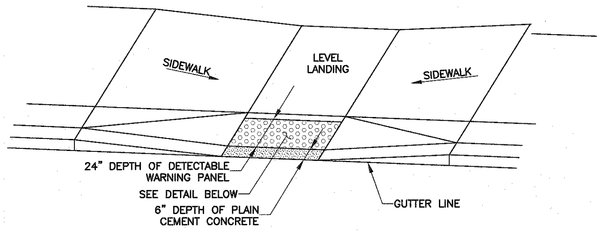
DETECTABLE WARNING APPLICATION NOTES

TRUNCATED DOMES (SEE CMR SECTION 18.4.2a) SHALL BE PLACED ACROSS THE ENTIRE WIDTH OF THE SIDEWALK FOR A DISTANCE OF NOT LESS THAN 2 FEET ALONG THE SIDEWALK, WHENEVER A PUBLIC SIDEWALK CROSSES A RAIL SYSTEM AT GRADE.

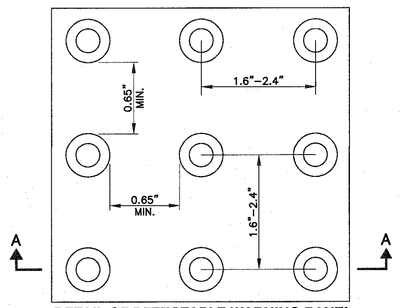
A: AT GRADE CROSSINGS WITH A PEDESTRIAN CONTROL GATE, THE EDGE OF THE 2 FOOT LENGTH OF DETECTABLE WARNING CLOSEST TO THE CONTROL GATE, SHALL BE PLACED PARALLEL TO THE CONTROL GATE AT A DISTANCE OF BETWEEN 4 FEET AND 5 FEET FROM THE GATE IN A DOWN POSITION.

B: AT GRADE CROSSINGS WITHOUT A CONTROL GATE, THE EDGE OF THE 2 FOOT LENGTH OF DETECTABLE WARNING CLOSEST TO THE FIRST RAIL SHALL BE PLACED AT A DISTANCE OF 21 FEET IN ADVANCE OF THE FIRST RAIL CROSSING THE PATH OF TRAVEL.

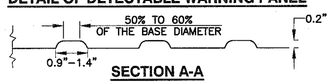
C: MHD MATERIAL SPECIFICATION (TO BE WRITTEN).



TYPICAL INSTALLATION



DETAIL OF DETECTABLE WARNING PANEL

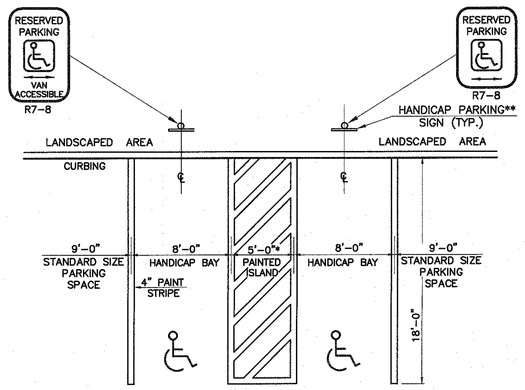


SECTION A-A

NOTE:
PANELS MAY BE CONCRETE PRECAST OR CAST IN PLACE OR OTHER SUITABLE MATERIAL PERMANENTLY APPLIED TO THE RAMP. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.

DETECTABLE WARNING PANEL FOR WHEELCHAIR RAMPS

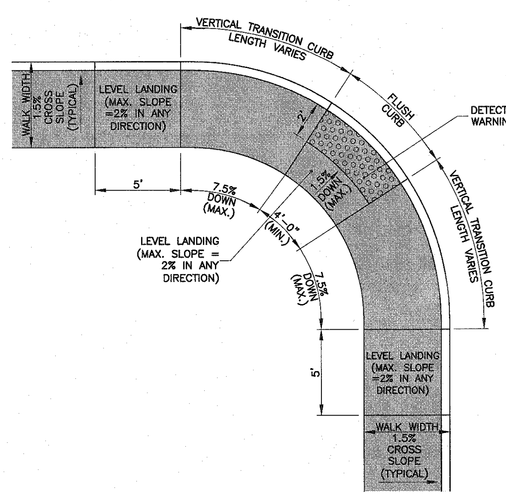
NOT TO SCALE



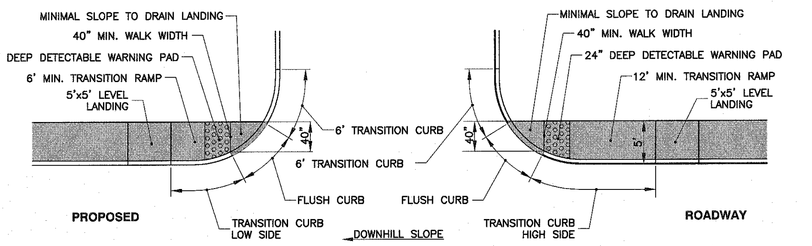
* 8'-0" ACCESS AISLE ADJACENT TO VAN SPACE
** SIGN FOR VAN SPACE TO READ "VAN ACCESSIBLE" BELOW DOUBLE ARROW AT BOTTOM.
NOTE : R7-8 SIGNS SHALL BE MOUNTED AT A HEIGHT OF NO LESS THAN 5 FEET AND NOT MORE THAN 8 FEET TO THE TOP OF THE SIGN.

ADA REQUIREMENTS:
1. WALKS SHALL NOT EXCEED 5% SLOPE.
2. WALKS CROSS SLOPE SHALL NOT EXCEED 2%.
3. SLOPE AT HANDICAP PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION.

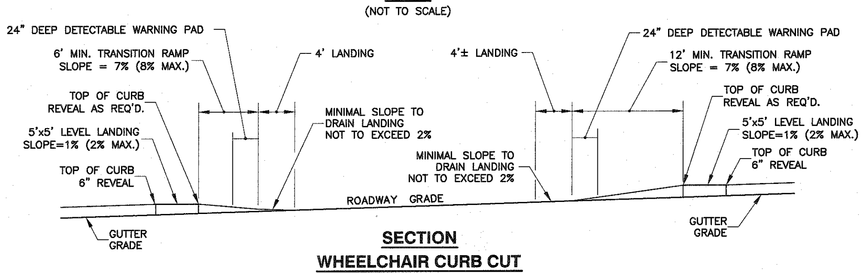
LAYOUT PLAN
TYPICAL HANDICAP PARKING
(NOT TO SCALE)



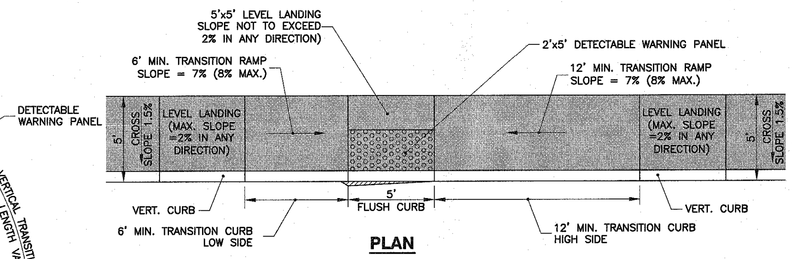
WHEELCHAIR CURB CUT
DETAIL "B"
(NOT TO SCALE)



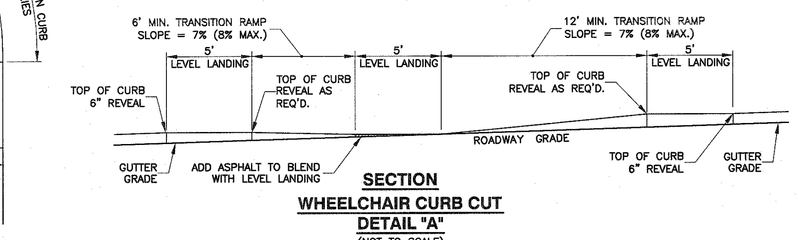
PLAN
(NOT TO SCALE)



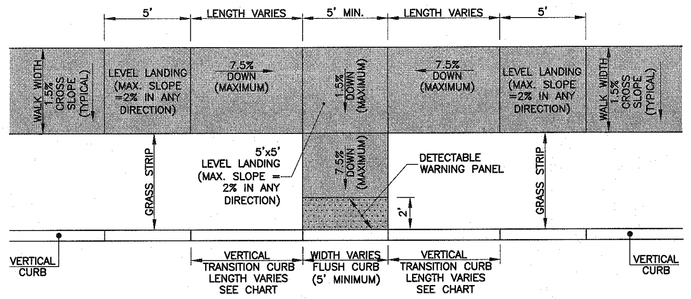
SECTION
WHEELCHAIR CURB CUT
TYPE "E"



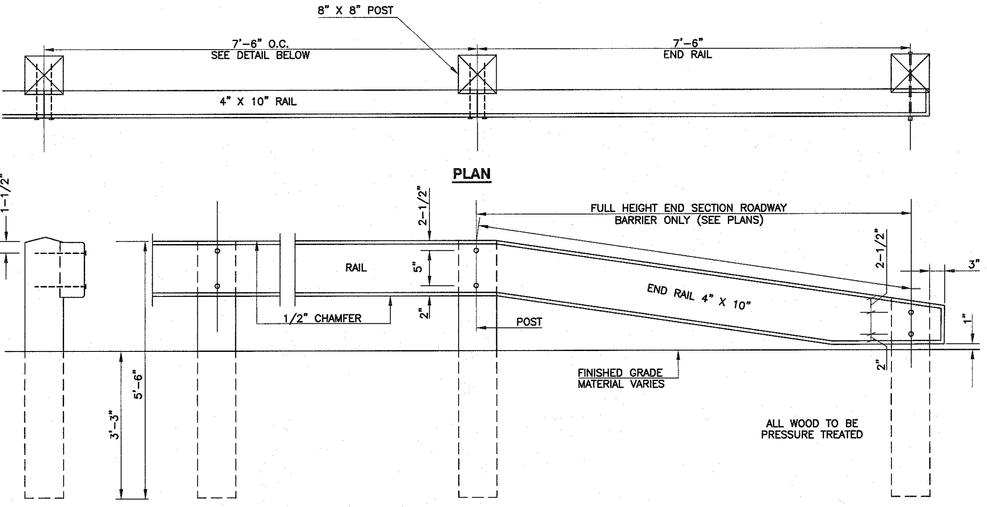
PLAN



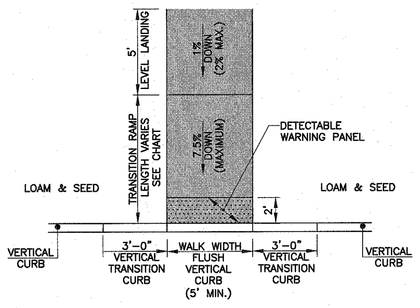
SECTION
WHEELCHAIR CURB CUT
DETAIL "A"
(NOT TO SCALE)



WHEELCHAIR CURB CUT
TYPE "D"
(NOT TO SCALE)



SINGLE FACE WOOD GUARD RAIL DETAIL
(NOT TO SCALE)



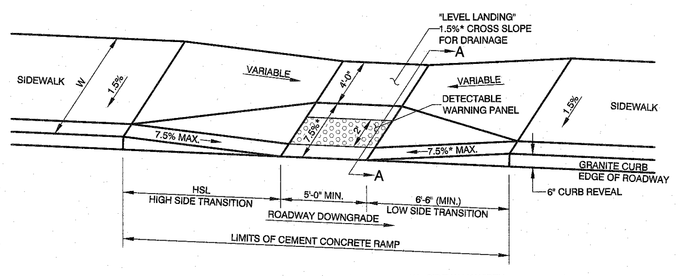
WHEELCHAIR CURB CUT
TYPE "C"
(NOT TO SCALE)

ROADWAY PROFILE GRADE	*HIGH SIDE TRANSITION LENGTH ROUNDED TO THE NEAREST 4"
%	LENGTH
0	6'-6"
>0 to 1	7'-8"
>1 to 2	9'-0"
>2 to 3	11'-0"
>3 to 4	14'-0"
>4	15'-0" Max.

NOTE:
*BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6"

CURB TRANSITION LENGTHS FOR WHEELCHAIR CURB CUT RAMPS

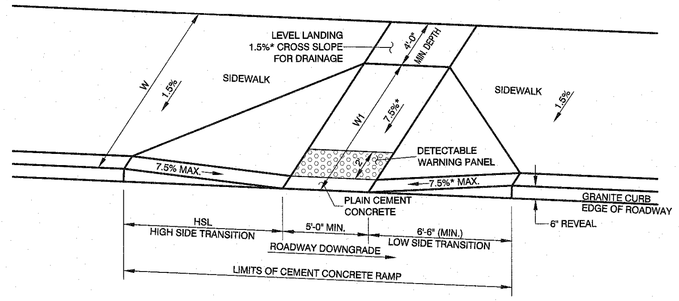
LEGEND
HSL = HIGH SIDE TRANSITION LENGTH (SEE M/E 107.9.0)
W = SIDEWALK WIDTH
W_1 = PERPENDICULAR RAMP LENGTH
Wc = CURB WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
USABLE SIDEWALK WIDTH PER AAB = W-Wc
RAMP LENGTH, W1 = W-4.0' MIN.



LEGEND
HSL = HIGH SIDE TRANSITION
W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%
USABLE SIDEWALK WIDTH PER AAB = W-Wc
RAMP LENGTH, W1 = W-4'-0" MIN.

SECTION A-A

WHEELCHAIR CURB CUT
LESS THAN 12'-4" SIDEWALK
(NOT TO SCALE)



LEGEND
HSL = HIGH SIDE TRANSITION
W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%
USABLE SIDEWALK WIDTH PER AAB = W-Wc
RAMP LENGTH, W1 = W-4'-0" MIN.

SECTION A-A

WHEELCHAIR CURB CUT
GREATER THAN 12'-4" SIDEWALK
(NOT TO SCALE)

ACCESSIBILITY NOTES

GENERAL NOTES:

1. SPECIAL ATTENTION SHALL BE GIVEN TO COMPLIANCE WITH THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) RULES AND REGULATIONS AND THE AMERICANS DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN (ADAAG).

2. IT IS ESSENTIAL THAT CONTRACTORS BE AWARE OF THE SITE ACCESSIBILITY REQUIREMENTS. THESE NOTES AND DETAILS ARE INTENDED TO ASSURE THAT CONTRACTORS ARE AWARE OF THE REQUIREMENTS AT THE TIME WHEN THEY ARE BIDDING THE PROJECT. IF SLOPES / GRADES AND DIMENSIONS ARE NOT ACHIEVABLE, THE CONTRACTOR IS REQUIRED TO CONTACT THE OWNER IMMEDIATELY, BEFORE MOVING FORWARD WITH THE WORK.

3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND CIVIL ENGINEER IMMEDIATELY OF ANY CONFLICT BETWEEN THESE NOTES AND DETAILS AND OTHER PROJECT DRAWINGS, WHETHER BY H.W. MOORE ASSOCIATES OR OTHERS. THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK FOR WHICH THE ALLEGED CONFLICT HAS BEEN DISCOVERED UNTIL SUCH ALLEGED CONFLICT HAS BEEN RESOLVED. NO CLAIM SHALL BE MADE BY THE CONTRACTOR FOR DELAY DAMAGES AS A RESULT OF RESOLUTION OF ANY SUCH CONFLICT(S).

4. AAB REGULATIONS DO NOT ALLOW ANY TOLERANCE ON SLOPE REQUIREMENTS AND THE MAXIMUM SLOPES LISTED BELOW CAN NOT BE EXCEEDED.

5. IT IS RECOMMENDED THAT THE CONTRACTOR USE A 2-FOOT DIGITAL LEVEL TO VERIFY SLOPES PRIOR TO PLACING THE FINISHED SURFACE. IT IS FURTHER RECOMMENDED THAT FORMS BE CHECKED PRIOR TO PLACING CONCRETE OR ASPHALT.

6. THESE ACCESSIBILITY NOTES AND DETAILS ARE INTENDED TO DEPICT SLOPE AND DIMENSIONAL REQUIREMENTS ONLY. REFER TO SIDEWALK, CURBING, AND PAVEMENT DETAILS FOR ADDITIONAL INFORMATION.

ACCESSIBLE ROUTE NOTES:

1. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES; PUBLIC STREETS OR SIDEWALKS; AND PUBLIC TRANSPORTATION STOPS TO THE ACCESSIBLE BUILDING OR FACILITY THEY SERVE.

2. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES THAT ARE ON THE SAME SITE.

3. DIRECTIONAL SIGNAGE INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE BUILDING ENTRANCE SHALL BE PROVIDED AT INACCESSIBLE BUILDING ENTRANCES.

4. TRANSITIONS BETWEEN RAMPS, WALKS, LANDINGS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT VERTICAL CHANGES (1/4 INCH MAXIMUM VERTICAL CHANGE).

WALKWAYS:

1. WIDTH OF WALKWAYS SHALL NOT BE LESS THAN 48 INCHES, EXCLUDING CURB STONES.

2. WALKWAYS SHALL PROVIDE A MINIMUM OF 36 INCHES CLEAR, UNOBSTRUCTED PATH OF TRAVEL PAST ALL OBSTRUCTIONS. (I.E. UTILITY POLES, SIGNS, FIRE HYDRANTS, ETC.)

3. WALKING SURFACES SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5.0% AND A MAXIMUM CROSS SLOPE OF 2.0%.

4. AT THE INTERSECTION OF TWO SIDEWALKS, THERE SHALL BE A LEVEL LANDING WITH NO SLOPE GREATER THAN 2% IN ANY DIRECTION.

5. ANY WALKING SURFACE WITH A RUNNING SLOPE GREATER THAN 5.0% IS CONSIDERED A RAMP AND SHALL COMPLY WITH THE GUIDELINES FOR RAMPS OR CURB CUT RAMPS.

6. ACCESSIBLE ROUTE SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT.

7. IF CATCH BASINS OR OTHER GRATINGS ARE LOCATED WITHIN A ACCESSIBLE ROUTE, THEN AN ADA GRATE SHALL BE USED WITH SPACES NO GREATER THAN ½ INCH WIDE IN THE DIRECTION OF TRAVEL.

RAMPS:

1. ANY PART OF AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 5% SHALL BE CONSIDERED A RAMP OR A CURB CUT RAMP.

2. THE MAXIMUM RUNNING SLOPE FOR A RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.

3. THE CLEAR WIDTH OF A RAMP SHALL BE 48 INCHES MINIMUM AS MEASURED BETWEEN THE HANDRAILS.

4. THE MAXIMUM RISE FOR ANY RAMP RUN SHALL BE 30 INCHES.

5. LANDINGS SHALL BE PROVIDED AT THE TOP AND BOTTOM OF RAMPS. LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2.0% IN ANY DIRECTION. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING. THE LANDING CLEAR LENGTH SHALL BE SIXTY (60) INCHES LONG MINIMUM. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING OF SIXTY(60) INCHES BY SIXTY (60) INCHES MINIMUM.

6. EDGE PROTECTION COMPLYING WITH AAB AND ADAAG REQUIREMENTS SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND ON EACH SIDE OF RAMP LANDINGS.

7. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY 521 CMR FIGURES 26d AND 26e SHALL BE COMPLIED WITH.

CURB CUT RAMPS:

1. CURB CUT RAMPS ARE REQUIRED AT THE CORNER OF EACH INTERSECTION AND WHERE A PEDESTRIAN PATH OF TRAVEL CROSSES A ROAD, DRIVEWAY OR OTHER VEHICULAR WAY.

2. THE MAXIMUM RUNNING SLOPE OF A CURB CUT RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.

3. CURB CUT RAMPS MAY EXTEND UP TO 15 FEET IN LENGTH.

4. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB CUT RAMP SHALL NOT BE STEEPER THAN 5%. THE ADJACENT SURFACES AT TRANSITIONS AT CURB CUT RAMPS TO WALKS, GUTTERS AND STREETS SHALL BE AT THE SAME LEVEL.

5. THE MINIMUM CLEAR WIDTH OF A CURB CUT RAMP SHALL BE 36 INCHES, EXCLUSIVE OF FLARED SIDES, IF PROVIDED.

6. LANDINGS SHALL BE PROVIDED AT THE TOP OF CURB CUT RAMPS. THE CLEAR LENGTH OF THE LANDING SHALL BE 48 INCHES MINIMUM. THE CLEAR WIDTH OF THE LANDING SHALL BE AT LEAST AS WIDE AS THE CURB CUT RAMP. EXCLUDING FLARED SIDES, LEADING TO THE LANDING. LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2% IN ANY DIRECTION.

ACCESSIBILITY NOTES (CONT.)

CURB CUT RAMPS (CONT.):

7. IF A CURB CUT RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES.

8. WHERE PROVIDED, CURB CUT RAMP FLARES SHALL NOT EXCEED 10%. IF THE CLEAR LENGTH OF THE LANDING IS LESS THAN FORTY-EIGHT (48) INCHES THAN THE SLOPE OF THE FLARED SIDES SHALL NOT EXCEED 8.33%.

9. CURB CUT RAMPS AND THE FLARED SIDES OF CURB CUT RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO VEHICULAR TRAFFIC LANES, PARKING SPACES OR PARKING ACCESS AISLES. CURBS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.

10. CURB CUT RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.

11. CURB CUT RAMPS SHALL HAVE A TWENTY-FOUR (24) INCH DEEP DETECTABLE WARNING PANEL COMPLYING WITH ADAAG, EXTENDING THE FULL WIDTH OF THE RAMP. REFER TO DETECTABLE WARNING DETAILS AND NOTES FOR PLACEMENT.

12. WHERE PROVIDED, STOP LINES SHALL BE LOCATED IN ADVANCE OF CURB CUT RAMP.

13. WHERE PROVIDED, DRAINAGE INLETS SHALL BE LOCATED UPSTREAM OF CURB RAMPS AND NOT IN THE RAMP AREA.

14. CURB CUT RAMP TYPE AND LOCATION ARE SHOWN ON PLAN.

ACCESSIBLE PARKING SPACES:

1. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTES OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE BUILDING ENTRANCE.

2. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE AT LEAST 8 FEET WIDE. WHERE PARKING SPACES AND ACCESS AISLES ARE MARKED WITH LINES, THE WIDTH MEASUREMENTS SHALL BE MADE FROM CENTERLINE OF THE MARKINGS.

3. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH PROVISIONS FOR ACCESSIBLE ROUTES.

4. TWO (2) ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE.

5. ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACE THEY SERVE.

6. ACCESS AISLES SHALL NOT OVERLAP THE VEHICULAR WAY. ACCESS AISLES SHALL BE PERMITTED TO BE PLACED ON EITHER SIDE OF THE PARKING SPACE EXCEPT FOR ANGLED VAN PARKING SPACES WHICH SHALL HAVE ACCESS AISLES LOCATED ON THE PASSENGER SIDE OF THE PARKING SPACES.

7. SURFACES OF PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE.

8. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ANY DIRECTIONS.

9. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE REQUIRED CLEAR WIDTH OF AN ACCESSIBLE ROUTE.

10. PARKING SPACES FOR VANS AND ACCESS AISLES AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF 8 FEET 2 INCHES (8'-2") MINIMUM. SIGNS SHALL BE PROVIDED AT ENTRANCES TO PARKING FACILITIES INFORMING DRIVERS OF CLEARANCES AND THE LOCATION OF VAN ACCESSIBLE PARKING SPACES.

11. EACH ACCESSIBLE PARKING SPACE SHALL BE PROVIDED WITH SIGNAGE DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. EACH ACCESS AISLE SHALL BE CLEARLY MARKED BY MEANS OF DIAGONAL STRIPES. SIGNS SHALL BE INSTALLED AT A CLEAR HEIGHT OF BETWEEN 5 FEET AND 8 FEET TO THE TOP OF THE SIGN AND SHALL NOT INTERFERE WITH AN ACCESSIBLE ROUTE FROM AN ACCESS AISLE. SIGNS LOCATED WHERE THEY MAY BE HIT BY VEHICLES BEING PARKED SHALL BE INSTALLED WITH BOLLARD PROTECTION.

12. ACCESSIBLE PARKING SPACE, ACCESS AISLE STRIPING, AND INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE PAINTED BLUE.

PASSENGER LOADING ZONES:

1. PASSENGER LOADING ZONES SHALL PROVIDE VEHICULAR PULL-UP SPACE 8 FEET WIDE MINIMUM AND 20 FEET LONG MINIMUM.

2. PASSENGER LOADING ZONES SHALL PROVIDE A CLEARLY MARKED ACCESS AISLE THAT IS 5 FEET WIDE MINIMUM AND EXTENDS THE FULL LENGTH OF THE VEHICLE PULL-UP SPACE THEY SERVE.

3. ACCESS AISLE SHALL ADJOIN AN ACCESSIBLE ROUTE AND NOT OVERLAP THE VEHICULAR WAY.

4. VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ANY DIRECTION. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE VEHICLE PULL-UP SPACE THEY SERVE.

5. SURFACES OF VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT.

6. VEHICLE PULL-UP SPACES, ACCESS AISLES SERVING THEM AND A VEHICULAR ROUTE FROM AN ENTRANCE TO THE PASSENGER LOADING ZONE, AND FROM THE PASSENGER LOADING ZONE TO A VEHICULAR EXIT SERVING THEM, SHALL PROVIDE A VERTICAL CLEARANCE OF 9 FEET 6 INCHES (9'-6")MINIMUM.

BUILDING ENTRANCES:

1. ALL PUBLIC ENTRANCES SHALL BE ACCESSIBLE.

2. THE APPROACH TO AN ACCESSIBLE ENTRANCE SHALL BE A PAVED WALK OR RAMP WITH A SLIP RESISTANT SURFACE, UNINTERRUPTED BY STEPS.

3. THE EXTERIOR LANDING AT THE ENTRANCE DOOR SHALL HAVE A LEVEL LANDING MEASURING AT LEAST 5 FEET BY 5 FEET AND SHALL NOT SLOPE MORE THAN 2% IN ANY DIRECTION.

4. THE LEVEL LANDING SHALL EXTEND A MINIMUM OF 18 INCHES WIDER THAN THE LATCH ON THE PULL SIDE OF THE DOOR.

REVISIONS

ISSUE	DATE	DESCRIPTION

JAMES M. WHITE CIVIL No. 32146 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

DATE: JUNE 25, 2014
SCALE: AS NOTED
SHEET C-7

THE COMMONS AT WEISS FARM

STONEHAM, MASSACHUSETTS

SITE DETAILS PLAN

hwmoore ASSOCIATES, INC.
CIVIL ENGINEERING | LAND PLANNING
112 Shawmut Avenue, Boston, MA 02118-2227
tel: 617-357-8145 fax: 617-357-9495 web: hwmoore.com

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