

1 Department of Transportation

2

3 Adopted Permanent Rules Relating to Natural Preservation Routes

4

5 Rules as Adopted

6 8820.0100 DEFINITIONS.

7 [For text of subpart 1, see M.R.]

8 Subp. 1a. ADT. "ADT" means average daily traffic, which
9 is computed by dividing the total number of vehicles traveling
10 over a segment of roadway in one year divided by 365.

11 [For text of subps 2 to 12, see M.R.]

12 Subp. 12a. Natural preservation route. "Natural
13 preservation route" means an existing or proposed roadway that
14 has been designated as a natural preservation route by the
15 commissioner upon petition by a county board and that possesses
16 sensitive or unique scenic, environmental, pastoral, or
17 historical characteristics. Examples may include, but are not
18 limited to, roads along lakes, rivers, wetlands, or floodplains
19 or through forests or hilly, rocky, or bluff terrain.

20 [For text of subps 13 to 22, see M.R.]

21 8820.2500 MINIMUM STATE-AID STANDARDS.

22 Subpart 1. Geometric design standards. The standards in
23 part 8820.9910 apply to rural design undivided roadways, new or
24 reconstruction.

25 The standards in part 8820.9930 apply to suburban design
26 roadways that meet indicated conditions, new or reconstruction.

27 The standards in parts 8820.9935 and 8820.9940 apply to
28 urban design roadways, new or reconstruction.

29 The requirements in parts 8820.9925, 8820.9945, and
30 8820.9970 apply to resurfacing projects.

31 The roadway classifications in part 8820.9950 apply to
32 urban roadways.

33 The vertical clearances for underpasses in part 8820.9955
34 apply.

35 The standards in part 8820.9965 apply to designated forest

1 highways within national forests and state park access roads
2 within state parks, new or reconstruction.

3 The standards in parts 8820.9980 and 8820.9985 apply to
4 designated natural preservation routes.

5 [For text of subps 2 to 4, see M.R.]

6 NATURAL PRESERVATION ROUTES

7 8820.4000 REQUEST TO COUNTY BOARD.

8 Any person may make a written request to designate a county
9 state-aid highway as a natural preservation route. The request
10 must be directed to the county board having jurisdiction over
11 the route. A county board is not required to propose
12 designation for the entire length of a county state-aid
13 highway. The county board shall act on the request within 60
14 days. ~~The commissioner may~~ In order to designate a county
15 state-aid highway as a natural preservation route only after
16 receipt of, the commissioner must receive a board resolution
17 from the county having jurisdiction over the road.

18 The county board shall use the descriptions in part
19 8820.4010 as a guide for determining which designation type best
20 fits a particular route. All of the descriptors may be used in
21 combination. No single descriptor, including ADT, may be used
22 to eliminate a route type from consideration.

23 8820.4010 CHARACTERISTICS OF ROUTE TYPES.

24 Subpart 1. Selection criteria generally. To be considered
25 for designation as a natural preservation route, a route must be
26 on the county state-aid highway system. It may be selected if
27 it possesses particular scenic, environmental, pastoral, or
28 historical characteristics such as, but not exclusively, routes
29 along lakes, rivers, wetlands, or floodplains or through forests
30 or hilly, rocky, or bluff terrain.

31 Subp. 2. Type I natural preservation route. A type I
32 natural preservation route is best characterized as one in which
33 the natural surroundings convey a feeling of intimacy with
34 nature. This type of route carries local passenger vehicles
35 with occasional commercial vehicles. This route has very low

1 volumes with leisurely driving speeds and may be used by
2 pleasure drivers. The roadway alignment follows the terrain,
3 which may be hilly or curving around lakes and wetlands, and can
4 be described as lying lightly on the land. There are few
5 reported accidents related to the geometric design of the
6 roadway or accidents can be minimized without realignment. The
7 operating speeds are generally lower than on regular county
8 state-aid highway routes.

9 Subp. 3. **Type II natural preservation route.** A type II
10 natural preservation route creates a feeling similar to the
11 feeling created by a type I natural preservation route, but the
12 surroundings and vistas may be more distant from the roadway.
13 It carries local traffic with moderate amounts of commercial
14 vehicles. This route generally has low volumes but may have
15 seasonal peaks greater than 300 vehicles per day. It has
16 leisurely driving speeds and may be used by some commuters and
17 pleasure drivers. The roadway alignment follows the terrain,
18 which may be hilly or curving around lakes and wetlands. Some
19 modifications may be made to the land surface. There are few
20 reported accidents related to the geometric design of the
21 roadway or accidents can be minimized with mitigation as
22 referred to in part 8820.4060. The operating speeds may be
23 lower than regular county state-aid highway routes.

24 Subp. 4. **Type III natural preservation route.** A type III
25 natural preservation route goes through an environment similar
26 to the types I and II natural preservation routes, but the
27 surroundings and vistas may be more distant from the roadway.
28 It may function as a minor or major collector and may be used by
29 general commercial traffic. It generally has volumes less than
30 750 vehicles per day but may have seasonal peaks. This type of
31 roadway passes through diverse terrain features and the
32 alignment is consistent with the traffic mix. It may have
33 required some modifications to the land surface. The safety
34 problems that may exist are related to the traffic volumes and
35 to the geometric design of the roadway. The problems can be
36 corrected with mitigation as referred to in part 8820.4060 or

1 with reconstruction. The operating speeds may be lower than a
2 comparable county state-aid highway route that is not on the
3 natural preservation route system.

4 8820.4020 REQUIREMENTS FOR ROUTE DESIGNATION PROPOSALS.

5 Subpart 1. County board resolution. The county board
6 shall submit a formal request to the commissioner in the form of
7 a resolution.

8 Subp. 2. Required information. The request must be
9 accompanied by:

10 A. an index map that identifies the proposed natural
11 preservation route by county state-aid highway number and
12 termini;

13 B. a narrative describing the history of the route,
14 any controversy surrounding it, the in-place cross section, the
15 particular scenic, environmental, or historical characteristics
16 considered desirable to preserve, and which designation category
17 (type I, II, or III) of natural preservation route being
18 requested;

19 C. photographs of the route;

20 D. a listing of parks, rivers, or other designated
21 natural or historical resource areas that the highway corridor
22 passes through or adjoins and that are considered desirable to
23 preserve;

24 E. a description of any safety hazards existing along
25 the route and a discussion of the accident record over the past
26 five years;

27 F. a transportation plan that considers alternate
28 routes, or traffic management plan for the area including
29 compatibility with the existing roadway network, as well as the
30 existing and projected ADT;

31 G. a description of the function of the route
32 including the functional classification, the type of traffic
33 using the route, and a discussion of seasonal variations and
34 trip purposes;

35 H. a comparison of the current operating speed, the

1 legal speed limit, and the rationale for the selection of the
2 planned design speed;

3 I. a preliminary description of the planned design if
4 construction or reconstruction is proposed, including a
5 discussion of:

6 (1) what natural or historical elements might be
7 affected by different construction alternatives;

8 (2) which safety features might be affected by
9 different construction alternatives; and

10 (3) how any changes in the continuity of design
11 will be mitigated;

12 J. preliminary cost estimates of the various
13 alternatives considered;

14 K. environmental documentation that may have been
15 completed, including public notices and public meetings that
16 have occurred;

17 L. a description of existing and projected land uses,
18 any zoning in effect, and compatibility with the natural
19 preservation route characteristics; and

20 M. a description of any provisions to address
21 bicycles, pedestrians, and equestrians.

22 8820.4030 ADVISORY COMMITTEE.

23 Subpart 1. Appointment and membership. The commissioner
24 shall appoint an advisory committee for each construction
25 district consisting of seven members: one member from the
26 department of natural resources, one county highway engineer,
27 one county commissioner, one representative of a recognized
28 environmental organization, and three members of the public.
29 The commissioner shall refer each county board submittal
30 received to the advisory committee for the construction district
31 in which the county exists. ~~The advisory committee shall~~
32 ~~consider all data relative to the petition for designation and~~
33 ~~make a recommendation to the commissioner.~~ No elected or
34 appointed official that represents a political subdivision
35 requesting the designation or any public member residing in that

1 county may serve on the committee.

2 Subp. 2. Operating procedure. The advisory committee
3 shall meet on call from the commissioner at which time they
4 shall elect a chair and establish their own procedures to
5 investigate the designation proposals.

6 The committee shall consider:

7 A. the economic, social, safety, and environmental
8 impacts that may result from the designation or denial of the
9 designation;

10 B. the magnitude of the effects on adjacent lands and
11 the value of the characteristics identified in part 8820.4020,
12 subpart 2;

13 C. the number of persons, either residents or the
14 traveling public, affected by designation or denial of
15 designation;

16 D. the present and future use of adjacent lands;

17 E. safety considerations as they apply to
18 pedestrians; bicyclists; motoring public; and fire, police, and
19 emergency units; and

20 F. other related issues as may be pertinent to the
21 roadway that have been identified from information submitted in
22 part 8820.4020, subpart 2.

23 Subp. 3. Recommendation. After considering all data
24 pertinent to the requested designation, the committee shall
25 recommend to the commissioner approval or disapproval of the
26 request.

27 8820.4040 DESIGNATION BY COMMISSIONER.

28 Following receipt of the advisory committee recommendation,
29 the commissioner may designate the roadway as a natural
30 preservation route. The commissioner shall base the decision on
31 the criteria in part 8820.4030, subpart 2, and shall notify the
32 political subdivision in writing of the decision. If the
33 request is denied, a written explanation will be included with
34 this notification.

35 8820.4050 EXTENT OF STATE AID.

1 The extent of state aid participation for a construction
2 project must be determined on the same basis as a regular county
3 state-aid highway project, except that landscaping items are
4 eligible for up to two percent of the total construction
5 allocation of the year in which any construction on the natural
6 preservation route is completed.

7 8820.4060 GEOMETRIC STANDARDS.

8 The standards in parts 8820.9980 and 8820.9985 apply to
9 designated natural preservation routes. In the case of
10 reconstruction, the designer shall preserve, to the greatest
11 extent possible, the existing profile, alignment, and cross
12 section. In doing so, the designer shall consider the use of
13 guardrails, retaining walls, and curb sections to protect
14 natural amenities. To the extent practical, the designer shall
15 ~~consider~~ include in the design landscaping, including native
16 species, curving alignments, variable back slopes, variable
17 ditch bottoms, limited clearing, and other means available to
18 limit the impacts on the environment while still addressing
19 public safety.

20 8820.4070 RECONSTRUCTION NOTIFICATION.

21 A county proposing a project that requires removal of the
22 entire surface of a county state-aid highway that is a natural
23 preservation route shall send to owners of property abutting the
24 highway a written notice that describes the project. In
25 addition, the county shall hold a public meeting to discuss
26 design and construction alternatives. Before project approval,
27 the county engineer shall provide evidence to the state aid
28 engineer that the concerns raised at the public meeting have
29 been addressed or incorporated into the project. Spot
30 maintenance projects, such as culvert replacements or subgrade
31 corrections, do not require notice.

32 8820.4080 SIGNS.

33 Route markers must be posted at public road entry points to
34 and at regular intervals along natural preservation routes.

1 Signs posted must conform to the Minnesota Manual on Uniform
 2 Traffic Control Devices adopted under Minnesota Statutes,
 3 section 169.06. Properly posted signs are prima facie evidence
 4 that adequate notice of a natural preservation route has been
 5 given to the motoring public. Signs must conform to the
 6 requirements in part 8820.9990.

7 8820.4090 REMOVAL OF DESIGNATION.

8 A county board, after notice and a public hearing, may
 9 petition the commissioner to remove the natural preservation
 10 route designation if the board believes the characteristics on
 11 which the natural preservation route designation was approved
 12 have substantially been lost. The petition for removing the
 13 designation must be based on, and the advisory committee shall
 14 consider, such items as loss of aesthetic qualities, changes in
 15 land use, changes in road function, or significant increases in
 16 accidents. The committee shall then make a recommendation to
 17 the commissioner. Following receipt of the advisory committee's
 18 recommendation, the commissioner may remove the natural
 19 preservation route designation from the roadway. The
 20 commissioner shall base the decision on the criteria in part
 21 8820.4030, subpart 2, notify the political subdivision in
 22 writing of the decision, and include a written explanation with
 23 the notification.

24 8820.9980 MINIMUM GEOMETRIC DESIGN STANDARDS: NATURAL
 25 PRESERVATION ROUTES; NEW OR RECONSTRUCTION.

26 Subpart 1. Type I natural preservation route.

27 TYPE I NATURAL PRESERVATION ROUTE

28 Surface Type	Aggregate	Paved
29		
30 Design Speed (4)	30 <u>mph</u>	30 <u>mph</u>
31 Lane Width	11 <u>ft.</u>	11 <u>ft.</u>
32 Shoulder Width (8)	1 <u>ft.</u>	2 (5) <u>ft.</u>
33 Inslope (1)	3:1	3:1
34 Recovery Area (2)	3 <u>ft.</u>	10 <u>ft.</u>
35 Design Strength		9 tons
36 New Bridge (3) Width	28 <u>ft.</u>	28 <u>ft.</u>
37 Bridge to remain (10)	22 <u>ft.</u>	22 <u>ft.</u>
38		

39 (1) Applies to slope within recovery area only. Other
 40 design features, such as guardrails or retaining walls, should

1 be considered in particularly sensitive areas in lieu of
2 reconstructing the inslope in accordance with part 8820.4060.

3 (2) Obstacle-free area (measured from edge of traffic lane).

4 (3) HS-20 loading is required.

5 (4) Based on stopping sight distance.

6 (5) The designer will provide a four-foot paved shoulder if
7 the route is a popular bike route.

8 (6) Ditch depths and widths ~~sho~~uld must be kept to the
9 minimum required to function hydraulically and to provide for
10 adequate snow storage when a standard ditch would negatively
11 impact the surroundings.

12 (7) The designer ~~sho~~uld shall specify in the plan and
13 special provisions that the clearing width is to be kept to the
14 absolute minimum. In sensitive areas, the normal clearance
15 allowed to a contractor for working room is zero unless
16 otherwise required for special conditions.

17 (8) If the route has scenic vistas that will require
18 parking vehicles along the shoulder, widening the shoulder at
19 these locations ~~could-be-considered~~ is acceptable.

20 (9) Curb and gutter may be used in lieu of a ditch section
21 under the paved option. The lane width, shoulder width, and
22 recovery area must be maintained.

23 (10) Inventory design rating H-15.

24 Subp. 2. **Type II natural preservation route.**

25 **TYPE II NATURAL PRESERVATION ROUTE**

26 Surface Type	Aggregate	Paved
27		
28 Design Speed (4)	30 <u>mph</u>	40 <u>mph</u>
29 Lane Width	11 <u>ft.</u>	12 <u>ft.</u>
30 Shoulder Width (5)	2 <u>ft.</u>	4 <u>ft.</u>
31 Inslope (1)	3:1	4:1
32 Recovery Area (2)	9 <u>ft.</u>	10 <u>ft.</u>
33 Design Strength		9 <u>tons</u>
34 New Bridge (3) Width	28 <u>ft.</u>	32 <u>ft.</u>
35 Bridge to remain (8)	24 <u>ft.</u>	24 <u>ft.</u>

36
37 (1) Applies to slope within recovery area only₇. Other
38 design features such as guardrail or retaining walls should be
39 considered in particularly sensitive areas in lieu of
40 reconstructing the inslope in accordance with part 8820.4060.

41 (2) Obstacle free area (measured from edge of traffic lane).

1 (3) HS-20 loading is required.

2 (4) Based on stopping sight distance.

3 (5) The designer will provide a six-foot paved shoulder if
4 the route is a popular bike route. If the route has scenic
5 vistas which will require parking vehicles along the shoulder,
6 widening the shoulder at these locations ~~could-be-considered~~ is
7 acceptable.

8 (6) Ditch depths and widths ~~should~~ must be kept to the
9 minimum required to function hydraulically, to be traversable if
10 within the recovery area, and to provide for adequate snow
11 storage when a standard ditch would negatively impact the
12 surroundings.

13 (7) The designer ~~should~~ shall specify in the plan and
14 special provisions that the clearing width is to be kept to the
15 absolute minimum. In sensitive areas the normal clearance
16 allowed to a contractor for working room shall be zero unless
17 required for special conditions.

18 (8) Inventory design rating H-15.

19 Subp. 3. Type III natural preservation route.

20 TYPE III NATURAL PRESERVATION ROUTE

21 Surface Type	Aggregate	Paved (8)	Paved
22 Design Speed (4)	30 <u>mph</u>	30 <u>mph</u>	40 <u>mph</u>
23 Lane Width	12 <u>ft.</u>	12 <u>ft.</u>	12 <u>ft.</u>
24 Shoulder Width (5)	3 <u>ft.</u>	4 <u>ft.</u>	6 <u>ft.</u>
25 Inslope (1)	4:1	4:1	4:1
26 Recovery Area (2)	10 <u>ft.</u>	10 <u>ft.</u>	15 <u>ft.</u>
27 Design Strength(5)		9 tons	9 tons
28 New Bridge Width (3)	32 <u>ft.</u>	32 <u>ft.</u>	32 <u>36 ft.</u>
29 Bridge to remain (9)	24 <u>ft.</u>	24 <u>ft.</u>	24 <u>ft.</u>

30
31
32 (1) Applies to slope within recovery area only⁷. Other
33 design features such as guardrail or retaining walls should be
34 considered in particularly sensitive areas in lieu of
35 reconstructing the inslope in accordance with part 8820.4060.

36 (2) Obstacle free area (measured from edge of traffic lane).

37 (3) HS-25 loading is required.

38 (4) Based on stopping sight distance.

39 (5) The designer will provide a six-foot paved shoulder if
40 the route is a popular bike route. If the route has scenic
41 vistas which will require parking vehicles along the shoulder,

1 widening the shoulder at these locations ~~could be considered~~ is
2 acceptable.

3 (6) Ditch depths and widths ~~should~~ must be kept to the
4 minimum required to function hydraulically, to be traversable if
5 within the recovery area, and to provide for adequate snow
6 storage when a standard ditch would negatively affect the
7 surroundings.

8 (7) The designer ~~should~~ shall specify in the plan and
9 special provisions that the clearing width is to be kept to the
10 absolute minimum. In sensitive areas the normal clearance
11 allowed to a contractor for working room shall be zero unless
12 required for special conditions.

13 ~~The amount and type of traffic using the route should~~
14 ~~be one of the considerations used to determine which level~~
15 ~~should be used for design and construction.~~ This column may be
16 applied only when the project is located in a platted area or an
17 area in a detailed development process, and physical restraints
18 are present that prevent reasonable application of another level
19 of these standards.

20 (9) Inventory design rating H-15.

21 8820.9985 MINIMUM GEOMETRIC DESIGN STANDARDS: NATURAL
22 PRESERVATION ROUTES; RESURFACING.

23 TYPE I, II, OR III NATURAL PRESERVATION ROUTE

24 Proposed Design	Pavement Width	Shoulder-to-Shoulder
25 Strength		Width
26		
27 7 tons	22 <u>ft.</u>	26 <u>ft.</u>
28		

29 Widths of bridges to remain in place must equal pavement
30 width. H-15 loading is required.

1 8820.9990 ROUTE MARKER.

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24 x 24

Green legend; white reflectorized background