



Number: E-97-008

Date: 10/09/97

## ENGINEERING DIRECTIVE

  
CHIEF ENGINEER

### EFFECTIVE IMMEDIATELY ENGINEERING DIRECTIVE

**IN ACCORDANCE WITH 521 CMR RULES and REGULATIONS of the ARCHITECTURAL ACCESS BOARD (AAB) and AMERICANS with DISABILITIES ACT (ADA), THE FOLLOWING WILL BE ADHERED TO ON ALL PROJECTS:**

1. All projects must be designed in accordance with the Wheelchair Ramp Standards booklet effective 10/8/97, and the Construction and Traffic Standard Details, 1996 Metric Edition as revised.
2. All projects which include wheelchair ramps must include construction drawings showing the location of all wheelchair ramps. Projects without construction plans must include these drawings in the Special Provisions of the project.
3. All proposed wheelchair ramp construction plans must use those symbols as shown in the Wheelchair Ramp Standards booklet and the Construction and Traffic Standard Details, 1996 Metric Edition as revised. The selected symbols must be representative of the finished ramp. The wheelchair ramp symbol illustrated in Table 2.1 of the Highway Design Manual showing plan symbols for existing features is sufficient to indicate existing wheelchair ramp locations.
4. The center line of the wheelchair ramp must be perpendicular to the curb. In cases where the crosswalk is skewed to the wheelchair ramp, a 2.2 m (diameter) turning area, entirely contained within the crosswalk, must be provided at the base of the wheelchair ramp. If necessary, the crosswalk should be widened to accommodate the turning area.

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5. Where grades or cross slopes change significantly and/or in densely populated urban areas where sidewalks significantly change in grade or cross slope, detailed sidewalk and wheelchair ramp grading plans must be developed to minimize impact to driveways and building entrances.
6. It is the responsibility of the design engineer to carefully review all wheelchair ramp locations on site during the design phase and to provide all necessary plans in accordance with AAB and ADA.
7. The entire wheelchair ramp shall be constructed of cement concrete , unless a project review by the Massachusetts Historical Commission under G. L. chapter 9 section 27c or the Federal Government pursuant to section 106 of the Federal Historic Preservation Act requires MassHighway to eliminate, minimize or mitigate said concrete construction as an adverse effect. Limits are defined in MassHighway Construction Standards drawings and in the Wheelchair Ramp Standards booklet effective 10/8/97
8. Level Landing is defined as an area at the top of each wheelchair ramp consisting of a length no less than 48" (1219 mm) as measured from the back of sidewalk to the start of ramp (or the gutter line if there is no ramp length) and with the combination of cross slope toward the street (for drainage) and the profile grade along the sidewalk such that no grade in any direction on the landing exceeds 1.9%, (this includes the steepest diagonal slope of the landing area).
9. The Contract Special Provisions must contain the following statements:
  - A. "Contractors shall establish grade elevations at all wheelchair ramp locations, and shall set transition lengths according to the appropriate table in the Construction Standards (or to the details shown on the plans)."
  - B. "All wheelchair ramp joints and transition sections which define grade changes shall be formed, staked and checked prior to placing cement concrete. All grade changes are to be made at joints."

The attached revised sheets replace the existing plates of the Massachusetts Highway Department (MassHighway) Construction and Traffic Standard Details 1996 Metric Edition as revised.

Att: MassHighway Construction and Traffic Standard Details 1996 Metric Edition as revised.

**Revised Plate #:**

**Effective Date :**

107.1.0	10/8/97
107.1.1	10/8/97
107.2.0	10/8/97
107.3.0	10/8/97
107.5.0	10/8/97
107.6.0	10/8/97
107.6.1	10/8/97
107.6.2	10/8/97
107.6.3	10/8/97
107.6.4	10/8/97
107.7.0	10/8/97
107.8.0	10/8/97
107.9.0	10/8/97
107.10.0	10/8/97

No longer in use are plate numbers:

107.11.0 through 107.15.0 issued -----5/16/96