

GENERAL NOTES

ROADWAY (CONT.)

MIXING AND PLACING SLURRY

THE SLURRY SHALL BE PREPARED BY MIXING WATER AND BIODEGRADABLE POLYMER. THE SLURRY SHALL BE PREPARED IN THE MIXING PLANT AND HYDRATED IN A TANK WITH CIRCULATION UNTIL THE SLURRY IS HOMOGENEOUS AND MEETS QUALITY CONTROL STANDARDS. THE SLURRY SHALL BE AGITATED UNTIL PLACEMENT IN THE TRENCH. SLURRY SHALL BE SUPPLIED TO THE TRENCH THROUGH PIPELINES WHICH SHALL BE EXTENDED AS NECESSARY TO SUPPLY THE EXCAVATION. AFTER THE INITIAL THREE (3) FEET OF SOIL HAS BEEN EXCAVATED SLURRY SHALL BE INTRODUCED TO THE TRENCH. THE LEVEL OF SLURRY SHALL BE MAINTAINED AT A LEVEL SUFFICIENT TO MAINTAIN TRENCH STABILITY BUT NO MORE THAN THREE (3) FEET BELOW THE GROUND SURFACE. DILUTION OF THE SLURRY BY SURFACE WATER SHALL BE PREVENTED. THE QUALITY OF THE SLURRY SHALL BE MAINTAINED AT ALL TIMES, INCLUDING PERIODS OF WORK STOPPAGE.

TRENCH STABILITY

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STABILITY OF THE TRENCH FOR ITS FULL LENGTH AND DEPTH AND SHALL BE RESPONSIBLE FOR MAINTAINING SLURRY DENSITY AND LEVELS NECESSARY TO MAINTAIN TRENCH STABILITY. THE CONTRACTOR SHALL CONTROL SURCHARGES FROM EXCAVATION AND BACKFILLING EQUIPMENT, WASTE, BERM CONSTRUCTION, BACKFILL STOCKPILES, AND ANY OTHER LOADING SITUATION THAT MAY AFFECT TRENCH STABILITY. IN THE EVENT OF FAILURE OF THE TRENCH WALLS PRIOR TO THE COMPLETION OF BACKFILLING, THE CONTRACTOR SHALL RE-EXCAVATE THE TRENCH AND REMOVE ALL MATERIAL DISPLACED INTO THE TRENCH AT THE EXPENSE OF THE CONTRACTOR.

DRAIN PIPE PLACEMENT

A MINIMUM OF SIX (6) INCHES OF GRANULAR BACKFILL SHALL BE PLACED IN THE BOTTOM OF THE TRENCH BEFORE DRAIN PIPE PLACEMENT TO PROVIDE BEDDING FOR THE PIPE. THE DRAIN PIPE SHALL BE PLACED INTO THE TRENCH FROM THE SURFACE THROUGH THE SLURRY. THE DRAIN PIPE SHALL BE PLACED SO AS TO MAINTAIN A MINIMUM 2% SLOPE FROM THE STARTING LOCATION TO THE DRAIN OUTLETS. THE CONTRACTOR SHALL MEASURE AND RECORD ELEVATION OF THE DRAIN PIPE AFTER PLACEMENT.

BACKFILLING

BACKFILLING SHALL BEGIN AS SOON AS PRACTICAL SO AS TO MINIMIZE THE LENGTH OF TRENCH SUPPORTED BY THE SLURRY. THE AREAS USED FOR THE STORAGE OF BACKFILL MATERIAL SHALL BE APPROVED BY THE ENGINEER AND RESTORED UPON COMPLETION OF WORK. THE CONTRACTOR SHALL BACKFILL CONTINUOUSLY FROM THE BEGINNING AND SURFACE OF THE TRENCH IN THE DIRECTION OF EXCAVATION SO THAT THE BACKFILL SLOPES IN THE DIRECTION OF EXCAVATION. THE BACKFILL SHALL BE PLACED IN THE TRENCH IN A MANNER THAT AVOIDS TRAPPING POCKETS OF SLURRY AND SEGREGATION OF THE BACKFILL. MATERIAL SHALL NOT BE STORED BETWEEN STA. 173+00 AND STA. 178+00 ABOVE ELEVATION 665 FEET. THE TRENCH SHALL BE BACKFILLED TO A MAXIMUM OF 5 FEET BELOW THE EXISTING 2:1 EMBANKMENT SLOPE.

SLURRY BREAKDOWN AND DRAIN ACTIVATION

AFTER COMPLETION OF BACKFILLING, THE SLURRY SHALL BE DEGRADED TO WATER AND RESIDUAL MATERIAL. SLURRY MODIFIERS SHALL BE ADDED AS NECESSARY TO DESTROY THE VISCOSITY AND FILTRATE PROPERTIES OF THE SLURRY. THE BROKEN SLURRY SHALL BE OXYGENATED AND pH ADJUSTED TO PROMOTE SLURRY DEGRADATION AND DRAIN ACTIVATION. WATER SHALL BE FLUSHED THROUGH THE BACKFILL MATERIAL TO REMOVE RESIDUAL MATERIAL AND ENSURE SATISFACTORY HYDRAULIC CONDUCTIVITY THROUGH THE GRANULAR BACKFILL. THE CONTRACTOR SHALL PUMP AND FLUSH THE TRENCH DRAIN UNTIL THE PORE VOLUME OF THE TRENCH DRAIN HAS BEEN CIRCULATED A MINIMUM OF THREE TIMES.

REGRAIDING AT TOP OF TRENCH DRAIN

AFTER THE TRENCH DRAIN IS ACTIVATED, THE TRENCH SHALL BE BACKFILLED TO GRADE. A MAXIMUM OF 5 FEET OF SUITABLE EMBANKMENT SOIL (ITEM 203) SHALL BE PLACED AND COMPACTED TO RESTORE THE EMBANKMENT GRADE. NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK. COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED UNDER ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN.

MEASUREMENT AND PAYMENT

THE QUANTITY OF BIODEGRADABLE POLYMER SLURRY TRENCH DRAIN INSTALLED SHALL BE MEASURED BY THE CUBIC YARD. THE VOLUME OF THE TRENCH DRAIN SHALL BE COMPUTED BY MULTIPLYING THE MEASURED LENGTH AND DEPTH OF THE TRENCH BY A TRENCH WIDTH OF THREE (3) FEET. MEASUREMENTS OF LENGTH AND DEPTH SHALL BE MADE DURING INSTALLATION AS MEASURED FROM THE GROUND SURFACE AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL MEASURE THE TRENCH DEPTH EVERY FIVE (5) LINEAR FEET AT A MINIMUM. NO ADDITIONAL PAYMENT WILL BE MADE FOR TRENCH WIDTHS GREATER THAN THREE (3) FEET. EXCEPT FOR DRAIN PIPE AND DRAIN OUTLETS, ALL MATERIALS, EQUIPMENT, AND LABOR REQUIRED TO PERFORM THE WORK AS OUTLINED SHALL BE PAID FOR UNDER ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN. PAYMENT FOR DRAIN PIPE WILL BE UNDER ITEM 603 - 8" CONDUIT, TYPE E, PERFORATED, 707.31, WITH FABRIC WRAP. PAYMENT FOR DRAIN OUTLETS WILL BE UNDER ITEM 604 - PRECAST REINFORCED CONCRETE OUTLET. NO SEPARATE PAYMENT SHALL BE MADE FOR BENCHING OR OTHER PREPARATIONS REQUIRED TO INSTALL THE SLURRY TRENCH DRAIN.

FENCE

THE FOLLOWING ESTIMATED QUANTITIES SHALL BE USED TO REMOVE THE EXISTING FENCE AND REPLACE IT AT THE SAME LOCATION AFTER THE BUTTRESS AND SLURRY TRENCH DRAIN ARE COMPLETED.

ITEM 202 - FENCE REMOVED 600 LIN. FT.
ITEM 607 - FENCE, TYPE CLT 600 LIN. FT.

ITEM 626 - BARRIER REFLECTOR, TYPE A

THE FOLLOWING ESTIMATED QUANTITY SHALL BE INCLUDED IN THE GENERAL SUMMARY TO BE PLACED ON THE INSTALLED GUARDRAIL.

ITEM 626 - BARRIER REFLECTOR, TYPE A 3 EACH

ITEM 606 - GUARDRAIL

THE FOLLOWING REQUIREMENTS ARE IN ADDITION TO THOSE FOUND IN SECTION 606 OF THE CMS MANUAL.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN ON STANDARD CONSTRUCTION DRAWING GR-1.1M. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

SEQUENCE OF OPERATIONS FOR GUARDRAIL INSTALLATIONS

1. REMOVE EXISTING GUARDRAIL THAT WILL BE REPLACED
2. COMPLETE SHOULDER RE-CONSTRUCTION
3. INSTALL GUARDRAIL AND CONSTRUCT STRIP OF ITEM 448 AS PER METHOD A OR B.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 203 - LINEAR GRADING, AND PAVING UNDER THE GUARDRAIL USING ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL).

ITEM 203 - LINEAR GRADING. THIS ITEM OF WORK SHALL CONSIST OF EXCAVATING ALONG THE OUTSIDE EDGE OF THE PAVED SHOULDER AS DETAILED ON THE TYPICAL SECTIONS TO PREPARE THE GROUND SURFACE FOR PAVING UNDER THE GUARDRAIL.

ALL COLLECTED DEBRIS SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATION MANUAL.

THE REMOVED MATERIAL SHALL BE REPLACED WITH MATERIAL AS DETAILED ON THE TYPICAL SECTIONS OR AS APPROVED BY THE ENGINEER.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT BID PRICE FOR ITEM 203 - LINEAR GRADING AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND MATERIALS NECESSARY TO PERFORM THIS ITEM OF WORK.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

- METHOD A:
1) SET GUARDRAIL POSTS.
2) PLACE ITEM 448.
- METHOD B:
1) PLACE ITEM 448.
2) BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED).
3) SET GUARDRAIL POST.
4) PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE A BITUMINOUS CONCRETE APPROVED BY THE ENGINEER. PATCHING AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22, (UNDER GUARDRAIL).

GENERAL NOTES

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