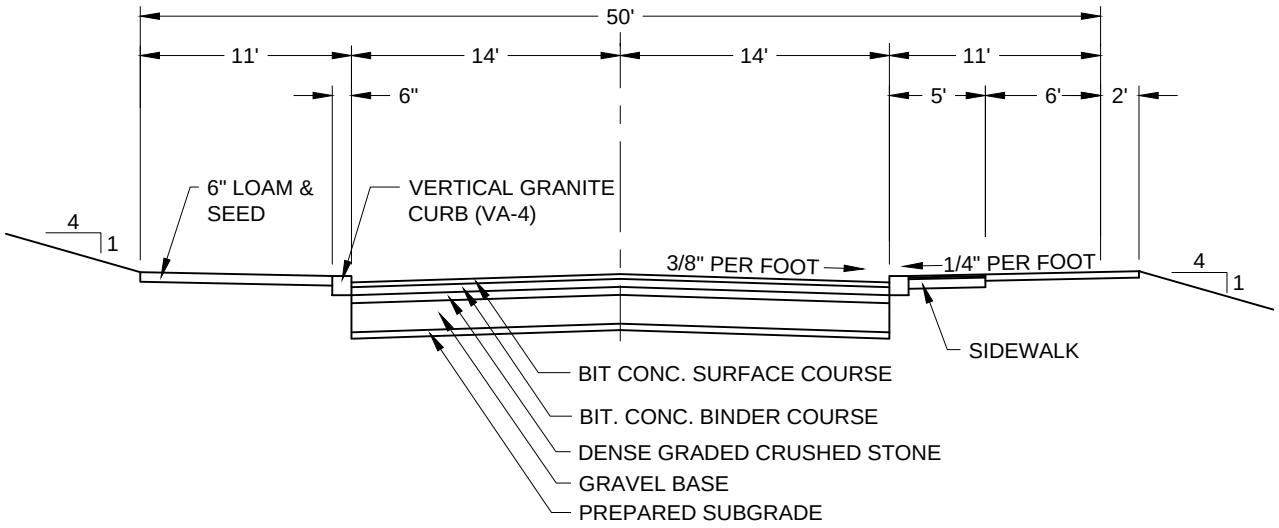
Town of
ARLINGTON
ENGINEERING DIVISION

51 Grove Street
Arlington, MA 02476

ROADWAY CONSTRUCTION STANDARD DETAILS

R-0001	Roadway Cross Section
R-0002	Vertical Granite Curb Installation
R-0003	Bituminous Berms
R-0004	Wheelchair Ramp Type A
R-0005	Wheelchair Ramp Type B
R-0006	Wheelchair Ramp Type C
R-0007	Wheelchair Ramp Type D
R-0008	Wheelchair Ramp Type E
R-0009	Wheelchair Ramp Type F
R-0010	Wheelchair Ramp Notes
R-0011	Detectable Warning Panel
R-0012	Typical Sidewalk Sections
R-0013	Typical Concrete Sidewalk Expansion Joints
R-0014	Brick Sidewalk (Plan View)
R-0015	Brick Sidewalk (Section View)
R-0016	Typical Driveway Apron with Grass Strip
R-0017	Typical Driveway Apron without Grass Strip
R-0018	Pavement Details for Trench Restoration
R-0019	Typical Steel Roadplate Installation



BITUMINOUS CONCRETE PAVEMENT SCHEDULE			
MINIMUM THICKNESS (INCH)	LOCAL	COLLECTOR	ARTERIAL
SURFACE COURSE	1.5	2	3
BINDER COURSE	2.5	4	5
DENSE GRADED CRUSHED STONE	4	4	4
GRAVEL BASE	8	8	8
PREPARED SUBGRADE	-	4	4

Town of ARLINGTON
ENGINEERING DIVISION
51 Grove Street
Arlington, MA 02476

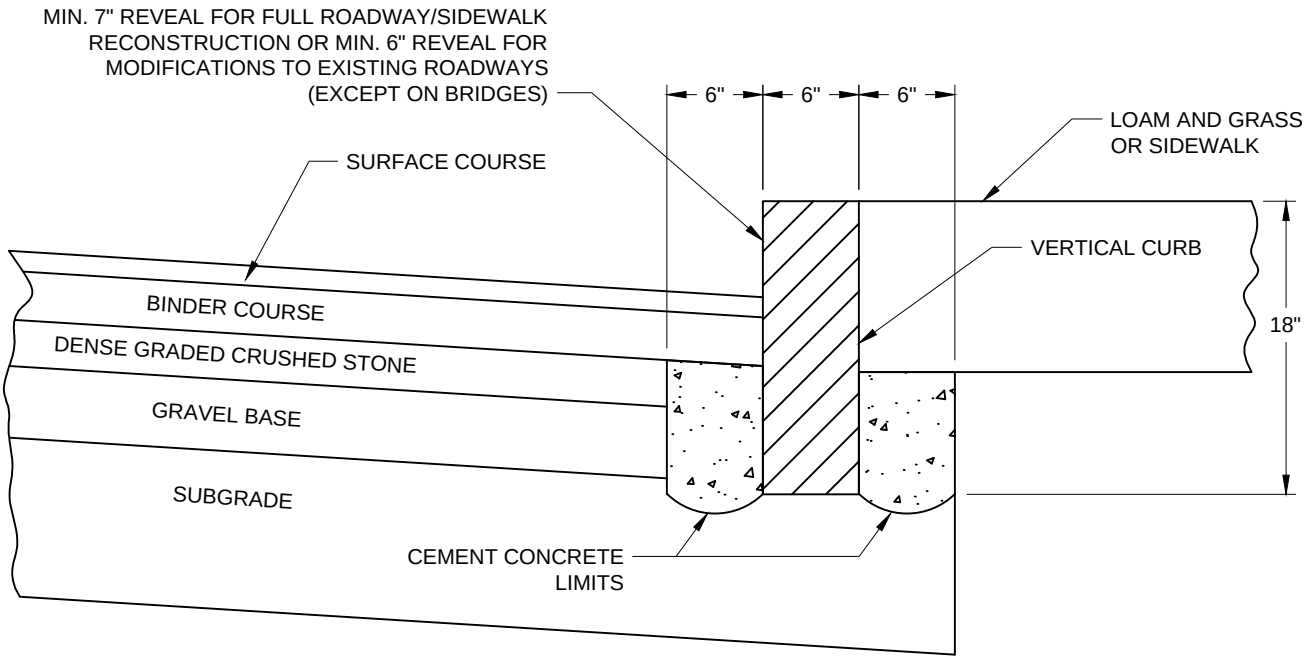
ROADWAY CROSS SECTION

JAN. 2015

NOT TO SCALE

REVISION
1

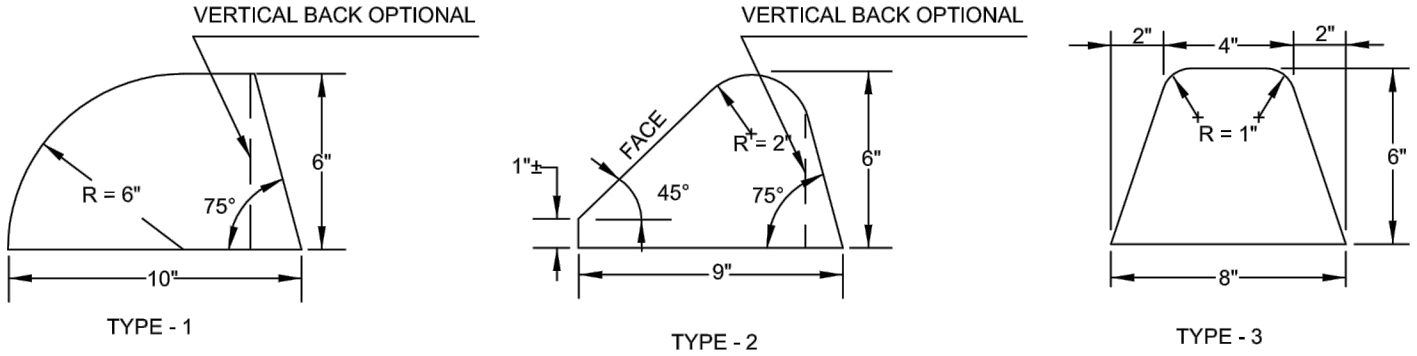
R-0001

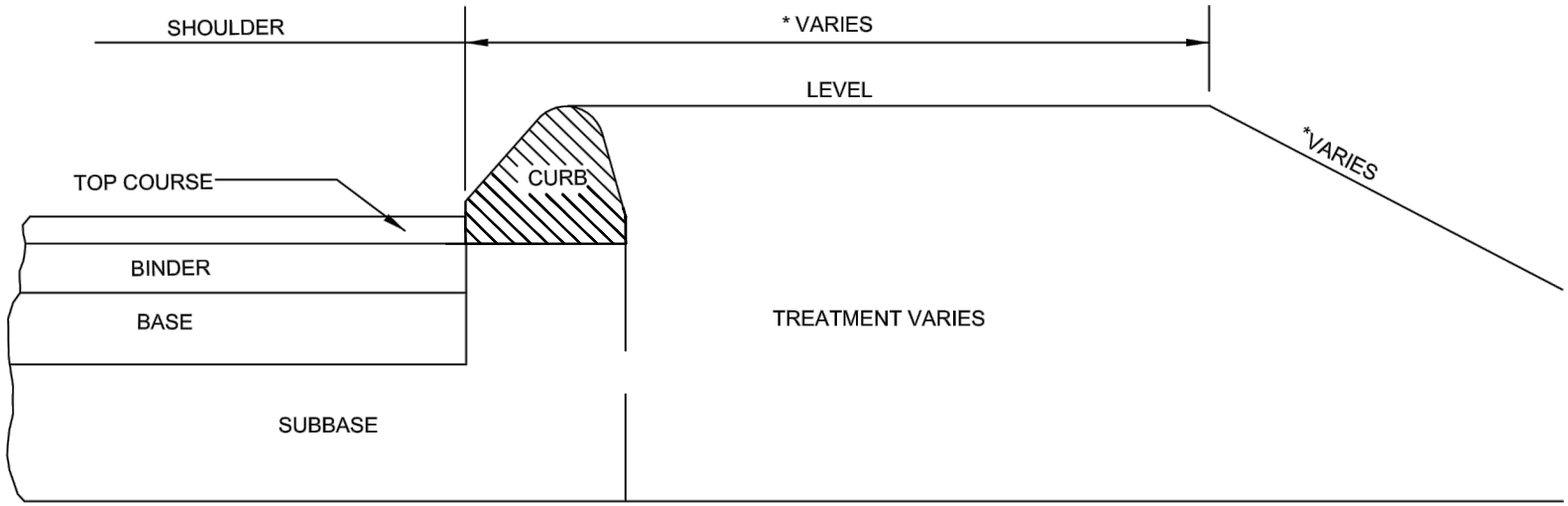


NOTES:

1. CUT NEAT LINE 6" FROM CURB LINE AND REMOVE BASE AND SUBGRADE, REPLACE WITH CEMENT CONCRETE. COVER WITH BINDER AND TOP COURSE TO CURB.
2. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD MHD SPECIFICATIONS MAY BE USED; ALL TEST REQUIREMENTS ARE WAIVED. BITUMINOUS CONCRETE SHALL NOT BE USED AS A SUBSTITUTE.
3. VERTICAL GRANITE CURB SHALL BE SET IN 6' LENGTHS.

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	VERTICAL GRANITE CURB INSTALLATION	JAN. 2015 NOT TO SCALE REVISION 1	R-0002





METHOD OF SETTING-TYPICAL FOR ALL TYPES

Town of ARLINGTON
ENGINEERING DIVISION
51 Grove Street
Arlington, MA 02476

BITUMINOUS BERMS

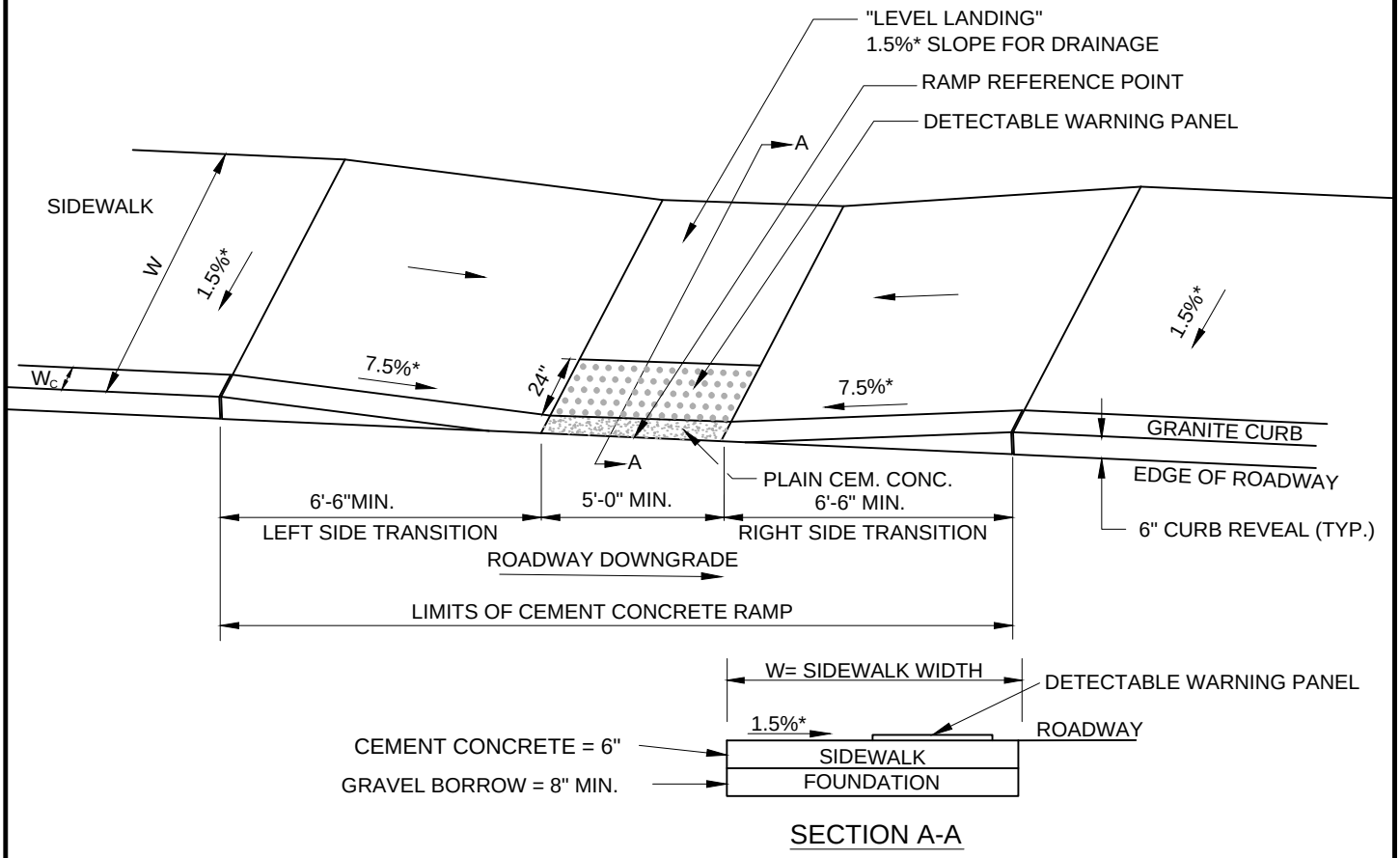
JAN. 2015

NOT TO SCALE

REVISION
1

D-0003

WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT AND THE CURRENT MASSHIGHWAY CONSTRUCTION STANDARDS.



SECTION A-A

WHEELCHAIR RAMP TYPE A

NOT TO SCALE

LEGEND:

HSL = HIGH SIDE TRANSITION LENGTH

W = SIDEWALK WIDTH

W_C= CURB WIDTH

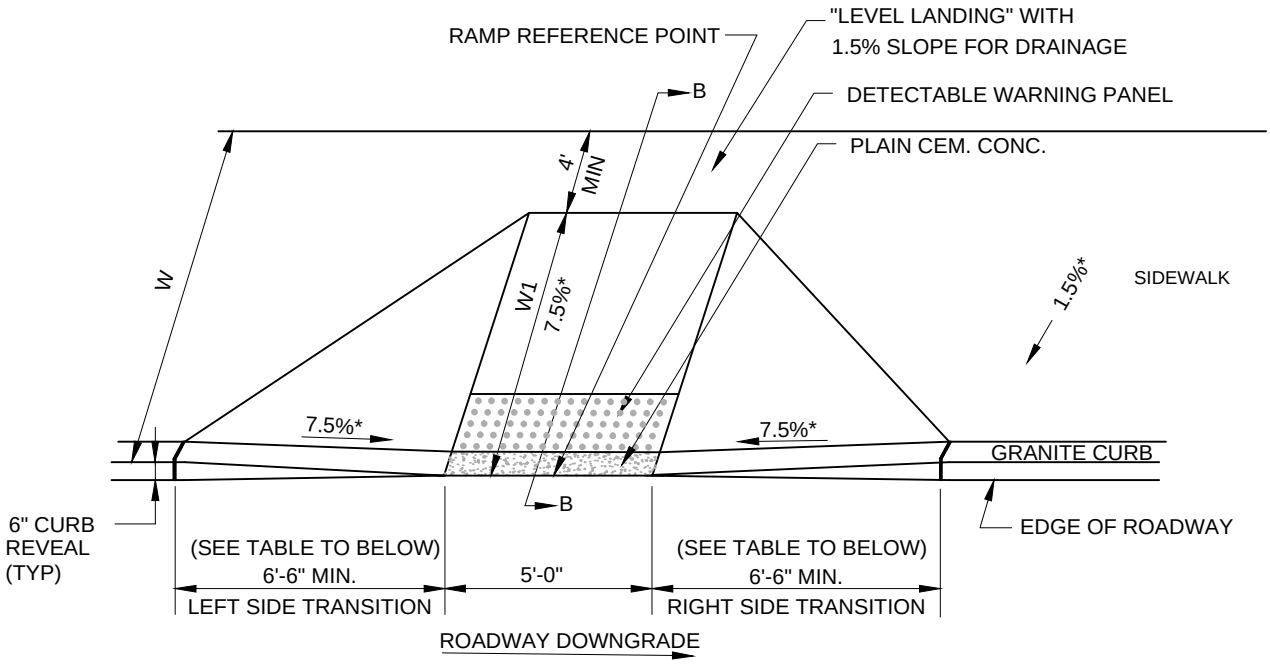
* = TOLERANCE FOR CONSTRUCTION ±0.5%

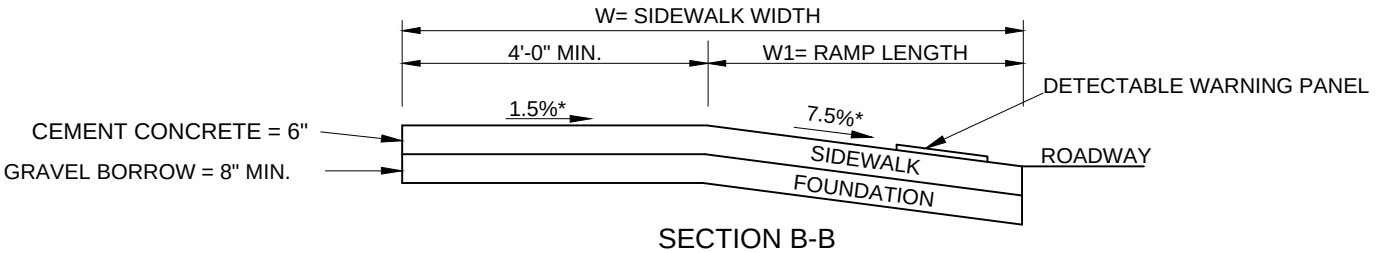
USABLE SIDEWALK WIDTH PER AAB = W-W_C

USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	WHEELCHAIR RAMP TYPE A	JAN. 2015 NOT TO SCALE REVISION ①	R-0004

WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT AND THE CURRENT MASSHIGHWAY CONSTRUCTION STANDARDS.





SECTION B-B

WHEELCHAIR RAMP TYPE B

NOT TO SCALE

LEGEND:

HSL = HIGH SIDE TRANSITION LENGTH

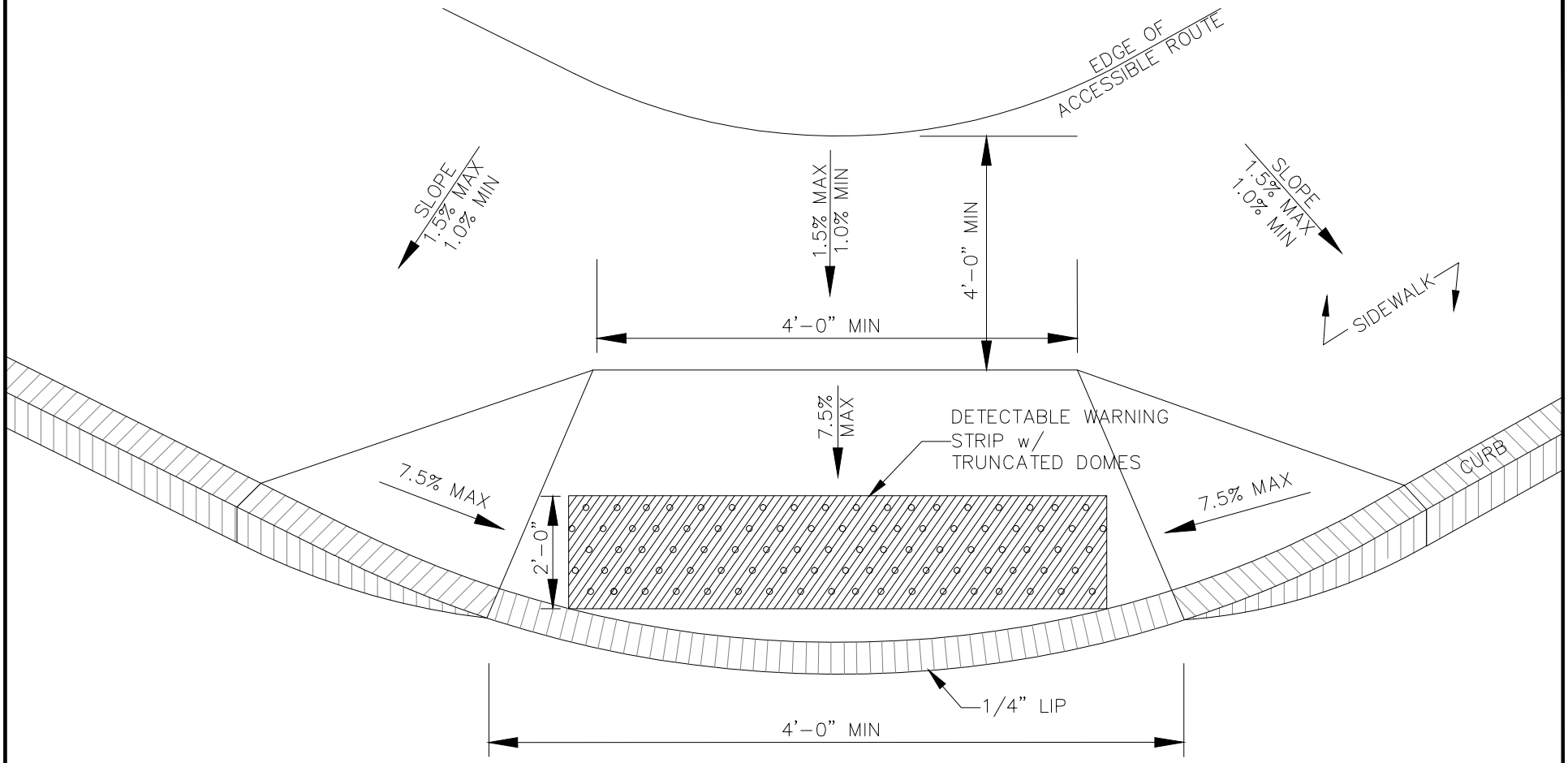
W = SIDEWALK WIDTH

W1 = PERPENDICULAR RAMP LENGTH

* = TOLERANCE FOR CONSTRUCTION ±0.5%

USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"

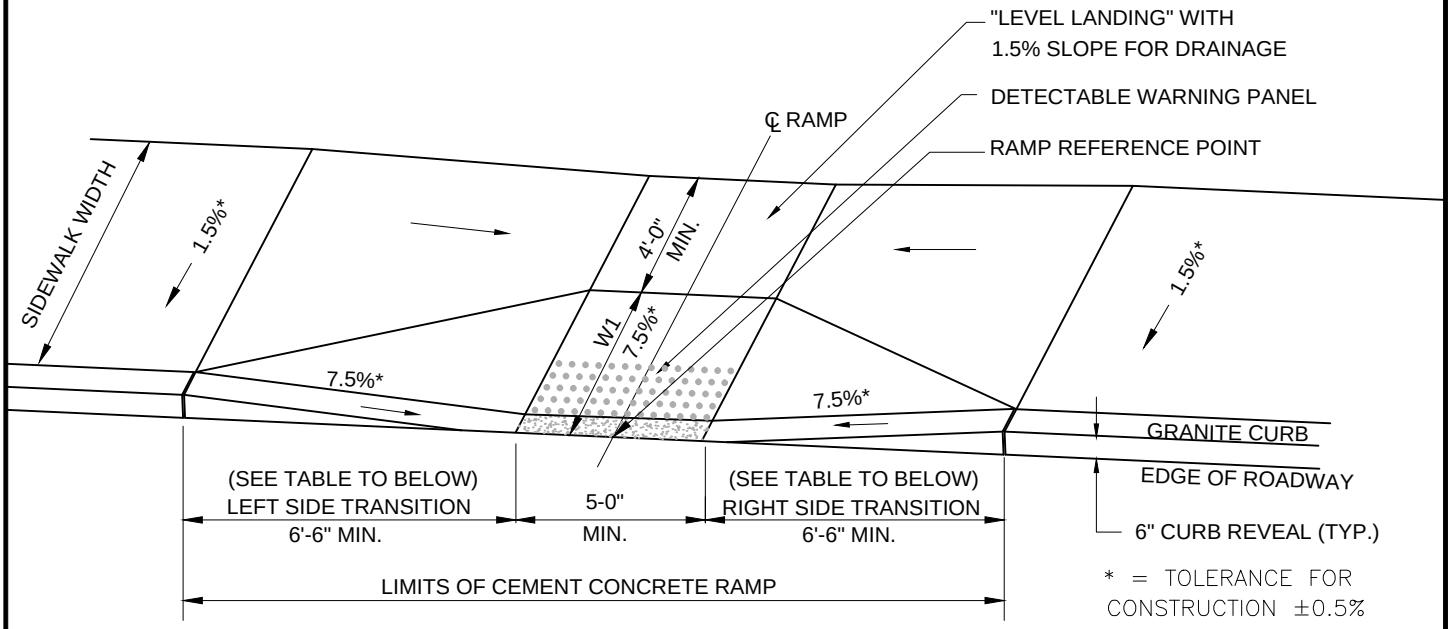
Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	WHEELCHAIR RAMP TYPE B	JAN. 2015 NOT TO SCALE REVISION 1	R-0005



WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT, AND THE CURRENT MASSHIGHWAY CONSTRUCTION STANDARDS

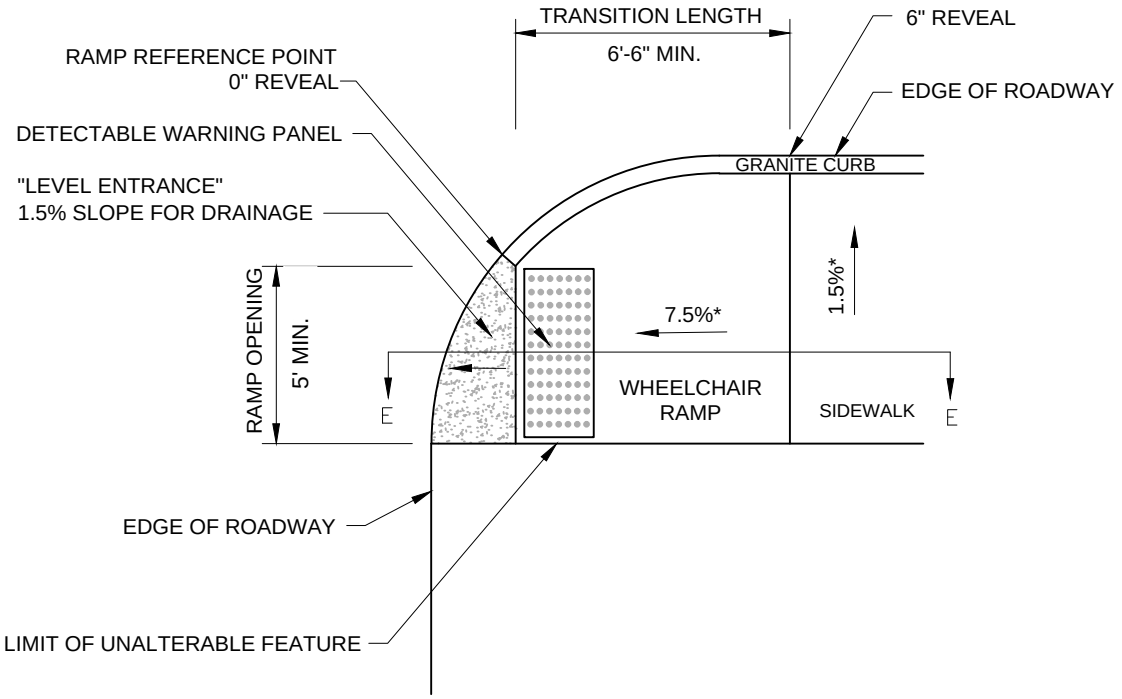
Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	WHEELCHAIR RAMP TYPE C	JAN. 2015 NOT TO SCALE REVISION ①	R-0006

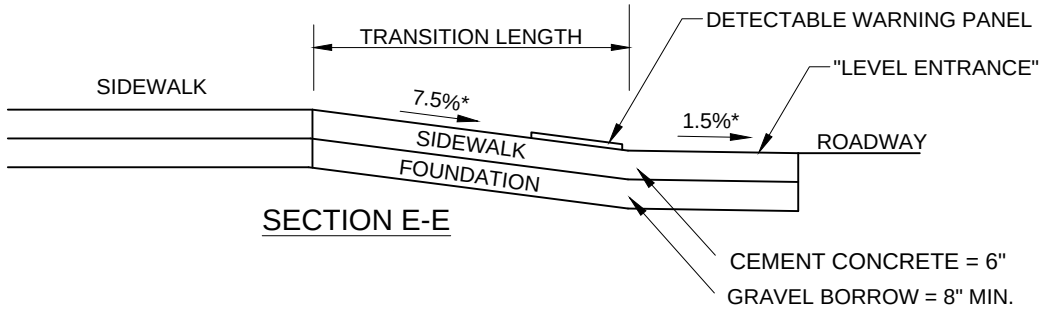
WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT AND THE CURRENT MASSHIGHWAY CONSTRUCTION STANDARDS.



Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	WHEELCHAIR RAMP TYPE D	JAN. 2015 NOT TO SCALE REVISION 1	R-0007

WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT AND THE CURRENT MASSHIGHWAY CONSTRUCTION STANDARDS.





SECTION E-E

LEGEND:

HSL = HIGH SIDE TRANSITION LENGTH

W = SIDEWALK WIDTH

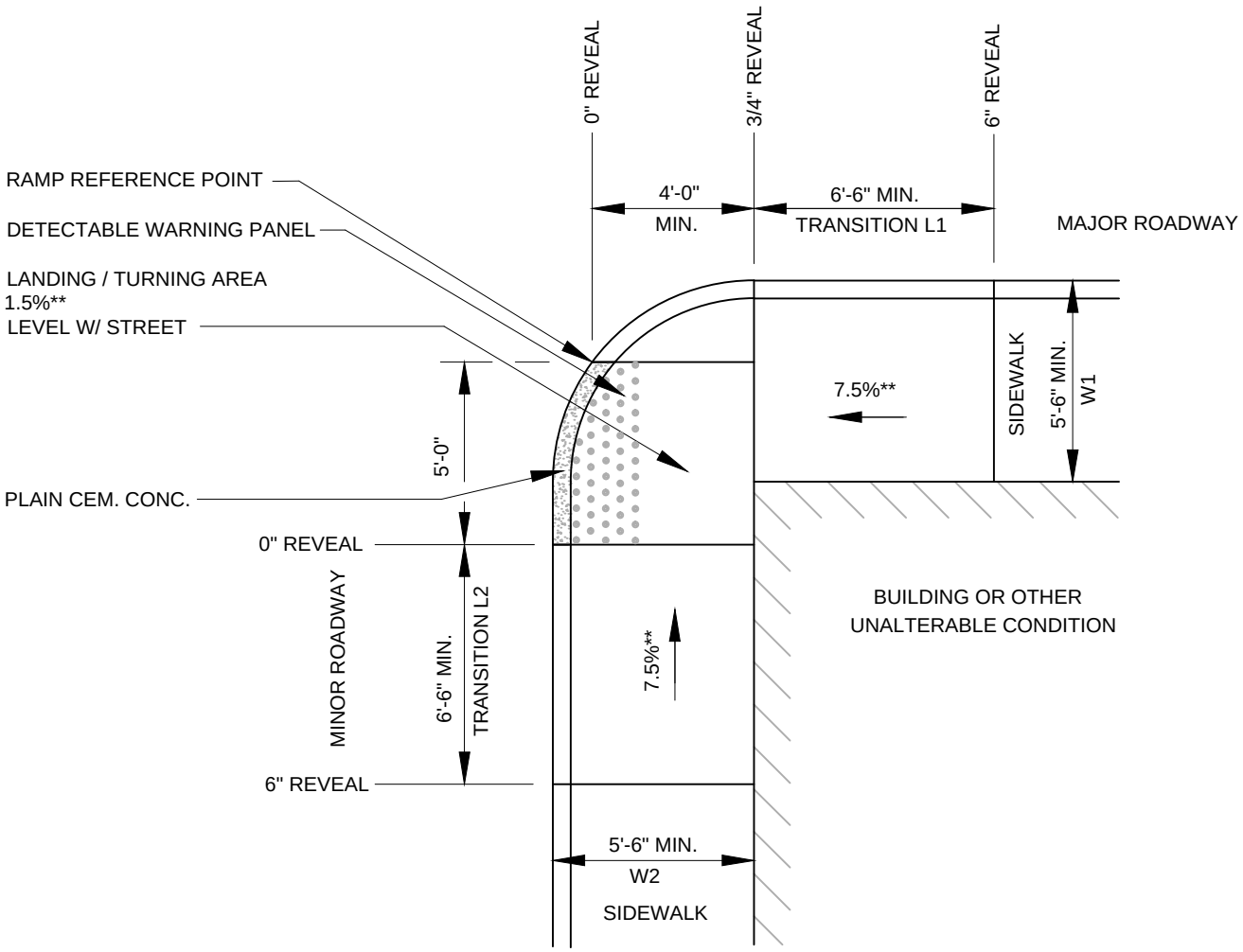
W1 = PERPENDICULAR RAMP LENGTH

* = TOLERANCE FOR CONSTRUCTION ±0.5%

USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	WHEELCHAIR RAMP TYPE E	JAN. 2015 NOT TO SCALE REVISION 1	R-0008

WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT AND THE CURRENT MASSHIGHWAY CONSTRUCTION STANDARDS.



Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	WHEELCHAIR RAMP TYPE F	JAN. 2015 NOT TO SCALE REVISION ①	R-0009

1. ROADWAY SIDEWALK CROSS SLOPES, FOR BRICK, CEMENT CONCRETE, AND BITUMINOUS CONCRETE, AS INDICATED IN THE CONSTRUCTION STANDARDS, WILL BE 1.5%. A CONSTRUCTION TOLERANCE OF ±0.5% IS ACCEPTABLE ON ROADWAY SIDEWALKS. SIDEWALKS ON BRIDGES WILL BE CONSTRUCTED TO A CROSS SLOPE OF 1.0% IN ACCORD WITH MASSDOT BRIDGE POLICY. IN ACCORDANCE WITH 521 CMR THE RULES AND REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD (AAB), THE SIDEWALK CROSS SLOPE CANNOT EXCEED 2.0%.

2. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-3" (PREFERED MINIMUM WIDTH OF 5'-0" FOR SIDEWALK MAINTENANCE) SHALL BE MAINTAINED PAST ALL OBSTRUCTIONS (UTILITY POLES, SIGNS, SIGNAL FOUNDATIONS, MASTS, MAILBOXES, ALONG DRIVE OPENINGS, ETC.).

3. THE WHEELCHAIR RAMP SLOPES AND SIDE SLOPES (TRANSITIONS) WILL BE MAXIMUM OF 7.5% WITH A CONSTRUCTION TOLERANCE OF ±0.5%. HOWEVER THESE SLOPES MAY BE FLATTER WHEN WARRANTED BY SURROUNDING CONDITIONS.

4. WHERE THE ROADWAY PROFILE EXCEEDS 4%, THE HIGH SIDE TRANSITION LENGTH UNDER ANY CONDITIONS NEED NOT EXCEED 15'-0".

5. IN NO CASE WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED ON THE TRAFFIC APPROACH SIDE OF THAT STOP LINE.

6. FIXED OBJECTS (I.E. UTILITY POLES, HYDRANTS, SIGNS, SIGNAL FOUNDATIONS, ETC.) MUST NOT ENCROACH ON ANY PART OF THE WHEELCHAIR RAMP INCLUDING TRANSITION SLOPES.

7. AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP, EXCLUDING CURB TRANSITIONS TO BE LOCATED OUTSIDE THE CROSSWALK. THE WHEELCHAIR RAMP ENTRANCE IS TO BE CENTERED IN THE CROSSWALK WHENEVER POSSIBLE.

8. CATCH BASINS WHICH ARE TO BE LOCATED IN THE VICINITY OF A WHEELCHAIR RAMP SHALL BE LOCATED UPGRADE OF THE RAMP ENTRANCE.

9. THE ENTRANCE OF A WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.

10. TESTING SURFACE: WHEN TESTING WITH A STRAIGHTEDGE PLACED PARALLEL TO THE LINE OF THE SLOPE THERE SHALL BE NO DEVIATION FROM A TRUE SURFACE IN EXCESS OF $\frac{1}{4}$".

11. WHEELCHAIR RAMPS ON BRIDGES SHOULD BE AVOIDED. IF A WHEELCHAIR RAMP IS REQUIRED TO BE PLACED ON A BRIDGE, PRIOR WRITTEN APPROVAL IS REQUIRED. SPECIAL DETAILING OF THE REINFORCEMENT AND CURB SYSTEM WILL BE REQUIRED TO MAINTAIN THE PREFORMANCE OF THE RAILING/BARRIER SYSTEM.

CURB TRANSITION LENGTH FOR WHEELCHAIR RAMPS		
ROADWAY PROFILE GRADE	*HIGH SIDE TRANSITION LENGTH (HST) 6" REVEAL	*HIGH SIDE TRANSITION LENGTH (HST) 7" REVEAL
%		
0	6'-6"	7'-8"
> 0 TO 1	7'-8"	9'-0"
> 1 TO 2	9'-0"	10'-8"
> 2 TO 3	11'-0"	12'-10"
> 3 TO 4	14'-0"	16'-0"
> 4	15'-0" MAX	17'-0" MAX

* BASED ON A DESIGN SLOPE OF 7.5%. VARING CURB REVEAL MAY ALTER HST LENGTH.

Town of ARLINGTON
ENGINEERING DIVISION
51 Grove Street
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WHEELCHAIR RAMP NOTES

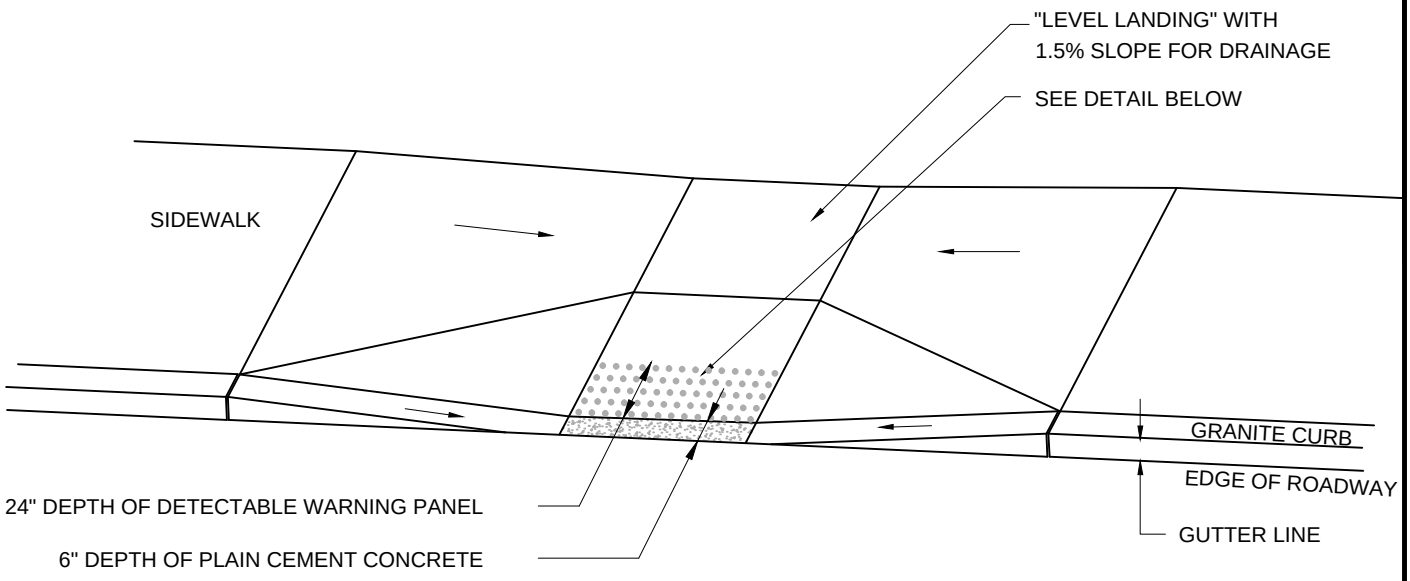
JAN. 2015

NOT TO SCALE

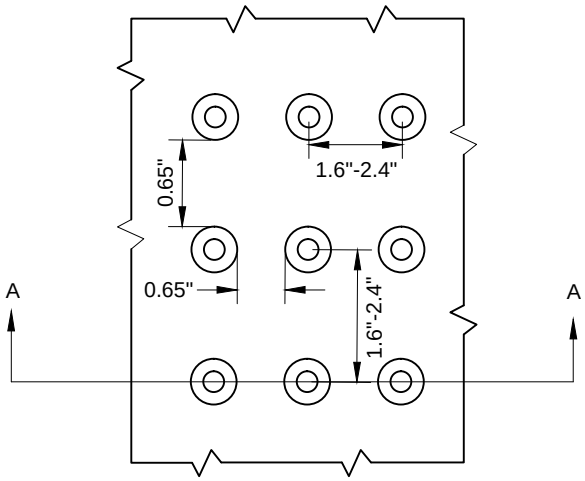
REVISION 1

R-0010

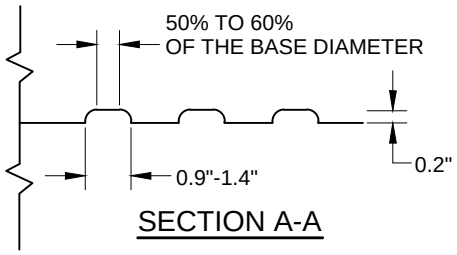
WHEELCHAIR RAMPS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CURRENT REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD, THE AMERICANS WITH DISABILITIES ACT AND THE CURRENT MASSHIGHWAY CONSTRUCTION STANDARDS.



TYPICAL INSTALLATION



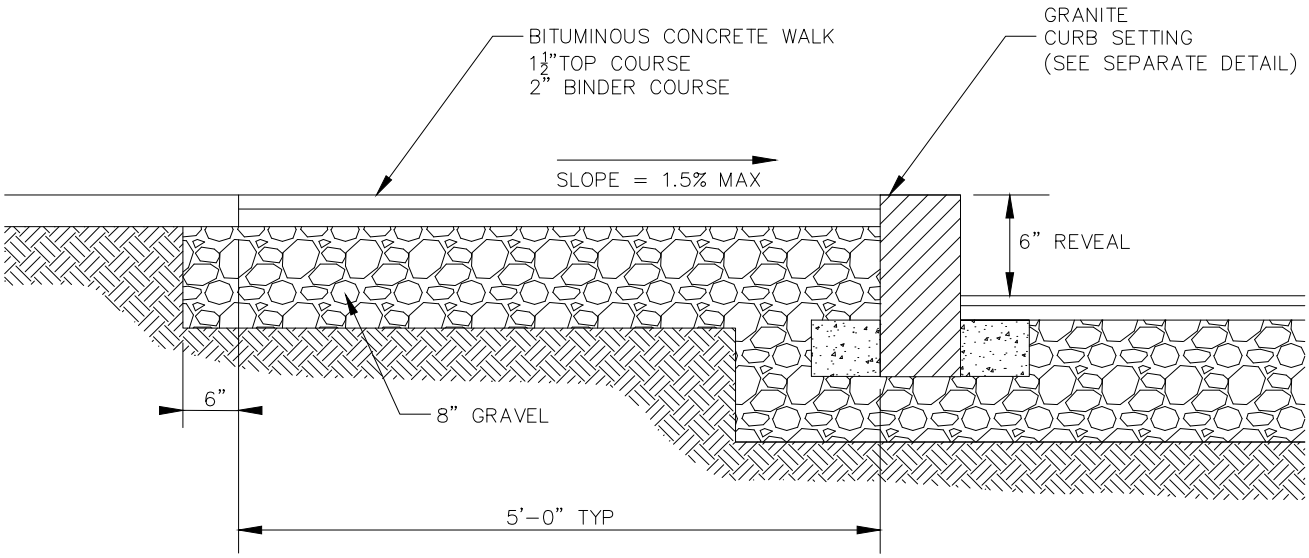
DETAIL OF DETECTABLE WARNING PANEL



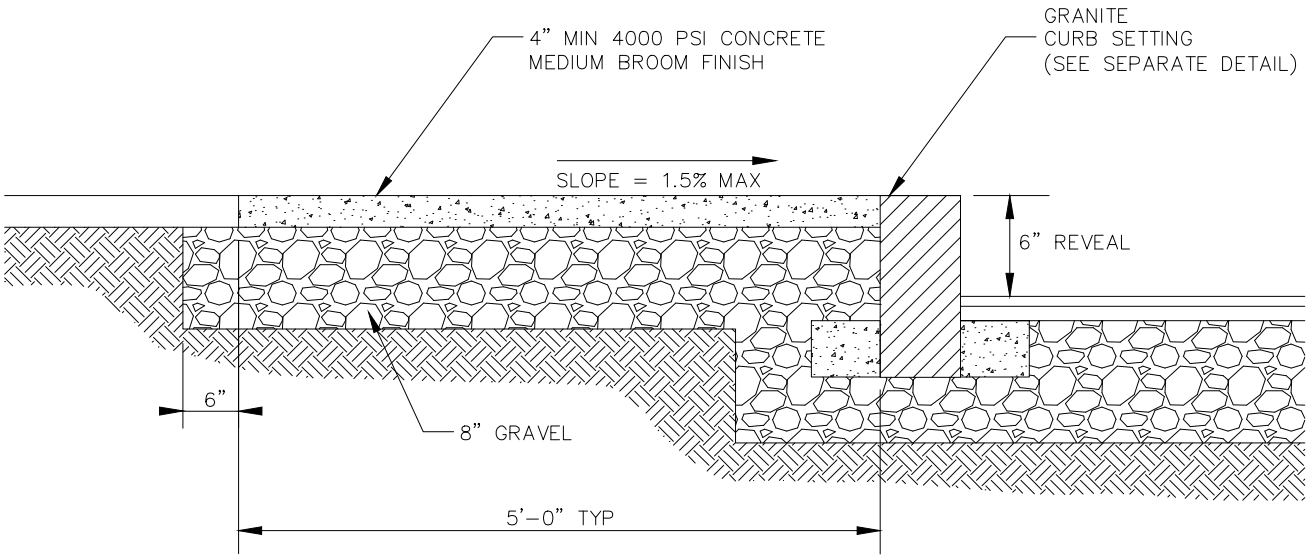
SECTION A-A

NOTE:
PANELS SHALL BE YELLOW IN COLOR AND SHALL BE CAST-IN-PLACE WITH WHEELCHAIR RAMP CEMENT CONCRETE. SURFACE APPLIED TACTILE PANELS SHALL NOT BE UTILIZED.

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	DETECTABLE WARNING PANEL	JAN. 2015 NOT TO SCALE REVISION 1	R-0011

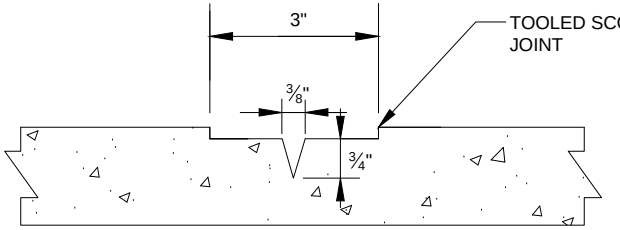


BITUMINOUS SIDEWALK

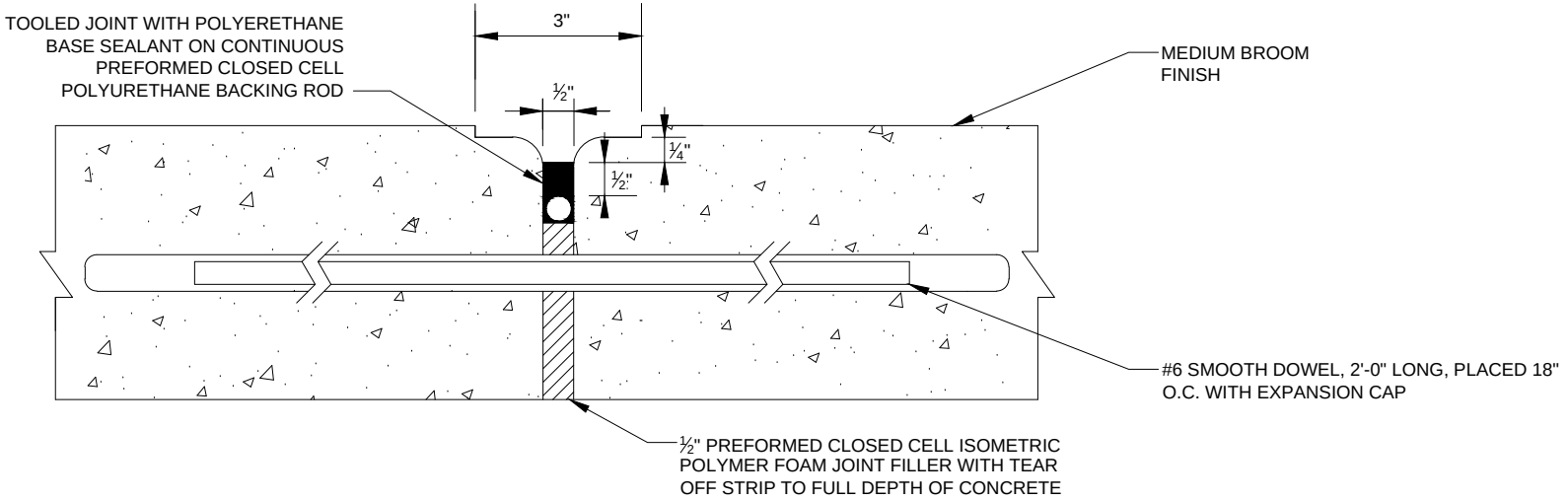


CONCRETE SIDEWALK

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	TYPICAL SIDEWALK SECTIONS	JAN. 2015 NOT TO SCALE REVISION ①	R-0012



CONTROL JOINT



EXPANSION JOINT

NOTE:

1. EXPANSION JOINTS SHALL BE PLACED 20 FT O.C.

Town of ARLINGTON
ENGINEERING DIVISION
51 Grove Street
Arlington, MA 02476

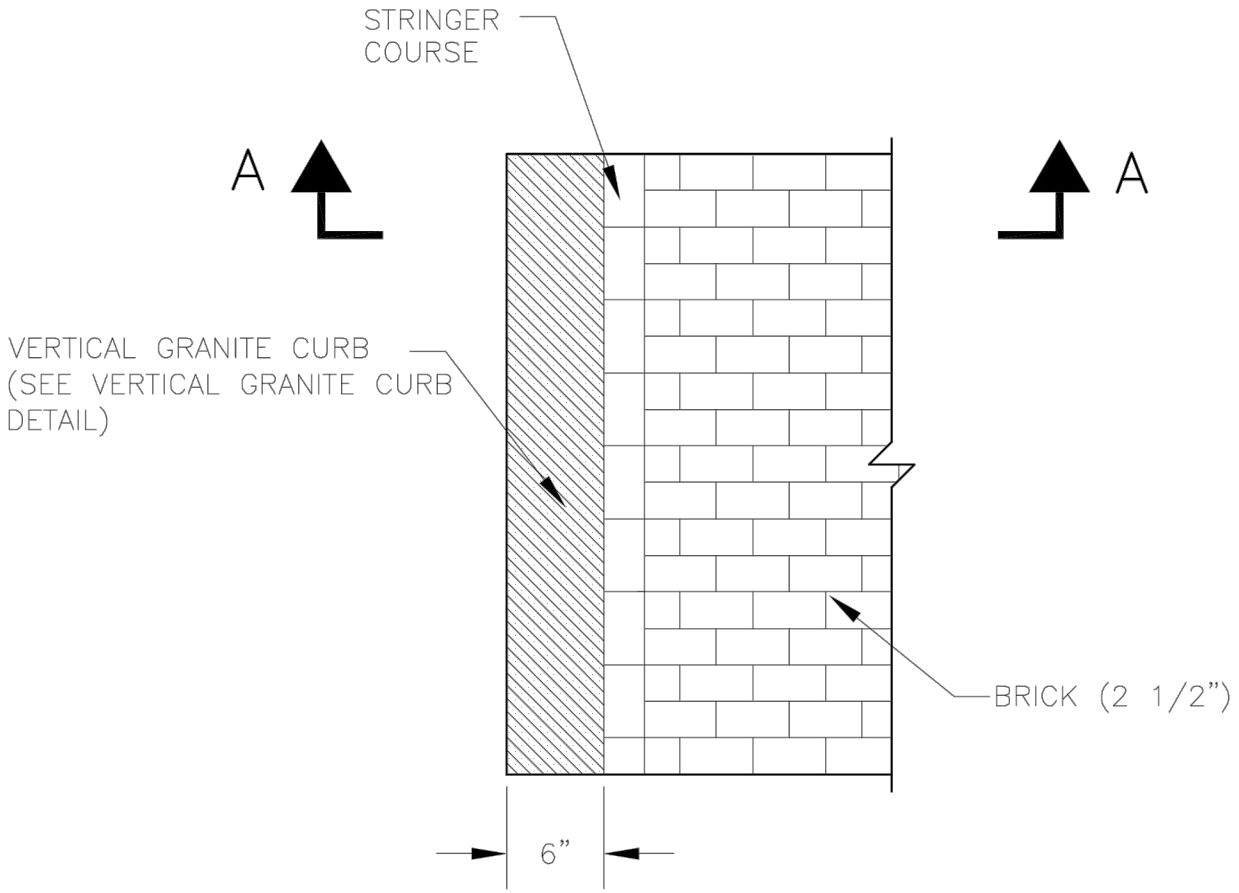
TYPICAL CONCRETE SIDEWALK EXPANSION JOINTS

JAN. 2015

NOT TO SCALE

REVISION 1

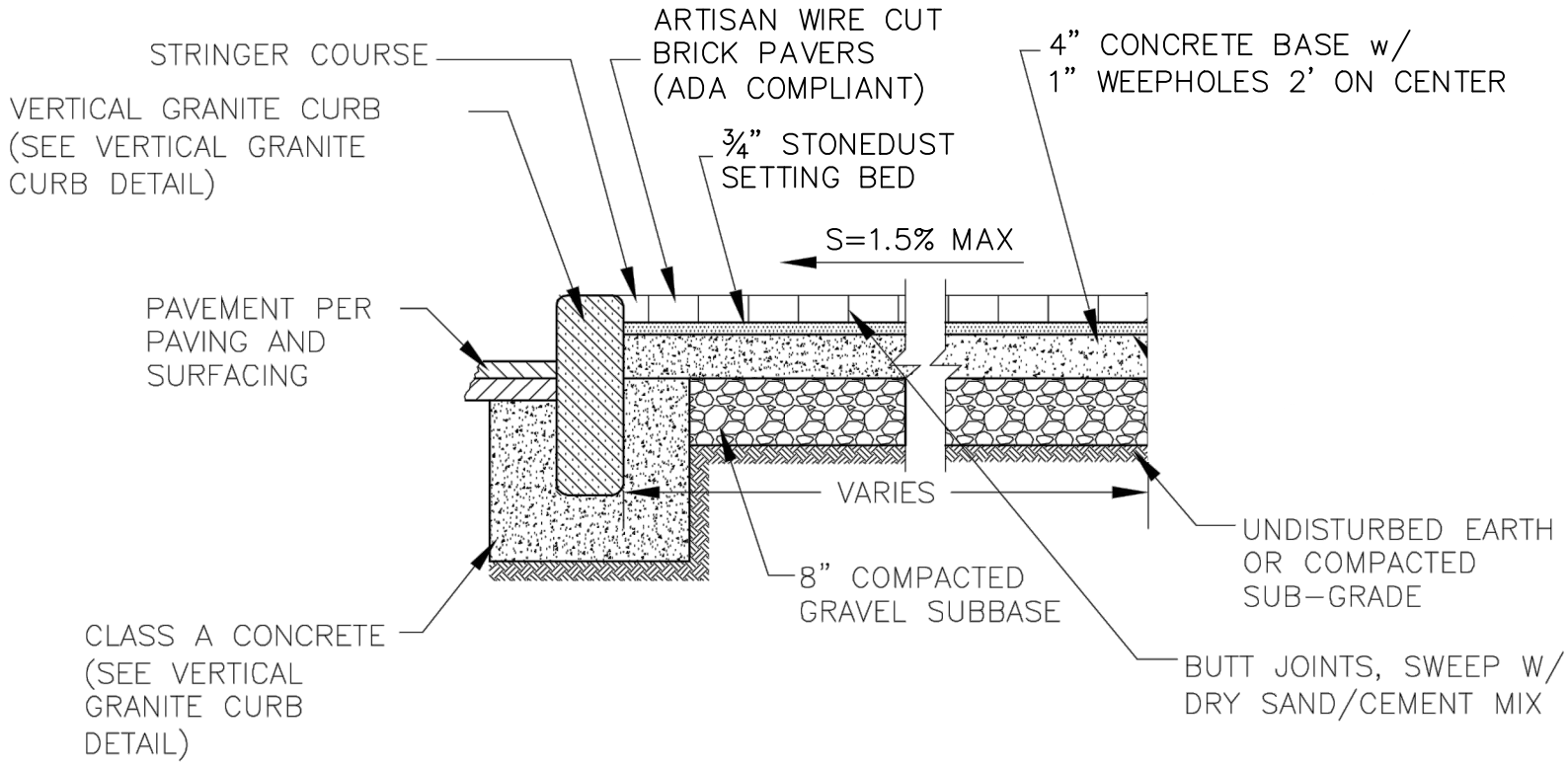
R-0013



NOTE:
AROUND HYDRANTS, UTILITY POLES SIGN POSTS ETC., SEE EXPANSION JOINT DETAIL

PLAN

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	BRICK SIDEWALK (PLAN VIEW)	JAN. 2015 NOT TO SCALE REVISION ①	R-0014

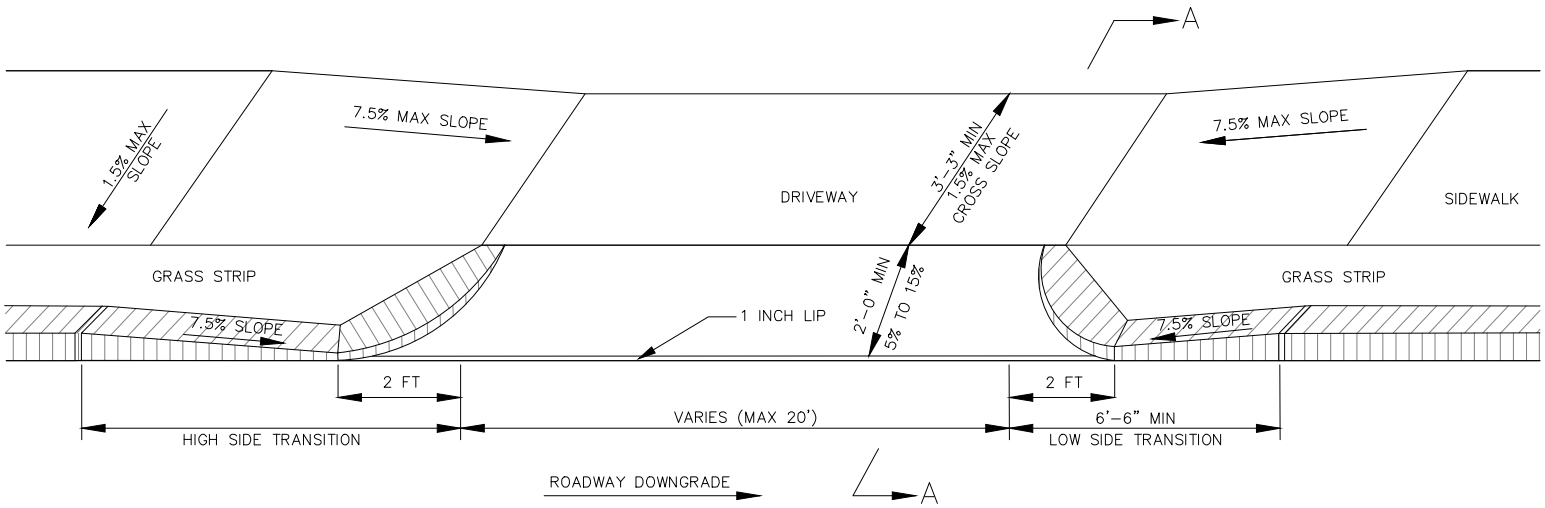


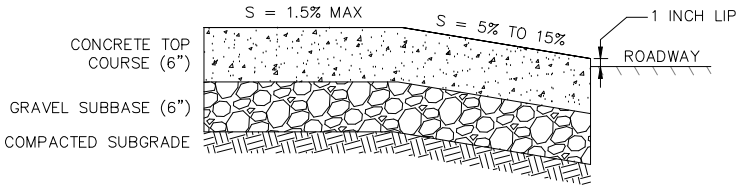
SECTION A–A

NOTES:

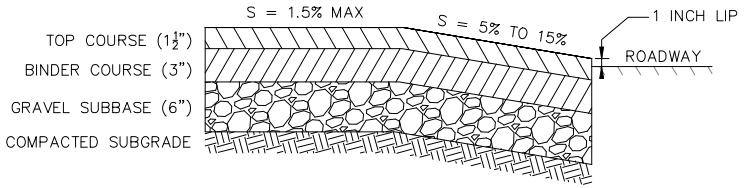
1. INSTALLATION OF BRICK TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. A SUBGRADE CONSISTING OF GRADED AGGREGATES MAY BE REQUIRED WHEN SUBGRADE CONDITIONS ARE POOR.
3. EXPANSION JOINTS SHOULD BE USED TO ACCOMMODATE ALLOWANCES FOR MOVEMENT IN MATERIALS. EXPANSION JOINT FILLER MATERIALS MUST BE HIGHLY COMPRESSIVE & DURABLE.
4. STONEDUST TO BE SWEPT INTO VOIDS, CRACKS, AND OPENINGS IF PRESENT IN COMPLETED SURFACE AND COMPACTED. THIS PROCESS SHALL BE REPEATED AS NECESSARY TO THE SATISFACTION OF THE ENGINEER.

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	BRICK SIDEWALK (SECTION VIEW)	JAN. 2015 NOT TO SCALE REVISION ①	R-0015





SECTION A–A
(CONCRETE DRIVEWAY)



SECTION A–A
(ASPHALT DRIVEWAY)

Town of ARLINGTON
ENGINEERING DIVISION
51 Grove Street
Arlington, MA 02476

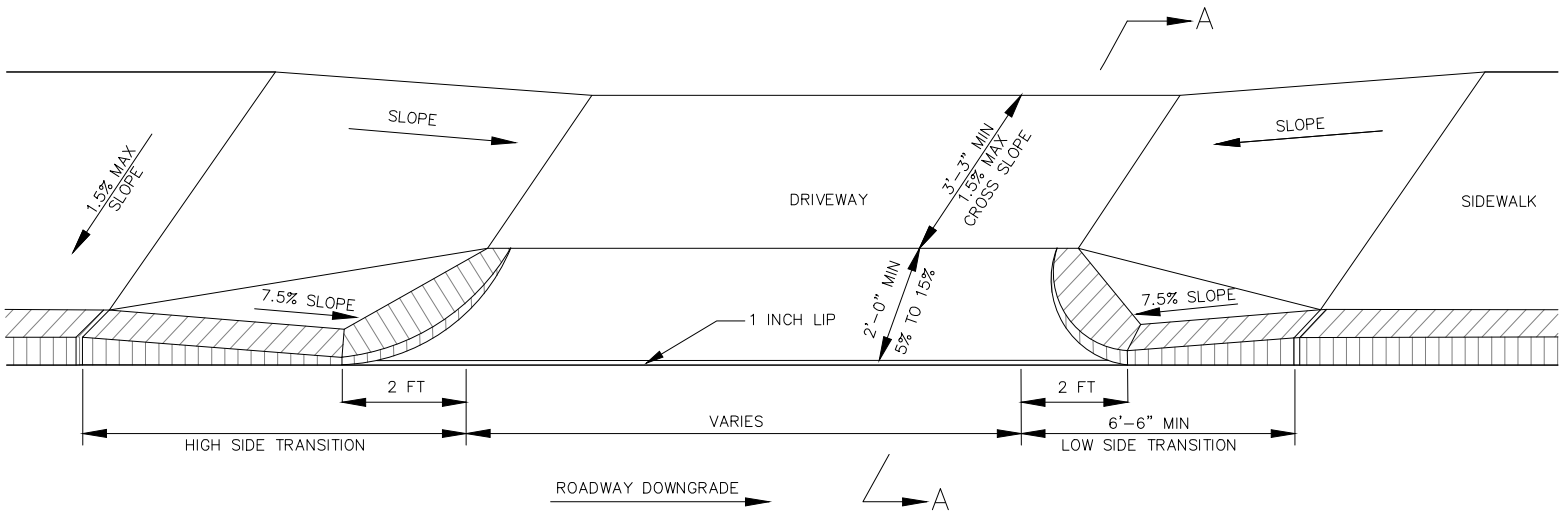
TYPICAL DRIVEWAY APRON WITH GRASS STRIP

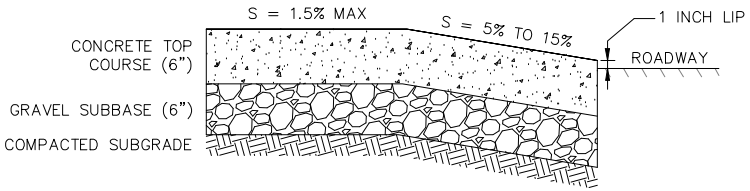
JAN. 2015

NOT TO SCALE

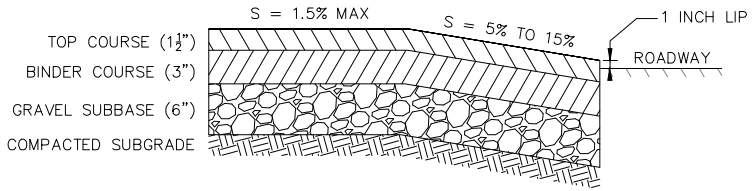
REVISION
1

R-0016





SECTION A–A
(CONCRETE DRIVEWAY)



SECTION A–A
(ASPHALT DRIVEWAY)

Town of ARLINGTON
ENGINEERING DIVISION
51 Grove Street
Arlington, MA 02476

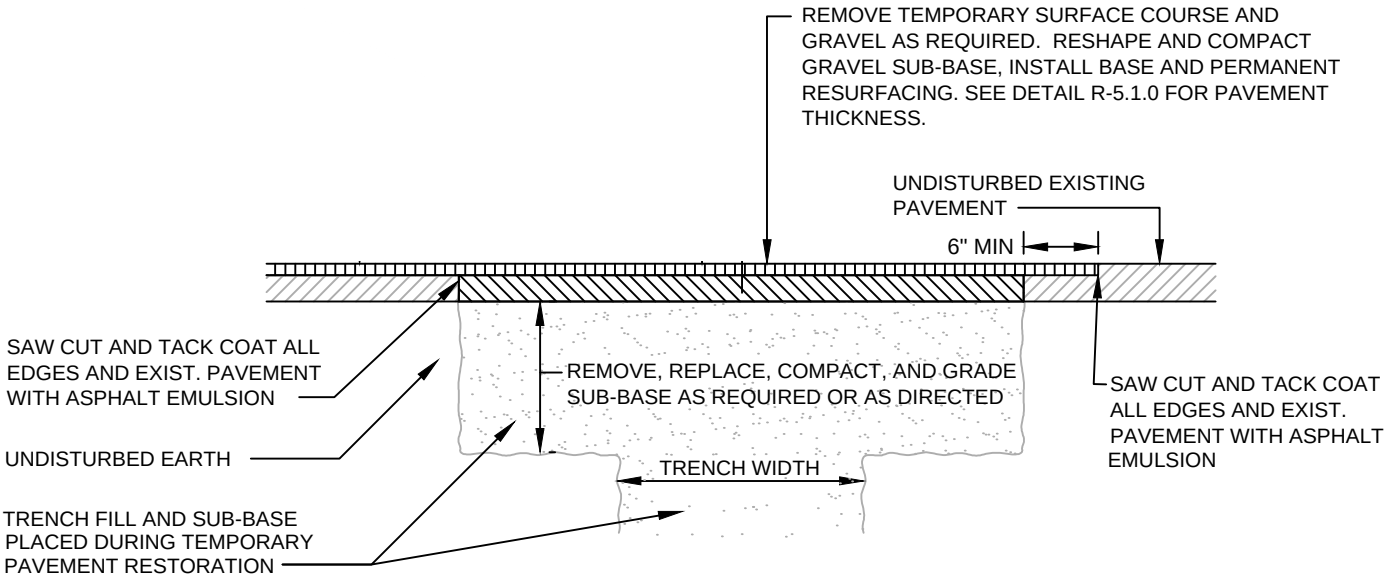
TYPICAL DRIVEWAY APRON WITHOUT GRASS STRIP

JAN. 2015

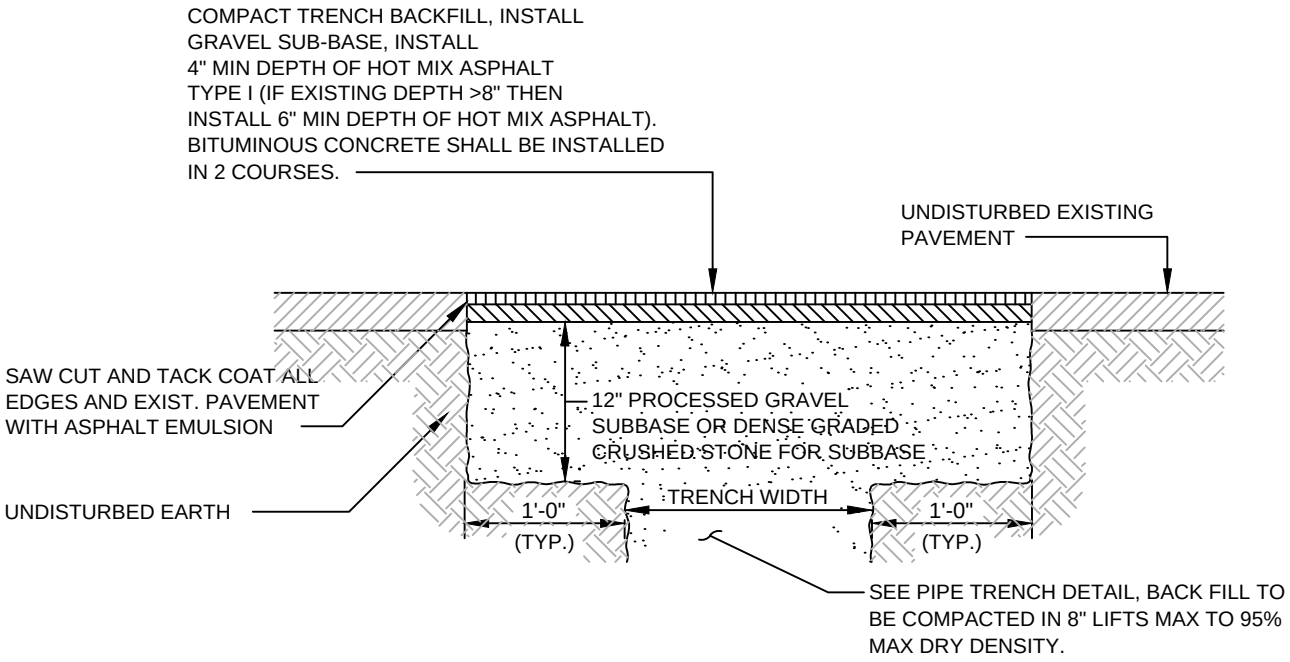
NOT TO SCALE

REVISION
1

R-0017

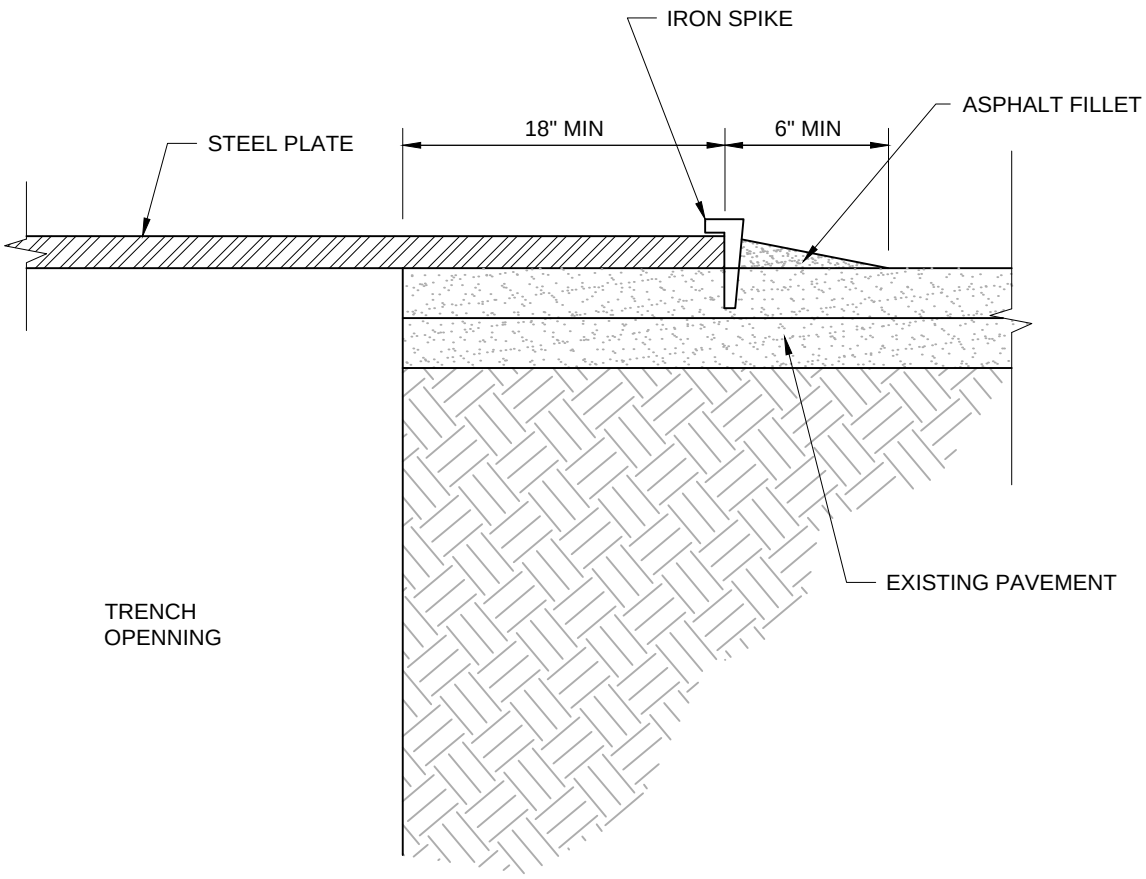


PERMANENT PAVEMENT RESTORATION



TEMPORARY PAVEMENT RESTORATION

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	PAVEMENT DETAILS FOR TRENCH RESTORATION	JAN. 2015 NOT TO SCALE REVISION 1	R-0018



NOTES:
1. USE OF STEEL PLATES ALLOWED ON A CASE BY CASE BASIS, PENDING WRITTEN APPROVAL BY TOWN.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES OR CLAIMS RESULTING FROM THE USE OF STEEL PLATES.
3. MUTCD COMPLIANT RETROREFLECTIVE ORANGE CONSTRUCTION WARNING SIGNS (48"X48") WITH WORDING "STEEL PLATE AHEAD" SHALL BE INSTALLED IN ADVANCE OF STEEL PLATE INSTALLATION.
4. THE CONTRACTOR SHALL DESIGN AND UTILIZE STEEL PLATES OF ADEQUATE DIMMENSIONS AND THICKNESS FOR INTENDED USE AND VEHICLE LOADING. MAXIMUMUM ALLOWABLE DEFLECTION SHALL BE 0.025". IRON SPIKE FASTENERS SHALL BE INSTALLED AROUND THE PERIMETER OF THE STEEL PLATE.

Town of ARLINGTON ENGINEERING DIVISION 51 Grove Street Arlington, MA 02476	TYPICAL STEEL ROADPLATE INSTALLATION	JAN. 2015 NOT TO SCALE REVISION 1	R-0019