

**UNIFORM STANDARD
DETAILS**

for

**PUBLIC WORKS
CONSTRUCTION**

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**1998
ARIZONA**

(Includes Revisions for 2011)

Note: Update packet does not include details approved in prior revisions.

100 SERIES: GENERAL INFORMATION (YEAR UPDATED)

- 101 GENERAL INFORMATION (2011)
- 110-1 PLAN SYMBOLS (2011)
- 110-2 PLAN SYMBOLS (2011)
- 112 DIMENSIONING FOR ROAD IMPROVEMENT PLANS
- 120-1 SURVEY MARKER (2001)
- 120-2 SURVEY MARKER-FOR UNINCORPORATED AREAS OF THE COUNTY (2007)
- 122 PAVEMENT MARKER FOR FIRE HYDRANTS (2011)
- 130 BARRICADES (2003)
- 131 STREET SIGN BASE
- 135-1 STEEL GUARD RAIL
- 135-2 STEEL GUARD RAIL
- 135-3 STEEL GUARD RAIL
- 135-4 STEEL GUARD RAIL
- 140 BOLLARD (2009)
- 141 HAZARD MARKER (2009)
- 145 SAFETY RAIL (2011)
- 150 PRECAST SAFETY CURB
- 160 6' CHAIN LINK FENCE AND GATE (2003)
- 170 TYPICAL RUNWAY OR TAXIWAY LIGHTING DETAIL
- 190 ROCK CORRECTION PROCEDURE FOR MAXIMUM DENSITY DETERMINATION

200 SERIES: STREET INFORMATION (YEAR UPDATED)

- 200-1 BACKFILL, PAVEMENT AND SURFACE REPLACEMENT (2010)
- 200-2 BACKFILL, PAVEMENT AND SURFACE REPLACEMENT (2010)
- 201 PAVEMENT SECTION AT TERMINATION (2008)
- 202 ALLEY DETAILS (PAVED AND UNPAVED)
- 203 SCUPPERS
- 204 EQUIPMENT CROSSING
- 205 PAVED TURNOUTS (2006)
- 206-1 CONCRETE SCUPPER (2007)
- 206-2 CONCRETE SCUPPER (2007)
- 206-3 CONCRETE SCUPPER (2007)
- 210 RESIDENTIAL SPEED HUMP (2009)
- 211 STANDARD TRENCH PLATING DETAIL
- 212 UTILITY POTHOLE REPAIR (2011)
- 220-1 CURB AND GUTTER - TYPES 'A', 'B', 'C', AND 'D' (2007)
- 220-2 CURB AND GUTTER - TYPES 'E' AND 'F' (2007)
- 221 CURB AND GUTTER TRANSITION TYP A TO TYPE C INTEGRAL ROLL CURB, GUTTER AND SIDEWALK (2011)
- 222 SINGLE CURB - TYPES 'A', 'B' AND TERMINATION (2008)
- 223 MEDIAN NOSE TRANSITION
- 224 JOINT FOR DRAINAGE INLETS AND MANHOLE COVERS
- 225 CONCRETE PAVERS (2005)
- 230 SIDEWALKS (2011)

200 SERIES: STREET INFORMATION-CONTINUED

- 235-1 CURB RAMPS - TYPE 'A' (2011)
- 235-2 CURB RAMPS - TYPE 'B' (2011)
- 235-3 CURB RAMPS - TYPE 'C' (2011)
- 235-4 CURB RAMPS - TYPE 'D' (2011)
- 235-5 CURB RAMPS - TYPE 'E' (2011)
- 240 VALLEY GUTTER (2010)
- 250-1 DRIVEWAY ENTRANCES WITH DETACHED SIDEWALK (2009)
- 250-2 DRIVEWAY ENTRANCES WITH SIDEWALK ATTACHED TO CURB (2009)
- 251 RETURN TYPE DRIVEWAYS (2003)
- 252 BUS AND PARKING BAYS (2005)
- 260 ALLEY ENTRANCE (WITH COMBINED CURB AND GUTTER) (2006)
- 261 ALLEY ENTRANCE (WITH ROLL TYPE CURB AND GUTTER) (2006)
- 262 WING TYPE ALLEY ENTRANCE (WITH COMB. CURB & GUTTER) (2006)
- 263 WING TYPE ALLEY ENTRANCE (WITH ROLL CURB & GUTTER) (2002)
- 270 FRAME AND COVER (AND GRADE ADJUSTMENTS) (2001)

300 SERIES: WATER INFORMATION (YEAR UPDATED)

- 301 BLOCKING FOR WATER GATE AND BUTTERFLY VALVES
- 302-1 JOINT RESTRAINT WITH TIE RODS
- 302-2 JOINT RESTRAINT WITH TIE RODS
- 303-1 JOINT RESTRAINT FOR DUCTILE IRON AND POLYETHYLENE WRAPPED DUCTILE IRON WATER PIPES
- 303-2 JOINT RESTRAINT FOR DUCTILE IRON AND POLYETHYLENE WRAPPED DUCTILE IRON WATER PIPES
- 310 CAST IRON WATER METER BOX COVER NO. 1
- 311 CAST IRON WATER METER BOX COVER NO. 2
- 312 CAST IRON WATER METER BOX COVER NO. 3
- 313 CAST IRON WATER METER BOX COVER NO. 4
- 314 CAST IRON WATER METER BOX COVER NO. 5
- 320 CONCRETE WATER METER BOXES
- 321 STANDARD WATER METER VAULT
- 340 INSTALLING TAPPING SLEEVES AND VALVES
- 342 CONCRETE PRESSURE PIPE TAPPING SLEEVE
- 345-1 3", 4", 6" WATER METER
- 345-2 4", 6", WATER METER WITH ON-SITE FIRE HYDRANTS
- 346 FIRE LINE DETECTOR CHECK VAULT
- 360 FIRE HYDRANT INSTALLATION (2008)
- 362 LOCATIONS FOR NEW HYDRANTS
- 370 VERTICAL REALIGNMENT OF WATER MAINS
- 380 THRUST BLOCKS FOR WATER LINES
- 381 ANCHOR BLOCKS FOR VERTICAL BENDS
- 389 CURB STOP WITH VALVE BOX AND COVER (2001)
- 390 CURB STOP WITH FLUSHING PIPE
- 391-1 VALVE BOX INSTALLATION AND GRADE ADJUSTMENT (2001)
- 391-2 VALVE BOX INSTALLATION (2001)
- 392 DEBRIS CAP INSTALLATION (2001)

DETAIL NO.

100-1



STANDARD DETAIL
ENGLISH

INDEX (PAGE 1 OF 2)

DETAIL NO.

100-1

400 SERIES: SEWER INFORMATION (YEAR UPDATED)

- 402 ENCASED PIPE FOR CANAL CROSSINGS
- 403-1 PIPE SUPPORTS ACROSS TRENCHES
- 403-2 PIPE SUPPORTS ACROSS TRENCHES
- 403-3 ALTERNATE TO PIPE SUPPORT
- 404-1 WATER AND SANITARY SEWER SEPARATION/PROTECTION (2006)
- 404-2 WATER AND SANITARY SEWER SEPARATION/PROTECTION (2006)
- 404-3 WATER AND SANITARY SEWER SEPARATION/PROTECTION (2006)
- 405 BROKEN SEWER LINE REPLACEMENT
- 420-1 PRE-CAST CONCRETE SEWER MANHOLE (2004)
- 420-2 PRE-CAST CONCRETE SEWER MANHOLE (2001)
- 421 OFFSET MANHOLE FOR 8" - 30" PIPE
- 422 BRICK SEWER MANHOLE & COVER FRAME ADJUSTMENT (2001)
- 423 WATER TIGHT 30" MANHOLE FRAME AND COVER
- 424 24" AND 30" MANHOLE FRAME AND COVER
- 425 24" ALUMINUM MANHOLE FRAME AND COVER
- 426 DROP SEWER CONNECTIONS (2007)
- 427 STUB OUT AND PLUGS
- 428 MANHOLE STEPS
- 429 INDUSTRIAL WASTE CONTROL VAULT WITH MANHOLE
- 440-1 SEWER BUILDING CONNECTIONS - TYPE 'A'
ELECTRONIC BALL MARKERS (STANDARD) (2007)
- 440-2 SEWER BUILDING CONNECTIONS - TYPE 'B'
TWO-WAY CLEANOUT AND METER BOX AT R/W (2007)
- 440-3 SEWER BUILDING CONNECTIONS - TYPE 'C'
ONE-WAY CLEANOUT AND METER BOX (2007)
- 440-4 SEWER SERVICE CURB CROSSING STAMP DETAIL (2006)
- 441 SEWER CLEANOUT (2001)

500 SERIES: IRRIGATION AND STORM DRAIN INFORMATION (YEAR UPDATED)

- 501-1 HEADWALL
- 501-2 HEADWALL
- 501-3 HEADWALL - 42" TO 84" PIPE
- 501-4 HEADWALL IRRIGATION 18" TO 60" PIPE
- 501-5 HEADWALL - DROP INLET
- 502-1 TRASH RACK
- 502-2 TRASH RACK (2004)
- 503 IRRIGATION STANDPIPE
- 504 CONCRETE BLOCK JUNCTION BOX
- 505 CONCRETE PIPE COLLAR
- 506 IRRIGATION VALVE INSTALLATION
- 507 ENCASED CONCRETE PIPE (SHALLOW INSTALLATION)
- 510 CORRUGATED METAL PIPE AND INSTALLATION
- 520 STORM DRAIN MANHOLE BASE (48" OR SMALLER)
- 521 STORM DRAIN MANHOLE BASE (51" OR LARGER)
- 522 STORM DRAIN MANHOLE SHAFT
- 523-1 PRESSURE MANHOLE
- 523-2 PRESSURE MANHOLE
- 524 STORM DRAIN LATERAL PIPE CONNECTIONS
- 530 3'-6" CURB OPENING CATCH BASIN - TYPE 'A'
- 531 5'-6" CURB OPENING CATCH BASIN - TYPE 'B'
- 532 8' CURB OPENING CATCH BASIN - TYPE 'C'
- 533-1 CATCH BASIN TYPE 'D'
- 533-2 CATCH BASIN TYPE 'D'
- 533-3 CATCH BASIN TYPE 'D' (2007)
- 533-4 7'-0" CURB OPENING CATCH BASIN TYPE 'D' GRATE (2007)
- 534-1 CATCH BASIN - TYPE 'E'
- 534-2 CATCH BASIN - TYPE 'E' (DETAILS)
- 534-3 CATCH BASIN - TYPE 'E' (DETAILS)
- 534-4 CATCH BASIN - TYPE 'E' (DETAILS)
- 534-5 ALTERNATE GRATE STYLES - SUMP LOCATION
- 535 CATCH BASIN - TYPE 'F' - FOR USE WITHOUT CURB (2009)
- 536-1 COMMON DETAILS AND SECTIONS FOR CURB OPENING CATCH BASINS
- 536-2 ALTERNATE COVER FOR CURB OPENING CATCH BASINS
- 537 CATCH BASIN - TYPE 'G' (2002)
- 538 CATCH BASIN - TYPE 'H'
- 539 GRATES FOR CATCH BASINS - TYPE 'G' AND 'H'
- 540-1 CATCH BASIN GRATES
- 540-2 CATCH BASIN GRATES
- 541 CATCH BASIN SUBGRADE DRAIN (2005)
- 545 END SECTION - REINFORCED CONCRETE PIPE
- 550 SPILLWAY INLET AND OUTLET
- 552 CONCRETE CUT-OFF WALLS (2009)
- 555 EROSION PROTECTION/GABIONS (2010)

DETAIL NO.

100-2



STANDARD DETAIL
ENGLISH

INDEX (PAGE 2 OF 2)

DETAIL NO.

100-2

1. THESE DETAILS HAVE BEEN PREPARED IN AN EFFORT TO STANDARDIZE THE CONSTRUCTION DETAILS USED BY VARIOUS CONTRACTING AGENCIES IN MARICOPA COUNTY. THEY ARE TO BE USED IN CONJUNCTION WITH THE CURRENT EDITION OF THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" SPONSORED DISTRIBUTED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS.
2. MANY NOTES WITHIN THESE DETAILS REFER TO VARIOUS SECTIONS OF THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION." WHERE THIS REFERENCE IS MADE, ONLY THE ABBREVIATION "SECT." IS USED. AN EXAMPLE OF THIS REFERENCE WOULD BE: "CLASS 'A' CONCRETE PER SECT. 725."
3. MANY NOTES WITHIN THESE DETAILS REFER TO OTHER DETAILS WITHIN THIS BOOK. WHERE THIS REFERENCE IS MADE, THE ABBREVIATION "DETAIL" IS USED. AN EXAMPLE OF THIS WOULD BE: "SEE DETAIL 391 FOR VALVE BOX INSTALLATION."
4. MANY DETAILS COVER MORE THAN ONE SHEET. THESE SHEETS HAVE BEEN GIVEN THE SAME NUMBER WITH A SUFFIX NUMBER, EXAMPLE: 391-1 AND 391-2.
5. AN EFFORT HAS BEEN MADE TO INCLUDE THE MOST COMMONLY USED CONSTRUCTION DETAILS IN THIS BOOK. ITEMS WHICH REQUIRE DESIGN CONSIDERATION BY THE DESIGNING ENGINEER HAVE NOT BEEN INCLUDED.
6. SOME OF THE DETAILS PRINTED HEREIN MAY BE USED BY SOME OF THE AGENCIES BUT NOT OTHERS. THE DESIGNING ENGINEER SHOULD THEREFORE CONTACT THE AGENCY WITHIN WHOSE JURISDICTION HE IS WORKING FOR DIRECTION AS TO WHICH DETAIL OR PORTIONS OF DETAILS SHOULD BE USED.
7. DETAIL DRAWINGS ARE NOT TO SCALE.

DETAIL NO.

101



MARICOPA
ASSOCIATION of
GOVERNMENTS

STANDARD DETAIL
ENGLISH

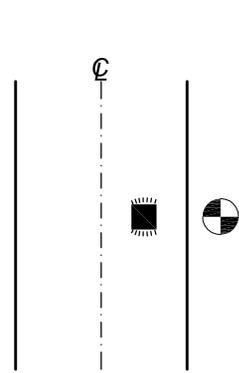
GENERAL INFORMATION

REVISED

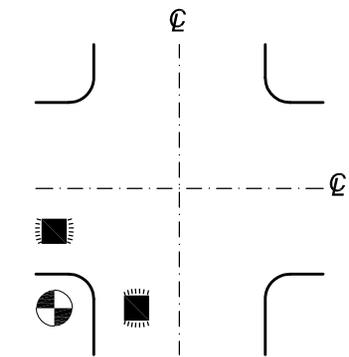
01-01-2011

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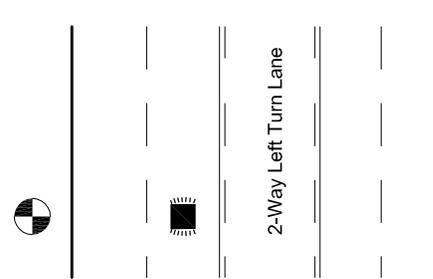
101



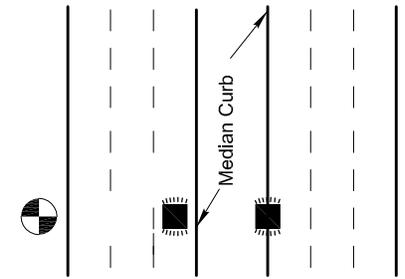
LOCAL STREET



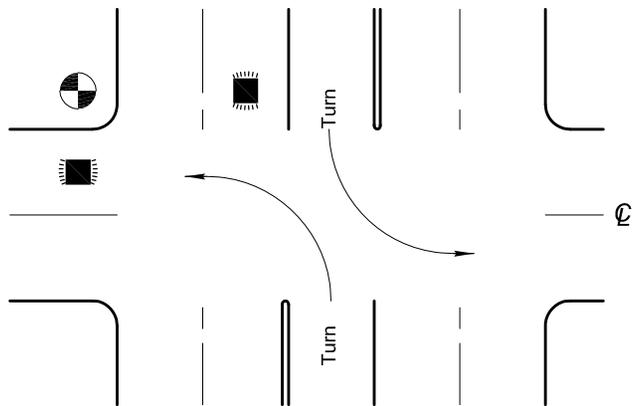
LOCAL CROSS STREET INTERSECTION



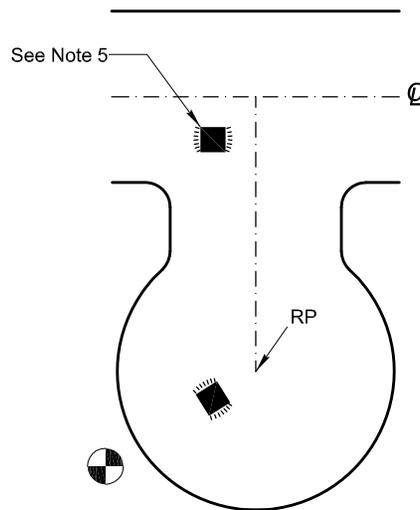
MULTI-LANE STREET W/ TWO WAY LEFT TURN LANE



MULTI-LANE STREET W/ RAISED MEDIAN



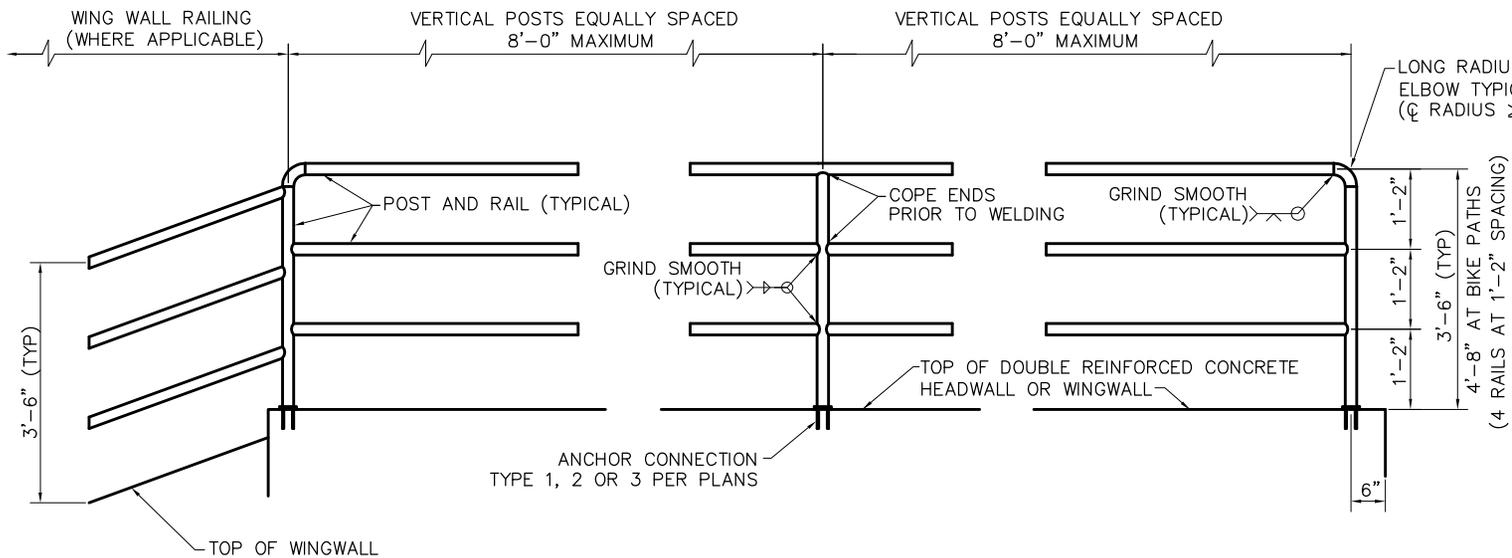
FOUR LANE STREET WITH TURN LANE AT INTERSECTION



CUL-DE-SAC

NOTES:

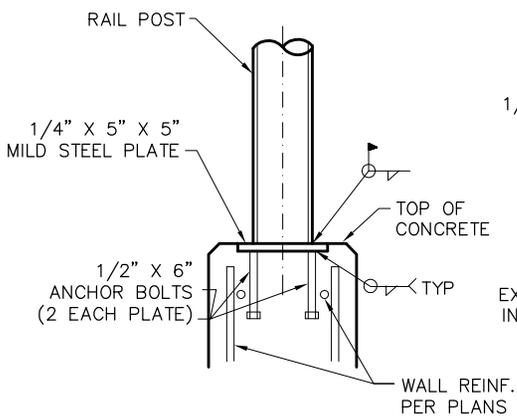
1. LOCATE PAVEMENT MARKER IN CENTER OF TRAVEL LANE AND ALIGN WITH HYDRANT.
2. FOR MULTIPLE LANE ROADS LOCATE PAVEMENT MARKER IN LEFT MOST THROUGH TRAFFIC LANE.
3. ADJUST MARKER LOCATION TO BE LOCATED OUTSIDE OF ANY DELINEATED CROSSWALK AREA.
4. FOR HYDRANT LOCATED ON FAR SIDE OF RAISED MEDIAN, LOCATE PAVEMENT MARKER ON TOP OF MEDIAN CURB ALIGNED WITH HYDRANT.
5. OMIT FOR CUL-DE-SAC GREATER THAN 250' IN LENGTH.
6. FIRE HYDRANT PAVEMENT MARKERS SHALL BE 2-WAY RETROREFLECTIVE BLUE: ADOT TYPE BB, 911A-BLUE BY FIRE LITE AMERACE CORPORATION, OR APPROVED EQUAL.



ELEVATION

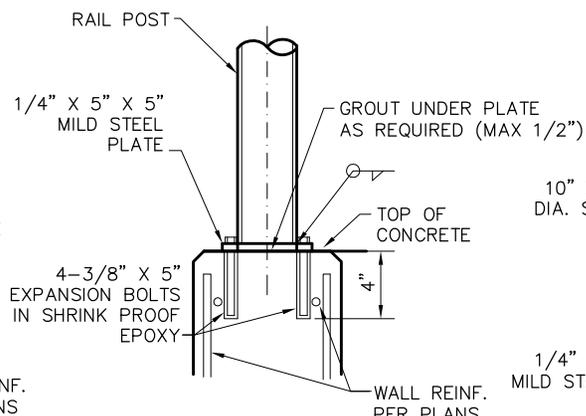
NOTES:

1. POSTS AND RAILS SHALL BE 1.5" SCHEDULE 40 HOT-DIPPED GALVANIZED STEEL PIPE ASTM A 53, GRADE B (2.72 #/LF, 1.9" O.D.). GALVANIZING SHALL BE IN ACCORDANCE WITH SECTION 771.
2. PAINT RAIL PER MAG SPECIFICATIONS SECTION 530 WHEN REQUIRED BY PLANS. SHOP PRIME WITH RUST INHIBITING PRIMER (FIELD REPAIR PRIMER AS NEEDED). COLOR PER PLANS.
3. VERTICAL POSTS TO BE EVENLY SPACED.
4. REMOVE ALL SHARP EDGES.
5. INSTALL SAFETY RAIL AS REQUIRED BY PLANS OR SPECIFICATIONS.
6. THE EMBEDMENT FOR ANCHOR TYPES 1, 2 AND 3 SHALL BE LOCATED INSIDE THE WALL REINFORCEMENT CAGE.
7. SAFETY RAIL IS NOT TO BE USED AS A PEDESTRIAN BRIDGE RAIL.



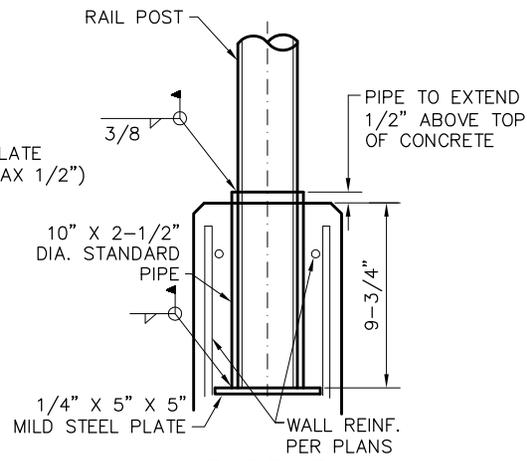
TYPE 1

ANCHOR PLATE DETAIL



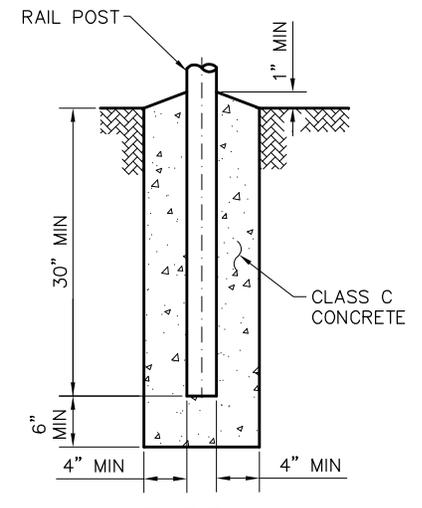
TYPE 2

EXPANSION BOLT DETAIL



TYPE 3

PIPE SLEEVE DETAIL



TYPE 4

GROUND INSTALLATION DETAIL

NOTE: SEE PLANS FOR ANCHORAGE DETAILS FOR ATTACHMENT TO SINGULARLY REINFORCED AND NON-REINFORCED WALLS.

DETAIL NO.

145



STANDARD DETAIL
ENGLISH

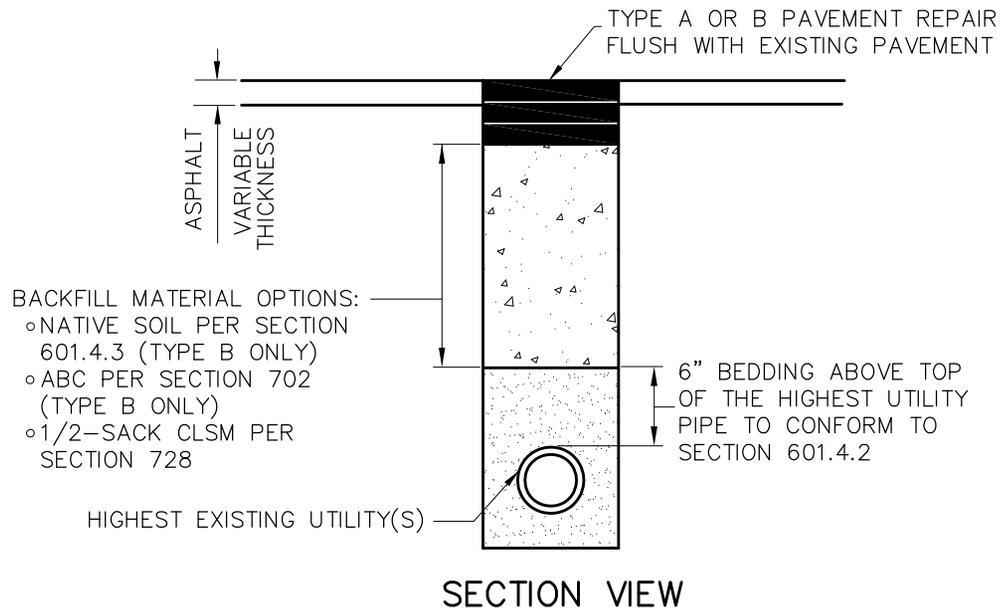
SAFETY RAIL

REVISED

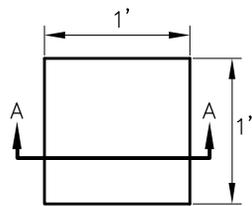
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DETAIL NO.

145



TYPE A PAVEMENT REPAIR

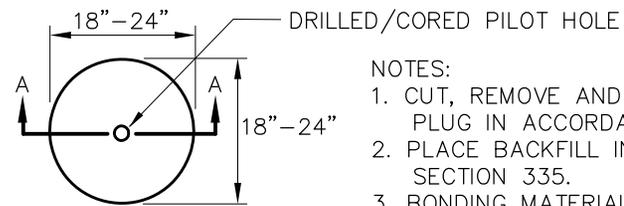


PLAN VIEW

NOTES:

1. DIMENSIONS ARE NOMINAL.
2. EDGES SHALL BE CUT TO A NEAT VERTICAL FACE.
3. PLACE CLSM BACKFILL IN ACCORDANCE WITH SECTION 604.
4. PLACE AGENCY-APPROVED ASPHALT CONCRETE IN MAXIMUM 2" LIFTS.

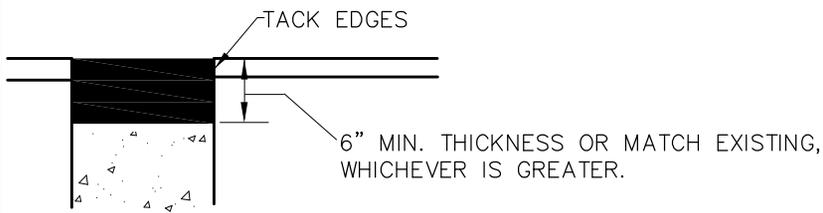
TYPE B PAVEMENT REPAIR



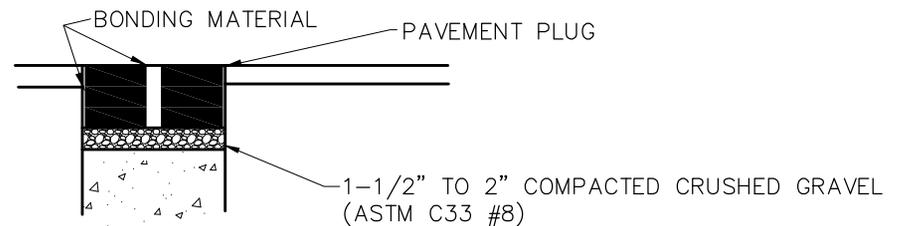
PLAN VIEW

NOTES:

1. CUT, REMOVE AND REPLACE PAVEMENT PLUG IN ACCORDANCE WITH SECTION 335.
2. PLACE BACKFILL IN ACCORDANCE WITH SECTION 335.
3. BONDING MATERIAL SHALL BE AS SPECIFIED IN SECTION 708.

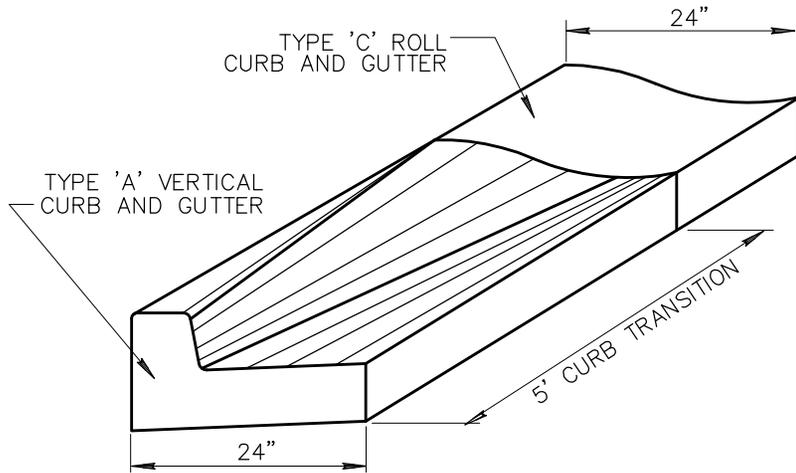


SECTION A-A

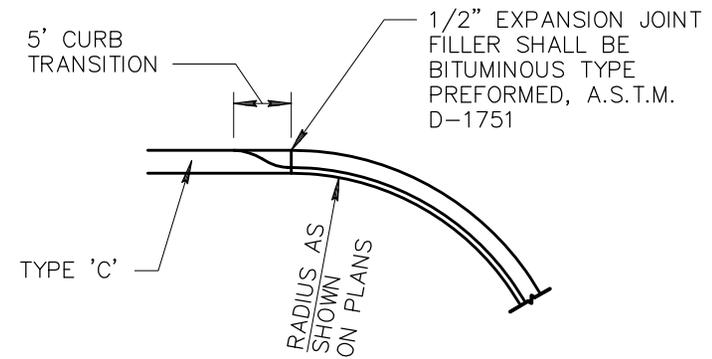


SECTION A-A

CURB TRANSITION TYPE 'A' TO TYPE 'C'



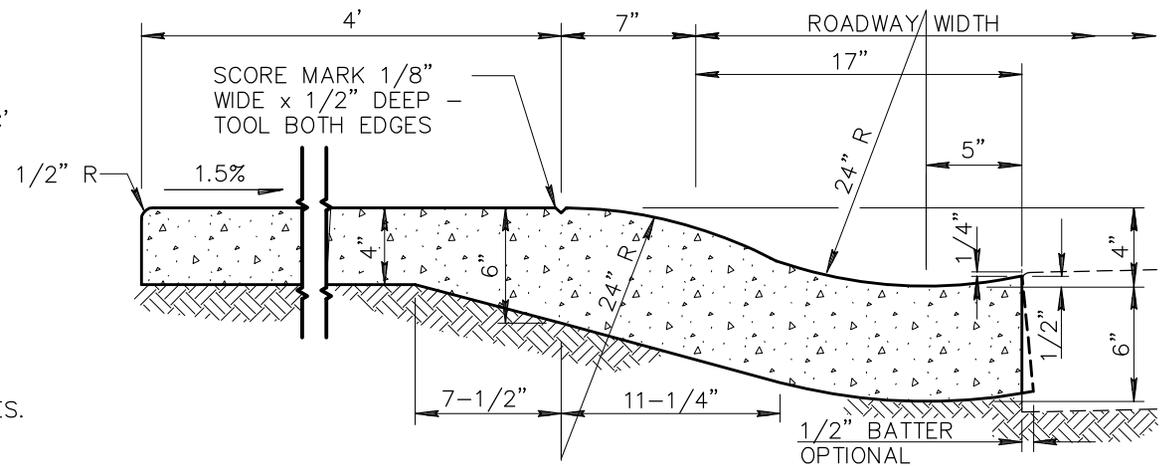
CURB AND GUTTER TRANSITION



NOTES: (CURB AND GUTTER TRANSITIONS)

1. TRANSITIONS WILL BE PAID FOR AS THE PREDOMINANT TYPE OF CURB AND GUTTER BEING TRANSITIONED. WHEN TYPE 'A' CURB AND GUTTER ARE USED AT CURB RETURNS AND TYPE 'C' CURB AND GUTTER IS PREDOMINANTLY USED ELSEWHERE, THE TYPE 'A' TO TYPE 'C' TRANSITIONS SHALL BE MEASURED AND PAID FOR AS TYPE 'C' CURB AND GUTTER.
2. WHERE PROPOSED CONSTRUCTION IS TO BE CONNECTED TO EXISTING CURB AND GUTTER, THE TRANSITION SHALL BE INDICATED ON PLANS.
3. CLASS 'B' CONCRETE PER SECT. 725.
4. TRANSITION BETWEEN TYPICAL SECTIONS SHALL BE ACCOMPLISHED BY THE USE OF DIRECT STRAIGHT LINE TRANSITIONS OF THE FLOW LINE AND OTHER SURFACE FEATURES.

INTEGRAL ROLL CURB, GUTTER AND SIDEWALK



NOTES: (INTEGRAL ROLL CURB, GUTTER AND SIDEWALK)

1. CONCRETE TO BE MONOLITHIC POUR. EXPOSED SURFACE FINISH AS PER SIDEWALK AND GUTTER DETAIL.
2. CONTRACTION JOINT SPACING 5' MAXIMUM.
3. EXPANSION JOINTS PER SECT. 340.
4. CLASS 'B' CONCRETE PER SECT. 725.

DETAIL NO.

221



STANDARD DETAIL
ENGLISH

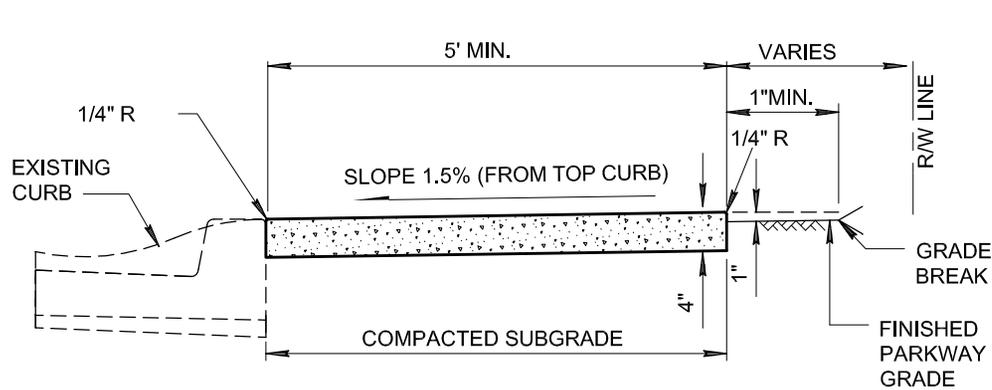
CURB AND GUTTER TRANSITION TYPE A TO TYPE C
INTEGRAL ROLL CURB, GUTTER AND SIDEWALK

REVISED

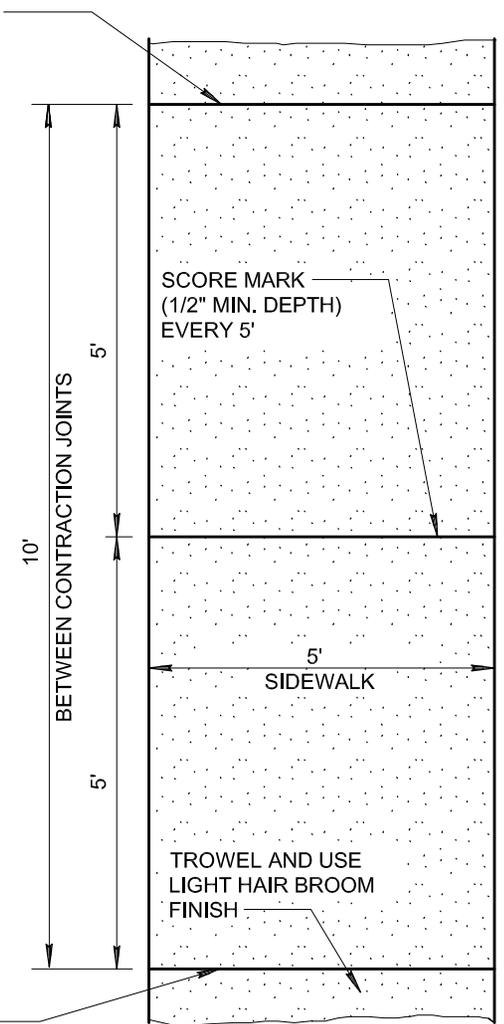
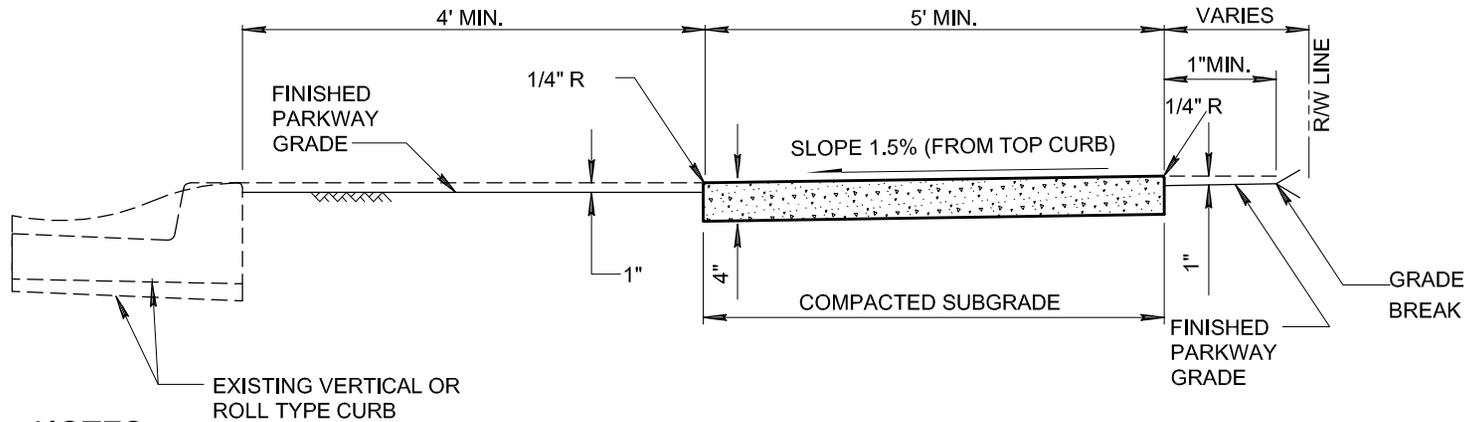
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DETAIL NO.

221



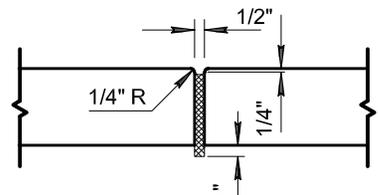
CURB AND GUTTER
CONTRACTION JOINT
SHALL MATCH
SIDEWALK JOINT



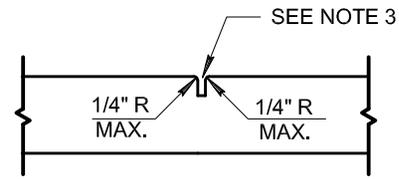
NOTES:

1. SIDEWALK CONSTRUCTION SHALL CONFORM TO SECTION 340.
2. EXPANSION JOINTS SHALL BE 1/2" BITUMINOUS TYPE PREFORMED EXPANSION JOINT FILLER, A.S.T.M. D-1751.
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'. THE EXPANSION JOINT MUST PROVIDE COMPLETE SEPERATION OF THE SIDEWALK FROM ADJOINING CONCRETE.
5. CONCRETE SHALL BE CLASS 'B' PER SECTION 725.
6. WHEN SIDEWALK AND ADJACENT CURB ARE INSTALLED MONOLITHICALLY, THE MID-POINT SCORE LINE SHALL EXTEND ACROSS THE CURB.

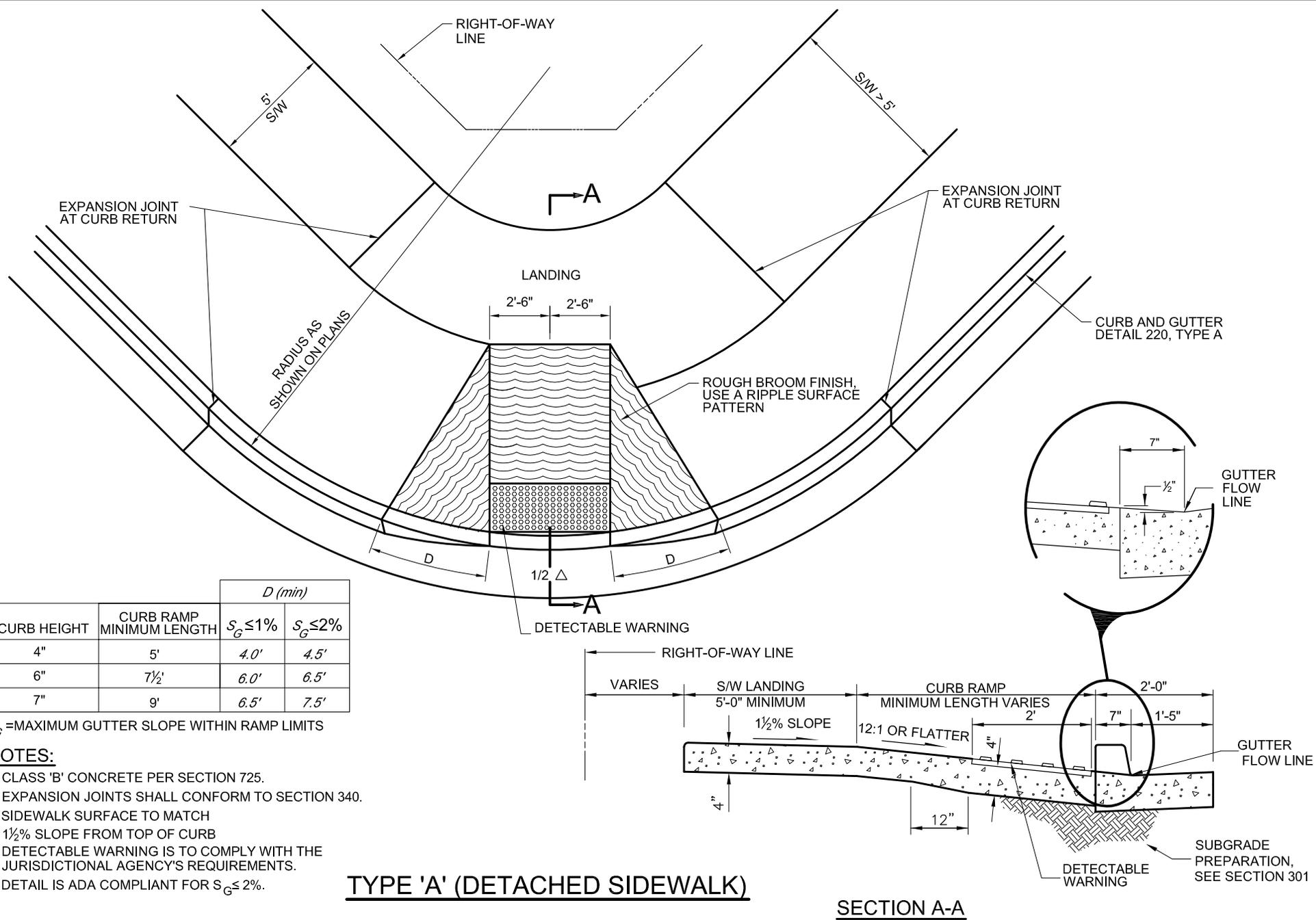
CURB AND GUTTER
CONTRACTION JOINT
SHALL MATCH
SIDEWALK JOINT



EXPANSION JOINT



CONTRACTION JOINT



CURB HEIGHT	CURB RAMP MINIMUM LENGTH	<i>D (min)</i>	
		$S_G \leq 1\%$	$S_G \leq 2\%$
4"	5'	4.0'	4.5'
6"	7½'	6.0'	6.5'
7"	9'	6.5'	7.5'

S_G = MAXIMUM GUTTER SLOPE WITHIN RAMP LIMITS

NOTES:

1. CLASS 'B' CONCRETE PER SECTION 725.
2. EXPANSION JOINTS SHALL CONFORM TO SECTION 340.
3. SIDEWALK SURFACE TO MATCH 1½% SLOPE FROM TOP OF CURB
4. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENTS.
5. DETAIL IS ADA COMPLIANT FOR $S_G \leq 2\%$.

TYPE 'A' (DETACHED SIDEWALK)

SECTION A-A

DETAIL NO.

235-1

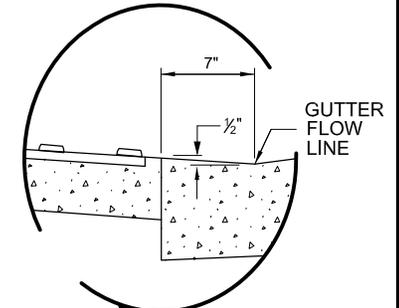
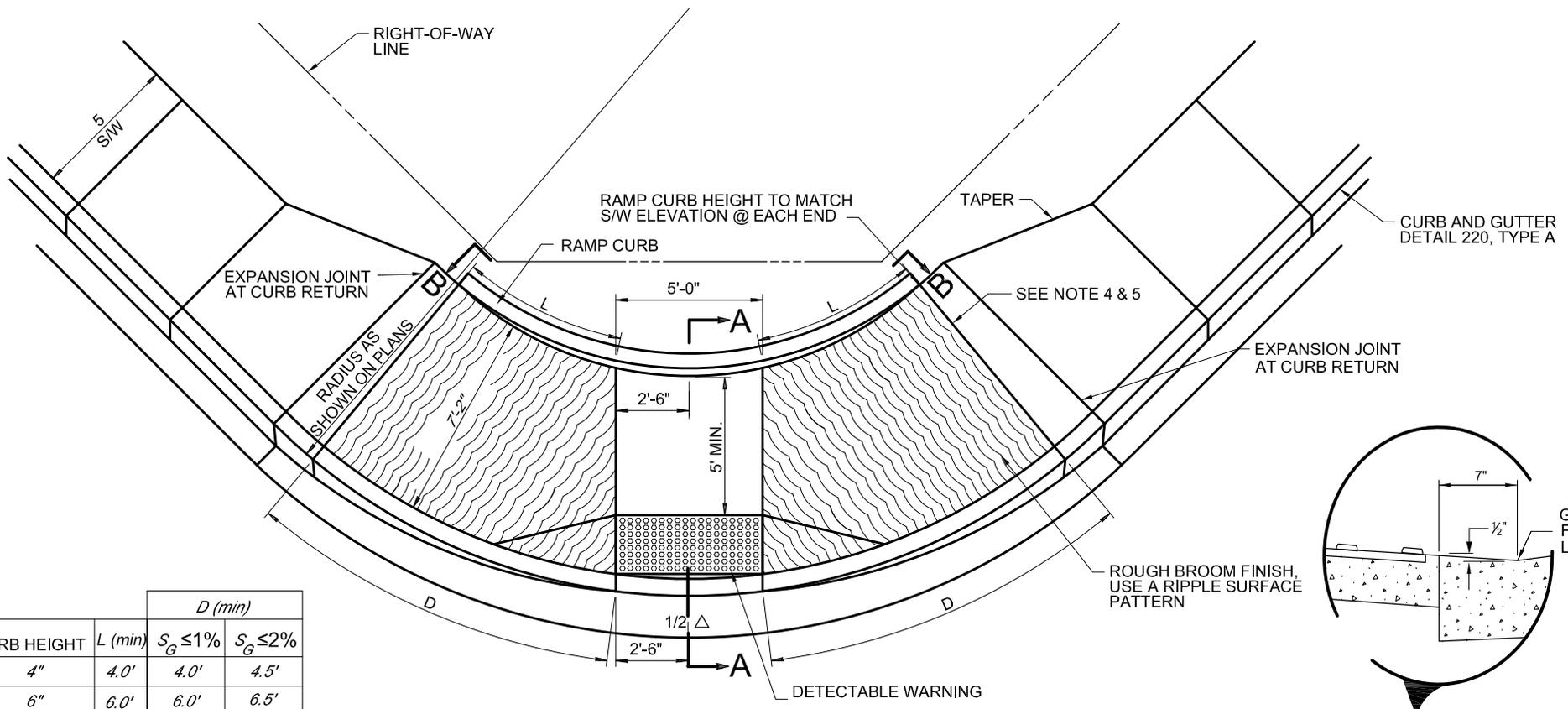


STANDARD DETAIL
ENGLISH

CURB RAMPS

REVISED
01-01-2011

DETAIL NO.
235-1

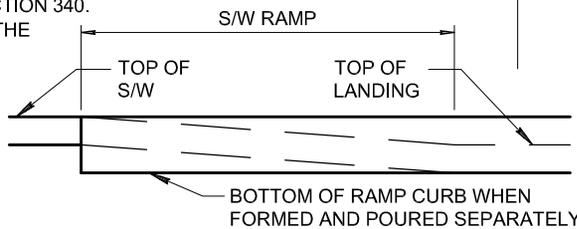


CURB HEIGHT	L (min)	D (min)	
		$S_G \leq 1\%$	$S_G \leq 2\%$
4"	4.0'	4.0'	4.5'
6"	6.0'	6.0'	6.5'
7"	7.0'	6.5'	7.5'

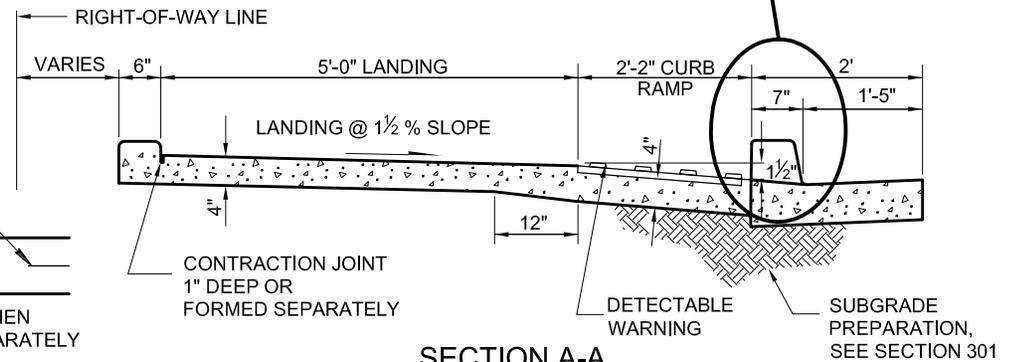
S_G = MAXIMUM GUTTER SLOPE WITHIN RAMP LIMITS

NOTES:

1. CLASS 'B' CONCRETE PER SECTION 725.
2. EXPANSION JOINTS SHALL CONFORM TO SECTION 340.
3. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENTS.
4. INCREASE 'L' OR 'D' AS NEEDED TO HAVE THE TOP OF RAMP FORM A RADIAL LINE.
5. WHEN TOP OF RAMP IS LESS THAN 4' FROM CURB RETURN, EXTEND RAMP TO THE CURB RETURN.
6. DETAIL IS ADA COMPLIANT FOR $S_G \leq 2\%$.



SECTION B-B



TYPE 'B'

SECTION A-A

DETAIL NO.
235-2



STANDARD DETAIL
ENGLISH

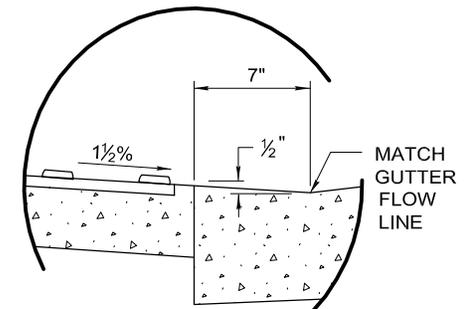
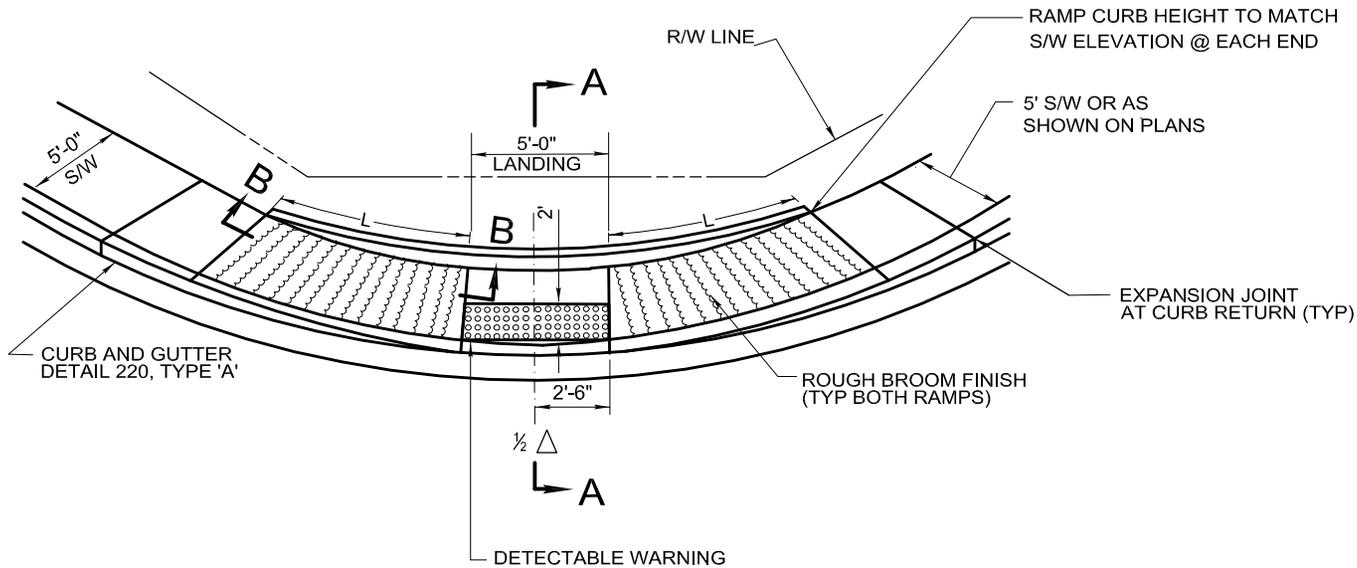
CURB RAMPS

REVISED
01-01-2011

DETAIL NO.
235-2

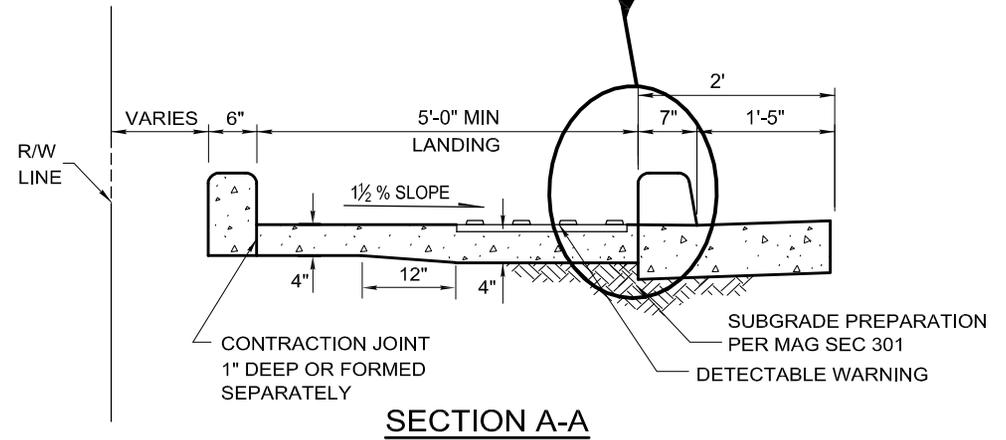
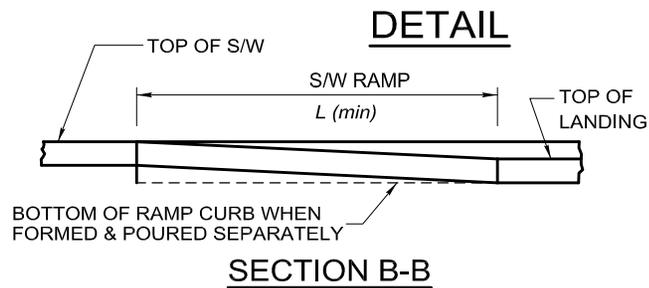
NOTES:

1. CLASS 'B' CONCRETE CONSTRUCTION PER SECTION 725.
2. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENT.
3. RAMP LONGITUDINAL SLOPE SHALL BE 12:1 OR FLATTER.
4. RAMP CROSS SLOPE SHALL BE 1½%.
5. DETAIL IS ADA COMPLIANT FOR CURB RADII ≥ 20' AND GUTTER SLOPE ≤ 2.0%.

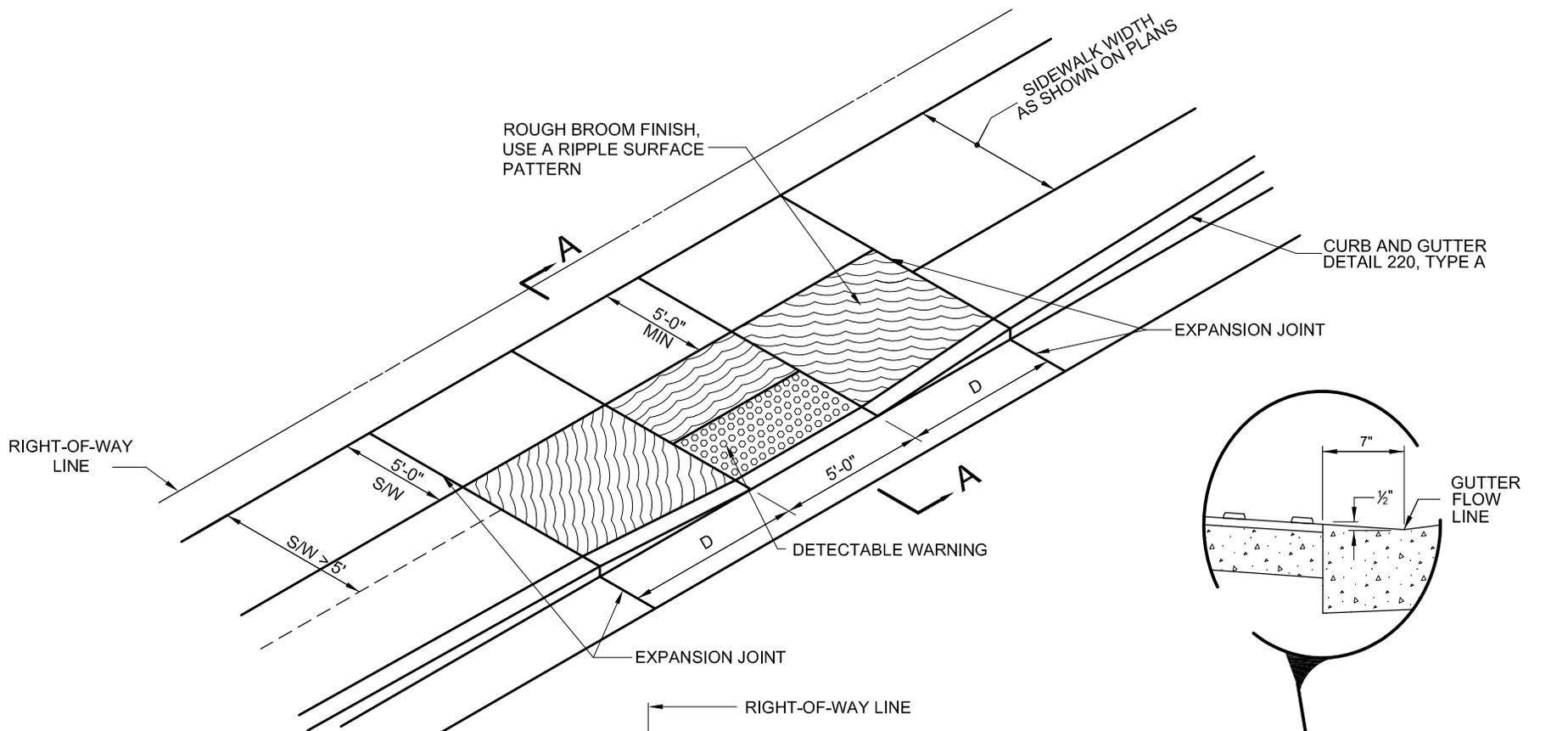


CURB HEIGHT	L (min)	
	$S_G \leq 1\%$	$S_G \leq 2\%$
4"	5.0'	6.0'
6"	7.0'	8.5'

S_G = MAXIMUM GUTTER SLOPE WITHIN RAMP LIMITS



TYPE 'C'

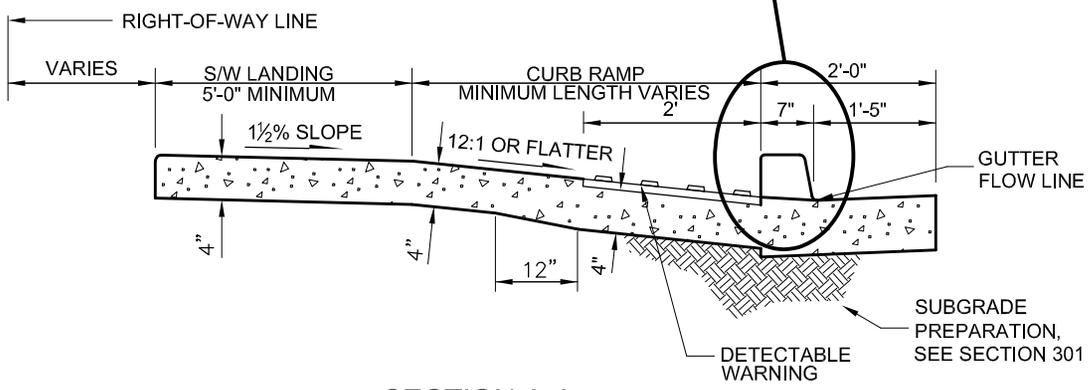


CURB HEIGHT	CURB RAMP MINIMUM LENGTH	D (min)	
		$S_G \leq 1\%$	$S_G \leq 2\%$
4"	5'	4.0'	4.5'
6"	7 1/2'	6.0'	6.5'
7"	9'	6.5'	7.5'

S_G = MAXIMUM GUTTER SLOPE WITHIN RAMP LIMITS

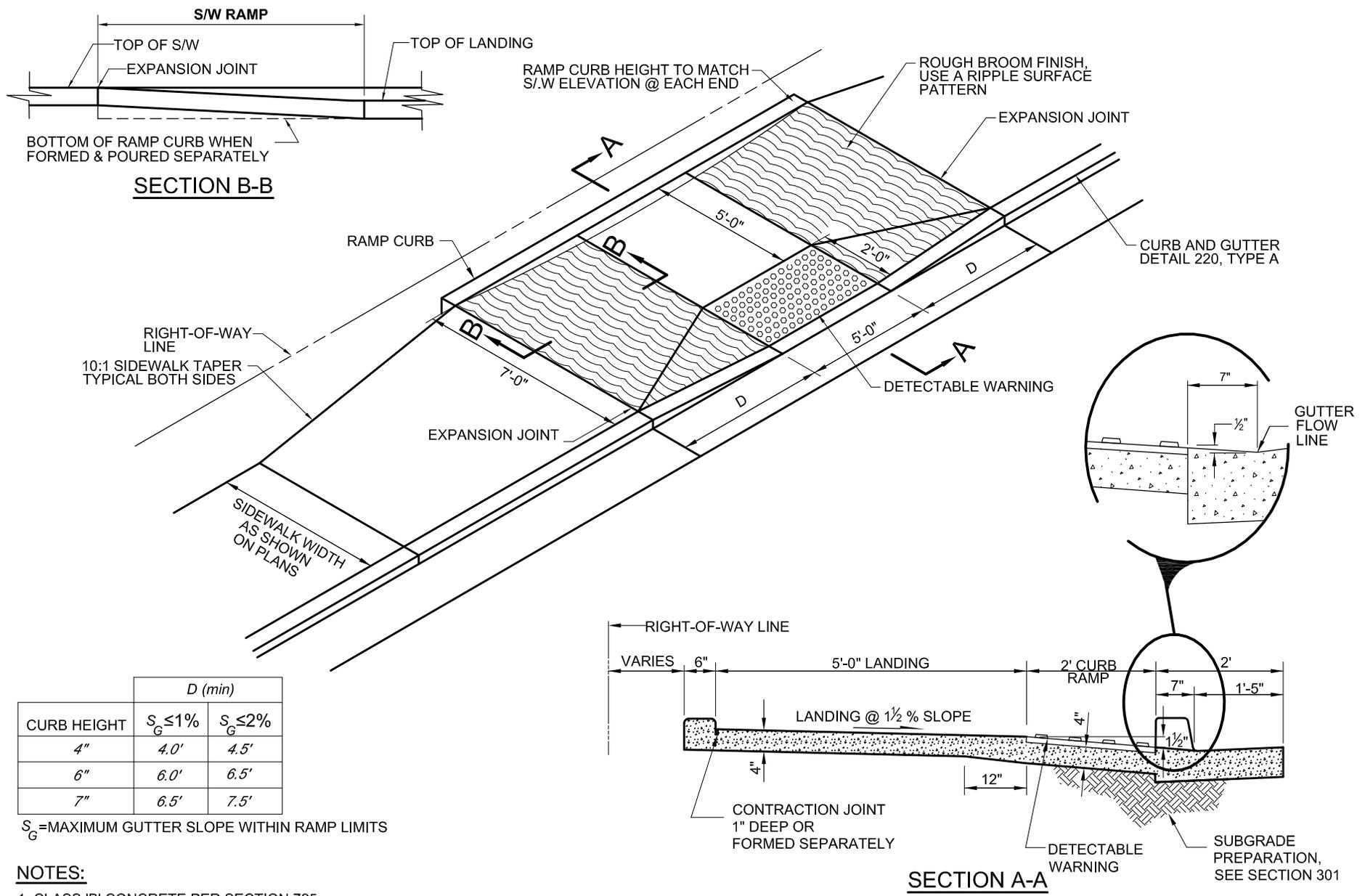
NOTES:

1. CLASS 'B' CONCRETE PER SECTION 725.
2. EXPANSION JOINTS SHALL CONFORM TO SECTION 340.
3. SIDEWALK SURFACE TO MATCH 1 1/2 % SLOPE FROM TOP OF CURB.
4. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENTS.
5. DETAIL IS ADA COMPLIANT FOR $S_G \leq 2\%$.



SECTION A-A

TYPE 'D' DETACHED SIDEWALK



TYPE 'E'

- NOTES:**
1. CLASS 'B' CONCRETE PER SECTION 725.
 2. EXPANSION JOINTS SHALL CONFORM TO SECTION 340.
 3. DETECTABLE WARNING IS TO COMPLY WITH THE JURISDICTIONAL AGENCY'S REQUIREMENTS.
 4. DETAIL IS ADA COMPLIANT FOR $S_G \leq 2\%$.