

EARTHWORK SCHEDULE

LOCATION	END AREAS				EARTH WORK					SUBGRADE IMPROVEMENT			DITCHES	
	TOPSOIL STRIPPING (TSS)	UNDERCUTS	CUT (C)	FILL (F)	20201200 REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL	20200100 EARTH EXCAVATION	EMBANKMENT	FURNISHED BALANCE WASTE (+) or SHORTAGE (-)	20300100 CHANNEL EXCAVATION	20201200 REMOVAL & DISPOSAL OF UNSUITABLE MATERIAL	XZ191300 AGGREGATE SUBGRADE (UNDERCUTS)	21001000 GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	21400100 GRADING AND SHAPING DITCHES	
	(SQ FT)	(SQ FT)	(SQ FT)	(SQ FT)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(SQ YD)	(FOOT)	
MAINLINE														
14+80.00	1.2	13.3	19.2	0.6						35.1	35.1	75.1		
15+00.00	3.7	13.2	16.5	1.2	1.8	13.2	0.7	10.6		46.5	46.5	157.6	50.0	
15+26.00	14.8	13.0	14.4	4.0	8.9	14.9	2.5	10.1		48.2	48.2	154.9	63.0	
15+50.00	14.2	20.9	27.2	19.7	12.9	18.5	10.5	5.2		117.2	117.2	332.9		
16+00.00	25.0	36.7	49.7	64.6	36.3	71.2	78.1	-17.5		142.6	142.6	388.5		
16+50.00	27.7	36.8	60.2	88.0	48.8	101.8	141.3	-54.8		135.8	135.8	350.7		
16+87.20	28.4	79.2	67.0	77.1	38.7	87.6	113.7	-39.3		56.4	56.4	142.0		
17+00.00	28.9	76.5	74.2	81.4	13.6	33.5	37.6	-9.1		72.2	72.2	186.5		
17+16.20	30.2	75.2	85.8	109.7	17.7	48.0	57.3	-16.5		6.2	6.2	16.3		
BRIDGE														
18+49.87	20.1	65.2	11.5	125.6						6.1	6.1	17.2		
18+79.87	21.6	64.7	9.8	86.6	23.2	11.8	117.9	-107.8		117.2	117.2	320.4		
19+00.00	22.8	29.1	0.9	137.1	16.6	4.0	83.4	-80.0		69.3	69.3	190.6		
19+50.00	20.5	32.5	3.9	119.8	40.1	4.4	237.9	-234.1		143.7	143.7	409.5		
20+00.00	20.6	31.7	7.6	113.4	38.1	10.7	215.9	-206.9		141.3	141.3	420.3		
20+50.00	19.0	14.9	20.1	26.1	36.7	25.7	129.2	-107.4		117.3	117.3	376.0		
21+00.00	21.2		28.9	15.6	37.2	45.4	38.6	-0.0		47.5	47.5	157.8		
21+50.00	18.8		33.0	3.0	37.0	57.3	17.2	31.5						
21+80.00					10.4	18.3	1.7	13.9						
CHANNEL														
1+00.00			209.5											
1+21.20			234.4					164.5						
1+38.00			362.0					138.1						
1+50.00			374.7					132.5						
1+61.00			376.1					150.1						
1+74.20			340.9					183.5						
1+87.70			179.6					179.3						
1+99.00			125.7					108.9						
SHRINKAGE FACTOR		15%			TOTAL	417.9	566.2	1,283.5	-802.2	1,056.9	1,302.8	1,302.8	3,696.1	113.0
					ADJ. PLAN TOTAL	420.0	570.0	1,285.0	-805.0	1,060.0	1,305.0	1,305.0	3,700.0	113.0

BALANCE BETWEEN SIDES OF CREEK

LOCATION	20200100		20400800
	EARTH EXC.	EMBANKMENT	FUNISHED EXCAVATION
WEST	389	442	-112.00
EAST	177	838	-688.00
TOTAL	566	1280	-800.00

EARTHWORK GENERAL NOTES

ALL EARTHWORK QUANTITIES ARE CALCULATED BY THE METHOD OF AVERAGE END AREAS USING THE PLAN CROSS SECTIONS.

SHRINKAGE FACTOR, ASSUMED TO BE 15% FOR THIS PROJECT, ARE ESTIMATED FOR THE PURPOSE OF DETERMINING A BALANCE OF EARTHWORK. THE CONTRACTOR SHALL ESTIMATE HIS OWN SHRINKAGE FACTORS IN DETERMINING HIS EARTHWORK. NO PAYMENT WILL BE MADE ON EARTHWORK QUANTITIES DUE TO VARIATION IN THE SHRINKAGE FACTOR SINCE EARTHWORK IS MEASURED IN ITS FINAL POSITION.

RECOMMENDATIONS OUTLINED IN THE ROADWAY GEOTECHNICAL REPORT PREPARED BY TESTING SERVICE CORPORATION, DATED AUGUST 10, 2007 WERE USED IN PREPARATION OF THE ROADWAY PLANS AND RELATED EARTHWORK CALCULATIONS.

AS OUTLINED IN THE ROADWAY GEOTECHNICAL REPORT, THE TOPSOIL THICKNESS WAS ESTIMATED AT 3-8 INCHES. SIX (6) INCHES WAS ASSUMED ON THIS PROJECT FOR THE PURPOSE OF CALCULATING TOPSOIL STRIPPING QUANTITIES.

IF UNDERCUTS ARE ENCOUNTERED, UNDERCUTS WILL BE PAID FOR AS REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL. AFTER TOPSOIL STRIPPING AND VEGETATION CLEARING AND PRIOR TO UNDERCUTTING, THE SUBGRADE WILL BE TESTED WITH A STATIC OR DYNAMIC CONE PENETROMETER IN ACORDANCE WITH THE IDOT SUBGRADE STABILITY MANUAL TO DETERMINE REMEDIAL TREATMENT.

TESTING OF SUBGRADES AND EMBANKMENTS WILL BE REQUIRED. TESTING REQUIRMENTS WILL BE PER THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS AND THE SUBGRADE STABILITY MANUAL. IF PROOF ROLLS ARE REQUIRED BY THE ENGINEER, THE COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

EARTH EXCAVATION SHALL BE PAID FOR ONLY ONCE, REGARDLESS OF STAGING OR SEQUENCING OF CONTRACTORS OPERATIONS THAT REQUIRE STOCKPILING OF MATERIALS FOR LATER USE, REDISTRIBUTION AND RESPREADING IN SHOULDERS AND CONSTRUCTING OF EMBANKMENTS.

FURNISHED EXCAVATION IS REQUIRED BASED ON THE ASSUMPTIONS FROM THE FURNISHED EXCAVATION TABLE. UNDERCUTS QUANTITIES HAVE BEEN CALCULATED BASED ON THE FOLLOWING UNDERCUT RECOMMENDATIONS:

STA. 15+35 TO BRIDGE: UNDERCUT 12" AND REPLACE WITH 18" AGG SUBGRADE.
 BRIDGE TO STA. 20+32: UNDERCUT 12" AND REPLACE WITH 18" AGG SUBGRADE.
 STA. 20+32 TO STA. 23+50: NO SPECIAL TREATMENT SUGGESTED.
 UNDERCUT DEPTHS BASED ON ASSUMPTION THAT FINAL SUBGRADE WILL BE ABOUT 1.5 FEET BELOW PROPOSED ROAD CENTERLINE ELEVATION.

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