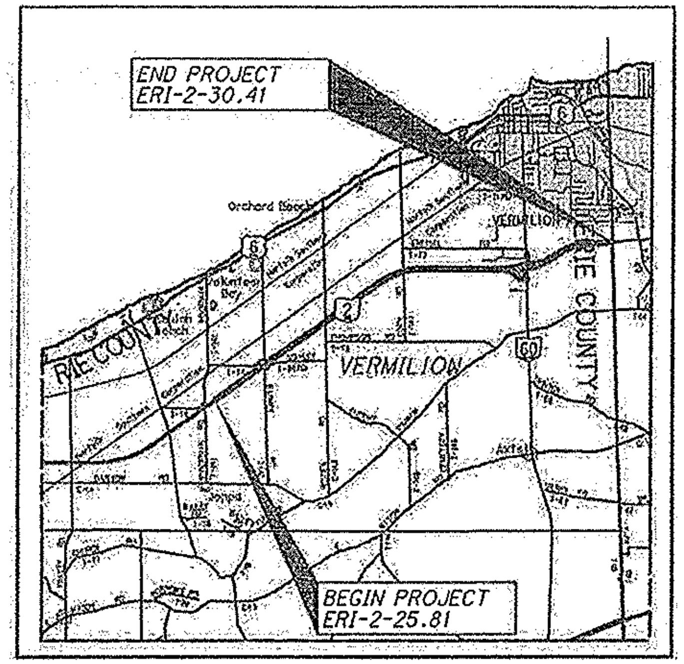
ERI - SR 2-25.81 PM Contract Proposal Available @ www.
160389 PID - 77439 Contracts.dot.state.oh.us/home
Dist 3 6/16/2016

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ERI-2-25.81

BERLIN TOWNSHIP
VERMILION TOWNSHIP
ERIE COUNTY



LOCATION MAP

LATITUDE: 41° 23' 49" LONGITUDE: 82° 23' 30"

SCALE IN MILES
0 1 2 3 4

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

DESIGN DESIGNATION

SEE PAGE 2 FOR DESIGN DESIGNATION

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT WILL INCLUDE PAVEMENT REPAIRS, MICROSURFACING, AND PAVEMENT MARKINGS ALONG OHIO 2.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA ______ N/A (MAINTENANCE PROJECT)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA ______ N/A (MAINTENANCE PROJECT)
NOTICE OF INTENT EARTH DISTURBED AREA ______ N/A (MAINTENANCE PROJECT)

LIMITED ACCESS

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

2013 SPECIFICATIONS

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

I HEREBY APPROVED 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 9, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS ANDESTIMATES.

PLANS PREPARED BY:

ODOT DISTRICT THREE PLANNING & ENGINEERING DEPT

APPROVED ______
DATE 3.29.2016 DISTRICT DEPUTY DIRECTOR

APPROVED ______
DATE 4-1-16 DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE
Call Before You Dig
1-800-362-2764
(Non-members must be called directly)

OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE
1-800-925-0988

ENGINEERS SEAL

STATE OF OHIO
KARLA R. BOHMER
E-76834
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Karla R. Bohmer
DATE: 2/29/16

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	TC-41.20	10/18/13		
		TC-42.20	10/18/13		
DM-4.3	1/15/16	TC-52.10	10/18/13		
DM-4.4	1/15/16	TC-52.20	7/18/14		
		TC-65.10	1/17/14		
MT-95.30	7/18/14	TC-65.11	7/18/14		
MT-95.50	10/16/15	TC-71.10	1/17/14		
MT-98.10	7/18/14	TC-72.20	7/18/14		
MT-98.11	7/18/14				
MT-98.20	7/18/14				
MT-98.22	7/18/14				
MT-98.28	7/18/14				
MT-98.29	7/19/13				
MT-99.20	7/19/13				
MT-101.90	7/17/15				
MT-105.10	7/19/13				

SUPPLEMENTAL SPECIFICATIONS

800	4/15/16
821	4/20/12
832	1/17/14
897	1/16/15

FEDERAL PROJECT NO. E040692
PID NO. 77439
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
ERI-2-25.81

I:\ProjectData\77439\Design\Roadway\Sheets\77439GT001.dgn

DESIGN DESIGNATION (ERI-2-25.81-29.50)

CURRENT ADT (2017)	20000
DESIGN YEAR ADT (2025)	20000
DESIGN HOURLY VOLUME (2025)	2000
DIRECTIONAL DISTRIBUTION	0.55
TRUCKS (24 HOUR B&C)	0.15
DESIGN SPEED	70 MPH
LEGAL SPEED	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION: PRINCIPAL ARTERIAL	
NHS PROJECT	YES

DESIGN EXCEPTIONS

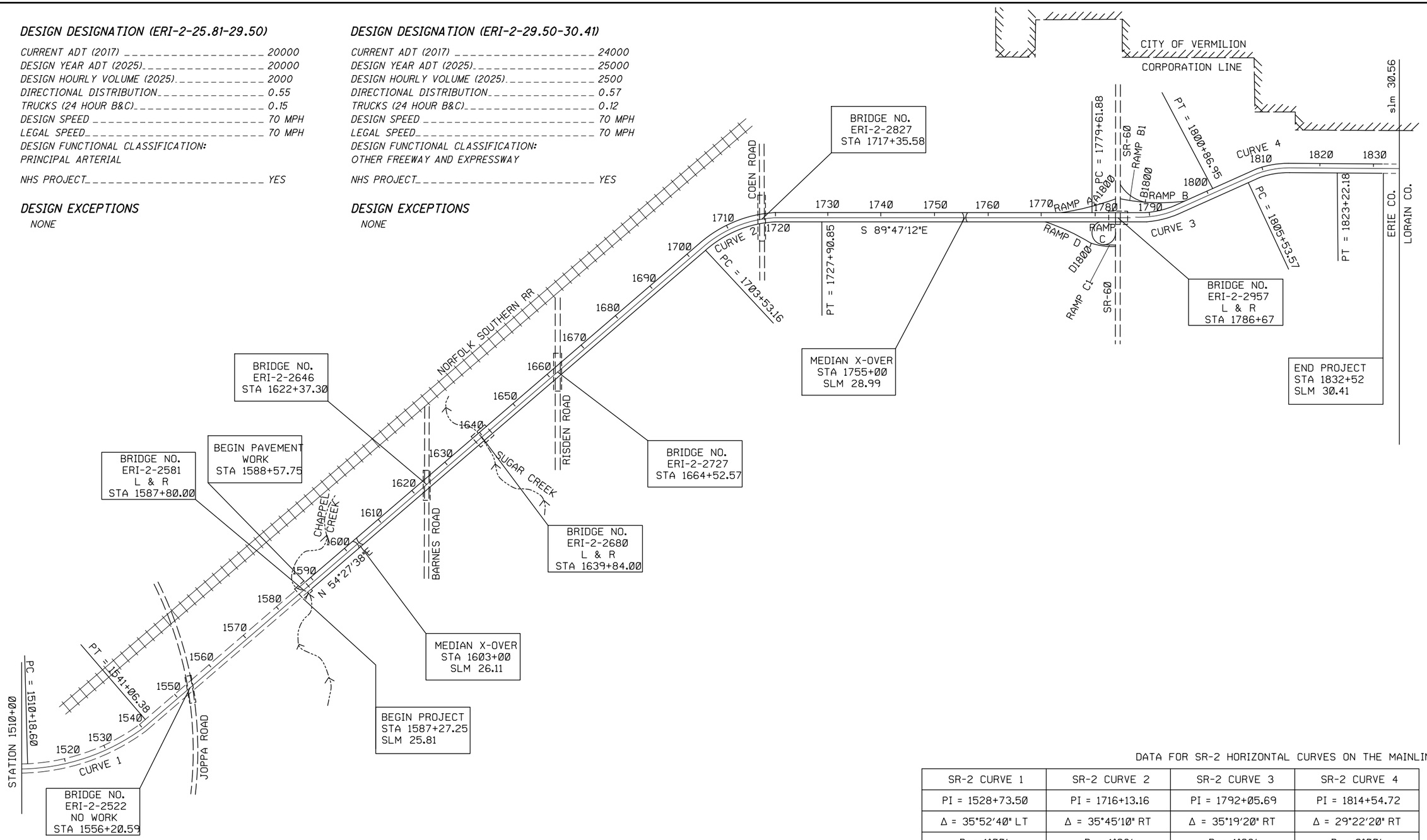
NONE

DESIGN DESIGNATION (ERI-2-29.50-30.41)

CURRENT ADT (2017)	24000
DESIGN YEAR ADT (2025)	25000
DESIGN HOURLY VOLUME (2025)	2500
DIRECTIONAL DISTRIBUTION	0.57
TRUCKS (24 HOUR B&C)	0.12
DESIGN SPEED	70 MPH
LEGAL SPEED	70 MPH
DESIGN FUNCTIONAL CLASSIFICATION: OTHER FREEWAY AND EXPRESSWAY	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE



DATA FOR SR-2 HORIZONTAL CURVES ON THE MAINLINE

SR-2 CURVE 1	SR-2 CURVE 2	SR-2 CURVE 3	SR-2 CURVE 4
PI = 1528+73.50	PI = 1716+13.16	PI = 1792+05.69	PI = 1814+54.72
Δ = 35°52′40" LT	Δ = 35°45′10" RT	Δ = 35°19′20" RT	Δ = 29°22′20" RT
D = 1°00′	D = 1°28′	D = 1°28′	D = 2°00′
R = 5729.58′′	R = 3906.53′	R = 3906.53′	R = 2864.79′
L = 3587.78′	L = 2437.69′	L = 2408.33′	L = 1168.61′
T = 1854.90′	T = 1260.00′	T = 1243.81′	T = 901.16′
E = 292.77	E = 198.17′	E = 193.23′	E = 98.10′
S = 0.0322	S = 0.0472	S = 0.0492	S = 0.0644
DGN SPD = 65 MPH	DGN SPD = 65 MPH	DGN SPD = 65 MPH	DGN SPD = 65 MPH

HORIZONTAL SCALE IN FEET
0 500 1000 2000

CALCULATED ERS
CHECKED KRB

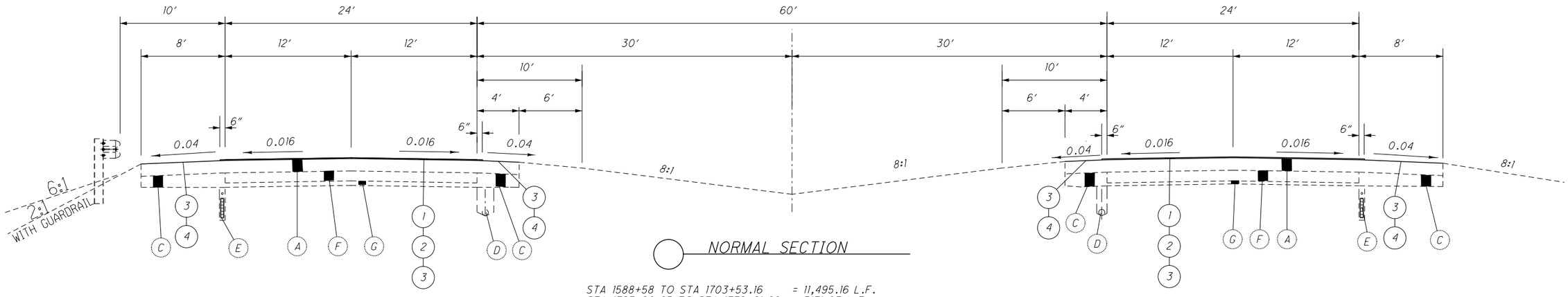
SCHEMATIC PLAN/ DESIGN DESIGNATION

ERI-2-25.81

2
13

DESIGN FILE: i:\ProjectData\77439\Design\Roadway\Sheets\77439GB001.dgn
WORKSTATION: escholtz
DATE: 3/1/2016
MODELNAME: Default

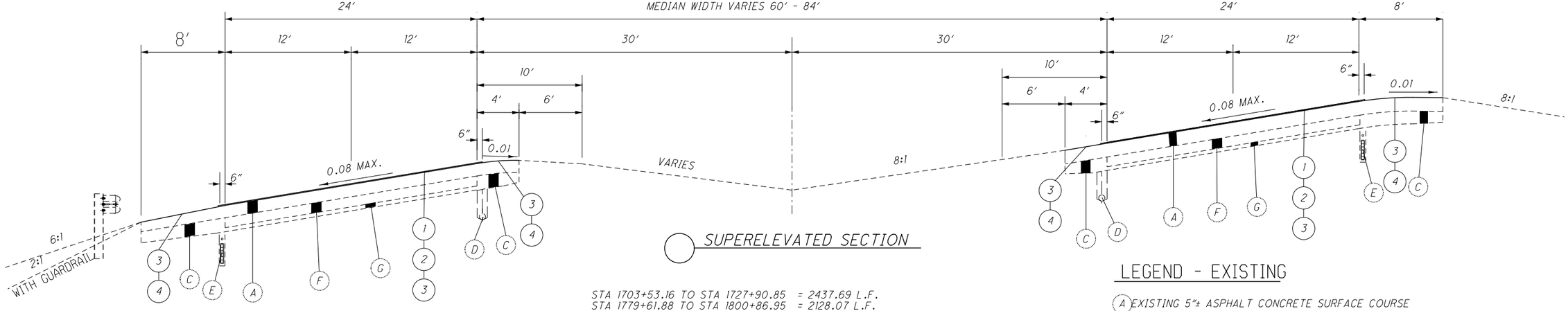
℄ SURVEY,
SR-2



NORMAL SECTION

STA 1588+58 TO STA 1703+53.16 = 11,495.16 L.F.
STA 1727+90.85 TO STA 1779+61.88 = 5171.03 L.F.
STA 1800+86.95 TO STA 1805+53.57 = 466.62 L.F.
STA 1823+22.18 TO STA 1832+52 = 929.82 L.F.
TOTAL = 18062.63 L.F.

℄ SURVEY,
SR-2



SUPERELEVATED SECTION

STA 1703+53.16 TO STA 1727+90.85 = 2437.69 L.F.
STA 1779+61.88 TO STA 1800+86.95 = 2128.07 L.F.
STA 1805+53.57 TO STA 1823+22.18 = 1768.61 L.F.
TOTAL = 6334.37 L.F.

LEGEND - PROPOSED

(1) ITEM 421 MICROSURFACING, SURFACE COURSE, AS PER PLAN (16 LB/SY)

(2) ITEM 421 MICROSURFACING, LEVELING COURSE, AS PER PLAN (14 LB/SY)

(3) ITEM 423 CRACK SEALING, MISC: TYPE II OR III

(4) ITEM SPECIAL - MISC: MASTIC SURFACE SEAL

LEGEND - EXISTING

(A) EXISTING 5"± ASPHALT CONCRETE SURFACE COURSE

(B) EXISTING 3"± ASPHALT CONCRETE SURFACE COURSE

(C) EXISTING 8" TO 11" VAR BITUMINOUS AGGREGATE BASE

(D) EXISTING 4" SHALLOW PIPE UNDERDRAIN

(E) EXISTING SHALLOW UNDERDRAIN

(F) EXISTING 8" CONTINUOUSLY REINFORCED CONCRETE

(G) EXISTING 3" BITUMINOUS AGGREGATE BASE

(H) EXISTING 12" BITUMINOUS AGGREGATE BASE

(I) EXISTING 6" BITUMINOUS AGGREGATE BASE

(J) EXISTING 9" REINFORCED CONCRETE

CALCULATED ERS CHECKED KRB

TYPICAL SECTIONS

ERI-2-25.81

DESIGN FILE: i:\ProjectData\77439\Design\Roadway\Sheets\77439GY001.dgn MODEL NAME: Sheet
WORKSTATION: escholtz DATE: 3/1/2016

NORMAL RAMP SECTION
LIMITED STATIONING

* STA 1775+00 TO STA 1778+00 RAMP A = 300.00 L.F.
* STA 1781+38 TO STA 1786+65 RAMP A = 527.00 L.F.
* STA 1787+70 TO STA 1790+19 RAMP B1 = 249.00 L.F.
STA 1786+30 TO STA 1788+10 RAMP C1 = 180.00 L.F.
* STA 1779+99 TO STA 1782+39 RAMP D = 240.00 L.F.
STA 1785+30 TO STA 1788+10 RAMP D = 280.00 L.F.
TOTAL = 1776.00 L.F.

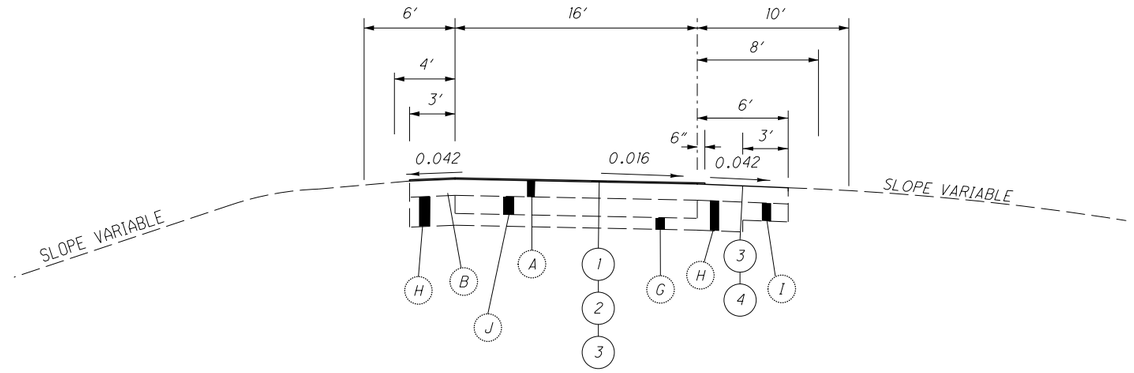
SUPERELEVATED RAMP SECTION
LIMITED STATIONING

STA 1778+00 TO STA 1781+38 RAMP A = 338.00 L.F.
STA 1786+61 TO STA 1796+17 RAMP B = 956.00 L.F.
STA 1783+93 TO STA 1772+38 RAMP C = 1155.00 L.F.
STA 1775+49 TO STA 1779+99 RAMP D = 450.00 L.F.
* STA 1782+39 TO STA 1785+30 RAMP D = 291.00 L.F.
TOTAL = 3190.00 L.F.

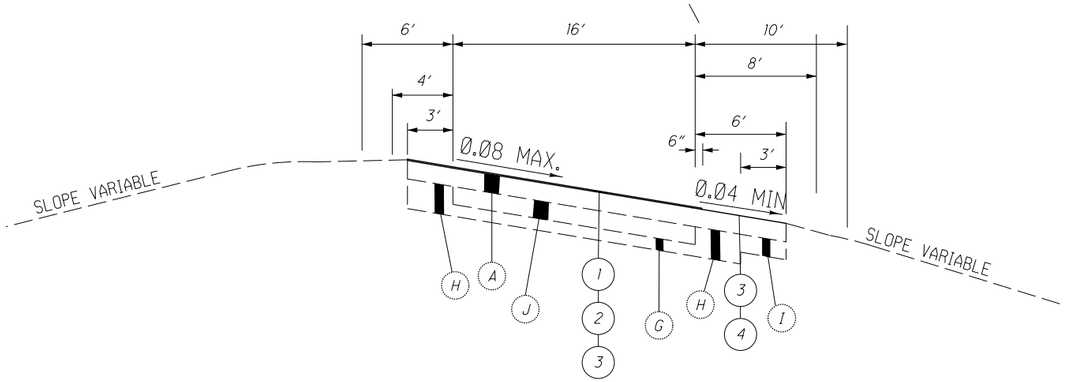
* INDICATES SECTION IS OPPOSITE HAND
FROM THAT SHOWN IN DRAWING

BARRIER MEDIAN
SECTION

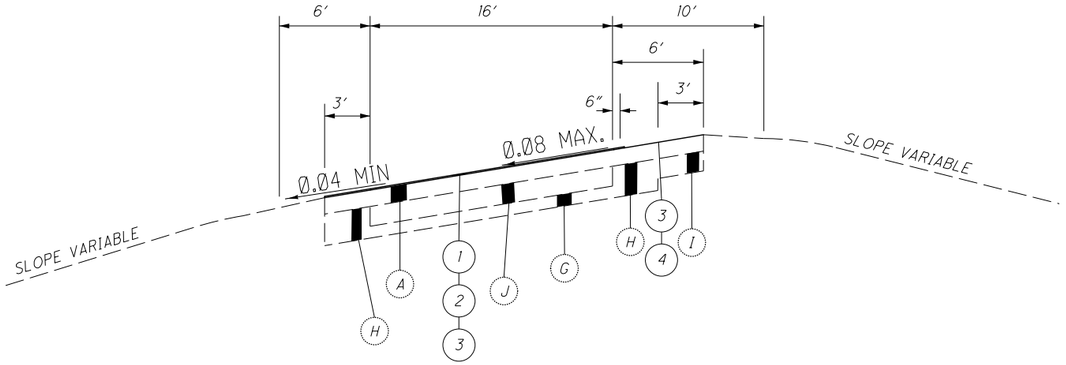
STA 1776+20.04 TO STA 1778+05.00 RAMP C = 184.96 L.F.
STA 1785+29.56 TO STA 1787+80.00 RAMP C1 = 250.44 L.F.
STA 1783+00.00 TO STA 1785+29.56 RAMP D = 229.56 L.F.
TOTAL = 664.96 L.F.



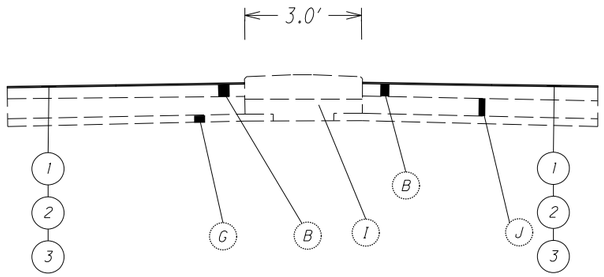
NORMAL RAMP SECTION



SUPERELEVATED RAMP SECTION



REVERSE SUPERELEVATED RAMP SECTION



CALCULATED ERS
CHECKED KRB

TYPICAL SECTIONS

ERI-2-25.81

4
13

DESIGN FILE: i:\ProjectData\77439\Design\Roadway\Sheets\77439GY001.dgn
WORKSTATION: escholtz
DATE: 3/1/2016
MODELNAME: Sheet

GENERAL

CONSTRUCTION NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY EMAIL AT D03.PIO@DOT.STATE.OH.US

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4318 OR EMAIL AT LOUIS.TUMBLIN@DOT.STATE.OH.US

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.STATE.OH.US

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

EXISTING PLANS

EXISTING PLANS ENTITLED ERI-2-25.81 (PID 23800) MAY BE INSPECTED IN THE ODOT DISTRICT 3 OFFICE IN ASHLAND.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

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.

UTILITIES

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

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

COLUMBIA GAS OF OHIO
1800 BROAD AVE.
FINDLAY, OHIO 45840
419-277-1349

CENTURYLINK
203 W. 9TH ST.
LORAIN, OHIO 44052
440-244-8423

ERIE COUNTY ENGINEER'S OFFICE
2700 COLUMBUS AVENUE
SANDUSKY, OHIO 44870
419-627-7710

ERIE COUNTY DEPT. OF ENVIRO. SERVICES
554 RIVER ROAD
P.O. BOX 469
HURON, OHIO 44839
419-433-7303

NORTHERN OHIO RURAL WATER
P.O. BOX 96
COLLINS, OHIO 44826
419-668-7213

OHIO EDISON COMPANY
2508 WEST PERKINS AVE.
SANDUSKY, OHIO 44870
419-627-6881

ODOT DISTRICT 3
906 CLARK AVENUE
ASHLAND, OHIO 44805
419-207-7045

TIME WARNER CABLE
8150 DOW CIRCLE
STRONGSVILLE, OHIO 44136
216-575-8016 EXT. 2165555034

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

SEQUENCE OF WORK

1) PERFORM PAVEMENT REPAIRS
2) CRACK SEAL PAVEMENT
3) APPLY MASTIC SURFACE SEAL ON SHOULDERS
4) MICROSURFACE MAINLINE AND RAMPS
5) APPLY PERMANENT STRIPING

PAVEMENT

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR
ITEM 253 - PAVEMENT REPAIR

THESE ITEMS OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT OR PAVED BERM WHICH MAY BE ASPHALT, BRICK, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE.

PAVEMENT REPAIR SHALL BE PERFORMED BEFORE PLACEMENT OF THE LEVELING AND/OR SURFACE COURSE. THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT WITH AN AVERAGE DEPTH OF 3.5" FOR ESTIMATING PURPOSES.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 2 FEET WIDE.

REPLACEMENT MATERIAL SHALL BE ITEM 301 OR ITEM 442 19MM MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 442 19MM CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 1.5" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". THE CONTRACTOR HAS THE OPTION OF USING EITHER ITEM 301 OR ITEM 442 19MM MATERIAL WHEN THE PAVEMENT REPAIR IS BETWEEN 3" AND 5" DEEP. ITEM 301 SHALL USE PG64-22 ASPHALT BINDER AND ITEM 442 19MM SHALL USE PG64-28 BINDER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. FOR PAYMENT PURPOSES ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR IS TO BE A MAXIMUM OF 4" DEEP AND ITEM 253 PAVEMENT REPAIR IS FOR DEPTHS GREATER THAN 4". PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR OR ITEM 253 - PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

SR 2 ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR
ESTIMATED QUANTITIES AS SHOWN ON SHEET 13 = 324.3 CY
QUANTITIES TO BE USED AS DIRECTED BY ENGINEER = 100.7 CY
TOTAL = 425 CY

SR 2 ITEM 253 - PAVEMENT REPAIR= 25 CY

ITEM 421 - MICROSURFACING, SURFACE COURSE, AS PER PLAN

ALL REQUIREMENTS OF ITEM 421 APPLY. IN ADDITION, SUPPLY A BLEND OF A MINIMUM OF 50% IGNEOUS DIABASE TRAP ROCK AND A MAXIMUM OF 50% LIMESTONE AGGREGATE FROM APPROVED SOURCES FOR USE AS AGGREGATE IN ITEM 421. DO NOT USE OTHER AGGREGATES.

MICROSURFACING SHALL BE IN ACCORDANCE WITH ITEM 421 WITH THE FOLLOWING CHANGE: TRUCK MOUNTED MACHINES ARE NOT PERMITTED ON THIS PROJECT.

OMIT ITEM 421 ON STRUCTURES WITH CONCRETE WEARING SURFACE.

THE CONTRACTOR IS RESPONSIBLE FOR COVERING ANY CASTINGS SO THE MICROSURFACING WILL NOT COVER THE CASTINGS (MONUMENT BOXES, MANHOLES, ETC.)

ITEM 421 - MICROSURFACING, LEVELING COURSE, AS PER PLAN

ALL REQUIREMENTS OF ITEM 421 APPLY.

MICROSURFACING SHALL BE IN ACCORDANCE WITH ITEM 421 WITH THE FOLLOWING CHANGE: TRUCK MOUNTED MACHINES ARE NOT PERMITTED ON THIS PROJECT.

OMIT ITEM 421 ON STRUCTURES WITH CONCRETE WEARING SURFACE.

THE CONTRACTOR IS RESPONSIBLE FOR COVERING ANY CASTINGS SO THE MICROSURFACING WILL NOT COVER THE CASTINGS (MONUMENT BOXES, MANHOLES, ETC.)

ITEM 423 - CRACK SEALING, TYPE II OR TYPE III

THE CONTRACTOR SHALL SEAL ALL VISABLE JOINTS AND CRACKS OVER TWO (2) FEET IN LENGTH ACCORDING TO ITEM 423 PRIOR TO MICROSURFACING.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER SQUARE YARD.

ITEM SPECIAL - AIR SPEED ZONE MARKING

THIS ITEM IS TO MEET CMS 646 EPOXY. THE SPEED MEASUREMENT MARKINGS ARE TO BE WHITE AND 24 INCHES WIDE (MEASURED IN THE DIRECTION OF TRAVEL) AND FOUR (4) FEET IN LENGTH.

PLACE THE MARKINGS AT 0.25 MILE INTERVALS OVER A ONE (1) MILE LENGTH OF ROADWAY ENTIRELY ON THE PAVED SHOULDERS. THE ZONE IS TO START AT ERI-2-26.00 AND END AT ERI-2-27.00 FOR BOTH DIRECTIONS OF TRAFFIC.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE MARKINGS LAID OUT BY A STATE OF OHIO REGISTERED SURVEYOR. A RECORD IS TO BE KEPT AND ONE ORIGINAL SIGNED AND SEALED DOCUMENT IS TO BE SENT TO THE DISTRICT 3 TRAFFIC ENGINEER AND ONE COPY FOR THE DISTRICT CONSTRUCTION ENGINEER.

MEASUREMENT AND PAYMENT: THE FIVE (5) MARKINGS PLACED ON EACH OF THE TWO SHOULDERS IN EACH 1 MILE OF ROADWAY PER EACH DIRECTION OF TRAVEL EQUAL ONE ZONE. ONE ZONE WILL BE MEASURED AS 1 EACH. PAYMENT FOR ALL MATERIALS, LABOR, EQUIPMENT AND SURVEYING FOR ACCEPTED WORK IS TO BE INCLUDED PER EACH IN ITEM SPECIAL - AIR SPEED ZONE MARKING.

ITEM 897 - PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A

TAPER THE PLANING AT BUTT JOINT LOCATIONS AT STRUCTURES WITH CONCRETE DECKS, FOLLOWING THE REQUIREMENTS OF STANDARD CONSTRUCTION DRAWING BP-3.1.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE ABOVE WORK. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SY OF ITEM 897 - PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A.

COORDINATION OF WORK BETWEEN CONTRACTORS

THE CONTRACTOR SHOULD BE AWARE THAT THERE MAY BE OTHER WORK BEING PERFORMED BY A SEPARATE CONTRACT. D03-BH-FY2016B (PID 87694) IS A BRIDGE REPAIR PROJECT THAT INCLUDES WORK TO STRUCTURE ERI-2-25.81 OVER CHAPPEL CREEK AND ERI-2-26.80 OVER SUGAR CREEK. THE WORK IS SCHEDULED TO BEGIN WORK IN THE 2016 CONSTRUCTION SEASON. COORDINATION OF WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

ITEM 646 - EPOXY PAVEMENT MARKINGS

ITEM 646 IS TO BE PLACED, AT MINIMUM, SEVEN (7) CALENDAR DAYS AFTER ITEM 421 MICROSURFACING HAS BEEN PLACED.

CALCULATED ERS
CHECKED KRB

GENERAL NOTES

ERI-2-25.81

ITEM SPECIAL - MASTIC SURFACE SEAL

1.0 DESCRIPTION.
THIS WORK SHALL CONSIST OF MIXING CATIONIC ASPHALT EMULSION, AGGREGATE, WATER, AND OTHER ADDITIVES AS NEEDED AND APPLYING THE MIXTURE ON THE PAVED SHOULDER PAVEMENT AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

2.0 MATERIAL REQUIREMENTS

2.1 ASPHALT EMULSION.
BITUMINOUS MATERIAL SHALL BE AN ASPHALT EMULSION, GRADE CSS-1H, IN ACCORDANCE WITH THE FOLLOWING TABLE. THE BITUMINOUS MATERIAL SHALL SHOW NO SEPARATION AFTER MIXING. THE EMULSION SHALL BE SAMPLED IN ACCORDANCE WITH AASHTO T 40.

CSS-1H	Min.	Max.
Viscosity, Saybolt Furol at 25° C, seconds	10	90
Particle charge test	Positive+	
Sieve test, %	--	0.50#
Residue, %	57	--
Test on Residue from Distillation	Min.	Max.
Penetration, 25° C, 100 g, 5 s	30	150

*THE STORAGE STABILITY TEST MAY BE WAIVED PROVIDED THE ASPHALT EMULSION STORAGE TANK AT THE MIXING SITE HAS ADEQUATE PROVISIONS FOR CIRCULATING THE ENTIRE CONTENTS OF THE TANK, AND PROVIDED SATISFACTORY FIELD RESULTS ARE OBTAINED.
+IF THE PARTICLE CHARGE TEST IS INCONCLUSIVE, MATERIAL HAVING A MAXIMUM PH VALUE OF 6.7 WILL BE ACCEPTABLE.
#THE SIEVE TEST MAY BE WAIVED IF MATERIAL APPLIES WITHOUT CLOGGING NOZZLES AND SATISFACTORY FIELD RESULTS ARE OBTAINED.

2.2 AGGREGATE

2.2.1 THE COMPOSITE AGGREGATE/MINERAL FILLER BLEND SHALL BE FREE OF CEMENTED OR CONGLOMERATED MATERIAL AND SHALL NOT HAVE ANY DETRIMENTAL MATERIAL. NOTE: HIGH MINERAL FILLER MIXTURES MAY REQUIRE SEPARATE TESTS TO BE RUN ON THE AGGREGATE/MINERAL FILLER COMPONENTS AND GRADATION VERIFICATION ACCOMPLISHED THE STATED BLEND PERCENTAGES.

Sieve	Percent Passing
No. 8 (2.36 mm)	100
No. 16 (1.18 mm)	95-100
No. 30 (600 mm)	85-100
No. 50 (300 mm)	40-70
No. 100 (150 mm)	30-60
No. 200 (75 mm)	25-65

2.2.2 AGGREGATE FOR SOURCES SHALL BE IN ACCORDANCE WITH THE FOLLOWING AGGREGATE REQUIREMENTS.

Property	Percent Maximum Limit
Absorption, AASHTO T 85, percent, max	n/a
Micro-Deval, AASHTO TP 58, percent, max	20

2.3 WATER.
WATER SHALL BE POTABLE AND FREE OF HARMFUL SOLUBLE SALTS.

2.4 ADDITIVES.
ANY OTHER MATERIAL ADDED TO THE MIXTURE OR TO ANY OF THE COMPONENT MATERIALS TO PROVIDE THE REQUIRED PROPERTIES SHALL BE SUPPLIED BY THE MANUFACTURER.

3.0 JOB MIX FORMULA.
THE MANUFACTURER SHALL DEVELOP THE JOB MIX FORMULA AND SHALL PRESENT CERTIFIED TEST RESULTS FOR THE ENGINEER'S APPROVAL PRIOR TO USE. MIX ACCEPTANCE WILL BE SUBJECT TO SATISFACTORY FIELD PERFORMANCE. THE MIXTURE SHALL CONTAIN A MINIMUM OF 30% AGGREGATE BY WEIGHT OF MIXTURE FOLLOWING IGNITION OVEN AND SHALL MEET THE FOLLOWING REQUIREMENTS.

MIX DESIGN REQUIREMENTS:

	Min.	Max.	Test Method
Wet-Track Abrasion Loss (3 day) Soak, g/m2	--	80	TB 100 (ISSA) Modified
Asphalt Content by Ignition Method, percent	30	--	AASHTO T-308-08*

*THIS METHOD IS MODIFIED TO ACCOUNT FOR A HIGH ASPHALT FINE AGGREGATE MIXTURE.

ITEM SPECIAL - MASTIC SURFACE SEAL (CONTINUED)

4.0 EQUIPMENT

4.1 MIXING EQUIPMENT.
THE MIXTURE SHALL BE MIXED THRU A CENTRAL MIXING PLANT. AGGREGATE, ASPHALT EMULSION, WATER AND ADDITIVES SHALL BE PROPORTIONED BY VOLUME OR WEIGHT (MASS) UTILIZING THE MIX DESIGN APPROVED BY THE ENGINEER. THE TANK SHALL BE EQUIPPED WITH A FULL SWEEP AGITATOR CAPABLE OF PRODUCING A HOMOGENEOUS MASTIC SURFACE TREATMENT MIX.

4.1.1 INDIVIDUAL VOLUME OR WEIGHT (MASS) CONTROLS FOR PROPORTIONING EACH ITEM TO BE ADDED TO THE MIX SHALL BE PROVIDED. EACH MATERIAL CONTROL DEVICE SHALL BE CALIBRATED AND PROPERLY MARKED. EACH DEVICE SHALL BE ACCESSIBLE FOR READY CALIBRATION AND PLACED SUCH THAT THE MAY DETERMINE THE AMOUNT OF EACH MATERIAL USED AT THE TIME.

4.3 MOBILE DISTRIBUTION UNIT (MDU).
THE MDU SHALL BE FULLY SELF-CONTAINED AND SHALL HAVE A STORAGE TANK WITH FULL SWEEP AGITATION, HYDRAULIC SYSTEM, OPERATOR CONTROLS, PUMPING SYSTEM, MATERIAL FILTERS AND SPRAY BAR CAPABLE OF APPLYING A FULL LANE WIDTH. THE EQUIPMENT SHALL HAVE SUFFICIENT AVAILABLE POWER TO OPERATE THE FULL SPRAY SYSTEM AND THE AGITATION SYSTEM AT THE SAME TIME.

4.2.1 AS MATERIAL IS DELIVERED TO THE JOB SITE AND APPLIED, THE PROPORTION OF THE MIXTURE SHALL BE MAINTAINED AS IT WAS MANUFACTURED PER THE MIX DESIGN.

4.2.2 THE STORAGE TANK SHALL HAVE AN INTERNAL FULL SWEEP MIXING SYSTEM. THE STORAGE TANK SHALL HAVE SUFFICIENT MIXING CAPABILITY TO ASSURE PROPER SUSPENSION OF FINE AGGREGATES IN THE SURFACING MIX.

4.2.3 THE MDU SHALL BE EQUIPPED WITH A SYSTEM ALLOWING THE MEASUREMENT AND CALCULATION OF APPLICATION RATES.

4.2.4 THE PUMPS SHALL PROVIDE OPERATION RESULTING IN HIGH VOLUME AND LOW POTENTIAL FOR CAVITATION. THE PUMPS SHALL BE ENGINEERED TO ALLOW THE SYSTEM TO HANDLE FINE AGGREGATE FILLED MATERIALS.

4.2.5 THE APPLICATOR SPRAY BAR SHALL BE SIZED WITH VOLUMETRIC CAPACITY TO DAMPEN ANY POSSIBLE PRESSURE RIPPLES BY PROVIDING EVEN PRESSURE TO ALL SPRAY TIPS. ATTACHMENTS SUCH AS A SPRAY SHIELD AND WIND DEFLECTOR SHALL BE AVAILABLE.

5.0 CONSTRUCTION REQUIREMENTS

5.1 SURFACE PREPARATION.
THE SURFACE SHALL BE THOROUGHLY CLEANED OF ALL VEGETATION, LOOSE MATERIAL, DIRT, MUD AND OTHER OBJECTIONABLE MATERIAL IMMEDIATELY PRIOR TO APPLICATION OF THE MIXTURE.

5.2 WEATHER LIMITATIONS.
MIXTURE SHALL NOT BE PLACED WHEN EITHER THE AIR TEMPERATURE OR THE TEMPERATURE OF THE SURFACE ON WHICH THE MIXTURE IS TO BE PLACED IS BELOW 60°F, WHEN IT IS RAINING, WHEN THERE IS A CHANCE OF TEMPERATURES BELOW 32° FAHRENHEIT (0° CELSIUS) WITHIN 24 HOURS AFTER PLACEMENT, OR AS DIRECTED BY THE ENGINEER.

5.3 DILUTION.
CONTRACTOR SHALL NOT DILUTE MIXTURE IN THE FIELD WITH WATER OR ANY OTHER ADDITIVE EXCEPT AS APPROVED BY THE MANUFACTURER.

5.4 PLACEMENT.
THE EXACT RATE WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE TOTAL COVERAGE SHALL BE 0.24 (±0.01) GAL/SY. THE MATERIAL MAY BE APPLIED USING EITHER METHOD A OR METHOD B.:
METHOD A: APPLY IN A SINGLE PASS OF 0.24 (±0.01) GAL/SY.
METHOD B: APPLY IN TWO SEPARATE PASSES OF 0.12 (±0.01) GAL/SY PER PASS.
WHICHEVER METHOD IS CHOSEN BY THE CONTRACTOR, THE REQUIREMENTS OF 5.4.2 SHALL BE MET.

5.4.1 THE MIXTURE SHALL BE UNIFORM AND HOMOGENEOUS AFTER APPLYING ON THE EXISTING PAVED SHOULDER AND SHALL NOT SHOW SEPARATION OF THE EMULSION AND AGGREGATE AFTER SETTING.

5.4.2 CONTRACTOR SHALL PROVIDE A MAT ENSURING TOTAL COVERAGE AND ESPECIALLY FREE OF VOIDS AND PIT HOLES.

5.4.3 AFTER APPLICATION, THE PAVED SHOULDER SHALL REMAIN CLOSED UNTIL THE SURFACE IS TACK-FREE AND CAPABLE OF BEING OPEN TO TRAFFIC WITHOUT TRACKING.

5.5 METHOD OF MEASUREMENT.
MEASUREMENT OF MASTIC SURFACE TREATMENT WILL BE MADE TO THE NEAREST GALLON (GAL), COMPLETE IN PLACE, AND ACCEPTED BY THE ENGINEER.

5.6 BASIS OF PAYMENT.
THE ACCEPTED QUANTITY OF MASTIC SURFACE TREATMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE.

CALCULATED ERS
CHECKED KRB

GENERAL NOTES

ERI-2-25.81

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 EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

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

DAY OF THE WEEK	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
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE FEE OF $50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ITEM 614 - MAINTAINING TRAFFIC: GENERAL

ONE 11' LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, PLAN DETAILS, STANDARD DRAWINGS, AND AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES CURRENT EDITION WITH THE LATEST REVISIONS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED ON THIS PLAN.

THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:
THE CONTRACTOR SHALL SUBMIT, IN WRITING, A SCHEDULE OF OPERATIONS TO THE ENGINEER AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL COORDINATE THE MAINTENANCE OF TRAFFIC OPERATIONS WITH THE LOCAL STATE HIGHWAY PATROL.

NIGHT WORK IS PERMITTED.

THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PAVEMENT THROUGHOUT THE PROJECT UNDER ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC DURING THE PERIOD FROM THE START OF WORK TO THE COMPLETION OF ALL WORK.

ITEM 614 - MAINTAINING TRAFFIC

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHEN THEY ARE NOT APPLICABLE, WITH THE APPROVAL OF THE ENGINEER.

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OMUTCD, AND SUCH FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ALL MAINTENANCE OF TRAFFIC SIGNS ARE PAID UNDER ITEM 614 - MAINTAINING TRAFFIC.

PLACEMENT OF WORK ZONE PAVEMENT MARKINGS

THE CONTRACTOR SHALL PLACE EDGE LINES AND LANE LINES AT THE END OF EACH WORK SHIFTWHEN EXISTING LINES HAVE BEEN OBLITERATED.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., 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. PCMS TRAILERS SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS WILL BE DETERMINED BY THE ENGINEER PRIOR TO BEGINNING WORK ON THIS PROJECT. 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, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING 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 PREPROGRAMMED 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 PREPROGRAMMED 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 UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 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. THE CONTRACTOR SHALL ONLY BE PAID FOR PCMS UNITS WHEN THEY ARE IN OPERATION ON THE PROJECT AS SPECIFIED IN THE PLANS OR BY THE ENGINEER.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 6 SIGN-MONTH

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

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS AS DIRECTED BY THE ENGINEER:

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.

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

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. 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.

LEO'S 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.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES AND PROVIDE 72 HOURS ADVANCE NOTICE AS REQUIRED BY THE HIGHWAY PATROL LISTED BELOW:

STATE HIGHWAY PATROL
511 Fremont Avenue
Sandusky, OH 44870
Phone: (419) 625-6565

LAW ENFORCEMENT OFFICERS 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 QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
120 HOURS

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

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE.

PROJECT START DATE

CONSTRUCTION SHALL NOT BEGIN BEFORE JULY 25, 2016.

INTERIM COMPLETION DATE

DUE TO THE STRINGENT AMBIENT TEMPERATURE REQUIREMENTS OF ITEM 421, ALL WORK INVOLVING ITEM 421 SHALL BE COMPLETED BEFORE AN INTERIM COMPLETION DATE OF SEPTEMBER 29, 2016 WITH ALL REMAINING ITEMS FINISHED BEFORE A FINAL COMPLETION DATE OF OCTOBER 15, 2016.

FOR EACH CALENDAR DAY BEYOND THE INTERIM COMPLETION DATE THAT THE WORK INVOLVING ITEM 421 IS NOT COMPLETED, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE FEE OF $1000 PER DAY.

CALCULATED ERS CHECKED KRB

MAINTENANCE OF TRAFFIC

ERI-2-25.81

ITEM 614 - WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS MAY BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).

2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703- 235-0528.

3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-614-599-7915.

4. OHIO LABORERS TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.

A COPY OF EACH WTS'S CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7) THE CONTRACTOR MAY DESIGNATE AN ALTERNATE WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY. EACH WTS SHALL HAVE A CURRENT WTS CERTIFICATION (WITH AN EXPIRATION DATE NO MORE THAN 5 YEARS FROM THE DATE OF ISSUE) FROM ANY OF THE APPROVED ORGANIZATIONS.

THE WTS POSITION HAS THE RESPONSIBILITY OF MONITORING TRAFFIC CONTROL DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES.

2. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.

3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.

4. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.

5. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEO'S WHILE THEY ARE ON THE PROJECT.

6. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEO'S AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.

7. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS; AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.

8. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.

9. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, A WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:

A. INITIAL TRAFFIC CONTROL SETUP (DAY AND NIGHT REVIEW).
B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.
C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TRAFFIC CONTROL SETUP.
D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.
E. REMOVAL OF TRAFFIC CONTROL DEVICES AT THE END OF A PHASE OR PROJECT.
F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.

10. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 9 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TRAFFIC CONTROL MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL DATED 10/15/06 OR CURRENT REVISION.

11. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

12. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND APPLICABLE STANDARDS AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

ITEM 614 - WORKSITE TRAFFIC SUPERVISOR, CONTINUED

THE DEPARTMENT WILL NOT PAY THE UNIT PRICE BID FOR THE WTS FOR ANY DAY ON WHICH THE CONTRACTOR FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

IF THREE OR MORE FAILURES TO PERFORM THE DUTIES SET FORTH ABOVE OCCUR, THE WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR THE WORKSITE TRAFFIC SUPERVISOR:

ITEM 614 - WORKSITE TRAFFIC SUPERVISOR 3 MONTHS

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 UNIT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

WORK OPERATIONS

IN ADDITION TO THE REQUIREMENTS OF SECTION 614 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS THE FOLLOWING SHALL APPLY:

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAVEL WHERE PRACTICAL. A FLAGGER SHALL BE USED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM.

THE CONTRACTOR SHALL ARRANGE CONSTRUCTION OPERATIONS SO AS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO THE CLOSED LANES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

ITEM 614 - MAINTAINING TRAFFIC LANE CLOSURE/REDUCTION REQUIRED

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

RAMP WORKING HOURS RESTRICTION

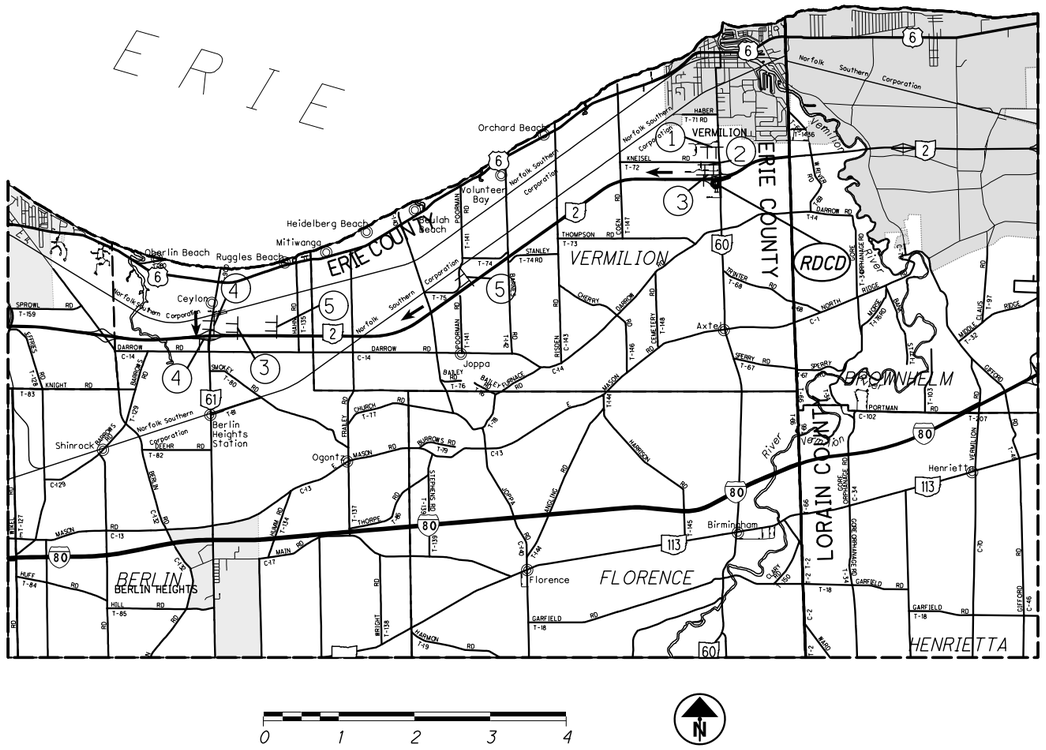
RAMP WORK SHALL BE DONE ONLY AT NIGHTTIME FROM 9 PM TO 6 AM.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE FEE OF $50 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

CALCULATED ERS CHECKED KRB

MAINTENANCE OF TRAFFIC

ERI-2-25.81



SR 60 TO SR 2 EASTBOUND DETOUR MAP

MAP LEGEND

- OFFICIAL STATE SIGNED DETOUR
- GATES AND BARRICADES, AS PER MT-98.29

SIGN LEGEND

1. ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN
2. DETOUR AHEAD — W20-2-36
3. DETOUR M4-8-21 / 2 M1-5-36-3 / EAST M3-2-36 / M6-1-21
4. DETOUR M4-8-21 / 2 M1-5-36-3 / EAST M3-2-36 / M6-1-21
5. DETOUR M4-8-21 / 2 M1-5-36-3 / EAST M3-2-36

RDCD
DETOUR M4-8-24
2 M1-5-36-3
EAST M3-2-36
M6-1-21
ROAD CLOSED TO THRU TRAFFIC R11-4
DETOUR M4-10L

TYPE III BARRICADES

DETOUR SIGNING

THE FOLLOWING QUANTITY IS INCLUDED FOR THE CONTRACTOR TO PROVIDE THE DETOUR SIGNING AS SHOWN AS PER 614.06 (B):

ITEM 614, DETOUR SIGNING - LUMP

RAMP CLOSURE

A TWO NIGHT CLOSURE WILL BE PERMITTED FOR THE PLANING AND PAVING OF THE LOOP RAMP from SR 60 TO SR 2 EASTBOUND. THE CONTRACTOR MAY ONLY WORK FROM 9 PM TO 6 AM. THE RAMP MUST REMAIN OPEN AT ALL TIMES DURING THE DAY.

THE DETOUR SHALL NOT BE IN EFFECT AND THE RAMP SHALL BE OPEN TO TRAFFIC DURING THE WEEKEND OF THE WOOLYBEAR FESTIVAL (FIRST WEEKEND IN OCTOBER, NO CLOSURES THAT FRIDAY THROUGH SUNDAY).

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE FEE OF $50 FOR EACH MINUTE THE ABOVE DESCRIBED RAMP CLOSURE RESTRICTIONS ARE VIOLATED.

DISTRICT NOTIFICATION

AT LEAST 14 DAYS PRIOR TO THE LOOP RAMP CLOSURE, THE CONTRACTOR WILL NOTIFY ODOT DISTRICT 3'S ROADWAY SERVICES MANAGER, MATT BLANKENSHIP, AT 419-207-7045 OF THE UPCOMING CLOSURE.

CALCULATED ERS
CHECKED KRB

MAINTENANCE OF TRAFFIC & DETOUR MAP

ERI-2-25.81

SHEET NUM.							PART.	ALT (X)	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	7	8	9	11	12		01/NHS/PV							
													PAVEMENT	
425							425		251	01010	425	CY	PARTIAL DEPTH PAVEMENT REPAIR	
25							25		253	02000	25	CY	PAVEMENT REPAIR	
				150984			150984		421	10011	150,984	SY	MICROSURFACING, SURFACE COURSE, AS PER PLAN (16 LBS/SY)	5
				150984			150984		421	10021	150,984	SY	MICROSURFACING, LEVELING COURSE, AS PER PLAN (14 LBS/SY)	5
				198444			198444		423	00220	198,444	SY	CRACK SEALING, TYPE II OR TYPE III	
				14441			14441		SPECIAL	69098900	14,441	GAL	MISC.:MASTIC SURFACE SEAL	6
				1011			1011		897	01010	1,011	SY	PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A	
													TRAFFIC CONTROL	
					738		738		621	00100	738	EACH	RPM	
					738		738		621	54000	738	EACH	RAISED PAVEMENT MARKER REMOVED	
					20.56		20.56		646	10010	20.56	MILE	EDGE LINE, 6"	
					9.39		9.39		646	10110	9.39	MILE	LANE LINE, 6"	
					1780		1780		646	10310	1,780	FT	CHANNELIZING LINE, 12"	
					48		48		646	10400	48	FT	STOP LINE	
					414		414		646	10620	414	FT	CHEVRON MARKING	
					2		2		SPECIAL	64620710	2	EACH	AIR SPEED ZONE MARKING	5
													MAINTENANCE OF TRAFFIC	
	120						120		614	11110	120	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		3					3		614	11500	3	MNTH	WORKSITE TRAFFIC SUPERVISOR	
			LS				LS		614	12420	LS		DETOUR SIGNING	
	6						6		614	18601	6	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	7
					28.17		28.17		614	20550	28.17	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
					61.68		61.68		614	22350	61.68	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
					5340		5340		614	23680	5,340	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
					144		144		614	26610	144	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
													INCIDENTALS	
	LS						LS		614	11000	LS		MAINTAINING TRAFFIC	
							3		619	16010	3	MNTH	FIELD OFFICE, TYPE B	
							LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
							LS		624	10000	LS		MOBILIZATION	

CALCULATED ERS
CHECKED KRB

GENERAL SUMMARY

ERI-2-25.81

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I:\Project Data\77439\Design\Roadway\Sheets\77439GS001.dgn

COUNTY	ROUTE	DIRECTION	LOG POINT TO LOG POINT		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG.		PAVEMENT AREA	421 MICROSURFACING, SURFACE COURSE, AS PER PLAN 16 LBS/SY	421 MICROSURFACING, LEVELING COURSE, AS PER PLAN 14 LBS/SY		423 CRACK SEALING, TYPE II OR III	SPECIAL MISC: MASTIC SURFACE SEAL (0.24 GAL/SY)		897 PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (BUTT JOINTS)
			STRAIGHT LINE MILEAGE						SQ YD	SQ YD	SQ YD		SQ YD	GAL		SQ YD
			MAINLINE													
ERI	2	EB	25.81	30.41	4.60	24288	25.0		67,467	67,467	67,467		67,467			
ERI	2	WB	25.81	30.41	4.60	24288	25.0		67,467	67,467	67,467		67,467			
			SHOULDERS													
			OUTSIDE													
ERI	2	EB	25.81	30.41	4.60	24288	7.5		20,240				20,240	4,858		
ERI	2	WB	25.81	30.41	4.60	24288	7.5		20,240				20,240	4,858		
RAMP A			A1779+00	A1786+65	0.14	765	5.5		468				468	112		
RAMP B			B1786+61	B1796+17	0.18	956	5.5		584				584	140		
RAMP B1			B1787+70	B1789+45	0.03	175	5.5		107				107	26		
RAMP C			C1772+38	C1783+93	0.22	1155	5.5		706				706	169		
RAMP C1			C1786+30	C1788+10	0.03	180	5.5		110				110	26		
RAMP D			D1774+44	D1788+10	0.26	1366	5.5		835				835	200		
			INSIDE													
ERI	2	EB	25.81	30.41	4.60	24288	3.5		9,445				9,445	2,267		
ERI	2	WB	25.81	30.41	4.60	24288	3.5		9,445				9,445	2,267		
RAMP A			A1779+00	A1786+65	0.14	765	3.0		255	255	255		255			
RAMP B			B1786+61	B1796+17	0.18	956	3.0		319	319	319		319			
RAMP B1			B1787+70	B1789+45	0.03	175	3.0		58	58	58		58			
RAMP C			C1772+38	C1783+93	0.22	1155	3.0		385	385	385		385			
RAMP C1			C1786+30	C1788+10	0.03	180	3.0		60	60	60		60			
RAMP D			D1774+44	D1788+10	0.26	1366	3.0		455	455	455		455			
			RAMP A													
ACCEL LANE			A1763+00	A1775+00	0.23	1200	12.0		1,600	1,600	1,600					
TRANSITION			A1775+00	A1778+00	0.06	300	18.0		600	600	600					
GORE			A1778+00	A1779+00	0.02	100	27.0		300	300	300					
RAMP A			A1779+00	A1786+15	0.14	715	16.5		1,311	1,311	1,311					
TURNOUT			A1786+15	A1786+65	0.01	50	19.0		106	106	106					
			RAMP B													
TURNOUT			B1786+61	B1788+03	0.03	142	21.0		331	331	331					
RAMP B			B1788+03	B1789+45	0.03	142	16.5		260	260	260					
RAMP B1			B1787+70	B1789+45	0.03	175	16.5		321	321	321					
TRANSITION			B1789+45	B1790+18	0.01	73	26.0		211	211	211					
RAMP B			B1790+18	B1796+17	0.11	599	24.5		1,631	1,631	1,631					
GORE			B1796+17	B1800+87	0.09	470	18.0		940	940	940					
DECEL LANE			B1800+87	B1803+25	0.05	238	12.0		317	317	317					
TAPER			B1803+25	B1804+25	0.02	100	6.0		67	67	67					
			RAMP C													
ACCEL LANE			C1783+93	C1799+75	0.30	1582	12.0		2,109	2,109	2,109					
RAMP C			C1772+38	C1783+93	0.22	1155	16.5		2,118	2,118	2,118					
RAMP C1			C1786+30	C1788+10	0.03	180	16.5		330	330	330					
			RAMP D													
TAPER			D1766+50	D1767+50	0.02	100	6.0		67	67	67					
DECEL LANE			D1767+50	D1773+15	0.11	565	12.0		753	753	753					
TRANSITION			D1773+15	D1774+44	0.02	129	35.0		502	502	502					
RAMP D			D1774+44	D1787+50	0.25	1306	16.5		2,394	2,394	2,394					
TURNOUT			D1787+50	D1788+10	0.01	60	23.0		153	153	153					
EXTRA AREA FOR U -TURN MEDIANS									369				369	89		
DEDUCTION FOR CONCRETE BRIDGE DECKS									-2,474	-1,903	-1,903		-571	-571		
EXTRA AREA FOR BUTT JOINTS																1011
TOTALS					31.12	164303				150,984	150,984		198,444	14,441		1,011

NOTE:
DO NOT PLACE MICROSURFACING ON EXPOSED CONCRETE BRIDGE DECKS & APPROACH SLABS

CALCULATED ERS
CHECKED KRB

PAVEMENT AND SHOULDER DATA

ERI-2-25.81

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DESIGN FILE: i:\ProjectData\77439\Design\Roadway\Sheets\77439GQ001.dgn
WORKSTATION: escholtz
DATE: 3/1/2016
MODELNAME: Design

AUXILIARY & LONG LINE MARKINGS

ROUTE	COUNTY	STATION / SLM FROM	STATION / SLM TO	HIGHWAY MILES	614 WORK ZONE LANE LINE, CLASS III, 642 PAINT	614 WORK ZONE EDGE LINE, CLASS III, 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	614 WORK ZONE STOP LINE, CLASS III, 642 PAINT	646 EDGE LINE TOTAL (PAY QUANTITY) (WHITE)	646 EDGE LINE TOTAL (PAY QUANTITY) (YELLOW)	646 LANE LINE	646 CENTER LINE SOLID LINE EQUIVALENT	646 CENTER LINE TOTAL (PAY QUANTITY)	646 AUXILIARY MARKINGS (740.07) CHANNELIZING LINE 12"	STOP LINE 24"	CROSSWALK LINE 12"	CHEVRON MARKING 24"	TRANSVERSE/ DIAGONAL LINE (YELLOW) 24"	ISLAND MARKING	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING 72 INCH	SCHOOL SYMBOL MARKING 96 INCH	PARKING LOT STALL MARKING	LANE ARROW LEFT	LANE ARROW RIGHT	LANE ARROW THROUGH	LANE ARROW COMBINATION	WORD ON PAVEMENT "ONLY" 72 INCH	WORD ON PAVEMENT "ONLY" 96 INCH	DOTTED LINE, 4"	HANDICAP SYMBOL MARKING	SPECIAL AIR SPEED ZONE MARKING
														12"	24"	12"	24"	24"														
		FROM	TO	MILE	MILE	MILE	FT	FT	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	SQ FT	EACH	EACH		FT	EACH				EACH		FT	EACH	EACH
2	ERI	25.81	30.41	4.60	27.6	55.2			9.20	9.20	9.20																					2
RAMP A		A1786+65	A1771+59	0.29	0.15	1.38	375		0.24	0.22	0.05			125																		
RAMP B		B1800+64	B1786+61	0.27	0.09	1.23	2,280	54	0.23	0.18	0.03			760	18		207															
RAMP B1		B1789+45	B1787+70	0.03		0.18			0.03	0.03																						
RAMP C1		C1788+00	C1786+30	0.03		0.18			0.03	0.03																						
RAMP C		C1792+92	C1772+38	0.39	0.21	1.77	795		0.32	0.27	0.07			265																		
RAMP D		D1770+09	D1788+10	0.34	0.12	1.74	1,890	90	0.29	0.29	0.04			630	30		207															
TOTALS TO GENERAL SUMMARY				5.95	28.17	61.68	5,340	144	10.34	10.22	9.39			1,780	48		414															2

RAISED PAVEMENT MARKERS

ROUTE	COUNTY	STATION/SLM FROM	STATION/SLM TO	DETAIL	621 RAISED PAVEMENT MARKER REMOVED	621 RPM	PRISMATIC RETRO-REFLECTOR TYPES ONE-WAY WHITE	TWO-WAY YELLOW / YELLOW	TWO-WAY WHITE / RED	TWO-WAY YELLOW / RED	TWO-WAY BLUE / BLUE	REMARKS
		FROM	TO		EACH	EACH	EACH					
ERI	SR 002	25.81	30.41	5	627	627	627					4-LANE DIVIDED
ERI	SR 002	29.57	29.58	2/3	111	111	42			69		INTERCHANGE AT SR 60
TOTALS TO GENERAL SUMMARY					738	738						

DETAIL	DESCRIPTION
1	MULTILANE UNDIVIDED TYPICAL SPACING
2	TAPERED ACCEL. LANE
3	DECELERATION LANE
4	PARALLEL ACCEL LANE
5	MULTILANE DIVIDED/EXPRESSWAY
6	STOP APPROACH
7	2 LANE APPR. WITH TURN LANE
8	THROUGH APPROACH
9	3 LANE APPR. WITH TURN LANE
10	3 LANE DIVIDED TO 2 LANE TRANSITION
11	3 LANE UNDIVIDED TO 2 LANE TRANSITION
12	TWO LNAE NARROW BRIDGE
13	TWO WAY LEFT TURN LANE
14	ONE LANE BRIDGE
15	HORIZONTAL CURVE
16	HORIZONTAL CURVE ALT.
17	STOP APPROACH ALT.
18	FIRE HYDRANT
GAP	CENTER LINE AT 80 FT. TYP.

NOTES

1) THRU LANES SHALL BE 12 FT WIDE AND STRIPED ACCORDING TO CMS 641.08 A.

2) FOR ALL WORK ZONE MARKINGS, THE 642 PAINT USED SHALL BE TYPE 1.

3) LEAVE RUMBLE STRIPS IN PLACE.

CALCULATED ERS
CHECKED KRB

PAVEMENT MARKING / RPM SUBSUMMARY

ERI-2-25.81

DESIGN FILE: i:\ProjectData\77439\Design\Roadway\Sheets\77439TS001.dgn
WORKSTATION: escholtz
MODEL NAME: Design
DATE: 3/1/2016

SR 2 EB Pavement Repairs

Location	Length (ft)	Width (ft)	Depth (ft)	Volume (CY)	Location			
					Driving Lane	Lane Line	Passing Lane	Transverse
25.81-26.00	6	24	0.33	1.8	x		x	x
	6	12	0.33	0.9	x			x
			Subtotal =	2.6				
26.00-27.00	6	12	0.33	0.9			x	x
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9			x	x
	6	12	0.33	0.9			x	x
			Subtotal =	4.4				
27.00-28.00	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
			Subtotal =	1.8				
28.00-29.00	200	4	0.25	7.4	x			
	200	4	0.25	7.4		x		
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9			x	x
			Subtotal =	18.3				
29.00-30.00	100	4	0.25	3.7		x		
	200	6	0.25	11.1		x	x	
	400	4	0.25	14.8	x			
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9			x	x
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
			Subtotal =	34.9				
30.00-30.41	400	4	0.25	14.8		x		
	300	4	0.25	11.1			x	
			Subtotal =	25.9				
Ramp D	50	4	0.25	1.9	x			
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	200	4	0.25	7.4	x			
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	50	4	0.25	1.9	x			
	100	4	0.25	3.7	x			
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
			Subtotal =	20.3				
Ramp C	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	200	4	0.25	7.4	x			
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	200	4	0.25	7.4	x			
	100	4	0.25	3.7	x			
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
			Subtotal =	24.0				
Ramp C1	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	50	4	0.33	2.4	x			
	4	16	0.33	0.8	x			x
			Subtotal =	4.8				

EB Pavement Repairs = 137.0

SR 2 WB Pavement Repairs

Location	Length (ft)	Width (ft)	Depth (ft)	Volume (CY)	Location			
					Driving Lane	Lane Line	Passing Lane	Transverse
30.41-30.00	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
	200	4	0.25	7.4		x		
	300	4	0.25	11.1			x	
	6	12	0.33	0.9	x			x
	6	12	0.33	0.9	x			x
			Subtotal =	22.0				
30.00-29.00	6	12	0.33	0.9	x			x
	100	4	0.25	3.7		x		
	100	4	0.25	3.7		x		
	50	4	0.25	1.9			x	
			Subtotal =	10.1				
29.00-28.00	6	12	0.33	0.9	x			x
	200	4	0.25	7.4		x		
	100	4	0.25	3.7		x		
	1000	4	0.25	37.0		x		
	1000	4	0.25	37.0		x		
	6	12	0.33	0.9	x			x
			Subtotal =	86.9				
28.00-27.00	6	12	0.33	0.9	x			x
	200	4	0.25	7.4		x		x
			Subtotal =	8.3				
27.00-26.00	6	12	0.33	0.9	x			x
	6	12	0.33	0.9			x	x
			Subtotal =	1.8				
26.00-25.81	6	12	0.33	0.9			x	x
			Subtotal =	0.9				
Ramp A	4	16	0.33	0.8	x			x
	500	4	0.25	18.5	x			
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	150	4	0.25	5.6	x			
			Subtotal =	29.5				
Ramp B	200	8	0.25	14.8	x			
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
	100	4	0.25	3.7	x			
	4	16	0.33	0.8	x			x
	50	8	0.25	3.7	x			
	4	16	0.33	0.8	x			x
			Subtotal =	26.1				
Ramp B1	4	16	0.33	0.8	x			x
	4	16	0.33	0.8	x			x
			Subtotal =	1.6				

WB Pavement Repairs = 187.3

Total Pavement Repairs = 324.3

NOTE:

THESE QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY. EXACT LOCATIONS AND QUANTITIES WILL BE DETERMINED BY THE PROJECT ENGINEER.

QUANTITIES HAVE BEEN CARRIED TO THE GENERAL NOTES, SHEET 5.

CALCULATED ERS CHECKED KRB

REPAIR CALCULATIONS

ERI-2-25.81

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