

PERMIT STANDARDS
FOR UNDERGROUND UTILITY INSTALLATIONS
TUSCOLA COUNTY ROAD COMMISSION

Revised 2016

General: All underground crossings of the public roadway shall be perpendicular within the road right of way, unless Road Commission Board approved variance. Utilities running parallel to the road shall be installed at or near the edge of road right-of-way unless otherwise agreed upon by the Engineer. All material and workmanship shall comply with the current Michigan Department of Transportation Standard Specifications for Construction (MDOT Specs). Materials shall meet American Association of State Highway and Transportation Officials (AASHTO) standards as noted herein.

Depth: Utilities shall be installed at the depths displayed in Chart 1 according to utility type. All installation activity shall conform to the permit terms listed on the reverse of the Right of Way Permit issued by Tuscola County Road Commission.

Chart 1		
Utility Type	Minimum Plow/Bore Depth in ROW	Minimum Road Crossing Depth
Telecommunications and Cable	36"	48"
Electric	48"	48"
Gas and Oil	48"	48"
Water, Storm Drains and Sewer*	60"	60"
Farm Tile		36"

*Depths for water, storm drains and sewer shall be measured from the bottom of ditch pan or road grade, whichever is lowest.

Material: All material shall meet the requirements as stated in the MDOT 2012 Standard Specs, Section 402.02 and 909.

- a. HDPE: Smooth-lined corrugated plastic pipe shall meet the requirements of AASHTO M-294, Type S Polyethylene pipe.
- b. PVC: Corrugated Polyvinyl Chloride Pipe shall meet AASHTO M 304, Certa-Lok joint.
- c. C900 or equivalent, shall be used for all watermain or storm sewer crossings, Certa-Lok joint.*

*Bell and spigot joint allowed for approved open-cut method.

See Table 402-1 in the MDOT Spec Book for further detail.

Note: Tracer Wire is required for all non-metallic pipe installation for post construction location purposes.

Road Crossing Method:

Gravel Road: Allowed to open cut a trench with proper backfill as per MDOT Specs, Section 401.03 D.

Class II Sand up to 6" (six inches) from top of road. Remaining 6" (six inches) shall be 23A Cr. Gravel or 23A Crushed limestone.

Proper notification shall be done by Contractor to Central Dispatch, Post Office, and School District(if during school year).

Hard Surfaced Road: All crossings will be done by approved methods other than the open-cut method unless approved by the Road Commission Board.

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Other Requirements: (Check indicates special attention to note)

- ___ Exposed Outlet: When the cross road pipe has an exposed outlet a concrete ring, a steel end Section, or a concrete end section shall be installed as per MDOT Specs 404.02.C. A rodent screen shall also be installed. As shown in MDOT Standard Plan R-80-Series.
- ___ Tunneling: When there is tunneling under the road surface, the tunnel shall be adequately sheeted or shored to prevent the sides and top from collapsing and the pavement from settling or cracking.
- ___ Bore or Jack: When the pipe is installed by boring and jacking, the leading edge of the pipe shall proceed the auger by $\frac{1}{2}$ times the diameter of the pipe. If the auger cannot be operated inside the utility pipe, a casing pipe will be required. A casing pipe may also be required at other times when deemed necessary by the Road Commission. Directional boring methods may not require casing. If directional boring is to be used, the Road Commission Permit Department will evaluate requirements on a case by case basis.
- ___ Shaft or Pit: All shafts or pits shall be located at least 10 feet off the edge of pavement on major roads and 5 feet off the edge of pavement on subdivision roads. If the shaft or pit must be closer to the road than the above dimensions due to the location of the utility to be tapped, sheeting or shoring must be used on all sides of the excavation which are closer to the road than the above requirements. Protection-Fencing barriers shall be installed at the site until Backfilled. Backfill shall meet trench backfill requirements with suitable material.
- ___ Drilling Fluids: Drilling fluid shall be used during drilling and back reaming operations. Excess drilling fluids shall be contained in a lined pit or containment pond, or trailer-mounted portable tank, until removed from site. Drilling fluids shall not be allowed to enter the streets, manholes, sanitary and storm sewers, and other drainage systems, including county drains, streams, and rivers.
- ___ Fill Voids: All voids shall be filled by pressure grouting or other approved methods. If any settlement or other change in grade occurs, the road shall be reconstructed to proper grade.
- ___ Open Cut: If the Road Commission approves crossing the road by the open cut method, the provisions for handling traffic will be as directed by the Road Commission. Approval of road closures will usually require that detours be installed in accordance with TCRC Maintaining Traffic Spec. Requests for road closures must be made in writing and include the location, length of time the road will be closed, approximate starting and completion dates and reasons for the request.

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Other Requirements (continued):

- ____ Maintain Traffic: If a road closure is not approved, traffic shall be maintained at all times. Sheeting may be required to protect the road if conditions warrant sheeting. The road surface may not be used for the storage of materials or any other construction purpose without prior approval of the Road Commission. Depending on traffic volumes and other conditions, the Road Commission may require the Permit Holder to provide bypass lanes (either paved or unpaved), may allow one-lane traffic properly controlled, or some combination of the two. Traffic control shall be in accordance with the TCRC Maintaining Traffic Spec.
- ____ Hours: Open-cut crossings shall be made during off-peak traffic hours, normally between the hours of 9:00 A.M. and 3:00 P.M. unless otherwise approved and/or directed by the Road Commission.
- ____ Pavement Removal: All utility trenches crossing major roads by the open-cut method shall remove pavement to a minimum width of 5 feet and at least 1 foot wider on each side than the trench.
- ____ Saw Cut: The pavement shall be cut by sawing unless otherwise approved. All saw cuts shall be made in a straight line and shall be parallel to existing transverse and longitudinal joints unless otherwise approved.
- ____ Backfill: Backfill shall be as per MDOT Spec Section 401.03D. MDOT Certified Class II Sand up to 6" (six inches) below the bottom of existing asphalt. Remaining 6" backfill shall be 23A Crushed Gravel or 23A Cr. Limestone, matching existing material. Match existing thickness of hard surface or 3" (three inch) of 13A bituminous, whichever is greater.
- ____ Density: Backfill shall be in appropriate lifts with density tests taken. A copy of results shall be supplied to the TCRC. Density to a minimum of 95%. Class II Sand compacted to 95% of the maximum unit weight as per MDOT Specs Section 401.03.D. Aggregate compacted to 98% of the maximum unit weight at no greater than optimum moisture content, as per MDOT Specs Section 307.03.
- ____ Restoration: Return site to like or better condition. Seed and mulch shall be used to prevent erosion as per Section 816 of MDOT Standard Specifications for Construction.

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