OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

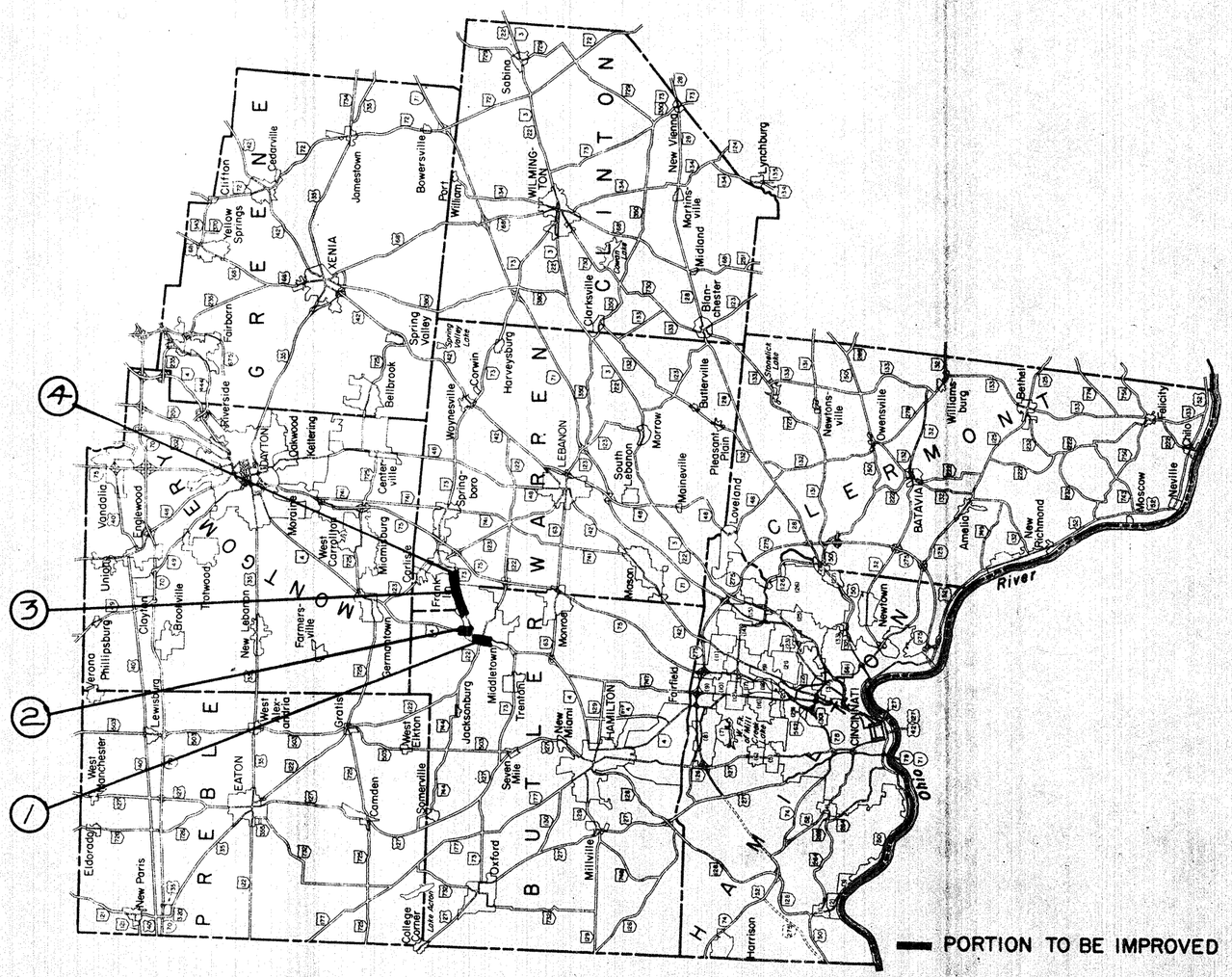
Project No. 321 (78)
Letting 5/16/78

1/11

PLAN NO. 200

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINII BEGIN	PROJECT TERMINII END	NET LENGTH MILES	TOWNSHIP	CITY	VILLAGE
1	BUT	SR4	(20.64)	20.64	21.17	0.53		Middeltown	
2	BUT	SR4	(23.21-23.71)	23.21	24.03	0.82		Middletown	
3	BUT	SR73	(23.17)	23.17	25.86	2.69		Middletown	
4	WAR	SR73	(0.00)	0.00	1.03	1.03		Franklin	
						5.01			

LOCATION MAP



— PORTION TO BE IMPROVED

The Standard 1977 Specifications of the State of Ohio, Department of Transportation, including changes and Supplemental Specifications listed in the plans and proposal shall govern these improvements.

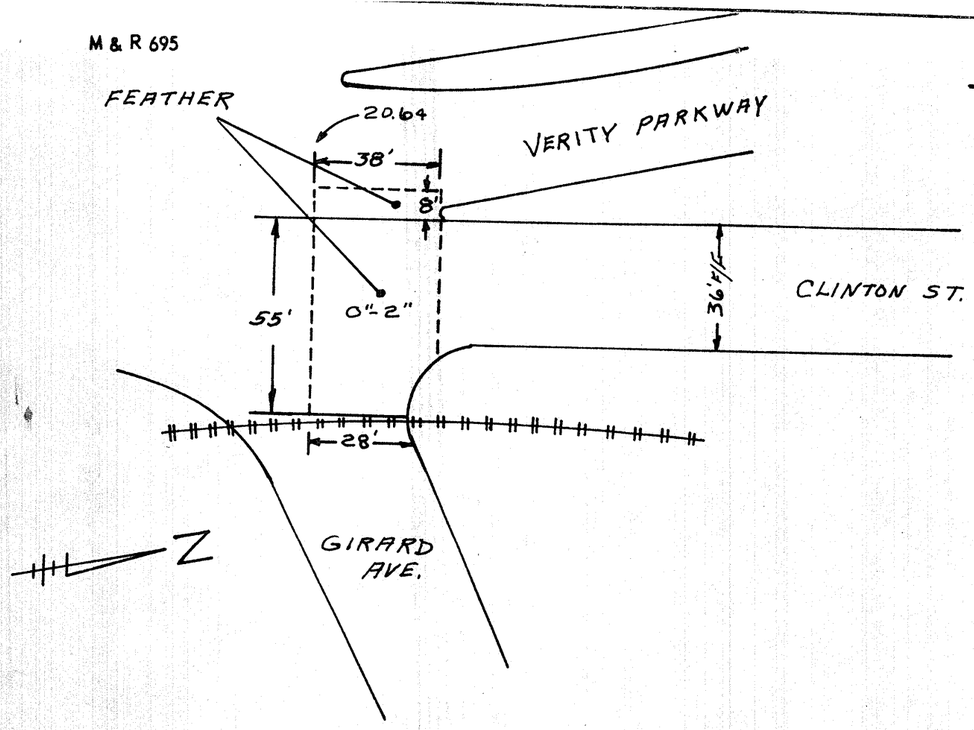
I hereby approve these plans and declare that the making of these improvements will require the closing of the highways to traffic on Parts No. _____ and that detours will be provided by State forces. The closing to traffic of the highways will not be required on Parts No. 1 thru 4 and provisions for the maintenance and safety of traffic will be as indicated in the proposal.

Approved Date 2-13-78	William W. Brayshaw District Deputy Director of Transportation
Approved Date 2-21-78 (OK H.A.S.)	Robert B. Pfeifer Engineer of Bridges
Approved Date _____	_____ Engineer of Maintenance
Approved Date 3-23-78	Greg McNelis Chief Engineer, Operations
Approved Date 3-23-78	Howard E. Mohr Assistant Deputy Director, Program Development
Approved Date _____	_____ Chief Engineer, Construction
Approved Date _____	_____ Chief Engineer, Design
Approved Date _____	_____ Assistant Director, Department of Transportation
Approved Date 3.24.78	David Z. Wein Director, Department of Transportation

STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	
BP-5	8-11-75		

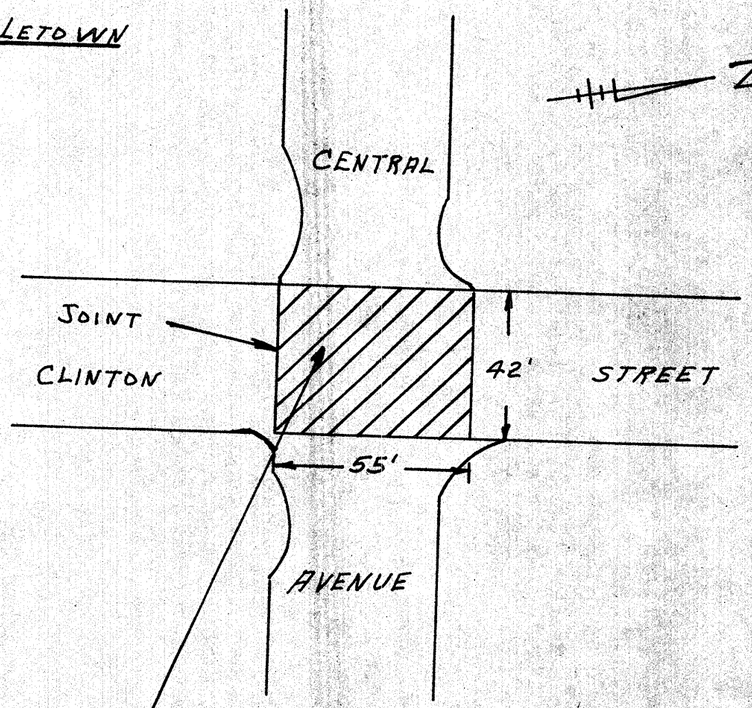
5-16-78

M & R 695



FEATHER AREA
LOG 20.64

BUT. SR-4 CLINTON ST. MIDDLETOWN
PART 1

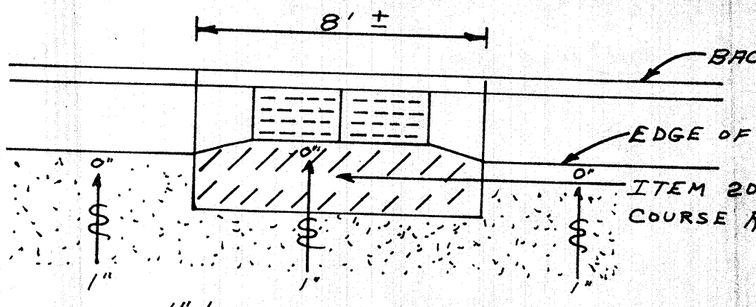


ITEM 202 WEARING COURSE
REMOVED 2" AVG.

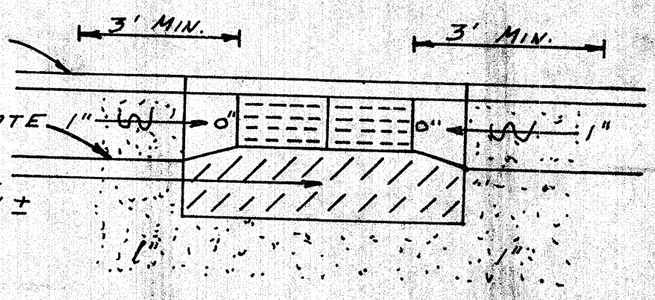
2/11

PLAN NO. 200

BUT. SR-4 GERMANTOWN RD. MIDDLETOWN
PART 2



1" LEVELING COURSE



1" SURFACE COURSE

NOTES

1. THE CONTRACTOR IS REQUIRED TO REMOVE A 1.5' X 8' STRIP 1" ± THICK OF THE EXISTING SURFACE COURSE IN FRONT OF ALL GRATE TYPE INLETS, AS DIRECTED BY THE ENGINEER. (7 grate type inlets)
2. THE NEW LEVELING AND SURFACE COURSES ARE TO BE HAND RAKED AND THEN ROLLED TO THE APPROXIMATE THICKNESS AS SHOWN ABOVE.

PAVING AT CATCH BASINS

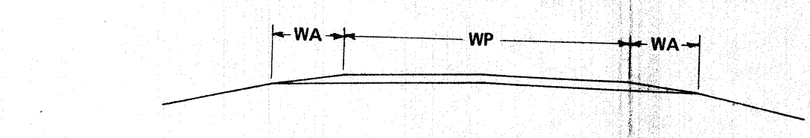
M & R 690 REV. 9-1-74

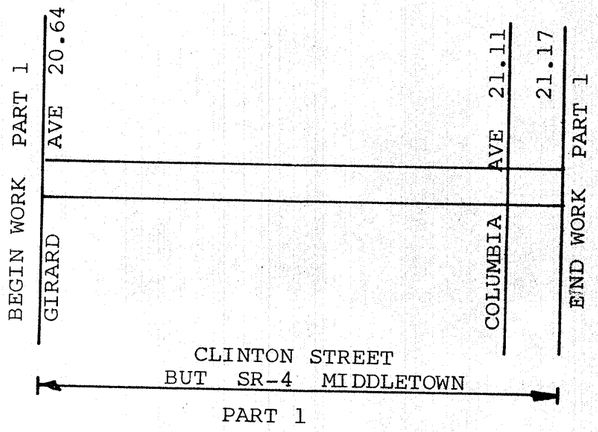
ASPHALT CONCRETE

PLAN NO. 200

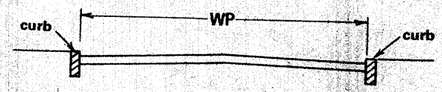
3/11

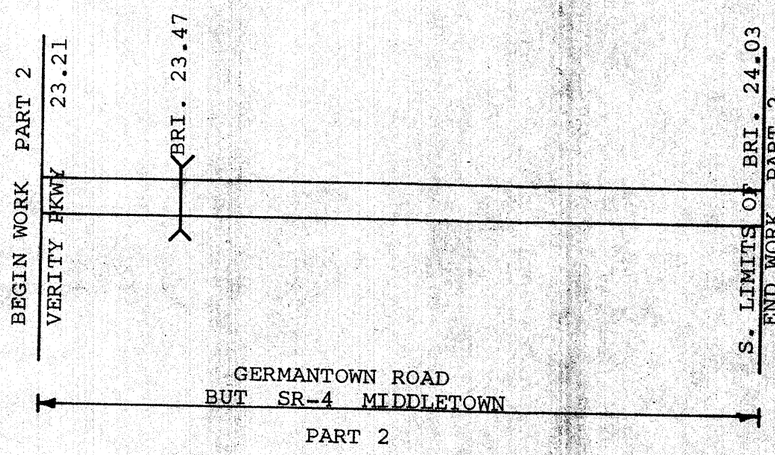
TYPICAL 1





TYPICAL 2





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 @0.075 gal./s.y. GALS.	407 COVER AGGR. @7 lbs./s.y. TONS	ASPHALT CONCRETE ITEM 403 THICK INCHES MIN.	ITEM 403 CU. YDS.	ITEM 404 THICK INCHES	ITEM 404 CU. YDS.	ITEM THICK INCHES	202 WEARING COURSE REMOVED AVG. DEPTH 1" SQ. YDS.	202 WEARING COURSE REMOVED AVG. DEPTH 2" SQ. YDS.	202 PRECAST TRAFFIC DIVIDERS REMOVED + DISPOSED OF EA.	202 PAVT. REMOVED (FLEXIBLE) DEPTH 9" SQ. YDS.	301 BIT. AGGR. BASE 9" THICK CU. YDS.	604 MANHOLES ADJUSTED TO GRADE EA.	604 WATER BOXES ADJUSTED TO GRADE EA.
1	SR-4	20.64-20.68	0.04	211	Avg 36	2	404	844	63	3	0	23	1	23								
		20.68-20.81	0.13	686	Avg 40	2	"	3,049	229	11	"	85	"	85								
		20.81-21.11	0.30	1,584	Avg 42	2	"	7,392	554	26	"	205	"	205								
		21.11-21.17	0.06	317	Avg 43	2	"	1,515	114	5	"	42	"	42								
	Extra Area & Deductions							1,181	89	4		48		33			See Sheet No. 2		18 Locations			
		TOTAL PART 1	0.53	2,798				13,981	1,049	49		403		388			257		287	72	34	4
2	SR-4	23.21-23.70	0.49	2,587	54	1	404	15,522	1,164	54	0	431	1	431								
		23.70-24.03	0.33	1,742	49	1	"	9,484	711	33	"	263	"	263		See Sheet No. 2			7 Locations			
	Extra Area & Deductions							2,723	204	10		76		76								
		TOTAL PART 2	0.82	4,329				27,729	2,079	97		770		770		19		141	68	17	22	1

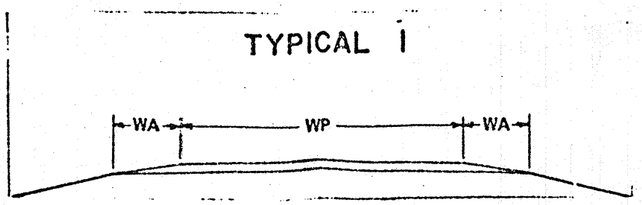
CALC. BY BLM DATE 2-9-78
CHK'D. BY FBR DATE 2-9-78

M & R 690 REV. 9-1-74

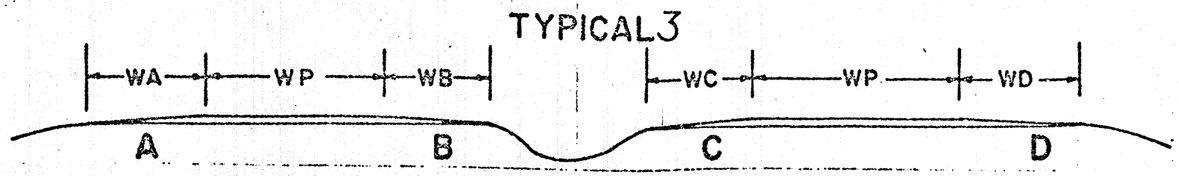
ASPHALT CONCRETE

PLAN NO. 200 — 4 / 11

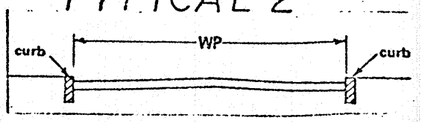
TYPICAL 1

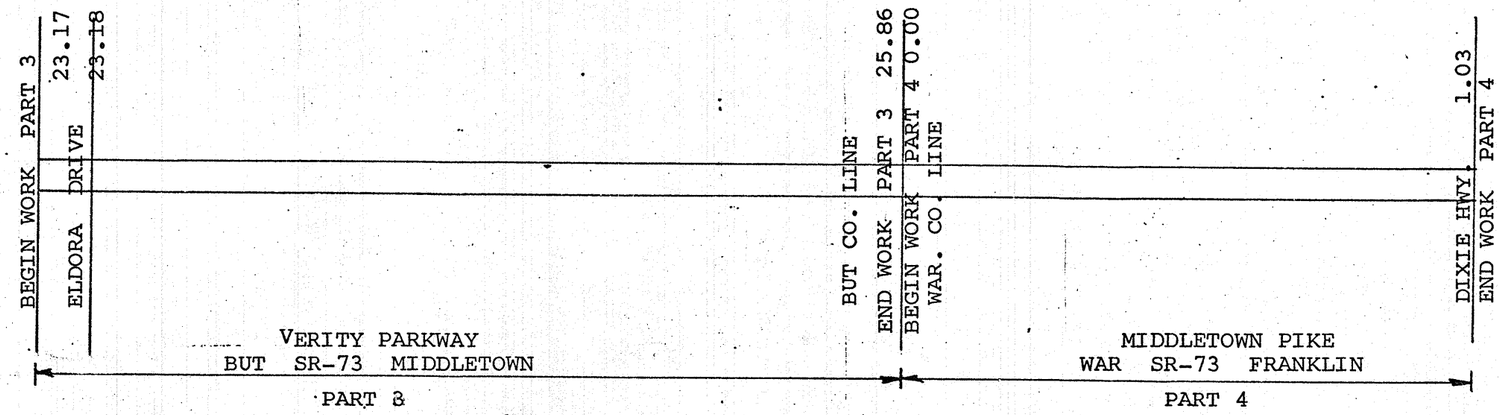


TYPICAL 3



TYPICAL 2



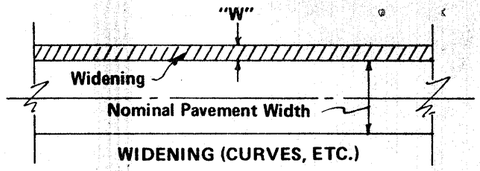


PAVEMENT DATA

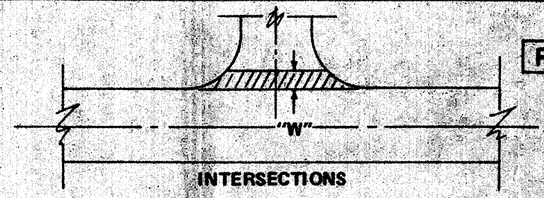
PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	WP FEET	TYPICAL	EXISTING TYPE PAVEMENT	PAVEMENT AREA SQ. YDS.	PROPOSED PAVEMENT 407 TACK COAT @0.075 gal./s.y. GALS.	407 COVER AGGR. @7 lbs./s.y. TONS	ASPHALT CONCRETE ITEM 403 THICK INCHES MIN.	ITEM 403 CU. YDS.	ITEM 404 THICK INCHES	ITEM 404 CU. YDS.	ITEM ____ THICK INCHES	ITEM ____ CU. YDS.	202 WEARING COURSE REMOVED AVG. DEPTH 2" SQ. YDS.	202 PAVT. REMOVED (FLEXIBLE) DEPTH 9" SQ. YDS.	301 BIT. AGGR. BASE 9" THICK CU. YDS	604 MANHOLES ADJUSTED TO GRADE EA.	604 WATER BOX ADJUSTED TO GRADE EA.
3	SR-73	23.17-25.86	2.69	14,203	24/24	3	404	75,750	5,681	265	0	1,052	1	2,104							
	Extra Area & Deductions							5,746	431	20		80		160				1 Location			
		TOTAL PART 3	2.69	14,203				81,495	6,112	285		1,132		2,264				100	25	3	1
4	SR-73	0.00-1.03	1.03	5,438	24/24	3	404	29,003	2,175	102	0	403	1	806							
	Extra Area & Deductions							910	68	3		13		25			1 Location	1 Location			
		TOTAL PART 4	1.03	5,438				29,913	2,243	105		416		831			667	187	47		

CHK'D. BY RLM DATE 2-6-78
CHK'D. BY FBR DATE 2-9-78

M & R 692 REV. 9-6-73



EXTRA AREA AND DEDUCTIONS



PLAN NO. 200 — 5/11

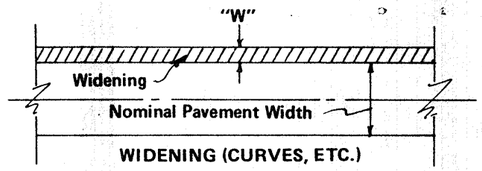
PART	ROUTE	LOG POINT TO LOG POINT	SIDE	DESCRIPTION	LENGTH MILES	LENGTH LIN. FT.	WIDTH "W" IN FEET	AREA IN SQ. YDS.	PROPOSED ITEMS 407 TACK COAT @0.075 gal./s.y. Gals.	407 COVER AGGR. @7 lbs./s.y. Tons	ASPHALT CONCRETE THICK INCHES MIN	CU. YDS. ITEM 403	CU. YDS. ITEM 404	ASPHALT CONCRETE THICK INCHES
1	SR-4	20.64	R	Girard Ave		23	19	49						
		20.70-21.17	R&L	Drop gutter plate allowance	0.94	4,963	2	*1,103				**15		
		20.75	L	Second Ave		48	15	80						
		20.81	L&R	First Ave		85	15	142						
		20.86	L&R	Reynolds Ave		92	15	153						
		20.96	L&R	Vail Ave		64	15	107						
		21.00	L&R	Manchester Ave		92	15	153						
		21.05	R	Trinity Place		45	15	75						
		21.11	R	Columbia Ave		45	15	75						
		21.11	L	Columbia Ave		38	65	274						
		21.17	C	End feather		15	44	73						
		TOTAL PART 1						1,181	89	4	0	48	33	1
2	SR-4	23.21	L&R	Verity Pkwy Return Radii		22	3	7						
		23.24	L	Crossover		51	55	312						
		23.25	R	Avalon Dr		78	15	130						
		23.22-23.27	L	Verity SB Germantown Rd to Parkway	0.05	264	30	880						
		23.27	L	Erie Ave		61	70	474						
		23.33	L	Woodburn Ave		82	4	36						
		23.37	R	Avalon Dr		50	15	83						
		23.40	L&R	Wilbraham Rd		120	Avg 22	293						
		23.98	L&R	Carmody Blvd		173	Avg 25	481						
		23.98		Carmody Blvd-Crossover		82	3	27						
		TOTAL PART 2						2,723	204	10	0	76	76	1

*Not included in Sq. Yd. total since it does not constitute additional surface area.

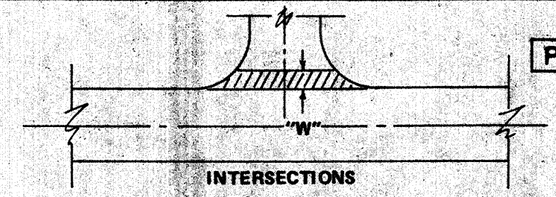
** Included in 403 Part 1 totals

CALC. BY [illegible] DATE 2-6-78
CHK'D. BY FBG DATE 2-9-78

M & R 692 REV. 9-6-73



EXTRA AREA AND DEDUCTIONS



PLAN NO. 200

6/11

PART	ROUTE	LOG POINT TO LOG POINT	SIDE	DESCRIPTION	LENGTH MILES	LENGTH LIN. FT.	WIDTH "W" IN FEET	AREA IN SQ. YDS.	PROPOSED ITEMS 407 ASPHALT CONCRETE TACK COAT @ 0.075 gal./s.y. Gals.	COVER AGGR. @ ..?.... lbs./s.y. Tons	THICK INCHES MIN.	CU. YDS. ITEM 403	CU. YDS. ITEM 404	THICK INCHES	301 BIT. AGGR. BASE 9" THICK CU. YDS.
3	SR-73	23.18	L&R	Eldora Dr		187	15	312							
		23.18		Eldora Dr-Crossover		115	23	294							
		23.19-23.22	L	Left turn bay at Eldora Dr	0.03	158	8	140							
		23.45-23.53	R	Left turn bay at Carmody	0.08	422	7	328							
		23.54	L	Carmody Blvd		102	27	306							
		23.54		Carmody Blvd-Crossover		90	30	300							
		23.54-23.62	L	Left turn bay at Carmody Blvd	0.08	422	7	328							
		23.82	R	Access 1		122	25	339							
		23.82		Access 1-Crossover		138	30	460							
		23.82-23.88	R	Entrance bay at Access 1	0.06	317	8	282							
		24.09		Crossover		44	30	147							
		24.41		Crossover		54	30	180							
		24.67	R	Access 2		111	25	308							
		24.67		Access 2-Crossover		162	30	540							
		24.73	R	Entrance bay at Access 2		317	7	246							
		25.41	R	Access 3		61	25	169							
		25.41		Access 3-Crossover		152	30	507							
		25.41-25.47	R	Entrance bay at Access 3		317	9	317							
		25.61		Crossover		43	30	143							
		25.85		Crossover		30	30	100							*25
		TOTAL PART 3						5,746	431	20	0	80	160	1	25
4	SR-73	0.84 E.B.		Crossover		60	30	200							
		1.02 E.B.	R	Turn lane		90	36	360							
		0.83 W.B.	R	Baxter Rd		90	15	150							
		1.03 W.B.	L	Turn lane		60	30	200							
		TOTAL PART 4						910	68	3	0	13	25	1	

*This quantity has been carried directly to the general summary sheet. Included in this quantity will be the cost of blading out 9" of base aggregate material in this median crossover. The bladed material may be wasted at the site as directed by the Engineer.

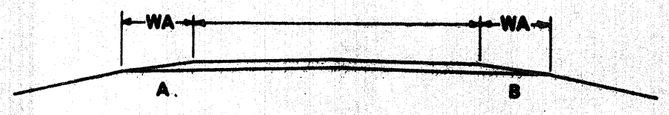
CALC. BY [illegible] DATE 2-12-78
CHK'D. BY [illegible] DATE 2-13-78

M & R 684 REV. 9-1-77

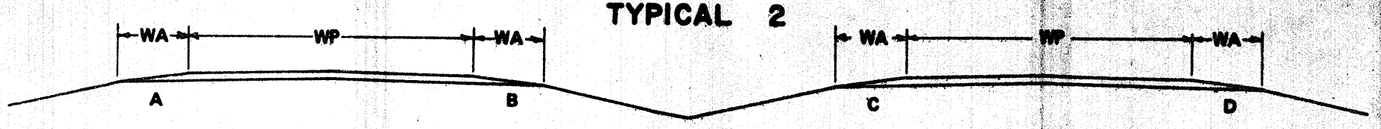
PAVED SHOULDERS

PLAN NO. 200 (7/11)

TYPICAL 1



TYPICAL 2



PART 2 ITEM 404 ASPHALT CONCRETE

The asphalt concrete for berms, intersections and drives *shall* be placed at the same time as the adjacent mainline pavement, as directed by the Engineer.

ITEM 411 - STABILIZED CRUSHED AGGREGATE: Whenever 411 stabilized crushed aggregate is stipulated, the first paragraph of 411.03 is waived and subgrade compaction shall be to the satisfaction of the Engineer.

** One station equals 100 lin. ft. Stations shall be measured along each edge of pavement.

*NOTES

1. 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 in 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 a 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. Excavated material shall be disposed of as indicated in the plan.

- ☒ a. Used to back up shoulders where required; the balance to be disposed of 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.

2. ITEM 404 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.

3. ITEM 301 BITUMINOUS AGGREGATE BASE may be used in lieu of Item 402 Asphalt Concrete.

4. ITEM 617 COMPACTED AGGREGATE: 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.

5. ITEM 408 BITUMINOUS PRIME COAT: After application of the Prime Coat, no further treatment shall be performed until so directed by the Engineer.

PAVED SHOULDER DATA

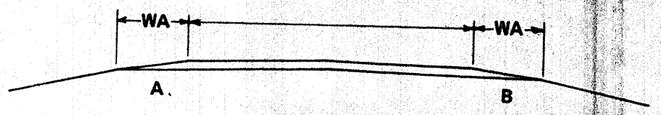
PART	ROUTE	LOG POINT TO LOG POINT	LENGTH MILES	LENGTH LIN. FT.	TYPICAL	PROPOSED WIDTH (FT.) A	B	C	D	SHOULDER AREA SQ. YDS.	203 LINEAR GRADING DEPTH INCHES	203 LINEAR GRADING **STA.	404 ASPHALT CONCRETE AVG. THICK INCHES	404 ASPHALT CONCRETE CU. YDS.	411 STABILIZED CRUSHED AGGREGATE AVG. THICK INCHES	411 STABILIZED CRUSHED AGGREGATE CU. YDS.	408 PRIME Bit. Matl. SEE SUMMARY SHEET @ 0.50 gal./s.y. GALS.	409 SEAL Bit. Matl. SEE SUMMARY SHEET @ 0.35 gal./s.y. GALS.	409 SEAL Aggr. #8 @ 0.0080 c.y./s.y. CU. YDS.	617 COMPACTED AGGREGATE CU. YDS.	605 AGGREGATE DRAINS LIN. FT.		* NOTES
2	SR-4	23.70-23.98	0.28	1,478	1	5	5			1,642	1	30	3	137			821	575	13				1A, 2B
		23.98-24.03	0.05	264	1	5	5			293	1	3	3	24			147	103	2				1A, 2B
		TOTAL PART2	0.33	1,742						1,935		33		161			968	678	15				

CALC. BY RM DATE 2-6-78
CHK'D. BY EBJ DATE 2-9-78

M & R 691 REV. 9-6-73

SHOULDER TREATMENT

TYPICAL 1



TYPICAL 2

***NOTES**

1. SEAL COAT: After completion of the mix the Seal Coat shall be applied when directed by the Engineer.
2. PENETRATION CHOKE: Choke to be applied in two applications; approximately 0.004 cu. yd./sq. yd. shall be applied immediately on the mix after initial rolling. Not earlier than two days nor later than five days following the final rolling the penetration coat and final choke application shall be performed in accordance with the provisions of 409.07 and 409.08.
3. MIX BITUMINOUS MATERIAL: Include 0.20 gal./sq. yd. to be applied as a penetration.
4. PRIME COAT: A minimum of 36 hours shall elapse after completion of Prime Coat before any subsequent treatment.
5. MIX: Mix to be completed on shoulders within _____ days following completion of the adjacent pavement.
6. SHIELD: The contractor shall provide a shield to prevent the spraying or drifting of liquid bituminous material onto the edge of the pavement or edgelines. The attention of the contractor is directed to 107.12 of the Specifications.
7. APPLICATION RATE: The rate of application for mix bituminous material shall be _____ gal. per sq. yd. for slag or _____ gal. per sq. yd. for gravel or stone.
8. CENTRAL MIXING: When central mixing is used, the mix material shall be reduced 0.20 - 0.25 gal./sq. yd. to prevent in-transit drainage and applied as a penetration.

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PLAN NO. 200

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.	407 TACK Bit. Matl. .... @..... gal./s.y. Gals.	407 TACK Cover Aggr. .... @..... lbs./s.y. Tons	405 MIX Bit. Matl. .... @..... gal./s.y. Gals.	405 MIX Mix Aggr. ..... @..... c.y./s.y. Cu. Yds.	405 CHOKE Aggr. ..... @..... c.y./s.y. Cu. Yds.	408 PRIME Bit. Matl. .... @..... gal./s.y. Gals.	409 SEAL Bit. Matl. .... @..... gal./s.y. Gals.	409 SEAL Aggr. ..... @..... c.y./s.y. Cu. Yds.	617 Shoulder Preparation AS PER PLAN Sq. Yds.	617 Compacted Aggregate DEPTH 3" Cu. Yds.		*NOTES
3	SR73	23.17-25.86	2.69	14,203	2	617	4	617	2	617	2	617	4	18,937									18,937	1,578		
		TOTAL PART3	2.69	14,203										18,937									18,937	1,578		
4	SR73	0.00-1.03	1.03	5,438	2	617	4	617	2	617	2	617	4	7,251									7,251	604		
		TOTAL PART 4	1.03	5,438										7,251									7,251	604		

CALC. BY PLH DATE 2-6-78
CH'D. BY FBR DATE 2-9-78

M & R 695

TYPICAL TRAFFIC MAINTENANCE NOTES FOR 4 LANE RESURFACING JOBS

It is the intention of these plans to perform the required work with the least inconvenience to, and the maximum safety of the contractor and the travelling public. The requirements for maintaining traffic shall be as indicated in the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways, the proposal, the specifications, and these plans. Any variance from these requirements shall be subject to the advance approval of the Engineer.

A. On multi-lane highways, at least one lane of traffic in each direction shall be maintained at all times. Traffic shall be controlled using lane closure traffic control devices as required. See Sheet #10 and the manual for specific requirements. During non-working hours traffic shall be restored to the full width of existing pavement.

B. Traffic shall be maintained at all intersections at all times, and shall be controlled with flagmen and traffic control devices as required and shall be subject to the approval of the Engineer.

C. The normal operation of all traffic signals shall be maintained at all times unless otherwise approved by the Engineer. Care shall be exercised not to perform any work which might affect operation of the traffic signal detectors, or underground wiring until arrangements have been made with the maintaining agency for relocation of the facility.

PLAN NO. 200

GENERAL NOTES

PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT AREAS

All areas of pavement removal and flexible replacement shall be completed at the end of each days operation and open to the normal flow of traffic. Item 301 bituminous aggregate base placed in pavement removal areas shall be compacted thoroughly to minimize settlement or displacement under traffic. The surface of the patches shall be maintained flush with the existing surface until the re-surfacing is placed.

ITEM 617 SHOULDER PREPARATION, AS PER PLAN

Compaction, as required shall be as directed by the Engineer. The rollers shall conform to 401.11.

ITEM 202 WEARING COURSE REMOVED

The existing wearing course shall be removed by the use of a road planer in which the cutting element may be of the grinding, sawing or milling type, so as to produce a smooth finished surface. The pavement removal shall be to the average depth as specified in the plan and any damage or removal beyond this depth shall be repaired at the contractor's expense, as directed by the Engineer.

ITEM 408 BITUMINOUS PRIME COAT

After completion of prime coat any subsequent treatment shall be as directed by the Engineer.

PART 1 CLINTON STREET

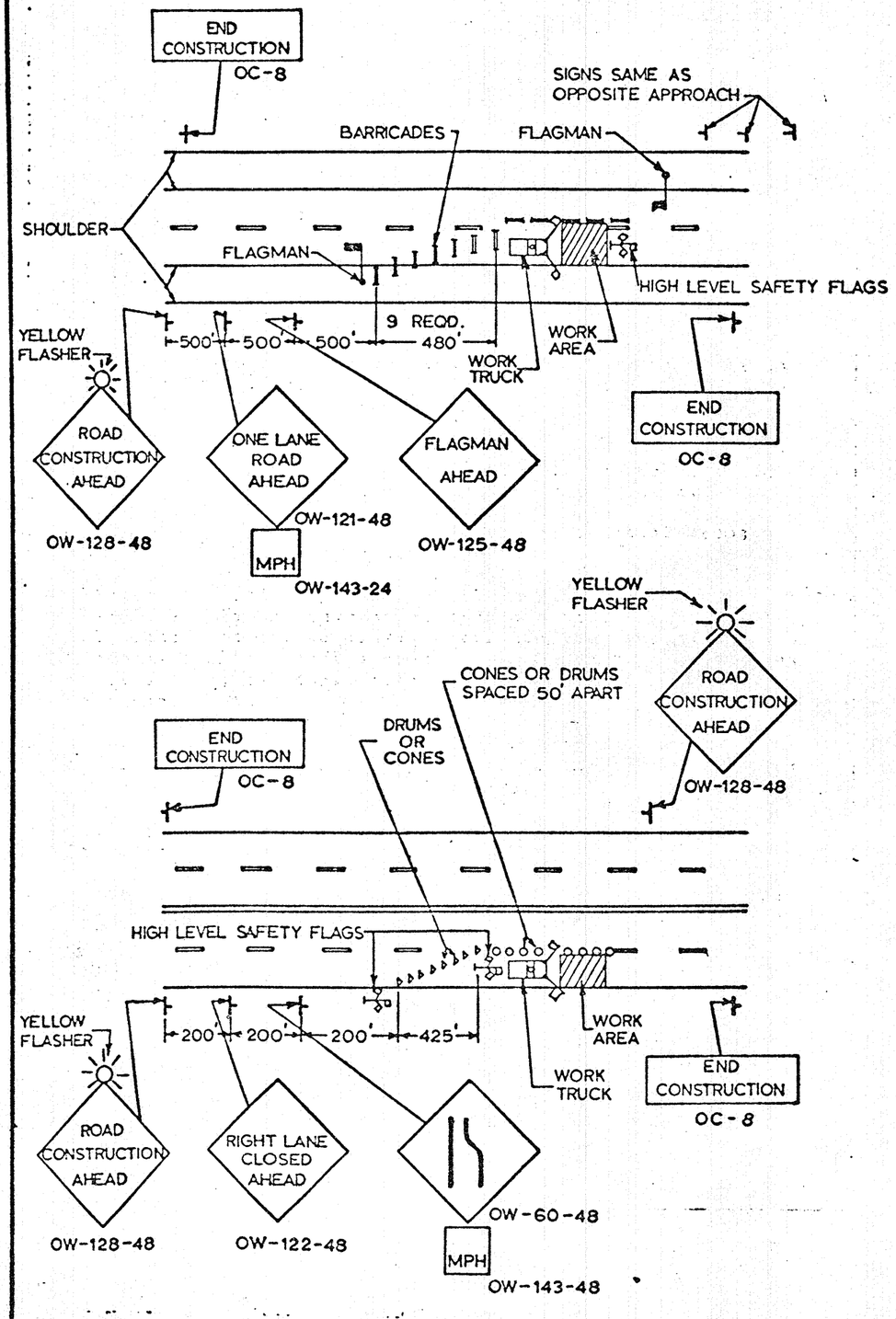
New curbs will be constructed the full length of Clinton Street by others, with a completion date of July 1, 1978. The reconstructed base adjacent to this new curb will be 1/2" below the top of the gutter plate and approximately 2' wide. Item 403 asphalt concrete leveling course shall be feathered to the top of the new gutter plate. Extra leveling material has been set up on Sheet No. 5 for use if needed. The full surface course of 1" 404 asphalt concrete will be placed on the new gutter plate, as directed by the Engineer.

ITEM 202: PRECAST TRAFFIC DIVIDERS REMOVED
All depressions caused by removal of the Precast Traffic Dividers shall be filled with 404 Asphalt Concrete to the existing road surface as a separate operation prior to the resurfacing operation. The cost of this operation shall be included in the contract price bid under Precast Traffic Dividers Removed.

M & R 695

PLAN NO. 200

TYPICAL CONTROL OF WORK AREA



GENERAL NOTES

1. Traffic control shall be as required in the proposal and as described below and in conformance with the Ohio Manual of Uniform Traffic Control Devices.
2. One lane traffic shall be maintained at all times. Flagmen shall be used to control traffic both day and night for as long as one lane operation is in effect.
3. Flagmen must be able to communicate with each other at all times as described in the Ohio Manual of Uniform Traffic Control Devices in the section "Flagman Control". Flagmen stations shall be adequately illuminated.
4. Lane Taper - Barricades or 55 gallon steel drums shall be used for lane taper and shall be supplemented by: Yellow delineators or steady burning yellow lights.
5. Centerline - The contractor shall use barricades or 55 gallon steel drums. Both the barricades and drums shall be painted with reflective orange and white paint.
6. Cones may be substituted for barricades or steel drums during daylight operations.
7. All traffic control devices shall be kept in proper positions, clean, legible and in good working condition at all times. All signs that are to convey their messages during hours of darkness shall be reflectorized or illuminated. All signs shall be post mounted, unless otherwise directed by the Engineer.
8. All vehicles, equipment, men and their activities are restricted at all times to one side of the pavement unless otherwise authorized by the Engineer.
9. The posted advisory speed shall be as directed by the Engineer.
10. Payment for providing, erecting, maintaining and removing signs, barricades, cones, markers, etc., shall be included in the lump sum bid for Item 614 - Maintaining Traffic.

CLOSING ONE LANE OF
2 OR 4 LANE HIGHWAY

M & R 693 REV. 10–1–74

PLAN NO. 200 (11/11)

GENERAL SUMMARY

ITEM	TOTAL PART 1	TOTAL PART 2	TOTAL PARTS 1&2	TOTAL PART 3	TOTAL PART 4	GRAND TOTAL PARTS 1-4	UNIT	DESCRIPTION
407	1,049	2,079	3,128	6,112	2,243	11,483	Gals.	**Tack Coat, SS–1, SS–1H, MS–2, RS–1 or RC–250**
407	49	97	146	285	105	536	Tons	**Cover Aggregate**
403	403	770	1,173	1,132	416	2,721	Cu. Yds.	**Asphalt Concrete AC–20**
404	388	931	1,319	2,264	831	4,414	Cu. Yds.	**Asphalt Concrete AC–20**
202	257	19	276		667	943	Sq.Yds	Wearing course removed
202		141	141			141	Each	Precast traffic dividers removed
202	287	68	355	100	187	642	Sq.Yds	Pavement removed (flexible)
203		33	33			33	Station	Linear grading
301	72	17	89	50	47	186	Cu.Yds	Bituminous aggregate base, AC-20 or (RT-11 or 12)
408		968	968			968	Gals.	Bituminous prime coat, (RT-2 or 3), (MC-30 or 70) or Primer 20, for shoulders
409		678	678			678	Gals.	Seal coat bituminous material, (RT-9 or 10), RS-2, CRS-2, CBAE-800 (MC-800 or 3000), for shoulders
409		15	15			15	Cu.Yds	Seal coat cover aggregate, No. 8 for shoulders
604	34	22	56	3		59	Each	Manholes adjusted to grade
604	4	1	5	1		6	Each	Water boxes adjusted to grade
617				8	3	11	M.Gals	Water
617				18,937	7,251	26,188	Sq. Yds.	**Shoulder Preparation**, as per plan
617				1,578	604	2,182	Cu. Yds.	**Compacted Aggregate**
614	Lump	Lump	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.

INTERMEDIATE COURSE AND/OR SPOT LEVELING OR PATCHING:
This material shall be placed in a separate operation where and as directed by the engineer.

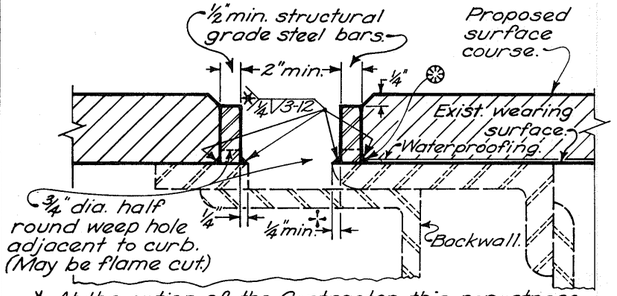
ALIGNMENT AND PROFILE:
The work proposed by this project is for the resurfacing of the existing pavement. The alignment of the existing pavement will not be changed, and the profile of the proposed surface will be similar to that of the existing pavement except that it will be raised an amount equal to the thickness of the resurfacing course or courses specified in these plans.

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.

CALC. BY RLM DATE 2-6-78
CHK'D. BY FJR DATE 2-9-78

RESURFACING

✣ Increase as necessary to maintain 2" min. opening.

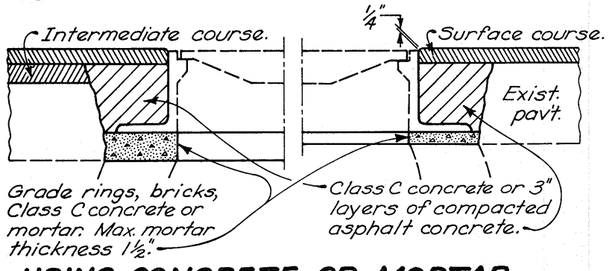


✱ At the option of the Contractor, this non-stress carrying weld may be continuous.

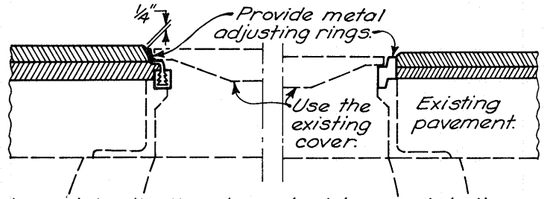
❁ If the waterproofing membrane is a prefabricated sheet, seal at this point with mastic or heat.

MAINTENANCE OF TRAFFIC: Generally the bars shall be welded while the lane is closed for water-proofing or resurfacing. However, if traffic is routed over the bars before resurfacing, temporary ramps shall be constructed to the tops of the bars using 402 or 404 feathering at a max. slope of 1 ft/in. The ramps shall be removed prior to resurfacing. Cost of placing and removing the ramps shall be included with Item 614 for payment.

VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS

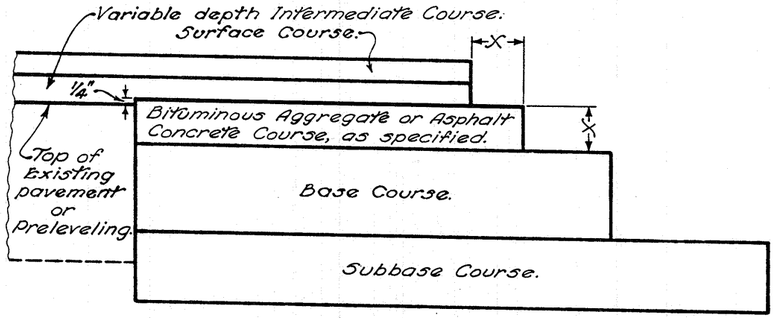


USING CONCRETE OR MORTAR



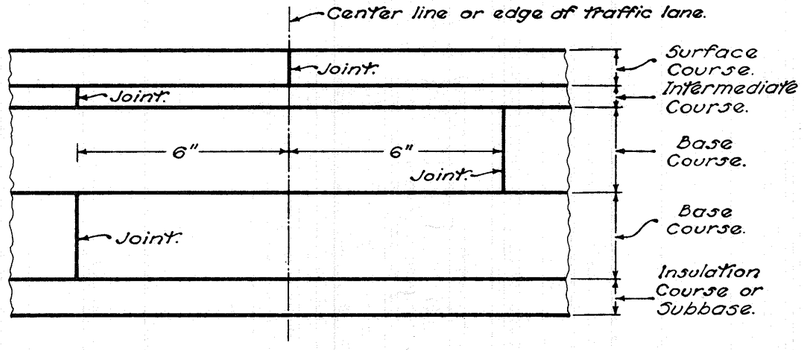
The metal adjusting rings shall be equal to the Series R-1979 by the Neenah Foundry Co. or the models LS, LB, SB, NB or MB by the National Utility Products Co. or an approved equal. Adjustment range 1" to 4⅛".

USING METAL ADJUSTING RINGS
MANHOLES ADJUSTED TO GRADE

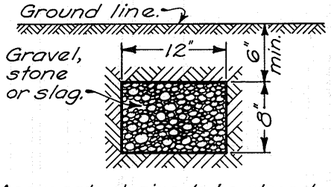


The Bituminous Aggregate in the upper part of the base widening shall finish approximately ¼" above the edge of the existing pavement where no preleveling is used. Where a preleveling (using intermediate course material) is specified, it shall be placed prior to excavation of the widening trench and the upper course of the base widening shall finish approximately ¼" above the preleveling.

COURSE DETAIL FOR WIDENING

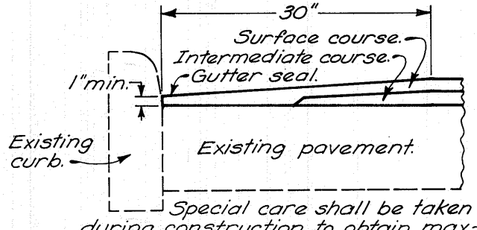


LAPPING LONGITUDINAL JOINTS



Aggregate drains to be placed where and as directed by Engineer.

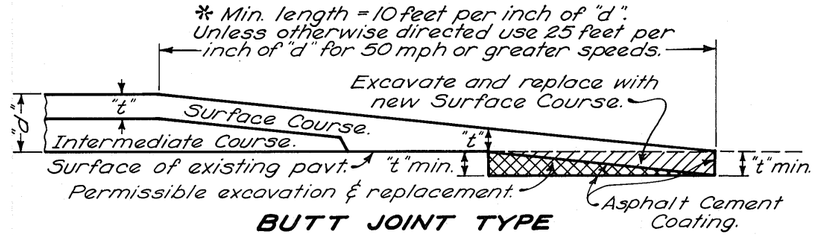
AGGREGATE DRAIN



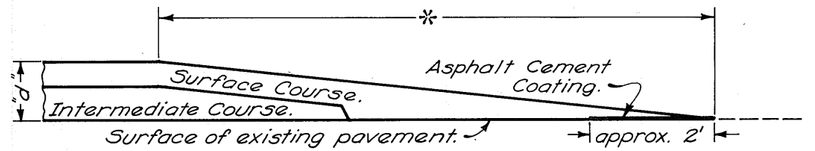
Special care shall be taken during construction to obtain maximum compaction of bituminous concrete in gutters.

GUTTER FINISH

NOTE: Either type feathered area may be used unless type is specified by the plan.

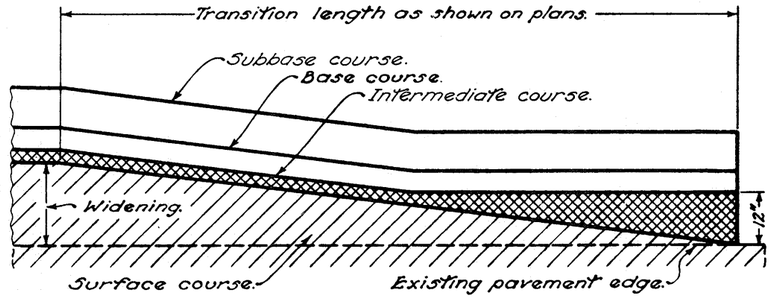


BUTT JOINT TYPE

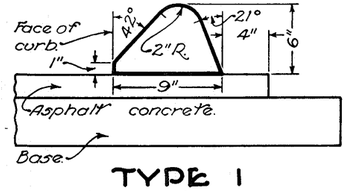


FEATHER EDGE TYPE

PLACING FEATHERED AREAS



MERGING EDGE OF PAVEMENT WIDENING WITH EDGE OF EXISTING PAVEMENT



TYPE I ASPHALT CONCRETE CURB

BUREAU OF ROADWAY DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

RESURFACING

STANDARD CONSTRUCTION DRAWING BP-5

APPROVED E. J. Schaefer ENGR., R.D.

DATE
6-1-'65
1-1-'71
6-1-'72
8-11-75