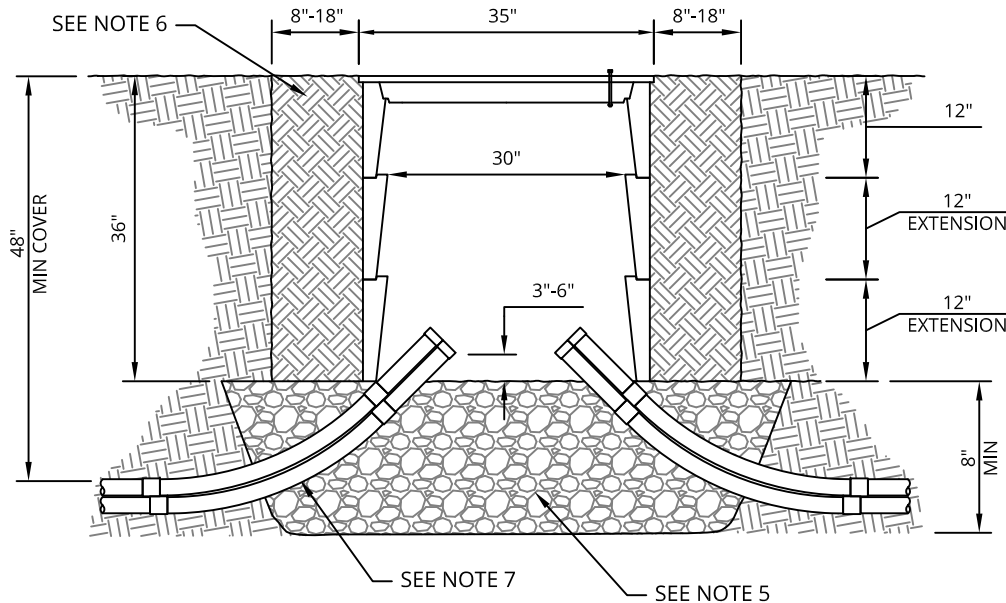


NOTES:

1. PLEASE REFER TO SECTION 5.6 THROUGH 5.7.3 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
2. HANDHOLE SHALL BE CHRISTY P36 OR APPROVED EQUAL WITH TWO 12-INCH EXTENSIONS FOR TOTAL DEPTH OF 36 INCHES.
3. ALL PULL BOXES SHALL BE AASHTO TIER 22, H-20 RATED OR BETTER WITH POLYMER CONCRETE OR FIBRELYTE COVERS.
4. ALL COVERS WILL HAVE "TRAFFIC" MARKING INTEGRATED INTO THE COVER AND BE ASTM C 857, WUC 3.63 OR AASHTO TIER 15 RATED. TIER 8 LIDS MAY BE USED IN SOME CASES WHEN APPROVED BY CITY OF CHANDLER
5. HAND HOLE BASE MUST BE PLACED ON 8-INCHES MINIMUM OF ABC OR PEA GRAVEL AS REQUIRED BY MAG SECTION 702 AND COMPACTED TO 100% MAXIMUM DENSITY.
6. THE OUTER SIDES OF THE PULL BOX MUST BE BACKFILLED WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACTED TO 95% TO WITHIN TWO INCHES OF FINISHED GRADE. THE COMPACTION AROUND THE BOX MUST NOT CAUSE THE SIDES TO DEFLECT OR ANY PART OF THE BOX OR LID TO CRACK.
7. HDPE CONDUIT PREFERRED, SCHEDULE 40 MINIMUM, WITH 45-DEGREE SWEEPS WITH A 36-INCH BEND RADIUS.
8. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.



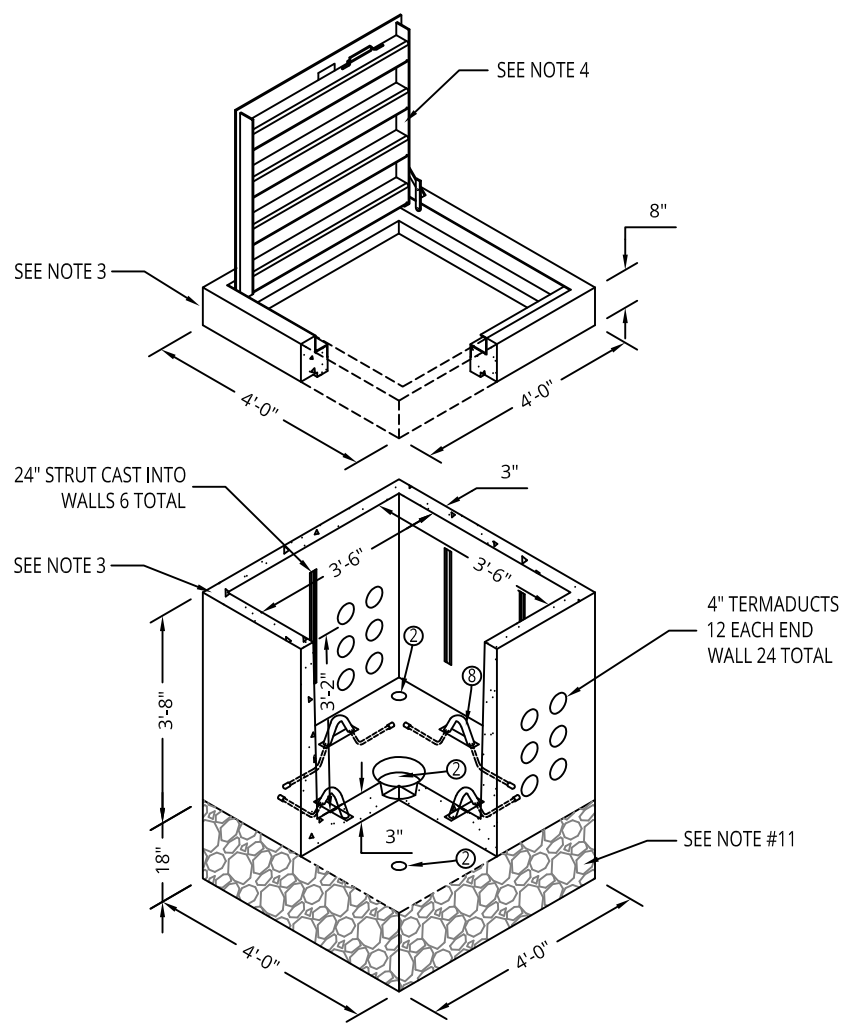
DETAIL NO.
C-103-1



PULL BOX NO. 7
TYPICAL INSTALLATION

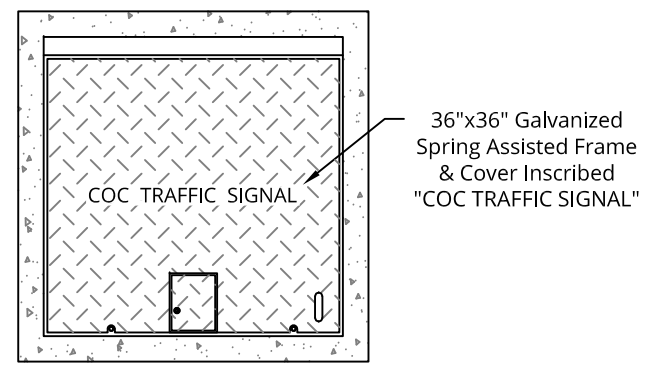
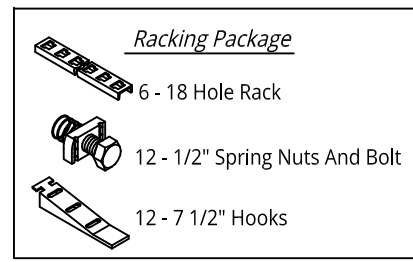
DRAFTED:
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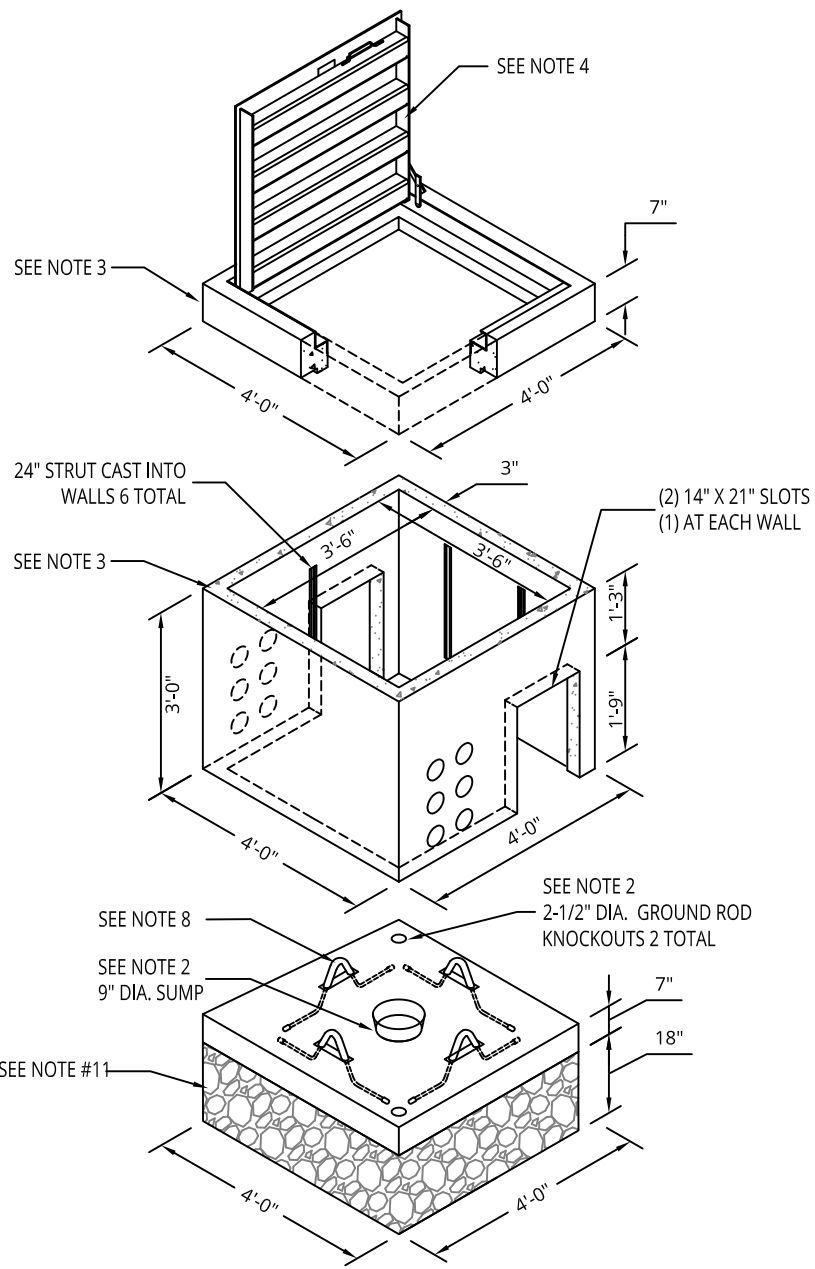
DETAIL NO.
C-103-1



NOTES:

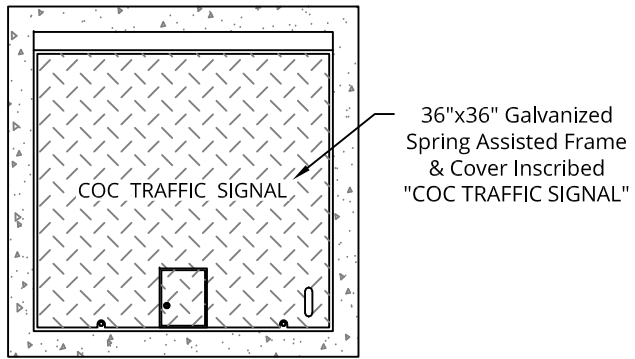
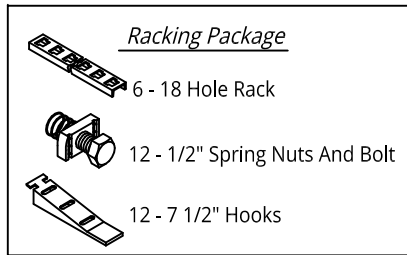
1. PLEASE REFER TO SECTION 5.6 THROUGH 5.7.3 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
2. VAULT SHALL BE UTILITY VAULT CO. #444-TA OR APPROVED EQUAL AND MUST INCLUDE A 9-INCH DIAMETER SUMP AND 2 HOLES FOR GROUND RODS .
3. PULL BOX AND LID SHALL BE RATED FOR HS20 LOADING
4. 36"X 36" GALVANIZED DIAMOND PLATE, SPRING ASSISTED FRAME AND COVER INSCRIBED "COC TRAFFIC SIGNAL".
5. LID SHALL OPEN 180 DEGREES WITH A TORSION BAR LIFT ASSIST
6. COVER HARDWARE SHALL BE CADMIUM PLATED
7. THE LID MUST HAVE PROVISIONS FOR A RECESSED PADLOCK IN A CAVITY IN THE PULL BOX COVER AND MUST LOCK DOWN WITHOUT THE PADLOCK.
8. FOUR PULLING IRONS SHALL BE PROVIDED.
9. THE PULL BOX MUST BE INSTALLED AT FINISHED GRADE.
10. EXCAVATION, BACKFILL AND COMPACTION PER MAG SECTION 601, UNLESS OTHERWISE SPECIFIED HEREIN.
11. MANHOLE BASE MUST BE PLACED ON 18 INCHES MINIMUM OF ABC AS REQUIRED BY MAG SECTION 702 AND COMPACTED TO 100% MAXIMUM DENSITY.
12. THE OUTER SIDES OF THE PULL BOX MUST BE BACKFILLED WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACTED TO 95% TO WITHIN TWO INCHES OF FINISHED GRADE. THE COMPACTION AROUND THE BOX MUST NOT CAUSE THE SIDES TO DEFLECT OR ANY PART OF THE BOX OR LID TO CRACK.
13. VOIDS RESULTING FROM ENTRANCE OF CONDUITS INTO PULL BOX MUST BE COMPLETELY FILLED WITH HYDRAULIC CEMENT GROUT OR DUCT SEALANT.
14. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.
15. ALL PROVIDED RACKING SHALL BE INSTALLED IN VAULT UNLESS OTHERWISE DIRECTED BY CITY OF CHANDLER

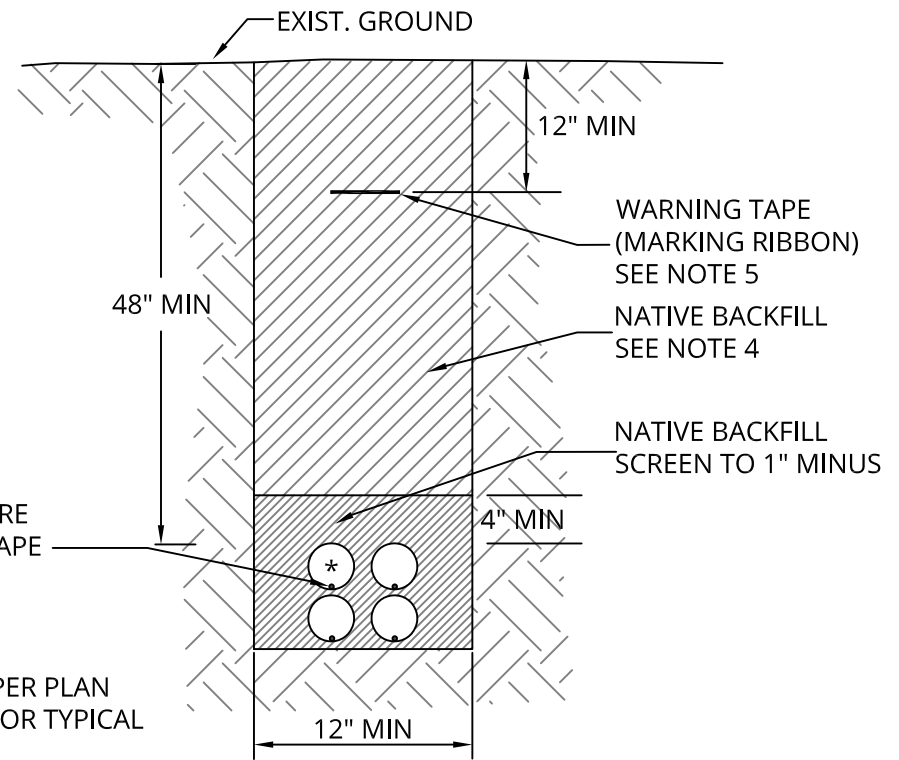
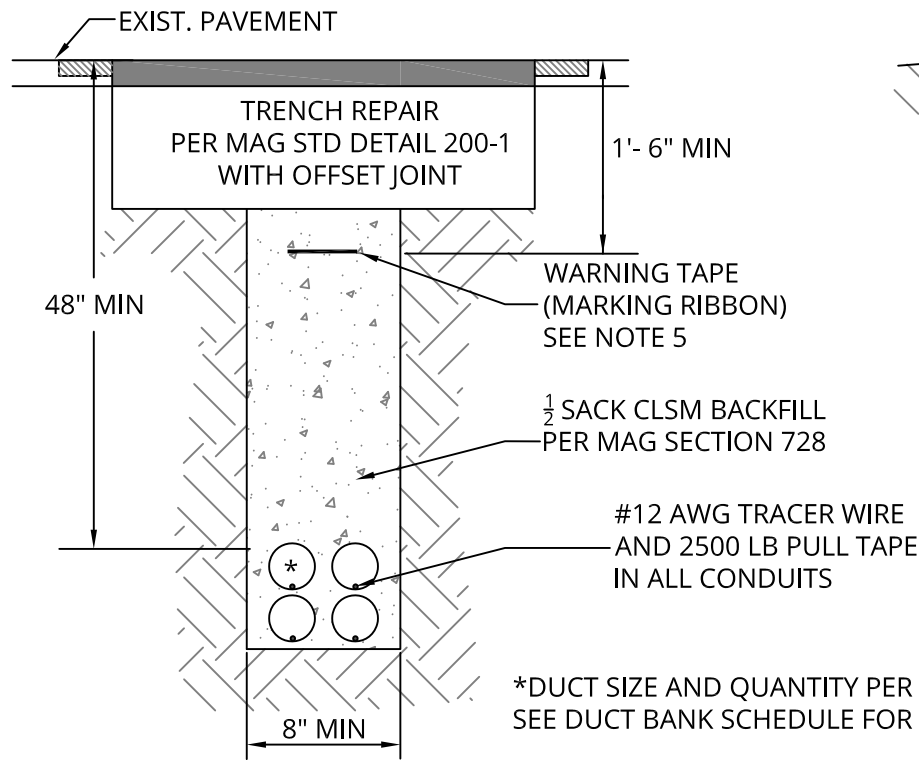




NOTES:

1. PLEASE REFER TO SECTION 5.6 THROUGH 5.7.3 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
2. VAULT SHALL BE UTILITY VAULT CO. #444-TA OR APPROVED EQUAL AND MUST INCLUDE A 9-INCH DIAMETER SUMP AND 2 HOLES FOR GROUND RODS .
3. PULL BOX AND LID SHALL BE RATED FOR HS20 LOADING
4. 36"X 36" GALVANIZED DIAMOND PLATE, SPRING ASSISTED FRAME AND COVER INSCRIBED "COC TRAFFIC SIGNAL".
5. LID SHALL OPEN 180 DEGREES WITH A TORSION BAR LIFT ASSIST
6. COVER HARDWARE SHALL BE CADMIUM PLATED
7. THE LID MUST HAVE PROVISIONS FOR A RECESSED PADLOCK IN A CAVITY IN THE PULL BOX COVER AND MUST LOCK DOWN WITHOUT THE PADLOCK.
8. FOUR PULLING IRONS SHALL BE PROVIDED.
9. THE PULL BOX MUST BE INSTALLED AT FINISHED GRADE.
10. EXCAVATION, BACKFILL AND COMPACTION PER MAG SECTION 601, UNLESS OTHERWISE SPECIFIED HEREIN.
11. MANHOLE BASE MUST BE PLACED ON 18 INCHES MINIMUM OF ABC AS REQUIRED BY MAG SECTION 702 AND COMPACTED TO 100% MAXIMUM DENSITY.
12. THE OUTER SIDES OF THE PULL BOX MUST BE BACKFILLED WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACTED TO 95% TO WITHIN TWO INCHES OF FINISHED GRADE. THE COMPACTION AROUND THE BOX MUST NOT CAUSE THE SIDES TO DEFLECT OR ANY PART OF THE BOX OR LID TO CRACK.
13. VOIDS RESULTING FROM ENTRANCE OF CONDUITS INTO PULL BOX MUST BE COMPLETELY FILLED WITH HYDRAULIC CEMENT GROUT OR DUCT SEALANT.
14. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.
15. ALL PROVIDED RACKING SHALL BE INSTALLED IN VAULT UNLESS OTHERWISE DIRECTED BY CITY OF CHANDLER





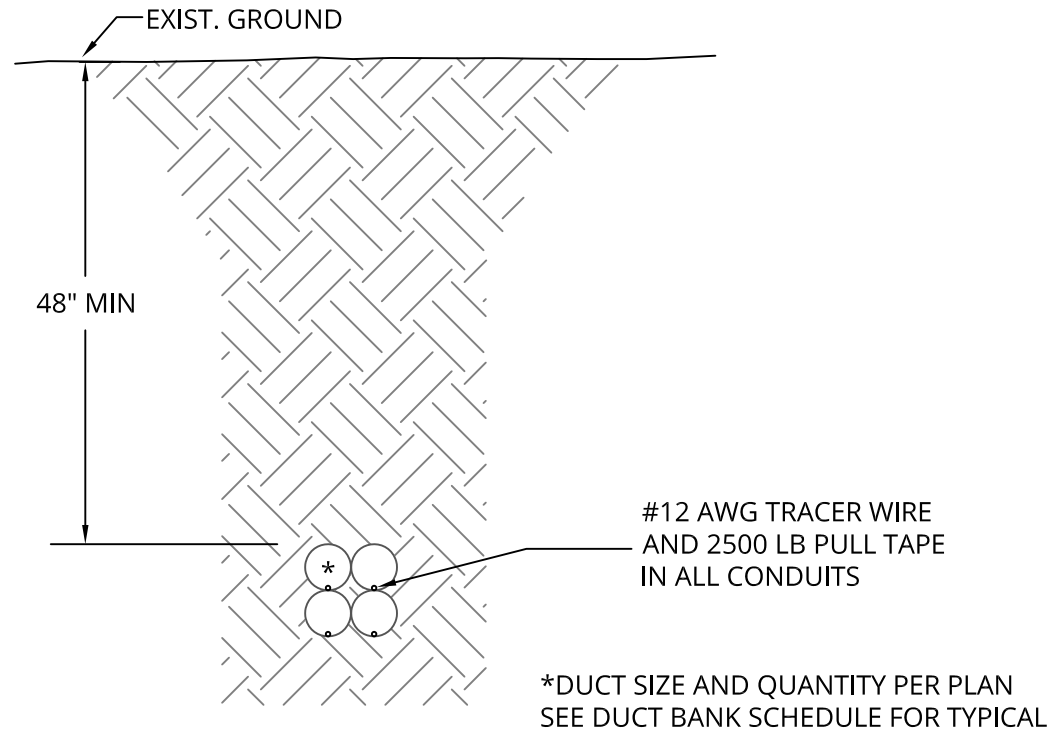
UNDER PAVEMENT AND ACCESS ROADS

UNDER SIDEWALKS OR LANDSCAPING

NOTES:

1. PAVEMENT MATCHING, BASE COURSES, AND SURFACE REPLACEMENT PER MAG SECTION 336 AND CITY SUPPLEMENTAL SPECIFICATIONS.
2. TRENCH EXCAVATION, BACKFILL AND COMPACTION PER MAG SECTION 601, UNLESS OTHERWISE SPECIFIED HEREIN.
3. INSTALLATION PER MAG SECTION 360, AND CITY SUPPLEMENTAL SPECIFICATIONS.
4. PLACE NATIVE BACKFILL IN 6-INCH LIFTS AND COMPACT TO 95% OF STANDARD PROCTOR WITH COMPACTION TESTS ON EVERY OTHER LIFT AND FOR EACH 500 FEET OF TRENCH.
5. MARKING RIBBON TO BE 3" MINIMUM WIDTH, 5 MIL THICK METALLIC DETECTABLE TAPE WITH THE MESSAGE "CAUTION - FIBER OPTIC CABLE BURIED BELOW" FOR OPEN TRENCH GREATER THAN 100'.
6. HDPE CONDUIT PREFERRED, SCHEDULE 40 MINIMUM, WITH 45-DEGREE SWEEPS WITH A 36-INCH BEND RADIUS.
7. PLEASE REFER TO SECTION 5.7 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
8. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.

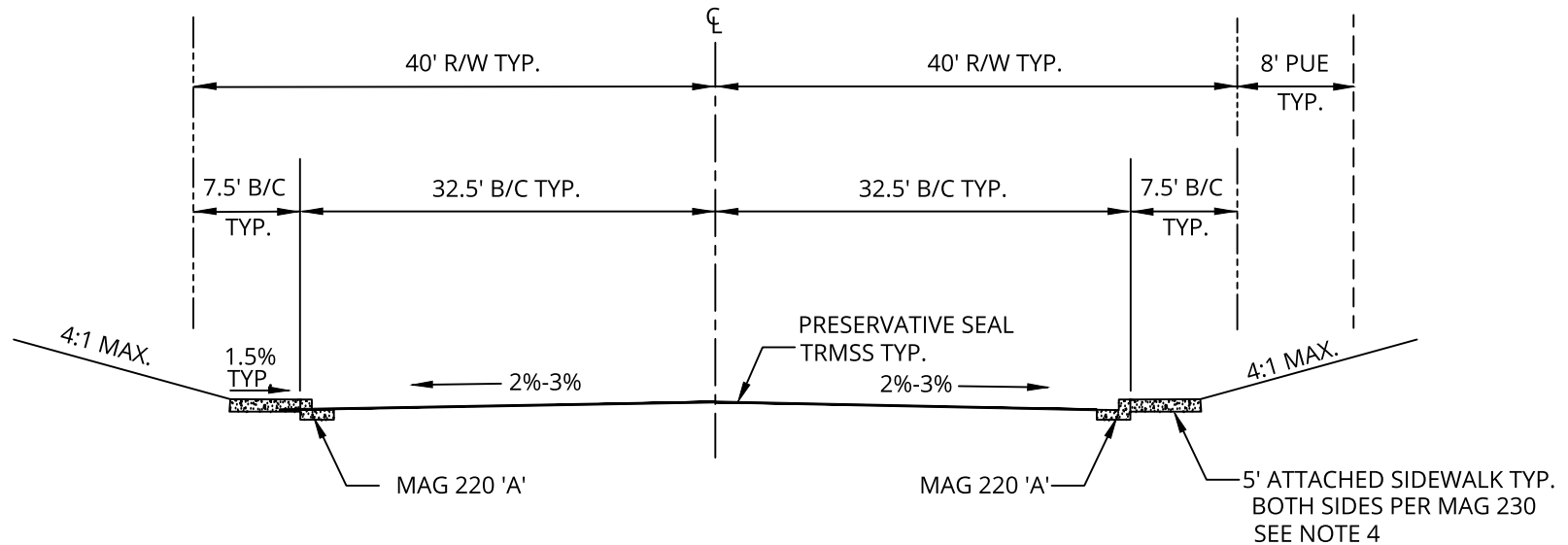
DUCT BANK SCHEDULE				
LOCATION	DEPTH	CONDUIT SIZE	CONDUIT QUANTITY	CONDUIT COLORS
IN RIGHT-OF-WAY OR ON CITY PROPERTY (EXCEPT BUILDING ENTRANCE)	48" MINIMUM COVER	2", TYP	4 EA, TYP	(3) GRAY (1) BLACK
BUILDING ENTRANCE	24" MINIMUM COVER	4", TYP	2 EA, TYP	ANY



NOTES:

1. PAVEMENT MATCHING, BASE COURSES, AND SURFACE REPLACEMENT PER MAG SECTION 336 AND CITY SUPPLEMENTAL SPECIFICATIONS.
2. HORIZONTAL DIRECTIONAL DRILLING (HDD) PER COC STANDARD DETAIL C-112 AND COC SUPPLEMENT TO MAG SECTION 608.
3. REFER TO CITY OF CHANDLER DETAIL C-111 FOR VACUUM EXCAVATION SPACING REQUIREMENTS. BACKFILL PER SECTION 601.
4. INSTALLATION PER MAG SECTION 360, AND CITY SUPPLEMENTAL SPECIFICATIONS.
5. HDPE CONDUIT PREFERRED, SCHEDULE 40 MINIMUM, WITH 45-DEGREE SWEEPS WITH A 36-INCH BEND RADIUS.
6. PLEASE REFER TO SECTION 5.7 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
7. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.

DUCT BANK SCHEDULE				
LOCATION	DEPTH	CONDUIT SIZE	CONDUIT QUANTITY	CONDUIT COLORS
IN RIGHT-OF-WAY OR ON CITY PROPERTY (EXCEPT BUILDING ENTRANCE)	48" MINIMUM COVER	2", TYP	4 EA, TYP	(3) GRAY (1) BLACK
BUILDING ENTRANCE	24" MINIMUM COVER	4", TYP	2 EA, TYP	ANY

**NOTES:**

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION SEC. 301.
2. BASE COURSE:
 - A. THE THICKNESS MUST CONFORM TO COC DETAIL C-240.
 - B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
 - A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
 - B. AREAS OF VISIBLE MIXTURE SEGREGATION MUST BE MILLED TO A DEPTH OF 2" AND OVERLAID A MINIMUM OF THE LANE WIDTH.
 - C. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
 - D. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE TRMSS PER SECTION 718. APPLICATION PER PAVING CONSTRUCTION NOTE.
4. SIDEWALK WIDTH MAY BE MODIFIED TO 4' MIN PROVIDED THAT, PER ADA, A 5' BY 5' PASSING AREA IS PROVIDED EVERY 200'.
5. 0.2% MINIMUM LONGITUDINAL GRADE ALLOWED.

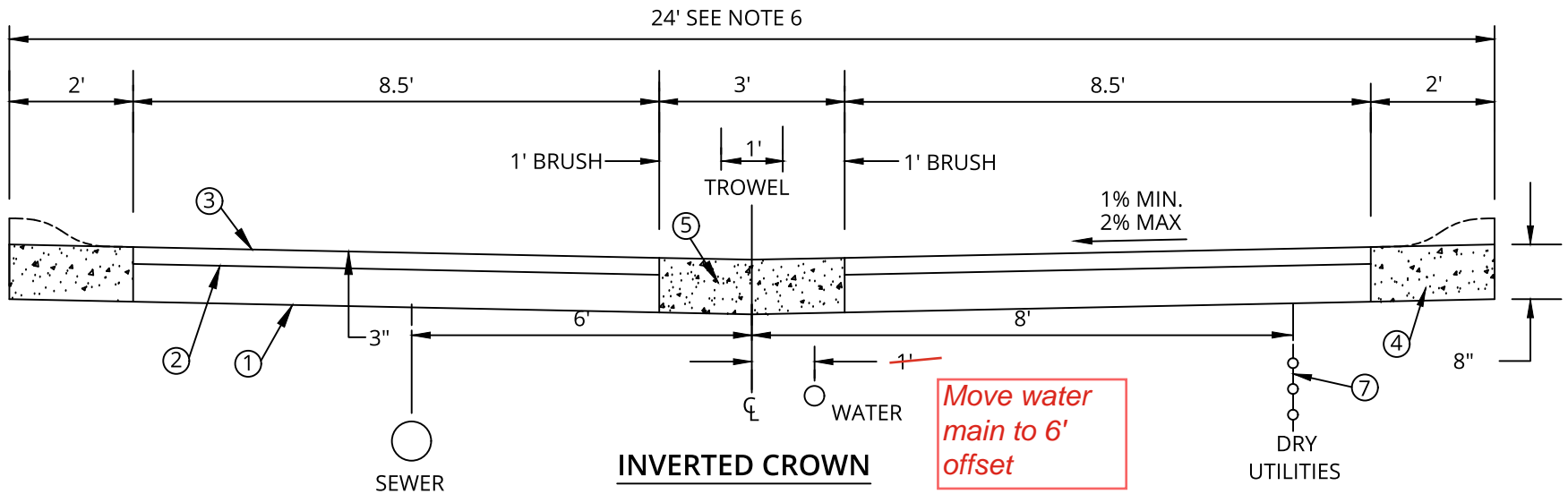
DETAIL NO.
C-208



**INDUSTRIAL COLLECTOR STREET
TYPICAL CROSS SECTION**

APPROVED:
01-16-2023

DETAIL NO.
C-208



NOTES:

1. THE SUBGRADE MUST BE PREPARED IN ACCORDANCE WITH MAG SECTION 301.
2. BASE COURSE:
 - A. THE THICKNESS MUST CONFORM TO COC STD. DTL. C-242.
 - B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO MAG SECTIONS 310 AND 702.
3. ASPHALTIC CONCRETE PAVEMENT:
 - A. 3" THICK 1/2" EVAC MIX AC PAVEMENT. SEE APPROVED PRODUCTS LIST FOR APPROVED EVAC MIXES.
 - B. ALL CONSTRUCTION AND MATERIALS MUST CONFORM TO EVAC AND MAG SECTIONS 321 AND 710.
 - C. PRESERVATIVE SEAL COAT CONFORMING TO MAG SECTION 334 AND MUST BE AN ASPHALT EMULSION SURFACE SEALER PER SECTION 718.3. APPLICATION PER PAVING CONSTRUCTION NOTE. 220-1
4. CONCRETE RIBBON CURB PER MAG DTL. 220-1 (TYPE B) OR ROLL CURB PER MAG DETAIL ~~200-1~~ (TYPE C). CONCRETE MUST BE CLASS "B" PER MAG SECTION 725 AND INSTALLED PER MAG SECTION 505.
5. VALLEY GUTTER MUST BE 9" THICK CLASS "B" PER MAG SECTION 725 AND INSTALLED PER MAG SECTION 505. BRUSH / TROWEL SURFACES AS SHOWN. CROSS SLOPE GRADES NOT TO EXCEED 2%.
6. EASEMENTS REQUIRED OVER PRIVATE DRIVE:
 - A. WATER AND SEWER EASEMENT.
 - B. PUBLIC UTILITY EASEMENT.
 - C. CROSS ACCESS EASEMENT.
 - D. DRAINAGE EASEMENT.
7. ALL DRY UTILITIES WILL BE TRENCHED WITHIN THE 24' PUE.

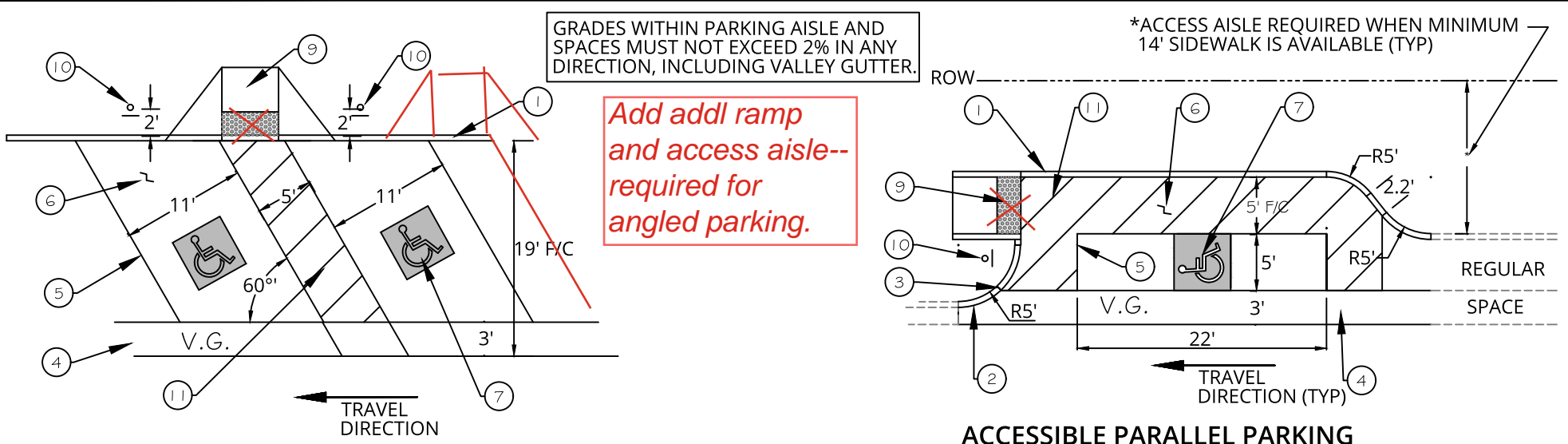
DETAIL NO.
C-214



**PRIVATE SHARED DRIVEWAY
TYPICAL CROSS SECTION & UTILITIES**

APPROVED:
01-16-2023

DETAIL NO.
C-214



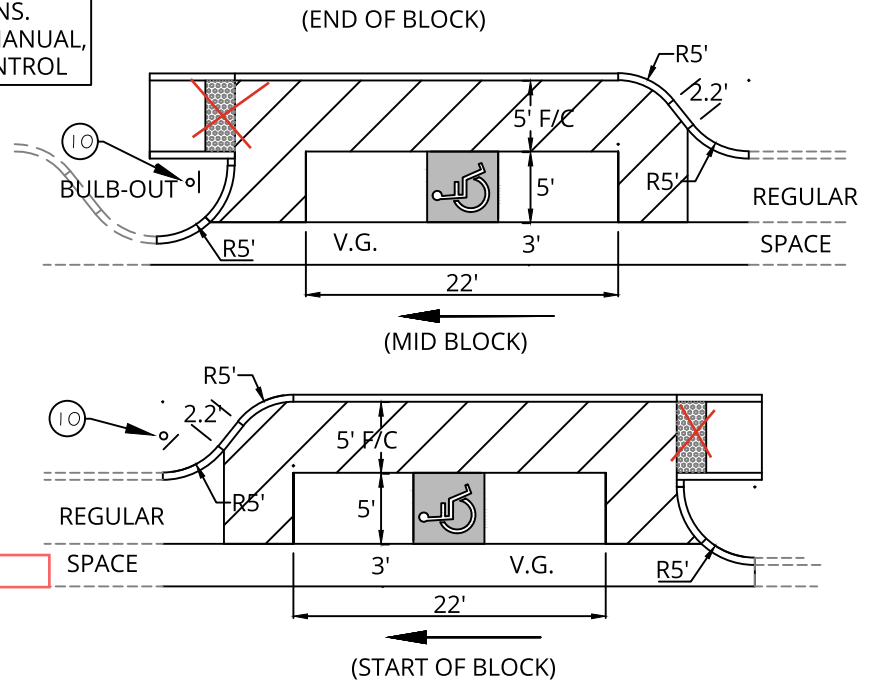
ACCESSIBLE ANGLE PARKING

REQUIRED ONLY IN SPECIFIC SITUATIONS. SEE THE ENG. & DESIGN STANDARDS MANUAL, CH. 4 STREET DESIGN AND ACCESS CONTROL

NOTES:

1. 6" SINGLE CURB PER MAG STD DTL 222, TYPE 'A'.
2. 6" VERTICAL CURB AND GUTTER PER MAG STD DTL 220-1, TYPE A.
3. TRANSITION POINT FROM SINGLE CURB TO VERTICAL CURB AND GUTTER.
4. VALLEY GUTTER MUST BE CLASS "B" PER MAG SEC 725 AND INSTALLED PER MAG SEC 505. BRUSH AND TROWEL PER C-215.
5. 4" SOLID WHITE LINE. MARKING IN CONCRETE GUTTER NOT NECESSARY.
6. SEE ON-STREET PARKING TYPICAL CROSS SECTION, C-215, FOR FURTHER REQUIREMENTS.
7. ACCESSIBLE PARKING SYMBOL PER C-612. DO NOT MARK IN CONCRETE VALLEY GUTTER.
8. IN-LINE RAMP PER C-257. COMPLY WITH RAMP GRADES AND LANDING REQUIREMENTS. **DETECTABLE WARNING SYTEM NOT REQUIRED.**
9. PERPENDICULAR RAMP PER C-258, PG 1. COMPLY WITH RAMP GRADES AND LANDING REQUIREMENTS. **DETECTABLE WARNING SYTEM NOT REQUIRED.**
10. ACCESSIBLE PARKING SIGN PER C-611.
11. 5' WIDE ACCESS AISLE MARKED WITH 4" SOLID WHITE LINES, 3' ON CENTER.

ACCESSIBLE PARALLEL PARKING



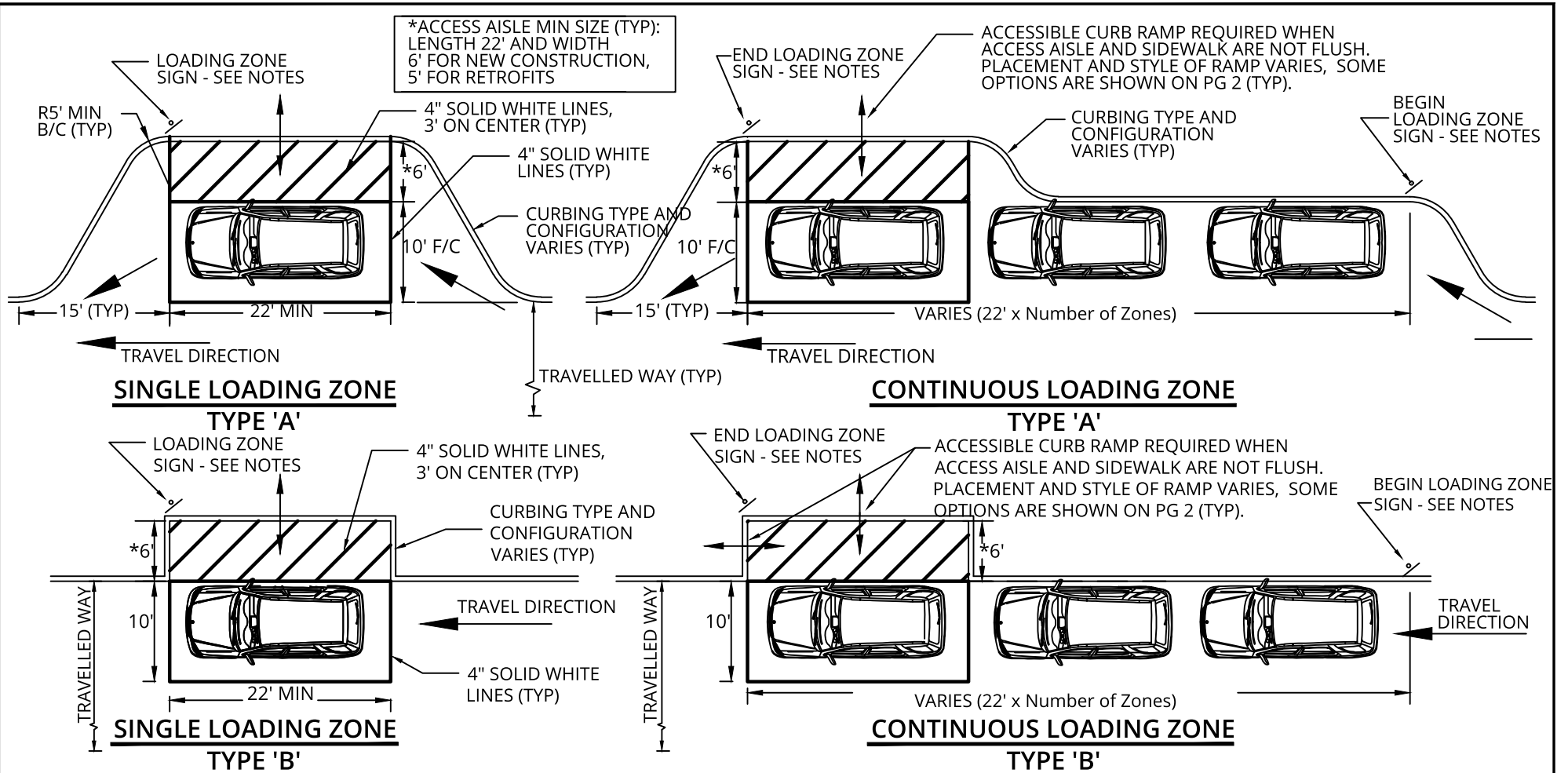
DETAIL NO.
C-260-2



**ON-STREET PARKING
ACCESSIBLE SPACES**

APPROVED:
01-09-2020

DETAIL NO.
C-260-2



NOTES:

1. SEE THE ENG. & DESIGN STANDARDS MANUAL, CH. 4 STREET DESIGN AND ACCESS CONTROL, FOR GUIDELINES ON USE OF THIS DETAIL.
2. ACCESS AISLE MUST ADJOIN AN ACCESSIBLE ROUTE AND MUST NOT OVERLAP TRAVELLED WAY.
3. FOR MULTIPLE AND CONTINUOUS LOADING ZONES, ONE ACCESSIBLE LOADING ZONE MUST BE PROVIDED EVERY 100 FT.
4. LOADING ZONE SIGN MUST BE PER DETAIL A ON PAGE 2. FOR MULTIPLE LOADING ZONES, SIGN MUST BE PROVIDED AT BEGINNING AND ENDING WITH ADDITIONAL ARROW SIGN. BOTTOM OF SIGN MUST BE MOUNTED 7' ABOVE FINISH GRADE.
5. ~~CURB RAMPS INSTALLED IN PUBLIC RIGHTS-OF-WAY REQUIRE DETECTABLE WARNING SYSTEM PER CITY APPROVED PRODUCTS LIST.~~

CURB RAMPS SERVING PASSENGER LOADING ZONES DO NOT REQUIRE DETECTABLE WARNING.

DETAIL NO. C-261-1		PASSENGER LOADING ZONES FOR AUTONOMOUS VEHICLES AND RIDE SHARING	APPROVED: 05-10-2018	DETAIL NO. C-261-1
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CAUTION: BEFORE SERVICES ARE INSTALLED, DRIVEWAY LOCATIONS SHOULD BE VERIFIED AND THE SERVICES CONSTRUCTED TO AVOID CONFLICTS.

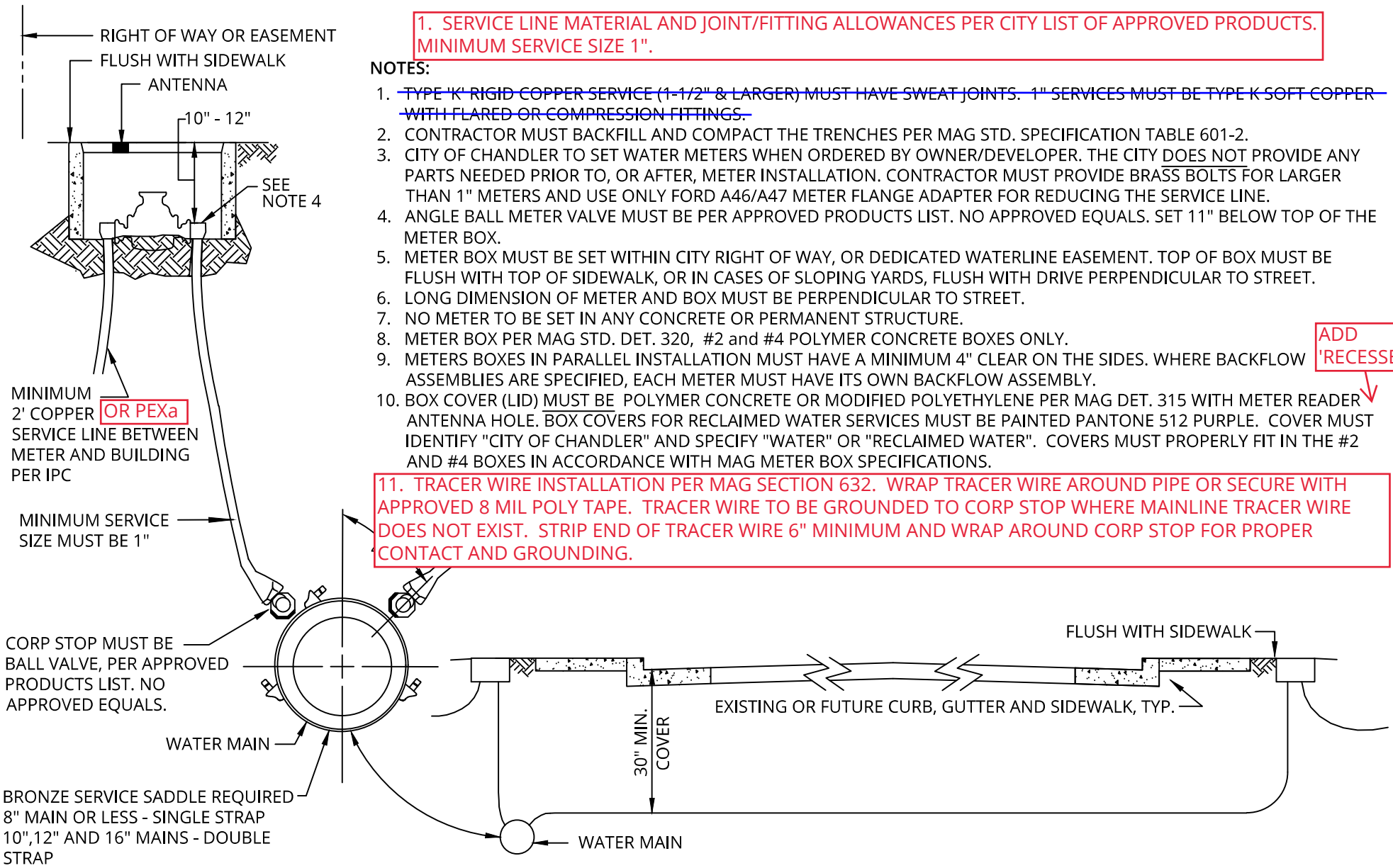
1. SERVICE LINE MATERIAL AND JOINT/FITTING ALLOWANCES PER CITY LIST OF APPROVED PRODUCTS. MINIMUM SERVICE SIZE 1".

NOTES:

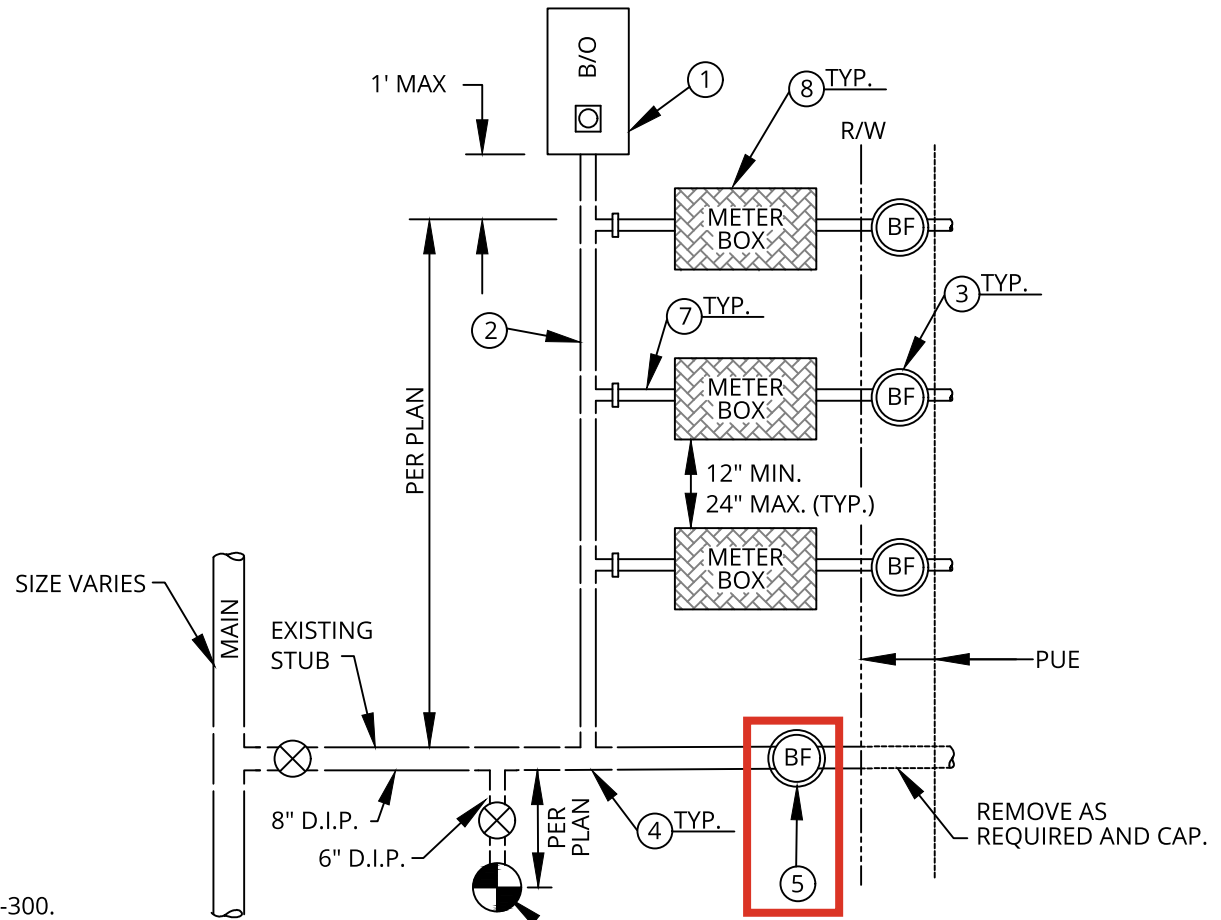
1. ~~TYPE 'K' RIGID COPPER SERVICE (1-1/2" & LARGER) MUST HAVE SWEAT JOINTS. 1" SERVICES MUST BE TYPE K SOFT COPPER WITH FLARED OR COMPRESSION FITTINGS.~~
2. CONTRACTOR MUST BACKFILL AND COMPACT THE TRENCHES PER MAG STD. SPECIFICATION TABLE 601-2.
3. CITY OF CHANDLER TO SET WATER METERS WHEN ORDERED BY OWNER/DEVELOPER. THE CITY DOES NOT PROVIDE ANY PARTS NEEDED PRIOR TO, OR AFTER, METER INSTALLATION. CONTRACTOR MUST PROVIDE BRASS BOLTS FOR LARGER THAN 1" METERS AND USE ONLY FORD A46/A47 METER FLANGE ADAPTER FOR REDUCING THE SERVICE LINE.
4. ANGLE BALL METER VALVE MUST BE PER APPROVED PRODUCTS LIST. NO APPROVED EQUALS. SET 11" BELOW TOP OF THE METER BOX.
5. METER BOX MUST BE SET WITHIN CITY RIGHT OF WAY, OR DEDICATED WATERLINE EASEMENT. TOP OF BOX MUST BE FLUSH WITH TOP OF SIDEWALK, OR IN CASES OF SLOPING YARDS, FLUSH WITH DRIVE PERPENDICULAR TO STREET.
6. LONG DIMENSION OF METER AND BOX MUST BE PERPENDICULAR TO STREET.
7. NO METER TO BE SET IN ANY CONCRETE OR PERMANENT STRUCTURE.
8. METER BOX PER MAG STD. DET. 320, #2 and #4 POLYMER CONCRETE BOXES ONLY.
9. METERS BOXES IN PARALLEL INSTALLATION MUST HAVE A MINIMUM 4" CLEAR ON THE SIDES. WHERE BACKFLOW ASSEMBLIES ARE SPECIFIED, EACH METER MUST HAVE ITS OWN BACKFLOW ASSEMBLY.
10. BOX COVER (LID) MUST BE POLYMER CONCRETE OR MODIFIED POLYETHYLENE PER MAG DET. 315 WITH METER READER ANTENNA HOLE. BOX COVERS FOR RECLAIMED WATER SERVICES MUST BE PAINTED PANTONE 512 PURPLE. COVER MUST IDENTIFY "CITY OF CHANDLER" AND SPECIFY "WATER" OR "RECLAIMED WATER". COVERS MUST PROPERLY FIT IN THE #2 AND #4 BOXES IN ACCORDANCE WITH MAG METER BOX SPECIFICATIONS.

ADD 'RECESSED'

11. TRACER WIRE INSTALLATION PER MAG SECTION 632. WRAP TRACER WIRE AROUND PIPE OR SECURE WITH APPROVED 8 MIL POLY TAPE. TRACER WIRE TO BE GROUNDED TO CORP STOP WHERE MAINLINE TRACER WIRE DOES NOT EXIST. STRIP END OF TRACER WIRE 6" MINIMUM AND WRAP AROUND CORP STOP FOR PROPER CONTACT AND GROUNDING.



DETAIL NO. C-301-1		WATER SERVICE INSTALLATION	APPROVED: 01-16-2023	DETAIL NO. C-301-1
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NOTES:

1. FLUSHING PIPE ASSEMBLY WITH BALL PER C-300.
2. MIN. 6" D.I.P.
3. BACKFLOW PREVENTION PER PLAN, INSTALLED INLINE AND WITHIN 6" OF METER BOX, IMMEDIATELY DOWNSTREAM OF THE LINESSETTER.
4. FITTINGS PER PLAN. FLANGED FITTINGS ONLY.
5. FD DOUBLE CHECK DETECTOR AS NEEDED PER PLAN.
6. FIRE HYDRANT AS NEEDED PER PLAN.
7. TAPPING: USE C-301 FOR 2" AND SMALLER OR C-316 FOR LARGER THAN 2"
8. ALL C-301-1 NOTES APPLY.

Move BF to outside of R/W

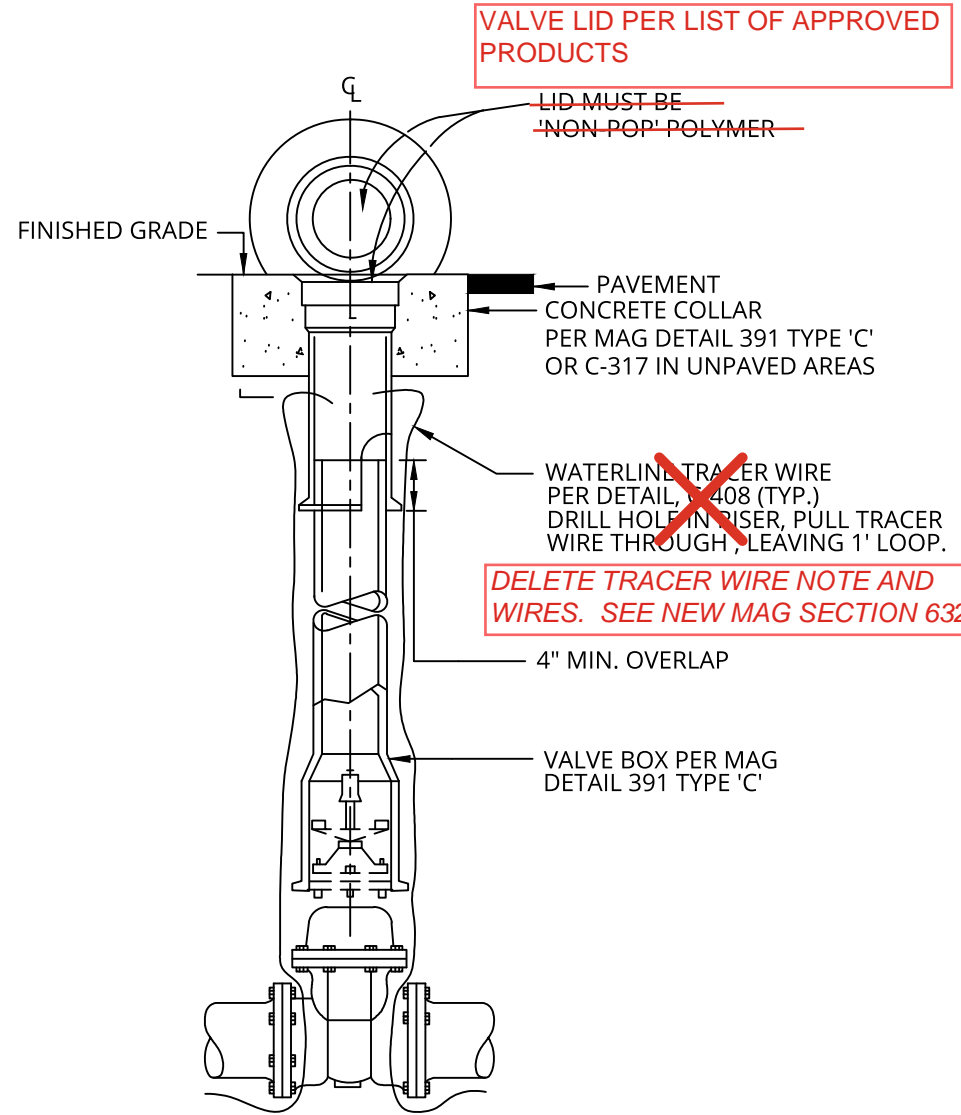
DETAIL NO.
C-301-2



**MULTI-METER
WATER SERVICE INSTALLATION**

APPROVED:
03-14-2013

DETAIL NO.
C-301-2



NOTES:

- 1. IN UNPAVED AREAS, CONCRETE COLLAR MUST CONFORM TO COC DETAIL C-317.
- 2. BACKFILL MUST BE 1/2 SACK CLSM. PER MAG. SPECIFICATION ~~718~~. **728**
- 3. VALVE BOXES MUST NOT BE INSTALLED WITHIN CONCRETE GUTTER, SIDEWALK, RAMPS OR VALLEY GUTTER.

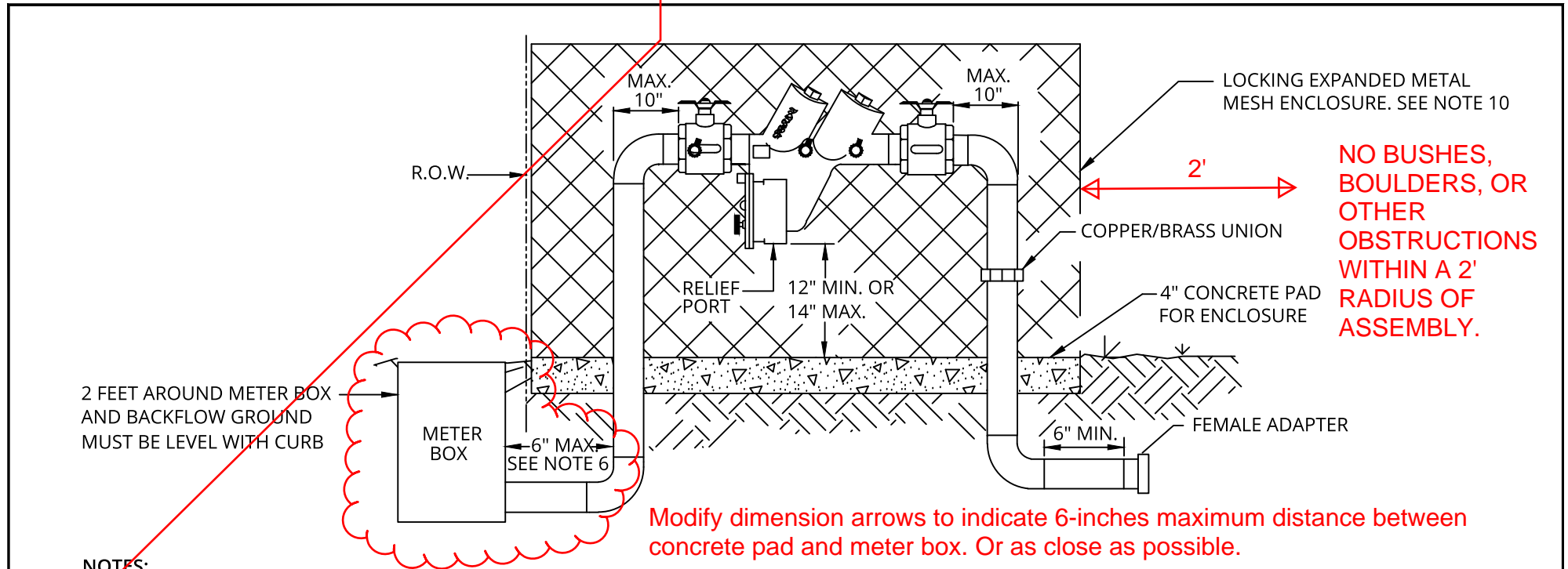
DETAIL NO.
C-307



**VALVE BOX INSTALLATION
(POTABLE WATER)**

APPROVED:
07-09-2015

DETAIL NO.
C-307



NOTES:

1. ASSEMBLY MUST BE APPROVED BY UNIVERSITY OF SOUTHERN CALIFORNIA (USC) FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. LIST OF APPROVED ASSEMBLIES ON FILE AT CIVIL ENGINEERING.
2. SHUTOFF VALVES MUST BE RESILIENT BALL TYPE WITH REMOVABLE HANDLES.
3. ALL PIPE AND FITTINGS MUST BE TYPE 'K' RIGID COPPER. ~~COMPRESSION FITTINGS ARE NOT ALLOWED.~~
4. TEST COCKS MUST BE FITTED WITH BRASS PLUGS INSTALLED WITH TEFLON TAPE.
5. NO TAPS ~~MUST BE~~ ALLOWED BETWEEN THE METER AND THE BACKFLOW PREVENTION ASSEMBLY.
6. INSTALL BACKFLOW PREVENTION ASSEMBLY INLINE AND ~~WITHIN 6 INCHES OF THE METER BOX,~~ IMMEDIATELY DOWNSTREAM OF THE ~~LINESETTER.~~
7. THE COPPER/BRASS UNION MAY NOT BE REQUIRED IF THE ASSEMBLY INCORPORATES THE UNION.
8. INSTALL BACKFLOW PREVENTION ASSEMBLY WITH RELIEF PORT FACING TOWARD THE GROUND.
9. BACKFLOW PREVENTION INSTALLATION MUST BE LEVEL, AND INSTALLED A MINIMUM OF 12 INCHES AND A MAXIMUM OF 14 INCHES FROM RELIEF PORT TO FINAL GRADE.
10. LOCKING ENCLOSURE MUST BE GUARD SHACK OR EQUIVALENT, PAINTED 'DESERT TAN' WITH TNEC EDUROSHIELD PER MFG'S INSTRUCTIONS. MINIMUM 12 MILS DFT. **DO NOT PAINT OVER ANY IDENTIFYING MARKERS OR PLACARDS.**
11. BACKFLOW PREVENTION ASSEMBLY MUST HAVE AT LEAST THE SAME CROSS-SECTIONAL AREA AS THE WATER METER BUT NO MORE THAN ONE SIZE LARGER THAN THE METER.

CITY WATER METER

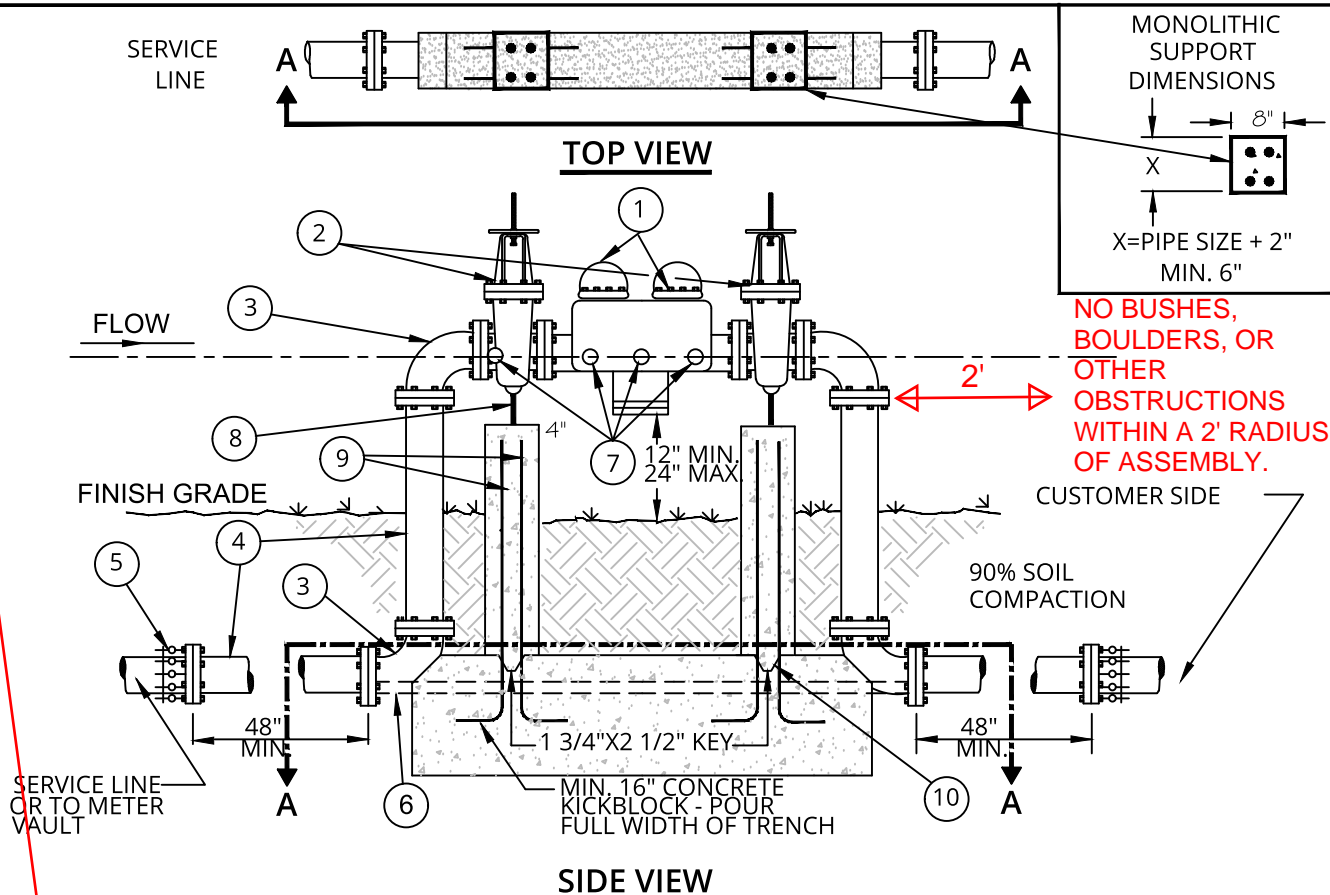
DETAIL NO.
C-311



**REDUCED PRESSURE-PRINCIPLE
 BACKFLOW PREVENTION ASSEMBLY
 INSTALLATION - 3" AND UNDER**

APPROVED:
03-14-2013

DETAIL NO.
C-311



○ LIST OF MATERIALS

- PRINCIPLE**
- APPROVED REDUCED PRESSURE ~~PRINCIPLE~~ BACKFLOW PREVENTION ASSEMBLY.
 - O.S.&Y. GATE VALVE, N.R.S. GATE VALVE, IF PREFERRED.
 - 90° ELL. (FLANGED D.I.P.)
 - PIPE SPOOL (FLANGED D.I.P.)
 - FLANGED ADAPTER (WHEN REQUIRED).
 - 3/4" ZINC COATED THREADED ROD, BOLTED TO FLANGES AS SHOWN, BOTH SIDES TYPICAL EQUAL TENSION.
 - TEST COCKS (4 REQUIRED WITH BRASS PLUGS USING ONLY TEFLON TAPE.)
 - ADJUSTABLE PIPE SUPPORT MUST BE PERMANENTLY ATTACHED TO BASE, 6" MAXIMUM HEIGHT.
 - #6 REINFORCING STEEL, DEFORMED BAR, 4" APART, EVENLY SPACED.
 - CONSTRUCTION JOINT KEY TO BE 1 3/4" X 2 1/2".

NO BUSHES, BOULDERS, OR OTHER OBSTRUCTIONS WITHIN A 2' RADIUS OF ASSEMBLY.

Add to Note 3: DO NOT PAINT THE NAME PLATE OR ANY BRASS OR STAINLESS STEEL PARTS ON THE ASSEMBLY.

NOTES:

- LIST OF LATEST APPROVED ASSEMBLIES ON FILE AT ENGINEERING. COPIES AVAILABLE.
- ASSEMBLY MUST BE AS APPROVED BY UNIVERSITY OF SOUTHERN CALIFORNIA (USC) FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
- ABOVE GROUND PORTION OF ASSEMBLY TO BE PAINTED LIGHT TAN OR EQUIVALENT BACKGROUND COLOR.
- WHEN UTILIZED FOR RECLAIMED WATER, THE WORDS 'RECLAIMED WATER' MUST BE STENCILED ON THE ASSEMBLY USING THE COLOR 'SAFETY PURPLE'.
- BACKFLOW PREVENTION ASSEMBLY MUST BE LOCATED ON PRIVATE PROPERTY AND AS CLOSE AS PRACTICABLE TO THE POTABLE WATER METER.
- BACKFLOW PREVENTION ASSEMBLY MUST HAVE AT LEAST THE SAME CROSS-SECTIONAL AREA AS THE METER BUT NO MORE THAN ONE SIZE LARGER THAN THE METER.

SCREENING METHOD

- SCREEN WALLS, PLANT MATERIAL, BERING AND/OR BUILDING ORIENTATION MUST BE SUBMITTED TO DEVELOPMENT SERVICES FOR REVIEW AND APPROVAL PRIOR TO START OF CONSTRUCTION.

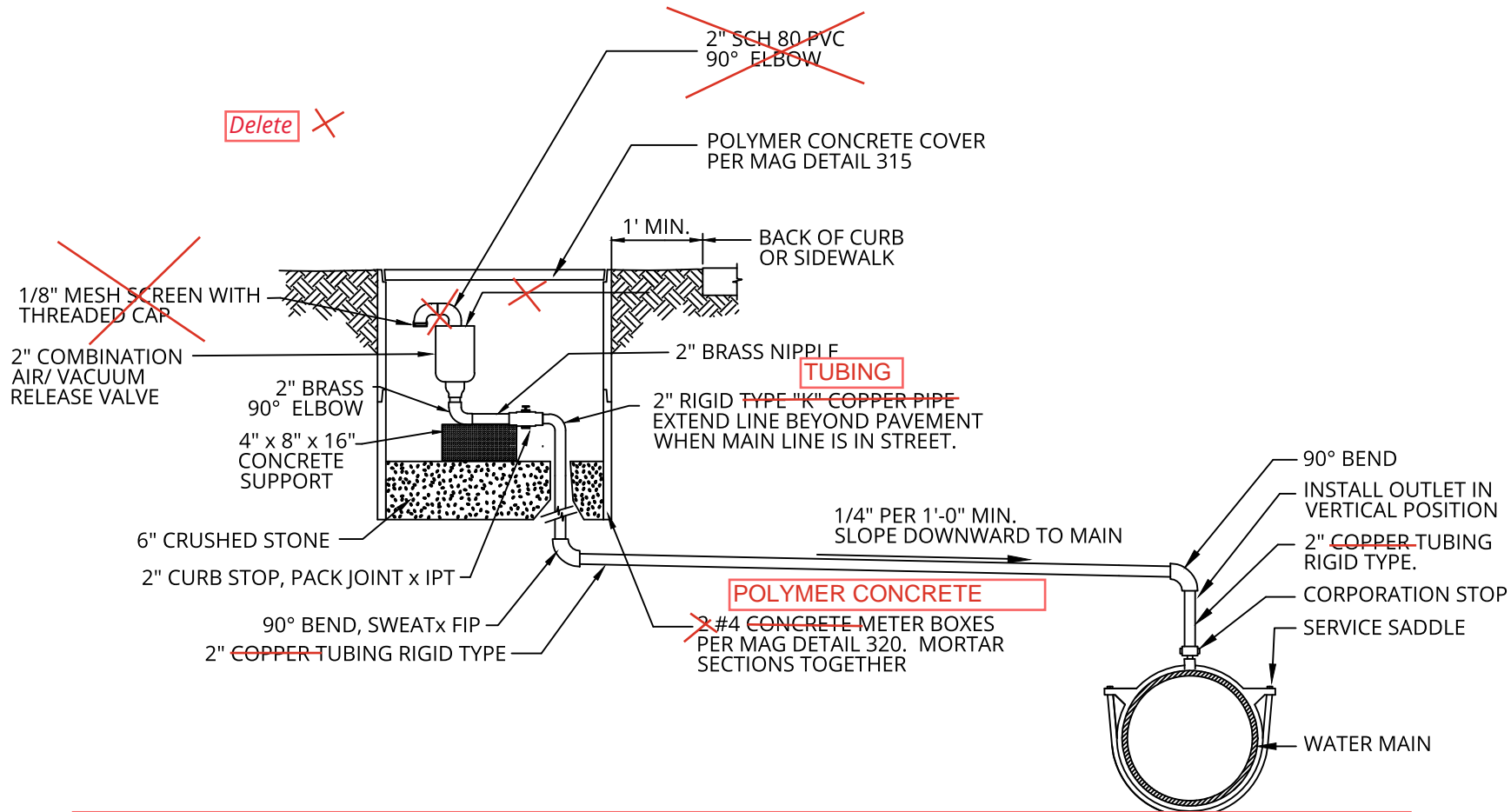
DETAIL NO.
C-315



**REDUCED PRESSURE PRINCIPLE
 BACKFLOW PREVENTION ASSEMBLY
 INSTALLATION - 4" AND LARGER**

APPROVED:
01-14-2016

DETAIL NO.
C-315



NOTES:

1. 2" RIGID SERVICE LINE. SEE CITY LIST OF APPROVED PRODUCTS FOR MATERIAL AND JOINT/FITTING ALLOWANCES.

1. THE ARV VAULT MUST BE LOCATED AS NEAR TO THE MAIN AS POSSIBLE. IN UNIMPROVED AREAS, PLACEMENT OF THE ARV VAULT MUST BE 10' FROM THE EDGE OF PAVEMENT.
2. FOR RECLAIMED WATER APPLICATIONS, THE PIPE MUST BE PAINTED PURPLE (PANTONE 512). POTABLE WATER MUST BE PAINTED BLUE.
3. AIR RELEASE/VACUUM VALVE MUST BE PER CITY LIST OF APPROVED PRODUCTS.
4. TO BE USED ONLY ON 16" AND SMALLER WATER MAINS.
5. MUST NOT BE PLACED IN LOW AREAS WHERE WATER MAY COLLECT.

Renumber

DETAIL NO.
C-319



**2" COMBINATION AIR/VACUUM
VALVE ASSEMBLY**

APPROVED:
01-09-2020

DETAIL NO.
C-319

TYPE "A"
CAST-IRON

TYPE "B"
**CORROSION-PROTECTIVE
COMPOSITE**

~~HINGED FRAME AND
COVERS MUST BE
ADJUSTED SO THAT
COVER OPENS AS
SHOWN BELOW.~~

~~VEHICLE
TRAVEL~~

~~PADDLE LOCK HOLE~~

~~TOP ARCH RAISED
CUSTOM MARKING~~

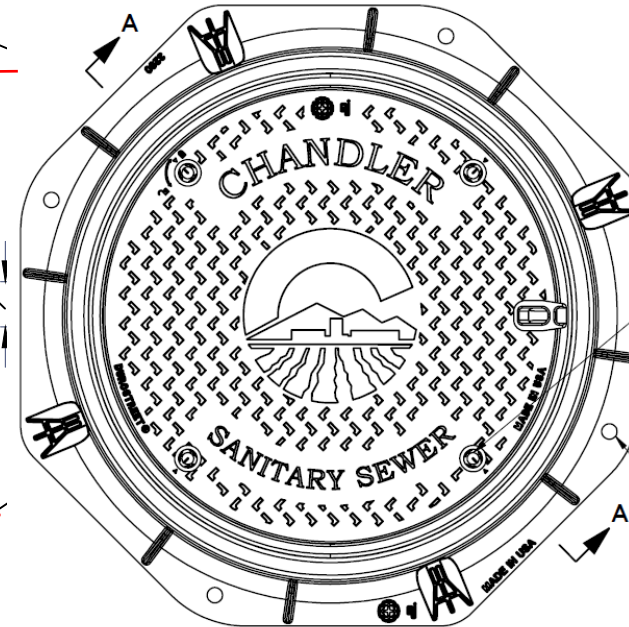
~~CONCEALED
PICK HOLE~~

~~AASHTO M-306
DESIGNATION~~

1/4 TURN LATCH with TwistLIFT® BOLT

1" DRILL DIMPLE ON
A 40" B.C.

CAST 1" DIA. HOLE



NOTES:

1. FRAME AND COVER MUST CONFORM TO MAG DETAIL 423 & 424 FOR TYPE 'A' OR CITY LIST OF APPROVED PRODUCTS FOR TYPE 'B' .
2. DELETE BEADS ON MAG DETAIL WHICH CONFLICT WITH LOGO SHOWN.
3. LETTERING ON MANHOLE COVER MUST CONTAIN UTILITY FOR WHICH MANHOLE IS NEEDED, ("CHANDLER SANITARY SEWER" OR, "CHANDLER STORM SEWER"), OR AS DIRECTED.
4. THE TOTAL WIDTH OF INDIVIDUAL LETTERS MUST BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND MUST BE BALANCED TO FORM A COMPLETE CIRCLE WITH SPACES BEFORE AND AFTER THE WORD.
5. LETTERS MUST BE 1 1/2" MIN IN HEIGHT AND RAISED 1/8" ABOVE LEVEL OF COVER.
6. TYPE OF LETTERS MUST BE SUBMITTED FOR APPROVAL.

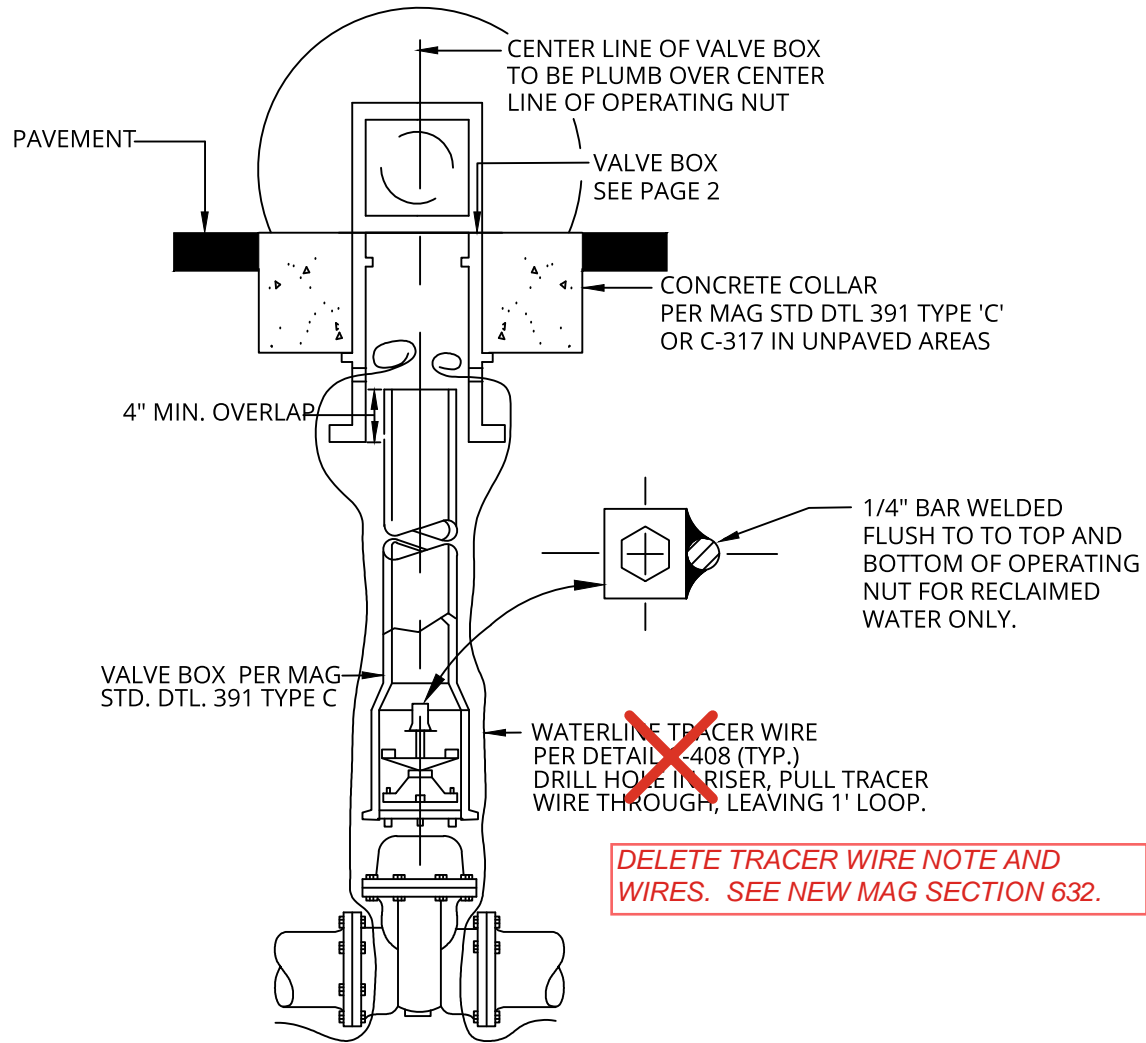
DETAIL NO.
C-400



MANHOLE FRAME AND COVER TYPES

APPROVED:
01-09-2020

DETAIL NO.
C-400



NOTES:

1. IN UNPAVED AREAS, CONCRETE COLLAR MUST CONFORM TO COC DETAIL C-317.
2. BACKFILL MUST BE 1/2 SACK CLSM. PER MAG SPECIFICATION ~~718~~ 728
3. VALVE BOXES MUST NOT BE INSTALLED WITHIN CONCRETE GUTTER, SIDEWALK, RAMPS OR VALLEY GUTTER.

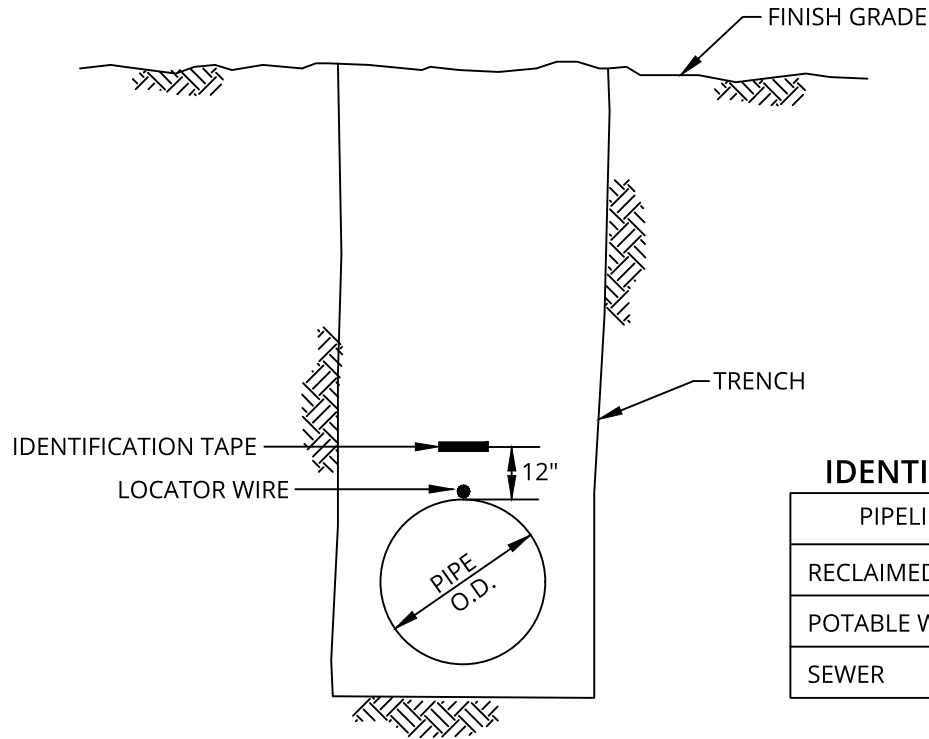
DETAIL NO.
C-406-1



**VALVE BOX INSTALLATION
(RECLAIMED WATER)**

APPROVED:
07-09-2015

DETAIL NO.
C-406-1



IDENTIFICATION TAPE & WIRE COLOR AND MARKING SCHEDULE

PIPELINE USE	COLOR	PRINTED MESSAGE
RECLAIMED WATER	MAG SPEC SEC 616.4	MAG SPEC SEC 616.4
POTABLE WATER	SOLID COLUMBIA BLUE	CAUTION POTABLE WATER LINE
SEWER	GREEN	CAUTION: SANITARY SEWER

NOTES:

1. I.D TAPE AND LOCATOR WIRE MUST BE INSTALLED ON PUBLIC DISTRIBUTION AND COLLECTION MAINS FOR ALL PIPE MATERIALS AND SIZES 4" AND LARGER.
2. I.D.TAPE AND MARKINGS MUST BE PER MAG SPECIFICATION 616.4 EXCEPT AS MODIFIED HEREON.
3. LOCATOR WIRE MUST BE AWG #14 THWN COPPER WIRE, TAPE TO PIPE EVERY 8-10 FEET.
4. LOCATOR WIRE MUST ORIGINATE/TERMINATE AT VALVE BOXES AND MANHOLES AND SECURED TO VALVE BOX OR MANHOLE NO MORE THAN 12" BELOW COVER.
5. LOCATOR WIRE MUST BE VERIFIED FOR ELECTRICAL CONTINUITY ALONG THE ENTIRE LENGTH.

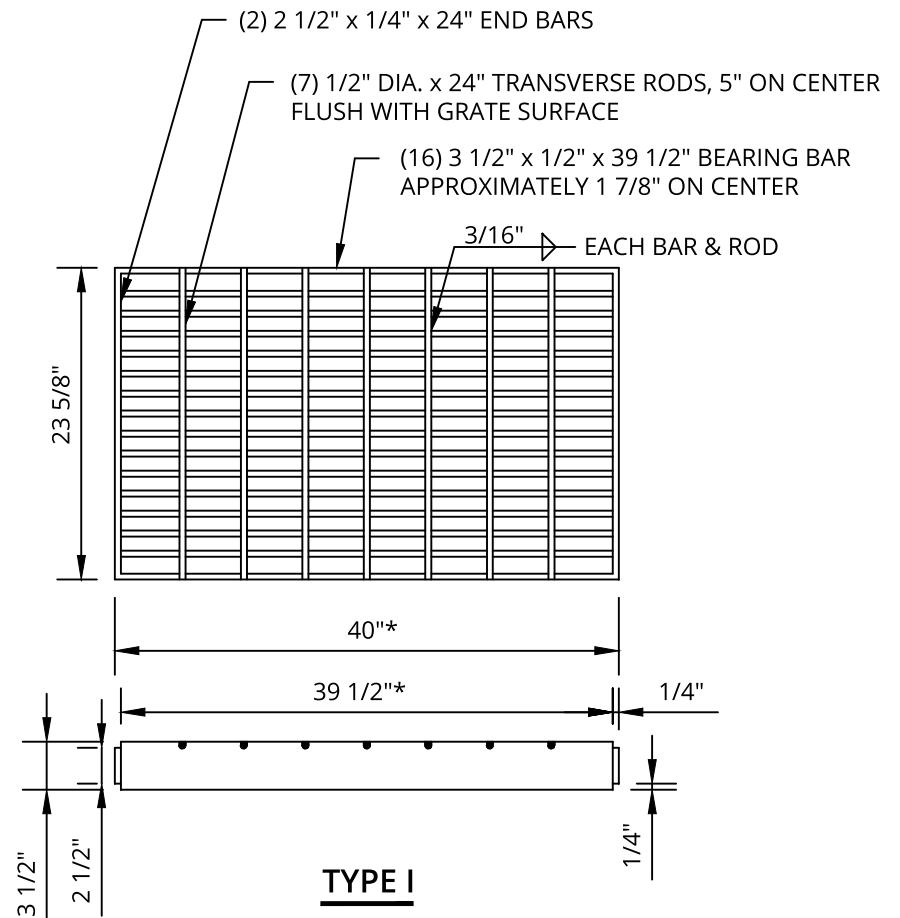
DETAIL NO.
C-408



PIPE LOCATOR WIRE & I.D. TAPE

APPROVED:
01-16-2023

DETAIL NO.
C-408



NOTES:

1. ALL STEEL MUST BE IN ACCORDANCE WITH ASTM A-36.
2. WELDING MUST BE IN ACCORDANCE WITH AWS SPECIFICATIONS.
3. FRAME AND GRATE MUST BE TESTED FOR ACCURACY OF FIT AND MUST BE MARKED IN SETS BEFORE DELIVERY.
4. THE COMPLETED ASSEMBLY MUST BE GIVEN ONE SHOP COAT OF NO.1 PAINT AND TWO FIELD COATS OF NO. 10 PAINT AS PER MAG SECTION 790.
5. THE GRATE MUST BE FABRICATED TO WITHIN 1/8" OF SPECIFIED DIMENSIONS.

* DIMENSION WILL VARY DEPENDING UPON CATCH BASIN PIPE SIZE.

DETAIL NO.
C-506

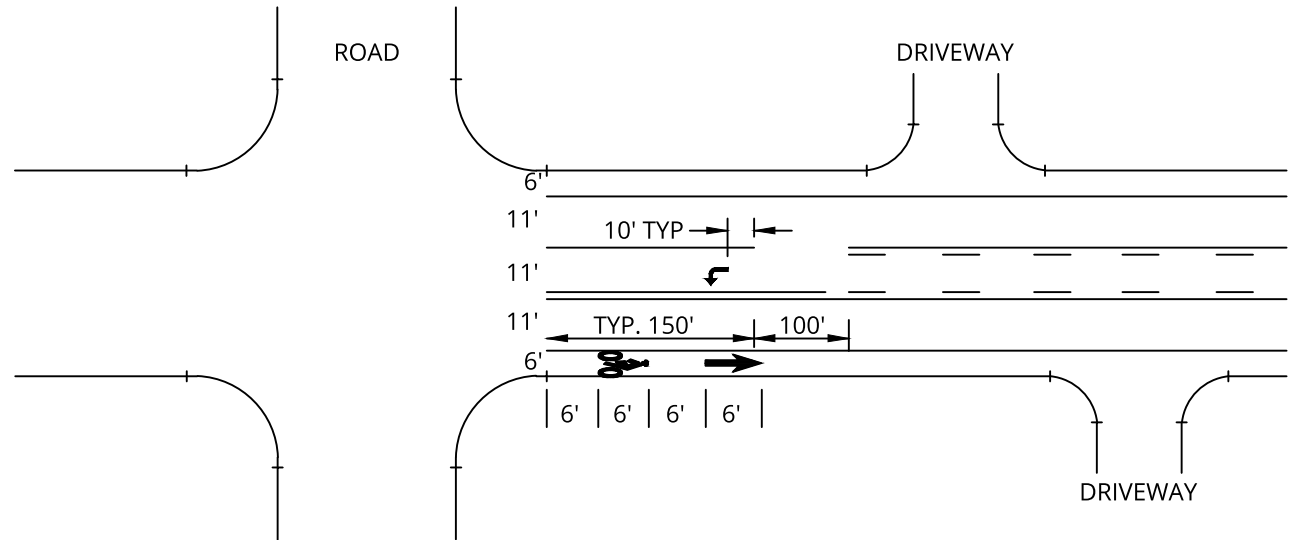
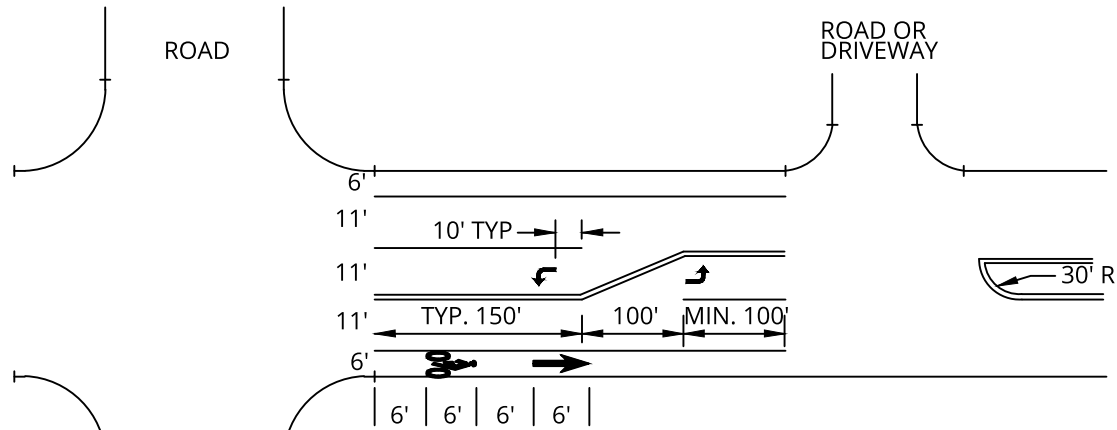


CATCH

CATHC BASIN GRATES

APPROVED:
11-19-1999

DETAIL NO.
C-506



NOTES:

1. ALL DIMENSIONS TO BACK OF CURB.
2. DO NOT INSTALL REFLECTORS ON COLLECTOR ROADS.
3. INSTALL BIKE SYMBOL AND ARROW DOWNSTREAM FROM ALL INTERSECTIONS.
4. BREAK TWO-WAY LEFT TURN PAVEMENT MARKINGS FOR INTERSECTIONS. DO NOT BREAK FOR DRIVEWAYS.

DETAIL NO.

~~C-602~~

C-624



COLLECTOR ROAD
PAVEMENT MARKINGS

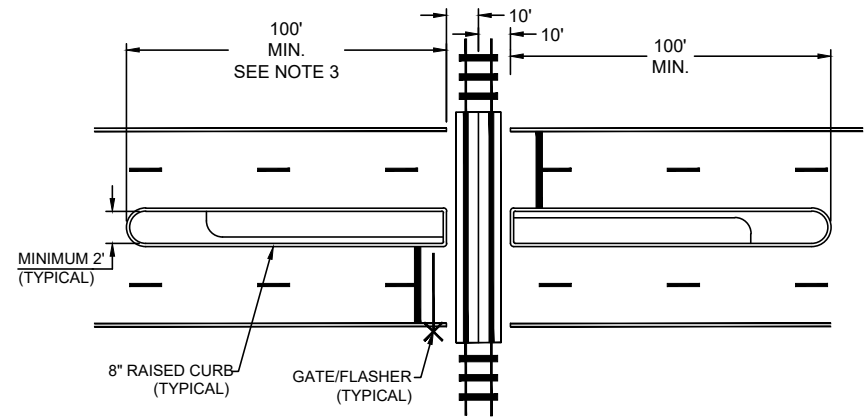
APPROVED:

01-11-2002

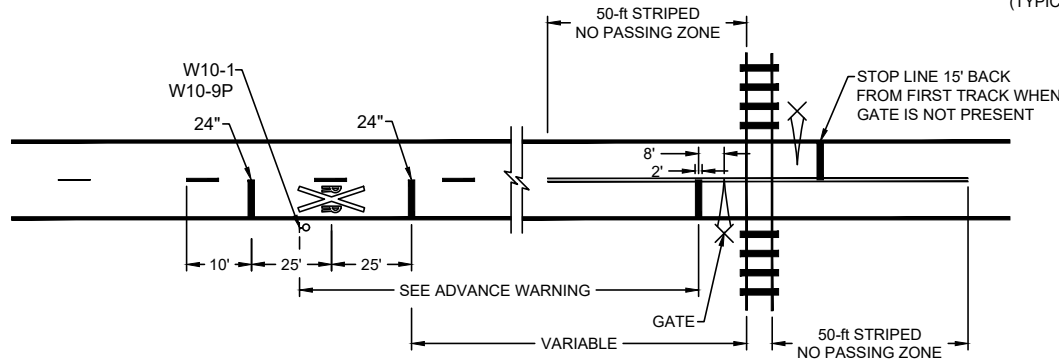
DETAIL NO.

~~C-602~~

C-624



Median Detail



NOTES:

1. ALL RAILROAD PAVEMENT MARKINGS SHALL BE ALKYD THERMOPLASTIC OR PAVEMENT MARKING TAPE UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.
2. ENTIRE INSTALLATION TO CONFORM WITH THE GUIDELINES PRESENTED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. WHEN PRESENT, RAISED MEDIANS SHALL EXTEND 100' FROM GATE ARM.

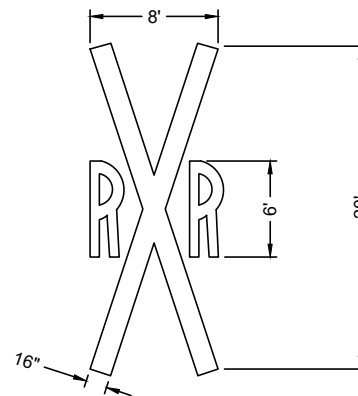
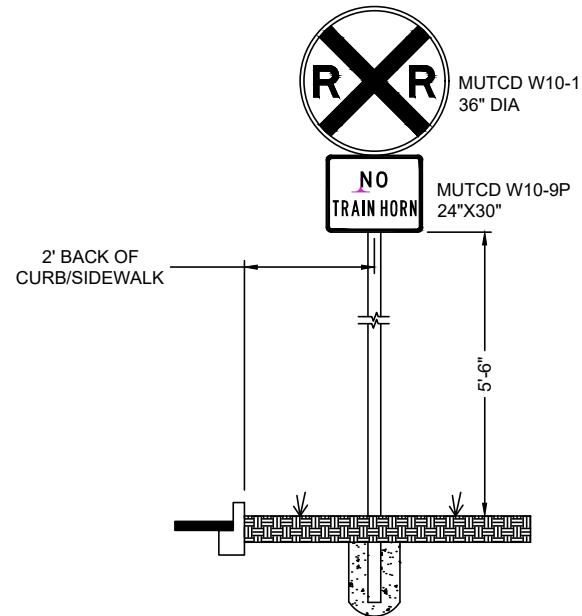


Figure X
Railroad Markings for Quiet Zone

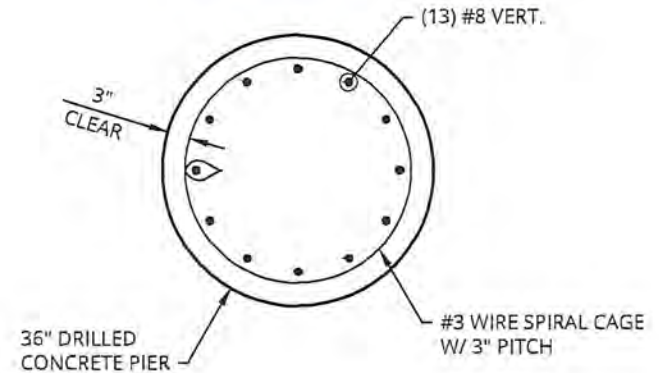
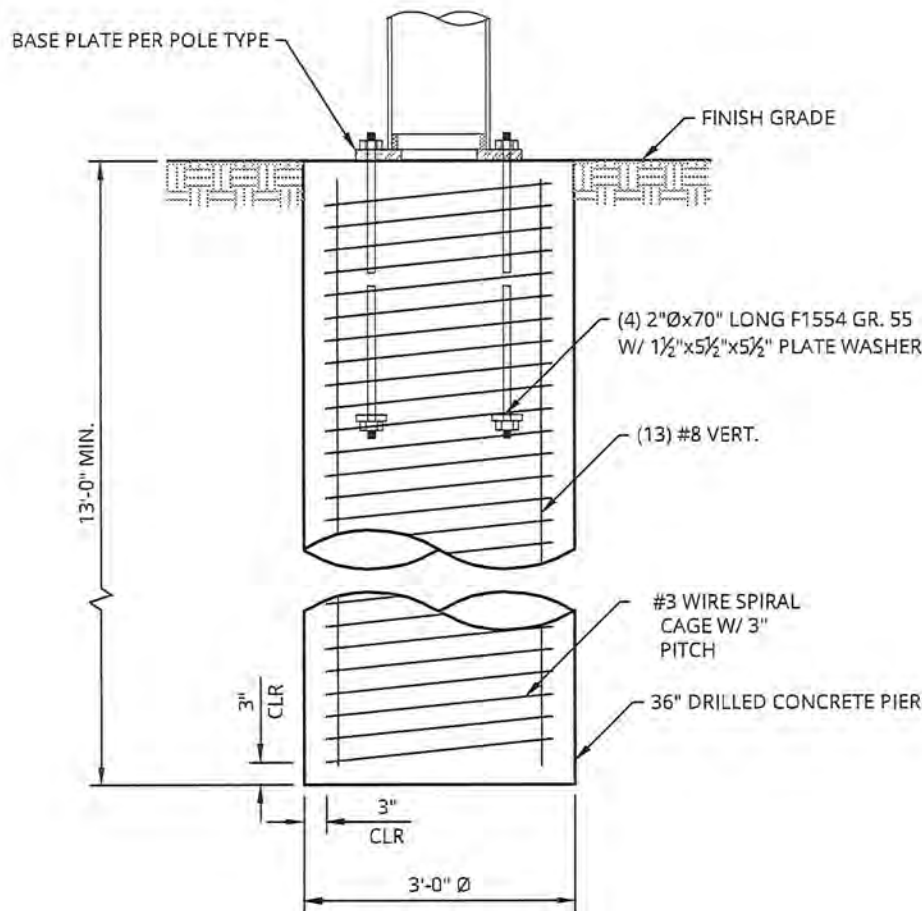
ADVANCE WARNING	
POSTED SPEED	MIN. DISTANCE
25 MPH	100'
30 MPH	100'
35 MPH	100'
40 MPH	125'
45 MPH	175'



NOTES:

1. THE FOUNDATION HOLE SHALL BE AUGURED AND 3,500 PSI CONCRETE SHALL BE POURED AGAINST UNDISTURBED COMPACTED EARTH.
2. UNSTABLE SOIL AND/OR STEEP SLOPE MAY REQUIRE A DEEPER FOUNDATION.
3. IF POLE FOUNDATION IS WITHIN OR ADJACENT TO A SIDEWALK, TOP OF THE POLE FOUNDATION SHALL BE FLUSH WITH THE ABUTTING SIDEWALK.
4. ONCE THE POLE INSTALLATION IS COMPLETE, THE OPEN SPACE BETWEEN THE BASE PLATE AND TOP OF FOUNDATIONS SHALL BE GROUTED.
5. A 25 FOOT COIL OF #4 BARE COPPER CONDUCTOR OR A 14 INCH SQUARE COPPER GROUND PLATE SHALL BE INSTALLED BEFORE CONCRETE IS POURED. THE COIL OR THE GROUND PLATE SHALL BE CONNECTED TO THE POLE GROUNDING LUG IN THE HAND HOLE. THE COIL OR GROUND PLATE SHALL BE COVERED WITH 6 INCHES OF FILL.

6. See ADOT Std DWG F-56 4.28 for additional Anchor Bolt Dimensions.



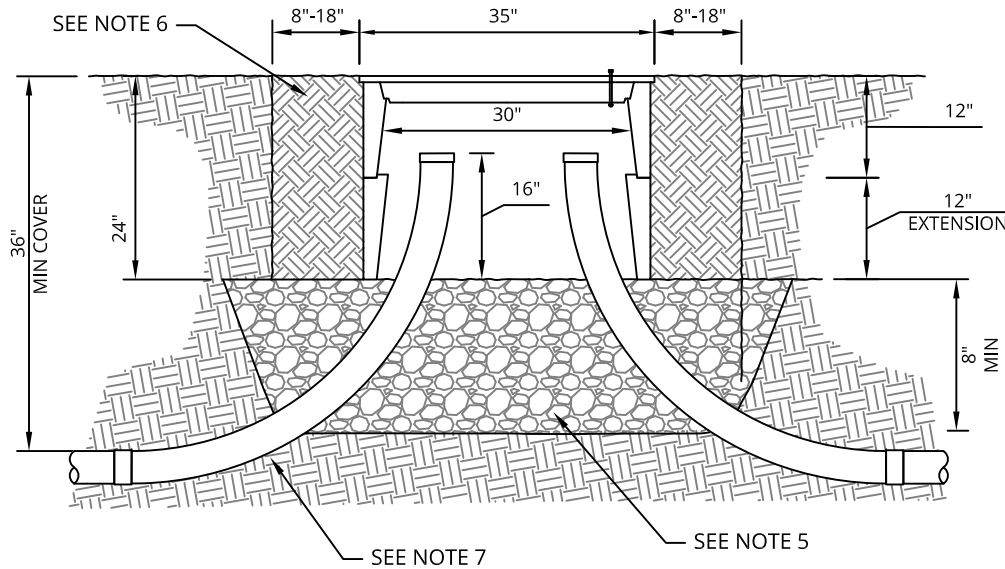
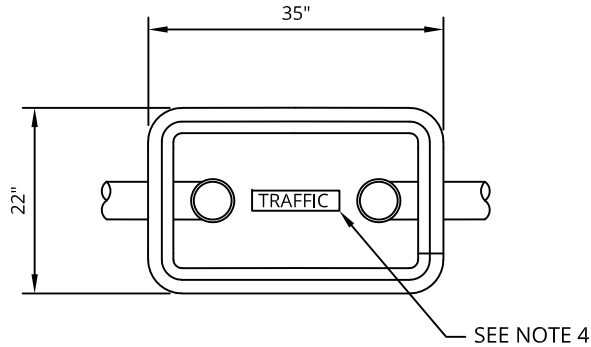
DETAIL NO.
C-718



CHANDLER POLE FOUNDATION
QC, RC, JC, JC MOD, KC, & KC MOD

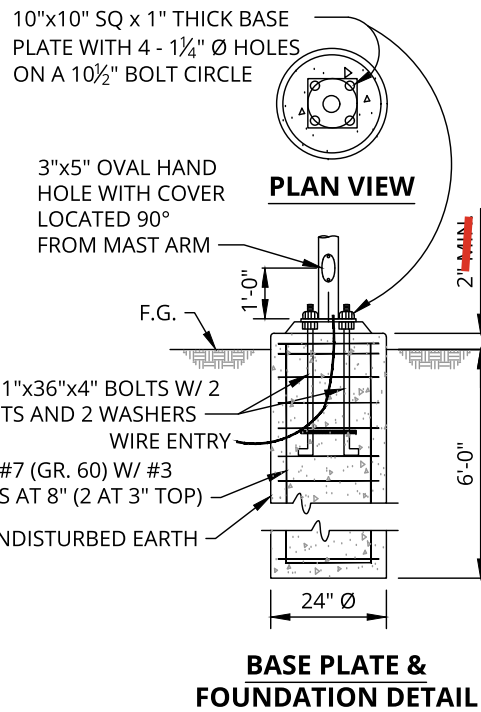
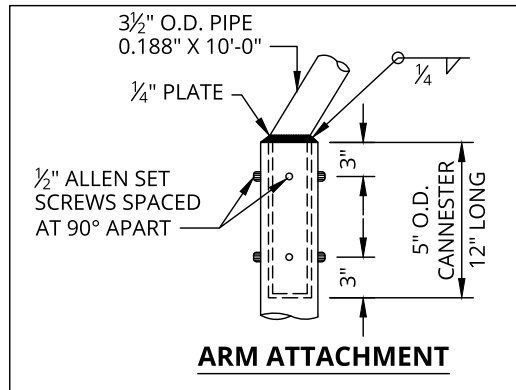
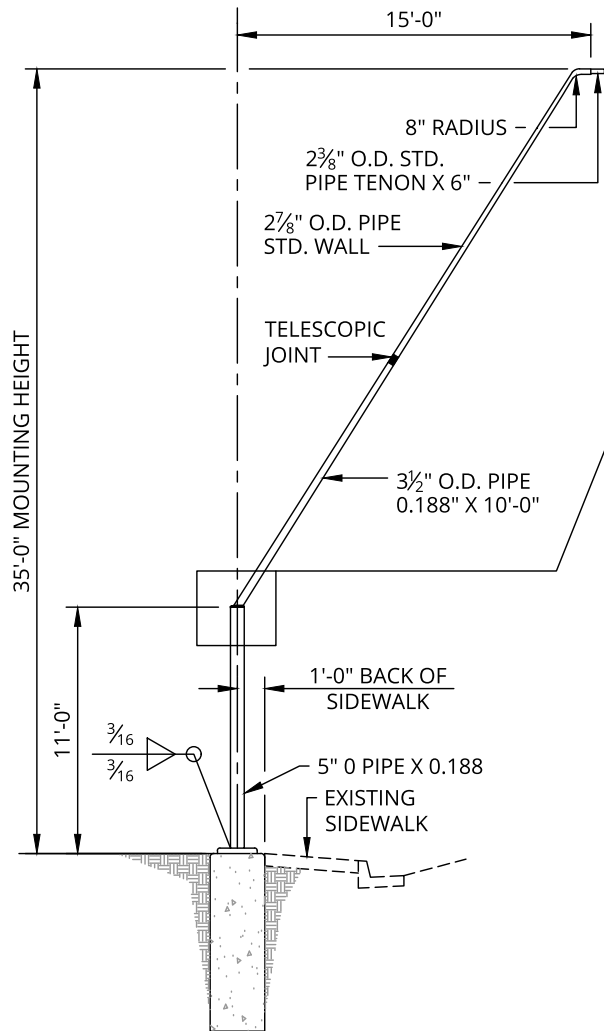
APPROVED:
01-27-2022

DETAIL NO.
C-718



NOTES:

1. PLEASE REFER TO SECTION 5.6 THROUGH 5.7.3 OF THE ENGINEERING & DESIGN STANDARDS MANUAL FOR MORE INFORMATION.
2. HANDHOLE SHALL BE CHRISTY P36 OR APPROVED EQUAL WITH 12-INCH EXTENSION FOR TOTAL DEPTH OF 24 INCHES.
3. ALL PULL BOXES SHALL BE AASHTO TIER 22, H-20 RATED OR BETTER WITH POLYMER CONCRETE OR FIBRELYTE COVERS.
4. ALL COVERS WILL HAVE "TRAFFIC" MARKING INTEGRATED INTO THE COVER AND BE ASTM C 857, WUC 3.63 OR AASHTO TIER 15 RATED. TIER 8 LIDS MAY BE USED IN SOME CASES WHEN APPROVED BY CITY OF CHANDLER
5. HAND HOLE BASE MUST BE PLACED ON 8-INCHES MINIMUM OF ABC OR PEA GRAVEL AS REQUIRED BY MAG SECTION 702 AND COMPACTED TO 100% MAXIMUM DENSITY.
6. THE OUTER SIDES OF THE PULL BOX MUST BE BACKFILLED WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACTED TO 95% TO WITHIN TWO INCHES OF FINISHED GRADE. THE COMPACTION AROUND THE BOX MUST NOT CAUSE THE SIDES TO DEFLECT OR ANY PART OF THE BOX OR LID TO CRACK.
7. PVC SCHEDULE 40 MINIMUM, 90-DEGREE SWEEPS WITH A 36-INCH BEND RADIUS.
8. ALL CONDUIT ENDS MUST HAVE A BELL-END TO PROTECT THE CONDUCTOR OR FIBER OPTIC CABLE FROM DAMAGE AND REMOVABLE CAPS MUST BE PLACED ON ALL UNUSED CONDUIT ENDS.



NOTES:

1. POLE BASE PLATE AND ANCHOR BOLTS DESIGNED PER AASHTO 80.
2. PIPE STEEL (ASTM A-53 GRADE B) ANCHOR BOLTS, BASE PLATE AND MISC. STEEL PER ASTM 36.
3. THE HAND HOLE TO BE 3"x5". THE COVER PLATE TO BE 16 GAUGE. THE COVER IS TO BE SECURED BY MFG.
4. AFTER FABRICATION THE POLE SHALL BE SANDBLASTED TO REMOVE ALL LOOSE SCALE RUST, CORROSION PRODUCTS, GREASE, DIRT AND OTHER FOREIGN PRODUCTS.
5. AFTER SANDBLASTING, THE POLE SHALL BE FINISHED PAINTED PER C.O.C. STANDARDS.

N.T.S.

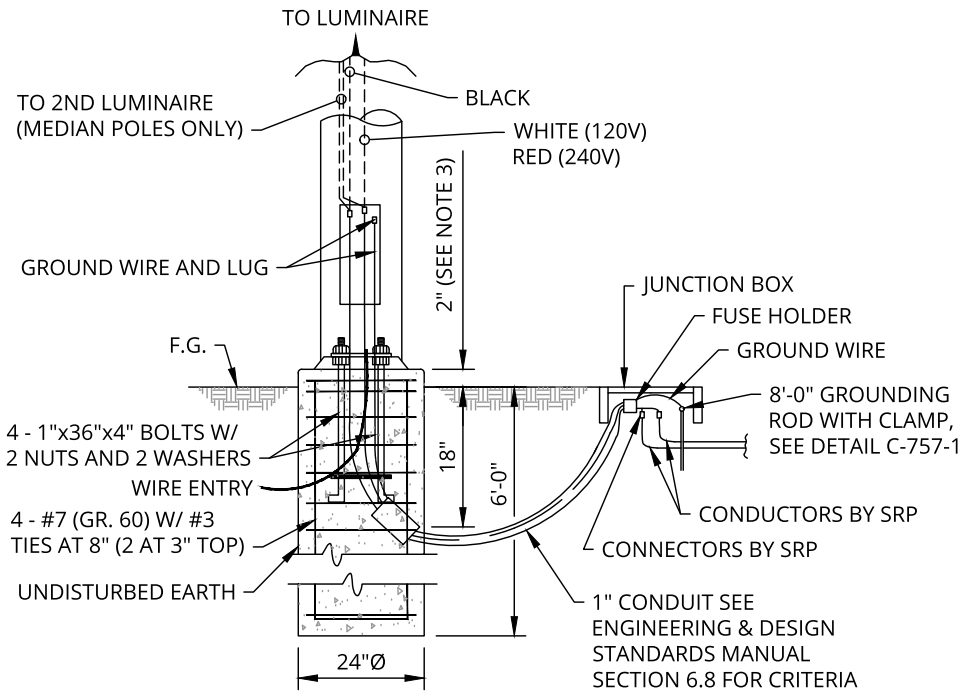
DETAIL NO.
C-756



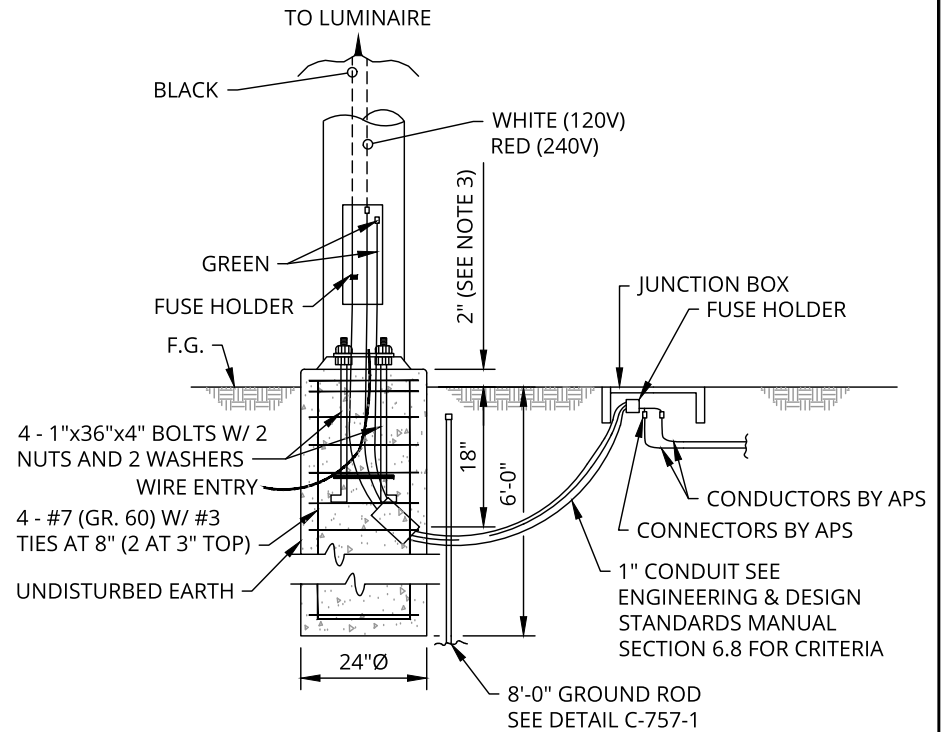
**ANGLE STREET LIGHT
POLE (SL-17)**

APPROVED:
01-27-2022

DETAIL NO.
C-756



SRP AREA



APS AREA

NOTES:

1. FOR CITY OR DEVELOPER INSTALLED AND CITY MAINTAINED FUSING IN APS AREAS, APS TO PROVIDE AND INSTALL 15 AMP FUSES IN JUNCTION BOX. CUSTOMER FUSING IN THE HANDHOLE NOT TO EXCEED 10 AMPS. FOR APS REQUIREMENTS CONTACT APS ENGINEERING.
2. FOR CITY OR DEVELOPER INSTALLED AND CITY MAINTAINED FUSING IN SRP AREAS CONTACT SRP ENGINEERING FOR REQUIREMENTS.
3. IF IN SIDEWALK, THEN POUR FLUSH.

N.T.S.

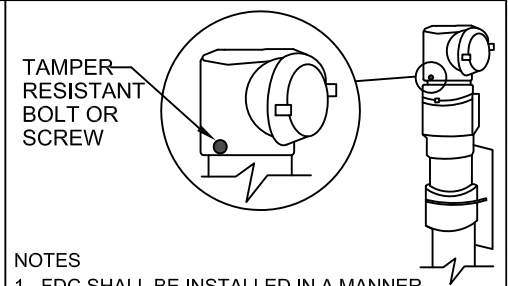
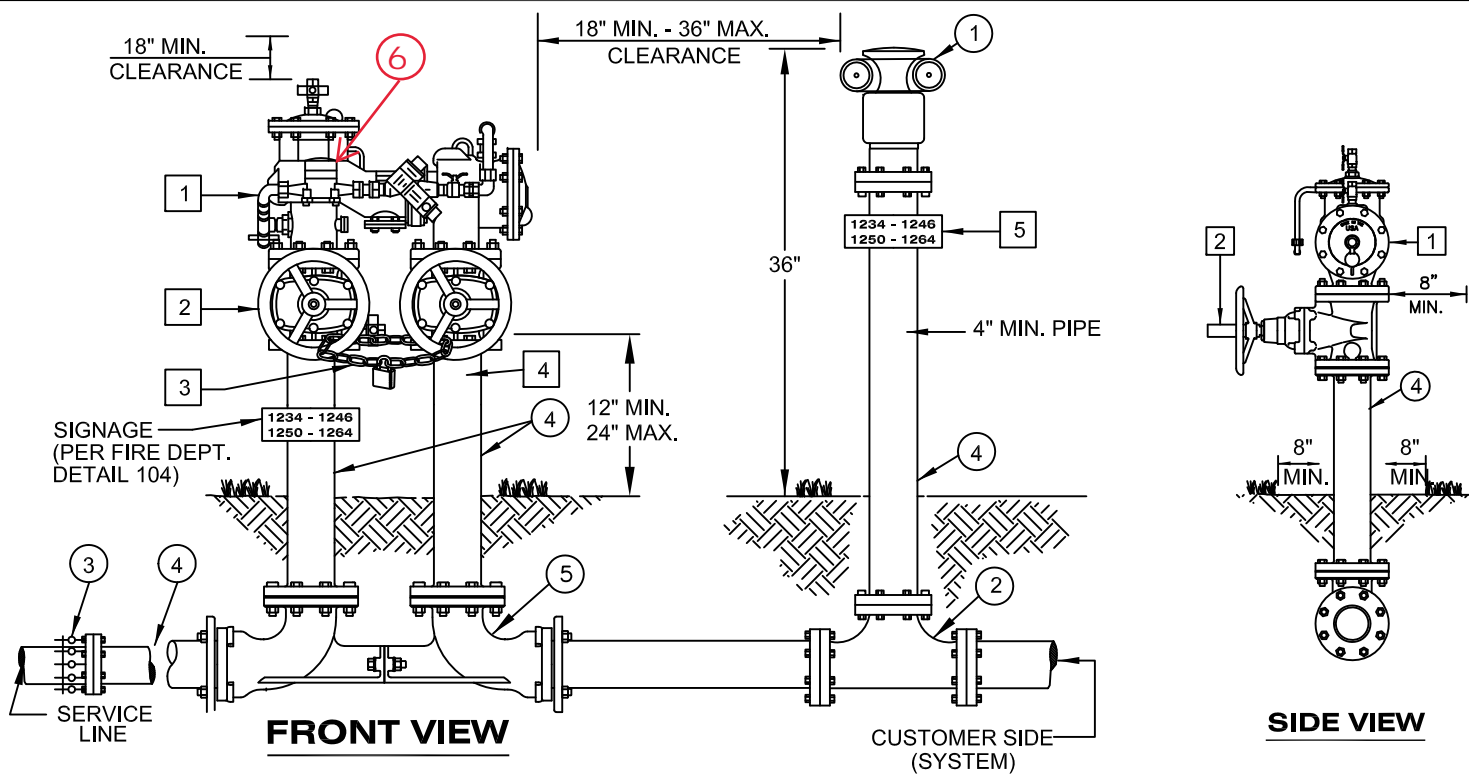
DETAIL NO.
C-758



**STREET LIGHT
CONNECTION DETAILS (SL-15)**

APPROVED:
01-27-2022

DETAIL NO.
C-758



NOTES

1. FDC SHALL BE INSTALLED IN A MANNER TO PREVENT TAMPERING AND/OR THEFT.
2. PRIOR TO INSTALLING THE FDC ON THE CHECK CHECK VALVE, THREADLOCKER, OR EQUIVALENT, SHALL BE PLACED ON THE THREADS.
3. TAMPER RESISTANT BOLT OR SCREW SHALL BE INSTALLED IN THE BASE OF THE FDC BY DRILLING A 3/8 INCH HOLE THROUGH THE MANIFOLD CASE AND INNER THREADS.

- LIST OF MATERIALS**
1. FIRE DEPT. SIAMESE CONNECTION (FDC) (RED).
 2. FLANGED TEE.
 3. FLANGED ADAPTER, (WHEN REQUIRED).
 4. PIPE SPOOL. (FLANGED D.I.P.)
 5. 90° ELBOW. (FLANGED D.I.P.)

6. FLOW DETECTION METER PER CITY LIST OF APPROVED PRODUCTS.

NOTES:

1. DOUBLE CHECK DETECTOR ASSEMBLY WITH BYPASS METER SHALL BE UL LISTED OR FM APPROVED FOR FIRE PROTECTION USE AND SHALL BE AS APPROVED BY U.S.C. FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. THIS ASSEMBLY IS TO BE USED FOR POLLUTION HAZARDS ONLY AS RECOMMENDED IN THE AWWA-M14 MANUAL.
2. ALL PIPING, VALVES, FITTINGS AND APPURTENANCES DOWNSTREAM OF THE SERVICE LINE O.S.& Y. VALVE SHALL BE APPROVED FOR FIRE PROTECTION USE AND INSTALLED PER N.F.P.A. #24.
3. THE ENTIRE ASSEMBLY SHALL BE SECURED WITH CHAIN AND LOCK.
4. BACKFLOW DEVICES SHALL BE PAINTED TO MATCH THE LANDSCAPE (DESERT BROWN).
5. FDC'S AND PIV'S SHALL BE PAINTED RED AND SIGNED PER FIRE DEPT. DETAIL NO. FD104 SIGNAGE.
6. FIRE SPRINKLER RISER SHALL BE DESIGNED PER FIRE DEPT. DETAIL NO. FD105.

GENERAL NOTES:

1. FDC'S SHALL BE LOCATED WITHIN 150 FEET OF A PUBLIC (YELLOW) FIRE HYDRANT ON THE SAME SIDE OF DRIVEWAY, AT THE ENTRANCE TO THE SITE.
2. A REGISTERED STRUCTURAL ENGINEER SHALL SEAL THE DESIGN OF THE THRUST BLOCKS, SUPPORTS AND TIE ROD ASSEMBLIES.
3. MAINTAIN 3 FEET CLEARANCE AROUND PIV AND FDC (NO TREES, BUSHES, FENCES, CACTUS OR RIVER ROCK).
4. MAX DISTANCE BETWEEN FDC AND BACKFLOW MAY BE MODIFIED ONLY AS APPROVED BY THE FIRE MARSHAL.

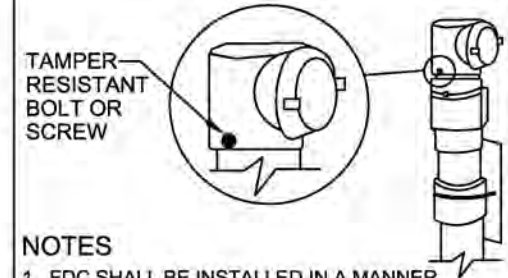
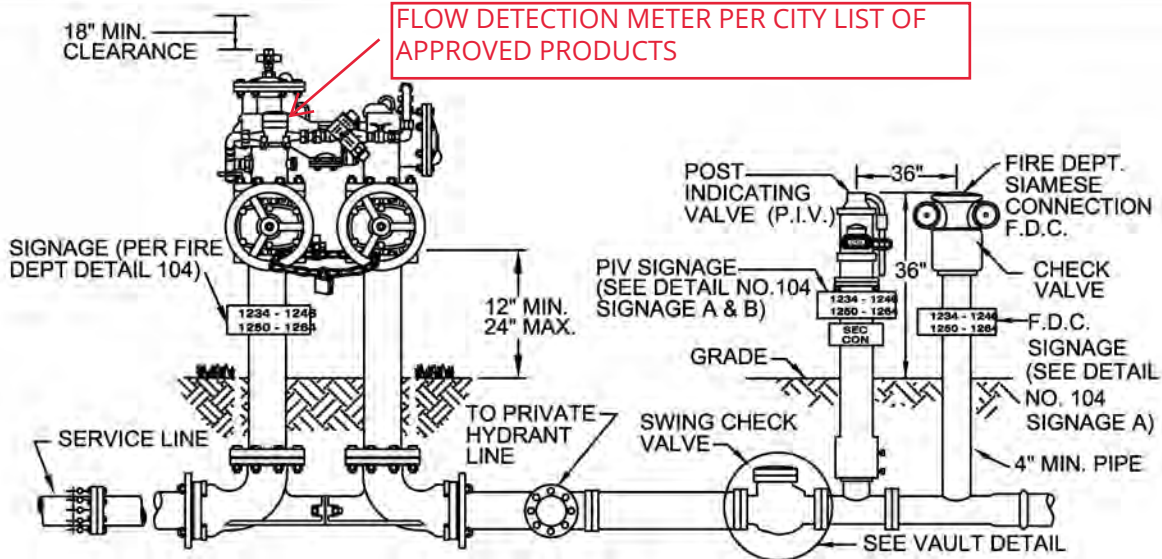
DETAIL NO.
FD102
NTS



**FIRE LINE INSTALLATION
(NO ON-SITE HYDRANTS REQUIRED)**

APPROVED: *M. J. ...*
FIRE MARSHAL
DATE: 01-09-2020

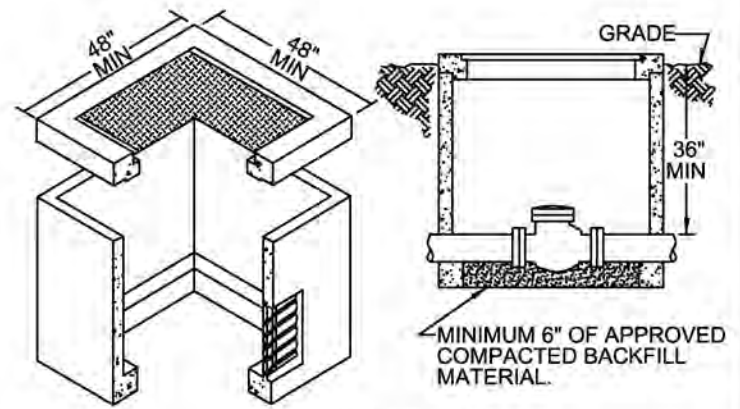
DETAIL NO.
FD102
NTS



- NOTES**
1. FDC SHALL BE INSTALLED IN A MANNER TO PREVENT TAMPERING AND/OR THEFT.
 2. PRIOR TO INSTALLING THE FDC ON THE CHECK VALVE, THREADLOCKER, OR EQUIVALENT, SHALL BE PLACED ON THE THREADS.
 3. TAMPER RESISTANT BOLT OR SCREW SHALL BE INSTALLED IN THE BASE OF THE FDC BY DRILLING A 3/8 INCH HOLE THROUGH THE MANIFOLD CASE AND INNER THREADS.

- NOTES:**
1. ALL FD102 NOTES, GENERAL NOTE AND LIST OF MATERIALS SHALL APPLY TO FD103 DESIGN. (EXCEPT GENERAL NOTE #4).

2. FDC'S SHALL BE LOCATED WITHIN 150 FEET OF A PUBLIC (YELLOW) FIRE HYDRANT ON THE SAME SIDE OF DRIVEWAY AT THE ENTRANCE TO THE SITE.
3. SWING CHECK VALVES USED ON UNDERGROUND FIRE LINES SHALL BE INSTALLED WITHIN A VAULT IN ACCORDANCE WITH THIS DETAIL. THE CHECK VALVE AND VAULT ASSEMBLY SHALL BE INSTALLED AFTER THE PRIVATE HYDRANT LINE (PRIVATE HYDRANTS SHALL BE PAINTED YELLOW WITH A BLACK BONNET).
4. FIRE SPRINKLER LINES SHALL HAVE A SECTIONAL CONTROL PIV INSTALLED BETWEEN THE SWING CHECK VALVE AND THE FDC. A SECTIONAL CONTROL PIV SHALL BE INSTALLED AT MID POINT ON THE LOOPED FIRE LINE TO PROVIDE FOR ISOLATION OF THE FIRE LINE.
5. FIRE SPRINKLER RISER SHALL BE DESIGNED PER FIRE DEPT. DETAIL NO. FD105. FIRE SPRINKLER (FS) SYSTEM RISER (FD105) SHALL BE SHOWN ON CIVIL AND FS BUILDING PLANS. PROVIDE A KEY BOX FOR FIRE DEPARTMENT ACCESS.
6. ALL STUB OUT AND FUTURE DEVELOPMENT PADS (PHASED PROJECTS) SHALL END WITH A PIV PAINTED FOREST GREEN.



VAULT DETAIL

DETAIL NO.
FD103
NTS



FIRE LINE INSTALLATION
(ON-SITE HYDRANT REQUIRED)

APPROVED: *[Signature]*
FIRE MARSHAL
DATE: 01-09-2020

DETAIL NO.
FD103
NTS