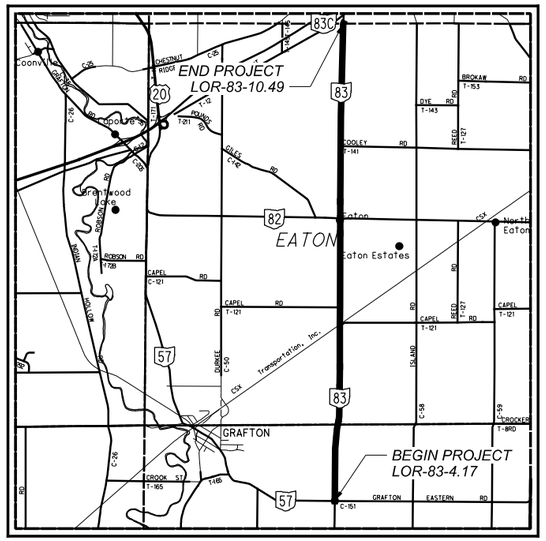
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

LOR-83-4.17

GRAFTON TOWNSHIP
EATON TOWNSHIP
LORAIN COUNTY



LOCATION MAP

LATITUDE: 40°50'30" LONGITUDE: 82°50'55"

N

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

DESIGN DESIGNATION

CURRENT ADT (2022)	7,900
DESIGN YEAR ADT (2034)	8,200
DESIGN HOURLY VOLUME (2034)	800
DIRECTIONAL DISTRIBUTION	61%
TRUCKS (24 HOUR B&C)	0.06
DESIGN SPEED (4.17-5.21, 5.69-10.49)	55 MPH
LEGAL SPEED (4.17-5.21, 5.69-10.49)	55 MPH
DESIGN SPEED (5.21-5.69)	50 MPH
LEGAL SPEED (5.21-5.69)	50 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
MAJOR COLLECTOR	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT THREE ENGINEERING

ENGINEER'S SEAL:

STATE OF OHIO
NICHOLAS RYAN FOSTER
E-81255
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Nicholas R Foster
DATE: 10/5/21

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STANDARD CONSTRUCTION DRAWINGS

BP-3.1	1/17/20	MT-95.31	7/19/19	TC-41.20	10/18/13	
		MT-95.32	4/19/19	TC-42.20	10/18/13	
DBR-3-11	7/15/11	MT-95.60	4/19/19	TC-52.10	10/18/13	
		MT-95.61	4/19/19	TC-52.20	1/15/21	
DM-4.3	1/15/16	MT-97.10	4/19/19	TC-61.30	7/19/19	
DM-4.4	1/15/16	MT-97.12	1/20/17	TC-64.10	7/16/21	
		MT-99.20	4/19/19	TC-65.10	1/17/14	
BP-4.1	7/19/13	MT-101.90	7/17/20	TC-65.11	7/21/17	
BP-9.1	1/18/19	MT-105.10	1/17/20	TC-71.10	7/16/21	
				TC-82.10	7/19/19	
RM-1.1	1/15/21					

SUPPLEMENTAL SPECIFICATIONS

800-2019	10/15/21
832	10/19/18
861	1/15/21
872	4/17/20
874	4/17/20
875	1/18/19

SPECIAL PROVISIONS

FEDERAL PROJECT NUMBER

E150747

RAILROAD INVOLVEMENT

CSX

PROJECT DESCRIPTION

THIS PROJECT IS 6.32 MILES IN LENGTH AND WILL INCLUDE PAVEMENT REPAIRS, RESURFACING WITH ASPHALT CONCRETE, GUARDRAIL REPLACEMENT AND RECONSTRUCTION, PLACEMENT OF PAVEMENT MARKINGS, DETECTOR LOOP REPLACEMENT, AND SHOULDER WIDENING AROUND A RAILROAD CROSSING.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	N/A*
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A*
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A*

* MAINTENANCE PROJECT

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.

MAINTENANCE OF TRAFFIC ENDORSEMENT

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

APPROVED _____
DATE 10/05/21 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY
DISTRICT 3
ENGINEERING TEAM FOUR

DESIGNER
NRF

REVIEWER
KCK 09/21

PROJECT ID
97046

SHEET P.001 TOTAL P.038

LOR-83-4.17

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/10/2022 TIME: 6:48:07 AM USER: nfoster
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SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
5	6	7	9	12	13	22	26	27			01/STR/PV	02/STR/BR	03/SAF/OT						
																		ROADWAY	
				18							18			202	23000	18	SY	PAVEMENT REMOVED	
				25							25			202	38000	25	FT	GUARDRAIL REMOVED	
				64.5							64.5			202	38603	64.5	FT	BRIDGE RAILING REMOVED FOR REUSE, AS PER PLAN	8
				10							10			202	42040	10	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
				14							14			202	42810	14	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E	
				12							12			202	47200	12	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	
						32					32			203	10000	32	CY	EXCAVATION	
				60							60			203	20000	60	CY	EMBANKMENT	
				181							181			204	10000	181	SY	SUBGRADE COMPACTION	
				25.45							25.45			209	15001	25.45	STA	RESHAPING UNDER GUARDRAIL, AS PER PLAN	8
					12.67						12.67			209	60500	12.67	MILE	LINEAR GRADING	
5											5			209	80000	5	EACH	GRADING MAILBOX APPROACHES	
				1,700							1,700			606	17000	1,700	FT	RAISING TYPE 5 GUARDRAIL	
				25							25			606	17290	25	FT	GUARDRAIL, TYPE 5, LONG-SPAN	
				10							10			606	26500	10	EACH	ANCHOR ASSEMBLY, TYPE T	
				14							14			606	27850	14	EACH	ANCHOR ASSEMBLY REBUILT, TYPE E	
				8							8			606	32170	8	EACH	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE TST	
				4							4			606	35150	4	EACH	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4	
		6									6			623	39601	6	EACH	MONUMENT BOX RECONSTRUCTED TO GRADE, AS PER PLAN	7
																		EROSION CONTROL	
		2									2			659	00100	2	EACH	SOIL ANALYSIS TEST	
		13									13			659	00300	13	CY	TOPSOIL	
		114									114			659	10000	114	SY	SEEDING AND MULCHING	
		6									6			659	14000	6	SY	REPAIR SEEDING AND MULCHING	
		6									6			659	15000	6	SY	INTER-SEEDING	
		0.02									0.02			659	20000	0.02	TON	COMMERCIAL FERTILIZER	
		0.02									0.02			659	31000	0.02	ACRE	LIME	
		0.64									0.64			659	35000	0.64	MGAL	WATER	
											500			832	30000	500	EACH	EROSION CONTROL	
																		PAVEMENT	
	1,250										1,250			251	01030	1,250	CY	PARTIAL DEPTH PAVEMENT REPAIR (442)	
				181							181			252	01500	181	FT	FULL DEPTH PAVEMENT SAWING	
	125										125			253	02000	125	CY	PAVEMENT REPAIR	
					101,550						101,550			254	01000	101,550	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.75")	
					7,675						7,675			254	01000	7,675	SY	PAVEMENT PLANING, ASPHALT CONCRETE (3")	
					1,844						1,844			254	01000	1,844	SY	PAVEMENT PLANING, ASPHALT CONCRETE (TAPER 1.75" TO 3")	
					570						570			254	01600	570	SY	PATCHING PLANED SURFACE	
				41							41			301	46000	41	CY	ASPHALT CONCRETE BASE, PG64-22	
				50							50			304	20000	50	CY	AGGREGATE BASE	
				19	14,596						14,615			407	10000	14,615	GAL	TACK COAT	
				17	5,067						5,084			408	10001	5,084	GAL	PRIME COAT, AS PER PLAN	6
				7	3,809						3,816			442	00201	3,816	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (PG64-22)	6
					105						105			442	10511	105	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448) (DRIVEWAYS), AS PER PLAN (PG64-22)	6
5					706						711			617	10100	711	CY	COMPACTED AGGREGATE	
					12.67						12.67			618	41000	12.67	MILE	RUMBLE STRIPES, EDGE LINE (ASPHALT CONCRETE)	
					2.15								2.15	618	43000	2.15	MILE	RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE)	
				9	5,332						5,341			861	11300	5,341	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (448)	
					147						147			861	11301	147	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (448), AS PER PLAN (DRIVEWAYS)	6
					2.15								2.15	874	21000	2.15	MILE	LONGITUDINAL JOINT PREPARATION	

GENERAL SUMMARY

DESIGN AGENCY
DISTRICT 3
ENGINEERING TEAM FOUR

DESIGNER
NRF

REVIEWER
KCK 09/21

PROJECT ID
97046

SHEET P.011 TOTAL P.038

LOR-83-4.17

MODEL: GEN_1 PAPERSIZE: 17x11 (in.) DATE: 1/10/2022 TIME: 6:50:34 AM USER: nfoster
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COUNTY	ROUTE	LOG POINT TO LOG POINT (STRAIGHT LINE MILEAGE)		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG.	*TYPICAL	PAVEMENT AREA SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.75") SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE (TAPER 1.75" TO 3") SQ. YD.	254 PAVEMENT PLANING, ASPHALT CONCRETE (3") SQ. YD.	254 PATCHING PLANED SURFACE SQ. YD.	407 TACK COAT @ 0.08 GAL/SY GALLON	407 TACK COAT @ 0.05 GAL/SY GALLON	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN, (PG64-22) INCH	442 CU. YD.	861 ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (448) INCH	861 CU. YD.	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (448) (DRIVEWAYS), AS PER PLAN, (PG64-22) INCH (AVG)	442 CU. YD.	861 ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5MM, TYPE A (448) , AS PER PLAN (DRIVEWAYS) INCH (AVG)	861 CU. YD.	618 RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE) MILE	618 RUMBLE STRIPES, EDGE LINE (ASPHALT CONCRETE) MILE	874 LONGITUDINAL JOINT PREPARATION MILE	AGGREGATE SHOULDER PROPOSED WIDTH SL FT	AGGREGATE SHOULDER PROPOSED WIDTH SR FT	AGGREGATE SHOULDER AREA SQ. YD.	209 LINEAR GRADING MILE	408 PRIME COAT, AS PER PLAN @ 0.40 GAL/SY GALLON	617 COMPACTED AGGREGATE 2 INCHES AVG. THICKNESS CU. YD.
LOR	83	4.17	4.19	0.02	106	29.0	1	342	342			2	27	17	1.25	12	1.75	17						0.04		1.5	1.5	35	0.04	14	2
LOR	83	4.19	4.20	0.01	50	29.0	½	161		161		1	13	8	1.25	6	1.75	8						0.02		1.5	1.5	17	0.02	7	1
STRUCTURE LOR-83-4.21					100	29.0	2	322			322	2	26	16	1.25	11	1.75	16						0.03		1.5	1.5	33	0.03	13	2
LOR	83	4.22	4.23	0.01	50	29.0	½	161		161		1	13	8	1.25	6	1.75	8						0.02		1.5	1.5	17	0.02	7	1
LOR	83	4.23	5.44	1.21	6389	29.0	1	20,587	20,587			103	1,647	1,029	1.25	715	1.75	1,001						2.42		1.5	1.5	2,130	2.42	852	118
LOR	83	5.44	5.45	0.01	50	29.0	½	161		161		1	13	8	1.25	6	1.75	8						0.02		1.5	1.5	17	0.02	7	1
STRUCTURE LOR-83-5.46					100	29.0	2	322			322	2	26	16	1.25	11	1.75	16						0.03		1.5	1.5	33	0.03	13	2
LOR	83	5.47	5.48	0.01	50	29.0	½	161		161		1	13	8	1.25	6	1.75	8						0.02		1.5	1.5	17	0.02	7	1
LOR	83	5.48	5.71	0.23	1214	29.0	1	3,912	3,912			20	313	196	1.25	136	1.75	190						0.46		1.5	1.5	405	0.46	162	22
LOR	83	5.71	5.97	0.26	1373	36.0	1	5,492	5,492			27	439	275	1.25	191	1.75	267						0.52		1.5	1.5	458	0.52	183	25
LOR	83	5.97	6.52	0.55	2904	28.0	1	9,035	9,035			45	723	452	1.25	314	1.75	439						1.10		1.5	1.5	968	1.10	387	54
LOR	83	6.52	6.73	0.21	1109	28.0	2	3,450			3,450	17	276	173	1.25	120	1.75	168						0.42		1.5	1.5	370	0.42	148	21
LOR	83	6.73	6.82	0.09	475	28.0	2	1,478			1,478	7	118	74	1.25	51	1.75	72					0.09	0.18	0.09	1.5	1.5	158	0.18	63	9
SUSPEND & RESUME: STRUCTURE LOR-83-6.82					75																										
LOR	83	6.83	6.93	0.10	528	28.0	2	1,643			1,643	8	131	82	1.25	57	1.75	80					0.10	0.20	0.10	1.5	1.5	176	0.20	70	10
LOR	83	6.93	7.49	0.56	2957	28.0	1	9,200	9,200			46	736	460	1.25	319	1.75	447					0.56	1.12	0.56	1.5	1.5	986	1.12	394	55
LOR	83	7.49	7.67	0.18	950	36.0	1	3,800	3,800			19	304	190	1.25	132	1.75	185					0.18	0.36	0.18	1.5	1.5	317	0.36	127	18
LOR	83	7.67	7.68	0.01	50	28.0	½	156		156		1	12	8	1.25	5	1.75	8					0.01	0.02	0.01	1.5	1.5	17	0.02	7	1
STRUCTURE LOR-83-7.69					100	28.0	2	311			311	2	25	16	1.25	11	1.75	15						0.03		1.5	1.5	33	0.03	13	2
LOR	83	7.70	7.71	0.10	50	28.0	½	156		156		1	12	8	1.25	5	1.75	8					0.10	0.20	0.10	1.5	1.5	17	0.20	7	1
LOR	83	7.71	7.83	0.12	634	30.0	1	2,113	2,113			11	169	106	1.25	73	1.75	103					0.12	0.24	0.12	1.5	1.5	211	0.24	85	12
LOR	83	7.83	7.89	0.06	317	40.0	1	1,409	1,409			7	113	70	1.25	49	1.75	68					0.06	0.12	0.06	1.5	1.5	106	0.12	42	6
LOR	83	7.89	7.90	0.01	50	40.0	½	222		222		1	18	11	1.25	8	1.75	11						0.02		1.5	1.5	17	0.02	7	1
SUSPEND & RESUME: SR 82 INTERSECTION																															
LOR	83	7.93	7.94	0.01	50	40.0	½	222		222		1	18	11	1.25	8	1.75	11						0.02		1.5	1.5	17	0.02	7	1
LOR	83	7.94	8.01	0.07	370	40.0	1	1,644	1,644			8	132	82	1.25	57	1.75	80					0.07	0.14	0.07	1.5	1.5	123	0.14	49	7
LOR	83	8.01	8.14	0.13	686	30.0	1	2,287	2,287			11	183	114	1.25	79	1.75	111					0.13	0.26	0.13	1.5	1.5	229	0.26	91	13
LOR	83	8.14	8.40	0.26	1373	28.5	1	4,348	4,348			22	348	217	1.25	151	1.75	211					0.26	0.52	0.26	1.5	1.5	458	0.52	183	25
LOR	83	8.40	8.87	0.47	2482	29.0	1	7,998	7,998			40	640	400	1.25	278	1.75	389					0.47	0.94	0.47	1.5	1.5	827	0.94	331	46
LOR	83	8.87	10.30	1.43	7550	29.0	1	24,328	24,328			122	1,946	1,216	1.25	845	1.75	1,183						2.86		1.5	1.5	2,517	2.86	1,007	140
LOR	83	10.30	10.31	0.01	50	40.0	½	222		222		1	18	11	1.25	8	1.75	11						0.02		1.5	1.5	17	0.02	7	1
SUSPEND & RESUME: STRUCTURE LOR-83-10.32					100																										
LOR	83	10.33	10.34	0.01	50	40.0	½	222		222		1	18	11	1.25	8	1.75	11						0.02		1.5	1.5	17	0.02	7	1
LOR	83	10.34	10.49	0.15	792	29.0	1	2,552	2,552			13	204	128	1.25	89	1.75	124						0.30		1.5	1.5	264	0.30	106	15
EXTRA AREA FOR INTERSECTIONS								373	373			4	30	15	1.25	13	1.75	18													
EXTRA AREA FOR PAVED DRIVES								1350	1350		148.5	14	108	54					1.25	47	1.75	66									
EXTRA AREA FOR AGGREGATE DRIVES								1660.5					133	66					1.25	58	1.75	81						1661		664	92
EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES								830	780			8	62	33	1.25	29	1.75	40													
TOTALS				**6.29**	**33211**				**101,550**	**1,844**	**7,675**	**570**	**9,007**	**5,589**		**3,809**		**5,332**		**105**		**147**	**2.15**	**12.67**	**2.15**				**12.67**	**5,067**	**706**

PAVEMENT DATA SHEET

DESIGN AGENCY
DISTRICT 3
ENGINEERING TEAM FOUR

DESIGNER
NRF

REVIEWER
KCK 09/21

PROJECT ID
97046

SUBSET 1 | TOTAL 1

SHEET P.013 | TOTAL P.038

LOR-83-4.17

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/10/2022 TIME: 6:50:49 AM USER: nfoster
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