

OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

FHWA REGION	STATE	FEDERAL PROJECT
5	OHIO	



PLAN NO. 312

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINII		NET LENGTH MILES	TOWNSHIP	CITY	VILLAGE
				BEGIN	END				
1	Van	US224	0.00-0.27 (5.10-9.31)	0.00	11.71	8.08			
2	Van	SR116	(18.97)(19.04-20.00)	18.97	20.22	1.20		Van Wert	
3	Van	SR116	(18.99)	18.99	19.04	0.05			

FR-51(52)
MR-5C70(1)

The Standard 1983 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. _____ and that detours will be provided by State forces. The closing to traffic of the highways will not be required on Parts No. **ONE TWO & THREE** and provisions for the maintenance and safety of traffic will be as indicated in the proposal.

Approved Date 9-14-83 James L. Schmeck
District Deputy Director of Transportation

Approved Date 9-21-83 Robert B. Pfeiffer
Engineer of Bridges

Approved Date _____
Engineer of Maintenance

Approved Date 11-1-83 James R. Longenecker
Chief Engineer, Operations

Approved Date _____
Assistant Deputy Director, Program Development

Approved Date _____
Chief Engineer, Construction

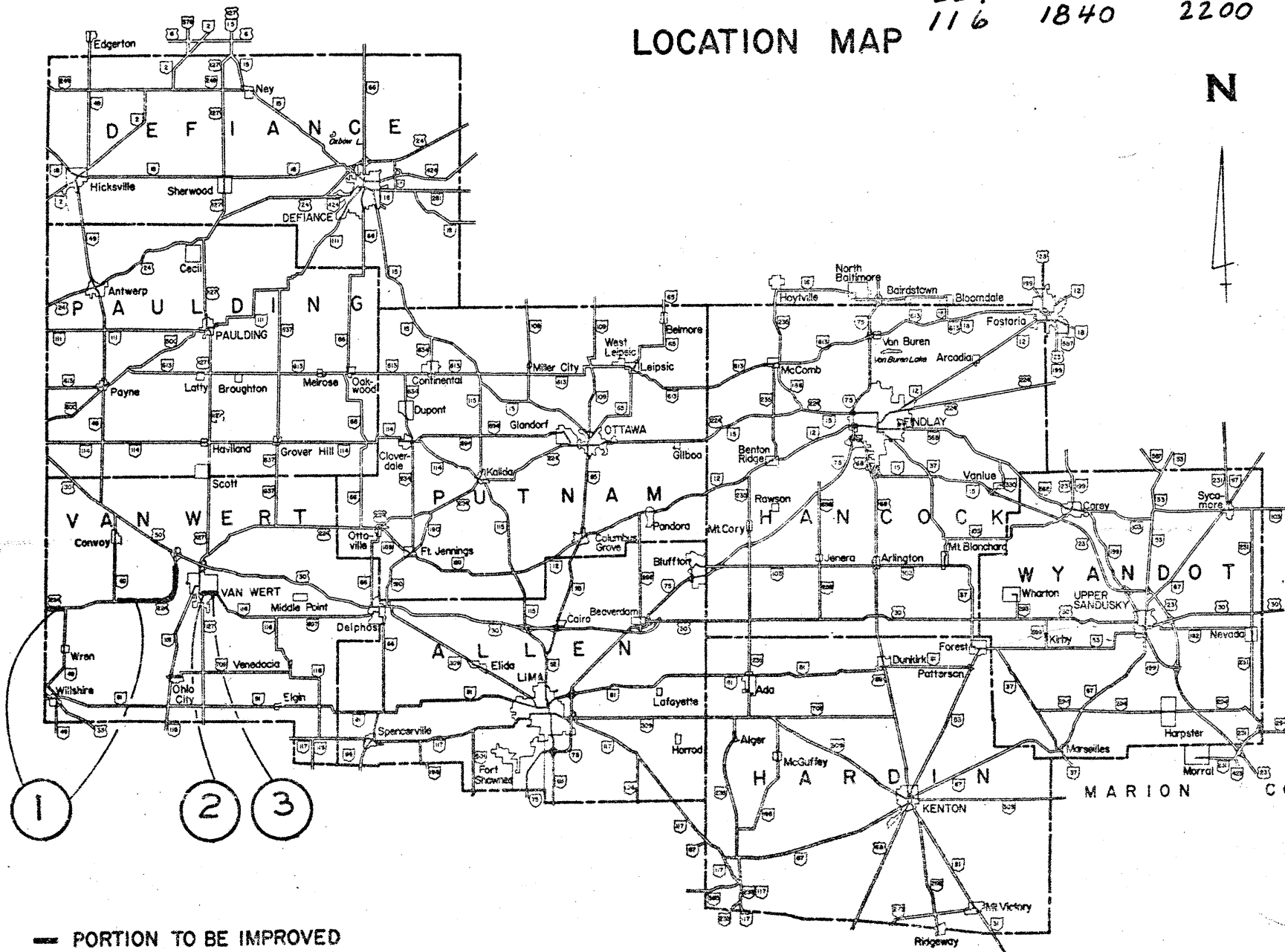
Approved Date _____
Chief Engineer, Design

Approved Date _____
Assistant Director, Department of Transportation

Approved Date 11-2-83 Warren J. Smith
Director, Department of Transportation

LOCATION MAP

	1982 ADT	1992 ADT	%
224	1240	1490	T 3
116	1840	2200	T 27



— PORTION TO BE IMPROVED

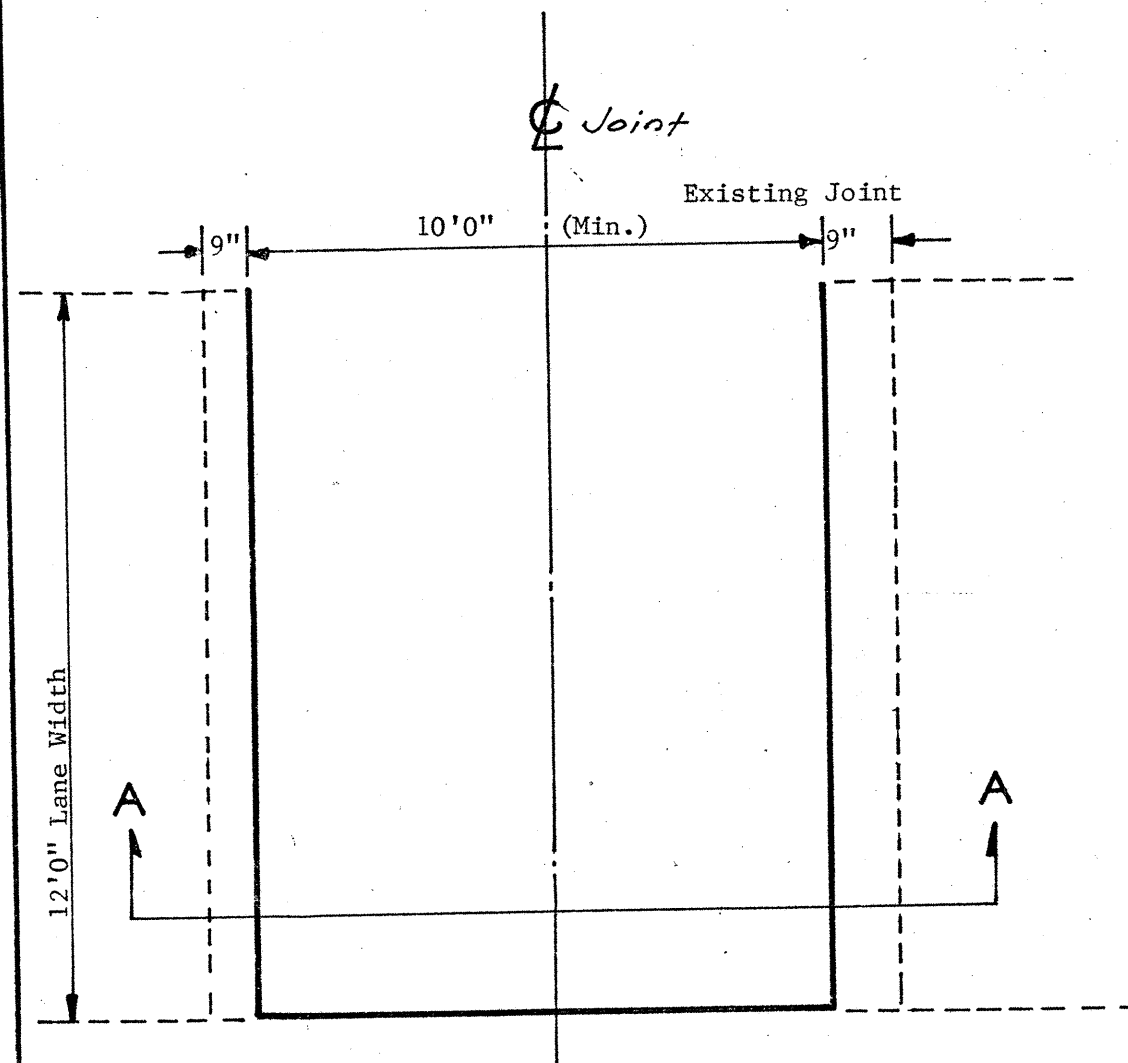
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

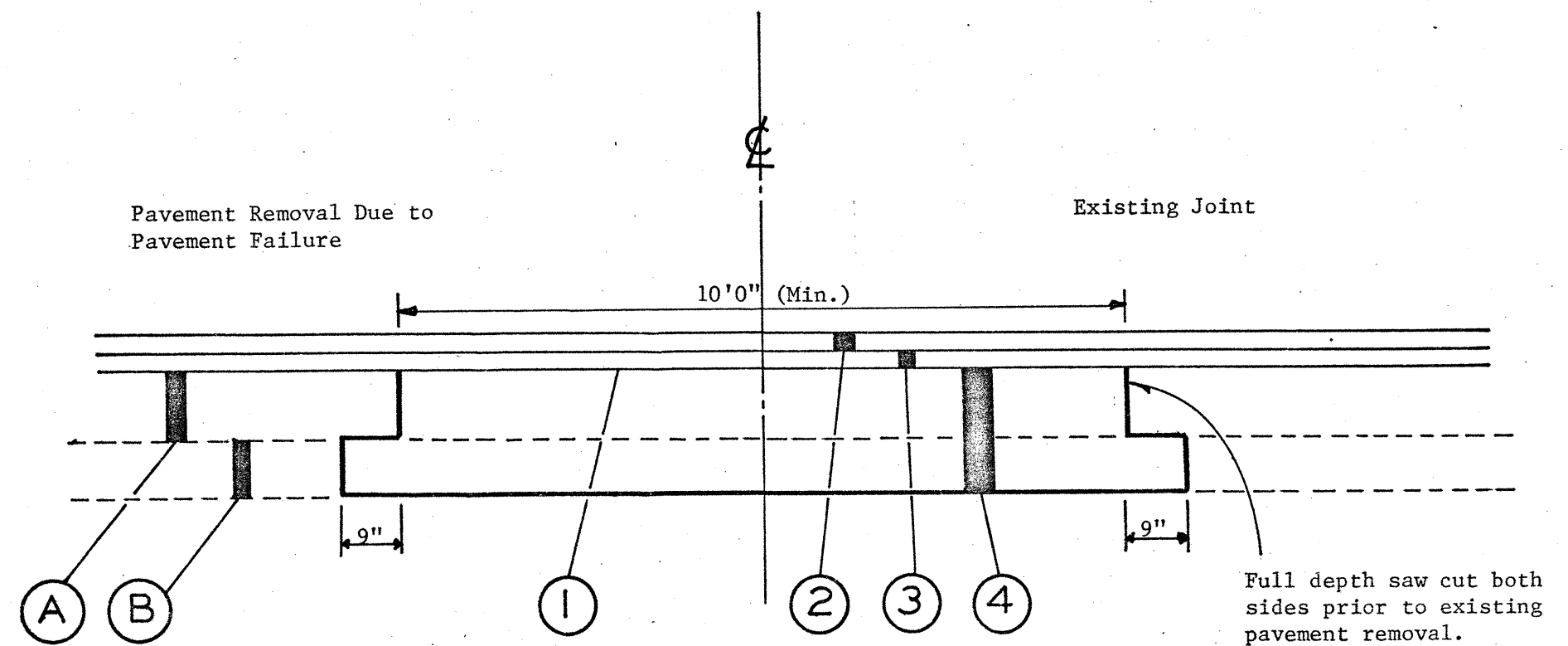
STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
BP-5	7-16-81	803	5-27-83
MC-3	6-1-73		

BN



JOINT
PLAN VIEW

Note: All locations of joint repair will be marked by the Engineer prior to the start of construction.



SECTION A-A

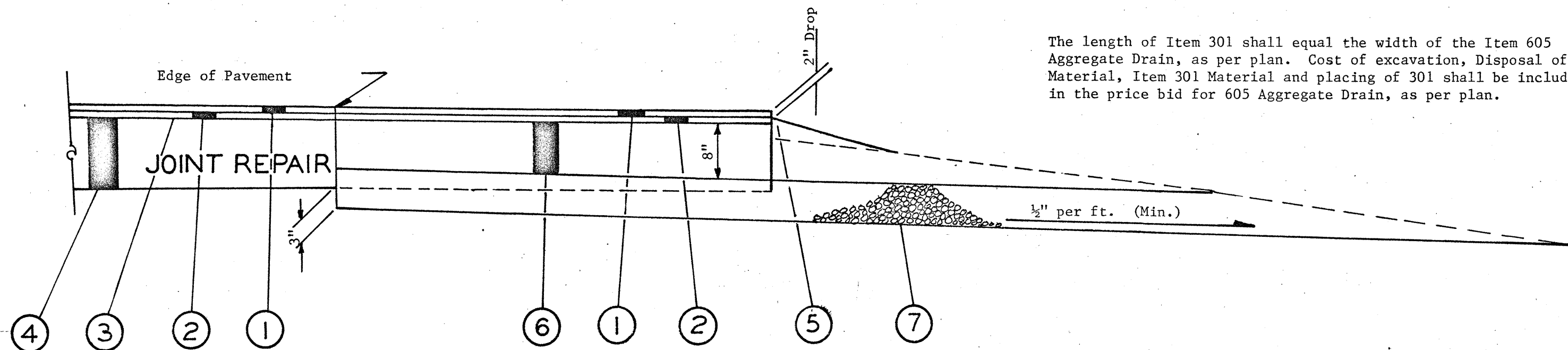
EXISTING LEGEND

- (A) 9" Reinforced Portland Cement Concrete
(B) 6" Subbase

PROPOSED LEGEND

- (1) 407 - Tack Coat
(2) 404 - 1" Asphalt Concrete AC-20
(3) 402 - 1½" Asphalt Concrete AC-20
(4) 305 - 15" Portland Cement Concrete Base, As Per Plan

Aggregate Drain As Per Plan

PROPOSED LEGEND

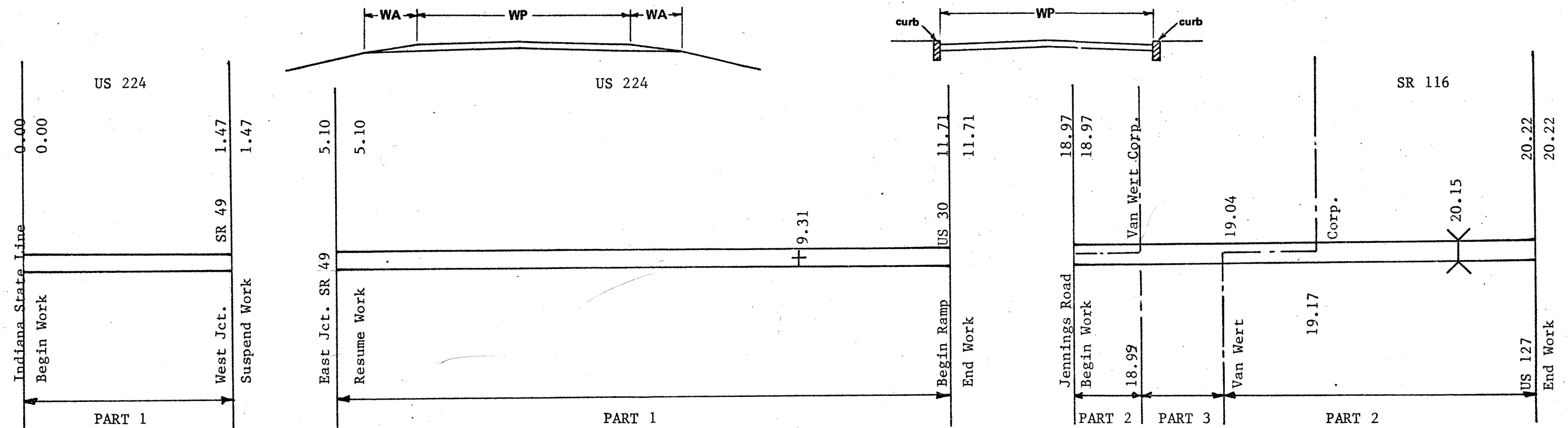
- | | | |
|---|----------|---|
| ① | Item 404 | 1" Asphalt Concrete AC-20 |
| ② | Item 402 | 1 1/2" Asphalt Concrete AC-20 |
| ③ | Item 407 | Tack Coat |
| ④ | Item 305 | 15" Portland Cement Concrete Base, as per plan |
| ⑤ | Item 617 | Compacted Aggregate |
| ⑥ | Item 301 | 8" Bituminous Aggregate Base AC-20 ^{or RT(11 or 12)} (To be included in the Unit Price Bid for Item 605 Aggregate Drain, as per plan.) |
| ⑦ | Item 605 | Aggregate Drain, as per plan |

ASPHALT CONCRETE

PLAN NO.
3124
9

TYPICAL 1

TYPICAL 2



PAVEMENT DATA

PART	ROUTE	LOG POINT TO LOG POINT	LENGTH		WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ. YDS.	PROPOSED PAVEMENT								202	305	Special			
			MILES	LIN. FT.					407		ASPHALT CONCRETE						Pavement Removed, as per plan SQ. YDS.	15" Portland Cement Conc. Base, as per plan SQ. YDS.	Pavement Sawing LIN. FT.			
									TACK COAT @ .075... gal./s.y. GALS.	COVER AGGR. @ ...7... lbs./s.y. TONS	ITEM 403		ITEM 404		ITEM 402							
											THICK INCHES	CU. YDS.	THICK INCHES	CU. YDS.	THICK INCHES	CU. YDS.						
1	US 224	0.00-1.47	1.47	7,762	24	1	404	20,699	1,552	72	1/2	287	1	575								
		5.10-9.31	4.21	22,229	24	1	404	59,277	4,446	207	1/2	823	1	1,647								
		9.31-11.71	2.40	12,672	24	1	404	33,792	2,534	118			1	939	1 1/2	1,408	532	532	960			
		Extra Areas						11,377	853	40	1/2	158	1	391								
	Total Part 1		8.08	42,663				125,145	9,385	437		1,268		3,552		1,408	532	532	960			
2	SR 116	18.97-18.99	0.02	106	12/12	2	404	282	21		1/2	4	1	8								
		19.04-19.17	0.13	686	12/12	2	404	1,829	137	6	1/2	25	1	51								
		19.17-20.22	1.05	5,544	24	2	404	14,784	1,109	52	1/2	205	1	411								
		Extra Areas						1,675	126	6	1/2	23	1	47								
	Total Part 2		1.20	6,336				18,570	1,393	65		257		517								
3	SR 116	18.99-19.04	0.05	264	24	2	404	704	52	3	1/2	10	1	20			*Note:	Extra Areas include additional material				
		Extra Areas						85	6	1	1/2	1	1	2			for all mailbox approaches.					
	Total Part 3		0.05	264				789	58	4		11		22								

*Note: Extra Areas include additional material for all mailbox approaches.

614 Temporary Pavement Markings

The contractor shall furnish, install, maintain, and, when necessary, remove temporary retro-reflective pavement markings on reconstructed resurfaced or temporary roads within the work limits, in accordance with the following requirements

The temporary markings shall be complete on all pavement courses exposed to traffic at the end of each day's operation. Where permanent markings are called for in these plans, the contractor shall furnish and place the permanent markings within 30 calendar days, following completion of all surface courses in a single roadway or prior to the end of the construction season, whichever comes first.

Temporary markings shall be placed in accordance with the following requirements, unless otherwise specified in the plans:

Center lines and lane lines shall consist of 12"x4" segments spaced at a maximum 40' center to center; channelizing lines shall be 12"x4" segments spaced at maximum 20' center to center. Freeway and expressway gore markings shall be two continuous lines, 50' long, 4" wide. Edge lines shall consist of 12"x4" segments spaced at a maximum 20' center to center.

The material furnished shall be flexible retroreflective preformed pressure sensitive tape for pavement lines. It shall be free of cracks with straight edges and consist of pigment and fillers, but have sufficient binder and plasticizer to retain glass beads having an appropriate refractive index to meet minimum reflective intensity standards outlined in the manufacturers information. Material shall be Flexolite "Wet Reflective", 3M "Scotchlane," or approved equal.

Glass beads shall be mixed uniformly throughout the marking material with sufficient surface beads to provide optimum reflectorization at all times.

The material shall have a precoated adhesive layer for pavement application without the use of heat, solvents or additional adhesives. The adhesive shall be sufficient to retain complete markings on the pavement surface throughout the useful life of the markings.

White marking material shall be free of tint. Yellow material shall conform to Color No. 33538 of Federal Standard 595.

In addition, all applicable manufacturers material and application instructions, in force at the time of placement, shall be adhered to. The contractor shall furnish to the engineer certification that the material supplied meets the properties specified herein.

Markings shall be accurately laid out in conformance with 621.051 and shall be located in a true line on the center line, lane line, or channelizing line where normal permanent marking would lie, unless otherwise specified in the plans. The temporary tape shall be placed by rolling the material into the surface. * edge line

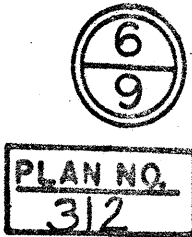
As an alternate material to pavement marking tape, the contractor may furnish and apply painted retroreflective pavement markings conforming to 621. The width and length of painted segment shall be the same as required for temporary tape material. The paint application rate shall be not less than 16 gallons per mile for a solid line nor less than 0.4 gallons per mile for the 12"x4" dashed line.

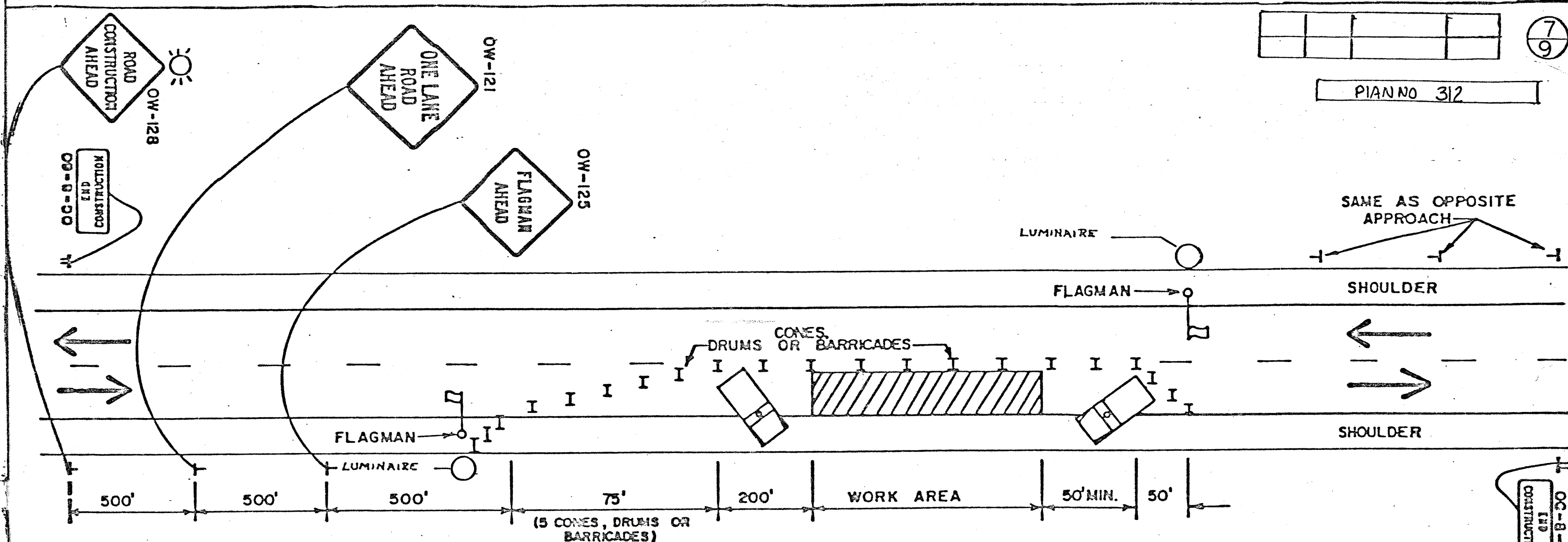
The contractor shall provide complete pavement markings for all temporary roads constructed for this project, in accordance with material and performance requirements described herein and in the Ohio Manual as defined in 614.03.

In addition to the requirement of 614.03, the contractor shall, prior to placing temporary markings, remove all existing conflicting markings that are visible to the traveling public during daylight or nighttime hours. When temporary markings are no longer needed, any conflicting markings visible to the traveling public shall be removed by the contractor before the flow of traffic is diverted to the next phases. Removal of existing or temporary markings shall be performed in accordance with 621.134. The cost for removal of conflicting markings shall be incidental to the various pay items unless specifically paid for as a separate item.

Method of measurement and basis of payment shall be in conformance with 621.15 and 621.16 respectively for:

Item	Unit	Description
614	Miles	Temporary Lane Lines
614	Miles	Temporary Center Lines
614	Miles/Lin. Ft	Temporary Channelizing Lines
614	Lin. Ft.	Temporary Gore Marking
614	Lin. Ft.	Removal of Temporary Marking
614	Miles	Temporary Edge Lines





GENERAL NOTES

1. FLAGMEN SHALL BE USED TO CONTROL TRAFFIC CONTINUOUSLY FOR AS LONG AS ONE LANE OPERATION IS IN EFFECT. FLAGMAN SHALL COMMUNICATE WITH EACH OTHER AT ALL TIMES AS DESCRIBED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES IN THE SECTION "FLAGMAN CONTROL".
2. CONES, DRUMS, OR BARRICADES SHALL BE SPACED AT 50 FOOT CENTERS FOR THE FIRST 1000 FEET OF THE WORK AREA AND AT A MAXIMUM OF 100 FEET FOR THE BALANCE OF THE WORK AREA. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS FOR THE LANE CLOSURES DURING DAYLIGHT HOURS ONLY.
3. SEVERAL SMALL WORK SITES CLOSE TOGETHER SHALL BE COMBINED INTO ONE WORK AREA TO MAKE A CLOSURE NOT MORE THAN 2000 FEET LONG INCLUDING TAPERS. CLOSURES MORE THAN 2000 FEET MAY BE APPROVED BY THE ENGINEER. THE MINIMUM LENGTH BETWEEN CLOSURES SHALL BE 2000 FEET. ONLY ONE SIDE OF THE ROAD SHALL BE CLOSED IN ANY ONE WORK AREA.
4. THE WORK TRUCKS SHOWN AT EACH END OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER MEN ARE WORKING WITHIN THE WORK AREA. THESE TRUCKS SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKMEN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF THE WORK TRUCKS SHOWN WHEN APPROVED BY THE ENGINEER.
5. THE TYPE B HIGH INTENSITY BARRICADE WARNING LIGHT SHOWN ON THE ROAD CONSTRUCTION AHEAD SIGN, IS REQUIRED WHENEVER NIGHT LANE CLOSURE IS NECESSARY.
6. TYPE C STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE ERECTED ON DRUMS OR BARRICADES FOR NIGHT LANE CLOSURES. MAXIMUM SPACING SHALL BE 50' CENTER TO CENTER IN ADVANCE OF THE WORK AREA AND 200' CENTER TO CENTER WITHIN THE WORK AREA.
7. ADEQUATE AREA ILLUMINATION TO CLEARLY IDENTIFY THE BEGINNING OF THE TRANSITION AT NIGHT SHALL BE PROVIDED BY USE OF A 175 WATT MINIMUM LUMINAIRE LOCATED ADJACENT TO FLAGMAN STATIONS AS SHOWN ABOVE. THE MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL BE A MINIMUM OF 27 FEET ABOVE THE PAVEMENT AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET ABOVE THE PAVEMENT.

FR-51(52) MR-5C10(1)				GENERAL SUMMARY			
ITEM	PART 1	PART 2	PART 3	GRAND TOTAL Parts 1, 2 & 3	UNIT	DESCRIPTION	
407	9,385	1,393	58	10,836	Gals.	Tack Coat, as per plan	
407	427	65	4	496	Tons	Cover Aggregate	
403	1,546	257	11	1,814	Cu. Yds.	Asphalt Concrete AC-20	
404	4,577	517	22	5,116	Cu. Yds.	Asphalt Concrete AC-20, as per plan	
402	2,112			2,112	Cu. Yds.	Asphalt Concrete AC-20)	
202	532			532	Sq. Yds.	Pavement Removed, As Per Plan	
305	532			532	Sq. Yds.	15" Portland Cement Concrete Base, As Per Plan	
Special	960			960	Lin. Ft.	Pavement Sawing	
605	600			600	Lin. Ft.	Aggregate Drains, As Per Plan	
407	3,690			3,690	Gals.	Tack Coat for Shoulders	
407	129			129	Tons	Cover Aggregate for Shoulders	
617	8			8	M. Gals.	Water	
310	50			50	Cu. Yds.	Subbase Type 1, Grading "A", As Per Plan	
614	16.16	2.40	0.10	18.66	Miles	Temporary Center Lines	
624	Lump	Lump	Lump	Lump	Lump	Mobilization	
617	23,701			23,701	Sq. Yds.	Shoulder Preparation	
617	1,975			1,975	Cu. Yds.	Compacted Aggregate	
614	Lump	Lump	Lump	Lump	Lump	Maintaining Traffic	

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.

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.

INTERMEDIATE COURSE, SPOT LEVELING AND PATCHING:

This material shall be placed in a separate operation where and as directed by the engineer.

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.

COVER AGGREGATE:

Cover aggregate shall conform to 703.06.

PLAN NO.
312

All hard surfaced side road approaches shall be resurfaced to the right of way line.

All private drives shall be feathered in 3'± using 404 asphalt concrete. The existing stone drives and mailbox approaches will be prepared by ODOT forces prior to the placement of the asphalt concrete. Preparation to include excavation of dirt and compaction of base. The 404 asphalt concrete quantities for drives and mailbox approaches are included in the extra area quantities.

Bridge Treatment: Resurfacing courses shall be feathered to meet the ends of the bridge approach slabs. ✓

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 40'.

The 404 on the shoulders may be placed at the same time that the 404 material is placed on the adjacent lanes of pavement, however, the shoulders shall be placed in a separate operation if the contractor's equipment does not have the capacity to place the material parallel to the existing shoulder grades.

Existing castings shall be raised by their respective owners.

The contractor shall note the additional cleaning and surface preparation may be required within the corporate limits of the municipalities on this project. Any and all additional work shall be incidental to 407.04 Preparation of Surface.

Pipe Underdrains: Any pipe underdrains broken or damaged as a result of construction operations shall be replaced by the contractor at no cost to the State of Ohio.

310 Subbase: In areas of pavement replacement where unsuitable subgrade material is encountered the Engineer shall require the replacement of the unsuitable subgrade. Included in the General Summary is 50 cu. yds. of 310 subbase grading "A" to be used as directed by the Engineer for subgrade replacement. The cost of removing and disposing of the unsuitable subgrade and reshaping of the subgrade will be included in the unit price bid for 310 Subbase Type 1, Grading A.

Joint Repair : Prior to the start of any construction on the project, the engineer will have marked all pavement joints to be repaired.

Pavement Removed, As Per Plan: The area to be removed shall be outlined generally rectangular in shape by sawing. The saw cut must be full depth, thereby providing a vertical face to avoid feathering, minimizing spalling on the bottom of the existing concrete during breakup, and to facilitate removal. Additional saw cuts within the outlined area will further aid in breakup and removal and prevent chipping of the edges of the construction joint. However, only those cuts designated by the engineer will be measures for payment.

Payment for the removal of all loose and broken material will be included in the unit price bid for 202 Pavement Removed, As Per Plan.