



City of East Grand Rapids Construction Standards for Right-of-Way and Easements

Email permit to Brian Bigorowski and Ken Wiley / Compaction test required for roadway.

Note on permit if bore or open cut.

Need traffic control plans-streets and sidewalks.

Advance Notice Required for all maintenance work

Removal of hard surface requires notice/permit

All Specs provided by EGR must be followed as noted or as directed by EGR.

Permits, New Service, Maintenance: Call/E-mail:

Brian Bigorowski: bbigorowski@eastgr.org 616-940-4817

Ken Wiley: kwiley@eastgr.org 616-940-4817

CC e-mail:

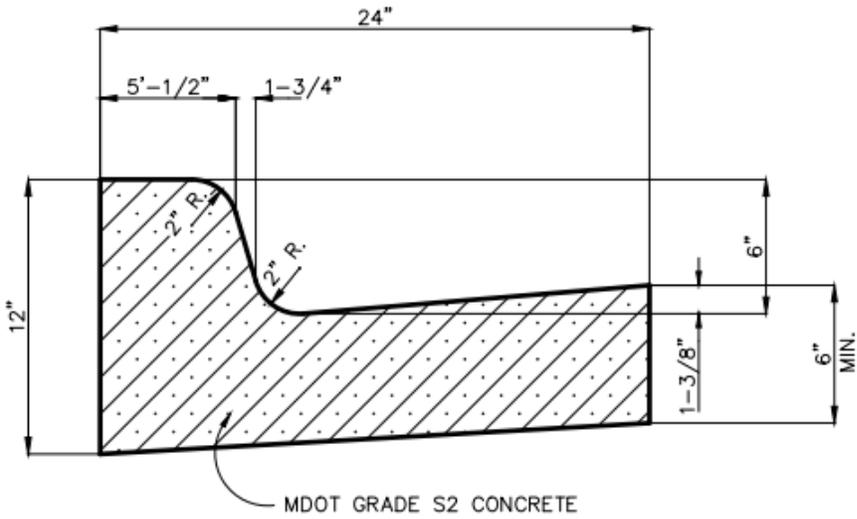
Doug La Fave: dlafave@eastgr.org

Nick Blocher: nblocher@eastgr.org

DPW Operator Room: oproom@eastgr.org

Crew Leader: crewleader@eastgr.org

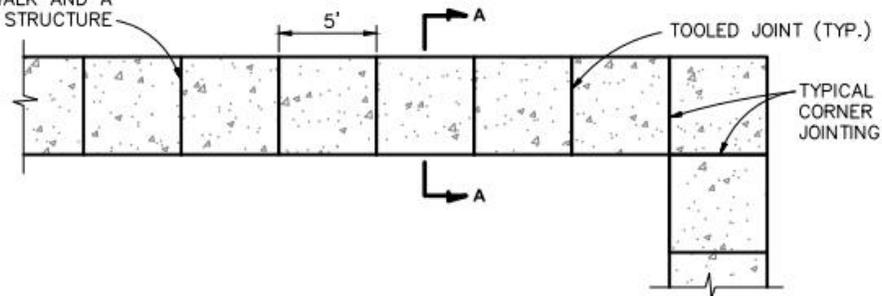
Curb and Gutter



- NOTES:
1. CONTRACTION JOINTS TO BE PLACED EVERY 10 FT.
 2. EXPANSION JOINTS TO BE PLACED EVERY 300 FT AND AT THE SPRING POINTS OF RADII

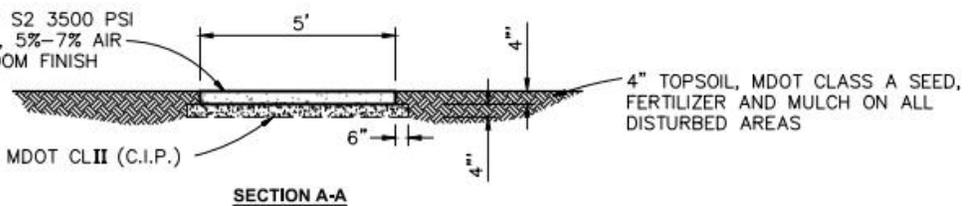
Sidewalk

½" EXPANSION JOINT EVERY 50' AND/OR AT EACH JOINT BETWEEN SIDEWALK AND A STRUCTURE



MDOT GRADE P1 OR S2 3500 PSI
28 DAY CONCRETE, 5%-7% AIR
ENTRAINED; BROOM FINISH

4" MIN. SAND BASE MDOT CLII (C.I.P.)



NOTES:

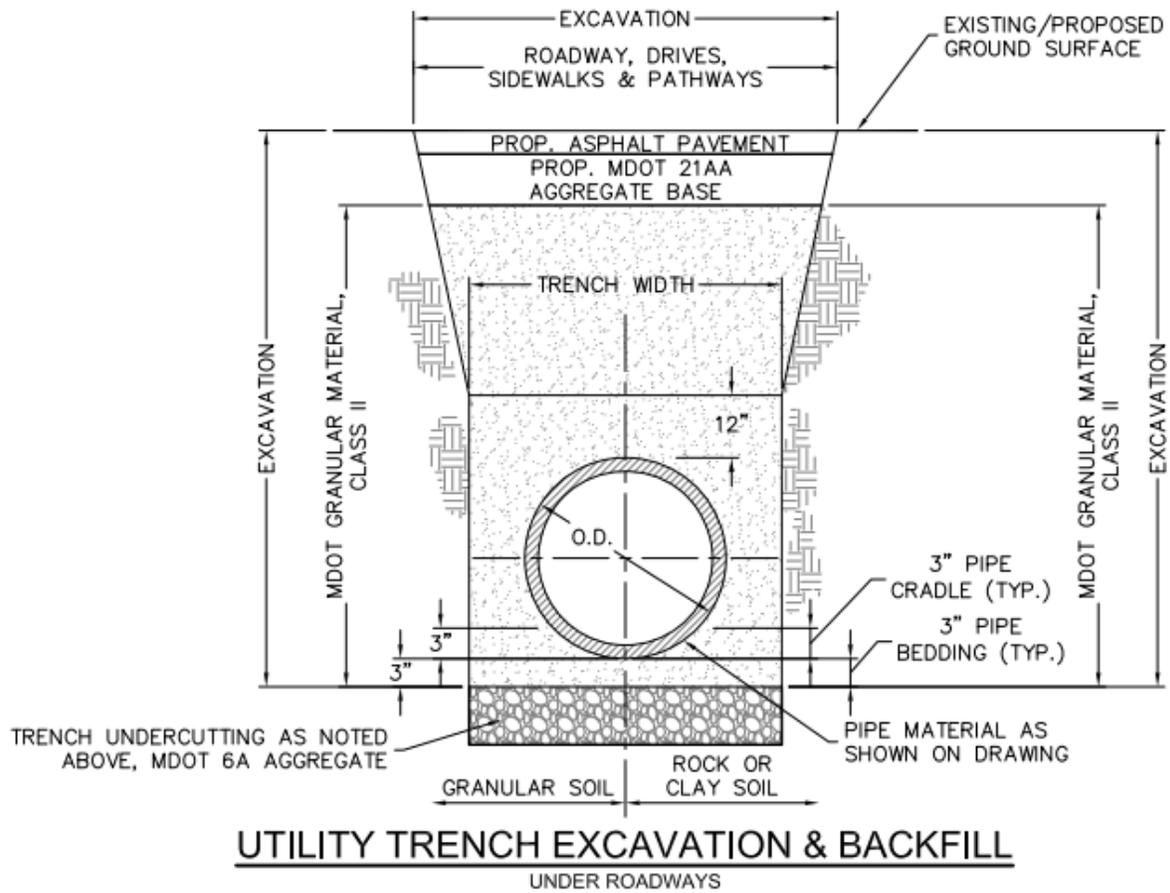
1. MAX CROSS SLOPE IS 2%
2. MAX RUNNING SLOPE IS 5%
3. 1' CLEAR ZONE TO BE PROVIDED FROM EACH EDGE OF SIDEWALK.
4. TOPSOIL TO BE SCREENED WITH NO STONES GREATER THAN ½" DIAMETER.
5. EROSION CONTROL BLANKET REQUIRED ON ALL SLOPES 1 ON 3 AND STEEPER

All ADA ramps require DTE form checks and inspections by DTE provided engineer, currently under DTE Fishbeck contract to meet MDOT spec. Metal plates only.

Barricading-Sidewalks:

Type II barricades shall be placed on both ends of each continuous sidewalk section removed, with a maximum barricade spacing of fifty feet. For sidewalk sections not within a driveway, the barricades shall remain in place from the time of removal until 24 hours after the concrete has been poured and cured. For sidewalk sections within a driveway and drive approaches, the barricades shall remain in place from the time of removal until 7 days after the concrete has been poured unless the strength has been verified. Pedestrian detour may be required, at which time the contractor shall submit a detour route in accordance with current MMUTCD standards.

Utility Trench Excavation/Backfill Detail

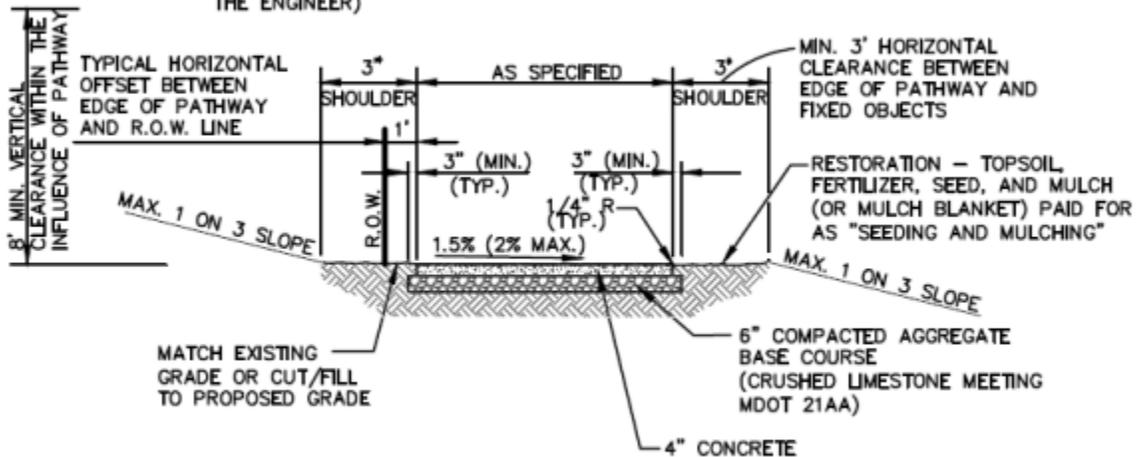


Concrete

CONCRETE PAVEMENT

1. CONCRETE SHALL CONSIST OF:
PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI AND A SLUMP OF 1½" TO 3 INCHES. PAVEMENT SHALL CONFORM TO M.D.O.T. GRADE P1.
2. ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.
3. THE CONCRETE BATCH PLANT SHALL BE M.D.O.T. CERTIFIED WITH LOCATION APPROVED BY THE CITY.
4. NO CONCRETE PAVING SHALL BE ALLOWED PRIOR TO MAY 1, OR AFTER NOVEMBER 1 (UNLESS APPROVED BY THE CITY).
5. DO NOT PLACE CONCRETE WHEN PRECIPITATION IS IMMINENT OR WHEN MOISTURE ON THE EXISTING SURFACE WILL PREVENT SATISFACTORY CURING. UNLESS OTHERWISE APPROVED BY THE ENGINEER IN WRITING, TEMPERATURE AND SEASONAL REQUIREMENTS FOR PLACING CONCRETE WILL BE ACCORDING TO THE CURRENT MDOT SPECIFICATIONS. PAVING WILL NOT BE ALLOWED BELOW THESE MINIMUM TEMPERATURES, NOR WHEN FROST IS ON OR IN THE GRADE OR ON THE EXISTING SURFACE.

* SHOULDER WIDTH REDUCTION WILL BE ALLOWED (MIN. 1') TO MINIMIZE GRADING WHERE EXIST CROSS-SLOPE EXCEEDS 1 ON 10 (10%) OR TO PRESERVE EXIST LANDSCAPE (BY DIRECTION OF THE ENGINEER)



EXCAVATION, GRADING, AND EMBANKMENT REQUIRED FOR PREPARING BASE FOR AGGREGATE BASE PAID FOR AS "PATHWAY GRADING"

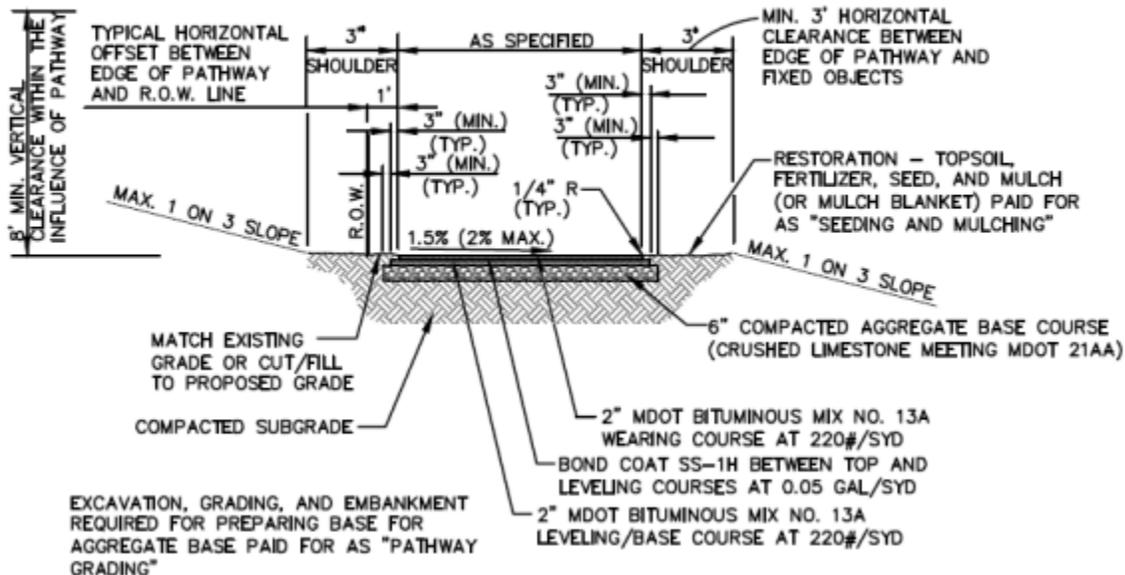
JOINTS:
PLACE EXPANSION JOINTS AT INTERVALS NOT TO EXCEED 30'.
PLACE CONTROL JOINTS AT 6' INTERVALS.

Asphalt

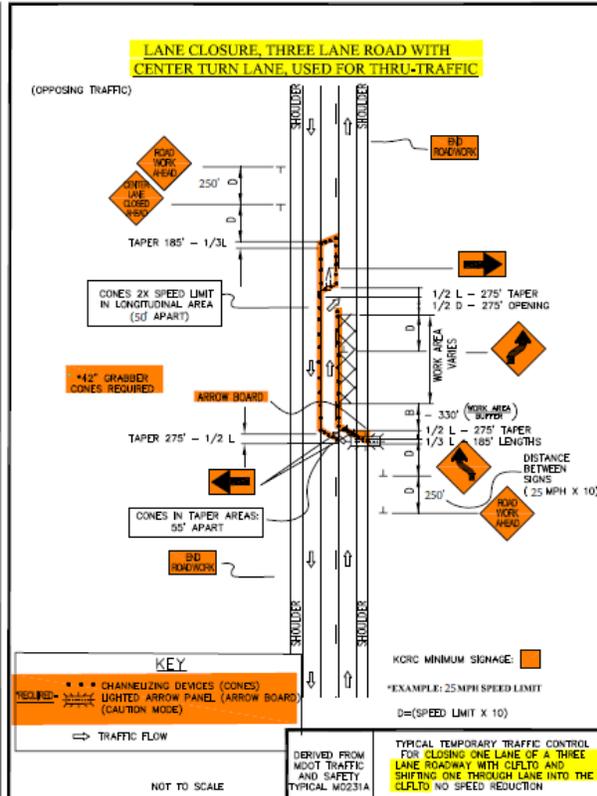
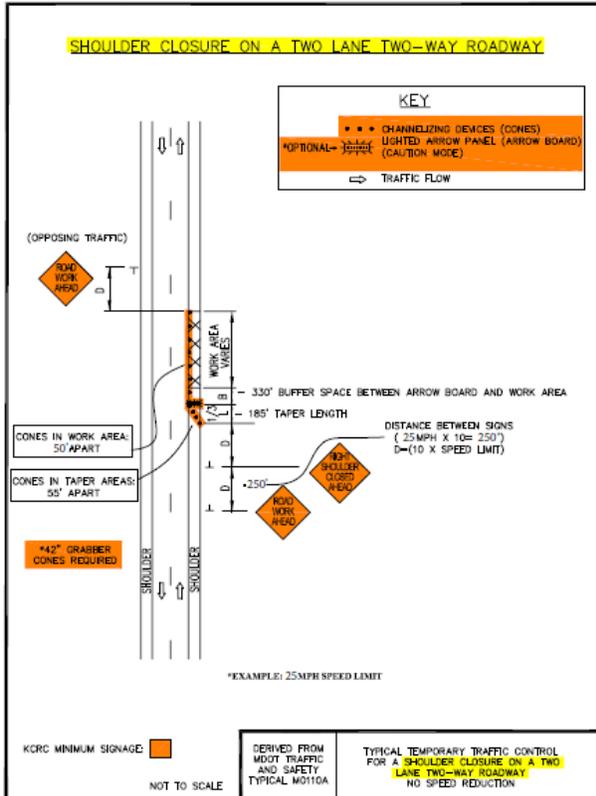
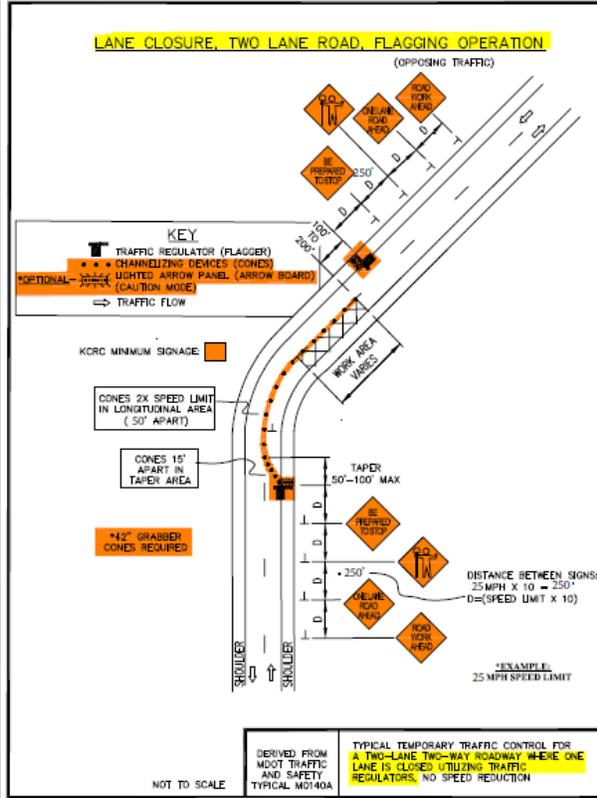
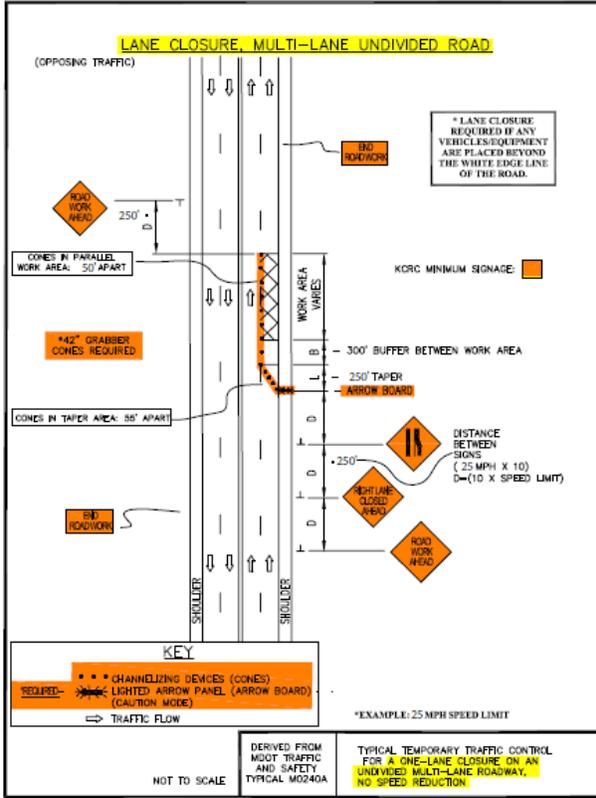
BITUMINOUS PAVEMENT

1. BITUMINOUS MIXTURE SHALL CONSIST OF: LEVELING COURSE – MDOT BITUMINOUS MIXTURE NO. 3C; LEVELING COURSE – MDOT BITUMINOUS MIXTURE NO. 4C; WEARING COURSE MDOT BIT MIX NO. 5E1.
2. ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY OF 92% OF THE FIELD CONTROL DENSITY AS DETERMINED BY THE THEORETICAL MAXIMUM DENSITY.
3. A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN ALL COURSES OF ASPHALT IMMEDIATELY PRIOR TO PLACEMENT OF EACH COURSE OF PAVEMENT. THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.10 GALLON/S.Y. BETWEEN LEVELING COURSES & 0.05 GALLON/SY BETWEEN WEARING COURSE AND LEVELING COURSE.
4. DO NOT PLACE HMA OR APPLY BOND COAT WHEN PRECIPITATION IS IMMINENT OR WHEN MOISTURE ON THE EXISTING SURFACE WILL PREVENT SATISFACTORY CURING. UNLESS OTHERWISE APPROVED BY THE ENGINEER IN WRITING, TEMPERATURE AND SEASONAL REQUIREMENTS FOR PLACING HMA WILL BE ACCORDING TO THE CURRENT MDOT SPECIFICATIONS. PAVING WILL NOT BE ALLOWED BELOW THESE MINIMUM TEMPERATURES, NOR WHEN FROST IS ON OR IN THE GRADE OR ON THE EXISTING SURFACE.

* SHOULDER WIDTH REDUCTION WILL BE ALLOWED (MIN. 1') TO MINIMIZE GRADING WHERE EXIST CROSS-SLOPE EXCEEDS 1 ON 10 (10%) OR TO PRESERVE EXIST LANDSCAPE (BY DIRECTION OF THE ENGINEER)



Traffic Control



Horizontal Directional Drilling

Minimum Allowable Depths

The minimum allowable installation depth of cover of a HDD installed pipe under the road and shoulder surface is correlated to the pipe diameter. Table 2 summarizes the minimum allowable depths for road crossings:

Table 2 - Minimum Allowable Depth

Pipe Diameters (inches)	Depth of Cover (feet)
6 or less	4
7 - 12	8
13- 24	10
24 and greater	12

In locations where the road surface is super elevated, the minimum depth of the bore shall be measured from the lowest side of the pavement surface. In addition, a minimum 3-foot depth shall be maintained in all other features including ditch bottoms.

Drilling Site

- (a) Location – All directional drilling operations shall take place between the back of curb and face of sidewalk within the right-of-way. Any deviation from this location requires prior approval from the City of East Grand Rapids.
- (b) Resident coordination – All affected residents shall be notified by written notice when drilling operations will be taking place (24 hours prior notice required). Any drilling that is necessary outside of the right-of-way requires permission from the resident and submittal to the City of East Grand Rapids 24 hours prior to drilling operations.
- (c) Protection – Fencing barriers shall be installed adjacent to equipment and supplies with suitable fencing and plastic drums to prohibit pedestrian access to the work site. Equipment shall not be used as fencing to protect access pits.

Worksite Restoration

- (a) Access pits and excavations shall be backfilled with suitable material, and in a method approved as noted.
- (b) The disturbed grass-surface area shall be immediately (within 24 hours of completion) top soiled, seeded, fertilized, mulched, and anchored according the current MDOT Standard Specifications for Construction, Sections 816 and 917.
- (c) All underground sprinkling to include piping, fittings, and sprinkler heads shall be replaced in kind to match existing conditions.
- (d) The contractor should take care so as not to damage existing conditions within the right-of-way and adjacent lawns and driveways. Any damage to existing sidewalks, curb and gutter, ramps, driveways, landscaping, etc. will be required to be replaced in kind/as noted.
- (e) Upon completion of the work, the contractor shall remove and properly dispose of all excess materials and equipment from the work site.