



**OHIO TURNPIKE AND  
INFRASTRUCTURE COMMISSION**

**ADDENDUM NO. 2**

**PROJECT NO. 43-19-06**

BRIDGE REHABILITATION AND 3RD LANE WIDENING M.P. 237.17 TO M.P. 238.63  
OHIO TURNPIKE OVER POLAND-UNITY ROAD M.P. 237.8, OHIO TURNPIKE OVER  
COLUMBIANA-NEW CASTLE ROAD M.P. 238.1  
MAHONING COUNTY, OHIO

**OPENING DATE:**

2:00 P.M. (EASTERN TIME), OCTOBER 26, 2018

**ATTENTION OF BIDDERS IS DIRECTED TO:**

**ANSWERS TO QUESTIONS RECEIVED THROUGH 1:30 PM ON OCTOBER 12, 2018**

-AND-

**PAVEMENT BORING LOGS**

-AND-


**MODIFICATIONS TO THE CONTRACT DOCUMENTS**


Plan Sheets: 1, 34A and 156

-and-

Bid Schedule of Items and Estimated Quantities Worksheet  
Ref. No. 130

Issued by the Ohio Turnpike and Infrastructure Commission on October 12, 2018 by Anthony D. Yacobucci, Chief Engineer, and Mark R. Musson, Director of Contracts Administration.

  
Anthony D. Yacobucci      Date      10-12-18

  
Mark R. Musson      Date      10/12/18

**ANSWERS TO QUESTIONS RECEIVED THROUGH 1:30 PM ON OCTOBER 12, 2018:**

**Q#3 Please provide soil borings for the structure work.**

*A#3 No additional soil borings were performed for this project. Soils information obtained during the original construction and the previous widening was used for the design. This information is contained within the respective existing plan sets. The boring logs for the pavement are provided with this Addendum No. 2 solely to share information available to the Commission in accordance with IB 2.1.4.*

**Q#4 There is a quantity error for the Drilled Shaft, 48” Diameter, above Bedrock bid item. The quantity is overstated for the Bridge at M.P. 238.1 based on the elevations given in the plans for this structure. Please review and adjust the bid quantity.**

*A#4 The estimated quantity for Item 524, Drilled Shafts, 48” Diameter, above Bedrock, is revised through this Addendum No. 2 from 61 feet to 37 feet on Plan Sheet 156 of 186, the Bid Schedule of Items for Reference No. 130 and Estimated Quantities Worksheet. The revised Plan Sheet 156 of 186, Bid Schedule of Items, and Estimated Quantities Worksheet is included as part of this Addendum No. 2.*

**Q#5 The Maintenance of Traffic Plans for both Phase 1 & 2 show continuous portable barrier wall for the length of the work zone. The plans do not show any construction access points to access the work areas between the two bridges. In order to meet the schedule for this project, all four bridges will need to be worked on at the same time during each phase and in order to get material and equipment to work areas between the bridges these access points will be critical. Please confirm that Construction Access Points similar to Ohio Department of Transportation Standard Drawing MT-103.10 will be allowed to be installed.**

*A#5 Construction Access Points for areas between the bridges are anticipated. The location(s) of these points may be determined by the Contractor, and shall follow the detail on new Plan Sheet 34A of 186, which is incorporated in the Contract Documents through this Addendum No. 2. A formal submission by the Contractor showing the proposed locations will be required prior to implementation. The cost for said access points shall be included in the lump sum bid price for SP 614, Maintaining Traffic.*

**Q#6 Under Special Provisions Section SP 104 – Access to Turnpike and Restrictions, Part G. States that “Access for all material deliveries shall be achieved through public Toll plaza ramps only. No access drives, maintenance building facilities, service plazas or back-gate entrance locations will be permitted for use without prior written approval of the Chief Engineer.” Will the Chief Engineer grant access through the back-gates to both the north & south side service plazas (M.P. 237.2) that provide access to East South Range Road and Glacier Road? Also, will the Chief Engineer grant access to the gate on the north side at the Toll Plaza (M.P. 239) that provides access to East Pine Lake Road?**

*A#6 Temporary Access Deduct Alternate proposals will be considered on this Project. The Contractor shall comply with all requirements of the Contract Documents, including but not limited to SP104 and SP109. The Bid Schedule of Items and Estimated Quantities Worksheet has been revised and incorporated into the Contract Documents through this Addendum No. 2.*

**Q#7 The plan note on Pg. 31 under Maintaining Traffic Part V. states that if the contractor desires to close the road(s) during this project, it must first be approved by the chief engineer. It is assumed that this note pertains to Unity Rd and Columbiana-New Castle Roadways. Will these local roads be allowed to close? Will they be allowed to be closed at the same times? Has OTIC previously coordinated the closure of these roads with Mahoning County Engineer's Office?**

*A#7 Yes, the note pertains to Poland-Unity Road and Columbiana-New Castle Road. Preliminary discussions with the Mahoning County Engineer's Office have resulted in favorable indications for allowing both Poland-Unity Road and Columbiana-New Castle Road to be closed; however, securing authorization is the obligation of the Contractor. The Mahoning County Engineer's Office will have specific requirements for any authorized closures that the Contractor must fulfill. The Contractor shall coordinate with and obtain approval from the Mahoning County Engineer's Office prior to the Chief Engineer issuing the approval referenced in the Contract Documents.*

**Q#8 Note 1 on standard construction drawing CBR-2 (9/19/18) states the concrete barrier wall may be slip formed. The toe detail on the upper right corner on this drawing states the vertical face below the pavement shall be formed. Please clarify if the Type B and C wall can be slip formed. If slip forming is acceptable, can the vertical face below the pavement be tapered to allow slip forming?**

*A#8 The Type B and C walls may be slip formed or hand formed. The vertical face below the pavement shall remain vertical, as provided in the detail and not tapered.*

**Q#9 Will the Chief Engineer allow a fence cut on this project?**

*A#9 Please see response to Q#6.*

**Q#10 Are there any on-site waste options within the turnpike right of way for excavated materials?**

*A#10 The Commission does not have any on-site waste options for this Project.*

**Q#11 Where is the project work location for the plan note on page 32 for bid item 164 “Existing Crossover to be closed/re-opened”?**

*A#11 The Commission will respond to this Question in a future addendum.*

**Q#12 Where is payment for the plan note on page 10 for the locating of the gas line crossings?**

*A#12 The Commission will respond to this Question in a future addendum.*

**MODIFIED CONTRACT DOCUMENTS**

With this Addendum No. 2, the Commission substitutes the enclosed material for the following Contract Documents:

Plan Sheets:

1, 34A and 156 of 186 with additions and deletions to the Plan Drawings called out with a cloud and marked with a revision triangle as thus:



With this Addendum No. 2, the Commission modifies the Bid Schedule of Items for the following Reference Numbers: 130

**Receipt of Addendum No. 2**

**Project No. 43-19-06 is hereby acknowledged:**

(Firm Name) \_\_\_\_\_

(Signature) \_\_\_\_\_

(Printed Name) \_\_\_\_\_

(Date) \_\_\_\_\_

**BIDDERS MUST RETURN THE ABOVE ACKNOWLEDGEMENT OF RECEIPT OF ADDENDUM NO. 2 WITH THEIR BID.**



# OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

## THE JAMES W. SHOCKNESSY OHIO TURNPIKE

### PROJECT NO. 43-19-06

# BRIDGE REHABILITATION AND 3RD LANE WIDENING

### M.P. 237.17 TO M.P. 238.63

## OHIO TURNPIKE OVER POLAND-UNITY ROAD M.P. 237.8, OHIO TURNPIKE OVER COLUMBIANA-NEW CASTLE ROAD M.P. 238.1 MAHONING COUNTY, OHIO

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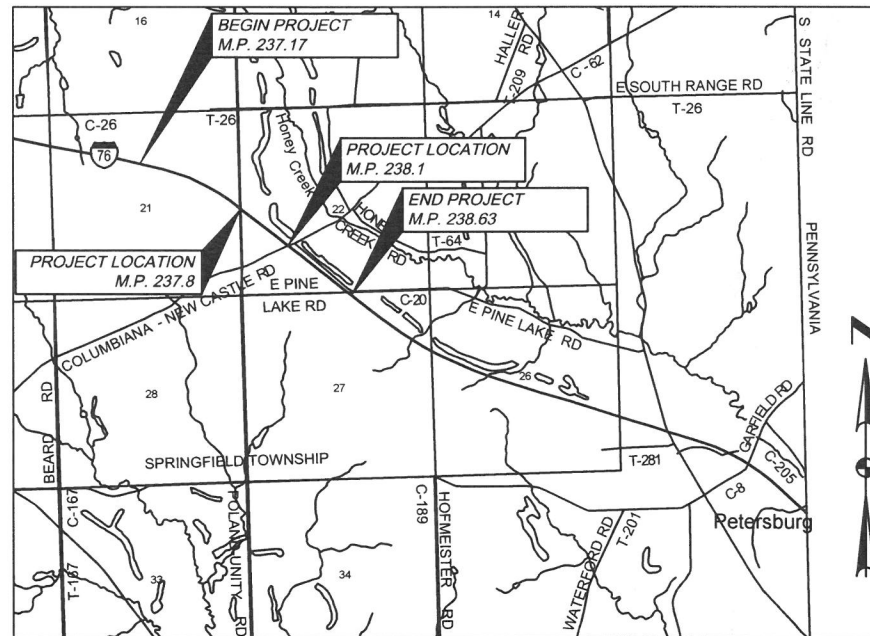
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### OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION STANDARD DRAWINGS

AS-1	REINFORCED CONCRETE APPROACH SLAB	09/19/18
CB-1	CATCH BASIN, NO. CB-1 WITH SLOPE DRAIN DETAIL	10/20/17
CB-4A	INLET, NO. I-3B50 DOUBLE GRATE	09/19/18
CB-5A	INLET, NO. I-3C50 DOUBLE GRATE	09/19/18
CBR-2	CONCRETE BARRIER, SINGLE SLOPE, TYPES B-50 AND C-50, AS PER PLAN	09/19/18
DJ-1	DECK JOINT DETAILS, CELLULAR ABUTMENTS	10/20/17
DJ-2	DECK JOINT DETAILS	10/20/17
DR-1	PRECAST FLARED END SECTION	10/20/17
RPM-1	RAISED PAVEMENT MARKERS AND STRIPING LAYOUT	10/20/17
SBR-50	50" SINGLE SLOPE CONCRETE MEDIAN BRIDGE RAILING	09/19/18
TC-3	TRAFFIC CONTROL MAINLINE DELINEATION AND MISCELLANEOUS DELINEATION	10/20/17
TCB-1	REQUIREMENTS FOR PORTABLE BARRIER SETTING AND REMOVAL OPERATIONS	10/20/17
TCB-3	MEDIAN BARRIER WALL CLOSURE DETAIL	10/20/17
TCR-1	TEMPORARY TRAFFIC CONTROL GENERAL NOTES	10/20/17
TCR-2	TEMPORARY TRAFFIC CONTROL DETAILS, LEGEND, NOTES, & STANDARD SINGLE LANE CLOSURE	10/20/17
TCR-4	TEMPORARY TRAFFIC CONTROL BI-DIRECTION ROADSIDE DELINEATION	10/20/17
TCR-9.1	TEMPORARY TRAFFIC CONTROL LANE CLOSURE AT EXIT AND ENTRANCE RAMP	10/20/17
TCR-11PS	TEMPORARY TRAFFIC CONTROL PAVEMENT STRIPING MOVING ZONE	10/20/17
TCR-12	TEMPORARY TRAFFIC CONTROL DOUBLE LANE SHIFT ZONE	10/20/17
TCR-14	TEMPORARY TRAFFIC CONTROL SINGLE LANE CLOSURE WITH PORTABLE BARRIER	10/20/17
TCR-15	TEMPORARY TRAFFIC CONTROL SIGNS FOR MAINTENANCE AND CONSTRUCTION	10/20/17
UD-1	UNDERDRAIN DETAIL	09/19/18
XOV-3	MAINTENANCE CROSSOVER DETAILS	09/19/18

### OHIO DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS

DM-1.1	OUTLETS, DRAINS, AND SEWER	07/21/17
BP-5.1	CONCRETE CURB AND COMBINED CURB AND GUTTER	07/20/18
MC-9.3	CONCRETE BARRIER	10/30/92
MH-1.2	MANHOLE NO. 3	01/15/16
MGS-1.1	GUARDRAIL DETAILS	01/19/18
MGS-2.1	MIDWEST GUARDRAIL SYSTEM, STANDARD TYPE MGS	01/19/18
MGS-3.1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	01/19/18
MGS-3.2	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	01/18/13
MGS-6.1	GUARDRAIL AT BRIDGES	01/19/18
MT-95.40	CLOSING LEFT OR RIGHT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER	01/20/17
MT-101.60	ROAD CLOSURE USING TYPE 3 BARRIERS	01/20/17
MT-101.70	BARRIER AND IMPACT ATTENUATOR DELINEATION	07/20/18
MT-105.10	TEMPORARY SIGN SUPPORT	07/19/13
RB-1-55	ROCKERS AND BOLSTERS FOR STEEL BEAM & GIRDER BRIDGES	07/19/13
SBR-1-13	SINGLE SLOPE CONCRETE BRIDGE RAILING	07/20/18
TC-52.10	SIGN BLANK DETAILS 1	10/18/13
TC-52.20	SIGN BLANK DETAILS 2	07/20/18



OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS		
SS 800	REVISIONS TO THE 2016 ODOT CMS	07/20/18
SS 821	ARROW BOARD	04/20/12
SS 832	TEMPORARY SEDIMENT AND EROSION CONTROL	01/17/14
SS 849	HEAT STRAIGHTENING OF DAMAGED STRUCTURAL STEEL	01/18/13
SS 921	ARROW BOARD	04/20/12
S 1120	MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	01/15/16
S 1122	DETERMINING SULFATE CONTENT IN SOILS	07/20/18

APPROVED FOR  
THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION

BY  
*Anthony D. Yank*  
CHIEF ENGINEER

10-12-18  
DATE

ENGINEERS SEAL:  
ALL SHEETS EXCEPT AS NOTED

SIGNED: *Robert B. Parker*  
DATE: 9/17/2018

ENGINEERS SEAL:  
SHEETS 155 THRU 186

SIGNED: *Wen H. Tseng*  
DATE: 9/17/2018

**UNDERGROUND UTILITIES**

CONTACT BOTH SERVICES  
CALL TWO WORKING DAYS  
BEFORE YOU DIG

CALL  
1-800-362-2764  
OR 811 (TOLL FREE)

OHIO UTILITIES PROTECTION  
SERVICE NON-MEMBERS  
MUST BE CALLED DIRECTLY

OHIO OIL & GAS PRODUCERS UNDERGROUND  
PROTECTIVE SERVICE CALL: 614-715-2984 OR 811

OTIC DIVISION TRADES SUPERVISOR:  
440-971-2731 - WEST (M.P. 0.0 - M.P. 126.4)  
440-971-2781 - EAST (M.P. 126.4 - M.P. 241.26)

PREPARED BY

**Jobs Henderson**  
A HULL COMPANY

4 Hemisphere Way  
Bedford, OH 44146  
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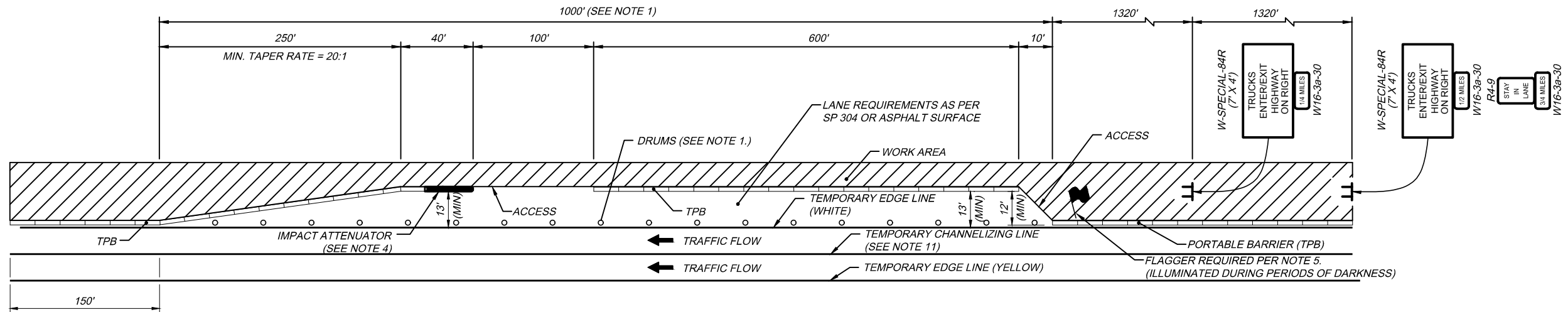
WITH

**TF** Thomas Fok & Associates, Inc.  
Consulting Engineers & Surveyors  
SBE & EDGE

1976

3896 Mahoning Avenue Youngstown OH 44515

(THIS SHEET WAS CREATED UNDER ADDENDUM NO. 2).



**TYPICAL CONSTRUCTION ACCESS POINT DETAIL**  
 (WORK AREA ON OUTSIDE LANES AND OUTSIDE SHOULDER SHOWN; WORK AREA ON INSIDE LANES AND INSIDE SHOULDER IS MIRRORED ABOUT THE CHANNELIZING LINE)

(LOCATIONS TO BE APPROVED BY THE CHIEF ENGINEER)

**NOTES:**

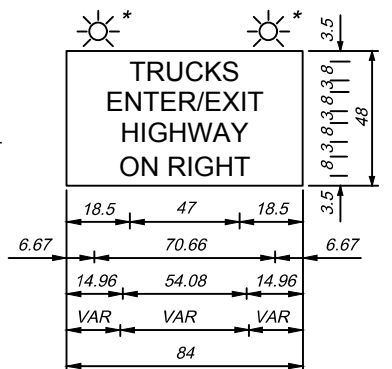
- AT ANY TIME WHEN CONSTRUCTION OPERATIONS ARE NOT OCCURRING WITHIN THE IMMEDIATE VICINITY OF THE CONSTRUCTION ACCESS POINT OR WHEN THE CONSTRUCTION ACCESS POINT IS NOT IN USE, THE CONTRACTOR SHALL CLOSE THE CONSTRUCTION ACCESS POINT BY PLACING CONSTRUCTION DRUMS AT 20' INTERVALS OUTSIDE OF THE TEMPORARY EDGE LINE WITHIN THE 1000' ACCESS AND ACCELERATION AREA DEFINED BY THE DETAIL ABOVE AND THE SIGNS SHALL BE COVERED.
- ALL REQUIRED SIGNS FOR CONSTRUCTION ACCESS POINTS SHALL BE FURNISHED, INSTALLED, MAINTAINED AND COVERED BY THE CONTRACTOR. ALL ASSOCIATED SIGN COSTS SHALL BE INCLUDED IN THE LUMP SUM BID FOR SP 614 - MAINTAINING TRAFFIC.
- IMPACT ATTENUATOR AND THE LAST FULL SECTION OF PORTABLE BARRIER ADJACENT TO THE IMPACT ATTENUATOR SHALL BE PLACED PARALLEL TO TRAFFIC PRIOR TO THE BEGINNING OF THE PORTABLE BARRIER MERGE TAPER.
- IMPACT ATTENUATOR SHALL MEET NCHRP 350, TEST LEVEL 3 TEST STANDARDS AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
- WHEN THE CONSTRUCTION ACCESS POINT IS OPEN AND IN USE, A FLAGGER WITH A FLAG SHALL BE LOCATED AT THE ENTRY LOCATION AT ALL TIMES.
- THE CONTRACTOR SHALL INCLUDE IN ITS ENVIRONMENTAL POLLUTION CONTROL PLAN FOR REMOVAL OF MUD ON VEHICLES LEAVING THE CONSTRUCTION SITE AND THE LIGHTING PLAN IF REQUIRED PER SP 112. A 100' CONSTRUCTION ENTRANCE/EXIT TO BE IN PLACE PRIOR TO USE, ACCORDING TO OEPA AND SWPPP REQUIREMENTS.
- THE CONTRACTOR SHALL ONLY INSTALL CONSTRUCTION ACCESS POINTS IN AREAS WHERE THE GRADE LEAVING THE AREA OF THE ACCESS POINT IS LESS THAN 2% UNLESS APPROVED BY THE CHIEF ENGINEER.
- IN THE EVENT THE CONTRACTOR REQUESTS A CHANGE TO THE ACCESS POINT LAYOUT SHOWN ABOVE THE CONTRACTOR SHALL PREPARE A REVISED DETAIL AND SHALL SUBMIT SAID DETAIL TO THE CHIEF ENGINEER FOR APPROVAL PRIOR TO ERECTION IN THE FIELD.
- TRAFFIC RESTRICTIONS PER SP 104 APPLY.
- THE PORTABLE BARRIER SHALL HAVE DELINEATIONS PER SP 622 AND TCR-14.
- A TEMPORARY CHANNELIZING LINE, IN ACCORDANCE WITH ITEM 614 WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT, (8") SHALL BE PLACED ALONG EACH CONSTRUCTION ACCESS POINT AS SHOWN. THE INSTALLATION AND REMOVAL OF THIS LINE(S) SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM SP 614 - MAINTAINING TRAFFIC.

TABLE OF WIDTHS AND SPACES

W-SPECIAL-84 (R/L)  
(SIGN INFORMATION SHOWN IN ENGLISH UNITS ONLY)

18.50	5.94	1.65	6.38	2.05	6.37	2.06	6.37	1.65	6.50	1.65	6.38	18.50						
6.67	5.94	1.65	6.38	1.67	5.94	1.65	5.94	0.55	6.47	1.10	5.94	1.65	6.94	1.65	1.60	1.65	5.94	6.67
14.96	6.38	2.05	1.60	2.05	6.38	2.05	6.37	1.65	8.44	0.56	8.00	0.55	8.00	14.96				
13.21	6.69	2.05	6.37	8.00	6.38	2.05	1.60	2.05	6.38	2.05	6.37	1.65	5.94	13.21				
15.87	6.69	2.05	6.37	8.00	6.38	1.65	5.94	1.65	5.94	1.65	5.94	1.65	5.94	15.87				

NO BORDER, BLACK ON ORANGE;  
E MOD FONT, TYPE F SHEETING



\* TYPE A FLASHING WARNING LIGHTS SHALL BE PROVIDED FOR THIS SIGN AND SHALL ONLY BE ACTIVE WHEN ACCESS POINT IS IN USE BY THE CONTRACTOR.

**CONSTRUCTION ACCESS POINTS**

CONSTRUCTION ACCESS POINT LOCATIONS MAY BE SELECTED BY THE CONTRACTOR WITH THE APPROVAL OF THE CHIEF ENGINEER. THE CONTRACTOR MAY SELECT ACCESS POINT LOCATIONS PROVIDED THAT THE DIRECTIONAL TRAVEL ACCESS POINTS ARE NOT CLOSER THAN 1.50 MILE FROM EACH OTHER AND ARE AT LEAST 1.00 MILE FROM AN ENTRANCE OR EXIT RAMP.

THE ACCESS POINT LOCATIONS SHALL BE SELECTED ON TANGENTS WITH GOOD SIGHT DISTANCE AND EASE OF ACCESS FOR ENTERING VEHICLES (AVOID LOCATIONS JUST BEYOND CREST VERTICAL CURVES, ON OVERHEAD STRUCTURES, ON UPGRADES, ETC.).

IN THE EVENT THAT THE CHIEF ENGINEER DETERMINES THAT AN ACCESS POINT DOES NOT FUNCTION IN A SAFE MANNER, THE CHIEF ENGINEER SHALL ORDER IT IMMEDIATELY CLOSED AT NO COST TO THE OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION. ACCESS POINTS MAY BE RELOCATED SUBJECT TO THE APPROVAL OF THE CHIEF ENGINEER, AS NECESSARY TO ACCOMPLISH CONSTRUCTION ACTIVITIES.

ALL ASSOCIATED COSTS FOR ERECTING, MAINTAINING AND REMOVING CONSTRUCTION ACCESS POINTS SHALL BE INCLUDED IN THE LUMP SUM BID FOR SP 614, MAINTAINING TRAFFIC. ALL COSTS FOR RELOCATION OF PORTABLE BARRIER, INSTALLATION, REPAIR, REPLACEMENT AND REMOVAL OF IMPACT ATTENUATORS, GRADING FOR ACCESS DRIVES, FLAGGER, CONSTRUCTION ENTRANCES AND RELATED COSTS SHALL BE INCLUDED IN THE LUMP SUM BID FOR SP 614, MAINTAINING TRAFFIC.

OTC037\_MOT CONSTRUCTION ACCESS.dwg: 10/10/18 - 4:07pm

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**OHIO TURNPIKE AND INFRASTRUCTURE COMMISSION**

BY	DATE	REVISIONS	NO.	CHECKED
JAH	10/18	ADDENDUM NO. 2	1	JAH
				IN CHARGE
				RBP

**MAINTENANCE OF TRAFFIC  
CONSTRUCTION ACCESS POINTS**

PROJECT 43-19-06      DATE: 09-17-2018

1 / 1

34A  
186

OHIO TURNPIKE

ESTIMATED QUANTITIES

ITEM NO.	QUANTITY	UNIT	ITEM DESCRIPTION	ABUTMENT	PIER	SUPER	GENERAL	AS PER PLAN SHEET
STRUCTURES								
SP 202	LUMP	LUMP SUM	PORTIONS OF STRUCTURE REMOVED				LUMP	
503	LUMP	LUMP SUM	COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	259	CU. YD.	UNCLASSIFIED EXCAVATION	259				
503	71	CU. YD.	ABUTMENT BACKFILL, AS PER 503.08	71				
505	LUMP	LUMP SUM	PILE DRIVING EQUIPMENT MOBILIZATION	LUMP				
507	960	FOOT	STEEL PILES HP10X42, FURNISHED	960				
507	780	FOOT	STEEL PILES HP10X42, DRIVEN	780				
507	36	EACH	STEEL POINTS OR SHOES	36				
SP 509	168,710	POUND	EPOXY COATED REINFORCING STEEL, GRADE 60	44,353	15,042	109,315		
509	500	POUND	REINFORCING STEEL REPLACEMENT OF EXISTING REINFORCING STEEL	500				
510	252	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	252				
511	167	CU. YD.	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTINGS	167				
511	58	CU. YD.	CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS		58			
SP 511B	497	CU. YD.	CLASS HP4 CONCRETE, SUPERSTRUCTURE DECK SLAB			497		
SP 511B	111	CU. YD.	CLASS S CONCRETE, BARRIERS AND PARAPETS, USING TYPE 1 CEMENT			111		
SP 511B	107	CU. YD.	CLASS HP4 CONCRETE, ABUTMENT SLABS	107				
SP 511B	5	CU. YD.	CLASS HP4 CONCRETE, FOR REPLACEMENT TESTING	5				
513	142,800	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3			142,800		
SP 514A	LUMP	LUMP SUM	SURFACE PREPARATION OF EXISTING STEEL, SYSTEM OZEU			LUMP		
SP 514A	LUMP	LUMP SUM	FIELD PAINTING OF EXISTING STEEL, PRIME COAT, SYSTEM OZEU			LUMP		
SP 514A	LUMP	LUMP SUM	FIELD PAINTING OF NEW AND EXISTING STEEL, INTERMEDIATE COAT, SYSTEM OZEU			LUMP		
SP 514A	LUMP	LUMP SUM	FIELD PAINTING OF NEW AND EXISTING STEEL, FINISH COAT, SYSTEM OZEU			LUMP		
SP 514A	32	HOURS	REMEDIATION OF CHLORIDES			32		
SP 514A	40	HOURS	GRINDING FINS, TEARS, AND SLIVERS			40		
516	6	EACH	BEARING DEVICES, BOLSTER			6		
516	6	EACH	BEARING DEVICES, ROCKER			6		
516	8	EACH	ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12" X 8" X 2.30")			8		
516	4	EACH	ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14" X 8" X 2.30")			4		
SP 516A	14	FOOT	CRACK REPAIR	14				
SP 516B	1,254	FOOT	SEALING OF CONSTRUCTION JOINTS	438		816		
SP 516G	14	EACH	ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES, H-PILES AND LOAD PLATES (NEOPRENE), (12" X 8" X 2.30")			14		
SP 516G	10	EACH	ELASTOMERIC BEARINGS WITH INTERNAL LAMINATES, H-PILES AND LOAD PLATES (NEOPRENE), (14" X 8" X 2.30")			10		
SP 519	62	SQ. FT.	PATCHING OF CONCRETE STRUCTURES	62				
524	37	FOOT	DRILLED SHAFTS, 48" DIAMETER, ABOVE BEDROCK		37			
524	48	FOOT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK		48			
SP 525A	LUMP	LUMP	WORKER PROTECTION			LUMP		
SP 525A	20	EACH	PROTECTIVE CLOTHING/EQUIPMENT SET			20		
SP 525A	LUMP	LUMP SUM	ESTABLISH REGULATED AREAS			LUMP		
SP 525A	LUMP	LUMP SUM	PAINT WASTE/HAZARDOUS WASTE HANDLING AND DISPOSAL			LUMP		
SP 525A	LUMP	LUMP SUM	CONTAINMENT SYSTEM			LUMP		
SP 527	LUMP	LUMP SUM	FALSEWORK, TEMPORARY BRACING AND PROTECTIVE STRUCTURES				LUMP	
SP 533	290	FOOT	CONTINUOUS STRIP SEAL IN STRUCTURAL STEEL JOINT			290		
SP 536	918	SQ. YD.	CONCRETE WEATHERPROOFING, SUBSTRUCTURE	222	696			
SP 536	3,174	SQ. YD.	CONCRETE WEATHERPROOFING, DECK, ABUTMENT SLABS, AND APPROACH SLABS			3,174		
849	LUMP	LUMP SUM	DAMAGE ASSESSMENT			LUMP		
849	LUMP	LUMP SUM	SURFACE PREPARATION			LUMP		
849	LUMP	LUMP SUM	STRAIGHTENING DAMAGED MEMBERS			LUMP		

PROJECT 43-19-06

DATE: 09/17/18

2 / 32

ESTIMATED QUANTITIES

OHIO TURNPIKE OVER COLUMBIANA-NEW CASTLE ROAD

MAHONING COUNTY

M.P. 238.1

DESIGN AGENCY

**TF** Thomas Folk & Associates, Inc.

Consulting Engineers & Surveyors

1976

ASSOCIATES SBE & EDGE

3896 Mahoning Avenue Youngstown OH 44515

OHIO TURNPIKE

DESIGNED

SDL

CHECKED

WHT

NO.

Δ


BY DATE

SD 10/18

REVISIONS

ADDENDUM NO. 2

156  
186


	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / S.B.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1040+93.25 / 30.81' RT	EXPLORATION ID <b>B-48-01</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 236.50	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1207.1 (MSL) EOB: 5.4 ft.	PAGE 1 OF 1
	START: 6/5/18 END: 6/5/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 470212.896 N, 2493647.524 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.4' - ASPHALT (5.0")	1207.1																	
0.9' - CONCRETE (11.0")	1206.7																	
0.3' - GRANULATED SLAG (4.0")	1205.8	1																
VERY STIFF, BROWN <b>SANDY SILT</b> , SOME CLAY, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.	1205.5	2	10	8	21	89	SS-1	3.75	7	7	19	47	20	20	11	9	13	A-4a (6)
		3	6	8	26	100	SS-2	3.75	12	7	20	37	24	21	15	6	13	A-4a (5)
		4																
		5	4	50/3"	-	89	SS-3	4.00	-	-	-	-	-	-	-	-	13	A-4a (V)
	1201.7	EOB																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL




	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1051+11.73 / 30.3' LT	EXPLORATION ID <b>B-48-02</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 236.70	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1218.9 (MSL) EOB: 7.9 ft.	PAGE 1 OF 1
	START: 6/12/18 END: 6/12/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 470069.604 N, 2494657.928 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED	
								GR	CS	FS	SI	CL	LL	PL	PI				
0.4' - ASPHALT (4.5")	1218.9																		
0.8' - CONCRETE (10")	1218.5																		
0.7' - GRANULATED SLAG (8.5")	1217.7	1																	
HARD, BROWN SANDY SILT, SOME CLAY, TRACE FINE GRAVEL, DAMP.	1217.0	2	5	9	24	100	SS-1	4.5+	9	8	19	35	29	26	16	10	13	A-4a (6)	
		3	6	8	20	67	SS-2	4.25	8	9	22	38	23	25	16	9	13	A-4a (5)	
		4	4	4	11	100	SS-3	4.5+	-	-	-	-	-	-	-	-	-	13	A-4a (V)
		5	4	4	11	100	SS-3	4.5+	-	-	-	-	-	-	-	-	-	13	A-4a (V)
		6	5	8	8	23	100	SS-4	4.5+	-	-	-	-	-	-	-	-	14	A-4a (V)
	1211.0	7																EOB	

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL


	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / S.B.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1061+72.34 / 30.31' RT	EXPLORATION ID <b>B-48-03</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 236.90	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1231.3 (MSL) EOB: 7.9 ft.	PAGE 1 OF 1
	START: 6/15/18 END: 6/15/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 469799.050 N, 2495685.245 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED	
								GR	CS	FS	SI	CL	LL	PL	PI				
0.5' - ASPHALT (5.5")	1231.3																		
0.8' - CONCRETE (10")	1230.8																		
0.6' - GRANULATED SLAG (7.5")	1230.0	1																	
	1229.4																		
VERY STIFF, DARK BROWN <b>SANDY SILT</b> , SOME CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.	1227.9	2	4	7	24	89	SS-1	3.75	19	10	19	30	22	25	15	10	10	A-4a (3)	
	1227.9	3	10																
DENSE, LIGHT BROWN <b>GRAVEL WITH SAND AND SILT</b> , LITTLE CLAY, MOIST.	1226.4	4	23	14	46	72	SS-2	-	31	10	35	13	11	19	14	5	8	A-2-4 (0)	
	1226.4		18																
HARD, BROWN <b>SANDY SILT</b> , SOME CLAY, LITTLE FINE GRAVEL, DAMP.	1224.9	5	6	6	20	94	SS-3	4.5+	-	-	-	-	-	-	-	-	-	12	A-4a (V)
	1224.9	6	8																
HARD, LIGHT BROWN <b>SILT AND CLAY</b> , SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	1223.4	7	14	10	34	89	SS-4	4.5+	-	-	-	-	-	-	-	-	-	14	A-6a (V)
	1223.4		14																

EOB

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1072+31.4 / 30.58' LT	EXPLORATION ID <b>B-48-04</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 237.10	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1242.1 (MSL) EOB: 5.7 ft.	PAGE 1 OF 1
	START: 6/12/18 END: 6/12/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 469647.889 N, 2496735.222 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.5' - ASPHALT (5.5")	1242.1																	
0.8' - CONCRETE (10")	1241.6																	
0.8' - GRANULATED SLAG (9.0")	1240.8	1																
0.5' - CONSOLIDATED SLAG (6.0")	1240.1	2																
MEDIUM DENSE TO DENSE, GRAY GRAVEL WITH SAND AND SILT, TRACE TO LITTLE CLAY, DAMP.	1239.6																	
	1237.6	3	15 13 1	20	56	SS-1	-	50	13	9	19	9	25	20	5	5	A-2-4 (0)	
	1237.6	4	21 50/2"	-	88	SS-2A SS-2B	- -	46 -	9 -	11 -	20 -	14 -	NP -	NP -	NP -	10 5	A-2-4 (0) Rock (V)	
	1236.4	5	50/2"	-	100	SS-3	-	-	-	-	-	-	-	-	-	6	Rock (V)	
		EOB																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / S.B.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1082+55.88 / 30.4' RT	EXPLORATION ID <b>B-48-05</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 237.30	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1241.1 (MSL) EOB: 8.0 ft.	PAGE 1 OF 1
	START: 6/5/18 END: 6/5/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 469371.006 N, 2497724.762 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.5' - ASPHALT (6.5")	1241.1																	
0.8' - CONCRETE (10")	1240.6																	
0.6' - GRANULATED SLAG (7.5")	1239.7	1																
	1239.1	2																
VERY STIFF TO HARD, BROWN <b>SANDY SILT</b> , SOME CLAY, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.		3	6 7 8	21	100	SS-1	4.5+	13	6	17	34	30	24	15	9	14	A-4a (6)	
		4	6 7 8	21	39	SS-2	4.5+	4	7	18	38	33	26	16	10	16	A-4a (7)	
		5																
-TRACE ORGANICS PRESENT IN SS-2 AND SS-3		6	3 5 6	16	83	SS-3	3.75	-	-	-	-	-	-	-	-	15	A-4a (V)	
		7	8 10 25	50	100	SS-4A	3.50	-	-	-	-	-	-	-	-	15	A-4a (V)	
<b>SANDSTONE</b> : GRAY, HIGHLY WEATHERED.	1233.6																	
	1233.1	8				SS-4B	-	-	-	-	-	-	-	-	-	-	Rock (V)	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL


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	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1094+64.63 / 30.72' LT	EXPLORATION ID <b>B-48-06</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 237.50	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1232.5 (MSL) EOB: 8.0 ft.	PAGE 1 OF 1
	START: 6/12/18 END: 6/12/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 468988.102 N, 2498867.641 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED	
								GR	CS	FS	SI	CL	LL	PL	PI				
0.4' - ASPHALT (4.5")	1232.5																		
0.8' - CONCRETE (10")	1232.1																		
0.8' - GRANULATED SLAG (9.5")	1231.3	1																	
VERY STIFF TO HARD, BROWN <b>SANDY SILT</b> , SOME CLAY, TRACE TO LITTLE FINE GRAVEL, DAMP TO MOIST.	1230.5	2	5	9	24	67	SS-1	4.5+	11	7	24	34	24	19	15	4	11	A-4a (5)	
		3	9	10	27	78	SS-2	4.5+	9	9	27	34	21	24	15	9	14	A-4a (4)	
		4	3	7	21	56	SS-3	4.5+	-	-	-	-	-	-	-	-	-	14	A-4a (V)
		5	8	10	29	78	SS-4	3.25	-	-	-	-	-	-	-	-	-	16	A-4a (V)
		6	7	10	10														
	1224.5	8																	

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / S.B.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1105+00.36 / 30.15' RT	<b>EXPLORATION ID</b> <b>B-48-07</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 237.70	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1221.5 (MSL) EOB: 7.7 ft.	PAGE 1 OF 1
	START: 6/5/18 END: 6/5/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 468379.742 N, 2499705.957 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.4' - ASPHALT (5.5")	1221.5																	
0.8' - CONCRETE (10.0")	1221.1																	
0.4' - GRANULATED SLAG (5.0")	1220.2	1																
VERY STIFF, BROWN <b>SILT AND CLAY</b> , SOME COARSE TO FINE SAND, TRACE FINE GRAVEL, DAMP.	1219.8	2	3 6 10	23	72	SS-1	4.00	10	7	15	33	35	30	16	14	13	A-6a (8)	
VERY STIFF TO HARD, BROWN <b>SANDY SILT</b> , SOME CLAY, LITTLE FINE GRAVEL, DAMP.	1218.3	3	10 16 16	46	100	SS-2	4.00	13	10	25	29	23	23	14	9	9	A-4a (3)	
-TRACE ORGANICS PRESENT IN SS-3		5	19 19 19	54	94	SS-3	4.5+	-	-	-	-	-	-	-	-	9	A-4a (V)	
		6																
		7	10 25 27	74	100	SS-4	4.5+	-	-	-	-	-	-	-	-	10	A-4a (V)	
	1213.8	EOB																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL


	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1115+96.80 / 30.53' LT	EXPLORATION ID <b>B-48-08</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 237.90	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1299.8 (MSL) EOB: 7.7 ft.	PAGE 1 OF 1
	START: 6/12/18 END: 6/12/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 467747.869 N, 2500604.237 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.4' - ASPHALT (4.5")	1299.8																	
0.9' - CONCRETE (10.5")	1299.4																	
0.5' - GRANULATED SLAG (5.5")	1298.6	1																
	1298.1																	
HARD, BROWN <b>SILT AND CLAY</b> , SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP.	1296.6	2	6	5	16	78	SS-1	4.5+	18	7	16	33	26	31	16	15	14	A-6a (7)
	1296.6	3																
DENSE, GRAY <b>GRAVEL WITH SAND AND SILT</b> , LITTLE CLAY, DAMP. -SANDSTONE FRAGMENTS PRESENT IN SS-2	1295.1	4	22	18	49	89	SS-2	-	42	9	14	22	13	26	17	9	9	A-2-4 (0)
	1295.1	5																
<b>SHALE</b> : GRAY, HIGHLY WEATHERED.		6	23	25	47	100	SS-3	-	-	-	-	-	-	-	-	-	4	Rock (V)
		7	16	14	33	100	SS-4	-	-	-	-	-	-	-	-	-	4	Rock (V)
	1292.1																	

EOB

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1120+29.35 / 24.03' Lt	EXPLORATION ID <b>B-48-09</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.00	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1291.1 (MSL) EOB: 7.5 ft.	PAGE 1 OF 1
	START: 6/12/18 END: 6/12/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 467474.572 N, 2500939.585 E	


MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED	
								GR	CS	FS	SI	CL	LL	PL	PI				
0.8' - ASPHALT (10.0")	1291.1																		
0.7' - GRANULATED SLAG (8.0")	1290.3	1																	
VERY STIFF, BROWN <b>SANDY SILT</b> , LITTLE TO SOME CLAY, SOME FINE GRAVEL, DAMP.  -SANDSTONE FRAGMENTS PRESENT IN SS-2 AND SS-3	1289.6	2	2	3	20	56	SS-1	2.75	24	10	18	26	22	26	16	10	15	A-4a (3)	
		3	6	6	16	39	SS-2	2.50	25	10	21	28	16	21	15	6	11	A-4a (2)	
		4	3	5	11	33	SS-3	3.50	-	-	-	-	-	-	-	-	-	13	A-4a (V)
		5	3	5	14	67	SS-4	3.50	-	-	-	-	-	-	-	-	-	13	A-4a (V)
		6	3	5															
	1283.6	7	5	5															

EOB

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

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	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / S.B.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1120+27.23 / 30.18' RT	EXPLORATION ID <b>B-48-10</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.00	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1291.2 (MSL) EOB: 8.1 ft.	PAGE 1 OF 1
	START: 6/5/18 END: 6/5/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 467433.347 N, 2500904.299 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.5' - ASPHALT (5.5")	1291.2																	
0.9' - CONCRETE (11.0")	1290.7																	
0.8' - GRANULATED SLAG (9.0")	1289.8	1																
	1289.1	2																
FILL: VERY STIFF, BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, MOIST.	1287.6	3	1 2	4	33	SS-1	3.25	11	8	17	34	30	26	15	11	15	A-6a (6)	
HARD, BROWN SANDY SILT, SOME CLAY, LITTLE FINE GRAVEL, DAMP.	1284.6	4	2 8 12	29	61	SS-2	4.5+	12	12	21	31	24	24	16	8	9	A-4a (4)	
	1284.6	6	6 8 8	23	83	SS-3	4.5+	-	-	-	-	-	-	-	-	11	A-4a (V)	
VERY STIFF, BROWN SILT AND CLAY, LITTLE COARSE TO FINE SAND, TRACE FINE GRAVEL, MOIST.	1283.1	7	14 25 16	59	33	SS-4	3.75	-	-	-	-	-	-	-	-	18	A-6a (V)	
	1283.1	8																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1130+17.14 / 23.3' LT	EXPLORATION ID <b>B-48-11</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.20	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1170.1 (MSL) EOB: 7.3 ft.	PAGE 1 OF 1
	START: 6/12/18 END: 6/12/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 466815.852 N, 2501771.951 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.7' - ASPHALT (8.0")	1170.1																	
0.6' - GRANULATED SLAG (7.5")	1169.4																	
POSSIBLE FILL: VERY STIFF, BROWN SANDY SILT, SOME CLAY, SOME FINE GRAVEL, DAMP.	1168.8	1																
	1167.3	2	2	13	44	SS-1	2.25	21	9	21	28	21	24	16	8	15	A-4a (3)	
POSSIBLE FILL: GRAY SANDSTONE FRAGMENTS.	1167.3	3	11	40	56	SS-2	-	-	-	-	-	-	-	-	-	4	A-1-a (V)	
	1165.8	4	12															
VERY STIFF TO HARD, GRAY TO BROWN SANDY SILT, "AND" GRAVEL, LITTLE CLAY, DRY TO DAMP.	1165.8	5	7	16	33	SS-3	4.5+	44	10	9	24	13	27	18	9	7	A-4a (0)	
	1162.8	6	6	5														
	1162.8	7	7	20	33	SS-4	3.25	-	-	-	-	-	-	-	-	13	A-4a (V)	
		7	9	5														

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL


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	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1135+42.91 / 30.15' LT	EXPLORATION ID <b>B-48-12</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.30	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1166.1 (MSL) EOB: 8.0 ft.	PAGE 1 OF 1
	START: 6/11/18 END: 6/11/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 466495.228 N, 2502188.714 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.4' - ASPHALT (5.0")	1166.1																	
0.8' - CONCRETE (10.5")	1165.7																	
0.8' - GRANULATED SLAG (8.5")	1164.9	1																
	1164.1	2																
HARD, BROWN SANDY SILT, SOME CLAY, SOME FINE GRAVEL, DAMP.	1162.6	3	3	4	13	56	SS-1	4.5+	24	8	18	29	21	24	15	9	14	A-4a (3)
VERY DENSE, BROWN GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.	1161.1	4	10	12	73	61	SS-2	-	35	9	31	17	8	NP	NP	NP	13	A-2-4 (0)
	1161.1	5																
SHALE : GRAY, HIGHLY WEATHERED.		6	9	8	21	39	SS-3	-	-	-	-	-	-	-	-	-	6	Rock (V)
		7	4	6	26	33	SS-4	-	-	-	-	-	-	-	-	-	5	Rock (V)
	1158.1	8																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1135+11.16 / 14.04' LT	EXPLORATION ID <b>B-48-13</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.30	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1165.0 (MSL) EOB: 10.0 ft.	PAGE 1 OF 1
	START: 6/12/18 END: 6/12/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 466481.819 N, 2502179.707 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.8' - GRAVEL (9.0")	1165.0																	
0.7' - GRANULATED SLAG (9.0")	1164.2																	
POSSIBLE FILL: STIFF, BROWN SANDY SILT, SOME FINE GRAVEL, LITTLE CLAY, DAMP.	1163.5	1	10			SS-1A	-	-	-	-	-	-	-	-	-	-		
	1162.5	2	4	3	10	67	SS-1B	1.50	20	9	29	25	17	22	14	8	13	A-4a (1)
POSSIBLE FILL: MEDIUM DENSE, BROWNISH GRAY GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST.	1162.5	3	1															
	1161.0	4	4	12	23	33	SS-2	-	45	11	14	21	9	NP	NP	NP	7	A-2-4 (0)
POSSIBLE FILL: GRAY SHALE AND SANDSTONE FRAGMENTS.	1161.0	5	19															
	1159.5	6	14	9	33	44	SS-3	-	-	-	-	-	-	-	-	-	5	A-2-4 (V)
VERY STIFF, GRAY TO BROWN SILT AND CLAY, SOME COARSE TO FINE SAND, LITTLE FINE GRAVEL, DAMP TO MOIST.	1159.5	7	4															
	1155.0	8	7	16	33	67	SS-4	3.50	-	-	-	-	-	-	-	-	9	A-6a (V)
	1155.0	9	2															
	1155.0	10	5	4	13	39	SS-5	3.00	-	-	-	-	-	-	-	-	15	A-6a (V)
		EOB																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1140+68.46 / 23.45' LT	EXPLORATION ID <b>B-48-14</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.40	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1171.9 (MSL) EOB: 7.5 ft.	PAGE 1 OF 1
	START: 6/11/18 END: 6/11/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 466164.127 N, 2502596.891 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.7' - ASPHALT (8.0")	1171.9																	
0.5' - GRANULATED SLAG (6.0")	1171.2																	
STIFF, BROWN <b>SANDY SILT</b> , SOME FINE GRAVEL, LITTLE CLAY, DAMP.	1170.7	1																
		2	1	2	9	39	SS-1	1.75	34	9	17	24	16	23	14	9	8	A-4a (1)
	1168.9	3		4														
MEDIUM DENSE, BROWN AND GRAY <b>GRAVEL WITH SAND AND SILT</b> , TRACE CLAY, MOIST.		4	7	8	26	61	SS-2	-	52	9	14	15	10	23	16	7	7	A-2-4 (0)
	1167.4	5		10														
<b>SANDSTONE</b> : GRAY, HIGHLY WEATHERED.		6	9	10	31	56	SS-3	-	-	-	-	-	-	-	-	-	7	Rock (V)
		7		12														
	1164.4	8	7	7	19	50	SS-4	-	-	-	-	-	-	-	-	-	7	Rock (V)
		7		6														

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL


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	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / S.B.	DRILL RIG: MOBILE B-53 (SN 624400)	STATION / OFFSET: 1146+06.81 / 30.33' RT	<b>EXPLORATION ID</b> <b>B-48-15</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.50	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1179.2 (MSL) EOB: 8.3 ft.	PAGE 1 OF 1
	START: 6/4/18 END: 6/4/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 77.9	COORD: 465788.001 N, 2502986.293 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTH	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.3' - ASPHALT (3.0")	1178.9																	
0.8' - CONCRETE (10.0")	1178.1																	
0.6' - CONSOLIDATED SLAG (7.5")	1177.5																	
MEDIUM DENSE, BROWN <b>GRAVEL WITH SAND AND SILT</b> , LITTLE CLAY, MOIST.	1175.4																	
-SANDSTONE FRAGMENTS PRESENT IN SS-1																		
VERY STIFF, BROWN <b>SANDY SILT</b> , SOME CLAY, SOME FINE GRAVEL, DAMP.																		
	1170.9	EOB																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1146+04.56 / 16.32' LT	<b>EXPLORATION ID</b> <b>B-48-16</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.50	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1179.2 (MSL) EOB: 10.0 ft.	PAGE 1 OF 1
	START: 6/11/18 END: 6/11/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 465826.909 N, 2503027.051 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED	
								GR	CS	FS	SI	CL	LL	PL	PI				
0.8' - GRAVEL (10.0")	1179.2																		
0.5' - GRANULATED SLAG (6.0")	1178.4																		
HARD, BROWN <b>SANDY SILT</b> , SOME TO "AND" FINE GRAVEL, LITTLE CLAY, DAMP.  -SANDSTONE FRAGMENTS PRESENT THROUGHOUT	1177.9	1				SS-1A	-	-	-	-	-	-	-	-	-	-	A-1-a (V)		
		2	4	5	6	16	61	SS-1B	4.5+	33	11	14	27	15	28	19	9	13	A-4a (1)
		3	5	9	5	20	67	SS-2	4.25	38	13	11	26	12	27	18	9	10	A-4a (1)
<b>SHALE</b> : GRAY, HIGHLY WEATHERED.	1175.2	4																	
		5	4	23	9	46	67	SS-3	-	-	-	-	-	-	-	-	-	3	Rock (V)
		6	7	9	8	24	39	SS-4	-	-	-	-	-	-	-	-	-	3	Rock (V)
		7																	
		8																	
		9	6	17	5	31	44	SS-5	-	-	-	-	-	-	-	-	-	4	Rock (V)
	1169.2	10																	
			EOB																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL


	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1151+19.52 / 23.31' LT	EXPLORATION ID <b>B-48-17</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.60	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1185.4 (MSL) EOB: 6.8 ft.	PAGE 1 OF 1
	START: 6/11/18 END: 6/11/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 465512.326 N, 2503421.445 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
1.1' - ASPHALT (13.0")	1185.4																	
0.4' - AGGREGATE BASE (5.0")	1184.3 1183.9	1																
MEDIUM DENSE TO DENSE, BROWN GRAVEL WITH SAND AND SILT, LITTLE CLAY, DAMP TO MOIST.	1179.4	2	16 10 11	30	56	SS-1	-	52	10	9	19	10	28	21	7	8	A-2-4 (0)	
		3	5 10 13	33	72	SS-2	4.50	51	9	8	20	12	30	22	8	10	A-2-4 (0)	
		4	12 32 50/3"	-	53	SS-3	-	-	-	-	-	-	-	-	-	-	6	A-2-4 (V)
SHALE : BROWN, HIGHLY WEATHERED.	1178.6	6	50/3"	-	100	SS-4	-	-	-	-	-	-	-	-	-	6	Rock (V)	

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

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	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1156+43.85 / 29.47' LT	<b>EXPLORATION ID</b> <b>B-48-18</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.70	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1188.2 (MSL) EOB: 5.8 ft.	PAGE 1 OF 1
	START: 6/11/18 END: 6/11/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 465194.383 N, 2503837.677 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
1.1' - ASPHALT (13.5")	1188.2																	
0.3' - AGGREGATE BASE (3.5")	1187.1	1																
0.7' - GRANULATED SLAG (8.25")	1186.8																	
	1186.1	2																
<b>SANDSTONE</b> : DARK BROWN, HIGHLY WEATHERED.			50/5"	-	100	SS-1	-	-	-	-	-	-	-	-	6	Rock (V)		
			4	50/3"	-	100	SS-2	-	-	-	-	-	-	-	4	Rock (V)		
		1182.4	5	50/3"	-	100	SS-3	-	-	-	-	-	-	-	4	Rock (V)		
		EOB																

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1156+46.05 / 12.75' LT	EXPLORATION ID <b>B-48-19</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.70	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1188.0 (MSL) EOB: 5.8 ft.	PAGE 1 OF 1
	START: 6/11/18 END: 6/11/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 465179.269 N, 2503829.661 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.7' - GRAVEL (9.0")	1188.0																	
1.1' - GRANULATED SLAG (13.25")	1187.3																	
VERY DENSE, BROWN GRAVEL AND SAND, LITTLE SILT, TRACE CLAY, MOIST.  -SANDSTONE FRAGMENTS PRESENT THROUGHOUT	1186.2	1	17	53	89	SS-1A	-	-	-	-	-	-	-	-	-	-		
		2	10 27			SS-1B	-	-	-	-	-	-	-	-	8	A-1-b (V)		
-SANDSTONE FRAGMENTS PRESENT THROUGHOUT		3	37 40 37	110	67	SS-2	-	39	7	29	-	25	-	NP	NP	NP	8	A-1-b (V)
		4	50/5"	-	80	SS-3	-	-	-	-	-	-	-	-	-	-	5	Rock (V)
SANDSTONE : BROWNISH GRAY, HIGHLY WEATHERED.	1184.0	5																
	1182.2	EOB	50/3"	-	67	SS-4	-	-	-	-	-	-	-	-	-	-	5	Rock (V)

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NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

	PROJECT: PAV. REP. PROG. - MP 236.5-241.5	DRILLING FIRM / OPERATOR: RII / L.K.	DRILL RIG: CME 55 (SN 386345)	STATION / OFFSET: 1161+56.30 / 57.25' RT	EXPLORATION ID <b>B-48-20</b>
	CLIENT: OTIC	SAMPLING FIRM / LOGGER: RII / J.P.	HAMMER: AUTOMATIC	ALIGNMENT: CL I-76 MP: 238.80	
	OTP NO.: 71-18-04 RII NO.: N-14-020(13)	DRILLING METHOD: 4.5" - CFA	CALIBRATION DATE: 9/22/16	ELEVATION: 1185.4 (MSL) EOB: 7.5 ft.	PAGE 1 OF 1
	START: 6/13/18 END: 6/13/18	SAMPLING METHOD: SPT	ENERGY RATIO (%): 85.9	COORD: 464823.652 N, 2504202.751 E	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
								GR	CS	FS	SI	CL	LL	PL	PI			
0.8' - ASPHALT (10.0")	1185.4																	
0.7' - GRANULATED SLAG (8.0")	1184.6	1																
VERY STIFF TO HARD, BROWN <b>SANDY SILT</b> , SOME CLAY, TRACE FINE GRAVEL, DAMP.  -TRACE ORGANICS PRESENT IN SS-3	1183.9	2	2	13	67	SS-1	2.75	8	9	22	34	27	25	16	9	14	A-4a (5)	
		3	5	26	78	SS-2	4.5+	9	7	22	35	27	26	16	10	12	A-4a (5)	
		4	6	20	100	SS-3	4.5+	-	-	-	-	-	-	-	-	-	12	A-4a (V)
		5	7	27	100	SS-4	4.5+	-	-	-	-	-	-	-	-	-	14	A-4a (V)
		6	7															
	1177.9	7	11	27	100	SS-4	4.5+	-	-	-	-	-	-	-	-	14	A-4a (V)	
		7	8															

NOTES: GROUNDWATER NOT ENCOUNTERED DURING DRILLING  
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: BACKFILLED BY OTIC PERSONNEL

0-2018-ODOT BORING LOG-TURNPIKE - OH DOT GDT - 10/10/18 17:28 - U:\GIS\PROJECTS\2014\N-14-020 (13).GPJ