Road Commission of Kalamazoo County

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Construction Guidelines

Effective
January 1, 2017

CONSTRUCTION GUIDELINES

WHEREAS, the Board of County Road Commissioners of the County of Kalamazoo, Michigan, deems it necessary to adopt construction guidelines relative to the construction of highways and appurtenant structures coming under our jurisdiction; and

WHEREAS, such procedures, guidelines, and specifications function to provide rules, regulations, and assistance to RCKC land developers and others to ensure that public highways, dedicated for public use, are constructed with approved materials and by appropriate methods,

NOW, THEREFORE, BE IT RESOLVED, that the CONSTRUCTION GUIDELINES , as filed with us on this date, by and the same, are hereby adopted as administrative rules and regulations governing the development of public roads and the same shall be known and cited as our CONSTRUCTION GUIDELINES ,

BE IT FURTHER RESOLVED, that in the event other previous resolutions or parts of previous resolutions conflict with this resolution adopting the aforesaid CONSTRUCTION GUIDELINES, such resolutions, or parts thereof, only to the extent of conflict, are hereby repealed.

BE IT FURTHER RESOLVED, that if any section, clause, or portion of the aforesaid CONSTRUCTION GUIDELINES be declared invalid by the courts, the balance of same shall remain valid and in effect, except for the part declared invalid.

BE IT FURTHER RESOLVED that the effective date of the aforesaid CONSTRUCTION GUIDELINES shall be January 1, 2017.

BOARD OF COUNTY ROAD COMMISSIONERS
OF THE COUNTY OF KALAMAZOO

By: Daniel J. Moyle

Daniel J. Moyle, Chairman

VI. CROSSROAD CUTS, TRENCHES, REMOVAL OF PAVEMENT AND RESTORATION

Construction of all utilities and other facilities for existing highways, roads, and streets shall conform to the requirements and specifications provided below.

The RCKC Application to Construct, Operate, Use and/or Maintain Remove Within the Right-of-Way or to Close A County Roadway shall be submitted for approval prior to issuance of the permit. Permittee agrees to conform with all of the requirements of the Public Act 174 of 2013 known as the MISS DIG Underground Facility Damage Prevention and Safety Act.

A. Location

1. Public Roads

The following location requirements for longitudinal occupancy of utilities shall be adhered to unless another location is specifically approved by the RCKC.

Utilities constructed prior to the acceptance of the plans shall be shown and comply with existing RCKC requirements. If they are to be placed within the ROW, utility locations shall be staked prior to their installation and shall be placed as indicated in Appendix D.

2. Limited Access Segments of North and South Sprinkle Road

Along North and South Sprinkle Road from BL I-94 to G Avenue, longitudinal occupancy of utilities shall be within 10 feet of either ROW or no closer than 10 feet to the edge of pavement. RCKC will allow only continuous type facilities that do not intermittently extend service outside the limited access ROW. The location requirements indicated in Appendix D shall be adhered to unless another location is specifically approved by the RCKC.

B. Depth

All crossroad underground facilities shall have a minimum of 5 feet of cover from top of pipe to ground level and shall have at least 2 feet of cover from top of pipe to the bottom of the ditch.

All underground facilities parallel to the road shall be maintained at a minimum of 36 inches below existing ground level, except fiber optics that will be at least 42 inches below the surface.

C. Method of Construction and Restoration

1. Construction

The method used for installation of crossroad facilities shall be described on the permit or submitted plans.

All crossroad underground facilities under HMA or concrete roads shall be

constructed by jacking and boring. Use of any other method will require specific permission on a case-by-case basis. Consideration will be given to open cut HMA roads in special cases.

Any construction carried out shall be approved, based on a permit obtained from the RCKC in advance of actual construction, and/or as soon as possible in the case of an emergency repair. Such permits will be issued with restrictions adequate to protect the interests of the motoring public and the road's physical facilities.

Except for asbestos pipe, utility owners may abandon existing underground facilities or structures that do not pose a hazard or impediment to the use and maintenance of the ROW. In any such case the utility owner shall maintain ownership and responsibility for the facility or structure. Abandonment may require that the utility owner remove its facility or structure, at the discretion of the RCKC, and restore all areas to conditions satisfactory to the RCKC. All abandoned pipe shall be pressure grout filled.

A utility owner proposing to cease operation of an asbestos pipe system shall remove the abandoned system from the ROW and shall properly dispose of the materials pursuant to applicable laws and regulations.

2. Excavation and Disposal of Excavated Material

   The permittee, contractor and/or shall provide and place the necessary sheeting, shoring and bracing required to prevent caving, loss, or settling of foundation material supporting the pavement, or any other highway installation, such as sewers, culverts, etc. The permittee, contractor, and/or utility company assume full responsibility for this protection and shall not proceed in these areas before approval of methods by the RCKC's.

   Excavated material shall be stocked in locations so as to not obstruct vision on the traveled portion of the highway and placed in a manner so that it interferes as little as possible with traffic flow. Sod and topsoil shall be stocked separately from other excavated material. The permittee shall dispose of all surpluses and unsuitable material outside the limits of the highway ROW unless the permit provides for disposal at approved locations within the ROW. In the latter case, the material shall be leveled and trimmed in an approved manner.

3. Backfill and Compaction Backfill

   Restoration shall be such that it will provide a condition equal to or better than the original condition and comply with MDOT Standard Specifications for Construction. All trenches, holes, and pits shall be filled with granular material meeting minimum requirements for MDOT Class III granular material. Material shall be placed in successive layers of not more than 12-inch depth, in loose measure, and each layer shall be thoroughly compacted as stipulated by MDOT. All backfill compaction will be subject to check by the Controlled Density Method or other approved engineering method.

4. Crossing Roadbed by Jack and Bore

   When pipe is installed by jack and bore, the ends of casings shall be sealed by an approved method. The RCKC inspector shall specifically approve location of boring pits.

5. Crossing by Cutting Pavement and Trenching

   When this method is approved by the RCKC, the pavement shall be cut back so that the opening is at least 24 inches wider on each side than the width of the trench. For surface restorations see Section VI. C .6. Restoration of an HMA Road Surface. In all concrete surfaces or bases, edges of trench shall be formed by the use of a concrete saw. The pavement shall be removed in such a manner as to allow the reinforcing steel to protrude a sufficient distance for lapping and tying with reinforcing steel in the pavement patch. If lapping and tying cannot be accomplished, connection to patch shall be by drill and dowel method. All HMA surface or base materials shall be saw cut. Backfilling shall comply with provisions of Section VI. C .3. Backfill and Compaction Backfill. After the backfill has been placed, the pavement shall be replaced with new pavement approved by the RCKC. Should work occur at a season of the year when it is not feasible to construct the new pavement, a temporary surface of HMA shall be installed and final pavement shall be placed the next May at permittee's expense.

6. Restoration of an HMA Road Surface

   Repairs shall be equal to or better than the existing road. HMA surfaces shall be milled to at least 10 feet on sides of utility cut and repaved. Pavement abutting final patch shall be saw cut. Crossroad cuts are to be backfilled and compacted as described in Section VI. C .3. Backfill and Compaction Backfill. Installation of material shall be to the appropriate distance from the surface to accommodate the base and pavement designated in Section VI. C., 12., Restoring Materials. Unless listed otherwise, HMA shall be in lifts of no greater than 2 inches compacted in place. On roads with a HMA base, the existing base shall be replaced with an equivalent depth of new HMA. Patch surface shall be rolled to conform to the existing pavement. Restoration may require milling and machine paving of road adjacent to cut. Use of infrared equipment may be allowed. Lane width shall be consistent with the current road with a minimum width of 10 feet.

7. Restoration of a Concrete Road Surface

   On a concrete road, MDOT Grade PI concrete shall be used to replace the original concrete.

8. Restoration of a Gravel Road Surface

   Trenches shall be backfilled and compacted in accordance with Section VI. C .3. Backfill and Compaction Backfill. to within 8 inches of the surface. In the remaining depth, 22A aggregate shall be placed and compacted to MDOT specifications.

9. Restoration of Shoulders

   Shoulder restoration shall comply with Section VI. C .3 .Backfill and Compaction Backfill. Specifications for shoulder restoration shall be the same as those for HMA, concrete and gravel road surfaces, Section VI. C., 12., Restoring Materials. The 23A aggregate shoulder gravel shall be a minimum depth of 6 inches and shoulder width shall be consistent with the current road with minimum width of 4 feet or as determined by the RCKC. Reuse of original shoulder gravel will not be permitted.

10. Ditches and Back slopes

    The permittee will be responsible for SESC measures until vegetation is well established for any cleanup deemed necessary by the RCKC . When work is necessary in the ditch line or back slope, all brush and trees in the construction area shall be completely removed. Slopes shall be regraded to existing conditions or to standard 1:4 fore slope. Rocks larger than 3 inches shall be removed. In lawn area all stone shall be removed. In accordance with MDOT Standard Specifications for Construction, the construction area shall have 3 inches of topsoil in depth, dragged, rolled, seeded and mulched. All lawn area shall be replaced with sodding or 3 inches of processed topsoil and seeded to match the existing lawn. Permittees are responsible for attaining and complying with SESC regulations.

11. Gravity Sanitary Sewer Projects

    For the construction of gravity sanitary sewer projects, the following requirements apply.

    a. Construction:

       Remove and replace entire lane to nearest edge of full-width lane remaining. Any undermined pavement shall be removed and replaced to next adjacent full width -lane or pavement edge.

       The entire width of a two-lane road shall be resurfaced. On a multilane facility, unless two full-width lanes in the same direction are saved, all lanes shall be completely resurfaced. Existing pavement along curb and gutter shall be milled to accommodate any resurfacing. All paving shall conform to MDOT Standard Specifications for Construction and this policy.

    b. Restoration of Shoulders:

       Shoulders shall be restored in accordance with Section VI. C .9. Restoration of Shoulders.

    c. Other:

       Storm sewer shall be protected to prevent filling or blocking with excavated materials and debris. Materials entering leaching basins, storm sewers or retention areas shall be removed and disposed of in an approved manner.

Disturbed or displaced drainage structures shall be returned to their proper place. Chipped, cracked, or broken facilities shall be replaced with RCKC approved materials.

Undermined or displaced curb and gutter shall be removed and replaced. Reinforcement steel in replacement curb and gutter shall connect to existing reinforcement steel in an approved manner.

12. Restoring Materials

The standards for restoration, as determined by the Engineer or their representative, are indicated in Appendix E and are the minimum requirements. Roads exceeding these material and design specifications shall be restored to their higher standards. Milled HMA material may be reused as aggregate base, provided the milled material approximates the gradation for MDOT 22A aggregate. See RCKC current specifications for mix designs.

13. Intent

It is the intent of these specifications that all ROW and surfaces shall be restored as soon as possible on the schedule approved by the RCKC.

14. Maintenance Certificate or Escrow

A letter of credit or cash deposit equaling 175% of the expected cost may be required.

D. Roadside Soil/Ground Cover Disturbances

Temporary, roadside impacts are anticipated. Work within and adjacent to the ROW shall comply with applicable storm water provisions and Best Management Practice measures to control soil erosion and sedimentation.

Earth changes on property that abuts the ROW shall not increase the volume or velocity of storm water disposed of in the ROW. Storm water shall be either detained on site or restricted to the original volume and rate of flow.

Grading and excavation shall be done in such a manner so as to prevent damage to roadside fixtures and features, including ditches, culverts, shoulders, curbs, basins, leaching areas, paved surfaces and utility access chambers. All debris resulting from the earth change shall be removed from the ROW.

All work shall comply with the provisions of Part 91 of the Erosion and Sedimentation Control Act of the Natural Resources and Environmental Protection PA 451 of 1994, as amended and as administered by the duly authorized agent, shall appear on the plans. A copy of the SESC plan, as required by the controlling agency, shall be included with the permit request. Copy of inspection reports shall be submitted to RCKC at the same time as original report.

Work shall not damage adjacent property or result in the deposit of debris or sediment into any drainage course or the ROW. Sediment shall be removed from runoff water before it leaves the site of the earth change. Temporary or permanent facilities constructed for the conveyance of water around, through, or from the earth change area shall limit the water flow to a non-erosive velocity. All earth changes shall be designed, constructed, and completed in such a manner so that: 1) the exposed area of any disturbed land shall be limited to the shortest possible period of time, and 2) the natural flow of storm water either through or across the area is not impacted or changed unless written permission is obtained from affected property owners, including the RCKC.

Temporary SESC facilities shall be removed and earth change areas graded and stabilized with permanent soil erosion control measures pursuant to approved standards and specifications as prescribed by the EGLE. Permanent SESC measures for all slopes, channels, ditches, or any disturbed land area shall be completed within the shortest possible period of time, but not to exceed five (5) calendar days after final grading or the final earth change has been completed. If it is not possible to permanently stabilize a disturbed area after an earth change has been completed, or if significant earth change activity ceases, then temporary SESC measures shall be maintained until permanent SESC measures are in place and the area is stabilized.

The permittee undertaking soil erosion and sediment control measures, and all subsequent owners of property on which such measures have been implemented, will be responsible for the continued maintenance of the permanent SESC.

VII. ACTIONS AFFECTING TREES

These rules and regulations apply to landowners, utilities, private contractors, governmental authorities, etc., regarding trees within the ROW.

The RCKC application Construct, Operate, Use and/or Maintain Remove Within the Right-of-Way or to Close A County Roadway shall be submitted for approval prior to issuance of the permit.

A. Requirements

1. Permittee is responsible for determining if any endangered species exist in the area of work and shall be required to comply with any regulations protecting such species.

2. Applies to any tree removal, pruning, trenching or tunneling through the root system, included as part of a project or on a specific permit.

3. Permittee may be required to provide location, size, number and species of trees affected. When required, this information is to be shown on construction plans or on sheets similar to the plans; in such a way that identification can be readily made in the field. When required, the permittee shall indicate individual trees that are subject to removal, trenching, tunneling or pruning and the extent of pruning.

4. Before removing any tree measuring more than 6 inches in diameter at a point 4 feet

APPENDIX E

MINIMUM ROAD CROSS SECTION REQUIREMENTS

RESIDENTIAL ROADS (PLATS)

190 lbs / syd (1 3/4 inches) RCKC HMA Mix 36A, Mod. Wearing Course
250 lbs / syd (2 1/4 inches) RCKC HMA Mix 13A Mod. Leveling Course
8 inches CIP MDOT 22A Aggregate Base
24 inches CIP MDOT Granular Material Class III Subbase

SECONDARY ROADS (LOCAL)

220 lbs / syd (2 inches) RCKC HMA 13A Mod. or 36A Wearing Course (as determined by County Engineer)
220 lbs / syd (2 inches) RCKC HMA 13A Mod. Leveling Course
220 lbs / syd (2 inches) RCKC HMA 13A Mod. Base Course
8 inches CIP MDOT 22A Aggregate Base
24 inches CIP MDOT Granular Material Class III Subbase

Or

GRAVEL ROADS

Full surface width shall be removed to a minimum depth of 8 inches and replaced with MDOT 22A aggregate
24 inches of CIP MDOT Class III granular material

COMMERCIAL ROADS (PRIMARY)

220 lbs / syd (2 inches) RCKC HMA 13A Mod. or 36A Wearing Course (as determined by County Engineer)
220 lbs / syd (2 inches) RCKC HMA 13A Mod. Leveling Course
220 lbs / syd (2 inches) RCKC HMA 13A Mod. Base Course
8 inches CIP MDOT 22A Aggregate Base
24 inches CIP MDOT Granular Material Class III Subbase

Or

6 inches MDOT Grade P1 Reinforced Concrete Pavement
8 inches CIP MDOT 22A Aggregate Base
24 inches CIP MDOT Granular Material Class III Subbase