

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

BUT - 27 - 1.85

**BUTLER COUNTY
ROSS TOWNSHIP**

PROJECT DESCRIPTION

CONSTRUCTION OF LEFT TURN LANES ON US 27 AT HERMAN ROAD, ROSS MILLVILLE ROAD, AND HAMILTON NEW LONDON ROAD. CONSTRUCTION OF A TWO WAY LEFT TURN LANE ON US 27 BETWEEN ROSS MILLVILLE ROAD AND HAMILTON NEW LONDON ROAD.

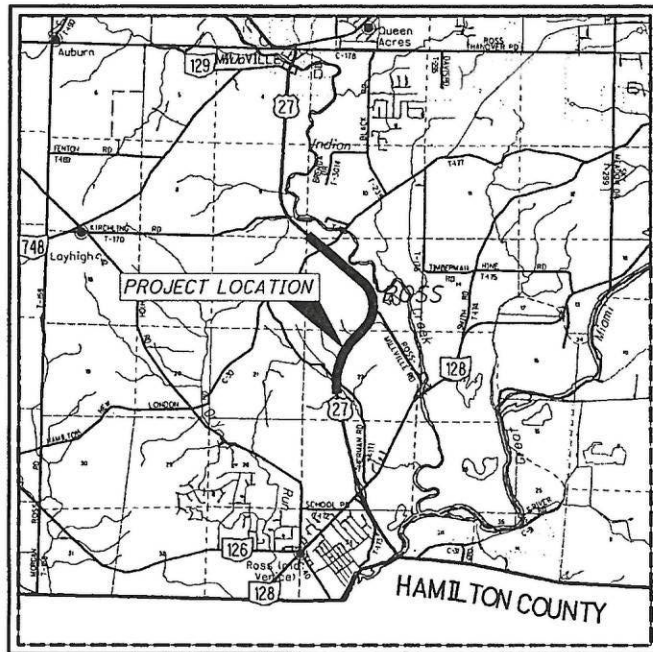
EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 10.42 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.50 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 10.92 ACRES

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 EXCEPT AS NOTED ON SHEET 18 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.



LOCATION MAP

LATITUDE: 39°21'02" LONGITUDE: -84°38'14"



PORTION TO BE IMPROVED	=====
INTERSTATE HIGHWAY	=====
FEDERAL ROUTES	=====
STATE ROUTES	=====
COUNTY & TOWNSHIP ROADS	=====
OTHER ROADS	=====

DESIGN DESIGNATION

CURRENT ADT (2022)	16,000
DESIGN YEAR ADT (2042)	21,000
DESIGN HOURLY VOLUME (2042)	2,100
DIRECTIONAL DISTRIBUTION	70%
TRUCKS (24 HOUR B&C)	14%
DESIGN SPEED	50/55
LEGAL SPEED	50/55
DESIGN FUNCTIONAL CLASSIFICATION:	
03 PRINCIPAL ARTERIAL (RURAL)	
NHS PROJECT	YES

ADA DESIGN WAIVER

NONE REQUIRED

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764 (Non-members must be called directly)

PLAN PREPARED BY:
THE OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 8 ENGINEERING
505 S. SR 741
LEBANON, OHIO 45036

ENGINEERS SEAL:

SIGNED: *Lucas W. Braun*
DATE: 11/9/21

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2-6
TYPICAL SECTIONS	7-12
GENERAL NOTES	13-14
MAINTENANCE OF TRAFFIC	15-45
GENERAL SUMMARY	46-48
PAVEMENT QUANTITIES	49-50
ROADWAY SUBSUMMARIES	51-53
PROJECT SITE PLAN	54-58
PLAN AND PROFILE - US 27	59-82
CROSS SECTIONS - US 27	83-131
CROSS SECTIONS - HAMILTON NEW LONDON	132-133
CROSS SECTIONS - BOHNE DRIVE	134
EARTHWORK AND SEEDING SUBSUMMARY	135
INTERSECTION DETAILS	136-139
DRIVE PROFILES	140-141
DRAINAGE SUBSUMMARY	142-143
CULVERT PLAN AND PROFILE	144-145
STORM PROFILES	146-147
WATERLINE PLANS - SWRWD	148-155
TRAFFIC CONTROL	156-172
TRAFFIC SIGNAL	173-181
ARCHIVE SOIL BORINGS	182-203

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/17/20	RM-1.1	1/15/21	TC-41.30	10/18/13	800-2019 10/15/21	WATERWAY
BP-8.2	1/18/19	RM-4.2	4/17/20	TC-41.40	10/18/13	809 1/15/21	PERMIT
				TC-41.41	7/19/19	813 10/19/18	(3/4/22)
CB-2-2A, 2B, 2C, 7/16/21	MT-95.60	4/19/19	TC-42.20	10/18/13	832 10/19/18		
CB-2-5 2-6, 7/16/21	MT-95.61	4/19/19	TC-52.10	10/18/13	874 4/17/20		
	MT-97.10	4/19/19	TC-52.20	1/15/21	878 1/17/20		
DM-1.1 7/17/20	MT-97.12	1/20/17	TC-61.30	7/19/19	909 1/15/21		
DM-1.2 1/18/13	MT-99.20	4/19/19	TC-65.10	1/17/14	913 4/21/17		
DM-4.3 1/15/16	MT-101.60	1/17/20	TC-65.11	7/21/17			
DM-4.4 1/15/16	MT-101.90	7/17/20	TC-71.10	7/16/21			
	MT-105.10	1/17/20	TC-81.22	7/16/21			
MGS-1.1 1/19/18			TC-83.10	1/17/20			
MGS-2.1 1/19/18	TC-12.31	1/21/22	TC-83.20	7/21/17			
MGS-4.2 7/19/13	TC-21.21	7/16/21	TC-85.20	7/20/18			
MGS-5.3 7/15/16	TC-22.10	4/17/20					
	TC-41.20	10/18/13					

APPROVED *Tammy K Campbell*
DATE 11-15-2021 DISTRICT DEPUTY DIRECTOR

APPROVED *Sack Markhoarles*
DATE 1-3-2022 DIRECTOR, DEPARTMENT OF TRANSPORTATION

BUT - US 27-01.85
220082 PID - 109351
Dist 8 2/17/2022

Contract Proposal available @
www.contracts.dot.state.oh.us

FEDERAL PROJECT NO.
E190 (558)

PID NO.
109351

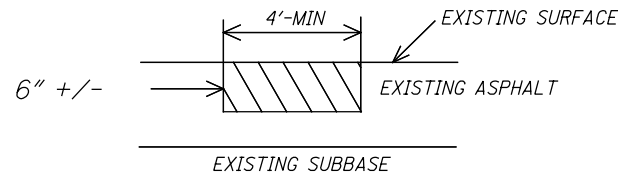
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

BUT - 27 - 1.85

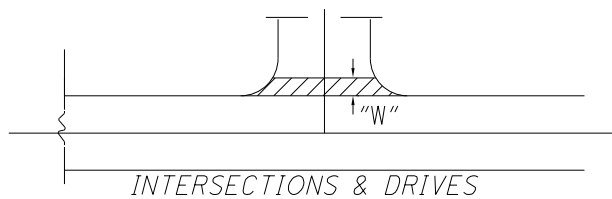
ITEM 253- PAVEMENT REPAIR

AN ESTIMATED QUANTITY OF 83 CU YDS OF ITEM 253- PAVEMENT REPAIR HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. THIS OPERATION SHALL BE PERFORMED BEFORE PAVEMENT PLANING OF ROADWAY.



EXISTING DETERIORATED ASPHALT SHALL BE REMOVED TO A MAXIMUM DEPTH OF 6" INCHES OR AS DIRECTED BY THE ENGINEER AND REPLACED WITH ITEM 301, ASPHALT CONCRETE BASE. THE 301 SHALL BE COMPACTED AS PER 401.15 AND IN APPROXIMATELY EQUAL LAYERS. THE LOCATIONS AND SIZE OF THE REPAIRS SHALL BE DETERMINED BY THE ENGINEER.

INTERSECTIONS AND DRIVES



INTERSECTION AND DRIVES QUANTITIES ARE INCLUDED IN THE ASPHALT CONCRETE QUANTITIES. INTERSECTION QUANTITIES HAVE BEEN ESTIMATED BASED ON LIMITS SHOWN ON PLAN SHEETS. DRIVE QUANTITIES HAVE BEEN ESTIMATED AT W=3' MEASURED FROM EDGE OF PAVED SHOULDER.

PERFORM WORK PER SPECIFIED OFFSET LIMITS UNLESS THERE IS A JOINT PRESENT CLOSER TO THE EDGE OF PAVED SHOULDER, IN WHICH CASE END WORK AT SAID JOINT.

ITEM 254 - PAVEMENT PLANING

THE PAVEMENT PLANING SHALL BE SCHEDULED SO AS TO BE COVERED BY THE SURFACE COURSE PRIOR TO REOPENING THE LANE TO TRAFFIC. THE COST OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE RESPECTIVE ITEM. A DISINCENTIVE IN THE AMOUNT OF \$9,600 SHALL BE ASSESS FOR EACH DAY, OR PORTION THEREOF, A PLANED SURFACE IS OPEN TO TRAFFIC.

SOLE SOURCE AQUIFER

THIS PROJECT IS LOCATED OVER A PORTION OF THE GREATER MIAMI SOLE SOURCE AQUIFER. IN ORDER TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL NOT BE PERFORMED FROM STA 215+38 TO STA 157+00 SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS WHICH COULD POSE A THREAT TO THE GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT (EVERGREEN AES 513-829-0809) FOR CLEAN UP OF THE SPILL.

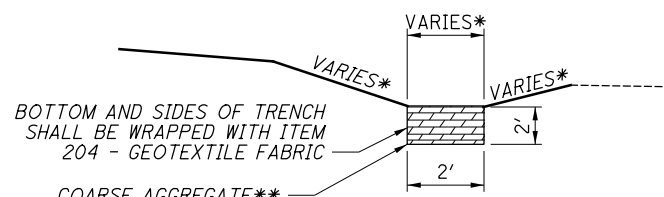
TREE CUTTING RESTRICTIONS

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. THE CONTRACTOR SHALL NOT REMOVE TREES UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THE CONTRACTOR SHALL DEMARCAT CLEARING LIMITS IN THE FIELD TO AVOID ANY UNAUTHORIZED TREE CLEARING. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ITEM 206 - CEMENT STABILIZED SUBGRADE

THE CULVERT STATION 202+18.50 WILL CONFLICT WITH THE STABILIZED SUBGRADE DUE TO THE SHALLOW DEPTH OF COVER. PRIOR TO PERFORMING WORK IN THIS AREA, ACCURATELY IDENTIFY THE CONFLICTING AREA AND NON-PERFORM THE ITEM 206 WORK.

ITEM 601 - INFILTRATION TRENCH FILTER, 2' THICKNESS



*SEE CROSS SECTIONS AND PLAN SHEETS FOR WIDTH, SLOPES, AND LOCATIONS

**COARSE AGGREGATE MATERIAL SHALL CONFORM TO TABLE 703.01 STANDARD SIZES OF PROCESSED AGGREGATE, SIZE NO. 57

ITEM 601 - INFILTRATION TRENCH FILTER, 2' THICKNESS 72 CY

ITEM 203 - EXCAVATION, AS PER PLAN

REMOVE EMBANKMENT TO THE LIMITS ILLUSTRATED IN THE CROSS-SECTIONS. THE ESTIMATED DEPTH OF REMOVAL IS 2 FT. BELOW THE EXISTING GROUND SURFACE. REMOVE THE EXISTING SOIL PER ITEM 203 - EXCAVATION. PAYMENT FOR THESE ITEMS INCLUDE ALL MATERIALS AND EQUIPMENT NECESSARY TO PERFORM THE WORK. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED OVER TO THE GENERAL SUMMARY:

ITEM 203 - EXCAVATION, AS PER PLAN 72 CY

INTERIM COMPLETION REQUIREMENTS

THE PROJECT HAS AN INTERIM COMPLETION DATE OF 11/1/2022. ON OR BEFORE THE INTERIM COMPLETION DATE, THE ROADWAY SHALL BE COMPLETED UP TO THE INTERMEDIATE COURSE AND TRAFFIC PLACED IN THE FINAL CONFIGURATION WITH WORK ZONE PAVEMENT MARKINGS IN PLACE AND OPEN TO TRAFFIC.

THE PROJECT HAS AN INTERIM COMPLETION DATE OF 12/1/2022. ON OR BEFORE THE INTERIM COMPLETION DATE, ALL TRAFFIC SIGNAL WORK AT HAMILTON NEW LONDON ROAD SHALL BE COMPLETED AND OPERATIONAL.

THE PROJECT HAS AN INTERIM COMPLETION DATE OF 09/30/2022. ON OR BEFORE THE INTERIM COMPLETION DATE, THE FIELD DRIVE ON US-27 STA. 209+50 SHALL BE COMPLETED AND OPERATIONAL.

THE CONTRACTOR SHALL BE ASSESSED A DAILY DISINCENTIVE IN THE AMOUNT OF \$2,500 PER DAY FOR FAILURE TO COMPLETE ALL THE REQUIRED WORK AND ASSOCIATED INCIDENTALS RELATED TO THE WORK. DAILY DISINCENTIVES ARE APPLICABLE TO THE WORK REQUIRED TO THE INTERIM COMPLETION DATE ONLY. THE CONTRACTOR IS STILL SUBJECT TO LIQUIDATED DAMAGES AS OUTLINED IN CMS 108.07 FOR THE REMAINDER OF THE CONTRACT.

DESCRIPTION OR LOCATION OF CRITICAL WORK	COMPLETION DATE	TIME PERIOD	DISINCENTIVE \$ PER TIME PERIOD
ALL TRAFFIC SIGNAL WORK AT HAMILTON NEW LONDON ROAD	1/15/2023	DAY	\$2,500
FIELD DRIVE ON US-27 STA. 209+50	9/30/2022	DAY	\$2,500

FARM DRAINS

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE (RIGHT OF WAY) CONSTRUCTION LIMITS WITH ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY.

DITCH USING ITEM 611, TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS IS DETERMINED BY THE ENGINEER AND PAYMENT MADE ON FINAL MEASUREMENTS.

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

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

611 4" CONDUIT, TYPE E 100 FT.

WATER WORKS ITEMS

ALL WATER WORK ITEMS SHOWN ON THE GENERAL SUMMARY SHALL FOLLOW THE SOUTHWEST REGIONAL WATER DISTRICT SPECIFICATIONS, RESPECTIVELY ON SHEET 150.

- ITEM SPECIAL - 6" WATER MAIN DIP & FITTINGS: 2.03
- ITEM SPECIAL - 8" WATER MAIN DIP & FITTINGS: 2.03
- ITEM SPECIAL - RETAP, RECONNECT & EXTEND 1" COPPER WATER SERVICE CONNECTION: 3.06
- ITEM - 6" FIRE HYDRANT, AS PER PLAN
- ITEM - FIRE HYDRANT & GATE VALVE REMOVED & RESET, AS PER PLAN
- ITEM - WATER WORK, MISC: CONNECT TO EX. WATER MAIN
- ITEM - 16" STEEL PIPE ENCASMENT, BORED OR JACKED, AS PER PLAN
- ITEM - SERVICE BOX ADJUSTED TO GRADE

THIS WORK CONSISTS OF ALL THE ITEMS PER CMS 638.01 AND SHALL FOLLOW SOUTHWEST REGIONAL WATER DISTRICT SPECIFICATIONS.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

TC-12.31 BASE PLATE CONNECTION:

ALL REFERENCE ITEMS THAT REFER TO THE TC-12.31 STANDARD DRAWING SHALL HAVE BASE CONNECTION FABRICATED AS PER THE "STANDARD BASE DESIGN" WHICH UTILIZES COMPLETE JOINT PENETRATION (CJP) WELDS.

I:\Project+Data\BUT-109351\BUT-US27-2.92_3.83\Design\Roadway\Sheets\109351_GN002.dgn Sheet 3/4/2022 2:51:36 PM so11en

CALCULATED
LWB
CHECKED
JDO

GENERAL NOTES

BUT -27 -1.85

SEQUENCE OF CONSTRUCTION

PHASE 1

- 1. INSTALL DETOUR FOR NORTH LEG ON US 27 AT INTERSECTION WITH HAMILTON NEW LONDON ROAD.
- 2. CONSTRUCT CULVERT BUT-27-3.83. INSTALL AS MUCH OF PROPOSED CULVERT AS POSSIBLE BEFORE REMOVING EXISTING CULVERT TO MINIMIZE TIME FOR DROP OFF ALONG HAMILTON NEW LONDON ROAD.
- 3. REMOVE EXISTING DETOUR.
- 4. CONSTRUCT PAVEMENT FOR MAINTAINING TRAFFIC ALONG EAST AND WEST SIDE OF US 27 BY MAINTAINING ONE LANE OF TWO-WAY TRAFFIC VIA FLAGGING OPERATIONS PER MT-97.10.

PHASE 2

- 1. MAINTAIN TRAFFIC FOR THE NORTH-SOUTH MOVEMENT ON US 27 USING TWO-WAY TRAFFIC ON THE EXISTING AND TEMPORARY PAVEMENT. PLACE TEMPORARY CONCRETE BARRIER TO SEPARATE THE CONSTRUCTION ZONE FROM THE TRAFFIC BEING MAINTAINED. CONTRACTOR SHALL MAINTAIN ALL DRIVEWAY ACCESS TO ALL PROPERTIES AT ALL TIMES.
- 2. CONTRACTOR CAN INCLUDE WIDENING ON EAST SIDE FROM STA. 97+80 TO STA. 182+65 AND WEST SIDE OF US 27 FROM STA. 188+81 TO STA. 215+38 IN PHASE 2 OR CONSTRUCT AS PART OF SEPARATE PHASES. CONSTRUCT TEMPORARY SIGNAL AS PART OF WORK WITH WIDENING OF WEST SIDE OF US 27.

PHASE 3

- 1. CONSTRUCT ALL WORK ON WEST SIDE OF US 27 FROM STA. 171+00 TO STA. 173+50 FOR RELOCATION OF BOHNE DRIVE. MAINTAIN TRAFFIC FOR THE NORTH-SOUTH MOVEMENT ON US 27 USING TWO-WAY TRAFFIC ON THE EXISTING, PROPOSED AND TEMPORARY PAVEMENT. PLACE TEMPORARY CONCRETE BARRIER TO SEPARATE THE CONSTRUCTION ZONE FROM THE TRAFFIC BEING MAINTAINED.
- 2. CONTRACTOR SHALL MAINTAIN ALL DRIVEWAY ACCESS TO ALL PROPERTIES AT ALL TIMES.

PHASE 4

- 1. COMPLETE ALL REMAINING PERMANENT SIGNAL WORK AT THE INTERSECTION OF US 27 AND HAMILTON NEW LONDON ROAD BY MAINTAINING ONE LANE OF TWO-WAY TRAFFIC VIA FLAGGING OPERATIONS PER MT-97.10 PER THE UNAUTHORIZED LANE USE TABLE.

PHASE 5

- 1. COMPLETE MILL AND FILL OPERATION FOR THE LENGTH OF THE PROJECT. COMPLETE ALL SIGNAGE AND PLACEMENT OF FINAL PAVEMENT MARKINGS.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

TEMPORARY TRAFFIC SIGNAL

CONTRACTOR SHALL INSTALL A TEMPORARY 32' WOOD POLE, CLASS 3 AT STA. 201+80, 56' LT TO MAINTAIN THE EXISTING TRAFFIC SIGNAL AT US 27 AND HAMILTON NEW LONDON ROAD DURING WIDENING WORK. THE EXISTING UTILITY POLE AT STA. 202+33, 21' RT WITH THE EXISTING SPAN WIRE ATTACHMENT WILL REMAIN FOR TEMPORARY SIGNAL.

CONTRACTOR SHALL RELOCATE ALL SIGNAL HEADS, MESSENGER WIRE, WIRING, ETC. TO NEW POLE TO MAKE SIGNAL FULLY OPERATIONAL AND PROVIDE POWER IN ACCORDANCE WITH C&MS 614.10. ALL TRAFFIC SIGNAL EQUIPMENT SHALL BE IN ACCORDANCE WITH SPECIFICATIONS IN C&MS 632, 633, 732, AND 733. WOOD POLE SHALL BE REMOVED AT COMPLETION OF FINAL TRAFFIC SIGNAL.

ALL WORK SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11.

PHASE 1:

ITEM 614, WORK ZONE EDGE LINE, CLASS I, 6" 0.63 MI

PHASE 5 (PROPOSED CONFIGURATION):

- ITEM 614, WORK ZONE CENTER LINE, CLASS I, 648 4.0 MI
- ITEM 614, WORK ZONE EDGE LINE, CLASS I, 6", 648 5.0 MI
- ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS I, 8", 648 2439 FT
- ITEM 614, WORK ZONE STOP LINE, CLASS I 92 FT
- ITEM 614, WORK ZONE ISLAND MARKING, CLASS I... 114 SQ FT
- ITEM 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT 4.0 MI
- ITEM 614, WORK ZONE EDGE LINE, CLASS III, 642 PAINT 5.0 MI
- ITEM 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 92 FT
- ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT 2439 FT
- ITEM 614, WORK ZONE ISLAND MARKING, CLASS III, 642 PAINT 114 SQ FT
- ITEM 614, WORK ZONE ARROW, CLASS III, 642 PAINT 40 EA
- ITEM 614, WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT 1319 FT
- ITEM 614, WORK ZONE RAISED PAVEMENT MARKING, 2-WAY, YELLOW/YELLOW 212 EACH
- ITEM 614, WORK ZONE RAISED PAVEMENT MARKING, 2-WAY, WHITE/RED 64 EACH
- ITEM 614, WORK ZONE RAISED PAVEMENT MARKING, 1-WAY, WHITE 32 EACH

I:\Project+Data\BUT\109351\BUT-US27-2.92_3.83\Design\M01\Sheets\109351\MN003.dgn Sheet 3/3/2022 9:11:20 AM sotten

CALCULATED
LWB
CHECKED
SK

MAINTENANCE OF TRAFFIC GENERAL NOTES

BUT -27 -1.85

I:\ProjectData\BUT-109351\BUT-US27-2.92-3.83\Design\Roadway\Sheets\109351_GG003.dgn Sheet 3/3/2022 9:03:28 AM sotten

SHEET NUM.								PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
15	16	17	19	20	178			01/SAF/OT	02/NHS/PV						
					1,180			1,180		632	40700	1,180	FT	TRAFFIC SIGNALS CONTINUED	
					3			3		632	64010	3	EACH	SIGNAL SUPPORT FOUNDATION	
					66			66		632	68300	66	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
					35			35		632	69800	35	FT	SERVICE CABLE, 3 CONDUCTOR, NO. 6 AWG	
					1			1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	175
					1			1		632	72100	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 2	
					1			1		632	72140	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13	
					1			1		632	78348	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-12.31 DESIGN 10 POLE, WITH MAST ARMS TC-81.22 DESIGN 12 AND DESIGN 12	
					1			1		632	90100	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION	
					1			1		633	65521	1	EACH	CABINET, TYPE 332, AS PER PLAN	173
					1			1		633	67100	1	EACH	CABINET FOUNDATION	
					1			1		633	67200	1	EACH	CONTROLLER WORK PAD	
					1			1		633	68511	1	EACH	COMMUNICATIONS, AS PER PLAN	176
					1			1		633	75001	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	173
					1			1		809	60000	1	EACH	CCTV IP-CAMERA SYSTEM, DOME-TYPE	
					2			2		809	69001	2	EACH	ADVANCE RADAR DETECTION, AS PER PLAN	174
					2			2		809	69101	2	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	174
					1			1		809	69123	1	EACH	ATC CONTROLLER, AS PER PLAN	173
														MAINTENANCE OF TRAFFIC	
	100							100		614	1110	100	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
					6,782	1,356		8,138		614	11630	8,138	FT	INCREASED BARRIER DELINEATION	
					17	1		18		614	12384	18	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
					LS			LS		614	12420	LS		DETOUR SIGNING	
		308						264	44	614	12800	308	EACH	WORK ZONE RAISED PAVEMENT MARKER	
					392	28		420		614	13310	420	EACH	BARRIER REFLECTOR, TYPE 1, BIDIRECTIONAL	
					144	28		172		614	13360	172	EACH	OBJECT MARKER, TWO WAY	
					2.08	0.48		2.56		614	21000	2.56	MILE	WORK ZONE CENTER LINE, CLASS I	
		4						4		614	21360	4	MILE	WORK ZONE CENTER LINE, CLASS I, 648	
		0.63	3.34	0.89				4.86		614	22010	4.86	MILE	WORK ZONE EDGE LINE, CLASS I, 6"	
		5						5		614	22336	5	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 648	
		2,439	291					2,730		614	23000	2,730	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8"	
		92	15					107		614	26000	107	FT	WORK ZONE STOP LINE, CLASS I	
		4						3.47	0.53	614	21550	4	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
		5						3.94	1.06	614	22360	5	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT	
		2,439						2,439		614	23680	2,439	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
		92						92		614	26610	92	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
		1,319						1,319		614	25620	1,319	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT	
		40						40		614	30650	40	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT	
		114						114		614	32700	114	SF	WORK ZONE ISLAND MARKING, CLASS I	
		114						114		614	32800	114	SF	WORK ZONE ISLAND MARKING, CLASS III, 642 PAINT	
		LS						LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
47					1,430			1,430		615	25000	1,430	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
								47		616	10000	47	MGAL	WATER	
					4,790			4,790		622	41100	4,790	FT	PORTABLE BARRIER, UNANCHORED	
					1,992	1,357		3,349		622	41100	3,349	FT	PORTABLE BARRIER, ANCHORED	
														INCIDENTALS	
					LS	LS		614		614	11000	LS		MAINTAINING TRAFFIC	
					14			619		619	16010	14	MNTH	FIELD OFFICE, TYPE B	
					LS	LS		623		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
					LS	LS		624		624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

BUT -27 -1.85