

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION

## HEN-110-0.30

### CITY OF NAPOLEON HARRISON TOWNSHIP HENRY COUNTY

#### FEDERAL PROJECT NUMBER

E130771

#### RAILROAD INVOLVEMENT

NONE

#### PROJECT DESCRIPTION

A RESURFACING AND BRIDGE REPAIR PROJECT ON S.R. 110 FROM SR-108 TO SR-109 IN HENRY COUNTY; PERFORM NECESSARY RELATED WORK.

#### EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.24 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.15 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES

#### 2019 SPECIFICATIONS

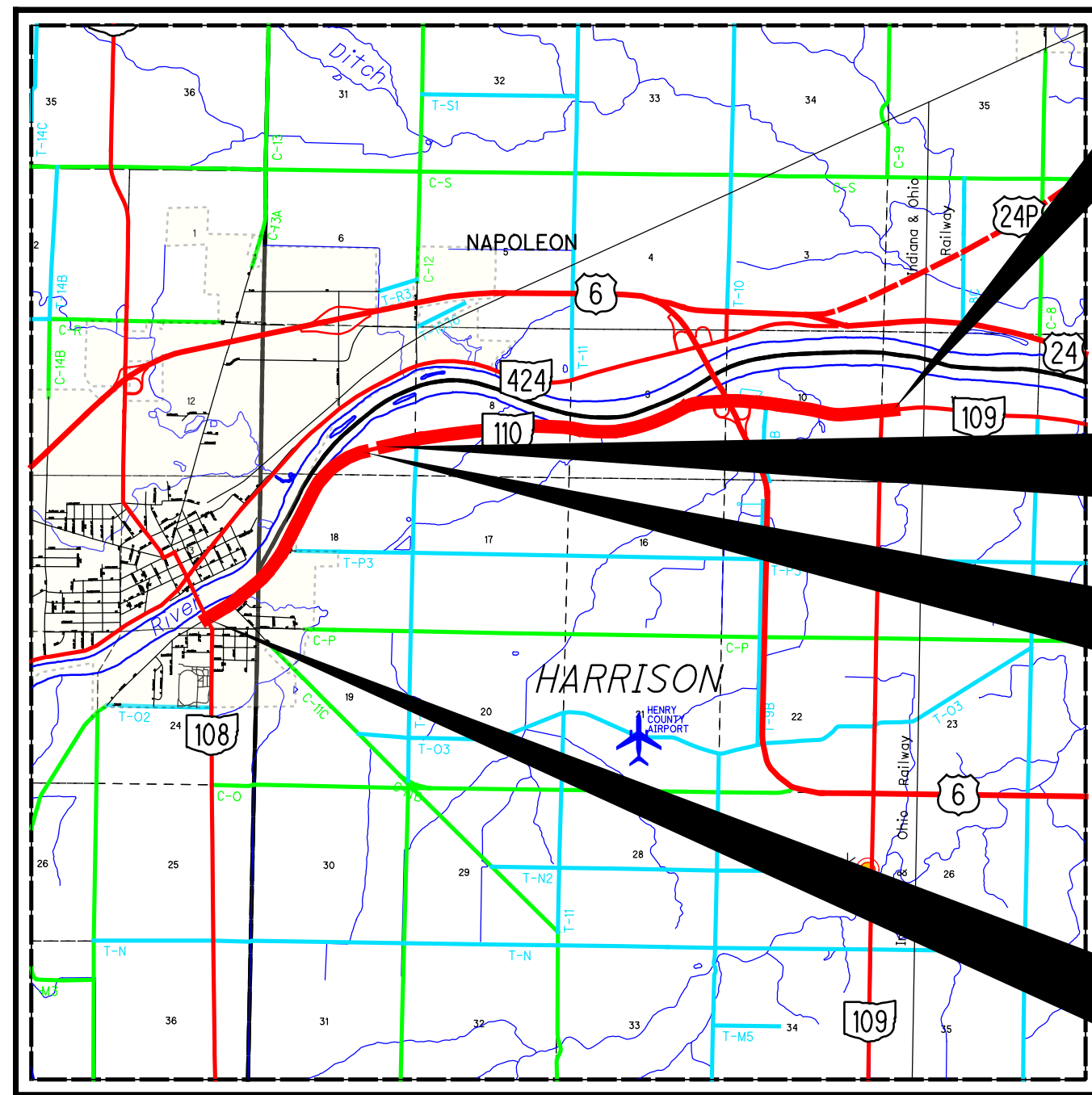
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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 ON SHEETS 18 & 19.

*Pat McColey, PE*

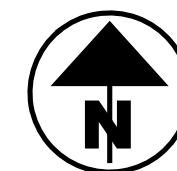
Pat McColey, P.E., S.I.  
District 02 Deputy Director

*Jack Marchbanks*  
Jack Marchbanks, PhD  
Director, Department of Transportation



LOCATION MAP

LATITUDE: 41°24'14" LONGITUDE: 84°5'13"



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

DESIGN DESIGNATION	SLM. 0.30-2.17	SLM. 2.17-5.20
CURRENT ADT (20 )	7600	1800
DESIGN YEAR ADT (20 )	7600	1900
DESIGN HOURLY VOLUME (20 )	700	200
DIRECTIONAL DISTRIBUTION	57%	52%
TRUCKS (24 HOUR B&C)	4%	33%
DESIGN SPEED	55 MPH	60 MPH
LEGAL SPEED	50 MPH	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:		
URBAN MAJOR COLLECTOR, RURAL MAJOR COLLECTOR		
NHS PROJECT		NO

#### DESIGN EXCEPTIONS

NONE REQUIRED

#### ADA DESIGN WAIVERS

NONE REQUIRED

**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 DEPT. OF TRANSPORTATION  
DISTRICT 2  
BOWLING GREEN, OHIO

#### INDEX OF SHEETS:

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STANDARD CONSTRUCTION DRAWINGS							SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-2.1	1/21/22	MGS-4.2	7/19/13	MT-101.60	1/17/20		800-2019 SEE PROPOSAL	WATERWAY PERMIT 7/14/22
BP-3.1	1/21/22	MGS-4.3	1/18/13	MT-101.90	7/17/20		821 4/20/12	
BP-3.2	1/18/19			MT-105.10	1/17/20		832 7/15/22	ASBESTOS
BP-4.1	7/19/13	RM-1.1	1/15/21				848 1/15/21	6/08/22
BP-5.1	7/15/22			TC-42.20	10/18/13		872 1/21/22	
		AS-1-15	1/20/23	TC-52.10	10/18/13		874 4/17/20	
CB-2-2A, 2B, 2C	1/20/23	AS-2-15	1/20/23	TC-52.20	1/15/21		875 1/18/19	
CB-3	7/16/21	DS-1-92	7/15/22	TC-61.30	7/19/19			
CB-3A	7/16/21	HW-2.1	7/20/18	TC-64.10	1/20/23			
		TST-1-99	1/15/21	TC-65.10	1/17/14			
DM-1.1	7/17/20			TC-65.11	7/15/22			
DM-1.2	7/16/21	MT-95.31	7/19/19	TC-71.10	7/15/22			
		MT-95.32	4/19/19	TC-82.10	7/19/19			
MGS-1.1	7/16/21	MT-97.10	4/19/19					
MGS-2.1	1/19/18	MT-97.12	1/20/17					
MGS-3.1	1/19/18	MT-99.20	4/19/19					

ENGINEER'S SEAL ROADWAY	ENGINEER'S SEAL BRIDGE

TITLE SHEET

DESIGN AGENCY



DESIGNER  
MEK  
REVIEWER  
DAR 10/21/22  
PROJECT ID  
94321  
SHEET TOTAL  
1 | 63


HEN-110-0.30

MODEL: Sheet PAPER: 34x22 (in.) DATE: 7/5/2023 TIME: 2:01:48 PM USER: mkeiner pvc:\ohiodot-pw-bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 02\Henry\94321\400-Engineering\FigRoadway\Sheets\94321\_GT001.dgn



STATION RANGE	TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	202	204	209	254	301	304	407	407	441	424	441	617	618	874	875			
							PAVEMENT REMOVED	SUBGRADE COMPACTION	LINEAR GRADING	PAVEMENT PLANING, ASPHALT CONCRETE, 3"	ASPHALT CONCRETE BASE, PG64-22, (449), 7"	AGGREGATE BASE, 6"	NON-TRACKING TACK COAT 0.085 GAL/SY	NON-TRACKING TACK COAT 0.055 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448), AS PER PLAN, 1"	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), 2"	COMPACTED AGGREGATE	RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE)	LONGITUDINAL JOINT PREPARATION	LONGITUDINAL JOINT ADHESIVE			
							SY	SY	MILE	SY	CY	CY	GAL	GAL	CY	CY	CY	CY	MILE	FT	LB			
132+00.00	TO	137+00.00	E	LT/RT	500.00	28.90	1605.56			0.19	1605.56		136.47	88.31		44.60	89.20	18.52	0.09	500				
137+00.00	TO	142+00.00	E/F	LT/RT	500.00	28.80	1600.00			0.19	1600.00		136.00	88.00		44.44	88.89	18.52	0.09	500				
142+00.00	TO	147+00.00	E	LT/RT	500.00	29.50	1638.89			0.19	1638.89		139.31	90.14		45.52	91.05	18.52	0.09	500				
147+00.00	TO	152+00.00	E/D	LT/RT	500.00	29.50	1638.89			0.19	1638.89		139.31	90.14		45.52	91.05	18.52	0.09	500				
152+00.00	TO	157+00.00	D/G	LT/RT	500.00	29.20	1622.22			0.19	1622.22		137.89	89.22		45.06	90.12	18.52	0.09	500				
157+00.00	TO	162+00.00	F/E/D	LT/RT	500.00	29.00	1611.11			0.19	1611.11		136.94	88.61		44.75	89.51	18.52	0.09	500				
162+00.00	TO	167+00.00	D	LT/RT	500.00	29.80	1655.56			0.19	1655.56		140.72	91.06		45.99	91.98	18.52	0.09	500				
167+00.00	TO	172+00.00	D/G	LT/RT	500.00	29.10	1616.67			0.19	1616.67		137.42	88.92		44.91	89.81	18.52	0.09	500				
172+00.00	TO	177+00.00	G/F	LT/RT	500.00	29.30	1627.78			0.19	1627.78		138.36	89.53		45.22	90.43	18.52	0.09	500				
177+00.00	TO	180+78.00	F/G	LT/RT	378.00	28.40	1192.80			0.14	1192.80		101.39	65.60		33.13	66.27	14.00	0.07	378				
180+78.00	TO	180+98.00	J	LT/RT	20.00	28.40	63.11	63.11	0.004		12.27	10.52	5.36	3.47		1.75	3.51	0.19	0.004	20				
180+98.00	TO	182+00.00	G	LT/RT	102.00	28.10	318.47			0.04	318.47		27.07	17.52		8.85	17.69	0.94	0.02	102				
182+00.00	TO	183+77.00	G/D	LT/RT	177.00	28.10	552.63			0.07	552.63		46.97	30.39		15.35	30.70	1.64	0.03	177				
183+77.00	TO	183+97.00	J	LT/RT	20.00	28.50	63.33	63.33	0.004		12.31	10.56	5.38	3.48		1.76	3.52	0.19	0.004	20				
183+97.00	TO	187+00.00	D/E	LT/RT	303.00	28.90	972.97			0.11	972.97		82.70	53.51		27.03	54.05	2.81	0.06	303				
187+00.00	TO	188+79.00	D	LT/RT	179.00	28.50	566.83			0.07	566.83		48.18	31.18		15.75	31.49	1.66	0.03	179				
188+79.00	TO	188+99.00	J	LT/RT	20.00	28.50	63.33	63.33	0.004		12.31	10.56	5.38	3.48		1.76	3.52	0.19	0.004	20				
188+99.00	TO	190+79.00	D	LT/RT	180.00	28.50	570.00			0.07	570.00		48.45	31.35		15.83	31.67	1.67	0.03	180				
190+79.00	TO	190+99.00	J	LT/RT	20.00	28.40	63.11	63.11	0.004		12.27	10.52	5.36	3.47		1.75	3.51	0.19	0.004	20				
190+99.00	TO	192+00.00	D	LT/RT	101.00	28.40	318.71			0.04	318.71		27.09	17.53		8.85	17.71	0.94	0.02	101				
192+00.00	TO	193+79.00	D	LT/RT	179.00	28.20	560.87			0.07	560.87		47.67	30.85		15.58	31.16	1.66	0.03	179				
193+79.00	TO	193+99.00	J	LT/RT	20.00	28.30	62.89	62.89	0.004		12.23	10.48	5.35	3.46		1.75	3.49	0.19	0.004	20				
193+99.00	TO	195+79.00	D	LT/RT	180.00	28.50	570.00			0.07	570.00		48.45	31.35		15.83	31.67	1.67	0.03	180				
195+79.00	TO	195+99.00	J	LT/RT	20.00	28.50	63.33	63.33	0.004		12.31	10.56	5.38	3.48		1.76	3.52	0.19	0.004	20				
195+99.00	TO	197+00.00	D	LT/RT	101.00	28.50	319.83			0.04	319.83		27.19	17.59		8.88	17.77	0.94	0.02	101				
197+00.00	TO	201+69.00	D	LT/RT	469.00	29.50	1537.28			0.18	1537.28		130.67	84.55		42.70	85.40	4.34	0.09	469				
201+69.00	TO	201+89.00	J	LT/RT	20.00	28.10	62.44	62.44	0.004		12.14	10.41	5.31	3.43		1.73	3.47	0.19	0.004	20				
201+89.00	TO	202+00.00	D	LT/RT	11.00	28.10	34.34			0.004	34.34		2.92	1.89		0.95	1.91	0.10	0.002	11				
202+00.00	TO	203+79.00	D	LT/RT	179.00	28.30	562.86			0.07	562.86		47.84	30.96		15.63	31.27	1.66	0.03	179				
203+79.00	TO	203+99.00	J	LT/RT	20.00	29.20	64.89	64.89	0.004		12.62	10.81	5.52	3.57		1.80	3.60	0.19	0.004	20				
203+99.00	TO	207+00.00	D	LT/RT	301.00	29.10	973.23			0.11	973.23		82.72	53.53		27.03	54.07	5.54	0.06	301				
207+00.00	TO	212+00.00	D/H	LT/RT	500.00	30.10	1672.22			0.19	1672.22		142.14	91.97		46.45	92.90	18.52	0.09	500				
212+00.00	TO	215+00.00	H/I	LT/RT	300.00	29.20	973.33			0.11	973.33		82.73	53.53		27.04	54.07	11.11	0.06	300				
215+00.00	TO	220+00.00	I	LT/RT	500.00	29.70	1650.00			0.19	1650.00		140.25	90.75		45.83	91.67	18.52	0.09	500				
220+00.00	TO	220+91.74	I	LT/RT	91.74	33.20	338.42			0.03	338.42		28.77	18.61		9.40	18.80	3.40	0.02	92				
223+76.00	TO	225+00.00	I	LT/RT	124.00	32.60	449.16			0.05	449.16		38.18	24.70		12.48	24.95	4.59	0.02	124				
SUBTOTALS							506.43	506.44	3.38	28750.62	98.46	210.09	2486.84	1609.13		812.66	1625.40	263.91	1.71	9016				
TOTALS CARRIED TO SHEET 25							507	506.5	3.4	28751	99	211		4096		813	1626	264	2.0	9016				

PAVEMENT CALCATIONS (2 OF 3)

DESIGN AGENCY  
  
 DESIGNER  
 MEK  
 REVIEWER  
 DAR 10/21/22  
 PROJECT ID  
 94321  
 SHEET TOTAL  
 24 63


HEN-110-0.30

MODEL: Sheet2 PAPER SIZE: 34x22 (in.) DATE: 7/5/2023 TIME: 10:28:33 AM USER: mkeiner  
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STATION RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA	202	204	209	254	301	304	407	407	441	424	441	617	618	874	875					
									PAVEMENT REMOVED	SUBGRADE COMPACTION	LINEAR GRADING	PAVEMENT PLANING, ASPHALT CONCRETE, 3"	ASPHALT CONCRETE BASE, PG64-22, (449), 7"	AGGREGATE BASE, 6"	NON-TRACKING TACK COAT 0.085 GAL/SY	NON-TRACKING TACK COAT 0.055 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448), AS PER PLAN, 1"	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), 2"	COMPACTED AGGREGATE	RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE)	LONGITUDINAL JOINT PREPARATION	LONGITUDINAL JOINT ADHESIVE					
FT	FT	SY	SY	SY	SY	MILE	SY	CY	CY	GAL	GAL	CY	CY	CY	CY	CY	CY	MILE	FT	LB								
225+00.00	TO	229+00.00	I	LT/RT	400.00	28.60	1271.11				0.15	1271.11			108.04	69.91	35.31	70.62	14.81	0.08	400							
229+00.00	TO	234+00.00	I/E/D	LT/RT	500.00	28.90	1605.56				0.19	1605.56			136.47	88.31	44.60	89.20	18.52	0.09	500							
234+00.00	TO	239+00.00	D/E	LT/RT	500.00	29.70	1650.00				0.19	1650.00			140.25	90.75	45.83	91.67	18.52	0.09	500							
239+00.00	TO	244+00.00	E	LT/RT	500.00	29.00	1611.11				0.19	1611.11			136.94	88.61	44.75	89.51	18.52	0.09	500							
244+00.00	TO	249+00.00	E/D	LT/RT	500.00	28.90	1605.56				0.19	1605.56			136.47	88.31	44.60	89.20	18.52	0.09	500							
249+00.00	TO	252+57.98	D/G	LT/RT	357.98	27.00	1073.94				0.14	1073.94			91.28	59.07	29.83	59.66	13.26	0.07	358							
252+57.98	TO	253+57.98	J	LT/RT	100.00	28.70	318.89	318.89	318.89	0.04		62.01	53.15	27.11	17.54	8.86	17.72	3.70	0.02		100							
254+89.42	TO	255+89.42	J	LT/RT	100.00	28.50	316.67	316.67	316.67	0.04		61.57	52.78	26.92	17.42	8.80	17.59	3.70	0.02		100							
255+89.42	TO	256+00.00	G	LT/RT	10.58	28.70	33.74			0.00	33.74			2.87	1.86	0.94	1.87	0.39	0.00		11							
256+00.00	TO	261+00.00	G/D	LT/RT	500.00	29.20	1622.22				0.19	1622.22			137.89	89.22	45.06	90.12	18.52	0.09	500							
261+00.00	TO	266+00.00	D/E	LT/RT	500.00	28.30	1572.22				0.19	1572.22			133.64	86.47	43.67	87.35	18.52	0.09	500							
266+00.00	TO	271+00.00	E	LT/RT	500.00	28.80	1600.00				0.19	1600.00			136.00	88.00	44.44	88.89	18.52	0.09	500							
271+00.00	TO	274+00.00	E	LT/RT	300.00	28.90	963.33				0.11	963.33			81.88	52.98	26.76	53.52	11.11	0.06	300							
274+00.00	TO	276+56.50	E	LT/RT	256.50	29.60	843.60				0.10	843.60			71.71	46.40	23.43	46.87	9.50	0.05	257							
<b>Intersections and Extra Areas</b>																												
Appian Ave.	A	RT	79.80	31.00			175.22					175.22			14.89	9.64	4.87	9.73										
Cliff St.	A	RT	27.80	8.50			18.31				0.01	18.31			1.56	1.01	0.51	1.02	0.31									
Maumee Ln.	A	RT	58.80	27.00			90.16				0.02	90.16			7.66	4.96	2.50	5.01	1.00									
Co. Rd. P-3	B	RT	182.39	32.40			421.51				0.02	421.51			35.83	23.18	11.71	23.42	1.20									
Campbell's Driveway	C	RT	142.28	10.00			160.63				0.01	160.63			13.65	8.83	4.46	8.92	0.37									
Co. Rd. 12 (112+75 TO 113+79.72)	K	RT	104.27				72.09	35.58	72.09	0.02		13.28	14.54	6.13	3.96		2.00	4.00	1.93			35.00						
Co. Rd. 12 (1000+00 TO 1001+28.60)	L	RT	128.60				107.02	28.17	107.02	0.02		19.10	20.36	9.10	5.89		2.97	5.95	2.38			43.00						
Co. Rd. 12	D	RT	214.29	14.50			316.4				0.01	316.4			26.9	17.4	8.79	17.6	0.54									
FIELD DRIVE NEAR 193+78		RT					177.3						1.09															
US 6 SB ENTRANCE/EXIT RAMP	I	RT	174.64	5.70			89.19				0.01	89.19			7.58	4.91	2.48	4.96	0.21									
US 6 NB ENTRANCE/EXIT RAMP	E	RT	215.07	12.45			218.14				0.01	218.14			18.54	12.00	6.06	12.12	0.46									
<b>SUBTOTALS</b>								699.30	814.66	2.04	16941.93	155.96	141.92	1509.30	976.63	41.38	451.85	986.50	194.51	0.95	5026.00	78.00						
<b>TOTALS FOR THIS SHEET</b>								699	815	2.1	16942	156	142		2486	42	452	987	195	1	5026	78						
<b>TOTALS CARRIED FROM SHEET 23</b>											3.3	35567			4979		988	1976	314	1	5873	1933						
<b>TOTALS CARRIED FROM SHEET 24</b>								507	507	3.4	28751	99	211		4096		813	1626	264	2	9016							
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>								1206	1321	9	81260	255	353		11561		42	2253	4589	773	4	19915	2011					

PAVEMENT CALCULATIONS (3 OF 3)

DESIGN AGENCY



DESIGNER  
MEK

REVIEWER  
MEK

DAR 10/21/22

PROJECT ID  
94321


SHEET TOTAL  
25 | 63

HEN-110-0.30

MODEL: Sheet PAPER:SIZE: 34x22 (in.) DATE: 7/5/2023 TIME: 8:52:03 AM USER: mkeiner  
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REF NO.	PLAN SHEET NO.	STATION TO STATION			659	203	203	659	659	659		832								
					SEEDING AND MULCHING	EXCAVATION	EMBANKMENT	TOPSOIL	COMMERCIAL FERTILIZER	WATER		EROSION CONTROL								
					SY	CY	CY	CY	TON	MGAL		EACH								
<b>CR 12 INTERSECTION WIDENING</b>																				
9		112+75.00	TO	113+79.72	39	19	37	4.4	0.01	0.21										
9		1000+00.00	TO	1001+28.60	60	24	77	6.7	0.01	0.33										
<b>CR 12 INTERSECTION DITCH</b>																				
9		113+10.89	TO	113+58.85	112	26		12.4	0.02	0.60										
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					212	69	115	24	0.04	1.2		16000	16000							

**EARTHWORK SUB-SUMMARY**

DESIGN AGENCY	
DESIGNER	MEK
REVIEWER	DAR
PROJECT ID	10/21/22
SHEET	94321
TOTAL	63