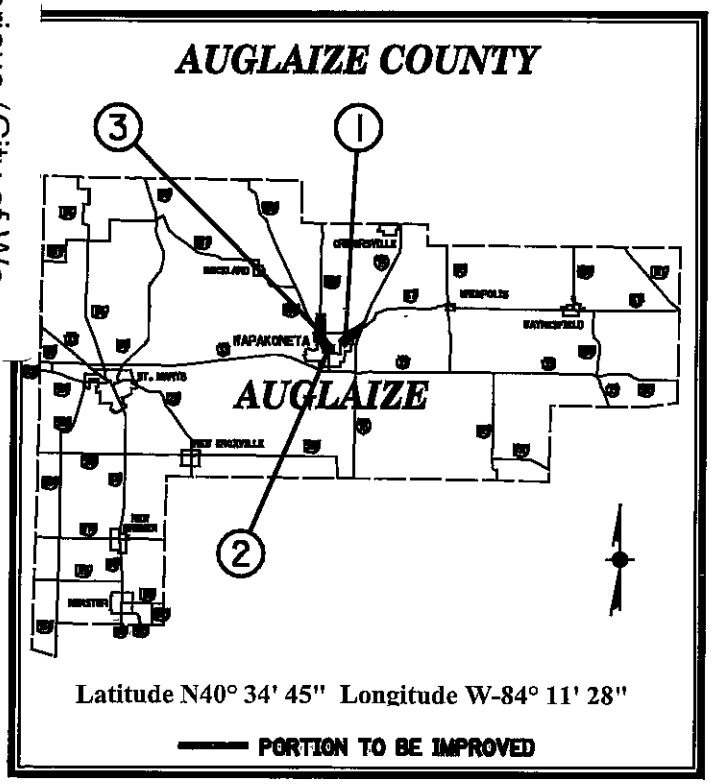
AUG - SR 67 - 2.23/Various (City of Wa
070168 PID - 25100
Dist 7 4/4/2007

State Job No. 476380	PID No. 25100
Project No.	FED. No. E070(138)

PLAN PREPARED BY: District D7

STATE OF OHIO
OHIO DEPARTMENT OF TRANSPORTATION
AUG-67-2.23
CITY OF WAPAKONETA

LOCATION MAP



Latitude N40° 34' 45" Longitude W-84° 11' 28"

PORTION TO BE IMPROVED

MAINTENANCE
URBAN RESURFACING

Project Earth Disturbed Area = 0.97 Acres
Estimated Contractor Earth Disturbed Area = N/A
Notice of Intent Earth Disturbed Area = N/A

2005 SPECIFICATIONS

The Standard 2005 Specifications of the State of Ohio Department of Transportation, including changes and supplemental specifications listed in the plans and the proposal shall govern these improvements.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth in the plans and estimates.

12-19-06 William L. Harrison / PRW
Date Approved — District Deputy Director

1-29-07 Keith C. Swearingen
Date Approved — Director, Department of Transportation

PROJECT DESCRIPTION: The work proposed by this project consists of shoulder stabilization, pavement planing and resurfacing the existing State Route 67, State Route 198 and State Route 501 roadways with Item 448, Asphalt Concrete, as set forth in these plans.

(1) AUG-67-2.23 (0.59 mile West of the Wapak East Corp. Limits to 0.26 mile West of I-75)

(2) AUG-198-1.18 (SR 67 to Wapak North Corp. Limits)

(3) AUG-501-2.19 (SR 198 to Redskin Trail)

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

1 - Title Sheet
2 & 3 - Pavement Data
4 & 5 - Berm Stabilization
6 - Approach Typicals
7 thru 9 - General Notes
10 thru 13 - Bridge Sheets
14 & 15 - General Summary

ENGINEER'S SEAL

STATE OF OHIO
PAUL ROBERT HARTKER
No. 47336
REGISTERED
PROFESSIONAL ENGINEER

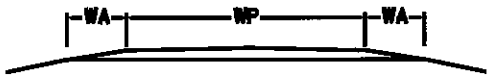
Signed Paul Robert Hartker
Date 12-19-06

STANDARD DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1	7-16-04	MT-99.20M	1-30-95	TC-52.10	4-20-01		
				TC-52.20	4-20-01	800	1-19-01
DM-4.3	7-19-02	MT-105.10	10-18-02				
DM-4.4	7-19-02	MT-105.11	10-18-02	TC-65.10	1-21-05	832	4-25-06
				TC-65.11	1-21-05	843	4-18-03
MT-97.10	9-5-06	TC-41.20	1-19-01				
MT-97.12	9-5-06	TC-42.20	7-16-04	TC-71.10	1-21-05		

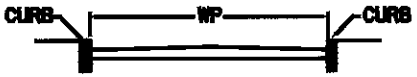
AUG67223 December 4, 2006

PLAN NO.

TYPICAL 1



TYPICAL 2



Item 407, Tack Coat, calculated at 0.10 gallon per square yard
Apply 0.075 gallon per square yard for Intermediate Course
Apply 0.025 gallon per square yard for Surface Course

PAVEMENT DATA

ROUTE	LOG POINT TO LOG POINT SLM	LENGTH MILE	LENGTH FEET	PAVEMENT WIDTH FEET	TYPICAL	PAVEMENT AREA SQ. YD.	PROPOSED PAVEMENT 407 TACK COAT @0.10 gal./sq. yard GALLONS	ASPHALT CONCRETE 448 THICK INCH AVG.	ASPHALT CONCRETE 448 CUBIC YARD	ASPHALT CONCRETE 448 THICK INCH AVG.	ASPHALT CONCRETE 448 CUBIC YARD	202 WEARING COURSE REMOVED (BUTT. JTS.) SQ. YD.	254 PAVEMENT PLANING 0.0" - 1.75" SQ. YD.	617 COMPACTED AGGREGATE THICK INCH AVG.	617 COMPACTED AGGREGATE CUBIC YARD
SR 67	2.23 - 2.95	0.72	3802	25.0	I	10561	1056	0.5	147	1.25	367	278			
Intersections (5)						1222	122	0.5	17	1.25	42	100			
Drives & Mailboxes (44)						2094	209	0.5	29	1.25	73	672			
Total State Route 67		0.72	3802			13877	1387		193		482	1050			
SR 501	2.19 - 2.67	0.48	2534	25.0	I	7039	704	0.5	98	1.25	244	278			
Intersections (5)						944	94	0.5	13	1.25	33	100			
Drives & Mailboxes (35)						1661	166	0.5	23	1.25	58	400			
Total State Route 501		0.48	2534			9644	964		134		335	778			

CALCULATED BY
CHECKED BY

AUGLAIZE COUNTY
AUG-67-2.23

PAVEMENT DATA

PLAN NO.

TYPICAL 1

TYPICAL 2

Item 407, Tack Coat, calculated at 0.10 gallon per square yard
Apply 0.075 gallon per square yard for Intermediate Course
Apply 0.025 gallon per square yard for Surface Course

PAVEMENT DATA

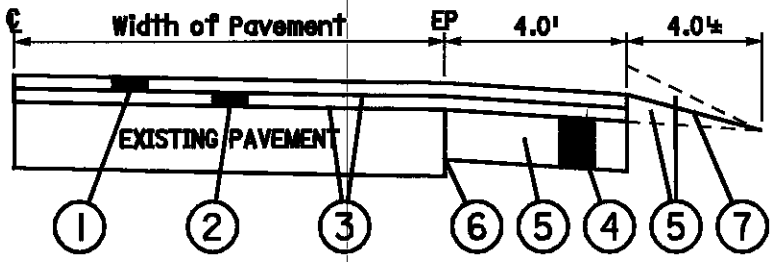
ROUTE	LOG POINT TO LOG POINT SLM	LENGTH MILE	LENGTH FEET	PAVEMENT WIDTH FEET	TYPICAL	PAVEMENT AREA SQ. YD.	PROPOSED PAVEMENT 407 TACK COAT @0.10 gal./sq. yard GALLONS	ASPHALT CONCRETE 448 THICK INCH AVG.	ASPHALT CONCRETE 448 CUBIC YARD	ASPHALT CONCRETE 448 THICK INCH AVG.	ASPHALT CONCRETE 448 CUBIC YARD	202 WEARING COURSE REMOVED (BUTT JTS.) SQ. YD.	254 PAVEMENT PLANING 0.0" - 1.75" SQ. YD.	617 COMPACTED AGGREGATE THICK INCH AVG.	617 COMPACTED AGGREGATE CUBIC YARD
SR 198	1.18 - 1.30	0.12	634	34.0	2	2395	240	0.5	33	1.25	83		2395		
	1.30 - 1.44	0.14	739	38.0	2	3120	312	0.5	43	1.25	108		3120		
	1.44 - 1.48	0.04	211	44.0	2	1032	103	0.5	14	1.25	36		1032		
	1.48 - 1.53	0.05	264	49.0	2	1437	144	0.5	20	1.25	50		1437		
	1.53 - 4.56	0.03	158	(See Bridge Sheets for Structure AUG-198-0153)											
	1.56 - 1.66	0.10	528	49.0	2	2875	288	0.5	40	1.25	100		2875		
	1.66 - 2.19	0.53	2798	31.0	2	9638	964	0.5	134	1.25	335		9638		
	2.19 - 2.67	0.48	2534	25.0	1	7039	704	0.5	98	1.25	244		7039	2.0	63
Intersections (21)						1300	130	0.5	18	1.25	45		1300		
Drives (26)						1248	125	0.5	17	1.25	43		1248		
Total State Route 198		1.49	7866			30084	3010		417		1049		30084		63

CALCULATED BY
CHECKED BY

AUGLAIZE COUNTY
AUG-67-2.23

PAVEMENT DATA

BERM STABILIZATION



1. Item 448 - Asphalt Concrete Surface Course, 1.25"
2. Item 448 - Asphalt Concrete Intermediate Course, 0.5"
3. Item 407 - Tack Coat
4. Item 301 - Asphalt Concrete Base, PG 64-22
5. Item 209 - Linear Grading
6. Asphalt Material
7. Item 659 - Seeding and Mulching

PLAN NO.

TYPICAL 1

NOTES:

One Station = 100.0 Feet

Stationing of linear grading shall be measured along each edge of pavement. No extra payment will be made for excavating adjacent approaches.

A quantity of Item 617, Compacted Aggregate has been included in the plans, to be used as directed, for the purpose of backing up drives.

PAVED SHOULDER DATA

ROUTE	LOG POINT TO LOG POINT SLM	LENGTH MILE	LENGTH FEET	TYPICAL	PROPOSED WIDTH FEET A	PROPOSED WIDTH FEET B	SHOULDER AREA SQUARE YARDS	209 LINEAR GRADING DEPTH INCH	209 LINEAR GRADING ** STA.	407 TACK COAT TACK COAT @0.10 gal./sq. yard GALLONS	ASPHALT CONCRETE 301 THICK INCH AVG.	301 CUBIC YARD	448 INTER MEDIATE THICK INCH AVG.	448 INTER MEDIATE CUBIC YARD	448 THICK INCH AVG.	448 CUBIC YARD	617 COMPACTED AGGREGATE THICK INCH AVG.	617 COMPACTED AGGREGATE CUBIC YARD
SR 67	2.23 - 2.70	0.47	2482	1	4.0	4.0	2206	6.0	50	221	6.0	368	0.5	31	1.25	77		
	2.70 - 2.79	0.09	475	1		4.0	211	6.0	5	21	6.0	35	0.5	3	1.25	7		
	2.79 - 2.95	0.16	845	1	4.0	4.0	751	6.0	17	75	6.0	125	0.5	10	1.25	26		
Mailboxes (12)							468	6.0	**	47	6.0	78	0.5	7	1.25	16		10
Total Part 1		0.72	3802				3636		72	364		606		51		126		10

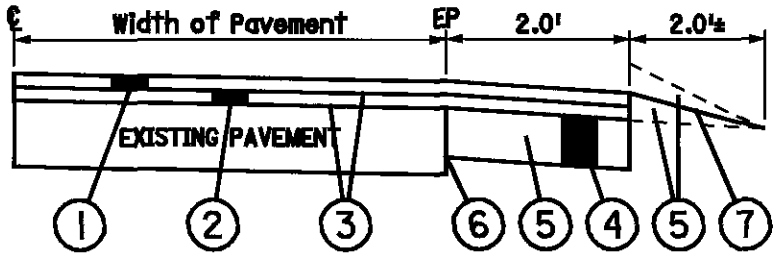
CALCULATED BY

CHECKED BY

AUGLAIZE COUNTY
AUG-67-2.23

BERM STABILIZATION

BERM STABILIZATION



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3. Item 407 - Tack Coat
4. Item 301 - Asphalt Concrete Base, PG 64-22
5. Item 209 - Linear Grading
6. Asphalt Material
7. Item 659 - Seeding and Mulching

PLAN NO.

TYPICAL 1

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PAVED SHOULDER DATA

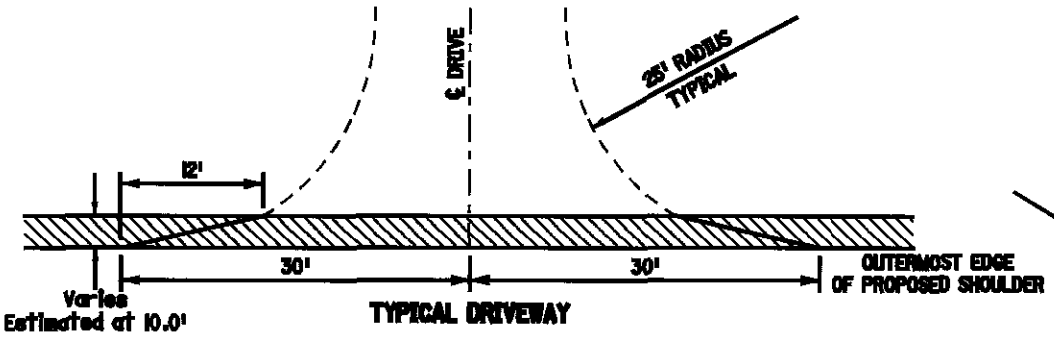
ROUTE	LOG POINT TO LOG POINT SLM	LENGTH MILE	LENGTH FEET	TYPICAL	PROPOSED WIDTH FEET A	PROPOSED WIDTH FEET B	SHOULDER AREA SQUARE YARDS	209 LINEAR GRADING DEPTH INCH	209 LINEAR GRADING ** STA.	407 TACK COAT TACK COAT @0.10 gal./sq. yard GALLONS	ASPHALT CONCRETE 301 THICK INCH AVG.	ASPHALT CONCRETE 301 CUBIC YARD	ASPHALT CONCRETE 448 INTER MEDIATE THICK INCH AVG.	ASPHALT CONCRETE 448 INTER MEDIATE CUBIC YARD	ASPHALT CONCRETE 448 THICK INCH AVG.	ASPHALT CONCRETE 448 CUBIC YARD	617 COMPACTED AGGREGATE THICK INCH AVG.	617 COMPACTED AGGREGATE CUBIC YARD
SR 501	2.25 - 2.67	0.42	2218		2.0	2.0	986	6.0	44	99	6.0	164	0.5	14	1.25	34		
Mailboxes (2)							92	6.0	**	9	6.0	15	0.5	1	1.25	3		5
Total Part 3		0.42	2218				1078		44	108		179		15		37		5

CALCULATED BY
CHECKED BY

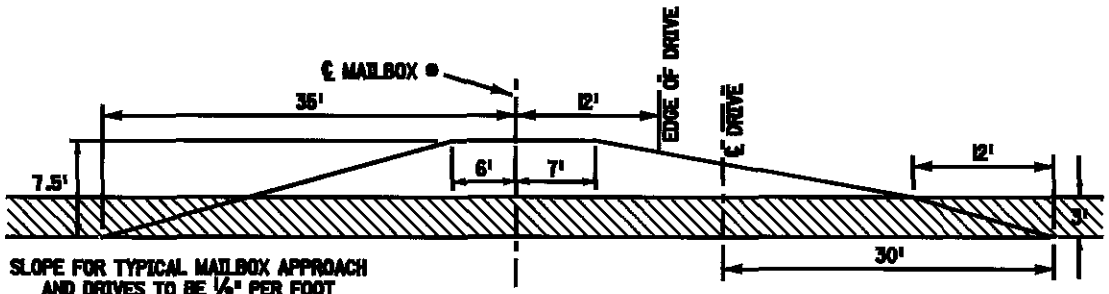
AUGLAIZE COUNTY
AUG-67-2.23

BERM STABILIZATION

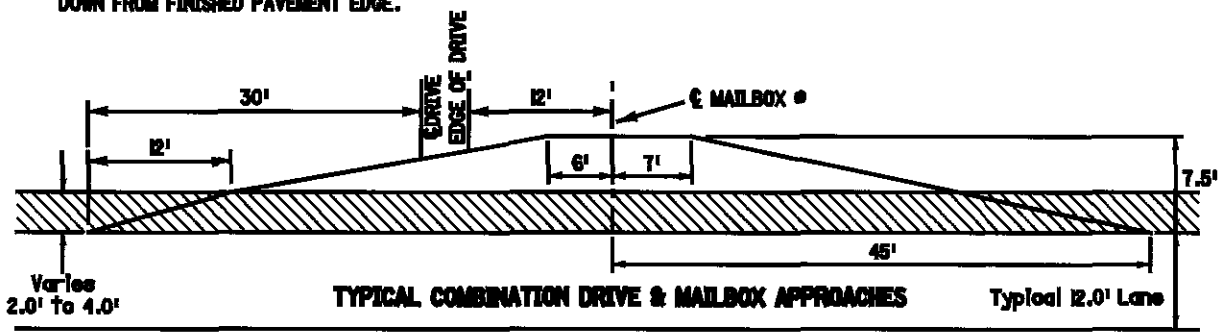
PLAN NO.



TYPICAL DRIVEWAY

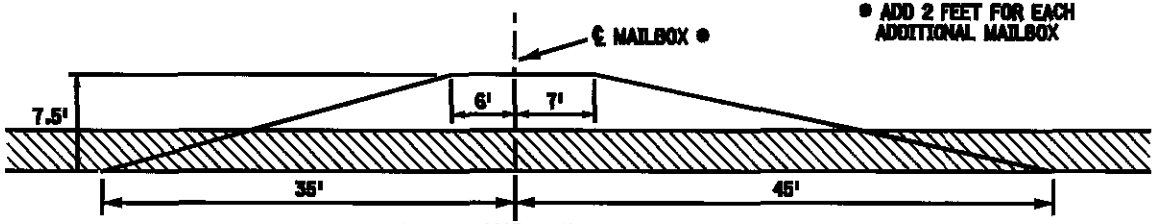


SLOPE FOR TYPICAL MAILBOX APPROACH AND DRIVES TO BE ½" PER FOOT DOWN FROM FINISHED PAVEMENT EDGE.

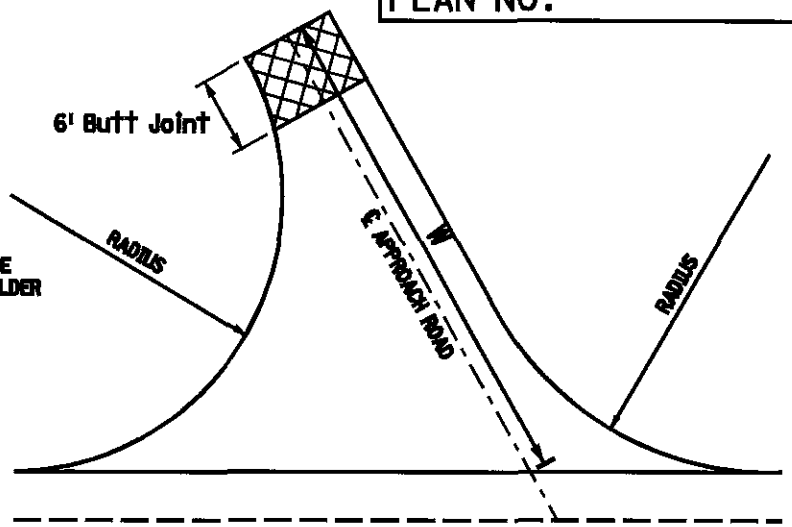


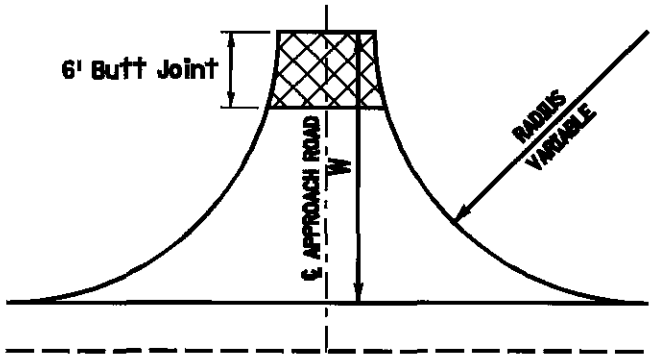
TYPICAL COMBINATION DRIVE & MAILBOX APPROACHES

● ADD 2 FEET FOR EACH ADDITIONAL MAILBOX



TYPICAL MAILBOX APPROACH





TYPICAL APPROACH ROAD PAVING

W = To Back of Radius or As Directed By the Engineer

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT SEVEN MAINTENANCE

TYPICAL APPROACHES FOR ROADS, DRIVES AND MAILBOXES

APPROVED

CALCULATED BY	AUGLAIZE COUNTY AUG-67-2.23	APPROACH TYPICALS	6/15
CHECKED BY			

GENERAL NOTES

PLAN NO.

ITEM 209 - LINEAR GRADING

This work shall consist of preparing a subgrade for the shoulder stabilization by excavating the existing shoulder material to the depths 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 asphalt concrete pavement shall first be trimmed to a line established by the Engineer. The existing shoulder shall then 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, 401.13. Areas graded in excess of depths specified or directed by the Engineer shall be backfilled to the desired grade using 617 Compacted Aggregate at the Contractor's expense. Excavated material shall be disposed of as indicated in the plan.

Excavation for widening or shoulder work shall be only on one side of the pavement at a time. The length of the shoulder trench which is open at any one time shall be held to a minimum and at all times be subject to the approval of the Engineer.

The open trench shall be adequately maintained and protected with work zone markers, lights, drums, barricades or flaggers at all times. Placement of proposed materials to final grade shall follow as close as possible behind the excavation operations.

The shoulder stabilization on this project shall be completed even with the existing pavement by the end of the work day, except for a short length of work section (25.0 feet or less at the end of the trench). No trench shall be left open overnight. In case work must be suspended because of inclement weather or other reasons, the trench for the uncompleted shoulder paving shall be backfilled as directed.

Excavation material shall be used to back up the finished pavement. Where there is an excess of material at any location, it shall be moved as directed, to areas where material is needed. The balance is to be disposed of as directed by the Engineer. All graded areas shall be finished and Seeding and Mulching applied as per Item 659. It is estimated that 75% of the area has residential yards abutting the pavement.

ITEM 209 - BORROW

There has been a quantity of Item 209, Borrow carried to the General Summary for the purpose of backing up the proposed pavement in all residential yard areas on State Route 67, State Route 198 and State Route 501, as directed by the Engineer. All borrow material shall be of processed material free of stone, bricks and debris. The areas of borrow/linear grading shall then be seeded as per Item 659, Seeding and Mulching. An estimated quantity of square yards of Item 659, Seeding and Mulching has also been included in the General Summary.

ITEM 301, ASPHALT CONCRETE BASE

The Contractor shall furnish all labor, material and equipment to haul, place and compact Item 301, Asphalt Concrete Base to add stabilized berms right and left. Uniform spreading and compacting shall be as described herein and shall be in accordance with the specifications and as directed by the Engineer.

Prior to placing an asphalt concrete mixture for shoulder stabilization, the edge of the existing pavement, for the full depth of the trench, shall be coated with asphalt material in accordance with 401.14.

The Contractor shall provide a shield to prevent the spraying or drifting of liquid asphalt material onto the edge of the pavement or edgelines.

DRIVES, MAILBOXES, COMBINATIONS, INTERSECTIONS

Drives, mailboxes, combination drive approaches and intersections are to be constructed as per typical drawings shown in the plans. All dimensions are to be used from the outside edge of the proposed pavement.

The approximate number: 13 Mailbox Approaches
1 Combination Mailbox Approaches and Drives

Drive and Mailbox Approaches may not be on the same side of the roadway as the linear grading being performed.

Where the Engineer deems it necessary to remove the base through existing asphalt or concrete drives and mailbox approaches, the back edge of the approach pavement shall be cut and removed in a straight line to the satisfaction of the Engineer. The cost of cutting is to be included in the unit price of Item 209, Linear Grading. Existing Asphalt Concrete Drives and Mailboxes shall not be disturbed, unless directed by the Engineer.

GENERAL NOTES

PLAN NO.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE

An estimated quantity of Item 254, Pavement Planing, Asphalt Concrete has been carried to the General Summary and included in the plans to be used as directed by the Engineer.

The approximate depth of pavement planing will vary from zero inches (0.0") to one and three-quarter inches (1.75"). All planed cuttings shall become the property of the Contractor and shall be removed from the limits of the project.

The approximate width of pavement planing will vary from twenty-five feet (25.0') to forty-nine feet (49.0').

The pavement planing includes all Intersections, Drives and Mailbox Approaches within the limits of the pavement planing area.

Item 254 - Pavement Planing, Asphalt Concrete, (State Route 198)
SLM 1.18 to SLM 2.67 = 30,074.0 square yards

There are approximately seventy-eight (78) castings within the planing area. The Contractor shall be responsible for furnishing all labor and equipment necessary to maintain traffic around the castings and shall include the cost in the unit price bid for Item 614, Maintaining Traffic.

Manholes = 47 each Water Valves = 26 each
Monument Boxes = 5 each

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

The Metric Standard Drawings referenced in this plan shall be converted to English units using the SI (Metric) to English conversion factors provided in Section 109.02 of the 2005 Construction and Material Specifications. Conversions shall be appropriately precise and shall reflect standard industry English values where suitable.

ITEM 632 - DETECTOR LOOP

During the course of this contract, it may be necessary for the Contractor to coordinate loop detector work with the City of Wapakoneta and other Contractors involved with asphalt planing and resurfacing projects. The intent of this work is to replace loop detectors removed by asphalt planing operations and the installation of new loop detectors prior to the asphalt concrete surface course being placed.

The Contractor shall coordinate and corroborate the layout of all loop detectors with the City of Wapakoneta.

Traffic signals will automatically switch to timed cycles when milled.

Loops are at the junction of State Route 198 and State Route 501.

ITEM 632 - LOOP DETECTOR TIE-IN, AS PER PLAN

This work shall consist of making connections to existing loop detector lead-in wire, whether that wire is underground or aerial. Included in this item is the connector kit or cable splice kit (conforming to 725.15) that must be used in making these connections.

This item is needed only when a tie-in situation exists. When all new lead-in wire is specified in the plan, this item of work is not required.

Payment for this item will include all necessary labor, miscellaneous hardware and equipment required to provide for the loop detector tie-in and operation. Basis of payment will be at the contract bid price per each.

ITEM 644 - PAVEMENT MARKINGS

The Contractor shall coordinate and corroborate the layout of all pavement markings with the City of Wapakoneta.

The City of Wapakoneta will provide a Pavement Marking Layout at the Preconstruction Meeting.

GENERAL NOTES

PLAN NO.

UNDERGROUND UTILITIES

The locations of the underground utilities listed on the plans are as obtained from the owners of the utility as required by Section 153.64 ORC. Ohio Utility Protection Service at 1-800-362-2764.

The underground utility companies with buried services within the project limits on State Route 67 and State Route 501 are as follows:

City of Wapakoneta
701 Parlette Court, Post Office Box 269
Wapakoneta, Ohio 45895
Phone: (419) 738-5596

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.

NOTIFICATION

The Contractor shall notify the Ohio Department of Transportation District Seven Construction Engineer two (2) weeks prior to beginning any work. Phone: (937) 497-6848.

ALIGNMENT AND PROFILE

The work proposed by this project consists of pavement planing and 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.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN IN THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATION AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE STRUCTURE AND PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO THE CMS SECTIONS 102.05 AND 105.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURES BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS, WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD. PLANS OF THE EXISTING STRUCTURES MAY BE EXAMINED AT THE DISTRICT SEVEN OFFICE IN SIDNEY, OHIO OR THE BUREAU OF BRIDGES AND STRUCTURAL DESIGN AT COLUMBUS, OHIO.

PROPOSED WORK - AUG-198-0153

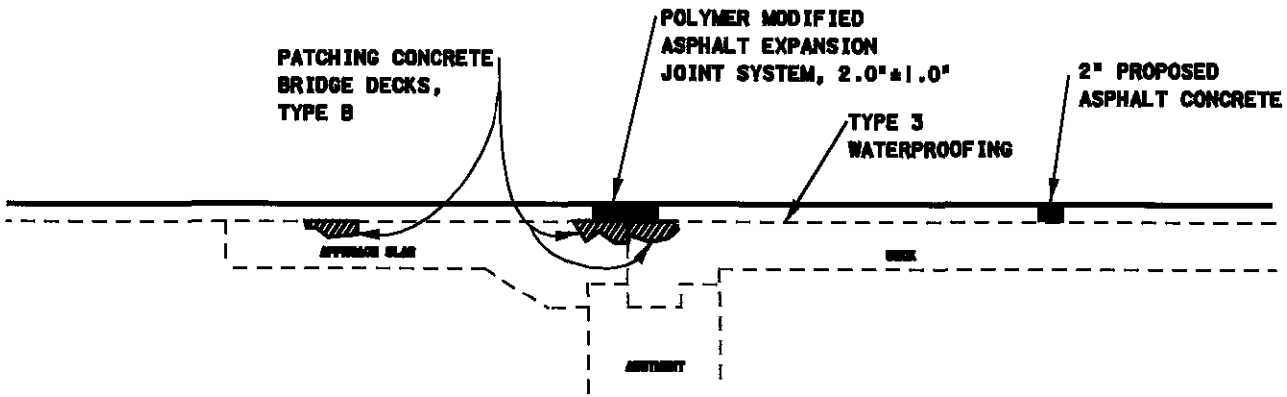
PATCH BRIDGE DECK AND APPROACH SLAB ALONG THE EXPANSION JOINTS. PATCH FORWARD APPROACH SLAB. WATERPROOF BRIDGE DECK. OVERLAY DECK WITH 2" ASPHALT CONCRETE. APPLY POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM, 2" THICK. PATCH SIDEWALKS AND CURB FACE WITH TROWELABLE MORTAR.

DURING ITEM 254 - PAVEMENT PLANING, THE CONTRACTOR SHALL TRANSITION FROM ONE AND THREE-QUARTER INCHES (1.75") TO ZERO INCHES (0.0") IN ONE HUNDRED FEET (100.0') TO MEET THE EXISTING FORWARD AND REAR APPROACH SLABS FOR A SMOOTH TRANSITION OVER THE BRIDGE DECK.

ITEM SPECIAL - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

SEE INSERT SHEETS. ALL ASPHALT DIMENSIONS ARE MEASURED AT THE EDGE OF THE STRUCTURE. THE ACTUAL DEPTH OF THE JOINT WILL BE THICKER AT THE CENTER OF THE ROADWAY. REMOVAL OF ANY EXISTING JOINT SEALER SHALL BE INCLUDED FOR PAYMENT IN THIS ITEM.

AUG-198-0153



PART	AUG-198 0153						ITEM	ITEM EXTENSION	GRAND TOTAL	UNIT	DESCRIPTION
	108						407	13900	108	GALLON	TACK COAT, 702.13
	15						448	46020	15	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
	45						448	46904	45	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 70-22M
	807						512	33010	807	SQ. YD.	TYPE 3 WATERPROOFING
	0.1						SPEC	51631400	0.1	CU. YD.	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
	33						SPEC	51912300	33	SQ. YD.	PATCHING CONCRETE BRIDGE DECKS, TYPE B
	150						843	50000	150	SQ. FT.	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR
	-									EACH	Wedges
	2"										Proposed Asphalt Concrete Thickness
	-										Wearing Course Removed Thickness

BRIDGE NO.	LENGTH (Bridge Limits) FT.	WIDTH FT.	BRIDGE DECK AREA S.Y.	STRUCTURE FILE NUMBER	COMMENTS (Wearing Course)
AUG-198-0153	152.05	48.00	811	0602949	Existing Concrete Deck

Quantities to be carried to the General Summary

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AUGLAIZE COUNTY
AUG-67-2.23

BRIDGE SUMMARY

ITEM SPECIAL - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION JOINTS AS PER THESE DETAILS AND THE MANUFACTURERS REQUIREMENTS USING A POLYMER MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

THE APPROVED APPLICATORS ARE LISTED ON THE FOLLOWING WEB SITE:

http://www.dot.state.oh.us/ae/standard/english/revisions/07-19-02%20milling/pininst.htm

THE APPROVED APPLICATORS LISTED ON THE WEBSITE SHALL BE IN EFFECT FOR THIS PROJECT FOURTEEN (14) CALENDAR DAYS PRIOR TO THE BID LETTING DATE.

MATERIALS:

BRIDGING PLATE: MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 mm. MAX. AT 140 DEGREES F.
PENETRATION:	9 mm. MAX. AT 77 DEGREES F. 1 mm. MAX AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 cm. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 ± 0.05
POURING TEMP:	350 - 390 DEGREES F.

AGGREGATE:

TYPE:	CRUSHED, DOUBLE WASHED AND DRIED GRANITE OR BASALT
GRADATION	THE GRADUATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT

BACKER ROD:

THE BACKER ROD SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OFTHE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SEALING PREPARATION

AFTER ALL PAVING OPERATIONS ARE COMPLETED, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN 2" DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATERPROOFING MATERIAL, BETWEEN SAW CUTS. THROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3000 FEET PER SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRESTRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT CAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATE SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OF SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDING PLATES TO ACCOMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SET UP BEFORE THE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE MINIMUM OF 1/32" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN ONE HOUR. A DOUBLE JACKETED OIL METER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO, A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED, WITHIN THESE LIMITS, TO ACHEIVE THE REQUIRED JOINT THICKNESS (MINIMUM 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHEIVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH A BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

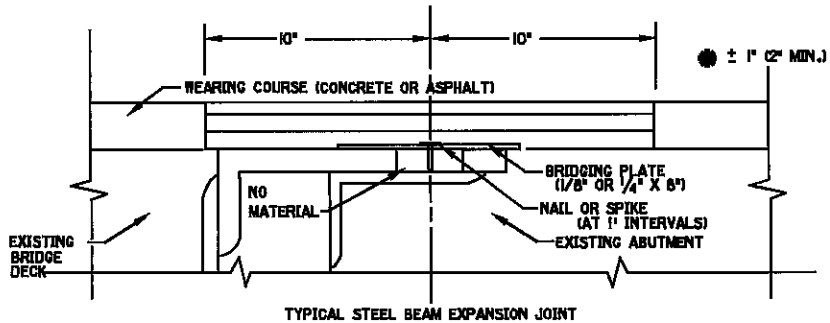
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE I APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF 2 INCHES OF THE PHASE I JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

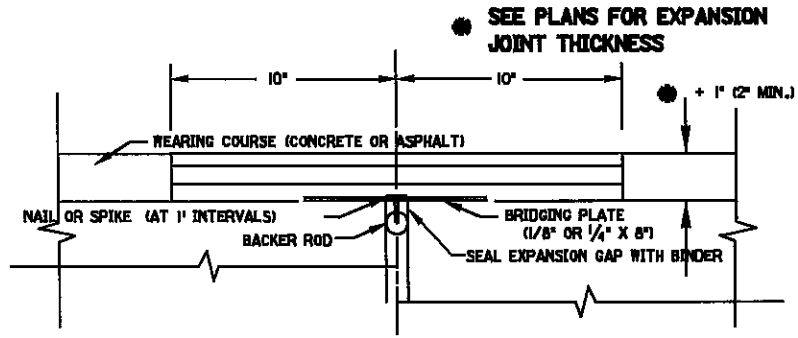
CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETREIVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE ODOT OFFICE OF MATERIALS MANAGEMENT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT:

THE DEPARTMENT WILL MEASURE THE JOINT BY THE NUMBER OF CUBIC YARDS AND WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS: ITEM SPECIAL, CUBIC YARD, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.



TYPICAL STEEL BEAM EXPANSION JOINT



TYPICAL PRESTRESSED BOX BEAM OR CONCRETE SLAB JOINT

GENERAL SUMMARY

PLAN NO.

SR 67	SR 198	SR 501	ITEM	ITEM EXTENSION	LOCAL	STATE	GRAND TOTAL	UNIT	DESCRIPTION
1050		778	202	23500	1786	42	1828	SQ. YD.	Wearing Course Removed
4		4	202	54000	8		8	EACH	Raised Pavement Marker Removed
72		44	209	60200	113	3	116	STATION	Linear Grading
100	25	55	209	70000	175	5	180	CU. YD.	Borrow
	30084		254	01000	28881	1203	30084	SQ. YD.	Pavement Planing, Asphalt Concrete
606		179	301	46000	761	24	785	CU. YD.	Asphalt Concrete Base, PG 64-22
1751	3010	1072	407	10000	5643	190	5833	GALLON	Tack Coat
	108		407	13900	104	4	108	GALLON	Tack Coat, 702.13
244	432	149	448	46020	798	27	825	CU. YD.	Asphalt Concrete Intermediate Course, Type I, PG 64-22
608	1094	372	448	46904	2006	68	2074	CU. YD.	Asphalt Concrete Surface Course, Type I, PG 70-22M
	807		512	33010	775	32	807	SQ. YD.	Type 3 Waterproofing
	1.0		SPECIAL	516 31400	1.0		1.0	CU. YD.	Polymer Modified Asphalt Expansion Joint System
	33		SPECIAL	519 12300	32	1	33	SQ. YD.	Patching Concrete Bridge Deck, Type B

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GENERAL SUMMARY

GENERAL SUMMARY

PLAN NO.

SR 67	SR 198	SR 501	ITEM	ITEM EXTENSION	LOCAL	STATE	GRAND TOTAL	UNIT	DESCRIPTION
2	23		604	34500	24	1	25	EACH	Manhole Adjusted to Grade
	5		604	39500	5		5	EACH	Monument Box Adjusted to Grade
9	4	4	614	12460	17		17	EACH	Work Zone Marking Sign
1.44	2.98	0.96	614	21400	5.20	0.18	5.38	MILE	Work Zone Center Line, Class II
10	63	5	617	10100	75	3	78	CU. YD.	Compacted Aggregate
	2	1	632	26500	3		3	EACH	Detector Loop
	2	1	632	27201	3		3	EACH	Loop Detector Tie-In, As Per Plan
	13		638	10800	13		13	EACH	Valve Box Adjusted to Grade
1.44	0.96	0.96	644	00100	2.30	1.06	3.36	MILE	Edge Line
0.72	1.49	0.48	644	00300	2.60	0.09	2.69	MILE	Center Line
	845		644	00400	811	34	845	FEET	Channelizing Line
64	190	64	644	00500	244	74	318	FEET	Stop Line
	710		644	00600	682	28	710	FEET	Crosswalk Line
	21		644	01300	20	1	21	EACH	Lane Arrow
	8		644	01410	8		8	EACH	Word on Pavement, 96 Inch
3636		1078	659	10000	4569	145	4714	SQ. YD.	Seeding and Mulching
0.33		0.10	659	20000	0.42	0.01	0.43	TON	Commercial Fertilizer
12		1	SPECIAL	690 50350	13		13	EACH	Mailbox Removed and Reset
500	250	250	832	30000	970	30	1000	EACH	Erosion Control
	150		843	50000	144	6	150	SQ. FT.	Patching Concrete Structures with Trowelable Mortar
LUMP			614	11000	LUMP	LUMP	LUMP		Maintaining Traffic
LUMP			624	10000	LUMP	LUMP	LUMP		Mobilization

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GENERAL SUMMARY