OHIO TURNPIKE AND
INFRASTRUCTURE COMMISSION

ADDENDUM NO. 4

PROJECT NO. 39-17-01
MAINLINE PAVEMENT RECONSTRUCTION
MILEPOST 90.00 TO MILEPOST 95.90, EASTBOUND
SANDUSKY COUNTY, OHIO

EXTENDED OPENING DATE: 2:00 P.M. (EASTERN TIME), NOVEMBER 2, 2016

ALL BIDS MUST BE ELECTRONICALLY SUBMITTED THROUGH BID EXPRESS

ATTENTION OF BIDDERS IS DIRECTED TO:

QUESTIONS RECEIVED THROUGH 12:00 PM ON OCTOBER 28, 2016

MODIFICATIONS TO THE CONTRACT DOCUMENTS

Plan Sheets: 15, 38, 105, 188, 190 and 191 of 272; Plan Insert Sheet 1 of 1.

Issued by the Ohio Turnpike and Infrastructure Commission on October 28, 2016. Issuance authorized by Anthony D. Yacobucci., Chief Engineer, and Mark R. Musson, Director of Contracts Administration.

Anthony D. Yacobucci — 10-28-16
Anthony D. Yacobucci — Date

Mark R. Musson — 10/28/16
Mark R. Musson — Date

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION
ADDENDUM NO. 4
PROJECT NO. 39-17-01

QUESTIONS AND ANSWERS THROUGH 12:00 PM ON OCTOBER 28, 2016

Q#43 Plan sheet 38, note 5 calls for restoration of existing crossover to include removal of slotted drain and temporary drainage structures, and that this work is incidental to SP614 Maintenance of Traffic. What is the required depth of the SP302 and SP304 prior to the 1.5" asphalt resurfacing?

A#43 This Addendum No. 4 clarifies the required thickness of SP302 is approximately 13.5" and the required thickness of SP304 is approximately 7". This value is based from record plans.

Q#44 I see where OTC calls for re-striping the project in the traffic control notes (plan sheet 188 is attached) during the beginning and end of the first and second construction seasons (OTIC Annual Pavement Marking Operations – Long Line Quantities). Is the first and second construction seasons – before Memorial Day, and after Labor Day? Or, did the OTC figure annual pavement marking work twice and this job is only in 2017?

A#44 The pavement marking quantities listed on Plan Sheet 188 of 272 are correct. This Project shall be completed in a single construction season. This Addendum No. 4 eliminates reference to Construction Season 2 on Plan Sheet 188 of 272.

Q#45 Channelizing Line, 12" Type 1, Dotted Line 12" Type 1, and Air Speed Zone Marking shown in the plans with quantities for Construction Season 1 and Construction Season 2 on Pavement Marking Subsummary plan sheet 191. Is this correct?

A#45 No. This Addendum No. 4 eliminates reference to Construction Season 2 from the plans and modifies the quantities on the Traffic Control General Summary on Plan Sheets 190 and 191 of 272. Reference No. 187, Item 642 - DOTTED LINE, 6", TYPE 1 (WHITE) is revised to 2,478 FT. Reference No. 188, Item 642 - CHANNELIZING LINE, 12", TYPE 1 (WHITE) is revised to 3,401 FT, Reference No. 189 and SPECIAL - AIR SPEED ZONE MARKING is revised to 10 EACH on the Bid Schedule and Estimated Quantities Worksheet.

Q#46 In response to addendum 2, plan sheet 9 note on "Linear Grading, As Per Plan"- the second paragraph says to reconstruct the foreslope using 4" topsoil. There is already a bid item for topsoil to cover seeding outside of pavements and shoulders (plan sheet 15 covers seeding/topsoil to 10' beyond shoulder). Does this item include or exclude topsoil?

A#46 Yes. If the Contractor's means and methods results in an area of disturbed earth in addition to the areas described on Plan Sheet 15 of 272, that area shall be covered with a 4-inch depth of topsoil at the Contractor's expense. The linear grading note covers the payment for any additional materials that are needed including topsoil. This Addendum No. 4 modifies the Item Number for Reference No. 51 from Item 659 to Item 653 –

Topsoil, Furnished and Placed (For Slopes) and the associated item number on Plan Sheets 15 and 105 of 272 and Plan Insert Sheet 1 of 1.

Q#47 The "OTIC Annual Pavement Marking Operations – Long Line Quantities" note on sheet 188 of 272 details the striping operations for the first and second construction season, however, this project appears to only have one construction season based on the completion date. Furthermore, the quantities listed in this note for Ref. 184 through 186 appear to only allow for one application. In a similar manner, the subsummary for Ref. 187 through 189 on sheet 191 of 272 appears to be doubled, with a total quantity listed for "Construction Season 1" and "Construction Season 2". Please clarify when the permanent striping is to be performed on this project as well as verifying the quantities in question.

Q#47 This project shall be completed in a single construction season. This Addendum No. 4 eliminates reference to Construction Season 2 from the plans.

Q#48 Bid item #1 "Clearing and Grubbing": there are trees west of the SR 53 interchange within construction limits for removal which would fall under Indiana Bat Law restrictions prohibiting removal between April 1 through September 30. SP 103 gives the contractor construction access beginning April 3, 2017 and requires permanent seeding to be completed by September 29, 2017. Will the owner allow the contractor early access prior to April 1 and/or access after September 30 to remove these trees or how does the owner intend to address this issue?

A#48 Yes, it is anticipated the Notice to Proceed will be issued in early January.

Q#49 Can you provide a little clarification for bid items 95-98? After reviewing the specifications on page 13/272, it appears that the contractor is required to double treat the subgrade at a depth of 16 inches. If I understand this correctly, the contractor is to treat the top 16" of subgrade with a 4% application of Lime Kiln Dust, omitting the compaction and cure coat operations, once the subgrade has been treated, it is mellowed for 24 hours. After the mellowing period, the subgrade is then re-treated with Portland cement at an application rate of 6%. This is then followed by initial compaction, fine grading, smooth rolling, and cure coat application. Is this the intent of the commission? There are some indications that the total treatment depth is 32" while there are other indications that it's a total treatment depth of 16 inches.

A#49 Yes, the total depth of Ref. Nos. 95 and 96 is 16" deep, and the general description of the Work for Ref. Nos. 95 through 98 is correct. The treatment depth of 32" is only for the work described in Section E.1 of the General Note "Item 206 – Chemically Stabilized Subgrade, As Per Plan" located on Plan Sheet 13 of 272.

Q#50 I think there is some confusion based the repair options listed under Item E, on page 13/272. Can you verify if the options listed under E. on page 13/272 are only utilized for areas that the stabilization has failed? Can you issue a clarification on the construction process for the stabilized subgrade?

Q#50 Yes, the options listed under Item E are only to be utilized for areas that fail after the soil stabilization is complete. The Contractor shall repair the subgrade per Options E.1, E.2, or E.3 as directed by the Chief Engineer.

Addendum No. 4 to Contract 39-17-01:

_____
(Firm Name)

_____
(Signature)

_____
(Printed Name)

Date: _____

EROSION REPAIR TABLE

OHIO TURNPIKE EASTBOUND

REFERENCE NO.	SHEET NO.	MILE POST	STATION	AREA (S.Y.)	WIDTH (FT.)	LENGTH (FT.)	AREA (S.F.)	DEFICIENCY
ER-01	123	90.1 - 90.2	435+28	267	80	30	2400	Some erosion/settlement at aggregate drain outlets
ER-02	124	90.21	441+09	22	10	20	200	aggregate drains with minor erosion
ER-03	128	91.25	496+00	100	30	30	900	Aggregate drains sloughing/eroding here to ramp
ER-04	133	92.40	556+72	556	100	50	5000	Severe erosion of abutment slope at east end
ER-05	134	92.49	561+34	100	60	15	900	Large washout between guardrail posts and down slope
ER-06	134	92.55	564+50	167	15	100	1500	Erosion behind guardrail
ER-07	135	92.88	581+93	133	40	30	1200	Several aggregate drain erosion slope problems.
ER-08	137	93.35	605+79	142	15	85	1275	Just west of culvert repair slope gully area L85' X W15'
ER-09	140	93.90	637+47	33	15	20	300	repair slope rutting area L20' X W15'
ER-10	140	94.02	642+22	133	20	60	1200	repair slope rutting area L60' X W20'.
ER-11	141	94.06	645+92	100	30	30	900	fill in and repair ditch sinkhole, area L30' X W30' X 10'Deep
ER-12	142	94.40	663+87	33	20	15	300	repair slope rutting area L20' X W15' .
ER-13	143	94.55	671+79	33	20	15	300	repair slope rutting area L20' X W15'
ER-14	144	94.80	684+99	50	30	15	450	repair slope rutting area L30' X W15'.
ER-15	144	94.82	686+05	58	35	15	525	repair slope rutting area L35' X W15'
ER-16	145	94.98	694+50	50	30	15	450	repair slope rutting area L30' X W15'.
ER-17	145	94.99	695+00	33	20	15	300	repair slope rutting area L20' X W15'.
ER-18	145	95.08 - 95.09	699+85	67	60	10	600	repair 3 separate slope gullies with areas L20' X W10' each.
		EROSION REPAIR TOTAL AREA		2077	S.Y.			

SLOPE EROSION REPAIRS

FOR INDICATED SLOPE EROSION AREAS, REMOVE TOPSOIL FROM THE EXTENTS OF THE INDICATED AREA AND REMOVE SOIL DOWN TO THE LOWEST EXPOSED DEPTH IN THE EROSION AREA OR 12 INCHES, WHICHEVER IS GREATER. REMOVE ALL ROCKS, GRAVEL AND COBBLES AND FOREIGN MATERIAL 1 1/2" OR GREATER FROM THE SLOPE EROSION AREA. PLACE AND COMPACT BACKFILL TO MATCH THE ADJACENT SLOPE AND PLACE 4 INCHES OF TOPSOIL TO MEET EXISTING SLOPE GRADES AT ALL EXTENTS OF THE INDICATED SLOPE. PLACE ITEM 671 - EROSION CONTROL MAT, TYPE B FROM THE TOP OF THE SLOPE DOWN TO THE LOWEST INDICATED EXTENT OF THE SLOPE EROSION REPAIR AREA. CONTINUE THE EROSION CONTROL MAT LATERALLY FIVE (5) FEET BEYOND THE SIDE EXTENTS OF THE SLOPE EROSION AREA. FOR AREAS ADJACENT TO PROPOSED CONCRETE BARRIER, THE TOP OF SLOPE MAT SHALL START AT THE OUTSIDE FACE OF THE BARRIER. FOR ALL OTHER AREAS, THE TOP OF SLOPE MAT SHALL START AT THE EDGE OF SHOULDER COMPACTED AGGREGATE BEHIND THE GUARDRAIL.

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK;

ITEM 203 - EMBANKMENT	*462 CU. YDS.*
ITEM 203 - EXCAVATION	*692 CU. YDS.*
ITEM 659 - SEEDING AND MULCHING	*2077 SQ. YDS.*
2 ITEM 653 - TOPSOIL FURNISHED AND PLACED (FOR SLOPES) 1	*231 CU. YDS.*
ITEM 659 - WATER	*11 M. GAL.*
ITEM 671 - EROSION CONTROL MAT, TYPE B	*3385 SQ. YDS.*

THE TABLES ABOVE SHOW AREAS EXPECTED TO REQUIRE THIS TREATMENT;

ITEM 207 - PERIMETER FILTER FABRIC FENCE

FILTER FABRIC SHALL MEET THE REQUIREMENTS 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 ELEVATION SHALL BE RAISED TO PREVENT FLOW AROUND THE END OF THE FENCE.

THE FILTER FABRIC SHALL 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 - PERIMETER FILTER FABRIC FENCE.

SEEDING & MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

ITEM 659 - SOIL ANALYSIS TEST 1	*5 EACH*
2 ITEM 653 - TOPSOIL FURNISHED AND PLACED (FOR SLOPES)	*6,282 CU. YD.*
ITEM 659 - SEEDING AND MULCHING	*56,587 SQ. YD.*
ITEM 659 - REPAIR SEEDING AND MULCHING	*2829 SQ. YD.*
ITEM 659 - INTER-SEEDING	*2829 SQ. YD.*
ITEM 659 - COMMERCIAL FERTILIZER	*7.64 TON*
ITEM 659 - LIME	*11.70 ACRES*
ITEM 659 - WATER	*306 M. GAL.*

1 4" OF TOPSOIL SHALL BE FURNISHED AND PLACED ON EXPOSED AREAS ADJACENT TO THE ROADSIDE BERM, SLOPES AND AS DIRECTED BY THE CHIEF ENGINEER. SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON AN ASSUMED LIMIT 10' BEYOND THE SHOULDER FOR THE LENGTH OF THE PROJECT, THE TOTAL AREA OF DITCH CLEANOUT AS SHOWN, LINEAR GRADING AREAS AND RAMP CROSS SECTIONS.

THE FOLLOWING ESTIMATED CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE CHIEF ENGINEER:

ITEM 671 - EROSION CONTROL MAT, TYPE B 2000 S.Y.

NO.	REVISIONS	BY	DATE
1	ADDENDUM NO. 1	PJF	10/14/16
2	ADDENDUM NO. 4	CLH	10/26/16

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

GENERAL NOTES

M.P. 90.00 TO M.P. 95.90 SANDUSKY COUNTY

GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
520 South Main Street, Suite 2531, Akron, Ohio 44311
330-572-2100
Fax 330-572-2101

DESIGNED:	CLH	CHECKED:	PJF	DATE:	08/26/16
DRAWN:	CLH	IN CHARGE:	MRG	SCALE:	N.T.S.

PROJECT NO. 39-17-01 SHEET 15 OF 272

Drawing File: O:\2013\2013115\roadway\sheets\2013115GN007.dwg Layout: Model
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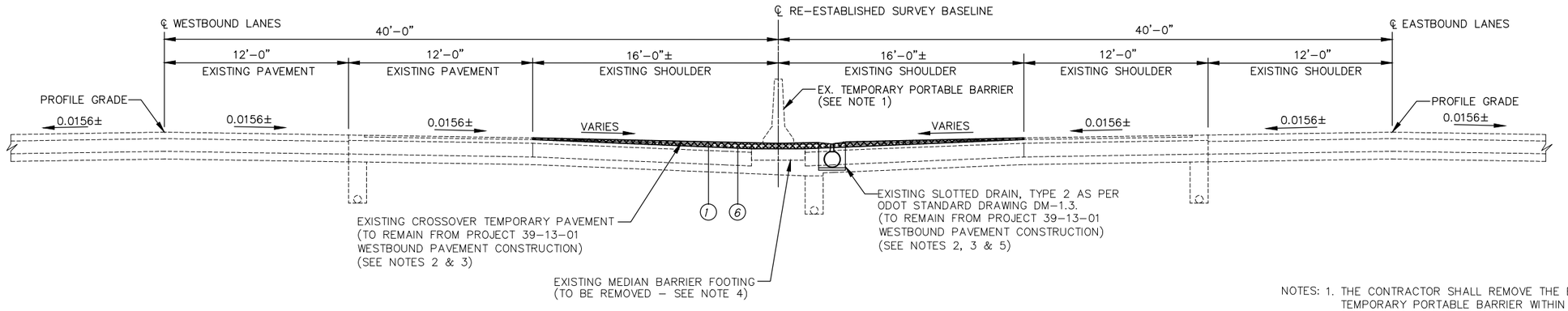
Technician: chuff



PROPOSED MAINTENANCE OF TRAFFIC CROSSOVER SECTION

CROSSOVER #1 - STA. 407+19 TO STA. 414+25
CROSSOVER #2 - STA. 743+75 TO STA. 750+81

NOTES:

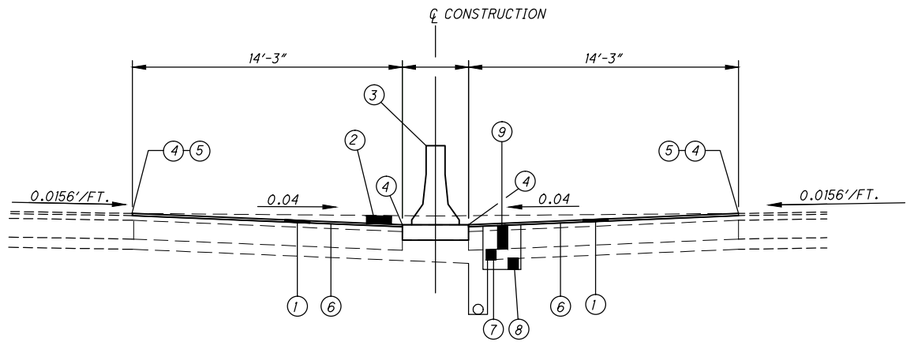
1. THE CONTRACTOR SHALL REMOVE THE EXISTING 50" TEMPORARY PORTABLE BARRIER WITHIN THE MEDIAN THAT REMAINS FROM THE COMPLETION OF PROJECT 39-13-01 WESTBOUND PAVEMENT CONSTRUCTION. THE CONTRACTOR SHALL UTILIZE THE EXISTING 50" TEMPORARY PORTABLE BARRIER TO EXTEND FROM THE MEDIAN WALL ALONG THE PROPOSED CROSSOVERS AS SHOWN ON THE PLANS, THEN TAPER DOWN TO THE TYPICAL 32" TEMPORARY PORTABLE BARRIER.
2. THE CONTRACTOR SHALL UTILIZE THE EXISTING CROSSOVER TEMPORARY PAVEMENT AND SLOTTED DRAIN THAT REMAINS FROM THE COMPLETION OF PROJECT 39-13-01 WESTBOUND PAVEMENT CONSTRUCTION.
3. THE CONTRACTOR SHALL PERFORM REHABILITATION OF THE CROSSOVER TEMPORARY PAVEMENT AND DRAINAGE REMAINING FROM PREVIOUS WESTBOUND CONSTRUCTION PROJECT 39-13-01 AS DIRECTED BY THE CHIEF ENGINEER. ALL COSTS ASSOCIATED WITH THE REHABILITATION OF THE EXISTING CROSSOVER AND DRAINAGE REPAIRS SHALL BE INCLUDED IN THE LUMP SUM BID FOR SP 614, MAINTAINING TRAFFIC.
4. CONCRETE BARRIER WITHIN THE CROSSOVER LIMITS WAS REMOVED WITH THE WESTBOUND CONSTRUCTION PROJECT 39-13-01. ONLY THE CONCRETE BARRIER WAS REMOVED WHILE THE BARRIER FOOTING WAS LEFT IN PLACE. THE CONTRACTOR IS ADVISED THAT THE CONCRETE BARRIER FOOTING SHALL BE REMOVED AS PART OF THE FINAL CROSSOVER RESTORATION AND THAT ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE BARRIER FOOTING SHALL BE INCLUDED IN THE LUMP SUM BID FOR SP 614, MAINTAINING TRAFFIC.
5. ALL COSTS ASSOCIATED WITH THE FINAL CROSSOVER RESTORATION INCLUDING BUT NOT LIMITED TO THE REMOVAL OF TEMPORARY PAVEMENT PLACED WITH THE 39-13-01 PROJECT, THE REMOVAL OF THE SLOTTED DRAIN AND ALL TEMPORARY DRAINAGE ITEMS AND THE INSTALLATION OF SONIC NAP ALERT PATTERN (SNAP) ITEMS AS PER OTIC STANDARD DRAWING TCR-13 SHALL BE INCLUDED IN THE LUMP SUM BID FOR SP 614, MAINTAINING TRAFFIC.

ITEM LEGEND

EXISTING TEMPORARY PAVEMENT
MINIMUM 1½" THICKNESS

1. *ITEM SP404 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, USING CRUSHED STONE, PG 64-22*
2. *ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (VARIABLE DEPTH)*
3. *ITEM 622 - CONCRETE BARRIER TYPE B-50, AS PER PLAN*
4. *ITEM SP404A - JOINT SEALER (APPLIED TO VERTICAL FACE)*
5. *ITEM SPECIAL - SAWCUT JOINT*
6. *ITEM SPECIAL - TRACKLESS TACK FOR INTERMEDIATE COURSE, APPLIED @ 0.06 GAL/S.Y.*
7. *SP 304 - AGGREGATE BASE (DEPTH = 7" +/-) **
8. *SP 304 - GRANULAR EMBANKMENT*
9. *SP 302 - BITUMINOUS AGGREGATE BASE (DEPTH = 13 1/2" +/-) **

** DEPTH BASED ON RECORD PLANS*



CROSSOVER RESTORATION TYPICAL SECTION

NO.	REVISIONS	BY	DATE
1	ADDENDUM NO. 4	LOB	10/25/16
-	-	-	-

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

MAINTENANCE OF TRAFFIC
MOT CROSSOVER TYPICAL SECTION
SANDUSKY COUNTY

GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
520 South Main Street, Suite 2531, Akron, Ohio 44311
330-572-2100
Fax 330-572-2101

DESIGNED:	ADG	CHECKED:	AKF	DATE:	08/26/16
DRAWN:	ADG	IN CHARGE:	MRG	SCALE:	N.T.S.

PROJECT NO. 39-17-01 SHEET 38 **OF** 272

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Technician: lblankenship

SHEET NUMBER																			INSERT 1	INSERT 2		ITEM	GRAND TOTAL	UNIT	DESCRIPTION	REF. NO.
9	10	11	12	13	14	15	107	108	109	111	112															
																									EROSION CONTROL	
																						SP 113	LUMP	1	SWP3 MANAGEMENT	
											3470											207	3470	FT	PERIMETER FILTER FABRIC FENCE	
											960											207	960	FT	FILTER FABRIC DITCH CHECK	
											12											207	12	CU YD	ROCK CHANNEL PROTECTION, TYPE D, WITHOUT FILTER	
											2500											653	2500	CU YD	TOPSOIL, FURNISHED AND PLACED, AS PER PLAN	112
						5																659	5	EACH	SOIL ANALYSIS TEST	
						6513													1889			2 653	8402	CU YD	TOPSOIL FURNISHED AND PLACED (FOR SLOPES) 1	
						58664													17174			659	75838	SQ YD	SEEDING AND MULCHING	
											14779											659	14779	SQ YD	SEEDING AND MULCHING, CLASS 3A	
						2829																659	2829	SQ YD	REPAIR SEEDING AND MULCHING	
						2829																659	2829	SQ YD	INTER-SEEDING	
						7.64																659	7.64	TON	COMMERCIAL FERTILIZER	
						11.70																659	11.70	ACRE	LIME	
						317																659	317	M GAL	WATER	
						5385					14779								17174			671	37338	SQ YD	EROSION CONTROL MAT, TYPE B	
																						832	LUMP	1	EROSION CONTROL	
																									DRAINAGE	
					11396																	209	11396	FT	DITCH CLEANOUT	
		200																	4			601	204	CU YD	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	
		200																				601	200	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
								4														601	4	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER	
																			415			603	415	FT	6" CONDUIT, TYPE E, 707.31 (TYPE CP)	
																			180			603	180	FT	6" CONDUIT, TYPE F, 707.33 1	
								641														603	641	FT	12" CONDUIT, TYPE F, 707.33	
								32														603	32	FT	15" CONDUIT, TYPE B, 706.02	
								32														603	32	FT	15" CONDUIT, TYPE C, 706.02	
								490														603	490	FT	15" CONDUIT, TYPE F, 707.33	
								8														603	8	FT	18" CONDUIT, TYPE C, 706.02	
								8														603	8	FT	18" CONDUIT, TYPE C, 707.24	
								8														603	8	FT	42" CONDUIT, TYPE A, 706.02	
								146														837	146	FT	72" LINER PIPE, AS PER PLAN	11
								~~143~~														~~837~~	~~143~~	~~FT~~	~~67" x 95" ARCH LINER PIPE, AS PER PLAN~~	~~11~~
								55														837	55	CU YD	BACKFILL FOR LINER PIPE	
								4														604	4	EACH	CATCH BASIN ADJUSTED TO GRADE, 4" OR LESS, AS PER PLAN	11
								24														604	24	EACH	CATCH BASIN GRATE AND CASTING, AS PER PLAN	11
									32										9			603	41	EACH	PRECAST REINFORCED CONCRETE OUTLET, AS PER PLAN	11
								22														SP 604	22	EACH	CATCH BASIN, NO. CB-1	
									2069													SP 605	2069	FT	UNDERDRAIN OUTLET PIPE	
			66																			SP 605	66	FT	AGGREGATE DRAIN, AS PER PLAN	12
			200																			SP 605	200	FT	TYPE 1 AGGREGATE DRAIN, WITH WRAP, AS PER PLAN	12
			200																			SP 605	200	FT	TYPE 2 AGGREGATE DRAIN, WITH WRAP, AS PER PLAN	12
									27700													SP 605	27700	FT	6" BASE PIPE UNDERDRAIN, WITH FABRIC WRAP (18")	
									28146													SP 605	28146	FT	6" SHALLOW PIPE U.D., WITH FABRIC WRAP (24")	
									25844													SP 605	25844	FT	6" SHALLOW PIPE U.D., WITH FABRIC WRAP (30")	

NO.	REVISIONS	BY	DATE
1	ADDENDUM NO. 1	CLH	10/14/16
2	ADDENDUM NO. 4	CLH	10/26/16

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

GENERAL SUMMARY

M.P. 90.00 TO M.P. 95.90 SANDUSKY COUNTY

GPD GROUP
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
520 South Main Street, Suite 2531, Akron, Ohio 44311
330-572-2100
Fax 330-572-2101

DESIGNED: CLH	CHECKED: PJF	DATE: 08/26/16
DRAWN: CLH	IN CHARGE: MRG	SCALE: N.T.S.

PROJECT NO. 39-17-01 SHEET 105 OF 272

Drawing File: O:\2013\20131115\roadway\sheets\20131150G002.dwg Layout: Model
Date: Oct 26, 2016 Time: 7:49 am Twist: -1.57079633
Technician: chuff

TRAFFIC CONTROL NOTES

ITEM 620 – REMOVAL OF DELINEATOR

THIS ITEM SHALL BE AS OUTLINED IN ITEM 620. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING DELINEATORS LOCATED WITHIN THE PROJECT LIMITS FROM MP 90.0 TO MP 95.8 EASTBOUND.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE TRAFFIC CONTROL GENERAL SUMMARY FOR USE AS DIRECTED BY THE CHIEF ENGINEER:

ITEM 620 – REMOVAL OF DELINEATOR 55 EACH

ITEM 620 – DELINEATOR, POST MOUNTED, AS PER PLAN

THIS ITEM SHALL BE AS OUTLINED IN 620 EXCEPT THAT ALL DELINEATORS AND SUPPORTS TO BE INSTALLED SHALL BE PROVIDED BY THE COMMISSION. THE CONTRACTOR SHALL CONTACT THE CHIEF ENGINEER TO ARRANGE FOR PICKUP OF THE DELINEATORS AND POST MATERIALS FOR THE PROJECT. ALL DELINEATORS SHALL BE INSPECTED BY COMMISSION STAFF IN THE PRESENCE OF THE CONTRACTOR PRIOR TO LOADING OF PROVIDED MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE TRANSPORTATION OF THE MATERIALS PROVIDED TO THE JOB SITE. UPON ARRIVAL AT THE JOB SITE, THE TRANSPORTED DELINEATOR MATERIALS SHALL BE INSPECTED BY COMMISSION PERSONNEL TO ENSURE THAT NO DAMAGE OCCURRED DURING TRANSPORT. COSTS ASSOCIATED WITH THE PICK–UP OF THE DELINEATORS AND SUPPORTS, THE TRANSPORTATION TO THE PROJECT SITE AND ANY STORAGE COSTS UNTIL ERECTION SHALL BE CONSIDERED INCIDENTAL TO THE ITEM NECESSITATING THE WORK. THIS ITEM SHALL INCLUDE ALL LABOR AND EQUIPMENT COSTS NECESSARY TO INSTALL THE DELINEATORS AS SHOWN IN THE PLANS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE TRAFFIC CONTROL GENERAL SUMMARY TO BE USED EVERY 0.1 MILES IN BETWEEN THE TENTH MARKERS:

ITEM 620 – DELINEATOR, POST MOUNTED, AS PER PLAN 55 EACH

ADDITIONAL PAVEMENT MARKINGS

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE TRAFFIC CONTROL GENERAL SUMMARY, AND ARE INCLUDED TO USE AS DIRECTED BY THE ENGINEER FOR THE PURPOSE OF APPLYING PAVEMENT MARKINGS AND RPM'S BETWEEN M.P. 88.65 (STA. 358+60) TO M.P. 96.26 (STA. 762+00) EASTBOUND AND BETWEEN M.P. 89.51 (STA. 404+00) TO M.P. 96.31 (STA. 764+90) WESTBOUND.

ITEM 642 – EDGE LINE, 6", TYPE 1 (WHITE) 1.49 MILE

ITEM 642 – EDGE LINE, 6", TYPE 1 (YELLOW) 1.44 MILE

ITEM 642 – LANE LINE, 6", TYPE 1 2.88 MILE

ITEM 621 – RAISED PAVEMENT MARKER REMOVED 196 EACH

SP 621 – RAISED PAVEMENT MARKER STIMSONITE MODEL 101 LPCR (WHITE) 193 EACH

SP 621 – RAISED PAVEMENT MARKER STIMSONITE MODEL 101 LPCR (YELLOW) 3 EACH

SP 626 – BARRIER REFLECTOR, TYPE B 62 EACH

OTIC ANNUAL PAVEMENT MARKING OPERATIONS – LONG LINE QUANTITIES

THE CONTRACTOR SHALL PERFORM THE ANNUAL PAVEMENT MARKING INSTALLATION FOR THE SINGLE CONSTRUCTION SEASON OF THIS PROJECT.

PRIOR TO IMPLEMENTING CONTRA FLOW DURING THE FIRST CONSTRUCTION SEASON, THE CONTRACTOR SHALL INSTALL PERMANENT PAVEMENT MARKINGS FOR THE NON–CONTRA FLOW OUTSIDE EDGE LINE AND THE OUTSIDE LANE LINE FROM MP 88.68 TO MP 96.38. ALL REMAINING EASTBOUND AND WESTBOUND LANE LINES AND EDGE LINES, INCLUDING THE INTERCHANGE PAVEMENT MARKINGS, SHALL BE COMPLETED BEFORE THE CONCLUSION OF THE FIRST CONSTRUCTION SEASON FROM MP 88.68 TO MP 96.38.

~~PRIOR TO IMPLEMENTING CONTRA FLOW DURING THE SECOND CONSTRUCTION SEASON, THE CONTRACTOR SHALL INSTALL PERMANENT PAVEMENT MARKINGS FOR THE NON–CONTRA FLOW OUTSIDE EDGE LINE AND THE OUTSIDE LANE LINE FROM MP 88.68 TO MP 96.38. ALL REMAINING EASTBOUND AND WESTBOUND LANE LINES AND EDGE LINES, INCLUDING THE INTERCHANGE PAVEMENT MARKINGS, SHALL BE COMPLETED BEFORE THE CONCLUSION OF THE SECOND CONSTRUCTION SEASON FROM MP 88.68 TO MP 96.38.~~ /1

THE FOLLOWING QUANTITIES ARE PROVIDED, TO BE USED AS DIRECTED BY THE ENGINEER AND CARRIED TO THE TRAFFIC CONTROL GENERAL SUMMARY TO ADDRESS THIS ANNUAL PAVEMENT MARKING WORK:

ITEM 642 – 6" EDGE LINE, TYPE 1, (WHITE) 14.86 MILE

ITEM 642 – 6" EDGE LINE, TYPE 1, (YELLOW) 14.44 MILE

ITEM 642 – 6" LANE LINE, TYPE 1, (WHITE) 28.80 MILE

SP 621 – RAISED PAVEMENT MARKER STIMSONITE MODEL 101 LPCR (WHITE) 1928 EACH

SP 621 – RAISED PAVEMENT MARKER STIMSONITE MODEL 101 LPCR (YELLOW) 24 EACH

ITEM 630 – SIGNING, MISC.: TENTH MILEPOST SIGN ERECTED

THIS ITEM SHALL BE AS OUTLINED IN ITEM 630 EXCEPT THAT ALL SIGNS AND SUPPORTS TO BE INSTALLED SHALL BE PROVIDED BY THE COMMISSION. THE CONTRACTOR SHALL CONTACT THE CHIEF ENGINEER TO ARRANGE FOR PICKUP OF THE SIGN AND POST MATERIALS FOR THIS PROJECT. ALL SIGNS SHALL BE INSPECTED BY COMMISSION STAFF IN THE PRESENCE OF THE CONTRACTOR PRIOR TO LOADING OF PROVIDED MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE TRANSPORTATION OF THE MATERIALS PROVIDED TO THE JOB SITE. UPON ARRIVAL AT THE JOB SITE, THE TRANSPORTED SIGNING MATERIALS SHALL BE INSPECTED BY COMMISSION PERSONNEL TO ENSURE THAT NO DAMAGE OCCURRED DURING TRANSPORT. COSTS ASSOCIATED WITH THE PICK–UP OF THE SIGNS AND SUPPORTS, THE TRANSPORTATION TO THE PROJECT SITE AND ANY STORAGE COSTS UNTIL ERECTION SHALL BE CONSIDERED INCIDENTAL TO THE ITEM NECESSITATING THE WORK. THIS ITEM SHALL INCLUDE ALL LABOR AND EQUIPMENT COSTS NECESSARY TO INSTALL THE SIGNS AS SHOWN IN THE PLANS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE TRAFFIC CONTROL GENERAL SUMMARY TO BE USED IN THE LOCATIONS SHOWN ON THE SIGNING AND PAVEMENT MARKING PLANS:

ITEM 630 – SIGNING, MISC.: TENTH MILEPOST SIGN ERECTED 70 EACH

EASTBOUND MILEPOST SIGN STATIONS

MILEPOST	STATION	MILEPOST	STATION
89.00	375+40.84	92.60	567+14.43
89.10	380+68.84	92.70	572+42.43
89.20	387+73.99	92.80	577+70.43
89.30	393+01.99	92.90	582+98.43
89.40	398+29.99	93.00	588+26.43
89.50	403+57.99	93.10	593+54.43
89.60	408+85.99	93.20	598+82.43
89.70	414+13.99	93.30	604+10.43
89.80	419+44.00	93.40	609+38.43
89.90	424+72.00	93.50	614+66.43
90.00	430+00.00	93.60	619+94.43
90.10	435+28.00	93.70	625+22.43
90.20	440+56.00	93.80	630+50.43
90.30	445+84.00	93.90	635+78.43
90.40	451+12.00	94.00	641+06.43
90.50	456+40.00	94.10	646+34.43
90.60	461+68.00	94.20	651+62.43
90.70	466+96.00	94.30	656+90.43
90.80	472+24.00	94.40	662+18.43
90.90	477+52.00	94.50	667+46.43
91.00	482+80.00	94.60	672+74.43
91.10	488+08.00	94.70	678+02.43
91.20	493+36.00	94.80	683+30.43
91.30	498+64.00	94.90	688+58.43
91.40	503+92.00	95.00	693+86.43
91.50	509+20.00	95.10	699+14.43
91.60	514+48.00	95.20	704+42.43
91.70	519+76.00	95.30	709+70.43
91.80	525+04.00	95.40	714+98.43
91.90	530+32.00	95.50	720+26.43
92.00	535+60.00	95.60	725+54.43
92.10	540+88.00	95.70	730+82.43
92.20	546+16.00	95.80	736+10.43
92.30	551+44.00	96.00	746+66.43
92.40	556+72.00		
92.50	561+86.43		

ITEM SP 621 – RAISED PAVEMENT MARKER

THIS ITEM SHALL BE INSTALLED IN ACCORDANCE WITH SP 621 WITH THE SPACING PER STANDARD DRAWING RPM–1. SEE THE TRAFFIC CONTROL GENERAL SUMMARY FOR QUANTITY DETAILS.

ITEM 621 – RAISED PAVEMENT MARKER REMOVED

RAISED PAVEMENT MARKERS SHALL BE REMOVED FROM THE OHIO TURNPIKE ON ALL LANES WITHIN THE LIMITS OF THE MAINTENANCE OF TRAFFIC ZONE. THE CONTRACTOR SHALL ONLY REMOVE THE EXISTING REFLECTORS OUTSIDE THE PROJECT LIMITS AS SHOWN IN THE PLANS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE TRAFFIC CONTROL GENERAL SUMMARY TO BE USED THROUGHOUT THE PROJECT AS DIRECTED BY THE ENGINEER.

ITEM 621 – RAISED PAVEMENT MARKER REMOVED 1952 EACH

ITEM SP 626 – BARRIER REFLECTORS

FOLLOWING COMPLETION OF THE PROJECT, NEW BARRIER REFLECTORS SHALL BE INSTALLED ON THE EXISTING MEDIAN WALL IN THE EASTBOUND DIRECTION FROM THE BEGINNING OF PROJECT AT MP 90.0 TO THE END OF THE PROJECT AT MP 95.8. BARRIER REFLECTOR SPACING SHALL CONFORM TO SP 626. MATERIAL SPECIFICATIONS SHALL CONFORM TO SP 626.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE TRAFFIC CONTROL GENERAL SUMMARY FOR USE AS DIRECTED BY THE CHIEF ENGINEER:

SP 626 – BARRIER REFLECTOR, TYPE B 311 EACH

ITEM 630 – SIGNING, MISC.: MILEPOST AND TENTH MILEPOST SIGN REMOVED

THIS ITEM SHALL BE AS OUTLINED IN ITEM 630. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MILEPOST AND TENTH MILEPOST SIGNS AND SUPPORTS WITHIN THE PROJECT LIMITS AS SHOWN ON THE PLAN SHEETS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE TRAFFIC CONTROL GENERAL SUMMARY FOR USE AS DIRECTED BY THE CHIEF ENGINEER:

ITEM 630 – SIGNING, MISC.: MILEPOST AND TENTH MILEPOST SIGN REMOVED 70 EACH

ITEM 630 –TRIANGULAR SLIP BASE CONNECTION, AS PER PLAN

IN ADDITION TO THE WORK DETAILED IN CMS 630 AND THE STANDARD CONSTRUCTION DRAWING TC–41.15, THIS ITEM OF WORK SHALL INCLUDE FIELD WELDING THREE 1" LENGTH WELDS WITH 1/4" WIDTH EVENLY SPACED AROUND THE PERIMETER OF THE STRUCTURAL PIPE WHERE IT MEETS THE SLIP BASE CASTING. THE WELDING SHALL OCCUR AFTER THE SIGN HAS BEEN ATTACHED AND PROPERLY ALIGNED WITH THE ROADWAY. AFTER WELDING, THE WELD AND ALL AREAS OF DAMAGED GALVANIZED COATING SHALL BE COATED WITH ZINC–RICH PAINT TO PROTECT THE STRUCTURAL PIPE AND SLIP BASE CONNECTION.

PAYMENT SHALL BE FOR EACH TRIANGULAR SLIP BASE CONNECTION, AS PER PLAN IN PLACE PER THE PLANS.

NO.	REVISIONS	BY	DATE
1	ADDENDUM NO. 4	LOB	10/25/16
-	-	-	-

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

TRAFFIC CONTROL NOTES

SANDUSKY COUNTY

GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
520 South Main Street, Suite 2531, Akron, Ohio 44311
330-572-2100
Fax 330-572-2101

DESIGNED:	DLS	CHECKED:	AKF	DATE:	04/05/16
DRAWN:	DLS	IN CHARGE:	MRG	SCALE:	1"=1'

PROJECT NO. 39-17-01 SHEET 188 OF 272

Drawing File: O:\2013\2013115\traffic\sheets\20131151N001.dwg Layout: TN001
Date: Oct 27, 2016 Time: 10:27 am Twist: 0
Technician: lblankenship

SHEET NUMBER																				ITEM	GRAND TOTAL	UNIT	DESCRIPTION	REF NO.
	INSERT 2	107	188	191	192	193	194	195	196	197														
			55																	620	55	EACH	REMOVAL OF DELINEATOR	
			55																	620	55	EACH	DELINEATOR, POST MOUNTED, AS PER PLAN	188
	16		2,148	152																621	2,300	EACH	RAISED PAVEMENT MARKER REMOVED	
	16		2,121	144																SP 621	2,265	EACH	RAISED PAVEMENT MARKER STIMSONITE MODEL 101LPCR (WHITE)	
			27	8																SP 621	35	EACH	RAISED PAVEMENT MARKER STIMSONITE MODEL 101LPCR (YELLOW)	
		187																		SP 626	187	EACH	BARRIER REFLECTOR, TYPE A	
		11	373																	SP 626	384	EACH	BARRIER REFLECTOR, TYPE B	
									37.6	139.0										630	176.6	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7	
									34.0	35.2										630	69.2	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9	
										48.8										630	48.8	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18	
									77.0	79.9										630	156.9	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	
					1		1													630	2	EACH	GROUND MOUNTED SUPPORT, PIPE	
					9	44	1		8	11										630	73	EACH	SIGN POST REFLECTOR	
									8	16										630	24	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
					1		1													630	2	EACH	TRIANGULAR SLIP BASE CONNECTION, AS PER PLAN	188
					4			12												630	16	EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, AS PER PLAN	189
									8	16										630	24	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
					1		1													630	2	EACH	GROUND MOUNTED PIPE SUPPORT FOUNDATION	
					21	28	23	20	11	17										630	120	EACH	SIGN ERECTED, FLAT SHEET, AS PER PLAN	189
									4	10										630	14	EACH	SIGN ERECTED, EXTRUSHEET, AS PER PLAN	189
			70																	630	70	EACH	SIGNING MISC.: TENTH MILEPOST SIGN ERECTED	188
			70																	630	70	EACH	SIGNING MISC.: MILEPOST AND TENTH MILEPOSTS SIGN REMOVED	188
					14	22	15	10	17	20										630	98	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
					18	30	12	12	13	13										630	98	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
									2	7										630	9	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
							2		6	14										630	22	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
					2			6												630	8	EACH	REMOVAL OF BRIDGE MOUNTED SIGN AND DISPOSAL, AS PER PLAN	189
					4		6	4												630	14	EACH	REMOVAL OF BARRIER MOUNTED SIGN AND DISPOSAL	
					2		3	2												630	7	EACH	REMOVAL OF BARRIER MOUNTED POST SUPPORT AND DISPOSAL	
			16.35																	642	16.35	MILE	EDGE LINE, 6", TYPE 1 (WHITE)	
			15.88																	642	15.88	MILE	EDGE LINE, 6", TYPE 1 (YELLOW)	
	0.25		31.68																	642	31.68	MILE	LANE LINE, 6", TYPE 1 (WHITE)	
				2,478																642	2,478	FT	DOTTED LINE, 6", TYPE 1 (WHITE)	
				3,401																642	3,401	FT	CHANNELIZING LINE, 12", TYPE 1 (WHITE)	
				10																SPECIAL	10	EACH	AIR SPEED ZONE MARKER	
				1																	1			

NO.	REVISIONS	BY	DATE
1	ADDENDUM NO. 4	LOB	10/25/16
-	-	-	-

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

TRAFFIC CONTROL GENERAL SUMMARY

M.P. 90.00 TO M.P. 95.90 SANDUSKY COUNTY

GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
520 South Main Street, Suite 2531, Akron, Ohio 44311
330-572-2100
Fax 330-572-2101

DESIGNED: DLS	CHECKED: AKF	DATE: 04/05/16
DRAWN: DLS	IN CHARGE: MRG	SCALE: N.T.S.

PROJECT NO. 39-17-01 SHEET 190 OF 272

Drawing File: O:\2013\2013115\traffic\sheets\2013115TC001.dwg Layout: Model
Date: Oct 27, 2016 Time: 10:30 am Twist: -1.5707963.3
Technician: lblankenship

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	SP 621 RAISED PAVEMENT MARKER STIMSONITE MODEL 101LPCR (WHITE) EACH	SP 621 RAISED PAVEMENT MARKER STIMSONITE MODEL 101LPCR (YELLOW) EACH	621 RAISED PAVEMENT MARKER REMOVED EACH	642 CHANNELIZING LINE, 12", TYPE 1 (WHITE) FT	642 DOTTED LINE, 6", TYPE 1 (WHITE) FT	SPECIAL AIR SPEED ZONE MARKING EACH
209	E	IR 80	497+00	499+50	RT					250	
209	E	IR 80	499+00	499+50	LT					50	
210	E	IR 80	499+50	507+32	LT					782	
210	D	IR 80	507+32	510+03	LT	7	4	11	271		
210	D	IR 80	507+32.	510+03	LT	11		11	271		
210	E	IR 80	499+50	500+17	RT					67	
210	D	IR 80	500+17	505+80	RT	28		28	563		
210	D	RAMP C	100+17	105+81	LT	29		29	564		
211	D	IR 80	521+80	523+50	RT	5		5	170		
211	D	IR 80	521+80	523+50	RT	5		5	170		
212	D	IR 80	525+00	529+99	LT	25	4	29	499		
212	D	IR 80	525+00	529+99	LT	24		24	499		
212	E	IR 80	529+99	534+45	LT					446	
212	E	IR 80	525+47	534+30	RT					883	
212	D	IR 80	523+50	525+47	RT	5		5	197		
212	D	IR 80	523+50	525+47	RT	5		5	197		
213	F	IR 80	535+60		LT						1
213	F	IR 80	535+60		LT						1
214	F	IR 80	548+80		LT						1
214	F	IR 80	548+80		LT						1
215	F	IR 80	561+86		LT						1
215	F	IR 80	561+86		LT						1
216	F	IR 80	575+06		LT						1
216	F	IR 80	575+06		LT						1
217	F	IR 80	588+26		LT						1
217	F	IR 80	588+26		LT						1
		1 TOTALS FOR CONSTRUCTION SEASON 1				144	8	152	3,401	2,478	10
		~~TOTALS FOR CONSTRUCTION SEASON 2~~									
		TOTALS CARRIED TO TRAFFIC CONTROL GENERAL SUMMARY				144	8	152	3401	2478	10

NO.	REVISIONS	BY	DATE
1	ADDENDUM NO. 4	LOB	10/25/16
-	-	-	-

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

PAVEMENT MARKING SUBSUMMARY

SHEET 1 OF 1

M.P. 90.00 TO M.P. 95.90 SANDUSKY COUNTY

GPD GROUP.
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
520 South Main Street, Suite 2531, Akron, Ohio 44311
330-572-2100
Fax 330-572-2101

DESIGNED:	DLS	CHECKED:	AKF	DATE:	04/05/16
DRAWN:	DLS	IN CHARGE:	MRG	SCALE:	N.T.S.

PROJECT NO. 39-17-01 SHEET 191 OF 272

Drawing File: C:\2013\2013115\traffic\sheets\2013115TS001.dwg Layout: Model
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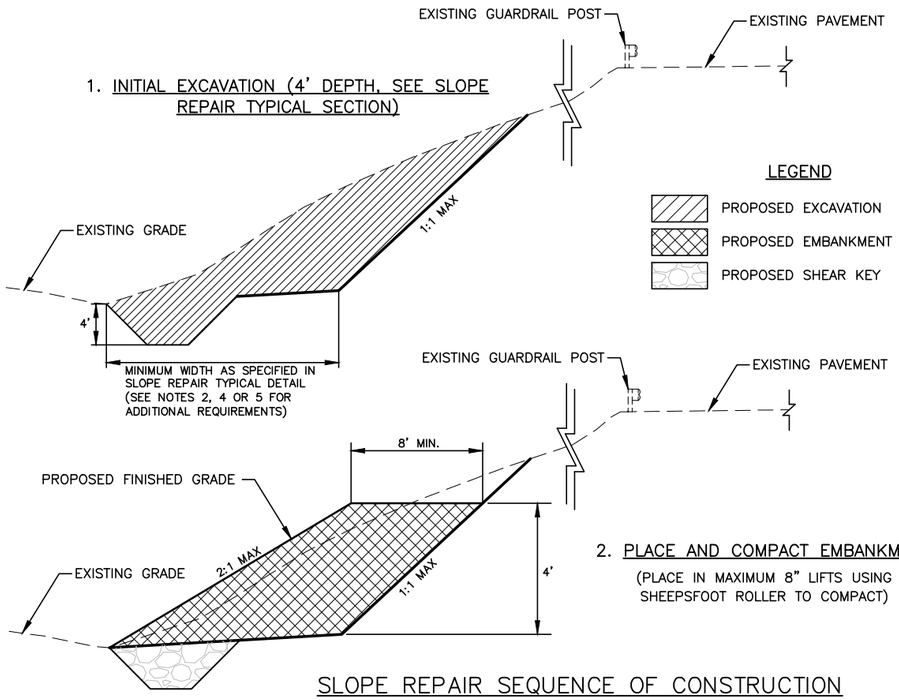


SLOPE REPAIR SEQUENCE OF CONSTRUCTION

GENERAL NOTES

(1) – THE GENERAL AREA OF SLOPE FAILURE REPAIRS ARE SHOWN ON THE PLAN AND PROFILE SHEETS. THIS ITEM SHALL CONSIST OF EXCAVATING, DRYING THE SOIL AND EMBANKING THE EXISTING SLOPE MATERIAL WITH THE INCLUSION OF A LIMESTONE SAND TO REBUILD THE SLOPES IN ACCORDANCE WITH THE NOTES AND DETAILS ON THIS SHEET. THE QUANTITIES FOR EXCAVATION INCLUDING EMBANKMENT CONSTRUCTION SHALL BE PAID BY THE NUMBER OF CUBIC YARDS PLACED TO REESTABLISH THE EXISTING SLOPES.

(2) – THE SLOPE REPAIR SEQUENCE OF CONSTRUCTION SHOWN ON THIS SHEET CORRESPONDS TO THE SLOPE REPAIR TYPICAL ON THIS SHEET. THE REPAIR SEQUENCE IN OTHER AREAS SHALL BE CONSTRUCTED IN SIMILAR SEQUENTIAL ORDER BEGINNING WITH INITIAL FILL.

(3) – THE FAILURE PLANE SHOWN AND THE LIMITS OF CORRECTIVE WORK ARE ESTIMATED. THE ACTUAL FAILURE PLANE SHALL BE DETERMINED BY CAREFUL TRENCHING NORMAL TO THE EMBANKMENT PRIOR TO ANY EXCAVATION AND/OR REMOVAL OF THE FAILED EMBANKMENT MATERIAL. THE PRESENCE OF, AND LOCATION OF, THE FAILURE PLANE SHALL BE VERIFIED BY THE CHIEF ENGINEER AND COMMISSION'S TESTING LAB.

(4) – THE CONTRACTOR SHALL REMOVE THE EXISTING SLOPE MATERIAL AND SPREAD OUT AND DRY THE SOIL IN ACCORDANCE WITH ITEM 203.07A.

(5) – BENCHES SHALL BE CUT INTO SOFT OR LOOSE MATERIAL AND EXTEND A MINIMUM OF 3 FEET BEYOND THE FAILURE PLANE INTO FIRM AND STABLE MATERIAL. BENCHING AND LIMITS OF CORRECTIVE WORK SHOWN ON THE PLANS SHALL BE MODIFIED, IF NECESSARY, IN ACCORDANCE WITH THE FIELD CONDITIONS TO ENSURE THAT THE FAILURE PLANE IS LOCATED AND MATERIAL IS REMOVED AND REPLACED TO THE DIMENSIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE CHIEF ENGINEER.

(6) – THE TOP 6 INCHES OF SUBGRADE AT THE BOTTOM OF THE EMBANKMENT EXCAVATION SHALL BE COMPACTED TO A MINIMUM DENSITY OF 98% (AASHTO T-99) PRIOR TO PLACING NEW EMBANKMENT MATERIAL.

(7) – FOLLOWING COMPLETION OF THE INITIAL BENCH EXCAVATION, EXCAVATION OF THE SHEAR KEY AT THE TOE OF THE PROPOSED FINAL SLOPE GRADE SHALL BE PERFORMED PRIOR TO PLACING THE NEW EMBANKMENT. THE DIMENSIONS OF THE SHEAR KEY SHALL BE AS SHOWN ON THE SLOPE REPAIR TYPICAL DETAIL AND PLACEMENT OF THE MATERIAL SHALL BE IN ACCORDANCE WITH ITEM 203.

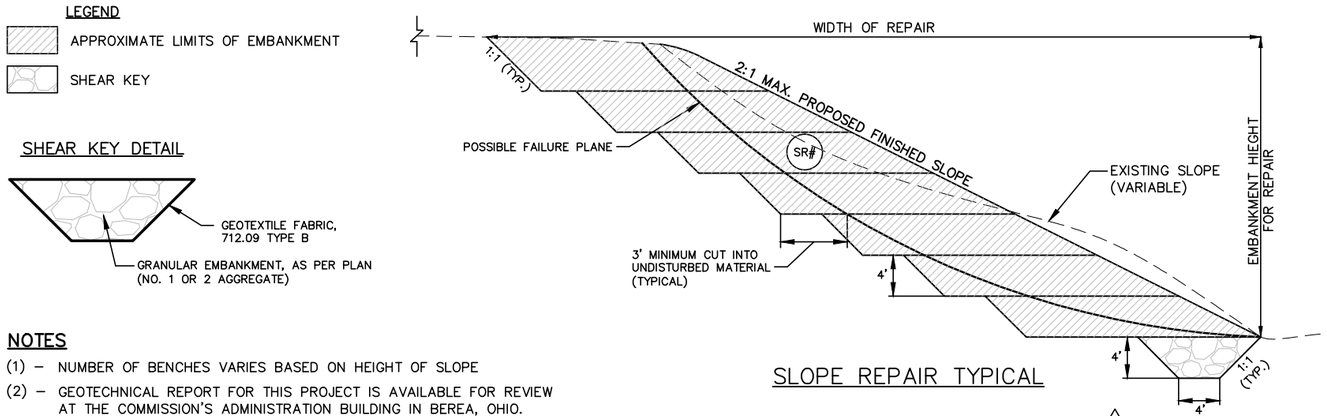
(8) – THE SURFACE OF BENCHED AREAS SHALL BE SLOPED TO DRAIN DURING INCLEMENT WEATHER TO PREVENT SATURATION OF THE CONSTRUCTED BENCHES.

(9) – PLACEMENT AND COMPACTION OF EMBANKMENT SHALL BE DONE IN NO MORE THAN 8" LIFTS. WHERE REQUIRED FOR STABILITY, THE CONTRACTOR SHALL MIX ONE (1) INCH OF A LIMESTONE SAND PER EIGHT (8) INCH LIFT (APPROXIMATELY 10% RATIO BY VOLUME BLENDED IN THE CLAY SOILS). THIS MODIFIED SOIL SHALL BE PLACED / BENCHED AS SHOWN ON THE SLOPE REPAIR TYPICAL AND COMPACTED IN ACCORDANCE WITH ITEM 203. THE CONTRACTOR SHALL ALSO PROVIDE THE MEANS AND METHOD BY WHICH THE CONTRACTOR INTENDS ON DRYING AND MIXING THE EXISTING EMBANKMENT MATERIAL WITH THE LIMESTONE SAND FOR REVIEW AND APPROVAL BY THE CHIEF ENGINEER.

(10) – ALL EMBANKMENT MATERIAL UNDER ITEM 203, SHALL BE TESTED BY THE COMMISSION TO INSURE THAT THE MATERIAL HAS A MINIMUM EFFECTIVE FRICTION ANGLE OF 28 DEGREES AND SHALL EXHIBIT A MINIMUM DRAIN COHESION OF 200 PSF. THE TESTING RESULTS OF THE COMMISSION'S TESTING AGENCY SHALL BE THE DETERMINING FACTOR FOR THIS REQUIREMENT. THE TEST RESULTS OF THE CONTRACTOR'S TESTING AGENCY WILL NOT BE CONSIDERED FOR THIS REQUIREMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING/EXCAVATING A MINIMUM OF TWO SAMPLES OF THE EXISTING SLOPE MATERIAL AT A DEPTH OF 1 TO 3 FEET BELOW GRADE FOR EACH SLOPE AREA TO BE TESTED BY THE COMMISSION'S TESTING AGENCY. THE SAMPLES SHALL BE OBTAINED AT THE BEGINNING AND END LIMITS OF THE SLIDE REPAIR AREA, AT THE MIDPOINT OF THE SLOPE OR AS FAR AS THE EXCAVATION EQUIPMENT CAN REACH FROM THE ROADWAY SHOULDER.

(11) – ALTHOUGH A TYPICAL CROSS SECTION IS PROVIDED INDICATING PROPOSED BENCHING OF THE EMBANKMENT FOUNDATION THROUGHOUT THE PROJECT, NO WAIVER OF SPECIFICATION IS INTENDED. ALL OTHER SLOPE EMBANKMENT AREAS SHALL BE BENCHED AS SET FORTH IN THE ITEM 203. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER ITEM 203.

(12) – IF THE REQUIREMENTS OF NOTE 10 ARE NOT MET, A CONTINGENCY QUANTITY OF 4030 CY OF ITEM SPECIAL – LIMESTONE SAND HAS BEEN CARRIED TO THE GENERAL SUMMARY TO IMPROVE THE SOIL AS DIRECTED BY THE COMMISSION'S TESTING AGENCY. THE ADDITIONAL SAND SHALL BE INCORPORATED IN A UNIFORM THICKNESS OF LIMESTONE SAND PER EIGHT (8") INCH LIFT PRIOR TO EMBANKING THE SOIL. THE LIMESTONE SAND SHALL MEET THE REQUIREMENTS OF LIMESTONE FINE AGGREGATE IN ACCORDANCE WITH 703 OF THE CMS.



SLOPE REPAIR TYPICAL

NOTES

(1) – NUMBER OF BENCHES VARIES BASED ON HEIGHT OF SLOPE

(2) – GEOTECHNICAL REPORT FOR THIS PROJECT IS AVAILABLE FOR REVIEW AT THE COMMISSION'S ADMINISTRATION BUILDING IN BEREA, OHIO.

SLOPE REPAIR AREA	MILE POST		LENGTH	LENGTH DESIGNATED FOR REPAIR	APPROX. WIDTH OF REPAIR	AVERAGE EMBANKMENT HEIGHT FOR REPAIR	AVERAGE NUMBER OF BENCHES	203 EXCAVATION, INCLUDING EMBANKMENT AS PER PLAN (#)	203 BORROW	203 GRANULAR EMBANKMENT, AS PER PLAN (SHEAR KEY) (*)	204 GEOTEXTILE FABRIC, TYPE B	653 TOPSOIL FURNISHED & PLACED (FOR SLOPES)	659 SEEDING AND MULCHING	671 EROSION CONTROL MAT, TYPE B
(SL-_)	BEGIN	END	FEET	FEET	FEET	FEET	EACH	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	CU. YD.	SQ. YD.	SQ. YD.
SL-1	90.32	90.33	55	95	60	23	5.75	1295	647	65	167	54	493	493
SL-2	90.41	90.43	130	170	60	25	6.25	2519	1259	154	395	108	979	979
SL-3	90.51	90.54	165	205	68	29	7.25	3523	1761	196	501	151	1370	1370
SL-4	90.74	90.77	170	210	84	36	9	4480	2240	201	516	194	1765	1765
SL-5	90.86	90.94	400	440	68	28	7	7301	3650	474	1214	325	2953	2953
SL-6	92.44	92.45	75	115	92	38	9.5	2590	1295	89	228	111	1007	1007
SL-7	92.55	92.65	500	540	68	26	6.5	8320	4160	593	1517	401	3645	3645
SL-8	95.38	95.56	920	960	60	18	4.5	10240	5120	1090	2792	546	4961	4961
					TOTALS CARRIED TO GENERAL SUMMARY			40267	20133	2862	7329	1889	17174	17174

(#) – THE ESTIMATED QUANTITIES FOR EXCAVATION INCLUDING EMBANKMENT, AS PER PLAN ARE APPROXIMATE AND BASED ON A SET REMOVAL AREA OF 16' X 4' X LENGTH DESIGNATED FOR REPAIR X NUMBER OF BENCHES. THE ACTUAL EXCAVATION INCLUDING EMBANKMENT QUANTITIES SHALL BE VERIFIED BY FIELD SURVEY. THE CONTRACTOR SHALL FIELD SURVEY THE SLOPE REPAIR AREA PRIOR TO, DURING, AND AFTER EXCAVATION AND EMBANKMENT OPERATIONS. THE SURVEY SHALL GENERATE CROSS SECTIONS AT 100 FOOT INTERVALS. AVERAGE END AREAS WILL BE USED TO DETERMINE THE ACTUAL AMOUNT OF MATERIAL REMOVED AND REPLACED. WHERE THE CONTRACT CALLS OUT "EXCAVATION INCLUDING EMBANKMENT" THE WORK FOR EMBANKMENT WILL NOT BE PAID FOR AS SUCH, BUT WILL BE CONSIDERED INCIDENTAL TO "EXCAVATION INCLUDING EMBANKMENT". THE COST OF SURVEYING, GENERATING CROSS SECTIONS AND QUANTITIES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION WILL BE GRANTED.

(*) – THE ESTIMATED QUANTITY OF EXCAVATION AND GRANULAR EMBANKMENT, AS PER PLAN (NO. 1 OR 2 AGGREGATE) FOR THE SHEAR KEY ARE BASED ON A CONSTANT CROSS SECTION AS SHOWN IN THE SLOPE REPAIR TYPICAL DETAIL AND THE LENGTH OF THE REPAIR AREA (NOT THE LENGTH DESIGNATED FOR REPAIR). ⚠1

BENCHING UNDERCUT AND REPLACEMENT

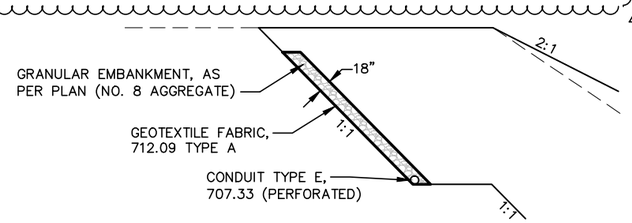
IF UNSUITABLE MATERIAL AND/OR UNSTABLE SOIL IS ENCOUNTERED AT THE BOTTOM OF THE BENCH CUT, UNDERCUT THE UNSUITABLE/UNSTABLE MATERIAL TO A DEPTH OF 1.5 FEET BELOW THE BOTTOM OF THE BENCH CUT AND REPLACE WITH ITEM 203 GRANULAR MATERIAL, TYPE C, WITH ITEM 204 GEOTEXTILE FABRIC, 712.09 TYPE A. THE FOLLOWING ESTIMATED CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE CHIEF ENGINEER FOR BENCHING UNDERCUT AND REPLACEMENT.

ITEM 203 – GRANULAR MATERIAL, TYPE C	230 CY
ITEM 204 – GEOTEXTILE FABRIC, 712.09 TYPE A	460 SY

BENCHING SLOPE DRAINS

IF WET, UNSTABLE SOILS ARE ENCOUNTERED DURING CONSTRUCTION OF THE BENCHING, SLOPE DRAINS SHALL BE INSTALLED AT THE BACK OF THE EXCAVATION AS DETAILED BELOW. THESE DRAINS SHALL CONSIST OF ITEM 203 GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 AGGREGATE), ITEM 204 GEOTEXTILE FABRIC, 712.09 TYPE A, AND ITEM 603 – 6"CONDUIT TYPE E, 707.31 (TYPE CP). THE GRANULAR EMBANKMENT SHALL BE PLACED IN LIFTS AS THE BENCHING BACKFILL IS CONSTRUCTED. TRANSVERSE OUTLET DRAINS SHALL OUTLET FROM THE AGGREGATE DRAIN AT THE LOW END OF THE BENCHES. THESE OUTLET DRAINS SHALL CONSIST OF ITEM 603 CONDUIT TYPE F, 707.33 WITH ITEM 603 PRECAST REINFORCED CONCRETE OUTLETS. TRANSVERSE OUTLET SHALL BE INSTALLED AT A MINIMUM 1 PERCENT SLOPE AND OUTLET THROUGH THE FACE OF THE SLOPE. PROVIDE ITEM 601 ROCK CHANNEL PROTECTION WITH FILTER FABRIC LINING OR OTHER EROSION PROTECTION BELOW THE OUTLETS, EXTENDING TO THE TOE OF THE SLOPE. THE FOLLOWING ESTIMATED CONTINGENCY QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE CHIEF ENGINEER FOR BENCHING SLOPE DRAINS. ⚠1

ITEM 203 – GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 AGGREGATE)	95 CY
ITEM 204 – GEOTEXTILE FABRIC, 712.09 TYPE A	510 SY
ITEM 603 – 6" CONDUIT TYPE E, 707.31 (TYPE CP)	415 LF
ITEM 603 – 6" CONDUIT TYPE F, 707.33	180 LF
ITEM 603 – PRECAST REINFORCED CONCRETE OUTLET	9 EACH
ITEM 601 – ROCK CHANNEL PROTECTION, TYPE B WITH FILTER	4 CY



BENCHING SLOPE DRAIN DETAIL

PLAN INSERT SHEET 1

NO.	REVISIONS	BY	DATE
1	ADDENDUM NO. 1	CLH	10/14/16
2	ADDENDUM NO. 4	CLH	10/26/16

OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

SLOPE REPAIR DETAIL 1

RESOURCE INTERNATIONAL, INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OH 42321

DESIGNED:	BRT	CHECKED:	JPS	DATE:	02/18/16
DRAWN:	RRM	IN CHARGE:	JAM	SCALE:	N.T.S.

CONTRACT 39-17-01 SHEET 1 OF 1

Drawing File: O:\2013\2013115\geotechnical\sheets\N-14-020(7)_SLOPE REPAIR NOTES-rev.DWG Layout: Model
Date: Oct 26, 2016 Time: 8:14 am Twist: -1.5709633
Technician: chuff