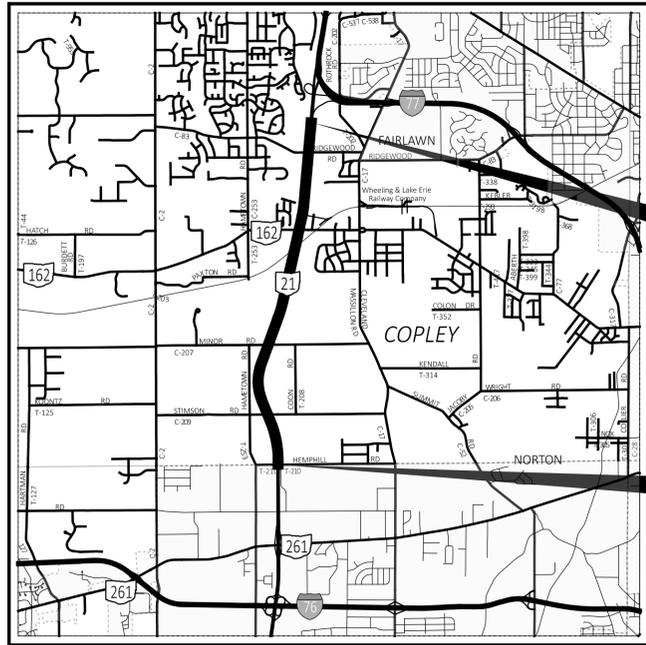


STATE OF OHIO DEPARTMENT OF TRANSPORTATION

SUM-77/21-22.25/VAR

COPLEY TOWNSHIP
SUMMIT COUNTY



LOCATION MAP

LATITUDE: 41°5'18.70" LONGITUDE: 81°39'36.71"



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

DESIGN DESIGNATION

DESIGN FUNCTIONAL CLASSIFICATION:
 PRINCIPAL ARTERIAL FREEWAY (SR 21 SLM 5.14 TO SLM 8.85)

NHS PROJECT	NO
CURRENT ADT (2021)	36,679
DESIGN HOURLY VOLUME (20)	4,4041
DIRECTIONAL DISTRIBUTION	74%
TRUCKS (24 HOUR B&C)	3,157 (9%)
DESIGN SPEED	60 MPH
LEGAL SPEED	60 MPH

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

UNDERGROUND UTILITIES
 Contact Two Working Days
 Before You Dig

OHIO811.org
 Before You Dig

OHIO 811, 8-1-1, or 1-800-362-2764
 (Non members must be called directly)

PLAN PREPARED BY:
 ODOT DISTRICT 4, PLANNING AND ENGINEERING
 2088 S. ARLINGTON ROAD
 AKRON, OH 44306

INDEX OF SHEETS:

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SIGN SUBSUMMARY	P.14
STRUCTURES	P.15 - P.19

FEDERAL PROJECT NUMBER

E200 (831)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RESURFACING OF SR 21 IN SUMMIT COUNTY.
 PROJECT INCLUDES MINOR BRIDGE REHABILITATION
 ON SEVEN STRUCTURES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	2.25 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED) 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 EXCEPT AS NOTED ON SHEET P.8, AND THAT PROVISIONS FOR THE
 MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE
 PLANS AND ESTIMATES.

DISTRICT DEPUTY DIRECTOR

DIRECTOR, DEPARTMENT OF TRANSPORTATION

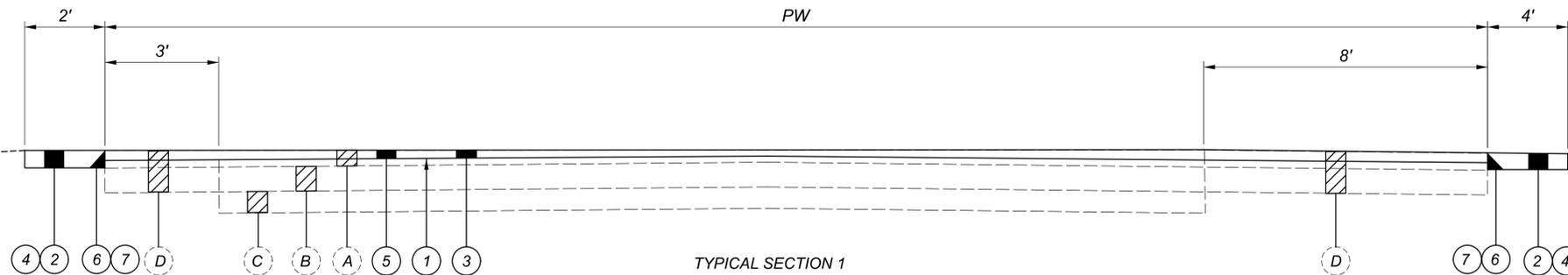
STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/21/22	MT-98.22	1/17/20	TC-73.20	1/17/20	800-2019 SEE PROPOSAL	WATERWAY PERMIT 2/6/23
BP-3.2	1/18/19	MT-98.29	1/17/20			807 1/21/22	
		MT-98.30	7/16/21			808 1/18/19	
		MT-99.20	4/19/19			821 4/20/12	
BP-9.1	1/18/19	MT-101.60	1/17/20			832 7/15/22	
		MT-101.90	7/17/20			844 4/20/18	
DM-1.1	7/17/20	MT-104.10	10/16/15			850 4/15/22	
DM-4.3	1/15/16	MT-105.10	1/17/20			897 1/16/15	
DM-4.4	1/15/16					905 4/17/20	
		TC-41.20	10/18/13			921 4/20/12	
MT-95.30	7/19/19	TC-52.10	10/18/13				
MT-97.10	4/19/19	TC-52.20	1/15/21				
MT-97.12	1/20/17	TC-65.10	1/17/14				
MT-98.10	1/17/20	TC-65.11	7/15/22				
MT-98.11	1/17/20	TC-71.10	7/15/22				
MT-98.20	4/19/19	TC-72.20	7/20/18				

ENGINEER'S SEAL
 ROADWAY

TITLE SHEET

DESIGN AGENCY	
DESIGNER	KMB
REVIEWER	CLG
PROJECT ID	05-03-22
SHEET	112793
TOTAL	19

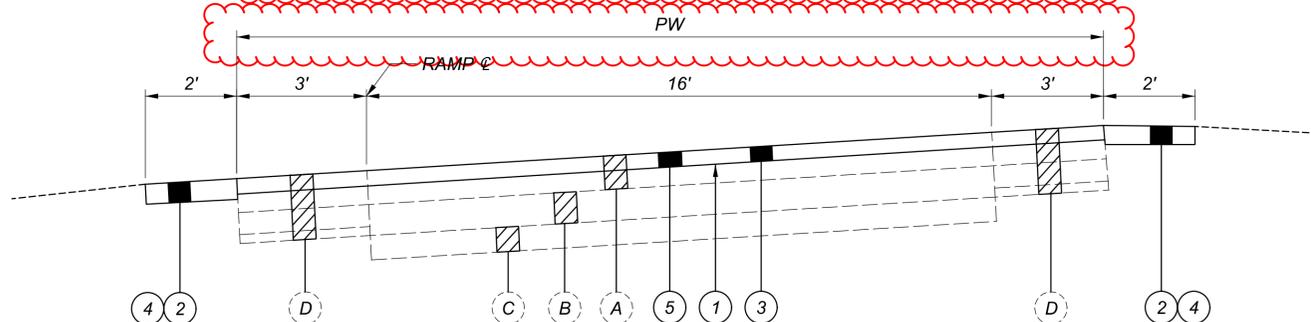
SR 21, NB LANES
 (SB LANES ARE MIRROR IMAGE)



TYPICAL SECTION 1
 (SR 21)

TYPICAL SECTION 1			
SR 21 NB PAVEMENT WIDTHS			
SLM		PW (FEET)	LENGTH (MILES)
FROM	TO		
5.14	6.50	35	1.36
6.50	6.59	50	0.09
6.59	6.84	41	0.25
6.84	7.15	38	0.31
7.15	7.22	40	0.07
7.22	7.65	48	0.43
7.65	7.98	38	0.33
7.98	8.08	42	0.10
8.08	8.30	35	0.22
8.30	8.85	38	0.55

TYPICAL SECTION 1			
SR 21 SB PAVEMENT WIDTHS			
SLM		PW (FEET)	LENGTH (MILES)
FROM	TO		
5.14	6.13	35	0.99
6.13	6.59	42	0.46
6.59	6.69	50	0.10
6.69	7.45	35	0.76
7.45	7.62	42	0.17
7.62	7.95	38	0.33
7.95	8.02	48	0.07
8.02	8.30	35	0.28
8.30	8.85	38	0.55



TYPICAL SECTION 2
 (SR 162 NE, SE, SW, NW RAMPS)

TYPICAL SECTION 2				
SR 21 @ SR 162 Ramps				
Ramp	SLM		PW (FEET)	LENGTH (FEET)
	FROM	TO		
RAMP A	SR 21 N TO SR 162		25	1300
RAMP B	SR 21 N FROM SR 162		25	1300
RAMP C	SR 21 S TO SR 162		25	1200
RAMP D	SR 21 S FROM SR 162		25	1200

LEGEND

- 1 ITEM 407, NON-TRACKING TACK COAT @ 0.09 GAL/SY
 - 2 ITEM 408, PRIME COAT, AS PER PLAN @ 0.40 GAL/SY
 - 3 ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN (PG70-22M) (T= 1 1/2")
 - 4 ITEM 617, COMPACTED AGGREGATE, AS PER PLAN (T = 2")
 - 5 ITEM 897, PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T= 1 1/2")
 - 6 ITEM 209, PREPARING SUBGRADE FOR SHOULDER PAVING
 - 7 SAFETY EDGE, AS PER SCD BP-3.2
- A EXISTING ASPHALT
 - B EXISTING CONCRETE BASE
 - C EXISTING SUBBASE
 - D EXISTING ASPHALT SHOULDER

DESIGN AGENCY



DESIGNER

KMB

REVIEWER

CLG 05-03-22

PROJECT ID

112793

SHEET

P.2

TOTAL

19

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.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THE PLANS, BUT CAN BE OBTAINED FROM THE OWNERS OF THE UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES.

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.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND THE PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

BARRIER REFLECTORS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS DIRECTED BY THE ENGINEER FOR INSTALLING/REPLACING BARRIER REFLECTORS ON ALL EXISTING BARRIER RUNS WITHIN THE PROJECT LIMITS.

- 202, REMOVAL MISC.: BARRIER REFLECTOR, 407 EACH
- 626, BARRIER REFLECTOR, TYPE 1 (ONE-WAY), 32 EACH
- 626, BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL), 359 EACH
- 626, BARRIER REFLECTOR, TYPE 2 (ONE-WAY), 16 EACH

PAVEMENT MARKING LANE WIDTHS

THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS:

ROUTE	S.L.M. TO S.L.M.	LANE WIDTH
SR 21	5.14 TO 8.85	12'

PAVEMENT MARKING DETAILS

THE PAVEMENT MARKING DETAIL SHEETS HAVE BEEN SUPPLIED AS REFERENCE DOCUMENTS FOR THIS PROJECT AND ARE AVAILABLE ON THE ODOT FTP SITE AT

<https://ftp.dot.state.oh.us/pub/contracts/Attach/> FOR

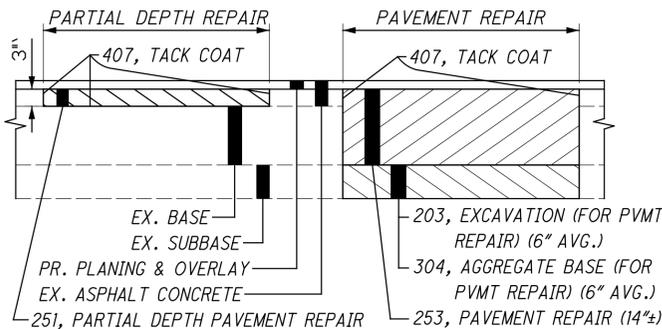
THIS PROJECT. FOR ANY LOCATIONS THAT PAVEMENT MARKING DETAILS HAVE NOT BEEN MADE AVAILABLE TO THE CONTRACTOR, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO PUT BACK NEW PAVEMENT MARKINGS IN THE ORIGINAL LOCATIONS.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441)

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 441 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. PAVEMENT REPAIRS WILL BE MARKED IN THE FIELD BY THE PROJECT ENGINEER ACCORDING TO CMS 251.02. MINIMUM WIDTH IS 2'. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING AND PRIOR TO THE PLACEMENT OF ASPHALT ON THE MILLED SURFACE. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 251, PARTIAL DEPTH PAVEMENT REPAIR (441), 3000 SQ. YD. (SUM 21, SLM 5.14 TO SLM 8.85)



ITEM 253 - PAVEMENT REPAIR

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 14"± 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING AND PRIOR TO THE PLACEMENT OF ASPHALT ON THE MILLED SURFACE.

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 FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 253, PAVEMENT REPAIR, 800 SQ YD (SUM 21, SLM 5.14 TO SLM 8.85)

ASPHALT PAVING LIMITATION

THE CONTRACTOR SHALL NOT ANTICIPATE OR SCHEDULE PLACING ASPHALT (ASPHALT SURFACE COURSE, ASPHALT INTERMEDIATE COURSE, ASPHALT CONCRETE BASE, ETC.) BETWEEN NOVEMBER 1 AND APRIL 1 WHEN SUBMITTING THEIR INITIAL BAR CHART PROGRESS SCHEDULE TO THE DISTRICT CONSTRUCTION ENGINEER (DCE) AS SPECIFIED IN CMS SECTION 108.02A. THIS LIMITATION SHALL ALSO INCLUDE INITIAL BASE LINE SCHEDULES AND ALL UPDATES IF A CPM SCHEDULE IS REQUIRED.

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:

- 203, EXCAVATION (FOR PAVEMENT REPAIR) 134 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 ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 304, AGGREGATE BASE (FOR PAVEMENT REPAIR) 134 CU YD

ITEM 618 - RUMBLE STRIPS SHOULDER, (ASPHALT CONCRETE)

FOR THE USE ALONG SR 21 WITHIN THE PROJECT LIMITS, FROM SLM 5.14 TO SLM 8.85. OFFSET "A" AND "B" SHALL FOLLOW THE OFFSET DIMENSION TABLE AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-9.1 FROM THIS ITEM OF WORK THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- 618, RUMBLE STRIPS SHOULDER, (ASPHALT CONCRETE) 12.50 MILES

ITEM 408 - PRIME COAT, AS PER PLAN

APPLY "MC-70" AT A RATE OF 0.4 GALLONS PER SQUARE YARD, OR AS DETERMINED BY THE ENGINEER, TO THE COMPLETED COMPACTED AGGREGATE SHOULDER.

ITEM SPECIAL - VERTICAL CLEARANCE

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LICENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURES: SUM-21-0570 (SFN 7701470) AND SUM-21-0863 (SFN 7701748).

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

- SPECIAL - VERTICAL CLEARANCE, 2 EACH

LINEAR GRADING

AREAS WHERE THE SHOULDER IS HIGHER THAN THE EDGE OF PAVEMENT WILL BE GRADED TO PROVIDE POSITIVE DRAINAGE. THIS WORK WILL ONLY BE PERFORMED IN AREAS NECESSARY AND WILL NOT BE PERFORMED ON THE ENTIRE PROJECT. AREAS FOR THE WORK WILL BE MARKED BY THE PROJECT ENGINEER. UNDER NO CIRCUMSTANCES WILL THIS WORK BE PERFORMED CONCURRENTLY WITH ANY OTHER OPERATION.

GRADING WILL BE ACCOMPLISHED BY THE REMOVAL OF MATERIAL TO PROVIDE A 0.08 POSITIVE SLOPE. THE GRADED AREAS WILL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION UNTIL SEEDING AND MULCHING IS PERFORMED. ALL EXCESS MATERIAL WILL BE REMOVED FROM THE BERMS AND WILL BE DISPOSED OF OFF THE PROJECT BY THE CONTRACTOR.

SEEDING AND MUCHING, FERTILIZER AND LIME WILL BE PERFORMED WITHIN A PERIOD NOT TO EXCEED 10 DAYS AFTER THE LINEAR GRADING.

THE QUANTITY OF ITEM 209 IS NOT PERMITTED TO BE INCREASED. REDUCTIONS IN QUANTITIES ARE PERMITTED AS DETERMINED BY THE PROJECT ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT BID ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

- 209, LINEAR GRADING, 784 STA.
- 659, SEEDING AND MULCHING, 21,778 SQ YD
- 659, COMMERCIAL FERTILIZER, 2.94 TON
- 659, LIME, 4.50 ACRES
- 659, WATER, 118 M. GAL.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN (T=2")

IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1- 1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

DESIGN AGENCY



DESIGNER

KMB

REVIEWER

CLG 05-03-22

PROJECT ID

112793

SHEET

P.3

19

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447 AND 449), AS PER PLAN

703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

FOLLOW ALL REQUIREMENTS OF THE SPECIFICATIONS WITH THE ADDITION OF THE FOLLOWING:

PERFORM THE IDEAL-CT FOR THE MIX DESIGN SUBMITTAL PER SUPPLEMENT 1033 ON THE JMF ASPHALT BINDER CONTENT DETERMINED FROM THE DESIGN AIR Voids AND ENSURE THE MINIMUM IN THE TABLE BELOW IS MET FOR THE MIX TYPE. THE IDEAL-CT ONLY NEEDS TO BE RAN FOR MIX DESIGN ACCEPTANCE.

PROVIDE RESULTS PER SUPPLEMENT 1033 WITH THE MIX DESIGN. SUPPLY SIX GYRATORY COMPACTED SPECIMENS TO THE HEIGHT MENTIONED IN SUPPLEMENT 1033 FOR THE MIX TYPE SPECIFIED. ALLOW MORE THAN TWO WEEKS FOR MIX DESIGN REVIEW AND PRELIMINARY APPROVAL DUE TO OMM VERIFYING THE MIX.

Mix Type	Minimum CT _{min}
Item 442 (Superpave) 9.5 mm	80
Item 442 (Superpave) 12.5 mm (Surface)	80
Item 442 (Superpave) 12.5 mm (Intermediate)	70
Item 442 (Superpave) 19 mm (Intermediate)	60
Item 441 (Marshall) Type 1 Surface Mixes	80
Item 441 (Marshall) Type 1 Intermediate Mixes	80
Item 441 (Marshall) Type 2 Intermediate Mixes	60
Item 302 (Marshall) Mixes	60

FOLLOW 403, EXCEPT AS FOLLOWS:

OFFSET THE AC GAUGE FOR EACH JMF FOR THE PROJECT PRIOR TO THE PROJECT'S START USING 403.06.A. AND THE MODIFIED SUPPLEMENT 1043 PROCEDURE BELOW. DURING S-1043.07 PROCESS, A RAP SAMPLE OBTAINED FROM THE JMF-DESIGNATED RAP PILE WILL BE EXTRACTED IN THE ASPHALT LEVEL 3 LAB TO VERIFY THE RAP AC %. THE RAP AC % WILL BE WITHIN 0.3% OF THE AVERAGE RAP AC % FROM THE JMF. IF RAP AC % IS OUTSIDE OF 0.3%, THE VERIFICATION PAN PROCESS WILL STOP, AND DISTRICT TESTING WILL ALLOW ONE OPPORTUNITY TO REWORK THE RAP PILE AT THE MIX PLANT AND RESAMPLE. RESAMPLING REQUIRES DISTRICT TESTING TO BE PRESENT. IF THE RESAMPLE IS STILL OUTSIDE OF THE 0.3%, THE JMF WILL BE RESCINDED AND NEED TO BE REDESIGNED.

FOLLOW 403.06, EXCEPT AS FOLLOWS:

ENSURE ASPHALT BINDER CONTENT DOES NOT EXCEED TABLE 403.06.G-1. ADJUSTMENTS TO MIX PLANT CONTROL SETTINGS MUST BE SUBMITTED TO AND APPROVED BY DISTRICT TESTING PRIOR TO MAKING THE ADJUSTMENT. THE ADJUSTMENT CANNOT EXCEED +/- 0.2% FROM DESIGN AC% FROM JMF. DO NOT LOWER VIRGIN BINDER CONTENT OR INCREASE RAP PERCENT. ENSURE PLANT TICKET SHOWS THE ADJUSTMENT AND IS SET TO THE ADJUSTED TOTAL AC % AT ALL TMES AFTERWARDS. RECORD THE DAILY VERIFICATION PAN RESULTS IN A SEPARATE WORKSHEET AND MAKE SURE IT'S POSTED IN THE PLANT FACILITY AND AVAILABLE TO THE MONITORS. INCLUDE THE DATE RAN, VERIFICATION PAN, RESULT, AND INITIALS OF WHO RAN IT. ENSURE A PRINTOUT OF THE DAILY VERIFICATION PAN IS ALSO INCLUDED WITH THE TE-199.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (447 AND 449), AS PER PLAN CONT.

FOLLOW SUPPLEMENT 1043 FOR AC GAUGE OFFSET, EXCEPT AS MODIFIED BELOW:

FOLLOW 1043.07 EXCEPT AS FOLLOVED:

NOTIFY DISTRICT TESTING A MINIMUM OF ONE WEEK PRIOR TO MAKING VERIFICATION PANS. DISTRICT TESTING WILL WITNESS A SOLVENT EXTRACTION FROM A SAMPLE FROM THE RAP PILE THAT IS TO BE USED IN THE JMF TO VERIFY THE RAP AC %. RAP AC % WILL BE WITHIN 0.3% OF RAP AC % DETERMINED IN JMF. IF OUTSIDE OF 0.3%, DO NOT PROCEED AND THE JMF WILL NEED TO BE REDESIGNED. DISTRICT TESTING WILL WITNESS THE VERIFICATION PANS BEING BLENDED, MIXED, AND COMPACTED. MAKE A MINIMUM OF THREE VERIFICATION PANS FOR THE JMF THAT ARE AT THE JMF ASPHALT BINDER CONTENT. MAKE ONE ADDITIONAL VERIFICATION PAN FOR EACH ADDITIONAL DISTRICT THE JMF WILL BE USED IN. IN ADDITION, TURN POSSESSION OVER THE CALIBRATION AC GAUGE PANS USED TO DETERMINE FIT COEFFICIENT TO DISTRICT TESTING.

FOR AC CONTENT PAY ACCEPTANCE, REPLACE 1043.08 WITH THE FOLLOWING:

CALCULATE AN AC GAUGE OFFSET AMOUNT FOR EACH JMF AND MIX PLANT IN ACCORDANCE WITH THE FOLLOWING PROCEDURE PRIOR TO START OF ANY PRODUCTION FOR THE JMF. NOTIFY DISTRICT TESTING 24 HOURS PRIOR TO OFFSETTING GAUGE.

1. ENSURE PRINTER IS ON AND PLACE THE FIRST VERIFICATION PAN IN THE AC GAUGE AND RUN.
 2. AFTER THE 16-MINUTE TEST, TAKE THE VERIFICATION PAN OUT AND TURN 180 DEGREES AND PLACE BACK IN AC GAUGE AND RUN.
 3. REPEAT STEPS 1 AND 2 WITH SECOND AND THIRD VERIFICATION PANS.
 4. FOR EACH RUN, TAKE JMF ASPHALT BINDER CONTENT MINUS THE AC GAUGE AC % TO THE OBTAIN THE OFFSET FOR THAT RUN.
 5. AVERAGE ALL OFFSETS FOR A FINAL OFFSET.
 6. RETAIN ALL OF THE VERIFICATION PANS. AFTER THE FINAL OFFSET IS DETERMINED, DISTRICT TESTING WILL CHOOSE TWO OF THE VERIFICATION PANS AND SEND ONE OF THESE TWO TO OMM TO EXTRACT AND REFLUX.
 7. DISTRICT TESTING WILL USE THE TWO VERIFICATION PANS TO OFFSET THEIR AC GAUGE.
- BEFORE THE BEGINNING OF A PRODUCTION DAY, RUN THE VERIFICATION RAN IN THE AC GAUGE AND ENSURE THE OFFSET AC GAUGE AMOUNT IS WITHIN 0.14% OF THE JMF ASPHALT BINDER CONTENT. DURING THE START OF PRODUCTION FOR THE JMF, SOLVENT EXTRACT THE FIRST TWO QC SAMPLES AND COMPARE TO THE OFFSET AC GAUGE. ENSURE SOLVENT EXTRACTION IS WITHIN 0.3% OF OFFSET AC GAUGE. IF MORE THAN 0.3% OFF, IMMEDIATELY RESAMPLE AND RUN AC GAUGE AND SOLVENT EXTRACT IMMEDIATELY. IF TWO CONSECUTIVE SAMPLES ARE MORE THAN 0.3% OFF, IMMEDIATELY STOP PRODUCTION, CONTACT MONITORING TEAM, AND INVESTIGATE THE REASON FOR THE PROBLEM. ONCE TWO CONSECUTIVE QC SAMPLES ARE WITHIN 0.3% OF OFFSET AC GAUGE, THE FINAL OFFSET GAUGE IS CONFIRMED.

AFTER CONFIRMING THE AC GAUGE OFFSET AMOUNT PROCEED WITH DETERMINING AC CONTENTS OF PRODUCTION SAMPLES BY THE AC GAUGE ACCORDING TO 1043.09.

ONLY DETERMINE ONE AC GAUGE OFFSET AMOUNT PER JMF. IF MORE THAN 30 DAYS HAVE LAPSED SINCE THE JMF WAS LAST TESTED, RE-DO THE OFFSET PROCEDURE ABOVE WITH TWO VERIFICATION PANS (ONE FROM THE CONTRACTOR AND ONE FROM THE DISTRICT). IF AN AC GAUGE OFFSET AMOUNT IS LATER DETERMINED, BY AN INVESTIGATION OF BOTH THE CONTRACTOR AND THE DISTRICT, TO BE INCORRECT RE-DO THE OFFSET PROCEDURE.

IN ADDITION, ALSO DETERMINE THE AC GAUGE OFFSET FOLLOWING THE CURRENT PROCEDURE AS OUTLINED IN SUPPLEMENT 1043 DATED JANUARY 21, 2022 AND PROVIDE THE INFORMATION TO THE DEPARTMENT. THIS AC GAUGE OFFSET NUMBER WILL NOT BE USED DURING QC TESTING.

STREAM AVOIDANCE - WOLF CREEK/BARBERTON INLET:

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT WOLF CREEK/BARBERTON RESERVOIR INLET. NO EXCAVATION, GRADING OR FILLING OPERATIONS SHALL BE PERFORMED IN WOLF CREEK/BARBERTON RESERVOIR INLET. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE CONSTRUCTION EQUIPMENT AND/OR MATERIALS IN WOLF CREEK/BARBERTON RESERVOIR INLET.

DRINKING WATER SOURCE PROTECTION

THIS PROJECT IS LOCATED NEAR BARBERTON RESERVOIR, A DRINKING WATER SOURCE PROTECTION AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR CONTAMINATION, THE CONTRACTOR SHALL UTILIZE PROPER CONTAINMENT AND DIKING IN REFUELING AREAS. FUELS, TOXIC/HAZARDOUS MATERIALS, AND CHEMICALS SHALL NOT BE STORED NEAR DRAINAGE WAYS, DITCHES, OR STREAMS. A SPILL KIT IS TO BE MAINTAINED ON-SITE THROUGHOUT CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS, OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY. ANY SUCH SPILL OR EVENT SHALL BE REPORTED IMMEDIATELY TO DAN MILLER AT THE BARBERTON WATER TREATMENT PLANT AT 330-848-6744. IF THE SPILL IS REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT BARBERTON FIRE CHIEF ROBERT L. PURSLEY, JR. AT 330-848-6732 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEA-UP OF THE SPILL.

646 SPEED MEASUREMENT MARKING

THE CONTRACTOR SHALL STRIPE AIR SPEED ZONE MARKINGS AT THE FOLLOWING LOCATIONS (INTERSTATE LOCATION MILEPOST IS 'STATE LOG'):

SR 21 NB&SB 6.9 TO 7.9

MARKINGS ARE 2' WIDE BY 9' LONG (6' ON THE OUTSIDE SHOULDER AND 3' ON THE INSIDE SHOULDER). THERE ARE 5 LINES IN EACH 1 MILE SECTION THAT NEED REMARKED. THE FOLLOWING HAS BEEN CARRIED TO THE GENERAL SUMMARY:

646 SPEED MEASUREMENT MARKING 10 EACH

ITEM SPECIAL - AS-BUILT CONSTRUCTION RECORD DRAWINGS

PRIOR TO FINAL ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL FURNISH THE DEPARTMENT FORMAL AS-BUILT CONSTRUCTION RECORD-DRAWING PLANS. THE FORMAL AS-BUILT CONSTRUCTION RECORD-DRAWING SHALL INCLUDE ALL RED-LINED CHANGES. RED-LINE CHANGE SHALL BE DENOTED UTILIZING CLOUDING IN MICROSTATION (OR OTHER CAD SOFTWARE) OR CLOUDING IN PDF EDITING SOFTWARE. THE AS-BUILT CONSTRUCTION RECORD-DRAWING SHALL HAVE A SIGNED VERIFICATION ON THE TITLE SHEET FROM THE CONTRACTOR INDICATING THAT ALL RED-LINED AND FIELD CHANGES HAVE BEEN INCORPORATED INTO AS-BUILT CONSTRUCTION RECORD-DRAWINGS.

THE CONTRACTORS VERIFICATION STATEMENT INDICATES ALL KNOWN FIELD MODIFICATIONS MADE HAVE BEEN INCLUDED IN THE FORMAL RECORD-DRAWING. THE CONTRACTORS VERIFICATION STATEMENT SHALL BE SIGNED BY THE CONTRACTORS PROJECT MANAGER (OR ACCEPTABLE REPRESENTATIVE).

IN ADDITION TO THE INFORMATION SHOWN ON THE CONSTRUCTION PLANS, THE AS-BUILT CONSTRUCTION RECORD-DRAWINGS SHALL SHOW THE FOLLOWING:

1. ALL DEVIATIONS FROM THE ORIGINAL APPROVED CONSTRUCTION PLANS WHICH RESULT IN A CHANGE OF LOCATION, MATERIAL, TYPE OR SIZE OF WORK.
2. ANY UTILITIES, PIPES, WELLHEADS, ABANDONED PAVEMENTS, FOUNDATIONS OR OTHER MAJOR OBSTRUCTIONS DISCOVERED AND REMAINING IN PLACE WHICH ARE NOT SHOWN, OR DO NOT CONFORM TO LOCATIONS OR DEPTHS SHOWN IN THE PLANS. UNDERGROUND FEATURES SHALL BE SHOWN AND LABELED ON THE RECORD-DRAWING PLAN IN TERMS OF STATION, OFFSET AND ELEVATION.
3. THE FINAL OPTION AND SPECIFICATION NUMBER SELECTED FOR THOSE ITEMS WHICH ALLOW SEVERAL MATERIAL OPTIONS UNDER THE SPECIFICATION (E.G., CONDUIT).
4. CHANGES TO THE PAY ITEMS AND FINAL QUANTITIES AS PAID SHALL BE SHOWN ON THE GENERAL SUMMARY AND SUBSUMMARIES.
5. ADDITIONAL PLAN SHEETS MAY BE NEEDED IF NECESSARY TO SHOW WORK NOT INCLUDED IN THE CONSTRUCTION PLANS. IF ADDITIONAL PLAN SHEETS ARE NEEDED, THEY ARE REQUIRED TO BE PREPARED IN CONFORMANCE WITH THE LOCATION AND DESIGN MANUAL, VOLUME 3, SECTION 1200 - PLAN PREPARATION.

NOTATION SHALL ALSO BE MADE OF LOCATIONS AND THE EXTENT OF USE OF MATERIALS, OTHER THAN SOIL, FOR EMBANKMENT CONSTRUCTION (ROCK, BROKEN CONCRETE WITHOUT REINFORCING STEEL, ETC.).

THE PLAN INDEX SHALL SHOW THE PLAN SHEETS WHICH HAVE CHANGES APPEARING ON THEM.

TWO COPIES OF THE AS-BUILT CONSTRUCTION RECORD-DRAWINGS SHALL BE DELIVERED TO THE PROJECT ENGINEER FOR APPROVAL UPON COMPLETION OF THE PHYSICAL WORK BUT PRIOR TO THE REQUEST FOR FINAL PAYMENT. AFTER THE DEPARTMENT HAS APPROVED THE AS-BUILT CONSTRUCTION RECORD-DRAWINGS, THE ASSOCIATED ELECTRONIC FILES SHALL BE DELIVERED TO THE DISTRICT CAPITAL PROGRAMS ADMINISTRATOR. ACCEPTANCE OF THESE PLANS AND DELIVERY OF THE ASSOCIATED ELECTRONIC FILES IS REQUIRED PRIOR TO THE WORK BEING ACCEPTED AND THE FINAL ESTIMATE APPROVED.

PAYMENT FOR ALL THE ABOVE SHALL BE LUMP SUM UPON PROPER EXECUTION OF ALL WORK OF THIS ITEM AS DETERMINED BY THE PROJECT ENGINEER.



MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE ELEVEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT OR COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.
2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.
3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.
4. TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.
5. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS TWO (2) MILES RURAL OR ONE [1] MILE URBAN.
6. FOR ROUTES NOT ON THE PERMITTED LANE CLOSURE CHART, ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.
7. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.
8. A QUANTITY OF 20 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.
9. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.
10. THE CONTRACTOR SHALL PLACE THE SIGNS: W8-1 [BUMP] PER OMUTCD 2C.28 AND W8-11 [UNEVEN LANES] PER OMUTCD 6F.45. PAYMENT FOR THESE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614 - MAINTAINING TRAFFIC. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGNS HAS BEEN INCLUDED IN THE PLANS PER CMS 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

- PHASE I - PLANED SURFACE
- 614, WORK ZONE CENTER LINE, CLASS I, 0.02 MILE
 - 614, WORK ZONE LANE LINE, CLASS I, 6" 7.42 MILE
 - 614, WORK ZONE STOP LINE, CLASS 1, 74 FT
 - 614, WORK ZONE CHANNELIZING LINE, CLASS I, 8" 3,607 FT

- PHASE II - SURFACE COURSE
- 614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT 0.02 MILE
 - 614, WORK ZONE LANE LINE, CLASS III, 6" 642 PAINT 7.42 MILE
 - 614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 74 FT
 - 614, WORK ZONE CHANNELIZING LINE, CLASS III, 8" 642 PAINT 3,607 FT

- TO BE USED AS DIRECTED BY THE ENGINEER
- 614, WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT 31.30 MILE
 - 614, WORK ZONE MARKING SIGN, 20 EACH (ALL PHASES)

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

SEQUENCE OF PAVEMENT OPERATIONS

THE CONTRACTOR SHALL PERFORM ALL PAVING AND PAVEMENT REPAIR OPERATIONS ONE LANE AT A TIME (CONTRACTOR IS PERMITTED TO WORK ON BOTH SIDES OF FREEWAY AT THE SAME TIME). THIS WORK INCLUDES MILLING, PAVEMENT REPAIRS, AND PLACEMENT OF NEW ASPHALT.

ALL PAVING AND PAVEMENT REPAIR OPERATION WORK ON SHOULDERS SHALL BE DONE CONCURRENTLY WITH THE CLOSEST LANE.

RAMP PAVING AND PAVEMENT REPAIR OPERATIONS SHALL BE COMPLETED AFTER ALL MAINLINE PAVING IS COMPLETE.

PERMITTED LANE CLOSURES

DURING PERFORMANCE OF THE WORK, THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION OF SR-21 WITH THE EXCEPTION OF THE TIME PERIODS LISTED BELOW.

LANE CLOSURE RESTRICTIONS		
LANE DESCRIPTION	TIME RESTRICTIONS	DISINCENTIVE
SR-21 NORTHBOUND SOUTH WORK LIMITS THROUGH SLM 7.78	MONDAY-FRIDAY: LANE CLOSURES WILL NOT BE PERMITTED BETWEEN THE HOURS OF 6:00AM-9:00AM AND 4:00PM-6:00PM.	AS PER LANE VALUE CONTRACT TABLE
SR-21 NORTHBOUND SLM 7.78 THROUGH NORTH WORK LIMITS	MONDAY-FRIDAY: LANE CLOSURES WILL NOT BE PERMITTED BETWEEN THE HOURS OF 6:00AM-9:00AM	
SR-21 SOUTHBOUND SOUTH WORK LIMITS THROUGH SLM 7.78	MONDAY-FRIDAY: LANE CLOSURES WILL NOT BE PERMITTED BETWEEN THE HOURS OF 6:00AM-9:00AM AND 1:00PM-7:00PM	
SR-21 SOUTHBOUND SLM 7.78 THROUGH NORTH WORK LIMITS	MONDAY-FRIDAY: LANE CLOSURES WILL NOT BE PERMITTED BETWEEN THE HOURS OF 6:00AM-9:00AM AND 1:00PM-7:00PM	

SHOULD THE CONTRACTOR FAIL TO MEET THE REQUIREMENTS AS INDICATED ABOVE, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES AS LISTED IN THE LANE VALUE CONTRACT TABLE.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD & RAMP CLOSURES	>= 2WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERNS CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL SHALL HAVE NO OTHER CONSTRUCTION RELATED DUTIES. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
ROAD & RAMP CLOSURES	>= 2WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERNS CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

TIME LIMITATION, TRAFFIC ON A MILLED SURFACE

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON A MILLED SURFACE SHALL BE 7 CONSECUTIVE CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$5,000 PER DAY THAT THE TRAFFIC IS PLACED ON A MILLED SURFACE BEYOND THE SPECIFIED LIMIT.

ITEM 614 - MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)

TRAFFIC ON ALL RAMPS SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD SPECIFIED IN THE TABLES SHOWN ON SHEET P.8, TRAFFIC SHALL BE DETOURED AS SHOWN ON SHEETS P.8. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$3,000 PER HOUR FOR EACH HOUR THE ROADWAY REMAINS CLOSED BEYOND THE SPECIFIED LIMIT.



ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

IN GENERAL LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 250 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.) THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 10 SIGN MONTH ASSUMING 5 PCMS SIGN(S) FOR 2 MONTH(S)

WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER	COUNTY-ROUTE	SLM RANGE
WZ - 26172	SUM-SR 21 NB	4.75 TO 9.14
WZ - 26172	SUM-SR 21 SB	4.83 TO 9.60

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRE-CONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1. WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION		WITHOUT POSITIVE PROTECTION	
	WORKERS PRESENT	WORKERS NOT PRESENT	WORKERS PRESENT	WORKERS NOT PRESENT
70	60	65	55	65
65	55	60	50	60
60	55	60	50	60
55	50	55	45	55

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY ASSUMING 14 DSL SIGN ASSEMBLY(IES) FOR 1 MONTHS 14 SIGN MONTHS

DESIGN AGENCY



DESIGNER
KMB

REVIEWER
CLG 05-03-22

PROJECT ID
112793

SHEET
P.6

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR SPECIAL EVENTS:

NEW YEAR'S (OBSERVED)	GENERAL/REGULAR ELECTION DAY (NOV)
TOTAL SOLAR ECLIPSE (4/8/24)	THANKSGIVING
MEMORIAL DAY	CHRISTMAS (OBSERVED)
FOURTH OF JULY (OBSERVED)	(OTHER HOLIDAY OR SPECIAL EVENT)
LABOR DAY	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR SPECIAL EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

Day of holiday or special event	Time all lanes must be open to traffic
Sunday	12:00N Friday through 6:00 AM Monday
Monday	12:00N Friday through 6:00 AM Tuesday
Monday (Total Solar Eclipse)	12:00N Friday through 6:00 AM Wednesday
Tuesday	12:00N Monday through 6:00 AM Wednesday
Tuesday (Gen./Reg. Election)	5:00 AM Tuesday through 12:00 AM Wednesday
Wednesday	12:00N Tuesday through 6:00 AM Thursday
Thursday	12:00N Wednesday through 6:00 AM Friday
Thursday (Thanksgiving only)	6:00 AM Wednesday through 6:00 AM Monday
Friday	12:00N Thursday through 6:00 AM Monday
Saturday	12:00N Friday through 6:00 AM Monday

DURING THE SAME PERIODS, MAINTAIN PEDESTRIAN ACCESS IF PEDESTRIAN ACCESS WAS PRESENT PRIOR TO CONSTRUCTION.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

LANE VALUE CONTRACT

THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME THE DESCRIBED CRITICAL LANE/RAMP IS RESTRICTED FROM FULL USE BY THE TRAVELING PUBLIC WITHIN THE RESTRICTED TIME PERIOD. THE LANE VALUE CONTRACT TABLE IS LOCATED IN THE PLAN GENERAL NOTES. THE DISINCENTIVES WILL BE ASSESSED FOR ALL RESTRICTIONS OF THE CRITICAL WORK.

CRITICAL WORK IS SHOWN IN THE LANE VALUE CONTRACT TABLE.

CRITICAL WORK IS DEFINED AS HAVING THE DESIGNATED SECTIONS OPEN TO UNRESTRICTED TRAFFIC AS SHOWN IN THE TABLE, OR THE ENTIRE PROJECT IF NOT OTHERWISE LISTED.

UNRESTRICTED TRAFFIC IS DEFINED AS ALL TRAFFIC LANES BEING AVAILABLE FOR USE WITH SPECIFIED STRIPING AND SAFETY FEATURES IN PLACE.

Description of Critical Lane/Ramp To Be Maintained	Restricted Time Period	Time Unit	Disincentive \$ Per Time Unit
SR 21 within project limits	As per the permitted lane closure note, Sheet P.5	Per Lane / Per Minute	\$160

DROPOFFS

THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE A DIFFERENCE IN ELEVATION BETWEEN THE MAINLINE MILLED SURFACES, AND ASPHALT SURFACE COURSE AND SIDE STREET APPROACHES/DRIVEWAYS GREATER THAN 1.25 INCH. THE CONTRACTOR SHALL PLACE A 12:1 ASPHALT WEDGE FOR ALL RESULTING ELEVATION DIFFERENCES GREATER THAN 1.25 INCH PRIOR TO OPENING TO TRAFFIC. THE PAVING OF INTERSECTION APPROACHES AND DRIVEWAYS, PER THE NOTES ON SHEET P.7, SHALL BE PERFORMED WITHIN 7 DAYS OF MAINLINE SURFACE COURSE BEING APPLIED AND A DROPOFF BEING CREATED BETWEEN THE NEW SURFACE COURSE AND THE MILLED/EXISTING SIDE ROAD OR DRIVEWAY SURFACE. THE CONTRACTOR MAY ELECT TO PLACE A 12:1 ASPHALT WEDGE IN LIEU OF COMPLETING THE PAVING, HOWEVER THE ASPHALT CONCRETE USED FOR THE WEDGE SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 – MAINTAINING TRAFFIC AND SHALL INCLUDE THE REMOVAL OF THE WEDGE BEFORE THE INTERSECTION/DRIVEWAY IS PAVED.

RAMP CLOSURES

RAMPS SHALL NOT BE CLOSED CONCURRENTLY UNLESS APPROVED BY THE PROJECT ENGINEER.

DESIGN AGENCY



DESIGNER
KMB

REVIEWER
CLG 05-03-22

PROJECT ID
112793

SHEET
P.7

SR 21 AT SR 162 INTERCHANGE RAMP CLOSURES

RAMP	PROPOSED WORK	PERMITTED CLOSURE TIMES	DURATION	DETOUR ROUTE	APPROX. NUMBER OF PCMS
RAMP A (SR 21 NB TO SR 162)	RAMP PAVING	7:00 PM TO 6:00AM WEEKLY	3 NIGHTS	TRAVEL NORTH ON IR 77 AND SR 21 / EXIT AT SR 18 WEST / KEEP RIGHT AND USE RAMP SOUTH IR 77 AND SR 21 / USE EXIT COPLEY RD	3
RAMP B (SR 21 NB FROM SR 162)	RAMP PAVING	7:00 PM TO 6:00AM WEEKLY	3 NIGHTS	TRAVEL WEST ON SR 162 / TURN RIGHT ONTO S MEDINA LINE RD / TURN RIGHT ONTO MEDINA RD / USE RAMP NORTH IR 77 AND SR 21	3
RAMP B (SR 21 NB FROM SR 162)	RAMP PAVING	7:00 PM TO 6:00AM WEEKLY	3 NIGHTS	TRAVEL EAST ON SR 162 / TURN LEFT ONTO S CLEVELAND MASSILON ROAD / TURN LEFT ONTO MEDINA RD / KEEP RIGHT USE NORTH IR 77 AND SR 21	3
RAMP C (SR 21 SB TO SR 162)	RAMP PAVING	7:00 PM TO 6:00AM WEEKLY	3 NIGHTS	TRAVEL SOUTH ON SR 21 / EXIT AT WADSWORTH RD SR 261 / TURN LEFT ONTO WADSWORTH RD / TURN LEFT ONTO NORTH SR 21 / USE EXIT COPLEY RD	3
RAMP D (SR 21 SB FROM SR 162)	RAMP PAVING	7:00 PM TO 6:00AM WEEKLY	3 NIGHTS	TRAVEL WEST ON SR 162 / TURN LEFT ON S MEDINA LINE RD / TURN LEFT ONTO WADSWORTH RD / TURN RIGHT ONTO SOUTH SR 21 RAMP	3
RAMP D (SR 21 SB FROM SR 162)	RAMP PAVING	7:00 PM TO 6:00AM WEEKLY	3 NIGHTS	TRAVEL EAST ON SR 162 / TURN RIGHT ONTO S CLEVELAND MASSILON RD / TURN RIGHT ONTO WADSWORTH RD / TURN LEFT ONTO SOUTH SR 21 RAMP	3

FOR ALL RAMP DETOURS PLACE THE FOLLOWING PCMS AT 2 LOCATIONS PRIOR TO CLOSURE

PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGES:

- PLACE 3 DAYS PRIOR TO CLOSURE

1. RAMP TO

TO CLOSE

2. (DATES/TIMES)

DESIGN AGENCY



DESIGNER

KMB

REVIEWER

CLG 05-03-22

PROJECT ID

112793

SHEET

P.8

TOTAL

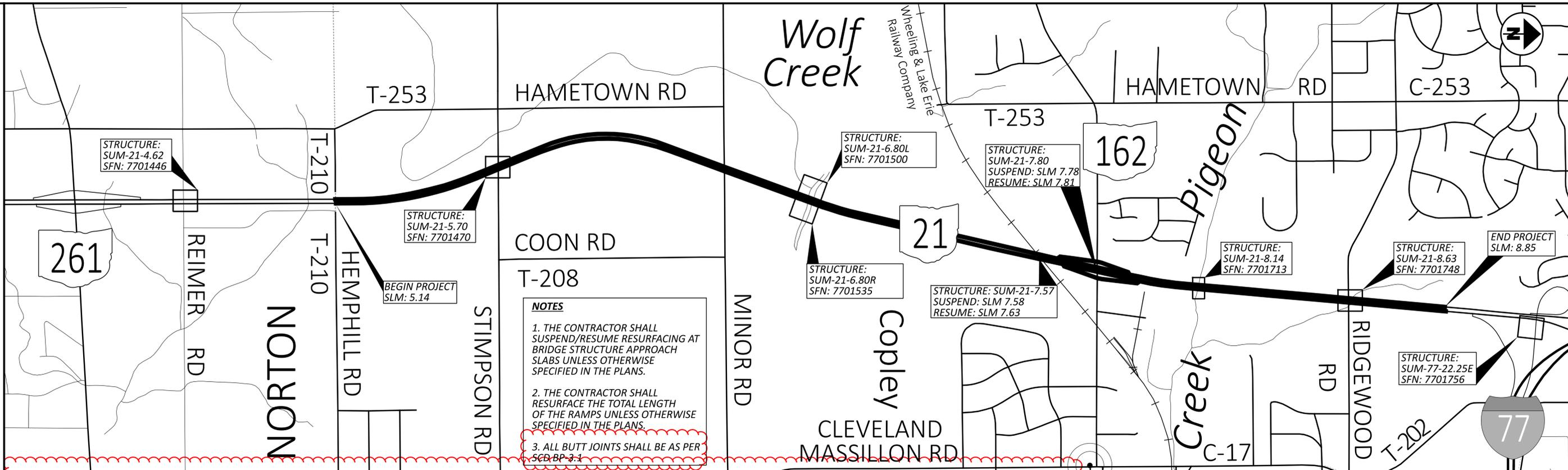
19

SHEET NUM.							PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	11	12	13	14	01/NHS/05	02/IMS/47	03/NHS/47	04/NHS/04							
ROADWAY																
407						407				202	98100	407	EACH	REMOVAL MISC.: BARRIER REFLECTOR		
134						134				203	10000	134	CY	EXCAVATION		
784						784				209	60200	784	STA	LINEAR GRADING		
		784				784				209	72000	784	STA	PREPARING SUBGRADE FOR SHOULDER PAVING		
	LS					LS				SPECIAL	69021000	LS		AS-BUILT CONSTRUCTION RECORD DRAWINGS	4	
2						2				SPECIAL	69098000	2	EACH	VERTICAL CLEARANCE	3	
EROSION CONTROL																
21,778						21,778				659	10000	21,778	SY	SEEDING AND MULCHING		
2.94						2.94				659	20000	2.94	TON	COMMERCIAL FERTILIZER		
4.5						4.5				659	31000	4.5	ACRE	LIME		
118						118				659	35000	118	MGAL	WATER		
						3,000				832	30000	3,000	EACH	EROSION CONTROL		
PAVEMENT																
3,000						3,000				251	01000	3,000	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)		
800						800				253	01000	800	SY	PAVEMENT REPAIR		
134						134				304	20000	134	CY	AGGREGATE BASE (FOR PAVEMENT REPAIR)		
		16,152				16,152				407	20000	16,152	GAL	NON-TRACKING TACK COAT		
		7,854				7,854				408	10001	7,854	GAL	PRIME COAT, AS PER PLAN	3	
		5,810				5,810				442	00100	5,810	CY	ANTI-SEGREGATION EQUIPMENT (PG70-22M)		
		7,485				7,485				442	10301	7,485	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN (PG70-22M)	4	
		974				974				617	10101	974	CY	COMPACTED AGGREGATE, AS PER PLAN	3	
12.5						12.5				618	40600	12.5	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)		
				22.87		22.87				850	10010	22.87	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)		
				1,560		1,560				850	10110	1,560	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)		
				3,607		3,607				850	10130	3,607	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)		
				0.19		0.19				850	20010	0.19	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)		
		179,458				179,458				897	01010	179,458	SY	PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A		
TRAFFIC CONTROL																
			467			467				621	00100	467	EACH	RPM		
			372			372				621	54000	372	EACH	RAISED PAVEMENT MARKER REMOVED		
32						32				626	00102	32	EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)		
359						359				626	00110	359	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)		
16						16				626	00110	16	EACH	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)		
					313		37	276		630	02100	313	FT	GROUND MOUNTED SUPPORT, NO. 2 POST		
					72		6	66		630	80100	72	SF	SIGN, FLAT SHEET		
					28		3	25		630	80100	28	SF	SIGN, FLAT SHEET, 730.20		
					28		4	24		630	84900	28	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL		
					28		4	24		630	86002	28	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL		
				0.05		0.05				646	10200	0.05	MILE	CENTER LINE		
				100		100				646	10400	100	FT	STOP LINE, 24"		
				200		200				646	10600	200	FT	TRANSVERSE/DIAGONAL LINE		
				8		8				646	20300	8	EACH	LANE ARROW		
				4		4				646	20320	4	EACH	WRONG WAY ARROW		
	10					10				646	20710	10	EACH	SPEED MEASUREMENT MARKING		
				15.65		15.65				807	12010	15.65	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"		
				7.42		7.42				807	12110	7.42	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"		
				0.02		0.02				807	12200	0.02	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, CENTER LINE		
				3,930		3,930				807	12310	3,930	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"		
				4,235		4,235				807	12410	4,235	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"		

GENERAL SUMMARY

DESIGN AGENCY

 DESIGNER
KMB
 REVIEWER
 CLG 05-03-22
 PROJECT ID
 112793
 SHEET TOTAL
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SLM RANGE	TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	897	442	442	407	617	408	442	209		
							PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T = 1.5")	ANTI-SEGREGATION EQUIPMENT (PG70-22M) (T = 1.5")	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN (PG70-22M) (T = 1.5")	NON-TRACKING TACK COAT @ 0.09 GAL/SY	COMPACTED AGGREGATE, AS PER PLAN (T = 2")	PRIME COAT, AS PER PLAN @ 0.40 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447), AS PER PLAN (PG70-22M) (SAFETY EDGE)	PREPARING SUBGRADE FOR SHOULDER PAVING	CY	STA
SR 21 NB																
5.14 TO 6.50	1	R	7180.80	35	27925.33		27925.33	797.87	1163.56	2513.28	177.30	1276.59	1.20	143.62		
6.50 TO 6.59	1	R	475.20	50	2640.00		2640.00	85.80	110.00	237.60	11.73	84.48	0.08	9.50		
6.59 TO 6.84	1	R	1320.00	41	6013.33		6013.33	183.33	250.56	541.20	32.59	234.67	0.22	26.40		
6.84 TO 7.15	1	R	1636.80	38	6910.93		6910.93	204.60	287.96	621.98	40.41	290.99	0.27	32.74		
7.15 TO 7.22	1	R	369.60	40	1642.67		1642.67	49.62	68.44	147.84	9.13	65.71	0.06	7.39		
7.22 TO 7.65	1	R	2270.40	48	12108.80		12108.80	388.91	504.53	1089.79	56.06	403.63	0.38	45.41		
7.65 TO 7.98	1	R	1742.40	38	7356.80		7356.80	217.80	306.53	662.11	43.02	309.76	0.29	34.85		
7.98 TO 8.08	1	R	528.00	42	2464.00		2464.00	75.78	102.67	221.76	13.04	93.87	0.09	10.56		
8.08 TO 8.30	1	R	1161.60	35	4517.33		4517.33	129.07	188.22	406.56	28.68	206.51	0.19	23.23		
8.30 TO 8.85	1	R	2904.00	38	12261.33		12261.33	363.00	510.89	1103.52	71.70	516.27	0.48	58.08		
SR 21 SB																
5.14 TO 6.13	1	L	5227.20	35	20328.00		20328.00	580.80	847.00	1829.52	129.07	929.28	0.87	104.54		
6.13 TO 6.59	1	L	2428.80	42	11334.40		11334.40	348.58	472.27	1020.10	59.97	431.79	0.40	48.58		
6.59 TO 6.69	1	L	528.00	50	2933.33		2933.33	95.33	122.22	264.00	13.04	93.87	0.09	10.56		
6.69 TO 7.45	1	L	4012.80	35	15605.33		15605.33	797.87	650.22	1404.48	49.54	713.39	0.67	80.26		
7.45 TO 7.62	1	L	897.60	42	4188.80		4188.80	85.80	174.53	376.99	11.08	159.57	0.15	17.95		
7.62 TO 7.95	1	L	1742.40	38	7356.80		7356.80	183.33	306.53	662.11	21.51	309.76	0.29	34.85		
7.95 TO 8.02	1	L	369.60	48	1971.20		1971.20	204.60	82.13	177.41	9.13	65.71	0.06	7.39		
8.02 TO 8.30	1	L	1478.40	35	5749.33		5749.33	49.62	239.56	517.44	36.50	262.83	0.25	29.57		
8.30 TO 8.85	1	L	2904.00	38	12261.33		12261.33	388.91	510.89	1103.52	35.85	516.27	0.48	58.08		
SR 21 AT SR 162 RAMPS																
RAMP A	2		1300.00	25	3611.11		3611.11	150.46	150.46	325.00	32.16	231.11				
RAMP B	2		1300.00	25	3611.11		3611.11	150.46	150.46	325.00	32.16	231.11				
RAMP C	2		1200.00	25	3333.33		3333.33	138.89	138.89	300.00	29.69	213.33				
RAMP D	2		1200.00	25	3333.33		3333.33	138.89	138.89	300.00	29.69	213.33				
SUBTOTALS							179458.0	5809.33	7477.4	16151.2	973.07	7853.80	6.53	783.55		
TOTALS CARRIED TO GENERAL SUMMARY							179458	5810	7478	16152	974	7854	7	784		

PAVEMENT CALCULATIONS

DESIGN AGENCY

 DESIGNER
KMB
 REVIEWER
 CLG 05-03-22
 PROJECT ID
 112793
 SHEET
 P.11 OF 19

SUM-77/21-22.25/VAR

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 5/3/2023 TIME: 1:50:02 PM USER: cgatlan
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COUNTY	ROUTE	LOCATION		621 RPM (YELLOW/YELLOW)	621 RPM (WHITE/RED)	621 RPM (WHITE)	621 RPM (YELLOW/RED)	621 RAISED PAVEMENT MARKER REMOVED	REMARKS
		FROM	TO						
SUM	21 NB	5.14	6.79		26	73		79	LANE LINE AND CHANNELIZING LINE
SUM	21 NB	6.82	7.58			34		27	LANE LINE
SUM	21 NB	7.63	7.78			7		6	LANE LINE
SUM	21 NB	7.81	8.85			69		55	LANE LINE
SUM	21 SB	5.14	6.79		28	73		81	LANE LINE AND CHANNELIZING LINE
SUM	21 SB	6.82	7.58			34		27	LANE LINE
SUM	21 SB	7.63	7.78			7		6	LANE LINE
SUM	21 SB	7.81	8.85			46		37	LANE LINE
SUM	RAMP A	0.00	0.11		9		8	14	SR 21 N TO SR 162 - EDGE LINE AND CHANNELIZING LINE AS PER SCD TC-73.20
SUM	RAMP B	0.00	0.14		7		10	14	SR 21 N FROM SR 162 - EDGE LINE AND CHANNELIZING LINE AS PER SCD TC-73.20
SUM	RAMP C	0.00	0.12		13		8	17	SR 21 S TO SR 162 - EDGE LINE AND CHANNELIZING LINE AS PER SCD TC-73.20
SUM	RAMP D	0.00	0.11		5		8	10	SR 21 S FROM SR 162 - EDGE LINE AND CHANNELIZING LINE AS PER SCD TC-73.20
SUM	IR 77	22.25	22.26				2		EDGE LINE
TOTALS CARRIED TO GENERAL SUMMARY					88	343	36	372	

RAISED PAVEMENT MARKINGS

DESIGN AGENCY

 DESIGNER
KMB
 REVIEWER
 CLG 05-03-22
 PROJECT ID
 112793
 SHEET
 P.12

SUM-77/21-22.25/VAR

MODEL: Sheet PAPER: 34x22 (in.) DATE: 5/3/2023 TIME: 1:50:14 PM USER: cgatian
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EDGE LINE											GENERAL SPEC: 640	
											MATERIAL TYPE: 646	
CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	WHITE EDGE LINE			YELLOW EDGE LINE			COMMENTS
						TOTAL	HIGHWAY	RAMP	TOTAL	HIGHWAY	RAMP	
SUM	SR 21 NB	5.14	CITY OF NORTON CORP LIMIT	8.85	END PROJECT	3.71	3.71		3.71	3.71		
SUM	SR 21 SB	5.14	CITY OF NORTON CORP LIMIT	8.85	END PROJECT	3.71	3.71		3.71	3.71		
SUM	RAMP A	0.00	SR 21 NB	0.11	SR 162							
SUM	RAMP B	0.00	SR 162	0.14	SR 21 NB	0.14		0.14	0.14		0.14	
SUM	RAMP C	0.00	SR 21 SB	0.12	SR 162	0.12		0.12	0.12		0.12	
SUM	RAMP D	0.00	SR 162	0.11	SR 21 SB	0.11		0.11	0.11		0.11	
SUM	SR 21		BRIDGE SUM-21-0462 WEST APPROACH		BRIDGE SUM-21-0462 EAST APPROACH	0.02	0.02					
SUM	SR 21		BRIDGE SUM-21-0570 WEST APPROACH		BRIDGE SUM-21-0570 EAST APPROACH	0.02	0.02					
SUM	IR 77		BRIDGE SUM-77-2225 WEST APPROACH SLAB		BRIDGE SUM-77-2225 EAST APPROACH SLAB	0.01		0.01	0.01		0.01	
TOTAL						7.84	7.46	0.38	7.80	7.42	0.38	

LANE LINE										
CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	6" LANE LINE		COMMENTS	
							DASHED	SOLID		
SUM	21 NB	5.14	CITY OF NORTON CORP LIMIT	8.85	END PROJECT	3.71	4.64			
SUM	21 SB	5.14	CITY OF NORTON CORP LIMIT	8.85	END PROJECT	3.71	4.64			
TOTAL						7.42	9.28			

CENTER LINE										
CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE	COMMENTS		
SUM	SR 21		BRIDGE SUM-21-0462 WEST APPROACH		BRIDGE SUM-21-0462 EAST APPROACH	0.01	0.02			
SUM	SR 21		BRIDGE SUM-21-0570 WEST APPROACH		BRIDGE SUM-21-0570 EAST APPROACH	0.01	0.02			
TOTAL						0.02	0.04			

AUXILIARY																						
CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE	STOP LINE	CENTER LINES		TRANSVERSE DIAGONAL LINES		ISLAND MARKING	SYMBOL MARKINGS				LANE ARROWS			WORD ON PVMT ONLY		DOTTED LINES	WRONG WAY ARROWS	COMMENTS	
					YELLOW	MILE	WHITE	YELLOW		Sq FT	RxR	SCHOOL		TURN LEFT	TURN RIGHT	THRU	COMB.	72"				96"
												FT	FT									
SUM	SR 21 SB MINOR RD ACCEL LANE	6.26	570		0.01			100											910			
SUM	SR 21 NB MINOR RD DECEL LANE	6.41	545		0.01			100														
SUM	SR 21 SB MINOR RD DECEL LANE	6.59	575		0.01																	
SUM	SR 21 NB MINOR RD ACCEL LANE	6.76	560		0.01																	
SUM	RAMP A - SR 21 N TO SR 162	7.66	340	50																	650	
SUM	RAMP B - SR 21 N FROM SR 162	7.68	500																		825	
SUM	RAMP C - SR 21 S TO SR 162	7.90	500	50																	575	
SUM	RAMP D - SR 21 S FROM SR 162	7.94	340																		375	
TOTAL			3930	100	0.05			200													4235	

PAVEMENT MARKINGS

DESIGN AGENCY



DESIGNER
KMB

REVIEWER
CLG 05-03-22

PROJECT ID
112793

SHEET
P.13

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STRUCTURE FILE NO. (SFN)	EXPRESSWAY / FREEWAY STRUCTURE ID INFO	INTERSECTING ROADWAY STRUCTURE ID INFO	APPROACH DIRECTION (NB, SB, EB, WB)	SIDE OF ROADWAY (LT, RT)	GENERAL		MAINLINE FREEWAY/EXPRESSWAY				ROADWAY OVER EXPRESSWAY/FREEWAY					ROADWAY UNDER EXPRESSWAY/FREEWAY				
					630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	
					REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	SIGN, FLAT SHEET, 730.20	SIGN, FLAT SHEET	SIGN, FLAT SHEET	GROUND MOUNTED SUPPORT, NO. 2 POST	SIGN, FLAT SHEET, 730.20	SIGN, FLAT SHEET, 730.20	SIGN, FLAT SHEET	SIGN, FLAT SHEET	GROUND MOUNTED SUPPORT, NO. 2 POST	SIGN, FLAT SHEET, 730.20	SIGN, FLAT SHEET	SIGN, FLAT SHEET	GROUND MOUNTED SUPPORT, NO. 2 POST	
EACH	EACH	SF	SF	SF	FT	SF	SF	SF	SF	FT	SF	SF	SF	FT						
7701756	SUM-77-22.25	SUM-21-9.28	NB	RT	1	1										1			7.5	
7701756	SUM-77-22.25	SUM-21-9.28	SB	RT	1	1										1			7.5	
7701756	SUM-77-22.25	SUM-21-9.28	WB	LT	1	1			3		11									
7701756	SUM-77-22.25	SUM-21-9.28	WB	RT	1	1	1	3			11									
7701446	SUM-21-04.62	SUM-MR3008-01.32	NB	RT	1	1	1				7.5									
7701446	SUM-21-04.62	SUM-MR3008-01.32	SB	RT	1	1	1				7.5									
7701446	SUM-21-04.62	SUM-MR3008-01.32	EB	LT										3				11		
7701446	SUM-21-04.62	SUM-MR3008-01.32	EB	RT								1	1		3			11		
7701446	SUM-21-04.62	SUM-MR3008-01.32	WB	LT								1		3				11		
7701446	SUM-21-04.62	SUM-MR3008-01.32	WB	RT								1	1		3			11		
7701470	SUM-21-05.70	SUM-CR209-01.19	NB	RT	1	1	1				7.5									
7701470	SUM-21-05.70	SUM-CR209-01.19	SB	RT	1	1	1				7.5									
7701470	SUM-21-05.70	SUM-CR209-01.19	EB	LT	1	1								3				11		
7701470	SUM-21-05.70	SUM-CR209-01.19	EB	RT	1	1						1	1		3			11		
7701470	SUM-21-05.70	SUM-CR209-01.19	WB	LT	1	1								3				11		
7701470	SUM-21-05.70	SUM-CR209-01.19	WB	RT	1	1						1	1		3			11		
7701535	SUM-21-06.80R		NB	RT	1	1	1	3			11									
7701535	SUM-21-06.80R		NB	LT	1	1		3			11									
7701500	SUM-21-06.80L		SB	RT	1	1	1	3			11									
7701500	SUM-21-06.80L		SB	LT	1	1		3			11									
7701594	SUM-21-07.57L WHEELING & LAKE ERIE	RFSB	RT	1	1	1		3			11									
7701594	SUM-21-07.57L WHEELING & LAKE ERIE	RFSB	LT	1	1			3			11									
7701624	SUM-21-07.59R WHEELING & LAKE ERIE	RRNB	RT	1	1	1		3			11									
7701624	SUM-21-07.59R WHEELING & LAKE ERIE	RRNB	LT	1	1	1		3			11									
7701713	SUM-21-08.14		NB	RT	1	1	1	3			11									
7701713	SUM-21-08.14		SB	RT	1	1	1	3			11									
7701748	SUM-21-08.63	SUM-CR83-01.71	NB	RT	1	1	1				7.5									
7701748	SUM-21-08.63	SUM-CR83-01.71	SB	RT	1	1	1				7.5									
7701748	SUM-21-08.63	SUM-CR83-01.71	EB	LT	1	1								3				11		
7701748	SUM-21-08.63	SUM-CR83-01.71	EB	RT	1	1						1	1		3			11		
7701748	SUM-21-08.63	SUM-CR83-01.71	WB	LT	1	1								3				11		
7701748	SUM-21-08.63	SUM-CR83-01.71	WB	RT	1	1						1	1		3			11		
TOTALS CARRIED TO GENERAL SUMMARY					28	28	14	30	6	166	6	6	18	18	132	2			15	
							NOTE 1	NOTE 2	NOTE 3		NOTE 1	NOTE 4	NOTE 2	NOTE 3		NOTE 1	NOTE 2	NOTE 3		

NOTE 1 I-h25b, MOUNTED UNDER OM-3R IF SPECIFIED, USE EXPRESSWAY / FREEWAY STRUCTURE INFO
NOTE 2 OM-3L
NOTE 3 OM-3R
NOTE 4 I-h25b, MOUNTED UNDER MAINLINE STRUCTURE ID SIGN, USE INTERSECTING ROADWAY STRUCTURE INFO

SIGN SUBSUMMARY

DESIGN AGENCY

 DESIGNER
 KMB
 REVIEWER
 CLG 05-03-22
 PROJECT ID
 112793
 SHEET
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DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15 DATED (REVISED) 7/15/2015

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

843 DATED 10/18/2019

844 DATED 04/20/2018

849 DATED 1/18/2013

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS, SECTIONS 102.05, 105.02, AND 513.04*. BASE CONTRACT

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK

SUM-77-2225 NE (SR 21)
 -REPAIR AND PATCH ALL UNSOUND AREAS OF EXISTING CONCRETE WEARING SURFACE OF THE APPROACH SLABS.
 -TREAT THE APPROACH SLABS WITH GRAVITY FED RESIN.
 -PATCH AND SEAL ALL UNSOUND AREAS OF PIERS AND ABUTMENTS WITH EPOXY-URETHANE.
 -REPAIR DETERIORATION IN PORTIONS OF THE RIGHT AND LEFT CONCRETE RAILINGS.
 -REMOVE EXISTING SEALANT AND RESEAL WITH EPOXY-URETHANE SEALER ON THE PARAPETS.
 -RESET AND REFURBISH ALL BEARINGS AT THE ABUTMENTS AND PIERS.
 -PROVIDE CLEARING AND GRUBBING 15 FEET AROUND THE STRUCTURE.
 -PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

SUM-21-0462 (OVER SR 21)
 -RESURFACE 25 FEET OF APPROACH PAVEMENT AT THE FORWARD AND REAR TO SMOOTH OUT THE APPROACH PAVEMENT / APPROACH SLAB TRANSITION.
 -PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS AND SEAL WITH EPOXY-URETHANE.
 -PROVIDE CLEARING AND GRUBBING 15 FEET AROUND THE STRUCTURE.
 -PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

SUM-21-0570 (OVER SR 21)
 -PROVIDE CLEARING AND GRUBBING 15 FEET AROUND THE STRUCTURE.
 -PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

SUM-21-0680L (OVER BARBERTON RESERVOIR INLET)
 -REMOVE AND REPLACE EXISTING ASPHALT WEARING SURFACE INCLUDING SAWING AND SEALING AT THE FORWARD AND REAR JOINTS (AS PER SCD AS-1-15, DETAIL A) (SEE PAVEMENT CALCULATIONS).
 -REMOVE DELAMINATIONS AND SPALLS FROM DECK UNDERSIDE.
 SEAL ALL SPALL REMOVED AREAS WITH EPOXY-URETHANE.
 -PROVIDE DUMPED ROCK ON THE FRONT AND REAR SLOPES UNDER THE STRUCTURE TO COVER THE EPOSED FOOTINGS.
 -PROVIDE CLEARING AND GRUBBING 15 FEET AROUND THE STRUCTURE.
 -PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

SUM-21-0680R (OVER BARBERTON RESERVOIR INLET)
 -REMOVE AND REPLACE EXISTING ASPHALT WEARING SURFACE INCLUDING SAWING AND SEALING AT THE FORWARD AND REAR JOINTS (AS PER SCD AS-1-15, DETAIL A) (SEE PAVEMENT CALCULATIONS).
 -REMOVE DELAMINATIONS AND SPALLS FROM DECK UNDERSIDE.
 SEAL ALL SPALL REMOVED AREAS WITH EPOXY-URETHANE.
 -REPAIR SLOPE PROTECTION AT ABUTMENT FOOTERS.
 -PROVIDE CLEARING AND GRUBBING 15 FEET AROUND THE STRUCTURE.
 -PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

SUM-21-0814 (OVER PIGEON CREEK)
 -REPAIR SOUR AT THE OUTLET.
 -PROVIDE CLEARING AND GRUBBING 15 FEET AROUND THE STRUCTURE.
 -PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.

SUM-21-0863 (OVER SR 21)
 -PATCH ALL UNSOUND AREAS OF CONCRETE DECK EDGES AND SEAL WITH EPOXY-URETHANE SEALANT.
 -RESET AND REFURBISH ALL THE BEARINGS AT THE FORWARD AND REAR ABUTMENTS.
 -PROVIDE CLEARING AND GRUBBING 15 FEET AROUND THE STRUCTURE.
 -PROVIDE NEW, CORRECT STRUCTURE IDENTIFICATION SIGNS.
 -CLEAN OUT SCUPPERS.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE: HIGH-PRESSURE WATER BLASTING WITH, OR WITHOUT, ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT OR VACUUM ABRASIVE BLASTING.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS

ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL WITHIN THE PLANS, A LUMP SUM QUANTITY IS INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR ITEM 201 – CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS. SCALPING IS NOT REQUIRED FOR THIS ITEM OF WORK. ALL VEGETATION SHALL BE REMOVED WITHIN 15 FEET (OR TO THE R/W LIMITS, WHICHEVER IS CLOSER) OF THE HEADWALLS, ABUTMENTS AND/OR PIERS.

ALL OTHER PROVISIONS AS SET FORTH IN THE CMS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 201 – CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS.

STRUCTURE PAINTING/CONCRETE SEALING OPERATIONS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT OR OTHER MATERIALS USED TO REPAIR, CLEAN, PAINT, SEAL OR TREAT ANY STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

ITEM SPECIAL - STRUCTURES: CONCRETE SPALL REMOVAL

THIS WORK WILL CONSIST OF REMOVING ALL VISIBLY SPALLED AREAS OF THE BOTTOM DECK FLOOR OF STRUCTURE AT THE LOCATIONS SUM-77-2225, SUM-21-0680L, SUM-21-0680R, AND SUM-21-0863. AFTER SPALLED CONCRETE AREAS HAVE BEEN REMOVED, REMOVAL AREAS WILL BE SEALED WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

CONCRETE SPALL REMOVAL WILL BE PAID FOR AT THE UNIT BID PRICE FOR SPECIAL – STRUCTURE MISC.: CONCRETE SPALL REMOVAL. THIS PRICE WILL INCLUDE THE COST OF LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK. REFER TO THE ESTIMATED QUANTITIES SHEET FOR SPECIFIC QUANTITIES.

SCOUR REPAIR (SUM-21-0814)

THE CONTRACTOR SHALL NOT PLACE DUMPED ROCK FILL TO A DEPTH ABOVE THE FLOW LINE ELEVATION OF THE EXISTING STEEL CULVERT.
 STRUCTURE SUM-21-0814 (FORWARD OUTLET)
 ITEM 601, DUMPED ROCK FILL, TYPE C, 5 CU YD

EROSION REPAIR

THE FOLLOWING QUANTITIES FOR EACH STRUCTURE SHALL BE USED TO REPAIR EROSION AT THE FOLLOWING LOCATIONS AS DIRECTED BY THE PROJECT ENGINEER:
 STRUCTURE SUM-77-2225 (REAR ABUTMENT SLOPE AND FOOTING)
 ITEM 203, BORROW, 15 CU YD
 ITEM 601, DUMPED ROCK FILL, TYPE C, 15 CU YD

STRUCTURE SUM-21-0680L (ABUTMENT SLOPES AND FOOTINGS)
 ITEM 203, BORROW, 30 CU YD
 ITEM 601, DUMPED ROCK FILL, TYPE C, 30 CU YD

STRUCTURE SUM-21-0680R (ABUTMENT SLOPES AND FOOTINGS)
 ITEM 203, BORROW, 30 CU YD
 ITEM 601, DUMPED ROCK FILL, TYPE C, 30 CU YD

ITEM 518 - SCUPPER MISC.: CLEANOUT

THIS WORK WILL CONSIST OF REMOVING ALL DEBRIS FROM ON TOP AND INSIDE OF THE SCUPPERS. SCUPPER CLEANOUT WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 518, SCUPPER MISC.: CLEANOUT. THIS PRICE WILL INCLUDE THE COST FOR LABOR, EQUIPMENT, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS WORK.

ITEM 516 SPECIAL - REFURBISHING BEARING DEVICES, AS PER PLAN (SUM-77-2225 AND SUM-21-0863)

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS, AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (C&MS 711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES FARENHEIT, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST O THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

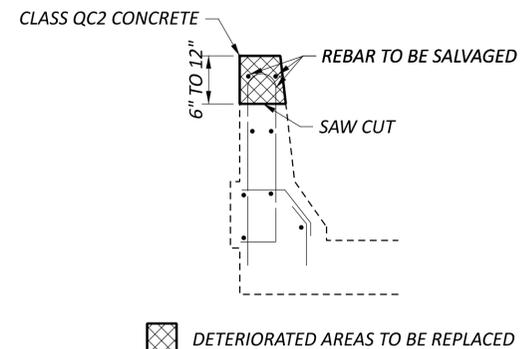
ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN (SUM-77-2225 AND SUM-21-0863)

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR A DISTANCE OF THE SEPARATION IN ACCORDANCE WITH C&MS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS. THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 511 - CONCRETE MISC.: PARAPET REPAIR

THIS ITEM WILL BE USED TO REPAIR DAMAGED PARAPETS OF STRUCTURE SUM-77-2225 NE.

SAWCUT AND REMOVE DAMAGED/SPALLED AREAS OF THE EXISTING PARAPETS TO A MINIMUM DEPTH OF 6" AND A MAXIMUM DEPTH OF 12" OR AS DIRECTED BY THE ENGINEER. CARE SHALL BE TAKEN WHEN REMOVING SPALLED CONCRETE TO SALVAGE EXISTING REBAR. CLASS QC2 CONCRETE WILL BE USED TO REPAIR THE DAMAGED PARAPETS. THE REMOVAL OF CONCRETE, PREPARATION OF THE SURFACES, FORMS, AND CLASS QC2 CONCRETE WILL BE INCIDENTAL TO THIS ITEM. PAYMENT WILL BE MADE AT THE CONTRACT PRICE PER FOOT FOR ITEM 511, CONCRETE MISC.: PARAPET REPAIR.



ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION (SUM-77-2225)

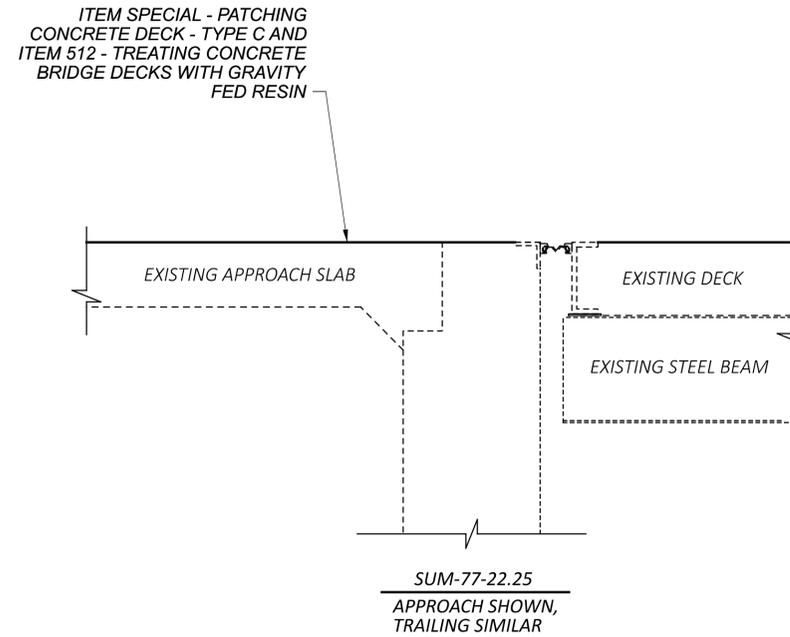
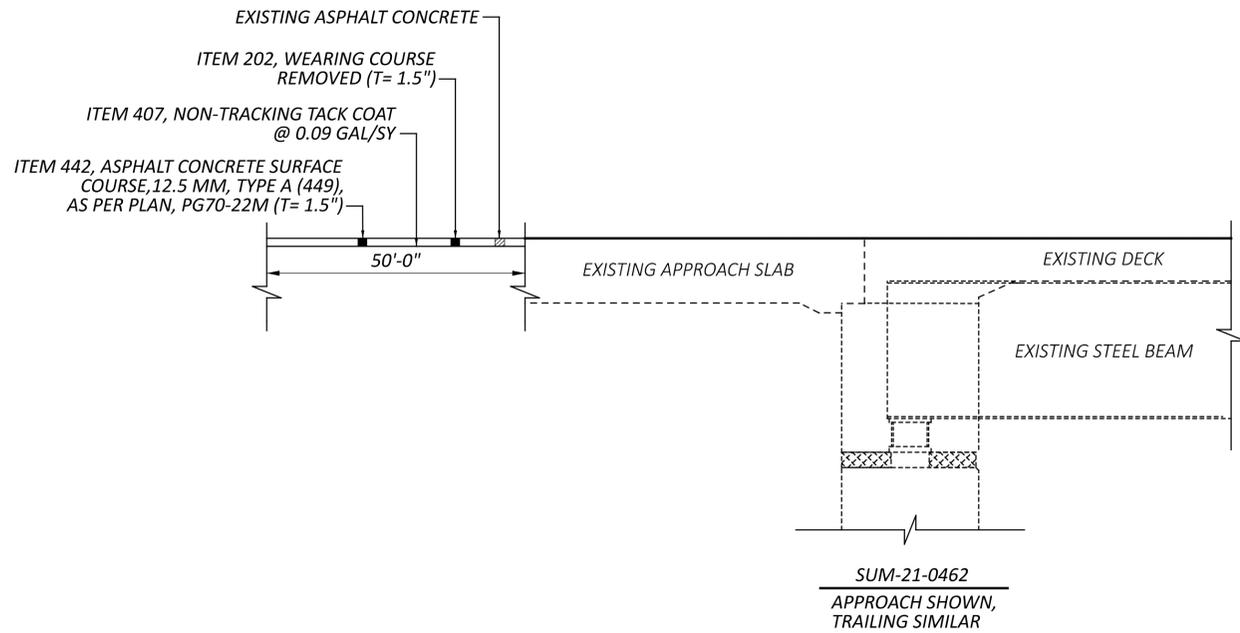
THIS WORK CONSISTS OF CONCRETE PATCHING ALL THREE OF THE REAR APPROACH PIER COLUMNS PER SUPPLEMENTAL SPECIFICATION 844. USE THE FOLLOWING ANODE SPACING FOR THIS LOCATION OR AS DIRECTED BY THE ENGINEER.
 36 SQ FT OF CONCRETE PATCHING
 26" MAX SPACING OF ANODES ALONG APPROXIMATELY 8'-0" OF EXISTING REINFORCING STEEL LENGTH.

STRUCTURE GENERAL NOTES
 BRIDGE NO.: SUM-77-2225, SUM-21-0462, SUM-210570,
 SUM-21-0680L, SUM-21-0680R, SUM-21-0814, SUM-21-0863

SFN	
VARIOUS	
DESIGN AGENCY	
DESIGNER	CHECKER
KMB	CLG
REVIEWER	
MJA 05-03-22	
PROJECT ID	
112793	
SUBSET	TOTAL
1	5
SHEET	TOTAL
P.15	19

ESTIMATED QUANTITIES												
BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
SUM-77-2225 7701756 02/MS/47	SUM-21-0462 7701446 03/MS/47	SUM-21-0570 7701470 03/MS/47	SUM-21-0680L 7701500 03/MS/47	SUM-21-0680R 7701535 03/MS/47	SUM-21-0814 7701713 04/MS/04	SUM-21-0863 7701748 03/MS/47						
LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP						
	312			30	30		201	11001	LUMP	CLEARING AND GRUBBING, AS PER PLAN, AROUND BRIDGES/STRUCTURES/CULVERTS	1 / 5	
15	28						202	23500	SY	WEARING COURSE REMOVED (T=1.5")		
	13			84	84		203	40000	CY	BORROW		
							407	20000	GAL	NON-TRACKING TACK COAT @ 0.09 GAL/SY		
							409	30000	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS		
							442	22101	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN (PG70-22M) (T=1.5")	1 / 5	
178							512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN		
297	6		12	15		15	512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
273							512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		
106							512	74500	FT	REMOVAL OF EXISTING PAVEMENT MARKING		
16							516	45305	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	1 / 5	
164	50						519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	1 / 5	
9							519	12304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C		
5			12	15		5	SPECIAL	53008800	SY	STRUCTURES- CONCRETE SPALL REMOVAL	1 / 5	
15			30	30		5	601	32100	CY	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER		
							601	27000	CY	DUMPED ROCK FILL, TYPE C		
LUMP						LUMP	516	47001	LUMP	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	1 / 5	
						6	518	12500	EACH	SCUPPER, MISC.: CLEANOUT		
36							844	10000	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION		

STRUCTURE ESTIMATED QUANTITIES
 BRIDGE NO.: SUM-77-2225, SUM-21-0462, SUM-210570,
 SUM-21-0680L, SUM-21-0680R, SUM-21-0814, SUM-21-0863



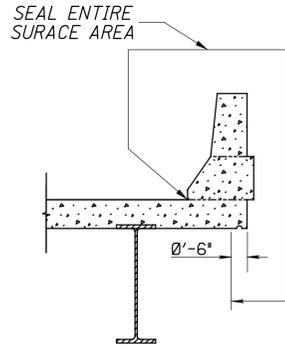
BRIDGE NUMBER	APPROACH PAVEMENT / APPROACH SLAB TRANSITION								APPROACH SLABS										
	LENGTH (TRANSITION)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	202	442	407	409	LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)	512	SPECIAL	512				
					WEARING COURSE REMOVED (T = 1.5")	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN (PG70-22M) (T = 1.5")	NON-TRACKING TACK COAT @ 0.09 GAL/SY	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS (SCD AS-1-15, DETAIL A)					SY	SY	GAL	FT	FT	SQ YD	FT
SUM-77-2225									25.00	32.00	88.89	FWD	88.89	4.44	106.00				
									25.00	32.00	88.89	REAR	88.89	4.44					
SUM-21-0462	50.00	28.00	155.56	FWD	155.56	6.48	14.00												
	50.00	28.00	155.56	REAR	155.56	6.48	14.00												
SUM-21-0680L		42.00					84.00												
SUM-21-0680R		42.00					84.00												
SUM-21-0863														10.00					
TOTALS					312	13	28	168	TOTALS				178	19	106				

STRUCTURE DETAILS

BRIDGE NO.: SUM-77-2225, SUM-21-0462, SUM-21-0570, SUM-21-0680L, SUM-21-0680R, SUM-21-0814, SUM-21-0863

SFN
 VARIOUS
 DESIGN AGENCY

DESIGNER: KMB
 CHECKER: CLG
 REVIEWER: MJA
 PROJECT ID: 112793
 SUBSET: 3 / TOTAL: 5
 SHEET: P.17 / TOTAL: 19



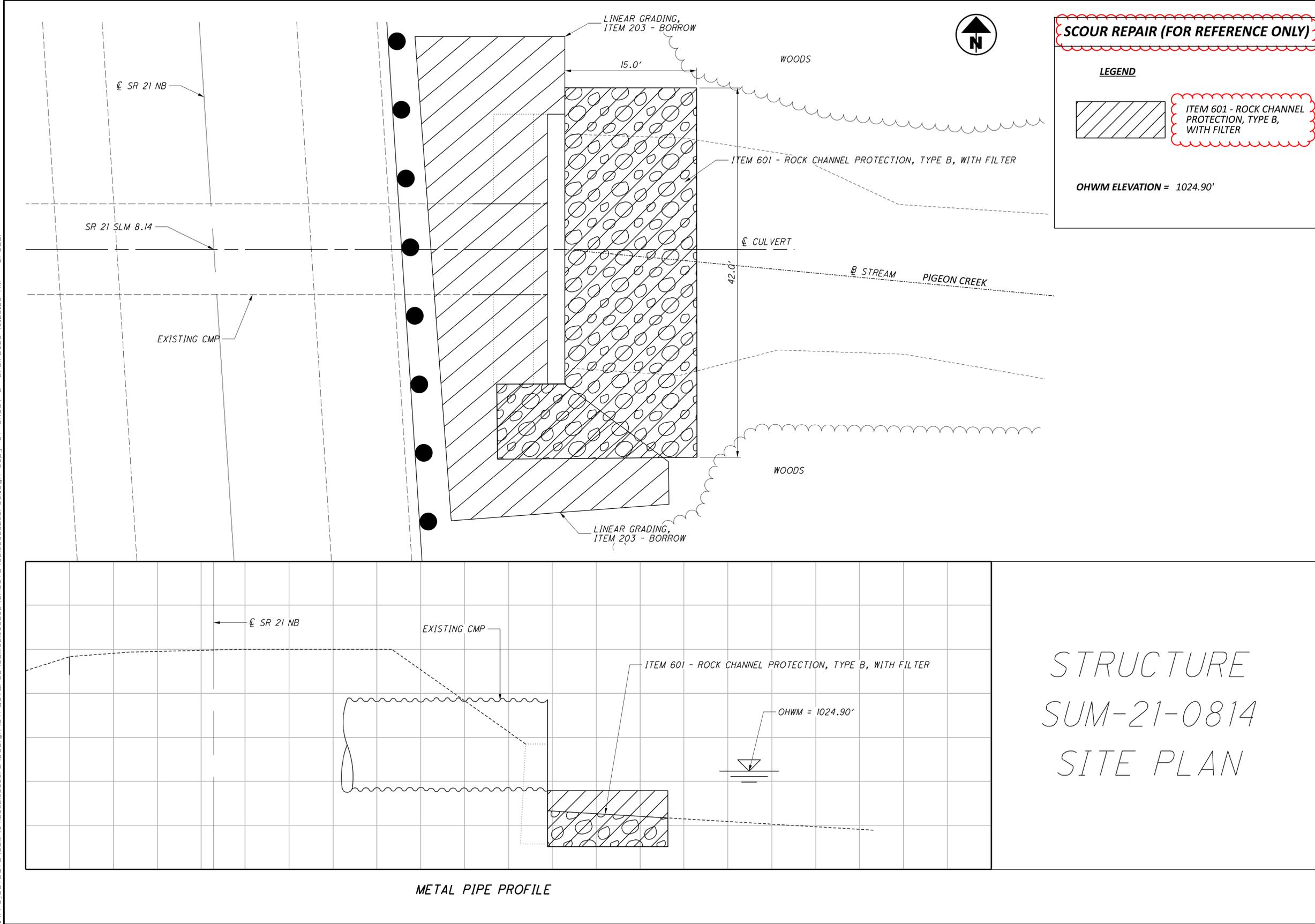
DETAIL A
 CONCRETE DECK WITH
 DEFLECTOR PARAPET

BRIDGE NUMBER	SEALING PAY ITEM	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES				
					ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
SUM-77-2225	ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	STEEL CONTINUOUS MULTI-BEAM	SEAL ALL PATCHED CONCRETE AT ABUTMENTS SEAL ALL PATCHED CONCRETE AT FACE OF PIERS SEAL ALL SPALL REMOVAL SURFACES ON DECK UNDERSIDE	MATCH EXISTING	12	12			24
SUM-77-2225	ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	STEEL CONTINUOUS MULTI-BEAM	SEAL PER DETAIL A	MATCH EXISTING			273		273
SUM-21-0462	ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	STEEL CONTINUOUS MULTI-BEAM	SEAL ALL PATCHED CONCRETE SURFACES ON PIERS	MATCH EXISTING		6			6
SUM-21-0680R	ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	CONCRETE CONTINUOUS SLAB	SEAL ALL SPALL REMOVAL SURFACES ON DECK UNDERSIDE	MATCH EXISTING			15		15
SUM-21-0680L	ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	CONCRETE CONTINUOUS SLAB	SEAL ALL SPALL REMOVAL SURFACES ON DECK UNDERSIDE	MATCH EXISTING			12		12
SUM-21-0863	ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	STEEL CONTINUOUS MULTI-BEAM	SEAL ALL PATCHED CONCRETE SURFACES ON DECK UNDERSIDE AND EDGES	MATCH EXISTING			10		10

CONCRETE SEALING DETAILS
 BRIDGE NO.: SUM-77-2225, SUM-21-0462, SUM-210570,
 SUM-21-0680L, SUM-21-0680R, SUM-21-0814, SUM-21-0863

SFN
 VARIOUS
 DESIGN AGENCY

DESIGNER: KMB
 CHECKER: CLG
 REVIEWER: MJA
 PROJECT ID: 112793
 SUBSET: 4, TOTAL: 5
 SHEET: P.18, TOTAL: 19



SCOUR REPAIR (FOR REFERENCE ONLY)

LEGEND

ITEM 601 - ROCK CHANNEL PROTECTION, TYPE B, WITH FILTER

OHWM ELEVATION = 1024.90'

STRUCTURE
 SUM-21-0814
 SITE PLAN

METAL PIPE PROFILE

SUM / WAY - 21 / 585 - 0.00 / VAR PART 1 PID No. 94123		SITE PLAN BRIDGE NO: SUM-21-0814 FEATURE INTERSECTED: PIGEON CREEK		SUMMIT STA. STA.	DESIGNED BFR CHECKED MJA	DRAWN XXX REVISED XXX	REVIEWED XXX STRUCTURE FILE NUMBER 7701713	DATE MM/DD/YY XXX	DESIGN AGENCY ODOT --- DISTRICT 4 PLANNING AND ENGINEERING
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31 / 31

STRUCTURE DETAILS - SCOUR REPAIR PLAN
 SUM-21-8.14
 OVER PIGEON CREEK

SFN 7701713
 DESIGN AGENCY

DESIGNER: CLG
 CHECKER: RCL
 REVIEWER: RCL
 PROJECT ID: 112793
 SUBSET TOTAL: 5 / 5
 SHEET TOTAL: P.19 / 19