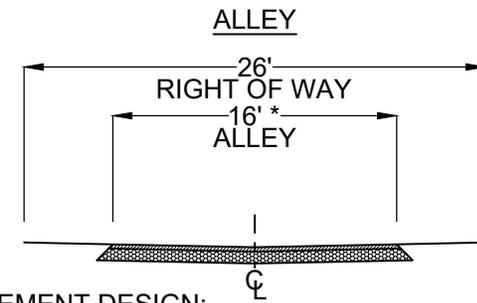


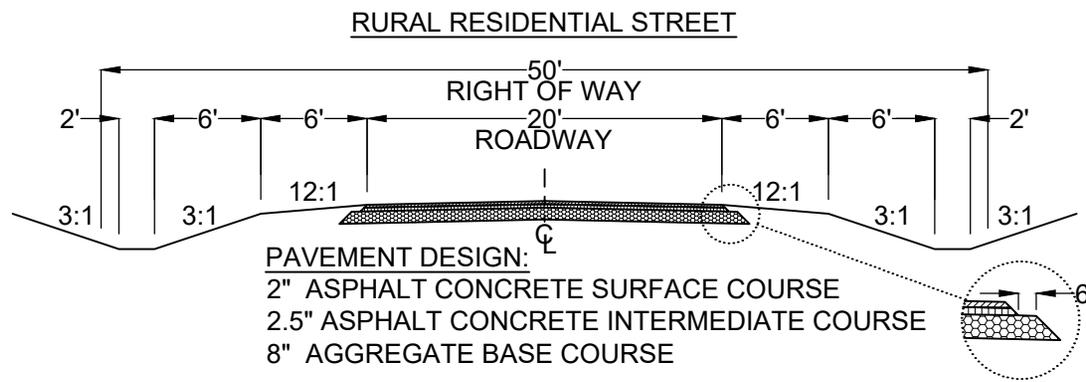
PAVEMENT DESIGN:
 2" ASPHALT CONCRETE SURFACE COURSE
 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE
 8" AGGREGATE BASE COURSE



PAVEMENT DESIGN:
 3" ASPHALT CONCRETE SURFACE COURSE
 8" AGGREGATE BASE COURSE
 * ONE WAY ALLEY OPTIONAL WITH VALLEY GUTTER (16' B-B)

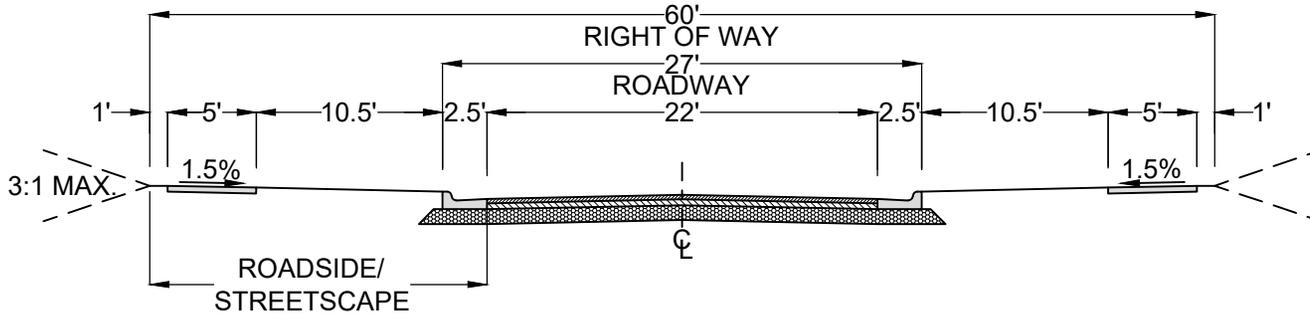
NOTE:

1. NORMAL CROWN (REVERSE CROWN FOR ALLEYS) OF 1/4 INCH PER FOOT SHALL BE USED UNLESS OTHERWISE DIRECTED BY TOWN ENGINEER.
2. WATER AND SEWER UTILITIES SHALL NOT BE SERVED FROM THE ALLEY RIGHT OF WAY.
3. RURAL RESIDENTIAL STREET MAY BE USED WHERE PERMITTED BY THE UDO.
4. GRASSED SWALES SHALL MEET THE APPLICABLE DESIGN REQUIREMENTS SET FORTH IN THE DWQ BMP MANUAL.
5. GRASSED SWALES MAY BE SUBJECT TO THE REQUIREMENTS SET FORTH IN UDO SECTION 6.1.12.
6. ROADSIDE / STREETSCAPE TREATMENTS ARE CONTEXT SENSITIVE. REFER TO ADVANCE APEX: THE 2045 TRANSPORTATION PLAN FOR APPROPRIATE CONTEXT, AND THE BICYCLE AND PEDESTRIAN SYSTEM PLAN MAP FOR APPROPRIATE FACILITY TYPE.

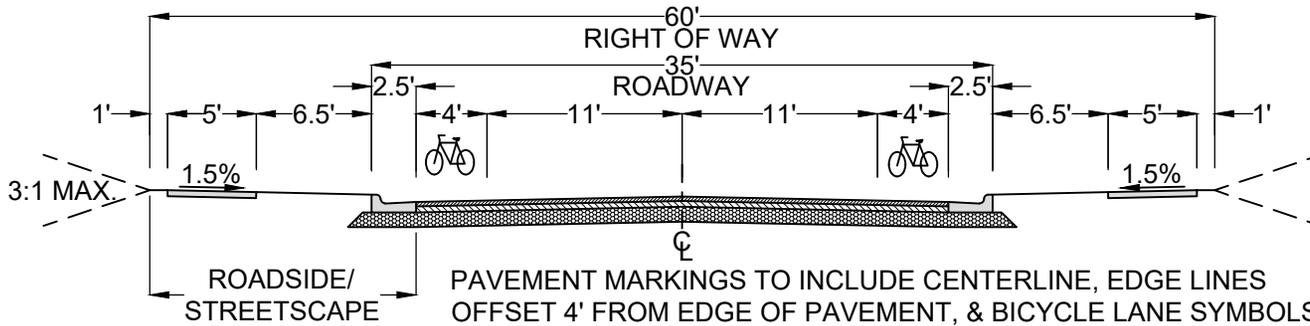


PAVEMENT DESIGN:
 2" ASPHALT CONCRETE SURFACE COURSE
 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE
 8" AGGREGATE BASE COURSE

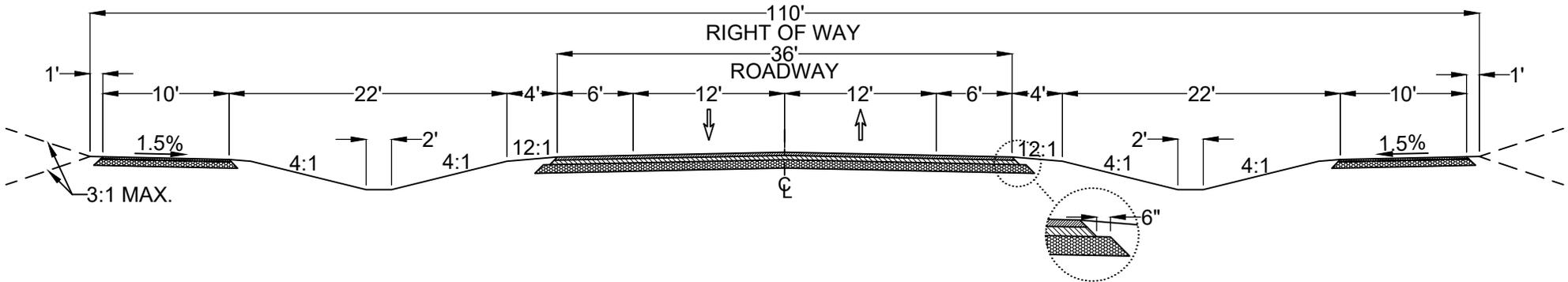
MINOR COLLECTOR STREET



MAJOR COLLECTOR STREET / 2-LANE URBAN THOROUGHFARE



2-LANE RURAL THOROUGHFARE



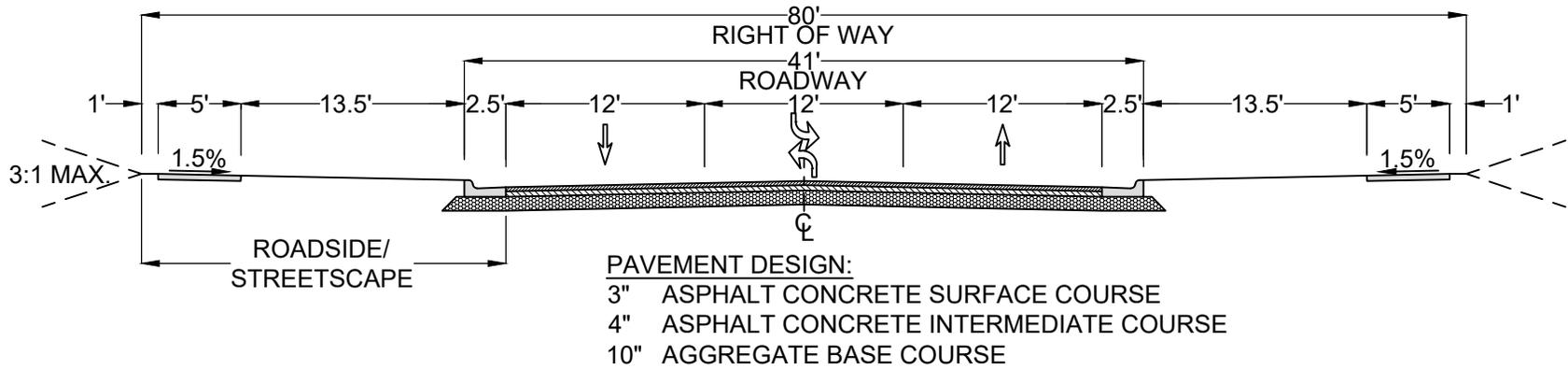
NOTE:

1. PAVEMENT DESIGN SHOWN IS THE MINIMUM FOR THE RESPECTIVE TYPICAL SECTION. CALCULATED PAVEMENT DESIGN MAY DIFFER.
2. NORMAL CROWN OF 1/4 INCH PER FOOT SHALL BE USED UNLESS OTHERWISE DIRECTED BY TOWN ENGINEER.
3. ROADSIDE / STREETSCAPE TREATMENTS ARE CONTEXT SENSITIVE. REFER TO ADVANCE APEX: THE 2045 TRANSPORTATION PLAN FOR APPROPRIATE CONTEXT, AND THE BICYCLE AND PEDESTRIAN SYSTEM PLAN MAP FOR APPROPRIATE FACILITY TYPE.

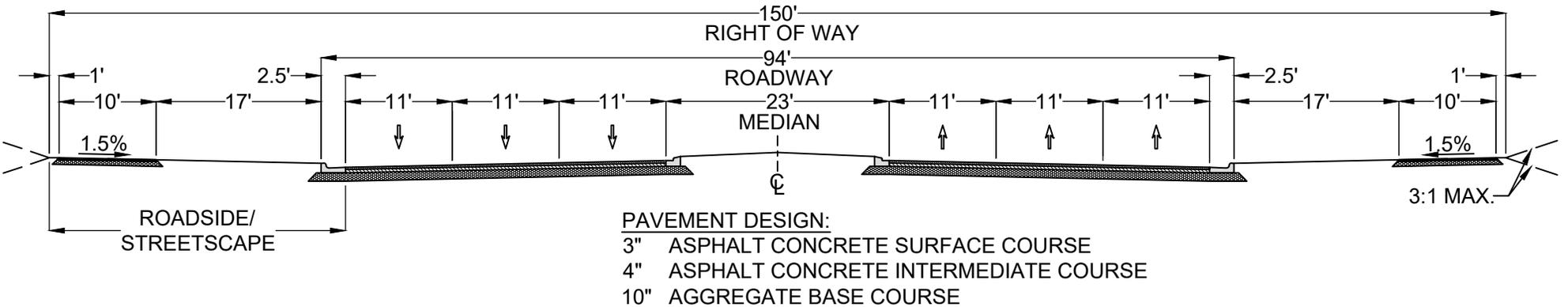
PAVEMENT DESIGN:

- 3" ASPHALT CONCRETE SURFACE COURSE
- 4" ASPHALT CONCRETE INTERMEDIATE COURSE
- 10" AGGREGATE BASE COURSE

3-LANE THOROUGHFARE

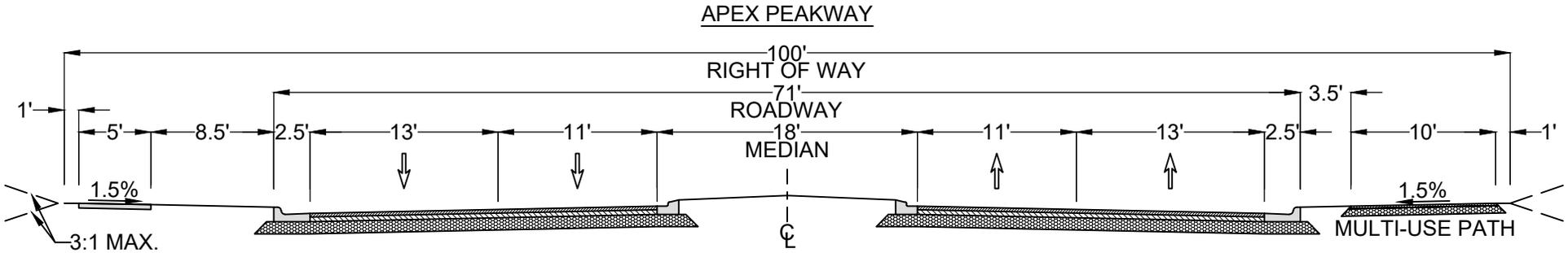


6-LANE THOROUGHFARE



NOTE:

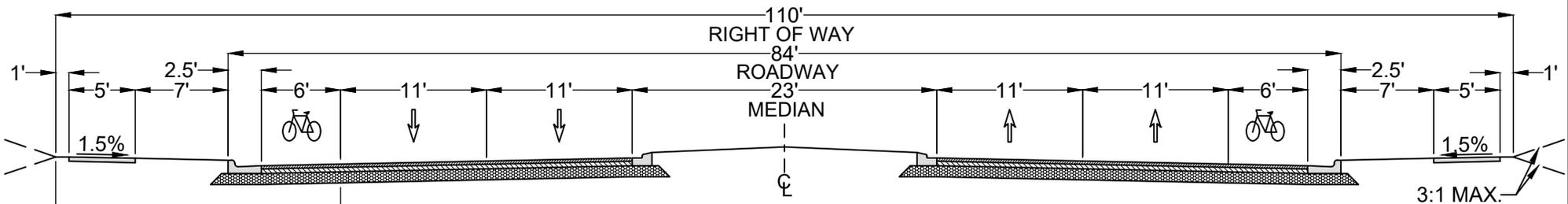
1. PAVEMENT DESIGN SHOWN IS THE MINIMUM FOR THE RESPECTIVE TYPICAL SECTION. CALCULATED PAVEMENT DESIGN MAY DIFFER.
2. NORMAL CROWN OF 1/4 INCH PER FOOT SHALL BE USED UNLESS OTHERWISE DIRECTED BY TOWN ENGINEER.
3. LANE WIDTHS SHALL BE MARKED PER THE DIMENSIONS SHOWN.
4. ROADSIDE / STREETSCAPE TREATMENTS ARE CONTEXT SENSITIVE. REFER TO ADVANCE APEX: THE 2045 TRANSPORTATION PLAN FOR APPROPRIATE CONTEXT, AND THE BICYCLE AND PEDESTRIAN SYSTEM PLAN MAP FOR APPROPRIATE FACILITY TYPE.



PAVEMENT DESIGN:
 3" ASPHALT CONCRETE SURFACE COURSE
 4" ASPHALT CONCRETE INTERMEDIATE COURSE
 10" AGGREGATE BASE COURSE

MULTI-USE PATH PAVEMENT DESIGN:
 2" ASPHALT CONCRETE SURFACE COURSE
 6" AGGREGATE BASE COURSE

4-LANE MEDIAN-DIVIDED THOROUGHFARE



PAVEMENT DESIGN:
 3" ASPHALT CONCRETE SURFACE COURSE
 4" ASPHALT CONCRETE INTERMEDIATE COURSE
 10" AGGREGATE BASE COURSE

NOTE:

1. PAVEMENT DESIGN SHOWN IS THE MINIMUM FOR THE RESPECTIVE TYPICAL SECTION. CALCULATED PAVEMENT DESIGN MAY DIFFER.
2. NORMAL CROWN OF 1/4 INCH PER FOOT SHALL BE USED UNLESS OTHERWISE DIRECTED BY TOWN ENGINEER.
3. LANE WIDTHS SHALL BE MARKED PER THE DIMENSIONS SHOWN.
4. APEX PEAKWAY SHALL UTILIZE THE 4-LANE MEDIAN-DIVIDED THOROUGHFARE WITH MULTI-USE PATH TYPICAL.
5. ROADSIDE / STREETScape TREATMENTS ARE CONTEXT SENSITIVE. REFER TO ADVANCE APEX: THE 2045 TRANSPORTATION PLAN FOR APPROPRIATE CONTEXT, AND THE BICYCLE AND PEDESTRIAN SYSTEM PLAN MAP FOR APPROPRIATE FACILITY TYPE.
6. A MINIMUM 4-FOOT WIDE BIKE LANE CAN BE USED IN TOWN CENTER AND TRANSIT-ORIENTED DEVELOPMENT CONTEXT AREAS IF ADJACENT TO A STANDARD CURB AND GUTTER SECTION AND WITHOUT A PARKING LANE.

TOWN OF APEX
STANDARDS

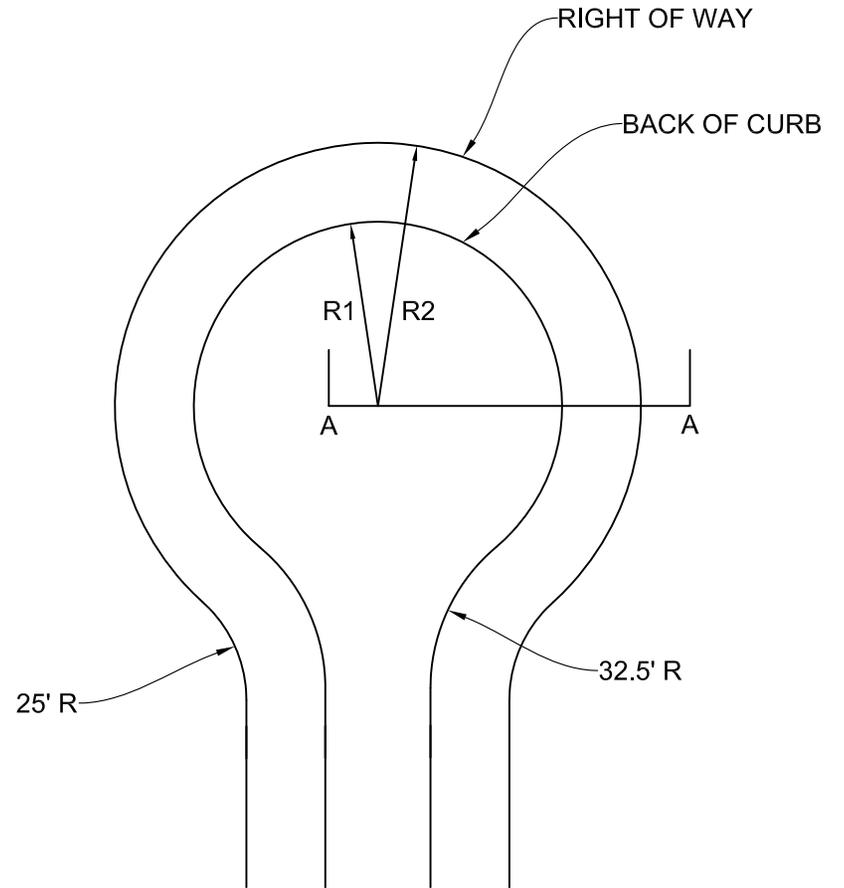
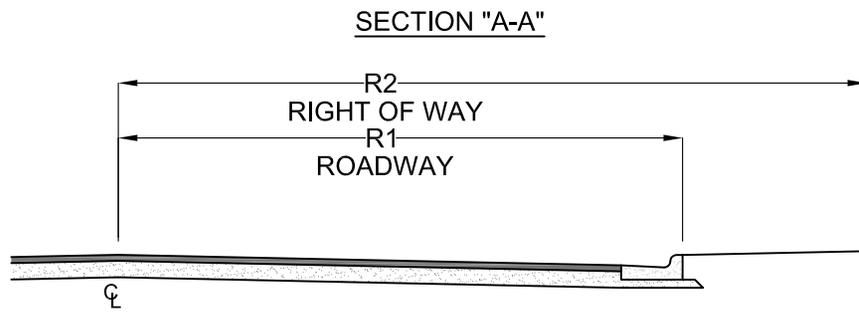
EFFECTIVE: APRIL 9, 2024

**STREET TYPICAL SECTIONS
4-LANE THOROUGHFARE**

STD. NO.

300.01

SHEET 4 OF 4



CLASSIFICATION	R1	R2
RESIDENTIAL	37.5'	47'
NON-RESIDENTIAL	45'	55'

TOWN OF APEX
STANDARDS

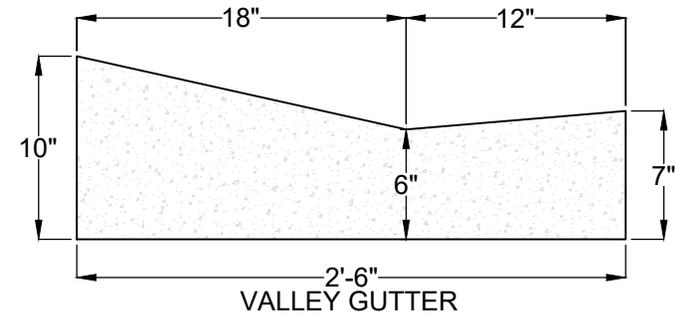
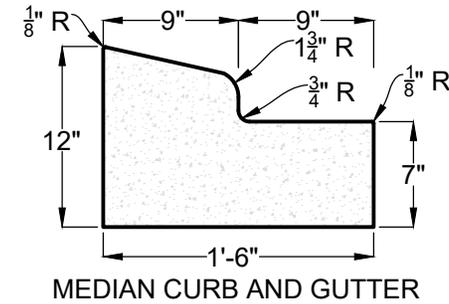
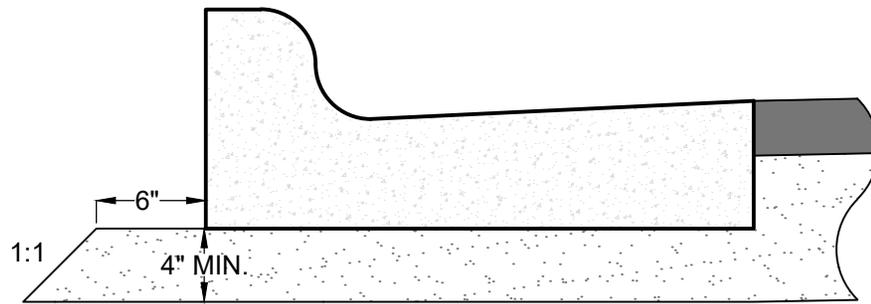
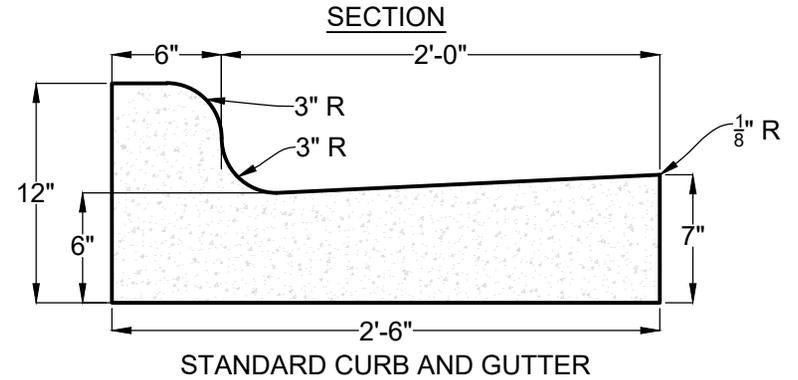
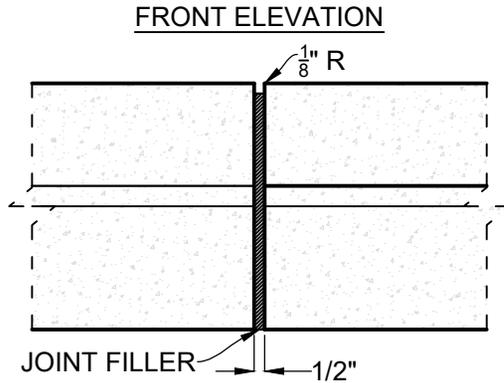
EFFECTIVE: NOVEMBER 20, 2007

CUL-DE-SAC

STD. NO.

300.02

SHEET 1 OF 1



NOTES:

1. CONCRETE SHALL BE 3000 PSI.
2. CONTRACTION JOINTS SHALL BE SPACED AT 10' INTERVALS OR 15' INTERVALS WHEN A MACHINE IS USED.
3. EXPANSION JOINTS SHALL BE SPACED AT 50' INTERVALS.
4. FINISH ALL CONCRETE WITH CURING COMPOUND.
5. FOLLOW ALL APPLICABLE ACI REQUIRMENTS.
6. VALLEY CURB SHALL ONLY BE USED FOR APPROVED APPLICATIONS.

**TOWN OF APEX
STANDARDS**

EFFECTIVE: FEBRUARY 28, 2023

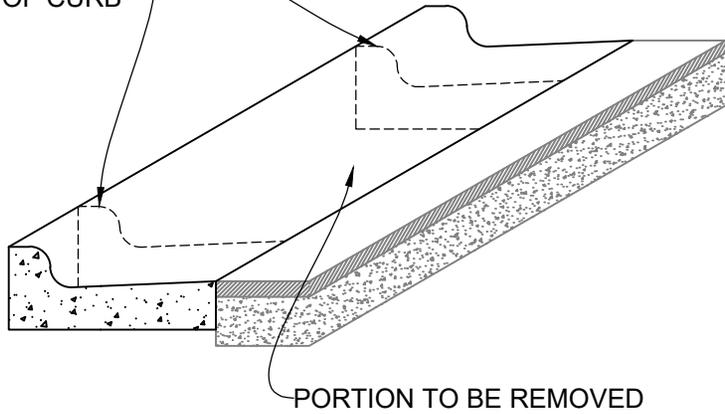
CONCRETE CURB AND GUTTER

STD. NO.

300.03

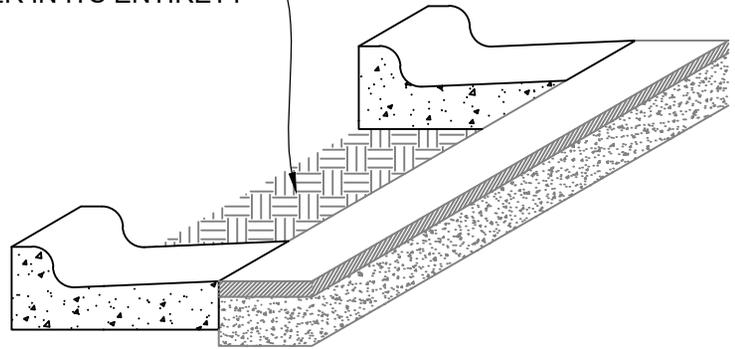
SHEET 1 OF 1

CURB SHALL BE CUT PERPENDICULAR TO THE BACK OF CURB



STEP ONE

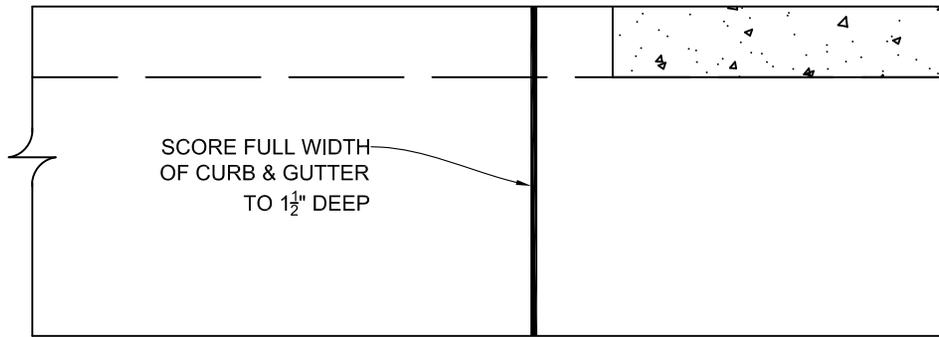
REMOVE CURB AND GUTTER IN ITS ENTIRETY



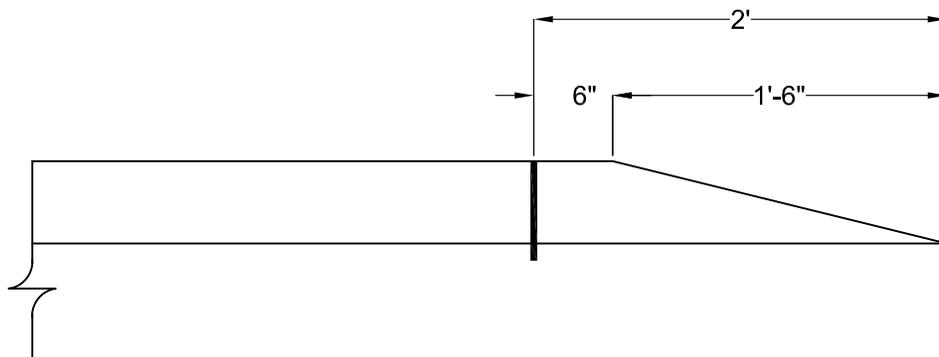
STEP TWO

NOTES:

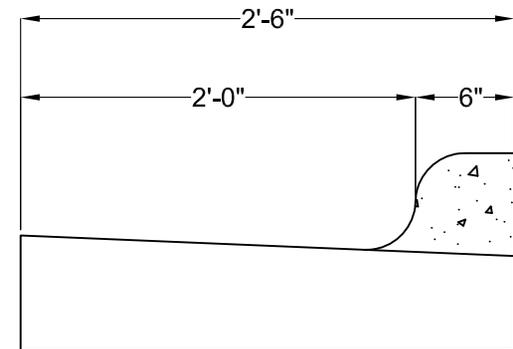
- 1. IF PERPENDICULAR CURB CUT IS WITHIN 5' FROM A JOINT, THEN THE CUT SHALL BE MADE AT THE JOINT.
- 2. FOR REPAIRS TO CURB, A 5' MINIMUM SECTION MUST BE REMOVED AND REPLACED (JOINT TO JOINT.)



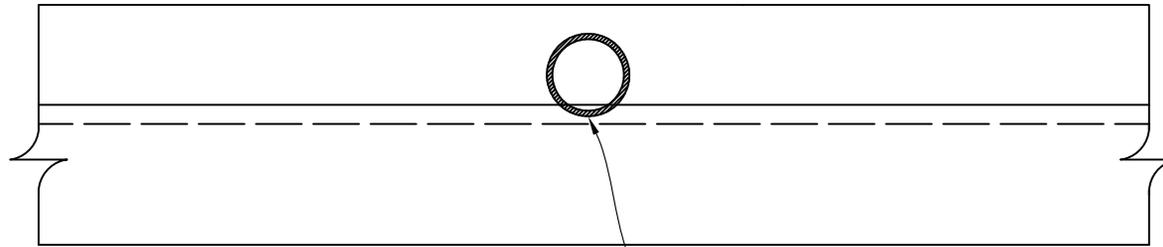
PLAN



FRONT



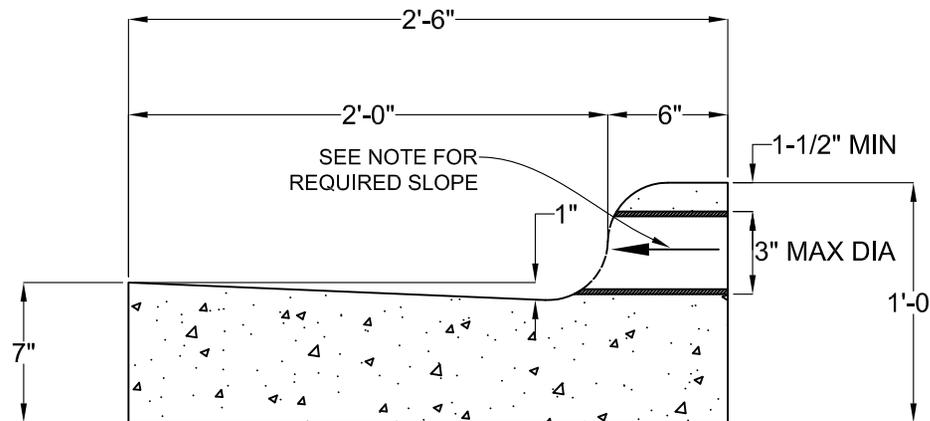
END



3" DIAMETER SCHEDULE 40 PVC PIPE THROUGH CURB.
THE EDGES OF THE DRAIN HOLE MUST BE ROUNDED
AND FINISHED SMOOTH AT THE FACE OF THE CURB.

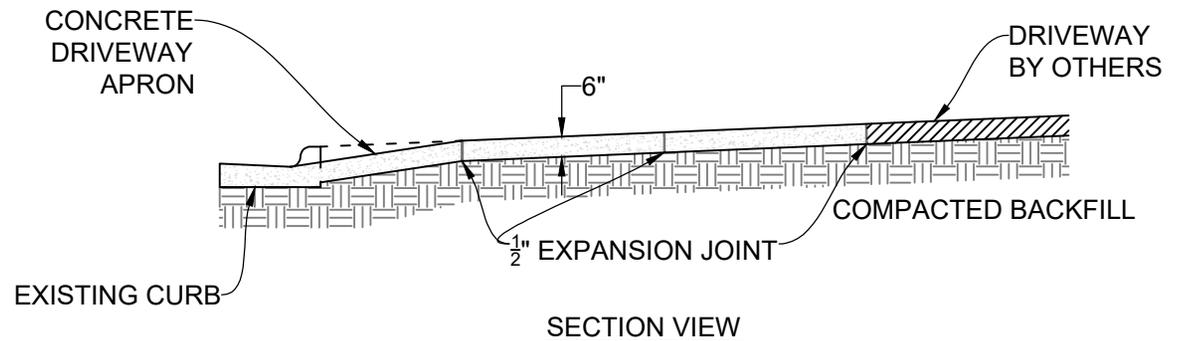
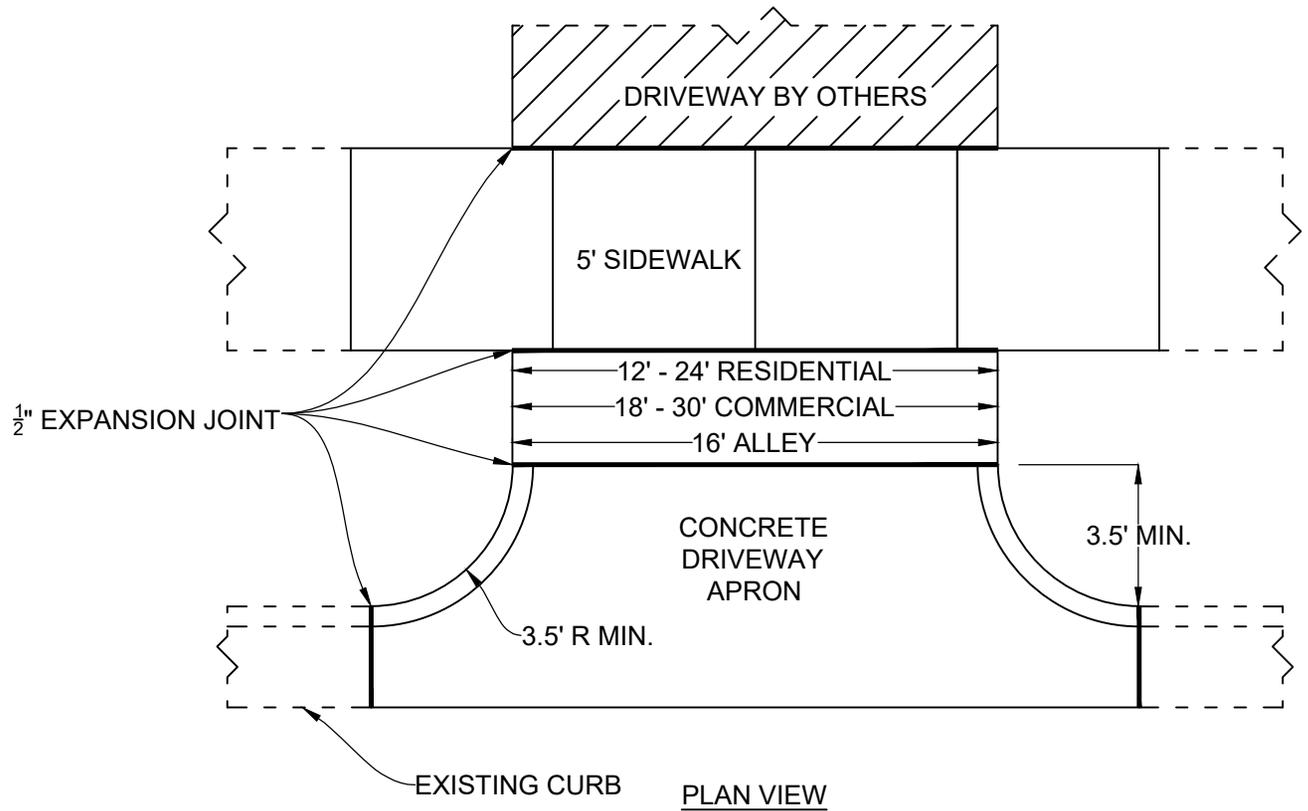
NOTES:

1. CURB DRAINS SHALL NOT BE CONSTRUCTED WITHIN 18" OF CONTRACTION OR EXPANSION JOINTS.
2. OPENING GRADE MAY VARY BETWEEN A MAXIMUM SLOPE OF 1/2" PER FOOT AND A MINIMUM OF 1/4" PER FOOT.
3. MORE THAN ONE HOLE MAY BE INSTALLED PROVIDED THE HOLES ARE LOCATED WITH 18" MINIMUM SPACING.



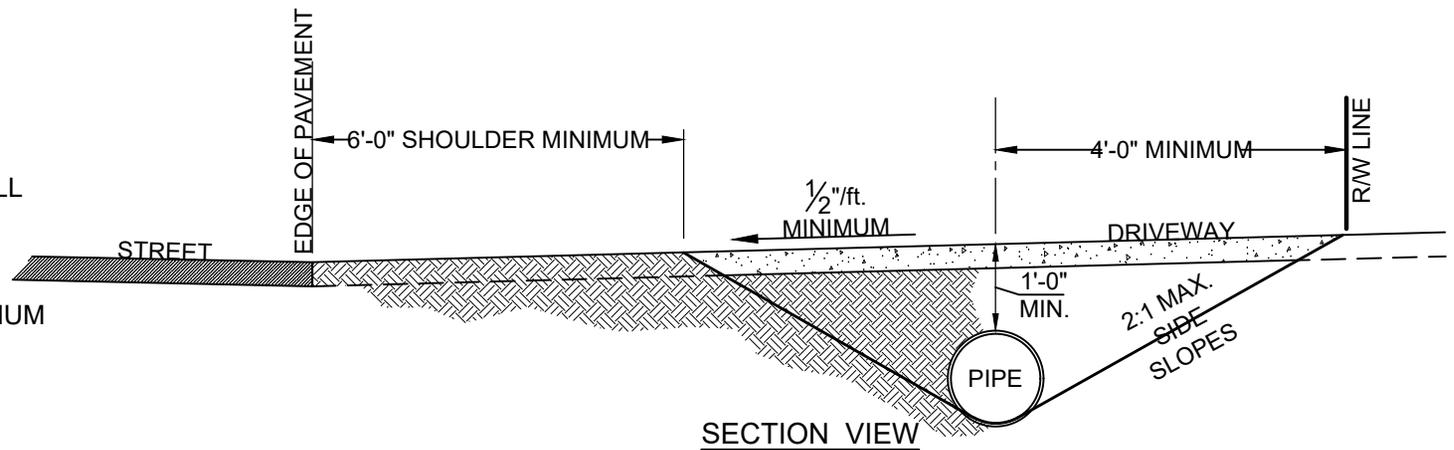
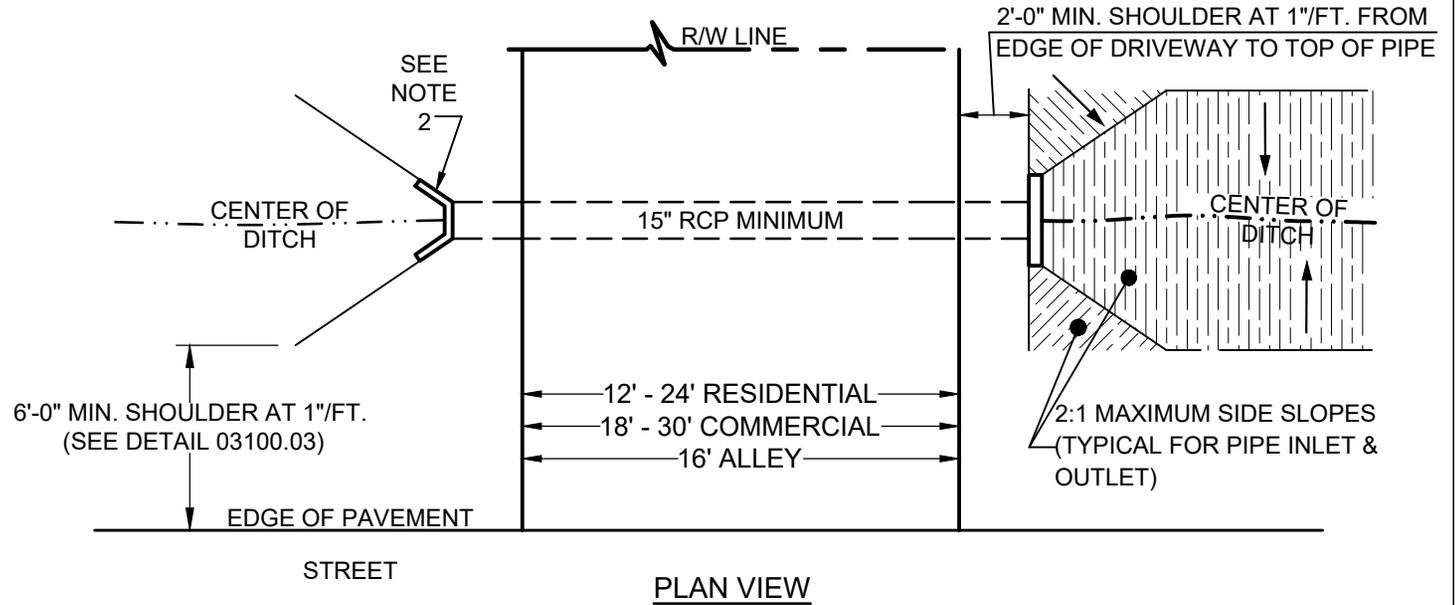
NOTES:

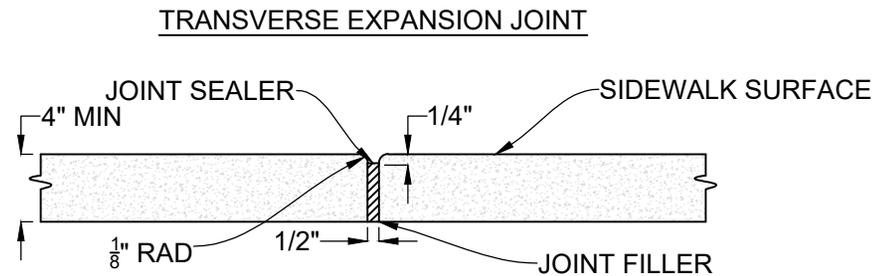
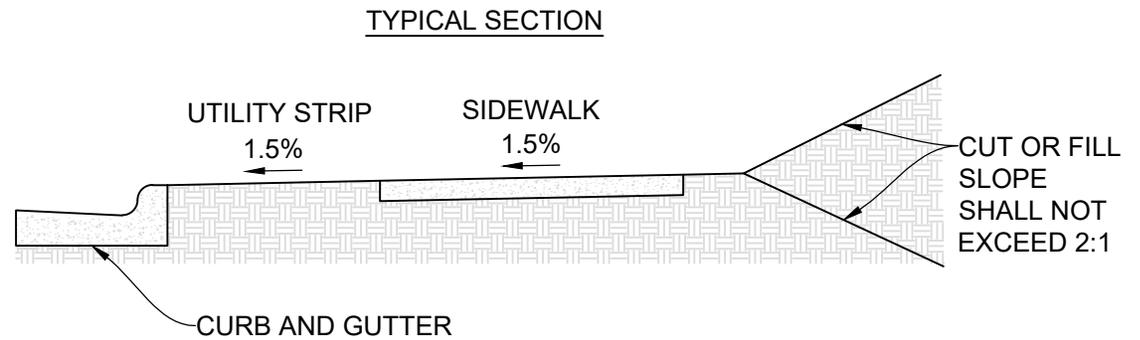
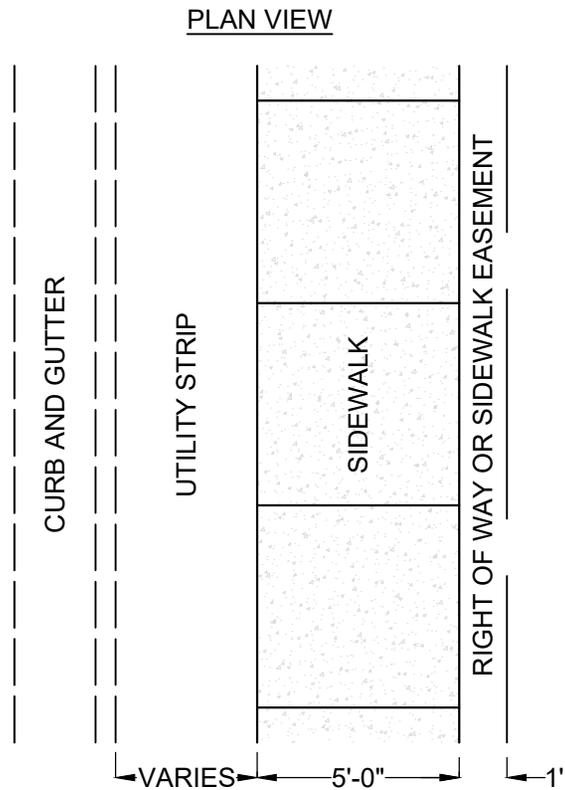
1. RESIDENTIAL DRIVEWAYS TO BE 12' TO 24' WIDTH EXCEPT WHEN CONNECTING TO AN ALLEY WIDTH MAY BE INCREASED TO ALLOW AN ADDITIONAL 9' WIDE PARKING PAD IF DISTANCE FROM THE ALLEY TO THE STRUCTURE IS LESS THAN 18'.
2. COMMERCIAL & INDUSTRIAL DRIVEWAYS TO BE 18' TO 30' WIDTH.
3. ALLEY CONNECTIONS TO BE 16' WIDTH.
4. ALL CONCRETE SHALL BE 3000 PSI.
5. IF CURB CUT IS WITHIN 5' FROM A JOINT, THEN THE CUT SHALL BE MADE AT THAT JOINT.
6. ALL DRIVEWAYS SHALL BE INSTALLED WITH A SIDEWALK SECTION AND UTILITY STRIP AS SHOWN. SIDEWALK SECTIONS SHALL HAVE 1/4" PER FOOT FALL TOWARDS THE STREET.
7. LOCATE DRIVEWAYS A MINIMUM OF 3 FEET FROM SEWER SERVICE LINES.



NOTES:

1. RESIDENTIAL DRIVEWAYS TO BE 12' TO 24' WIDTH EXCEPT WHEN CONNECTING TO AN ALLEY WIDTH MAY BE INCREASED TO ALLOW AN ADDITIONAL 9' WIDE PARKING PAD IF DISTANCE FROM THE ALLEY TO THE STRUCTURE IS LESS THAN 18'.
2. COMMERCIAL & INDUSTRIAL DRIVEWAYS TO BE 18' TO 30' WIDTH.
3. ALLEY CONNECTIONS TO BE 16' WIDTH.
4. ALL CONCRETE SHALL BE 3000 PSI.
5. PIPE SHALL BE SIZED BY ENGINEER.
6. HEADWALLS, ENDWALLS, OR FLARED END SECTIONS SHALL BE INSTALLED AT ENDS OF DRIVEWAY PIPE.
7. LOCATE DRIVEWAYS A MINIMUM OF 3 FEET FROM SEWER SERVICE LINES.





NOTES:

1. TRANSVERSE EXPANSION JOINTS SHALL BE SPACED 50' MAXIMUM.
2. CONTRACTION JOINTS SHALL BE SPACED 5' MAXIMUM.
3. ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.
4. ALL CONCRETE SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF THE ACI.
5. SIDEWALK EASEMENT REQUIRED WHEN SIDEWALK IS OUTSIDE PUBLIC RIGHT OF WAY.

**TOWN OF APEX
STANDARDS**

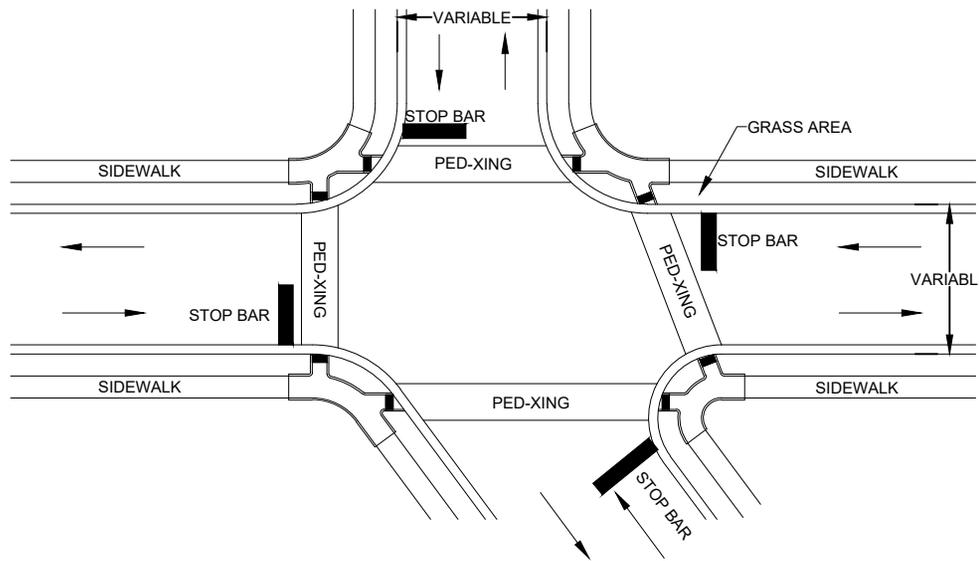
EFFECTIVE: JUNE 13, 2023

CONCRETE SIDEWALK

STD. NO.

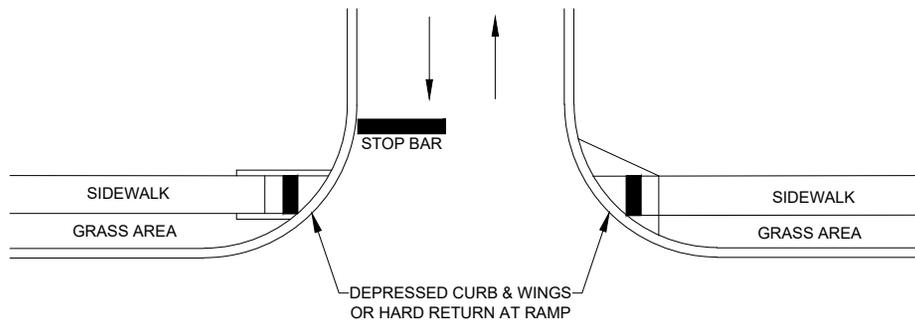
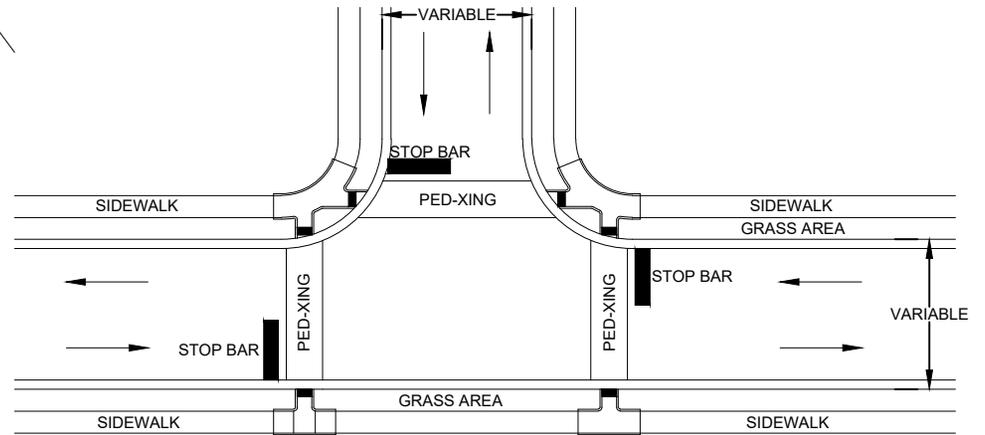
300.08

SHEET 1 OF 1



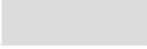
DETAIL SHOWING TYPICAL LOCATION OF SIDEWALK ACCESS RAMPS, PEDESTRIAN CROSSWALKS AND STOP BARS

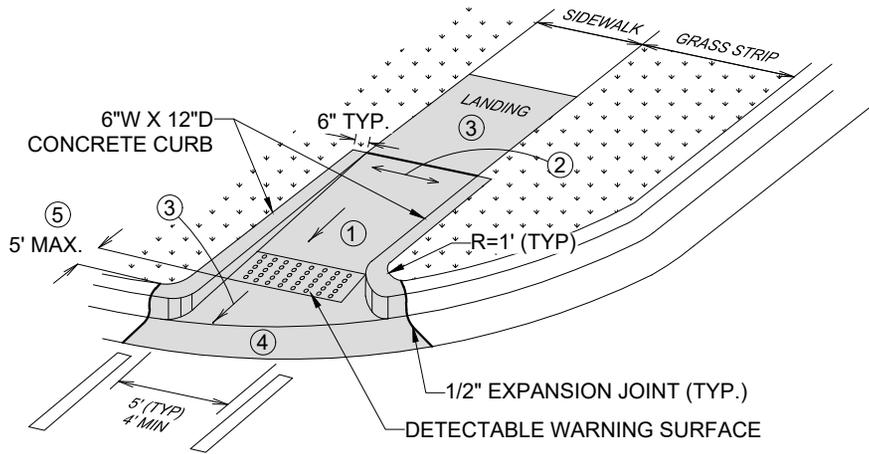
DETAIL SHOWING TYPICAL LOCATION OF SIDEWALK ACCESS RAMPS, PEDESTRIAN CROSSWALKS AND STOP BARS FOR TEE INTERSECTION



FOR RAMPS AT ASPHALT TO ASPHALT STREET TYPE DRIVEWAYS OR PRIVATE STREET TIE IN

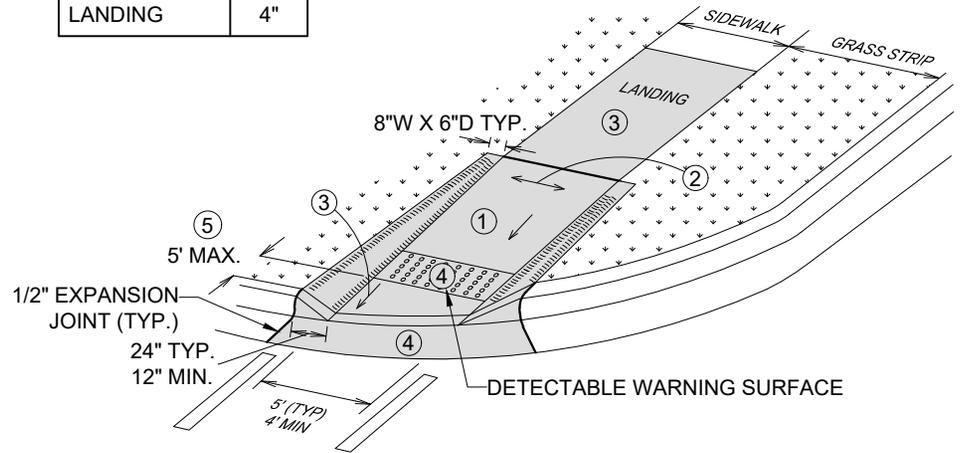
CONCRETE DEPTH	
RAMP/FLARE	6"
LANDING	4"

 PAY LIMITS FOR CURB RAMP



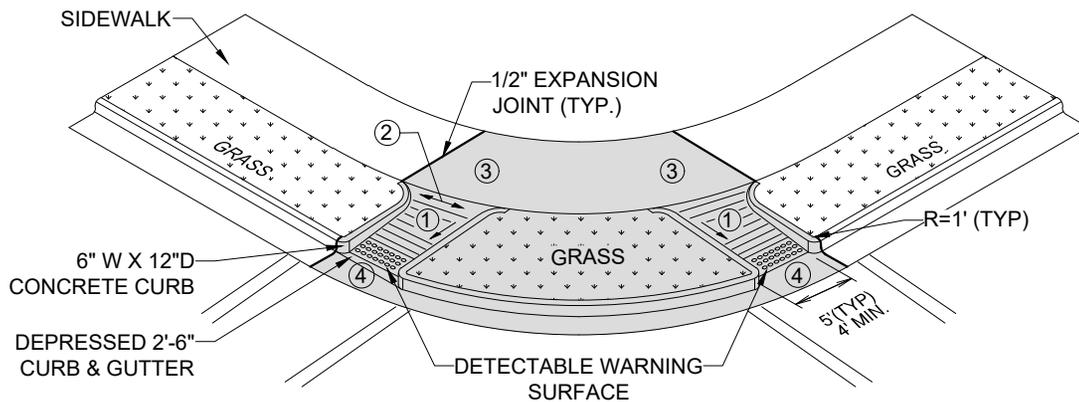
TYPE N-1 (CURB TYPE)

1. RUNNING SLOPE: 5% MIN./8.33% (12:1) MAX.
2. CROSS SLOPE: 2% MAX. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. CROSS SLOPE NOT TO EXCEED 2% ANY PORTION OF TRANSITION TO STREET.
5. IF LENGTH EXCEEDS 5', TRUNCATED DOMES SHALL BE INSTALLED ALONG THE BACK OF THE CURB COVERING THE FULL WIDTH OF THE RAMP.

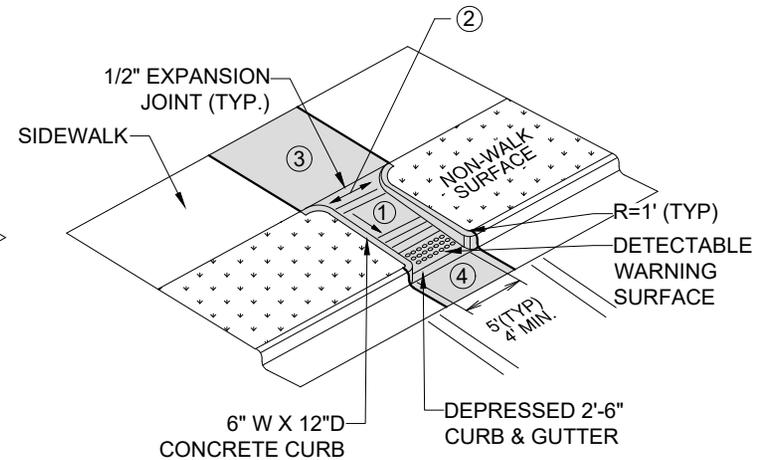


TYPE N-1A (FLARE TYPE)

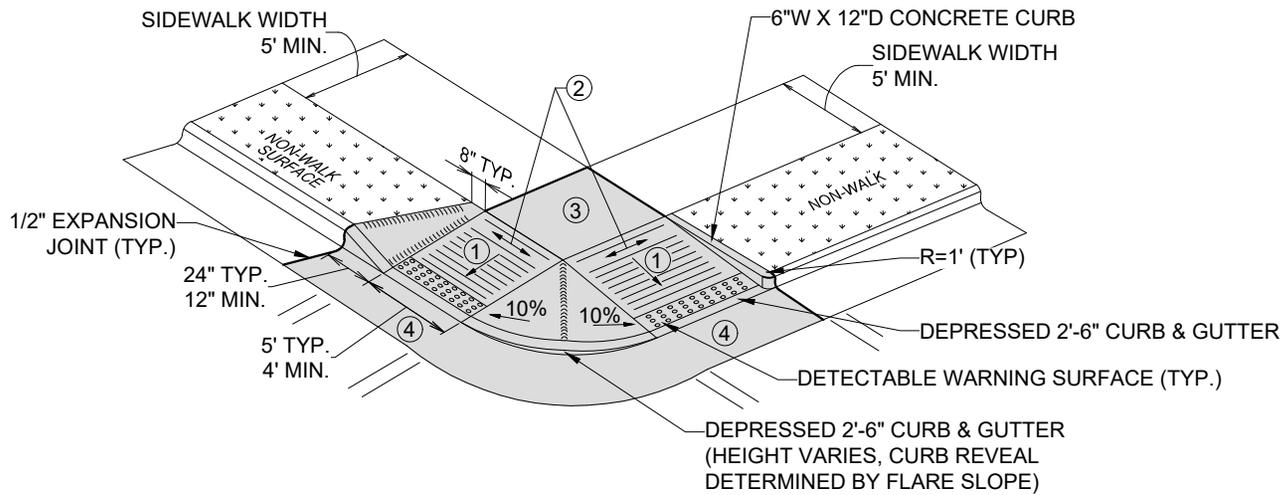
NOTE: USE SMALL FLARES ONLY WHEN A CURB TYPE DIRECTLY CONFLICTS WITH APPROACHING VEHICULAR TURNING MOVEMENTS.



TYPE N-2 (RADIUS)



TYPE N-2 (TEE INTERSECTION)



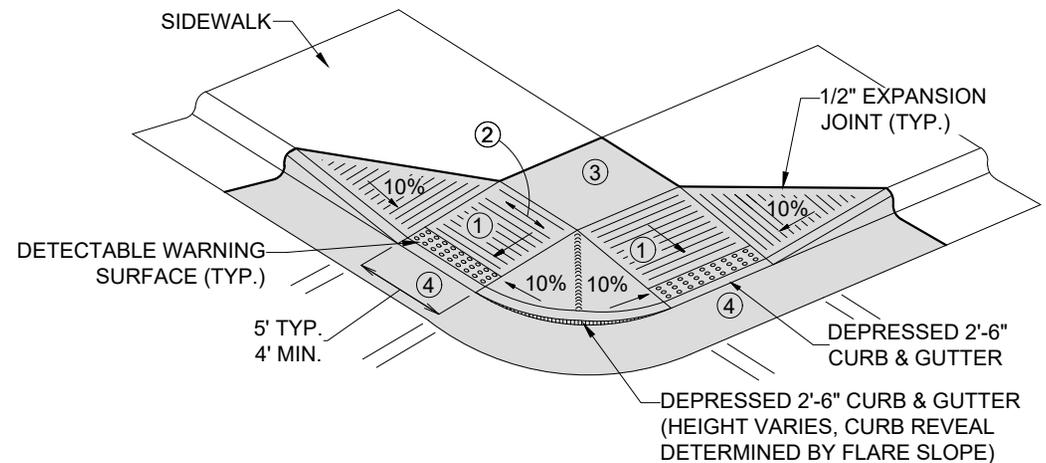
PAY LIMITS FOR CURB RAMP

CONCRETE DEPTH	
RAMP/FLARE	6"
LANDING	4"

TYPE N-3

NOTE: USE SMALL FLARES ONLY WHEN A CURB TYPE DIRECTLY CONFLICTS WITH APPROACHING VEHICULAR TURNING MOVEMENTS.

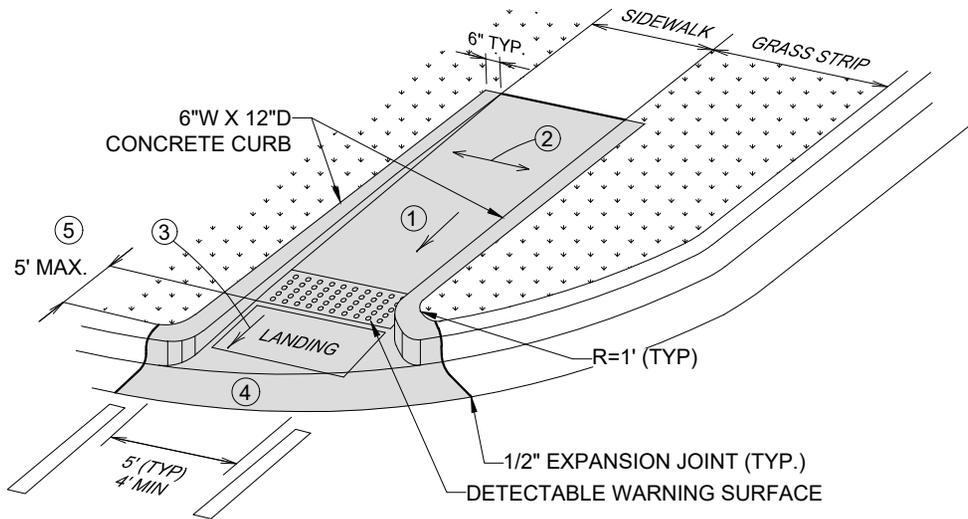
1. RUNNING SLOPE: 5% MIN./8.33% (12:1) MAX.
2. CROSS SLOPE: 2% MAX. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. CROSS SLOPE NOT TO EXCEED 2% ANY PORTION OF TRANSITION TO STREET.



**TYPE N-3A
COMMERCIAL USE**

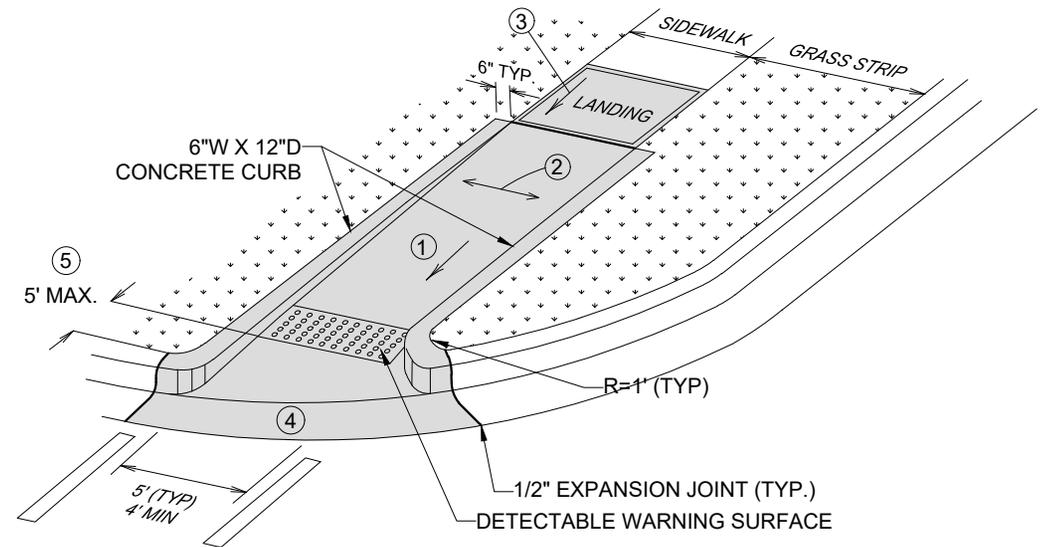
CONCRETE DEPTH	
RAMP/FLARE	6"
LANDING	4"

 PAY LIMITS FOR CURB RAMP



TYPE N-4

1. RUNNING SLOPE: 5% MIN./8.33% (12:1) MAX.
2. CROSS SLOPE: 2% MAX. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. CROSS SLOPE NOT TO EXCEED 2% ANY PORTION OF TRANSITION TO STREET.
5. IF LENGTH EXCEEDS 5', TRUNCATED DOMES SHALL BE INSTALLED ALONG THE BACK OF THE CURB COVERING THE FULL WIDTH OF THE RAMP.



TYPE N-4A

TOWN OF APEX
STANDARDS

CURB RAMP (NEW DEVELOPMENT)

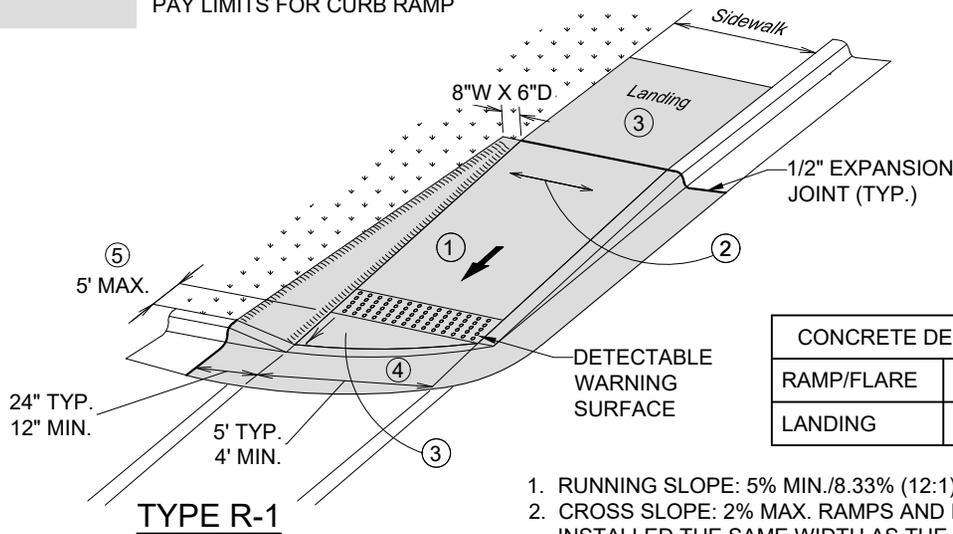
STD. NO.

300.09

EFFECTIVE: FEBRUARY 28, 2023

SHEET 4 OF 14

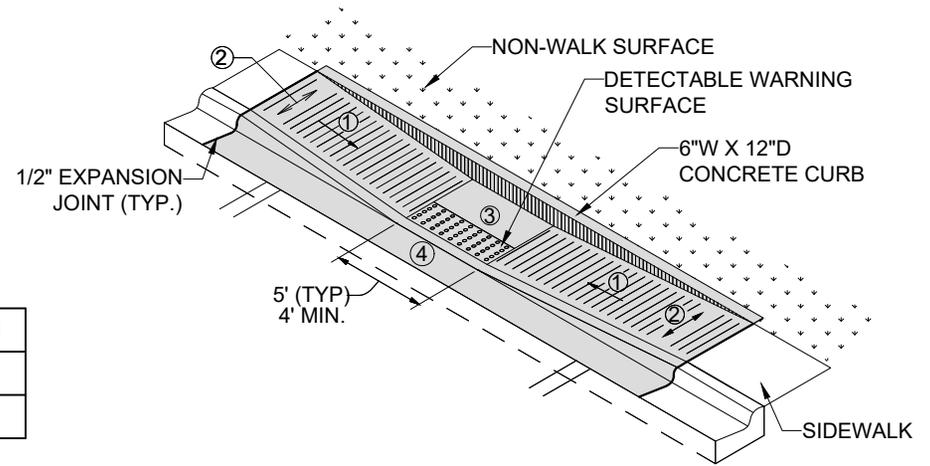
PAY LIMITS FOR CURB RAMP



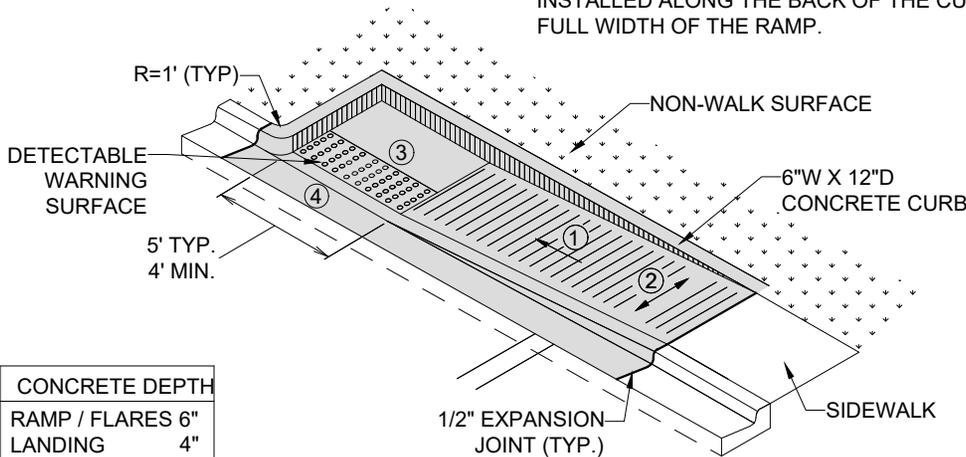
TYPE R-1

CONCRETE DEPTH	
RAMP/FLARE	6"
LANDING	4"

1. RUNNING SLOPE: 5% MIN./8.33% (12:1) MAX.
2. CROSS SLOPE: 2% MAX. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. CROSS SLOPE NOT TO EXCEED 2% ANY PORTION OF TRANSITION TO STREET.
5. IF LENGTH EXCEEDS 5', TRUNCATED DOMES SHALL BE INSTALLED ALONG THE BACK OF THE CURB COVERING THE FULL WIDTH OF THE RAMP.

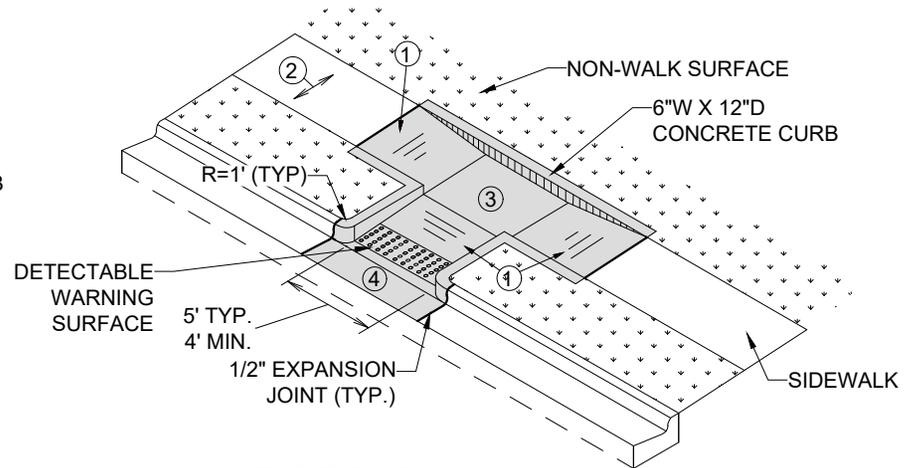


TYPE R-2
(USE ONLY WHERE WATER WILL NOT POND WITHIN LANDING)

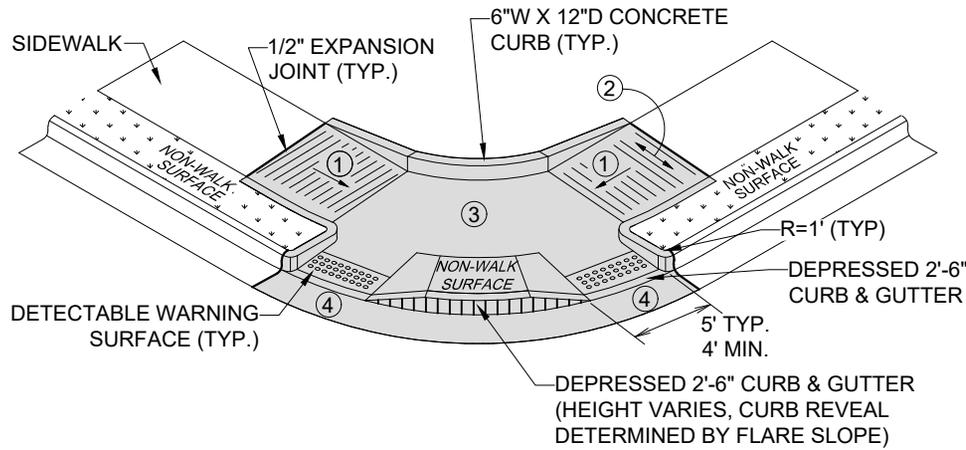


TYPE R-2A

CONCRETE DEPTH	
RAMP / FLARES	6"
LANDING	4"



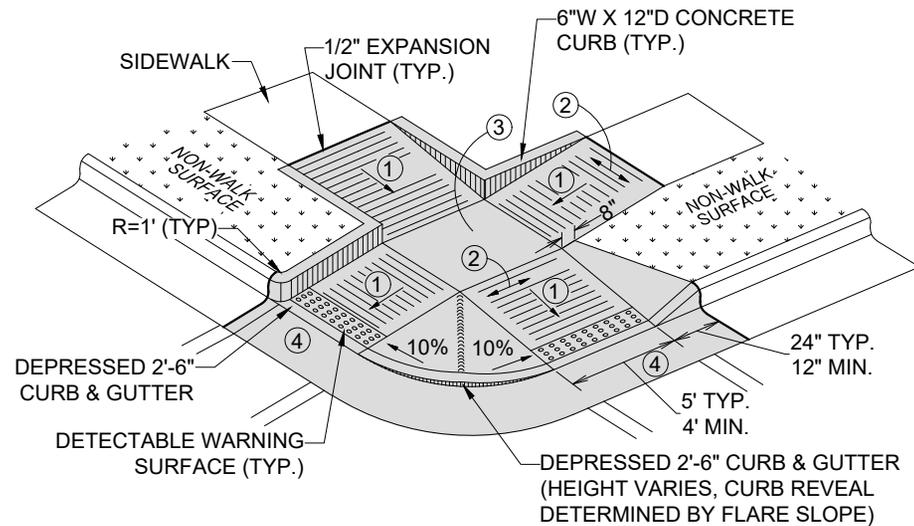
TYPE R-2B



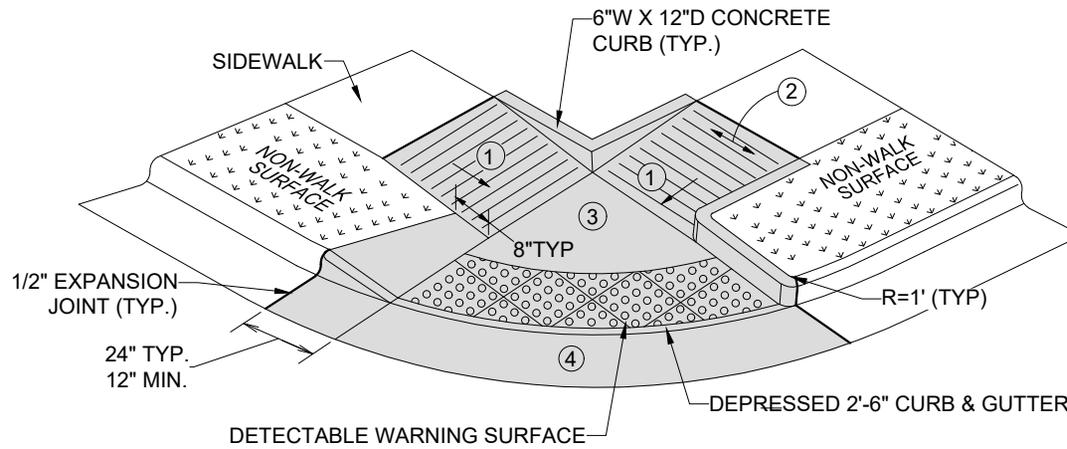
TYPE R-3

CONCRETE DEPTH	
SIDE RAMPS	4"
LANDINGS/OPENINGS	6"

1. RUNNING SLOPE: 5% MIN./8.33% (12:1) MAX.
2. CROSS SLOPE: 2% MAX. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. CROSS SLOPE NOT TO EXCEED 2% ANY PORTION OF TRANSITION TO STREET.
5. IF LENGTH EXCEEDS 5', TRUNCATED DOMES SHALL BE INSTALLED ALONG THE BACK OF THE CURB COVERING THE FULL WIDTH OF THE RAMP.



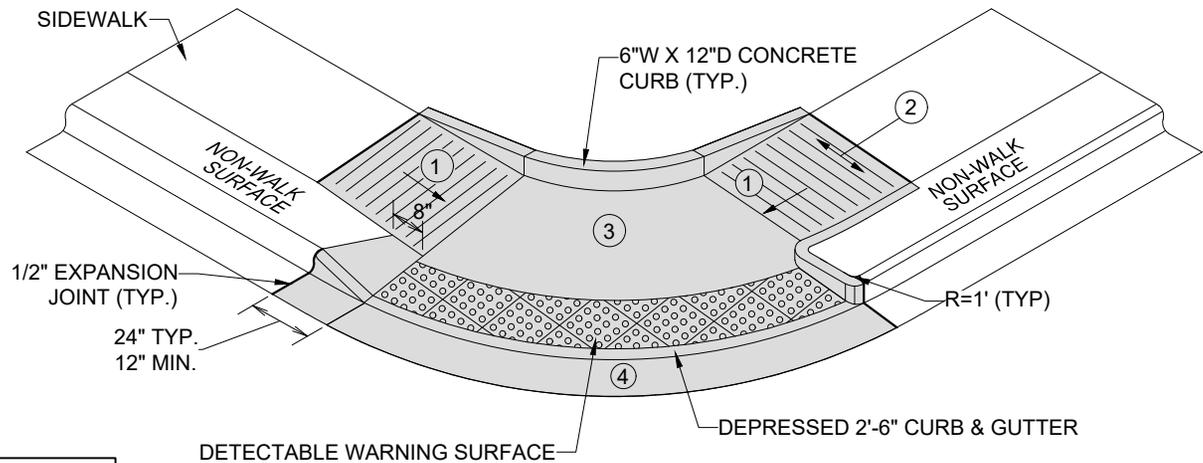
TYPE R-4



CONCRETE DEPTH	
SIDE RAMPS	4"
LANDINGS/CURB RAMPS	6"

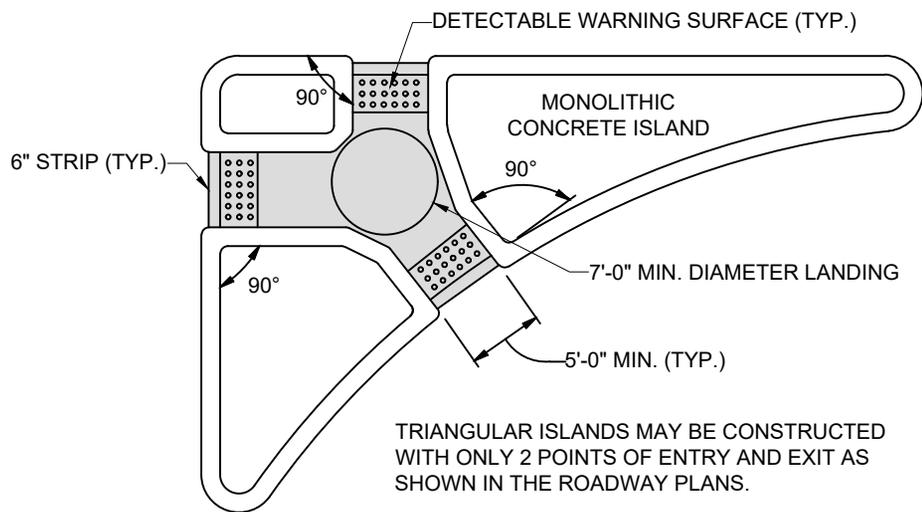
SMALL RADIUS
LESS THAN 15'

1. RUNNING SLOPE: 5% MIN./8.33% (12:1) MAX.
2. CROSS SLOPE: 2% MAX. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. CROSS SLOPE NOT TO EXCEED 2% ANY PORTION OF TRANSITION TO STREET.



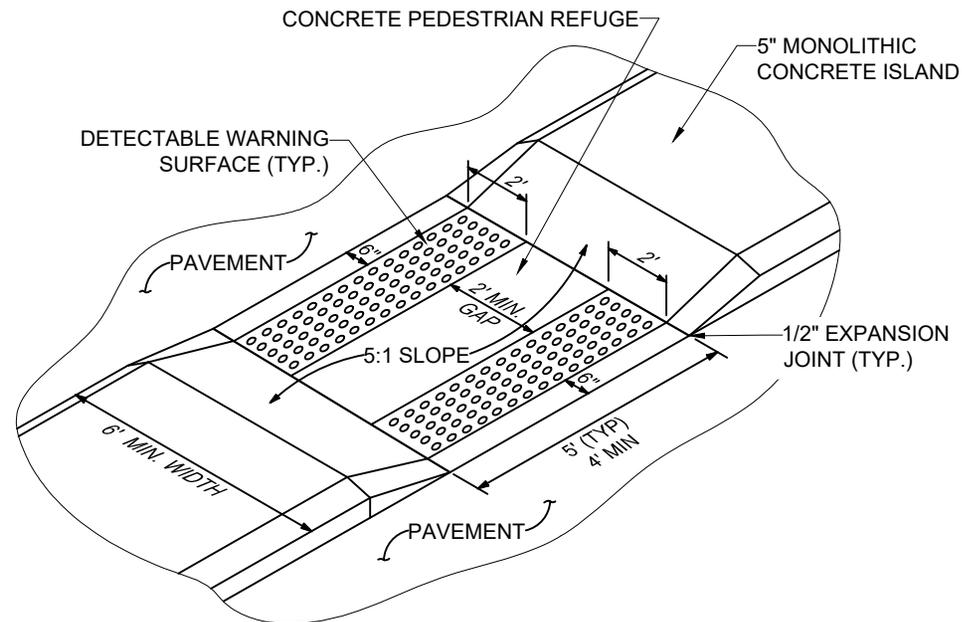
LARGER RADIUS
15' OR GREATER

PAY LIMITS FOR CURB RAMP

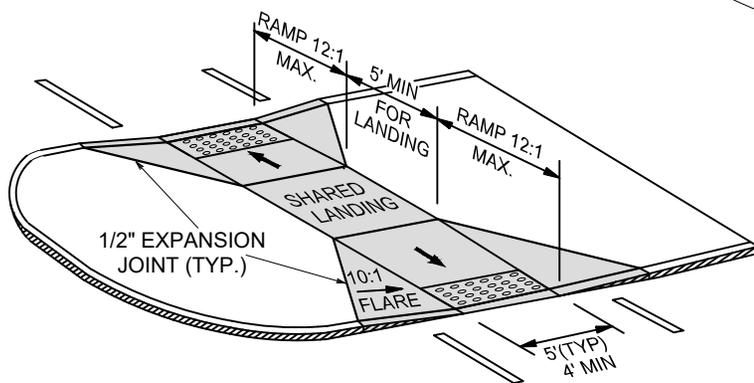


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY 2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE ROADWAY PLANS.

TRIANGULAR ISLAND WITH CUT THROUGH

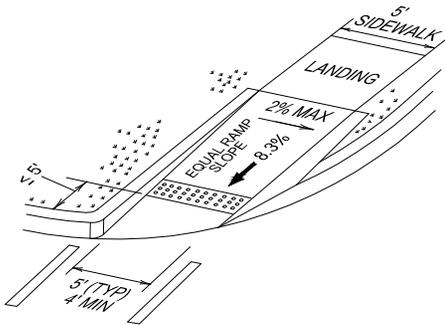


MEDIAN ISLAND WITH CUT THROUGH
(MEDIANS ≤ 20')

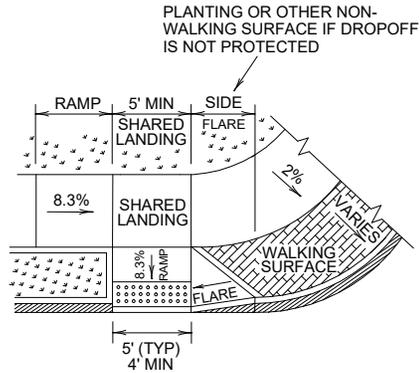


MEDIAN ISLAND CURB RAMPS
(MEDIANS WIDER THAN 20')

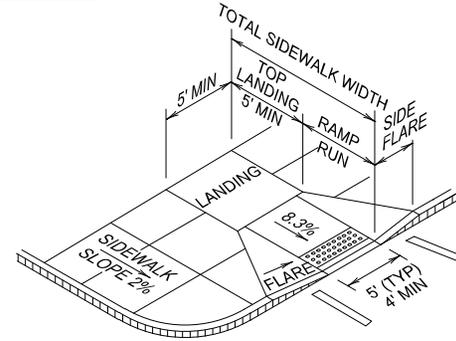
TYPE N-1, N-1A, R-1



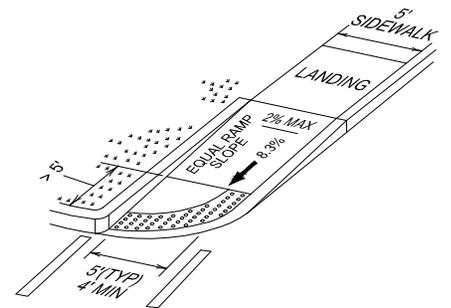
TYPE N-2, N-3



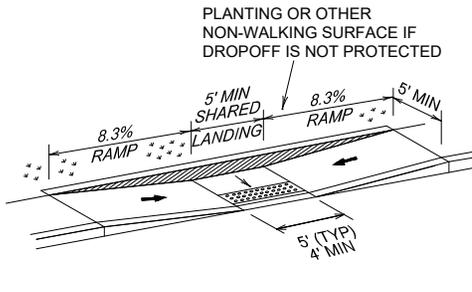
TYPE N-3A



TYPE R-1A

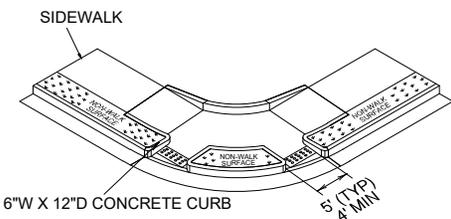


TYPE R-2

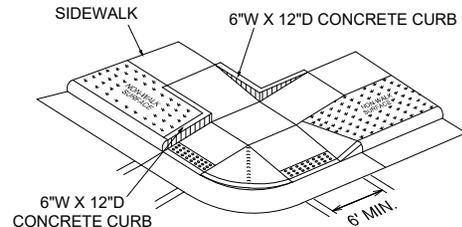


PARALLEL CURB RAMP

TYPE R-3



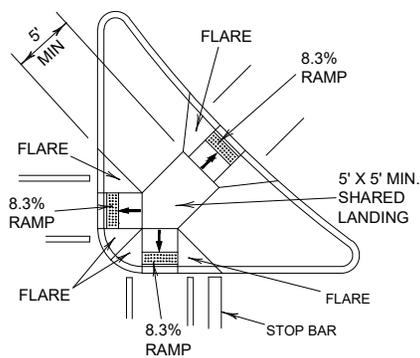
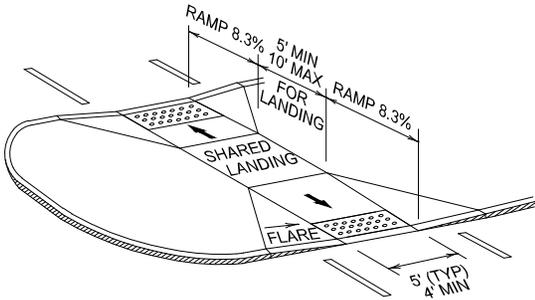
TYPE R-4



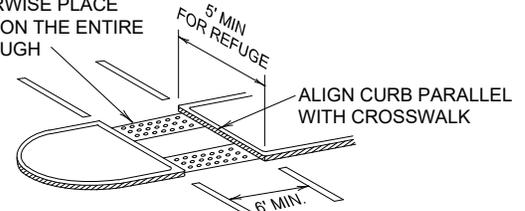
NOTES:

1. CROSS SLOPE NOT TO EXCEED 2% ANY PORTION OF RAMP OR TRANSITION TO STREET.
2. DETECTABLE WARNING SURFACE SHALL EXTEND FULL WIDTH OF SIDEWALK OR RAMP.

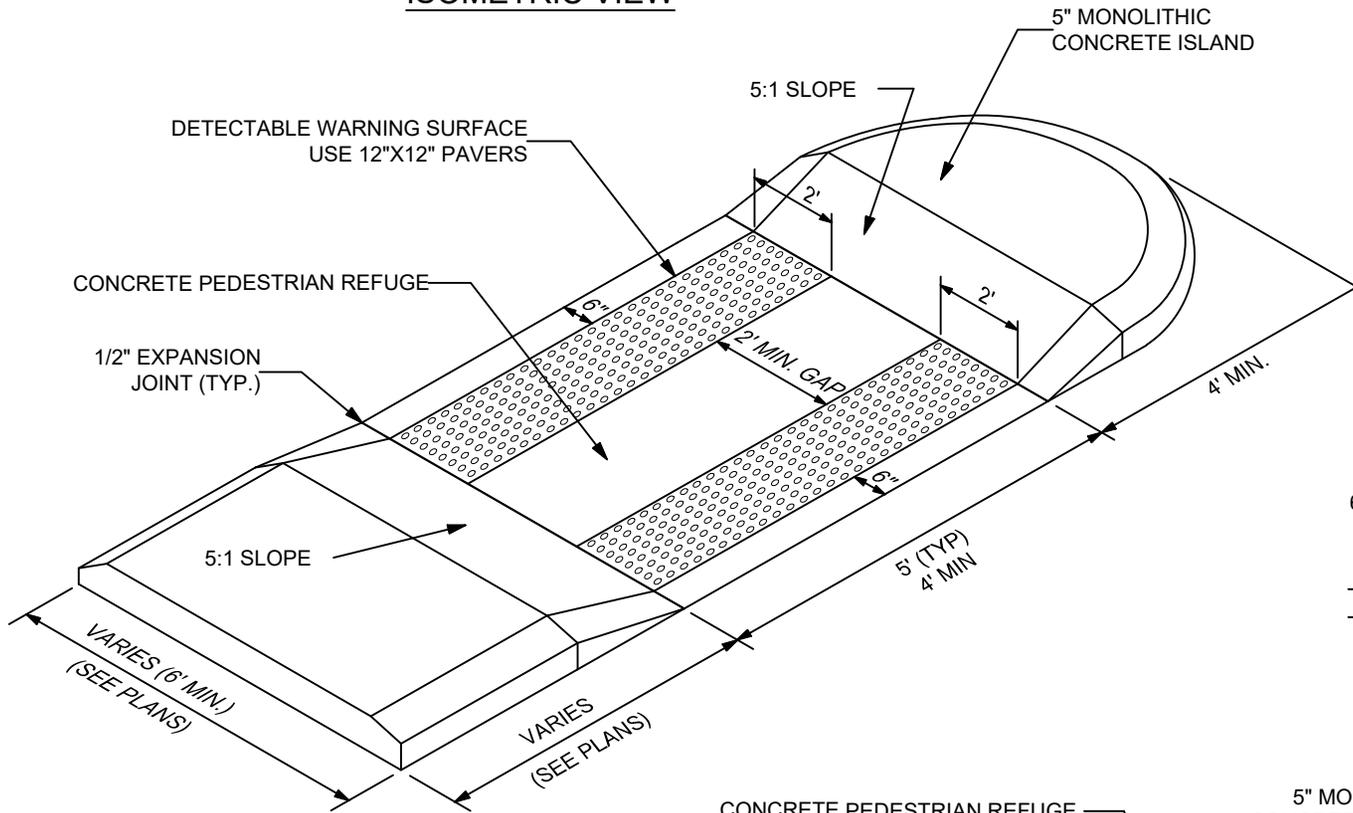
CURB RAMPS AT MEDIAN ISLANDS



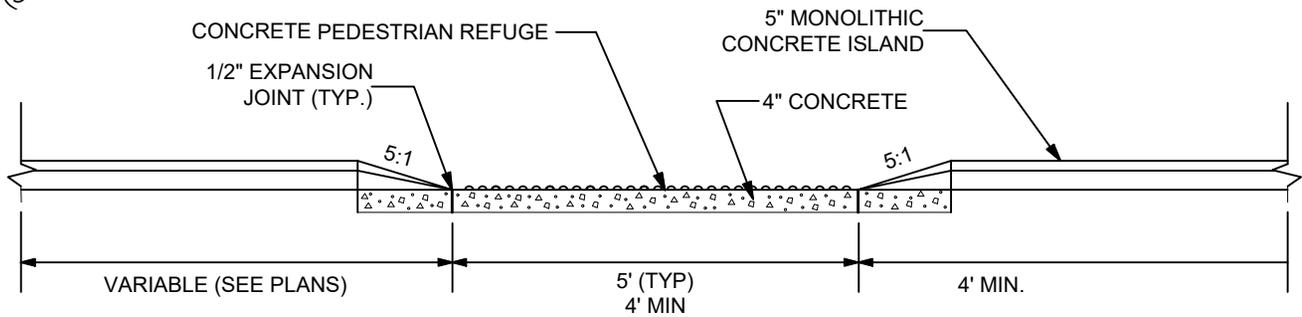
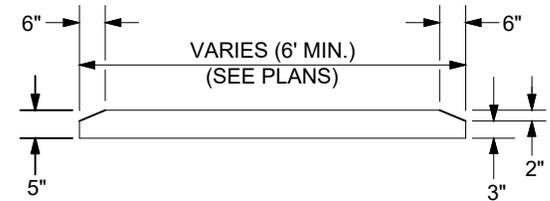
2' STRIP IF CUT THROUGH IS GREATER THAN 4' LENGTH; OTHERWISE PLACE DETECTABLE WARNING ON THE ENTIRE SURFACE OF CUT THROUGH



ISOMETRIC VIEW



CROSS SECTION VIEW



PROFILE VIEW

TOWN OF APEX
STANDARDS

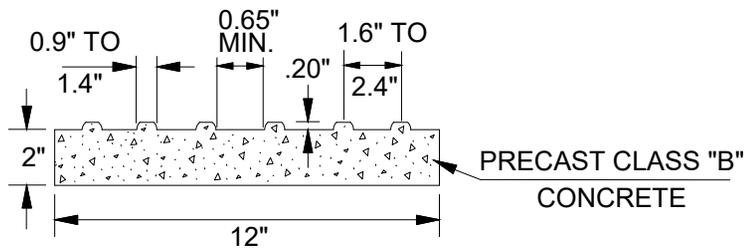
CURB RAMP (PEDESTRIAN REFUGE)

EFFECTIVE: FEBRUARY 28, 2023

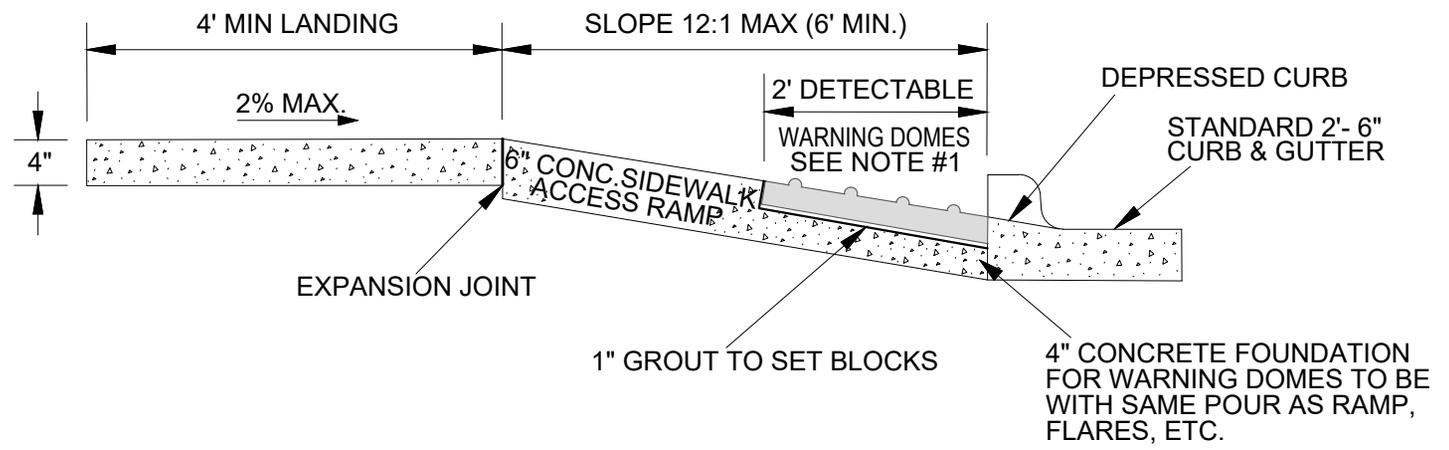
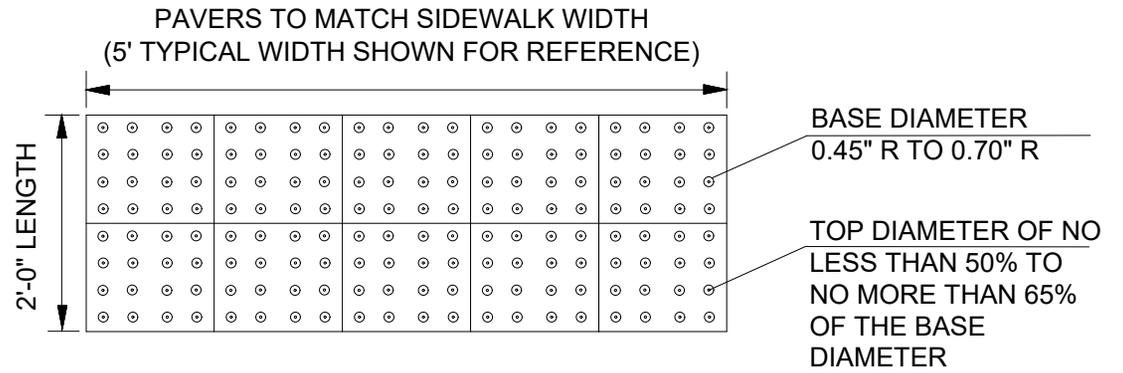
STD. NO.

300.09

SHEET 10 OF 14



DETECTABLE WARNING
DOMES CONCRETE PAVER



RAMP SECTION
WITH DETECTABLE WARNING PAVERS

TOWN OF APEX
STANDARDS

EFFECTIVE: FEBRUARY 28, 2023

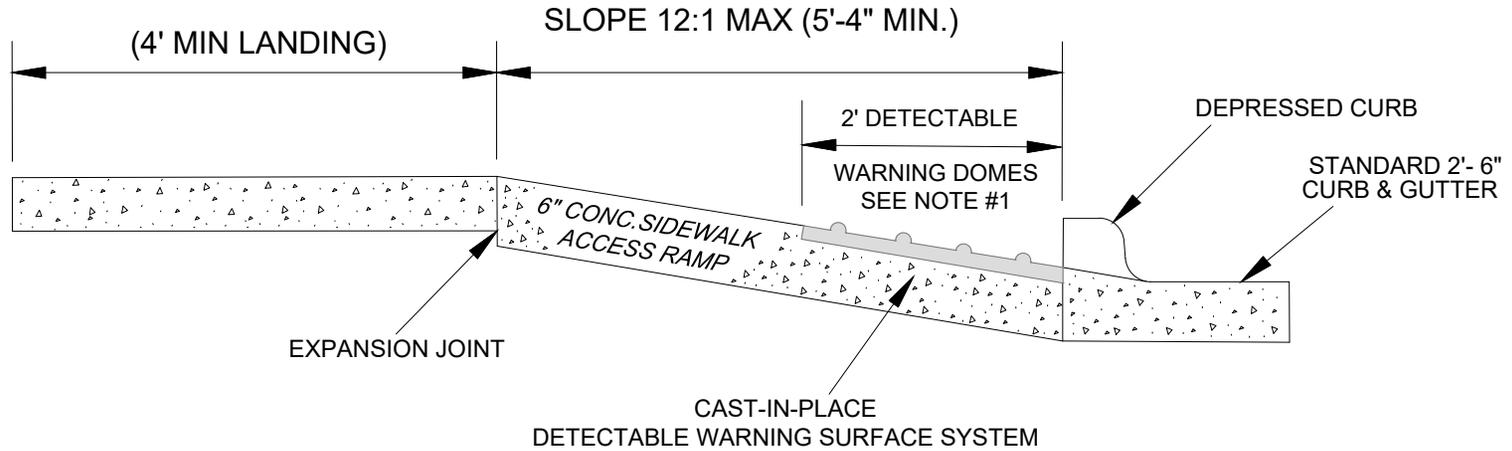
CURB RAMP (DETECTABLE WARNING - PAVERS)

STD. NO.

300.09

SHEET 11 OF 14

RAMP SECTION
WITH DETECTABLE WARNING SURFACE
CAST-IN-PLACE SYSTEM



NOTES:

1. DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON DETAIL.
2. WARNING AREA SHALL BE CHARCOAL, OR BLACK FOR CONTRAST.

TOWN OF APEX
STANDARDS

EFFECTIVE: AUGUST 12, 2025

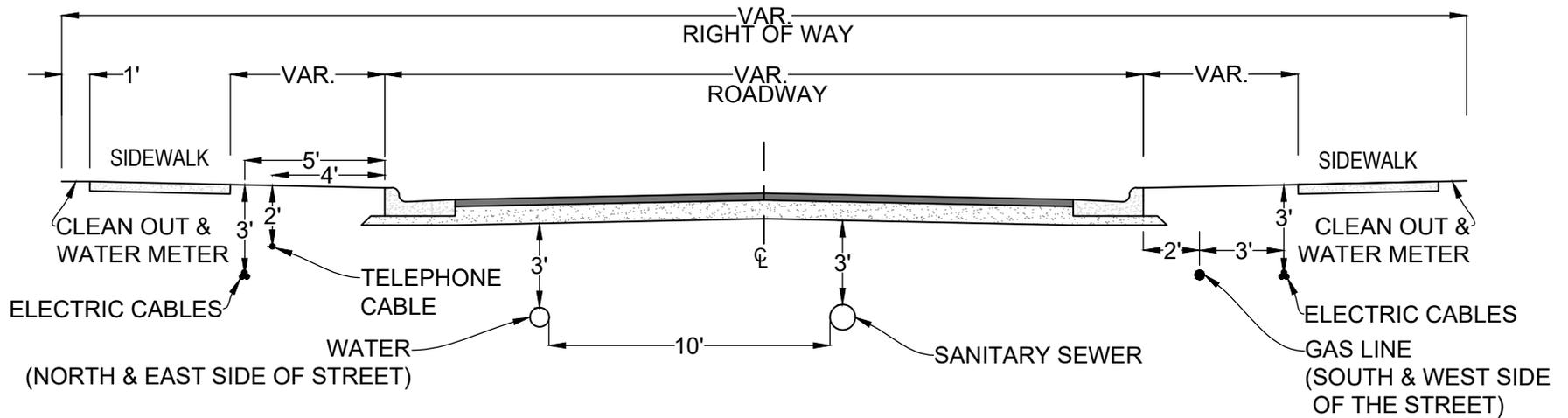
CURB RAMP
(DETECTABLE WARNING - CAST-IN-PLACE)

STD. NO.

300.09

SHEET 13 OF 14

1. STANDARD CURB RAMPS HAVE BEEN DEVELOPED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND PUBLIC RIGHT OF WAY ACCESS GUIDELINES (PROWAG).
2. CURB RAMPS SHALL BE PROVIDED AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SIDEWALK ACCESS RAMPS SHALL BE LOCATED AS INDICATED IN THE DETAIL, HOWEVER, THE LOCATION MAY BE ADJUSTED WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT.
3. THE WALKING SURFACE SHALL BE SLIP RESISTANT. THE COLOR FOR THE DETECTABLE WARNING AREA SHALL BE GRAY, CHARCOAL, OR BLACK FOR CONTRAST.
4. RUNNING SLOPE OF RAMPS SHALL BE 5 PERCENT MINIMUM AND 8.3 PERCENT MAXIMUM BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET.
5. IN NO CASE SHALL THE WIDTH OF THE SIDEWALK ACCESS RAMP BE LESS THAN 48". ALL RAMPS SHALL BE INSTALLED AT THE SAME WIDTH AS THE SIDEWALK.
6. USE CLASS A (3,000 PSI) CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NONSKID SURFACE.
7. A 1/2" EXPANSION JOINT INSTALLED FULL DEPTH WILL BE REQUIRED WHERE THE CONCRETE SIDEWALK ACCESS RAMP JOINS THE CURB AND ALSO WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
8. CURB RAMPS SHOULD BE PLACED PARALLEL TO THE DIRECTION OF TRAVEL.



NOTE:
VERTICLE SEPARATION SHALL ADHERE TO THE FOLLOWING.

VERTICAL SEPARATION	
UTILITY	DISTANCE (INCHES)
WATER & SEWER	18
WATER ABOVE STORM	24
WATER BELOW STORM DRAIN	18
SEWER & STORM	24
ALL OTHER UTILITIES	12

**TOWN OF APEX
STANDARDS**

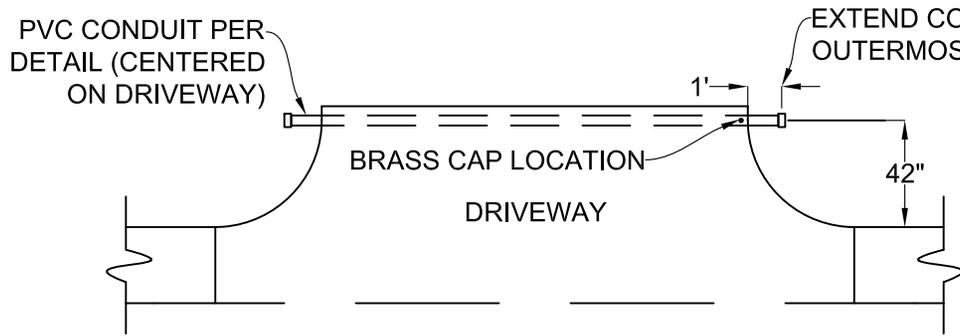
EFFECTIVE: APRIL 12, 2022

STREET CROSS SECTION SHOWING UTILITY LOCATIONS

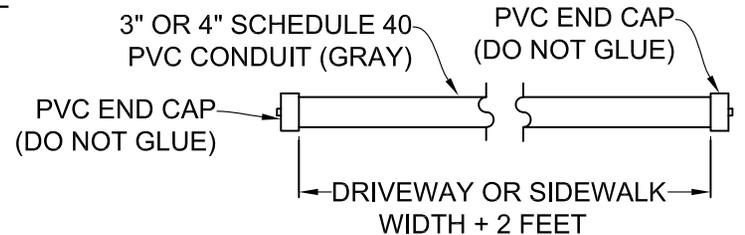
STD. NO.

300.10

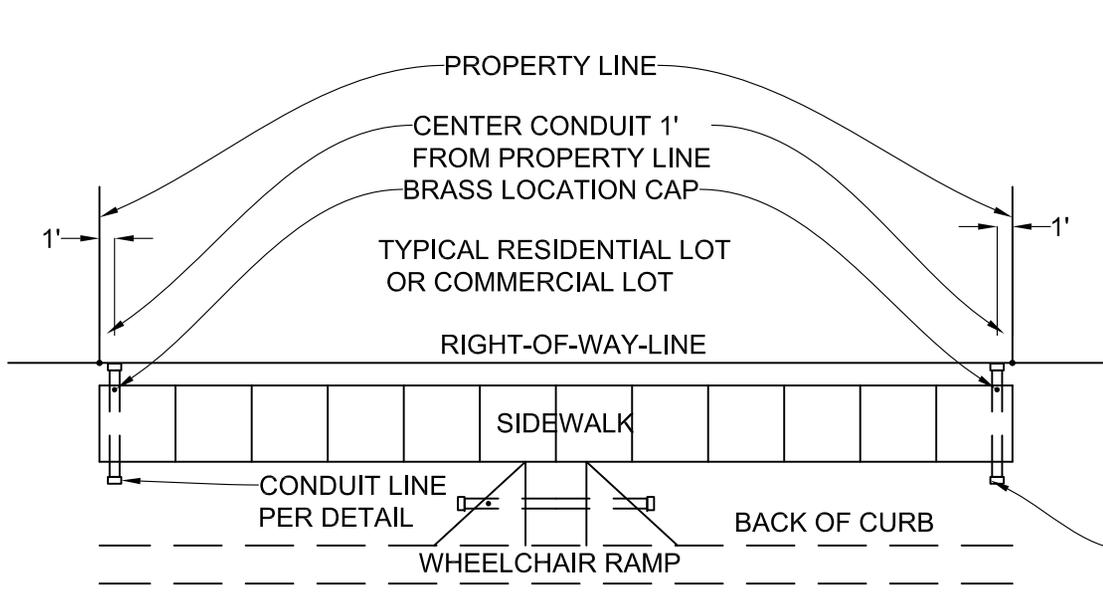
SHEET 1 OF 1



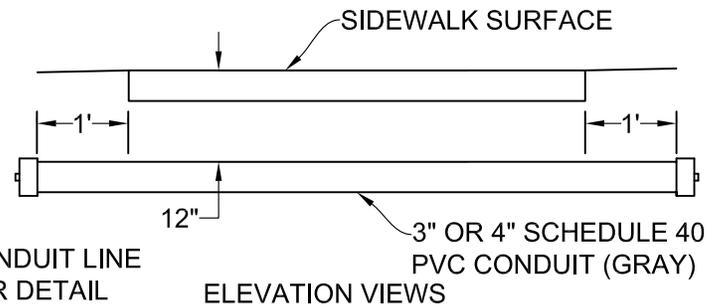
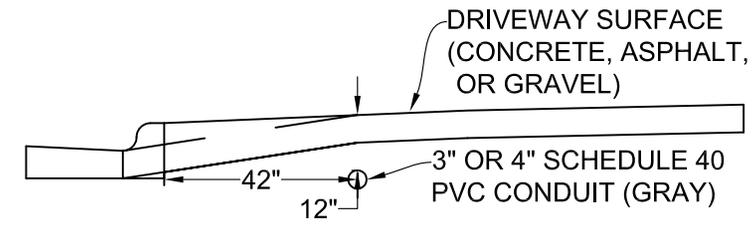
PLAN VIEW OF DRIVEWAY CROSSING



CONDUIT CROSSING



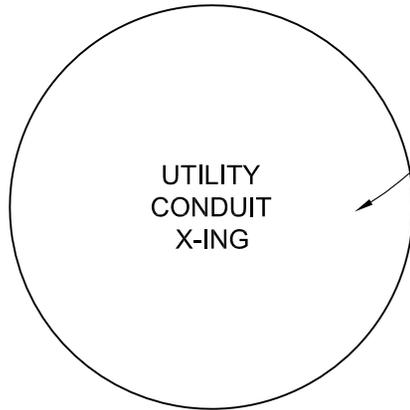
PLAN VIEW OF SIDEWALK CROSSING



ELEVATION VIEWS

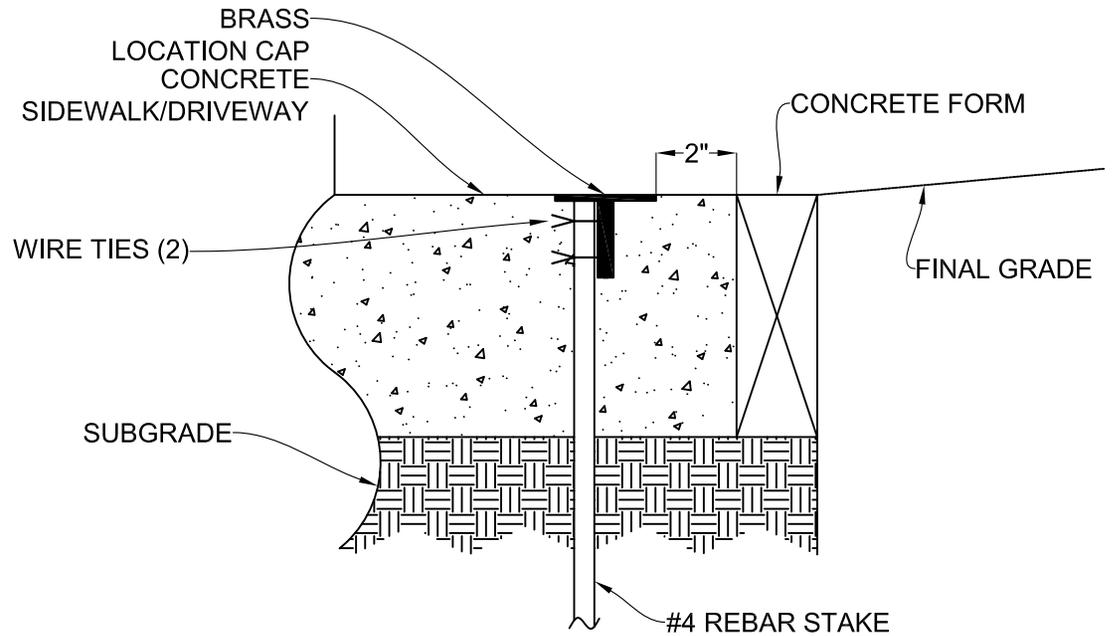
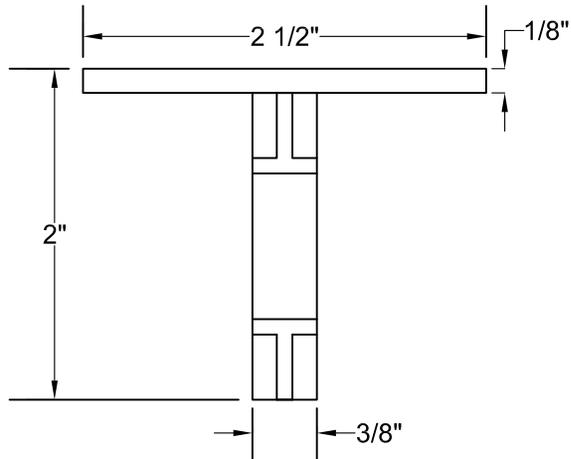
NOTE:
 CONDUITS SHALL BE INSTALLED IN ASSOCIATION WITH ALL NEW RESIDENTIAL / COMMERCIAL DRIVEWAY AND SIDEWALK INSTALLATIONS.

TOWN OF APEX STANDARDS EFFECTIVE: DECEMBER 3, 2002	CONDUIT CROSSING FOR DRIVEWAYS & SIDEWALKS	STD. NO.
		300.11
		SHEET 1 OF 2



BRASS LOCATION CAP

$\frac{3}{8}$ " TALL
STAMPED LETTERING



ELEVATION VIEW
CAP INSTALLATION

TOWN OF APEX
STANDARDS

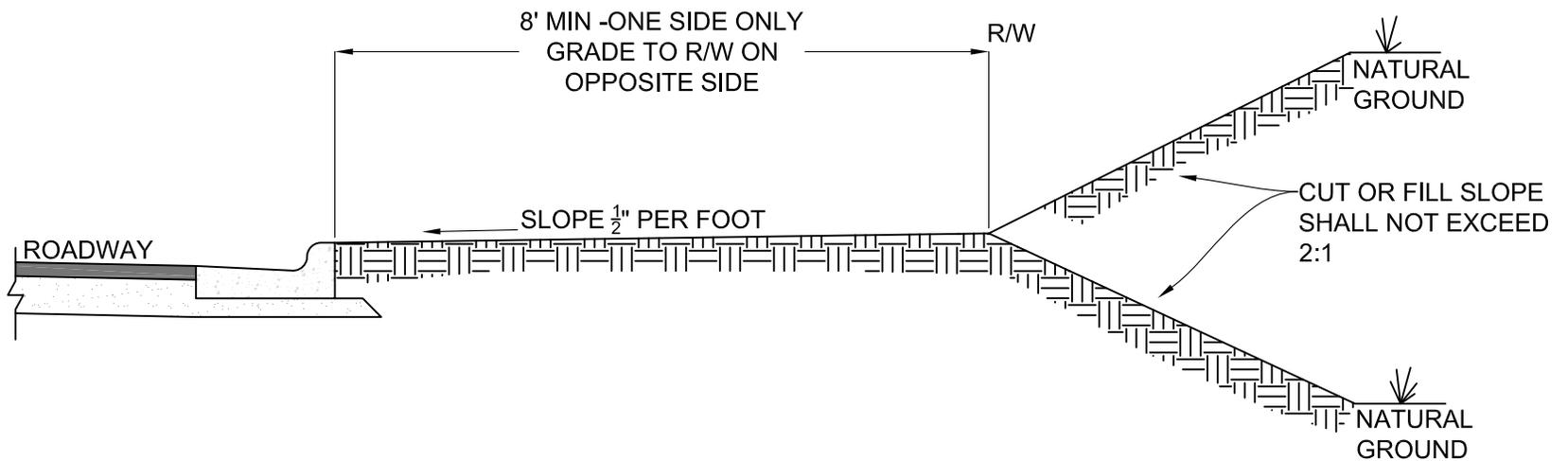
EFFECTIVE: DECEMBER 3, 2002

CONDUIT CROSSING FOR DRIVEWAYS & SIDEWALKS

STD. NO.

300.11

SHEET 2 OF 2



TOWN OF APEX
STANDARDS

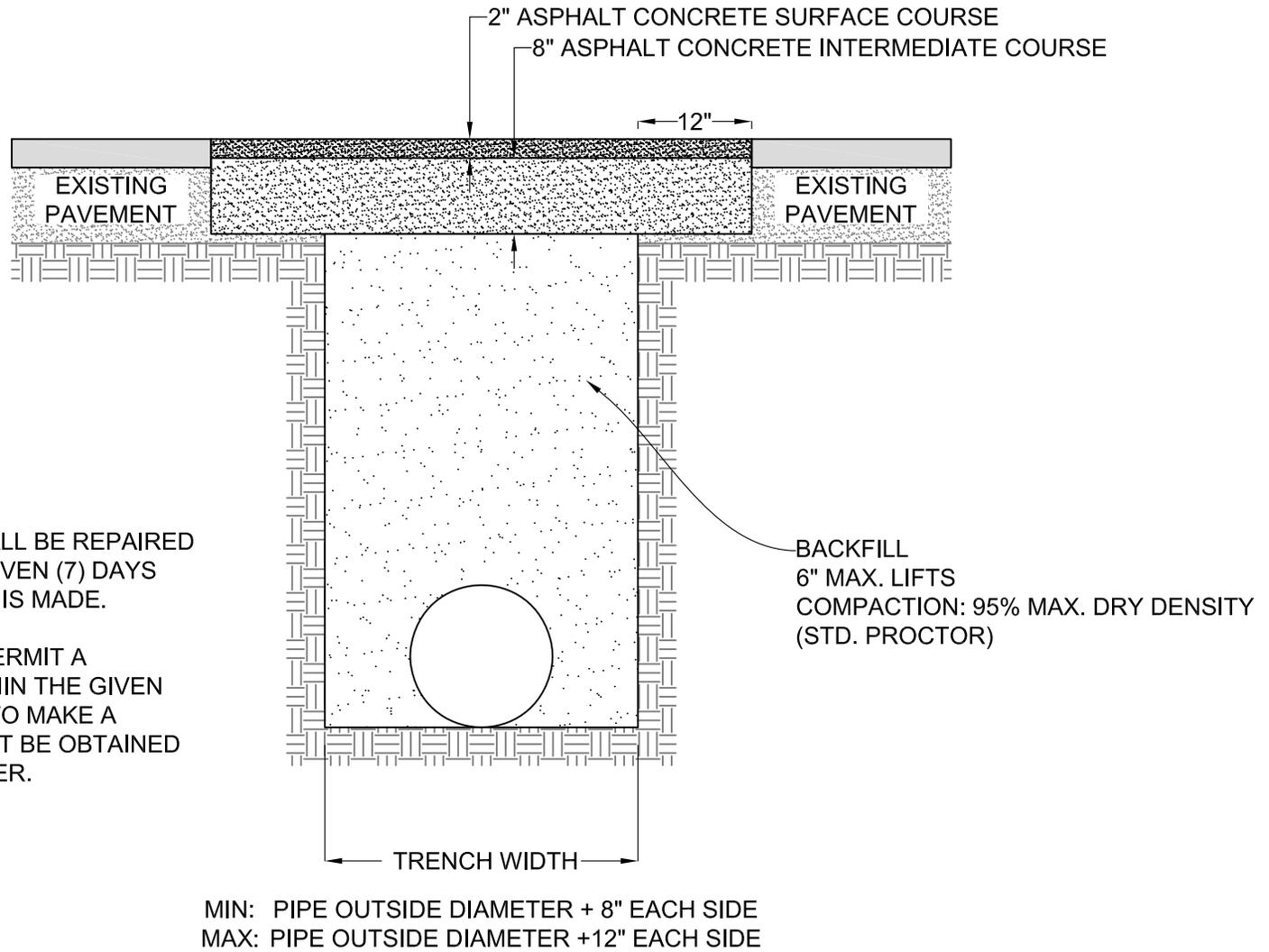
EFFECTIVE: DECEMBER 3, 2002

SHOULDER SECTION WITHOUT SIDEWALK

STD. NO.

300.12

SHEET 1 OF 1



NOTES:

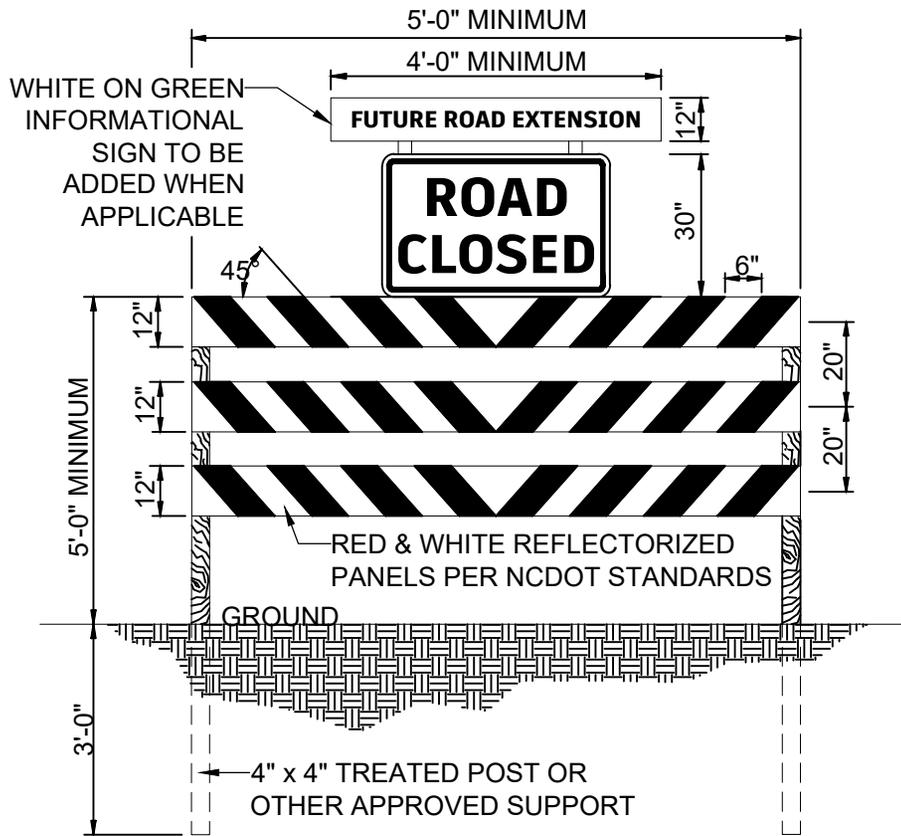
1. ALL PAVEMENT CUTS SHALL BE REPAIRED WITHIN A MAXIMUM OF SEVEN (7) DAYS FROM THE DATE THE CUT IS MADE.
2. IF CONDITIONS DO NOT PERMIT A PERMANENT REPAIR WITHIN THE GIVEN TIME LIMIT, PERMISSION TO MAKE A TEMPORARY REPAIR MUST BE OBTAINED FROM THE TOWN ENGINEER.

CLASSIFICATION	DESIGN SPEED (MPH)	MAX. GRADE (%)	HORIZONTAL CURVE CONTROLS		VERTICAL CURVE CONTROLS	
			MAX. SUPER ELEVATION (%)	MIN. CL RADIUS (FT)	MIN. LENGTH CREST (FT)	MIN. LENGTH SAG (FT)
THOROUGHFARE	50	7	4	926	84A	96A
MAJOR COLLECTOR	35	10	4	371	29A	49A
MINOR COLLECTOR	30	10	NC	333	19A	37A
RESIDENTIAL STREET	25	10	NC	198	12A	26A
ALLEY	---	10	RC	50	12A	26A

NOTES:

1. A = ALGEBRAIC DIFFERENCE IN GRADES
2. NC / RC = NORMAL CROWN / REVERSE CROWN
3. THIS TABLE OUTLINES MINIMUMS FOR ROADWAY DESIGN. SOUND ENGINEERING JUDGEMENT SHOULD BE EXERCISED WHEN USING MINIMUM DESIGN STANDARDS FOR ROADS.
4. ALTERNATE DESIGNS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION PUBLISHED BY AASHTO: A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS.
5. GRADES SHALL NOT EXCEED 5% WITHIN 100 FEET OF STOP OR YIELD CONDITION.

THOROUGHFARE & COLLECTOR

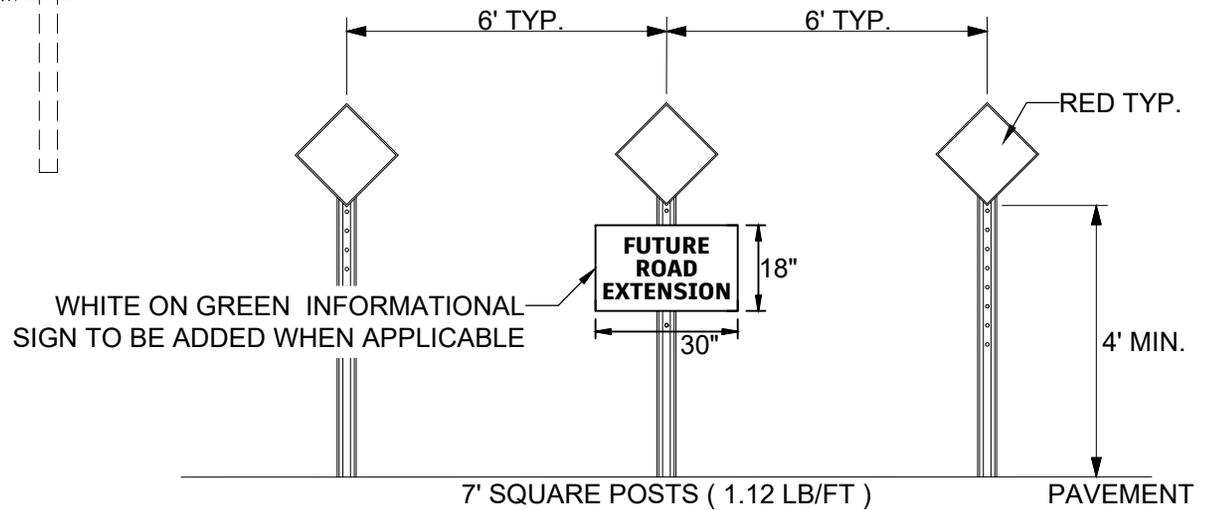


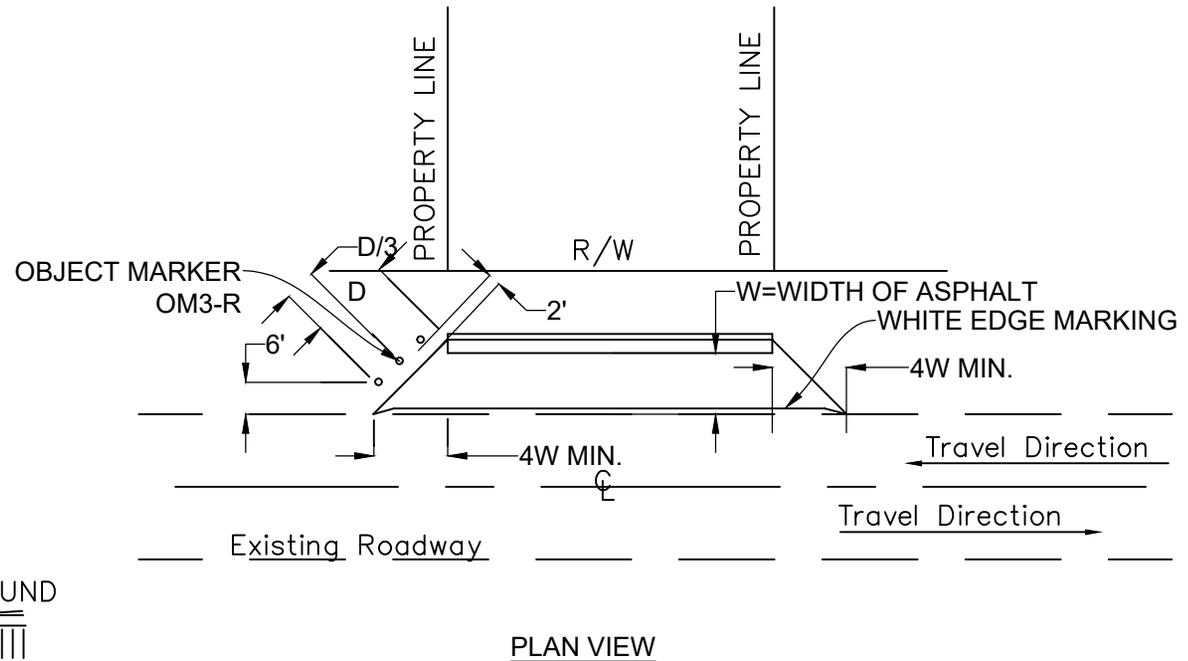
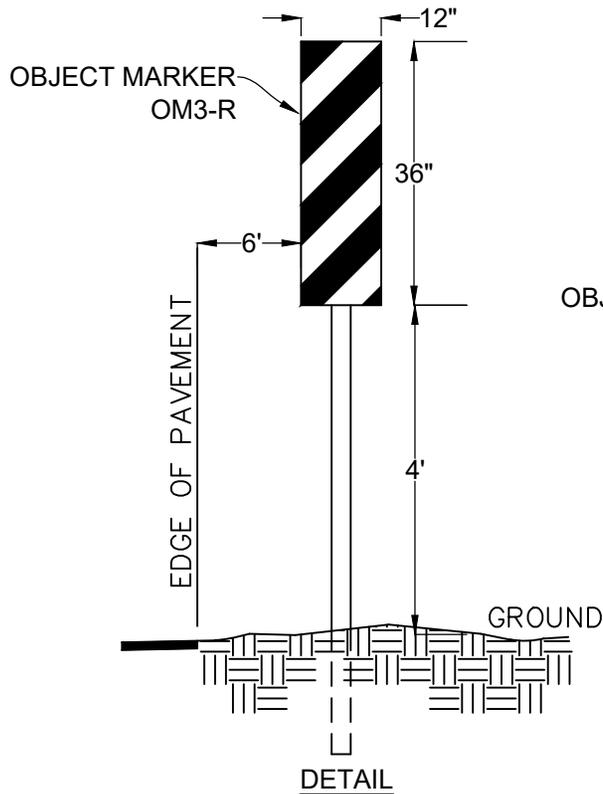
NOTES:

1. BARRICADE(S) TO BE ERECTED ACROSS ENTIRE ROADWAY INCLUDING CURB & GUTTER.
2. ADVANCE WARNING SIGN W14-1 (DEAD END) SHALL BE PLACED JUST AFTER LAST INTERSECTING STREET.
3. MARKINGS FOR BARRICADE RAILS SHALL BE REFLECTIVE AND ALTERNATE RED & WHITE STRIPS.
4. "ROAD CLOSED" SIGN SHALL MEET SPECIFICATIONS OF MUTCD R11-2 AND BE REQUIRED AT TOP OF EACH BARRICADE USED.
5. CALL 811 FOR UNDERGROUND UTILITY LOCATIONS PRIOR TO INSTALLATION.

LOCAL & MIXED USE

3 MARKERS MINIMUM





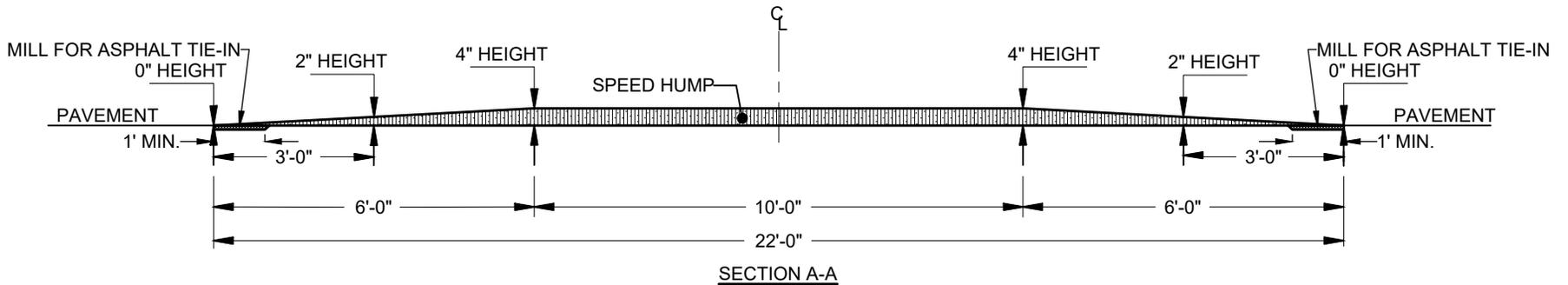
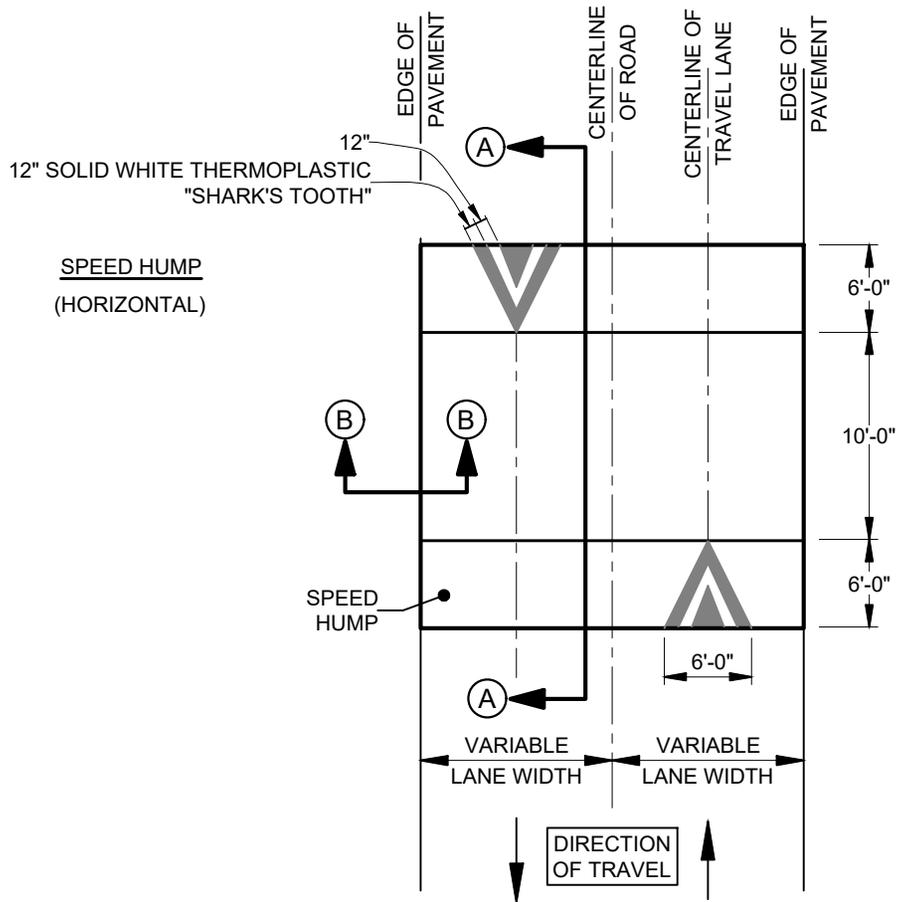
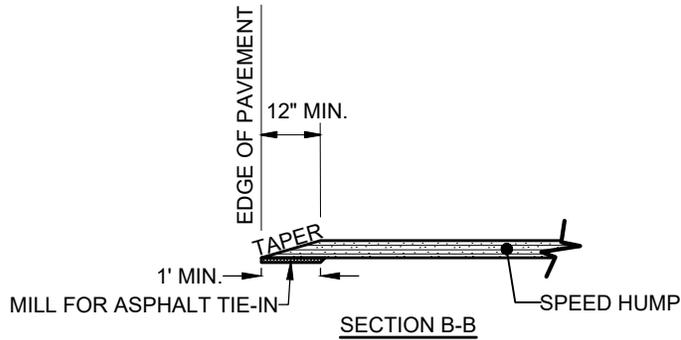
NOTES:

- A. BOTTOM EDGE OF DELINEATOR 4' ABOVE ROADWAY.
- B. THE DELINEATOR STRIPES SHALL SLOPE UPWARD
- C. DELINEATORS TO BE SPACED ON CENTERS AT 1/3 OF THE DISTANCE D SHOWN BELOW FOR NEW ASPHALT WIDTHS < 15 FT. OR AT 1/4 OF D FOR NEW ASPHALT WIDTHS > 15 FT.
- D. DELINEATORS SHALL BE MOUNTED ON BREAKAWAY POSTS.
- E. DELINEATORS SHALL BE REFLECTORIZED.

- 1. TAPER ON BOTH ENDS OF ROADWAY WIDENING SHALL BE A MINIMUM 4:1. THE TOWN ENGINEER AND/OR NCDOT RESERVE THE RIGHT TO REQUIRE A LONGER TAPER IF DEEMED NECESSARY FOR THE SAFETY OF THE PUBLIC.
- 2. A SOLID WHITE EDGE MARKING SHALL BE EXTENDED ALONG WIDENING AT EXISTING PAVEMENT.
- 3. DELINEATORS SHALL ONLY BE REQUIRED AT TAPER FROM CURB TO EXISTING PAVEMENT IN DIRECTION OF TRAVEL.
- 4. DELINEATORS SHALL BE ORIENTED SUCH THAT THE FACE OF THE SIGN IS PERPENDICULAR TO TRAVEL LANE.

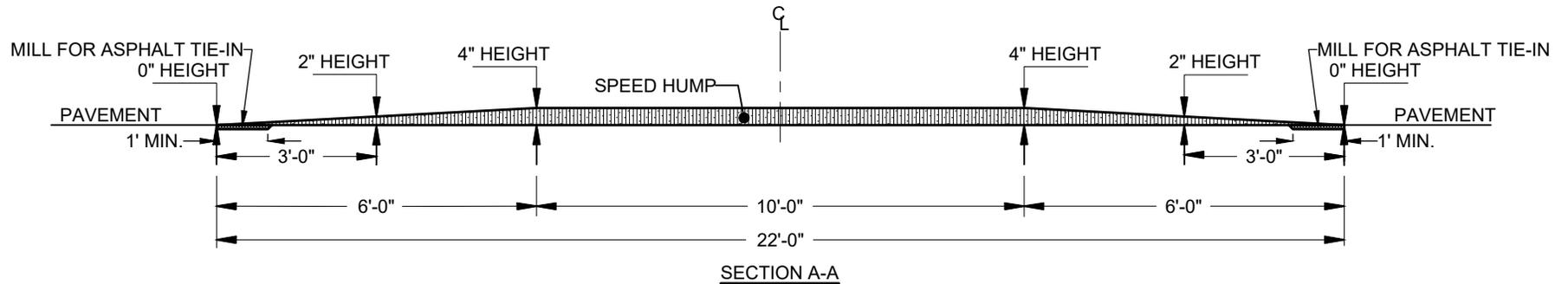
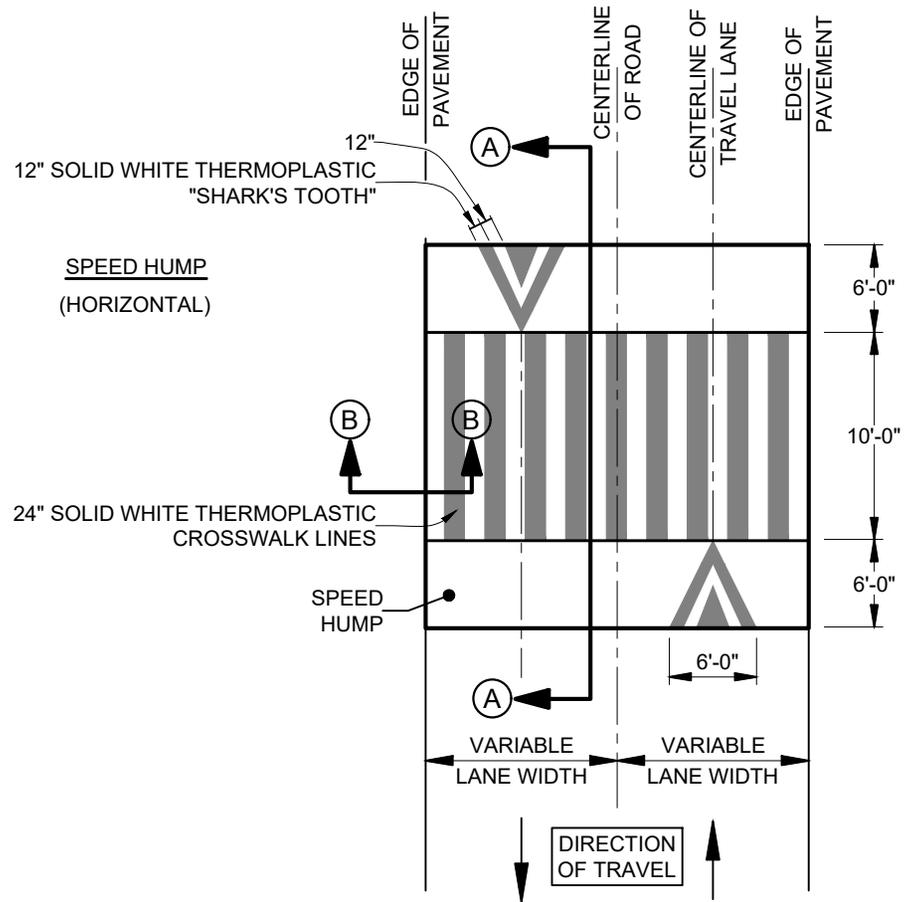
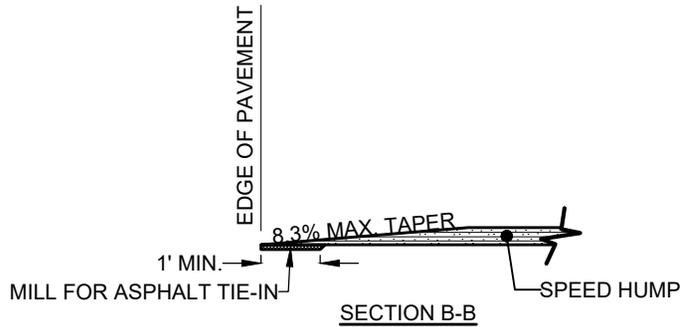
NOTES:

1. EXISTING ROADWAY SHALL BE CLEARED FREE OF ALL LOOSE DEBRIS; AREA TO BE SURFACED WITH SPEED HUMPS SHALL BE COATED WITH TACK PRIOR TO PAVING OPERATIONS.
2. SPEED HUMPS SHALL BE CONSTRUCTED WITH ASPHALT.
3. ROADSIDE, EACH DIRECTION:
 W17 -1 "SPEED BUMP" YELLOW 30" x 30"
 W13-1P "20 MPH" YELLOW 18" x 18"
4. ALL VERTICAL MEASUREMENTS SHALL BE WITHIN A MAXIMUM OF 0.5" TOLERANCE, OTHERWISE, THE TOWN MAY REQUIRE REMOVAL/ REPLACEMENT.



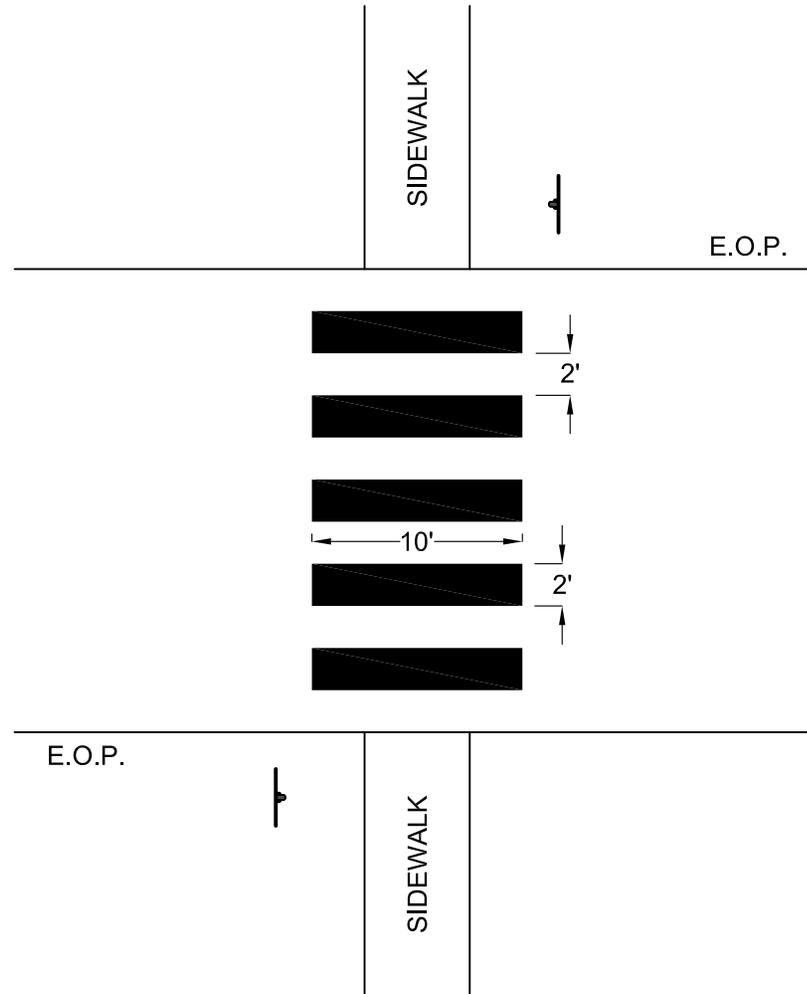
NOTES:

- EXISTING ROADWAY SHALL BE CLEARED FREE OF ALL LOOSE DEBRIS; AREA TO BE SURFACED WITH SPEED HUMPS SHALL BE COATED WITH TACK PRIOR TO PAVING OPERATIONS.
- SPEED HUMPS SHALL BE CONSTRUCTED WITH ASPHALT.
- ROADSIDE, EACH DIRECTION:
W17 -1 "SPEED BUMP" YELLOW 30" x 30"
W13-1P "20 MPH" YELLOW 18" x 18"
- W11-2 & W16-7P AT CROSSWALK ON EACH APPROACH (2X2)
- ALL VERTICAL MEASUREMENTS SHALL BE WITHIN A MAXIMUM OF 0.5" TOLERANCE, OTHERWISE, THE TOWN MAY REQUIRE REMOVAL/ REPLACEMENT.

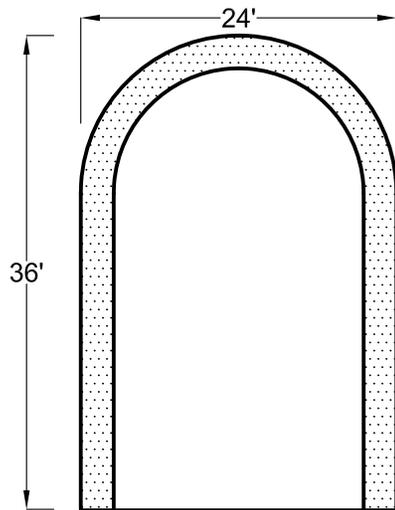


NOTES:

1. CROSSWALK MARKINGS ARE 10' IN LENGTH, 2' WIDE AND 4' ON CENTER (WHITE THERMOPLASTIC).
2. CROSSWALK IS NOT PROTECTED BY STOP CONTROL.
3. W11-2 & W16-7P SIGNS AT CROSSWALK ON EACH APPROACH (2X2).



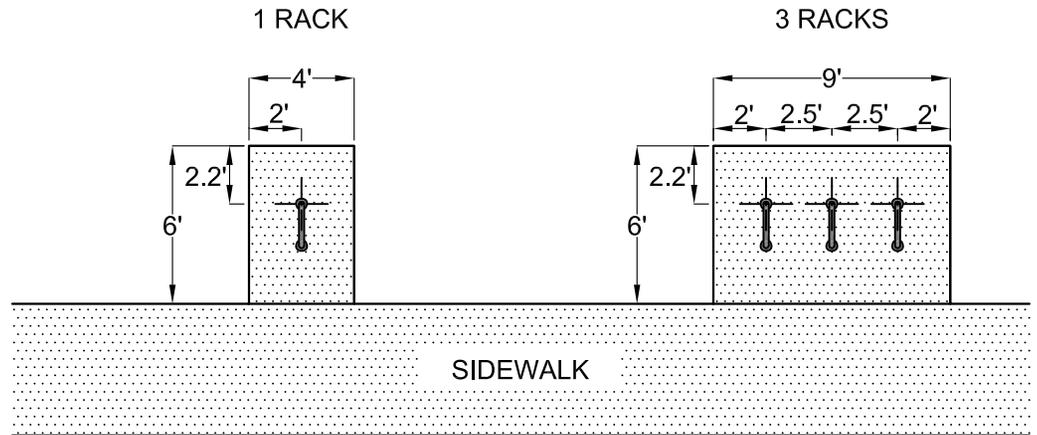
INVERTED "U" RACKS



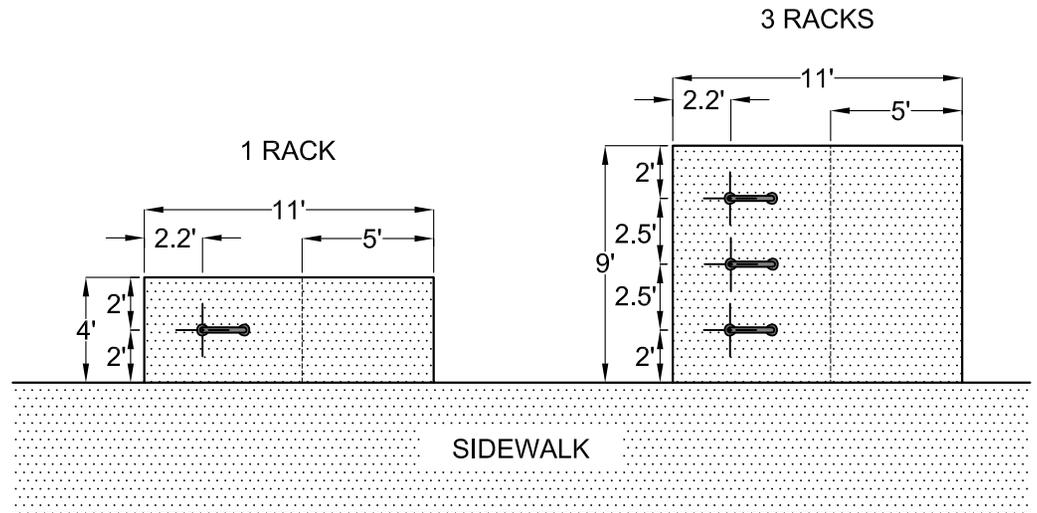
NOTES:

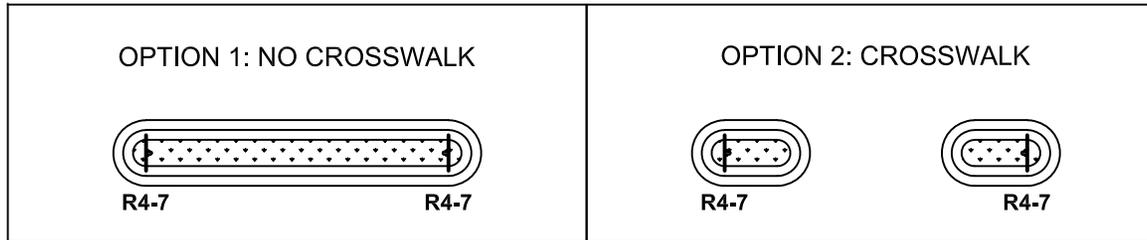
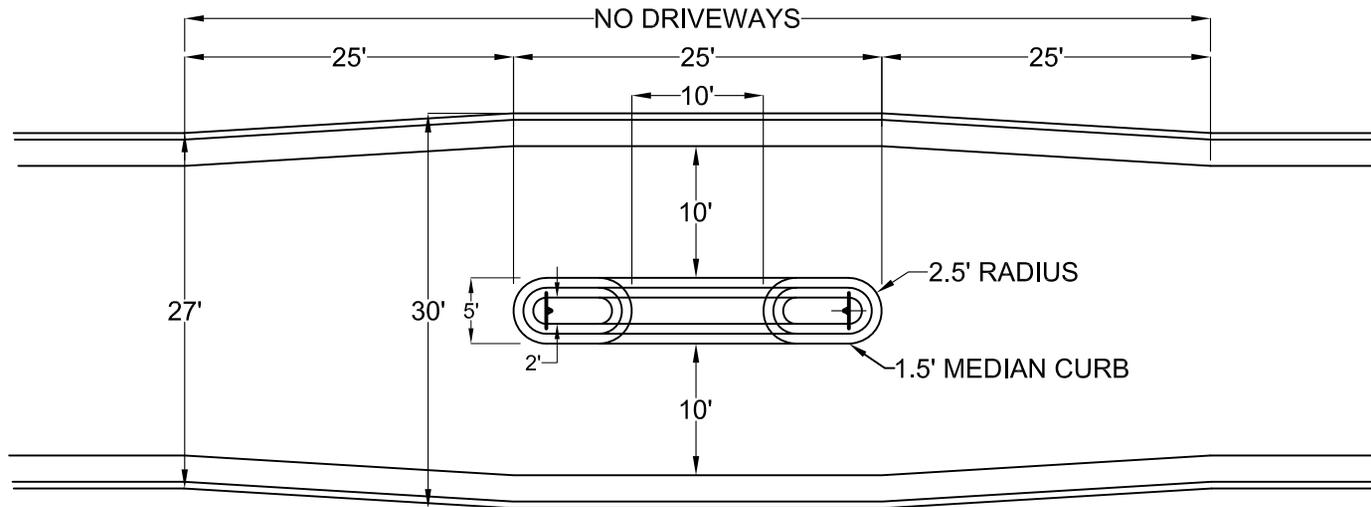
1. PARKING PAD IS 6" CONCRETE SLAB. SIZE SHOWN IS 4'X6' MIN. PAD FOR SINGLE RACK AND 2'-6" ADDITIONAL WIDTH PER RACK FOR RACKS TO BE SPACED 2'-6" O.C. IF MORE THAN ONE.
2. 5' WIDE UNOBSTRUCTED MANEUVERING AREA IS REQUIRED BEHIND RACKS WHEN ORIENTED PARALLEL TO A SIDEWALK AS SHOWN; REQUIRES 4'X11' MIN. PAD.
3. RACKS SHALL BE FLANGE MOUNTED AND SHALL HAVE BLACK POLYESTER POWDER COAT. OTHER PLACEMENTS SHALL MEET MINIMUM SIZE REQUIREMENTS.
4. BICYCLE PARKING SHALL NOT ENCROACH ON ACCESSIBLE PATHS.
5. DESIGNATED PLACEMENT WITHIN PARKING LOTS MAY ALSO BE ACCEPTABLE.

OPTION 1: PERPENDICULAR TO SIDEWALK



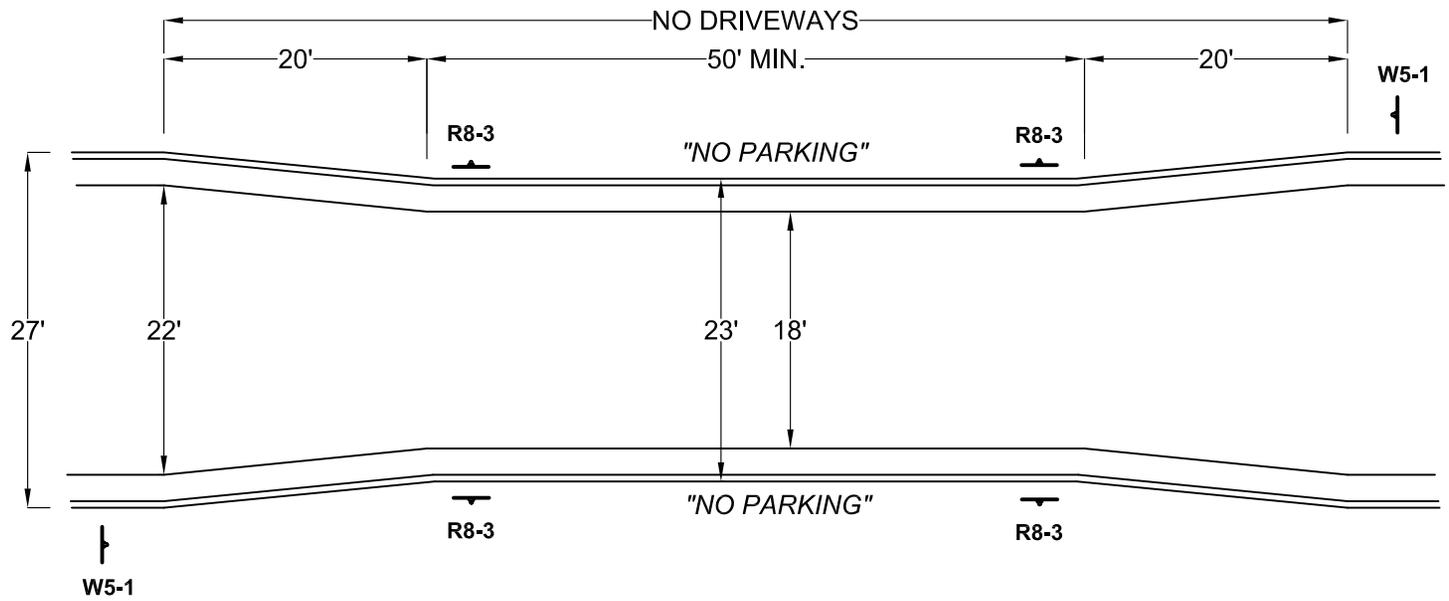
OPTION 2: PARALLEL TO SIDEWALK





NOTES:

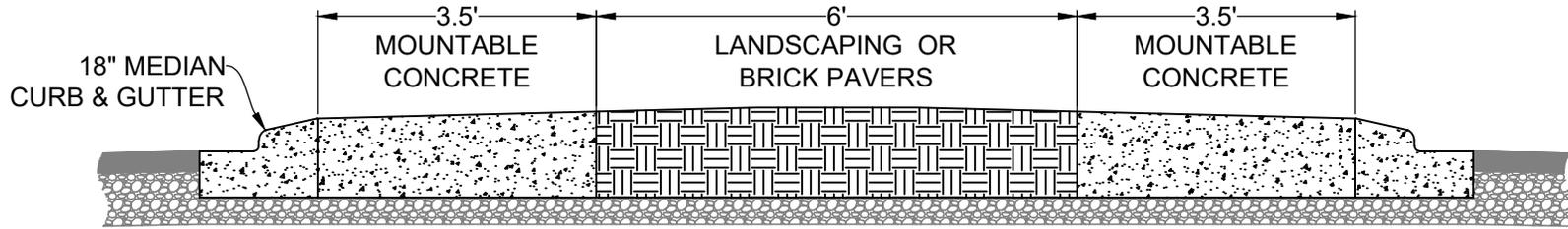
1. NOT FOR USE WITHIN 300 FEET OF HORIZONTAL CURVES UNDER 300-FOOT RADIUS OR WITHIN 50 FEET OF AN INTERSECTION.
2. PLACE R4-7 KEEP RIGHT SIGNS ON EACH END OF MEDIAN.
3. OPTIONAL: 10' BREAK (SHOWN ABOVE) FOR MID-BLOCK PEDESTRIAN CROSSING.
4. PLANTINGS MAY INCLUDE GRASS, FLOWERS, OR SHRUBS UNDER 30" MATURE HEIGHT IN OPTIONAL 2' PLANTING STRIP. MAINTENANCE OF ANY PLANTINGS IS THE RESPONSIBILITY OF THE HOA.
5. DRIVEWAYS SHALL NOT BE LOCATED WITHIN 25 FEET OF THE MEDIAN.



NOTES:

1. NOT FOR USE WITHIN 50 FEET OF HORIZONTAL CURVES, ADJACENT TO CURVES UNDER 300-FOOT RADIUS, OR WITHIN 50 FEET OF AN INTERSECTION.
2. W5-1 "ROAD NARROWS" 100' IN ADVANCE FOR EACH APPROACH (2).
3. R8-3 "NO PARKING" EACH END OF NECKDOWN ON BOTH SIDES OF THE STREET (4).
4. MAY BE USED TO REDUCE ENVIRONMENTAL IMPACTS OVER LONGER DISTANCES WHERE DRIVEWAYS ARE NOT PRESENT, INCLUDING STREAM OR WETLAND CROSSINGS.
5. DRIVEWAYS SHALL NOT BE LOCATED WITHIN THE LIMITS OF THE NECKDOWN DEVICE.

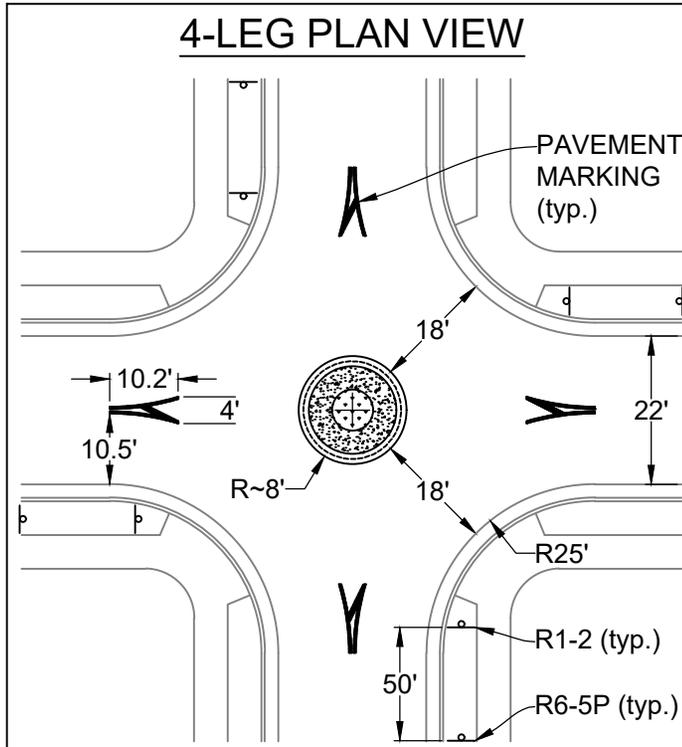
CROSS SECTION



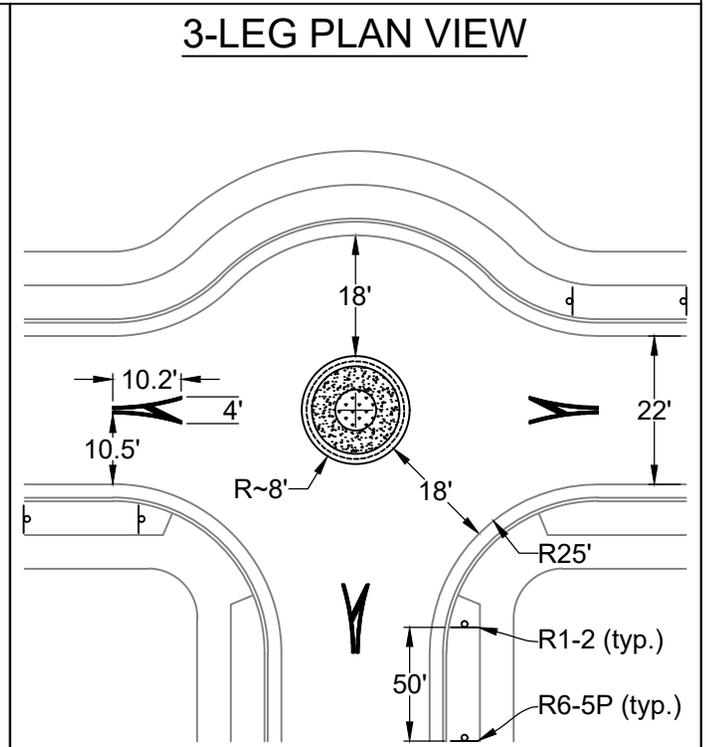
NOTES:

1. ROADWAY: MINIMUM STREET WIDTH IS 27' BACK-TO-BACK OR 22' EDGE-TO-EDGE; MAXIMUM CIRCULATING LANE WIDTH IS 18'; LANE WIDTH WILL VARY FOR SKEWED INTERSECTIONS AND INTERSECTIONS INVOLVING WIDER STREETS.
2. CENTER ISLAND TO BE HOA MAINTAINED; LARGE SHRUBS AND TREES ARE NOT PERMITTED. LANDSCAPING SUBJECT TO STAFF REVIEW AND APPROVAL.
3. SIGNS: YIELD SIGN (R1-2) AND CIRCULAR INTERSECTION SIGN (R6-5P) ON EACH APPROACH AT CIRCLE.
4. PAVEMENT MARKING: PAINTED SPLITTER ISLANDS ARE 4" DOUBLE YELLOW WITH 8" ANGLE MARKING AT 2:1.

4-LEG PLAN VIEW



3-LEG PLAN VIEW



**TOWN OF APEX
STANDARDS**

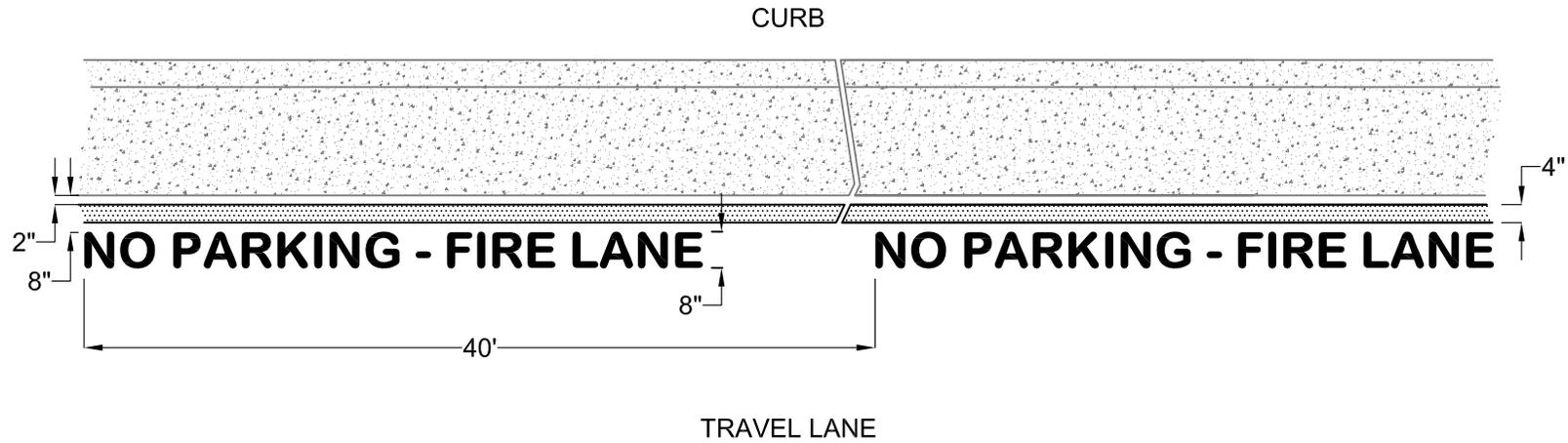
EFFECTIVE: APRIL 9, 2024

NEIGHBORHOOD TRAFFIC MINI-CIRCLE

STD. NO.

300.23

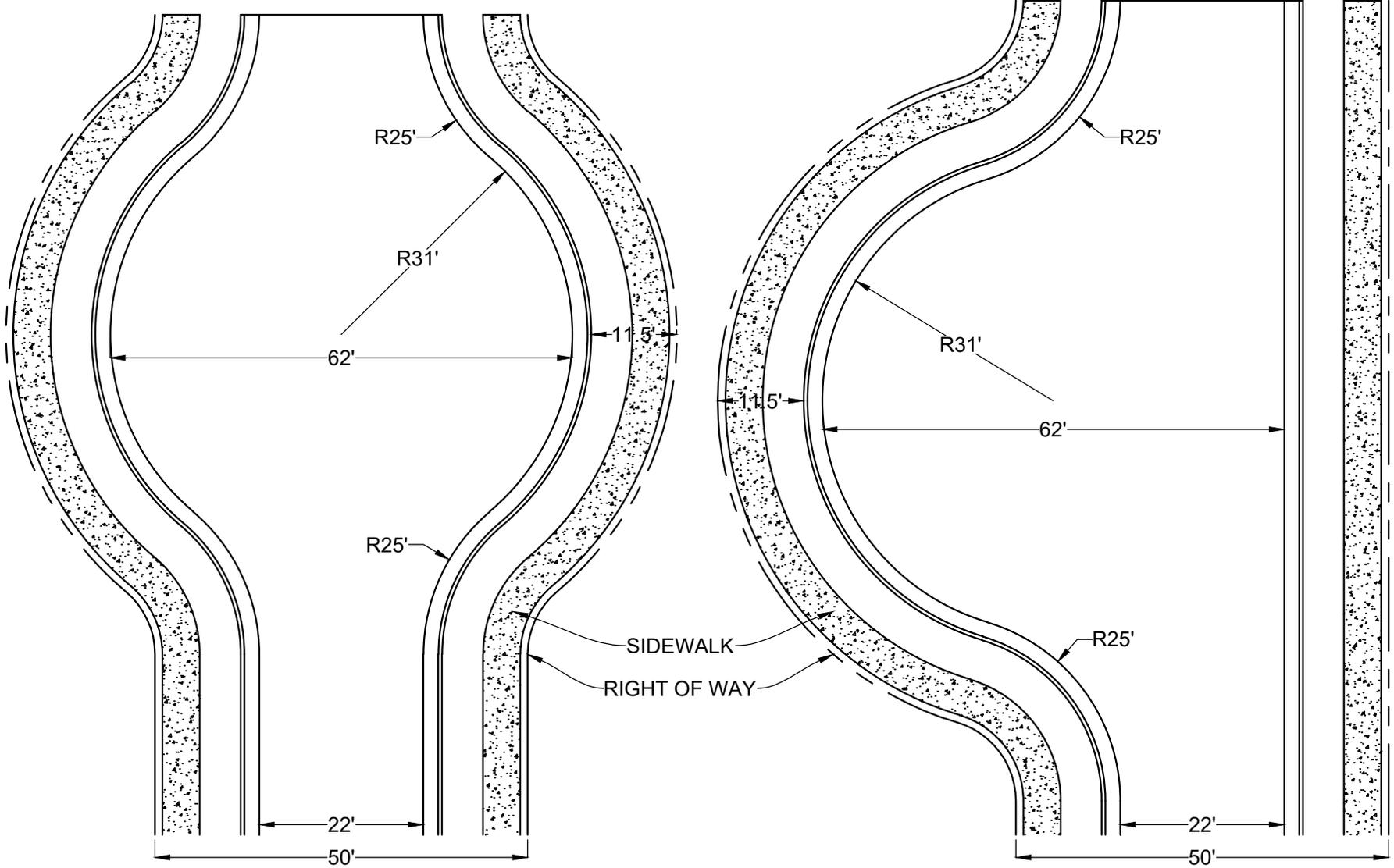
SHEET 1 OF 1



NOTES:

1. "NO PARKING-FIRE LANE" LETTER MARKINGS SHALL BE YELLOW.
2. LETTERS SHALL BE A MINIMUM OF 8" HIGH AND SPACED 8" FROM THE EDGE OF PAVEMENT.
3. LETTER MARKING SHALL BE PLACED EVERY 40' AND AT EVERY FIRE HYDRANT.
4. SOLID 4" WIDE YELLOW LINE SHALL BE PLACED 2" FROM THE EDGE OF PAVEMENT.

TOWN OF APEX STANDARDS	FIRE LANE PAVEMENT MARKING	STD. NO.
		300.24
EFFECTIVE: DECEMBER 21, 2010		SHEET 1 OF 1



TOWN OF APEX
STANDARDS

EFFECTIVE: JUNE 13, 2023

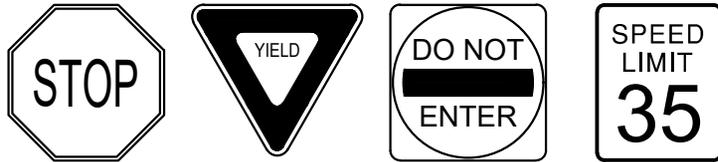
STUB STREET TURN-AROUND

STD. NO.

300.25

SHEET 1 OF 1

TYPICAL REGULATORY SIGNS



SIGN SIZES	APPROACH TYPE	
	SINGLE LANE	MULTI-LANE
R1-1 (STOP)	30" x 30"	36" x 36"
R1-2 (YIELD)	36" x 36" x 36"	48" x 48" x 48"
R5-1 (DO NOT ENTER)	30" x 30"	36" x 36"
R2-1 (SPEED LIMIT)	24" x 30"	30" x 36"

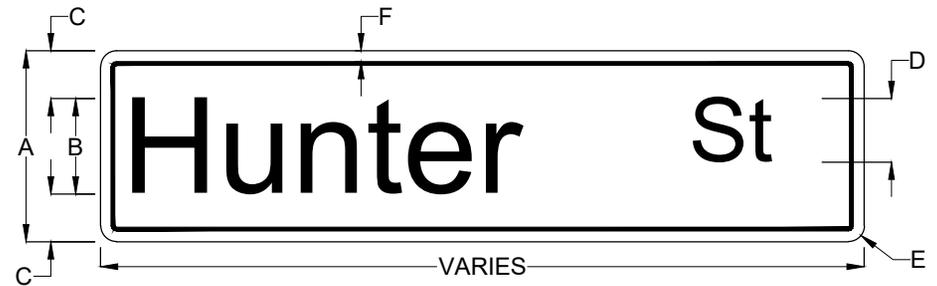
* FOR OTHER TYPES OF REGULATORY SIGNS CONSULT THE MUTCD

CROSSWALK SIGNS



SIGN SIZES	APPROACH TYPE	
	SINGLE LANE	MULTI-LANE
W11-2 (PEDESTRIAN)	30" x 30"	36" x 36"
S1-1 (SCHOOL)	36" x 36"	36" x 36"
W16-7P (ARROW PLAQUE)	21" x 15"	21" x 15"
R1-5 (YIELD HERE TO PEDS)	36" x 36"	36" x 36"
R1-6/R1-6b (IN-STREET CROSSING)	12" x 36"	12" x 36"

POST-MOUNTED STREET NAME SIGN (D3-1)

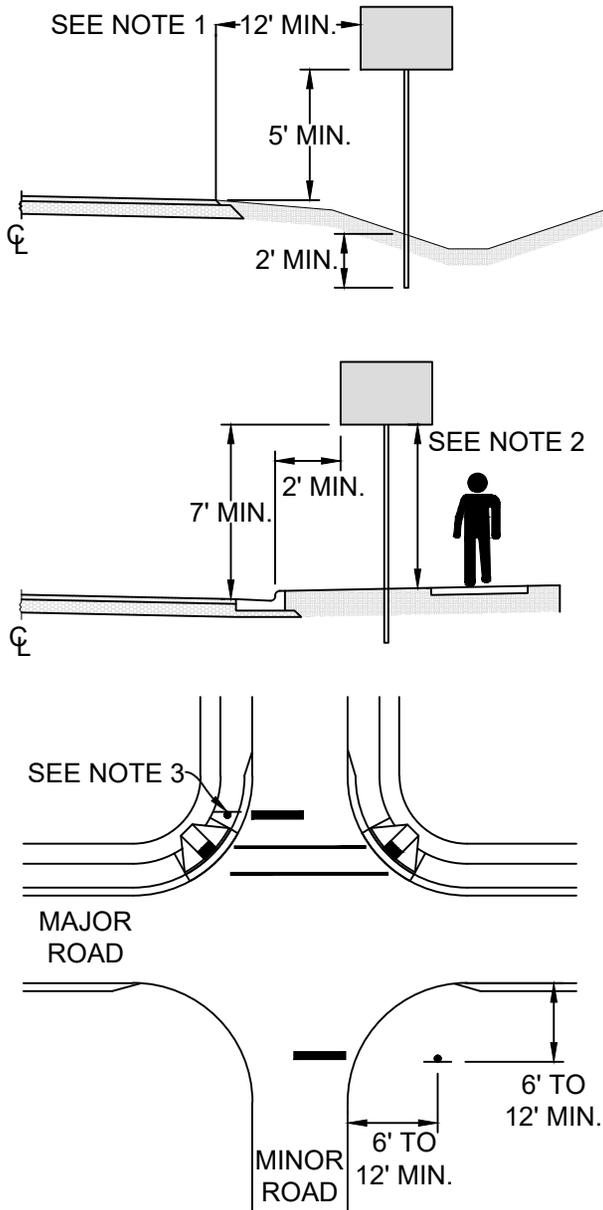


SIGN TYPE	SIGN DIMENSIONS					
	A	B	C	D	E	F
STANDARD	9"	6"	1.5"	4"	0.75"	0.5"
MULTI-LANE (> 40 MPH)	12"	8"	2"	6"	0.75"	0.5"

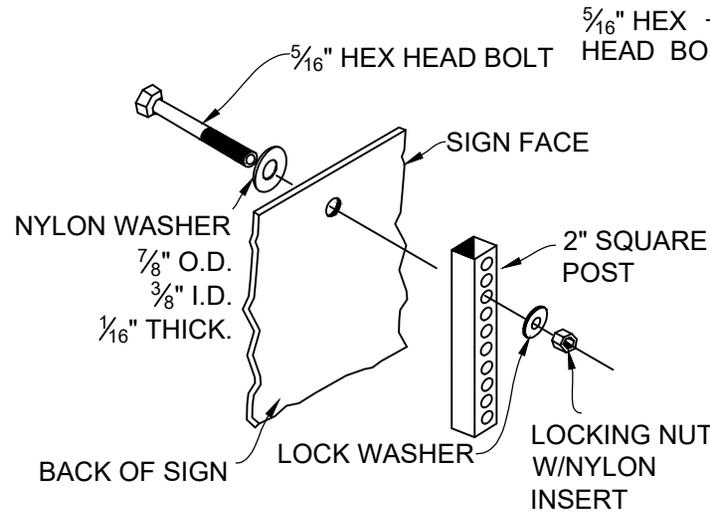
NOTES:

1. SHEETING MATERIAL FOR ALL SIGNS SHALL BE HIGH INTENSITY PRISMATIC (HIP) TYPE IV MULTI-LAYER SHEETING.
2. ALL STREET NAME SIGNS INSTALLED IN RESIDENTIAL AREAS SHALL COMPLY WITH STANDARD DIMENSIONS. STREET NAME SIGNS SHALL BE GREEN WITH WHITE LEGEND AND BORDER. LETTERING SHALL BE COMPOSED OF UPPER AND LOWER-CASE LETTERS. LOWER-CASE LETTERS SHALL BE 75% THE HEIGHT OF UPPER-CASE LETTERS. STREET SUFFIXES SHALL BE UPPER-CASE LETTERS. FONT TYPE SHALL BE HIGHWAY GOTHIC SERIES C. 36-INCH BLADES SHALL BE STANDARD FOR STREET NAMES, WITH 15 CHARACTERS OR LESS.
3. STREET NAME SIGNS SHALL BE FABRICATED USING WHITE (HIP) SHEETING AS A BASE LAYER WITH GREEN (HIP) SHEETING OVERLAYED. THE LEGEND SHALL BE DIGITALLY CUT OR PRINTED FROM THE OVERLAY LAYER.
4. PEDESTRIAN WARNING SIGNS AND SCHOOL CROSSING SIGNS SHALL HAVE A FLUORESCENT YELLOW-GREEN BACKGROUND WITH BLACK LEGEND AND BORDERS.
5. IF IN-STREET CROSSING SIGNS ARE USED IN SCHOOL AREAS, R1-6b SIGN SHALL BE USED INSTEAD OF R1-6 SIGN.
6. REFER TO MUTCD FOR ALL OTHER GUIDANCE.

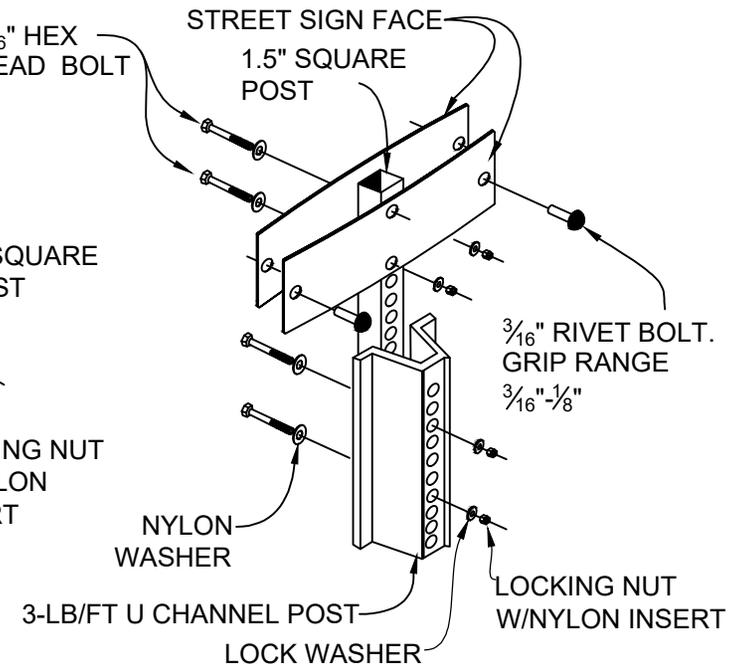
SIGN PLACEMENT



SIGN MOUNTING DETAIL



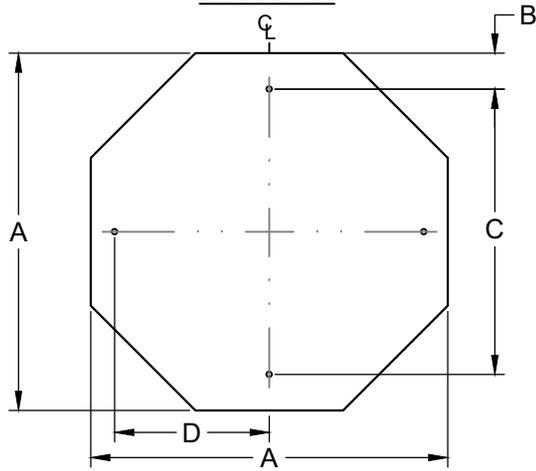
RETROFIT ASSEMBLY DETAIL (TOWN USE ONLY)



NOTES:

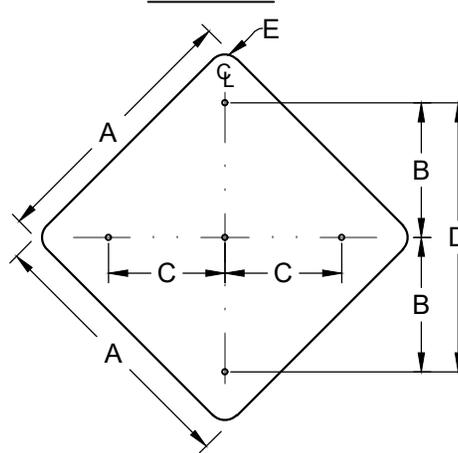
1. MINIMUM LATERAL OFFSET FROM EDGE OF TRAVELED WAY SHOULD BE 12 FEET.
2. ON CURB SECTIONS PROVIDE A MINIMUM VERTICAL CLEARANCE OF 7 FEET FROM EDGE OF TRAVELED WAY. WHERE SIDEWALKS ARE PRESENT PROVIDE A MINIMUM VERTICAL CLEARANCE OF 7 FEET FROM EDGE OF TRAVELED WAY OR TOP OF SIDEWALK, WHICHEVER IS HIGHER.
3. WHERE CROSSWALKS EXIST, SIGNS SHOULD BE PLACED WITHIN 4 FEET IN ADVANCE OF THE CROSSWALK. STREET NAME SIGNS MAY BE PLACED ABOVE A REGULATORY STOP OR YIELD SIGN WITH NO REQUIRED VERTICAL SEPARATION.
4. ALL NEW SIGNS SHALL BE POSTED ON 14 GAUGE, 2" PERFORATED SQUARE SIGN POSTS. ALL STREET NAME SIGNS RETROFITTED TO EXISTING U-CHANNEL SHALL BE POSTED ON 1.5" SQUARE SIGN POSTS. SIGN RETOROFITTING SHALL BE FOR TOWN USE ONLY.
5. ON ALL ROADWAYS EXCEPT STREETS WITH STANDARD CURB AND GUTTER AND SPEED LIMITS EQUAL TO OR LESS THAN 25 MPH, ALL SIGNS WITHIN CLEAR ZONE SHALL BE OF A BREAKAWAY DESIGN THAT COMPLIES WITH THE LATEST EDITION OF AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) AND NCHRP REPORT 350.
6. IN AREAS OF WEAK SOILS A BREAKAWAY ANCHOR UNIT SHALL BE USED AND BACKFILLED WITH CONCRETE, IF DETERMINED BY THE INSPECTOR.

OCTAGON



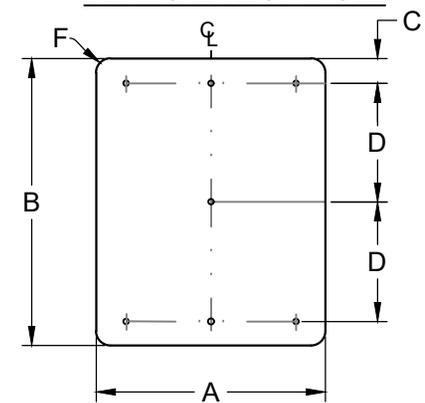
A	B	C	D
30"	3"	24"	-
36"	3"	30"	16"

DIAMOND



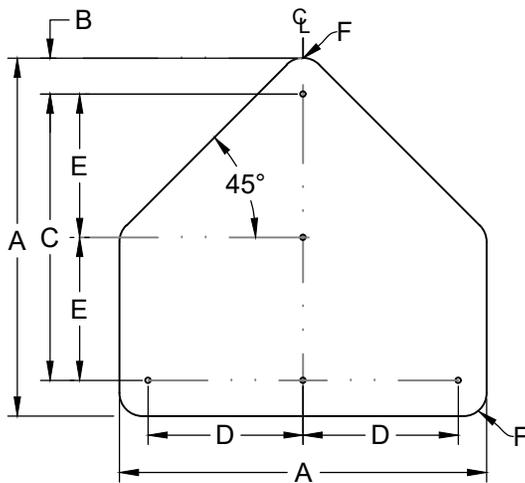
A	B	C	D	E
18"/24"	-	-	18"/24"	1.5"
30"	15"	16"	-	1.875"
36"	18"	16"	-	2.25"

VERTICAL RECTANGLE



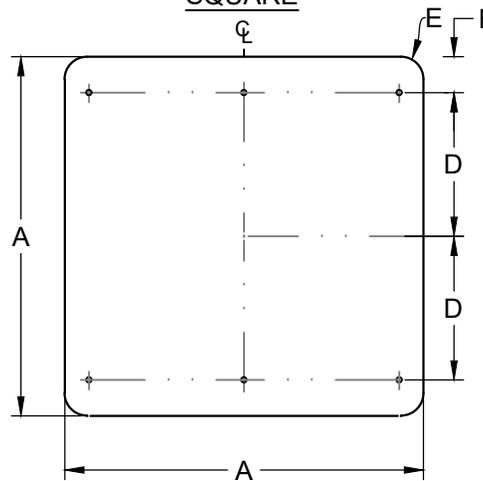
A	B	C	D	E	F
12"	18"	1.5"	-	-	1.5"
18"	24"	1.5"	-	-	1.5"
24"	30"	3"	-	-	1.5"
30"	36"	3"	15"	-	1.875"
36"	42"	3"	18"	16"	2.25"

PENTAGON (SCHOOL)



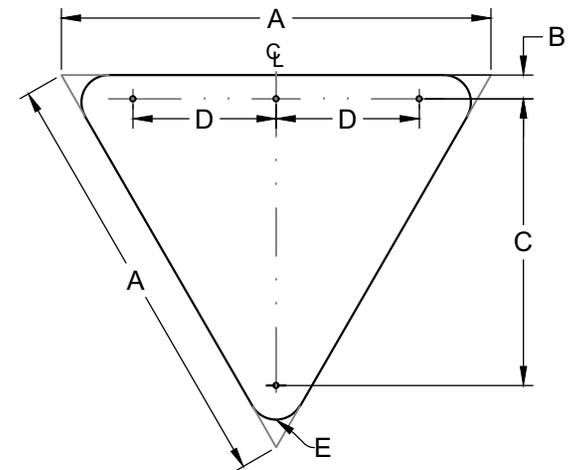
A	B	C	D	E	F
30"	3"	24"	-	-	1.875"
36"	3"	-	16"	15"	2.25"

SQUARE



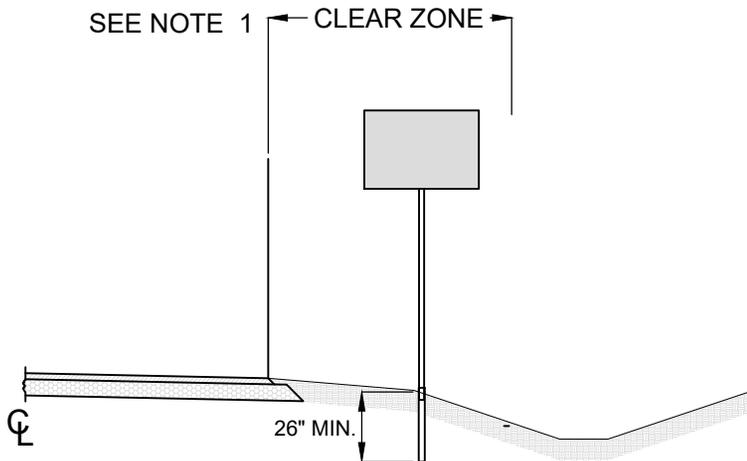
A	B	C	D	E
12"	1"	-	-	1.5"
18" / 24"	1.5"	-	-	1.5"
30"	3"	-	-	1.875"
36"	3"	16"	15"	2.25"

EQUILATERAL TRIANGLE

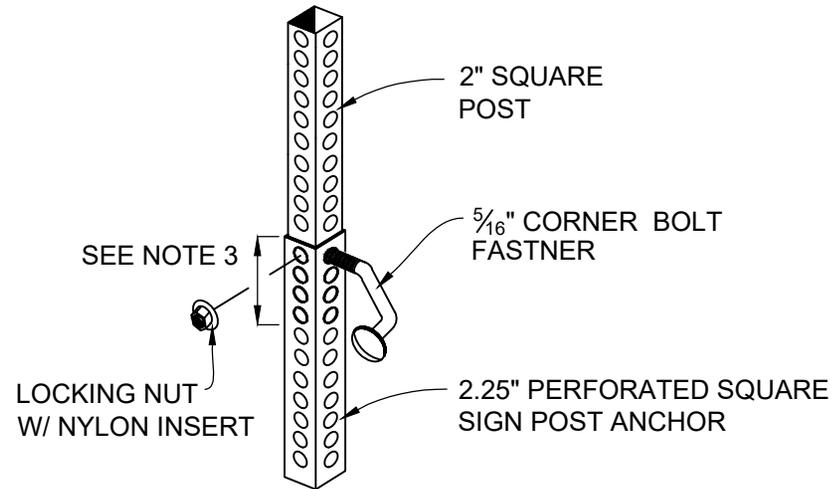


A	B	C	D	E
36"	2"	24"	-	1.5"
48"	3"	32"	16"	1.5"

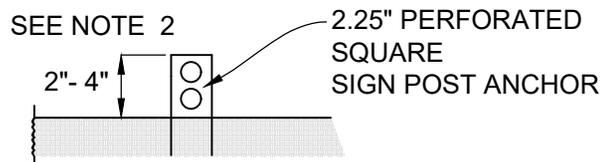
BREAKAWAY SIGN
PLACEMENT



POST INSTALLATION

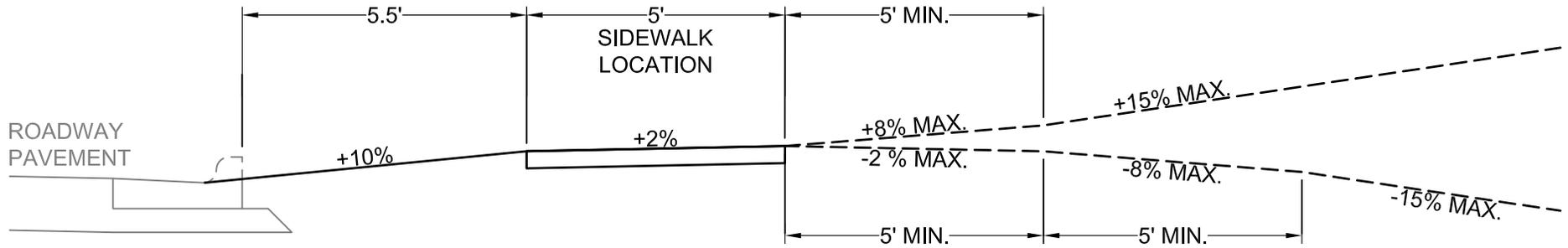


ANCHOR INSTALLATION

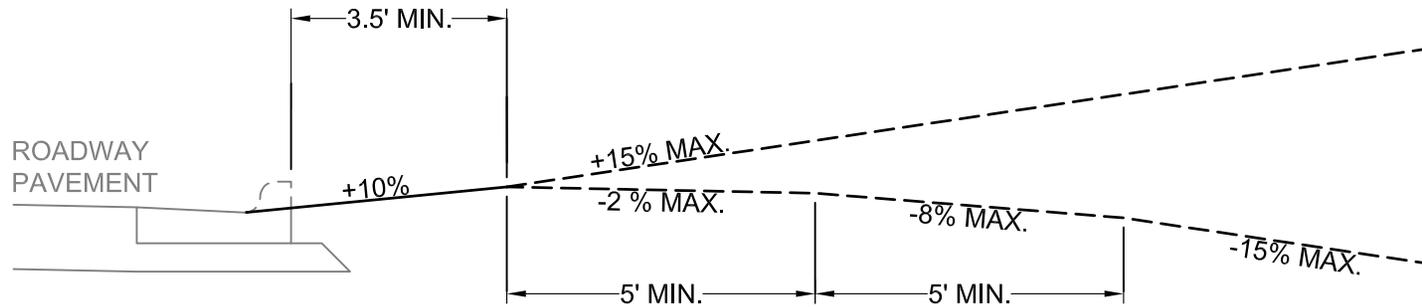


NOTES:

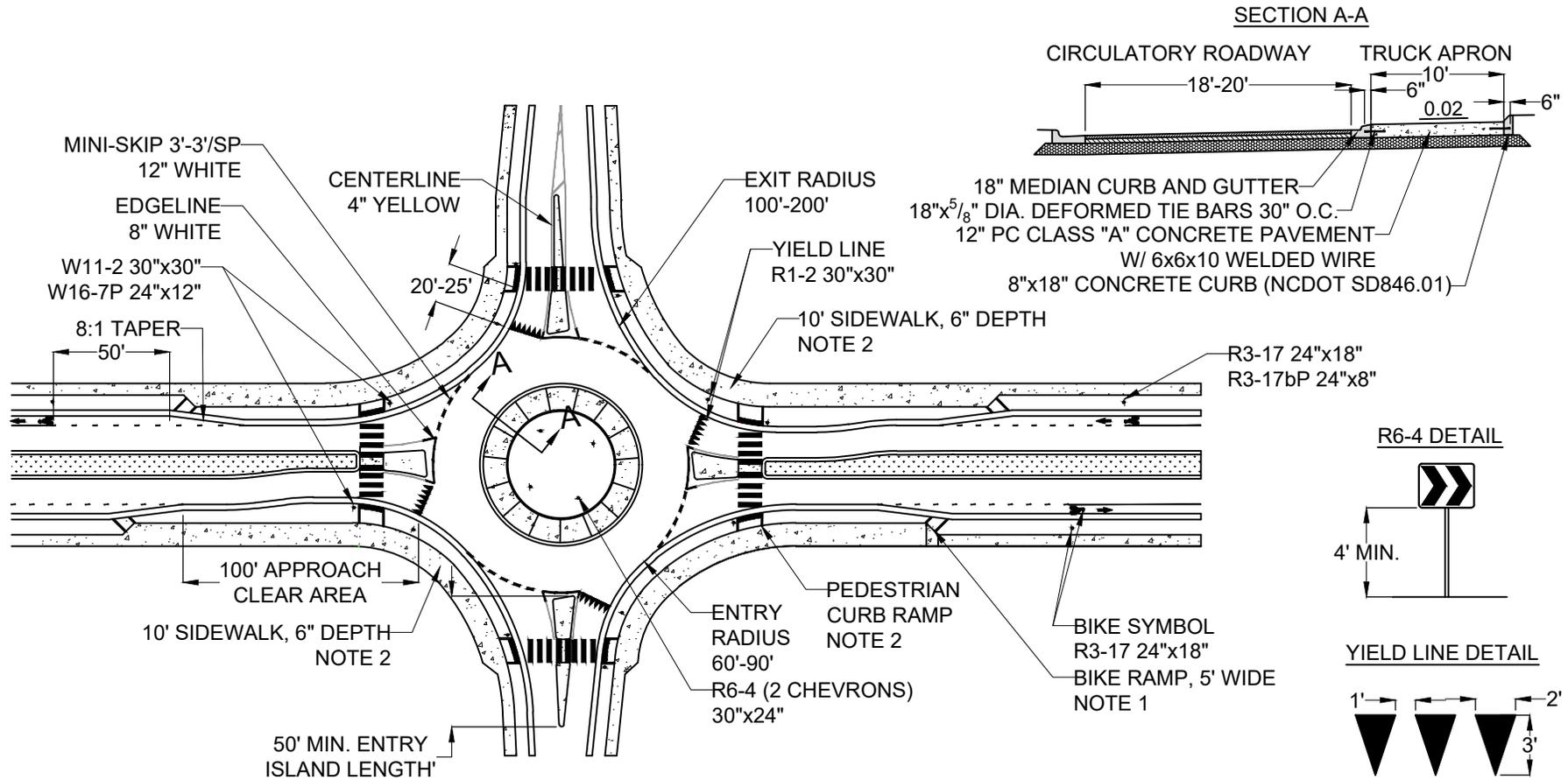
1. ON ALL ROADWAYS EXCEPT STREETS WITH STANDARD CURB AND GUTTER AND SPEED LIMITS EQUAL TO OR LESS THAN 25 MPH, ALL SIGNS WITHIN CLEAR ZONE SHALL BE OF A BREAKAWAY DESIGN THAT COMPLIES WITH THE LATEST EDITION OF AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) AND NCHRP REPORT 350.
2. DRIVE ANCHOR MINIMUM 26 INCHES INTO THE GROUND. LEAVE 2 INCHES MINIMUM TO 4 INCHES MAXIMUM TO PROTRUDE ABOVE SURFACE.
3. FIT POST INTO ANCHOR. FASTEN CORNER BOLT THROUGH THE FOURTH HOLE ON THE POST AND THE FIRST HOLE ON THE ANCHOR.
4. IN AREAS OF WEAK SOILS THE ANCHOR UNIT MAY BE BACKFILLED WITH CONCRETE, IF DETERMINED BY THE INSPECTOR.



CROSS SECTION WITH SIDEWALK



CROSS SECTION WITHOUT SIDEWALK



NOTES:

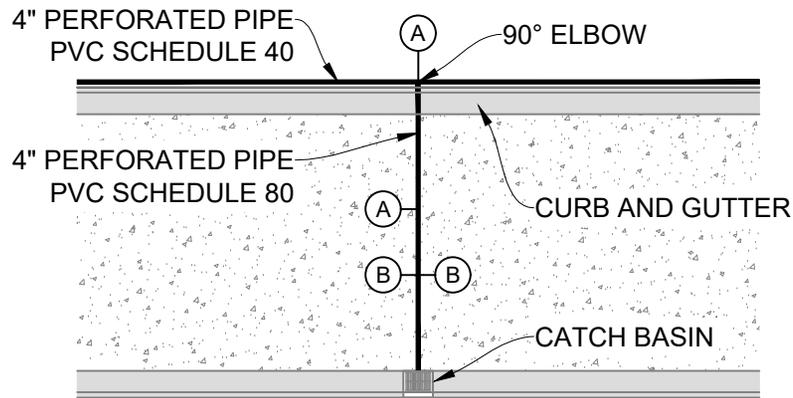
1. WHEN BICYCLE LANES ARE PRESENT TRANSITION BICYCLES FROM THE TRAVEL WAY WITH BICYCLE CURB RAMPS ANGLED AT 45 DEGREES. BICYCLE CURB RAMPS SHALL HAVE A GRADE BETWEEN 15%-20% .
2. WHEN BICYCLE LANES ARE PRESENT TRANSITION TO A 10' WIDE SIDEWALK AT BIKE CURB RAMP LOCATION, AND PROVIDE 10' WIDE PEDESTRIAN CURB RAMPS AT ROUNDABOUT CROSSINGS.
3. KEEP A 100' AREA APPROACHING THE ROUNDABOUT CLEAR OF TREES AND PARALLEL PARKING SPACES BETWEEN THE BACK OF CURB AND THE PEDESTRIAN PATH.
4. INSTALL W2-6 WARNING SIGNS APPROACHING ROUNDABOUT IF POSTED SPEED LIMIT IS 40 MPH OR HIGHER.
5. TRUCK APRON CONTRACTION JOINTS SHALL BE EQUALLY SPACED, WITH MAX OUTSIDE CHORD SPACING OF 15 FEET. REFER TO NCDOT STANDARD DRAWINGS 700.01 FOR TRANSVERSE CONTRACTION JOINT DETAIL.
6. PLACE WELDED WIRE FABRIC IN THE CENTER OF TRUCK APRON SLAB. LAP TRANSVERSE EDGES OF SHEETS OF WELDED WIRE FABRIC 12 INCHES EXCEPT AT TRANSVERSE EXPANSION JOINTS.

**TOWN OF APEX
STANDARDS**
EFFECTIVE: SEPTEMBER 24, 2024

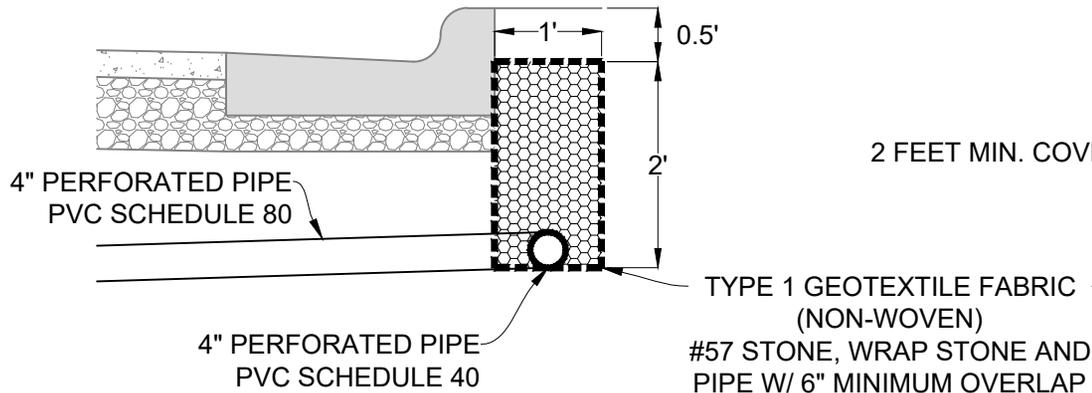
SINGLE-LANE ROUNDABOUT

STD. NO.
300.29
SHEET 1 OF 1

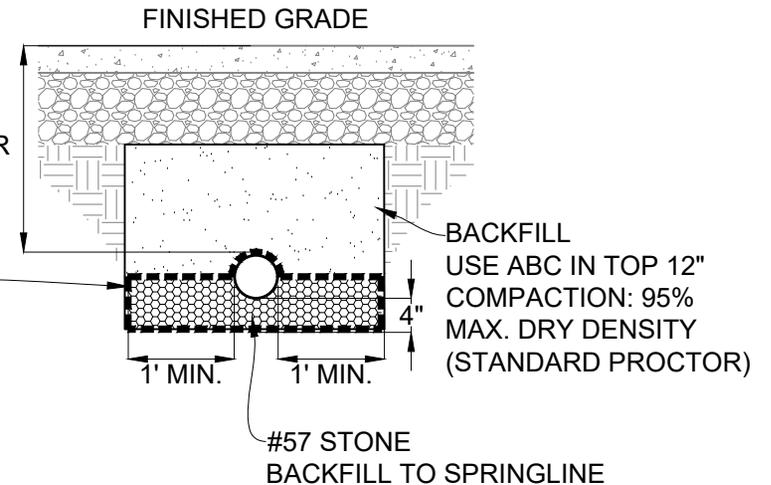
PLAN VIEW



SECTION A-A



SECTION B-B



NOTE:

1. UNDERDRAINS ARE REQUIRED WHERE DETERMINED BY THE ENGINEER.
2. CONNECT UNDERDRAIN PIPE TO STORM DRAIN CATCH BASIN.
3. BACKFILL MATERIAL SHALL BE APPROVED SUITABLE MATERIAL.

TOWN OF APEX
STANDARDS

EFFECTIVE: NOVEMBER 19, 2019

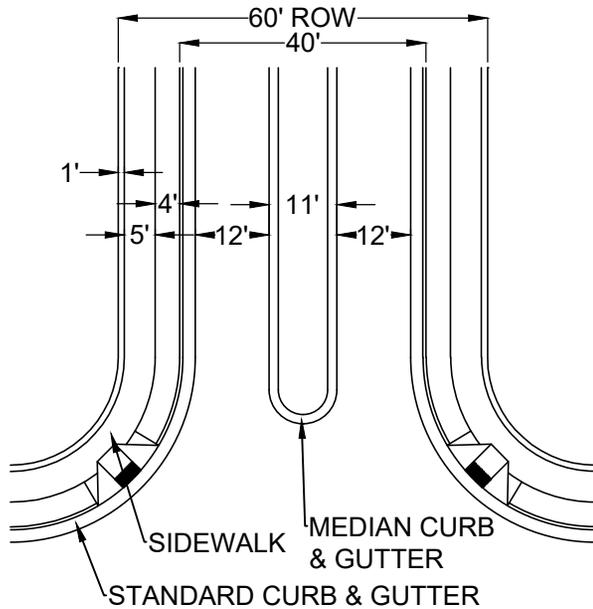
AGGREGATE SHOULDER DRAIN

STD. NO.

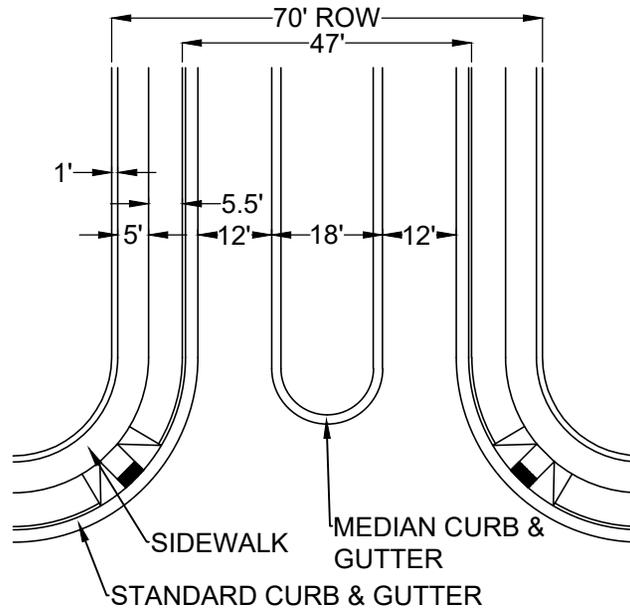
300.30

SHEET 1 OF 1

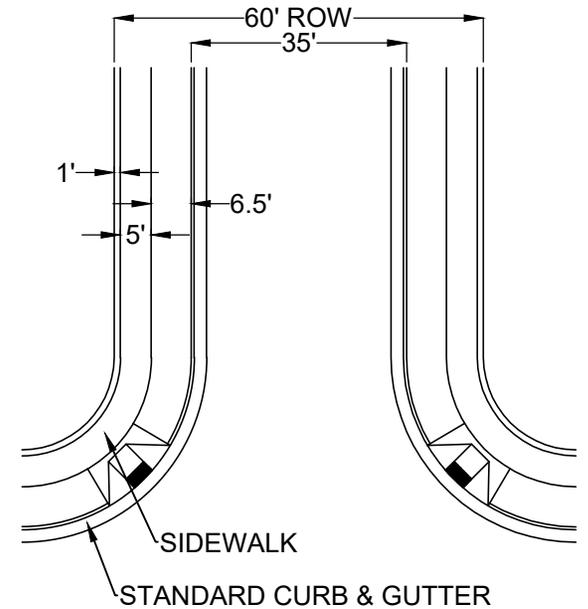
11' MEDIAN



18' MEDIAN



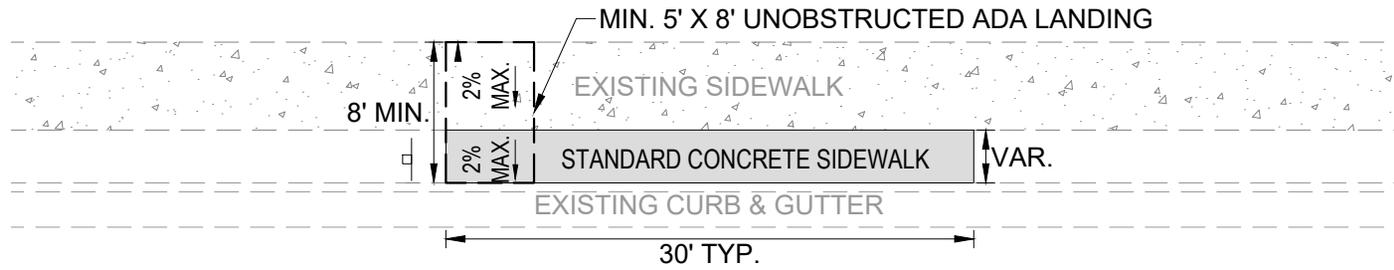
WITHOUT MEDIAN



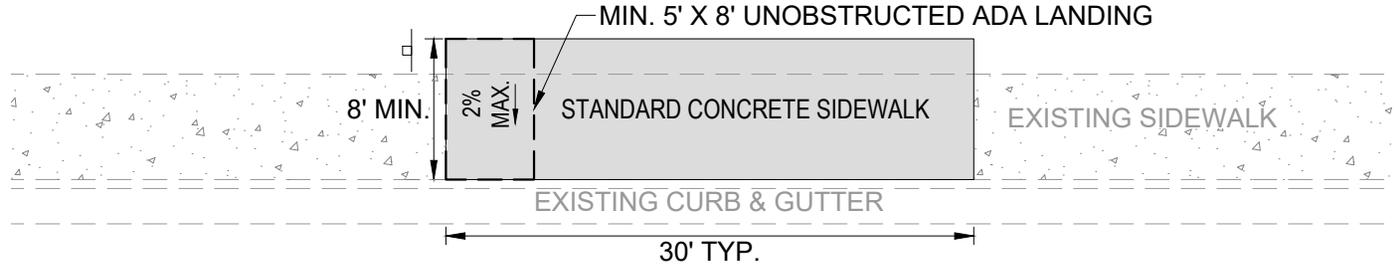
NOTES:

1. MEDIAN REQUIRED FOR MAIN ENTRANCE TO DEVELOPMENTS WITH MORE THAN 50 LOTS.
2. FOR ENTRANCE WITHOUT MEDIAN, USE 35' B-B WIDTH FOR FIRST BLOCK OF DEVELOPMENT OR AS OTHERWISE APPROVED.

LANDING PAD W/ SIDEWALK & UTILITY STRIP

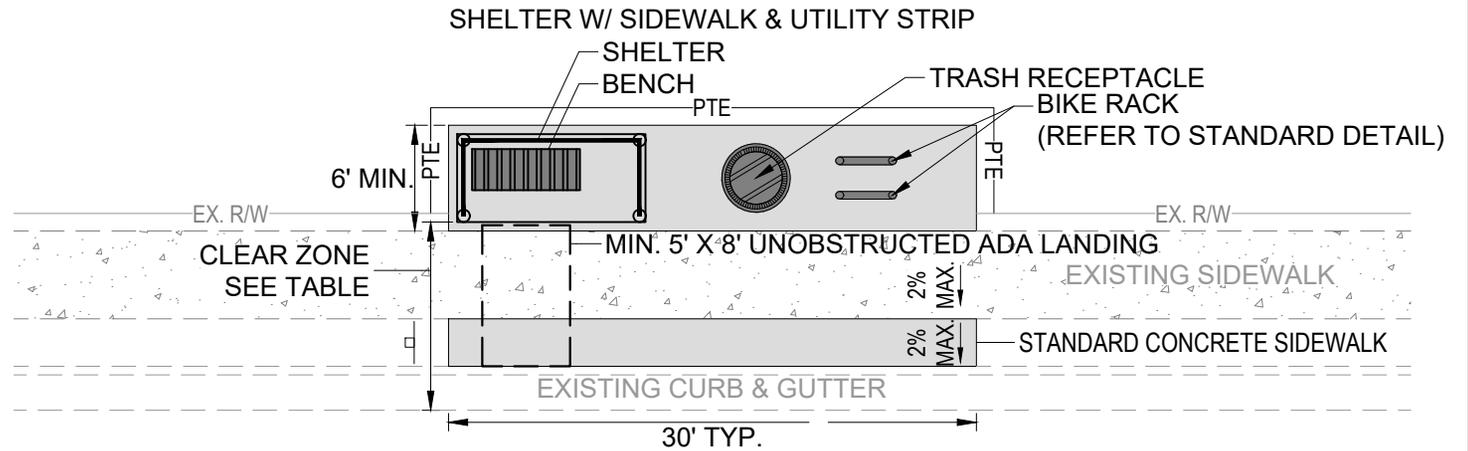


LANDING PAD W/ SIDEWALK AT BACK OF CURB

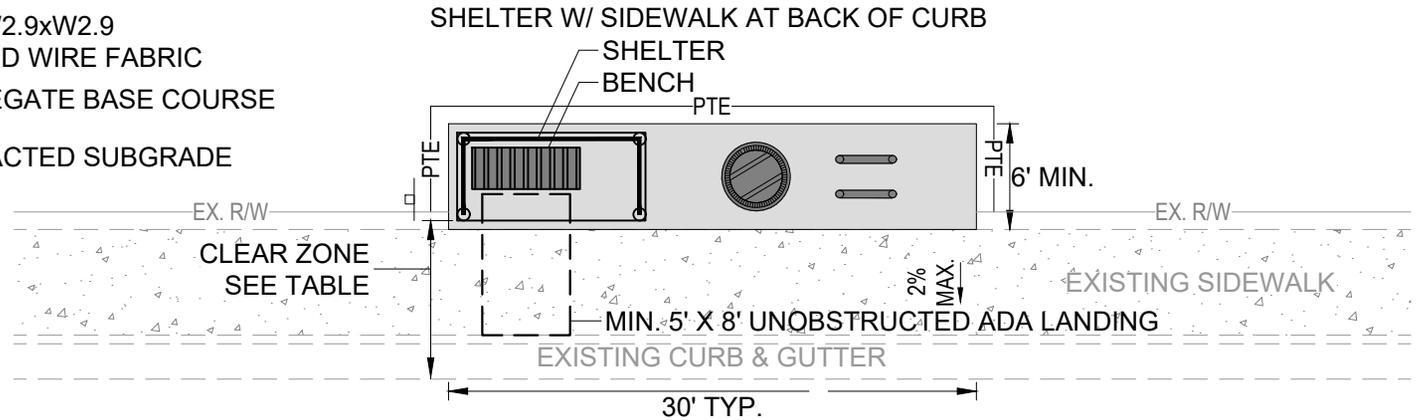
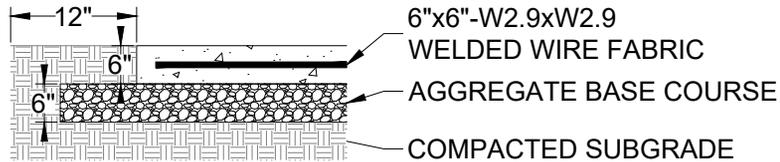


NOTES:

1. EVALUATE EXISTING SIDEWALK FOR ADA COMPLIANCE. REMOVE AND REPLACE AS NEEDED.
2. EXISTING SIDEWALK SHALL BE REMOVED AND REPLACED AT THE DISCRETION OF THE ENGINEER.
3. GRADE TO DIVERT STORMWATER AWAY FROM THE LANDING PAD.
4. INSTALL EXPANSION JOINT BETWEEN ALL NEW AND EXISTING CONCRETE.
5. IN CONSTRAINED AREAS THE LANDING PAD LENGTH MAY BE NARROWED TO THE 5 FEET ADA MINIMUM SUBJECT TO REVIEW AND APPROVAL.
6. A FLAT CLEARED AREA 1 FOOT MINIMUM WIDTH SHALL BE ESTABLISHED AROUND THE LANDING PAD.



AMENITY PAD TYPICAL SECTION



NOTES:

1. BUS STOP LOCATIONS WITH NO CURB AND GUTTER REQUIRE PROPOSED SHELTERS TO BE LOCATED OUTSIDE THE CLEAR RECOVERY AREA AS DEFINED BY THE LATEST VERSION OF THE AASHTO ROADSIDE DESIGN GUIDE.
2. ANY AMENITIES PROPOSED WILL REQUIRE REVIEW AND APPROVAL BY TOWN OF APEX. IF A CUSTOM SHELTER IS PROPOSED WITHIN NCDOT RIGHT-OF-WAY, THE SHELTER MUST BE ADDED TO NCDOT'S APPROVED PRODUCTS LIST PRIOR TO INSTALLATION.
3. ANY REQUIRED STRUCTURAL CALCULATIONS FOR CUSTOM SHELTERS ARE TO BE PROVIDED TO TOWN OF APEX PRIOR TO APPROVAL.
4. BUS SHELTERS SHALL BE LOCATED A MINIMUM OF 15 FEET FROM FIRE HYDRANTS AND UTILITY POLES.
5. BUS SHELTERS AT NEAR SIDE STOPS ARE TO BE LOCATED ON SIDE OF PAD FARTHEST FROM THE INTERSECTION
6. A MINIMUM 6 FEET WIDE PEDESTRIAN PATH IS TO BE RETAINED BETWEEN THE BACK OF CURB AND ANY AMENITIES WHERE SIDEWALK IS PLANNED. A MINIMUM 10 FEET WIDE PEDESTRIAN PATH IS TO BE RETAINED BETWEEN THE BACK OF CURB AND ANY AMENITIES WHERE SIDE PATH OR STREET-SIDE GREENWAY IS PLANNED.
7. A PERMANENT TRANSIT EASEMENT (PTE) OR PUBLIC RIGHT-OF-WAY IS TO BE PROVIDED FOR THE AMENITY AREA IF LOCATED OUTSIDE OF EXISTING RIGHT-OF-WAY, AT A MINIMUM 1' OFFSET FROM THE AMENITY AREA.
8. A FLAT CLEARED AREA 1 FOOT MINIMUM WIDTH SHALL BE ESTABLISHED AROUND THE LANDING PAD.

CLEAR ZONE MIN. DISTANCE TO SHELTER	
25 MPH	8'
35 MPH	10'
45 MPH	12'

TOWN OF APEX
STANDARDS

EFFECTIVE: APRIL 9, 2024

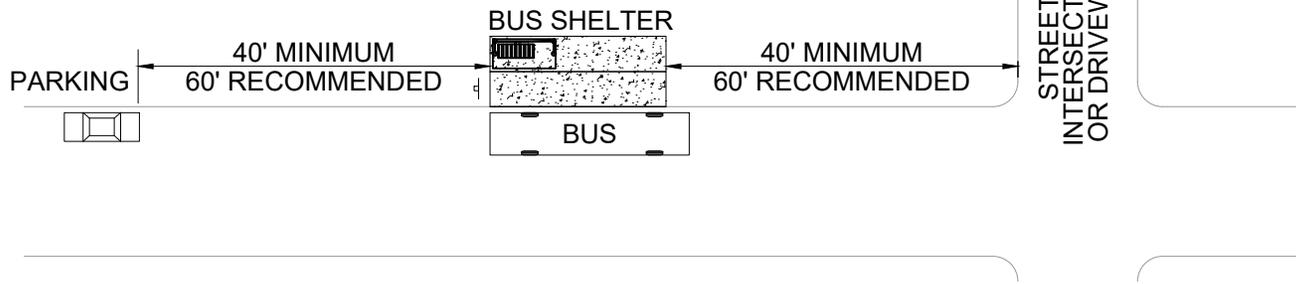
**BUS STOP
AMENITY PAD**

STD. NO.

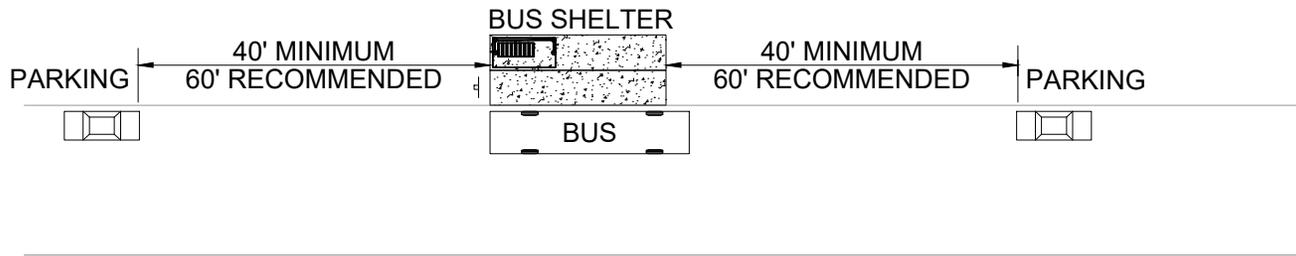
300.32

SHEET 2 OF 3

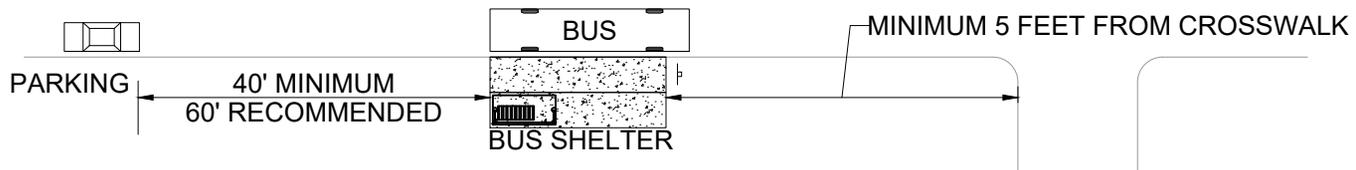
FAR SIDE BUS STOPS



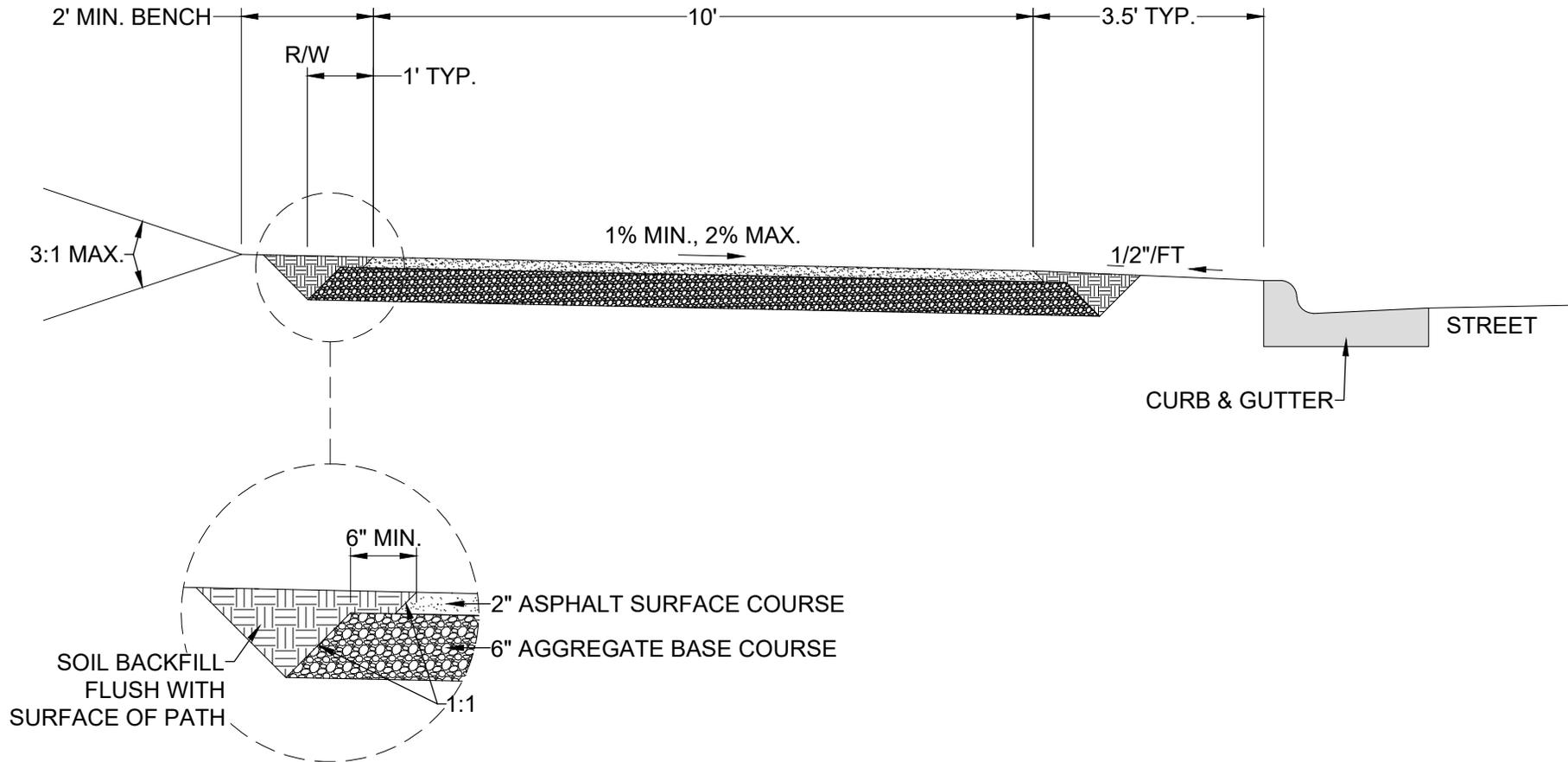
MID BLOCK BUS STOPS



NEAR SIDE BUS STOPS



NOTE: AT INTERSECTIONS WITH STREETS OR DRIVEWAYS, CURB RAMP WIDTH MUST MATCH MULTI-USE PATH WIDTH.



TOWN OF APEX
STANDARDS

EFFECTIVE: FEBRUARY 28, 2023

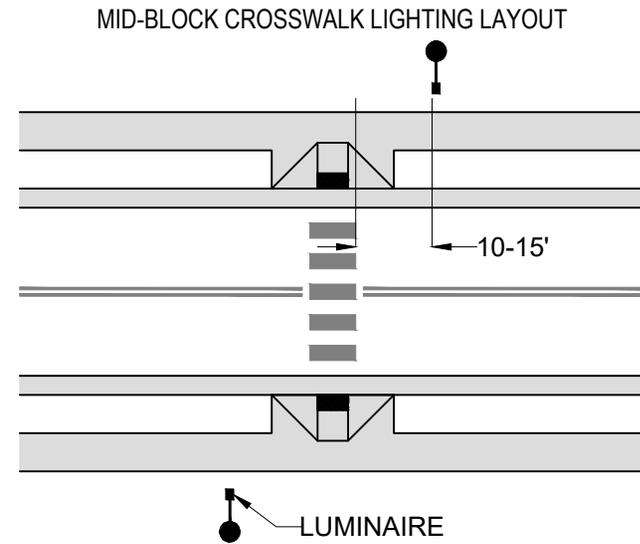
MULTI-USE PATH

STD. NO.

300.33

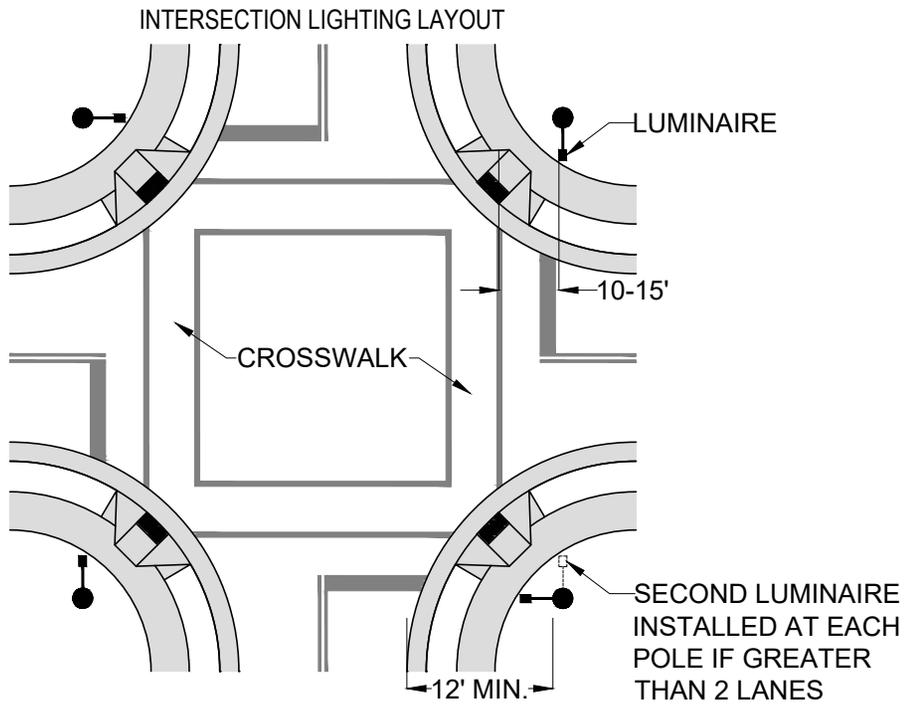
SHEET 1 OF 1

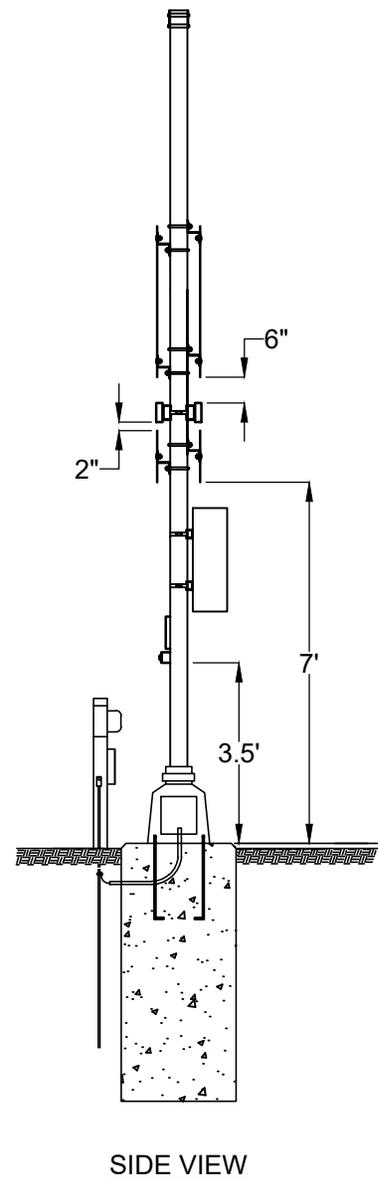
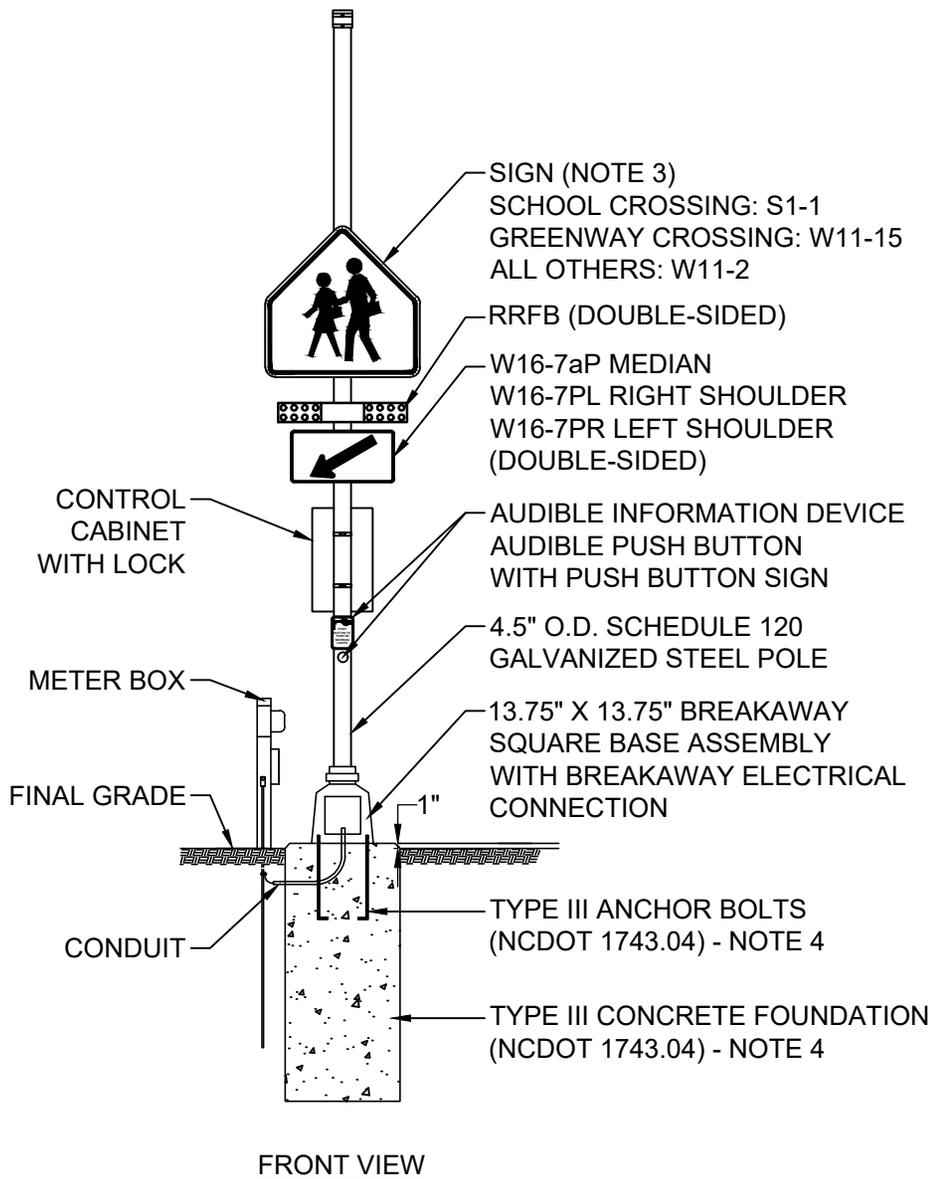
CROSSWALK TYPE	NUMBER OF LANES	NUMBER OF FIXTURES
MIDBLOCK	≥ 2	2
INTERSECTION	2	4
INTERSECTION	> 2	8



NOTES:

- LUMINAIRES TO BE PLACED A MINIMUM OF 12' FROM THE FACE OF CURB OR EDGE OF TRAVEL LANE. ALL LUMINAIRES WITHIN THE ROADWAY CLEAR ZONE SHALL BE PLACED ON A BREAKAWAY BASE.
- LUMINAIRES FOR CROSSWALKS ARE TO BE LOCATED BETWEEN 10-15 FEET FROM THE CROSSWALK WHERE POSSIBLE.
- LUMINAIRES SHOULD BE PLACED PRIOR TO THE CROSSWALK FROM THE DRIVERS' PERSPECTIVE.
- LUMINAIRE TYPE BY ROADWAY DESIGNATION AND CROSSWALK TYPE:
 - ACROSS THOROUGHFARES AND AT SIGNALIZED INTERSECTIONS: COBRA-HEAD LED, ROADWAY DISTRIBUTION III, 3000K, WITH ~18,000 LUMEN OUTPUT/~150 WATT INPUT.
 - ACROSS MAJOR COLLECTOR STREETS AND YIELD-CONTROLLED OR HIGH-VISIBILITY CROSSWALKS ACROSS MINOR COLLECTOR STREETS AND RESIDENTIAL STREETS: COBRA-HEAD LED, ROADWAY DISTRIBUTION III, 3000K, WITH ~7,000 LUMEN OUTPUT/~50 WATT INPUT.
 - TWO-BAR CROSSWALKS ACROSS RESIDENTIAL AND MINOR COLLECTOR STREETS: LUMINAIRES TO BE LANTERN STYLE, LED, ROADWAY DISTRIBUTION III, 3000K, WITH ~5,000 LUMEN OUTPUT/~50 WATT INPUT. MULTIPLE LUMINAIRES MAY BE NEEDED DEPENDING ON THE ROADWAY CONFIGURATION.





NOTES:

1. RECTANGULAR RAPID FLASH BEACON (RRFB) SHALL BE INSTALLED IN PAIRS, ONE ON EITHER SIDE OF APPROACH TRAFFIC AND DOUBLE-SIDED.
2. CONTROLLER SHALL BE INSTALLED ON THE BACKSIDE OF THE POST FROM APPROACH TRAFFIC. INSTALL CONTROLLER UNDER THE ARROW PLAQUE SIGNAGE AND ABOVE THE PUSH BUTTON SIGNAGE.
3. THE W11-2, W11-15, OR S1-1 SIGNS SHALL BE 36" X 36".
4. FOR A 14' POLE, INSTALL RRFB ON A TYPE III CONCRETE FOUNDATION AND ANCHOR BOLTS PER NCDOT SPECIFICATIONS, UNLESS SPECIFIED OTHERWISE BY THE VENDOR.
5. INSTALL BEACON SO THAT PUSH BUTTON IS OFFSET NO MORE THAN 1 FOOT FROM EDGE OF PATH FOR ACCESSIBILITY.

TOWN OF APEX
STANDARDS

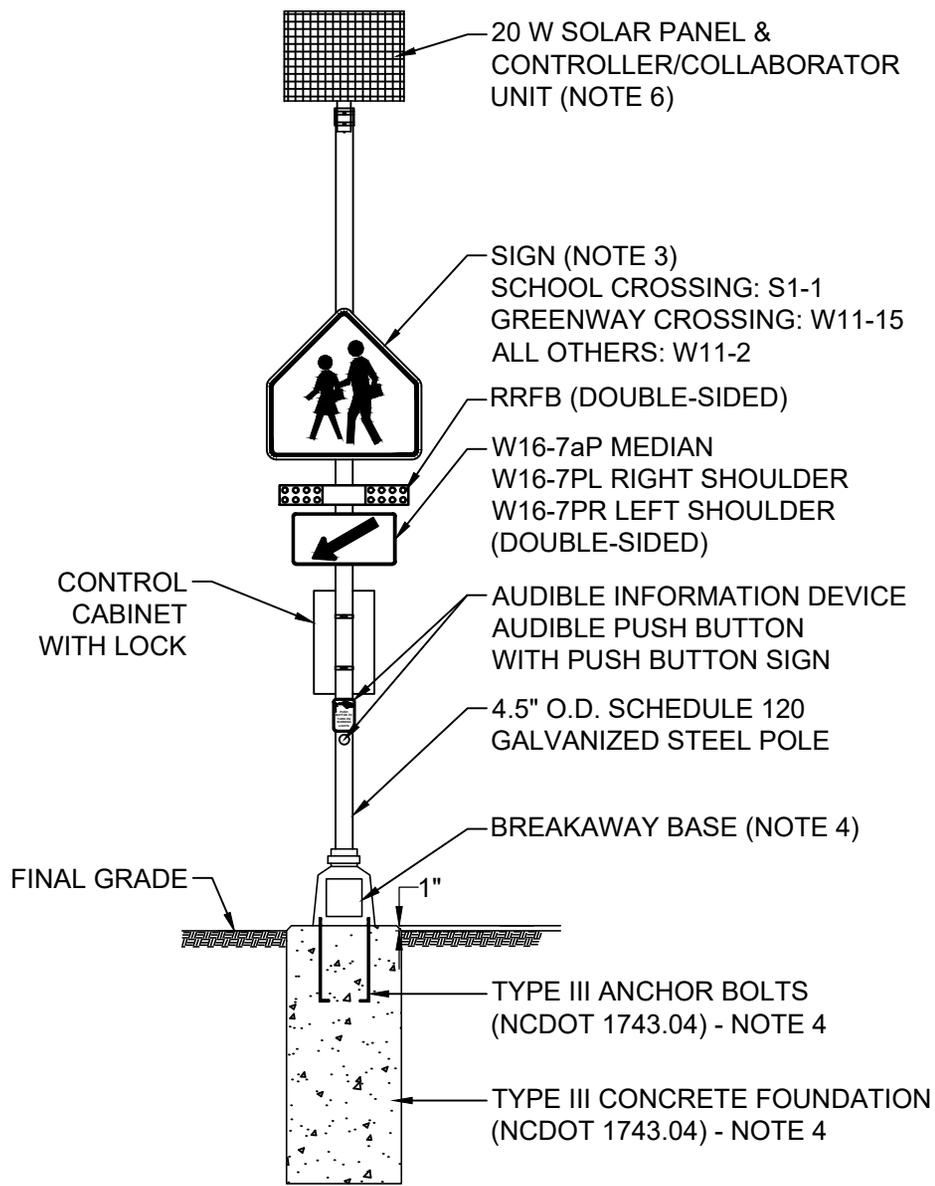
RECTANGULAR RAPID FLASH BEACON
(METER)

STD. NO.

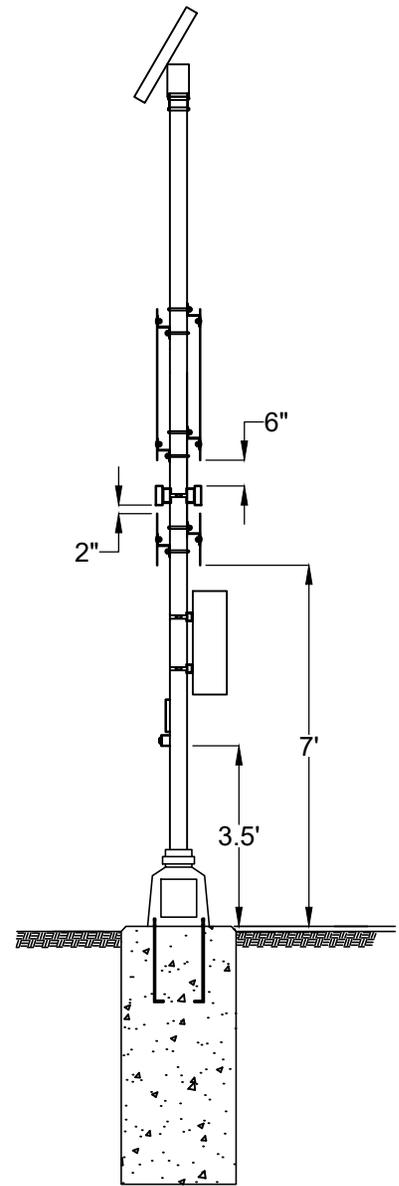
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EFFECTIVE: JANUARY 28, 2025

SHEET 1 OF 2



FRONT VIEW



SIDE VIEW

NOTES:

1. RECTANGULAR RAPID FLASH BEACON (RRFB) SHALL BE INSTALLED IN PAIRS, ONE ON EITHER SIDE OF APPROACH TRAFFIC AND DOUBLE-SIDED.
2. CONTROLLER SHALL BE INSTALLED ON THE BACKSIDE OF THE POST FROM APPROACH TRAFFIC. INSTALL CONTROLLER UNDER THE ARROW PLAQUE SIGNAGE AND ABOVE THE PUSH BUTTON SIGNAGE.
3. THE W11-2, W11-15, OR S1-1 SIGNS SHALL BE 36" X 36".
4. FOR A 14' POLE, INSTALL RRFB ON A TYPE III CONCRETE FOUNDATION AND ANCHOR BOLTS PER NCDOT SPECIFICATIONS, UNLESS SPECIFIED OTHERWISE BY THE VENDOR.
5. INSTALL BEACON SO THAT PUSH BUTTON IS OFFSET NO MORE THAN 1 FOOT FROM EDGE OF PATH FOR ACCESSIBILITY.
6. SOLAR PANEL SHALL BE AFFIXED TO TOP OF POST ORIENTED TO FACE SOUTH AND SUPPORT AID PUSH BUTTON POWER DEMAND BASED ON LOCATION SPECIFIC MANUFACTURER DETAILS. PANEL MAY HAVE INTEGRATED BATTERY AND CONTROLS IN LIEU OF CONTROL CABINET.

RECTANGULAR RAPID FLASH BEACON
(SOLAR)