

ITEM	EXISTING	PROPOSED
Maintenance Holes		MH-7
Inlet Type 250A		
Inlet Type 250B		
Inlet Type 252		
Inlet Type 268		
Catch Basin round inlet top		
Private CB & Inlet		
Catch Basin Type 151 (pre 1985)		
Catch Basin Type 240A		
Catch Basin Type 240B		
Catch Basin Type 240C		
Catch Basin Type 240D		
Catch Basin Type 241		
Catch Basin Type 242A		
Catch Basin Type 242B		
Junction Box Type 277A		
Junction Box Type 277B		
Area Drain		

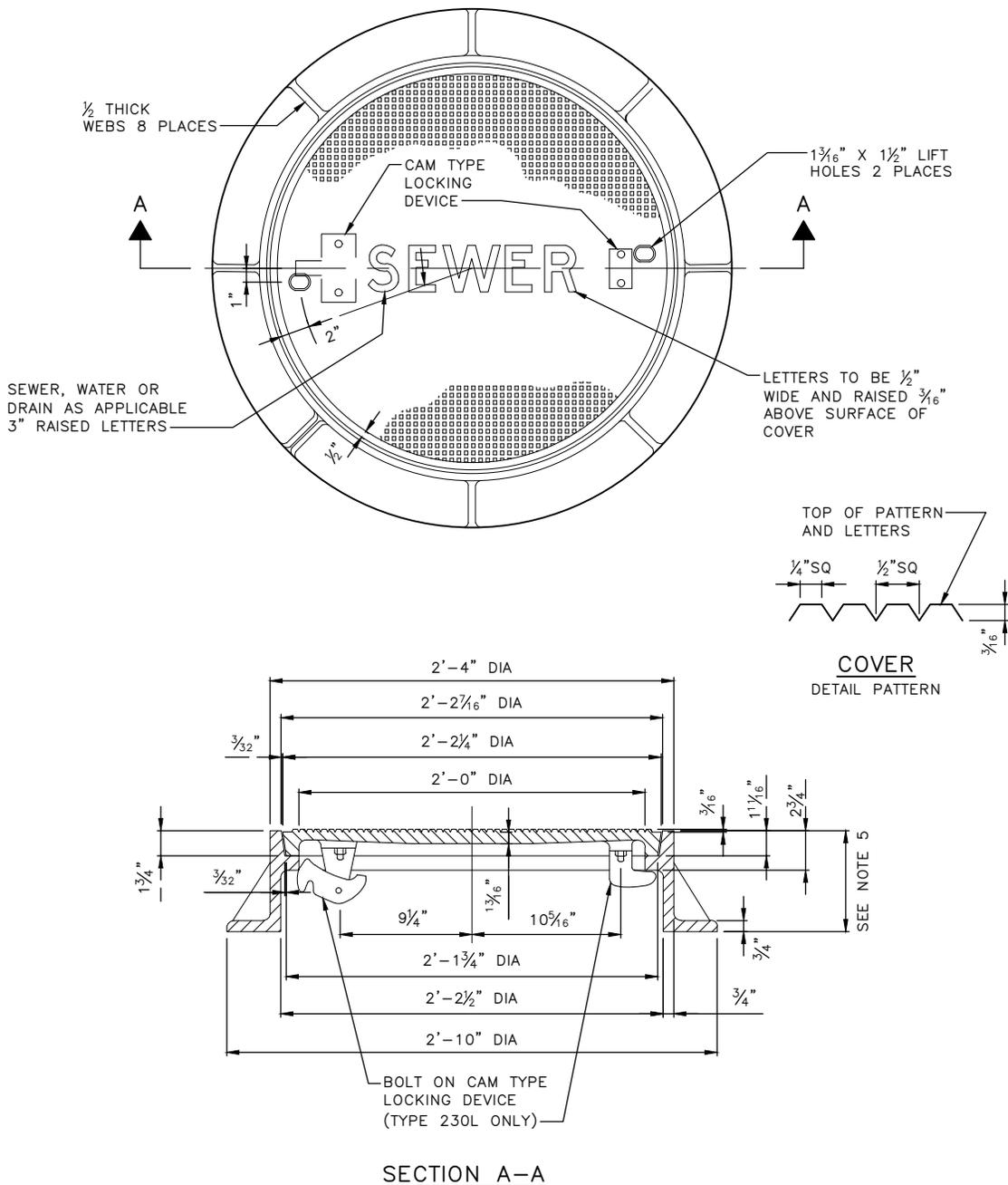
REF STD SPEC SEC



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NOT TO SCALE

STANDARD SYMBOLS  
SEWER & DRAINAGE



NOTES:

1. DESIGNATE LOCKING COVER AS TYPE 230L FOR USE IN NON-VEHICULAR TRAFFIC AREAS.
2. COVER THICKNESS IS MEASURED FROM THE BOTTOM OF THE PATTERN.
3. FRAMES MUST BE MANUFACTURED FROM CAST IRON OR DUCTILE IRON.
4. COVERS MUST BE MANUFACTURED FROM DUCTILE IRON.
5. CASTING HEIGHTS:
  - MUST BE 10" WHEN IN ROADWAY.
  - MUST BE 7" WHEN NOT IN ROADWAY
  - SEE ALSO STD PLAN NO. 406.

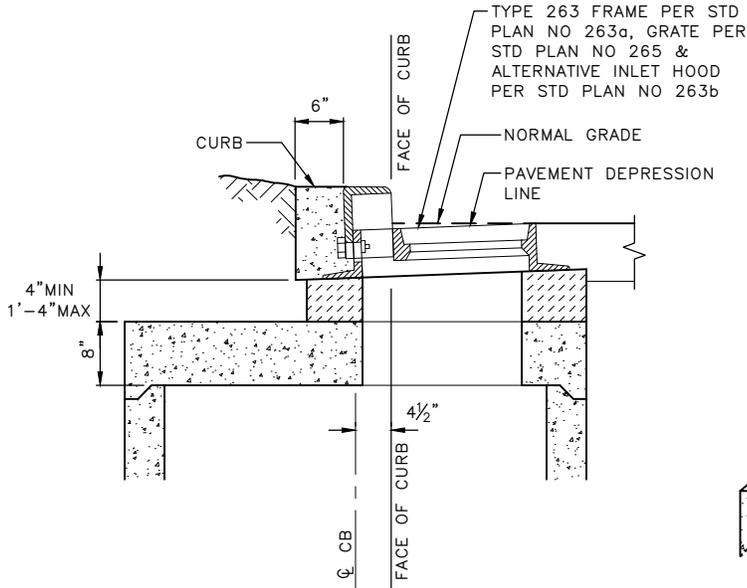
REF STD SPEC SEC 7-05, 9-12



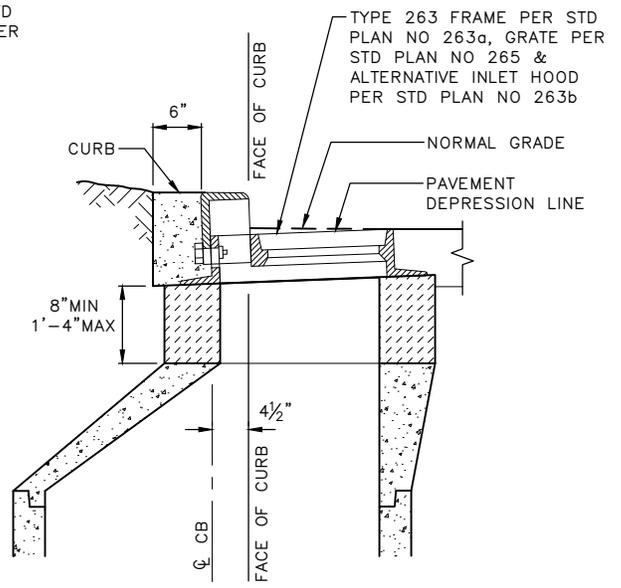
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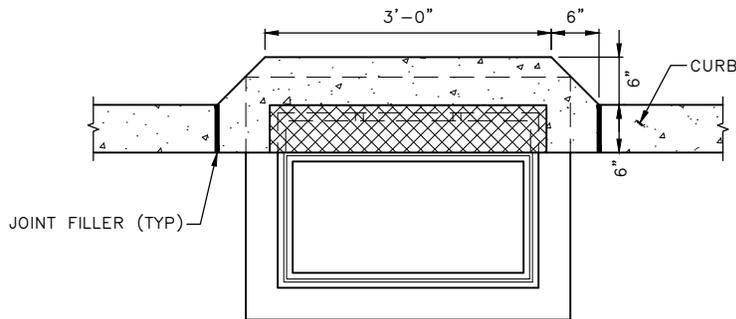
2'-0" DIAMETER  
FRAME & COVER



TYPE 240D CB



TYPE 242C CB



CURB DETAIL (PLAN VIEW) FOR  
TYPE 240D & 242C CB & TYPE 250B INLET

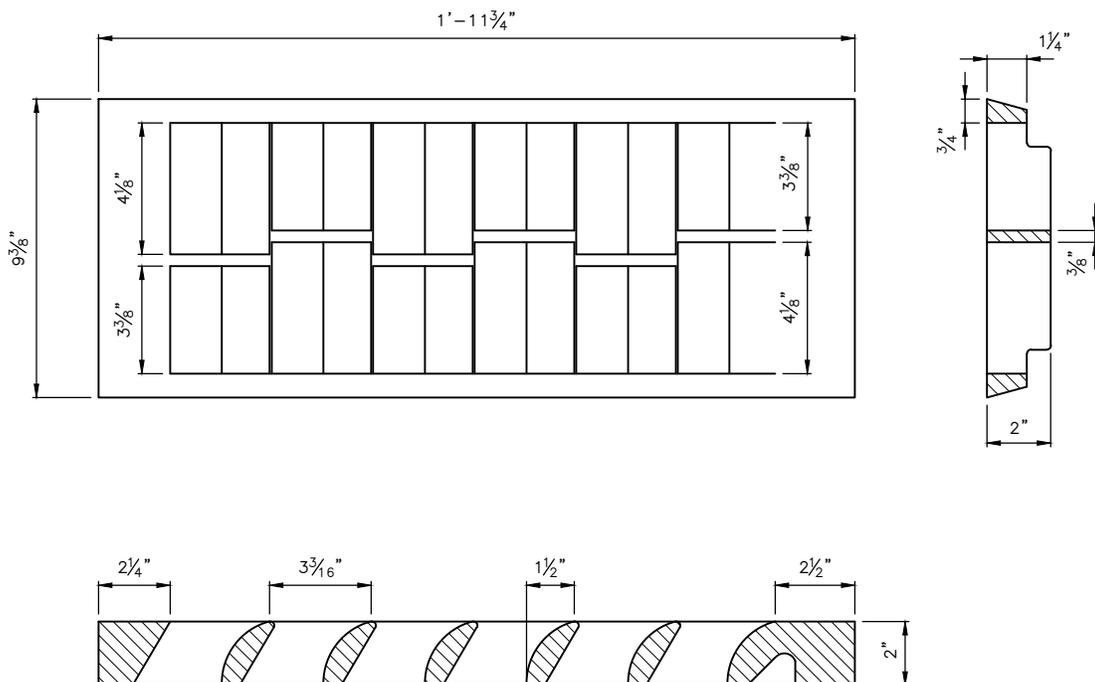
REF STD SPEC SEC 7-05



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CATCH BASIN & INLET  
INSTALLATION WITH STANDARD  
PLAN 263B ALTERNATIVE HOOD



**NOTES:**

1. OPEN AREA - 100 SQUARE INCHES.
2. OTHER GRATES ACCEPTABLE; SPECIFY VANE, SOLID COVER, BI-DIRECTIONAL VANE, ADA OR BEEHIVE ON PLANS.
3. SEE STD PLAN NO 265 FOR VANE AND END DETAIL.
4. STD PLAN NO 266 DIMENSIONS GOVERN ON END DETAIL.
5. REPLACEMENT VANED GRATE FOR TYPE 164 INLET FRAMES.

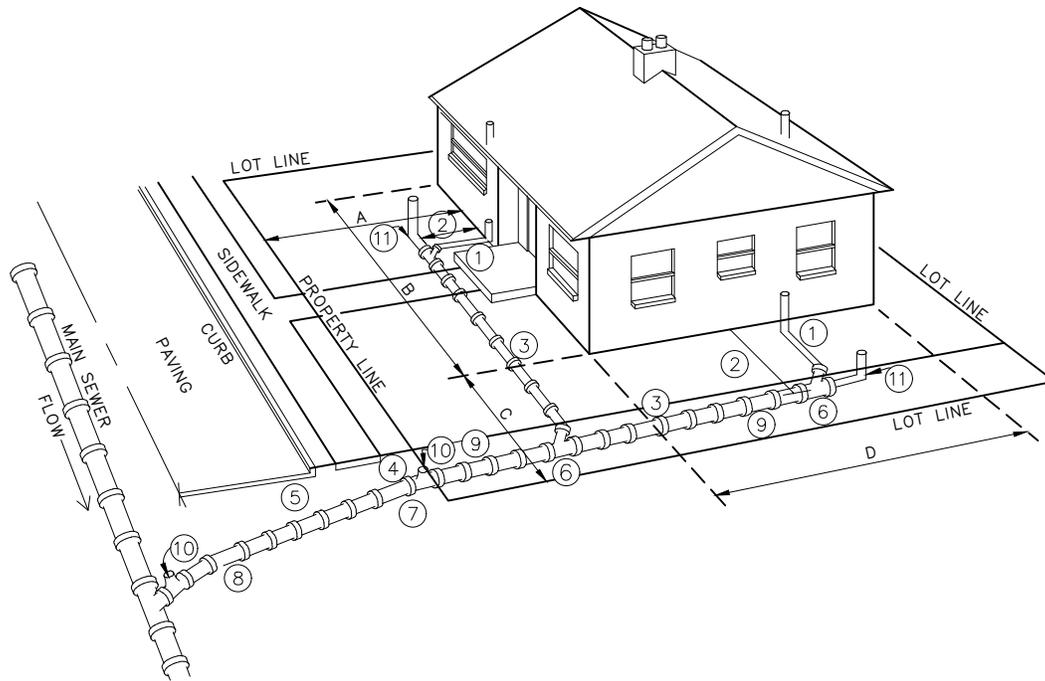
REF STD SPEC SEC 7-20.3(6), 9-12



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**TYPE 266 REPLACEMENT  
VANED GRATE**



**NOTES:**

1. ALL SANITARY PLUMBING OUTLETS MUST BE CONNECTED TO THE SANITARY SEWER OR COMBINED SEWER.
2. 2'-6" MIN DISTANCE FROM HOUSE, EXCEPT FOR SOIL PIPE CONNECTION.
3. 1'-6" MIN COVER OF PIPE.
4. 2'-6" MIN COVER AT PROPERTY LINE.
5. 5'-0" MIN COVER AT CURB LINE.
6. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH BENDS OR WYES.
7. STANDARD 4" TO 6" INCREASER.
8. 6" SEWER PIPE: MIN SIZE IN STREET, AND ELSEWHERE AS DIRECTED. 2% MIN GRADE, 100% MAX.
9. 4" SEWER PIPE: MIN SIZE ON PROPERTY. 2% MIN GRADE, 100% (45') MAX.
10. TEST "T" WITH PLUG
11. CLEANOUT AT UPSTREAM END OF SIDE SEWER.
12. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE CURRENT SIDE SEWER ORDINANCE.

**DIMENSIONS:**

- A = FRONT YARD SETBACK
- B = LENGTH OF HOUSE
- C = SIDE YARD SETBACK
- D = WIDTH OF HOUSE

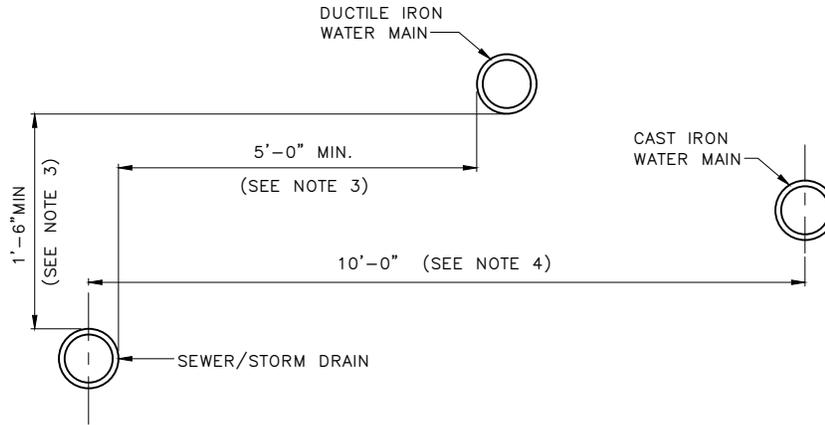
REF STD SPEC SEC 7-18



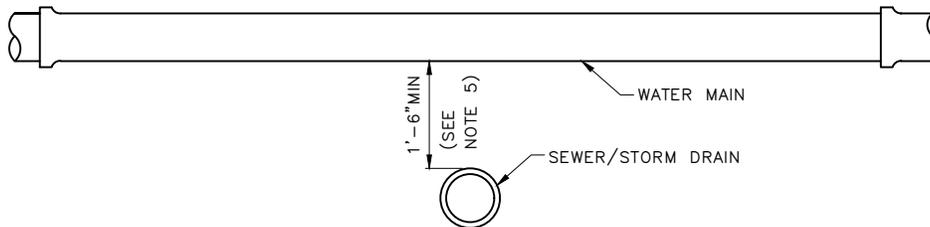
City of Seattle

NOT TO SCALE

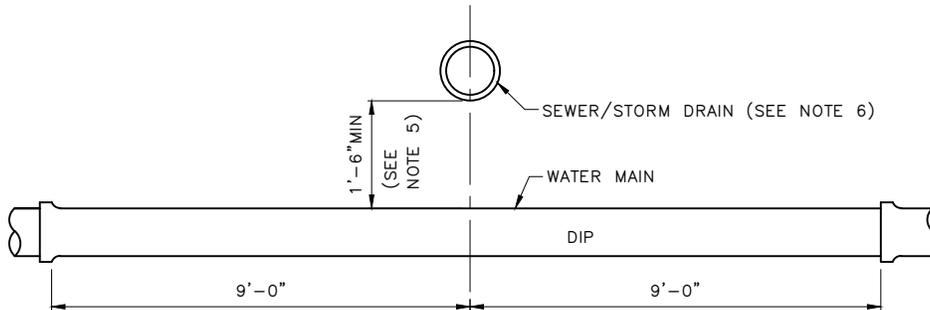
SIDE SEWER INSTALLATION



PARALLEL INSTALLATION



CROSSING WATER OVER SEWER/STORM DRAIN



STANDARD SINGLE 18'-0" NOMINAL LENGTH DUCTILE IRON WATER MAIN SECTION CENTERED AT THE POINT OF CROSSING

CROSSING WATER UNDER SEWER/STORM DRAIN

**NOTES:**

1. EXCEPTIONS TO STD PLAN NO 286a & 286b MUST BE APPROVED BY SEATTLE PUBLIC UTILITIES.
2. "SEWER/STORM DRAIN" INCLUDES STORM DRAINS, SANITARY SEWER, COMBINED SEWER MAINS AND SIDE SEWER.
3. WHERE MINIMUM CLEARANCES CANNOT BE MET, SEWER MUST BE CONSTRUCTED OF MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS INCLUDING WATER MAIN PRESSURE TESTING REQUIREMENTS.
4. NO VERTICAL CLEARANCE REQUIRED.
5. IF MINIMUM VERTICAL SEPARATION CANNOT BE MET, WATER MAIN MUST BE A STANDARD SINGLE 18'-0" NOMINAL LENGTH DUCTILE IRON WATER MAIN SECTION CENTERED AT THE POINT OF CROSSING.
6. SEWER/STORM DRAIN MUST HAVE ADEQUATE FOUNDATION SUPPORT TO PREVENT SETTLEMENT ON THE WATER MAIN AND TO PREVENT DEFLECTION OF WATER MAIN JOINTS.
7. CROSSINGS AT AN ANGLE BETWEEN 90° AND 45° MAY OCCUR BETWEEN 9'-0" AND 6'-0" OF WATER MAIN JOINT. FOR CROSSINGS LESS THAN 45°, SEE NOTE 1.

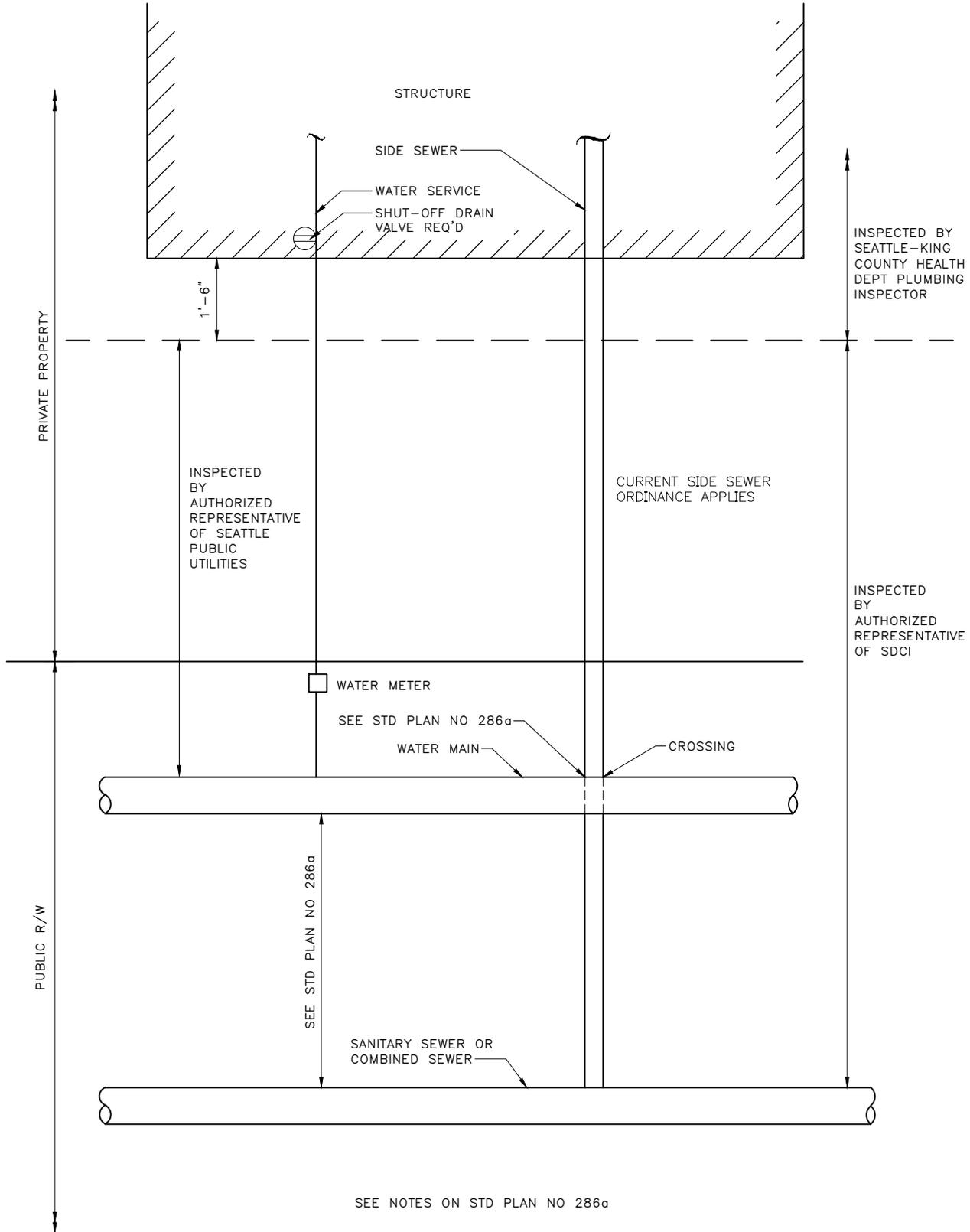
REF STD SPEC SEC 1-07.17, 7-11



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**SPACING & CLEARANCES FOR SEWER/STORM DRAIN & WATER**



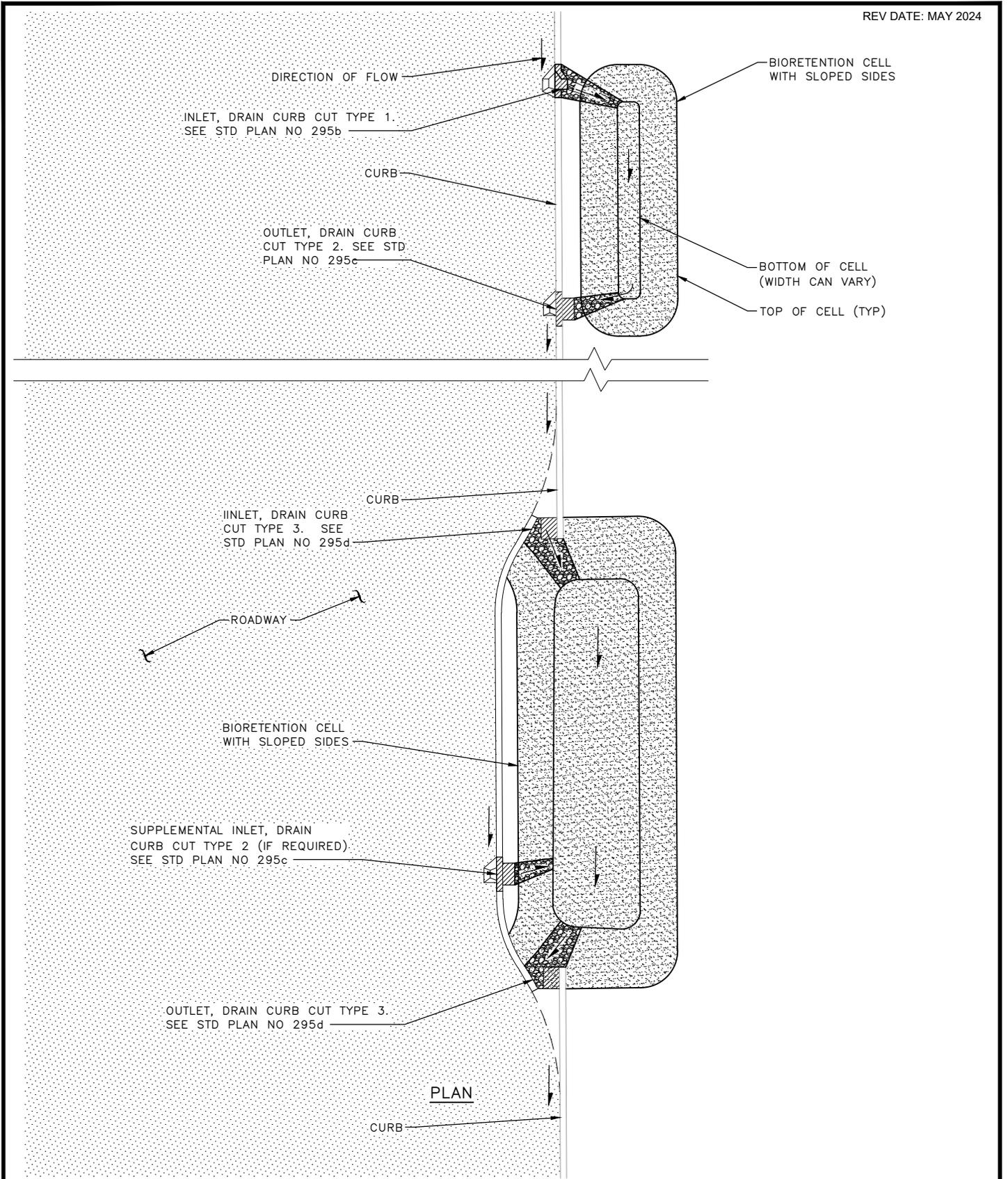
REF STD SPEC SEC 1-07.17, DIV 7



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SPACING & CLEARANCES FOR SEWER & WATER



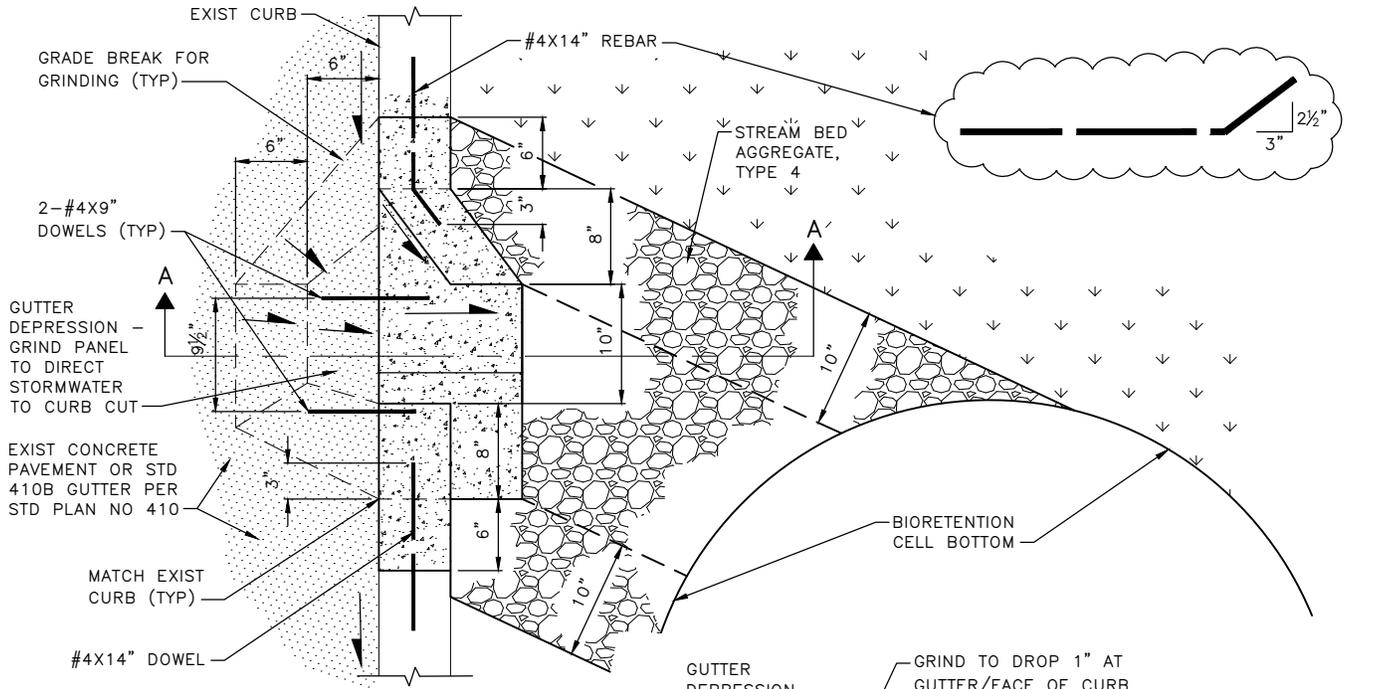
REF STD SPEC SEC 7-21, 8-04, 9-03



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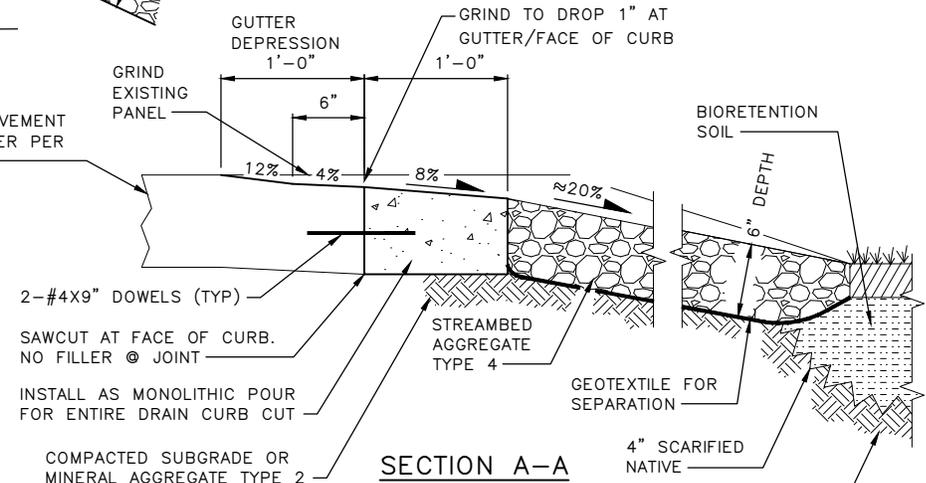
TYPICAL DRAIN CURB CUT  
LOCATION FOR BIORETENTION  
WITH SLOPED SIDES



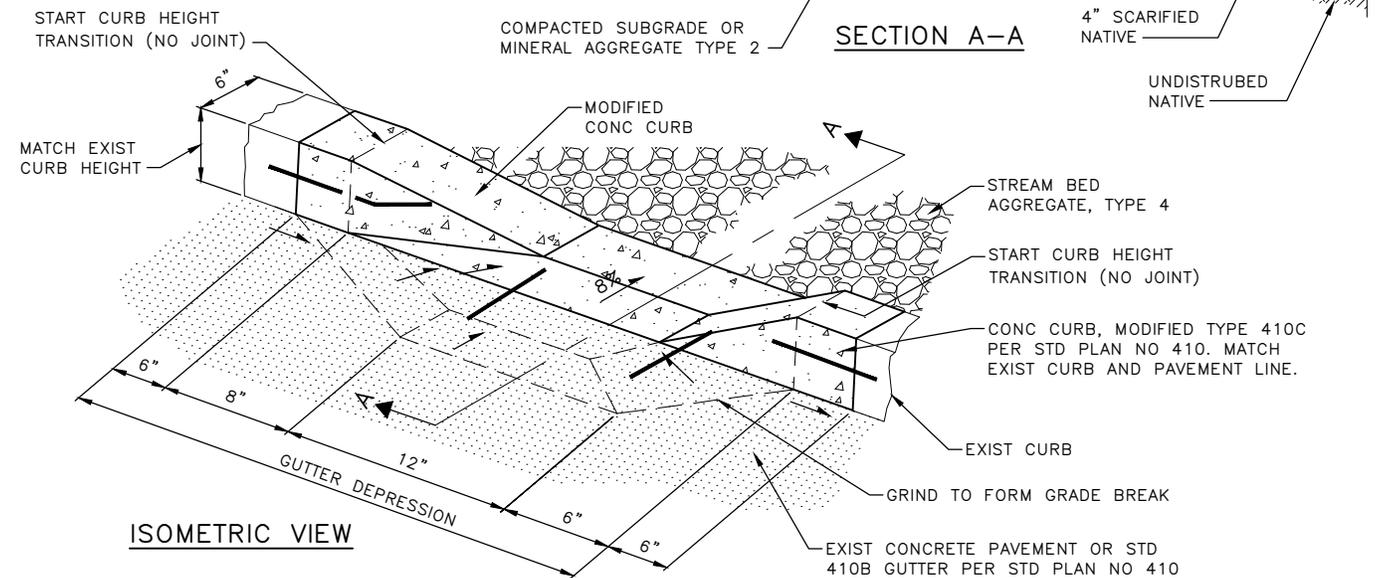
PLAN

**NOTES:**

1. DRAIN CURB CUTS MUST NOT BE LOCATED WITHIN CONCRETE ROAD PANEL JOINT.
2. USE DRAIN CURB CUT TYPE 1 WHERE GUTTER LINE LONGITUDINAL SLOPE IS 0 TO 5%. WHERE LONGITUDINAL SLOPE IS GREATER THAN 5%, DRAIN CURB CUT OPENING WILL BE DESIGNED BY THE ENGINEER.



SECTION A-A



ISOMETRIC VIEW

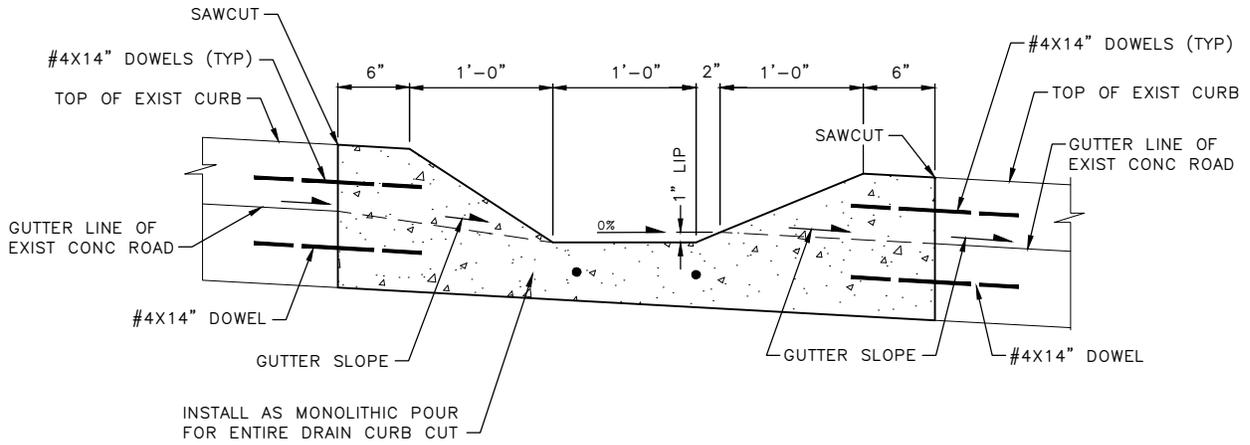
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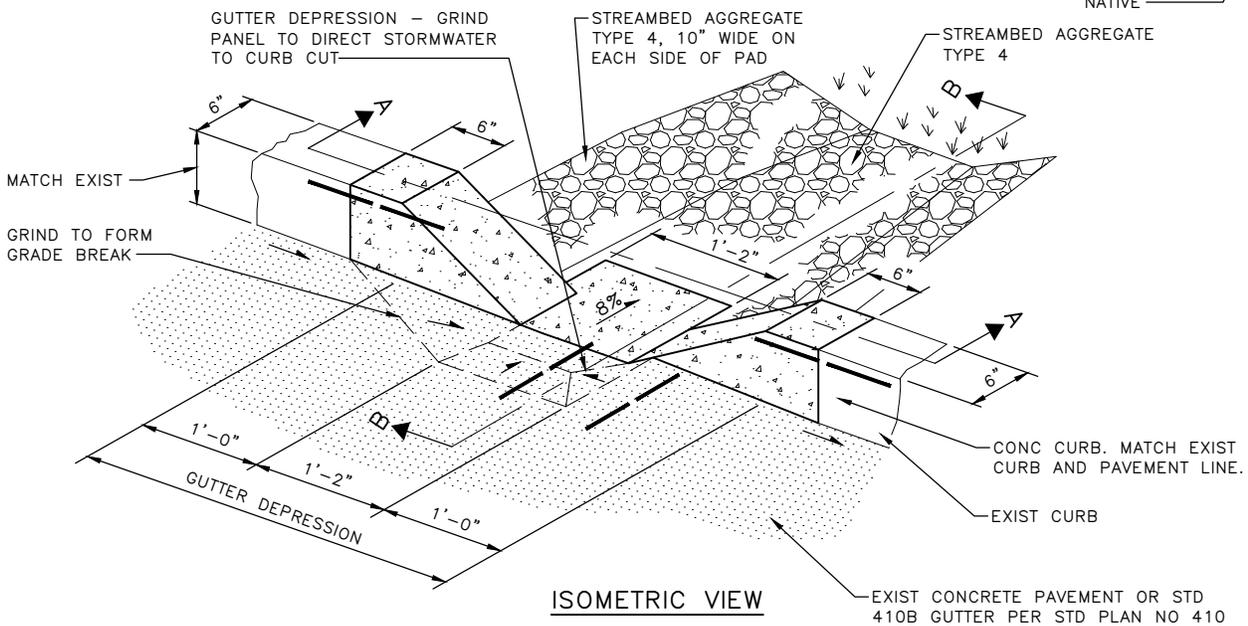
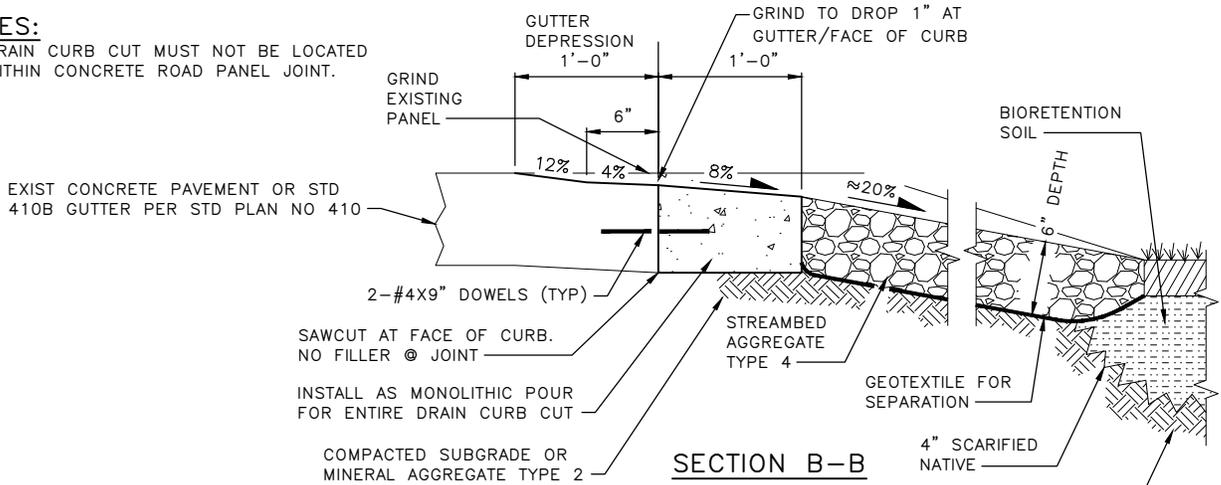
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DRAIN CURB CUT TYPE 1



**NOTES:**

1. DRAIN CURB CUT MUST NOT BE LOCATED WITHIN CONCRETE ROAD PANEL JOINT.



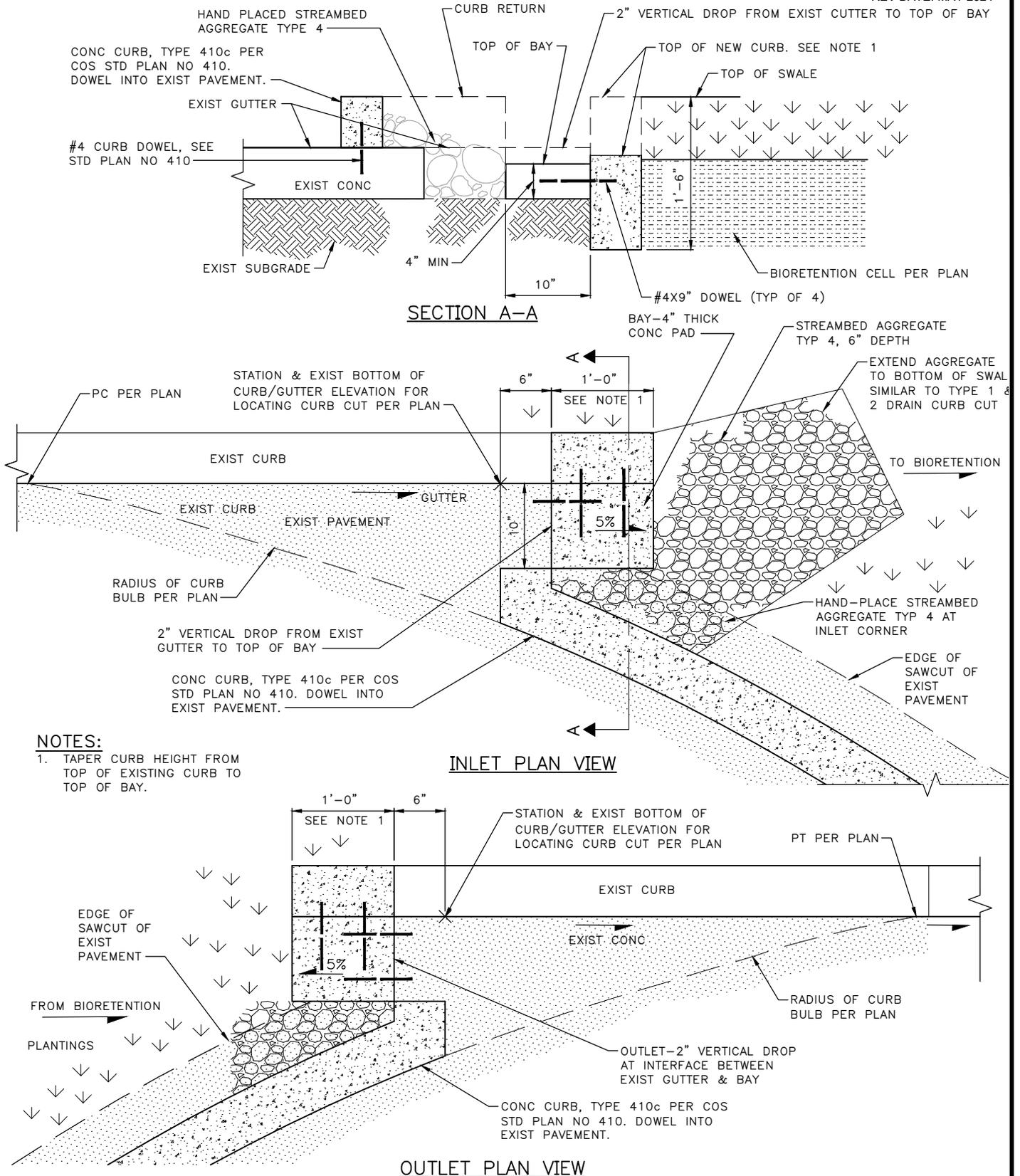
REF STD SPEC SEC 7-21, 8-04, 9-03



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NOT TO SCALE

DRAIN CURB CUT TYPE 2



REF STD SPEC SEC 7-21, 8-04, 9-03



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NOT TO SCALE

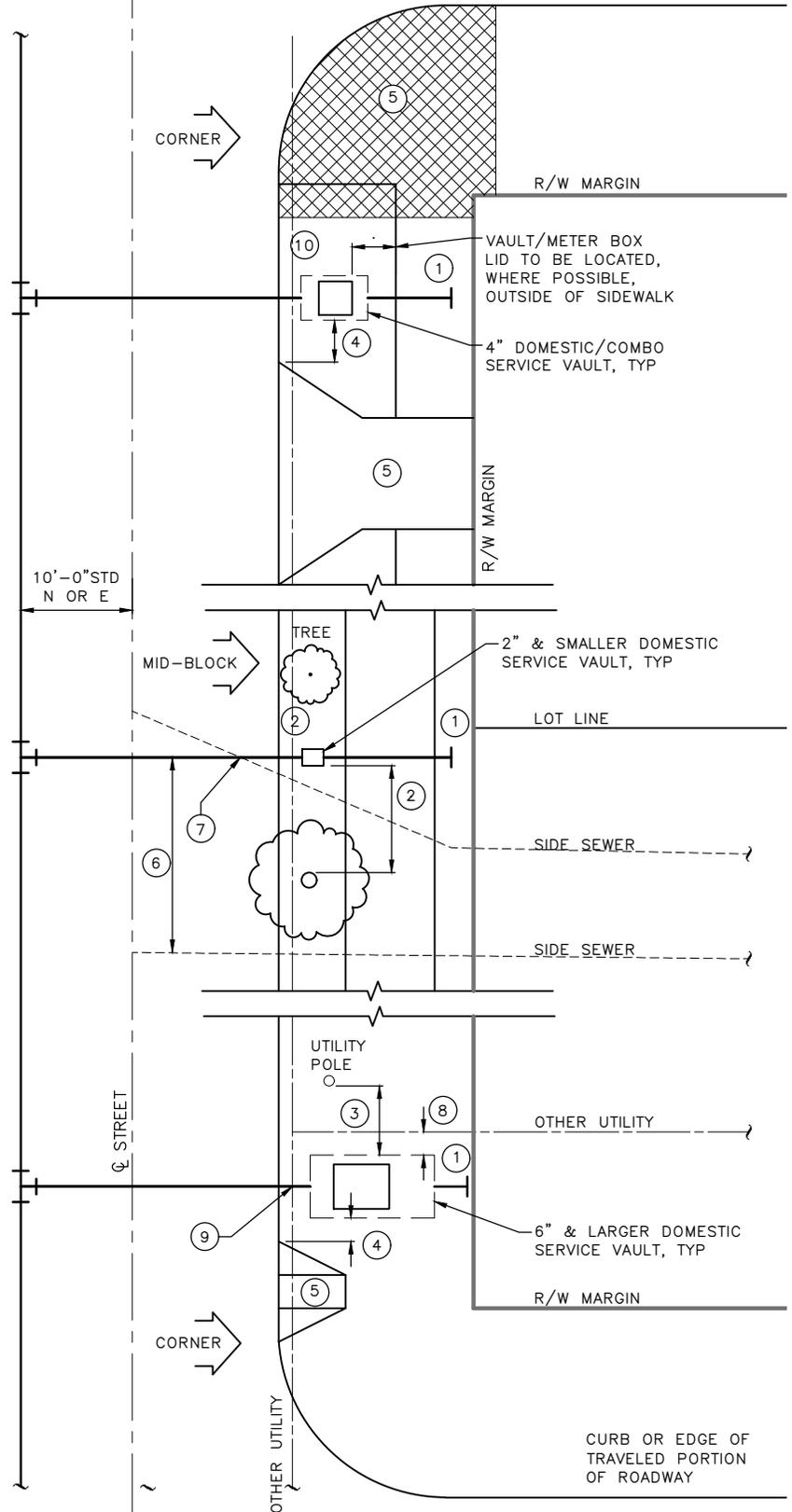
DRAIN CURB CUT TYPE 3

**NOTES:**

- ①. UNION POINT 2' OUTSIDE OF VAULT/METER BOX, 2' FROM R/W MARGIN UNLESS OTHERWISE NOTED ON PLANS.
- ②. 5' CLEARANCE MINIMUM FROM EDGE OF NEW OR EXISTING TREES. IF EXCAVATION IS REQUIRED WITHIN ROOT ZONE OF EXISTING TREES, THE EXCAVATION MUST BE ACCOMPLISHED BY HAND METHODS, CONDUCTED TO PREVENT DAMAGE TO FEEDER AND SURFACE ROOTS, AND MINIMIZE COMPACTION OF SOILS.
- ③. 5' CLEAR FROM EDGE OF POLES.
- ④. 2' CLEAR FROM EDGE OF DRIVEWAY OR ADA RAMP WING.
- ⑤. WATER SERVICE NOT TO BE INSTALLED IN DRIVEWAY, BEHIND ADA RAMP, OR STREET CORNER.
- ⑥. SIDE SEWER HORIZONTAL CLEARANCE 10' FOR CIP, GALVANIZED OR PLASTIC WATER PIPE OR 5' FOR DIP OR COPPER WATER PIPE.
- ⑦. SIDE SEWER VERTICAL CLEARANCE 1.5' MIN.
- ⑧. VAULT HORIZONTAL CLEARANCE 3' MIN FROM OTHER UTILITIES. UNLESS OTHERWISE NOTED IN STD SPECS.
- ⑨. VERTICAL CLEARANCE 12" MIN FOR ALL OTHER UTILITY CROSSINGS UNLESS OTHERWISE NOTED IN STD SPECS.
- ⑩. ALLOWABLE LOCATION OF WATER SERVICE VAULT, 2' MINIMUM CLEAR OF BACK OF CURB.

PERMIT REQUIREMENTS WILL DETERMINE LOCATION AND ORIENTATION OF ALL SERVICE VAULTS & METER BOXES IN THE RIGHT OF WAY. VAULTS & METER BOXES SHOWN ON THIS STD PLAN ARE FOR GRAPHICAL PURPOSES ONLY.

EXCEPTIONS TO THE STANDARDS LOCATIONS REQUIRE CITY REVIEW AND APPROVAL.



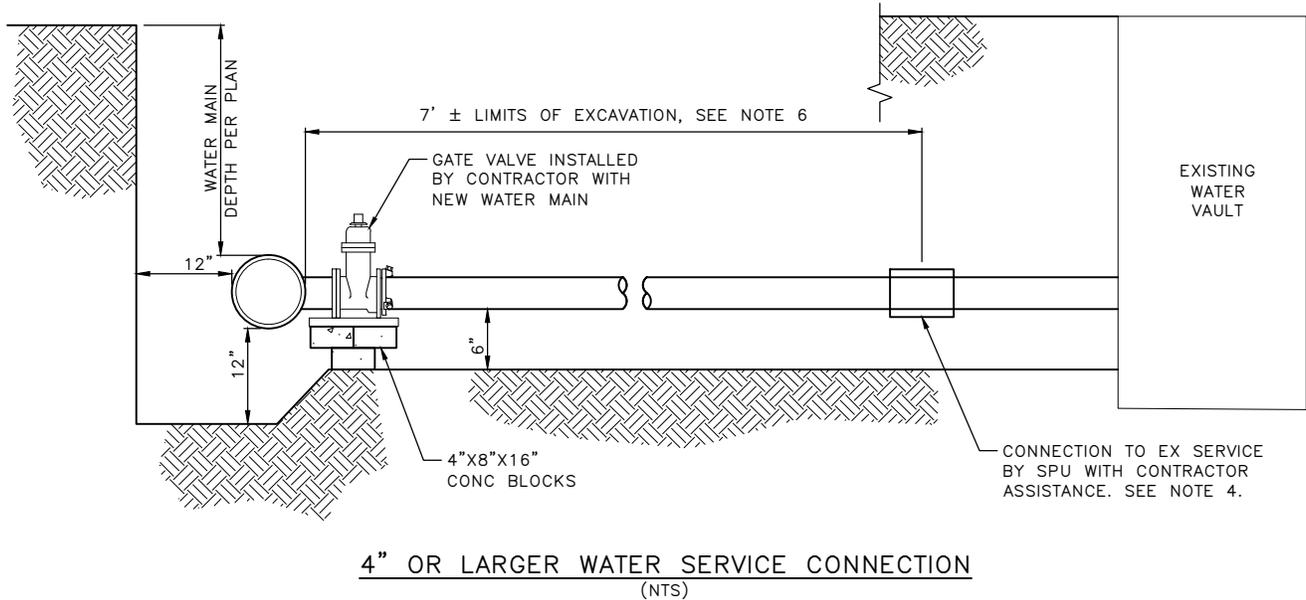
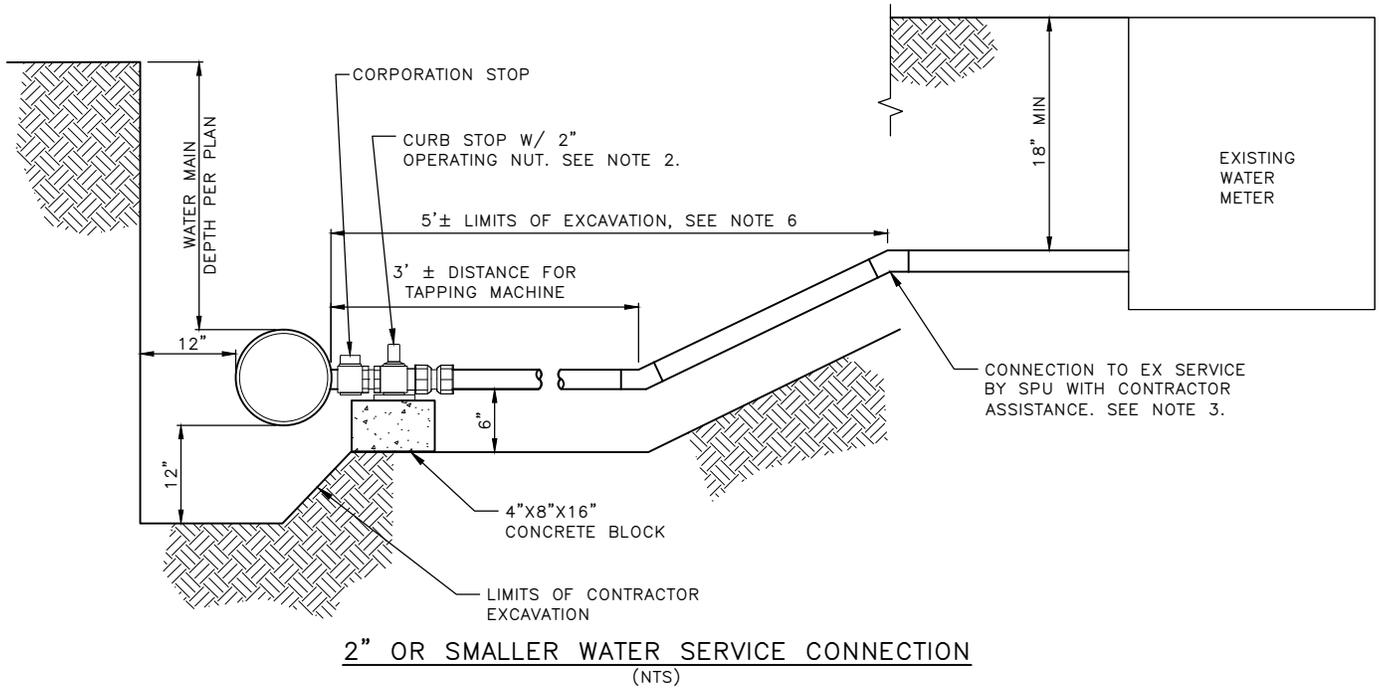
REF STD SPEC SEC 1-07.17(2)



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**CLEARANCES FOR TYPICAL WATER SERVICE VAULTS & METER BOXES**



**NOTES:**

1. SPU PROVIDES MATERIALS, INSTALLS, AND CONNECTS SERVICES 2" AND SMALLER WITH CONTRACTOR ASSISTANCE. CONTRACTOR PROVIDES MATERIALS FOR SERVICES 4" AND LARGER EXCEPT FOR SLEEVE TO EXISTING PIPE. SEE STANDARD SPECIFICATIONS SECTION 7-15.
2. CURB STOP IS INSTALLED FOR 1.5" AND 2" SERVICES. CONTRACTOR TO INSTALL VALVE BOX PER STD PLAN 315.
3. NON-COPPER SERVICES MUST BE RENEWED UP TO THE WATER METER.
4. WHERE INDICATED IN DRAWINGS OR THE WATER SERVICE TABLE, THE WATER SERVICE MUST BE RENEWED TO THE EXISTING VAULT.
5. BEDDING AND BACKFILL OF SERVICE LINES MUST BE THE SAME AS THE WATER MAIN.
6. LIMITS OF EXCAVATION MAY BE LARGER. REFER TO DRAWINGS FOR ACTUAL EXTENTS OF WATER SERVICE INSTALLATION.

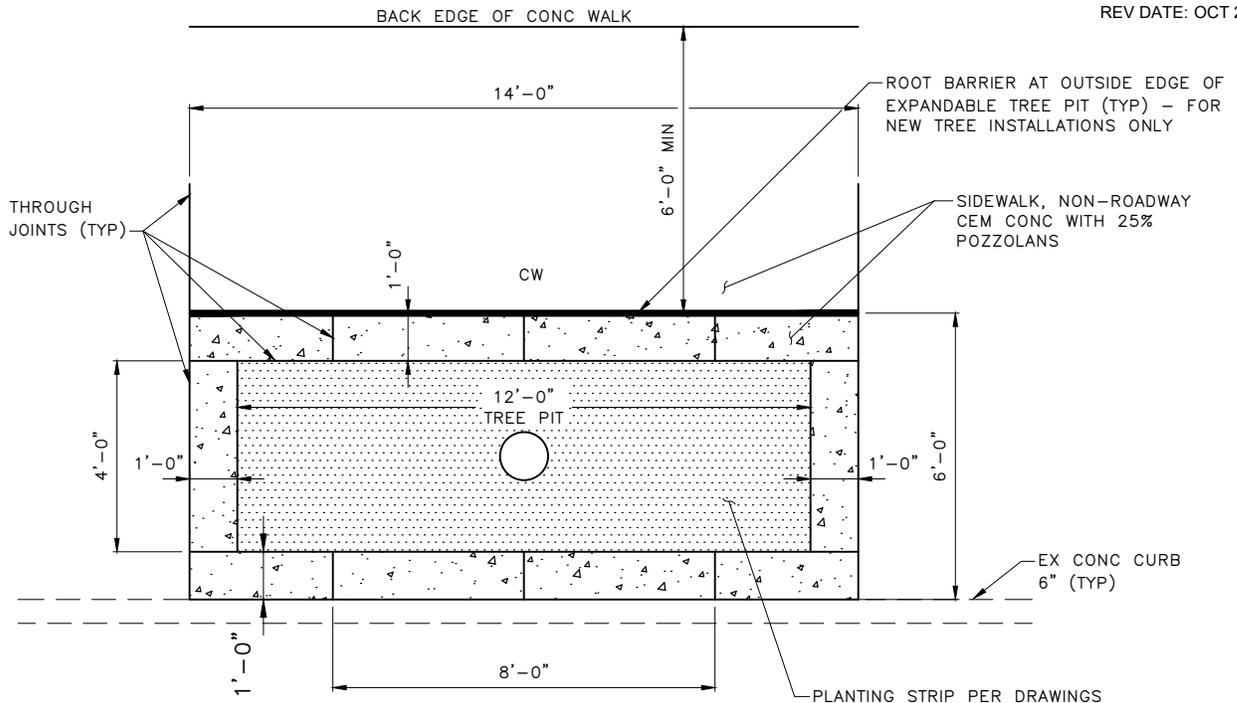
REF STD SPEC SEC 7-11, 7-15



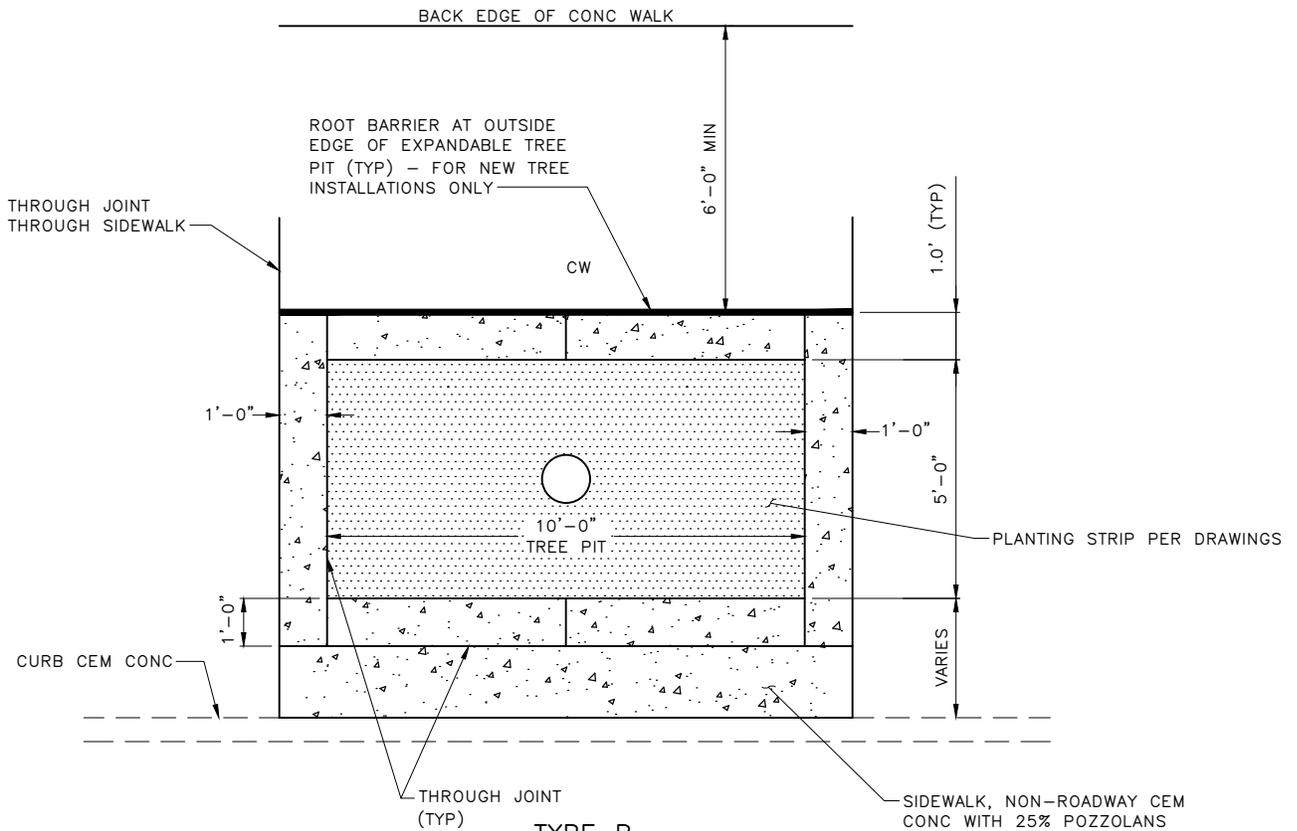
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**WATER SERVICE CONNECTION  
TO NEW WATER MAIN**



TYPE A



TYPE B

NOTES:

1. SEE STD PLAN 420 FOR CW SCORING DETAILS.
2. INSTALL ROOT BARRIER PER STANDARD PLAN NO 100a.
3. WHEN INSTALLING NEW TREE PITS IN EXISTING SIDEWALK, REMOVE SIDEWALK TO FULL PANEL WIDTH. INSTALL TREE PIT AS SHOWN ON THIS DETAIL.

REF STD SPEC SEC 8-02, 8-14

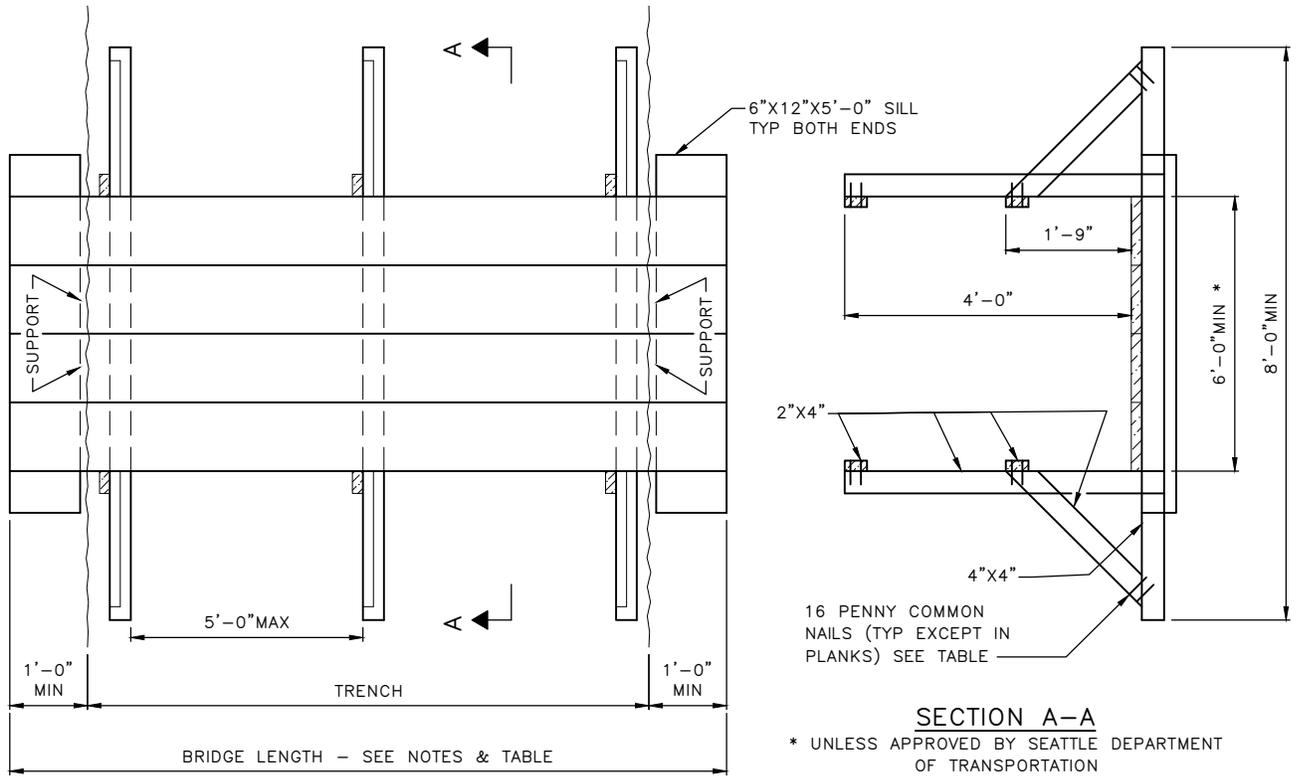


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EXPANDABLE TREE PIT DETAIL

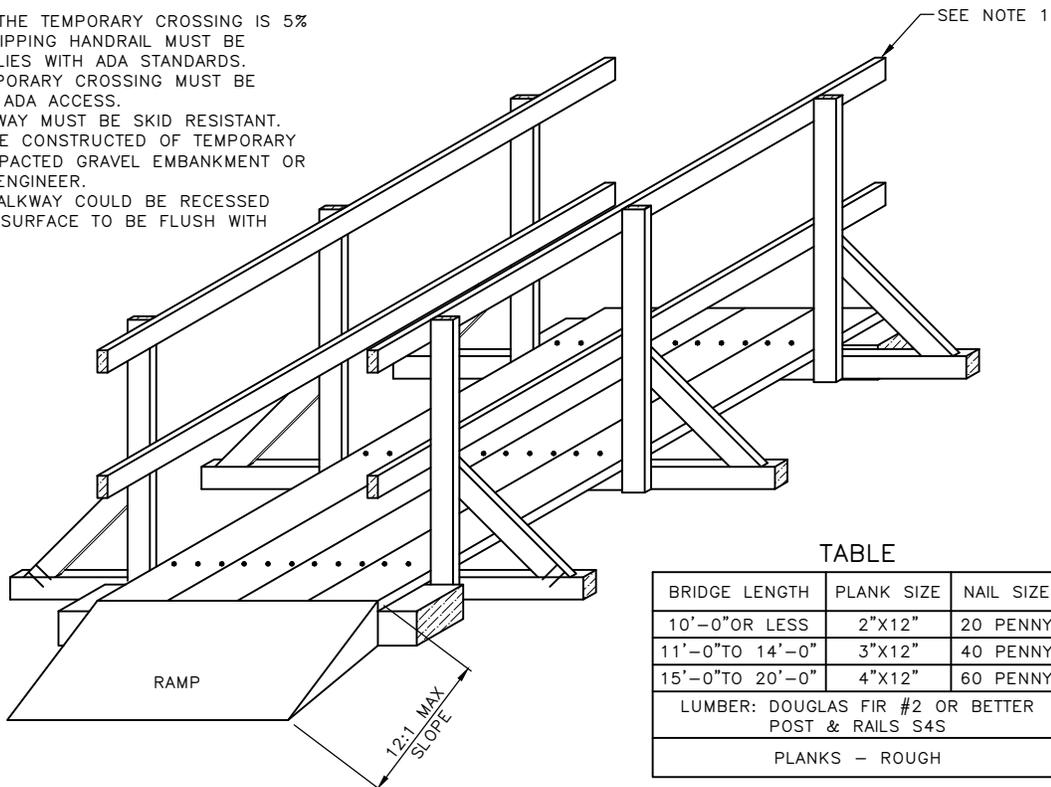




**SECTION A-A**  
 \* UNLESS APPROVED BY SEATTLE DEPARTMENT OF TRANSPORTATION

**NOTES:**

1. IF THE SLOPE OF THE TEMPORARY CROSSING IS 5% OR GREATER, A GRIPPING HANDRAIL MUST BE ADDED THAT COMPLIES WITH ADA STANDARDS.
2. ENDS OF THE TEMPORARY CROSSING MUST BE SLOPED TO ALLOW ADA ACCESS.
3. SURFACE OF WALKWAY MUST BE SKID RESISTANT.
4. THE RAMP MUST BE CONSTRUCTED OF TEMPORARY PAVEMENT OR COMPACTED GRAVEL EMBANKMENT OR AS APPROVED BY ENGINEER.
5. THE TEMPORARY WALKWAY COULD BE RECESSED FOR THE WALKING SURFACE TO BE FLUSH WITH ADJOINING GRADE.



**TABLE**

BRIDGE LENGTH	PLANK SIZE	NAIL SIZE
10'-0" OR LESS	2"X12"	20 PENNY
11'-0" TO 14'-0"	3"X12"	40 PENNY
15'-0" TO 20'-0"	4"X12"	60 PENNY
LUMBER: DOUGLAS FIR #2 OR BETTER POST & RAILS S4S		
PLANKS - ROUGH		

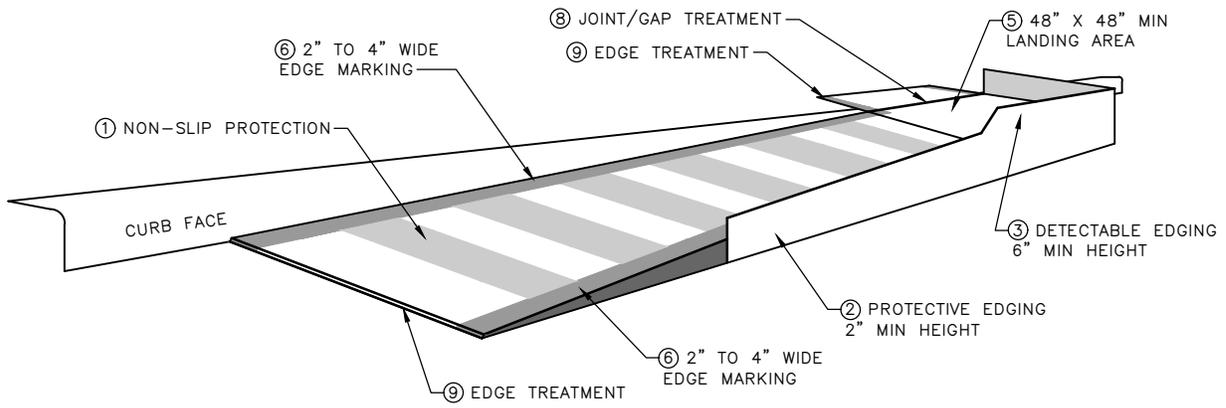
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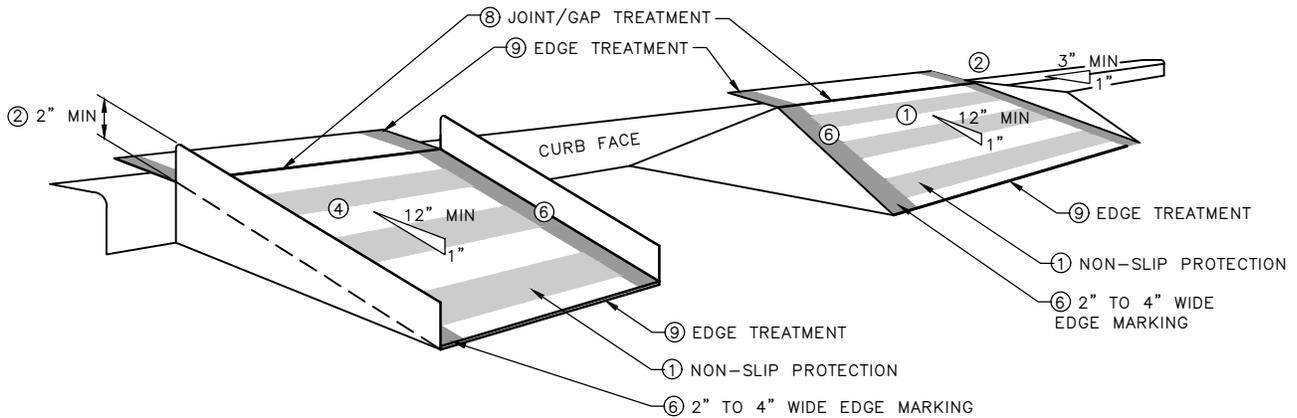
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**TEMPORARY PEDESTRIAN WALKWAY**



**TEMPORARY CURB RAMP  
PARALLEL TO CURB**



**TEMPORARY CURB RAMP  
PERPENDICULAR TO CURB**

**NOTES:**

- ① CURB RAMPS ARE REQUIRED TO BE AT LEAST 36 INCHES WIDE WITH A FIRM, STABLE, AND NON-SLIP SURFACE.
- ② EDGE PROTECTION WITH A TWO-INCH MINIMUM HEIGHT IS REQUIRED FOR RAMPS WITH A RISE GREATER THAN SIX INCHES OR A SIDE APRON SLOPE GREATER THAN 33 PERCENT.
- ③ EDGE PROTECTION IS REQUIRED ON RAMPS WITH A VERTICAL ELEVATION OVER SIX INCHES AND SHOW A CONTRASTING COLOR WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ CURB RAMPS AND LANDINGS ARE REQUIRED TO HAVE A TWO-PERCENT MAXIMUM CROSS SLOPE.
- ⑤ PROVIDE A CLEAR SPACE OF AT LEAST 48 INCHES BY 48 INCHES ABOVE AND BELOW THE CURB RAMP.
- ⑥ MARK THE CURB RAMP WALKWAY EDGE WITH A CONTRASTING COLOR TWO TO FOUR INCHES WIDE UNLESS COLOR-CONTRASTING EDGING IS USED, AS REQUIRED BY ITEM 3 ABOVE.
- ⑦ WATER FLOW IN THE GUTTER SHOULD HAVE MINIMUM RESTRICTION.
- ⑧ LIMIT LATERAL JOINTS OR GAPS BETWEEN SURFACES TO BE LESS THAN HALF AN INCH WIDE.
- ⑨ CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED HALF AN INCH. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 INCHES HIGH AND BEVELED AT 1:2 WHEN BETWEEN 0.25 AND 0.5 INCHES HIGH.

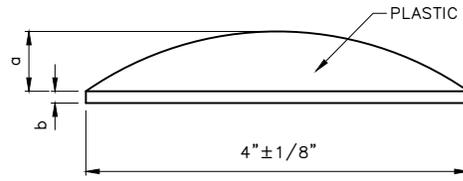
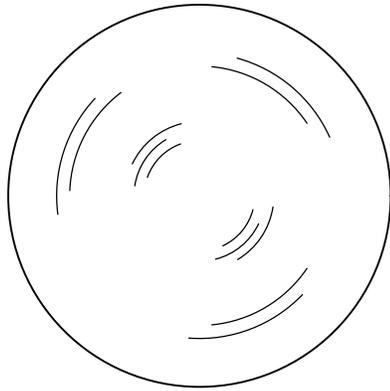
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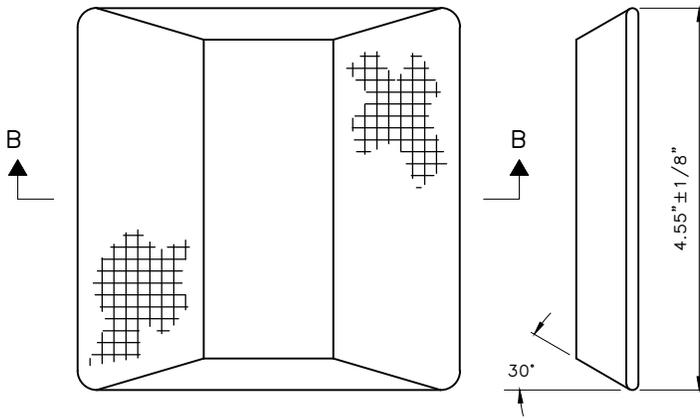
**TEMPORARY PEDESTRIAN  
CURB RAMP**



LANE MARKER-TYPE 1

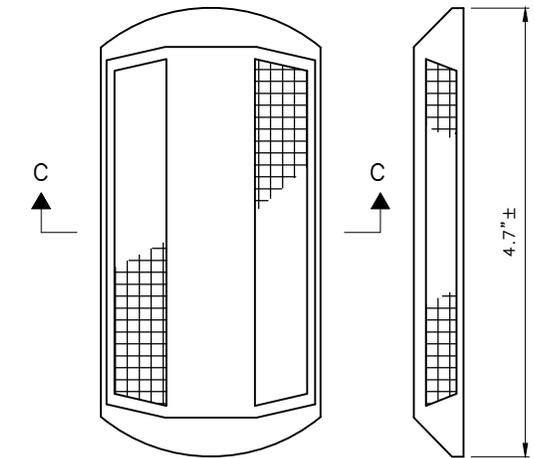
$a = 5/8'' \pm 1/8''$   
 $b = 1/8'' \pm 1/16''$

▲ DIRECTION OF TRAFFIC



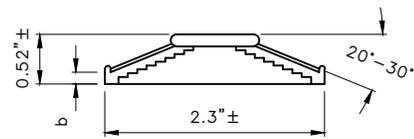
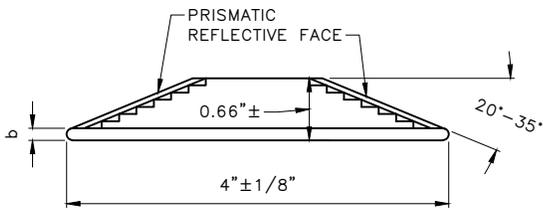
SECTION B-B

LANE MARKER-TYPE 2A  
 4" PRISMATIC REFLECTIVE MARKER



SECTION C-C

LANE MARKER-TYPE 2B



REF STD SPEC SEC 8-08



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TRAFFIC BUTTONS &  
 LANE MARKERS