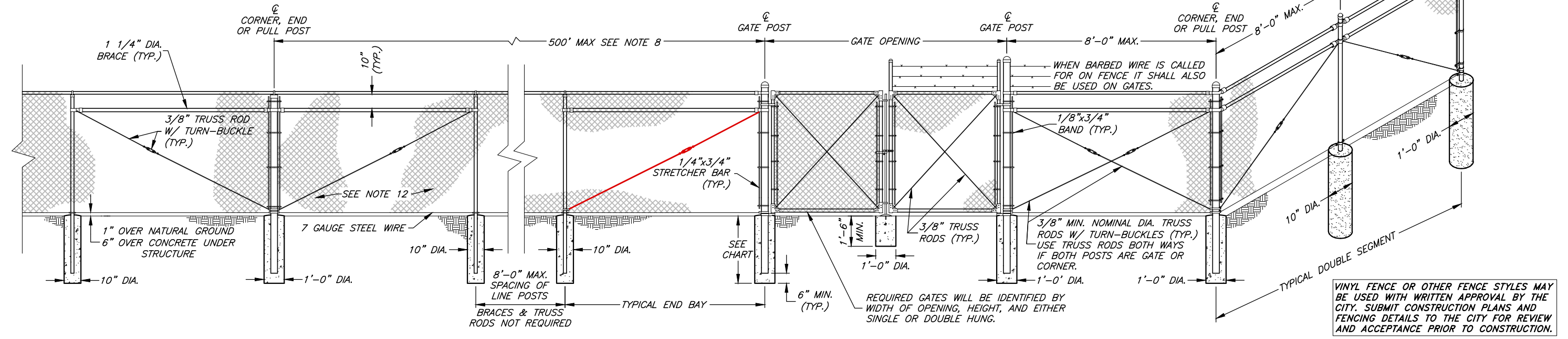
**GENERAL NOTES:**

1. MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. TOP SUPPORT: TUBULAR RAIL (SEE SECTION 32 31 13M)
3. BARB WIRE SHALL BE USED ONLY WHEN APPROVED BY THE CITY AND DESIGNATED ON THE CONSTRUCTION PROJECT PLANS OR SPECIFICATIONS.
4. TWISTED AND BARBED SELVAGE TOP AND BOTTOM SHALL BE USED ON FENCES 5'-0" HIGH OR GREATER.
5. KNUCKLED SELVAGE ON TOP AND TWISTED AND BARBED ON BOTTOM SHALL BE USED ON FENCES LESS THAN 5'-0".
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' RADIUS NOT MORE THAN 8'-0".
b.	UNDER 500' RADIUS TO 200' RADIUS NOT MORE THAN 8'-0".
c.	UNDER 200' RADIUS TO 100' RADIUS NOT MORE THAN 6'-0".
d.	UNDER 100' RADIUS NOT MORE THAN 5'-0".
9. TRUSS RODS AND BRACES SHALL NOT BE REQUIRED FOR FABRIC HEIGHT LESS THAN 5'-0".
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 CHAIN LINK 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 THE CITY FENCING ORDINANCE.

HEIGHT	GATE OPENING	GATE POST	GATE FRAME
UNDER 6'-0"	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'-0" 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'	2'	6'	5'-8"	2"	1 1/2"
3'	2'	5'	4'-8"	2"	1 1/2"



CITY ENGINEER	DESIGNED	DATE
DATE	DRAWN	REV.
	CHECKED	DATE

SCALE: N.T.S.

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 DRAWN \_\_\_\_\_  
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**JA**  
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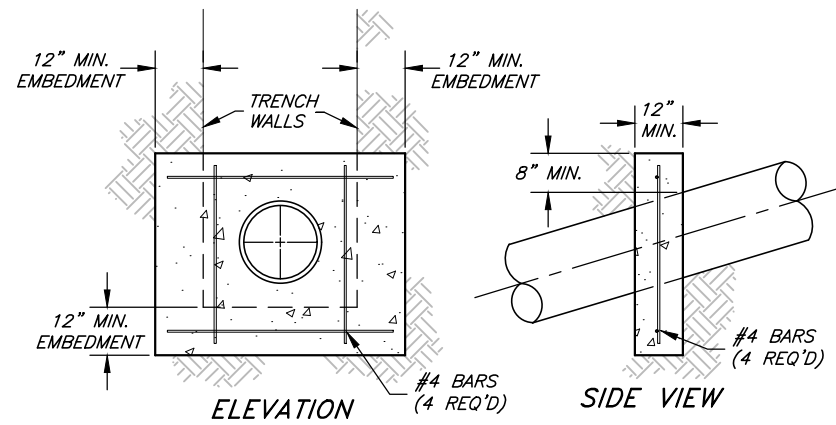
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**Pleasant View City**

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**PUBLIC WORKS - MISCELLANEOUS CONSTRUCTION STANDARDS**

**CHAIN LINK FENCE STANDARD DETAILS**

SHEET: **M1**  
 OF X SHEETS  
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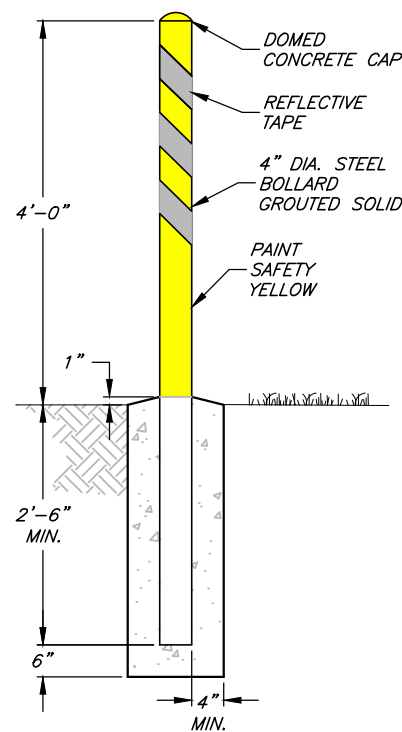
**ANCHOR BLOCK**

**ANCHOR BLOCK NOTES:**

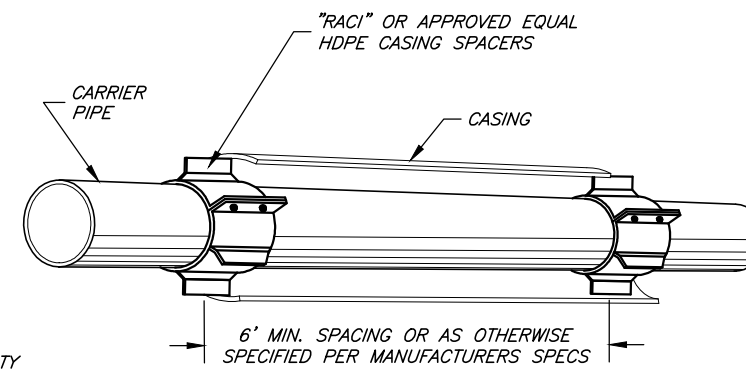
A. PIPE ANCHOR BLOCKS SHALL BE INSTALLED ON ALL CULINARY WATER, STORM DRAIN, AND IRRIGATION WATER LINES WHERE SLOPE EXCEEDS 20%.

B. SPACING:

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



**BOLLARD DETAIL**



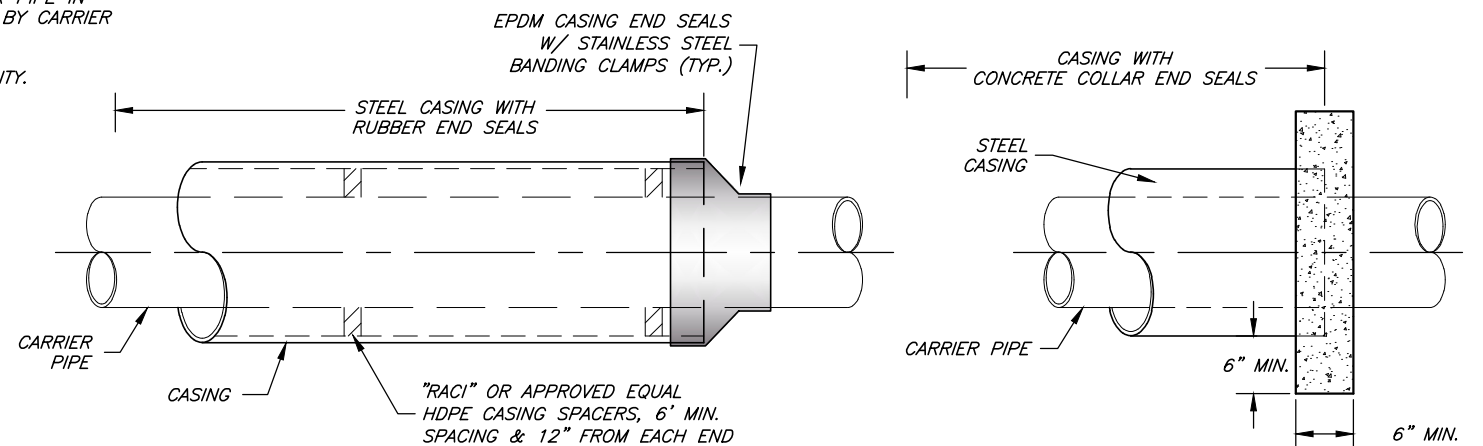
**CENTERING GUIDE**

WITH CASING CUT AWAY TO SHOW DETAIL (N.T.S.)

**CASEMENT DETAIL NOTES:**

- CARRIER PIPE TO BE SPECIFIED BY THE CITY ENGINEER.
- CASING PIPE SHALL BE SMOOTH STEEL WITH MINIMUM YIELD STRENGTH = 35,000 P.S.I. OR AS SPECIFIED IN THE PROJECT PLANS.
- METHOD OF INSTALLATION OF CARRIER PIPE IN CASING SHALL BE AS RECOMMENDED BY CARRIER PIPE MANUFACTURER.
- SEAL CASING AS DIRECTED BY THE CITY.

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		



**CASEMENT DETAIL**

FOR PIPELINE BORE PROJECTS

CITY ENGINEER	DESIGNED	SCALE:
DATE	DRAWN	N.T.S.
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DATE		

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**PLEASANT VIEW CITY CORPORATION**  
 PUBLIC WORKS - MISCELLANEOUS CONSTRUCTION STANDARDS  
**TYPICAL PIPELINE CASING, PIPE ANCHOR BLOCK, AND BOLLARD DETAILS**

SHEET:  
**M2**  
 OF X SHEETS  
 0