

# OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

880-91

FHWA REGION	STATE	FEDERAL PROJECT			
5	OHIO				



PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINII		NET LENGTH MILES	TOWNSHIP	CITY	VILLAGE
				BEGIN	END				
1	MED	SR-162	(13.01) (17.24-23.47)(24.36-25.87)	13.01	26.96	13.38			

EXTRA  
PLAN  
A. *ailer* 9-24-92

PLAN NO. 40

The Standard 1991 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 and provisions for the maintenance and safety of traffic will be as indicated in the proposal.

Approved Date 5-9-91

*Phillip A. Harwood*  
District Deputy Director of Transportation

JEM Approved Date 5-14-91

*B.D. Hanjilavini*  
Engineer of Bridges

Approved Date \_\_\_\_\_

Engineer of Maintenance

Approved Date 8-15-91

*Alexander H. Hunds*  
Deputy Director, Operations

Approved Date \_\_\_\_\_

Assistant Deputy Director, Program Development

Approved Date \_\_\_\_\_

Chief Engineer, Construction

Approved Date \_\_\_\_\_

Chief Engineer, Design

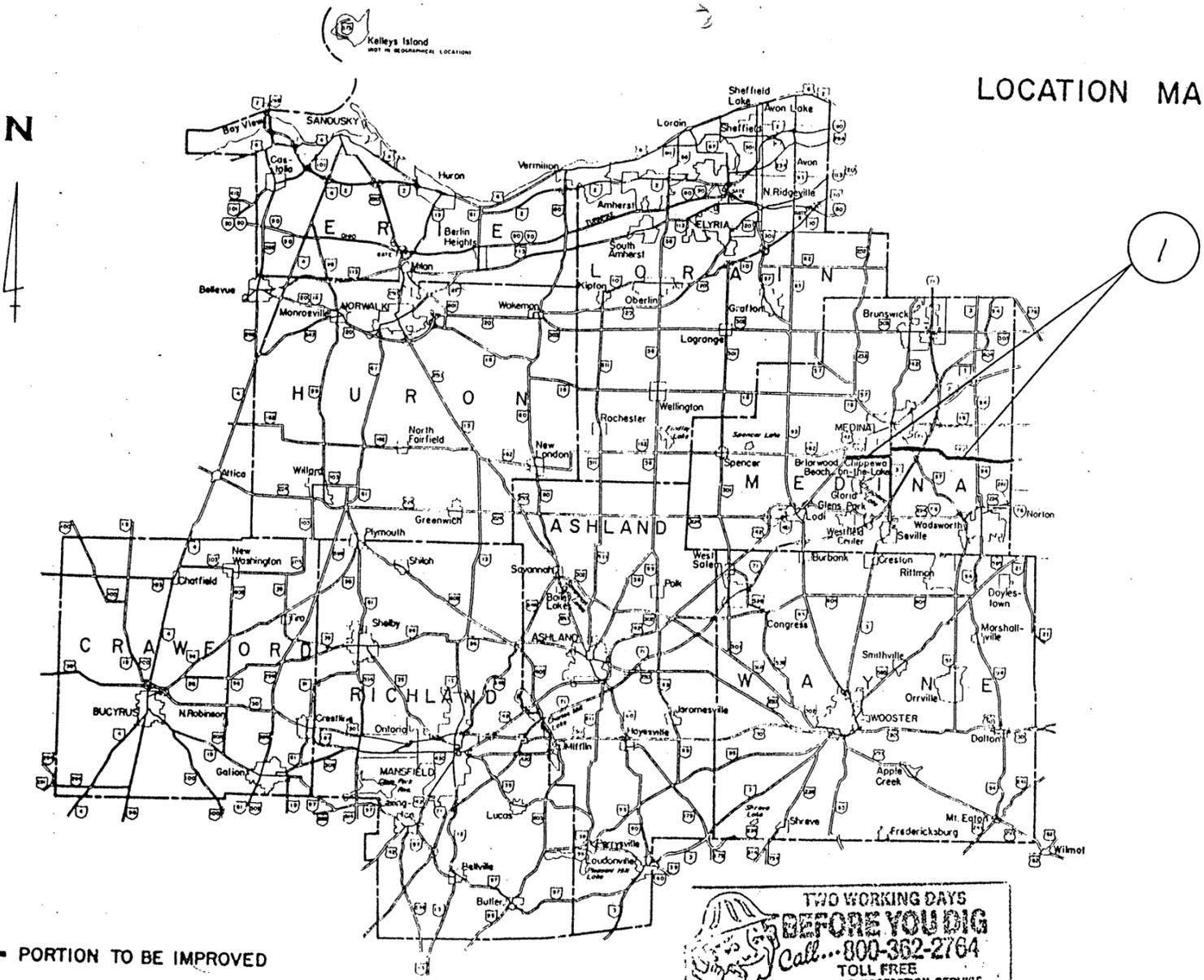
Approved Date \_\_\_\_\_

Assistant Director, Department of Transportation

Approved Date 8-16-91

*Jerry Wray*  
Director, Department of Transportation

LOCATION MAP



— PORTION TO BE IMPROVED

TWO WORKING DAYS  
**BEFORE YOU DIG**  
Call... 800-362-2764  
TOLL FREE  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS MUST BE CALLED DIRECTLY

- \* TC-65.10 02-01-90
- TC-65.11 02-01-90
- TC-65.12 02-01-90
- TC-65.13 02-01-90

* STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
MT-97.10	04-29-88	802	04-13-90
MT-97.11	10-04-89		
MT-99.10	11-14-86		
MT-99.20	04-29-88	862	12-16-88
GR-1.1	05-06-91	962	01-23-90
GR-1.2	05-06-91		
GR-2.1	05-06-91		
GR-4.1	05-06-91		
GR-4.2	05-06-91		

GENERAL SUMMARY

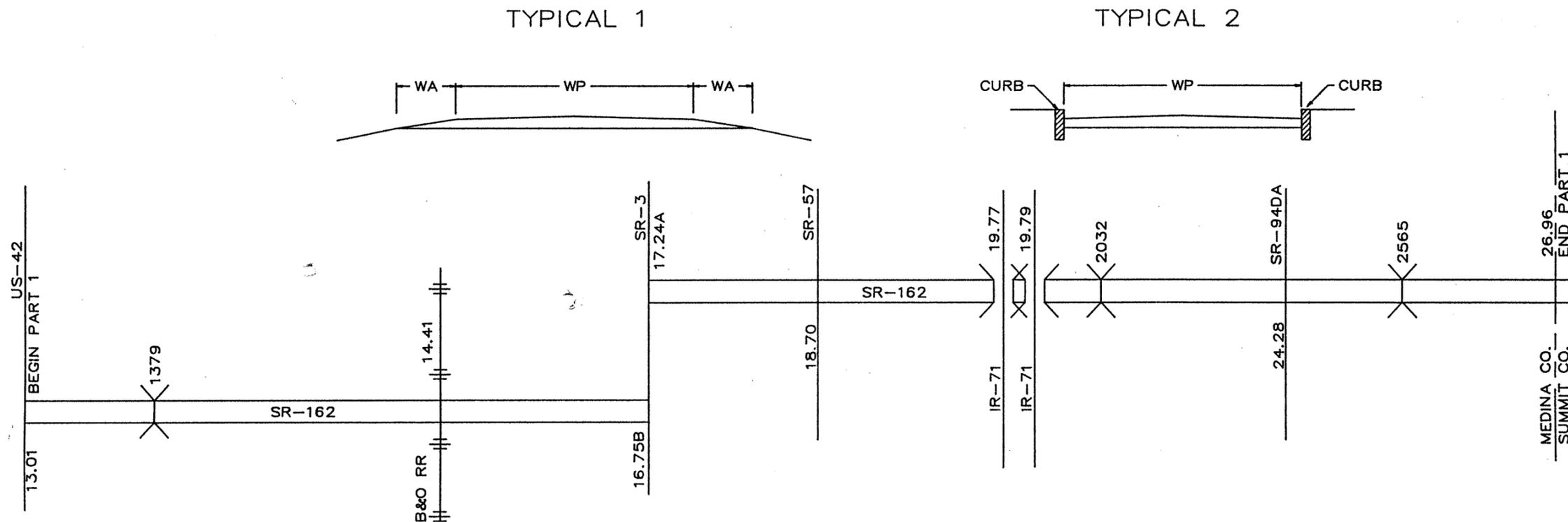
					Quantities From Sheet No.	PART 1 SR-162	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
					10	698	202	54100	698	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE
					4	1383	203	60000	1383	STATION	LINEAR GRADING
					8	25	253	02000	25	CU.YD.	PAVEMENT REPAIR
					3	1000	254	01000	1000	SQ.YD.	PAVEMENT PLANING, BITUMINOUS
					4	2562	448	15000	2562	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, AC-20
					3	1097	448	14000	1097	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, AC-20
					3	6249	448	16000	6249	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20
					3	15240	407	10000	15240	GALLON	TACK COAT
					6	463	SPECIAL 606	50000	463	LIN.FT.	BERM RESHAPING
					6	337.50	606	13000	337.50	LIN.FT.	GUARDRAIL, TYPE 5
					6	3	606	25000	3	EACH	ANCHOR ASSEMBLY, TYPE A
					6	3	606	26500	3	EACH	ANCHOR ASSEMBLY, TYPE T
					-	44	614	12460	44	EACH	WORK ZONE MARKING SIGN
					-	LUMP	614	11000	LUMP	LUMP	MAINTAINING TRAFFIC
					10	17.12	614	21500	17.12	MILE	TEMPORARY CENTER LINE, CLASS II, 642 PAINT, TYPE I
					4	20086	617	20000	20086	SQ.YD.	SHOULDER PREPARATION
					4	1116	617	10100	1116	CU.YD.	COMPACTED AGGREGATE, TYPE A
					4	20	617	25000	20	M.GAL.	WATER
					10	13.38	642	00300	13.38	MILE	CENTER LINE, TYPE I
					10	26.76	642	00100	26.76	MILE	EDGE LINE, TYPE I
					-	LUMP	624	10000	LUMP	LUMP	MOBILIZATION
					6	9	802	00100	9	EACH	BARRIER REFLECTOR, TYPE A
					10	50	645	00490	50	LIN.FT.	STOP LINE, TYPE A
					10	4	645	00990	4	EACH	RAILROAD SYMBOL MARKING, TYPE A
					9	1440	862	00100	1440	EACH	RAISED PAVEMENT MARKER

# ASPHALT CONCRETE

FHWA REGION	STATE	PROJECT
5	OHIO	

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PLAN NO.  
40



## PAVEMENT DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH		WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ. YDS.	PROPOSED PAVEMENT						PAVEMENT PLANING BITUM. SQ. YD.
			MILES	LIN. FT.					407		ASPHALT CONCRETE AC-20				
									TACK COAT @ 0.08 gal./s.y.	COVER AGGR. @ 7 lbs./s.y.	ITEM 448 THICK INCHES AVG.	ITEM 448 INTER. COURSE TYPE 1 CU. YD.	ITEM 402 THICK INCHES AVG.	ITEM 402 SURFACE COURSE TYPE 1 CU. YD.	
1	SR-162	13.01 - 16.75B	3.74	19747	24	1	404	52659	4213		3/4	1097	1	1463	
		17.24A - 24.28B	7.04	37171	24	1	404	99123	7930			1 1/4	3442		
		24.36A-25.59	1.23	6494	24	1	404	17317	1385			1 1/4	601		
		25.59 - 25.87	0.28	1478	24	1	404	3941	315			1 1/4	137		
		25.87 - 26.96	1.09	5755	24	1	404	15347	1228			1 1/4	533		
							EA FOR INTER. AND DRIVES	2113	169			1 1/4	73		1000
		TOTAL PART 1	13.38	70645				190500	15240			1097	6249		1000

PAVED SHOULDERS

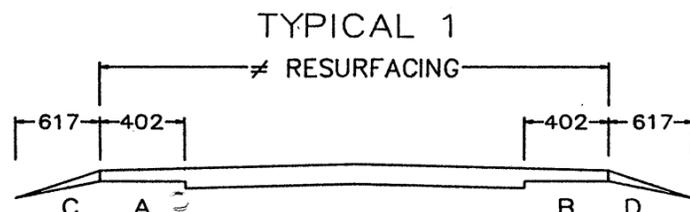
PLAN NO.

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\* NOTES

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SEE SHEET 3 FOR QUANTITIES, APPLICATION AND LOCATION OF 448 AND 409.

- ITEM 203 LINEAR GRADING:**  
This work shall consist of preparing a subgrade for the shoulder paving by excavating the existing shoulder material to the depth shown on the plan, or as directed by the Engineer to remove any unstable material and by shaping and compacting the subgrade. The unsound or broken edge of bituminous pavements shall first be trimmed to a line established by the Engineer. The existing shoulder then shall be excavated and the subgrade shaped and compacted. Compaction shall be carried out to the satisfaction of the Engineer by means of trench roller, 401.11. Areas graded in excess of depths specified or directed by the Engineer shall be backfilled to desired grade using 617 Compacted Aggregate at the Contractor's expense. Excavation material shall be disposed of as indicated in the plan.
  - a. Used to back up shoulders where required; the balance to be disposed as directed by the Engineer.
  - b. Disposed of by the Contractor at his own responsibility outside the limits of the right of way.
  - c. Wasted adjacent to the pavement and within the right of way as directed by the Engineer.
- ITEM 448 ASPHALT CONCRETE:**  
Prior to placing a bituminous mixture for shoulder paving, the edge of the existing pavement, for the full depth of the trench, shall be coated with bituminous material in accordance with 401.12.
- ITEM 301 BITUMINOUS AGGREGATE BASE**  
May be used in lieu of Item 402 Asphalt Concrete.
- ITEM 617 COMPACTED AGGRGATE:**  
A quantity of Item 617 Compacted Aggregate has been provided for areas where the shoulders were low prior to grading and/or low areas caused by removal of unsuitable material.
- ITEM 408 BITUMINOUS PRIME COAT:**  
After application of the Prime Coat, no further treatment shall be performed until so directed by the Engineer.
- SHIELD:** The Contractor shall provide a shield to prevent the spraying or drifting of liquid bituminous material onto the edge of the pavement or edge-lines. The attention of the Contractor is directed to 107.12 of the Specifications.
- ITEM 448 INTERMEDIATE COURSE, TYPE 2** to be placed prior to 448 resurfacing

\*\* ONE STATION EQUALS 100 LIN.FT. (measured along each edge of pavement)

PAVED SHOULDER DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH		TYPICAL	PROPOSED WIDTH (FT.)				SHOULDER AREA SQ.YDS.	203		448		301		408	409		617	617	617	COVER AGGREGATE @ 7 lbs./s.y.	448 ASPHALT CONCRETE AVER. THICKNESS	NOTES	
			MILES	LIN.FT.		LINEAR GRADING		ASPHALT CONCRETE			BITUMINOUS AGGREGATE BASE		PRIME	SEAL		COMPACTED AGGREGATE	SHOULDER PREPARATION	WATER								
			DEPTH INCHES	**STA.		AVG. THICK INCHES	INTER. COURSE, TYPE 2 CU.YD.	AVG. THICK INCHES	CU.YDS.		Bit. Matl. @..... gal./s.y.	Bit. Matl. @..... gal./s.y.	Aggr. @..... c.y./s.y.	TYPE A 2" avg. THICKNESS	M.GAL.	TON	CU.YDS.									
1	SR162	13.01-16.75B	3.74	19747	1	2	2	2	2	8776	2 av.	395	3	731						488	8776					
		17.24A-24.28B	7.04	37171	1	2	2	1	1	16520	2 av.	743	3	1377						459	8260					
		24.36A-25.59	1.23	6494	1	2	2	1	1	2886	2 av.	130	3	241						80	1443					
		(25.59-25.87)	(0.28)	(1478)	1			1	1											18	328					
		25.87-26.96	1.09	5755	1	2	2	1	1	2558	2 av.	115	3	213						71	1279					
		TOTAL PART 1	13.10	69167						30740		1383		2562						1116	20086	20				1,7

LEGEND

- ① Anchor Assembly, Type A
- ② Guardrail Type 5
- ⑪ Anchor Assembly, Type T
- ⑫ Guardrail Type 5, Radius Rail
- ⑳ Barrier Reflector, Type A

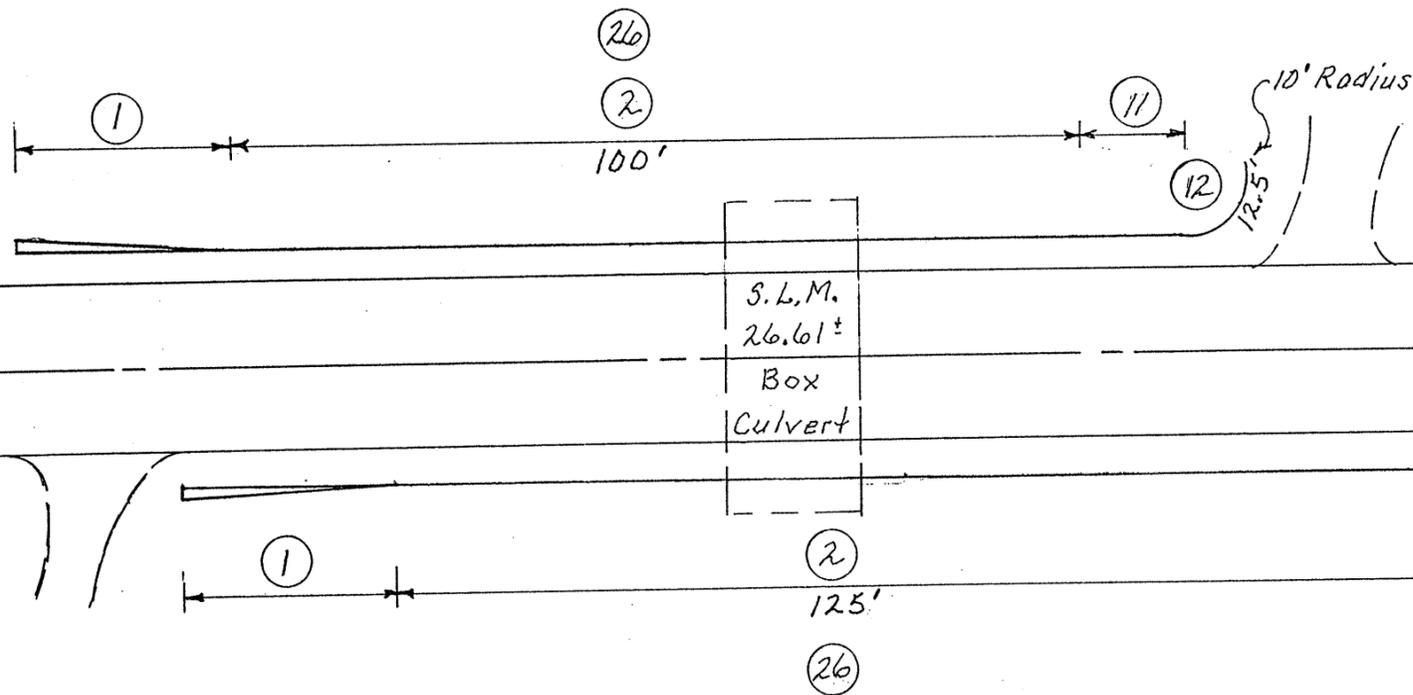
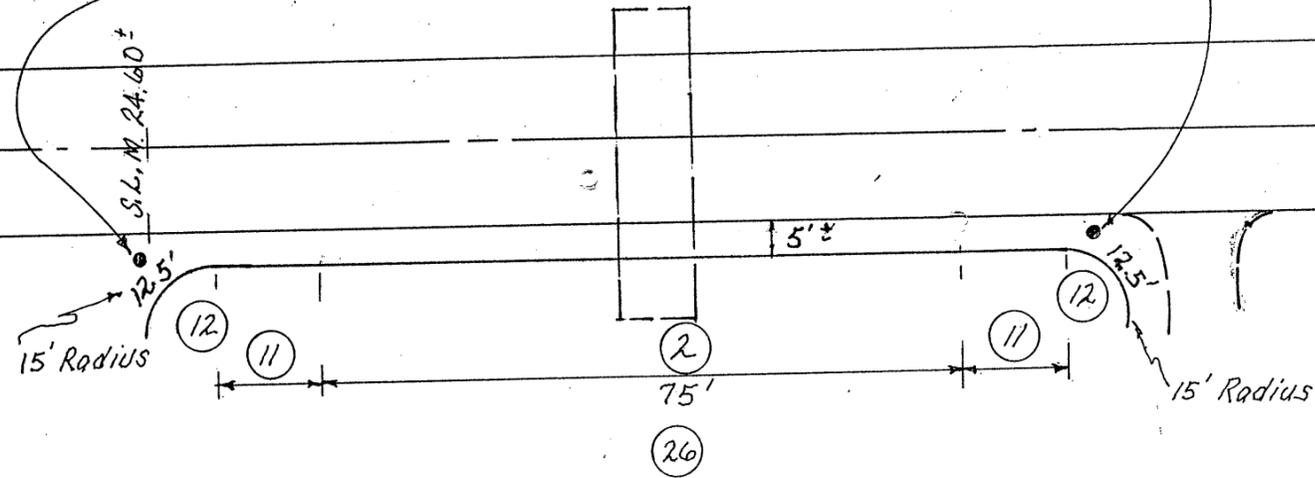
5  
12

PLAN NO.  
40

~ SHARON CENTER ~

27.28  
E Circle

Utility Pole (elect.) to be relocated behind Guardrail





# GENERAL NOTES

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## 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.

## TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE AND BERM WIDENING SHALL BE PERFORMED ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED AT ALL TIMES WITH DRUMS OR BARRICADES, WITH TYPE "C" STEADY BURN LIGHTS ATTACHED AFTER WORKING HOURS.

PLACEMENT OF THE PROPOSED BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL BY THE ENGINEER.

## BERM AND BASE WIDENING AT INTERSECTIONS AND DRIVES

PAVEMENT AND BERM QUANTITIES ARE CALCULATED THROUGH ALL INTERSECTIONS AND DRIVES. ANY PORTION MAY BE NON-PERFORMED IF SO DIRECTED BY THE ENGINEER.

## BERM AND BASE WIDENING

THE CUBIC YARD OF ASPHALT CONCRETE SHALL BE PAID BY TICKET WEIGHT CONVERSION, WITHIN A TOLERANCE OF PLUS OR MINUS 5% OF THE REQUIRED CALCULATED WEIGHT PER UNIT OF AREA, AS PER 401.16.

## INTERSECTIONS AND DRIVES

RURAL-INTERSECTIONS SHALL BE PAVED TO THE END OF THE RADII OR AS DIRECTED BY THE ENGINEER TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS. URBAN-INTERSECTIONS SHALL BE PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. ALL DRIVES SHALL BE PAVED AS DIRECTED BY THE ENGINEER. (GRAVEL DRIVES SHALL BE PAVED WITH APRON WHICH IS THE WIDTH OF BERM OR 3' MINIMUM, WHICH EVER IS GREATER.) CARE SHALL BE TAKEN TO ELIMINATE WATER POCKETS IN CURBED SECTIONS.

## ITEM 254. PAVEMENT PLANING BITUMINOUS

PLANING IS TO BE PERFORMED AS DIRECTED AND IN AREAS DESIGNATED BY THE ENGINEER. REMOVAL OF EXISTING PAVEMENT SURFACE MAY BE REQUIRED TO ELIMINATE ADVERSE SURFACE DISTORTION WHICH IN THE JUDGEMENT OF THE ENGINEER CANNOT BE SATISFACTORILY CORRECTED IN THE PAVING COURSES.

THESE AREAS MAY INCLUDE MATERIAL DISPLACED BY RUTTING OR SHOVING, ASPHALT SURFACE PATCHES, CONCRETE PATCHES AND TRANSVERSE BUMPS AT JOINTS WITH STRUCTURES, ADJOINING PAVEMENTS, RAILROADS, ETC.

## STRUCTURE WORK

STR - 1379 IS TO BE REPLACED AND WORK MAY BE IN PROGRESS DURING CONSTRUCTION OF THIS PROJECT. THE DETOUR WILL BE US-42 AND SR-3. COOPERATION BETWEEN THE CONTRACTORS (105.07) WILL BE NECESSARY TO AVOID INTERFERENCE IN THE COMPLETION OF THE CONTRACT.

REVISED 9-17-91 JDP

# GENERAL NOTES

PLAN NO. 40



## ITEM SPECIAL BERM RESHAPING

BERMS OR SHOULDERS AT LOCATIONS WHERE EXISTING GUARDRAIL IS REMOVED OR WHERE NEW GUARDRAIL IS TO BE BUILT SHALL BE RESHAPED AS DIRECTED BY THE ENGINEER TO INSURE A SMOOTH SURFACE FREE OF ALL IRREGULARITIES. EXCESS MATERIAL RESULTING FROM RESHAPING BERMS SHALL BE DISPOSED OF.

PAYMENT FOR THIS WORK SHALL BE THE UNIT PRICE BID PER LINEAL FOOT OF ITEM SPECIAL BERM RESHAPING.

## 448 ITEM 404: ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20

THE COURSE AGGREGATE IN THE SURFACE COURSE SHALL BE CRUSHED CARBONATE STONE. IN ADDITION TO ITEM 401.12, THE FEATHERED OR BUTT JOINT SHALL BE UNIFORMLY COATED WITH A 6" WIDE BAND OF A.C. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 404 ASPHALT CONCRETE, SURFACE COURSE, TYPE I, AC-20  
448

## UNDERGROUND UTILITIES

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UNDERGROUND WATER LINES, DRAINS, CABLES, SEWERS OR OTHER UTILITIES.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ALL DAMAGE INFLICTED ON UNDERGROUND UTILITIES.

## SEEDING OF DISTURBED AREAS

ALL DISTURBED AREAS SHALL BE FERTILIZED, SEEDED, AND MULCHED AS PER 659. THE COST OF THIS WORK SHALL BE INCLUDED FOR PAYMENT IN THE RESPECTIVE 203 AND 606 PLAN PAY ITEMS AT EACH WORK LOCATION. THE FOLLOWING ARE QUANTITIES THAT HAVE BEEN ESTIMATED FOR COMPLETION OF THIS WORK.

SEEDING: 300 SQ.YD.

FERTILIZER: 003 TONS

## ITEM 253. PAVEMENT REPAIR

THIS ITEM 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.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. THE REPAIR AREAS SHALL BE ROUGHLY RECTANGULAR IN SHAPE AND CUT OR SAWED TO A NEAT LINE. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE THE ADJACENT PAVEMENT. THE DEPTH OF REMOVAL, AS DIRECTED BY THE ENGINEER, SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT (ESTIMATED DEPTH MAY VARY FROM 2" TO 12"). THE MATERIALS SO REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 203.05.

REPLACEMENT MATERIAL SHALL BE 402 OR 301 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. THE REPAIR AREAS SHALL BE PAINTED WITH BITUMINOUS MATERIAL (SIDES AND BOTTOM). ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO SATISFACTION OF THE ENGINEER. MAXIMUM LIFT THICKNESS SHALL BE THREE (3) INCHES.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED IN THE SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE MADE AT THE UNIT PRICE BID PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 253, PAVEMENT REPAIR.

25 CU.YD. - PART 1

## PAVEMENT CONTROL

AN AUTOMATIC SCREED CONTROL, HAVING A 30 FOOT MINIMUM SKI-ARM, SHALL BE USED FOR PLACING THE 448 ASPHALT CONCRETE INTERMEDIATE AND SURFACE COURSE ON EXISTING PAVEMENT WIDTHS OF 20 FEET AND OVER.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPER-ELEVATED CURVES. THE SUPER-ELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER.

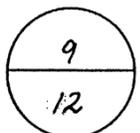
DETAIL	
1	MULTILANE DIVIDED
1	TYPICAL SPACING

DETAIL	
2	TAPERED ACCEL LANE
3	DECELERATION LANE
4	PARALLEL ACCEL LANE
5	MULTILANE DIVIDED/ EXPRESSWAY

DETAIL	
6	STOP APPROACH
7	1 LANE APPR. W/LT. TURN LANE
8	THRU APPROACH
9	2 LANE APPR. W/LT TURN LANE

DETAIL	
10	4 LANE DIVIDED TO 2 LANE TRANSITION
11	4 LANE UNDIVIDED TO 2 LANE TRANSITION
12	TWO LANE NARROW BRIDGE
13	TWO WAY LEFT TURN LANE
14	ONE LANE BRIDGE
15	HORIZONTAL CURVE

FED RD. DIVISION	STATE	PROJECT	
5	OHIO		



PLAN NO. ~~RPM-3-90~~ 40

16	HORIZONTAL CURVE ALT.
17	STOP APPROACH ALT.
GAP	CENTERLINE AT 80' TYP.

## Raised Pavement Marker SUB-SUMMARY

LOCATION				DETAIL	RPM	RPM FLOWABLE CASTING INSTALLATION ONLY			PRISMATIC RETRO REFLECTOR	PRISMATIC RETRO-REFLECTOR TYPES					REMARKS	LOCATION NUMBER	
COUNTY	ROUTE	S.L.M. SECTION				ONE WAY	TWO WAY	USED		ONE - WAY		TWO - WAY					
		FROM	TO							WHITE	YELLOW	WHITE/WHITE	YELLOW/YELLOW	WHITE/RED			
PART 1																	
MED	SR-162	13.00	13.20	6	66				39			27			STOP APPROACH AT US-42 (EAST JUNCTION)		
		13.20	16.55	GAP	221							221			CONTINUOUS ROUTE TREATMENT		
		16.55	16.75	6	66				39			27			STOP APPROACH AT SR-3 (WEST JUNCTION)		
		17.24	17.44	6	66				39			27			STOP APPROACH AT SR-3 (EAST JUNCTION)		
		17.44	18.50	GAP	70							70			CONTINUOUS ROUTE TREATMENT		
		18.50	18.90	6	132				78			54			STOP APPROACHES AT SR-57		
		18.90	20.05	GAP	76							76			CONTINUOUS ROUTE TREATMENT		
		20.05	20.39	8	76				32			44			THRU APPROACHES AT RIVER STYX RD. (CR-49)		
		20.39	20.59	16	37							37			ONE CURVE AT 20ft SPACINGS		
		20.59	21.01	GAP	28							28			CONTINUOUS ROUTE TREATMENT		
		21.01	21.23	16	35							35			ONE CURVE AT 20ft SPACINGS		
		21.23	21.58	GAP	23							23			CONTINUOUS ROUTE TREATMENT		
		21.58	21.80	16	35							35			ONE CURVE AT 20ft SPACINGS		
		21.80	22.00	GAP	13							13			CONTINUOUS ROUTE TREATMENT		
		22.00	22.31	16	58							58			REVERSE CURVE AT 20ft SPACINGS		
		22.31	24.08	GAP	117							117			CONTINUOUS ROUTE TREATMENT		
		24.08	24.28	6	66				39			27			STOP APPROACH AT SR-94 (EAST APPROACH IN SHARON CENTER)		
		24.36	24.56	6	66				39			27			STOP APPROACH AT SR-94 (WEST APPROACH IN SHARON CENTER)		
		24.56	25.17	GAP	40							40			CONTINUOUS ROUTE TREATMENT		
		25.17	25.41	15	32							32			ONE CURVE		
		25.41	26.03	GAP	41							41			CONTINUOUS ROUTE TREATMENT		
		26.03	26.26	15	30							30			ONE CURVE		
		26.26	26.96	GAP	46							46			CONTINUOUS ROUTE TREATMENT		
		TOTAL PART 1				1440				305		1135					

# PAVEMENT MARKING SUB-SUMMARY

QUANTITIES	
Calc.	Chk'd.
Date	Date

PLAN NO. 40

FHWA REGION	STATE	PROJECT
5	OHIO	

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12

CO.	ROUTE	FROM		TO		642 QUANTITIES CENTER LINE MILES		RAISED PAVEMENT MARKERS REMOVED FOR STORAGE EACH	642 CENTER LINE REMARKS
		S.L.M.		S.L.M.		TOTAL (PAY QUANT.)	SOLID LINE EQUIV.		
MED	SR-162	13.01	US-42	16.75 B	SR-3	3.74	2.37	0	
"	"	17.24 A	SR-3	24.28 B	SR-94	7.04	10.402	578	
"	"	24.36 A	SR-94	26.96	Summit Co. Line	2.60	2.738	120	
CENTER LINE TOTAL						13.38	15.510	698	

CO.	ROUTE	FROM		TO		642 QUANTITIES 4" LANE LINE MILES			PARTICIPATION	642 LANE LINE REMARKS
		S.L.M.		S.L.M.		TOTAL	DASHED	SOLID		
LANE LINE TOTAL										

CO.	ROUTE	FROM		TO		WHITE EDGE LINE QUANTITIES				YELLOW EDGE LINE QUANTITIES				642 EDGE LINE REMARKS
		S.L.M.		S.L.M.		TOTAL MILES	HWY. MILES	RAMP MILES	PART.	TOTAL	HWY.	RAMP	PART.	
MED	SR-162	13.01	US-42	16.75 B	SR-3	7.48	3.74							<div style="border-left: 1px solid black; padding-left: 5px;">                     614 Temp. Center Line 3.74 x 2 = 7.48                      10' Lanes                      7.04 x 1 = 7.04                      2.60 x 1 = 2.60                      Total = 17.12                 </div>
"	"	17.24 A	SR-3	24.28 B	SR-94	14.08	7.04							
"	"	24.36 A	SR-94	26.96	Summit Co. Line	5.20	2.60							
EDGE LINE TOTAL						26.76	13.38							

CO.	ROUTE	FROM		TO		642 QUANTITIES 8" CHANNELIZING LINES		PARTICIPATION	642 CHANNELIZING LINE REMARKS
		S.L.M.		S.L.M.		MILES	LIN. FT.		
CHANNELIZING LINE TOTAL									

## 645 AUXILIARY MARKING (740.05)

CO.	ROUTE	S.L.M.		24" TRANSVERSE LINES		STOP LINES	12" CROSS-WALK LINES	WORD ON PAVEMENT		LANE ARROWS				R.R. SYMBOL MARKING	DOTTED LINES		REMARKS
		FROM	TO	WHITE	YELLOW			ONLY	SCHOOL	TURN	THRU	COMB.	WHITE		YELLOW		
		LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	EACH	EACH	LEFT	RIGHT	EACH	EACH	EACH	LIN. FT.	LIN. FT.			
MED	SR-162	13.01	16.75 B			20							2				
"	"	17.24 A	24.28 B			20							2				
"	"	24.36 A	26.96			10							0				
AUXILIARY MARKING TOTALS						50							4				

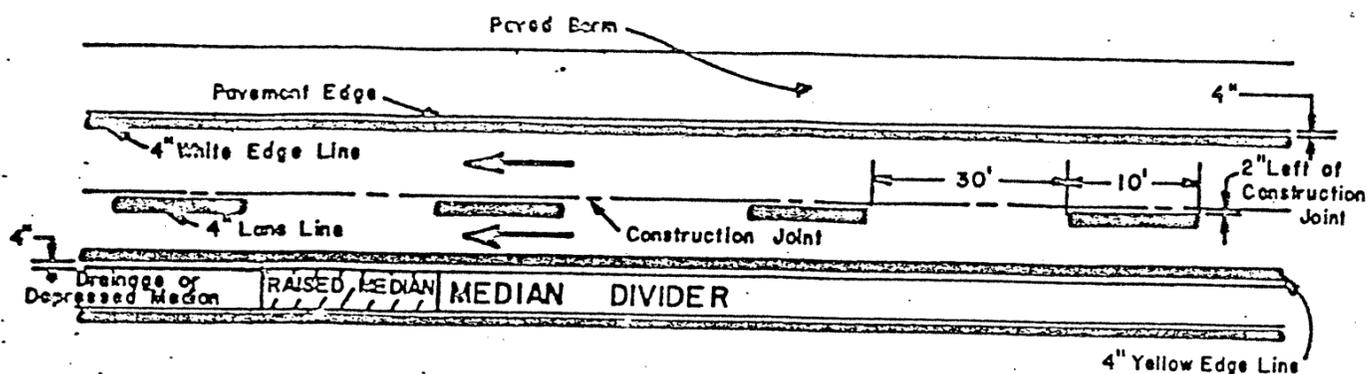
# PAVEMENT MARKING TYPICAL DETAILS

FED. RD DIV.	STATE	PROJECT	
5	OHIO		

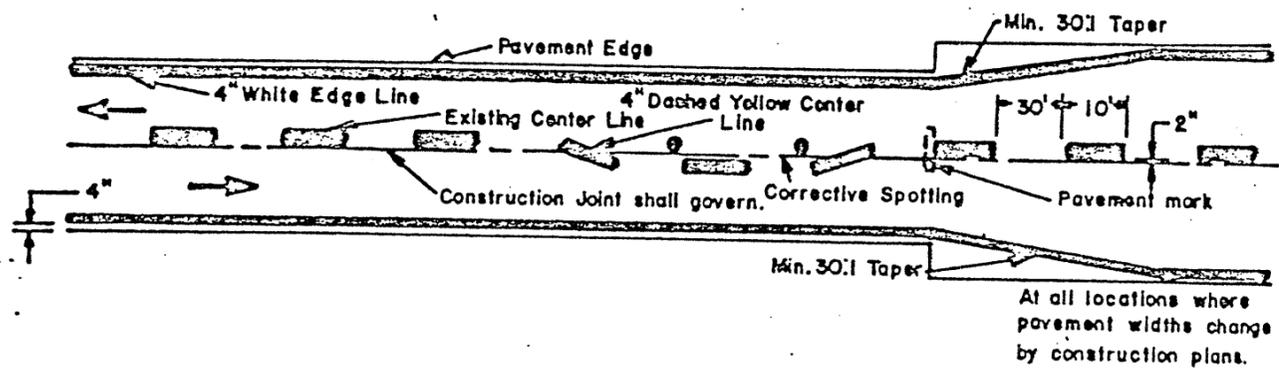
11  
12

PLAN NO. 40

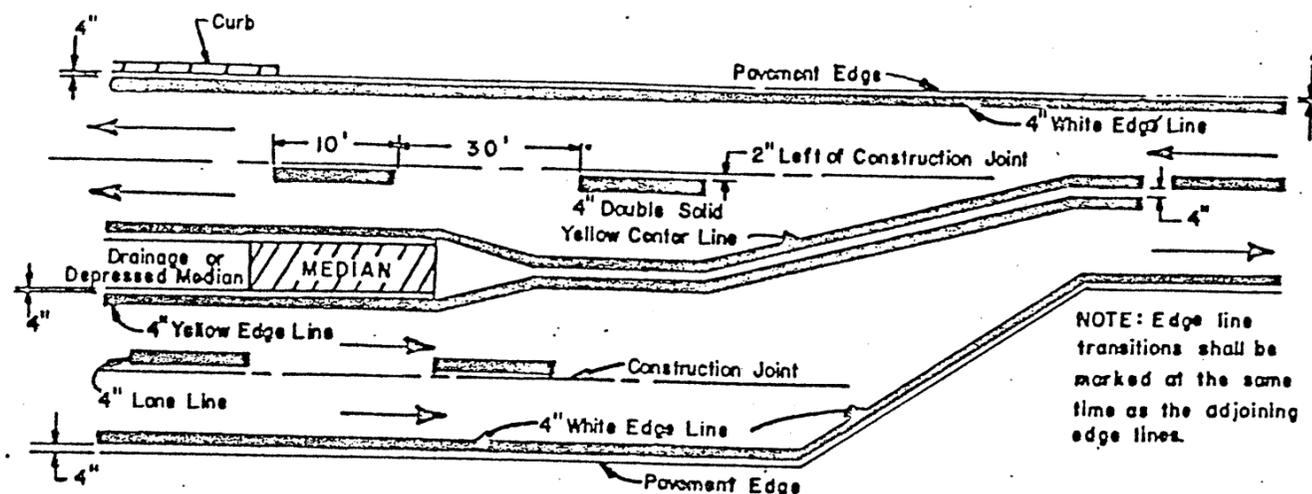
## FREEWAY & EXPRESSWAY MAINLINE MARKINGS



## TWO LANE MARKINGS



## MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



### 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, CDR. I

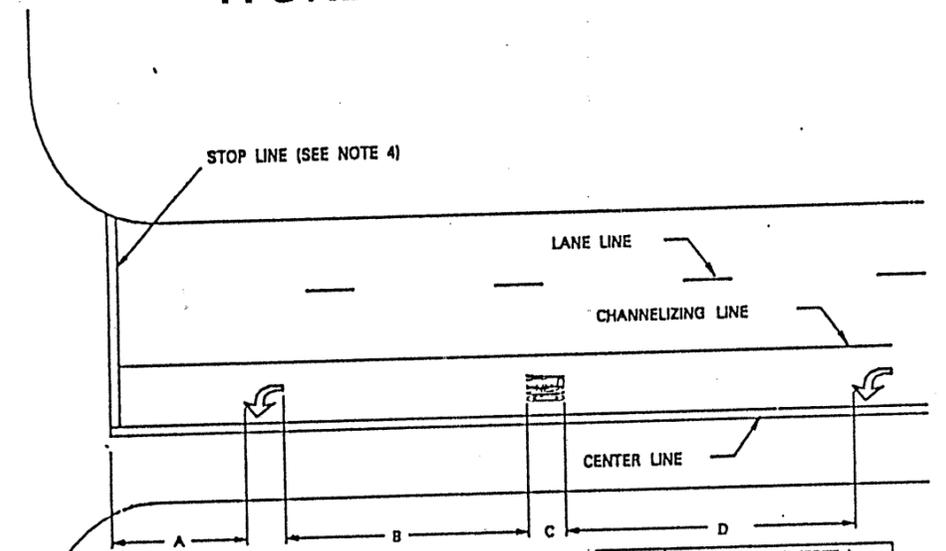
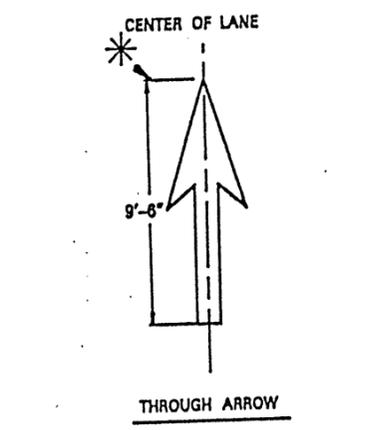
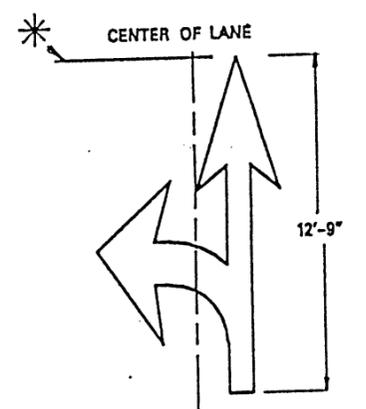
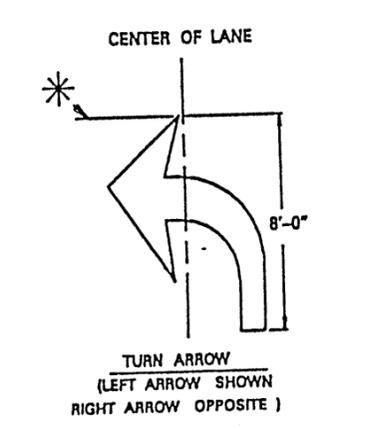
9/86

# WORD AND SYMBOL MARKING DETAILS

FED RD DIVISION	STATE	PROJECT
5	OHIO	

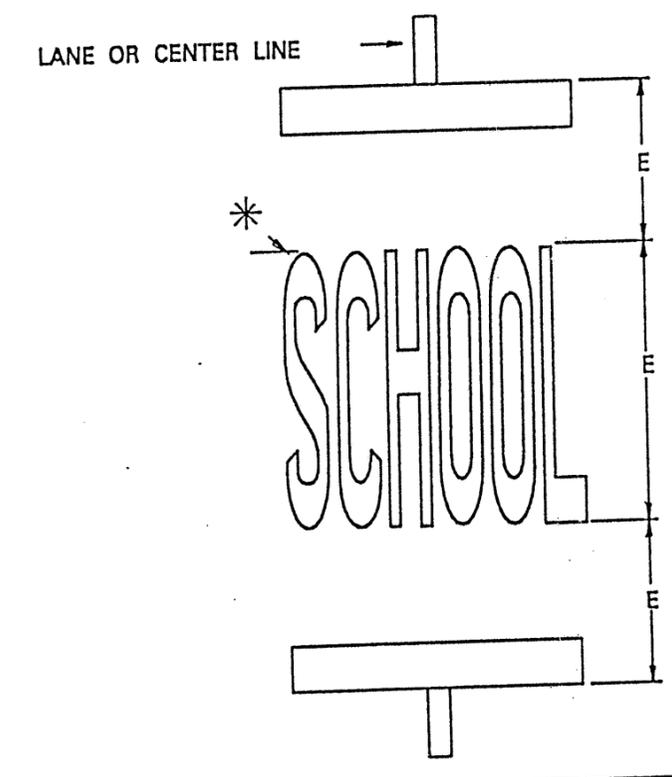


PLAN NO. 40

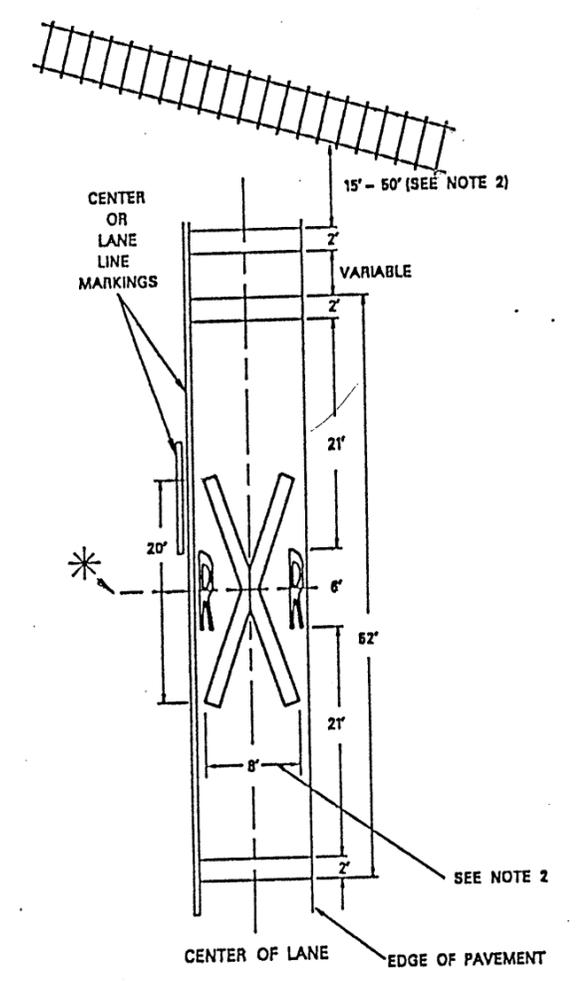


NOTE:  
STOP LINE LOCATED MIN. 40' FROM  
AT LEAST ONE SIGNAL HEAD WHICH APPLIES  
TO THAT APPROACH

TYPE	DIMENSIONS (FEET)			
	A	B	C	D
RURAL	30 MIN.	32-80	8	32-80
URBAN	10 MIN.	32-80	8	24-60



TYPE	INCHES
	E
RURAL	96
URBAN	72



- NOTES:
- 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.
  - THE RAILROAD SYMBOL SHALL BE LOCATED SO THAT THE W-64, "RAILROAD ADVANCE WARNING SIGN", IS WITHIN THE TWO TRANSVERSE BOUNDARY 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.
  - ON MULTI-LANE APPROACHES, THE TRANSVERSE LINES USED WITH THE WORD "SCHOOL" SHALL EXTEND ACROSS ALL APPROACH LANES WITH 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.
  - 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.
  - 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.
  - 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