

MAH-76/80-3.53/0.00

FEDERAL PROJECT NUMBER

RAILROAD INVOLVEMENT

PROJECT DESCRIPTION

FULL DEPTH CONCRETE REPAIRS ON MAH-76 & MAH-80

EARTH DISTURBED AREAS

PROJECT EDA: ESTIMATED CONTRACTOR EDA: NOTICE OF INTENT EDA:

N/A (MAINTENANCE PROJECT) N/A (MAINTENANCE PROJECT) N/A (MAINTENANCE PROJECT)

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Dard + Dar Alar	0 10.0
APPROVED LACE WINCHOOM	is plan
APPROVED Jal Marchound	R

MJA REVIEWER TJP 06-08-21 115092 P.1 41

ESIGN AGENC

ш

SHE

TITLE

APPROVED	_
DATE	

DIRECTOR, DEPARTMENT OF TRANSPORTATION

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, OHIO811. THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEADQUARTERS (MICHELLE CHANEY AT 330-786-2267) AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY) OGPUPS 1-800-925-0988 ODOT 330-786-2267 MICHELLE CHANEY

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

ITEM 258 - RETROFIT DOWEL BAR

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR TRANSVERSE CRACKS WITHOUT ANY SETTLEMENT. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 258 - RETROFIT DOWEL BAR, 1,000 EACH

EXISTING UNDERDRAINS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR ANY EXISTING DAMAGED UNDERDRAINS AND CONFIRM THEY ARE UNOBSTRUCTED

ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, 1.000 FEET ITEM 616, WATER, 20 M GAL

ALL EXISTING UNDERDRAINS THAT WERE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ITEM 255 - FULL DEPTH REMOVAL AND RIGID REPLACEMENT; CLASS QC1 AND CLASS RRCM OR QC3, AS PER PLAN

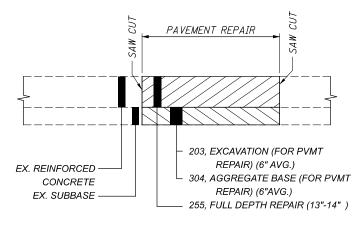
A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 13" - 14" CLASS QC1 CONCRETE OR CLASS RRCM CONCRETE. AS PER PLAN. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE REPAIR LOCATIONS MUST BE DOCUMENTED FOR FUTURE REFERENCE. EXISTING ASPHALT PATCHES SHALL ALSO BE CONSIDERED AREAS THAT NEED REPAIRED. PLAN PAGES 7-41 HAVE SUGGESTED LOCATIONS FOR REPAIRS.

CONCRETE, CLASS RRCM, AS PER PLAN, SHALL BE USED ON MAH-76 AND MAH-80 ON THE MIDDLE LANES, NEAR RAMPS, AT SLM 5.00. AND OTHER AREAS AS DIRECTED BY THE PROJECT ENGINEER OR WHERE RESTRICTED BY THE PERMITTED LANE CLOSURE CHART.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 255 - FULL DEPTH REMOVAL AND RIGID REPLACEMENT, MISC .: CLASS RRCM OR QC3, AS PER PLAN, 4,500 SY ITEM 255 - FULL DEPTH REMOVAL AND RIGID REPLACEMENT, CLASS QC1, 1,500 SY

ITEM 255 - FULL DEPTH PAVEMENT SAWING, 27,000 FT



ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT. LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR), 1,000 CU YD

ITEM 304 - AGGREGATE BASE (FOR PAVEMENT REPAIR)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATEDQUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

304, AGGREGATE BASE (FOR PAVEMENT REPAIR), 1,000 CU YD

CONCRETE, CLASS RRCM OR QC3, AS PER (FOR FULL DEPTH REPAIRS)	PLAN	EX
THE MATERIAL REQUIREMENTS OF CMS 255 AS FOLLOWS:	0.02 MAY BE MODIFIED	PR UN CO
PROVIDE A RRCM MIXTURE MEETING THE R CMS 255.02 OR AN ALTERNATE RRCM MIXTU THE FOLLOWING REQUIREMENTS:		PR DM
PORTLAND CEMENT CONCRETE 499.03, C	LASS QC3, W/MACRO-FIBERS	UN EX AS
PROVIDE A MIXTURE MEETING THE REQUIR IN ITEM 499.	EMENTS OF WELL GRADED	FO FO
AIR CONTENT: 4 TO 8 PERCENT		TH. IN
FLEXURAL STRENGTH: DEVELOP A RRCM C ACHIEVE A FLEXURAL STRENGTH OF 300 PS THAN 4 HOURS AND NOT MORE THAN 6 HOL (150 MM X 150 MM) BEAM SAMPLES CONFOR	SI (2.8 MPA) IN NOT LESS IRS USING 6" X 6"	ITE ITE ITE ITE
PERMEABILITY: 2,000 COULOMBS		ITE
COARSE AGGREGATE (NO. 57 & NO. 8) FINE AGGREGATE (NATURAL SAND) PORTLAND CEMENT, TYPE 1*	703.02 & 703.13 703.02 701.04	ITE PA
FLY ASH OR NATURAL POZZOLAN SLAG CEMENT	701.13 701.11	TH
WATER CHEMICAL ADMIXTURE** AIR-ENTRAINING ADMIXTURE	499.02 705.12 705.10	GE CO IR
MACRO-FIBERS FOR CONCRETE*** LIQUID MEMBRANE-FORMING COMPOUNDS	705.29	ITE
FOR CONCRETE CURING	705.07	
* PROVIDE A MIXTURE WITH A PORTLAND C OR LESS AND A TOTAL CEMENTITIOUS CON		ТН
** MAXIMUM OF 0.5% CALCIUM CHLORIDE E CONTENT OR A LIQUID NON-CHLROIDE ACC MAY BE USED TO GENERATE EARLY STRENG SPECIALTY TYPE 'S' ADMIXTURE ALSO PERM OF MANUFACTURER'S DATA SHEET REQUIR	ELERATING ADMIXTURE GTH DEVELOPMENT. MITTED (SUBMITTAL	INL MA LIN ES TO
*** USE A MINIMUM DOSAGE RATE OF FIBEI CONCRETE. ENSURE THE FINAL PROPOSEL ABLE TO BE PRODUCED SUCH THAT BALLIN THE FIBERS IS NOT A PROBLEM AS DETERM A DEMONSTRATION OF THE MIX PRODUCTIO BE REQUIRED BY THE ENGINEER PRIOR TO MIX ON THE PROJECT.	D MIX IS WORKABLE AND G OR CLUMPING OF IINED BY THE ENGINEER. DN, OR TRIAL MIX, MAY	WA THI AN CO REI DIS (PE MA
		OR

SUBMIT LAB TESTING RESULTS OF THE ALTERNATE RRCM MIXTURE USING THE ACTUAL MATERIALS THAT WILL BE USED ON THE PROJECT. MAKE AT LEAST FIVE BEAM SPECIMENS AND TEST THEM AT 3, 4, 5, 6, & 8 HOURS AGE. ALTERNATELY, THE CONTRACTOR MAY DEVELOP THE MIX'S MATURITY CURVE ACCORDING TO SUPPLEMENT 1098.

DO NOT OPEN THE RIGID REPLACEMENT TO TRAFFIC UNTIL THE RRCM ATTAINS A MODULUS OF RUPTURE OF 300 POUNDS PER SQUARE INCH (2.8 MPA) BASED ON MATURITY TESTING OR BEAM TESTING ON THE PROJECT

THE JMF WILL NOT BE APPROVED FOR USE ON THE ENTIRE PROJECT UNTIL A SUCCESSFUL FIELD PLACEMENT IS PERFORMED ON THE PROJECT WITH THE MIX DESIGN. THIS PLACEMENT MUST DEMONSTRATE THE MIXTURE IS CAPABLE OF MEETING THE PRESCRIBED FLEXURAL STRENGTH AND TIME REQUIREMENTS.

drasi Ā 22 39 ME MAH-76/80-3.53/0.00

XISTING SUBSURFACE DRAINAGE

ROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING NDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING ONSTRUCTION AS DIRECTED BY THE PROJECT ENGINEER.

ROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING M-1 1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE NDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR XISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS S WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED OR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT OR UNCLASSIFIED PIPE UNDERDRAINS.

HE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

EM 601 - TIED CONCRETE BLOCK MAT, TYPE 1, 10 SQ. YD. FEM 605 - AGGREGATE DRAINS 100 ET TEM 611 - 6" CONDUIT, TYPE F. 50 FT. EM 611 - PRECAST REINFORCED CONCRETE OUTLET, 10 EACH EM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS, 100 FT.

EM 257 - DIAMOND GRINDING PORTLAND CEMENT CONCRETE AVEMENT

HE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE ENERAL SUMMARY FOR DIAMOND GRINDING EXISTING MAINLINE ONCRETE PAVEMENT AND NEW FULL DEPTH CONCRETE REPAIRS ON 76 FROM SLM 3.53 TO SLM 8.65 AND IR 80 FROM SLM 0.00 TO SLM 5.02

EM 257 - DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT, 326,800 SY

HE DRINKING WATER SOURCE PROTECTION AREA

ILAND SURFACE WATER CORRIDOR MANAGEMENT ZONE OF THE IAHONING VALLEY SANITARY DISTRICT IS LOCATED WITHIN THE PROJECT IMITS. USE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS STABLISHED FOR THE PROJECT. DO NOT STORE FUELS, OXIC/HAZARDOUS MATERIALS AND CHEMICALS NEAR DRAINAGE VAYS, DITCHES, OR STREAMS. MAINTAIN A SPILL KIT ON-SITE HROUGHOUT CONSTRUCTION ACTIVITIES. IMMEDIATELY MITIGATE NY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT OULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. EPORT ALL SPILLS OR EVENTS TO THE MAHONING VALLEY SANITARY ISTRICT AT (330) 652-3614. IF THE SPILL IS A REPORTABLE AMOUNT PER OHIO EPA RELEASE REPORTING REQUIREMENTS), CONTACT THE AHONING COUNTY EMERGENCY MANAGEMENT AT (330) 726-4155 DR THE OHIO EPA SPILLS HOTLINE AT (800) 282-9378 FOR CLEAN-UP OF THE SPILL.

PRESSURE RELIEF JOINTS

THE CONTRACTOR SHALL REPLACE ALL ASPHALT IN THE EXISTING PRESSURE RELIEF JOINTS AS DIRECTED BY THE PROJECT ENGINEER. THE FOLLOWING QUANTITY HAS BEEN CARRIED OVER TO THE GENERAL SUMMARY

ITEM 451 - SPECIAL - PRESSURE RELIEF JOINT, TYPE C, 1,420 FT

INTERIM COMPLETION DATE

ALL WORK ASSOCIATED WITH ITEM 255 - FULL DEPTH REMOVAL AND RIGID REPLACEMENT: CLASS QC1 AND CLASS RRCM OR QC3. AS PER PLAN SHALL BE COMPLETED BY OCTOBER 31, 2021. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$7,500 FOR EACH CALENDAR DAY BEYOND THIS DATE THIS WORK IS NOT COMPLETED.



DESIGNER							
MJA							
REVI	EWER						
TJP 0	6-08-21						
PROJECT ID							
115	092						
SHEET	TOTAL						
P.2	41						

DESCRI	UNIT	GRAND	ITEM	ITEM	PART.	 I		·		SHEET	,	 	
		TOTAL	EXT		01/IMS/PV	6		4	3		2		
ROAD													
EXCAVATION	CY	1,000	10000	203	1,000						1,000		
550000													
TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	SY	10	21050	601	10				 		10		
WATER	MGAL	20	10000	616	20						20		
6" UNCLASSIFIED PIPE UNDERDRAINS	FT	100	13300	605	100						100		
6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	FT	1,000	13410	605	1,000						1,000		
AGGREGATE DRAINS	FT	100	31100	605	100						100		
6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	FT	150	00510	611	150						150		
6" CONDUIT, TYPE F	FT	50	01500	611	50						50		
PRECAST REINFORCED CONCRETE OUTLET	EACH	10	99710	611	10						10		
	E/torr	10	00110	011	10						10		
PAVEM													
FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLAS	SY	1,500	10010	255	1,500						1,500		
FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, MISC	SY	4,500	10200	255	4,500			l			4,500		
FULL DEPTH PAVEMENT SAWING DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT	FT SY	12,000 326,800	20000 10000	255 257	12,000 326,800						12,000 326,800		
RETROFIT DOWEL BAR	EACH	1,000	10000	258	1,000	 		Į			1,000		
		,									,		
AGGREGATE BASE	CY	1,000	20000	304	1,000						1,000		
PRESSURE RELIEF JOINT, TYPE C	FT	1,420	45132000	SPECIAL	1,420	 			 		1,420		
TRAFFIC C													
RPM	EACH	1,509	00100	621	1,509			 					
RAISED PAVEMENT MARKER REMOVED	EACH	1,207	54000	621	1,207								
EDGE LINE, 6", TYPE 1A	MILE	38.42	00114	642	38.42	38.42							
LANE LINE, 6", TYPE 1A	MILE	28.48	00214	642	28.48	28.48							
CHANNELIZING LINE, 12", TYPE 1A	FT	15,995	00414	642	15,995	15,995							
TRANSVERSE/DIAGONAL LINE, TYPE 1A	FT	1,000	00710	642	1,000	1,000							
DOTTED LINE, 6", TYPE 1A	FT	10,135	01516	642	10,135	10,135							
								└─── ┤					
MAINTENANCE	HOUR	250	11110	614	250				250				
	EACH	30	12460	614	30				30				
	SNMT	8	18601	614	8			8					
		10	44.000	014									
MAINTAINING TRAFFIC CONSTRUCTION LAYOUT STAKES AND SURVEYING		LS LS	11000 10000	614 623	LS LS				 				
MOBILIZATION		LS	10000	624	LS								
								Į					
						 		l	 				
						 	<u> </u>	<u> </u>	 				
						 		Į					
								ļ					
								I					
	1												

		-	
CRIPTION	SEE SHEET NO.		
DADWAY			
DN CONTROL			
AINAGE			
VEMENT CLASS QC1 /ISC.: CLASS RRCM OR QC3, AS PER PLAN	3		
т			
		7 4 4 4	
	4		5
IC CONTROL			L L
			」 り
NCE OF TRAFFIC NCE			
	5		
DENTALS			
		DESIGN AGE	NCY
		$\left(\right)$	
		DESIGNER	
		M. REVII	JA ^{EWER} 6-08-21
		PROJECT ID 115	092
		SHEET P.5	total 41

	LOC	ATION				621	621	621	621	621	-
COUNTY	ROUTE	SECTION (S.L.M.)				RPM (YELLOW/YELLOW)	RPM (WHITE/RED)	RPM (WHITE)	RPM (YELLOW/RED)	RAISED PAVEMENT MARKER REMOVED	
		FROM	то			EACH	EACH	EACH	EACH	EACH	_
МАН	76	3.53	8.65				41	225		213	EASTBOUND
MAH	76	3.53	8.65				44	225		215	WESTBOUND
MAH	80	0.00	3.92				95	261		285	EASTBOUND
MAH	80	0.00	5.02				198	418		493	WESTBOUND

	-	
REMARKS		
	DESIGN AGE	ENCY
	C	
	DESIGNER	JA
	REVII XXX MI	^{ewer} M-DD-YY
	PROJECT ID	D
	SHEET P.6A	TOTAL 41