

DRAINAGE AND EROSION CONTROL

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT, AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF THE EXISTING SEWERS WITHIN THE WORK LIMITS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE PERTINENT 603 CONDUIT ITEMS OF THE CONTRACT.

SEEDING

QUANTITIES FOR SEEDING ARE CALCULATED TO TWO (2) FEET BEYOND THE CONSTRUCTION LIMIT AS SHOWN ON THE CROSS SECTIONS.

ITEM SPECIAL-HERBICIDES FOR WEED CONTROL

THIS ITEM SHALL BE USED IN TWO WAYS: 1. PRIOR TO PLACING THE ITEM 404- ASPHALT CONCRETE, AC-20, AN APPLICATION OF PRINCEP 80W, OR AMISINE OR AN APPROVED EQUAL, SHALL BE APPLIED TO THE SHOULDER BED. 2. AN APPLICATION OF THE ABOVE SHALL BE PLACED ON ALL EXISTING CONCRETE MEDIANS.

THE RATE AND METHOD OR APPLICATION FOR AMISINE OR AN APPROVED EQUAL SHALL BE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER SQUARE YARD OF ITEM SPECIAL-HERBICIDES FOR WEED CONTROL, WHICH PRICE SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND WATER REQUIRED TO COMPLETE THIS ITEM OF WORK.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER, FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

	I	II	
ITEM 207 - TEMPORARY SEEDING AND MULCHING...	2200	1800	SQ. YD.
ITEM 207 - STRAW OR HAY BALES.....	24	16	EACH
ITEM 207 - FILTER FABRIC FENCE.....	600	400	LIN.FT.
ITEM 659 - MOWING.....	25	20	M.SQ.FT.
ITEM 659 - COMMERCIAL FERTILIZER.....	0.6	0.4	TONS
ITEM 659 - REPAIR SEEDING AND MULCHING.....	570	440	SQ. YD.
ITEM 659 - WATER.....	6	4	M.GAL.

WATERING AND MOWING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDED AREAS, AS PER 659.09.

	I	II	UNITS
ITEM 659 - WATER	30	20	M.GAL.
ITEM 659 - MOWING	25	20	M.SQ.FT.

CONNECTION TO EXISTING PIPE

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

ITEM 207 FILTER FABRIC FENCE

FILTER FABRIC MATERIALS SHALL MEET THE REQUIREMENT OF ITEM 207.02.

THE BOTTOM OF THE FENCE SHALL BE BURIED 6" BELOW THE GROUND. THE FENCE SHALL BE HIGH ENOUGH TO RETAIN SEDIMENT LADEN WATER AND ADEQUATELY SUPPORTED TO PREVENT COLLAPSE OR BURSTING. THE GROUND ELEVATION OF THE FENCE SHALL BE HELD CONSTANT EXCEPT THAT THE END ELEVATIONS SHALL BE RAISED TO PREVENT FLOW AROUND THE END OF THE FENCE.

THE FILTER FABRIC FENCE SHALL, AT THE DIRECTION OF THE ENGINEER, BE MAINTAINED TO BE FUNCTIONAL. THIS SHALL INCLUDE REMOVAL OF TRAPPED SEDIMENT AND REQUIRED CLEANING, REPAIR, AND/OR REPLACEMENT OF THE FILTER FABRIC.

THE COST OF ALL MATERIALS, CONSTRUCTION, MAINTENANCE AND REMOVAL REQUIRED SHALL BE PAID FOR UNDER ITEM 207 LIN. FT. FILTER FABRIC FENCE.

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE C, WITHOUT FILTER

THIS ITEM SHALL BE USED TO FILL IN ERODED AREAS IN THE RED CREEK ALONG THE ABUTMENTS OF BRIDGE NO.S LAK-2-1735 L & R.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE STRUCTURE SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 601 - ROCK CHANNEL PROTECTION,	II
TYPE C, WITHOUT FILTER.....	10 C.Y.

AGGREGATE SLOPE PROTECTION REPAIR

THIS ITEM SHALL BE USED TO REPAIR EXISTING SLOPE PROTECTION WHICH HAS BEEN ERODED AS A RESULT OF BRIDGE DRAINAGE.

THIS WORK SHALL INCLUDE THE PLACEMENT OF NON-POROUS EMBANKMENT MATERIAL AND CRUSHED AGGREGATE SLOPE PROTECTION.

EROSION AREAS SHALL BE REPAIRED USING EMBANKMENT AND CRUSHED AGGREGATE SLOPE PROTECTION TO MATCH THE SURROUNDING AREA.

ALL COSTS OF FURNISHING AND PLACING THE EMBANKMENT SHALL BE INCLUDED UNDER ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE AS DIRECTED BY THE ENGINEER:

ITEM 601-CRUSHED AGGREGATE SLOPE PROTECTION,	I	II
AS PER PLAN	40	30 S.Y.

CONCRETE SLOPE PROTECTION REPAIR

THIS WORK SHALL INCLUDE THE REMOVAL OF THE EXISTING CONCRETE SLOPE PROTECTION, PLACING EMBANKMENT MATERIAL TO FILL ERODED AREAS UNDER AND ADJACENT TO THE PROPOSED CONCRETE SLOPE PROTECTION AND THE INSTALLATION OF NEW SLOPE PROTECTION.

ALL JOINTS BETWEEN THE NEW AND OLD SLOPE PROTECTION SHALL BE SEALED WITH 705.04. ALL ADDITIONAL OPEN JOINTS AND CRACKS SHALL ALSO BE SEALED WITH 705.04.

ALL COSTS OF REMOVAL INCLUDING REMOVING ANY WASHED OUT SOIL AT THE BASE OF THE SLOPE PROTECTION SHALL BE INCLUDED UNDER ITEM 202 - CONCRETE SLOPE PROTECTION REMOVED.

ALL COSTS OF CONSTRUCTING THE NEW CONCRETE SLOPE PROTECTION, INCLUDING ALL NECESSARY ENBANKMENT AND JOINT AND CRACK SEALING SHALL BE INCLUDED UNDER ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 202 - CONCRETE SLOPE PROTECTION REMOVED	I	
ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN ..	400	S.Y.
	400	S.Y.

SPRING DRAINS

REFERENCE IS MADE TO THE DETAILED DRAWING ON STANDARD CONSTRUCTION DRAWING MC-1, SHOWING THE METHOD OF DRAINING ANY SPRING THAT MAY BE SHOWN ON THE PLAN, OR ENCOUNTERED DURING CONSTRUCTION, AS DETERMINED BY THE ENGINEER. SPRING DRAINS SHALL BE OUTLETTED TO HIGHWAY DRAINAGE STRUCTURE WITH 10' OF 6" CONDUIT TYPE F IN LIEU OF AGGREGATE DRAIN AS SHOWN ON THE STANDARD CONSTRUCTION DRAWING. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.01	I	II	
TYPE III OR 707.21 TYPE III, AS PER PLAN...	50	150	L.F.
ITEM 603 - 6" CONDUIT TYPE "F".....	50	50	L.F.

THE CONTRACTOR SHALL NOT ORDER MATERIALS FOR "SPRING DRAINS" UNTIL AUTHORIZED BY THE ENGINEER, AND IN THE EVENT NO SPRINGS ARE ENCOUNTERED, THE ITEM SHALL BE NON-PERFORMED.

UNDERDRAIN OUTLETS IN EARTHWORK AREAS

EXISTING UNDERDRAIN OUTLETS WHICH ARE ENCOUNTERED IN THE EARTHWORK AREAS SHALL BE EXTENDED AS DIRECTED BY THE ENGINEER USING 6 INCH CONDUIT, TYPE F. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE:

ITEM 603 - 6" CONDUIT, TYPE F	I	II	
	70	30	L.F.

ITEM 605-AGGREGATE DRAIN

THE FOLLOWING ESTIMATED QUANTITY IS INCLUDED IN THE GENERAL SUMMARY TO BE USED WHERE AND AS DIRECTED BY THE ENGINEER TO DRAIN SUBBASE MATERIAL WHICH HAS BECOME SATURATED.

ITEM 605-AGGREGATE DRAIN.....	I	II	
	1000	1000	L.F.

ITEM - 605 (VARIOUS) PIPE UNDERDRAINS, AS PER PLAN

GRANULAR FILTER MATERIALS FOR THESE ITEMS SHALL BE NO. 8 OR 9 SIZE AND LIMITED TO DURABLE NATURAL AGGREGATES OR AIR-COOLED BLAST FURNACE SLAG.