



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0348

INSTRUCTIONAL BULLETIN NO. 09-17

Regarding Revised Sections 6 & 7 - General Notes and Special Notes & Index

Effective for the March 10, 2010 letting (January 13, 2009 Turn-in), Sections 6 & 7 of the Design Guidelines are revised. The entire Section 6 (Revised: December 1, 2009) and Section 7 (Revised: December 1, 2009) is attached to replace the existing sections in the Design Guidelines.

The following sections of Section 6 have been revised as part of the December 1, 2009 revision.

Section	Revision
6-145.00 Pavement Markings	Notes added and revised to address changes to pavement marking guidelines.
6-295.02 Stream Relocation	Note (4) revised.

The following sections of Section 6 were revised as part of the previous revision to Section 6 dated September 28, 2009 and is provided for information to designers to document recently revised general notes.

Section	Revision
6-105.00 Seeding and Sodding	Note (5) revised
6-110.00 Guardrail	Note to designer added prior to Note (2)
6-115.00 Drainage	Note (2) revised
6-175.00 Signalization	Notes (15) thru (18) deleted
6-190.05 Inspection, Maintenance, and Repair	Note (25) revised
6-290.00 Erosion Prevention and Sediment Control	Note to designer added
6-290.01 Stream/ Wetland	Note to designer revised prior to Note (1)
6-290.02 High Quality Waters	Note to designer revised prior to Note (2)
6-290.03 NPDES	Note to designer revised prior to Note (4) Note to designer revised prior to Note (8) Note to designer revised prior to Note (9)
6-290.04 Utility Relocation	Note to designer revised prior to Note (10)
6-290.05 Litter, Debris, Waste, Petroleum	New section added
6-290.06 Polyacrylamide	New section added
6-295.01 Ecology	Note to designer revised prior to Note (1)
6-295.02 Stream Relocation	New section added

This bulletin voids Instructional Bulletin 09-14.

Original signed by Jeff C. Jones
Jeff C. Jones, Civil Engineering Director
Design Division

December 1, 2009
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SECTION VI – GENERAL NOTES AND SPECIAL NOTES

CHAPTER 1 – GENERAL NOTES

6-100.00	GRADING
6-105.00	SEEDING AND SODDING
6-110.00	GUARDRAIL
6-115.00	DRAINAGE
6-120.00	UTILITIES
6-125.00	FENCING
6-130.00	MISCELLANEOUS
6-135.00	ROAD CLOSURE
6-140.00	RIGHT – OF – WAY
6-145.00	PAVEMENT MARKINGS
6-150.00	PAVEMENT
6-150.01	PAVING
6-150.02	RESURFACING
6-155.00	GRADED SOLID ROCK
6-160.00	RIPRAP
6-165.00	SIGNING
6-170.00	TRAFFIC CONTROL DIRECTIONAL SIGNING
6-175.00	SIGNALIZATION
6-180.00	CONSTRUCTION WORK ZONE & TRAFFIC CONTROL
6-185.00	LIGHTING
6-190.00	EROSION PREVENTION AND SEDIMENT CONTROL
6-190.01	DISTURBED AREA
6-190.02	SEDIMENT CONTROL
6-190.03	STREAM/WETLAND

TDOT - ROADWAY DESIGN GUIDELINES

English

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- 6-190.04 SPECIES**
- 6-190.05 INSPECTION, MAINTENANCE, REPAIR**
- 6-190.06 MATERIALS**
- 6-190.07 SWPPP, PERMITS, PLANS, RECORDS**
- 6-190.08 LITTER, DEBRIS, WASTE, PETROLEUM**

CHAPTER 2 – SPECIAL NOTES

- 6-200.00 GRADING**
- 6-250.00 PAVEMENT**
 - 6-250.02 RESURFACING**
 - 6-250.03 PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL**
- 6-270.00 SIGNALIZATION**
- 6-290.00 EROSION PREVENTION AND SEDIMENT CONTROL**
 - 6-290.01 STREAM/WETLAND**
 - 6-290.02 HIGH QUALITY WATERS**
 - 6-290.03 NPDES**
 - 6-290.04 UTILITY RELOCATION**
 - 6-290.05 LITTER, DEBRIS, WASTE, PETROLEUM**
 - 6-290.06 POLYACRYLAMIDE**
- 6-295.00 ENVIRONMENTAL**
 - 6-295.01 ECOLOGY**
 - 6-295.02 STREAM RELOCATION**

SECTION VI – GENERAL NOTES AND SPECIAL NOTES

CHAPTER 1 – GENERAL NOTES

6-100.00 GRADING

- (1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.
- (3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.
- (4) ARCHAEOLOGICAL SITE NO. _____ MUST BE AVOIDED AS A SOURCE OF FILL OR HEAVY MACHINERY STAGING AREA. EARTH FILL WILL BE REQUIRED FROM AREAS OUTSIDE THE PROPOSED RIGHT-OF-WAY. CERTIFICATION MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

6-105.00 SEEDING AND SODDING

- (1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, TOPSOILED AND SEEDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. TOPSOIL, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEMS 203-04 AND/OR 203-07. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM 801-01.
- (2) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

NOTE: SEE SECTION 4-801.05. NOTE (3) SHALL BE PLACED IN THE GENERAL NOTES WITH THE BLANK BEING FILLED IN WITH THE PROPER ITEM NUMBER

- (3) ITEM NO. ____ SHALL BE USED ON SLOPES 3:1 OR STEEPER AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.
- (4) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.
- (5) ITEM NO. 801-02, SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET, SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

6-110.00 GUARDRAIL

- (1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

NOTE: NOTE (2) NOT NECESSARY IF NOTE (1) IS USED.

- (2) THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

NOTE: NOTE (3) NOT NECESSARY IF NOTE (2) IS USED. IF BARRICADES OR DRUMS AND TYPE "A" LIGHTS ARE NOT ALREADY IN THE CONTRACT, BE SURE TO PROVIDE FOR PAYMENT.

- (3) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE A LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL.

NOTE: NOTE (4) TO BE USED ON NEW ALIGNMENT ONLY.

- (4) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

6-115.00 DRAINAGE

- (1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

NOTE: SEE SECTION 4-204.00

- (2) EXCAVATION FOR _____ WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).

NOTE: SEE SECTION 4-204.05

- (3) CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.
- (4) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).
- (5) WHERE A CULVERT (PIPE, SLAB OR BOX) IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION, NO INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT WILL BE MADE DUE TO SUCH CHANGE.
- (6) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

6-120.00 UTILITIES

- (1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

TDOT - ROADWAY DESIGN GUIDELINES

English

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- (2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.
- (3) THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.
- (5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

6-125.00 FENCING

- (1) LOCATION OF THE FENCE SHALL BE ONE FOOT INSIDE THE RIGHT-OF-WAY EXCEPT WHERE SHOWN ON THE PLANS.
- (2) FENCES SHALL BE TURNED IN AT DRAINAGE STRUCTURES, STOCK PASSES AND BRIDGES WHERE DIRECTED BY THE ENGINEER SO AS TO ABUT WINGWALLS AND/OR ABUTMENTS.
- (3) THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS TWO WEEKS NOTICE PRIOR TO CUTTING FENCES.
- (4) THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ACCESS CONTROL FENCES PRIOR TO CUTTING EXISTING STOCK FENCES IN AREAS UTILIZED BY DOMESTIC LIVESTOCK OR OTHER AREAS AS DIRECTED BY THE ENGINEER.

6-130.00 MISCELLANEOUS

- (1) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.
- (2) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES WHERE AND AS DIRECTED BY THE ENGINEER.
- (3) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA

6-135.00 ROAD CLOSURE

- (1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

6-140.00 RIGHT – OF – WAY

NOTE: SEE SECTION 2-300.00. NOTES (1) OR (2) TO BE USED ON ALL ROW PROJECTS.

NOTE: NOTE (1) TO BE USED FOR PLANS PREPARED OR MANAGED IN THE HEADQUARTERS DESIGN OFFICE.

- (1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, DESIGN DIVISION IS TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

NOTE: NOTE (2) TO BE USED FOR PLANS PREPARED OR MANAGED IN THE REGIONAL DESIGN OFFICES.

- (2) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, DESIGN DIVISION AND THE CIVIL ENGINEERING MANAGER 1, REGIONAL DESIGN OFFICE, ARE TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.
- (3) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.

NOTE: SEE SECTION 2-300.05. NOTES (4) THROUGH (8) ARE TO BE USED ON NEW OR RECONSTRUCTION PROJECTS WITH PARTIAL ACCESS CONTROL. NOTES (4) THROUGH (7) AND NOTE (9) GO ON ALL NEW OR RECONSTRUCTION PROJECTS WITH NO ACCESS CONTROL.

- (4) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.
- (5) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.
- (6) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND

THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

- (7) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.
- (8) TRACT REMAINDERS NOT HAVING AN EXISTING DRIVEWAY WILL BE PROVIDED ONE 50-FOOT OPENING IN THE ACCESS CONTROL FENCE AND A DRIVEWAY WILL BE CONSTRUCTED UNLESS ACCESS IS PROVIDED FROM AN INTERSECTING ROAD OR BASED ON PHYSICAL CONDITIONS AND/OR CONFLICTS WITH OTHER DESIGN CONSIDERATIONS WHICH PREVENT AN ACCESS OPENING. PAVING OF THESE NEW DRIVEWAYS WILL BE IN ACCORDANCE TO THE 7 PERCENT CRITERIA PREVIOUSLY MENTIONED FOR EXISTING DRIVEWAYS.
- (9) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

NOTE: SEE SECTION 2-300.05. NOTES (10) AND (11) GO ON PROJECTS THAT ARE ON STATE ROUTES AND NOTE (12) GOES ON PROJECTS THAT ARE NOT ON STATE ROUTES.

- (10) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.
- (11) ON PROJECTS WITH CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT. AFTER THE PERMIT HAS BEEN GRANTED, THE DEPARTMENT WILL CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE THROUGH THE CURB AND SIDEWALK, PROVIDED THE CURB AND SIDEWALK HAVE NOT BEEN CONSTRUCTED. IT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE FROM BACK OF SIDEWALK TO TOUCHDOWN POINT FOR ANY ADDITIONAL DRIVEWAYS OR FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.
- (12) ON NON-STATE ROUTES, ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS SHALL REQUIRE A PERMIT ONLY IF THE LOCAL AGENCY SPECIFIES THE NEED FOR THAT PERMIT.

NOTE: SEE SECTION 1-210.05.

- (13) EASEMENT REQUIRED FOR THE RAILROAD CROSSING IS TO BE OBTAINED BY THE UTILITIES ENGINEER BY PROVISIONS CONTAINED IN THE CROSSING AGREEMENT NEGOTIATED WITH THE RAILROAD.

6-145.00 PAVEMENT MARKINGS

NOTE: SEE SECTION 4-716.05 THROUGH 4-716.36.

TEMPORARY PAVEMENT MARKING ON INTERMEDIATE LAYERS

- (1) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01, PAINTED PAVEMENT MARKING (4" LINE), L.M.
- (2) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.20, PAINTED PAVEMENT MARKING (6" LINE), L.M.
- (3) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAYS WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02, PAINTED PAVEMENT MARKING (8" BARRIER LINE), L.F.
- (4) WIDE (8 INCH) TEMPORARY PAVEMENT MARKING LINE WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8" BARRIER LINE), LIN. FT.

FINAL PAVEMENT MARKING IF 4" ENHANCED FLATLINE THERMOPLASTIC IS USED

- (5) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.01, ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 6" ENHANCED FLATLINE THERMOPLASTIC IS USED

- (6) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 8" ENHANCED FLATLINE THERMOPLASTIC IS USED

- (7) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.03, ENHANCED FLATLINE THERMO PVMT MRKNG (8IN BARRIER LINE), L.F. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN

INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 4" SPRAY THERMOPLASTIC (60 mil) IS USED

- (8) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" SPRAY THERMOPLASTIC (60 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.01, SPRAY THERMO PVMT MRKNG (60 mil) (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 6" SPRAY THERMOPLASTIC (60 mil) IS USED

- (9) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" SPRAY THERMOPLASTIC (60 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.02, SPRAY THERMO PVMT MRKNG (60 mil) (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 8" SPRAY THERMOPLASTIC (60 mil) IS USED

- (10) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" SPRAY THERMOPLASTIC (60 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.03, SPRAY THERMO PVMT MRKNG (60 mil) (8IN BARRIER LINE), L.F. THE CONTRACTOR SHALL HAVE THE

OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 4" SPRAY THERMOPLASTIC (40 mil) IS USED

- (11) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 4" SPRAY THERMOPLASTIC (40 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.06, SPRAY THERMO PVMT MRKNG (40 mil) (4IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 6" SPRAY THERMOPLASTIC (40 mil) IS USED

- (12) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" SPRAY THERMOPLASTIC (40 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.07, SPRAY THERMO PVMT MRKNG (40 mil) (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF 8" SPRAY THERMOPLASTIC (40 mil) IS USED

- (13) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 8" SPRAY THERMOPLASTIC (40 mil) INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL

NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-13.08, SPRAY THERMO PVMT MRKNG (40 mil) (8IN BARRIER LINE), L.F. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

FINAL PAVEMENT MARKING IF REFLECTORIZED PAINT IS USED

- (14) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.01 PAINTED PAVEMENT MARKING (4IN LINE), L.M.
- (15) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.20 PAINTED PAVEMENT MARKING (6IN LINE), L.M.
- (16) PERMANENT PAVEMENT LINE MARKINGS SHALL BE REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8IN BARRIER LINE), L.F.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

- (17) THE PAVEMENT MARKING ON THE _____(C)_____ FOR _____(D)_____ WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. _____(E)_____, LIN. MI.

(C) NOTE: FILL IN THE BLANK WITH APPROPRIATE WORDS(S) FOR THE SPECIAL ROADWAY(S): DETOUR, LANE SHIFT, MEDIAN CROSSOVER, ETC.

(D) NOTE: FILL IN THE BLANK WITH APPROPRIATE WORD(S) FOR THE KIND OF PAVEMENT MARKING(S) NEEDED: CENTERLINE, EDGELINES, LANE LINES.

(E) NOTE: SEE SECTIONS 4-712.10 AND 4-716.11. FILL IN THE BLANK WITH ITEM NO. 716-05.01 PAINTED PAVEMENT MARKING (4IN LINE), L.M., 716-05.20 PAINTED PAVEMENT MARKING (6IN LINE), L.M., OR ITEM NO. 716-05.02 PAINTED PAVEMENT MARKING (8IN BARRIER LINE), L.F.

(18) BEFORE OPENING THE _____(C)_____ TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM 712-09.01 REMOVABLE PAVEMENT MARKING LINE, LIN. FT. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01 TRAFFIC CONTROL, LUMP SUM.

(C) NOTE: FILL IN THE BLANK WITH APPROPRIATE WORDS(S) FOR THE SPECIAL ROADWAY(S): DETOUR, LANE SHIFT, MEDIAN CROSSOVER, ETC.

(19) BEFORE OPENING THE _____(C)_____ TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01 TRAFFIC CONTROL, LUMP SUM.

(C) NOTE: FILL IN THE BLANK WITH APPROPRIATE WORDS(S) FOR THE SPECIAL ROADWAY(S): DETOUR, LANE SHIFT, MEDIAN CROSSOVER, ETC.

6-150.00 PAVEMENT

NOTE: NOTES (1), (2), (3), (4), (5), AND (8) ARE TO BE PLACED ON ALL RESURFACING PROJECTS ON ROADWAYS WITH SHOULDERS AND DITCHES (NO CURB AND GUTTER).

NOTE: NOTES (1), (2), (3), (6), (7), AND (8) ARE TO BE PLACED ON ALL RESURFACING PROJECTS ON ROADWAYS WITH URBAN CURB AND GUTTERS.

6-150.01 PAVING

- (1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.
- (2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

6-150.02 RESURFACING

NOTES (3) THROUGH (8) FOR RESURFACING ONLY

- (3) WHERE DIRECTED BY THE TDOT ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SHAPE PUBLIC SIDE ROADS, BUSINESS ENTRANCES, AND PRIVATE DRIVES, AS WELL AS CLEANING OF EXISTING DRAINS BEFORE PLACING MATERIALS. ALL COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- (4) ALL PUBLIC SIDE ROADS SHALL BE PAVED ONE PAVER WIDTH THROUGH THE INTERSECTION AS A MINIMUM. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD OR BUSINESS ENTRANCE SHALL BE PROVIDED. SHOULD THE PAVEMENT OF THE INTERSECTING PUBLIC ROAD BE DISTRESSED, THE RESURFACING WIDTH MAY BE INCREASED TO THE NORMAL RIGHT OF WAY LINE.
- (5) PRIVATE DRIVEWAYS, FIELD ENTRANCES, AND BUSINESS ENTRANCES WILL BE RESURFACED A PAVER WIDTH (LANE WIDTH) AS A MINIMUM. A PAVEMENT TAPER TO TRANSITION THE NEW PAVEMENT SHALL BE REQUIRED, IT SHALL BE BASED ON AN ADDITIONAL ONE FOOT OF WIDTH PER ONE INCH DEPTH OF PAVEMENT. IF THE SHOULDER IS NARROW ENOUGH THAT THE SUM OF THE SHOULDER AND THE TRANSITION ARE LESS THAN A PAVER WIDTH, THE TRANSITION SHALL OCCUR WITHIN THE PAVER WIDTH. IF THE SUM OF THE SHOULDER AND THE TRANSITION IS GREATER THAN A PAVER WIDTH (LANE WIDTH), THE TRANSITION SHALL OCCUR OUTSIDE OF THE PAVER WIDTH.
- (6) ON CURB AND GUTTER SECTIONS, PUBLIC ROAD INTERSECTIONS SHALL BE RESURFACED TO THE END OF RADIUS. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD SHALL BE PROVIDED.
- (7) ON URBAN TYPICAL SECTIONS, (CURB AND GUTTER), RESIDENTIAL DRIVEWAYS AND BUSINESS ENTRANCES SHALL HAVE A MINIMUM WIDTH OF MATERIAL NOT LESS THAN ONE FOOT USED IN THE TRANSITION TO FEATHER THE PAVEMENT EDGE.
- (8) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL

PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

6-155.00 GRADED SOLID ROCK

NOTE: IF A NOTE WORDED DIFFERENTLY FROM (1) IS SUPPLIED, THAT NOTE SHOULD BE USED. IF A MAXIMUM DIMENSION TWO FEET OR LESS IS SPECIFIED, NOTE (2) IS NOT NECESSARY; HOWEVER, IF A MAXIMUM DIMENSION GREATER THAN TWO FEET BUT NOT THREE FEET IS SPECIFIED, IT SHALL BE NECESSARY TO CONTACT THE CONSTRUCTION OFFICE FOR THE APPROPRIATE MAXIMUM DEPTH TO BE USED IN NOTE (2).

- (1) THE ROCK FILL (GRADED SOLID ROCK) MATERIAL SHALL CONSIST OF SOUND, NON-DEGRADABLE LIMESTONE OR SANDSTONE WITH A MAXIMUM SIZE OF 3'-0". AT LEAST 50% (BY WEIGHT) OF THE ROCK SHALL BE UNIFORMLY DISTRIBUTED BETWEEN 1'-0" AND 3'-0" IN DIAMETER, AND NO GREATER THAN 10% (BY WEIGHT) SHALL BE LESS THAN 2" IN DIAMETER. THE MATERIAL SHALL BE ROUGHLY EQUIDIMENSIONAL; THIN, SLABBY MATERIALS WILL NOT BE ACCEPTED. THE CONTRACTOR SHALL BE REQUIRED TO PROCESS THE MATERIAL WITH AN ACCEPTABLE MECHANICAL MEANS (A SCREENING PROCESS CAPABLE OF PRODUCING THE REQUIRED GRADATION). THE ROCK SHALL BE APPROVED BY A REPRESENTATIVE OF THE DIVISION OF MATERIALS AND TESTS BEFORE USE.
- (2) THIS GRADED SOLID ROCK MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING FIVE FEET IN DEPTH.

6-160.00 RIPRAP

NOTES (1) AND (2) ARE NOT REQUIRED IF CLASS A-1, A-2, B, OR C MACHINED RIPRAP IS USED.

- (1) MACHINED RIPRAP SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY THIS NOTE. MACHINED RIPRAP SHALL BE CLEAN SHOT ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIALS AND SHALL VARY IN SIZE FROM ___" TO ___'-___". THE STONE SIZES SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE SIZE RANGE WITH NO MORE THAN 20% OF THE MATERIAL (BY WEIGHT) LESS THAN ___". THE THICKNESS OF THE STONE LAYER SHALL BE ___'-___" (+/-3") AND THE SIZE GRADATION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT THE LAYER THICKNESS AND FROM TOP TO BOTTOM OF THE SLOPE.

UPON COMPLETION OF THE PROJECT, A VISUAL INSPECTION SHALL REVEAL THAT APPROXIMATELY 50% OF THE SURFACE AREA CONSISTS OF STONES ___" OR LARGER. PAYMENT WILL BE MADE UNDER ITEM

709-05.10 MACHINED RIPRAP (DESCRIPTION), C.Y., AND QUANTITIES WILL BE BASED ON THE AVERAGE THICKNESS OF ___'- ___".

- (2) RIPRAP SHALL CONSIST OF FURNISHING AND PLACING EITHER RUBBLE STONES BY HAND OR MACHINED. RUBBLE STONE SHALL MEET THE REQUIREMENTS OF SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE CLEAN (FREE FROM ORGANIC MATTER), DURABLE, ANGULAR WITH FRACTURED FACES, NEARLY RECTANGULAR IN SHAPE WITH A BREADTH OR THICKNESS AT LEAST ONE-THIRD ITS LENGTH.

IF THE CONTRACTOR ELECTS TO USE MACHINED RIPRAP, IT SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY THIS NOTE. MACHINED RIPRAP SHALL BE CLEAN SHOT ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIALS, AND SHALL VARY IN SIZE FROM ___" TO ___'- ___". THE STONE SIZES SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE SIZE RANGE WITH NO MORE THAN 20% OF THE MATERIAL (BY WEIGHT) LESS THAN ___". THE THICKNESS OF THE STONE LAYER SHALL BE ___'- ___" (+/-3") AND THE SIZE GRADATION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT THE LAYER THICKNESS AND FROM TOP TO BOTTOM OF THE SLOPE. UPON COMPLETION OF THE PROJECT, A VISUAL INSPECTION SHALL REVEAL THAT APPROXIMATELY 50% OF THE SURFACE AREA CONSISTS OF STONES ___" OR LARGER. PAYMENT WILL BE MADE UNDER ITEM ___(A)_____ AND QUANTITIES WILL BE BASED ON A THICKNESS OF ___'- ___".

(A) NOTE: FILL IN THE BLANK WITH APPROPRIATE RIPRAP ITEM NUMBER.

6-165.00 SIGNING

- (1) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUTOUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND. THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL EXTRUDED PANEL SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE, AS OUTLINED IN THE STANDARD SPECIFICATIONS. ALL SHIELDS ON GUIDE SIGNS SHALL BE DEMOUNTABLE AND ATTACHED TO THE SIGN FACE AS OUTLINED IN THE STANDARD SPECIFICATIONS.
- (2) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2 FEET SHORTER OR LONGER THAN SHOWN ON THE PLANS, THE ENGINEER SHALL VERIFY THE SUPPORT TYPE WITH THE DESIGN

DIVISION, SIGNING AND MARKING SECTION, TELEPHONE NO. (615)-741-0982. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.

- (3) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.
- (4) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.
- (5) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH LAYOUT DRAWINGS (3 SETS) OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMERALS, SHIELDS, AND ARROWS. THE LAYOUT DRAWINGS SHALL BE SENT TO THE DESIGN DIVISION, SIGNING AND MARKING SECTION, SUITE 1000, J. K. POLK BUILDING, NASHVILLE, TN 37243-0350.
- (6) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.
- (7) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.
- (8) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND, OR BROWN BACKGROUND.
- (9) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.
- (10) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.

6-170.00 TRAFFIC CONTROL DIRECTIONAL SIGNING

NOTE: NOTES (1) THROUGH (5) ARE TO BE PLACED ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION PROJECTS AND ACCESS CONTROLLED AND INTERSTATE RESURFACING PROJECTS WHEN THE TRAFFIC CONTROL PHASING REQUIRES PLACEMENT OF TEMPORARY PAVEMENT MARKINGS WHICH CONFLICT DIRECTIONAL SIGNS OR REQUIRES DIRECTIONAL SIGNS TO BE RELOCATED OR ADJUSTED.

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

- (1) ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL UTILIZE ALL EXISTING DIRECTIONAL SIGNING FOR AS LONG AS POSSIBLE. THESE EXISTING SIGNS CAN BE MOVED USING TEMPORARY SUPPORTS AS NEEDED. AS SOON AS THESE EXISTING DIRECTIONAL SIGNS COME DOWN PERMANENTLY, THE CONTRACTOR SHALL HAVE UP AT LEAST ONE NEW TEMPORARY "ADVANCE GUIDE SIGN" AND ONE NEW TEMPORARY "EXIT DIRECTIONAL SIGN" AT ALL EXIT RAMPS. THESE SIGNS ARE TO BE MAINTAINED WITHIN CLEAR VIEW OF THE PUBLIC ON THE RIGHT SIDE OF THE HIGHWAY AND SHALL BE REPLACED IF DAMAGED, DURING ALL PHASES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER.
- (2) THE SIZE OF THESE NEW TEMPORARY SIGNS WILL BE DETERMINED BY THE MESSAGE. THE MESSAGE SHALL BE THE SAME AS THE EXISTING SIGN THAT THESE NEW TEMPORARY SIGNS WILL BE REPLACING. THE LETTER SIZE SHALL BE A MINIMUM OF 8 INCH, "D" UPPER CASE LETTER. THE DIRECTIONAL ARROW WILL BE A "B" ARROW AT A 45 DEGREE ANGLE (SAME ANGLE AS THE EXISTING ARROW). THE MATERIAL SHALL BE 0.100 INCH SHEET ALUMINUM; THE COLOR SHALL BE A REFLECTIVE GREEN BACKGROUND WITH REFLECTIVE WHITE COPY.
- (3) ALL WORK AND MATERIAL TO MAKE THESE NEW TEMPORARY DIRECTIONAL SIGNS ALONG WITH ADEQUATE SUPPORTS AND TO MOVE THEM AS NEEDED DURING EACH PHASE OF CONSTRUCTION WILL BE PAID FOR UNDER ITEM NO. _____ (A) _____, AS DIRECTED BY THE ENGINEER.

(A) NOTE: FILL IN THE BLANK WITH APPROPRIATE 712-SERIES ITEM NUMBER.

- (4) SOME OF THESE DIRECTIONAL SIGNS WILL NEED AN INTERSTATE, U.S., OR A STATE HIGHWAY SHIELD, A CARDINAL DIRECTION, AND A DIRECTION ARROW TO ACCOMPANY THE DIRECTIONAL SIGN. THESE SIGNS SHALL BE MOUNTED BELOW THE DIRECTIONAL SIGN.
- (5) ALL EXISTING "EMERGENCY REFERENCE MARKERS" AND "HOSPITAL SIGNS" SHALL BE MAINTAINED WITHIN FULL VIEW OF THE MOTORING PUBLIC THROUGHOUT ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING AND TEMPORARY SUPPORTS SHALL BE PAID FOR UNDER ITEM NO. _____ (B) _____.

(B) NOTE: FILL IN THE BLANK WITH APPROPRIATE 712-SERIES ITEM NUMBER.

NOTE: NOTE (6) SHOULD BE PLACED ON ACCESS CONTROL AND INTERSTATE PROJECTS WITH EXISTING "LOGO" SIGNS.

- (6) WHEN "LOGO" SIGNS ARE ON ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE

CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO THE DEPARTMENT FOR THE REIMBURSEMENT OF THE SIGN FACE IF IT IS DAMAGED. ALL WORK IN MOVING THESE "LOGO" SIGNS AND THE TEMPORARY SUPPORTS ARE TO BE PAID FOR UNDER ITEM NO. _____(C)_____, AS DIRECTED BY THE ENGINEER. THE SUPPORTS FOR THE FINAL LOCATION OF THESE SIGNS WILL BE PAID FOR UNDER OTHER ITEMS OF CONSTRUCTION.

(C) NOTE: FILL IN THE BLANK WITH APPROPRIATE 712-SERIES ITEM NUMBER.

NOTE: NOTE (7) SHOULD BE PLACED ON NON-ACCESS CONTROLLED PROJECTS.

- (7) WHEN EXISTING "TOURIST ORIENTED DIRECTIONAL SIGNS" (TODS) ARE ON NON-ACCESS CONTROLLED CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING THESE "TODS" AND TEMPORARY SUPPORTS ARE TO BE PAID FOR UNDER ITEM NO. _____(D)_____, AS DIRECTED BY THE ENGINEER. NEW SUPPORTS AND SIGN FACE FOR FINAL LOCATION WILL BE PAID FOR UNDER OTHER ITEMS OF CONSTRUCTION.

(D) NOTE: FILL IN THE BLANK WITH APPROPRIATE 712-SERIES ITEM NUMBER.

6-175.00 SIGNALIZATION

- (1) EQUIPMENT AND INSTALLATION OF TRAFFIC SIGNALS SHALL COMPLY WITH TDOT STANDARD SPECIFICATIONS, SECTION 730.

NOTE: NOTE (2) IS FOR USE IN HAMILTON COUNTY, AS DIRECTED.

- (2) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730C-TRAFFIC SIGNALS."

NOTE: NOTE (3) IS FOR USE IN KNOX COUNTY, AS DIRECTED.

- (3) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730K-TRAFFIC SIGNALS."

NOTE: NOTE (4) IS FOR USE IN SHELBY COUNTY, AS DIRECTED.

- (4) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730M-TRAFFIC SIGNALS."

NOTE: NOTE (5) IS FOR USE IN DAVIDSON COUNTY, AS DIRECTED.

- (5) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE TDOT "SPECIAL PROVISIONS REGARDING SECTION 730N-TRAFFIC SIGNALS."
- (6) SALVAGEABLE EQUIPMENT SHALL BECOME THE PROPERTY OF THE (CITY OR COUNTY) AND SHALL BE STOCKPILED AT A LOCATION DESIGNATED BY THE ENGINEER FOR PICKUP BY THE (CITY OR COUNTY).
- (7) IF RESURFACING IS INCLUDED IN THE PROJECT, SIGNAL DETECTION LOOPS SHALL BE INSTALLED BEFORE THE FINAL SURFACE IS APPLIED.
- (8) ANY SIGNAL HEADS, WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL, SHALL BE COMPLETELY COVERED.
- (9) SIGNAL HEADS SHALL FLASH A MINIMUM OF SEVEN (7) DAYS PRIOR TO ACTIVATION OF THE SIGNAL.
- (10) THE CONTRACTOR SHALL CONTACT _____ A MINIMUM OF THIRTY (30) DAYS PRIOR TO ACTIVATION OF THE SIGNAL TO OBTAIN THE INITIAL SIGNAL TIMINGS.

NOTE: FOR NOTES (11) THROUGH (18) SEE SECTION 4-730.08.

- (11) THE PROJECT ENGINEER SHALL NOTIFY THE LOCAL GOVERNMENTAL AGENCY RESPONSIBLE FOR TRAFFIC CONTROL MAINTENANCE AT LEAST ONE DAY IN ADVANCE OF THE COLD PLANING ACTIVITY AT SIGNALIZED INTERSECTIONS WHERE DETECTOR LOOPS ARE ON THE PAVEMENT. THE MAINTAINING AGENCY WILL THEN BE RESPONSIBLE FOR DISCONNECTING THE LOOP DETECTORS AND MAKING ANY NECESSARY TIMING ADJUSTMENTS IN THE SIGNAL CONTROLLER PRIOR TO THE CONSTRUCTION.
- (12) THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR SUPPLYING THE CONTRACTOR WITH AS BUILT SIGNAL PLANS AT THE PRE-CONSTRUCTION CONFERENCE. THESE PLANS WILL PROVIDE THE CONTRACTOR WITH THE DESIRED LOCATION FOR DETECTOR LOOP REPLACEMENT.
- (13) LOOPS SHALL BE INSTALLED IN THE LEVELING COURSE IF A LEVELING COURSE IS PROVIDED.
- (14) LOOP REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 730 OF THE STANDARD SPECIFICATIONS.

6-180.00 CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (5) USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF A OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500

OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE.. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED AND THE VERTICAL PANELS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

6-185.00 LIGHTING

- (1) INSTALLATION AND MATERIALS SHALL COMPLY WITH SECTIONS 714 AND 917 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED MARCH 1, 2006 AND WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRIC CODE, NFPA 70.
- (2) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2-INCH SCHEDULE 40 PVC RIGID CONDUIT.
- (3) THE GROUND WIRE SHALL BE RUN INSIDE CONDUIT WITHIN STRUCTURES, SHALL BE COLORED GREEN AND HAVE THW INSULATION.
- (4) EXISTING FOUNDATIONS TO BE REMOVED A MINIMUM OF SIX INCHES BELOW GRADE.
- (5) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.
- (6) LIGHT STANDARDS SHALL BE ROUND TAPERED POLES. LENGTH SHALL BE DETERMINED BY REQUIRED MOUNTING HEIGHT.
- (7) STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.
- (8) STANDARDS SHALL BE DESIGNED FOR 80-MPH WIND PRESSURE AND SHALL SUPPORT A 62-POUND LUMINAIRE ON A 15-FOOT ARM.
- (9) ALL NEW ROADWAY LIGHT STANDARDS SHALL BE MOUNTED ON BASES WITH ACCESS DOOR. TRANSFORMER BASES SHALL MEET AASHTO SPECIFICATIONS AND HAVE FHWA APPROVAL. STANDARDS SHALL BE ALUMINUM WITH TRANSFORMER BASES.

- (10) BRACKET ARMS SHALL BE ROUND TAPERED TRUSS TYPE WITH STRAP MOUNTING AND LENGTHS AS SCHEDULED.
- (11) BRACKET ARM UPSWEEP SHALL BE THE SAME FOR ALL LIGHT STANDARDS OF THE SAME TYPE.

6-190.00 EROSION PREVENTION AND SEDIMENT CONTROL

6-190.01 DISTURBED AREA

- (1) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 10 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
- (2) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.
- (3) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- (4) CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS AND SHALL BE PHASED FOR PROJECTS THAT HAVE OVER 50 ACRES OF SOIL DISTURBANCE. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION PROJECT, UNLESS APPROVED IN WRITING BY THE ENVIRONMENTAL DIVISION.

6-190.02 SEDIMENT CONTROL

- (5) EPSC MEASURES SHALL BE INSTALLED CONCURRENTLY WITH CLEARING OPERATIONS, SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- (6) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G.,

FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.

- (7) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL-VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT.
- (8) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.
- (9) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.
- (10) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.
- (11) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- (12) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

6-190.03 STREAM/WETLAND

- (13) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH TDOT STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- (14) NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.
- (15) INSTREAM EPSC DEVICES ARE NOT APPROVED, UNLESS SPECIFIED IN WRITING BY THE ENVIRONMENTAL DIVISION.
- (16) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SO SPECIFIED IN THE ARAP/401, SECTION 404 PERMIT(S) AND/OR TVA26(A), IF APPLICABLE. ANY ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, AFTER RECEIVING THE APPROVAL OF TDOT ENVIRONMENTAL DIVISION.
- (17) THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING.
- (18) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CROSSINGS MUST BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES MUST BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK MUST BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS MUST BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO THEIR PREEXISTING ELEVATION. ALL TEMPORARY CROSSINGS MUST BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (BAILEY BRIDGE OR EQUIVALENT,

TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.

- (19) HEAVY EQUIPMENT WORKING IN WETLANDS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT MUST BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED.
- (20) WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.

6-190.04 SPECIES

- (21) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).

6-190.05 INSPECTION, MAINTENANCE, REPAIR

- (22) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
- (23) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.
- (24) THE CONTRACTOR SHALL INSTALL A RAIN GAUGE EVERY LINEAR MILE AT ALL SITES WHERE CLEARING, GRUBBING, EXCAVATION, GRADING CUTTING OR FILLING IS BEING ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED. IF THE PROJECT LENGTH IS LESS THAN ONE LINEAR MILE, ONE RAIN GAUGE SHALL BE INSTALLED AT THE CENTER OF THE PROJECT OR AS INDICATED BY THE TDOT EPSC INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT EACH

GAUGE IS MAINTAINED IN GOOD WORKING CONDITION. TDOT AND/OR THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION AND FORECASTED PERCENTAGE OF PRECIPITATION IN DETAILED RECORDS OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL PER GAUGE, THE ESTIMATED DURATION (OR STARTING AND ENDING TIMES), AND FORECASTED PERCENTAGE OF PRECIPITATION FOR THE PROJECT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER ON A MONTHLY BASIS. THE COST FOR THE RAIN GAUGES IS TO BE INCLUDED IN THE UNIT BID PRICES FOR OTHER ITEMS. RAIN GAUGES SHALL BE AS SPECIFIED IN THE APPROVED TDOT RAINFALL MONITORING PLAN.

- (25) INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY.
- (26) OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- (27) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.

6-190.06 MATERIALS

- (28) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

6-190.07 SWPPP, PERMITS, PLANS, RECORDS

- (29) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

- AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.
- (30) ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT ENGINEER. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
 - (31) THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS AND PRECIPITATION RECORDS.
 - (32) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE.
 - (33) IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
 - (34) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS.
 - (35) PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL I - FUNDAMENTALS OF

EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE OR EQUIVALENT COURSE. A COPY OF CERTIFICATION RECORDS FOR THIS COURSE SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

6-190.08 LITTER, DEBRIS, WASTE, PETROLEUM

- (36) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S.
- (37) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

CHAPTER 2 – SPECIAL NOTES

6-200.00 GRADING

NOTE: THESE NOTES SHALL BE ADDED TO THE PLANS AS SPECIAL NOTES ON ALL PROJECTS FOR WHICH A GEOTECHNICAL REPORT IS PREPARED UNLESS OTHERWISE DIRECTED BY THE DESIGN MANAGER AFTER CONSULTATION WITH THE SOILS AND GEOLOGY SECTION OF THE MATERIALS AND TESTS DIVISION AND THE HEADQUARTERS CONSTRUCTION DIVISION. ALL GRADING QUANTITIES ON THE ESTIMATED ROADWAY QUANTITIES SHEET SHOULD ALSO BE FOOTNOTED "REFER TO SPECIAL NOTES."

- (1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.
- (2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.
- (3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.
- (4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
- (5) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF

MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

6-250.00 PAVEMENT

6-250.02 RESURFACING

NOTE: NOTE (1) SHOULD BE ADDED TO THE SPECIAL NOTES ON INTERSTATE RESURFACING PLANS WHICH INCLUDE COLD PLANING ITEMS.

- (1) TRAFFIC WILL BE ALLOWED TO TEMPORARILY DRIVE ON THE MILLED SURFACE OF THE ROADWAY UNDER THE FOLLOWING CONDITIONS ONLY:
- A. THE MILLED SURFACE IS FINE TEXTURED. THE FINE TEXTURE SHALL BE OBTAINED BY A MILLING MACHINE UTILIZING A MILLING HEAD WITH TEETH SPACING 3/8" OR LESS OPERATING AT LESS THAN 80 FEET PER MINUTE.
 - B. THE SURFACE SHALL BE SWEEPED AND CLEANED OF ALL LOOSE MATERIALS.
 - C. THE DIFFERENCE IN ELEVATION BETWEEN THE MILLED SURFACE AND THE ADJACENT LANE SHALL NOT EXCEED 1 1/2 INCHES.
 - D. THE MILLED SURFACE SHALL BE PAVED WITHIN 48 HOURS.
 - E. RAIN OR INCLEMENT WEATHER IS NOT EXPECTED OR FORECASTED WITHIN 48 HOURS AFTER MILLING.
 - F. ALL APPLICABLE SIGNING IS INSTALLED IN ACCORDANCE WITH THE MUTCD SIGNING SHALL INCLUDE MOTORCYCLE WARNING SIGNS (TN-64) PLACED IN ADVANCE OF ANY MILLED AREAS.
 - G. IF RAVELING OR DETERIORATION OF THE MILLED SURFACE IS OCCURRING WHILE TRAFFIC IS DRIVING ON THE MILLED SURFACE, THEN THIS PRACTICE WILL NOT BE ALLOWED AND PAVING SHALL BE COMPLETED IMMEDIATELY AFTER MILLING.
 - H. ONLY ONE LANE IN EACH DIRECTION SHALL HAVE A MILLED SURFACE AT ONE TIME.

6-250.03 PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL

NOTE: NOTES (A) THROUGH (C) SHALL BE SHOWN IN THE FORM OF TRAFFIC CONTROL NOTES ON THE ON THE TRAFFIC CONTROL SHEETS AND NOT ON THE GENERAL NOTES SHEETS. THE DESIGNER IS TO SHOW ONLY THOSE NOTES THAT APPLY TO THE SPECIFIC PHASE OF TRAFFIC CONTROL SHOWN

ON THE SHEET ON WHICH THE NOTE APPEARS. SEE SECTION 4-712.10 OF THE DESIGN GUIDELINES.

- A. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES OR TRAFFIC LANE AND SHOULDER WHERE THE TRAFFIC LANE IS BEING USED BY TRAFFIC, CAUSED BY BASE, PAVING OR RESURFACING:
 - 1. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING 2 INCHES:
 - a. WARNING SIGNS, UNEVEN PAVEMENT (W8-11) AND/OR SHOULDER DROP-OFF (W8-9A), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.
 - b. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY ADDED PAVEMENT SHALL BE ELIMINATED WITHIN THREE WORKDAYS.
 - c. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY COLD PLANING SHALL BE ELIMINATED WITHIN THREE WORKDAYS.
 - d. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE TRAFFIC LANE BEING UTILIZED BY TRAFFIC AND SHOULDER, THE DIFFERENCE IN ELEVATION SHALL BE ELIMINATED WITHIN SEVEN WORKDAYS AFTER THE CONDITION IS CREATED.
 - 2. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES, TRAFFIC IS NOT TO BE ALLOWED TO TRAVERSE THIS DIFFERENCE IN ELEVATION:
 - a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:
 - (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.
 - (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN

MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

- b. IF THE DIFFERENCE IN ELEVATION IS ELIMINATED OR DECREASED TO 2 INCHES OR LESS BY THE END OF EACH WORKDAY, CONES MAY BE USED DURING DAYLIGHT HOURS IN LIEU OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES MENTIONED IN PARAGRAPH A, PROVIDED WARNING SIGNS ARE ERECTED. WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF TWO SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

- c. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE THROUGH TRAFFIC LANE AND THE SHOULDER, AND THE ELEVATION DIFFERENCE IS LESS THAN 3.5 INCHES, THE CONTRACTOR MAY USE WARNING SIGNS AND/OR PROTECTIVE DEVICES AS APPLICABLE AND APPROVED BY THE ENGINEER. SEE PARAGRAPH A REGARDING USE OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES. WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) WILL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

IN THESE SITUATIONS THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 2 MILES IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

3. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 6 INCHES, BUT NOT EXCEEDING 18 INCHES, THE CONTRACTOR, WITH THE ENGINEER'S APPROVAL, MAY UTILIZE ONE OF THE FOLLOWING:
 - a. THE CONTRACTOR SHALL ACCOMPLISH SEPARATION BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:
 - (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.
 - (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

IN ORDER TO USE THIS METHOD, THE CONTRACTOR MUST REDUCE THE DIFFERENCE IN ELEVATION TO 6 INCHES OR LESS BY THE END OF THE WORK DAY THAT THE CONDITION IS CREATED.

- b. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH A, AND CONSTRUCT A STONE WEDGE WITH A 4:1 SLOPE, OR FLATTER, TO ELIMINATE THE VERTICAL OFFSET IF THE LOWER ELEVATION IS AT OR BELOW SUBGRADE AT THE END OF EACH DAY.
- c. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH A, AND IF THE LOWER ELEVATION IS BASE STONE OR ASPHALT PAVEMENT, PLACEMENT OF SUBSEQUENT LAYERS OF PAVEMENT MUST BEGIN THE NEXT WORK DAY AND PROGRESS CONTINUOUSLY UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED OR REDUCED TO 6 INCHES OR LESS.
- d. THE CONTRACTOR SHALL PROVIDE SEPARATION BY PORTABLE BARRIER RAIL.

FOR PRECEDING CONDITIONS A, B, AND C, THE CONTRACTOR SHALL USE THE SHOULDER DROP-OFF WARNING SIGN (W8-9A). IT SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. IN THESE SITUATIONS THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE

IN LENGTH, UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

4. FOR DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 18 INCHES:

SEPARATION WILL BE PROVIDED BY THE USE OF PORTABLE BARRIER RAIL.

IN THIS SITUATION THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

- B. IF THE DIFFERENCE IN ELEVATION IS WITHIN 30 FEET OF THE NEAREST TRAFFIC LANE BEING USED BY TRAFFIC CAUSED BY GRADING, EXCAVATION FOR UTILITIES, DRAINAGE STRUCTURES, UNDERCUTTING, ETC:

1. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 3/4 INCH AND NOT EXCEEDING 2 INCHES:

WARNING SIGNS (UNEVEN PAVEMENT AND/OR LOW SHOULDER) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

2. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES:

- a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

- (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.
 - (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.
3. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 6 INCHES:
- a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:
 - (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.
 - (2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.
 - b. ELIMINATE VERTICAL OFFSET BY CONSTRUCTING A STONE WEDGE OR GRADING TO A 4:1 SLOPE, OR FLATTER, OR USE PORTABLE BARRIER RAIL.
- THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE WITHIN 8 FEET OF A TRAFFIC LANE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.
- C. IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN 8 FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:
- SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:
1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

6-270.00 SIGNALIZATION

NOTE: SEE SECTION 4-730.15 FOR PLACEMENT OF THIS NOTE.

- (1) THE DESIGN OF TRAFFIC SIGNAL SUPPORT POLES, MAST ARMS, STRAIN POLES, ETC. SHALL BE IN CONFORMANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION. OVERHEAD CANTILEVERED TRAFFIC SIGNAL STRUCTURES SHALL BE DESIGNED FOR FATIGUE CATEGORY 1.

6-290.00 EROSION PREVENTION AND SEDIMENT CONTROL

NOTE: REFER TO SECTION 3-305.08 SPECIAL EPSC NOTES.

6-290.01 STREAM/WETLAND

NOTE: NOTE (1) SHALL BE INCLUDED IN THE EPSC SPECIAL NOTES ON THE FIRST SHEET OF THE EPSC PLAN SET FOR ALL PROJECTS WITH MULTI-BARREL CULVERTS AND BRIDGES THAT INCLUDE PROPOSED WORK WITHIN A STREAM CHANNEL AREA. THIS NOTE PERTAINING TO WORK WITHIN THE STREAM CHANNEL AREA FOR CONSTRUCTION HAS BEEN DEVELOPED TO ELIMINATE SUPPLEMENTS AND PAYMENT CONCERNS FOR EROSION PREVENTION AND SEDIMENT CONTROL ITEMS USED FOR THIS PURPOSE. THE STRUCTURES DIVISION SHALL INCLUDE A SIMILAR NOTE IN THE STRUCTURES PLANS FOR BRIDGES.

- (1) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., FOR PIER FOOTING, RIP-RAP PLACEMENT, MULTI-BARREL CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY

ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS, EC-STR-31 AND TEMPORARY DIVERSION CULVERTS, EC-STR-32 FOR SINGLE BARREL CULVERT CONSTRUCTION.

6-290.02 HIGH QUALITY WATERS

NOTE: NOTES (2) AND (3) SHALL BE INCLUDED IN THE EPSC SPECIAL NOTES ON THE FIRST SHEET OF THE EPSC PLAN SET FOR ALL PROJECTS WITH HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION.

- (2) FOR PROJECTS THAT DISCHARGE INTO HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION, AN OUTFALL IN A DRAINAGE AREA OF 5 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT.
- (3) FOR PROJECTS THAT DISCHARGE INTO HIGH QUALITY WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED, TO THE MAXIMUM EXTENT PRACTICABLE, DURING CONSTRUCTION ACTIVITIES AT THE SITE. BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 25 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CONSTRUCTION GENERAL PERMIT. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

6-290.03 NPDES

NOTE: NOTES (4) THROUGH (7) SHALL BE INCLUDED IN THE EPSC SPECIAL NOTES ON THE FIRST SHEET OF THE EPSC PLAN SET FOR ALL PROJECTS WHICH REQUIRE A NPDES PERMIT. REFER TO SECTION 3-305.06.

- (4) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.
- (5) THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.
- (6) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:
 - A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - C. NO CULVERT OR BRIDGE CONSTRUCTION SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
 - D. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
- (7) PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT

RESUME UNTIL AFTER 15 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION OR OTHER PERMANENTLY STABLE NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER RUNS WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE.

NOTE: FOR ALL PROJECTS WHICH REQUIRE A NPDES PERMIT, THE EPSC PLAN SHALL ADDRESS PERIODS OF THE YEAR DURING WHICH CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING WILL NOT OCCUR AND LIMITATIONS ON THE TOTAL AREA OF EXPOSED SOIL (AREAS THAT DO NOT HAVE TEMPORARY OR PERMANENT STABILIZATION) AT ANY TIME DURING CONSTRUCTION. AS SUCH, THE FOLLOWING GUIDANCE SHALL BE FOLLOWED.

IF THE COMBINED EARTHWORK QUANTITIES FOR COMMON EXCAVATION (NOT ROCK) AND UNCLASSIFIED BORROW EXCAVATION IS GREATER THAN 1,000,000 CY, OR THE PROJECT IS 1 MILE OR CLOSER TO THE NEAREST DESIGNATED TIER II STREAM, THE DESIGN MANAGER SHALL NOTIFY THE APPROPRIATE DESIGN DIVISION ASSISTANT DIRECTOR. THE DESIGN DIVISION ASSISTANT DIRECTOR SHALL IN TURN REQUEST ADDITIONAL GUIDANCE FROM THE ENVIRONMENTAL DIVISION PERMITS SECTION AND THE CONSTRUCTION DIVISION REGARDING APPROPRIATENESS OF SEASONAL LIMITATIONS AND LIMITATIONS ON THE TOTAL AREA OF EXPOSED SOIL.

IF THE COMBINED EARTHWORK QUANTITIES FOR COMMON EXCAVATION (NOT ROCK) AND UNCLASSIFIED BORROW EXCAVATION IS LESS THAN 1,000,000 CY OR THE PROJECT IS FURTHER THAN 1 MILE FROM THE NEAREST DESIGNATED TIER II STREAM, THE DESIGNER SHALL INCLUDE NOTE (8) IN THE EPSC SPECIAL NOTES ON THE FIRST SHEET OF THE EPSC PLAN SET:

- (8) EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

NOTE: NOTE (9) SHALL BE INCLUDED IN THE PROJECT SPECIAL NOTES ON THE SECOND SHEETS OF THE ROADWAY PLANS FOR ALL PROJECTS WHICH REQUIRE A NPDES PERMIT. FILL IN THE BLANK WITH THE APPROPRIATE SHEET NUMBER.

- (9) REFER TO THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN, SHEET ____, FOR NOTES REGARDING SEASONAL WORK LIMITATION OR LIMITATION ON THE TOTAL AREA OF EXPOSED SOIL.

6-290.04 UTILITY RELOCATION

NOTE: NOTES (10) THROUGH (19) SHALL BE INCLUDED IN THE EPSC SPECIAL NOTES ON THE FIRST SHEET OF THE EPSC PLAN SET FOR ALL PROJECTS IN WHICH UTILITIES ARE IN THE CONTRACT. REFER TO SECTION 3-305.07.

- (10) RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.
- (11) SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.
- (12) UTILITY CROSSINGS FOR PERENNIAL STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO UTILITIES IN THIS PROJECT IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC). THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP).
- (13) IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.
- (14) FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

- (15) IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS IN THIS PROJECT, THEREFORE, THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTIONS PREVENTION PLANS (SWPPP). THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT WORK.
- (16) TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.
- (17) FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.
- (18) THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS (AS APPROVED BY THE TDOT PROJECT ENGINEER).
- (19) THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN-PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT PROJECT ENGINEER BEFORE COMMENCING WORK.

6-290.05 LITTER, DEBRIS, WASTE, PETROLEUM

NOTE: NOTE (21) SHALL BE INCLUDED IN THE EPSC SPECIAL NOTES ON THE FIRST SHEET OF THE EPSC PLAN SET FOR ALL PROJECTS WHERE A BRIDGE IS BEING WIDENED, REPLACED, OR REHABILITATED OVER RAILROAD RIGHT-OF-WAY. FILL IN THE BLANK WITH THE NAME(S) OF THE APPROPRIATE RAILROAD(S) INVOLVED IN THE PROJECT.

- (20) THE CONTRACTOR SHALL MAINTAIN A COMPLETE AND COMPREHENSIVE EROSION PREVENTION AND SEDIMENT CONTROL PLAN TO PREVENT ROADWAY AND/OR CONSTRUCTION SEDIMENT OR DEBRIS AND ANY PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, PAINTS OR COATINGS ETC. FROM FALLING ONTO THE RAILROAD'S RIGHTS-OF-WAY AND/OR FROM ENTERING THE DRAINAGE

DITCHES OR DRAINAGE STRUCTURES OF THE RAILROAD, AND ANY SEDIMENT OR DEBRIS OR PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, ETC. THAT DO ENTER SUCH DRAINAGE AREAS OF THE RAILROAD'S RIGHTS-OF-WAY ARE TO BE REMOVED IN ACCORDANCE WITH RULES SET FORTH BY _____ AND AT THE CONTRACTOR'S EXPENSE.

6-290.06 POLYACRYLAMIDE

NOTE: NOTES (22) THROUGH (29) SHALL BE INCLUDED IN THE EPSC SPECIAL NOTES ON THE FIRST SHEET OF THE EPSC PLAN SET FOR ALL PROJECTS WHERE POLYACRYLAMIDE (PAM) IS USED.

- (21) ENSURE POLYACRYLAMIDE (PAM) EMULSIONS AND POWDERS ARE OF THE ANIONIC TYPE AND MEET THE FOLLOWING REQUIREMENTS:
- (22) MEETS THE EPA AND FDA ACRYLABIDE MONOMER LIMITS OF EQUAL TO OR GREATER THAN 0.005% ACRYLAMIDE MONOMER
- (23) HAS A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLE
- (24) MIXTURE IN NON-COMBUSTIBLE
- (25) CONTAINS ONLY MANUFACTURED RECOMMENDED ADDITIVES
- (26) PAM SHALL BE MIXED AND APPLIED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS AND THE MANUFACTURE'S RECOMMENDATIONS FOR THE SPECIFIED USED CONFORMING TO ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS.
- (27) ALL VENDERS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT WHICH VERIFIES THAT THE PAM, PAM MIX, PAM BLEND EXHIBITS ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPA REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIT POTENTIALS HAVE BEEN REDUCED. CATIONIC FORMS OF PAM ARE NOT ALLOWED FOR UNDER THIS GUIDELINE DUE TO THEIR HIGH LEVELS OF TOXICITY TO AQUATIC ORGANISMS. PAM EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS DUR TO SURFACTANT TOXITY. CONTRACTOR MUST SEEK THE APPROVAL OF THE EPSC DEISGN ENGINEER AND TDOT IF CHITOSAN IS PROPOSED FOR USE ON THIS PROJECT.
- (28) ALL VENDORS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL SUPPLY WRITTEN "SITE SPECIFIC" TESTING RESULTS

SEMONSTRATING THAT A PERFORMANCE OF 95% OR GREATER REDUCTION OF NTU OR TSS FROM STORMWATER DISCHARGES.

- (29) EMULSION BATCHES SHALL BE MIXED FOLLOWIGN RECOMMENDATIONS OF A TESTING LABORATORY THAT DETERMINES THE PROPER PRODUCT AND RATE TO MEET SITE REQUIREMENTS. APPLICATION METHOD SHALL INSURE UNIFORM COVERAGE TO THE TARGET AREA. EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER FUNOFF OR RIPARIAN WATERS.
- (30) PAM POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. MIXING PAM POWDER WITH DRY DILICA SAND WILL AID IN SPREADING.
- (31) PREMIXING OF PAM POWDER INTO FERTILIXER, SEED, OR OTHER SOIL AMENDMENTS IS ALLOWED WHEN SPECIFIED IN THE DESIGN PLAN. APPLICATION METHDON SHALL INSURE UNIFORM COVERAGE TO THE TARGET AREA.
- (32) PAM LOGS OR BLOCKS SHALL BE APPLIED FOLLOWING SITE TESTING RESULTS TO ENSURE PROPER PLACEMENT AND PERFORMANCE AND SHALL MEET OR EXCEED STATE AND FEDERAL WATER QUALITY REQUIREMENTS.

6-295.00 ENVIRONMENTAL

6-295.01 ECOLOGY

NOTE: NOTES (1) THROUGH (3) SHALL BE INCLUDED IN THE PROJECT SPECIAL NOTES ON THE SECOND SHEETS OF THE ROADWAY PLANS FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT IDENTIFIED FOR BRIDGES.

- (1) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING CONCERNING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR DESIGNATED CONSULTANT WILL NEED TO BE ON-SITE FOR WORK BEING DONE WHICH COULD AFFECT THE STREAM OR SPECIES.
- (2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE WILL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED BRIDGE WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS WHICH MUST BE FOLLOWED.

- (3) ALL BRIDGE PROJECTS WITH THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT IDENTIFIED MUST HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER THE STREAM.

6-295.02 STREAM RELOCATION

NOTE: NOTE (4) SHALL BE INCLUDED IN THE PROJECT SPECIAL NOTES ON THE SECOND SHEETS OF THE ROADWAY PLANS FOR ALL PROJECTS WHICH CONTAIN A STREAM RELOCATION.

- (4) ONCE WATER IS DIVERTED INTO A NEWLY CONSTRUCTED AND STABILIZED RELOCATED STREAM / CHANNEL THE ECOLOGY SECTION MUST BE NOTIFIED. THE STREAM NAME, STREAM NUMBER, AND DATE THE WATER WAS DIVERTED INTO THE STREAM / CHANNEL IS TO BE SUPPLIED WITH THE NOTIFICATION.

SECTION VII - INDEX

SECTION INDEX

-A-

ABANDONMENT OF WATER WELLS 3-130.00, 4-202.13, 4-625.00
 ACCESS CONTROL..... 2-300.05, 2-300.10, 2-310.00, 3-330.00, 4-145.00, 4-713.05
 (CONT'D).....4-713.10, 4-713.20, 4-716.13, 4-716.15, 4-716.35
 ACQUISITION TABLE, RIGHT-OF-WAY.....2-320.05, 3-300.00, 3-400.00, 4-133.00
 ACTIVITY STATUS SHEET, PROJECT 1-110.00, 2-110.00, 4-110.00
 AGGREGATE BASE, BITUMINOUS COATED 4-308.00
 AGGREGATE BASE, MINERAL..... 4-303.00
 AGGREGATE-CEMENT BASE COURSE - GRAVEL 4-309.01
 AGGREGATE-CEMENT BASE COURSE - LIMESTONE 4-309.00
 AGGREGATE-LIME-FLY ASH STABILIZED BASE COURSE 4-312.00
 APPRAISALS..... 3-105.10, 3-400.00, 3-400.15, 3-400.20, 3-400.25, 3-400.35, 3-405.00
 APPROACHES, ROADWAY..... 4-203.25
 APRON FOR BOX CULVERT AND BRIDGE OUTLETS, PAVED 4-604.10
 AQUATIC RESOURCE ALTERATION PERMIT (ARAP) 3-410.00
 ASPHALTIC CONCRETE SURFACE (HOT MIX) 4-411.00
 AT-GRADE RAILROAD CROSSINGS..... 1-210.05
 AUTOMATIC TRAFFIC RECORDERS, LOCATION OF 2-180.00
 AVERAGE DAILY LOADING (ADL)..... 3-125.00, 2-120.00
 AVERAGE DAILY TRAFFIC (ADT)..... 1-200.05, 2-120.00, 3-125.00
 (CONT'D)..... 3-125.05, 4-712.00, 4-806.00

-B-

BALANCE, EARTHWORK.....2-145.05, 3-315.05, 3-315.15, 4-203.02, 4-203.45
 BALED HAY 4-209.01
 BASE, BITUMINOUS PLANT MIX 4-307.00
 BASE, BITUMINOUS COATED AGGREGATE 4-308.00
 BASE COURSE - AGGREGATE-LIME-FLY ASH STABILIZED 4-312.00
 BASE COURSE - GRAVEL, AGGREGATE-CEMENT 4-309.01
 BASE COURSE - LIMESTONE, AGGREGATE-CEMENT 4-309.00
 BASE, MINERAL AGGREGATE 4-303.00
 BASE, SOIL-CEMENT 4-304.00, 4-203.40
 BERM, TEMPORARY 4-209.01
 BITUMINOUS PLANT MIX BASE (HOT MIX)..... 4-307.00
 BITUMINOUS SEAL COAT (CHIP SEAL) 4-307.00
 BITUMINOUS SEAL COAT (CHIP SEAL) ALONG EDGE OF PAVED SHOULDERS
 WHILE MAKING LANE SHIFTS DURING CONSTRUCTION 4-405.00
 BITUMINOUS SEAL COAT (SPLIT APPLICATION) 4-406.00
 BITUMINOUS COATED AGGREGATE BASE (PLANT MIX)..... 4-308.00
 BOX CONCRETE CULVERTS 4-204.05, 4-604.00, 4-604.10, 4-604.20, 4-604.25, 4-705.00
 (CONT'D)..... 4-203.35, 2-155.05
 BOX CONCRETE SHALLOW FILLS 4-604.30
 BRIDGE CLEARANCES ON PAVING PROJECTS 4-125.00

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

BRIDGE DECK PANELS	4-604.05
BRIDGE DECK SEALANT	4-617.00
BRIDGE END DRAINS	3-200.10, 4-611.04
BRIDGE LENGTHS, BOX AND SLAB-TYPE CULVERTS	2-155.05
BRIDGES VERTICAL CLEARANCES	2-125.00
BRUSH BARRIERS, TEMPORARY	4-209.01
BUILDINGS, REMOVAL	4-202.10

-C-

CATCH BASIN, COMPUTATION OF SIZE FOR	3-236.00
CATCH BASIN GRATE ELEVATIONS SHOWN ON THE PLANS	3-250.00
CATCH BASIN, SPACING BETWEEN FOR MAINTENANCE CLEAN OUTS	3-255.00
CATCH BASIN WITH STRUCTURAL STEEL GRATES	3-251.00
CEMENT BASE, SOIL	4-203.40, 4-304.00
CHANNEL CHANGES	2-155.05, 2-320.05
CHANNEL EXCAVATION	4-203.35, 4-604.35
CHANNELIZATION STRIPING	4-716.00
CHECK DAMS	4-209.01
CHECKLIST, ROADWAY DESIGN	1-105.00, 1-120.00
CHIP SEAL	4-405.00, 4-405.01
CIVIL ENGINEERING MANAGER I	2-115.00, 2-120.00, 2-300.00, 3-110.024, 3-110.05
(CONT'D)	3-400.15, 3-410.00, 4-115.00, 4-140.00, 4-140.05, 4-712.20
CLEARANCES, BRIDGE	4-125.00
CLEARANCES, VERTICAL	2-125.00, 4-125.00
CLEAR ROADSIDE	2-135.00, 2-135.05
CLEAR ZONES	2-135.00, 2-135.05
CLIMBING LANES	2-150.00
COLD PLANING	4-415.00, 4-405.00, 4-712.10, 4-713.25, 4-730.08
COMMISSIONER SIGNATURE	3-105.05, 4-115.05
COMPUTATION	
AGGREGATE-CEMENT BASE COURSE - GRAVEL	4-309.01
AGGREGATE-CEMENT BASE COURSE - LIMESTONE	4-309.00
AGGREGATE-LIME-FLY ASH STABILIZED BASE	4-312.00
ASPHALTIC CONCRETE SURFACE (HOT MIX)	4-411.00
BASE AND SUBGRADE TREATMENT	4-301.00, 4-302.00
BITUMINOUS COATED AGGREGATE BASE (PLANT MIX)	4-308.00
BITUMINOUS PLANT MIX BASE (HOT MIX)	4-307.00
BITUMINOUS SEAL COAT (CHIP SEAL)	4-405.00
BITUMINOUS SEAL COAT (SPLIT APPLICATION)	4-406.00
BRIDGE END DRAINS	3-200.10, 4-611.05
CATCH BASINS	3-236.00
DOUBLE BITUMINOUS SURFACE TREATMENT	4-404.00
EROSION PREVENTION AND SEDIMENT CONTROL	4-209.00, 4-209.01
MANHOLES, CIRCULAR	3-236.00
MICRO-SURFACING	4-414.05
MINERAL AGGREGATE BASE	4-303.00
PRIME COAT	4-402.00
RIGHT-OF-WAY	1-210.10, 2-315.05, 2-112.00, 2-2-115.00, 2-155.00, 2-155.02

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

(CONT'D)	2-175.00, 1-220.00, 1-210.45, 1-206.10, 1-103.00, 1-210.10, 1-210.00
(CONT'D)	1-120.00, 2-300.00, 2-300.05, 2-300.10, 2-315.00, 2-320.15, 2-315.05
(CONT'D)	2-320.00, 2-320.05, 2-320.10, 2-320.20
ROADWAY QUANTITY FINAL	1-103.00
SOIL-CEMENT BASE	4-304.00, 4-230.40
SUBGRADE TREATMENT (GRANULAR).....	4-301.00
SUBGRADE TREATMENT (LIME)	4-302.00, 4-203.40
TACK COAT	4-617.00, 4-405.00, 4-403.00, 4-414.05
UNDERSEALING CONCRETE PAVEMENT	4-502.00
WATER	4-203.40, 4-801.10
CONCRETE BOX CULVERTS	2-155.05, 4-204.05, 4-604.10, 4-604.25, 4-203.55, 4-604.00
(CONT'D)	4-604.00, 4-705.00
CONCRETE PAVEMENT, UNDERSEALING	4-502.00
CONCRETE RAMPS, PAVEMENT MARKING.....	4-716.15
CONSTRUCTION QUANTITY ESTIMATES.....	4-140.00
CONSTRUCTION QUANTITY ESTIMATES DATA FILE	4-140.05
CONSTRUCTION EASEMENT	2-320.15
CONSTRUCTION INDEX	4-133.00, 4-135.05
CONSTRUCTION PLANS AND ESTIMATES REVISIONS	4-140.00, 4-140.01, 4-140.05
(CONT'D)	4-140.02, 4-140.03, 4-140.09
CONSTRUCTION PLANS SUBMITTAL	4-140.00
CONSTRUCTION REVISIONS.....	4-150.00
CONSTRUCTION SIGNS ON INTERSTATE PROJECTS	4-713.20
CONSTRUCTION TITLE SHEET	4-115.00
CONSULTANT'S SEAL	3-105.10, 4-115.10
CONSULTANT'S SIGNATURE.....	3-105.10, 4-115.10
CONSULTANTS	1-105.00, 2-120.00, 2-118.00, 2-320.20, 3-400.30, 4-140.05
COORDINATE VALUES.....	1-205.15
CORRECTION FACTOR FOR COMPUTATION OF REINFORCING STEEL IN CONCRETE BOX OR SLAB-TYPE CULVERTS OR BRIDGES.....	4-604.20
CREDITS, SALVAGE	4-130.00
CROSS DRAIN PLANS FORMAT	3-215.00
CROSS DRAINS (UNDER MAINLINE AND PUBLIC SIDE ROADS)	3-215.05
CROSS DRAINS END TREATMENTS.....	3-215.10
CROSS-SECTIONS.....	1-210.10, 3-110.05, 3-400.25, 3-400.30, 3-410.00, 4-133.00, 4-203.03
(CONT'D)	4-115.10, 4-140.00
CROSS-SECTIONS (RIGHT-OF-WAY PLANS).....	3-400.25
CROSS-SECTIONS (SIZE OF FULL-SIZE SHEETS)	2-112.00, 3-102.00, 4-112.00
CROWN VETCH (WITH MULCH).....	4-801.05
CROWN VETCH (WITHOUT MULCH)	4-805.00
CULVERT EXCAVATION (PIPE).....	4-204.00
CULVERT SHEET SUBMISSION.....	3-216.00
CULVERTS, BOX AND SLAB-TYPE	2-155.05, 4-604.00, 4-604.20, 4-604.30
(CONT'D)	4-604.35, 4-705.00
CULVERTS, PLACEMENT OF HEADWALLS ON	3-205.20

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

-D-

DATUM ADJUSTMENT FOR COORDINATE VALUES 1-205.15

DELINEATORS, FLEXIBLE 4-713.00

DESCRIPTIONS, PROJECT 2-115.20, 4-115.30

DESIGN CHECKLIST, ROADWAY 1-105.00, 1-120.00

DESIGN ENGINEERING SUPERVISOR 2-115.00, 3-105.00, 4-115.00

DESIGN EXCEPTION REQUESTS 3-110.02

DESIGN RECORDS FOLDER 1-100.00

DESIGN SUPERVISORS (NAME ON TITLE SHEET) 2-115.00, 3-105.00, 4-115.00

DESIGNERS (NAME ON TITLE SHEET) 2-115.00, 3-105.00, 4-115.00

DIMENSIONS AND DIRECTIONS ON PLANS 1-205.20

DOUBLE BITUMINOUS SURFACE TREATMENT 3-125.05, 4-404.00

DRAINAGE 2-200.00, 2-200.05, 2-200.10, 2-320.05, 3-200.00, 3-261.00

(CONT'D) 4-203.55, 4-611.00

DRAINAGE CHARTS 2-200.05

DRAINAGE EASEMENT 2-320.05

DRAINAGE PLANS, CHECKING PRIOR TO CONSTRUCTION 4-611.00

DRAINAGE PROBLEM EXAMPLES 2-200.10

DRAINAGE TABLES 2-200.05

DRAINS, BRIDGE END 4-611.05

DRAINS, CROSS 2-320.05, 3-205.05, 3-215.00, 3-205.00, 3-400.25

DRAINS, END TREATMENT FOR CROSS 3-205.05

DRAINS, END TREATMENT FOR MEDIAN 3-205.15

DRAINS, END TREATMENT FOR SIDE 3-205.10

DRAINS, MEDIAN 3-205.15

DRAINS, SIDE 3-205.10

DRIVEWAY APRONS 3-310.10

DRIVEWAY CONSTRUCTION AND RESURFACING POLICY 2-300.10

DRIVEWAY NOTES 2-300.05

DRIVEWAY PROFILES 2-300.05

DRIVEWAY TYPICAL SECTIONS 2-300.05

DRUMS, TRAFFIC CONTROL 4-712.00

-E-

EARTHWORK 2-145.05, 3-315.05, 3-315.15, 4-203.02, 4-203.45

EARTHWORK BALANCES 2-145.05, 3-315.05, 3-315.15, 4-203.02, 4-203.45

EASEMENT, PERMANENT DRAINAGE 2-320.05

EASEMENT, SLOPE 2-320.10

EASEMENTS 2-320.00, 2-320.05, 2-320.10, 2-320.15, 3-410.00

EASEMENTS CONSTRUCTION 2-320.15

END TREATMENTS - CROSS DRAINS UNDER MAINLINE 3-205.00

END TREATMENTS - CROSS DRAINS UNDER PUBLIC ROADS 3-205.05

END TREATMENTS - MEDIAN DRAINS 3-205.15

END TREATMENTS - SIDE DRAINS 3-205.10

ENERGY ABSORBING TERMINAL (PORTABLE) 4-705.05

EQUATION BLOCKS 2-115.05

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

EROSION PREVENTION AND SEDIMENT CONTROL
 (EPSC) NOTES 4-209.00
 EROSION PREVENTION AND SEDIMENT CONTROL
 (EPSC) QUANTITIES 4-209.01
 EROSION CONTROL BLANKET 4-805.00
 ESTIMATED ROADWAY GRADING QUANTITIES BLOCK FOR ROAD
 AND DRAINAGE EXCAVATION (UNCLASSIFIED) 4-203.55
 ESTIMATED ROADWAY QUANTITIES SHEET 1-200.00
 ESTIMATES CONFIDENTIALITY 4-140.09
 ESTIMATES, CONSTRUCTION QUANTITY 3-400.15, 4-140.00, 4-140.05
 ESTIMATES, PRELIMINARY QUANTITY 3-400.15, 4-140.05
 EXCAVATION 2-145.00, 3-315.00, 3-315.05, 4-203.00, 4-203.02, 4-203.35
 EXCAVATION, CHANNEL 4-203.00, 4-203.35
 EXCAVATION FOR BOX AND SLAB-TYPE CULVERTS AND BRIDGES 4-203.35, 4-204.05
 EXCAVATION, PIPE CULVERT 4-204.00
 EXCLUSIONS 2-115.10, 4-115.25
 EXTENSION OF THROUGH LANES BEYOND INTERSECTIONS 2-160.00
 EXCAVATION OR PLACEMENT OF RIP-RAP IN THE DRY 4-209.05
 EXPRESSWAYS 2-165.00, 4-716.15

-F-

FERTILIZER (SUPPLEMENT APPLICATION) 4-801.20
 FIELD REVIEW PROCEDURES 1-120.00, 2-330.00, 3-400.35, 4-145.00
 FILLS, CAPPING ROCK 3-315.00
 FILTER BARRIER, TEMPORARY 4-209.00
 FINAL PREPARATION OF PLANS 1-103.00, 1-120.00
 FLEXIBLE DELINEATORS 4-713.00
 FLEXIBLE SURFACES 4-307.00
 FLY ASH 4-312.00
 FOLDER, PROJECT 1-100.00, 1-110.00
 FREEWAYS 2-165.00
 FULL-SIZE PLAN AND CROSS SECTION SHEETS (SIZE) 2-112.00, 3-102.00, 4-112.00
 FUNDING APPROVAL REQUESTS, RIGHT-OF-WAY 3-400.20

-G-

GENERAL NOTES 4-135.00, 4-135.05, 4-716.20
 GEOLOGY REPORTS, SOILS AND 3-110.05
 GEOMEMBRANE 4-740.00
 GEOTEXTILE FABRIC 4-740.00
 GRADE COMPUTATIONS 1-103.00
 GRADE COMPUTATIONS FINAL 1-103.00
 GRADING QUANTITIES 1-103.00
 GRADING QUANTITIES SHEET 2-145.07, 4-203.50, 3-315.20
 GRANULAR BACKFILL FOR STRUCTURES 4-303.05
 GRAVEL, AGGREGATE-CEMENT BASE COURSE 4-309.01
 GRAVITY TYPE RETAINING WALLS 4-303.05

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

GUARDRAIL ACROSS CONCRETE BOX AND SLAB-TYPE
CULVERTS AND BRIDGES 4-705.00
GUARDRAIL ACROSS CONCRETE DECK BRIDGES..... 4-705.00
GUARDRAIL END TERMINALS 4-705.05
GUARDRAIL, INTERSTATE RESURFACING..... 4-145.00

-H-

HANDICAP RAMPS..... 3-310.05
HAUL ROADS..... 3-410.00, 4-120.00
HAZARDOUS MATERIAL STUDY 2-155.02
HEADQUARTERS, DESIGN 2-120.00, 3-400.00, 3-400.20
HEADWALLS ON CULVERTS 3-205.20
HERBICIDE 4-400.05
HORIZONTAL CLEARANCE 2-125.00, 3-110.02
HOT MIX, ASPHALTIC CONCRETE SURFACE 4-411.00
HYDRAULIC COMPUTATIONS 1-103.00, 3-225.00
HYDRAULIC GRADE APPROVAL 2-127.00

-I-

IMPROVED INLET 3-230.00
INCIDENTAL CONSTRUCTION..... 4-705.00
INCIDENTALS, PRINTING FOR..... 3-400.00
INDENTED RUMBLE STRIPS..... 4-411.03
INTERSECTIONS..... 2-160.00, 2-170.00, 2-300.10, 3-305.15, 4-400.00
INTERSECTIONS, DESIGN OF TURNING LANES 2-170.00
INTERSTATE - CONSTRUCTION SIGNS 4-712.00
INTERSTATES, MARKING AND SIGNING 3-330.00
ITEM NUMBER..... 4-140.01

-J-

JUNCTION BOXES..... 3-256.00, 4-611.00

-L-

LANE REDUCTION TRANSITION LENGTHS..... 2-160.00
LENGTHS, PROJECT 4-115.15
LETTING REVISIONS 4-140.03
LIGHTING 2-315.00, 2-315.05, 4-712.00, 4-714.00
LIGHTING DEVICES, TRAFFIC CONTROL..... 4-712.00, 4-714.00
LIME..... 4-302.00, 4-309.00, 4-312.00
LIMESTONE, AGGREGATE-CEMENT BASE COURSE 4-309.00
LIMITED SCOPE, PROJECTS OF 1-200.30
LOCAL PROGRAM..... 1-200.35
LOG MILE POST 2-115.20

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

-M-

MACHINED RIP-RAP 4-209.01, 4-209.05, 4-709.05
MANHOLES 3-235.00, 3-236.00
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 4-712.00
MARKINGS, CONCRETE RAMPS IN INTERCHANGE AREAS 4-712.10
MARKINGS, PAVEMENT 3-330.00, 4-712.00, 4-712.10, 4-716.05
MARKINGS, PAVEMENT FOR TRAFFIC CONTROL 4-712.00
MEDIAN DRAINS 3-205.15
MEDIAN DRAINS, END TREATMENT FOR 3-205.15
MEDIAN OPENING SPACING 2-140.00, 2-140.05
MICRO SURFACING 4-414.05
MINERAL AGGREGATE BASE 4-303.00
MINERAL AGGREGATE (SIZE 57) 4-303.00
MITIGATION AREAS, PLACEMENT OF TREES 3-410.02

-N-

NOTES, GENERAL 4-135.00
NOTES, PAVEMENT MARKING 4-716.20
NOTICE OF INTENT (NOI) FORM 3-145.00

-O-

OBSTRUCTIONS, REMOVAL 4-202.01
OPENING SPACING, MEDIAN 2-140.00

-P-

PAVED APRON BOX CULVERT 4-604.10
PAVED APRON FOR BOX CULVERT AND BRIDGE OUTLETS 4-604.10
PAVEMENT, RIGID 4-501.00
PAVEMENT, UNDERSEALING CONCRETE 4-502.00
PAVEMENT DESIGN BRIDGE PROJECTS 3-125.00
PAVEMENT DESIGN REQUEST FORM 3-125.00
PAVEMENT DESIGN REQUESTS 3-125.00
PAVEMENT - DIFFERENCE IN ELEVATION DURING CONSTRUCTION 4-712.10
PAVEMENT MARKERS (SNOWPLOWABLE RAISED) 4-716.35
PAVEMENT MARKERS (RAISED) 4-716.36
PAVEMENT MARKING - CONCRETE RAMPS IN INTERCHANGE AREAS 4-716.15
PAVEMENT MARKING - CROSSWALK WITH LONGITUDINAL LINES 4-716.15
PAVEMENT MARKING GUIDELINES 4-716.15
PAVEMENT MARKING LINE (REMOVABLE) 4-716.30
PAVEMENT MARKING NOTES 4-716.20
PAVEMENT MARKING PLANS 4-716.13
PAVEMENT MARKINGS, PERMANENT 4-716.15
PAVEMENT MARKINGS, RESURFACING PLANS 4-716.16

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

PAVEMENT MARKINGS, MICRO SURFACE PAVMENTS.....4-716.17
PAVEMENT MARKINGS, TEMPORARY 4-716.10
PAVING POLICY, RESURFACING 4-400.00
PERFORMANCE GRADE MIX (PAVING)..... 4-400.03
PERMANENT DRAINAGE EASEMENTS..... 2-320.05
PERMANENT PAVING MARKINGS ON CONCRETE BRIDGE DECKS 4-716.15
PERMANENT PAVING MARKINGS POLICY 4-716.15
PIPE CULVERT EXCAVATION 4-204.00
PIPE MATERIALS, SELECTION OF 3-200.00
PIPE SELECTION OF MATERIALS 3-200.00
PLANS AND ESTIMATES REVISIONS (CONSTRUCTION)..... 4-150.00
PLANS SHEET (SIZE OF FULL-SIZE) 2-112.00, 3-102.00, 4-112.00
PLANS SUBMITTAL 3-400.00
PLANS SUBMITTAL, SIZE 11" X 17" 4-140.02
PLANT MIX BASE, BITUMINOUS 4-307.00
PORTABLE BARRIER RAIL 4-712.00
PRECAST PRESTRESSED BRIDGE DECK PANELS 4-604.05
PRELIMINARY CONSTRUCTION QUANTITY ESTIMATE..... 3-400.15
PRELIMINARY PLANS 2-100.00
PRESPLITTING 4-203.15
PRIME COAT..... 4-402.00
PRINTING FOR APPRAISALS 3-400.25
PRINTING FOR INCIDENTALS..... 3-400.00
PRINTING FOR "UTILITIES ONLY" 3-400.05
PRIVATE DRIVES 3-305.10
PROFILES, DRIVEWAY 2-300.05
PROJECT ACTIVITY STATUS SHEET 1-110.00, 2-110.00, 4-110.00
PROJECT DESCRIPTIONS 4-115.30, 2-115.20
PROJECT FOLDER..... 1-100.00, 2-100.00
PROJECT LENGTH..... 4-115.15
PROJECT MOWING CYCLE 4-806.00
PROJECT RECORDS 1-100.00
PROJECTS LET TO CONTRACT 1-103.00
PUBLIC HEARING AND PUBLIC MEETING REQUIREMENTS,
INSTRUCTIONS REGARDING 1-130.00

-Q-

QUANTITY ESTIMATES, CONSTRUCTION..... 3-400.15, 4-140.00, 4-140.05
QUANTITY ESTIMATES, PRELIMINARY 3-400.15, 4-140.00, 4-140.05

-R-

RAILROAD CROSSINGS AT-GRADE..... 1-210.05
RAILROAD CROSSINGS, GRADE SEPARATED..... 1-210.00
RAILROAD RIGHT-OF-WAY ENCROACHMENT 1-210.10
RAILROADS 3-325.00
RAISED BITUMINOUS RUMBLE STRIPS 4-411.02

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

RAISED PAVEMENT MARKERS.....4-716.36

RAMPS, ENTRANCE..... 2-165.00

REFLECTIVE PAVEMENT MARKERS (SNOWPLOWABLE) 4-716.35

REGIONAL DESIGN OFFICE.....2-300.00, 3-400.00, 3-400.30, 4-150.00

REMOVABLE PAVEMENT MARKING LINE 4-716.30

REMOVAL OF BUILDINGS AND OBSTRUCTIONS 4-202.10

REMOVAL OF STRUCTURES 4-202.00, 4-202.01

RESURFACING - PAVING POLICY 4-400.00

RESURFACING PROJECTS..... 1-200.10

RESURFACING PROJECTS, TRAFFIC DATA BLOCK..... 4-115.35

RETAINING WALLS, GRAVITY TYPE 4-303.05

REVISIONS, CONSTRUCTION..... 4-150.00, 1-220.00

REVISIONS, LETTING 4-140.03

REVISIONS, RIGHT-OF-WAY 3-405.00

REVISIONS, UNECONOMIC REMNANTS 3-120.00

RIDEABILITY SPECIFICATIONS 4-411.05

RIGHT-OF-WAY ACQUISITION TABLE..... 2-320.05

RIGHT-OF-WAY AREAS 2-320.05

RIGHT-OF-WAY FUNDING APPROVAL REQUESTS..... 3-400.20, 4-140.00

RIGHT-OF-WAY INCIDENTALS..... 3-400.00

RIGHT-OF-WAY NOTES 2-300.00, 3-305.00

RIGHT-OF-WAY NOTES FOR DRIVEWAYS..... 2-300.05, 3-305.05

RIGHT-OF-WAY PLANS..... 3-100.00

RIGHT-OF-WAY PLANS CHECKLIST 3-100.00

RIGHT-OF-WAY REVISIONS..... 3-405.00, 1-220.00

RIGID PAVEMENT 4-501.00

RIP-RAP 4-709.05

ROAD SAFETY AUDIT REVIEW (RSAR) PROJECTS 1-200.25

ROADWAY APPROACHES..... 4-203.25

ROADWAY DESIGN CHECKLIST..... 1-105.00

ROADWAY DESIGN STANDARDS & GUIDELINES 1-200.00

ROADWAY LIGHTING..... 4-714.00

ROADWAY SIGNING 4-713.05, 4-713.10, 4-713.15

ROADWAY SPECIALIST SUPERVISOR 2 1-105.00, 1-110.00

RUMBLE STRIPS 4-411.03

RUMBLE STRIPES..... 4-411.04

RWIS WEATHER STATIONS, LOCATION OF 2-180.00

-S-

SALVAGE CREDITS 4-130.00

SCORING SHOULDERS..... 4-411.03

SEAL COAT 4-405.00, 4-406.00

SEALANT, BRIDGE DECK..... 4-617.00

SEALANT, SILICONE 4-905.00

SEDIMENT TRAP..... 4-209.01

SEEDING (SUPPLEMENTAL APPLICATION) 4-801.15

SEEDING (WITH MULCH)..... 4-801.00

SEEDING (WITH MULCH), TEMPORARY 4-801.07

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

SHALLOW FILLS.....	4-604.20
SHOULDERS, SCORING.....	4-411.03
SHRINKAGE FACTORS.....	2-145.10, 3-315.10, 4-203.05
SIDE DRAINS, END TREATMENT FOR.....	3-205.10
SIDE ROAD, PUBLIC, PAVING POLICY.....	4-400.00
SIGNALIZATION.....	2-315.00
SIGNATURE, COMMISSIONER.....	3-105.05, 4-115.05
SIGNATURE, CHIEF ENGINEER.....	3-105.05, 4-115.05
SIGNING PLANS.....	3-330.00
SILICONE SEALANT.....	4-905.00
SILT FENCES, TEMPORARY.....	4-209.01
SLAB BRIDGE, CONCRETE - SHALLOW FILLS.....	4-604.20
SLAB CONCRETE CULVERTS.....	4-604.20
SLOPE EASEMENT.....	2-320.10
SLOTTED DRAIN PIPE.....	3-200.30
SNOWPLOWABLE RAISED PAVEMENT MARKERS.....	4-716.35
SOIL-CEMENT BASE.....	4-304.00
SOILS AND GEOLOGY REPORTS.....	3-110.05
SOLID ROCK BORROW.....	4-203.20
SOLID ROCK, GRADING LINE THROUGH.....	4-203.10
SPECIAL CONSTRUCTION SIGNS.....	4-712.15
SPECIAL NOTES ON TITLE SHEET.....	2-115.01
SPECIAL PAVEMENT MARKINGS.....	4-716.25
STATUS SHEET, PROJECT ACTIVITY.....	1-110.00
STEEL BAR REINFORCEMENT (ROADWAY).....	4-604.25
STOCK FENCE, ROW.....	4-707.00
STOCK PASSES.....	3-240.00, 4-604.40
STRIPING, CHANNELIZATION.....	4-716.00
STRIPING, INTERCHANGE RAMPS.....	4-716.15
STRIPING, PAVEMENT MARKING GUIDELINES.....	4-716.05
STRIPING, PERMANENT PAVEMENT MARKINGS.....	4-716.15
STRUCTURAL BACKFILL (GRANULAR).....	4-303.05
STRUCTURE, REMOVAL OF.....	4-202.00
STRUCTURES, TEMPORARY.....	4-621.00
SUBGRADE TREATMENT.....	4-300.00
SUBGRADE TREATMENT (GRANULAR).....	4-301.00
SUBGRADE TREATMENT (LIME).....	4-302.00
SUBMITTAL OF PLANS FOR STRUCTURAL GRADE APPROVAL.....	2-127.00
SUPERELEVATION RATES.....	2-130.00
SUPERELEVATION RUN-OFF.....	2-130.00
SUPERVISORS (NAME ON TITLE SHEET).....	2-115.00, 3-105.00, 4-115.00
SURFACE (HOT MIX), ASPHALTIC CONCRETE.....	4-411.00
SURFACES, FLEXIBLE.....	4-400.00
SURFACE TREATMENT, DOUBLE BITUMINOUS.....	4-404.00
SURVEY NOTES.....	1-100.00
SURVEY UPDATES.....	3-115.00
SWELL FACTORS.....	2-145.10, 3-315.10, 4-203.05

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

-T-

TABLE, RIGHT-OF-WAY ACQUISITION..... 2-320.00

TACK COAT 4-403.00

TEMPORARY PAVEMENT MARKINGS POLICY 4-716.10

TEMPORARY SEEDING (WITH MULCH)..... 4-801.07

TEMPORARY SLOPE DRAIN PIPE 4-209.01

TEMPORARY STRUCTURES..... 4-621.00

TEMPORARY TRAFFIC SIGNALS USED AT TWO LANE BRIDGE
RECONSTRUCTION PROJECTS 4-730.20

TITLE SHEET 2-115.00, 2-115.05, 2-115.10, 2-115.15, 3-105.00, 3-105.05, 3-105.10
(CONT'D)..... 4-115.00, 4-115.05, 4-115.10, 4-115.20, 4-115.25, 4-115.35

TOPSOIL 3-315.05, 4-203.30

TRACT NUMBERS ON PLANS 1-206.10

TRAFFIC BLOCK..... 2-115.15

TRAFFIC CONTROL IN CONSTRUCTION ZONES

 ATTENUATORS (PORTABLE)..... 4-712.00

 BARRICADES AND DRUMS 4-712.00

 CONSTRUCTION SIGNING 4-712.00

 LIGHTING DEVICES 4-712.00

 MARKINGS 4-712.00

 PORTABLE BARRIER RAIL..... 4-712.00

 VERTICAL PANELS 4-712.00

TRAFFIC CONTROL - DIFFERENCES IN ELEVATION
 BETWEEN ADJACENT ROADWAY ELEMENTS 4-712.10

TRAFFIC DATA BLOCK (RESURFACING)..... 4-115.35

TRAFFIC DATA FOR DESIGN 2-120.00

TRAFFIC DATA FORM..... 2-120.00

TRAFFIC SIGNAL DETECTION LOOPS REPLACEMENT..... 4-730.08

TRAFFIC SIGNALS 2-315.00, 4-730.10, 4-730.15, 4-730.20

TREES IN MITIGATION AREAS 3-410.02

TRENCH DRAIN PIPE, USE OF 3-200.30

TRUCK CLIMBING LANES..... 2-150.00

TURNING LANES, DESIGN 2-170.00

TYPICAL SECTIONS DRIVEWAY..... 2-300.05

-U-

UNDERCUTTING 2-145.00, 4-203.00

UNDERDRAINS..... 4-710.00

UNDERSEALING CONCRETE PAVEMENT 4-502.00

UNECONOMIC REMNANTS 3-120.00

UTILITY PLANS..... 2-315.00, 2-315.05, 3-400.05, 4-137.00

-V-

VERTICAL CLEARANCES FOR BRIDGES 2-125.00, 3-110.02, 4-125.00

VERTICAL PANELS - TRAFFIC CONTROL 4-712.00

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

W-

WATER (SEEDING AND SODDING) 4-801.10
WATER QUALITY PERMIT 3-410.00
WATER QUALITY PERMIT ACTIVITY SCHEDULES 3-410.00
WATER QUALITY PERMIT DRAWING CELLS 3-410.00
WATER WELLS 3-130.00, 4-202.13, 4-625.00
WETLANDS 1-215.00, 2-155.00, 2-155.05, 3-115.00, 3-410.00, 3-410.02
WETLANDS BOUNDARY DESIGNATION 2-155.00
"WORKERS PRESENT" SIGN 4-712.15

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

ITEM NUMBER INDEX

202-01	4-202.01
202-01.50	4-202.01
202-04.01: 202-04.49	4-202.00
202-04.50: 202-04.99	4-202.00
202-06.01: 202-06.99	4-202.01
202-13	4-202.13
203-01	4-203.00, 4-203.02, 4-203.55
203-02.01	4-203.20
203-05	4-203.00
203-06	4-203.40
203-08	4-203.35
203-30.01	4-203.25
203-30.02	4-203.25
204-10.01: 204-10.16	4-203.40
301-01	4-301.00
302-01.01	4-203.40, 4-302.00
302-02	4-302.00
303-01	4-303.00
303-01.02	4-303.05
303-01.03	4-303.00
303-01.08	4-303.00
303-01.09	4-303.00
303-02	4-303.00
303-10.01: 303-10.06	4-303.00
304-01.02	4-304.00
304-02	4-304.00
307-01.01	4-307.00
307-01.02	4-307.00
307-01.03	4-307.00
307-01.04	4-307.00
307-01.05	4-307.00
307-01.06	4-307.00
307-01.07	4-307.00
307-01.08	4-307.00
307-01.09	4-307.00
307-01.10	4-307.00
307-01.13	4-307.00
307-01.14	4-307.00
307-01.15	4-307.00
307-02.01	4-307.00
307-02.02	4-307.00
307-02.03	4-307.00
307-02.04	4-307.00
307-02.05	4-307.00
307-02.06	4-307.00
307-02.07	4-307.00

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

307-02.08.....	4-307.00
307-02.13.....	4-307.00
307-02.14.....	4-307.00
307-03.01.....	4-307.00
307-03.02.....	4-307.00
307-03.03.....	4-307.00
307-03.04.....	4-307.00
307-03.05.....	4-307.00
307-03.06.....	4-307.00
307-03.07.....	4-307.00
307-03.08.....	4-307.00
307-03.09.....	4-307.00
307-03.13.....	4-307.00
307-03.14.....	4-307.00
307-04.08.....	4-307.00
307-20.01.....	4-307.00
308-01.....	4-308.00
308-01.01.....	4-308.00
308-01.02.....	4-308.00
308-02.....	4-308.00
308-02.01.....	4-308.00
308-02.02.....	4-308.00
309-01.01.....	4-309.00, 4-309.01
309-01.02.....	4-309.00, 4-309.01
309-02.....	4-309.00, 4-309.01
312-01.....	4-312.00
312-02.....	4-312.00
312-03.....	4-312.00
312-04.....	4-312.00
402-01.....	4-402.00
402-02.....	4-402.00
403-01.....	4-403.00
403-02.....	4-403.00
404-01.01.....	4-404.00
404-01.02.....	4-404.00
405-01.01.....	4-405.00
405-01.02.....	4-405.00
406-01.01.....	4-406.00
406-01.02.....	4-406.00
411-01.....	4-411.00
411-01.03.....	4-411.00
411-01.04.....	4-411.00
411-01.07.....	4-411.00
411-02.....	4-411.00
411-02.03.....	4-411.00
411-02.04.....	4-411.00
411-03.....	4-411.00
411-03.03.....	4-411.00

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

411-03.04.....	4-411.00
411-04.....	4-411.00
411-12.01.....	4-411.03, 4-716.15
411-12.02.....	4-411.03, 4-716.15
411-12.03.....	4-411.04, 4-716.15
411-12.04.....	4-411.04, 4-716.15
414-03.01.....	4-414.05
414-03.02.....	4-414.05
415-01.01.....	4-415.00
415-01.02.....	4-415.00
415-01.03.....	4-415.00
501.03.03.....	4-411.03, 4-716.15
502-02.....	4-502.00
502-05.....	4-303.00
502-10.....	4-502.00
604-02.02.....	4-604.25
604-15.01.....	4-202.13
610-07.03.....	4-611.05
617-01.....	4-617.00
621-01.01: 621-01.10.....	4-621.00
625-01.01.....	4-625.00
705-01.01.....	4-705.00
705-01.04.....	4-705.00
705-02.02.....	4-705.00
705-04.02.....	4-705.05
705-04.04.....	4-705.05
705-04.07.....	4-705.05
705-08.51.....	4-712.00
705-10.30.....	4-705.00
705-10.31.....	4-705.00
709-01.01.....	4-611.05
709-05.05.....	4-709.05
709-05.06.....	4-709.05
709-05.07.....	4-709.05
709-05.08.....	4-709.05
709-05.09.....	4-709.05
709-05.10: 709-05.13.....	4-709.05
712-06.01.....	4-712.00
712-06.16.....	4-712.15
712-09.01.....	4-716.30
713-16.20: 713-16.29.....	4-713.15
716-01.11.....	4-716.15
716-01.12.....	4-716.15
716-01.21.....	4-716.15
716-01.22.....	4-716.15
716-02.04.....	4-716.00
716-02.07.....	4-716.00
716-02.08.....	4-716.25

TDOT - ROADWAY DESIGN GUIDELINES

English

Revised: 12/01/09

716-02.09.....	4-716.25
716.04.04.....	4-716.00
716-05.01.....	4-716.15, 4-716.30
716-05.04.....	4-716.00
716-05.07.....	4-716.00
716-08.04.....	4-716.00
716-10.01.....	4-716.10
716-10.15.....	4-716.10
716-12.01.....	4-716.15
716-12.02.....	4-716.15
716-13.01.....	4-716.15
716-13.06.....	4-716.15
730-14.02.....	4-730.08
730-14.03.....	4-730.08
730-40.....	4-730.20
730-50.....	4-730.20
801-01.....	4-801.00
801-01.02.....	4-801.00
801-01.07.....	4-801.07
801-02.....	4-801.07
801-03.....	4-801.10
801-07.....	4-801.15
801-07.01.....	4-801.15
801-08.....	4-801.20