SHELLY & SANDS

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY RLM DATE 1-28-92
CHKD. BY SKB DATE 1-28-92

FHWA REGION	STATE	FEDERAL PROJECT	PLAN NO.
5	OHIO		177

(1/15)

409(9

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINII BEGIN	PROJECT TERMINII END	NET LENGTH MILES	TOWNSHIP	CITY	VILLAGE
1	MUS	SR 284	(0.00-3.05)	0.00	13.40	12.27			
2	MUS	SR 340	(0.00)	0.00	3.78	3.78			
3	NOB	SR 340	(0.00)	0.00	0.71	0.71			
4	GUE	SR 340	(0.00)	0.00	0.88	0.88			

The Standard 19 91 Specifications of the State of Ohio, Department of Transportation, including changes and Supplemental Specifications listed in the plans and proposal shall govern these improvements.

I hereby approve these plans and declare that the making of these improvements will require the closing of the highways to traffic on Parts No. NONE and that detours will be provided by State forces. The closing to traffic of the highways will not be required on Parts No. 1,2,3&4 and provisions for the maintenance and safety of traffic will be indicated in the proposal.

Approved Date 2-21-92 — Cash Mills — District Deputy Director of Transportation

Approved Date 2-27-92 — B. D. Kamblani — Engineer of Bridges

Approved Date 3-2-92 — Ruth C. Swearingen — Engineer of Maintenance

Approved Date 3-3-92 — Alexander H. Hynds — Deputy Director, Operations

Approved Date _____ — Assistant Deputy Director, Program Development

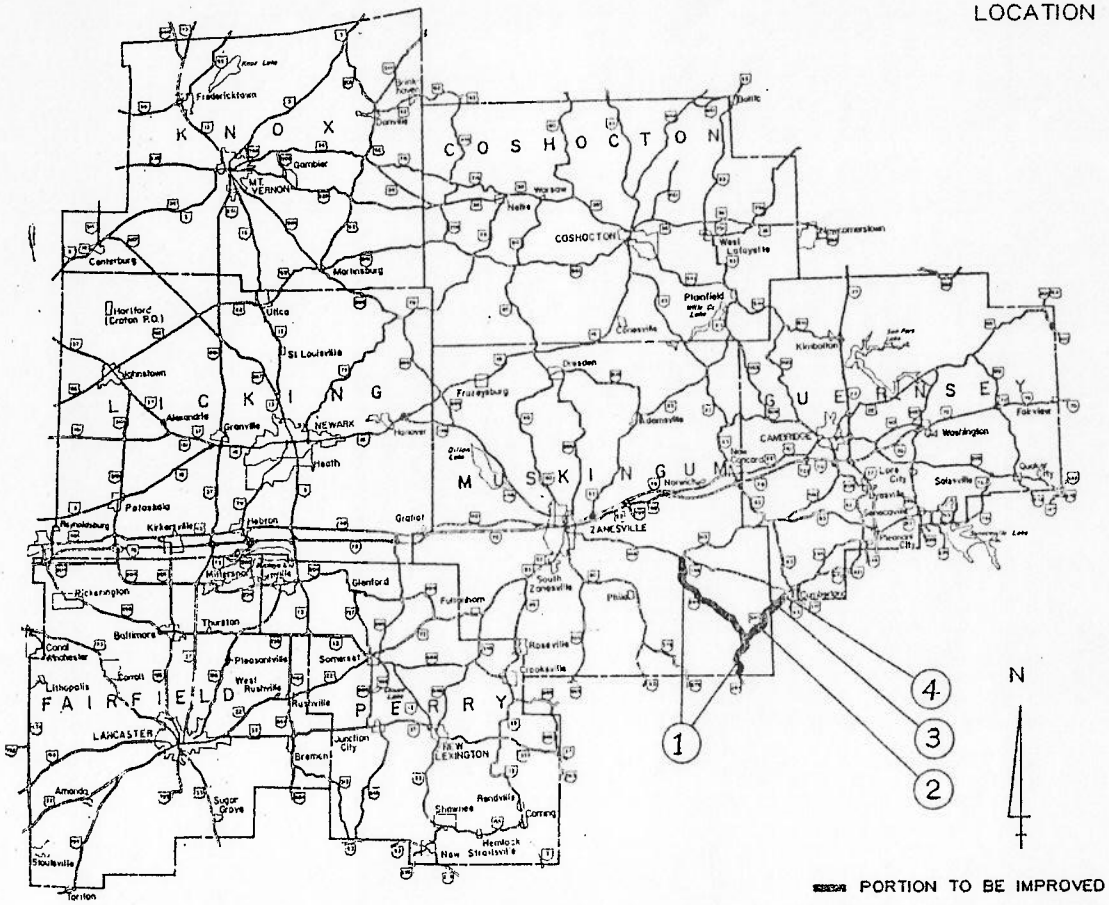
Approved Date _____ — Chief Engineer, Construction

Approved Date _____ — Chief Engineer, Design

Approved Date _____ — Assistant Director, Department of Transportation

Approved Date 3-3-92 — Jerry Wray — Director, Department of Transportation

LOCATION MAP



PORTION TO BE IMPROVED

STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
BP-5	10-01-87		
BP-6	10-01-87		
MT-97.10	4-29-88		
MT-97.11	10-04-89		
MT-99.10	11-14-86		
MT-99.20	4-29-88		

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY KLH DATE 1-22-92
CHKD. BY ____ DATE ____

PLAN NO.

GENERAL NOTES

SHOULDER RESTORATION

IN ORDER TO PROVIDE POSITIVE DRAINAGE FROM THE ROADWAY SURFACE TO THE SHOULDER BREAK, (6' MINIMUM WIDTH OR AS DIRECTED BY THE ENGINEER) THE EXISTING ROADWAY SHOULDERS SHALL BE GRADED ANDSHAPED USING A GRADER OF ADEQUATE SIZE TO PERFORM THE WORK TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE GRADING AND SHAPING WORK, INCLUDING LABOR AND INCIDENTALS, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - GRADER RENTAL, AND SHALL BE FOR THEACTUAL NUMBER OF GRADER HOURS WORKED.

ALL EXCESS MATERIAL REMAINING AFTER THE GRADER WORK IS COMPLETED, SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. PAYMENT FOR ALL OF THE ABOVE REMOVAL WORK SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - LOADER RENTAL, AND SHALL BE FOR THE ACTUAL NUMBER OF LOADER HOURS WORKED. ANY OTHER EQUIPMENT, LABOR OR INCIDENTALS REQUIRED TO COMPLETE THIS ITEM SHALL BE INCLUDED THEREIN FOR PAYMENT. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE PURPOSES.

ITEM SPECIAL - GRADER RENTAL

ITEM SPECIAL - LOADER RENTAL

RESIDENCE AND COMMERCIAL DRIVES

AN ESTIMATED QUANTITY OF ITEM 448 ASPHALT CONCRETE HAS BEEN INCLUDED IN THE PLAN TO BE USED AS DIRECTED BY THE ENGINEER TO PAVE APPROACH AREAS TO EXISTING DRIVEWAYS. PAVING SHALL EXTEND 10 FEET INTO THE DRIVEWAY, MEASURED FROM THE EDGE OF THE PAVEMENT, OR PAVED BERM. THICKNESS SHALL BE APPROXIMATELY THE SAME AS THE ROADWAY PAVEMENT OR PAVED BERM. FIELD DRIVES AND OIL WELL DRIVES WILL NOT BE PAVED.
ANY GRADING OF EXISTING DRIVES, TACK OR PRIME COAT, ALL MATERIAL, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE WORK ON DRIVES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 448 ASPHALT CONCRETE, SURFACE COURSE, TYPE 1 (DRIVEWAYS).
PAVING OF THE MAINLINE SHALL BE COMPLETED BEFORE THE WORK DESCRIBED ABOVE SHALL BEGIN ON DRIVES.
THE QUANTITIES SHOWN IN THE TABLE BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE PURPOSE DESCRIBED ABOVE.

PART 1	51
PART 2	-
PART 3	-
PART 4	5

CU.YD.

EXTRA ASPHALT FOR PRE-LEVELING

A QUANTITY OF 448 INTERMEDIATE COURSE HAS BEEN INCLUDED IN THE PLAN TO BE USED AT THE DIRECTION OF THE ENGINEER FOR PRE-LEVELING WHERE THE PAVEMENT IS LOW OR DETERIORATED.
THE QUANTITY OF ITEM 448 SHOWN BELOW HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 448 ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, AC-20

PART 1	920
PART 2	284
PART 3	53
PART 4	66

CU.YD.

MAIL BOX TURN OUTS

A QUANTITY OF ASPHALT CONCRETE HAS BEEN PROVIDED IN THE PLAN TO COVER MAIL BOX TURN OUTS. TURN OUTS SHALL BE PAVED AS SHOWN IN THE DETAIL IN DRAWING BP-6, 10-1-87.
ANY EXTRA GRADING OF THE SHOULDERS, PRIME OR TACK COAT, MATERIALS, LABOR, EQUIPMENT TOOLS AND INCIDENTALS NECESSARY TO COMPLETE MAIL BOX TURN OUTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 448 ASPHALT CONCRETE, SUFACE COURSE, TYPE 1, AC-20.

ITEM 448 ASPHALT CONCRETE, SURFACE COURSE, TYPE 1, AC-20.
CU.YD. (SEE TABLE BELOW)

PART 1	15
PART 2	2
PART 3	-
PART 4	5

CU.YD.

ITEM 617 COMPACTED AGGREGATE, AS PER PLAN

ALL AGGREGATE SHALL BE 100% CRUSHED LIMESTONE.

3/9 RB

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY RLM DATE 1-28-93
CHKD. BY [illegible] DATE 1-28-93

PLAN NO.

3/15

GENERAL NOTES

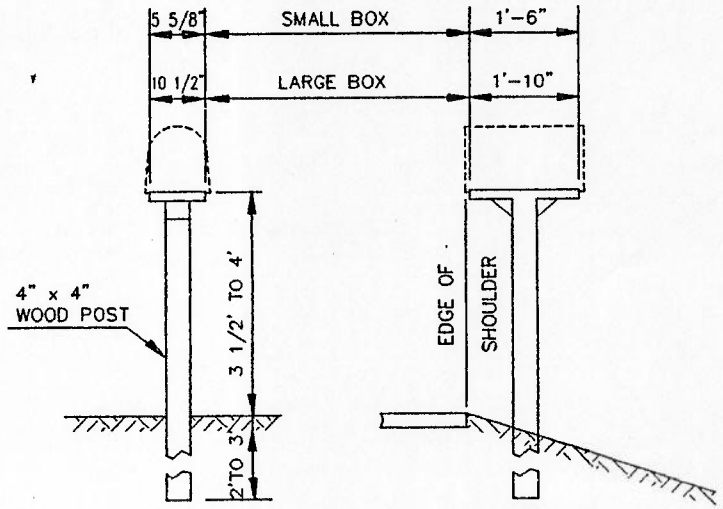
ITEM SPECIAL – MAILBOX SUPPORTS

THIS ITEM SHALL CONSIST OF REPLACING AND RESETTING DESIGNATED MAILBOX SUPPORTS WITH PRESSURE TREATED FOUR INCH (NOMINAL) TIMBER POSTS MEETING AASHTO M 133–81 AWPA P 8 OR AWPA 5. MAILBOX SUPPORTS SHALL BE CONSTRUCTED AS PER THE DRAWING ON THIS SHEET. ALL MATERIAL, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE REMOVAL AND INSTALLATION OF THE EXISTING MAILBOX ON THE NEW TIMBER POSTS AND RESETTING THE MAILBOX POSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL – MAILBOX SUPPORTS.
THE FOLLOWING QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE PURPOSE.

ITEM SPECIAL – MAILBOX SUPPORTS

PART 1	4
PART 2	1
PART 3	–
PART 4	–

CU.YD.



TYPICAL MAILBOX LOCATION AND MOUNTING HEIGHT

ITEM 614 WORK ZONE MARKING SIGNS

A QUANTITY OF A EACH WORK ZONE MARKING SIGNS (B EACH "NO EDGE LINES" OW–167 AND C EACH "UNMARKED NO PASSING ZONES" OW–168) ARE CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

PART	1	2	3	4
A	28	8	4	4
B	14	4	2	2
C	14	4	2	2

EDGE LINE SUB-SUMMARY

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY SLM DATE 1-28-22
CHKD. BY SMB DATE 1-28-22

PLAN NO.

4
15

CO.	ROUTE	S.L.M.		WHITE EDGE LINE QU.			YELLOW EDGE LINE QU.			PARTICIPATION TYPE				EDGE LINE TOTAL MILES	REMARKS
		FROM	TO	TOTAL MILES	HIGHWAY	RAMP	TOTAL MILES	HIGHWAY	RAMP	IRG	FG	RSG	NON FED STATE		
MUS	SR 284	0.00	1.92	3.84	1.92								PART 1	3.84	MORGAN CO. LINE TO SUSPEND WORK
		3.05	13.40	20.70	10.35								PART 1	20.70	RESUME WORK TO SR 146
	TOTALS			24.54	12.27								PART 1	24.54	
MUS	SR 340	0.00	3.78	7.56	3.78								PART 2	7.56	SR 284 TO NOB. CO. LINE
NOB	SR 340	0.00	0.71	1.42	0.71								PART 3	1.42	MUS. CO. LINE TO GUE. CO. LINE
GUE	SR 340	0.00	0.88	1.76	0.88								PART 4	1.76	NOB. CO. LINE TO SR 146

QUANTITIES INCLUDE CL AROUND OUTSIDE OF PAINTED ISLAND

CENTER LINE SUB-SUMMARY

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY RLH DATE 1-28-97
CHKD. BY [illegible] DATE 1-28-97

PLAN NO.

5/15

COUNTY	ROUTE	S.L.M. FROM	S.L.M. TO	CENTER LINES QUANTITIES TOTAL MILES	CENTER LINES QUANTITIES EQUIVALENT SOLID LINE	PARTICIPATION TYPE IRG	FG	RSG	NON FED STATE		REMARKS
MUS	SR 284	0.00	1.92	1.92	3.503				1.92	PART 1	MORGAN CO. LINE TO SUSPEND WORK
		3.05	13.40	10.35	18.391				10.35	PART 1	RESUME WORK TO SR 146
MUS. 284	TOTALS			12.27	21.894				12.27	PART 1	
MUS	340	0.00	3.78	3.78	5.844				3.78	PART 2	SR 284 TO NOB. CO. LINE
NOB	340	0.00	0.71	0.71	1.420				0.71	PART 3	MUS. CO. LINE TO GUE. CO. LINE
GUE	340	0.00	0.88	0.88	1.585				0.88	PART 4	NOB. CO. LINE TO SR 146

EPARTMENT OF TRANSPORTATION
&R707 REV. 9-1-83

PAVEMENT MARKING SUB-SUMMARY

CALC. BY RLH DATE 1-18-93
CHKD. BY SKG DATE 1-28-93

MUS-284-0.00 NOB-340-0.00
MUS-340-0.00 GUE-340-0.00

PLAN NO.

6
15

644 THERMOPLASTIC

ROUTE	SIDE	24" TRANSVERSE LINES		STOP LINE	12" CROSSWALK LINES	WORD ON PAVEMENT				LANE ARROWS				RAILROAD SYMBOL ON PAVEMENT	DOTTED LINES		8" CHANNEL LINE	REMARKS
						ONLY		SCHOOL		TURN								
		WHITE	YELLOW	24"	WHITE	72"	96"	72"	96"	LEFT	RIGHT	THRU	COMB.		WHITE	YELLOW		
		LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	LIN.FT.	LIN.FT.	LIN.FT.	
PART 1																		
SR 284																		
YOUNG HICKORY RD.	LT			30														PLACE 16' FROM SR 284 ℄
OAK GROVE RD.	RT			19														PLACE 14' FROM SR 284 ℄
DRAKE-MARTIN RD.	LT			18														PLACE 18' FROM SR 284 ℄
RURALDALE RD.	RT			45														PLACE 20' FROM SR 284 ℄
RURALDALE RD.	LT			26														PLACE 18' FROM SR 284 ℄
INTERNATIONAL DR.	RT			26														PLACE 18' FROM SR 284 ℄
PAISLEY RD.	LT			43														PLACE 19' FROM SR 284 ℄
ZION RIDGE RD.	RT			27														PLACE 16' FROM SR 284 ℄
SUGAR GROVE RD.	LT			30														PLACE 15' FROM SR 284 ℄
HIGH FREELAND RD.	RT			35														PLACE 19' FROM SR 284 ℄
FENTON RD.	LT			50														PLACE 20' FROM SR 284 ℄
LEEDOM RD.	RT			30														PLACE 16' FROM SR 284 ℄
WION RIDGE RD.	LT			30														PLACE 15' FROM SR 284 ℄
HARMON HOLLOW RD.	LT			30														PLACE 15' FROM SR 284 ℄
ON SR 284 AT SR 146	CL			20														PLACE 20' FROM SR 146 ℄
SR 284 TOTALS	PART 1			459														
SR 340 (PART 2)																		
ON SR 340 AT SR 284	CL			30														PLACE 20' FROM SR 284 ℄
SISK ROAD	LT			20														PLACE 18' FROM SR 340 ℄
INTERNATIONAL DR.	LT			26														PLACE 16' FROM SR 340 ℄
SR 340 TOTALS	PART 2			76														
SR 340 (PART 4)																		
ZEBEDEE LANE	LT			16														PLACE 17' FROM SR 340 ℄
ON SR 340 AT SR 146	CL			12														PLACE AS DIRECTED
SR 340 TOTALS	PART 4			28														

PAVEMENT MARKING TYPICAL DETAILS

FED.RD DIV.	STATE	PROJECT	
5	OHIO		

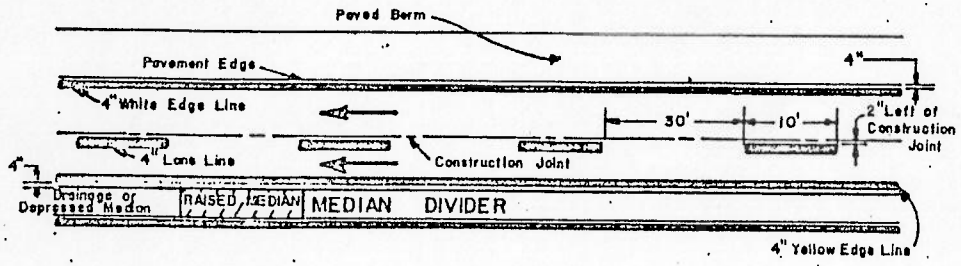
7/15

CALC. BY RLM DATE 1-28-92
CHKD. BY SKB DATE 1-28-92

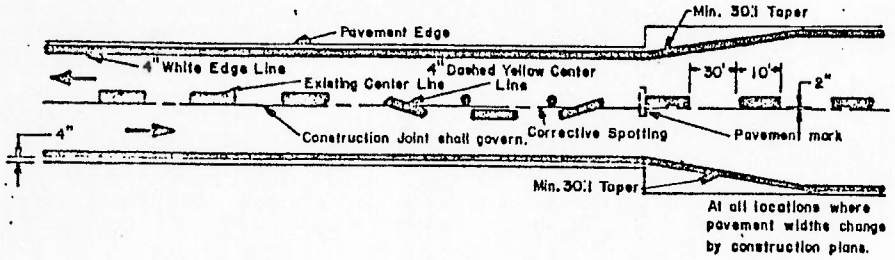
MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

PLAN NO.

FREEWAY & EXPRESSWAY MAINLINE MARKINGS

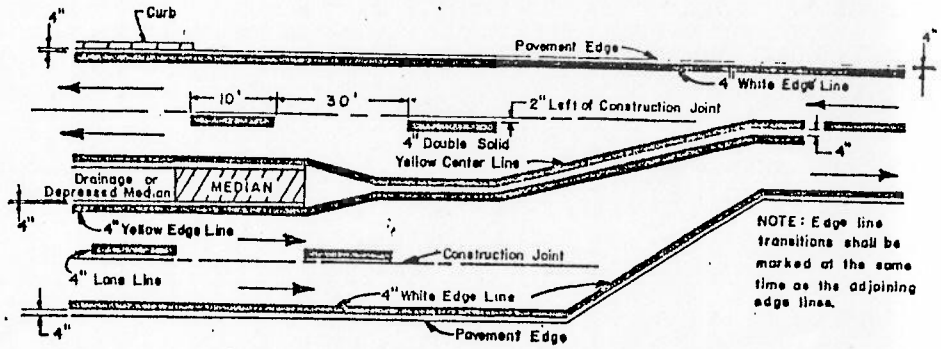


TWO LANE MARKINGS



At all locations where pavement widths change by construction plans.

MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



NOTE: Edge line transitions shall be marked at the same time as the adjoining edge lines.

NOTES:

1. THE DISTANCE FROM THE PAVEMENT EDGE TO THE NEARSIDE EDGE OF THE EDGELINE MAY BE INCREASED WITH THE APPROVAL OF THE ENGINEER IN ORDER TO MAINTAIN UNIFORM LANE WIDTH.

2. SEE TC 72.20 FOR ENTRANCE AND EXIT RAMP MARKINGS.

3. The cycle length for dashed lines shall be 40 feet plus or minus 6 inches. The minimum length of dash shall be sufficiently long to maintain a 3:1 ratio between length of gap and length of dash.

DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING TYPICAL DETAILS

DATE 11/80

JDL CDRT

SB-2

WORD AND SYMBOL MARKING DETAILS

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

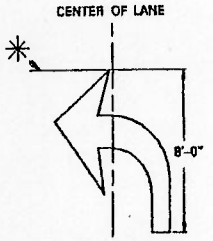
FED RD DIVISION	STATE	PROJECT	
6	OHIO		

8
15

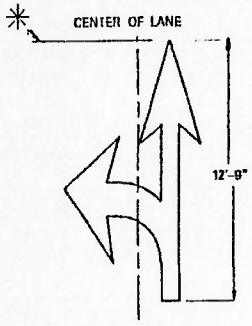
PLAN NO.

CALC. BY RLH
DATE 1-28-92

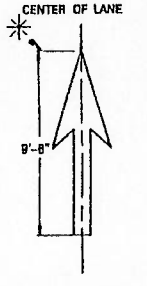
CHKD. BY SKB
DATE 1-29-92



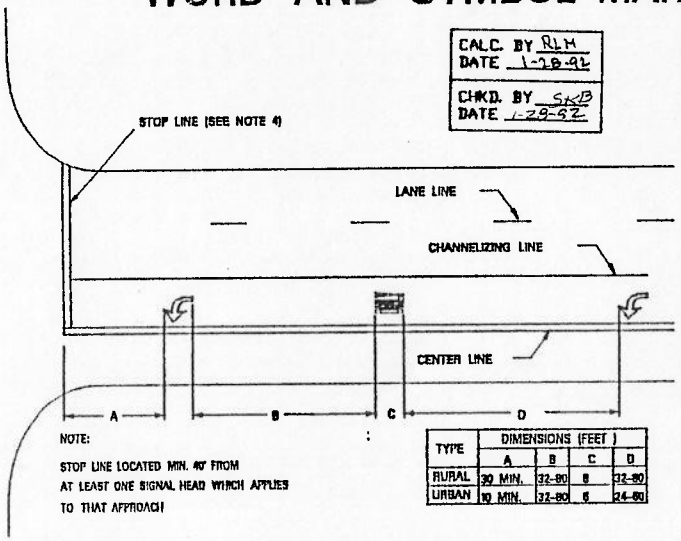
TURN ARROW
(LEFT ARROW SHOWN
RIGHT ARROW OPPOSITE)



COMBINED ARROW
(THREE HEAD DIRECTIONAL ARROWS CAN BE ACHIEVED BY THE COMBINATION OF TURN ARROWS.)

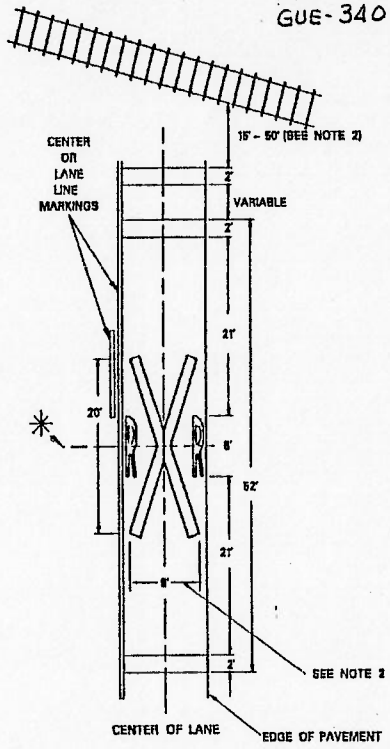


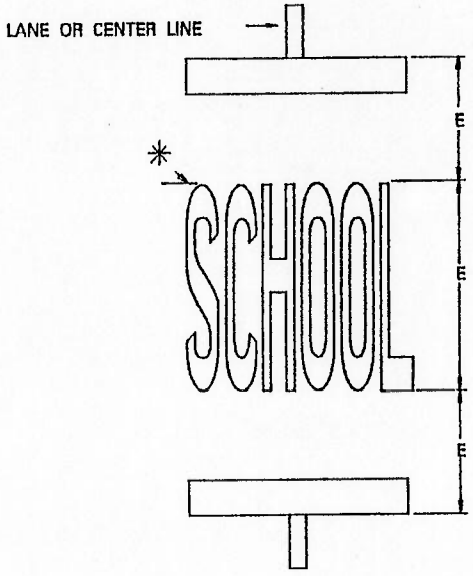
THROUGH ARROW



NOTE:
STOP LINE LOCATED MIN. 40' FROM AT LEAST ONE SIGNAL HEAD WHICH APPLIES TO THAT APPROACH

TYPE	DIMENSIONS (FEET)			
	A	B	C	D
RURAL	30 MIN.	32-80	8	32-80
URBAN	10 MIN.	32-80	6	24-80





TYPE	INCHES
	E
RURAL	96
URBAN	72

NOTES:
1. ON MULTI-LANE APPROACHES, THE TRANSVERSE LINES USED WITH THE RAILROAD SYMBOLS SHALL EXTEND ACROSS ALL APPROACH LANES AND SYMBOLS SHALL BE PLACED IN EACH APPROACH LANE.

2. THE RAILROAD SYMBOL SHALL BE LOCATED SO THAT THE W-84, "RAILROAD ADVANCE WARNING SIGN", IS WITHIN THE TWO TRANSVERSE BOUNDRY LINES OF THE RAILROAD SYMBOL. THE STOP LINE SHALL BE LOCATED FOR BEST SIGHT DISTANCE WITHIN 15 FEET TO 50 FEET OF THE NEAR EDGE OF THE TRACKS. STOP LINES SHALL BE PERPENDICULAR TO THE CENTER LINE OF THE ROADWAY. WIDTH OF "X" MAY VARY ACCORDING TO LANE WIDTH.

3. ON MULTI-LANE APPROACHES, THE TRANSVERSE LINES USED WITH THE WORD "SCHOOL" SHALL EXTEND ACROSS ALL APPROACH LANES WITH A SINGLE WORD "SCHOOL" CENTERED ACROSS THE APPROACH LANES. ON TWO LANE ROADWAYS, THE TRANSVERSE LINES SHALL EXTEND ACROSS THE ROADWAY WITH THE WORD "SCHOOL" CENTERED ACROSS THE ROADWAY. CENTER OR LANE LINES SHALL NOT PASS THROUGH THE "SCHOOL" MARKING.

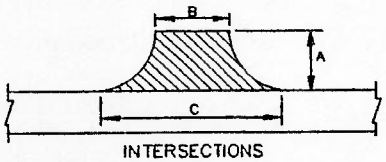
4. THE STOP LINE SHOULD BE PLACED WHERE CROSS-CORNER VISION IS MAXIMUM, IN NO CASE MORE THAN 30 FEET OR LESS THAN 4 FEET FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY. FOR NORMAL INTERSECTIONS A MAXIMUM DISTANCE OF 10 FEET IS RECOMMENDED.

   IF A MARKED CROSSWALK IS PRESENT, THE STOP LINE SHOULD BE PLACED 4 FEET IN ADVANCE OF AND PARALLEL TO THE NEAREST CROSSWALK.

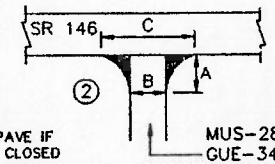
5. FOR TRAFFIC PAINT AND POLYESTER APPLICATION, TEMPLATE GAPS SHALL BE FILLED WITH MARKING MATERIAL IN ACCORDANCE WITH 641.03. FOR EXTRUDED THERMOPLASTIC MATERIAL, THESE GAPS MAY REMAIN UNFILLED IN ACCORDANCE WITH 644.03.

6. USE STANDARD DIMENSIONS CONFORMING TO REQUIREMENTS OF OMUTCD SECTION 3B-40 THROUGH 3B-43 INCLUSIVE. (THAT IS THE 1977 METRIC EDITION STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING WITH ERRATA.)

✳ INDICATES STATION REFERENCE POINT



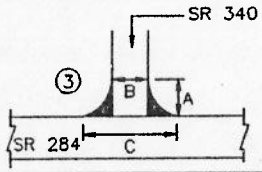
INTERSECTIONS



(1) DO NOT PAVE IF ROAD IS CLOSED

MUS-284 AND GUE-340

EXTRA AREAS



CALC. BY RLM DATE 1-16-97
CHKD. BY SJO DATE 1-24-97

PLAN NO.

9/15

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

PART	ROUTE	LOG POINT TO LOG POINT	SIDE	DESCRIPTION	INTERSECTIONS A IN FEET	INTERSECTIONS B IN FEET	INTERSECTIONS C IN FEET	AREA IN SQ. YD.	PROPOSED ITEMS 407 TACK COAT @ 0.10 gal./s.y. GAL.	407 COVER AGGR. @ 1 lbs./s.y. TON	ASPHALT CONCRETE THICK INCHES	ASPHALT CONCRETE CU. YD. 448 INTERMEDIATE COURSE, TYPE 2, AC-20	ASPHALT CONCRETE CU. YD. 448 SURFACE COURSE, TYPE 1, AC-20	ASPHALT CONCRETE THICK INCHES	EXISTING SURFACE	408 BITUMINOUS PRIME COAT @ 0.40 gal./s.y. GAL.
1	SR 284		LT	YOUNG HICKORY RD.	30	18	63	135			2	8	4	1	GRAVEL	54
			RT	OAK GROVE RD.	30	16	50	110			2	6	3	1	GRAVEL	44
			LT	DRAKE-MARTIN RD.	35	17	51	132			2	7	4	1	GRAVEL	53
			RT	RURALDALE RD. (1)	55	24	117	431			2	24	12	1	GRAVEL	172
			LT	RURALDALE RD.	35	20	90	214			2	12	6	1	GRAVEL	86
			RT	INTERNATIONAL DR.	45	24	90	285			2	16	8	1	GRAVEL	114
			LT	PAISLEY RD.	60	24	150	580			2	32	16	1	GRAVEL	232
			RT	ZION RIDGE RD.	50	24	96	333			2	19	9	1	GRAVEL	133
			LT	SUGAR GROVE RD.	50	18	95	314			2	17	9	1	GRAVEL	126
			RT	HIGH FREELAND RD.	50	19	105	344			2	19	10	1	GRAVEL	138
			LT	FENTON RD.	85	20	175	921			2	51	26	1	GRAVEL	368
			RT	LEEDOM RD.	35	20	80	194			2	11	5	1	GRAVEL	78
			LT	WION RIDGE RD. (CO.RD.79)	40	18	90	240			2	13	7	1	GRAVEL	96
			LT	HARMON HOLLOW RD. (TWP.211)	50	16	100	322			2	18	9	1	GRAVEL	129
			CL	AT SR 146 ②	33	24	58	62	6		2	3	2	1	ASPH.	
1	SR 284	TOTALS		CARRIED TO SHEET 10				4617	6			256	130			1823
2	SR 340	MUS.CO.	CL	AT SR 284 ③	65	21	123	368	37		2	20	10	1	ASPH.	
			LT	SISK RD.	32	15	70	151			2	8	4	1	GRAVEL	60
			LT	INTERNATIONAL DR.	35	25	73	191			2	11	5	1	GRAVEL	76
2	SR 340	TOTALS		CARRIED TO SHEET 11				710	37			39	19			136
4	SR 340	GUE.CO.	LT	ZEBEDEE RD.	30	15	57	120			2	7	3	1	GRAVEL	48
			CL	AT SR 146 ②	60	19	122	343	34		2	19	10	1	ASPH.	
4	SR 340	TOTALS		CARRIED TO SHEET 11				463	34			26	13			48

DEPARTMENT OF TRANSPORTATION
M&R707 REV. 9-1-83

ASPHALT CONCRETE

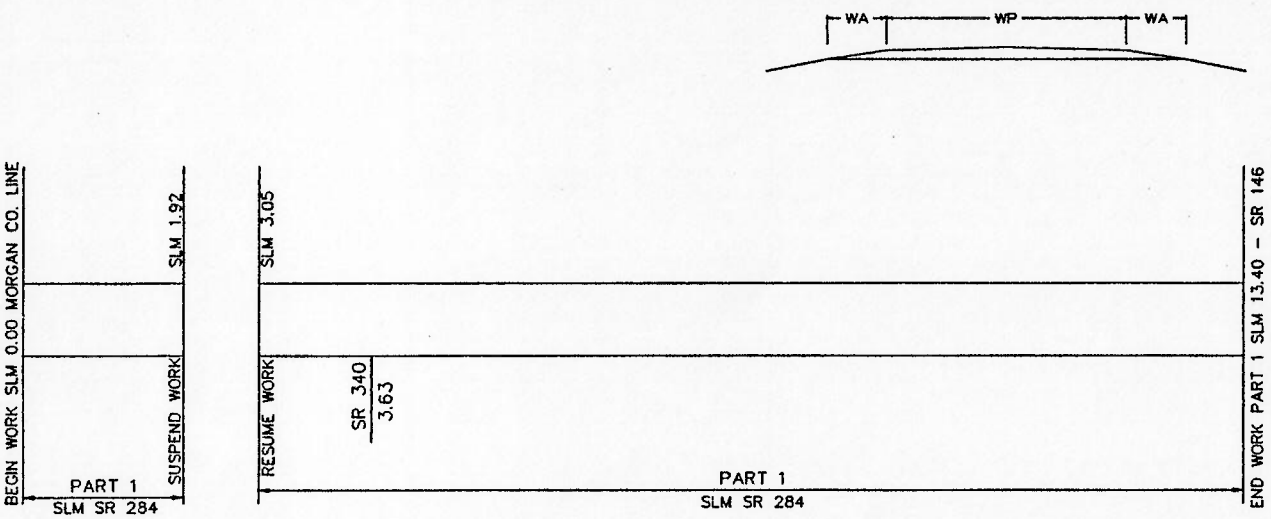
TYPICAL 1

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY DLM DATE 1-24-97
CHKD. BY [illegible] DATE 1-27-97

PLAN NO.

10/15



(1) BRIDGE LENGTH X PAVEMENT WIDTH

PAVEMENT DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ. YDS.	PROPOSED PAVEMENT 407 TACK COAT @ 0.10 gal./s.y. GALS.	407 COVER AGGR. lbs./s.y. TONS	ASPHALT CONCRETE ITEM 448 THICK INCHES AVG.	ITEM 448 INTERMEDIATE COURSE, TYPE 2, AC-20 CU.YDS.	ITEM 448 THICK INCHES	ITEM 448 SURFACE COURSE, TYPE 1, AC-20 CU.YDS.	614 TEMPORARY CENTER LINE, CLASS II MILE	408 BITUMINOUS PRIME COAT GAL.
1	SR 284	0.00-1.92	1.92	10138	18	1	409	20276	2028		2	1126	1	563	3.84	
		3.05-13.40	10.35	54648	18	1	409	109296	10930		2	6072	1	3036	20.70	
EXTRA AREAS FROM SHEET 9								4617	6			256		130		1823
EXTRA TACK COAT FOR LONGITUDINAL JOINT									150							
1	SR 284	TOTALS	12.27	64786				134189	13114			7454		3729	24.54	1823

DEPARTMENT OF TRANSPORTATION
M&R707 REV. 9-1-83

ASPHALT CONCRETE

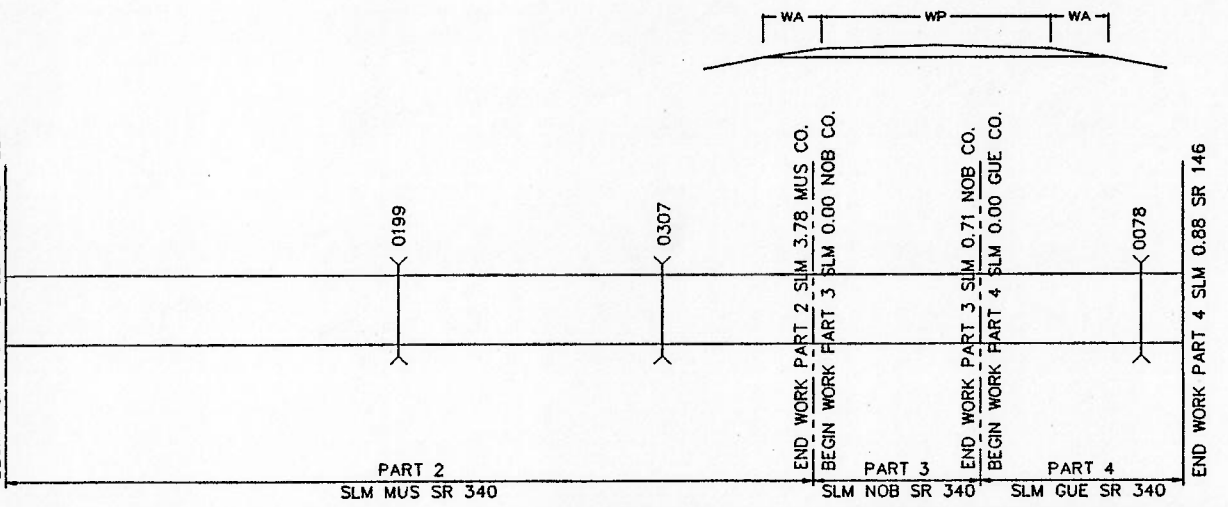
TYPICAL 1

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY KLM DATE 1-18-94
CHKD. BY [illegible] DATE 1-24-94

PLAN NO.

11
15



BRIDGE TREATMENT
PART 2
MUS-340-0199 36.0' X 23.08' SEE SHEET 13
MUS-340-0307 37.5' X 25.5' SEE SHEET 13
PART 4
GUE-340-0078 39.25' X 24.0' SEE SHEET 13

• AVERAGE

PAVEMENT DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ. YDS.	PROPOSED PAVEMENT 407 TACK COAT @ 0.10 gal./s.y. GALS.	407 COVER AGGR. lbs./s.y. TONS	ASPHALT CONCRETE ITEM 448 THICK INCHES AVG.	ITEM 448 INTERMEDIATE COURSE, TYPE 2, AC-20 CU.YDS.	ITEM 448 THICK INCHES	ITEM 448 SURFACE COURSE, TYPE 1, AC-20 CU.YDS.	614 TEMPORARY CENTER LINE, CLASS II MILE	408 BITUMINOUS PRIME COAT GAL.
2	SR 340	0.00 – 1.86	1.86	9821	20+		404/409	21824	2182		2	1212	1	606	3.72	
		1.86 – 3.78	1.92	10138	18	1	409	20276	2028		2	1126	1	563	3.84	
EXTRA AREAS FROM SHEET 9								710	37			39		19		136
EXTRA TACK COAT FOR LONGITUDINAL JOINT									46							
DEDUCT FOR BRIDGES (1)								(147)	(15)			(8)		(4)		
TOTALS			3.78	19959				42663	4278			2369		1184	7.56	136
3	SR 340	0.00–0.71	0.71	3749	18	1	409	7498	750		2	417	1	208	1.42	
EXTRA AREAS FROM SHEET 9								–	–			–		–		
EXTRA TACK COAT FOR LONGITUDINAL JOINT									9							
3	SR 340	TOTALS	0.71	3749				7498	759			417		208	1.42	
4	SR 340	0.00–0.88	0.88	4646	18	1	409	9292	929		2	516	1	258	1.76	
EXTRA AREAS FROM SHEET 9								463	34			26		13		48
EXTRA TACK COAT FOR LONGITUDINAL JOINT									11							
DEDUCT FOR BRIDGES (1)								(79)	(8)			(4)		(2)		
4	SR 340		0.88	4646				9676	966			538		269	1.76	48

SR 340

01-04-80 (MAINT - C) M284AC2

SHOULDER TREATMENT

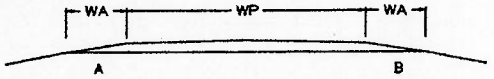
MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY RLM DATE 1-26-95
CHKD. BY JJD DATE 1-27-95

PLAN NO.

12/15

TYPICAL 1



SHOULDER DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	TYPICAL	EXISTING TYPE – WIDTH (FT.) A TYPE	A WIDTH	B TYPE	B WIDTH	C TYPE	C WIDTH	D TYPE	D WIDTH	AREA SQ. YDS.			617 SHOULDER PREPARATION SQ.YD.	617 COMPACTED AGGREGATE, TYPE A, AS PER PLAN 3" AVG.THICK CU. YD.	617 WATER M GAL.
	MUS.CO.																		
1	SR 284	0.00 – 1.92	1.92	10138	1	617	2	617	2					4506			4506	375	3.4
		3.05 – 13.40	10.35	54648	1	617	2	617	2					24288			24288	2024	18.4
1	SR 284	TOTALS	12.27	64786										28794			28794	2399	21.8
	MUS.CO.																		
2	SR 340	0.00 – 3.78	3.78	19958	1	617	2	617	2					8870			8870	739	6.7
	NOB.CO.																		
3	SR 340	0.00 – 0.71	0.71	3749	1	617	2	617	2					1666			1666	139	1.3
	GUE.CO.																		
4	SR 340	0.00 – 0.88	0.88	4646	1	617	2	617	2					2065			2065	172	1.6

BRIDGE DECK TREATMENT

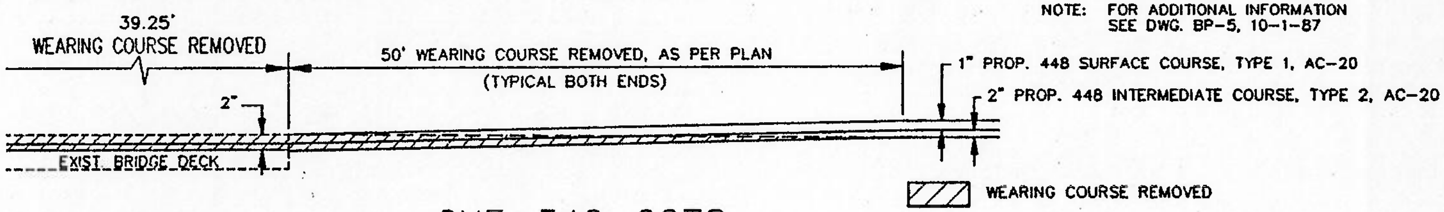
MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY RLM DATE 1-28-92
CHKD. BY 9&B DATE 1-28-92

OHIO | FHWA REGION 5

PLAN NO.

NOTE: FOR ADDITIONAL INFORMATION SEE DWG. BP-5, 10-1-87



GUE-340-0078

BRIDGE DECK DATA

PART	COUNTY, ROUTE, BRIDGE NO.	LENGTH (BRIDGE LIMITS) LIN.FT.	WIDTH LIN.FT.	BRIDGE DECK AREA SQ.YDS.	202 WEARING COURSE REMOVED DEPTH 2" SQ.YDS.	BRIDGE DECK REPAIR (☐ SS-845 LATEX MODIFIED CONCRETE ☐ SS-850 DENSE CONCRETE) ____" THICK OVERLAY SQ.YDS.	VARIABLE THICKNESS OVERLAY CU.YDS.	FULL-DEPTH REPAIR CU.YDS.	SPECIAL: PATCHING TYPE	PATCHING SQ.YD.	STEEL DRIP STRIP SQ.FT.	DECK WATERPROOFING: MEMBRANE WATERPROOFING SHEET TYPE 1 SQ.YDS.	MEMBRANE WATERPROOFING SQ.YDS.	202 WEARING COURSE REMOVED, AS PER PLAN SQ.YDS.	ASPHALT CONCRETE: THICK INS. 1"	448 SURFACE COURSE, TYPE 1, AC-20 CU.YDS.	407 TACK COAT @ 0.05 GAL./SQ.YD. GAL.	202 WEARING COURSE REMOVED, AS PER PLAN SQ. YD.	
2	MUS-340-0199	36.0	23.08	92.32											2	5	5		
	MUS-340-0307	37.5	25.5	106.25											2	6	5		
2	TOTALS															11	10		
4	GUE-340--0078	39.25	24.0	104.67	104.67										2	6	10	200	

GENERAL SUMMARY

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

CALC. BY RLH DATE 1-28-97
CHKD. BY SKB DATE 1-28-97

PLAN NO.

ITEM	PART 1	PART 2	PART 3	PART 4					ITEM	ITEM EXT. NO.	GRAND TOTAL PARTS 1 – 4	UNIT	DESCRIPTION
202	–	–	–	105					202	23500	105	SQ.YD.	WEARING COURSE REMOVED
202	–	–	–	200					202	23501	200	SQ.YD.	WEARING COURSE REMOVED, AS PER PLAN
SPECIAL	40	11	2	3					SPECIAL	20363000	56	HOUR	GRADER RENTAL
SPECIAL	20	6	1	1					SPECIAL	20363500	28	HOUR	LOADER RENTAL
407	13114	4288	759	976					407	10000	19137	GALLON	TACK COAT
408	1823	136	–	48					408	10000	2007	GALLON	BITUMINOUS PRIME COAT
448	8374	2653	470	604					448	15000	12101	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC–20
448	3744	1405	208	280					448	16000	5637	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC–20
448	51	–	–	5					448	16000	56	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC–20,(DRIVEWAYS)
614	LUMP	LUMP	LUMP	LUMP					614	11000	LUMP	LUMP	MAINTAINING TRAFFIC
614	28	8	4	4					614	12460	44	EACH	WORK ZONE MARKING SIGN
614	24.54	7.56	1.42	1.76					614	21400	35.28	MILE	TEMPORARY CENTER LINE, CLASS II
617	2399	739	139	172					617	10101	3449	CU.YD.	COMPACTED AGGREGATE, TYPE A, AS PER PLAN
617	28794	8870	1666	2065					617	20000	41395	SQ.YD.	SHOULDER PREPARATION
617	22	7	1	2					617	25000	32	MGAL.	WATER

GENERAL NOTES

TRAFFIC:
Traffic shall be maintained at all times. The length of restricted traffic zones shall be kept to a minimum consistent with the specification requirements for protection of completed courses.

RAILROAD CROSSINGS:
The new surface course shall be feathered or butt jointed to meet the rail grades as specified.

TACK COAT:
The tack coat operation shall be as determined at a pre–construction conference as per 407.05, and application rates shall not exceed 0.10 gal. per sq. yd.
In addition to the requirements of 407.05 the tack coat shall be applied immediately ahead of the paving operation or as otherwise determined by the Project Engineer.

INTERMEDIATE COURSE, SPOT LEVELING AND PATCHING:
This material shall be placed in a seperate operation where and as directed by the Engineer.

ALIGNMENT AND PROFILE:
The work proposed by this project is for the resurfacing of the existing pavement. The alignment of the existing pavement will not be changed, and the profile of the proposed surface will be similar to that of the existing pavement except that it will be raised an amount equal to the thickness of the resurfacing course or courses specified in these plans.
Spreading equipment shall be capable of having an automatic profile control device added to be used when directed by the Engineer. The minimum length of the ski for this device shall be 30'.

CONTROL OF ONE WAY TRAFFIC:
In addition to the requirements of the Ohio Manual of Uniform Traffic Control Devices and Material Specifications the following requirements shall apply.
Communications between flaggers shall be by two–way radio during the paving operations.
Payment for the above shall be included in Item 614, Maintaining Traffic.

COVER AGGREGATE:
Cover aggregate shall conform to 703.06.

BRIDGES:
The proposed depth of asphalt resurfacing shall be altered to match the proposed depth of the treatment on the structures. The resurfacing thickness shall be adjusted as required at the approximate rate of 25 ft. per inch of difference in thickness unless otherwise directed by the Engineer.

CALC. BY ____
DATE ____
CHKD. BY ____
DATE ____

GENERAL SUMMARY

MUS-284-0.00
MUS-340-0.00
NOB-340-0.00
GUE-340-0.00

PLAN NO.

ITEM	PART 1	PART 2	PART 3	PART 4					ITEM	ITEM EXT. NO.	GRAND TOTAL PART	UNIT	DESCRIPTION
619	LUMP	LUMP	LUMP	LUMP					619	15000	LUMP	LUMP	FIELD OFFICE, TYPE A
624	LUMP	LUMP	LUMP	LUMP					624	10000	LUMP	LUMP	MOBILIZATION
642	24.54	7.56	1.42	1.76					642	00102	35.28	MILE	EDGE LINE, TYPE 2
642	12.27	3.78	0.71	0.88					642	00302	17.64	MILE	CENTER LINE, TYPE 2
644	459	76	–	28					644	00500	563	LIN.FT.	STOP LINE
SPECIAL	4	1	–	–					SPECIAL	69050000	5	EACH	MAILBOX SUPPORT