
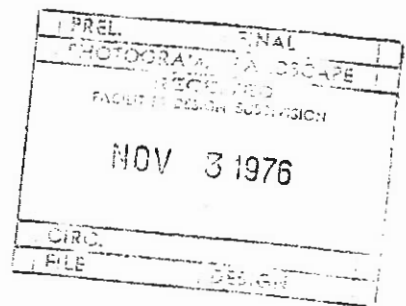


TO: MODIFIED BY EI 85-031 EFFECTIVE 10/31/1985 Director, Preliminary Plan Review Bureau SUPERSEDED BY EB 97-006 EFFECTIVE 2/14/1997	<h1>ENGINEERING INSTRUCTION</h1> <p>NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p>
Distribution: <input checked="" type="checkbox"/> Main Office <input type="checkbox"/> Regions <input checked="" type="checkbox"/> Special	Code: <u> EI 76-67 </u> Date: <u> 10/28/76 </u>
APPROVED:  <u>Deputy Chief Engineer, Facilities Design Subdivision</u>	Supersedes: EB 5-12

The attached Standards for Highways within the Adirondack Park, dated October 1976, are to be used as a guide for design, construction and maintenance of highway projects within the Adirondack Park.

ADK:DMR
 Att.



GEOMETRIC STANDARDSA. General

The policies and standards as stated in the Highway Design Manual shall be followed except as noted in this instruction. The design should insure the preservation and enhancement of the unique character of the Adirondack Park.

It should be noted that use of these standards requires extra effort by the design engineer to insure that the project fits harmoniously into the natural surroundings including measures such as varying the clearing limits, varying back slopes and ditch depths according to soil conditions, and avoiding wetlands whenever possible or providing ameliorative measures, etc.

Before determining whether R & P or reconstruction design standards will be followed on a project, the Regional Design Engineer will consult with the Department of Environmental Conservation and the Adirondack Park Agency. If agreement cannot be reached, the matter shall be referred to the Adirondack Highway Council which will make a recommendation to the Commissioner of Transportation whose decision will be final.

Before commencing design work, the Regional Design Engineer should again consult with DEC and the APA to determine the existence and/or location of such critical environmental factors as wetlands, rare and endangered species habitats, historic sites, forest preserve land, etc. This information should be supplied to the design engineer within one month's time so the project will not be delayed.

B. Definitions

1. Reconstruction Projects - major rebuilding of a roadway to provide additional capacity, to improve alignment and to generally upgrade the roadway.
2. Rehabilitation and Preservation Projects - relatively small scale low-level improvement projects that usually consist of resurfacing existing pavements; modification of geometrics; improvement of highway appurtenances such as shoulders, guide rail, drainage, etc., and bridge improvements including structural rehabilitation or replacement.

C. Classifications1. Principal Arterials

Interstate Route 87 is the only Principal Arterial presently in the Adirondack Park. When reconstructing I-87, the design standards for a rural freeway in Table 2-1 of the Highway Design Manual shall be followed.

2. Reconstruction Standards for Minor Arterials within the Park 10/76

Design Speed	- 55 mph
Pavement Width	- 11' travel lanes except where DHV exceeds 200 in which case 12' lanes will be used
Shoulder Width	- 8' fully stabilized and including a bikeway unless overriding circumstances prevent it
Min. Stopping SD	- 390 feet
Max. Grade	- 7% when total rise for grade of 3% or more is greater than 40' - an analysis for a climbing lane is needed
Max. Degree of Curve	- 5.75° (based on 0.06 max. superelevation)
%Mileage with less than Min. PSD	- 70% where adequate capacity is provided
Distance Clear of Fixed Objects	- 30'
Level of Service	- Normally provide Level of Service C, Level of Service D will be acceptable where serious ROW or environmental damage would occur when providing Level C
Ditch Depth	- 3' with 1 on 4 front slope and 1 on 4 back slope. For certain soil conditions, a 4' ditch may be needed.

3. Reconditioning and Preservation Standards for Minor Arterials

These projects will be reconstructed to geometric standards nearly the same as those on the highway as built. Where Federal-aid is being sought, AASHTO Geometric Design Standards for R-R-R projects should be followed except that 11' travel lanes and 6' fully stabilized shoulders will be standard. A maximum clear distance of 16' will be provided.

4. Other State and County Highways

Design Speed	- 40 mph
Pavement Width	- 11' travel lanes
Shoulder Width	- 6' fully stabilized
Min. Stopping SD	- 275'
Max. Degree of Curve	- 11.5° (based on 0.06 maximum superelevation)
%Mileage with less than Min. PSD	- 80
Distance Clear of Fixed Objects	- 16'
Max. Grade 10%	- where total rise for grades of 4% or more is greater than 50' - an analysis for a climbing lane is needed
Level of Service	- normally provide Level of Service C, Level of Service D will be acceptable where serious ROW or environmental damage would occur when providing Level C. It is understood that where 40 mph design speed elements are provided, the Level of Service is D

10/76

D. Clear Recovery Area

A clear recovery area of 30' from edge of pavement for reconstruction projects and 16' for R & P projects and 40 MPH design speed projects should be provided when feasible. Guide rail may be provided in lieu of the recovery area. The warrants for guide rail shall be as stated in Chapter 10 of the Highway Design Manual. Additional runs of guide rail may be provided to protect areas identified by the Adirondack Park Agency as being of special value where providing a recovery area would not be appropriate.

Also to minimize clearing, a 1 on 4 back slope will be used in all cut sections less than 3' in height and a 1 on 4 front slope will be used on all fill sections up to 6' in height. Cuts greater than 3' should have a 1 on 4 back slope for the first 12' followed by a 1 on 2 slope to the original ground. Fills greater than 6' should have a 1 on 2 front slope to the original ground.

E. Utilities

Wherever possible, all utilities shall be relocated underground or on one side of the highway on one set of poles.

F. Types of Guide Rail

Use cable guide rail when deflection room will permit. When cable guide rail is used along a fill slope steeper than 1 on 2, the post spacing shall be a maximum of 8'. When 7' deflection room (cable guide with 4' post spacing) is not available, self rusting box beam guide rail (brown coated galvanized when self rusting box beam is not available) shall be used with a post spacing as required for the available deflection room. On all guide rail and median barriers using "controlled oxidizing" steels, reflective markers will be attached to the rail every 96 feet.

G. Bridges

For all new structures and on reconstruction involving replacement of all structural steel supporting members, ASTM A 588 controlled oxidizing steel will be used.

H. Minor Arterials Include:

Route 3 - From the Blue Line crossing west of Plattsburgh to the Blue Line crossing northwest of Star Lake.

Route 8 - From the Blue Line crossing north of Utica to Route I-87.

Route 9 - From the Blue Line crossing north of Glens Falls to the Route 28 intersection. From Route 8 intersection southwest of Loon Lake to the intersection of Route 73 northwest of Underwood. From the Route 9N intersection in Keeseville north to the Blue Line crossing.

10/76

- Route 9N - From the Blue Line Crossing just south of Corinth to Route 73 just north of Keene Valley. From Route 86 intersection in Jay to the Route 9 intersection in Keeseville.
- Route 22 - From the Blue Line crossing just northwest of Whitehall to Westport.
- Route 28 - From the Blue Line crossing north of Woodgate to the intersection of Route 9 north of Warrensburg.
- Route 30 - From the Blue Line crossing south of Mayfield to the intersection of Route 3 south of Wawbeek. From the intersection of Route 192 at Paul Smith's to the Blue Line crossing north of Deer River Flow.
- Route 30A- From the Blue Line crossing north of Gloversville to the intersection of Route 30 at Mayfield.
- Route 56 - From the Route 3 intersection at Sevey to the Blue Line Crossing south of South Colton.
- Route 73 - From the Blue Line crossing just east of Ticonderoga to Lake Placid.
- Route 86 - From the intersection with Route 192A north of Saranac Lake to the intersection of Route 9N at Jay.
- Route 192- From the intersection of Route 192A to the intersection of Route 30 at Paul Smith's.
- Route 192A-From the intersection with Route 86 five miles north of Saranac Lake to the intersection of Route 192.

II SCENIC OVERLOOKS

Scenic turnouts and other appropriate parking facilities will continue to be provided and maintained on the state highway system within the Park.

The Department of Transportation will consider establishing suitable roadside parking facilities at the vista sites on state highways shown on the master plan map. This work can be accomplished as part of the reconstruction of those particular sections of highway or as separate projects utilizing any available Federal Highway Beautification funds or other funds.

The Department of Transportation will keep the Adirondack Park Agency informed of its plans and will cooperate with the Agency in locating suitable sites for future roadside parking areas and scenic turnouts.

10/76

CONSTRUCTION

Our standard construction specifications require that all areas, both within and outside the ROW, which are **disturbed**, used by, or serving as a source of material for the contractor, be restored to a pleasing and acceptable condition as approved by the Engineer. This applies to borrow pits, spoil or waste areas, haul roads, storage areas, shop areas and all similar areas. The locations of borrow pits and areas for disposal of surplus materials must be approved and grading plans will normally be required.

We strictly adhere to these specifications with the stated objective of reducing construction scars to a minimum and retaining and protecting the visual quality of the travel corridor: The clearing line for trees should be undulating and extend not more than an average of 5 feet beyond the toe of fill or top of cut. The top of cut should be rounded.

Erosion control during construction is accomplished by establishing a grass cover on all disturbed areas as the construction is progressed and by temporary check dams, sedimentation basins and other accepted methods.

Where work encroaches on lands controlled by the Department of Environmental Conservation, clearing and work limits will be marked by the EIC and DEC and APA forces. The contractor shall not clear and grub beyond the indicated limits without prior approval of DEC and the Project Engineer.

HIGHWAY MAINTENANCE

The Department will investigate the possibility of locating temporary maintenance buildings and storage areas where they will not be visible from the highway or screening such facilities from the motorists view. Such work will be dependent on the availability of funds and must be done without impairing the primary purpose of the facilities. We are most desirous that our buildings, stockpiles and storage facilities be properly located where they cannot be seen from the highway and of sufficient size so we can control drainage and have ponding areas to adequately protect the environment. In order to accomplish this, cooperation by the Adirondack Park Agency and the Department of Environmental Conservation is needed to provide suitable sites.

The quality of the roadside maintenance will have a major impact on the appearance of the travel corridors. To encourage the establishment of attractive native vegetation without adverse affects on the safety or operational capabilities of the highway, the following general roadside maintenance practices will be in effect:

1. Mow grass shoulders and ditches once a year to maintain sight distance and to keep drainage unobstructed. The mowing should be done between September and October.
2. Adequate sight distance at intersections and on the inside of curves will be maintained by one of the following:

10/76

- a. Mowing at least once a year, preferably in the fall between September 1 and October 1.
 - b. Selective removal of woody growth at any time of year and treatment of stumps and stubble with herbicides as set forth in the Herbicide Manual.
3. Selective removal of roadside trees within the highway right-of-way for reasons of safety, to improve the appearance or to open up vistas. Herbicides treatment of cut stumps shall be carried out as set forth in the Herbicide Manual.
4. Herbicides will be used in the line of guide rail to eliminate need for mowing. This work will be done as set forth in the Herbicide Manual.
5. Herbicides will not be applied to control weeds in areas back of guide rail or ditch line. This will encourage the establishment of vegetation which is indigineous to the area and result in attractive, naturalized roadsides.