

Road Specifications TOWN OF SUNRISE, CHISAGO COUNTY,

I. Standard Specifications

The standard construction specifications referred to herein shall be the **MnDOT Standard Specifications for Construction**, 2005 edition. Roads shall be designed for 9-ton axle load at an Average daily traffic count and current design speed, as determined by the Township Engineer.

The Township requires a soils boring report from a geotechnical engineer which recommends said 9 ton design unless specifically waived for an individual project.

All curves and grades shall be appropriate for the determined average daily traffic and design speed of the roadway. No centerline curve may have a radius less than 200' as rated for 30mph traffic speeds.

II. Special Provisions

A. Construction Requirements

1. Prior to the start of any construction activity, the Developer shall schedule a preconstruction conference with the following persons in attendance:
 - a. Developer
 - b. Developer's Engineer/Surveyor
 - c. Developer's Contractor
 - d. Township Engineer
 - e. Township Supervisors as available
 - f. Utility locators and State/County representatives as applicable.
2. The Agenda for the meeting shall include but may not be limited to:
 - a. Erosion control measures specific to the site.
 - b. Permits attained, yet to be attained, and conditions of those permits. Mn PCA construction grading, MnDNR, MnBWSR Wetlands and County Turn lane permits shall be addressed as applicable.
 - c. Project timetable, Dates and working hours, pay requests, drawdown of escrow, etc.
 - d. Contacts, Phone and FAX numbers, Addresses,
 - e. Dust control
 - f. Concerns of neighbors and effected agencies.
 - g. Status of utilities, Gas, Phone, Electric, any others
 - h. Insurance: Liability certificates and Performance Bonds
 - i. Provisions for emergency vehicle access during construction
 - j. Documentation that the Developer's Agreement is filed at the Recorder's Office
 - k. Other
3. Construction staking shall be done by the Developer's Engineer and shall conform in all respects to the approved plans and Township Standards.
4. The Developer is required to have certain phases of construction inspected by the Township Engineer prior to proceeding to the next phase. Construction staking shall be provided for use by the Township Engineer during inspection of the road construction.

Construction not inspected will not be accepted unless the Developer can prove that it meets all required standards. The Developer may be required to reconstruct an uninspected portion.

The Developer shall notify the Township Engineer at least 48 hours in advance for inspection of the proposed roadway at each of the following times.

- a. When all topsoil and unsuitable material have been removed from the subgrade:
 The Township reserves the right to require satisfactory soil investigations, compaction tests or test rolling, at the expense of the Developer, to verify that all unsuitable material has been removed.
 - b. When subgrade has been deemed ready for aggregate base course:
 Construction stakes must be in place for use during inspection.
 - c. When aggregate base course has been placed and graded to + or - 0.10 feet of the finish grades established by the approved plans:
 Construction stakes must be in place for use during inspection.
 Final shaping and compaction prior to paving is commonly complete and a roll test is performed
 - d. During placement of bituminous base and wearing courses
 - e. For final inspection of the completed roadway, ditches and turf establishment.
 - f. Before expiration of warranty per the Developer's Agreement
5. The Developer shall sample the gravel and provide sieve analysis to determine compliance with the specifications. Maximum sample rate is one per 250 tons, with a minimum of two per roadway
 6. Compaction of both the subgrade and base shall be tested by the specified density method, (MNDOT 2211.3 c1) unless the Township Engineer specifically exempts it. Maximum test rate is one compaction test per 500-foot section of roadway in each of the subgrade and base. The Developer assumes all responsibility for work, which proceeds before satisfactory test results are received.
 7. The Developer shall construct all roadways to the section shown on Drawing No.1. as attached to these specifications. As a minimum requirement, all clearing and grubbing shall extend to the top of the backslope of the ditch.
 8. Ditch bottoms and slopes shall be finished with four inches of topsoil meeting MnDOT spec 3877 and mulch meeting MnDOT spec 3882 type 1, at a rate of two tons per acre. These surfaces shall be seeded in accordance with MnDOT spec 3876 at a rate and mix to be designated on the plans. Steep slopes shall be sodded as directed by the Township Engineer to prevent erosion.
 9. The Developer shall construct a turnaround on all dead end roads in accordance with Drawing No. 2.
 10. The Township will provide and install all permanent traffic, warning and regulatory signs as needed. The Developer shall pay for all signs and barricades within 30 days of invoicing by the Township. Township personnel will install all signs.
 11. Surfacing shall conform in every respect to MnDOT specifications for plant mix bituminous. The Developer is responsible for taking one bituminous sample per 250 ton to test for asphalt content, or otherwise provide acceptable certification of conformance.
 12. The Developer shall provide for installation of utilities within easements provided for that purpose as shown on Drawing No. 1. Upon completion of utility construction all disturbed areas shall be restored in conformance with paragraph 7 above.
 13. Where driveway locations are known, the Developer shall install the driveway aprons. They shall extend at least from the edge of the road to the property line. They shall be constructed in accordance with Township driveway specifications, (Drawing Two attached) to wit:
 - a. No slope shall be less than 1.0% or more than 6% in the first 25' from the edge of road pavement.
 - b. Driveway width shall be at least 16' driving surface.

c. Cover over a culvert crown shall be no less than 12”

14. To minimize inconvenience and nuisance to existing residents, the Developer shall, control dust by watering or other approved means. Any damage to existing roads used by the Developer or his agents, as haul roads shall be repaired immediately.

B. Construction Materials

- 1. Surfacing: Bituminous mixture for bituminous base and surfacing shall be MnDOT Spec. 2360 with oil content as specified in the trial mix design.
- 2. Gravel-Base: Class 5 gravel shall meet the requirements of MnDOT spec 3138
- 3. Culverts shall be placed as shown on the approved plans. Minimum size material and class shall be as directed by the Township Engineer. In no case shall a culvert be less than 15 inches in diameter. All culverts shall have flared end aprons for 4:1 or 5:1 slope.
- 4. Catch basins, manholes, and other storm water appurtenances shall be in conformance with Drawing 3.
- 5. Swing arm mailboxes shall be located per township directive to minimize snowplow conflicts. i.e. on same side of the road an any other mailbox within 400’ along the road.

C. Design Considerations

1. All right of way widths shall conform to the following minimum standards:

<u>Right of Way</u>	<u>Paved Surface</u>	<u>Roadway Width</u>
66’	Rural 24’	32’
66’	Urban 28’ F-F	32’

Typical section shall be as shown on Drawing No. 1.

Turnarounds and driveways as shown on Drawing No. 2

2. All centerline gradients be at least 0.5 percent and streets shall have a crown of no less than 2% or no greater than 4%. They shall not exceed the guidelines as defined in the county subdivision ordinance.

3. Driveways shall be 16’ wide at the top and provide a 25’ radius tangent to the edge of bituminous. When the driveway is built during the primary street construction, a 4’ paved “bumpout” shall be paved into the driveway.

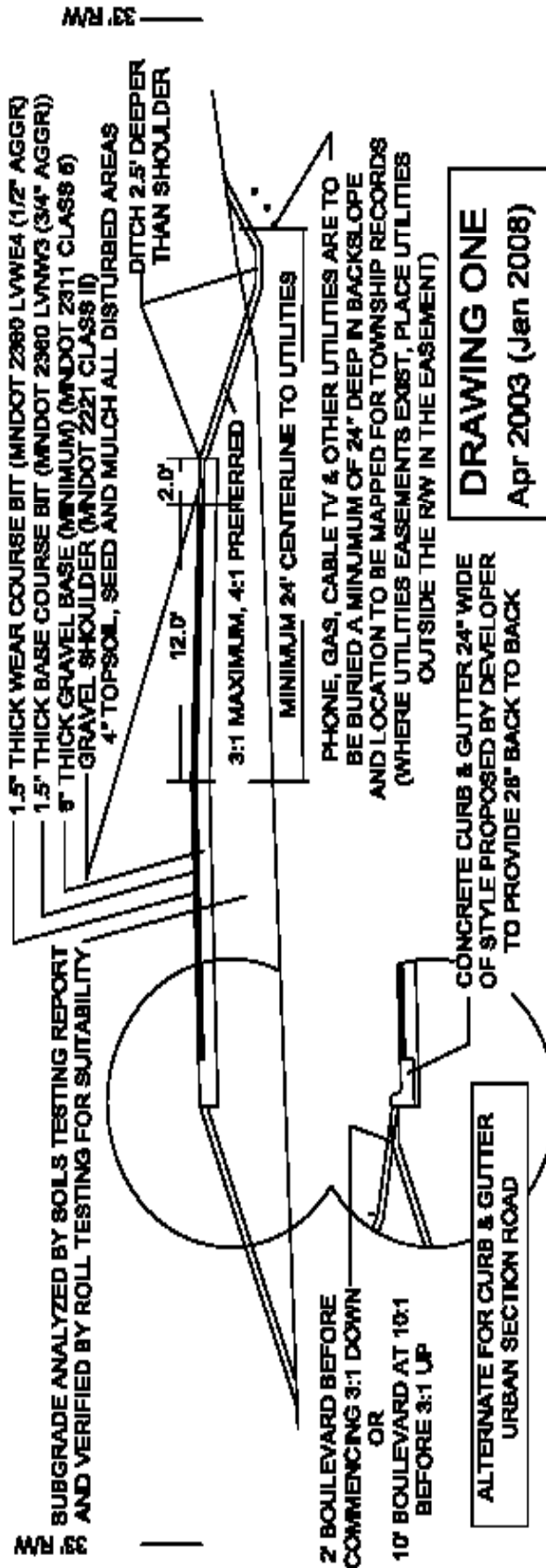
Intersection angle shall be as close to 90 degrees as possible and no angle less than 70 degrees will be permitted.

Maximum downslope steepness from edge of driveway shall be 3:1 horizontal to vertical.

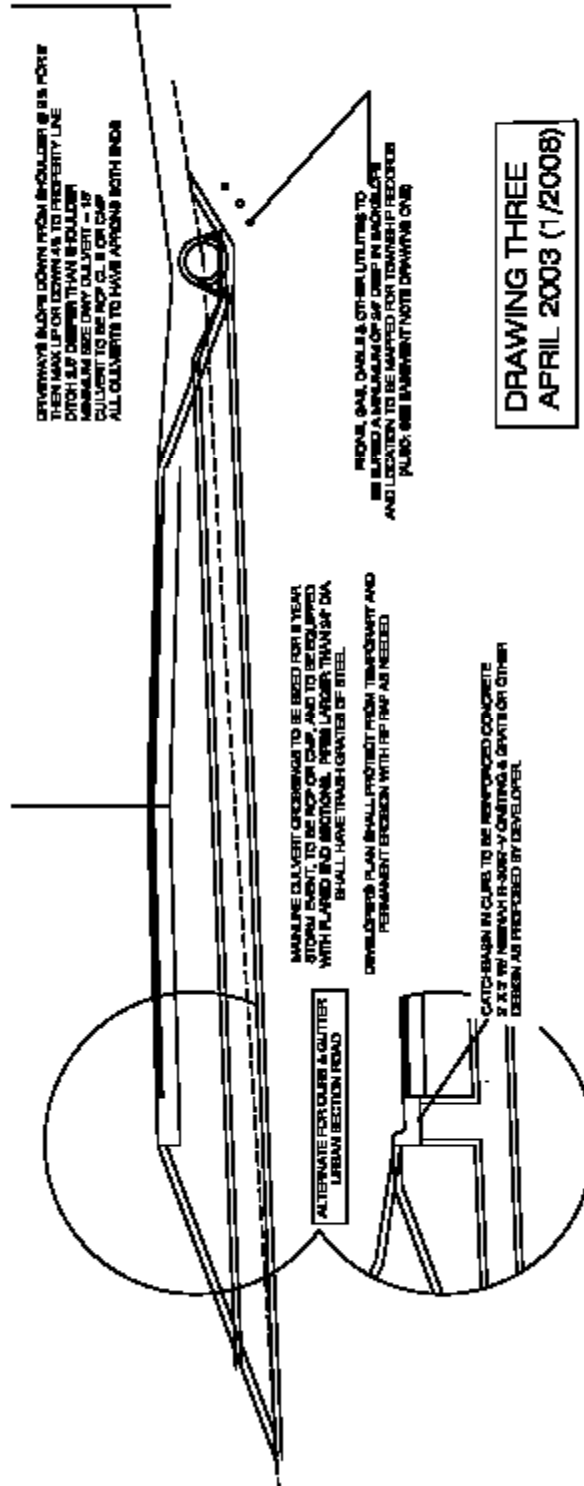
Minimum ditch depth shall be 2.5’ and deeper ditches may be required depending on the site.

Minimum culvert length shall be 34’ (2 aprons at 2’ each included in 34’) and more may be required depending on the site

TYPICAL ROAD SECTIONS SUNRISE TOWNSHIP



TYPICAL STORM DRAINAGE SUNRISE TOWNSHIP



DRAWING THREE
APRIL 2003 (1/2008)

D. Acceptance of Work

1. The Township Engineer shall recommend final acceptance of the work to the Township Board of Supervisors.
2. Any work considered unacceptable shall be subject to MnDOT Spec 1512, where in the Township is the department and the Developer is the contractor.

E. Township position

All costs and risks are the Developer's responsibility as defined in the developer's agreement. The Township board has the sole right to make amendments to this agreement, and may do so on a case by case basis without setting precedent.

F. Acknowledgements

I have read, understand and agree to the terms and conditions of the Standard Specifications of New Roadway Construction for Sunrise Township located in the State of Minnesota. In the case of platted land, I have submitted this acknowledgement with my preliminary plat as an indication of my understanding of Roadway Construction Requirements.

Signature of Developer

Township Clerk or Notary

Date

Date