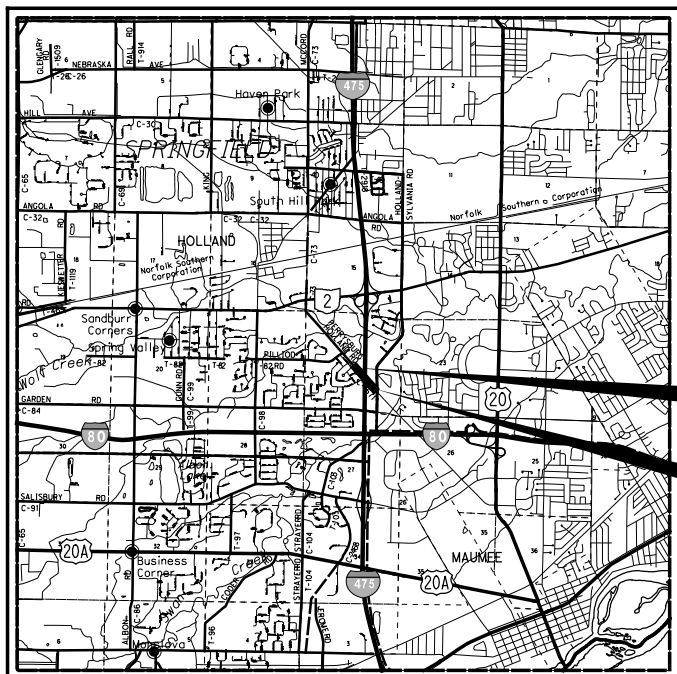


# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## LUC-475-3.82

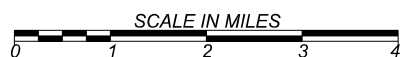
### SPRINGFIELD TOWNSHIP

### LUCAS COUNTY



LOCATION MAP

LATITUDE: 41°36'00" LONGITUDE: 83°41'27"



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

DESIGN DESIGNATION	PERRYSBURG-HOLLAND ROAD	I-475
CURRENT ADT (2022)	11000	75500
DESIGN YEAR ADT (2042)	12000	84000
DESIGN HOURLY VOLUME (2042)	1200	7600
DIRECTIONAL DISTRIBUTION	60%	50%
TRUCKS (24 HOUR B&C)	N/A	11%
DESIGN SPEED	45 MPH	70 MPH
LEGAL SPEED	45 MPH	65 MPH
DESIGN FUNCTIONAL CLASSIFICATION: 03 MINOR ARTERIAL ROADS		.01 INTERSTATES
URBAN MINOR ARTERIAL		
NHS PROJECT		NO

DESIGN EXCEPTIONS : NONE REQUIRED

ADA DESIGN WAIVERS : NONE REQUIRED

#### INDEX OF SHEETS:

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TRAFFIC CONTROL	30-32
STRUCTURES OVER 20 FOOT SPAN	33-36, 35A

#### FEDERAL PROJECT NUMBER

E191 (125)

#### RAILROAD INVOLVEMENT

NONE

#### PROJECT DESCRIPTION

BRIDGE REHABILITATION OF PERRYSBURG HOLLAND ROAD OVER I-475. PROJECT INCLUDES BRIDGE DECK REPLACEMENT, CONVERSION OF ABUTMENTS TO SEMI-INTEGRAL, SHIFTING THE PAVEMENT CROWN, RECONSTRUCTION OF APPROACH ROADWAY, AND REPLACEMENT OF EX. GUARDRAIL.

#### EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.60 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.30 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A

#### 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.

#### UNDERGROUND UTILITIES

Contact Two Working Days  
Before You Dig



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

PLAN PREPARED BY:



ENGINEER'S SEAL:



SIGNED: *Michael T. Gramza II*  
DATE: 05/18/2021

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	1/17/20	AS-1-15	7/17/15	TC-61.30	7/19/19	800	7/16/21	ASBESTOS	
		AS-2-15	1/18/19	TC-65.10	1/17/14	832	10/19/18	REPORT	02/17/21
DM-1.1	7/17/20	GSD-1-96	7/19/02	TC-65.11	7/21/17	840	4/16/21		
DM-4.1	7/17/20	SBR-1-20	7/17/20			863	10/17/14		
DM-4.4	1/15/16	SICD-1-21	1/15/21						
		SICD-2-14	1/15/21						
BP-5.1	1/18/19	VPF-1-90	7/20/18						
F-1.1	7/19/13	MT-95.30	7/19/19						
F-3.1	7/19/13	MT-97.10	4/19/19						
		MT-97.12	1/20/17						
MGS-1.1	1/19/18	MT-101.60	1/17/20						
MGS-2.1	1/19/18	MT-105.10	1/17/20						
MGS-3.1	1/19/18								
MGS-6.1	1/19/18	TC-41.20	10/18/13						
		TC-42.20	10/18/13						

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 9.

APPROVED: *Pat McCully, PE*  
DATE: 5/24/21 DISTRICT DEPUTY DIRECTOR

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY



BERGMANN  
ARCHITECTS ENGINEERS PLANNERS  
3234 Executive Parkway, Ste 111, Toledo, OH 43606

DESIGNER

MAS

REVIEWER

XF 05/18/21

PROJECT ID

110516

SHEET

1 TOTAL 56

LUC-475-3.82

MODEL: Sheet PAPER: SIZE: 11x17 (in.) DATE: 5/12/2021 TIME: 2:45:13 PM USER: mstolitzfus  
P:\Projects\001\0447100\_0001-LUC-475-3.86\_Bridge\_Reddeck\_V4.0\_Dwg.dwg Reddeck\_V4.0\_Engineering\_Roadway\_Sheets\0516\_G1001.dgn

**ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN & ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN:**  
 IN LIEU OF THE WATER CURING REQUIREMENTS OF 511.14, CONCRETE SHALL BE PLACED AND CURED AS FOLLOWS.

**MIX DESIGN AND BATCHING:**

1. THE CLASS QC2 CONCRETE MIX SHALL INCLUDE THE ADMIXTURE, "E5 INTERNAL CURE" BY SPECIFICATION PRODUCTS WITH A DOSAGE RATE OF 4.0 OZ/CWT OF CEMENTITIOUS MATERIAL.
2. THE WATER-CEMENTITIOUS RATIO SHALL BE 0.470 TO 0.500.
3. ENSURE THAT THE CONCRETE MIXTURE IS FULLY WETTED BEFORE ADDING THE E5 INTERNAL CURE ADMIXTURE TO THE LOAD.

**DURING PLACEMENT:**

1. A REPRESENTATIVE FROM SPECIFICATION PRODUCTS SHALL BE ON SITE DURING PLACEMENT. THIS REQUIREMENT MAY BE WAIVED BY THE ENGINEER IF BOTH THE CONTRACTOR AND READY MIXED CONCRETE SUPPLIER HAVE SUFFICIENT EXPERIENCE WITH BATCHING AND PLACEMENT OF THE ADMIXTURE ON PREVIOUS DEPARTMENT PROJECTS.
2. WATER SHALL NOT BE APPLIED TO THE PLASTIC CONCRETE SURFACE FOR ANY REASON.
3. PRODUCTS MARKETED AS "EVAPORATIVE RETARDANTS" OR "EVAPORATION REDUCERS" SHALL NOT BE USED FOR ANY REASON. SOME COMMON TRADE NAMES FOR THESE PRODUCTS INCLUDE SIKA FILM, MASTERKURE ER50, AND EUCOBAR.
4. THE FOLLOWING PRODUCTS MAY BE USED AS FINISHING AIDS AS DIRECTED BY THE MANUFACTURER:
  - A. E5 MIRACLE AID BY SPECIFICATION PRODUCTS
  - B. EZ FINISH BY SPECIFIED SURFACES
  - C. THE JUICE BY M2 SOLUTIONS

**AFTER PLACEMENT:**

1. PROVIDE LIQUID MEMBRANE-FORMING COMPOUND ACCORDING TO CMS ITEM 705.07, TYPE 2. SELECT FROM THE DEPARTMENT QPL. APPLICATION OF THE MATERIAL SHALL BE AS FOLLOWS:
  - A. A MOTORIZED SPRAYER SHALL BE USED. THOROUGHLY MIX THE LIQUID MEMBRANE-FORMING COMPOUND PRIOR TO APPLICATION.
  - B. TWO COATS SHALL BE APPLIED TO ACHIEVE A FINAL APPEARANCE OF A WHITE SHEET OF PAPER. THE FIRST COAT SHALL BE APPLIED TO THE PLASTIC SURFACE FROM A WALK BRIDGE IMMEDIATELY AFTER TEXTURING AND AFTER ANY BLEED WATER OR SHEEN HAS DISSIPATED FROM THE SURFACE. AFTER THE FIRST COAT HAS SET, BUT NOT TO EXCEED 40 MINUTES LATER, THE SECOND COAT SHALL BE APPLIED FROM A WALK BRIDGE. THE SECOND COAT SHALL NOT BE APPLIED IMMEDIATELY AFTER THE FIRST COAT.
  - C. DO NOT OPERATE THE SPRAYER IN A MANNER THAT WILL MAR OR DISTORT THE PLASTIC SURFACE.
  - D. EXPOSED REINFORCING BARS SHALL BE PROTECTED FROM OVERSPRAY.
  - E. A HANDPUMP SPRAYER MAY BE USED TO APPLY LIQUID MEMBRANE-FORMING COMPOUNDS IN NARROW AREAS.
2. DO NOT PLACE EQUIPMENT OR TRAFFIC ON THE STRUCTURE FOR A MINIMUM OF 120 HOURS AND UNTIL 85% f<sub>c</sub> OR FLEXURAL BREAK OF 650 PSI (CENTER POINT), HAS BEEN OBTAINED BY FIELD CURING METHODS. CURE THE FIELD SPECIMENS IN THE SAME MANNER AS THE DECK CONCRETE IT REPRESENTS.
3. DO NOT REMOVE FALSEWORK FOR AT LEAST 120 HOURS AFTER DECK PLACEMENT COMPLETION AND UNTIL 85% f<sub>c</sub> OR FLEXURAL BREAK OF 650 PSI (CENTER POINT), HAS BEEN OBTAINED.
4. CLEAN DECK AREAS PRIOR TO APPLICATION OF PAVEMENT MARKINGS. LIGHTLY BLAST TO REMOVE CURING COMPOUND, TO THE SATISFACTION OF THE ENGINEER, AT LOCATIONS OF NEW PAVEMENT MARKINGS.

ALL OTHER REQUIREMENTS OF C&MS 511 & 526 SHALL PERTAIN TO THIS WORK.

**GENERAL NOTES**  
 BRIDGE NO. LUC-475-0382  
 PERRYSBURG HOLLAND ROAD OVER I-475

SFN	
4807359	
DESIGN AGENCY	
	
<b>BERGMANN</b> <small>ARCHITECTS ENGINEERS PLANNERS</small> <small>324 Executive Parkway, Ste. 100, Toledo, OH 43606</small>	
DESIGNER	CHECKER
JAM	KAH
REVIEWER	
MJQ 05/18/21	
PROJECT ID	
110516	
SUBSET	TOTAL
3A	24
SHEET	TOTAL
35A	56

ESTIMATED QUANTITIES (01/BRO/BR)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	APP. SLABS	GEN.	SEE SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LS	2/24
202	22900	176	SY	APPROACH SLAB REMOVED				176		
503	21101	1137	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	1137					2/24, 6/24
509	10000	38737	LB	EPOXY COATED REINFORCING STEEL	10519		27919	299		
509	20001	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN					100	2/24
509	30020	68146	FT	NO. 4 GFRP DEFORMED BARS			67392	754		
509	30030	82519	FT	NO. 5 GFRP DEFORMED BARS			82519			
510	10001	592	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	592					2/24
511	21523	523	CY	CLASS QC2 CONCRETE WITH QC/QA, SUPERSTRUCTURE, AS PER PLAN			523			3A/24
511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2					
511	34451	153	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			144	9		2/24
511	45710	69	CY	CLASS QC1 CONCRETE, ABUTMENT	69					
512	10100	1427	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	166	234	971	56		
512	10601	75	FT	CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN	75					3/24
513	10201	46	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			46			
513	20000	5940	EACH	WELDED STUD SHEAR CONNECTORS			5940			3/24
514	00051	606	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL, AS PER PLAN			606			3/24
514	00057	606	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN			606			3/24
516	10010	69	FT	ARMORLESS PREFORMED JOINT SEAL					69	
516	13600	19	SF	1" PREFORMED EXPANSION JOINT FILLER			19			
516	13900	143	SF	2" PREFORMED EXPANSION JOINT FILLER			143			
516	14020	147	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	147					
516	44201	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN, 12"x14"x3-1/4" PAD, 14"x17"x1-1/2" PLATE			10			20/24
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS			3/24
518	21200	15	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	15					
518	40000	134	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	134					
519	11101	58	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		58				3/24
526	30011	371	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				371		3/24 3A/24
526	90031	69	FT	TYPE C INSTALLATION, AS PER PLAN				69		3/24
SPECIAL	53000600	1724	SF	SPECIAL-STRUCTURES: GLASS FIBER REINFORCED WRAP SYSTEM		1724				3/24, 10/24
SPECIAL	51271500	192	SY	URETHANE TOP COAT SEALER		192				3/24
607	39900	831	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			831			18/24, 19/24

ESTIMATED QUANTITIES  
 BRIDGE NO. LUC-475-0382  
 PERRYSBURG HOLLAND ROAD OVER I-475

SFN  
 4807359  
 DESIGN AGENCY



**BERGMANN**  
 ARCHITECTS ENGINEERS PLANNERS  
 3234 Cooperative Parkway, Ste. 100  
 Toledo, OH 43608

DESIGNER: JAM  
 CHECKER: KAH  
 REVIEWER: MJQ 05/18/21

PROJECT ID: 110516

SUBSET	TOTAL
4	24
SHEET	TOTAL
36	56