

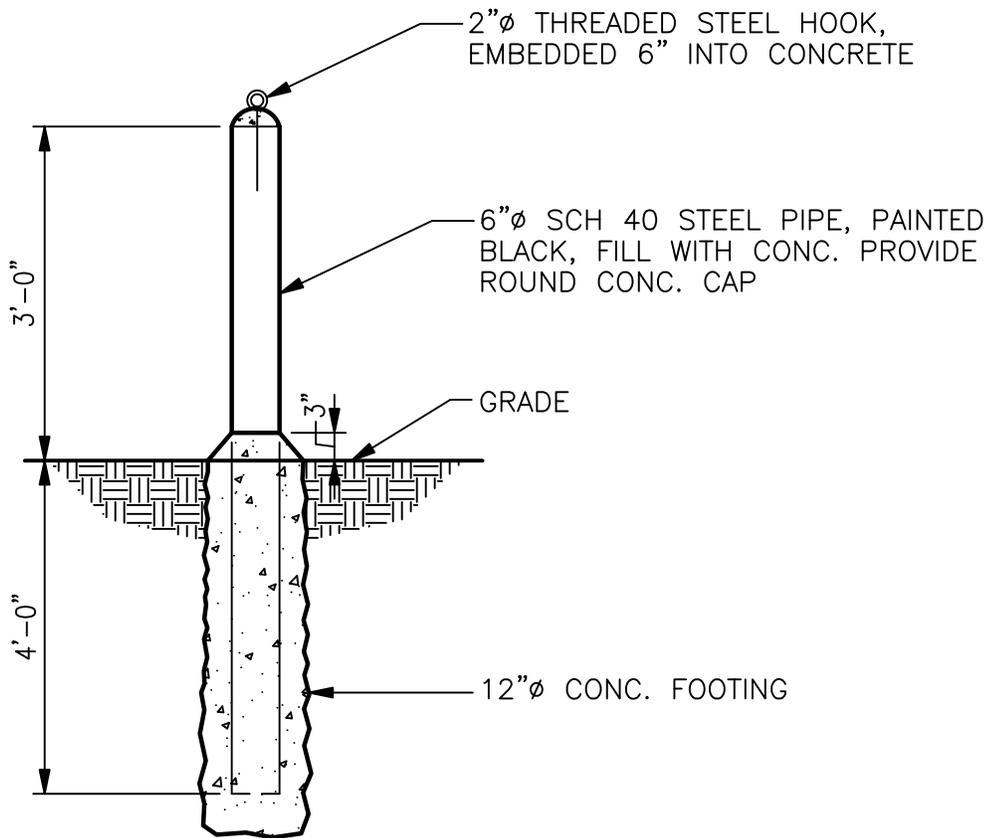
NOTE: REFER TO EXISTING GATE AT ANDOVER WELL PUMPHOUSE NO. 5 FOR AN EXAMPLE OF DESIRED GATE

SINGLE SWING GATE DETAIL

12/26/00



STANDARD DRAWING
NO.
710A



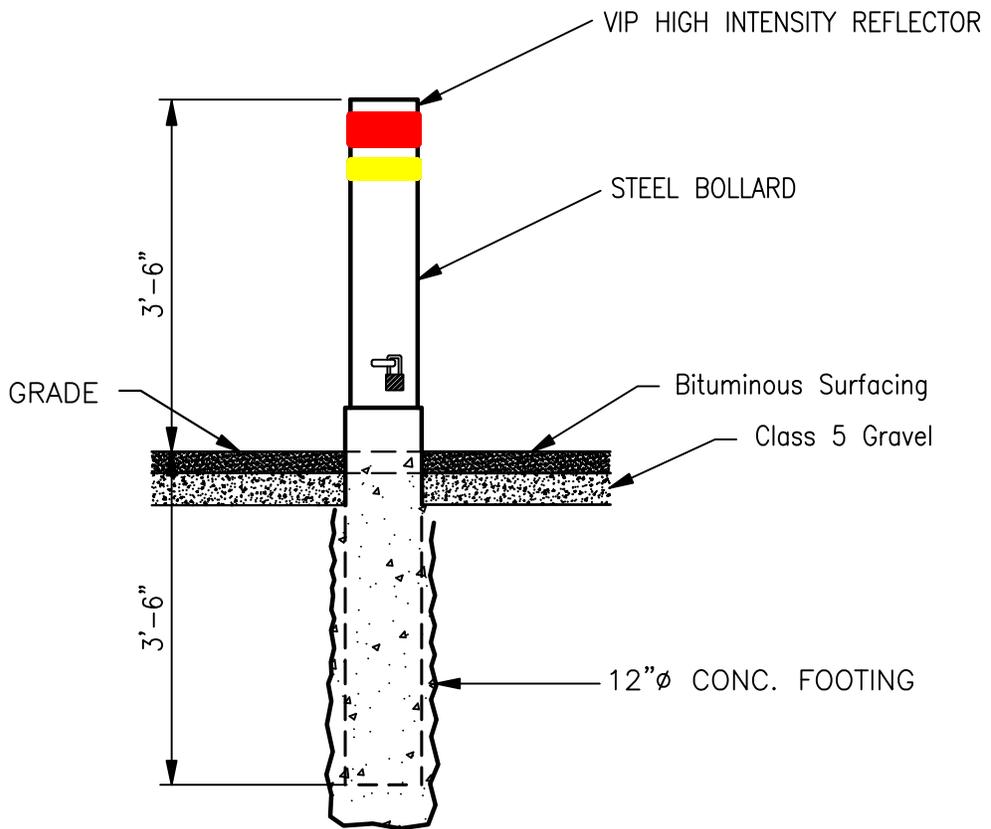
PIPE BOLLARD DETAIL

12/26/00



STANDARD DRAWING
NO.

711A

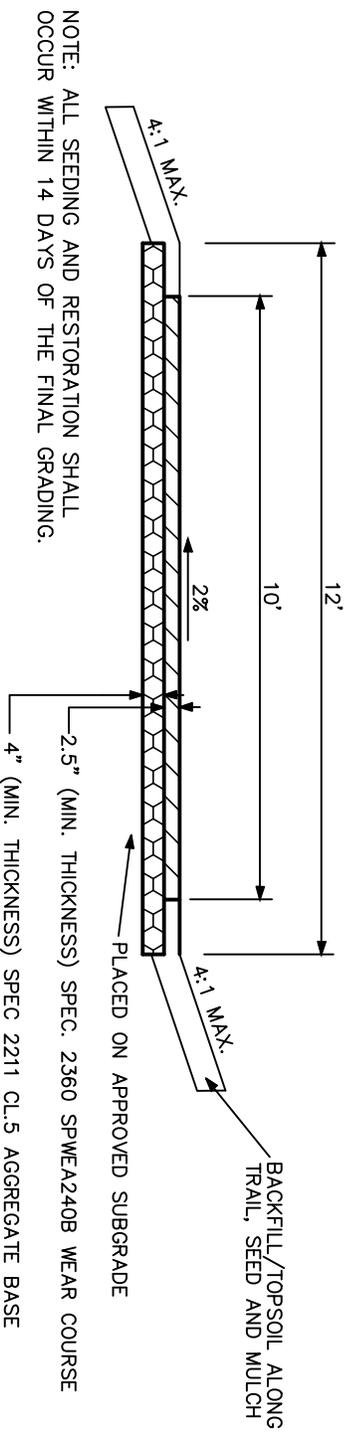


PIPE BOLLARD DETAIL

4/28/03

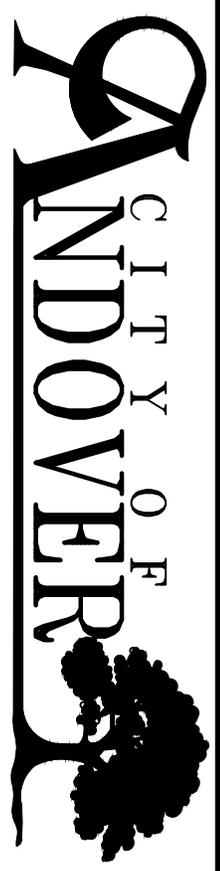


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712



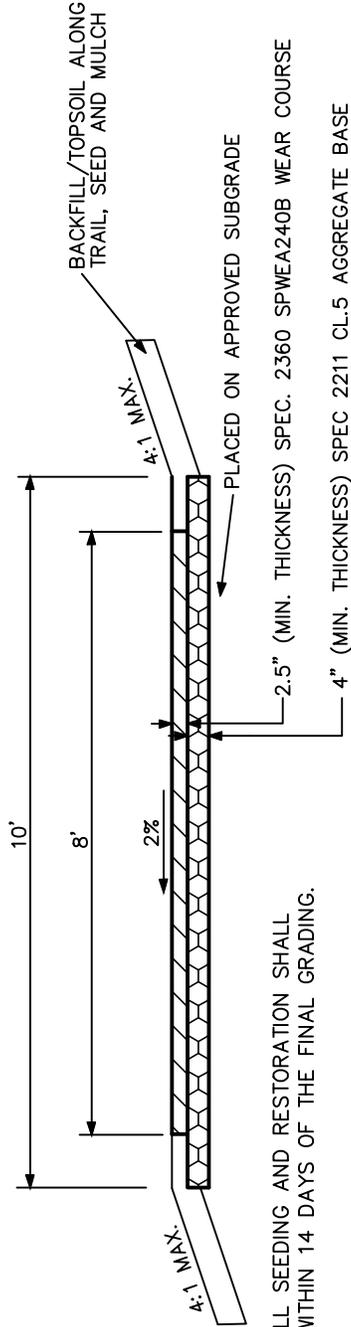
10' TYPICAL TRAIL SECTION

4/02/12



STANDARD DRAWING
NO.

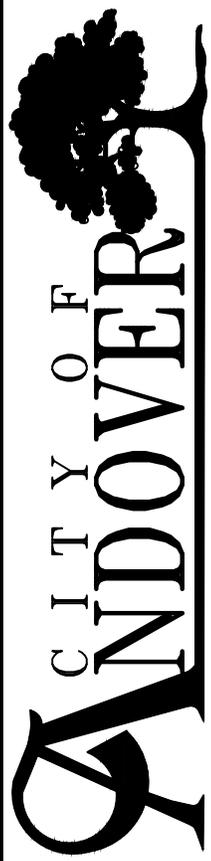
713B



NOTE: ALL SEEDING AND RESTORATION SHALL OCCUR WITHIN 14 DAYS OF THE FINAL GRADING.

8' TYPICAL TRAIL SECTION

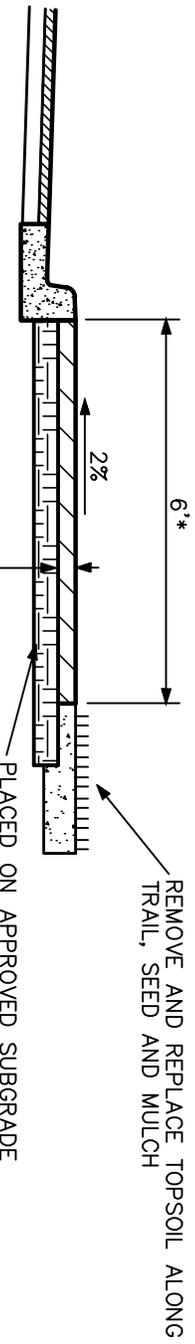
4/02/12



STANDARD DRAWING
NO.

714B

NOTE: ALL SEEDING AND RESTORATION SHALL OCCUR WITHIN 14 DAYS OF THE FINAL GRADING.

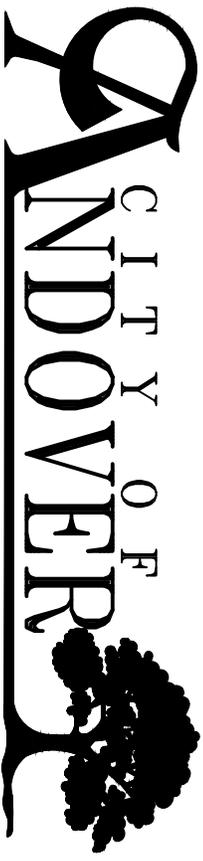


* 5' MINIMUM IF NOT AGAINST CURB

TYPICAL SIDEWALK SECTION

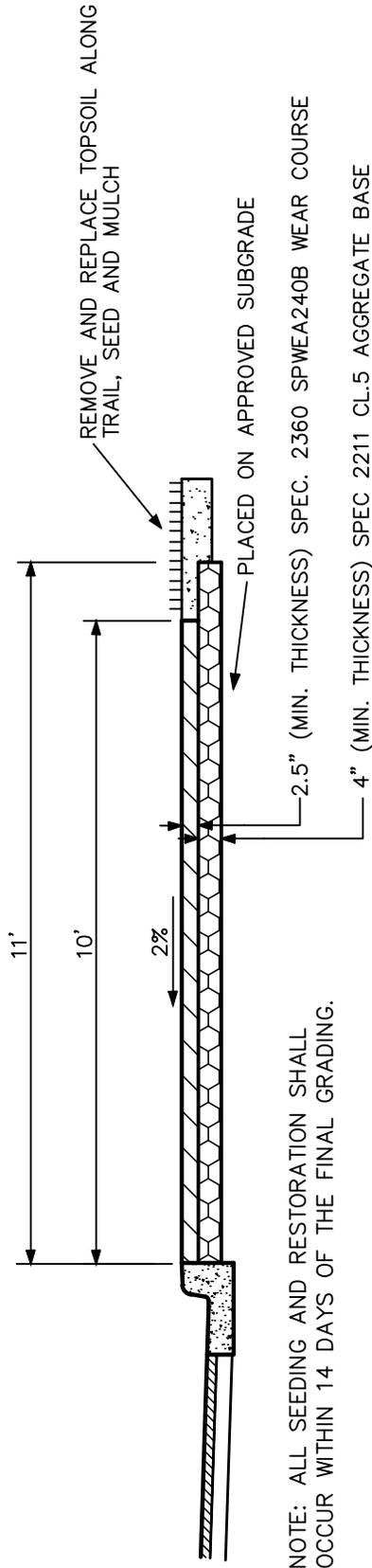
<BEHIND CURB>

4/13/2016



STANDARD DRAWING
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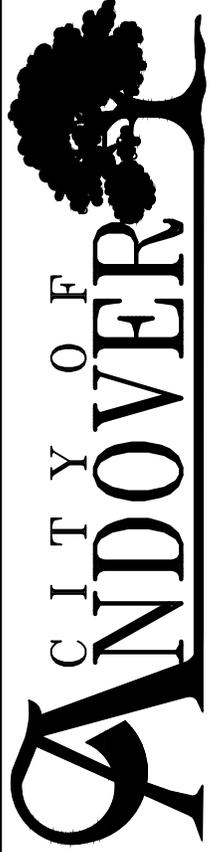
715A



NOTE: ALL SEEDING AND RESTORATION SHALL OCCUR WITHIN 14 DAYS OF THE FINAL GRADING.

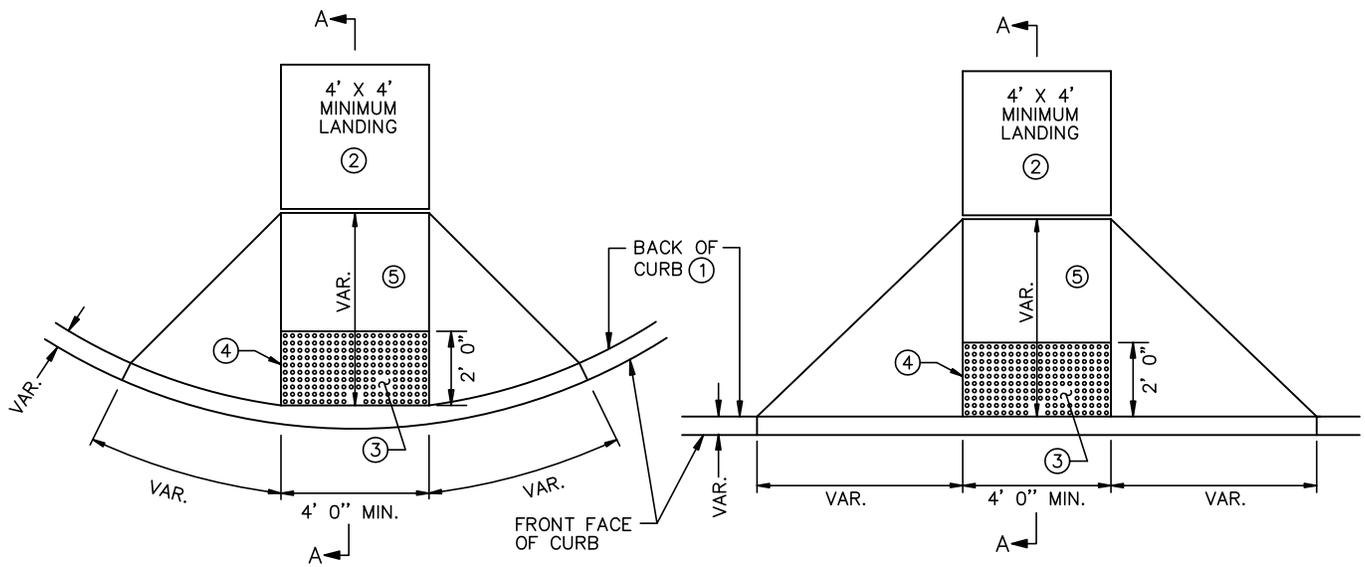
TYPICAL TRAIL SECTION <BEHIND CURB>

4/02/12

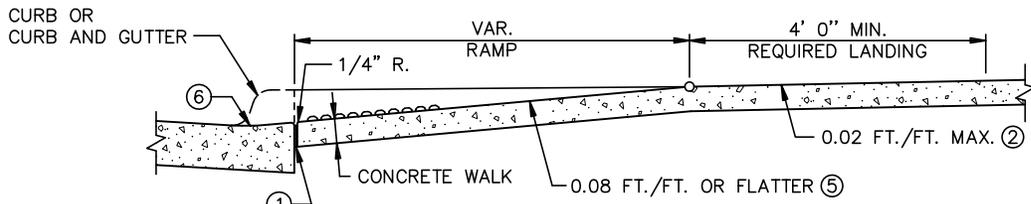


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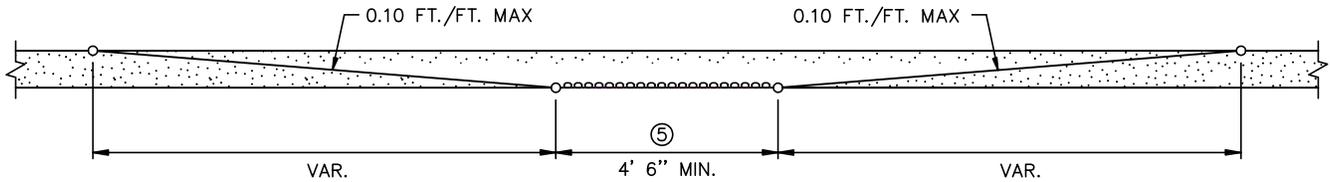
716B



PLAN VIEWS



SECTION A-A



ELEVATION

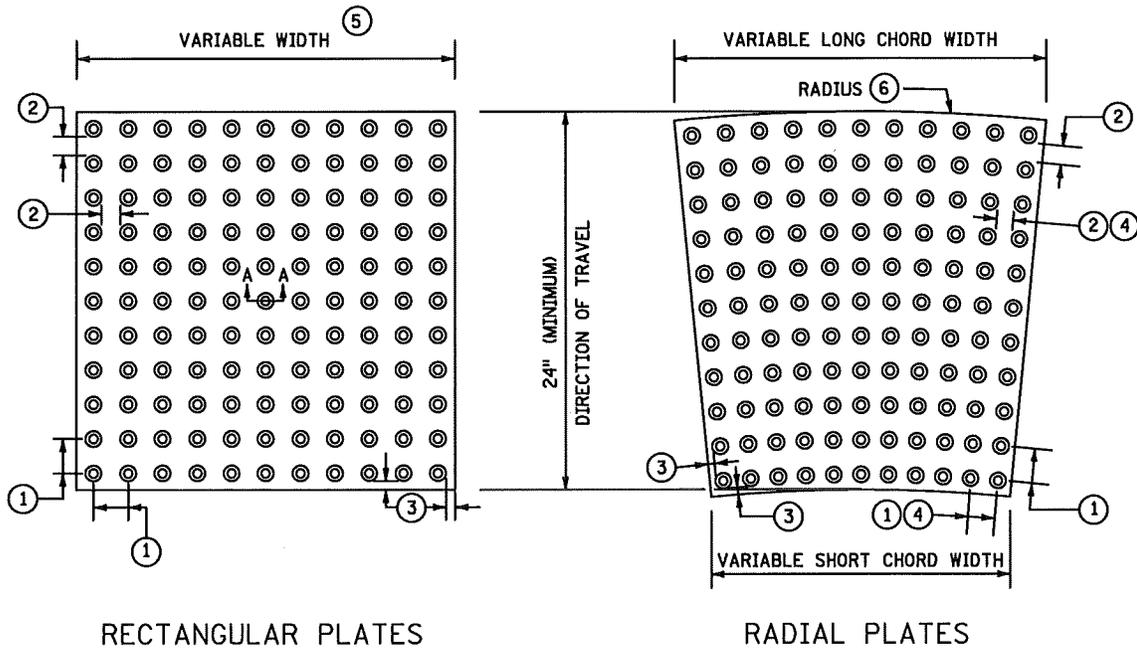
NOTES:

- ① 1/2-INCH EXPANSION JOINT. 1/2-INCH PREFORMED JOINT FILLER MATERIAL, AASHTO M 213.
- ② PROVIDE A 4' X 4' MINIMUM LANDING. SEE PLANS FOR PROPOSED RUNNING SLOPE AND CROSS SLOPE, NEITHER OF WHICH MAY EXCEED 0.02 FT./FT. AS CONSTRUCTED.
- ③ PLACE THE DETECTABLE WARNINGS AT THE BACK OF CURB. WHEN THE DETECTABLE WARNING SYSTEM IS A PREFORMED RECTANGLE PLACED AT THE BACK OF A RADIAL CURB LINE, HAND FORM THE CURB TO FILL THE GAP. DETECTABLE WARNING AREA SHALL BE 2' 0" MIN. IN THE DIRECTION PERPENDICULAR TO THE GRADE BREAK AND SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP.
- ④ WHERE RADIAL WARNING SURFACES ARE USED OR IN OTHER CIRCUMSTANCES WHERE THE EDGE OF THE WARNING SURFACE IS NOT PARALLEL TO THE EDGE OF THE CURB RAMP PATH OF TRAVEL, THE EDGE OF THE DETECTABLE WARNING SURFACE SHOULD NEVER BE MORE THAN 3 INCHES FROM THE EDGE OF THE RAMP. DETECTABLE WARNING AREA SHALL CONTRAST VISUALLY WITH THE ADJACENT GUTTER, ROADWAY, OR WALKWAY, EITHER LIGHT ON DARK OR DARK ON LIGHT. CONTRAST MAY BE PROVIDED ON THE FULL RAMP SURFACE, EXCLUDING THE FLARED SIDES.
- ⑤ CROSS SLOPE OF THE RAMP MAY NOT EXCEED 0.02 FT./FT. AS CONSTRUCTED. WIDTH SHALL BE 4'6" FOR SIDEWALKS AND 6'0" FOR TRAILS.
- ⑥ ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY NOT BE GREATER THAN 1/4 INCH.

PEDESTRIAN CURB RAMP

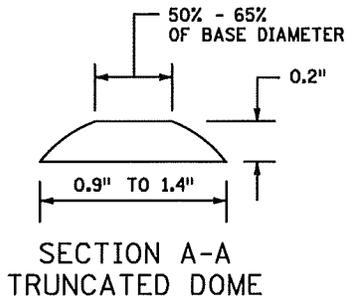


STANDARD DRAWING
NO.
719B



RECTANGULAR PLATES

RADIAL PLATES



| TYPICAL RADIAL TRUNCATED DOME PLATES | | | |
|--------------------------------------|---------------------------|-------------------|------------------------------------|
| RADIUS (FEET) | LONG CHORD WIDTH (INCHES) | SQ. FT. PER PLATE | PLATES REQUIRED FOR 90 DEGREE TURN |
| ⑦ 10 | 23-1/2 | 3.53 | 8 |
| 15 | 18-13/16 | 2.93 | 15 |
| 15 | 23-1/2 | 3.67 | 12 |
| 20 | 18-13/16 | 3.00 | 20 |
| 20 | 18-7/8 | 2.98 | 20 |
| 25 | 20-1/2 | 3.28 | 23 |
| 25 | 23-9/16 | 3.77 | 20 |
| 30 | 22-5/8 | 3.65 | 25 |
| 35 | 22 | 3.56 | 30 |

NOTES:

DETECTABLE WARNING SURFACES SHALL FOLLOW THE PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG).

DETECTABLE WARNINGS CONSIST OF TRUNCATED DOMES ALIGNED IN A SQUARE OR RADIAL GRID PATTERN.

DETECTABLE WARNINGS ARE REQUIRED:

- WHERE RAMPS, LANDINGS, OR BLENDED TRANSITIONS PROVIDE A FLUSH PEDESTRIAN CONNECTION TO THE ROADWAY.
- WHERE PEDESTRIAN ACCESS ROUTES CROSS COMMERCIAL DRIVEWAYS THAT ARE PROVIDED WITH TRAFFIC CONTROL DEVICES OR OTHERWISE PERMITTED TO OPERATE LIKE A PUBLIC ROADWAY.
- AT PEDESTRIAN RAILWAY CROSSINGS.
- ON RAIL PLATFORMS WHERE BOARDING EDGES ARE NOT PROTECTED.

DETECTABLE WARNINGS SHALL EXTEND:

- A MINIMUM OF 24" IN THE DIRECTION OF TRAVEL.
- THE FULL WIDTH OF THE RAMP, LANDING, OR BLENDED TRANSITION, WITHIN 3" OF FULL WIDTH ON EITHER END.
- THE FULL LENGTH OF THE PUBLIC USE AREA OF A RAIL PLATFORM.

DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, ROADWAY, OR WALKWAY, EITHER A LIGHT-ON-DARK OR DARK-ON-LIGHT. CONTRAST MAY BE PROVIDED ON THE FULL RAMP SURFACE, EXCLUDING THE FLARED SIDES.

~~FOR MN/DOT PROJECTS, SEE MN/DOT'S APPROVED/QUALIFIED PRODUCT LISTS.~~

DETECTABLE WARNING SURFACE SHALL BE PAID FOR AS TRUNCATED DOMES BY THE SQUARE FOOT.

ALL TRUNCATED DOME SYSTEMS SHALL BE PLACED IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.

- ① CENTER TO CENTER DOME SPACING: 1.6" MINIMUM, 2.4" MAXIMUM.
- ② BASE TO BASE DOME SPACING: 0.65" MINIMUM.
- ③ DOME BASE TO PLATE EDGE SPACING: 0.35" MINIMUM, 0.75" MAXIMUM.
- ④ SPACING VARIES ON RADIAL PLATES.
- ⑤ TYPICAL WIDTHS AVAILABLE: 12", 18", 24", 30", 36". CHECK WITH MANUFACTURERS FOR AVAILABLE WIDTHS.
- ⑥ ON RADIAL PLATE, RADIUS DEFINED AT BACK OF CURB.
- ⑦ TYPICAL RADII. CHECK WITH MANUFACTURERS FOR AVAILABLE RADII.

APPROVED AUGUST 23, 2010

Jon Chyd
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

DETECTABLE WARNING SURFACE
TRUNCATED DOMES

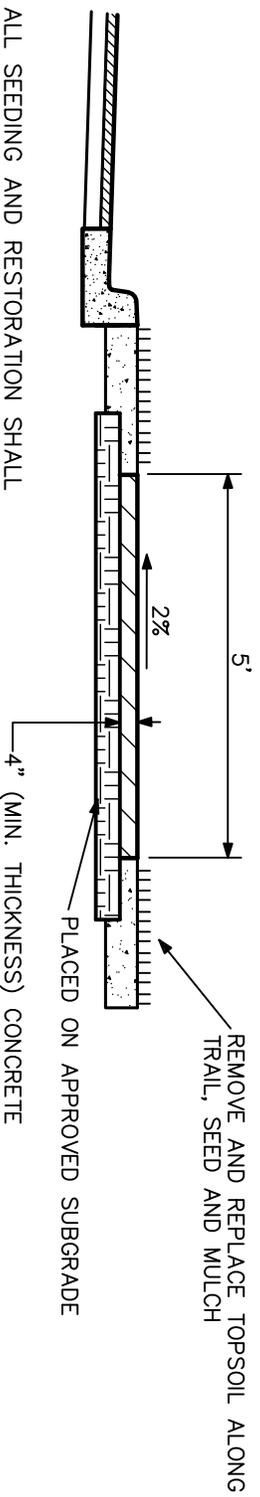
SPECIFICATION
REFERENCE

2531

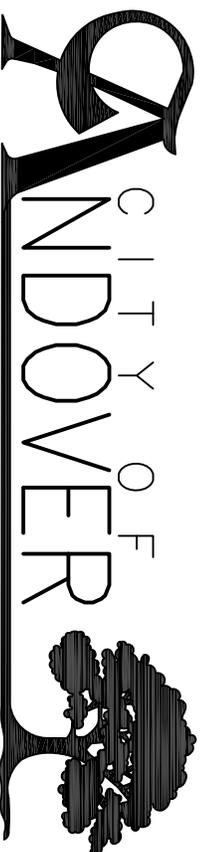
STANDARD
PLATE
NO.

7038A

NOTE: ALL SEEDING AND RESTORATION SHALL OCCUR WITHIN 14 DAYS OF THE FINAL GRADING.



TYPICAL SIDEWALK SECTION



STANDARD DRAWING
NO.

721