

ORDINANCE NUMBER FOURTEEN

CRITERIA FOR CONSTRUCTING AND ACCEPTING ROADS AND APPROACHES ONTO THE COUNTY HIGHWAY SYSTEM AND THE COUNTY SECONDARY HIGHWAYS, HEREINAFTER REFERRED TO AS "COUNTY ROADS"

BE IT ORDAINED by Pennington County, South Dakota that Ordinance 14 be amended to read as follows:

Section 101 - Purpose:

- A. To establish the minimum criteria under which roads may be retained as part of or considered for placement on the "County Highway System" and "County Secondary Highways" as defined in Section 500.
- B. To ensure that County Roads serve the greatest number of people in the most equitable way within the County's resources.
- C. To provide minimum specifications for the construction of County Roads and approaches.

Section 102 - Policy:

- A. Consistent with the purposes stated above, the criteria set forth in Sections 201 and 202 will qualify a road for consideration for acceptance as a County Road but does not guarantee acceptance.
- B. The Board of Commissioners, with recommendations of the County Highway Department, reserves unto itself the determination of whether to add a road as a County Road or not, the appropriate classification of the road, and the priority level of maintenance on the road.

Section 103 - Procedure for Requesting Roads to be Designated as County Roads:

- A. An application requesting roads to be designated as County Roads can be submitted to the County Highway Superintendent. Requests will be complete and include information such as location, length of road, map or plat. Requests will state that the road meets or exceeds the specifications as stated in Sections 201 and 202. The Highway Department may request additional information including certification from contractors, engineers, suppliers and engineered plans that Section 201 and 202 requirements have been met. The request and the Highway Department's recommendations will then be forwarded to the Board of Commissioners for its consideration.
- B. Each application request requires a fee as defined in Section 700.

Section 201 - Minimum Construction Standards and Specifications:

- A. Commencing with the effective date of this Ordinance, any road to be considered for acceptance as a County Road will meet the minimum construction standards and specifications as stated below and as shown on Exhibits "A" and "B" attached hereto. The owner(s) and or developer(s) are responsible for all costs associated with the construction of or improvement of roads as required.

- B. In the event the road is also subject to the provisions of the County Subdivision Ordinance, or lies within the extraterritorial area of a municipality, the road will also comply with any and all additional County/City standards and specifications as applicable.
- C. Road design will be consistent with the current published edition of the standards of the “American Association of State Highway Transportation Officials” (AASHTO). Road construction materials and construction methods will conform to the current published edition of the “Standard Specifications for Roads and Bridges” and “Local Roads”, South Dakota Department of Transportation.
1. The minimum dedicated right-of-way width will be sixty-six feet (66’) for minor arterial roads. Minimum dedicated right-of-way for major arterial will be one hundred feet (100’).
 2. Maximum grade of any road or portion of road will not exceed twelve percent (12%) without the written permission from the County Highway Superintendent or designee.

Table 5-2. Maximum Grades for Local Roads in Rural Areas

Type of Terrain	U.S. Customary									
	Maximum Grade (%) for Specified Design Speed (mph)									
	15	20	25	30	35	40	45	50	55	60
Level	9	8	7	7	7	7	7	6	6	5
Rolling	12	11	11	10	10	10	9	8	7	6
Mountainous	17	16	15	14	14	13	12	10	10	-

Note: Short lengths of grade in rural areas, such as grades less than 500 ft (150 m) in length, one-way downgrades, and grades on low-volume roads (AADT less than 2,000 veh./day) may be up to 2 percent steeper than the grades shown in this table.

Table reference: 5.2.1.5 AASHTO 2018 EDITION
GEOMETRIC DESIGN OF HIGHWAYS AND STREETS

3. Maximum radius of curvature will follow Table 4-4 specifications.

Table 4-4. Guidelines for Maximum Side Friction Factor and Minimum Radius
(New Construction, Design Volume ≤ 250 veh/day, Limited Proportion of Heavy Vehicle Traffic)

U.S. Customary					
Design Speed (mph)	Reduced Design Speed (mph)	Max. Design Side Friction Factor, f_{max}	Minimum Radius (ft), R_{min}		
			Max. Superelevation Rate (%), e_{max}		
			4	6	8
10	10	.38	25	25	25
15	15	.32	40	40	40
20	15	.32	40	40	40
25	20	.27	85	80	75
30	20	.27	85	80	75
35	25	.23	155	145	135
40	30	.20	250	230	215
45	35	.18	370	340	315
50	40	.16	535	485	445
55	45	.15	710	645	585
60	50	.14	925	835	760

Table reference: 4.4.1.1 AASHTO 2019 Second Edition
Guidelines for Geometric Design of Low-Volume Roads

4. Crown rates will be 0.02 ft/ft on paved surfaces and 0.04 ft/ft on gravel surfaces. Maximum super elevation rate in curves will be 0.06 ft/ft on paved surfaces and 0.08 ft/ft on gravel surfaces.
5. Maximum in slope will be 4 to 1, preferred back slope is 3 to 1. Back slope will, under no conditions, be greater than 1 to 1.
6. Ditches will have a minimum depth of two feet (2') and a minimum flat bottom width of two feet (2').
7. Culverts will be sized to ensure proper drainage. Cross culverts on a roadway will be a minimum diameter of twenty-four inches (24").
8. Culverts will be sized to ensure proper drainage. Approaches to a roadway will use a minimum diameter of eighteen inches (18").
9. Dead end roads will have a turnaround matching minimum dimensions of Figure "2" and Tables "1-3" of Exhibit "A".
10. Gravel surfacing will meet the requirements of "Part B. Section 260, Granular Bases and Surfacing" and "Section 882" of the current published edition of the "Standard Specification for Roads and Bridges", South Dakota Department of Transportation.
11. Roads that have or will have 250 ADT (average daily traffic) or more should be paved.

Section 202 - Standards and Specifications for Asphalt Pavement/Concrete Pavement Roads:

- A. The design of pavement will be in compliance with Section 201 and the current published edition of the "AASHTO Guide for Design of Pavement Structures".
- B. Pavement structure will be designed for the predicted traffic loading over a twenty (20) year performance period (minimum). Traffic can be represented by a number of eighteen thousand pound (18-kip) equivalent single axle loads (ESAL). The ESALs for the performance period represents the cumulative number from the time the roadway is opened to traffic to the time when the serviceability is reduced to a terminal value.
- C. The pavement structure will have a minimum of eight inches (8") of granular base for residential. Commercial and industrial roads will have a minimum granular base of twelve inches (12"). The granular base will meet the requirements of "Part B. Section 260, Granular Bases and Surfacing" and "Section 882" of the current published edition of the "Standard Specification for Roads and Bridges", South Dakota Department of Transportation.

In lieu of the above minimum requirements, the recommendations of a geotechnical report or engineered plans from a professional engineer may be considered.

Section 300 - Specifications for Approaches:

- A. Typical Approach Detail as shown on Exhibit "B" and listed below will be followed in the construction of approaches within public rights-of-ways under the jurisdiction of Pennington County. Road construction materials and methods will conform to the current published edition

of the "Standard Specifications for Roads and Bridges", South Dakota Department of Transportation.

1. Maximum grade on an approach will not exceed five percent (5%) within the right-of-way.
 2. Culverts will be sized to ensure proper drainage. The minimum size of culvert will be eighteen inches (18") in diameter. Fifteen inches (15") in diameter may be allowed under certain conditions with written approval from the County Highway Superintendent or designee. The minimum culvert length will be thirty feet (30').
 3. Gravel surfacing will meet the requirements of "Part B. Section 260, Granular Bases and Surfacing" of the current published edition of the "Standard Specifications for Roads and Bridges", South Dakota Department of Transportation. The minimum depth will be four inches (4") with a minimum traveled roadway width of twenty feet (20') for residential and twenty-eight feet (28') for commercial and industrial up to the right-of-way line.
 4. Approaches will be constructed perpendicular, as practical, to the road.
 5. Only one (1) approach per residence will be allowed unless authorized by the County Highway Superintendent or designee.
 6. Additional approaches for commercial, industrial and agriculture will be reviewed on a case by case basis by the County Highway Superintendent or his designee.
 7. Sight distance of approaches will meet the standards in the current published edition of the AASHTO guide.
 8. Ditches and right-of-way will follow specifications set forth in Ordinance 11 for erosion control and seeding.
 9. Temporary approaches must be removed within one year of approach permit approval unless extension authorized by the County Highway Superintendent or designee upon written request of the applicant.
- B. Property owner(s) must obtain a written permit and approval from the County Highway Department for each approach. Property owner(s) must construct approach according to County specification and current policy, and is responsible for all costs associated with construction and maintenance. Refer to Section 700 for approach permit fees and surety deposit related to approach permits.

Section 400 - Exceptions to Standards and Specifications:

- A. The purpose of an exception is to modify strict application of the specific requirements of this Ordinance. An exception will only be granted in the case whereby such strict application would result in practical difficulty.
- B. Standards for granting an exception.
 1. The particular physical surroundings, shape or topographical conditions of the specific road involved would result in a particular hardship upon the owner(s) as distinguished from a mere inconvenience, if the strict letter of the regulations were to be carried out.

2. The granting of the exception will not be detrimental to the public welfare or injurious to other property or improvements in the area in which the road is located.
 3. The proposed exception will not increase traffic congestion on the public roads, increase the danger of fire, endanger the public safety, and/or diminish or impair property values within the area.
 4. That because of circumstances or conditions, there is no possibility that the road can be developed in strict conformity with the provisions of the regulations and that the authorization of an exception is therefore necessary.
 5. That the exception, if authorized, will represent the minimum exception that will afford reasonable relief and will represent the least modification desirable of the regulations.
- C. Any person, firm or corporation desiring an exception in accordance with this Ordinance will make application for such request to the Highway Department.
 - D. Upon the filing of any application for an exception, the applicant will pay to Pennington County the appropriate fee as defined in Section 700.
 - E. All applications for an exception request under this Ordinance will be acted upon at a meeting of the Board of Commissioners. A favorable vote by a majority of the members of the Board of Commissioners will be required to approve each request.
 - F. Appeals may be taken to the Circuit Court by any person or persons, jointly or severally, aggrieved by any decision of the Board of Commissioners, or any taxpayer, or any officer, department, board or bureau of the County, aggrieved by any decision of the Board of Commissioners, in the manner and form provided by the statutes of the State of South Dakota, in such cases made and provided.

Section 500 - Road Classifications and Designated Maintenance:

A. County Highway System

Definition:

The County Highway System will be the principal or primary highway system of roads in Pennington County. This system of roads provides access to the major geographical areas in the County. Roads included in this definition must be designated by resolution or official motion of the Board of Commissioners and approved by the South Dakota Department of Transportation.

B. County Secondary Highways

Definition:

County Secondary Highways are those roads that connect to County Highway System, or in some cases connect to roads on the State Trunk System. Generally, County Secondary Highways provide access to large land areas not served by the County Highway System.

County Secondary Highways may provide access to, but not into, cities, towns, developments and unincorporated residential areas. All roads defined as County Secondary Highways will be designated by resolution or official motion by the Board of Commissioners and recorded in its minutes.

C. Maintenance Levels Defined

Full Maintenance: Roads will be maintained per County Highway Department policy to the best standard possible, within the Highway Department's budget and staffing considerations. All asphalt pavement/concrete pavement roads will be Full Maintenance. Full Maintenance gravel surfaced roads have an average daily traffic (ADT) count, as collected by County Highway Department staff, of more than 30 cars or 10 trucks. All roads with a bridge on the National Bridge Inventory will be Full Maintenance.

Minimum Maintenance: Road maintenance and snow removal will be determined by the Highway Department as budget and staffing allows. In general, gravel surfaces will be maintained twice a year. Mowing operations will occur twice a year. Snow removal will occur when amounts meet a six-inch (6") minimum. Minimum Maintenance roads have an average daily traffic (ADT) count, as collected by County Highway Department staff, of less than 30 cars or 10 trucks.

No Maintenance: Removal of man-made obstructions will occur.

Section 600 - Amendments:

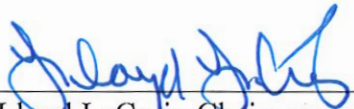
- A. The Amendment of this Ordinance may be initiated by the Board of Commissioners under the provisions of South Dakota Codified Laws, Chapter 7-18A-2, or by individual citizens, or groups of citizens under the provisions of South Dakota Codified Laws 7-18A-9.

Section 700 – Schedule of Fees:

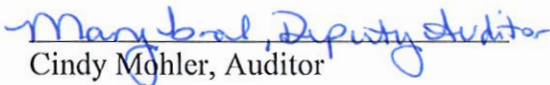
- Application request for County Road designation: \$2,500.00 due upon application.
- Approach permit fee: \$250.00 per approach due upon application. The County Highway Superintendent or his designee may waive the approach permit fee for second approach applications if both applications are submitted concurrently for the same parcel of land.
- Approach permit surety deposit: \$2,500.00 cash or cashier's check per approach required following initial inspection, at the time the permit is approved. Surety deposit will be refunded upon approved, final inspection. Temporary logging approaches associated with Black Hills National Forest Service active timber sales are exempt from the surety deposit.
- Exception request fee: \$500.00 due upon application.

APPROVED THIS 7 day of November 2023.

PENNINGTON COUNTY
BOARD OF COMMISSIONERS


Lloyd LaCroix Chairperson

ATTEST:


Cindy Mohler, Auditor



Preliminary Approval: February 5 & 19, 1980
First Reading: March 4, 1980
Second Reading: March 11, 1980
Third Reading: March 25, 1980
Fourth Reading: April 8, 1980
Fifth Reading: April 29, 1980 (adopted)

Amendment 1 First Reading: December 6, 1988
Amendment 1 Second Reading: December 19, 1988
Amendment 1 Effective: January 24, 1989

Amendment 2 First Reading: February 4, 1992
Amendment 2 Second Reading: February 26, 1992
Amendment 2 Third Reading: March 4, 1992
Amendment 2 Published: March 19, 1992
Amendment 2 Effective: April 9, 1992

Amendment 3 First Reading: April 5, 2005
Amendment 3 Second Reading: May 10, 2005
Amendment 3 Published: May 25, 2005
Amendment 3 Effective: June 13, 2005

Amendment 4 First Reading: May 17, 2022
Amendment 4 Second Reading: June 10, 2022
Amendment 4 Third Reading: June 21, 2022
Amendment 4 Published: July 6 & 7, 2022
Amendment 4 Effective: July 27, 2022

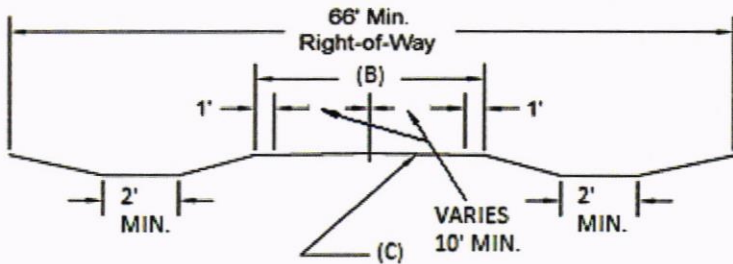
Amendment 5 First Reading: October 3, 2023
Amendment 5 Second Reading: October 17, 2023 (Continued)
Amendment 5 Second Reading and Final Adoption: November 7, 2023
Amendment 5 Published: November 21, 23, & 25, 2023
Amendment 5 Effective: December 15, 2023

EXHIBIT A

PENNINGTON COUNTY HIGHWAY DEPARTMENT SPECIFICATIONS FOR COUNTY ROADS

Figure 1

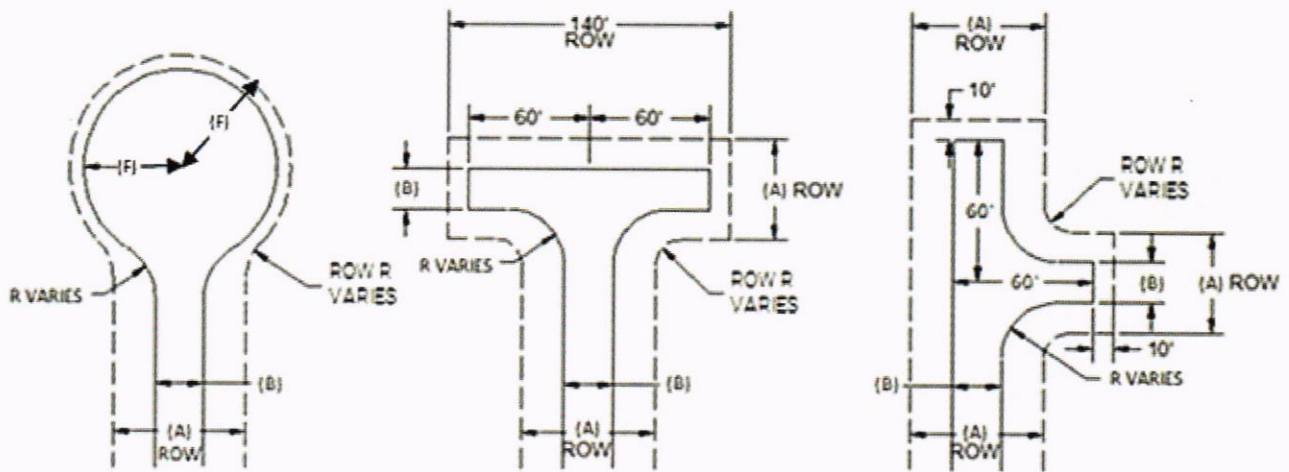
TYPICAL ROAD SECTION



* Maximum slope is 4 to 1 (current standard of the South Dakota Department of Transportation). Steeper slopes are subject to the approval of Pennington County.

Figure 2

TYPICAL TURNAROUND DIMENSIONS



** Refer to Tables 1-3 for dimensions on (A) to (F) on Figures 1 & 2.

Table 1

Road Design Standards for Agriculture / Ranchette / Low Density / Rural Residential Zoning Districts

		Easement	Local	Collector	Minor Arterial <250 ADT	Major Arterial >250 ADT
A	Right of Way Width (feet)	66 ¹	66	66	66	100
B	Road Width (feet)	20 ²	24	24	32	48
C	Road Surface	6" Gravel	6" Gravel	6" Gravel	6" Gravel	4" Paved Surface ³
D	Base Course Thickness	8"	8"	8"	8"	8"
E	Grade (min-max)	1%-12%	1%-12%	1%-10%	1%-7%	1%-7%
F	Turnaround (feet) for Cul-de-Sacs and Intermediate Turnaround	n/a	55 Radius (ROW) 48 Radius (Surfacing)	55 Radius (ROW) 48 Radius (Surfacing)	n/a	n/a

¹ - 40-foot-wide easement for access is allowed for a maximum of two lots.

² - 24-foot required if serving more than four (4) lots.

³ - Paved Surface (Asphalt or Concrete). Will meet the requirements of Section 202 of Ordinance 14.

Table 2

Road Design Standards for Suburban Residential / Urban Residential Zoning Districts

		Local	Collector	Minor Arterial	Major Arterial
A	Right of Way Width (feet)	66	66	80	100
B	Road Width (feet)	24	24	32	48
C	Road Surface	Paved Surface ¹	Paved Surface ¹	Paved Surface ¹	Paved Surface ¹
D	Base Course Thickness	8"	8"	8"	8"
E	Grade (min-max)	0.5%-10%	0.5%-8%	0.5%-6%	0.5%-6%
F	Turnaround (feet) for Cul-de-Sacs and Intermediate Turnaround	55 Radius (ROW) 48 Radius (Surfacing)	55 Radius (ROW) 48 Radius (Surfacing)	n/a	n/a

¹ - Paved Surface (Asphalt or Concrete). Will meet the requirements of Section 202 of Ordinance 14 with Curbs (South Dakota Department of Transportation Type B-66) and sidewalks (Five-Foot-Wide, One foot from Lot Line).

Table 3

Road Design Standards for Industrial / Commercial and Highway Service Zoning Districts

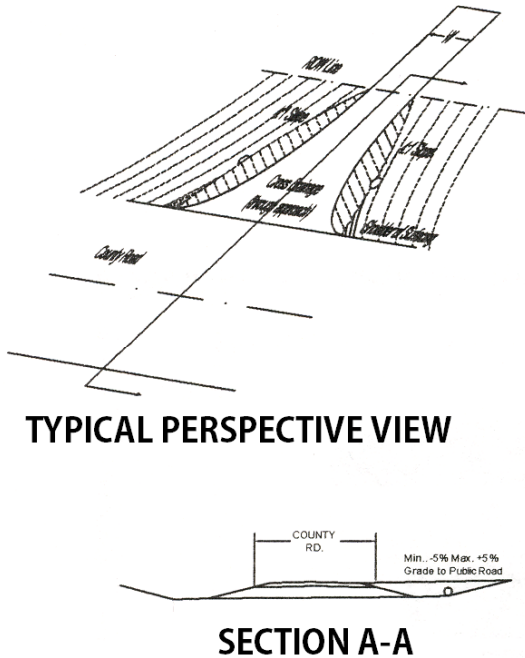
		Easement	Local	Collector	Minor Arterial	Major Arterial
A	Right of Way Width (feet)	66	66	66	80	100
B	Road Width (feet)	24	32	32	42	48
C	Road Surface	n/a	Paved Surface ¹	Paved Surface ¹	Paved Surface ¹	Paved Surface ¹
D	Base Course Thickness	12"	12" ²	12" ²	12" ²	12" ²
E	Grade (min-max)	n/a	0.5%-8%	0.5%-6%	0.5%-5%	0.5%-5%
F	Turnaround (feet) for Cul-de-Sacs and Intermediate Turnaround	n/a	80 Radius (ROW) 70 Radius (Surfacing)	80 Radius (ROW) 70 Radius (Surfacing)	n/a	n/a

¹ - Paved Surface (Asphalt or Concrete). Will meet the requirements of Section 202 of Ordinance 14.

² – Commercial and Industrial Gravel Base Thickness is twelve inches (12").

EXHIBIT B

STANDARD SPECIFICATION FOR COUNTY APPROACHES

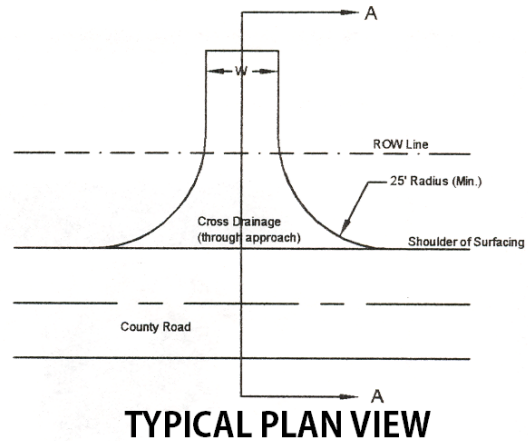


** W is surface Width at Right-of-Way line

W – 20' Min. for Residences

W – 28' Min. for Commercial

Maximum W – 50'



The above Typical Approach Detail will be followed in the construction of roads within Public right-of-ways under the jurisdiction of Pennington County. Road construction materials and methods will conform to the current published edition of the "Standard Specifications for Roads and Bridges" of the South Dakota Department of Transportation, when referenced in the standards below. A copy of these Specifications is on file at the County Highway Department Office.

The following are standards, which will be met:

1. Maximum grade on an approach will not exceed five percent (5%) within the right-of-way.
2. Culverts will be sized to ensure proper drainage. The minimum size of culvert will be eighteen inches (18") in diameter. Fifteen inches (15") in diameter may be allowed under certain conditions with written approval from the County Highway Department designee. The minimum culvert length will be thirty feet (30').
3. Gravel surfacing will meet the requirements of "Part B. Section 260, Granular Bases and Surfacing" of the current published edition of the "Standard Specifications for Roads and Bridges", South Dakota Department of Transportation. The minimum depth will be four inches (4") with a minimum traveled roadway width of twenty feet (20') for residential and twenty-eight feet (28') for commercial and industrial up to the right-of-way line.
4. Approaches will be constructed perpendicular, as practical, to the County Road.
5. Only one (1) approach per residence will be allowed unless authorized by the County Highway Superintendent or designee.
6. Additional approaches for commercial, industrial and agriculture will be reviewed on a case by case basis by the County Highway Superintendent or designee.
7. Sight distance of approaches will meet the standards in the current published edition in the AASHTO guide.
8. Ditches and right-of-way will follow specifications as set forth in Ordinance 11 for erosion control and seeding.
9. Temporary approaches must be removed within one year of approach permit approval unless an extension is granted by the Highway Superintendent or designee upon written request of the applicant.