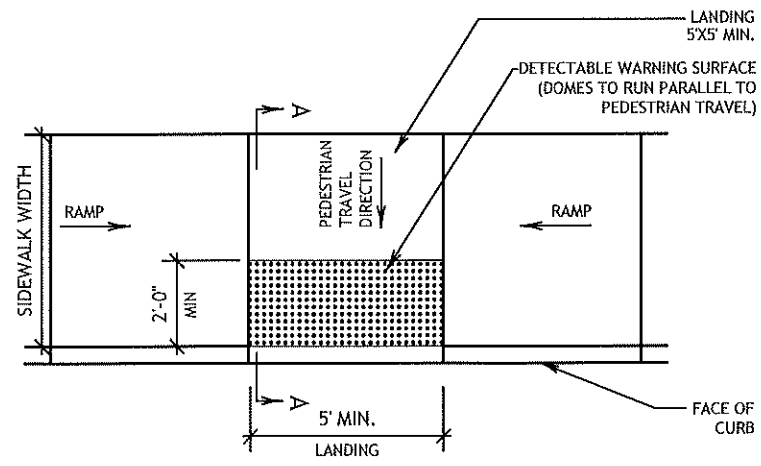
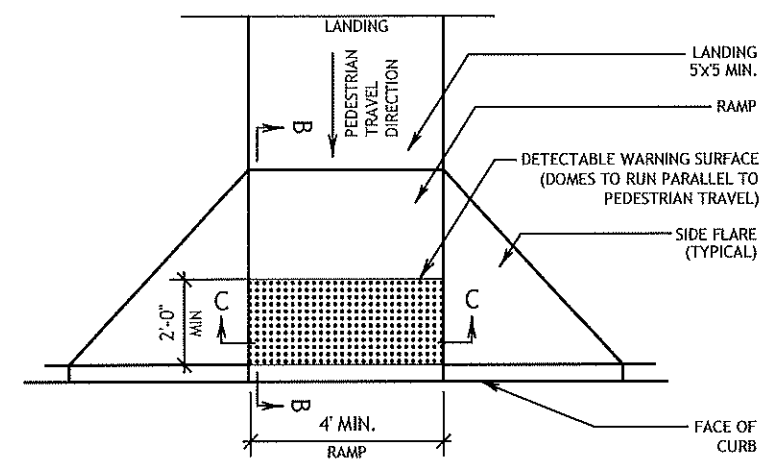


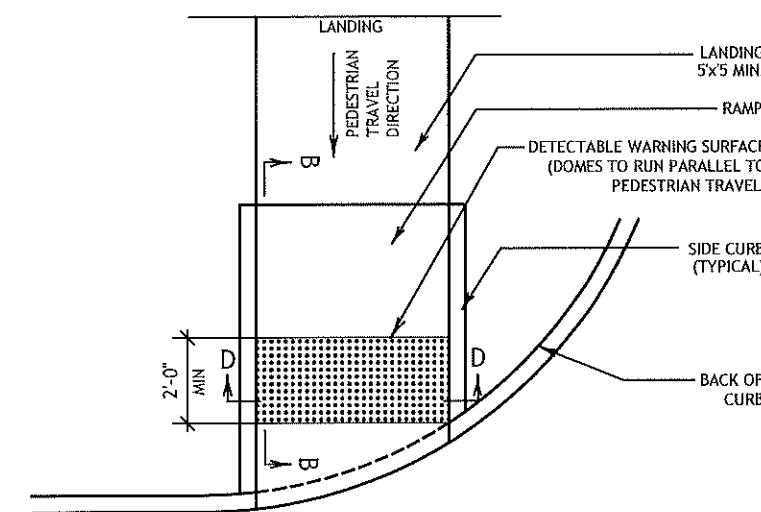
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the City of New Braunfels for any purpose whatsoever.



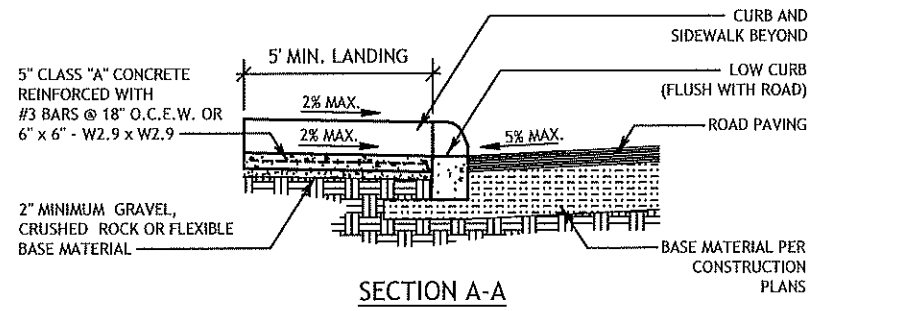
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING FOR PARALLEL CURB RAMP.



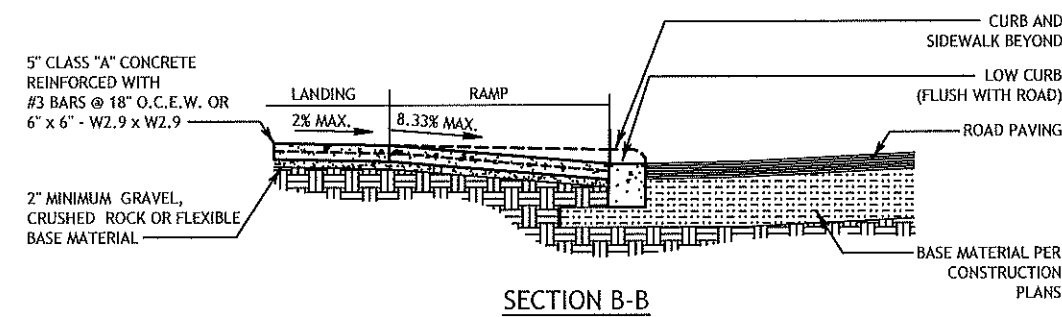
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE FOR PERPENDICULAR CURB RAMP.



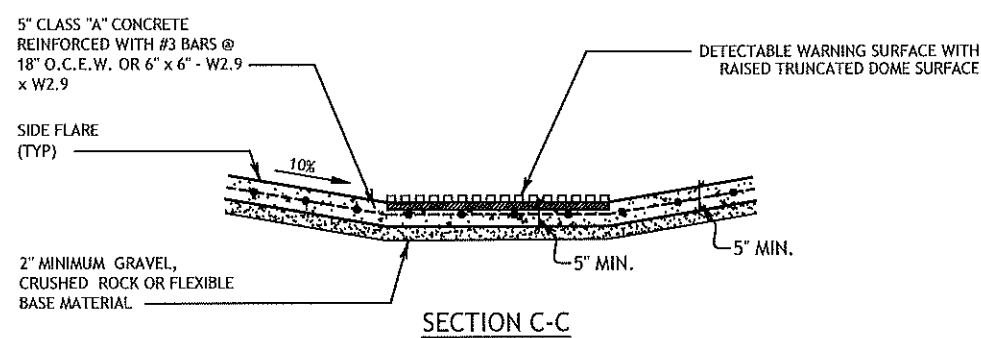
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN FOR DIRECTIONAL CURB RAMP.



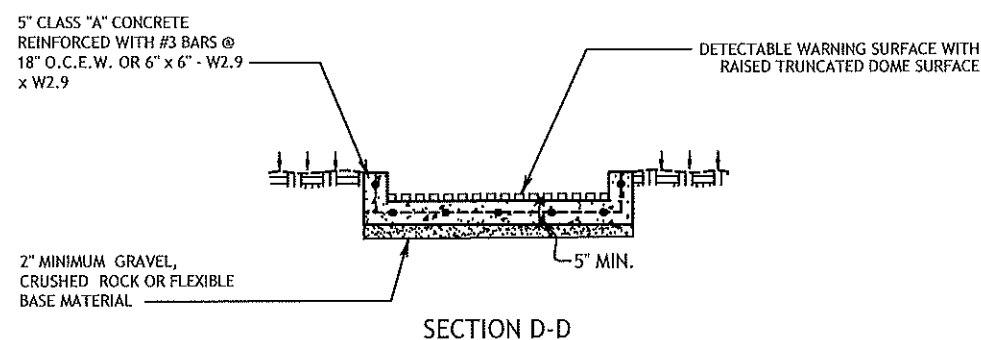
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

**CURB RAMP NOTES**

- ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.
- THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF CURB RAMP ARE TO BE SHOWN ON THE CONSTRUCTION SET FORTH IN THE AMERICAN'S WITH DISABILITIES ACT (ADA) AND TEXAS ACCESSIBILITY STANDARDS (TAS). CITY ENGINEER OR BUILDING OFFICIAL MAY ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
- THE MINIMUM STANDARD SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 118-49 OF THE NEW BRAUNFELS CODE OF ORDINANCES.
- ALL LANDINGS WHERE REQUIRED SHALL BE 5' X 5' (60"X60") MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
- RAMP LENGTHS SHALL BE SUFFICIENT TO MAINTAIN A MAXIMUM SLOPE OF 8.33% (1V:12H). MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2% (1V:50H).
- SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE GRADE OF THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS, AND LANDINGS IN ACCORDANCE WITH CURRENT ADA AND TAS REQUIREMENTS.
- PROVIDE FLARED RAMP SIDES WITH A MAXIMUM SLOPE OF 10% (1V:10H) MEASURED ALONG THE CURB LINE. CURB RETURNS MAY BE USED IN-LIEU OF SIDE FLARES IN AREAS NOT NORMALLY WALKED ACROSS BY PEDESTRIANS, BECAUSE THE ADJACENT SURFACE IS VEGETATION OR OTHER NON-WALKING SURFACE OR WHERE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
- MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4' X 4' (48"X48") WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
- CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
- EXISTING FEATURES THAT COMPLY WITH CURRENT TAS REQUIREMENTS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
- HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. PROVIDE CURB RAMPS WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
- SEPARATE CURB RAMP AND LANDINGS FROM ADJACENT SIDEWALK AND ANY OTHER ELEMENTS WITH PRE-MOLD OR BOARD JOINT OF 1/2" UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
- PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
- THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33-(-2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
- IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
- ADA RAMP SHALL BE CONSTRUCTED WITH 5" CLASS "A" CONCRETE WITH 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6"x6" - W2.9 X W2.9 WIRE MESH.
- THE EXTENTS OF ADA COMPLIANCE IN ALTERATIONS SHALL BE WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT AND AS DETERMINED BY THE CITY BUILDING OFFICIAL.

**DETECTABLE WARNING NOTES**

- CURB RAMPS OR LANDINGS ABUTTING THE CROSSWALK MUST HAVE A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH SECTION 705 OF THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACES, INCLUDING SIDE FLARES. FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
- DETECTABLE WARNING SURFACES MUST BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
- ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
- DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
- DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS AT THE BACK OF CURB. ALIGN THE ROWS OF DOMES TO BE PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
- DETECTABLE WARNING MATERIALS MUST MEET TXDOT DEPARTMENTAL MATERIALS SPECIFICATION DMS 4350 AND BE LISTED ON THE MATERIAL PRODUCER LIST. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- DETECTABLE WARNING PAVERS SHALL NOT BE PERMITTED WITHOUT THE APPROVAL BY THE PUBLIC WORKS DEPARTMENT.



ENGINEERING DIVISION  
550 LANDA STREET  
NEW BRAUNFELS, TEXAS 78130  
PHONE: 830 221 4020  
FAX: 830 626 3600

**CURB RAMP STANDARDS**

APPROVED DATE: 05/18/2017	DWG. NO.: ST-019	SCALE: AS NOTED
DRAWN BY: RC	CONTACT: GF	SHEET: 1 OF 1