Moving Massachusetts Forward. massDOT Highway

**INTEROFFICE MEMORANDUM**

**TO:** Michael Papadopolos, Project Manager

**FROM:** Jeff Cullen, AAB/ADA Review Coordinator

**DATE:** December 7, 2011

**SUBJECT:** **ACTON / MAYNARD** - Assabet River
Rail Trail Construction, Includes 4 Bridges
Project File #604531
AAB/ADA 25% Accessibility Review

The following review is based on the 25% submission documents for the subject project.

**PROJECT COMMENTS:**

1. At White Pond Road and the end of the project terminus plot the existing edge of road details such as granite curbing, sloped edging, grass, grass strip, sidewalk etcetera where the trail head ends.
2. Provide a construction detail for the warning panel treatments for the full pavement width on the trail at the terminal and crossing points.
3. Provide a 20 scale plan detail for the trail heads/terminal locations and crossing points.
4. The next level submission should include schedules for both driveways and wheel chair ramp (WCR) curb cuts which are cross-referenced with the plans. The schedules should include the referenced roadway baseline, station and offset to the center of the opening at the gutter line, gutter profile slope, opening width at the gutter, left transition length, right transition length, depth from the gutter to the back of the sidewalk, and depth of level landing or width of path of travel across driveways.
5. Please provide curb cut construction details with a sectional views for all the types of wheelchair ramps and driveways aprons with continuous sidewalk crossings. All proposed construction plans with wcrs and driveway aprons with continuous sidewalk crossing must use those outlines that comply with the types of curb cut construction details provided. The selected scaled symbols used for the construction plans must be reflective of the finished ramp or driveway apron. For example the wcr for the crossing at station 52 will require separate wcr construction detail.
6. The wheelchair ramp schedule plan should include a notation, on the sketches, that detectable warning panels are required on all the proposed wheelchair ramps and are to be installed in accordance with Construction Standard Details, 2010 and E 107.6.5.
7. At station 19+50 right, does the proposed stone dust path comply with the requirements of an accessible route in terms of grade, cross slope, surface treatment etcetera? Please provide a profile, grades or a grading plan and typicals or cross sections. Reference 521 **CMR** 20.00; **ACCESSIBLE ROUTE**.
8. Is there an accessible pedestrian route (PAR) directly leading form the accessible aisle to the trail at station 19+50 right? Provide enough information of the plans to conform this.
9. Does the accessible aisle conform to Reference 521 **CMR** 23.4.6; *Access aisles,* at station 19+50 right. Provide enough information on the plans to conform this.

**PROJECT COMMENTS: (Cont)**

10. The grade break at the bottom of the ramp at station 62+50 is skewed to the direction of travel and is non-compliant and is difficult for a wheelchair user to negotiate. This also applies to the wcrs at stations 67+80, 72+35, 76+50, both wcrs at the Acton Street crossing, 89+25 etcetera. Reference PROWAG Chapter R3: TECHNICAL PROVISONS, Section R303.3.4; **GRADE BREAKS**.
11. A level landing shall be provided at the top of every perpendicular curb cut/wcr 4 feet in depth by the width of the ramp. This applies to wcrs at stations 52+00, 58+00, 72+35 etcetera. Reference Massachusetts 521 CMR 21.00: **CURB CUTS**, subsection 21.6.1 Landing Width.
12. The grade of the rail trail has to meet 4.5% $\pm$ 0.5% maximum or the section of trail not meeting this grade requirement for an accessible route has to be designed as a ramp. For the profile grade at stations 63 and 74. If the designer has determined that these regulations can not be complied with, than it is recommended a variance is obtained from the Massachusetts AAB/ADA Coordinator, Mr. David Phaneuf and after this has been accomplished, obtain another variance from the Massachusetts AAB before construction begins. Reference 521 **CMR** 20.00; **ACCESSIBLE ROUTE** and **PROWAG** Chapter **R3** TECHNICAL PROVISIONS, Section R302: Pedestrian Access Routes, subsection **R302.5: GRADE**.
13. Wheel chair ramps can provide geometric wayfinding assistance to the visually impaired to correctly orientate them to the proper direction when crossing a street. Radial wheelchair ramps inherently interfere with this property and can direct the visually impaired into the traffic stream instead of directing them to properly cross the street within the cross walk markings. As a result, we direct the designers not to place a radial wheel chair ramp in the "apex location" of a turning radius, but rather, to shift the wcr along the curvature of the radius as much as allowable, up to a maximum allowable by the MUTCD, to help negate the effect of improperly directing the visually impaired into the traffic stream. Also, a 4 foot deep by the length of the width of the ramp landing area is required at the bottom of all ramps to be within the cross walk strips and outside of the through-travel lanes. Apex positioned wcrs are only allowed when there are site constraints.

Please move all the radial wcrs to provide the best possible wayfinding assistance for the visually impaired. (See attached sketch showing a general layout.) For example the proposed apex wcr at station 76+00. Please provide a separate wcr for each crossing direction.

14. Please provide construction details such as decking, edge treatments, railings etcetera and typicals for the Boardwalk Structures.

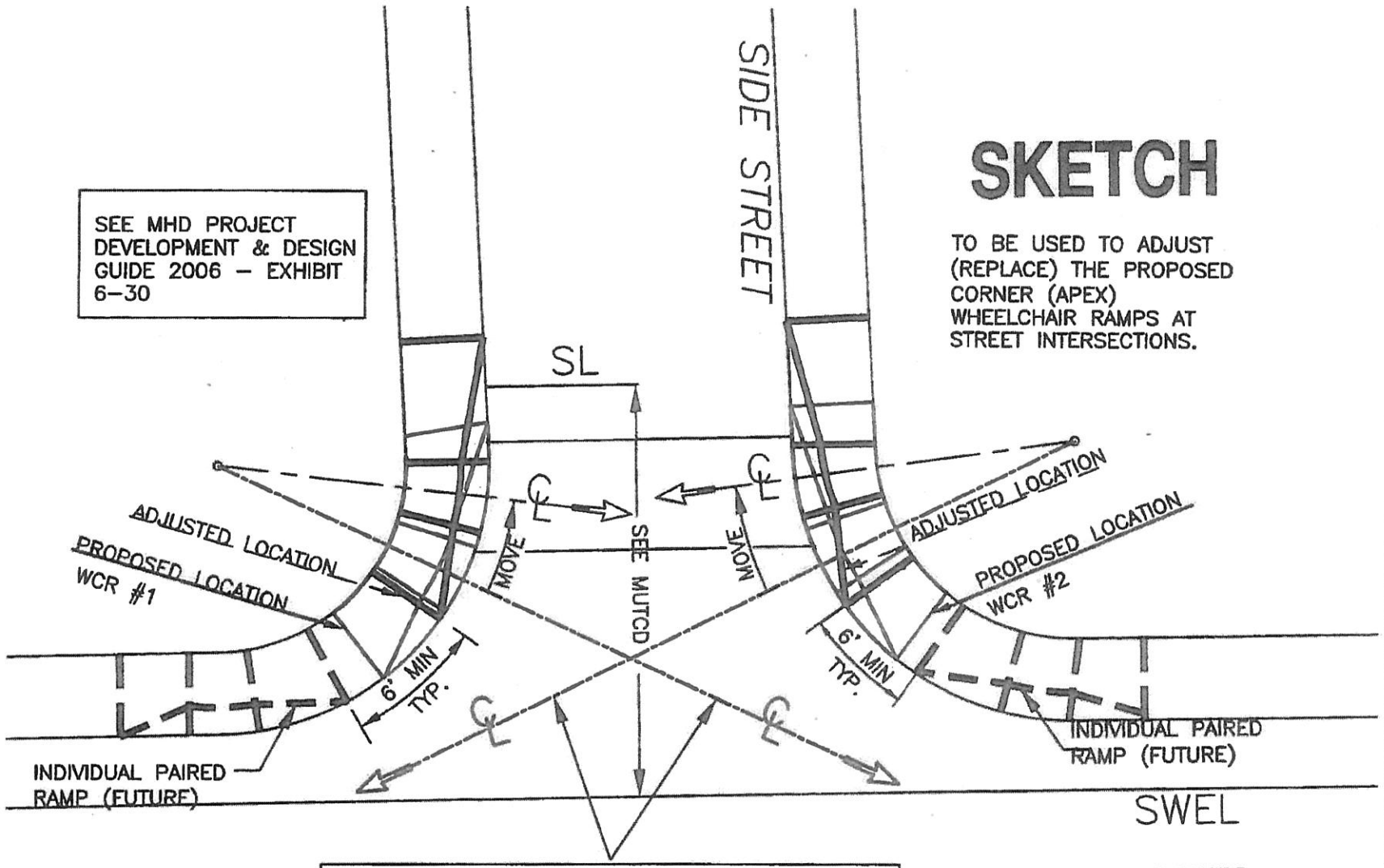
JC/

Cc. David Phaneuf, AAB/ADA Coordinator

# SKETCH

TO BE USED TO ADJUST (REPLACE) THE PROPOSED CORNER (APEX) WHEELCHAIR RAMPS AT STREET INTERSECTIONS.

SEE MHD PROJECT DEVELOPMENT & DESIGN GUIDE 2006 – EXHIBIT 6–30




BY MOVING THE CENTER LINES OF THE RAMPS, THE WHEELCHAIR RAMPS AND THE USERS ARE DIRECTED MORE ACROSS THE STREET AND LESS TO THE INTERSECTION.

APPEARANCE CAN BE VERY IMPORTANT TO THE DISABLED COMMUNITY ACCEPTANCE OF THE DESIGN