

Crow Wing County Highway Department

ROAD CONSTRUCTION SPECIFICATIONS

Adopted by the Crow Wing County Board of Commissioners 6/10/2014

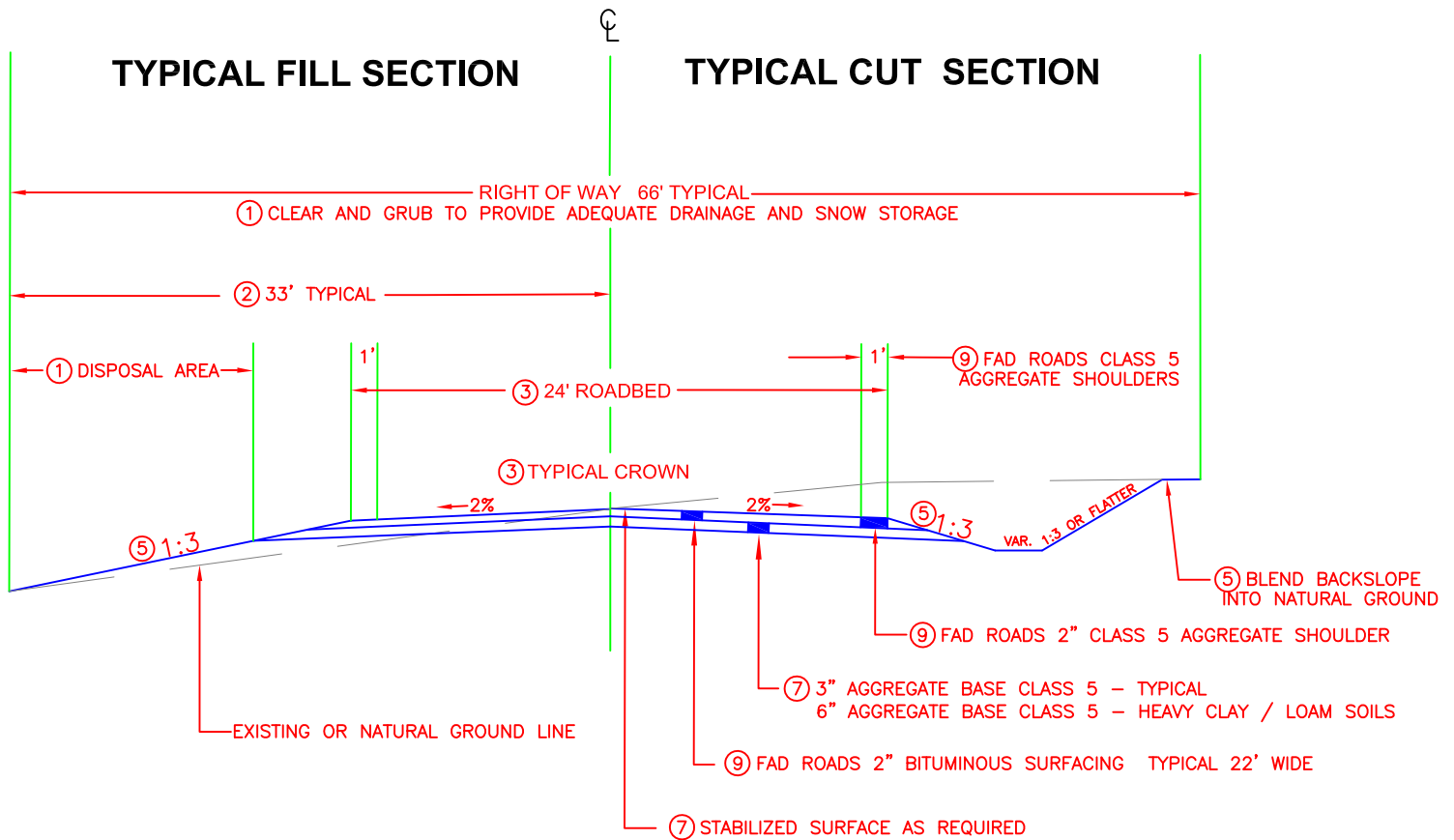
Re: Subdivision Platting Ordinance Section

Except as otherwise provided in the Subdivision Platting Ordinance, all improvements of roads with the right-of-ways shall be planned for and accomplished in accordance with current highway design standards and as defined by the following minimum construction standards: These minimums are designated for local functioning roadways. Any roadways intended to function as a collector or above shall be designed to follow the most current version of the MnDOT Road Design Manual.

1. Sufficient clearing and grubbing shall be done to provide adequate drainage and snow storage area. Generally, the entire right-of-way shall be cleared except to save desirable timber and other vegetation. Stumps and debris shall be properly disposed of outside the limits of the roadbed and all rocks larger than 3 inches shall be disposed of by burial outside the limits of the roadbed.
2. The roadbed shall be constructed in the center of the platted right-of-way except under extenuating circumstances where a minimum of twenty-five (25) feet shall be maintained from the centerline of the roadbed.
3. The roadbed width shall be twenty-four (24) feet, shoulder to shoulder. It shall be adequately crowned to drain surface water laterally to prevent standing water from saturating the roadbed. Roadways crossing water features shall have culvert/bridge structures designed by an Engineer licensed in the State of Minnesota. Approved dead-end roadways shall have a constructed cul-de-sac with a minimum of a sixty-five (65) foot radius provided for right-of-way and a fifty (50) foot radius roadway surface.
4. Care shall be taken in the selection of soils used in the construction of embankments insofar as possible, using the best materials available for the upper portion of the embankments and the proper soils placed in the lower portion. Unsuitable soils, such as swamp materials, shall be disposed of outside the roadbed shoulder lines. Embankments shall be constructed in layers not to exceed 6 inches in plastic soils or 12 inches in non-plastic soils, with proper compaction applied to each layer until no evidence of further consolidation exists. Embankments constructed over low wet areas shall be placed in one lift to an elevation of at least one foot above water elevation before proceeding with layer construction as previously defined.
5. Side ditch and embankment construction shall provide adequate roadbed drainage including installation of centerline culverts as required. Inslopes shall not be constructed steeper than 1 foot vertically to 3 feet horizontally to (1:3). Back-slopes shall not be constructed steeper than 1 foot vertically to 3 feet horizontally (1:3) and the top of the back-slope shall be blended into the natural ground line. At major cut and fill areas where the required typical roadway section is unable to be physically constructed within the platted right of way, additional right-of-way or slope easements shall be considered in order to construct proper slopes to prevent serious erosion.
6. Horizontal and vertical alignment shall be coordinated. Centerline grades shall not exceed 10 percent and centerline grades shall not be constructed flatter than 0.5 percent wherever possible. Sharp curves shall not result at the crest or the foot of a steep grade. Road intersections shall be at right angles insofar as practical, and no intersection shall be at an angle of less than 75 degrees. Horizontal alignments on local roadways intended to become the responsibility of a public entity shall be designed to meet a 25 mph design speed as determined by the most current version of the MnDOT Road Design Manual. When connecting a proposed roadway to an existing collector or above roadway that will require a culvert adjacent to the existing roadway, a concrete culvert shall be utilized.

7. The subdivider shall not be required to hard-surface any road other than those required in Section 9 below; however, adequate surfacing shall be provided which shall be shaped and compacted to the extent that it will not rut under normal traffic. A minimum of three (3) inches of aggregate base class 5 shall be constructed on all roads. For roads constructed through heavy clay and loam type soils, the minimum construction of aggregate base class 5 shall be six (6) inches.
8. All graded areas as a result of road construction shall be protected from erosion to prevent destruction of the roadbed and minimize impacts to adjacent land and water features. In accordance with MPCA requirements and the NPDES Permit, topsoil, erosion control best management practices and standard turf establishment measures shall be required to prevent erosion.
9. For the First Assessment District (FAD), Unorganized Territory, in addition to the requirements listed in 1-8 above, a bituminous surfaced road will be required prior to acceptance by Crow Wing County. The paved surface shall be at least twenty two (22) feet wide with a depth of at least two (2) inches. If paving the minimum of twenty two (22) feet, one foot aggregate shoulders shall be provided to meet the twenty four (24) foot roadbed requirement identified in Section 3 above. To verify that this requirement is met, an "as built" plan certified by a licensed professional engineer, shall be submitted to the county for approval. The County also reserves the right to core the road at the developer's expense to ensure the proper depth of bituminous and base material has been provided.

The above construction requirements outline minimum acceptable standards for construction of proposed development roads. The County reserves the right to require traffic studies performed by a Licensed Professional Engineer to determine which of the minimum requirements listed above are not adequate. The items to be determined shall include, but not limited to, impacts to connecting roads, the need for turn/ bypass lanes, intersection lighting, intersection control evaluation, traffic signal justification, lane width, shoulder width, number of traffic lanes, trail/ sidewalk considerations, and access control. Items deemed necessary by the County for the long term safety and functionality of any proposed changes to the roadway system shall be discussed during the plat/ subdivision development process.



TYPICAL ROADWAY CROSS-SECTION CROW WING COUNTY HIGHWAY DEPARTMENT

NOTE: THIS CROSS-SECTION REFERS TO THE "ROAD CONSTRUCTION SPECIFICATIONS" ON FILE AS ADOPTED BY THE CROW WING COUNTY BOARD ON 6/10/2014. THE CIRCLED NUMBERS REFER TO THE SPECIFICATION PARAGRAPH NUMBERS.

