



Minnesota Department of Transportation

Transportation Building
395 John Ireland Boulevard
Saint Paul, Minnesota 55155-1899

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ADMINISTRATIVE
HEARINGS

August 30, 2012

The Honorable Raymond R. Krause
Chief Administrative Law Judge
Office of Administrative Hearings
600 North Robert Street
P.O. Box 64620
Saint Paul, Minnesota 55164-0620

Re: In the Matter of the Exempt Adopted Rules of the Department of Transportation, Chapter 8820, Relating to Local State-Aid Route Standards; Financing, Request for Review and Approval of Exempt Rules Under Minnesota Statutes, Section 14.386; Governor's Tracking #AR 2001

Dear Chief Judge Krause:

The Minnesota Department of Transportation proposes to adopt the above-named exempt rules governing Local State-Aid Route Standards: Financing, Chapter 8820. The Department requests that the Office of Administrative Hearings review and approve the rules under Minnesota Statutes, section 14.386;

Enclosed for your review are the documents required by OAH Rules, part 1400.2400, subpart 2:

- (1) The rules with Revisor's approval.
- (2) A proposed Order Adopting Rules.

If you have questions about the enclosed documents or the proposed exempt rules, please contact me at 651-366-3066.

After completing your review, please send any correspondence to me at the following address:

Laura Nehl-Trueman
Minnesota Department of Transportation
395 John Ireland Blvd. MS 130
St. Paul, MN 55155

Yours very truly,

Laura Nehl-Trueman
MnDOT Staff Attorney/Rules Coordinator

Minnesota Department of Transportation

PROPOSED ORDER ADOPTING EXEMPT RULES

Adoption of Exempt Rules Governing Local State-Aid Route Standards; Financing, Minnesota Rules, chapter 8820.

BACKGROUND INFORMATION

1. The Minnesota Department of Transportation has complied with all notice and procedural requirements for adopting exempt rules in Minnesota Statutes, chapter 14, specifically Minnesota Statutes, 14.386, Minnesota Rules, chapter 1400, and other applicable law.
2. The authority to adopt exempt rules is contained in Laws of Minnesota 2012, chapter 287, article three, section 12. Section 12 amends Minnesota Statutes, section 162.155 by adding paragraph (c) as follows:

“(c) The rules adopted by the commissioner under this section, and sections 162.02; 162.07, subdivision 2; 162.09; and 162.13, subdivision 2, are exempt from the rulemaking provisions of chapter 14. The rules are subject to section 14.386, except that, notwithstanding paragraph (b) of that section, the rules continue in effect until repealed or superseded by other law or rule.” (Effective August 1, 2012)

The rule amendments in this rulemaking are adopted by the commissioner under Minnesota Statutes, sections 162.02, subdivision 2 and 162.09, subdivision 2.

3. Minnesota Rules, Chapter 8820 are being revised to include standards for on-road bicycle facility for state-aid routes. The standards will guide designers as they balance accommodation of all roadway users including commuters, shippers, emergency vehicle operators, bicyclists, pedestrians, transit carriers, and businesses.
4. Pursuant to Minnesota Statutes, sections 162.02, subdivision 2 (relating to counties), and 162.09, subdivision 2 (relating to cities), the rules are required to be developed with the advice of a Rules Advisory Committee. Members of the Committee are selected by the Association of Minnesota Counties, the Minnesota County Engineers Association, the League of Minnesota Cities, and the City Engineers Association of Minnesota and composed of members from each state highway construction districts.

As required, MnDOT’s State Aid for Local Transportation Division met with the State Aid Rules Advisory Committee to seek their advice on the draft rule standards. The Department also worked with committees of the City Engineers Association of Minnesota and the Minnesota County Engineers Association as well as bicycle advocates to facilitate the development of the rules regarding on-road bicycle facility design standards. In December, 2010 and November 2011, draft standards were emailed for review and comment to all county engineers and city engineers of cities

from part 8820.9946 standards is the minimum lane width of 10' where design speed is 25 to 30 mph, considering legal vehicles may be 8.5' wide not including side mirrors, thereby leaving 9" either side for trucks to wander.

6. In the development of the proposed lane-width design criteria for bicycle accommodation, the following vehicle dimensions and other practical items were considered:

a) Bicyclists:

- i. Bicycle per MNDOT Bikeway Facility Design Manual, Table 3-1 (<http://www.dot.state.mn.us/bike/designmanual.html>) = 2.00' wide
- ii. Bicycle with trailer per MNDOT Bikeway Facility Design Manual, Table 3-1 = 3.70' wide

b) Large trucks (legal): Minnesota Statutes, section 169.80

(<http://www.dot.state.mn.us/bike/designmanual.html>) = (8.50') wide exclusive of rearview mirrors or load securement devices

c) American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 6th Edition. (Green Book) (2011)

https://bookstore.transportation.org/collection_detail.aspx?ID=110

- i. Passenger car = 7' wide (page 2-4)
- ii. Single Unit truck = 8' wide (page 2-4)
- iii. Parking Lane Width: (Collectors page 6-13 ; Arterials page 7-34):
 1. Urban Collectors:
 - a. Residential = 7' to 8' wide
 - b. Commercial/Industrial = 8' to 11' wide
 2. Urban Arterials: 7' to 10' wide for passenger cars
- iv. Distance between travel lane and curb face (Collectors page 6-15 ; Arterials page 7-30 and 4-19):
 1. Collectors = 1' to 2'
 2. Arterials Low Speed (less than or equal to 45 mph) = 1' to 2'
 3. Arterials High Speed (greater than or equal to 50 mph) = not recommended but 1' to 2' if necessary

7. The sentences in standards parts 8820.9920, 8820.9926, 8820.9936, 8820.9946, and 8820.9981 which refer designers to the Minnesota State Aid Roundabout Guide has been removed from the rule because the guide will be incorporated into the department State Aid Manual which is a more appropriate venue for this particular design guide.

ORDER

| Table 4-1: Bikeway Design Selection for Urban (Curb and Gutter) Cross Section - English Units | | | | | | | |
|--|--------------------|--------------|-----------|-------------|--------------|------------------------|------------------------|
| Motor Vehicle ADT (2 Lane) | | <500 | 500-1,000 | 1,000-2,000 | 2,000-5,000 | 5,000-10,000 | >10,000 |
| Motor Vehicle ADT (4 Lane) | | N/A | N/A | 2,000-4,000 | 4,000-10,000 | 10,000-20,000 | >20,000 |
| Motor Vehicle Speed | 25 mph | SL | WOL | WOL | WOL | BL = 5 ft | Not Applicable |
| | 30 mph | SL with sign | WOL | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft |
| | 35 - 40 mph | WOL | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft | BL = 6 ft or PS = 8 ft |
| | 45 mph and greater | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft | BL = 6 ft or PS = 8 ft | SUP or PS = 10 ft |
| BL = Bicycle Lane, SL = Shared Lane, WOL = Wide Outside Lane, SUP = Shared-Use Path, PS = Paved Shoulder | | | | | | | |

| Table 4-2: Bikeway Design Selection for Rural (Shoulder and Ditch) Cross Section - English Units | | | | | | | |
|---|--------------------|------------------|-------------------|-------------------|--------------|---------------|-------------------|
| Motor Vehicle ADT (2 Lane) | | <500 | 500-1,000 | 1,000-2,000 | 2,000-5,000 | 5,000-10,000 | >10,000 |
| Motor Vehicle ADT (4 Lane) | | N/A | N/A | 2,000-4,000 | 4,000-10,000 | 10,000-20,000 | >20,000 |
| Motor Vehicle Speed | 25 mph | PS = 4 ft* or SL | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 4 ft* | PS = 4 ft* | Not Applicable |
| | 30 mph | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 4 ft* | PS = 4 ft* | PS = 6 ft | PS = 6 ft |
| | 35 - 40 mph | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 6 ft | PS = 6 ft | PS = 6 ft | PS = 8 ft |
| | 45 mph and greater | PS = 4 ft* | PS = 4 ft* | PS = 6 ft | PS = 8 ft | PS = 8 ft | SUP or PS = 10 ft |
| * See discussion in Section 4-3.1 regarding rumble strips on 4-foot shoulders. PS = Paved Shoulder, SL = Shared Lane, SUP = Shared-Use Path, WOL = Wide Outside Lane | | | | | | | |

Refer to Section 4-2.1 for additional geometric and operation factors.

2.1 Subp. 29. Wide outside lane. "Wide outside lane" means outside lanes which
 2.2 accommodate bicycles and motorists in the same lane with a lane width of 14 to 16 feet.
 2.3 For accommodating bicyclists, the wide outside lane dimension shall be to the face of curb.

2.4 **8820.9920 MINIMUM DESIGN STANDARDS; RURAL AND SUBURBAN**
 2.5 **UNDIVIDED; NEW OR RECONSTRUCTION PROJECTS.**

2.6 When the road authority has determined that the roadway will be specifically
 2.7 designed to include on-road bicycle facilities, and only if the roadway surface is paved,
 2.8 the appropriate design criteria in the current MnDOT Bikeway Facility Design Manual are
 2.9 recommended for design purposes.

2.10 New or reconstruction projects for rural and suburban undivided roadways must meet
 2.11 or exceed the minimum dimensions indicated in the following design chart.

| Projected Lane ADT (a) | Lane Width | Shoulder Width | In- slope (b) | Clear Zone (c) | Design Speed (d) | Sur- facing | Structural Design Strength | Bridges to Remain (e) Width Curb to Curb |
|------------------------------|---------------|-------------------|---------------------|-------------------|------------------------|----------------|----------------------------------|---|
| | feet | feet | rise: run | feet | mph | | tons | feet |
| 0-49 | 11 | 1 | 1:3 | 7 | 30-60 | Agg. | | 22 |
| 50-149 | 11 | 3 | 1:4 | 9 | 40-60 | Agg. | | 22 |
| 150-299 | 12 | 4 | 1:4 | 15 | 40-60 | Agg./ Paved | 7-ton/ 10-ton Staged (g) | 28 |
| 300-749 | 12 | 4 | 1:4 | 15 | 40-60 | Paved | 10-ton Staged (g) | 28 |
| 750-1499 | 12 | 4 | 1:4 | 25 | 40-60 | Paved | 10-ton Staged (g) | 28 |
| 1500 and over | 12 | 6(f) | 1:4 | 30 | 40-60 | Paved | 10 | 30 |

4.1 (e) Inventory rating of H 15 is required. A bridge narrower than these widths may
4.2 remain in place if the bridge is not deficient structurally or hydraulically.

4.3 (f) Shoulders are required to be a minimum width of eight feet for highways classified
4.4 as minor arterials and principal arterials with greater than 1,500 ADT projected, at least
4.5 two feet of which must be paved. If the roadway is designated as a bicycle facility by the
4.6 road authority, at least four feet of the shoulder shall be paved.

4.7 (g) Except within municipal corporate limits, ten-ton staged structural design must be
4.8 able to carry ten-ton axle loads except during spring load-restriction periods, or year-round
4.9 if needed for system continuity. Roadbed width must accommodate ultimate ten-ton
4.10 pavement overlay thickness and ultimate 1:4 sideslope. Within municipal corporate limits,
4.11 minimum structural design must support nine-ton axle strength.

4.12 Approach sideslopes must be 1:4 or flatter when the ADT exceeds 400.

4.13 HS 25 loading with AASHTO Standard Specifications or HL-93 loading with load
4.14 and resistance factor design (LRFD) is required for new or reconstructed bridges. HS 18
4.15 loading is required for all rehabilitated bridges. The curb-to-curb minimum width for new
4.16 or reconstructed bridges must be no less than either the minimum required lane plus
4.17 shoulder widths or the proposed lane plus shoulder widths, whichever is greater, but in no
4.18 case less than the minimum lane widths plus four feet, and in no case less than required
4.19 per Minnesota Statutes, section 165.04.

4.20 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
4.21 ~~State Aid Roundabout Guide are recommended.~~

4.22 Vehicular roadway bridge and underpass structures when two-way bicycle traffic is
4.23 accommodated: on bridge or underpass sidewalks, the sidewalk clear width shall be no
4.24 less than eight feet, but preferably ten feet. Whenever practicable, the shoulder/clear zone
4.25 of an off-road shared use path should be carried across bridges and through underpasses
4.26 and the minimum structure clear width must be 12 feet. When the full width of the
4.27 approach shared use path (surface width plus shoulder/clear zone) is greater than the

6.1 ~~Widths~~ Dimensions less than those indicated in the chart require a variance in accordance
6.2 with parts 8820.3300 and 8820.3400.

6.3 Widths of bridges to remain in place must equal roadway pavement width. Bridges
6.4 narrower than these widths may remain in place provided that the bridge does not qualify
6.5 for federal-aid bridge funds. H 15 inventory rating is required.

6.6 Any highway that was previously built to state-aid or state standards, that was granted
6.7 a variance to standards in effect at the time of construction or reconstruction, or that is a
6.8 trunk highway turnback, may be reconditioned.

6.9 The proposed structural design strength must ~~be~~ accommodate a minimum of seven
6.10 tons per axle.

6.11 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
6.12 ~~State Aid Roundabout Guide are recommended.~~

6.13 Subp. 2. [Repealed, 23 SR 1455]

6.14 **8820.9936 MINIMUM DESIGN STANDARDS, URBAN; NEW OR**
6.15 **RECONSTRUCTION PROJECTS.**

6.16 New or reconstruction projects for urban roadways must meet or exceed the minimum
6.17 dimensions indicated in the following design chart.

| 6.18 Functional 6.19 Classification and 6.20 Projected Traffic 6.21 Volume | 6.22 Design Speed mph | Lane Width (a) feet | Curb Reaction Distance (e) feet | Parking Lane Width feet |
|---|--------------------------|---------------------------|---|-------------------------------|
| 6.23 Collectors or Locals 6.24 with ADT < 10000 | 30-40 | (b) 11 | 2 | 8 |
| 6.25 | over 40 | 12 | 2 | 10 |
| 6.26 Collectors or Locals 6.27 with ADT ≥ 10000 and 6.28 Arterials | 30-40 | (b) 11 | (c) 4 | 10 |
| 6.29 | over 40 | 12 | (c) 4 | (d) 10 |

8.1 includes elements for the accommodation of pedestrians or bicycles, the new bridge
8.2 width must also provide for pedestrians or bicycles unless pedestrians or bicycles are
8.3 otherwise accommodated.

8.4 For ADT less than 150, the widths of bridges to remain must be at least the sum of
8.5 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must
8.6 be at least the sum of the lanes plus half the sum of the shoulders, parking lane, and
8.7 curb reaction distance.

8.8 Clearance of 1.5 feet from the face of the curb to fixed objects must be provided when
8.9 the posted speed is 40 to 45 mph. A ten-foot clear zone measured from the driving lane
8.10 must be provided when the posted speed exceeds 45 mph.

8.11 For volumes greater than 15,000 projected ADT, at least four through-traffic lanes
8.12 are required, unless a capacity analysis demonstrates that a different lane configuration
8.13 achieves level of service D or better.

8.14 ~~"Level of service" has the meaning given it in the Highway Capacity Manual, Special~~
8.15 ~~Report 209, as revised and published by the Transportation Research Board of the National~~
8.16 ~~Research Council, Washington, D.C. The definition is incorporated by reference, is not~~
8.17 ~~subject to frequent change, and is located at the Minnesota State Law Library, 25 Rev. Dr.~~
8.18 ~~Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.~~

8.19 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
8.20 ~~State Aid Roundabout Guide are recommended.~~

8.21 **8820.9941 MINIMUM DESIGN STANDARDS: ON-ROAD BICYCLE FACILITY**
8.22 **FOR URBAN; NEW OR RECONSTRUCTION PROJECTS.**

8.23 The bicycle facility design standard in this part applies when the road authority has
8.24 determined that the roadway will be specifically designed to include an on-road bicycle
8.25 facility and only if the roadway surface is paved.

8.26 New or reconstruction projects for urban roadways must meet or exceed the
8.27 dimensions indicated in the following design chart.

| | | | | | | | |
|------|---|----------------|--------------|--------------|---------------|--------------------------------|--------------------------------|
| 10.1 | <u>Collectors or Locals with ADT >10,000 and Arterials</u> | <u>30-40</u> | <u>11-12</u> | <u>4 (b)</u> | <u>10</u> | <u>BL 6 or PS 8 or SUP</u> | <u>BL 6 or PS 8 or SUP</u> |
| 10.2 | | | | | | | |
| 10.3 | | | | | | | |
| 10.4 | | | | | | | |
| 10.5 | | | | | | | |
| 10.6 | | | | | | | |
| 10.7 | | <u>over 40</u> | <u>12</u> | <u>4 (b)</u> | <u>10 (c)</u> | <u>BL 6 or PS 8 or SUP</u> | <u>PS 8 or SUP</u> |
| 10.8 | | | | | | | |

10.9 (SL = shared lane; BL = bicycle lane; WOL = wide outside lane; PS = paved shoulder;
 10.10 SUP = shared use path)

10.11 Engineering judgment should be used to choose a lane-width, on-road bicycle facility,
 10.12 or shoulder width dimension other than the widths indicated in the chart. Factors to
 10.13 consider include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak
 10.14 hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic,
 10.15 pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way
 10.16 constraints, vehicle turn lane configuration, sight distance, sight lines, bus routes, other
 10.17 nonmotorized uses, functional classification, or other factors. Dimensions less than
 10.18 those indicated in the chart require a variance in accordance with parts 8820.3300 and
 10.19 8820.3400.

10.20 (a) One-way turn lanes must be at least ten feet wide, except 11 feet is required if
 10.21 the design speed is over 40 mph.

10.22 (b) Curb reaction distance may be reduced to two feet if there are four or more traffic
 10.23 lanes and on one-way streets.

10.24 (c) No parking is allowed on streets with six or more traffic lanes or when the posted
 10.25 speed limit exceeds 45 mph.

10.26 (d) Curb reaction shall be provided unless on-street parking, a bicycle facility, or a
 10.27 wide outside lane are provided adjacent to the curb. The dimensions for wide outside
 10.28 lanes include the curb reaction distance.

12.1 For ADT less than 150, the widths of bridges to remain must be at least the sum of
12.2 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must
12.3 be at least the sum of the lanes plus one-half the sum of the shoulders, parking lane,
12.4 and curb reaction distance.

12.5 Clearance of 1.5 feet from the face of the curb to fixed objects must be provided when
12.6 the posted speed is 40 to 45 mph. A ten foot clear zone measured from the driving lane
12.7 must be provided when the posted speed exceeds 45 mph.

12.8 For volumes greater than 15,000 projected ADT, at least four through-traffic lanes
12.9 are required, unless a capacity analysis demonstrates that a different lane configuration
12.10 achieves level of service D or better.

12.11 Structures: Vehicular roadway bridge and underpass structures when two-way bicycle
12.12 traffic is accommodated: on bridge or underpass sidewalks, the sidewalk clear width
12.13 shall be no less than eight feet, but preferably ten feet. Whenever practicable, the
12.14 shoulder/clear zone of an off-road shared use path should be carried across bridges and
12.15 through underpasses. The minimum structure clear width must be 12 feet. When the
12.16 surface width plus shoulder/clear zone full width of the approach shared use path is greater
12.17 than the proposed clear width of the structure, a lead-in bicycle safety railing is required at
12.18 each end of the bridge or underpass. As an alternative to lead-in bicycle safety railing,
12.19 the surface width of the approach shared use path may be narrowed at a 1:50 taper while
12.20 maintaining minimum surface width and shoulder/clear zone through the structure.

12.21 **8820.9946. MINIMUM DESIGN STANDARDS, URBAN; RECONDITIONING**
12.22 **PROJECTS.**

12.23 Subpart 1. **Two-way streets.** In the following design chart, total width is from
12.24 face-to-face of curbs.

12.25 Reconditioning projects for two-way urban roadways must meet or exceed the
12.26 minimum dimensions indicated in the chart.

14.1 For ADT less than 150, the widths of bridges to remain must be at least the sum of
 14.2 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must
 14.3 be at least the sum of the lanes plus half the sum of the shoulders, parking lane, and
 14.4 curb reaction distance.

14.5 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
 14.6 ~~State Aid Roundabout Guide are recommended.~~

14.7 Subp. 2. **One-way streets.** In the following design chart, total width is from
 14.8 face-to-face of curbs.

14.9 Reconditioning projects for one-way urban roadways must meet or exceed the
 14.10 minimum dimensions indicated in the chart.

| 14.11 14.12 14.13 14.14 14.15 | Number of Through Lanes and Functional Class | Present ADT | Total Width with No Parking (feet) | Total Width with Parking on One Side (feet) | Total Width with Parking on Both Sides (feet) | Proposed Structural Design Strength (tons) |
|--|--|-------------|---|--|--|--|
| 14.16 14.17 14.18 14.19 | 2-Lane Collector or Local with ADT < 10000 | < 5000 | 21 | 29 | 37 | 7 |
| 14.20 | | 5000-10000 | 23 | 31 | 39 | 9 |
| 14.21 14.22 14.23 14.24 14.25 14.26 | 2-Lane Collector or Local with ADT ≥ 10000 or 2-lane Arterial | < 15000 | 23 | 31 | 39 | 9 |
| 14.27 | | ≥ 15000 | 24 | 32 | 40 | 9 |
| 14.28 14.29 | 3-Lane Arterial or Collector | All | 34 | 42 | 50 | 9 |

14.30 For ADT less than 150, the widths of bridges to remain must be at least the sum of
 14.31 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must

| | | | | | | | |
|-------|-----------------------|----------------|------------------|-------------|--------------|--------------------|-----------------------|
| 16.1 | | <u>35-40</u> | <u>11-12</u> | <u>8-10</u> | <u>9 (b)</u> | <u><500</u> | <u>SL or BL 5-6</u> |
| 16.2 | | | | | | <u>500-10,000</u> | <u>BL 5-6</u> |
| 16.3 | | <u>over 40</u> | <u>11-12</u> | <u>10</u> | <u>9 (b)</u> | <u><10,000</u> | <u>BL 5-6</u> |
| 16.4 | <u>Two-Lane</u> | <u>25-30</u> | <u>10-12 (d)</u> | <u>7-10</u> | <u>9</u> | <u>>10,000</u> | <u>BL 5-6</u> |
| 16.5 | <u>Collectors or</u> | | | | | | |
| 16.6 | <u>Locals With</u> | | | | | | |
| 16.7 | <u>ADT >10,000</u> | | | | | | |
| 16.8 | <u>or Two-Lane</u> | | | | | | |
| 16.9 | <u>Arterials (a)</u> | | | | | | |
| 16.10 | | <u>35-40</u> | <u>11-12</u> | <u>8-10</u> | <u>9</u> | <u>>10,000</u> | <u>BL 5-6 or PS 8</u> |
| 16.11 | | <u>over 40</u> | <u>11-12</u> | <u>10</u> | <u>9</u> | <u>>10,000</u> | <u>PS 8 or SUP</u> |
| 16.12 | <u>Four-Lane</u> | <u>25-30</u> | <u>10-12 (d)</u> | <u>7-10</u> | <u>9 (b)</u> | <u><10,000</u> | <u>WOL 14-16 or</u> |
| 16.13 | <u>Collectors or</u> | | | | | | <u>BL 5-6</u> |
| 16.14 | <u>Locals with</u> | | | | | | |
| 16.15 | <u>ADT <10,000</u> | | | | | | |
| 16.16 | | <u>35-40</u> | <u>11-12</u> | <u>8-10</u> | <u>9 (b)</u> | <u><10,000</u> | <u>BL 5-6</u> |
| 16.17 | | <u>over 40</u> | <u>11-12</u> | <u>10</u> | <u>9 (b)</u> | <u><10,000</u> | <u>BL 6</u> |
| 16.18 | <u>Four-Lane</u> | <u>30-40</u> | <u>11-12</u> | <u>10</u> | <u>9</u> | <u>>10,000</u> | <u>BL 6 or PS 8</u> |
| 16.19 | <u>Collectors or</u> | | | | | | <u>or SUP</u> |
| 16.20 | <u>Locals with</u> | | | | | | |
| 16.21 | <u>ADT >10,000</u> | | | | | | |
| 16.22 | | <u>over 40</u> | <u>11-12</u> | <u>10</u> | <u>9</u> | <u>>10,000</u> | <u>BL 6 or PS 8</u> |
| 16.23 | | | | | | | <u>or SUP</u> |
| 16.24 | <u>Six-Lane</u> | | <u>12</u> | <u>(c)</u> | <u>9</u> | <u>Not Allowed</u> | <u>SUP</u> |
| 16.25 | <u>Collectors or</u> | | | | | | |
| 16.26 | <u>Arterials</u> | | | | | | |

16.27 (SL = shared lane; BL = bicycle lane; WOL = wide outside lane; PS = paved shoulder;
 16.28 SUP = shared use path)

16.29 Engineering judgment should be used to choose a lane-width, on-road bicycle facility,
 16.30 or shoulder width dimension other than the widths indicated in the chart. Factors to
 16.31 consider include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak
 16.32 hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic,
 16.33 pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way

18.1 be at least the sum of the lanes plus one-half the sum of the shoulders, parking lane,
 18.2 and curb reaction distance.

18.3 RENUMBERING INSTRUCTION. The revisor of statutes shall renumber the
 18.4 provisions of Minnesota Rules, part 8820.0100, listed in column A to the references listed
 18.5 in column B. The revisor shall also make necessary cross-reference changes in Minnesota
 18.6 Rules consistent with the renumbering.

| | <u>Column A</u> | <u>Column B</u> |
|-------|---------------------------|---------------------------|
| | <u>Old Subpart Number</u> | <u>New Subpart Number</u> |
| 18.9 | <u>1</u> | <u>1</u> |
| 18.10 | <u>1a</u> | <u>3</u> |
| 18.11 | <u>2</u> | <u>4</u> |
| 18.12 | <u>2a</u> | <u>5</u> |
| 18.13 | <u>2c</u> | <u>7</u> |
| 18.14 | <u>2e</u> | <u>8</u> |
| 18.15 | <u>2f</u> | <u>9</u> |
| 18.16 | <u>3</u> | <u>10</u> |
| 18.17 | <u>3a</u> | <u>11</u> |
| 18.18 | <u>3b</u> | <u>12</u> |
| 18.19 | <u>3c</u> | <u>13</u> |
| 18.20 | <u>4</u> | <u>14</u> |
| 18.21 | <u>5</u> | <u>15</u> |
| 18.22 | <u>6</u> | <u>16</u> |
| 18.23 | <u>7</u> | <u>17</u> |
| 18.24 | <u>8</u> | <u>18</u> |
| 18.25 | <u>9a</u> | <u>19</u> |
| 18.26 | <u>9b</u> | <u>20</u> |
| 18.27 | <u>10</u> | <u>21</u> |
| 18.28 | <u>10a</u> | <u>23</u> |
| 18.29 | <u>11</u> | <u>24</u> |

Office of the Revisor of Statutes Administrative Rules



TITLE: Exempt Adopted Rules Relating to Local State-Aid Route Standards; Financing

AGENCY: Department of Transportation

MINNESOTA RULES: Chapter 8820

INCORPORATION BY REFERENCE:

Part 8820.0100, subpart 25: Highway Capacity Manual, Special Report 209, as revised and published by the Transportation Research Board of the National Research Council, Washington, D.C., located at the Minnesota State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.

The attached rules are approved as to form

Ryan S. Inman
Assistant Revisor



MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS

600 North Robert Street
Saint Paul, Minnesota 55101

Mailing Address:
P.O. Box 64620
St. Paul, Minnesota 55164-0620

September 13, 2012

Voice: (651) 361-7900
TTY: (651) 361-7878
Fax: (651) 361-7936

Laura Nehl-Trueman
MnDOT Staff Attorney/Rules Coordinator
395 John Ireland Boulevard
St. Paul, MN 55155-1899

Re: *In the Matter of the Exempt Adopted Rules of the Department of Transportation, Chapter 8820, Relating to Local State-Aid Route Standards Financing: Minnesota Rules, Chapter 8820 OAH Docket No. 60-3000-23088-1; Governor's Tracking No. AR 2001*

Dear Ms. Nehl-Trueman:

This is to inform you that the adoption of the above-entitled rules, as modified on August 21, 2012, have been approved as to legality on September 13, 2012, under Minnesota Statutes, section 14.386. The amendments to the rule parts are exempt from the rulemaking requirements of Minnesota Statutes, Chapter 14. Enclosed and served upon you by mail is the Order on Review of Rules under Minn. Stat. § 14.386 and Minn. R. 1400.2400.

With the approval of the adopted rules, our office has closed this file and is returning the rule record to you so that your agency can maintain the official rulemaking record in this matter as required by Minnesota Statutes, section 14.365. **Please notify our office once the Commissioner has signed the proposed Order Adopting Rules.** Our office then will file three certified copies of the rules with the Secretary of State's office. The Department may publish a copy of the amendments in the State Register pursuant to Minnesota Statutes, section 14.386(a)(4). The amendments will be effective upon publication.

Laura Nehl-Trueman
September 13, 2012
Page 2

If you have any questions regarding this matter, please contact Nancy J. Hansen at (651) 361-7874.

Sincerely,


JAMES E. LAFAVE
Administrative Law Judge

Telephone: (651) 361-7848

JEL:njh

Enclosure

cc: Office of the Attorney General
Legislative Coordinating Commission
paul.marinac@revisor.mn.gov
Office of the Governor

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE DEPARTMENT OF TRANSPORTATION

In the Matter of the Exempt Adopted
Rules of the Department of
Transportation, Chapter 8820,
Relating to Local State-Aid Route
Standards Financing:
Minnesota Rules, Chapter 8820

**ORDER ON REVIEW
OF RULES UNDER
MINN. STAT. § 14.386
AND MINN. R. 1400.2400**

This matter came before Administrative Law Judge James E. LaFave upon the application of the Minnesota Department of Transportation for a legal review under Minn. Stat. § 14.386.

On September 4, 2012, the Minnesota Department of Transportation filed documents with the Office of Administrative Hearings seeking review and approval of the above-entitled rules under Minn. Stat. § 14.386 and Minn. R. 1400.2400.

No comments were received from the public during the comment period.

Based upon a review of the written submissions by the Department, and the contents of the rulemaking record,

IT IS HEREBY ORDERED THAT:

1. The rules were adopted in compliance with the procedural requirements of Minnesota Statutes, Chapter 14, and Minnesota Rules, Chapter 1400.
2. According to the 2012 Laws of Minnesota, Chapter 287, article three, section 12, the Department has the statutory authority to adopt these proposed rules using the exempt rulemaking process.
3. The adopted rules are **APPROVED**.

Dated: September 13, 2012


JAMES E. LAFAVE
Administrative Law Judge

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
ADMINISTRATIVE LAW SECTION
600 NORTH ROBERT STREET
ST. PAUL, MN 55101

CERTIFICATE OF SERVICE

| | |
|---|---|
| Case Title: In the Matter of the Exempt Adopted Rules of the Department of Transportation, Chapter 8820, Relating to Local State-Aid Route Standards Financing: Minnesota Rules, Chapter 8820 | OAH Docket No. 60-3000-23088-1 Governor's Tracking No. AR 2001 |
|---|---|

Nancy J. Hansen certifies that on the 13th day of September, 2012, she served a true and correct copy of the attached Order on Review of Rules under Minn. Stat. § 14.386 and Minn. R. 1400.2400, by serving it by courier service or by U S Mail with postage prepaid, addressed to the following individuals:

| | |
|---|---|
| Laura Nehl-Trueman MnDOT Staff Attorney/Rules Coordinator 395 John Ireland Boulevard St. Paul, MN 55155-1899 | |
| Legislative Coordinating Commission 85 State Office Building 100 Rev. Dr. Martin Luther King Jr. Blvd St. Paul, MN 55155 | The Honorable Lori Swanson Minnesota Attorney General 102 Capitol Building 75 Rev. Dr. Martin Luther King Jr. Blvd St. Paul, MN 55155 |
| Paul Marinac Office of the Revisor of Statutes paul.marinac@revisor.mn.gov | Allison Jones Legislative Coordinator Governor's Office 130 State Capitol 75 Constitution St Paul, MN 55155 |



Minnesota Department of Transportation

Transportation Building
395 John Ireland Boulevard
Saint Paul, Minnesota 55155-1899

September 18, 2012

The Honorable James E. LaFave
Administrative Law Judge
Office of Administrative Hearings
600 North Robert Street
P.O. Box 64620
Saint Paul, Minnesota 55164-0620

Re: In the Matter of the Exempt Adopted Rules of the Department of Transportation, Relating to Local State-Aid Route Standards; Financing, Minnesota Rules, Chapter 8820, OAH Docket No. 60-3000-23088-1; Governor's Tracking No. AR 2001

Dear Judge LaFave:

Pursuant to your letter dated September 13, 2012, the Department is notifying the Office of Administrative Hearings that the Commissioner of Transportation has signed the Order Adopting Exempt Rules in the above-entitled matter. A copy of the signed order is enclosed.

According to your letter, upon receipt of the signed Order, the Office of Administrative Hearings will file three certified copies of the rules with the Secretary of State's office.

If you have questions about the enclosed document, please contact me at 651-366-3066.

Yours very truly,

A handwritten signature in black ink, appearing to read 'Laura Nehl-Trueman', with a long horizontal flourish extending to the right.

Laura Nehl-Trueman
MnDOT Staff Attorney/Rules Coordinator

Minnesota Department of Transportation

ORDER ADOPTING EXEMPT RULES

Adoption of Exempt Rules Governing Local State-Aid Route Standards; Financing, Minnesota Rules, chapter 8820.

BACKGROUND INFORMATION

1. The Minnesota Department of Transportation has complied with all notice and procedural requirements for adopting exempt rules in Minnesota Statutes, chapter 14, specifically Minnesota Statutes, 14.386, Minnesota Rules, chapter 1400, and other applicable law.
2. The authority to adopt exempt rules is contained in Laws of Minnesota 2012, chapter 287, article three, section 12. Section 12 amends Minnesota Statutes, section 162.155 by adding paragraph (c) as follows:

“(c) The rules adopted by the commissioner under this section, and sections 162.02; 162.07, subdivision 2; 162.09; and 162.13, subdivision 2, are exempt from the rulemaking provisions of chapter 14. The rules are subject to section 14.386, except that, notwithstanding paragraph (b) of that section, the rules continue in effect until repealed or superseded by other law or rule.” (Effective August 1, 2012)

The rule amendments in this rulemaking are adopted by the commissioner under Minnesota Statutes, sections 162.02, subdivision 2 and 162.09, subdivision 2.

3. Minnesota Rules, Chapter 8820 are being revised to include standards for on-road bicycle facility for state-aid routes. The standards will guide designers as they balance accommodation of all roadway users including commuters, shippers, emergency vehicle operators, bicyclists, pedestrians, transit carriers, and businesses.
4. Pursuant to Minnesota Statutes, sections 162.02, subdivision 2 (relating to counties), and 162.09, subdivision 2 (relating to cities), the rules are required to be developed with the advice of a Rules Advisory Committee. Members of the Committee are selected by the Association of Minnesota Counties, the Minnesota County Engineers Association, the League of Minnesota Cities, and the City Engineers Association of Minnesota and composed of members from each state highway construction districts.

As required, MnDOT’s State Aid for Local Transportation Division met with the State Aid Rules Advisory Committee to seek their advice on the draft rule standards. The Department also worked with committees of the City Engineers Association of Minnesota and the Minnesota County Engineers Association as well as bicycle advocates to facilitate the development of the rules regarding on-road bicycle facility design standards. In December, 2010 and November 2011, draft standards were emailed for review and comment to all county engineers and city engineers of cities

over 5,000 population, as well as several MnDOT staff, bicycling advocacy representatives, and other interested individuals. The State Aid Rules Advisory Committee met on March 25, 2012, to review, discuss, and revise the draft standards, then advised that MnDOT should act to adopt the rules as proposed.

5. The MnDOT Bikeway Facility Design Manual (2007)

(<http://www.dot.state.mn.us/bike/designmanual.html>) was by and large the guiding document for this rulemaking; in particular Table 4-1 and Table 4-2 (attached). Current standards in state aid rules differentiate roadway design standards by rural vs. urban, and additionally by new/reconstruction vs. reconditioning (improvement of pavement structure with no significant change to existing cross-section or alignment).

a) RURAL

- For new/reconstruction rural bicycle facilitation, the existing rural design tables are amended slightly, specifically requiring a minimum 4' shoulder width; also including bridge and underpass requirements.
- For rural reconditioning project with bicycle facilitation, the primary revision is to recommend to designer "the current MnDOT Bikeway Facility Design Manual".

b) URBAN: For urban bicycle facilitation, new rule parts were created:

- 8820.9941 MINIMUM DESIGN STANDARDS: ON-ROAD BICYCLE FACILITY FOR URBAN; NEW OR RECONSTRUCTION PROJECTS.
- 8820.9951 MINIMUM DESIGN STANDARDS, ON-ROAD BICYCLE FACILITIES FOR URBAN; RECONDITIONING PROJECTS.

The standard within proposed part 8820.9941 for urban new and reconstructed roadways is similar to part 8820.9936, Minimum Design Standards, Urban; New or Reconstruction Projects, in that the row and column headers are similar but with two additional columns for bikeway design and two additional speed range rows. The additions are based on, and similar to, Table 4-1 of the MnDOT Bikeway Facility Design Manual. The lane widths include several widths narrower than allowed in part 8820.9936, which is reasonable due to lower design speeds, maneuvering within lanes when adjacent lanes are not occupied (particularly in the case of bicycle lanes adjacent to parking lanes), and the limitation of available overall road width. A notable break from part 8820.9936 standards is the minimum lane width of 10' where design speed is 25 to 30 mph, considering legal vehicles may be 8.5' wide not including side mirrors, thereby leaving 9" either side for trucks to wander.

The standards in part 8820.9951 for urban reconditioning are similar to part 8820.9946, Minimum Design Standards, Urban; Reconditioning Projects, in that the row and column headers are similar except with two additional columns for bikeway design and two additional speed range rows. The additions are based on, and similar to, Table 4-1 of the MnDOT Bikeway Facility Design Manual. The lane widths include several widths narrower than allowed in part 8820.9946, which is reasonable due to lower design speeds, maneuvering within lanes when adjacent lanes are not occupied (particularly in the case of bicycle lanes adjacent to parking lanes), and the limitation of available overall road width. A notable break

from part 8820.9946 standards is the minimum lane width of 10' where design speed is 25 to 30 mph, considering legal vehicles may be 8.5' wide not including side mirrors, thereby leaving 9" either side for trucks to wander.

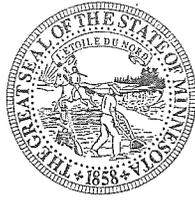
6. In the development of the proposed lane-width design criteria for bicycle accommodation, the following vehicle dimensions and other practical items were considered:
 - a) Bicyclists:
 - i. Bicycle per MNDOT Bikeway Facility Design Manual, Table 3-1 (<http://www.dot.state.mn.us/bike/designmanual.html>) = 2.00' wide
 - ii. Bicycle with trailer per MNDOT Bikeway Facility Design Manual, Table 3-1 = 3.70' wide
 - b) Large trucks (legal): Minnesota Statutes, section 169.80 (<http://www.dot.state.mn.us/bike/designmanual.html>) = (8.50') wide exclusive of rearview mirrors or load securement devices
 - c) American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 6th Edition. (Green Book) (2011) https://bookstore.transportation.org/collection_detail.aspx?ID=110
 - i. Passenger car = 7' wide (page 2-4)
 - ii. Single Unit truck = 8' wide (page 2-4)
 - iii. Parking Lane Width: (Collectors page 6-13 ; Arterials page 7-34):
 1. Urban Collectors:
 - a. Residential = 7' to 8' wide
 - b. Commercial/Industrial = 8' to 11' wide
 2. Urban Arterials: 7' to 10' wide for passenger cars
 - iv. Distance between travel lane and curb face (Collectors page 6-15 ; Arterials page 7-30 and 4-19):
 1. Collectors = 1' to 2'
 2. Arterials Low Speed (less than or equal to 45 mph) = 1' to 2'
 3. Arterials High Speed (greater than or equal to 50 mph) = not recommended but 1' to 2' if necessary
7. The sentences in standards parts 8820.9920, 8820.9926, 8820.9936, 8820.9946, and 8820.9981 which refer designers to the Minnesota State Aid Roundabout Guide has been removed from the rule because the guide will be incorporated into the department State Aid Manual which is a more appropriate venue for this particular design guide.

ORDER

| Table 4-1: Bikeway Design Selection for Urban (Curb and Gutter) Cross Section – English Units | | | | | | | |
|--|--------------------|--------------|-----------|-------------|--------------|------------------------|------------------------|
| Motor Vehicle ADT (2 Lane) | | <500 | 500-1,000 | 1,000-2,000 | 2,000-5,000 | 5,000-10,000 | >10,000 |
| Motor Vehicle ADT (4 Lane) | | N/A | N/A | 2,000-4,000 | 4,000-10,000 | 10,000-20,000 | >20,000 |
| Motor Vehicle Speed | 25 mph | SL | WOL | WOL | WOL | BL = 5 ft | Not Applicable |
| | 30 mph | SL with sign | WOL | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft |
| | 35 - 40 mph | WOL | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft | BL = 6 ft or PS = 8 ft |
| | 45 mph and greater | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft | BL = 6 ft or PS = 8 ft | SUP or PS = 10 ft |
| BL = Bicycle Lane, SL = Shared Lane, WOL = Wide Outside Lane, SUP = Shared-Use Path, PS = Paved Shoulder | | | | | | | |

| Table 4-2: Bikeway Design Selection for Rural (Shoulder and Ditch) Cross Section – English Units | | | | | | | |
|---|--------------------|------------------|-------------------|-------------------|--------------|---------------|-------------------|
| Motor Vehicle ADT (2 Lane) | | <500 | 500-1,000 | 1,000-2,000 | 2,000-5,000 | 5,000-10,000 | >10,000 |
| Motor Vehicle ADT (4 Lane) | | N/A | N/A | 2,000-4,000 | 4,000-10,000 | 10,000-20,000 | >20,000 |
| Motor Vehicle Speed | 25 mph | PS = 4 ft* or SL | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 4 ft* | PS = 4 ft* | Not Applicable |
| | 30 mph | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 4 ft* | PS = 4 ft* | PS = 6 ft | PS = 6 ft |
| | 35 - 40 mph | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 6 ft | PS = 6 ft | PS = 6 ft | PS = 8 ft |
| | 45 mph and greater | PS = 4 ft* | PS = 4 ft* | PS = 6 ft | PS = 8 ft | PS = 8 ft | SUP or PS = 10 ft |
| * See discussion in Section 4-3.1 regarding rumble strips on 4-foot shoulders. PS = Paved Shoulder, SL = Shared Lane, SUP = Shared-Use Path, WOL = Wide Outside Lane | | | | | | | |

Refer to Section 4-2.1 for additional geometric and operation factors.



MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS

600 North Robert Street
Saint Paul, Minnesota 55101

Mailing Address:
P.O. Box 64620
St. Paul, Minnesota 55164-0620

October 4, 2012

Voice: (651) 361-7900
TTY: (651) 361-7878
Fax: (651) 361-7936

Nancy Breems
Secretary of State, Elections Division
180 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd.
St. Paul, MN 55155-1299

**Re: In the Matter of the Exempt Adopted Rules of the Department
of Transportation, Chapter 8820, Relating to Local State-Aid
Route Standards Financing: Minnesota Rules, Chapter 8820
OAH Docket No. 60-3000-23088-1
Governor's Tracking No. AR 2001**

Dear Ms. Breems:

Pursuant to Minnesota Statutes, sections 14.386, and Minnesota Rules, part 1400.2400, subpart 4, our office is filing with the Secretary of State three copies of the above-entitled adopted exempt rules. The rules were approved for legality by our office on September 13, 2012.

Please send the agency copy of the rules to:

Laura Nehl-Trueman
MnDOT Staff Attorney/Rules Coordinator
395 John Ireland Boulevard
St. Paul, MN 55155-1899

Please contact me at (651) 361-7874 if you have any questions regarding this matter.

Sincerely,

Nancy J. Hansen
Administrative Assistant

Enclosures

Adopted Rules

A rule becomes effective after the requirements of *Minnesota Statutes* §§ 14.05-14.28 have been met and five working days after the rule is published in the *State Register*, unless a later date is required by statutes or specified in the rule. If an adopted rule is identical to its proposed form as previously published, a notice of adoption and a citation to its previous *State Register* publication will be printed. If an adopted rule differs from its proposed form, language which has been deleted will be printed with strikeouts and new language will be underlined. The rule's previous *State Register* publication will be cited.

KEY: Proposed Rules - Underlining indicates additions to existing rule language. ~~Strikeouts~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **Adopted Rules** - Underlining indicates additions to proposed rule language. ~~Strikeout~~ indicates deletions from proposed rule language.

Department of Natural Resources (DNR) Adopted Repeal of Obsolete Rules: Boat and Water Rules

The rules proposed and published at *State Register*, Volume 36, Number 44, pages 1405-1406, May 21, 2012 (36 SR 1405), are adopted as proposed.

Exempt Rules

Exempt rules are excluded from the normal rulemaking procedures (*Minnesota Statutes* §§ 14.386 and 14.388). They are most often of two kinds. One kind is specifically exempted by the Legislature from rulemaking procedures, but approved for form by the Revisor of Statutes, reviewed for legality by the Office of Administrative Hearings, and then published in the *State Register*. These exempt rules are effective for two years only.

The second kind of exempt rule is one adopted where an agency for good cause finds that the rulemaking provisions of *Minnesota Statutes*, Chapter 14 are unnecessary, impracticable, or contrary to the public interest. This exemption can be used only where the rules:

- (1) address a serious and immediate threat to the public health, safety, or welfare, or
- (2) comply with a court order or a requirement in federal law in a manner that does not allow for compliance with *Minnesota Statutes* Sections 14.14-14.28, or
- (3) incorporate specific changes set forth in applicable statutes when no interpretation of law is required, or
- (4) make changes that do not alter the sense, meaning, or effect of the rules.

These exempt rules are also reviewed for form by the Revisor of Statutes, for legality by the Office of Administrative Hearings and then published in the *State Register*. In addition, the Office of Administrative Hearings must determine whether the agency has provided adequate justification for the use of this exemption. Rules adopted under clauses (1) or (2) above are effective for two years only. The Legislature may also exempt an agency from the normal rulemaking procedures and establish other procedural and substantive requirements unique to that exemption.

KEY: Proposed Rules - Underlining indicates additions to existing rule language. ~~Strikeouts~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **Adopted Rules** - Underlining indicates additions to proposed rule language. ~~Strikeout~~ indicates deletions from proposed rule language.

Department of Transportation (Mn/DOT) Exempt Adopted Rules Relating to Local State-Aid Route Standards; Financing

8820.0100 DEFINITIONS.

[For text of subps 1 to 22, see M.R.]

Subp. 23. AASHTO. "AASHTO" means the American Association of State Highway and Transportation Officials, 444 North Capitol Street Northwest, Suite 249, Washington, D.C. 20001.

Subp. 24. Bicycle lane. "Bicycle lane" has the meaning given it in *Minnesota Statutes*, section 169.011, subdivision 5.

Exempt Rules

Subp. 25. Level of service. "Level of service" has the meaning given in the Highway Capacity Manual, Special Report 209, as revised and published by the Transportation Research Board of the National Research Council, Washington, D.C. The definition is incorporated by reference, is not subject to frequent change, and is located at the Minnesota State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.

Subp. 26. Paved shoulder. "Paved shoulder" means a part of a highway which is contiguous to the regularly traveled portion of the highway and is on the same level as the highway.

Subp. 27. Shared lane. "Shared lane" means any roadway or travel lane upon which a separate bicycle lane is not designated and which bicycles may legally use, whether or not such facility is specifically designated as a bikeway or bicycle route.

Subp. 28. Shared use path. "Shared use path" means a bikeway that is physically separated from a roadway or shoulder by the use of an open space buffer or physical barrier. A shared use path can also be used by a variety of nonmotorized users such as pedestrians, joggers, skaters, and wheelchair users.

Subp. 29. Wide outside lane. "Wide outside lane" means outside lanes which accommodate bicycles and motorists in the same lane with a lane width of 14 to 16 feet. For accommodating bicyclists, the wide outside lane dimension shall be to the face of curb.

8820.9920 MINIMUM DESIGN STANDARDS; RURAL AND SUBURBAN UNDIVIDED; NEW OR RECONSTRUCTION PROJECTS.

When the road authority has determined that the roadway will be specifically designed to include on-road bicycle facilities, and only if the roadway surface is paved, the appropriate design criteria in the current MnDOT Bikeway Facility Design Manual are recommended for design purposes.

New or reconstruction projects for rural and suburban undivided roadways must meet or exceed the minimum dimensions indicated in the following design chart.

| Projected ADT (a) | Lane Width | Shoulder Width | In-slope (b) | Clear Zone (c) | Design Speed (d) | Surfacing | Structural Design Strength | Bridges to Remain (e) Width Curb to Curb |
|-------------------|------------|----------------|--------------|----------------|------------------|----------------|--------------------------------|--|
| | feet | feet | rise: run | feet | mph | | tons | feet |
| 0-49 | 11 | 1 | 1:3 | 7 | 30-60 | Agg. | | 22 |
| 50-149 | 11 | 3 | 1:4 | 9 | 40-60 | Agg. | | 22 |
| 150-299 | 12 | 4 | 1:4 | 15 | 40-60 | Agg./ Paved | 7-ton/ 10-ton Staged (g) | 28 |
| 300-749 | 12 | 4 | 1:4 | 15 | 40-60 | Paved | 10-ton Staged (g) | 28 |
| 750-1499 | 12 | 4 | 1:4 | 25 | 40-60 | Paved | 10-ton Staged (g) | 28 |
| 1500 and over | 12 | 6(f) | 1:4 | 30 | 40-60 | Paved | 10 | 30 |

Exempt Rules

Engineering judgment ~~may~~ should be used to choose a lane-width, on-road bicycle facility, or shoulder-width dimension other than the widths indicated in the chart for roadways. Factors to consider ~~may be~~ include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way constraints, vehicle turn lane configuration, sight distance, sight lines, bus routes, other nonmotorized uses, functional classification, or other factors. Widths Dimensions less than those indicated in the chart require a variance in accordance with parts 8820.3300 and 8820.3400.

For rural divided roadways, use the geometric design standards of the Mn/DOT Road Design Manual, with a minimum ten tons structural design and minimum 40 mph design speed.

(a) Use the existing traffic for highways not on the state-aid system.

(b) Applies to slope within the clear zone only.

(c) Culverts with less than 30-inch vertical height allowed without protection in the clear zone.

Guardrail is required to be installed at all bridges where the design speed exceeds 40 mph, and either the existing ADT exceeds 400 or the bridge clear width is less than the sum of the lane and shoulder widths.

Mailbox supports must be in accordance with chapter 8818.

For roadways in suburban areas as defined in part 8820.0100, the clear zone may be reduced to a width of ten feet for projected ADT under 1,000 and to 20 feet for projected ADT of 1,000 or over. Wherever the legal posted speed limit is 40 mph or less, the clear zone may be reduced to a width of ten feet.

(d) Subject to terrain. In suburban areas, the minimum design speed may be equal to the current legal posted speed where the legal posted speed is 30 mph or greater.

(e) Inventory rating of H 15 is required. A bridge narrower than these widths may remain in place if the bridge is not deficient structurally or hydraulically.

(f) Shoulders are required to be a minimum width of eight feet for highways classified as minor arterials and principal arterials with greater than 1,500 ADT projected, at least two feet of which must be paved. If the roadway is designated as a bicycle facility by the road authority, at least four feet of the shoulder shall be paved.

(g) Except within municipal corporate limits, ten-ton staged structural design must be able to carry ten-ton axle loads except during spring load-restriction periods, or year-round if needed for system continuity. Roadbed width must accommodate ultimate ten-ton pavement overlay thickness and ultimate 1:4 sideslope. Within municipal corporate limits, minimum structural design must support nine-ton axle strength.

Approach sideslopes must be 1:4 or flatter when the ADT exceeds 400.

HS 25 loading with AASHTO Standard Specifications or HL-93 loading with load and resistance factor design (LRFD) is required for new or reconstructed bridges. HS 18 loading is required for all rehabilitated bridges. The curb-to-curb minimum width for new or reconstructed bridges must be no less than either the minimum required lane plus shoulder widths or the proposed lane plus shoulder widths, whichever is greater, but in no case less than the minimum lane widths plus four feet, and in no case less than required per *Minnesota Statutes*, section 165.04.

~~For roundabout design, the design criteria of the current edition of the Minnesota State Aid Roundabout Guide are recommended.~~

Vehicular roadway bridge and underpass structures when two-way bicycle traffic is accommodated: on bridge or underpass sidewalks, the sidewalk clear width shall be no less than eight feet, but preferably ten feet. Whenever practicable, the shoulder/clear zone of an off-road shared use path should be carried across bridges and through underpasses and the minimum structure clear width must be 12 feet. When the full width of the approach shared use path (surface width plus shoulder/clear zone) is greater than the proposed clear width of the structure, then lead-in bicycle safety railing is required at each end of the bridge or underpass. As an alternative to lead-in bicycle safety

Exempt Rules

railing, the surface width of the approach shared use path may be narrowed at a 1:50 taper while maintaining minimum surface width and shoulder/clear zone through the structure.

8820.9926 MINIMUM DESIGN STANDARDS: RURAL AND SUBURBAN UNDIVIDED; RECONDITIONING PROJECTS.

Subpart 1. **Minimum reconditioning standards.** Reconditioning projects for rural or suburban undivided roadways must meet or exceed the minimum dimensions indicated in the following design chart. See part 8820.0100, subpart 13b, for the description of activities allowed.

| Existing ADT | Statutory or Regulatory Posted Speed | Lane Width (Paved) | Combined Lane (Paved) and Shoulder Width |
|--------------|--------------------------------------|--------------------|--|
| 1-749 | Under 50 mph | 10 feet | 11 feet |
| 1-749 | 50 mph or over | 10 feet | 12 feet |
| 750 and over | Under 50 mph | 10 feet | 12 feet |
| 750 and over | 50 mph & over | 11 feet | 14 feet |

When the road authority has determined that the roadway will be specifically designed to include on-road bicycle facilities, and only if the roadway surface is paved, the appropriate design criteria in the current MnDOT Bikeway Facility Design Manual are recommended for design purposes.

Engineering judgment may should be used to choose a lane-width, on-road bicycle facility, or shoulder width dimension other than the widths indicated in the chart for roadways. Factors to consider include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way constraints, vehicle turn lane configuration, sight distance, sight lines, bus routes, other nonmotorized uses, functional classification, or other factors. Widths Dimensions less than those indicated in the chart require a variance in accordance with parts 8820.3300 and 8820.3400.

Widths of bridges to remain in place must equal roadway pavement width. Bridges narrower than these widths may remain in place provided that the bridge does not qualify for federal-aid bridge funds. H 15 inventory rating is required.

Any highway that was previously built to state-aid or state standards, that was granted a variance to standards in effect at the time of construction or reconstruction, or that is a trunk highway turnback, may be reconditioned.

The proposed structural design strength must be accommodate a minimum of seven tons per axle.

For roundabout design, the design criteria of the current edition of the Minnesota State Aid Roundabout Guide are recommended.

Subp. 2. [Repealed, 23 SR 1455]

8820.9936 MINIMUM DESIGN STANDARDS, URBAN; NEW OR RECONSTRUCTION PROJECTS.

New or reconstruction projects for urban roadways must meet or exceed the minimum dimensions indicated in the following design chart.

| Functional Classification and Projected Traffic Volume | Design Speed mph | Lane Width feet | Curb Reaction Distance (a) feet | Parking Lane Width (e) feet |
|--|---------------------|--------------------|---------------------------------------|-----------------------------------|
| Collectors or Locals with ADT < 10000 | 30-40 | (b) 11 | 2 | 8 |
| | over 40 | 12 | 2 | 10 |

Exempt Rules

| | | | | |
|---|---------|--------|-------|--------|
| Collectors or Locals with ADT ≥ 10000 and Arterials | 30-40 | (b) 11 | (c) 4 | 10 |
| | over 40 | 12 | (c) 4 | (d) 10 |

Engineering judgment may be used to choose a lane-width dimension other than the widths indicated in the chart for roadways. Factors to consider ~~may be~~ include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic, other nonmotorized uses, functional classification, or other factors. Widths less than those indicated in the chart require a variance in accordance with parts 8820.3300 and 8820.3400.

(a) One-way turn lanes must be at least ten feet wide, except 11 feet is required if the design speed is over 40 mph.

(b) Wherever possible, lane widths of 12 feet, rather than 11 feet, should be used.

(c) May be reduced to two feet if there are four or more traffic lanes and on one-way streets.

(d) No parking is allowed for six or more traffic lanes or when the posted speed limit exceeds 45 mph.

(e) Curb reaction must be provided only where parking is not provided.

One-way streets must have at least two through-traffic lanes.

When a median is included in the design of the two-way roadway, a one-foot reaction distance to the median is required on either side of the median. Minimum median width is four feet.

Urban design roadways must be a minimum nine tons structural axle load design.

Roadways not on the state-aid system are not subject to the minimum structural design strength requirements.

The minimum curb-to-curb width of a new bridge must be the required street width, but in no case less than required per *Minnesota Statutes*, section 165.04. HS 25 loading with AASHTO Standard Specifications or HL-93 loading with load and resistance factor design (LRFD) is required for new or reconstructed bridges and a minimum of HS 18 loading is required for all rehabilitated bridges. Where the new bridge approach roadway includes elements for the accommodation of pedestrians or bicycles, the new bridge width must also provide for pedestrians or bicycles unless pedestrians or bicycles are otherwise accommodated.

For ADT less than 150, the widths of bridges to remain must be at least the sum of the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must be at least the sum of the lanes plus half the sum of the shoulders, parking lane, and curb reaction distance.

Clearance of 1.5 feet from the face of the curb to fixed objects must be provided when the posted speed is 40 to 45 mph. A ten-foot clear zone measured from the driving lane must be provided when the posted speed exceeds 45 mph.

For volumes greater than 15,000 projected ADT, at least four through-traffic lanes are required, unless a capacity analysis demonstrates that a different lane configuration achieves level of service D or better.

~~“Level of service” has the meaning given it in the Highway Capacity Manual, Special Report 209, as revised and published by the Transportation Research Board of the National Research Council, Washington, D.C. The definition is incorporated by reference, is not subject to frequent change, and is located at the Minnesota State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.~~

~~For roundabout design, the design criteria of the current edition of the Minnesota State Aid Roundabout Guide are recommended.~~

8820.9941 MINIMUM DESIGN STANDARDS: ON-ROAD BICYCLE FACILITY FOR URBAN; NEW OR RECONSTRUCTION PROJECTS.

The bicycle facility design standard in this part applies when the road authority has determined that the roadway will be specifically designed to include an on-road bicycle facility and only if the roadway surface is paved.

Exempt Rules

New or reconstruction projects for urban roadways must meet or exceed the dimensions indicated in the following design chart.

| Functional Classification and Projected Traffic Volume | Design Speed | Lane Width (a) | Curb Reaction Distance (d) | Parking Lane Width (f) | Bikeway Design Roadways with Two Travel Lanes Urban Curb and Gutter | | Bikeway Design Roadways with Four or more Travel Lanes Urban Curb and Gutter |
|--|--------------|----------------|----------------------------|------------------------|---|---------------------|--|
| | (mph) | (feet) | (feet) | (feet) | (ADT) | (feet) | (feet) |
| Collectors or Locals with ADT <2,000 | 25-30 | 10-12 (e) | 2 | 7-10 | <500 | SL | N/A |
| | | | | | 500-2,000 | WOL 14-16 or BL 5-6 | |
| | 35-40 | 11-12 | 2 | 8-10 | <500 | SL | BL 5-6 |
| | | | | | 500-2,000 | WOL 14-16 or BL 5-6 | |
| over 40 | 12 | 2 | 10 | | BL 5-6 | BL 5-6 | |
| Collectors or Locals With ADT 2,000-5,000 | 25-30 | 10-12 (e) | 2 | 7-10 | | WOL 14-16 or BL 5-6 | WOL 14-16 or BL 5-6 |
| | 35-40 | 11-12 | 2 | 8-10 | | BL 5-6 | BL 5-6 |
| | over 40 | 12 | 2 | 10 | | BL-6 | BL |
| Collectors or Locals with ADT 5,000-10,000 | 25-30 | 10-12 (e) | 2 | 7-10 | | BL 5-6 | BL 5-6 |
| | 35-40 | 11-12 | 2 | 8-10 | | BL 5-6 | BL 5-6 |
| | over 40 | 12 | 2 | 10 | | BL 6 or PS 8 or SUP | BL 6 or PS 8 or SUP |
| Collectors or Locals with ADT ≥10,000 and Arterials | 30-40 | 11-12 | 4 (b) | 10 | | BL 6 or PS 8 or SUP | BL 6 or PS 8 or SUP |
| | over 40 | 12 | 4 (b) | 10 (c) | | BL 6 or PS 8 or SUP | PS 8 or SUP |

Exempt Rules

(SL = shared lane; BL = bicycle lane; WOL = wide outside lane; PS = paved shoulder; SUP = shared use path)

Engineering judgment should be used to choose a lane-width, on-road bicycle facility, or shoulder width dimension other than the widths indicated in the chart. Factors to consider include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way constraints, vehicle turn lane configuration, sight distance, sight lines, bus routes, other nonmotorized uses, functional classification, or other factors. Dimensions less than those indicated in the chart require a variance in accordance with parts 8820.3300 and 8820.3400.

- (a) One-way turn lanes must be at least ten feet wide, except 11 feet is required if the design speed is over 40 mph.
- (b) Curb reaction distance may be reduced to two feet if there are four or more traffic lanes and on one-way streets.
- (c) No parking is allowed on streets with six or more traffic lanes or when the posted speed limit exceeds 45 mph.
- (d) Curb reaction shall be provided unless on-street parking, a bicycle facility, or a wide outside lane are provided adjacent to the curb.

The dimensions for wide outside lanes include the curb reaction distance.

(e) When creating a multimodal design with a combination of vehicle lane, parking lane, and bikeway lane widths, if a vehicle lane width of less than 11 feet is used, the parking and bikeway lanes shall be at least one foot wider than the minimum widths. Engineering judgment should be used to choose a vehicle lane width of less than 11 feet. Additional factors to consider include the types of vehicles (buses, trucks, etc.), peak hour counts, turning movements, population/land use, crash history/analysis, terrain limitations, bicycle traffic, pedestrian traffic, other nonmotorized uses, and snow storage.

(f) In determining the parking lane width, the roadway ADT and the vehicle mix shall be taken into consideration for residential, commercial and/or industrial areas, or for a mixed use thereof.

One-way streets must have at least two through-traffic lanes.

When a raised median is included in the design of the two-way roadway, a one-foot reaction distance to the median is required on either side of the median. Minimum median width is four feet.

Urban design roadways must accommodate a minimum nine tons structural axle load design.

Roadways not on the state-aid system are not subject to the minimum structural design strength requirements.

The minimum curb-to-curb width of a new bridge must be the required street width, but in no case less than required per Minnesota Statutes, section 165.04, HS 25 loading with AASHTO Standards Specifications or HL-93 loading with load and resistance factor design (LRFD) is required for new or reconstructed bridges and a minimum of HS 18 loading is required for all rehabilitated bridges. When the new bridge approach roadway includes elements for the accommodation of pedestrians or bicycles, the new bridge width must also provide for pedestrians or bicycles unless pedestrians or bicycles are otherwise accommodated.

For ADT less than 150, the widths of bridges to remain must be at least the sum of the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must be at least the sum of the lanes plus one-half the sum of the shoulders, parking lane, and curb reaction distance.

Clearance of 1.5 feet from the face of the curb to fixed objects must be provided when the posted speed is 40 to 45 mph. A ten foot clear zone measured from the driving lane must be provided when the posted speed exceeds 45 mph.

For volumes greater than 15,000 projected ADT, at least four through-traffic lanes are required, unless a capacity analysis demonstrates that a different lane configuration achieves level of service D or better.

Structures: Vehicular roadway bridge and underpass structures when two-way bicycle traffic is accommodated: on bridge or underpass sidewalks, the sidewalk clear width shall be no less than eight feet, but preferably ten feet. Whenever practicable, the shoulder/clear zone of an off-road shared use path should be carried across bridges and through underpasses. The minimum structure clear width must be 12

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feet. When the surface width plus shoulder/clear zone full width of the approach shared use path is greater than the proposed clear width of the structure, a lead-in bicycle safety railing is required at each end of the bridge or underpass. As an alternative to lead-in bicycle safety railing, the surface width of the approach shared use path may be narrowed at a 1:50 taper while maintaining minimum surface width and shoulder/clear zone through the structure.

8820.9946 MINIMUM DESIGN STANDARDS, URBAN; RECONDITIONING PROJECTS.

Subpart 1. Two-way streets. In the following design chart, total width is from face-to-face of curbs.

Reconditioning projects for two-way urban roadways must meet or exceed the minimum dimensions indicated in the chart.

| Number of Through Lanes, Functional Class, and Present Traffic Volume | Total Width with No Parking (feet) | Total Width with Parking on One Side (feet) | Total Width with Parking on Both Sides (feet) | Proposed Structural Design Strength (tons) |
|---|---------------------------------------|--|--|---|
| 2-Lane Collector or Local with ADT < 10000 | 26 | 32 | 38 | (b) 9 |
| 4-Lane Collector or Local with ADT < 10000 | 44 | 52 | 60 | (b) 9 |
| 2-Lane Collector or Local with ADT e" 10000 or 2-Lane Arterial (a) | 26 | 32 | 42 | 9 |
| 4-Lane Collector or Local with ADT e" 10000 or 4-Lane Arterial | 44 | 54 | 64 | 9 |
| 6-Lane Collectors or Arterials | 66 | (c) | (c) | 9 |

Engineering judgment may be used to choose a lane-width or shoulder-width dimension other than the widths indicated in the chart for roadways. Factors to consider may be include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic, other nonmotorized uses, functional classification, or other factors. Widths less than those indicated in the chart require a variance in accordance with parts 8820.3300 and 8820.3400.

(a) Permissible for present traffic volumes less than 15,000 ADT.

(b) When ADT is less than 5,000, seven tons is allowable.

(c) No parking is allowed.

When a median is included in the design of the two-way roadway, a one-foot reaction distance to the median is required on either side of the median. Minimum median width is four feet.

For ADT less than 150, the widths of bridges to remain must be at least the sum of the lanes. For ADT greater than or equal to 150, the

Exempt Rules

widths of bridges to remain must be at least the sum of the lanes plus half the sum of the shoulders, parking lane, and curb reaction distance.

For roundabout design, the design criteria of the current edition of the Minnesota State Aid Roundabout Guide are recommended.

Subp. 2. **One-way streets.** In the following design chart, total width is from face-to-face of curbs.

Reconditioning projects for one-way urban roadways must meet or exceed the minimum dimensions indicated in the chart.

| Number of Through Lanes and Functional Class | Present ADT | Total Width with No Parking (feet) | Total Width with Parking on One Side (feet) | Total Width with Parking on Both Sides (feet) | Proposed Structural Design Strength (tons) |
|---|-------------|---------------------------------------|--|--|---|
| 2-Lane Collector or Local with ADT < 10000 | < 5000 | 21 | 29 | 37 | 7 |
| | 5000-10000 | 23 | 31 | 39 | 9 |
| 2-Lane Collector or Local with ADT ≥ 10000 or 2-lane Arterial | < 15000 | 23 | 31 | 39 | 9 |
| | ≥ 15000 | 24 | 32 | 40 | 9 |
| 3-Lane Arterial or Collector | All | 34 | 42 | 50 | 9 |

For ADT less than 150, the widths of bridges to remain must be at least the sum of the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must be at least the sum of the lanes plus half the sum of the shoulders, parking lane, and curb reaction distance.

For roundabout design, the design criteria of the current edition of the Minnesota State Aid Roundabout Guide are recommended.

Subp. 3. **Exception.** Any street that was previously built to state-aid or state standards, that was granted a variance to standards in effect at the time of construction or reconstruction, or that is a trunk highway turnback, but does not meet current standards, may be reconditioned regardless of subparts 1 and 2.

8820.9951 MINIMUM DESIGN STANDARDS. ON-ROAD BICYCLE FACILITIES FOR URBAN: RECONDITIONING PROJECTS.

The bicycle facility design standard in this part applies when the road authority has determined that the roadway will be specifically designed to include an on-road bicycle facility, and only if the roadway surface is paved.

Reconditioning projects for urban roadways must meet or exceed the minimum dimensions indicated in the following design chart.

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| Number of Through Lanes, Functional Class, and Present Traffic Volume | Design Speed | Lane Width | Parking Lane Width (e) | Proposed Structural Design Strength | Bikeway Design | |
|--|--------------|------------|------------------------|-------------------------------------|--------------------|------------------------|
| | (mph) | (feet) | (feet) | (tons) | (ADT) | (feet) |
| Two-Lane Collectors or Locals with ADT <10,000 | 25-30 | 10-12 (d) | 7-10 | 9 (b) | <1,000 | SL |
| | | | | | 1,000-5,000 | WOL 14-16 or BL 5-6 |
| | | | | | 5,000-10,000 | BL 5-6 |
| | 35-40 | 11-12 | 8-10 | 9 (b) | <500 500-10,000 | SL or BL 5-6 BL 5-6 |
| | over 40 | 11-12 | 10 | 9 (b) | <10,000 | BL 5-6 |
| Two-Lane Collectors or Locals With ADT >10,000 or Two-Lane Arterials (a) | 25-30 | 10-12 (d) | 7-10 | 9 | >10,000 | BL 5-6 |
| | 35-40 | 11-12 | 8-10 | 9 | >10,000 | BL 5-6 or PS 8 |
| | over 40 | 11-12 | 10 | 9 | >10,000 | PS 8 or SUP |
| Four-Lane Collectors or Locals with ADT <10,000 | 25-30 | 10-12 (d) | 7-10 | 9 (b) | <10,000 | WOL 14-16 or BL 5-6 |
| | 35-40 | 11-12 | 8-10 | 9 (b) | <10,000 | BL 5-6 |
| | over 40 | 11-12 | 10 | 9 (b) | <10,000 | BL 6 |
| Four-Lane Collectors or Locals with ADT >10,000 | 30-40 | 11-12 | 10 | 9 | >10,000 | BL 6 or PS 8 or SUP |
| | over 40 | 11-12 | 10 | 9 | >10,000 | BL 6 or PS 8 or SUP |
| Six-Lane Collectors or Arterials | | 12 | (e) | 9 | Not Allowed | SUP |

Exempt Rules

(SL = shared lane; BL = bicycle lane; WOL = wide outside lane; PS = paved shoulder; SUP = shared use path)

Engineering judgment should be used to choose a lane-width, on-road bicycle facility, or shoulder width dimension other than the widths indicated in the chart. Factors to consider include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way constraints, vehicle turn lane configuration, sight distance, sight lines, bus routes, other nonmotorized uses, functional classification, or other factors. Dimensions less than those indicated in the chart require a variance in accordance with parts 8820.3300 and 8820.3400.

(a) A road may be reconditioned under this part if present traffic volumes are less than 15,000 ADT.

(b) When ADT is less than 5,000, seven-ton axle load structural design strength is allowable.

(c) No parking is allowed for six-lane collectors or arterials.

(d) When creating a multimodal design with a combination of vehicle lane, parking lane, and bikeway lane widths, if a vehicle lane width of less than 11 feet is used, the parking and bikeway lanes shall be at least one foot wider than the minimum widths. Engineering judgment should be used to choose a vehicle lane width of less than 11 feet. Additional factors to consider include the types of vehicles (buses, trucks, etc.), peak hour counts, turning movements, population/land use, crash history/analysis, terrain limitations, bicycle traffic, pedestrian traffic, other nonmotorized uses, and snow storage.

(e) In determining the parking lane width, the roadway ADT and the vehicle mix shall be taken into consideration for residential, commercial and/or industrial areas, or for a mixed use thereof.

A minimum curb reaction of one foot shall be provided unless on-street parking, a bicycle facility, or a wide outside lane are provided adjacent to the curb. The dimensions for wide outside lanes include the curb reaction distance. When a raised median is included in the design of the two-way roadway, a one-foot reaction distance to the median is required on either side of the median. Minimum median width is four feet.

For ADT less than 150, the widths of bridges to remain must be at least the sum of the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must be at least the sum of the lanes plus one-half the sum of the shoulders, parking lane, and curb reaction distance.

RENUMBERING INSTRUCTION. The revisor of statutes shall renumber the provisions of *Minnesota Rules*, part 8820.0100, listed in column A to the references listed in column B. The revisor shall also make necessary cross-reference changes in *Minnesota Rules* consistent with the renumbering.

| <u>Column A</u> | <u>Column B</u> |
|---------------------------|---------------------------|
| <u>Old Subpart Number</u> | <u>New Subpart Number</u> |
| 1 | 1 |
| 1a | 3 |
| 2 | 4 |
| 2a | 5 |
| 2c | 7 |
| 2e | 8 |
| 2f | 9 |
| 3 | 10 |
| 3a | 11 |
| 3b | 12 |
| 3c | 13 |
| 4 | 14 |
| 5 | 15 |
| 6 | 16 |
| 7 | 17 |
| 8 | 18 |
| 9a | 19 |

Exempt Rules

| | |
|------------|-----------|
| <u>9b</u> | <u>20</u> |
| <u>10</u> | <u>21</u> |
| <u>10a</u> | <u>23</u> |
| <u>11</u> | <u>24</u> |
| <u>12</u> | <u>25</u> |
| <u>12a</u> | <u>26</u> |
| <u>13</u> | <u>27</u> |
| <u>13a</u> | <u>29</u> |
| <u>13b</u> | <u>30</u> |
| <u>13c</u> | <u>31</u> |
| <u>14</u> | <u>32</u> |
| <u>14a</u> | <u>35</u> |
| <u>15</u> | <u>36</u> |
| <u>15c</u> | <u>37</u> |
| <u>15d</u> | <u>38</u> |
| <u>16</u> | <u>39</u> |
| <u>17</u> | <u>40</u> |
| <u>17b</u> | <u>41</u> |
| <u>17c</u> | <u>42</u> |
| <u>20</u> | <u>43</u> |
| <u>21</u> | <u>44</u> |
| <u>22</u> | <u>45</u> |
| <u>23</u> | <u>2</u> |
| <u>24</u> | <u>6</u> |
| <u>25</u> | <u>22</u> |
| <u>26</u> | <u>28</u> |
| <u>27</u> | <u>33</u> |
| <u>28</u> | <u>34</u> |
| <u>29</u> | <u>46</u> |



Minnesota Department of Transportation

Transportation Building

395 John Ireland Boulevard
Saint Paul, Minnesota 55155-1899

November 27, 2012

The Honorable James E. LaFave
Administrative Law Judge
Office of Administrative Hearings
600 North Robert Street
P.O. Box 64620
Saint Paul, Minnesota 55164-0620

Re: In the Matter of the Exempt Adopted Rules of the Department of Transportation, Chapter 8820, Relating to Local State-Aid Route Standards Financing: Minnesota Rules, Chapter 8820 OAH Docket No. 60-3000-23088-1; Governor's Tracking No. AR 2001

Dear Judge LaFave,

On September 13, 2012, the above-entitled rules were approved by the Office of Administrative Hearings. (See enclosed OAH approval documents.) The rules have subsequently been published in the State Register and were adopted on November 5, 2012.

After the publication of the rules, the staff at MnDOT noted an inadvertent omission of a number from the design chart in part 8820.9941. In the design chart in part 8820.9941, the 6 foot lane width number is missing for bike lanes with Average Daily Traffic (ADT) 2,000-5,000 with design speeds over 40 mph.

To illustrate the omission, I have enclosed the rule documents that were submitted to the OAH for review on August 30, 2012. I have highlighted in the documents the rule part where the 6 foot reference was omitted. In the enclosed OAH rule submission, please see the highlighted section on page 9, line 9.27 of the 8/21/12 rules. In the last column on line 9.27 it only reads "BL." (BL stands for Bike Lane.) The rule should read "BL 6."

The 6 foot reference was unintentionally dropped from the department draft when the rules were submitted to the Revisor's office for formatting and therefore was not included in the Revisor's formatted version. However, up until this point in the process, prior department rule drafts did contain the 6 foot reference in part 8820.9941. These prior rule drafts were reviewed by the statutorily mandated Rules Advisory Committee. (See para. 4 of the enclosed Proposed Order regarding the advisory committee.) There were no comments from the Rules Advisory Committee concerning the 6 foot bike lane width dimension and therefore the requirement met the approval of the Rules Advisory Committee.

In addition, the department's Proposed Order contemplates the use of the 6 foot width for the bike lane for this particular traffic and speed levels. Please see paragraph 5 of the enclosed Proposed Order. Paragraph 5 refers to the MnDOT Bikeway Facility Design Manual, including Table 4-1 which was

attached to the Proposed Order. The standards for the rule are based on the information in Table 4-1. Table 4-1 shows a 6 foot Bike Lane in the 2,000-5,000 column for speeds over 40 mph. (See highlighted areas in enclosed Table 4-1.)

The department would like to correct the omission of the 6 foot reference by publishing an Errata in the State Register which would include the 6 foot width dimension in the design chart of part 8820.9941. Based upon the prior review of the rules by the Rules Advisory Committee and the Office of Administrative Hearings, the department believes that this corrective action is reasonable.

Please let me know if the proposed publication of the Errata in the State Register is an acceptable corrective measure or if you need any additional information in this matter. I can be reached at 651-366-3066 or laura.nehl-trueman@state.mn.us

Sincerely,



Laura Nehl-Trueman
MnDOT Staff Attorney/Rules Coordinator
395 John Ireland Blvd. MS 130
St. Paul, MN 55155

Enclosures



Minnesota Department of Transportation

Transportation Building
395 John Ireland Boulevard
Saint Paul, Minnesota 55155-1899

August 30, 2012

The Honorable Raymond R. Krause
Chief Administrative Law Judge
Office of Administrative Hearings
600 North Robert Street
P.O. Box 64620
Saint Paul, Minnesota 55164-0620

Re: In the Matter of the Exempt Adopted Rules of the Department of Transportation, Chapter 8820, Relating to Local State-Aid Route Standards; Financing, Request for Review and Approval of Exempt Rules Under Minnesota Statutes, Section 14.386; Governor's Tracking #AR 2001

Dear Chief Judge Krause:

The Minnesota Department of Transportation proposes to adopt the above-named exempt rules governing Local State-Aid Route Standards: Financing, Chapter 8820. The Department requests that the Office of Administrative Hearings review and approve the rules under Minnesota Statutes, section 14.386;

Enclosed for your review are the documents required by OAH Rules, part 1400.2400, subpart 2:

- (1) The rules with Revisor's approval.
- (2) A proposed Order Adopting Rules.

If you have questions about the enclosed documents or the proposed exempt rules, please contact me at 651-366-3066.

After completing your review, please send any correspondence to me at the following address:

Laura Nehl-Trueman
Minnesota Department of Transportation
395 John Ireland Blvd. MS 130
St. Paul, MN 55155

Yours very truly,

A handwritten signature in cursive script, appearing to read 'Laura Nehl-Trueman'.

Laura Nehl-Trueman
MnDOT Staff Attorney/Rules Coordinator



Minnesota Department of Transportation

395 John Ireland Boulevard
Saint Paul, MN 55155

Memo

TO: Thomas K. Sorel
Commissioner

FROM: Laura Nehl-Trueman *LNT*
MnDOT Rule Coordinator
Office of Chief Counsel

DATE: August 27, 2012

SUBJECT: For review and approval: In the Matter of the Exempt Adopted Rules of the Department of Transportation, Chapter 8820, Relating to Local State-Aid Route Standards; Financing

Attached for your review and approval is a certified copy of the above-entitled rules and the Proposed Order Adopting Exempt Rules.

As the proposed Order Adopting Exempt Rules provides, the department was given legislative authority to adopt the State Aid rules using the Exempt rulemaking process under Minnesota Statutes, section 14.386. (Laws of Minnesota 2012, chapter 287, article three, section 12.)

As required by Minnesota Statutes, sections 162.02, subd. 2, and 162.09, subd. 2, the department has sought the advice of the Rules Advisory Committee in the development of the rule amendments. At this time, the Division of State Aid for Local Transportation is ready to proceed with the submittal of the rules to the Office of Administrative Hearings for review and approval.

Please review the attached rules and Order Adopting Exempt Rules. If acceptable, please sign on the signature line below.

If you have any questions regarding the rule amendments or the Order Adopting Exempt Rules, please contact me at 651-366-3066 or Paul Stine at 651-366-3830.

Approved for Submission to the Office of Administrative Hearings:

Date 8-31-12

Thomas K. Sorel, Commissioner

An Equal Opportunity Employer



Minnesota Department of Transportation

PROPOSED ORDER ADOPTING EXEMPT RULES

Adoption of Exempt Rules Governing Local State-Aid Route Standards; Financing, Minnesota Rules, chapter 8820.

BACKGROUND INFORMATION

1. The Minnesota Department of Transportation has complied with all notice and procedural requirements for adopting exempt rules in Minnesota Statutes, chapter 14, specifically Minnesota Statutes, 14.386, Minnesota Rules, chapter 1400, and other applicable law.
2. The authority to adopt exempt rules is contained in Laws of Minnesota 2012, chapter 287, article three, section 12. Section 12 amends Minnesota Statutes, section 162.155 by adding paragraph (c) as follows:

“(c) The rules adopted by the commissioner under this section, and sections 162.02; 162.07, subdivision 2; 162.09; and 162.13, subdivision 2, are exempt from the rulemaking provisions of chapter 14. The rules are subject to section 14.386, except that, notwithstanding paragraph (b) of that section, the rules continue in effect until repealed or superseded by other law or rule.” (Effective August 1, 2012)

The rule amendments in this rulemaking are adopted by the commissioner under Minnesota Statutes, sections 162.02, subdivision 2 and 162.09, subdivision 2.

3. Minnesota Rules, Chapter 8820 are being revised to include standards for on-road bicycle facility for state-aid routes. The standards will guide designers as they balance accommodation of all roadway users including commuters, shippers, emergency vehicle operators, bicyclists, pedestrians, transit carriers, and businesses.
4. Pursuant to Minnesota Statutes, sections 162.02, subdivision 2 (relating to counties), and 162.09, subdivision 2 (relating to cities), the rules are required to be developed with the advice of a Rules Advisory Committee. Members of the Committee are selected by the Association of Minnesota Counties, the Minnesota County Engineers Association, the League of Minnesota Cities, and the City Engineers Association of Minnesota and composed of members from each state highway construction districts.

As required, MnDOT's State Aid for Local Transportation Division met with the State Aid Rules Advisory Committee to seek their advice on the draft rule standards. The Department also worked with committees of the City Engineers Association of Minnesota and the Minnesota County Engineers Association as well as bicycle advocates to facilitate the development of the rules regarding on-road bicycle facility design standards. In December, 2010 and November 2011, draft standards were emailed for review and comment to all county engineers and city engineers of cities

over 5,000 population, as well as several MnDOT staff, bicycling advocacy representatives, and other interested individuals. The State Aid Rules Advisory Committee met on March 25, 2012, to review, discuss, and revise the draft standards, then advised that MnDOT should act to adopt the rules as proposed.

5. The MnDOT Bikeway Facility Design Manual (2007)

(<http://www.dot.state.mn.us/bike/designmanual.html>) was by and large the guiding document for this rulemaking; in particular Table 4-1 and Table 4-2 (attached). Current standards in state aid rules differentiate roadway design standards by rural vs. urban, and additionally by new/reconstruction vs. reconditioning (improvement of pavement structure with no significant change to existing cross-section or alignment).

a) RURAL

- For new/reconstruction rural bicycle facilitation, the existing rural design tables are amended slightly, specifically requiring a minimum 4' shoulder width; also including bridge and underpass requirements.
- For rural reconditioning project with bicycle facilitation, the primary revision is to recommend to designer "the current MnDOT Bikeway Facility Design Manual".

b) URBAN: For urban bicycle facilitation, new rule parts were created:

- 8820.9941 MINIMUM DESIGN STANDARDS: ON-ROAD BICYCLE FACILITY FOR URBAN; NEW OR RECONSTRUCTION PROJECTS.
- 8820.9951 MINIMUM DESIGN STANDARDS, ON-ROAD BICYCLE FACILITIES FOR URBAN; RECONDITIONING PROJECTS.

The standard within proposed part 8820.9941 for urban new and reconstructed roadways is similar to part 8820.9936, Minimum Design Standards, Urban; New or Reconstruction Projects, in that the row and column headers are similar but with two additional columns for bikeway design and two additional speed range rows. The additions are based on, and similar to, Table 4-1 of the MnDOT Bikeway Facility Design Manual. The lane widths include several widths narrower than allowed in part 8820.9936, which is reasonable due to lower design speeds, maneuvering within lanes when adjacent lanes are not occupied (particularly in the case of bicycle lanes adjacent to parking lanes), and the limitation of available overall road width. A notable break from part 8820.9936 standards is the minimum lane width of 10' where design speed is 25 to 30 mph, considering legal vehicles may be 8.5' wide not including side mirrors, thereby leaving 9" either side for trucks to wander.

The standards in part 8820.9951 for urban reconditioning are similar to part 8820.9946, Minimum Design Standards, Urban; Reconditioning Projects, in that the row and column headers are similar except with two additional columns for bikeway design and two additional speed range rows. The additions are based on, and similar to, Table 4-1 of the MnDOT Bikeway Facility Design Manual. The lane widths include several widths narrower than allowed in part 8820.9946, which is reasonable due to lower design speeds, maneuvering within lanes when adjacent lanes are not occupied (particularly in the case of bicycle lanes adjacent to parking lanes), and the limitation of available overall road width. A notable break

from part 8820.9946 standards is the minimum lane width of 10' where design speed is 25 to 30 mph, considering legal vehicles may be 8.5' wide not including side mirrors, thereby leaving 9" either side for trucks to wander.

6. In the development of the proposed lane-width design criteria for bicycle accommodation, the following vehicle dimensions and other practical items were considered:

a) Bicyclists:

- i. Bicycle per MNDOT Bikeway Facility Design Manual, Table 3-1 (<http://www.dot.state.mn.us/bike/designmanual.html>) = 2.00' wide
- ii. Bicycle with trailer per MNDOT Bikeway Facility Design Manual, Table 3-1 = 3.70' wide

b) Large trucks (legal): Minnesota Statutes, section 169.80

(<http://www.dot.state.mn.us/bike/designmanual.html>) = (8.50') wide exclusive of rearview mirrors or load securement devices

c) American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets, 6th Edition. (Green Book) (2011)

https://bookstore.transportation.org/collection_detail.aspx?ID=110

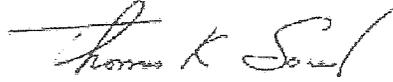
- i. Passenger car = 7' wide (page 2-4)
- ii. Single Unit truck = 8' wide (page 2-4)
- iii. Parking Lane Width: (Collectors page 6-13 ; Arterials page 7-34):
 1. Urban Collectors:
 - a. Residential = 7' to 8' wide
 - b. Commercial/Industrial = 8' to 11' wide
 2. Urban Arterials: 7' to 10' wide for passenger cars
- iv. Distance between travel lane and curb face (Collectors page 6-15 ; Arterials page 7-30 and 4-19):
 1. Collectors = 1' to 2'
 2. Arterials Low Speed (less than or equal to 45 mph) = 1' to 2'
 3. Arterials High Speed (greater than or equal to 50 mph) = not recommended but 1' to 2' if necessary

7. The sentences in standards parts 8820.9920, 8820.9926, 8820.9936, 8820.9946, and 8820.9981 which refer designers to the Minnesota State Aid Roundabout Guide has been removed from the rule because the guide will be incorporated into the department State Aid Manual which is a more appropriate venue for this particular design guide.

ORDER

The above-named rules, in the Revisor's form dated August, 21, 2012 are adopted under my authority in Minnesota Statutes, sections, 162.02, subdivision 2, 162.09, subdivision 2, and 162.155.

8-31-12
Date



Thomas K. Sorel, Commissioner
Department of Transportation

| Table 4-1: Bikeway Design Selection for Urban (Curb and Gutter) Cross Section – English Units | | | | | | | |
|--|--------------------|--------------|-----------|-------------|--------------|------------------------|------------------------|
| Motor Vehicle ADT (2 Lane) | | <500 | 500-1,000 | 1,000-2,000 | 2,000-5,000 | 5,000-10,000 | >10,000 |
| Motor Vehicle ADT (4 Lane) | | N/A | N/A | 2,000-4,000 | 4,000-10,000 | 10,000-20,000 | >20,000 |
| Motor Vehicle Speed | 25 mph | SL | WOL | WOL | WOL | BL = 5 ft | Not Applicable |
| | 30 mph | SL with sign | WOL | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft |
| | 35 - 40 mph | WOL | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft | BL = 6 ft or PS = 8 ft |
| | 45 mph and greater | BL = 5 ft | BL = 5 ft | BL = 6 ft | BL = 6 ft | BL = 6 ft or PS = 8 ft | SUP or PS = 10 ft |
| BL = Bicycle Lane, SL = Shared Lane, WOL = Wide Outside Lane, SUP = Shared-Use Path, PS = Paved Shoulder | | | | | | | |

| Table 4-2: Bikeway Design Selection for Rural (Shoulder and Ditch) Cross Section – English Units | | | | | | | |
|---|--------------------|------------------|-------------------|-------------------|--------------|---------------|-------------------|
| Motor Vehicle ADT (2 Lane) | | <500 | 500-1,000 | 1,000-2,000 | 2,000-5,000 | 5,000-10,000 | >10,000 |
| Motor Vehicle ADT (4 Lane) | | N/A | N/A | 2,000-4,000 | 4,000-10,000 | 10,000-20,000 | >20,000 |
| Motor Vehicle Speed | 25 mph | PS = 4 ft* or SL | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 4 ft* | PS = 4 ft* | Not Applicable |
| | 30 mph | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 4 ft* | PS = 4 ft* | PS = 6 ft | PS = 6 ft |
| | 35 - 40 mph | PS = 4 ft* or SL | PS = 4 ft* or WOL | PS = 6 ft | PS = 6 ft | PS = 6 ft | PS = 8 ft |
| | 45 mph and greater | PS = 4 ft* | PS = 4 ft* | PS = 6 ft | PS = 8 ft | PS = 8 ft | SUP or PS = 10 ft |
| * See discussion in Section 4-3.1 regarding rumble strips on 4-foot shoulders. PS = Paved Shoulder, SL = Shared Lane, SUP = Shared-Use Path, WOL = Wide Outside Lane | | | | | | | |

Refer to Section 4-2.1 for additional geometric and operation factors.

1.1 Department of Transportation
1.2 Exempt Adopted Rules Relating to Local State-Aid Route Standards; Financing
1.3 8820.0100 DEFINITIONS.

1.4 [For text of subps 1 to 22, see M.R.]

1.5 Subp. 23. AASHTO. "AASHTO" means the American Association of State
1.6 Highway and Transportation Officials, 444 North Capitol Street Northwest, Suite 249,
1.7 Washington, D.C. 20001.

1.8 Subp. 24. Bicycle lane. "Bicycle lane" has the meaning given it in Minnesota
1.9 Statutes, section 169.011, subdivision 5.

1.10 Subp. 25. Level of service. "Level of service" has the meaning given in the Highway
1.11 Capacity Manual, Special Report 209, as revised and published by the Transportation
1.12 Research Board of the National Research Council, Washington, D.C. The definition is
1.13 incorporated by reference, is not subject to frequent change, and is located at the Minnesota
1.14 State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.

1.15 Subp. 26. Paved shoulder. "Paved shoulder" means a part of a highway which
1.16 is contiguous to the regularly traveled portion of the highway and is on the same level
1.17 as the highway.

1.18 Subp. 27. Shared lane. "Shared lane" means any roadway or travel lane upon which
1.19 a separate bicycle lane is not designated and which bicycles may legally use, whether or
1.20 not such facility is specifically designated as a bikeway or bicycle route.

1.21 Subp. 28. Shared use path. "Shared use path" means a bikeway that is physically
1.22 separated from a roadway or shoulder by the use of an open space buffer or physical
1.23 barrier. A shared use path can also be used by a variety of nonmotorized users such as
1.24 pedestrians, joggers, skaters, and wheelchair users.

2.1 Subp. 29. Wide outside lane. "Wide outside lane" means outside lanes which
 2.2 accommodate bicycles and motorists in the same lane with a lane width of 14 to 16 feet.
 2.3 For accommodating bicyclists, the wide outside lane dimension shall be to the face of curb.

2.4 **8820.9920 MINIMUM DESIGN STANDARDS; RURAL AND SUBURBAN**
 2.5 **UNDIVIDED; NEW OR RECONSTRUCTION PROJECTS.**

2.6 When the road authority has determined that the roadway will be specifically
 2.7 designed to include on-road bicycle facilities, and only if the roadway surface is paved,
 2.8 the appropriate design criteria in the current MnDOT Bikeway Facility Design Manual are
 2.9 recommended for design purposes.

2.10 New or reconstruction projects for rural and suburban undivided roadways must meet
 2.11 or exceed the minimum dimensions indicated in the following design chart.

| 2.12 | Projected Lane | Shoulder | In- | Clear | Design | Sur- | Structural | Bridges |
|------|----------------|----------|-------|----------|--------|--------|------------|-----------|
| 2.13 | ADT | Width | slope | Zone (c) | Speed | facing | Design | to |
| 2.14 | (a) | | (b) | | (d) | | Strength | Remain |
| 2.15 | | | | | | | | (e) Width |
| 2.16 | | | | | | | | Curb to |
| 2.17 | | | | | | | | Curb |
| 2.18 | | | rise: | | | | | |
| 2.19 | | feet | run | feet | mph | | tons | feet |
| 2.20 | 0-49 | 11 | 1:3 | 7 | 30-60 | Agg. | | 22 |
| 2.21 | 50-149 | 11 | 1:4 | 9 | 40-60 | Agg. | | 22 |
| 2.22 | | | | | | | 7-ton/ | |
| 2.23 | | | | | | Agg./ | 10-ton | |
| 2.24 | 150-299 | 12 | 1:4 | 15 | 40-60 | Paved | Staged (g) | 28 |
| 2.25 | | | | | | | 10-ton | |
| 2.26 | 300-749 | 12 | 1:4 | 15 | 40-60 | Paved | Staged (g) | 28 |
| 2.27 | | | | | | | 10-ton | |
| 2.28 | 750-1499 | 12 | 1:4 | 25 | 40-60 | Paved | Staged (g) | 28 |
| 2.29 | 1500 and | | | | | | | |
| 2.30 | over | 12 | 1:4 | 30 | 40-60 | Paved | 10 | 30 |

3.1 Engineering judgment ~~may~~ should be used to choose a lane-width, on-road bicycle
3.2 facility, or shoulder-width dimension other than the widths indicated in the chart for
3.3 roadways. Factors to consider ~~may be~~ include safety, speed, population/land use,
3.4 benefit/cost analysis, traffic mix, peak hourly traffic, farm equipment, environmental
3.5 impacts, terrain limitations, bicycle traffic, pedestrian traffic, on-street parking, intersection
3.6 and driveway spacing, rights-of-way constraints, vehicle turn lane configuration, sight
3.7 distance, sight lines, bus routes, other nonmotorized uses, functional classification, or
3.8 other factors. ~~Widths~~ Dimensions less than those indicated in the chart require a variance
3.9 in accordance with parts 8820.3300 and 8820.3400.

3.10 For rural divided roadways, use the geometric design standards of the Mn/DOT
3.11 Road Design Manual, with a minimum ten tons structural design and minimum 40 mph
3.12 design speed.

3.13 (a) Use the existing traffic for highways not on the state-aid system.

3.14 (b) Applies to slope within the clear zone only.

3.15 (c) Culverts with less than 30-inch vertical height allowed without protection in
3.16 the clear zone.

3.17 Guardrail is required to be installed at all bridges where the design speed exceeds
3.18 40 mph, and either the existing ADT exceeds 400 or the bridge clear width is less than
3.19 the sum of the lane and shoulder widths.

3.20 Mailbox supports must be in accordance with chapter 8818.

3.21 For roadways in suburban areas as defined in part 8820.0100, the clear zone may be
3.22 reduced to a width of ten feet for projected ADT under 1,000 and to 20 feet for projected
3.23 ADT of 1,000 or over. Wherever the legal posted speed limit is 40 mph or less, the clear
3.24 zone may be reduced to a width of ten feet.

3.25 (d) Subject to terrain. In suburban areas, the minimum design speed may be equal to
3.26 the current legal posted speed where the legal posted speed is 30 mph or greater.

4.1 (e) Inventory rating of H 15 is required. A bridge narrower than these widths may
4.2 remain in place if the bridge is not deficient structurally or hydraulically.

4.3 (f) Shoulders are required to be a minimum width of eight feet for highways classified
4.4 as minor arterials and principal arterials with greater than 1,500 ADT projected, at least
4.5 two feet of which must be paved. If the roadway is designated as a bicycle facility by the
4.6 road authority, at least four feet of the shoulder shall be paved.

4.7 (g) Except within municipal corporate limits, ten-ton staged structural design must be
4.8 able to carry ten-ton axle loads except during spring load-restriction periods, or year-round
4.9 if needed for system continuity. Roadbed width must accommodate ultimate ten-ton
4.10 pavement overlay thickness and ultimate 1:4 sideslope. Within municipal corporate limits,
4.11 minimum structural design must support nine-ton axle strength.

4.12 Approach sideslopes must be 1:4 or flatter when the ADT exceeds 400.

4.13 HS 25 loading with AASHTO Standard Specifications or HL-93 loading with load
4.14 and resistance factor design (LRFD) is required for new or reconstructed bridges. HS 18
4.15 loading is required for all rehabilitated bridges. The curb-to-curb minimum width for new
4.16 or reconstructed bridges must be no less than either the minimum required lane plus
4.17 shoulder widths or the proposed lane plus shoulder widths, whichever is greater, but in no
4.18 case less than the minimum lane widths plus four feet, and in no case less than required
4.19 per Minnesota Statutes, section 165.04.

4.20 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
4.21 ~~State Aid Roundabout Guide are recommended.~~

4.22 Vehicular roadway bridge and underpass structures when two-way bicycle traffic is
4.23 accommodated: on bridge or underpass sidewalks, the sidewalk clear width shall be no
4.24 less than eight feet, but preferably ten feet. Whenever practicable, the shoulder/clear zone
4.25 of an off-road shared use path should be carried across bridges and through underpasses
4.26 and the minimum structure clear width must be 12 feet. When the full width of the
4.27 approach shared use path (surface width plus shoulder/clear zone) is greater than the

5.1 proposed clear width of the structure, then lead-in bicycle safety railing is required at
 5.2 each end of the bridge or underpass. As an alternative to lead-in bicycle safety railing,
 5.3 the surface width of the approach shared use path may be narrowed at a 1:50 taper while
 5.4 maintaining minimum surface width and shoulder/clear zone through the structure.

5.5 **8820.9926 MINIMUM DESIGN STANDARDS: RURAL AND SUBURBAN**
 5.6 **UNDIVIDED; RECONDITIONING PROJECTS.**

5.7 Subpart 1. **Minimum reconditioning standards.** Reconditioning projects for rural
 5.8 or suburban undivided roadways must meet or exceed the minimum dimensions indicated
 5.9 in the following design chart. See part 8820.0100, subpart 13b, for the description of
 5.10 activities allowed.

| 5.11 Existing ADT | 5.12 Statutory or 5.13 Regulatory Posted Speed | Lane Width (Paved) | Combined Lane (Paved) and Shoulder Width |
|-------------------|--|--------------------|--|
| 5.14 1-749 | Under 50 mph | 10 feet | 11 feet |
| 5.15 1-749 | 50 mph or over | 10 feet | 12 feet |
| 5.16 750 and over | Under 50 mph | 10 feet | 12 feet |
| 5.17 750 and over | 50 mph & over | 11 feet | 14 feet |

5.18 When the road authority has determined that the roadway will be specifically
 5.19 designed to include on-road bicycle facilities, and only if the roadway surface is paved,
 5.20 the appropriate design criteria in the current MnDOT Bikeway Facility Design Manual are
 5.21 recommended for design purposes.

5.22 Engineering judgment may should be used to choose a lane-width, on-road bicycle
 5.23 facility, or shoulder width dimension other than the widths indicated in the chart for
 5.24 roadways. Factors to consider include safety, speed, population/land use, benefit/cost
 5.25 analysis, traffic mix, peak hourly traffic, farm equipment, environmental impacts, terrain
 5.26 limitations; bicycle traffic, pedestrian traffic, on-street parking, intersection and driveway
 5.27 spacing, rights-of-way constraints, vehicle turn lane configuration, sight distance, sight
 5.28 lines, bus routes, other nonmotorized uses, functional classification, or other factors.

6.1 ~~Widths~~ Dimensions less than those indicated in the chart require a variance in accordance
6.2 with parts 8820.3300 and 8820.3400.

6.3 Widths of bridges to remain in place must equal roadway pavement width. Bridges
6.4 narrower than these widths may remain in place provided that the bridge does not qualify
6.5 for federal-aid bridge funds. H 15 inventory rating is required.

6.6 Any highway that was previously built to state-aid or state standards, that was granted
6.7 a variance to standards in effect at the time of construction or reconstruction, or that is a
6.8 trunk highway turnback, may be reconditioned.

6.9 The proposed structural design strength must ~~be~~ accommodate a minimum of seven
6.10 tons per axle.

6.11 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
6.12 ~~State Aid Roundabout Guide are recommended.~~

6.13 Subp. 2. [Repealed, 23 SR 1455]

6.14 **8820.9936 MINIMUM DESIGN STANDARDS, URBAN; NEW OR**
6.15 **RECONSTRUCTION PROJECTS.**

6.16 New or reconstruction projects for urban roadways must meet or exceed the minimum
6.17 dimensions indicated in the following design chart.

| 6.18 Functional 6.19 Classification and 6.20 Projected Traffic 6.21 Volume | Design Speed mph | Lane Width (a) feet | Curb Reaction Distance (e) feet | Parking Lane Width feet |
|---|---------------------|---------------------------|---|-------------------------------|
| 6.23 Collectors or Locals 6.24 with ADT < 10000 | 30-40 | (b) 11 | 2 | 8 |
| 6.25 | over 40 | 12 | 2 | 10 |
| 6.26 Collectors or Locals 6.27 with ADT ≥ 10000 and 6.28 Arterials | 30-40 | (b) 11 | (c) 4 | 10 |
| 6.29 | over 40 | 12 | (c) 4 | (d) 10 |

7.1 Engineering judgment may be used to choose a lane-width dimension other than the
7.2 widths indicated in the chart for roadways. Factors to consider ~~may be~~ include safety,
7.3 speed, population/land use, benefit/cost analysis, traffic mix, peak hourly traffic, farm
7.4 equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic,
7.5 other nonmotorized uses, functional classification, or other factors. Widths less than
7.6 those indicated in the chart require a variance in accordance with parts 8820.3300 and
7.7 8820.3400.

7.8 (a) One-way turn lanes must be at least ten feet wide, except 11 feet is required if
7.9 the design speed is over 40 mph.

7.10 (b) Wherever possible, lane widths of 12 feet, rather than 11 feet, should be used.

7.11 (c) May be reduced to two feet if there are four or more traffic lanes and on one-way
7.12 streets.

7.13 (d) No parking is allowed for six or more traffic lanes or when the posted speed
7.14 limit exceeds 45 mph.

7.15 (e) Curb reaction must be provided only where parking is not provided.

7.16 One-way streets must have at least two through-traffic lanes.

7.17 When a median is included in the design of the two-way roadway, a one-foot reaction
7.18 distance to the median is required on either side of the median. Minimum median width is
7.19 four feet.

7.20 Urban design roadways must be a minimum nine tons structural axle load design.

7.21 Roadways not on the state-aid system are not subject to the minimum structural
7.22 design strength requirements.

7.23 The minimum curb-to-curb width of a new bridge must be the required street width,
7.24 but in no case less than required per Minnesota Statutes, section 165.04. HS 25 loading
7.25 with AASHTO Standard Specifications or HL-93 loading with load and resistance factor
7.26 design (LRFD) is required for new or reconstructed bridges and a minimum of HS 18
7.27 loading is required for all rehabilitated bridges. Where the new bridge approach roadway

8.1 includes elements for the accommodation of pedestrians or bicycles, the new bridge
8.2 width must also provide for pedestrians or bicycles unless pedestrians or bicycles are
8.3 otherwise accommodated.

8.4 For ADT less than 150, the widths of bridges to remain must be at least the sum of
8.5 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must
8.6 be at least the sum of the lanes plus half the sum of the shoulders, parking lane, and
8.7 curb reaction distance.

8.8 Clearance of 1.5 feet from the face of the curb to fixed objects must be provided when
8.9 the posted speed is 40 to 45 mph. A ten-foot clear zone measured from the driving lane
8.10 must be provided when the posted speed exceeds 45 mph.

8.11 For volumes greater than 15,000 projected ADT, at least four through-traffic lanes
8.12 are required, unless a capacity analysis demonstrates that a different lane configuration
8.13 achieves level of service D or better.

8.14 ~~"Level of service" has the meaning given it in the Highway Capacity Manual, Special~~
8.15 ~~Report 209, as revised and published by the Transportation Research Board of the National~~
8.16 ~~Research Council, Washington, D.C. The definition is incorporated by reference, is not~~
8.17 ~~subject to frequent change, and is located at the Minnesota State Law Library, 25 Rev. Dr.~~
8.18 ~~Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.~~

8.19 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
8.20 ~~State Aid Roundabout Guide are recommended.~~

8.21 **8820.9941 MINIMUM DESIGN STANDARDS: ON-ROAD BICYCLE FACILITY**
8.22 **FOR URBAN; NEW OR RECONSTRUCTION PROJECTS.**

8.23 The bicycle facility design standard in this part applies when the road authority has
8.24 determined that the roadway will be specifically designed to include an on-road bicycle
8.25 facility and only if the roadway surface is paved.

8.26 New or reconstruction projects for urban roadways must meet or exceed the
8.27 dimensions indicated in the following design chart.

| | <u>Functional Classification and Projected Traffic Volume</u> | <u>Design Speed</u> | <u>Lane Width (a)</u> | <u>Curb Reaction Distance (d)</u> | <u>Parking Lane Width (f)</u> | <u>Bikeway Design Roadways with Two Travel Lanes Urban Curb and Gutter</u> | | <u>Bikeway Design Roadways with Four or more Travel Lanes Urban Curb and Gutter</u> |
|------|---|---------------------|-----------------------|-----------------------------------|-------------------------------|--|----------------------------|---|
| | | | | | | <u>(ADT)</u> | <u>(feet)</u> | |
| 9.1 | | | | | | | | |
| 9.2 | | | | | | | | |
| 9.3 | | | | | | | | |
| 9.4 | | | | | | | | |
| 9.5 | | | | | | | | |
| 9.6 | | | | | | | | |
| 9.7 | | | | | | | | |
| 9.8 | | | | | | | | |
| 9.9 | | <u>(mph)</u> | <u>(feet)</u> | <u>(feet)</u> | <u>(feet)</u> | <u>(ADT)</u> | <u>(feet)</u> | <u>(feet)</u> |
| 9.10 | <u>Collectors or Locals with ADT <2,000</u> | <u>25-30</u> | <u>10-12 (e)</u> | <u>2</u> | <u>7-10</u> | <u><500</u> | <u>SL</u> | <u>N/A</u> |
| 9.11 | | | | | | | | |
| 9.12 | | | | | | | | |
| 9.13 | | | | | | <u>500-2,000</u> | <u>WOL 14-16 or BL 5-6</u> | |
| 9.14 | | | | | | | | |
| 9.15 | | | | | | | | |
| 9.16 | | | | | | | | |
| 9.17 | | <u>35-40</u> | <u>11-12</u> | <u>2</u> | <u>8-10</u> | <u><500</u> | <u>SL</u> | <u>BL 5-6</u> |
| 9.18 | | | | | | | | |
| 9.19 | | | | | | | | |
| 9.20 | | | | | | <u>500-2,000</u> | <u>WOL 14-16 or BL 5-6</u> | |
| 9.21 | | <u>over 40</u> | <u>12</u> | <u>2</u> | <u>10</u> | | <u>BL 5-6</u> | <u>BL 5-6</u> |
| 9.22 | <u>Collectors or Locals With ADT 2,000-5,000</u> | <u>25-30</u> | <u>10-12 (e)</u> | <u>2</u> | <u>7-10</u> | | <u>WOL 14-16 or BL 5-6</u> | <u>WOL 14-16 or BL 5-6</u> |
| 9.23 | | | | | | | | |
| 9.24 | | | | | | | | |
| 9.25 | | | | | | | | |
| 9.26 | | <u>35-40</u> | <u>11-12</u> | <u>2</u> | <u>8-10</u> | | <u>BL 5-6</u> | <u>BL 5-6</u> |
| 9.27 | | <u>over 40</u> | <u>12</u> | <u>2</u> | <u>10</u> | | <u>BL-6</u> | <u>BL</u> |
| 9.28 | <u>Collectors or Locals with ADT 5,000-10,000</u> | <u>25-30</u> | <u>10-12 (e)</u> | <u>2</u> | <u>7-10</u> | | <u>BL 5-6</u> | <u>BL 5-6</u> |
| 9.29 | | | | | | | | |
| 9.30 | | | | | | | | |
| 9.31 | | | | | | | | |
| 9.32 | | | | | | | | |
| 9.33 | | <u>35-40</u> | <u>11-12</u> | <u>2</u> | <u>8-10</u> | | <u>BL 5-6</u> | <u>BL 5-6</u> |
| 9.34 | | <u>over 40</u> | <u>12</u> | <u>2</u> | <u>10</u> | | <u>BL 6 or PS 8 or SUP</u> | <u>BL 6 or PS 8 or SUP</u> |
| 9.35 | | | | | | | | |

| | | | | | | | | |
|------|---|----------------|--------------|--------------|---------------|--|--------------------------------|--------------------------------|
| 10.1 | <u>Collectors or Locals with ADT >10,000 and Arterials</u> | <u>30-40</u> | <u>11-12</u> | <u>4 (b)</u> | <u>10</u> | | <u>BL 6 or PS 8 or SUP</u> | <u>BL 6 or PS 8 or SUP</u> |
| 10.2 | | | | | | | | |
| 10.3 | | | | | | | | |
| 10.4 | | | | | | | | |
| 10.5 | | | | | | | | |
| 10.6 | | | | | | | | |
| 10.7 | | <u>over 40</u> | <u>12</u> | <u>4 (b)</u> | <u>10 (c)</u> | | <u>BL 6 or PS 8 or SUP</u> | <u>PS 8 or SUP</u> |
| 10.8 | | | | | | | | |

10.9 (SL = shared lane; BL = bicycle lane; WOL = wide outside lane; PS = paved shoulder;
 10.10 SUP = shared use path)

10.11 Engineering judgment should be used to choose a lane-width, on-road bicycle facility,
 10.12 or shoulder width dimension other than the widths indicated in the chart. Factors to
 10.13 consider include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak
 10.14 hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic,
 10.15 pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way
 10.16 constraints, vehicle turn lane configuration, sight distance, sight lines, bus routes, other
 10.17 nonmotorized uses, functional classification, or other factors. Dimensions less than
 10.18 those indicated in the chart require a variance in accordance with parts 8820.3300 and
 10.19 8820.3400.

10.20 (a) One-way turn lanes must be at least ten feet wide, except 11 feet is required if
 10.21 the design speed is over 40 mph.

10.22 (b) Curb reaction distance may be reduced to two feet if there are four or more traffic
 10.23 lanes and on one-way streets.

10.24 (c) No parking is allowed on streets with six or more traffic lanes or when the posted
 10.25 speed limit exceeds 45 mph.

10.26 (d) Curb reaction shall be provided unless on-street parking, a bicycle facility, or a
 10.27 wide outside lane are provided adjacent to the curb. The dimensions for wide outside
 10.28 lanes include the curb reaction distance.

11.1 (e) When creating a multimodal design with a combination of vehicle lane, parking
11.2 lane, and bikeway lane widths, if a vehicle lane width of less than 11 feet is used, the
11.3 parking and bikeway lanes shall be at least one foot wider than the minimum widths.
11.4 Engineering judgment should be used to choose a vehicle lane width of less than 11 feet.
11.5 Additional factors to consider include the types of vehicles (buses, trucks, etc.), peak hour
11.6 counts, turning movements, population/land use, crash history/analysis, terrain limitations,
11.7 bicycle traffic, pedestrian traffic, other nonmotorized uses, and snow storage.

11.8 (f) In determining the parking lane width, the roadway ADT and the vehicle mix
11.9 shall be taken into consideration for residential, commercial and/or industrial areas, or
11.10 for a mixed use thereof.

11.11 One-way streets must have at least two through-traffic lanes.

11.12 When a raised median is included in the design of the two-way roadway, a one-foot
11.13 reaction distance to the median is required on either side of the median. Minimum median
11.14 width is four feet.

11.15 Urban design roadways must accommodate a minimum nine tons structural axle
11.16 load design.

11.17 Roadways not on the state-aid system are not subject to the minimum structural
11.18 design strength requirements.

11.19 The minimum curb-to-curb width of a new bridge must be the required street width,
11.20 but in no case less than required per Minnesota Statutes, section 165.04. HS 25 loading
11.21 with AASHTO Standards Specifications or HL-93 loading with load and resistance factor
11.22 design (LRFD) is required for new or reconstructed bridges and a minimum of HS 18
11.23 loading is required for all rehabilitated bridges. When the new bridge approach roadway
11.24 includes elements for the accommodation of pedestrians or bicycles, the new bridge
11.25 width must also provide for pedestrians or bicycles unless pedestrians or bicycles are
11.26 otherwise accommodated.

12.1 For ADT less than 150, the widths of bridges to remain must be at least the sum of
12.2 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must
12.3 be at least the sum of the lanes plus one-half the sum of the shoulders, parking lane,
12.4 and curb reaction distance.

12.5 Clearance of 1.5 feet from the face of the curb to fixed objects must be provided when
12.6 the posted speed is 40 to 45 mph. A ten foot clear zone measured from the driving lane
12.7 must be provided when the posted speed exceeds 45 mph.

12.8 For volumes greater than 15,000 projected ADT, at least four through-traffic lanes
12.9 are required, unless a capacity analysis demonstrates that a different lane configuration
12.10 achieves level of service D or better.

12.11 Structures: Vehicular roadway bridge and underpass structures when two-way bicycle
12.12 traffic is accommodated: on bridge or underpass sidewalks, the sidewalk clear width
12.13 shall be no less than eight feet, but preferably ten feet. Whenever practicable, the
12.14 shoulder/clear zone of an off-road shared use path should be carried across bridges and
12.15 through underpasses. The minimum structure clear width must be 12 feet. When the
12.16 surface width plus shoulder/clear zone full width of the approach shared use path is greater
12.17 than the proposed clear width of the structure, a lead-in bicycle safety railing is required at
12.18 each end of the bridge or underpass. As an alternative to lead-in bicycle safety railing,
12.19 the surface width of the approach shared use path may be narrowed at a 1:50 taper while
12.20 maintaining minimum surface width and shoulder/clear zone through the structure.

12.21 **8820.9946 MINIMUM DESIGN STANDARDS, URBAN; RECONDITIONING**
12.22 **PROJECTS.**

12.23 Subpart 1. **Two-way streets.** In the following design chart, total width is from
12.24 face-to-face of curbs.

12.25 Reconditioning projects for two-way urban roadways must meet or exceed the
12.26 minimum dimensions indicated in the chart.

| | Number of Through Lanes, Functional Class, and Present Traffic Volume | Total Width with No Parking (feet) | Total Width with Parking on One Side (feet) | Total Width with Parking on Both Sides (feet) | Proposed Structural Design Strength (tons) |
|-------|---|---------------------------------------|--|--|---|
| 13.1 | 2-Lane Collector or Local with ADT < 10000 | 26 | 32 | 38 | (b) 9 |
| 13.2 | | | | | |
| 13.3 | | | | | |
| 13.4 | | | | | |
| 13.5 | | | | | |
| 13.6 | 4-Lane Collector or Local with ADT < 10000 | 44 | 52 | 60 | (b) 9 |
| 13.7 | | | | | |
| 13.8 | 2-Lane Collector or Local with ADT ≥ 10000 or 2-Lane Arterial (a) | 26 | 32 | 42 | 9 |
| 13.9 | | | | | |
| 13.10 | | | | | |
| 13.11 | 4-Lane Collector or Local with ADT ≥ 10000 or 4-Lane Arterial | 44 | 54 | 64 | 9 |
| 13.12 | | | | | |
| 13.13 | | | | | |
| 13.14 | 6-Lane Collectors or Arterials | 66 | (c) | (c) | 9 |
| 13.15 | | | | | |
| 13.16 | | | | | |
| 13.17 | | | | | |

13.18 Engineering judgment may be used to choose a lane-width or shoulder-width
 13.19 dimension other than the widths indicated in the chart for roadways. Factors to consider
 13.20 ~~may be include~~ safety, speed, population/land use, benefit/cost analysis, traffic mix, peak
 13.21 hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic,
 13.22 pedestrian traffic, other nonmotorized uses, functional classification, or other factors.
 13.23 Widths less than those indicated in the chart require a variance in accordance with parts
 13.24 8820.3300 and 8820.3400.

13.25 (a) Permissible for present traffic volumes less than 15,000 ADT.

13.26 (b) When ADT is less than 5,000, seven tons is allowable.

13.27 (c) No parking is allowed.

13.28 When a median is included in the design of the two-way roadway, a one-foot reaction
 13.29 distance to the median is required on either side of the median. Minimum median width is
 13.30 four feet.

14.1 For ADT less than 150, the widths of bridges to remain must be at least the sum of
 14.2 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must
 14.3 be at least the sum of the lanes plus half the sum of the shoulders, parking lane, and
 14.4 curb reaction distance.

14.5 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
 14.6 ~~State Aid Roundabout Guide are recommended.~~

14.7 Subp. 2. **One-way streets.** In the following design chart, total width is from
 14.8 face-to-face of curbs.

14.9 Reconditioning projects for one-way urban roadways must meet or exceed the
 14.10 minimum dimensions indicated in the chart.

| 14.11 14.12 14.13 14.14 14.15 | Number of Through Lanes and Functional Class | Present ADT | Total Width with No Parking (feet) | Total Width with Parking on One Side (feet) | Total Width with Parking on Both Sides (feet) | Proposed Structural Design Strength (tons) |
|--|--|-------------|---|--|--|--|
| 14.16 14.17 14.18 14.19 | 2-Lane Collector or Local with ADT < 10000 | < 5000 | 21 | 29 | 37 | 7 |
| 14.20 | | 5000-10000 | 23 | 31 | 39 | 9 |
| 14.21 14.22 14.23 14.24 14.25 14.26 | 2-Lane Collector or Local with ADT ≥ 10000 or 2-lane Arterial | < 15000 | 23 | 31 | 39 | 9 |
| 14.27 | | ≥ 15000 | 24 | 32 | 40 | 9 |
| 14.28 14.29 | 3-Lane Arterial or Collector | All | 34 | 42 | 50 | 9 |

14.30 For ADT less than 150, the widths of bridges to remain must be at least the sum of
 14.31 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must

15.1 be at least the sum of the lanes plus half the sum of the shoulders, parking lane, and
 15.2 curb reaction distance.

15.3 ~~For roundabout design, the design criteria of the current edition of the Minnesota~~
 15.4 ~~State Aid Roundabout Guide are recommended.~~

15.5 Subp. 3. **Exception.** Any street that was previously built to state-aid or state
 15.6 standards, that was granted a variance to standards in effect at the time of construction or
 15.7 reconstruction, or that is a trunk highway turnback, but does not meet current standards,
 15.8 may be reconditioned regardless of subparts 1 and 2.

15.9 **8820.9951 MINIMUM DESIGN STANDARDS, ON-ROAD BICYCLE FACILITIES**
 15.10 **FOR URBAN; RECONDITIONING PROJECTS.**

15.11 The bicycle facility design standard in this part applies when the road authority has
 15.12 determined that the roadway will be specifically designed to include an on-road bicycle
 15.13 facility, and only if the roadway surface is paved.

15.14 Reconditioning projects for urban roadways must meet or exceed the minimum
 15.15 dimensions indicated in the following design chart.

| 15.16 15.17 15.18 15.19 15.20 15.21 Number of Through Lanes, Functional Class, and Present Traffic Volume | 15.22 Design Speed | Lane Width | Parking Lane Width (e) | Proposed Structural Design Strength | Bikeway Design | |
|--|--------------------------|---------------|------------------------------|--|------------------|------------------------|
| | (mph) | (feet) | (feet) | (tons) | (ADT) | (feet) |
| 15.23 15.24 15.25 15.26 Two-Lane Collectors or Locals with ADT <10,000 | 25-30 | 10-12 (d) | 7-10 | 9 (b) | <1,000 | SL |
| 15.27 15.28 | | | | | 1,000-5,000 | WOL 14-16 or BL 5-6 |
| 15.29 15.30 | | | | | 5,000- 10,000 | BL 5-6 |

| | | | | | | | |
|-------|-----------------------|----------------|------------------|-------------|--------------|--------------------|-----------------------|
| 16.1 | | <u>35-40</u> | <u>11-12</u> | <u>8-10</u> | <u>9 (b)</u> | <u><500</u> | <u>SL or BL 5-6</u> |
| 16.2 | | | | | | <u>500-10,000</u> | <u>BL 5-6</u> |
| 16.3 | | <u>over 40</u> | <u>11-12</u> | <u>10</u> | <u>9 (b)</u> | <u><10,000</u> | <u>BL 5-6</u> |
| 16.4 | <u>Two-Lane</u> | <u>25-30</u> | <u>10-12 (d)</u> | <u>7-10</u> | <u>9</u> | <u>>10,000</u> | <u>BL 5-6</u> |
| 16.5 | <u>Collectors or</u> | | | | | | |
| 16.6 | <u>Locals With</u> | | | | | | |
| 16.7 | <u>ADT >10,000</u> | | | | | | |
| 16.8 | <u>or Two-Lane</u> | | | | | | |
| 16.9 | <u>Arterials (a)</u> | | | | | | |
| 16.10 | | <u>35-40</u> | <u>11-12</u> | <u>8-10</u> | <u>9</u> | <u>>10,000</u> | <u>BL 5-6 or PS 8</u> |
| 16.11 | | <u>over 40</u> | <u>11-12</u> | <u>10</u> | <u>9</u> | <u>>10,000</u> | <u>PS 8 or SUP</u> |
| 16.12 | <u>Four-Lane</u> | <u>25-30</u> | <u>10-12 (d)</u> | <u>7-10</u> | <u>9 (b)</u> | <u><10,000</u> | <u>WOL 14-16 or</u> |
| 16.13 | <u>Collectors or</u> | | | | | | <u>BL 5-6</u> |
| 16.14 | <u>Locals with</u> | | | | | | |
| 16.15 | <u>ADT <10,000</u> | | | | | | |
| 16.16 | | <u>35-40</u> | <u>11-12</u> | <u>8-10</u> | <u>9 (b)</u> | <u><10,000</u> | <u>BL 5-6</u> |
| 16.17 | | <u>over 40</u> | <u>11-12</u> | <u>10</u> | <u>9 (b)</u> | <u><10,000</u> | <u>BL 6</u> |
| 16.18 | <u>Four-Lane</u> | <u>30-40</u> | <u>11-12</u> | <u>10</u> | <u>9</u> | <u>>10,000</u> | <u>BL 6 or PS 8</u> |
| 16.19 | <u>Collectors or</u> | | | | | | <u>or SUP</u> |
| 16.20 | <u>Locals with</u> | | | | | | |
| 16.21 | <u>ADT >10,000</u> | | | | | | |
| 16.22 | | <u>over 40</u> | <u>11-12</u> | <u>10</u> | <u>9</u> | <u>>10,000</u> | <u>BL 6 or PS 8</u> |
| 16.23 | | | | | | | <u>or SUP</u> |
| 16.24 | <u>Six-Lane</u> | | <u>12</u> | <u>(c)</u> | <u>9</u> | <u>Not Allowed</u> | <u>SUP</u> |
| 16.25 | <u>Collectors or</u> | | | | | | |
| 16.26 | <u>Arterials</u> | | | | | | |

16.27 (SL = shared lane; BL = bicycle lane; WOL = wide outside lane; PS = paved shoulder;

16.28 SUP = shared use path)

16.29 Engineering judgment should be used to choose a lane-width, on-road bicycle facility,

16.30 or shoulder width dimension other than the widths indicated in the chart. Factors to

16.31 consider include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak

16.32 hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic,

16.33 pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way

17.1 constraints, vehicle turn lane configuration, sight distance, sight lines, bus routes, other
17.2 nonmotorized uses, functional classification, or other factors. Dimensions less than
17.3 those indicated in the chart require a variance in accordance with parts 8820.3300 and
17.4 8820.3400.

17.5 (a) A road may be reconditioned under this part if present traffic volumes are less
17.6 than 15,000 ADT.

17.7 (b) When ADT is less than 5,000, seven-ton axle load structural design strength is
17.8 allowable.

17.9 (c) No parking is allowed for six-lane collectors or arterials.

17.10 (d) When creating a multimodal design with a combination of vehicle lane, parking
17.11 lane, and bikeway lane widths, if a vehicle lane width of less than 11 feet is used, the
17.12 parking and bikeway lanes shall be at least one foot wider than the minimum widths.
17.13 Engineering judgment should be used to choose a vehicle lane width of less than 11 feet.
17.14 Additional factors to consider include the types of vehicles (buses, trucks, etc.), peak hour
17.15 counts, turning movements, population/land use, crash history/analysis, terrain limitations,
17.16 bicycle traffic, pedestrian traffic, other nonmotorized uses, and snow storage.

17.17 (e) In determining the parking lane width, the roadway ADT and the vehicle mix
17.18 shall be taken into consideration for residential, commercial and/or industrial areas, or
17.19 for a mixed use thereof.

17.20 A minimum curb reaction of one foot shall be provided unless on-street parking, a
17.21 bicycle facility, or a wide outside lane are provided adjacent to the curb. The dimensions
17.22 for wide outside lanes include the curb reaction distance. When a raised median is
17.23 included in the design of the two-way roadway, a one-foot reaction distance to the median
17.24 is required on either side of the median. Minimum median width is four feet.

17.25 For ADT less than 150, the widths of bridges to remain must be at least the sum of
17.26 the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must

18.1 be at least the sum of the lanes plus one-half the sum of the shoulders, parking lane,
 18.2 and curb reaction distance.

18.3 RENUMBERING INSTRUCTION. The revisor of statutes shall renumber the
 18.4 provisions of Minnesota Rules, part 8820.0100, listed in column A to the references listed
 18.5 in column B. The revisor shall also make necessary cross-reference changes in Minnesota
 18.6 Rules consistent with the renumbering.

| | <u>Column A</u> | <u>Column B</u> |
|-------|---------------------------|---------------------------|
| | <u>Old Subpart Number</u> | <u>New Subpart Number</u> |
| 18.9 | <u>1</u> | <u>1</u> |
| 18.10 | <u>1a</u> | <u>3</u> |
| 18.11 | <u>2</u> | <u>4</u> |
| 18.12 | <u>2a</u> | <u>5</u> |
| 18.13 | <u>2c</u> | <u>7</u> |
| 18.14 | <u>2e</u> | <u>8</u> |
| 18.15 | <u>2f</u> | <u>9</u> |
| 18.16 | <u>3</u> | <u>10</u> |
| 18.17 | <u>3a</u> | <u>11</u> |
| 18.18 | <u>3b</u> | <u>12</u> |
| 18.19 | <u>3c</u> | <u>13</u> |
| 18.20 | <u>4</u> | <u>14</u> |
| 18.21 | <u>5</u> | <u>15</u> |
| 18.22 | <u>6</u> | <u>16</u> |
| 18.23 | <u>7</u> | <u>17</u> |
| 18.24 | <u>8</u> | <u>18</u> |
| 18.25 | <u>9a</u> | <u>19</u> |
| 18.26 | <u>9b</u> | <u>20</u> |
| 18.27 | <u>10</u> | <u>21</u> |
| 18.28 | <u>10a</u> | <u>23</u> |
| 18.29 | <u>11</u> | <u>24</u> |

| | | |
|-------|------------|-----------|
| 19.1 | <u>12</u> | <u>25</u> |
| 19.2 | <u>12a</u> | <u>26</u> |
| 19.3 | <u>13</u> | <u>27</u> |
| 19.4 | <u>13a</u> | <u>29</u> |
| 19.5 | <u>13b</u> | <u>30</u> |
| 19.6 | <u>13c</u> | <u>31</u> |
| 19.7 | <u>14</u> | <u>32</u> |
| 19.8 | <u>14a</u> | <u>35</u> |
| 19.9 | <u>15</u> | <u>36</u> |
| 19.10 | <u>15c</u> | <u>37</u> |
| 19.11 | <u>15d</u> | <u>38</u> |
| 19.12 | <u>16</u> | <u>39</u> |
| 19.13 | <u>17</u> | <u>40</u> |
| 19.14 | <u>17b</u> | <u>41</u> |
| 19.15 | <u>17c</u> | <u>42</u> |
| 19.16 | <u>20</u> | <u>43</u> |
| 19.17 | <u>21</u> | <u>44</u> |
| 19.18 | <u>22</u> | <u>45</u> |
| 19.19 | <u>23</u> | <u>2</u> |
| 19.20 | <u>24</u> | <u>6</u> |
| 19.21 | <u>25</u> | <u>22</u> |
| 19.22 | <u>26</u> | <u>28</u> |
| 19.23 | <u>27</u> | <u>33</u> |
| 19.24 | <u>28</u> | <u>34</u> |
| 19.25 | <u>29</u> | <u>46</u> |

Office of the Revisor of Statutes

Administrative Rules



TITLE: Exempt Adopted Rules Relating to Local State-Aid Route Standards; Financing

AGENCY: Department of Transportation

MINNESOTA RULES: Chapter 8820

INCORPORATION BY REFERENCE:

Part 8820.0100, subpart 25: Highway Capacity Manual, Special Report 209, as revised and published by the Transportation Research Board of the National Research Council, Washington, D.C., located at the Minnesota State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.

The attached rules are approved as to form

A handwritten signature in black ink, appearing to read "Ryan S. Inman", written over a horizontal line.

Ryan S. Inman
Assistant Revisor



MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS

600 North Robert Street
Saint Paul, Minnesota 55101

Mailing Address:
P.O. Box 64620
St. Paul, Minnesota 55164-0620

December 12, 2012

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Laura Nehl-Trueman
MnDOT Staff Attorney/Rules Coordinator
MN Department of Transportation
395 John Ireland Boulevard
Mail Stop 100
St. Paul, MN 55155-1899

Re: *In the Matter of the Exempt Adopted Rules of the Department of Transportation, Chapter 8820, Relating to Local State-Aid Route Standards; Financing, Relating to Local State-Aid Route Standards Financing: Minnesota Rules, Chapter 8820; OAH 60-3000-23088; Governor's Tracking No. AR 2001*

Dear Ms. Nehl-Trueman:

Enclosed and served upon you by mail or courier service is the Corrective Order in the above-entitled matter.

Sincerely,


JAMES E. LAFAVE
Administrative Law Judge

Telephone No. (651) 361-7848
Fax No. (651) 361-7936

JEL:njh

Enclosures

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE DEPARTMENT OF TRANSPORTATION

In the Matter of the Exempt Adopted
Rules of the Department of
Transportation, Chapter 8820,
Relating to Local State-Aid Route
Standards Financing:
Minnesota Rules, Chapter 8820

CORRECTIVE ORDER

This matter came before Administrative Law Judge James E. LaFave upon the application of the Minnesota Department of Transportation for a legal review under Minn. Stat. § 14.386.

On September 4, 2012, the Minnesota Department of Transportation filed documents with the Office of Administrative Hearings seeking review and approval of the above-entitled rules under Minn. Stat. § 14.386 and Minn. R. 1400.2400.

No comments were received from the public during the comment period.

On September 13, 2012, the Office of Administrative Hearings approved the rules. The rules were subsequently published in the *State Register* and were adopted on November 5, 2012.

By letter dated November 27, 2012, the Minnesota Department of Transportation notified the Office of Administrative Hearings an integer was inadvertently omitted from the design chart in part 8820.9941. In the design chart in part 8820.9941, the 6-foot lane width number is missing for bike lanes with Average Daily Traffic (ADT) 2,000-5,000 with design speeds over 40 mph.

Based upon a review of the written submissions by the Department, and the contents of the rulemaking record,

IT IS HEREBY ORDERED THAT:

1. The Minnesota Department of Transportation shall publish in the *State Register* an Errata which will include the 6-foot lane width dimension in the design chart

of part 8820.0041.

Dated: December 12, 2012


JAMES E. LAFAVE
Administrative Law Judge

MEMORANDUM

The Minnesota Department of Transportation (The Department) has the statutory authority, pursuant to the 2012 Laws of Minnesota, Chapter 287, article three, section 12, to adopt a rule requiring a 6-foot lane width for bike lanes with ADT of 2,000-5,000 with design speeds over 40 mph. No public comment was received regarding the 6-foot lane width.

Commissioner Thomas K Sorel's Order of August 31, 2012, adopted the position there should be a 6-foot lane width for bike lanes with ADT of 2,000-5,000 with design speeds over 40 mph. The 6-foot reference in the design chart was unintentionally dropped from the Department's draft when the rules were submitted to the Revisor's office for formatting. The 6-foot reference was therefore not included in the Revisor's formatted version.

The missing integer in the design chart is in the nature of a typographical error. Because the regulatory choice was made by the Department and approved by the Office of Administrative Hearings, the appropriate cure is to publish an Errata in the *State Register*.

J. E. L.