

# SEWER AND WATER SERVICE INSTALLATION

## OWNER / SITE INFORMATION

OWNER NAME: \_\_\_\_\_  
 SITE ADDRESS: \_\_\_\_\_  
 LOT #: \_\_\_\_\_  
 PHONE NUMBER: \_\_\_\_\_

## CONTRACTOR

NAME: \_\_\_\_\_  
 ADDRESS: \_\_\_\_\_  
 PHONE NUMBER: \_\_\_\_\_  
 CONTACT PERSON: \_\_\_\_\_

## ESTIMATED ROW QUANTITIES

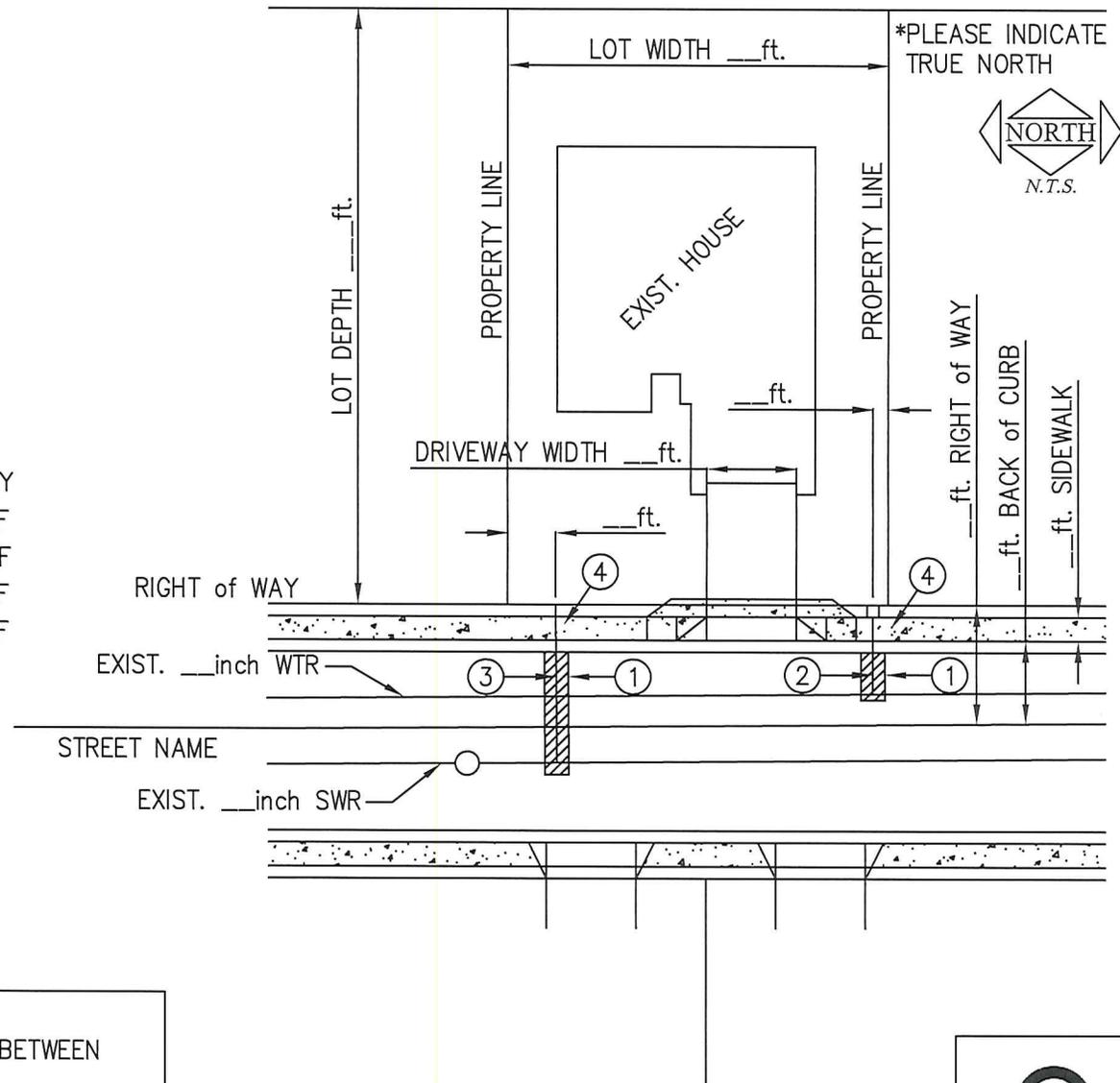
REMOVE & REPLACE PAVEMENT	_____	SY
REMOVE & REPLACE CURB & GUTTER	_____	LF
REMOVE & REPLACE SIDEWALK	_____	SF
4-INCH SEWER SERVICE	_____	LF
1-INCH/2 INCH WATER SERVICE	_____	LF

## CONSTRUCTION NOTES

- ① SAWCUT, REMOVE AND REPLACE AC PAVEMENT PER MAG STD DTL 200
- ② NEW COPPER WATER SERVICE PER COA DETAIL A1300
- ③ NEW 4-INCH SEWER SERVICE SDR 35 PER MAG DTL 440-3 & 440-4
- ④ REMOVE & REPLACE CURB, GUTTER & SIDEWALKS AS NECESSARY

### NOTE:

1. MAINTAIN MIN. 2' VERTICAL SEPARATION BETWEEN SEWER SERVICE AND WATER MAIN.
2. MAINTAIN MIN. 6' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER SERVICES LINES.
3. DO NOT INSTALL WATER OR SEWER SERVICE UNDER DRIVEWAY.



\*PLEASE INDICATE TRUE NORTH

N.T.S.

APPROVED: \_\_\_\_\_  
 ENGINEERING DIVISION DATE

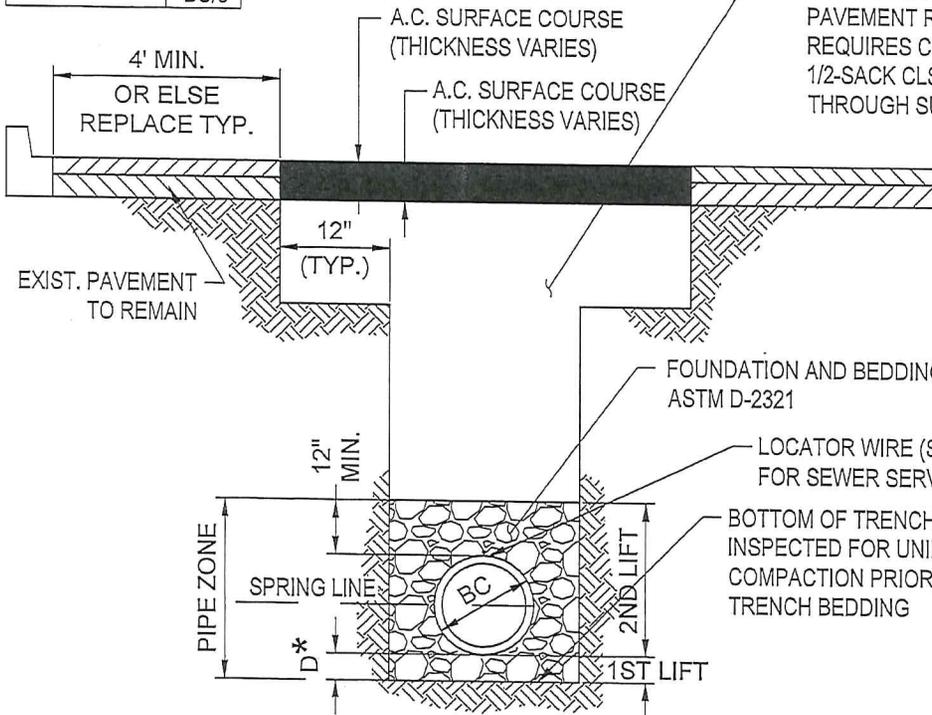


INSIDE DIA.	D*
0" ≤ 12"	4"
12" AND ≤ 39"	6"
> 39"	BC/8

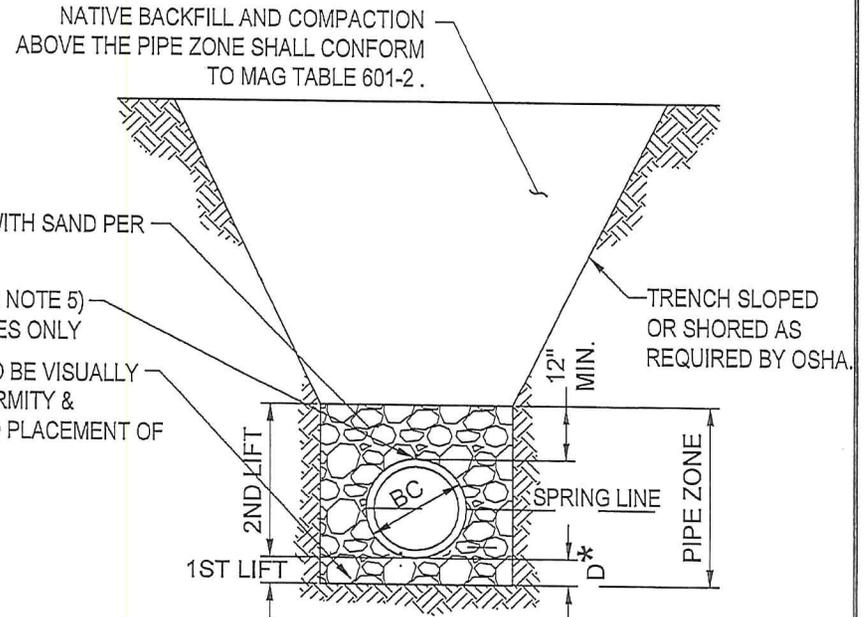
BC=OUTSIDE DIA. PIPE (INCHES)

\* NOTE: IN CASES WHERE COVER EXCEEDS 12'  
USE 12" MIN. THICKNESS FOR PIPE BEDDING

PAVEMENT REPLACEMENT PARALLEL TO THE DIRECTION OF TRAFFIC  
REQUIRES COMPLIANCE TO MAG STD. DET. 200 "T-TOP" MODIFIED WITH A.B.C.  
BACKFILL PER SECTION 702 AND 601.  
PAVEMENT REPLACEMENT TRANSVERSE TO THE DIRECTION OF TRAFFIC  
REQUIRES COMPLIANCE TO MAG STD. DET. 200 "T-TOP" MODIFIED WITH  
1/2-SACK CLSM PER SECTION 728 AND 604 FROM TOP OF PIPE ZONE  
THROUGH SUBGRADE



**TRENCH SECTION A**  
(PAVED)



**TRENCH SECTION B**  
(UNPAVED)

**NOTES:**

1. TRENCH WIDTH SHALL BE IN ACCORDANCE WITH MAG STD. TABLE 601-1.
2. THE PIPE ZONE SHALL BE PLACED IN TWO LIFTS. THE FIRST LIFT (FOUNDATION) IS FROM THE BOTTOM OF THE TRENCH TO THE BOTTOM OF PIPE. THE SECOND LIFT (BEDDING) IS FROM THE BOTTOM OF PIPE THROUGH THE PIPE ZONE. SEPARATE INSPECTIONS ARE REQUIRED FOR EACH LIFT.
3. THE CONTRACTOR SHALL PLACE THE FIRST LIFT IN A MANNER THAT WILL INSURE UNIFORM SUPPORT UNDER THE HAUNCHES AND PROPER ALIGNMENT OF THE PIPE.
4. INSTALL ELECTRONIC BALL MARKER AT ALL WYE CONNECTIONS. 30" MAX. DEPTH. ELECTRONIC MARKER BALLS TO BE 3M OR SEE COA APPROVED PRODUCTS LIST.
5. FOR PRIVATE SEWER LINES AND SERVICES, LOCATOR WIRE SHALL BE REQUIRED.

DETAIL NO.

**A1131**

**Avondale**  
STANDARD DETAIL

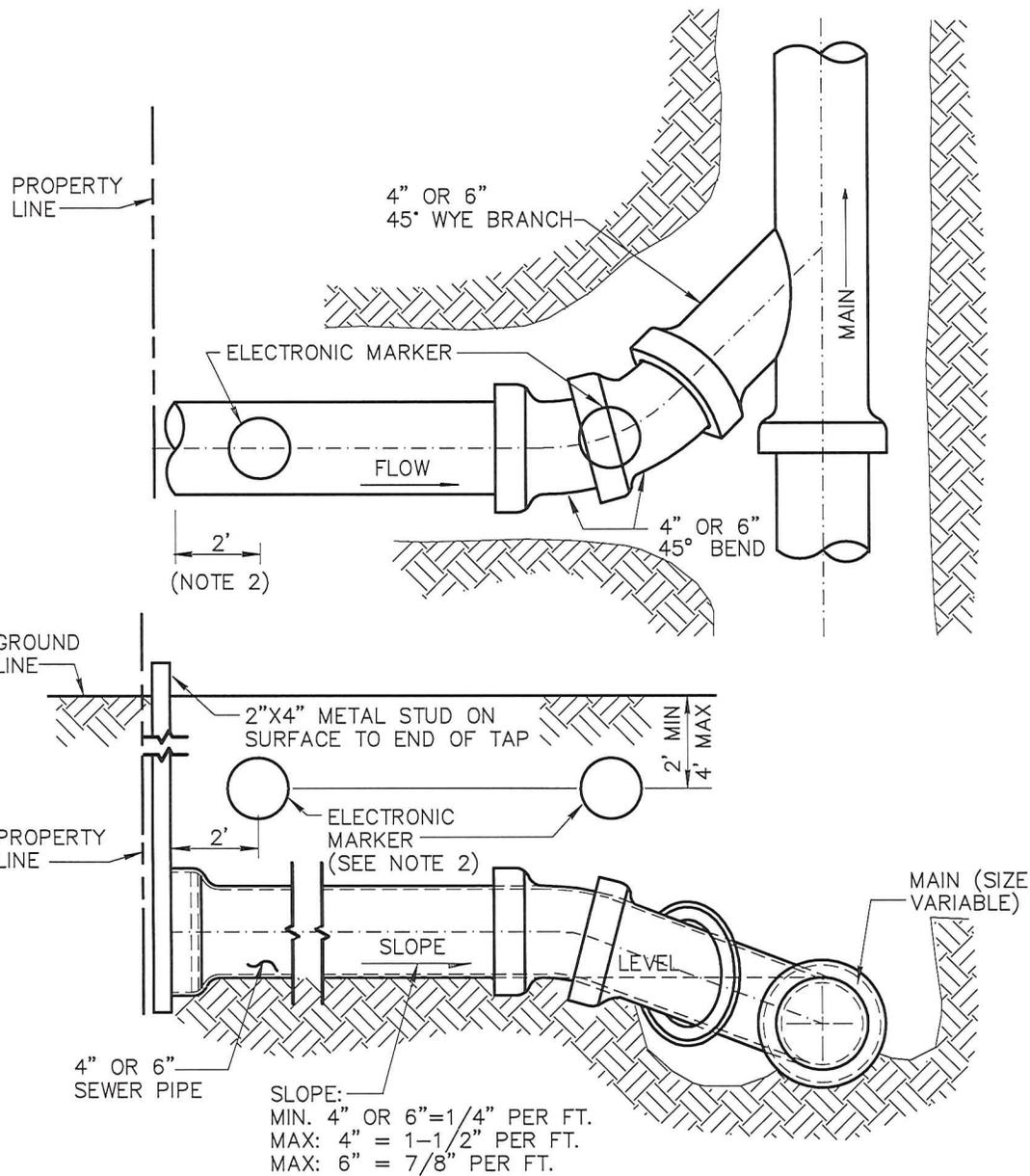
**TYPICAL TRENCH  
DETAIL (SEWER)**

APPROVED BY:

*David S. Gower*

DATE:

8.24.16



ELECTRONIC MARKER PLACEMENT

**NOTES:**

1. ELECTRONIC MARKER SHALL BE A 3M MODEL 1424-XR/iD [4" DIAMETER SELF LEVELING MARKER BALL GREEN IN COLOR] OR APPROVED EQUAL OR AS REQUIRED BY THE LOCAL AGENCY.
2. MARKER SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS, 2' BACK FROM THE END OF THE SEWER SERVICE STUB AND CINCH TIED TO PIPE OR ABOVE PIPE AS REQUIRED BY LOCAL AGENCY. AN ADDITIONAL MARKER SHALL BE INSTALLED AT EACH SERVICE STUB BEND.
3. ELECTRONIC MARKER SHALL BE RESTORED BY CONTRACTOR IF DISTURBED WHEN PRIVATE SERVICE LINE CONNECTION IS INSTALLED.
4. MARKER SHALL BE USED IN ADDITION TO A 2"x4" METAL STUD.
5. CONSTRUCTION DETAIL APPLIES WHERE CONTRACTOR BUILDS HOUSE CONNECTION. TAP EXTENDS TO PROPERTY LINE IN ALLEYS OR STREETS OR TO EASEMENT LINE.
6. SIZE OF TAP SHALL BE DESIGNATED ON PLANS.
7. CONSTRUCT TAP AT MINIMUM SLOPE IF COVER WILL BE LESS THAN 5' AT PROPERTY LINE.
8. ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES, TEE-WYES AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTINGS JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DEFLECTION.
9. END OF TAP TO BE SEALED AND MARKED AS NOTED.

DETAIL NO.  
**440-1**

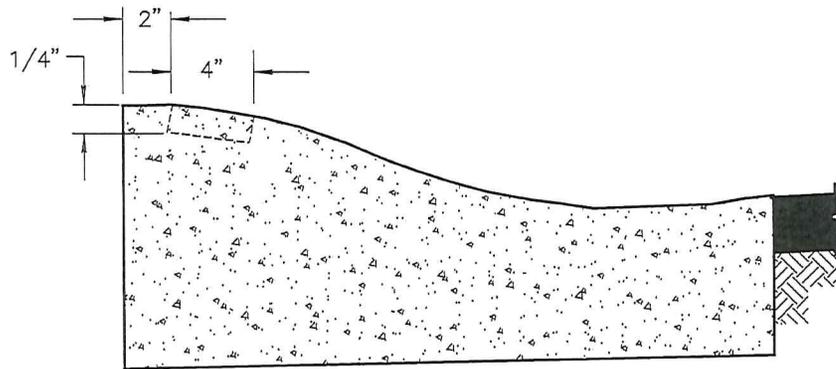


STANDARD DETAIL  
ENGLISH

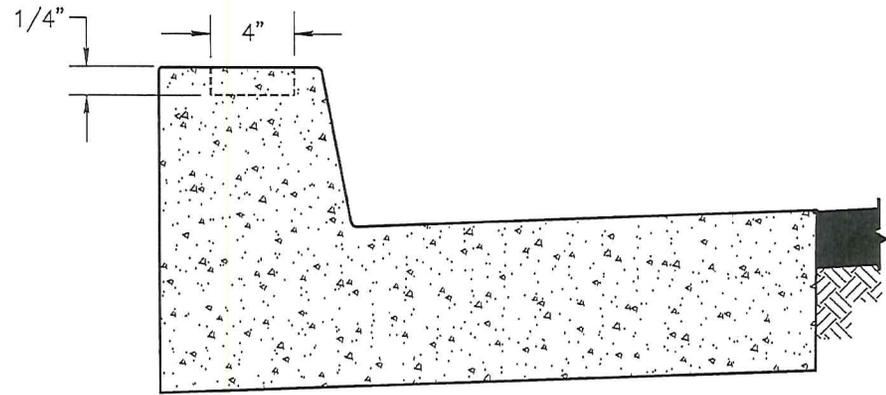
**TYPE 'A' - SEWER BUILDING CONNECTION  
ELECTRONIC BALL MARKERS (STANDARD)**

REVISED  
01-01-2007

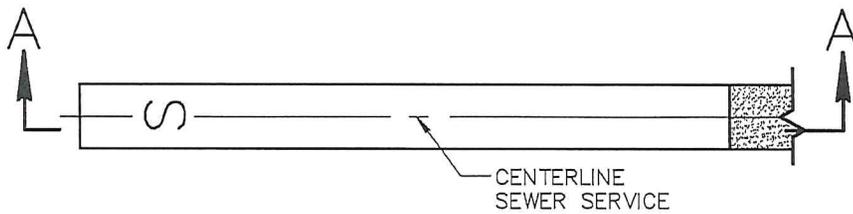
DETAIL NO.  
**440-1**



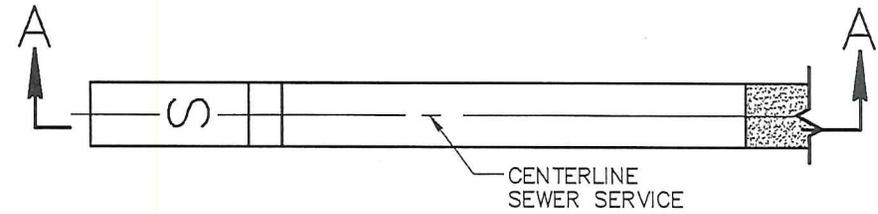
SECTION A-A



SECTION A-A



CURB STAMP ROLLED CURB



CURB STAMP VERTICAL CURB

NOTES:

1. STAMP TOP OF CURB WITH 4" TALL BY 1/4" DEEP "S" TO DESIGNATE SEWER SERVICE LINE CROSSING.

DETAIL NO.  
440-4

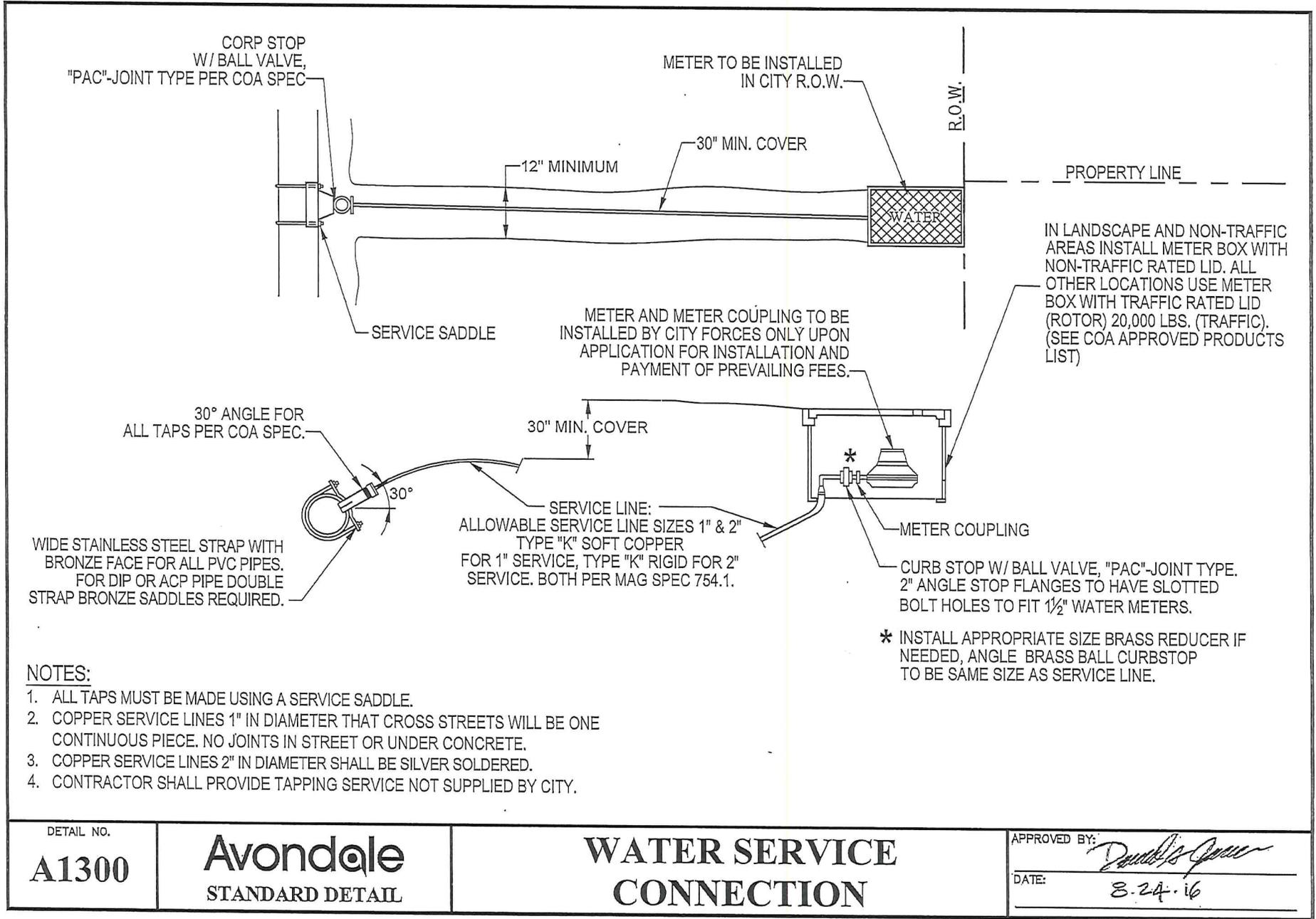


STANDARD DETAIL  
ENGLISH

SEWER SERVICE CURB CROSSING  
STAMP DETAIL

REVISED  
01-01-2006

DETAIL NO.  
440-4



**NOTES:**

1. ALL TAPS MUST BE MADE USING A SERVICE SADDLE.
2. COPPER SERVICE LINES 1" IN DIAMETER THAT CROSS STREETS WILL BE ONE CONTINUOUS PIECE. NO JOINTS IN STREET OR UNDER CONCRETE.
3. COPPER SERVICE LINES 2" IN DIAMETER SHALL BE SILVER SOLDERED.
4. CONTRACTOR SHALL PROVIDE TAPPING SERVICE NOT SUPPLIED BY CITY.

\* INSTALL APPROPRIATE SIZE BRASS REDUCER IF NEEDED, ANGLE BRASS BALL CURBSTOP TO BE SAME SIZE AS SERVICE LINE.

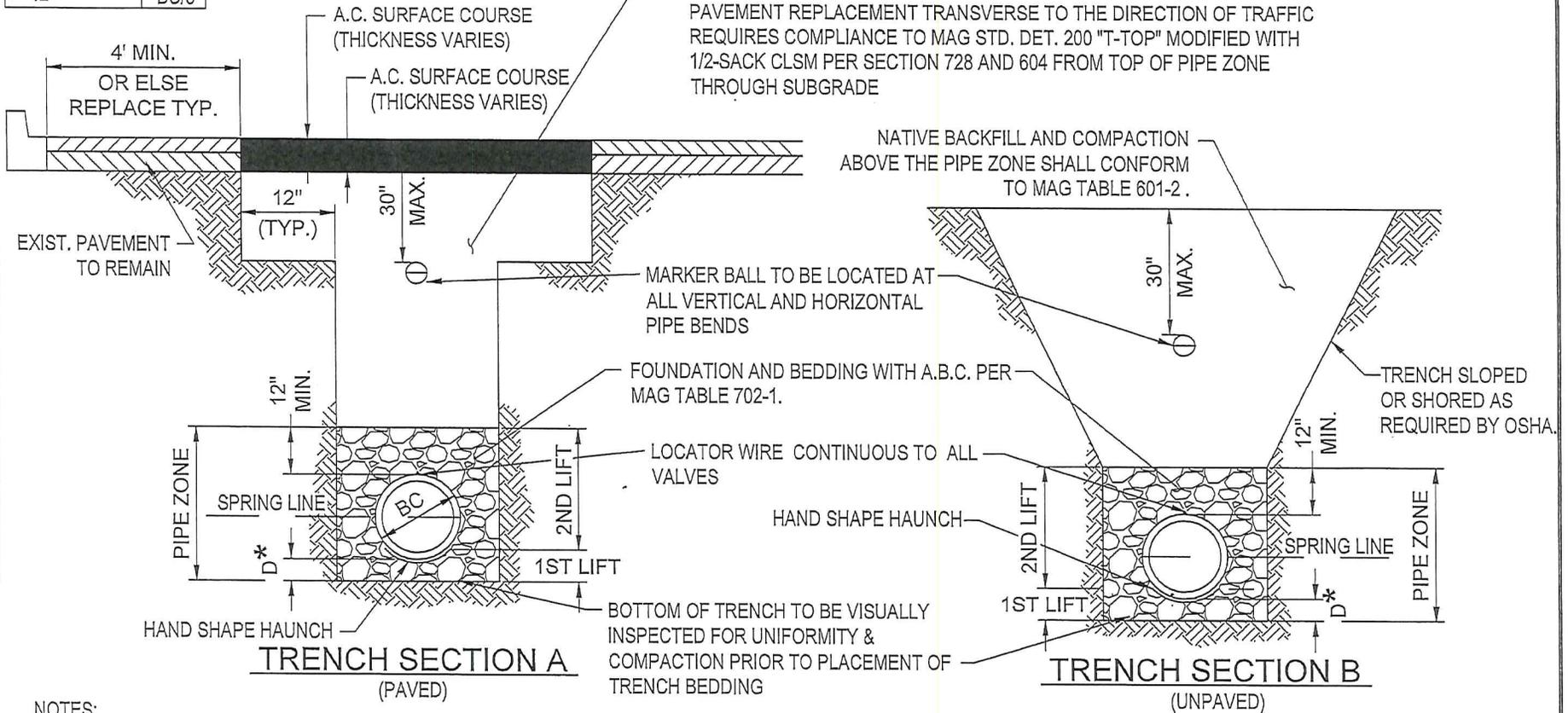
DETAIL NO. <h2 style="margin: 0;">A1300</h2>	<h1 style="margin: 0;">Avondale</h1> <p style="margin: 0;">STANDARD DETAIL</p>	<h1 style="margin: 0;">WATER SERVICE CONNECTION</h1>	APPROVED BY: <i>Daniel's [Signature]</i> DATE: 8-24-16
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INSIDE DIA.	D*
0" ≤ 12"	4"
12" AND ≤ 42"	6"
> 42"	BC/8

BC=OUTSIDE DIA. PIPE (INCHES)

\* NOTE: IN CASES WHERE COVER EXCEEDS 12' USE 12" MIN. THICKNESS FOR PIPE BEDDING

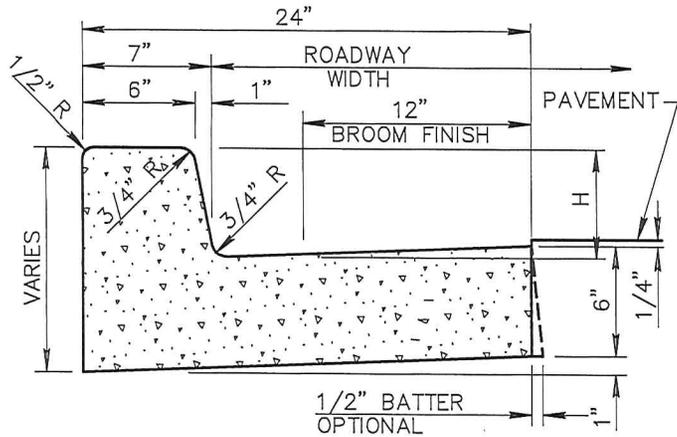
PAVEMENT REPLACEMENT PARALLEL TO THE DIRECTION OF TRAFFIC REQUIRES COMPLIANCE TO MAG STD. DET. 200 "T-TOP" MODIFIED WITH A.B.C. BACKFILL PER SECTION 702 AND 601.  
 PAVEMENT REPLACEMENT TRANSVERSE TO THE DIRECTION OF TRAFFIC REQUIRES COMPLIANCE TO MAG STD. DET. 200 "T-TOP" MODIFIED WITH 1/2-SACK CLSM PER SECTION 728 AND 604 FROM TOP OF PIPE ZONE THROUGH SUBGRADE



NOTES:

1. TRENCH WIDTH SHALL BE IN ACCORDANCE WITH MAG STD. TABLE 601-1.
2. THE PIPE ZONE SHALL BE PLACED IN TWO LIFTS. THE FIRST LIFT IS FROM THE BOTTOM OF THE TRENCH THROUGH THE HAUNCHES. THE SECOND LIFT (PIPE SHADING) IS FROM THE HAUNCHES THROUGH THE PIPE ZONE. SEPARATE INSPECTIONS ARE REQUIRED FOR EACH LIFT.
3. THE CONTRACTOR SHALL PLACE THE FIRST LIFT IN A MANNER THAT WILL INSURE UNIFORM SUPPORT UNDER THE HAUNCHES AND PROPER ALIGNMENT OF THE PIPE.
4. LOCATOR WIRE SHALL BE INSULATED COPPER WIRE, #10 SOLID. LOCATOR WIRE IS TO ORIGINATE AND TERMINATE INSIDE VALVE BOXES IN A PROTECTIVE CONDUIT. LOCATOR WIRE SHALL BE REQUIRED ON BOTH PUBLIC AND PRIVATE WATERLINES.

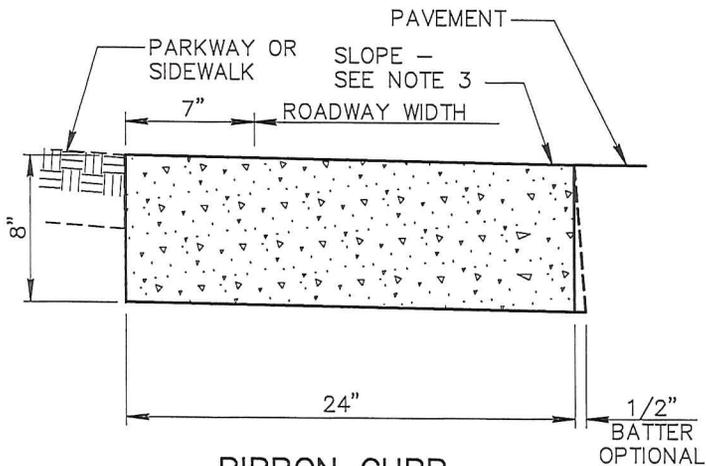
DETAIL NO. <b>A1130</b>	<b>Avondale</b> STANDARD DETAIL	<b>TYPICAL TRENCH DETAIL (WATER)</b>	APPROVED BY: <i>[Signature]</i> DATE: <b>8.24.16</b>
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**VERTICAL CURB AND GUTTER  
(TYPE A)**

**NOTES: (TYPE A)**

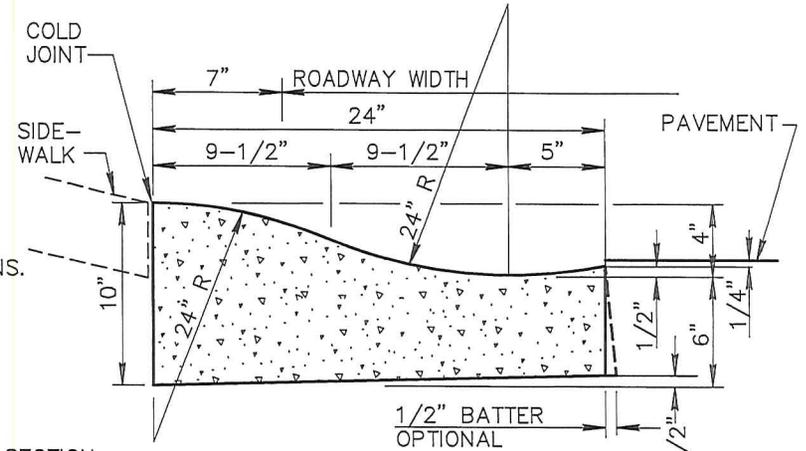
1. ALL EXPOSED SURFACES TO BE TROWEL FINISHED EXCEPT AS SHOWN. SEE SECT. 340.
2. H=6" OR AS SPECIFIED ON PLANS.
3. CONTRACTION JOINT SPACING 10' MAXIMUM.
4. EXPANSION JOINTS AS PER SECT. 340.
5. CLASS 'B' CONCRETE PER 725.
6. WHEN THE ADJACENT PAVEMENT SECTION SLOPES AWAY FROM THE GUTTER, THE SLOPE OF THE GUTTER PAN SHALL MATCH PAVEMENT CROSS SLOPE.



**RIBBON CURB  
(TYPE B)**

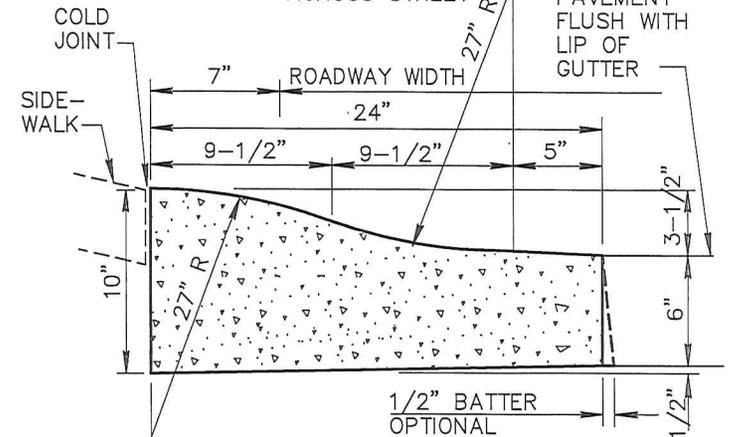
**NOTES: (TYPE B)**

1. CONSTRUCT CURB AND INSTALL 1/2" MASTIC EXPANSION JOINTS, A.S.T.M. D-1751. SECT. 340.
2. BROOM FINISH ALL SURFACES.
3. RIBBON CURB MAY SLOPE TOWARDS PAVEMENT OR PARKWAY AS INDICATED ON PLANS.
4. CONTRACTION JOINT SPACING 10' MAXIMUM.
5. CONCRETE SHALL BE CLASS 'B' PER SECT. 725 AND INSTALLED PER SECT. 505.



**ROLL CURB AND GUTTER  
(TYPE C)**

SPECIAL SECT. USE FOR HIGH SIDE CURB WITH SHEET DRAINAGE ACROSS STREET



**(TYPE D)**

**NOTES: (C & D)**

1. ALL WORK AND MATERIALS SHALL CONFORM TO SECT. 304, 505 AND 725. BROOM FINISH TO EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAXIMUM.
3. EXPANSION JOINTS AS PER SECT. 340.
4. CLASS 'B' CONCRETE PER 725.

DETAIL NO.

220-1



MARICOPA  
ASSOCIATION of  
GOVERNMENTS

STANDARD DETAIL  
ENGLISH

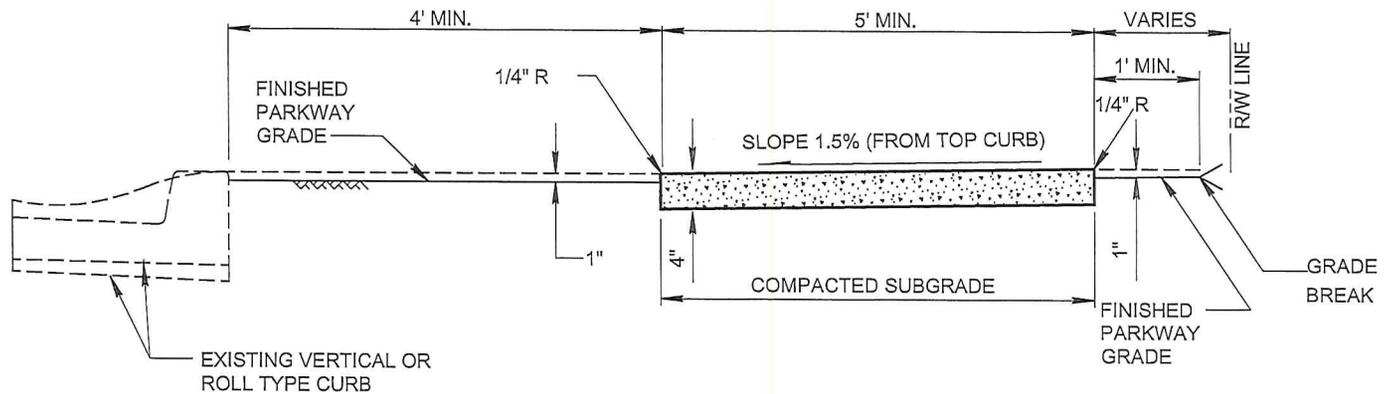
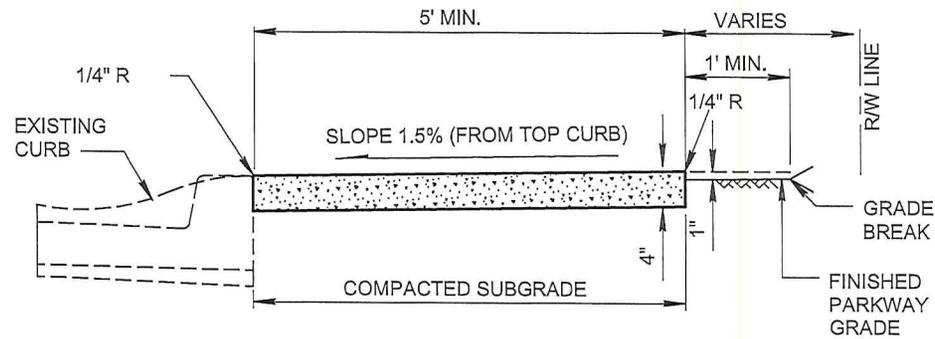
**CURB AND GUTTER  
TYPES A, B, C AND D**

REVISED

01-01-2007

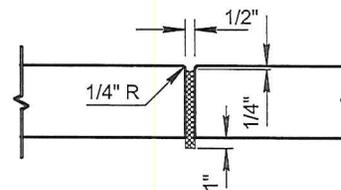
DETAIL NO.

220-1

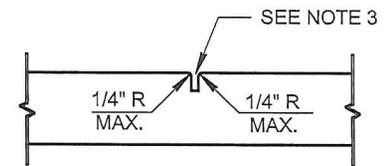


**NOTES:**

1. SIDEWALK CONSTRUCTION SHALL CONFORM TO SECTION 340.
2. EXPANSION JOINTS SHALL BE 1/2" BITUMINOUS TYPE PREFORMED EXPANSION JOINT FILLER, PER SECTION 729.
3. LARGE AGGREGATE, IN CONTRACTION JOINT SHALL BE SEPARATED TO A DEPTH OF 1", FINISH DEPTH SHALL BE A MINIMUM OF 3/4".
4. EXPANSION JOINTS SHALL CONFORM TO SECTION 340, BE INSTALLED PRIOR TO CONCRETE PLACEMENT, AND AT A MAXIMUM SPACING OF 50'.
5. CONCRETE SHALL BE CLASS 'B' PER SECTION 725.
6. WHEN SIDEWALK AND ADJACENT CURB ARE CONSTRUCTED MONOLITHICALLY, ALL EXPANSION AND CONTRACTION JOINTS SHALL EXTEND ACROSS THE CURB.



**EXPANSION JOINT**



**CONTRACTION JOINT**

DETAIL NO.

230



STANDARD DETAIL  
ENGLISH

SIDEWALKS

REVISED

01-01-2014

DETAIL NO.

230