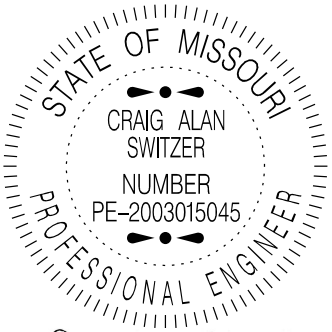
Job No.: JST0108
Route: CC, B, MM, TT, AA, AA, Y
County: McDonald, Newton, & Barry

JOB SPECIAL PROVISIONS TABLE OF CONTENTS

(Job Special Provisions shall prevail over General Provisions whenever in conflict therewith.)



&[Date] &[Time]
CRAIG ALAN SWITZER - CIVIL
MO-PE-2003015045

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 W. CAPITOL AVE.
JEFFERSON CITY, MO 65102
Phone 1-888-275-6636

If a seal is present on this sheet, JSP's have been electronically sealed and dated.

JOB NUMBER: JST0108
McDONALD, NEWTON and BARRY COUNTIES, MO
DATE PREPARED: 08/12/24

ADDENDUM DATE:

Only the following items of the Job Special Provisions (Roadway) are authenticated by this seal: ALL

Job No.: JST0108
Route: CC, B, MM, TT, AA, AA, Y
County: McDonald, Newton, & Barry

JOB
SPECIAL PROVISION

A. General – State JSP-09-03K

1.0 Description. The Federal Government is not participating in the cost of construction of this project.

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of worker required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations. The current State Wage Rates can be found on the Missouri Department of Transportation web page at www.modot.org under "Doing Business with MoDOT", "Contractor Resources" for the applicable bid opening. This supplemental bidding document has important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

State Wage Rates

1.2 The following documents are available on the Missouri Department of Transportation web page at www.modot.org under "Doing Business with MoDOT"; "Standards and Specifications". The effective version shall be determined by the letting date of the project.

General Provisions & Supplemental Specifications

Supplemental Plans to July 2024 Missouri Standard Plans
For Highway Construction

These supplemental bidding documents contain all current revisions to the published versions and have important legal consequences. It shall be conclusively presumed that they are in the bidder's possession, and they have been reviewed and used by the bidder in the preparation of any bid submitted on this project.

B. Contract Liquidated Damages

1.0 Description. Liquidated Damages for failure or delay in completing the work on time for this contract shall be in accordance with Sec 108.8. The liquidated damages include separate amounts for road user costs and contract administrative costs incurred by the Commission.

2.0 Period of Performance. Prosecution of work is expected to begin on the date specified below in accordance with Sec 108.2. Regardless of when the work is begun on this contract, all work on all projects shall be completed on or before the date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Notice to Proceed: November 4, 2024
Contract Completion Date: November 1, 2025

2.1 Calendar Days and Completion Dates. Completion of the project is required as specified herein. The count of calendar days will begin on the date the contractor starts any construction operations on the project.

Job Number	Calendar Days	Daily Road User Cost
JST0108	158	$1,800

3.0 Liquidated Damages for Contract Administrative Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged contract administrative liquidated damages in accordance with Sec 108.8 in the amount of **$1,500** per calendar day for each calendar day, or partial day thereof, that the work is not fully completed. For projects in combination, these damages will be charged in full for failure to complete one or more projects within the specified contract completion date or calendar days.

4.0 Liquidated Damages for Road User Costs. Should the contractor fail to complete the work on or before the contract completion date specified in Section 2.0, or within the number of calendar days specified in Section 2.1, whichever occurs first, the contractor will be charged road user costs in accordance with Sec 108.8 in the amount specified in Section 2.1 for each calendar day, or partial day thereof, that the work is not fully completed. These damages are in addition to the contract administrative damages and any other damages as specified elsewhere in this contract.

C. Work Zone Traffic Management

1.0 Description. Work zone traffic management shall be in accordance with applicable portions of Division 100 and Division 600 of the Standard Specifications, and specifically as follows.

1.1 Maintaining Work Zones and Work Zone Reviews. The Work Zone Specialist (WZS) shall maintain work zones in accordance with Sec 616.3.3 and as further stated herein. The WZS shall coordinate and implement any changes approved by the engineer. The WZS shall ensure all traffic control devices are maintained in accordance with Sec 616, the work zone is operated within the hours specified by the engineer, and will not deviate from the specified hours without prior approval of the engineer. The WZS is responsible to manage work zone delay in accordance with these project provisions. When requested by the engineer, the WZS shall submit a weekly report that includes a review of work zone operations for the week. The report shall identify any problems encountered and corrective actions taken. Work zones are subject to unannounced inspections by the engineer and other departmental staff to corroborate the validity of the WZS's review and may require immediate corrective measures and/or additional work zone monitoring.

1.2 Work Zone Deficiencies. Failure to make corrections on time may result in the engineer suspending work. The suspension will be non-excusable and non-compensable regardless of if road user costs are being charged for closures.

2.0 Traffic Management Schedule.

2.1 Traffic management schedules shall be submitted to the engineer for review prior to the start of work and prior to any revisions to the traffic management schedule. The traffic management schedule shall include the proposed traffic control measures, the hours traffic control will be in place, and work hours.

2.2 The traffic management schedule shall conform to the limitations specified in Sec 616 regarding lane closures, traffic shifts, road closures and other width, height, and weight restrictions.

2.3 The engineer shall be notified as soon as practical of any postponement due to weather, material, or other circumstances.

2.4 In order to ensure minimal traffic interference, the contractor shall schedule lane closures for the absolute minimum amount of time required to complete the work. Lanes shall not be closed until material is available for continuous construction and the contractor is prepared to diligently pursue the work until the closed lane is opened to traffic.

2.5 Traffic Congestion. The contractor shall, upon approval of the engineer, take proactive measures to reduce traffic congestion in the work zone. The contractor shall immediately implement appropriate mitigation strategies whenever traffic congestion reaches an excess of 10 minutes to prevent congestion from escalating to 15 minute or above threshold. If disruption of the traffic flow occurs and traffic is backed up in queues of 15 minute delays or longer, then the contractor shall immediately review the construction operations which contributed directly to disruption of the traffic flow and make adjustments to the operations to prevent the queues from reoccurring. Traffic delays may be monitored by physical presence on site or by utilizing real-time travel data through the work zone that generate text and/or email notifications where available. The engineer monitoring the work zone may also notify the contractor of delays that require prompt mitigation. The contractor may work with the engineer to determine what other alternative solutions or time periods would be acceptable.

2.5.1 Traffic Safety.

2.5.1.1 Recurring Congestion. Where traffic queues routinely extend to within 1,000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway, the contractor shall extend the advance warning area, as approved by the engineer.

2.5.1.2 Non-Recurring Congestion. When traffic queues extend to within 1,000 feet of the ROAD WORK AHEAD, or similar, sign on a divided highway or to within 500 feet of the ROAD WORK AHEAD, or similar, sign on an undivided highway infrequently, the contractor shall deploy a means of providing advance warning of the traffic congestion, as approved by the engineer. The warning location shall be no less than 1,000 feet and no more than 0.5 mile in advance of the end of the traffic queue on divided highways, and no less than 500 feet and no more than 0.5 mile in advance of the end of the traffic queue on undivided highways.

3.0 Work Hour Restrictions.

3.1 Except for emergency work, as determined by the engineer, and long term lane closures required by project phasing, all lanes shall be scheduled to be open to traffic during the five major holiday periods shown below, from 12:00 noon on the last working day preceding the holiday until 6:00 a.m. on the first working day subsequent to the holiday unless otherwise approved by the engineer.

Memorial Day
Labor Day
Thanksgiving
Christmas
New Year's Day

3.1.1 Independence Day. The lane restrictions specified in Section 3.1 shall also apply to Independence Day, except that the restricted periods shall be as follows:

When Independence Day falls on:	The Holiday is Observed on:	Halt Lane Closures beginning at:	Allow Lane Closures to resume at:
Sunday	Monday	Noon on Friday	6:00 a.m. on Tuesday
Monday	Monday	Noon on Friday	6:00 a.m. on Tuesday
Tuesday	Tuesday	Noon on Monday	6:00 a.m. on Wednesday
Wednesday	Wednesday	Noon on Tuesday	6:00 a.m. on Thursday
Thursday	Thursday	Noon on Wednesday	6:00 a.m. on Friday
Friday	Friday	Noon on Thursday	6:00 a.m. on Monday
Saturday	Friday	Noon on Thursday	6:00 a.m. on Monday

3.2 The contractor shall not perform any construction operation on the roadway, roadbed, or active lanes, including the hauling of material within the project limits, during restricted periods, holiday periods or other special events specified in the contract documents.

4.0 Detours and Lane Closures.

4.1 When a changeable message sign (CMS) is provided, the contractor shall use the CMS to notify motorists of future traffic disruption and possible traffic delays one week before traffic is shifted to a detour or prior to lane closures. The CMS shall be installed at a location as approved or directed by the engineer. If a CMS with Communication Interface is required, then the CMS shall be capable of communication prior to installation on right of way. All messages planned for use in the work zone shall be approved and authorized by the engineer or its designee prior to deployment. When permanent dynamic message signs (DMS) owned and operated by MoDOT are located near the project, they may also be used to provide warning and information for the work zone. Permanent DMS shall be operated by the TMC, and any messages planned for use on DMS shall be approved and authorized by the TMC at least 72 hours in advance of the work.

4.2 At least one lane of traffic in each direction shall be maintained at all times except for brief intervals of time required when the movement of the contractor's equipment will seriously hinder the safe movement of traffic. Periods during which the contractor will be allowed to interrupt traffic will be designated by the engineer.

5.0 Basis of Payment. No direct payment will be made to the contractor to recover the cost of equipment, labor, materials, or time required to fulfill the above provisions, unless specified elsewhere in the contract document. All authorized changes in the traffic control plan shall be provided for as specified in Sec 616.

D. Emergency Provisions and Incident Management – SW

1.0 The contractor shall have communication equipment on the construction site or immediate access to other communication systems to request assistance from the police or other emergency agencies for incident management. In case of traffic accidents or the need for police to direct or restore traffic flow through the job site, the contractor shall notify police or other emergency agencies immediately as

needed. The resident engineer's office shall also be notified when the contractor requests emergency assistance.

Resident Engineer – Name: Marvin Morris 417-834-7333 (Cell), or 417-621-6525 (Office).

2.0 In addition to the 911 emergency telephone number for ambulance, fire or police services, the following agencies may also be notified for accident or emergency situation within the project limits.

Missouri Highway Patrol – Troop D: 417-895-6868	
MoDOT Customer Service: 417-895-7600	
McDonald County Sheriff 417-233-4319	McDonald County Office of Emergency Management 417-223-7575
Newton County Sheriff 417-451-8300	Newton County Office of Emergency Management 417-451-4357
Barry County Sheriff 417-847-6556	Barry County Office of Emergency Management 417-737-1142

Emergency Only Numbers
911 *55 cell phone – Missouri Highway Patrol 417-864-1160 – MoDOT Incident Management Coordinator

2.1 This list is not all inclusive. Notification of the need for wrecker or tow truck services will remain the responsibility of the appropriate police agency.

2.2 The contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.

3.0 No direct pay will be made to the contractor to recover the cost of the communication equipment, labor, materials, or time required to fulfill the above provisions.

E. Project Contact for Contractor/Bidder Questions

All questions concerning this project during the bidding process shall be forwarded to the project contact listed below.

Craig Switzer, Project Contact
Southwest District, Joplin Regional Office
2915 Doughboy Drive
Joplin, MO 64804

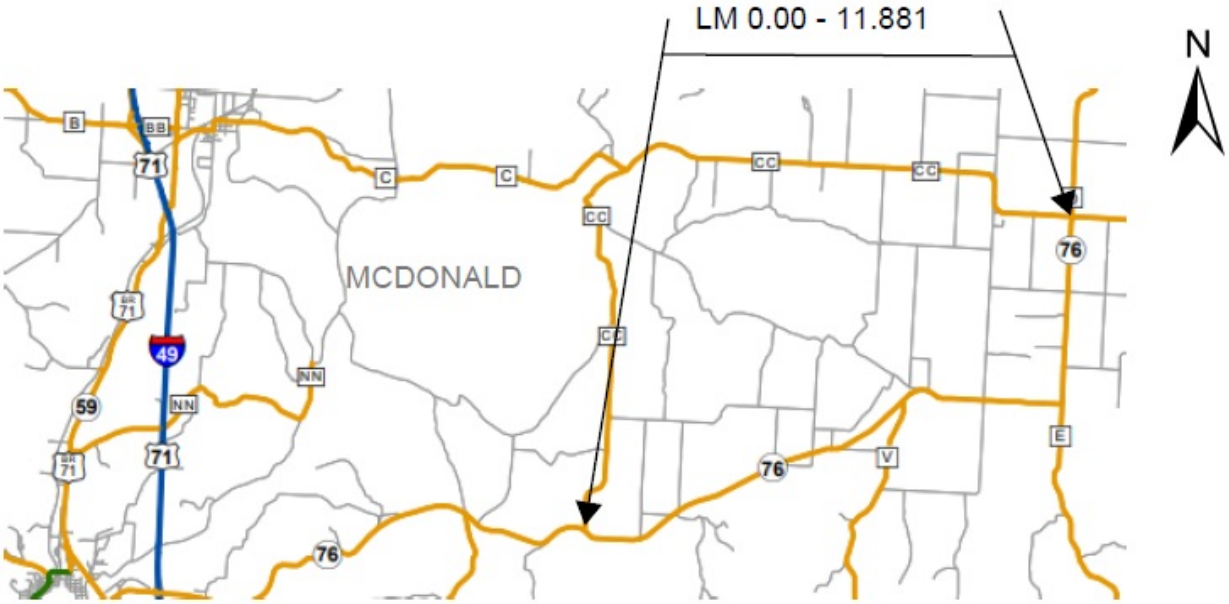
Telephone Number: 417-621-6331
Email: Craig.Switzer@modot.mo.gov

All questions concerning the bid document preparation can be directed to the Central Office – Design at (573) 751-2876.

F. Project Details and Quantities – Route CC (McDonald)

1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 11.881. The total length of pavement limits are 11.881 miles with a total average width of 21.5 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

NONE

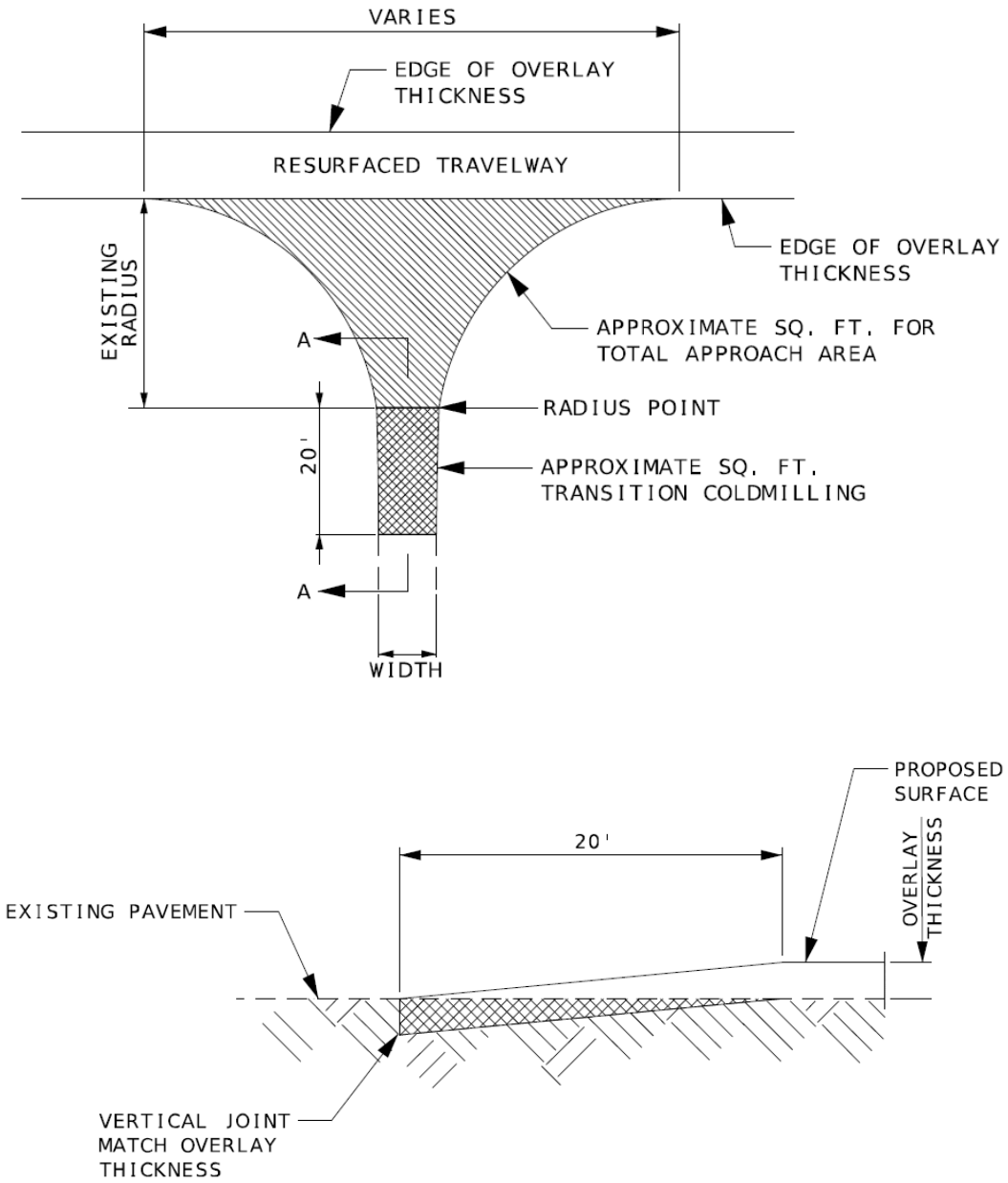


2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface Leveling PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd^2 the entire width of the traveled way for the length of the pavement limits, except that tack coat shall be applied at the rate of 0.10 gal/yd^2 in coldmilled areas. Include safety edge per Std. Plan 401.00.

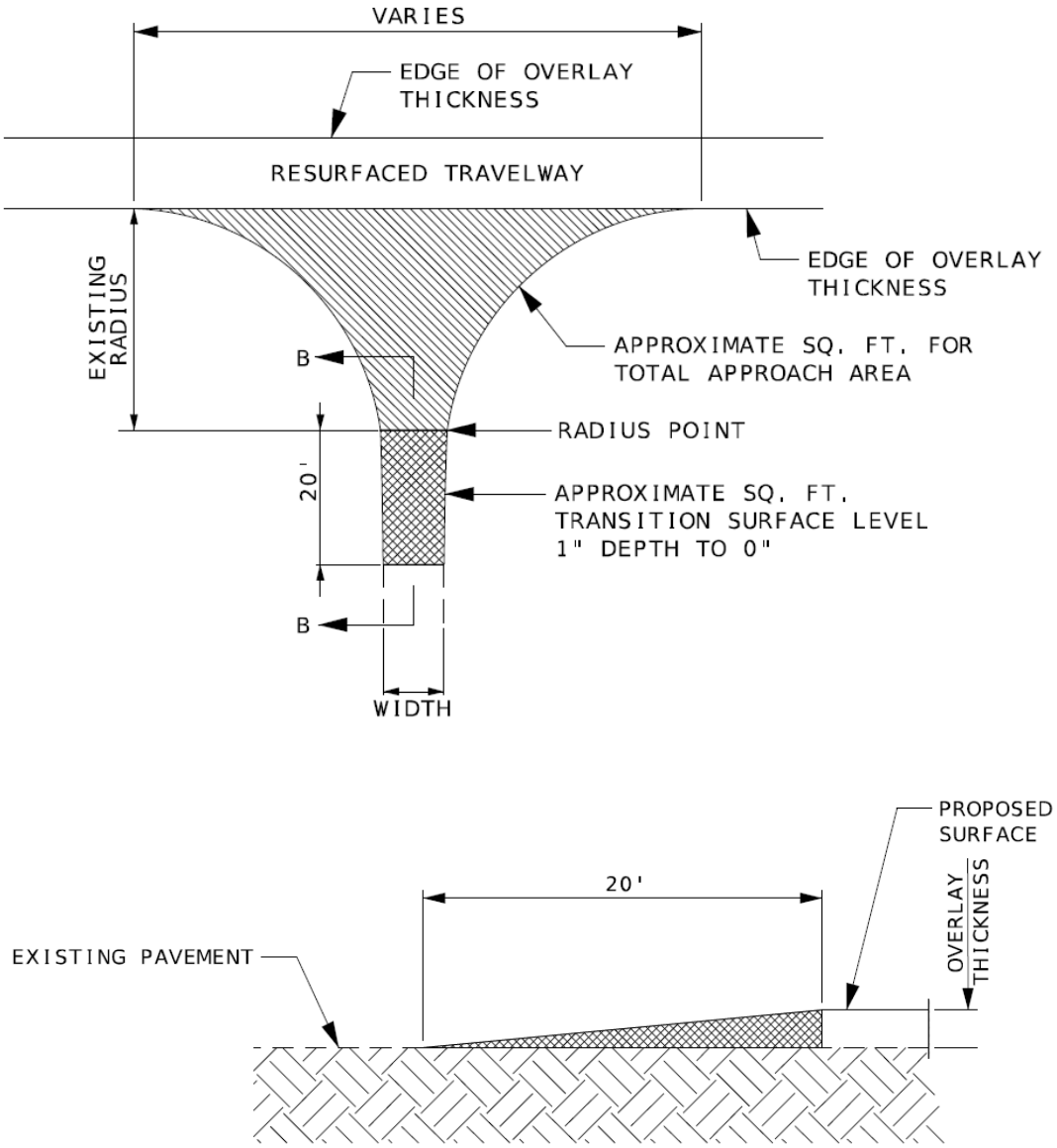
2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, depth transitions shall be coldmilled at the rate of 1" in 100'.

2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).



SECTION A-A

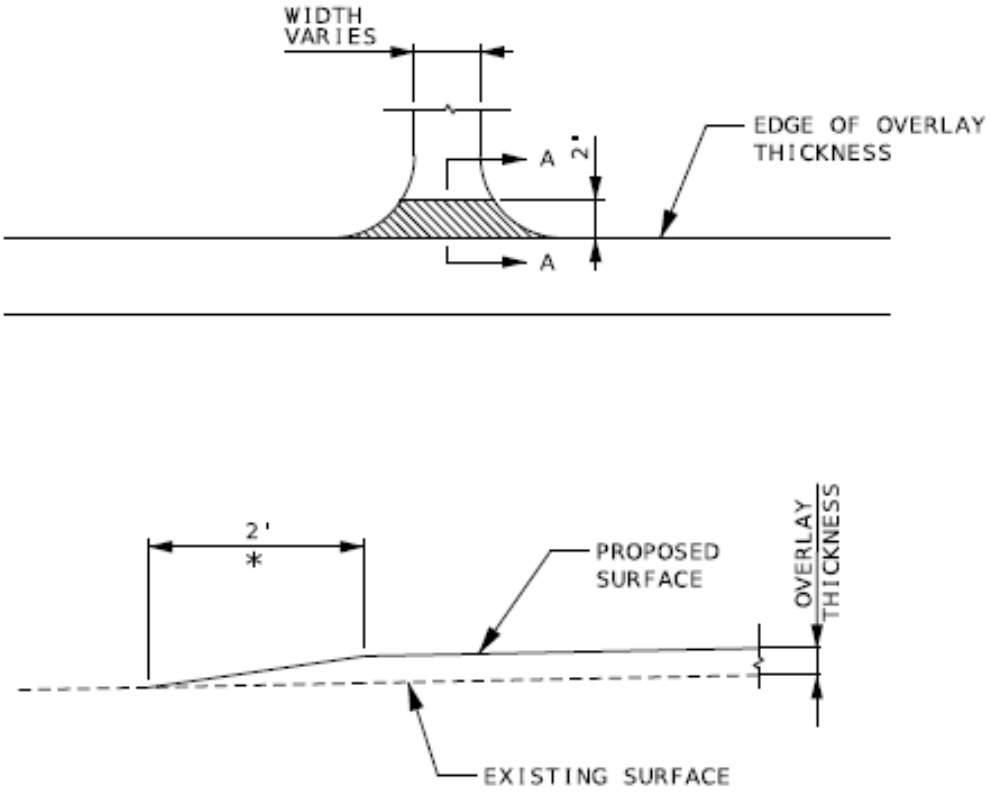
TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)



SECTION B-B

TYPICAL STATE ROUTE JUNCTION
(COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).



SECTION A-A

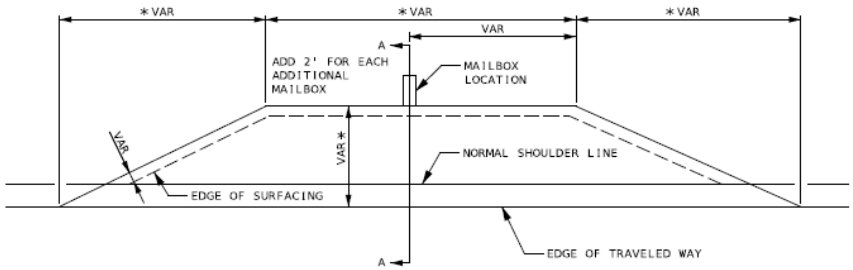
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

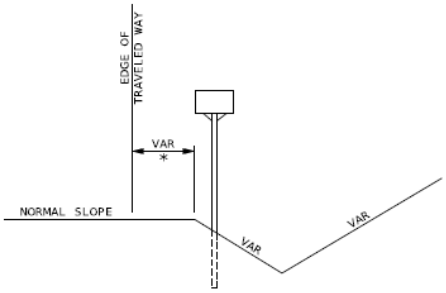
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

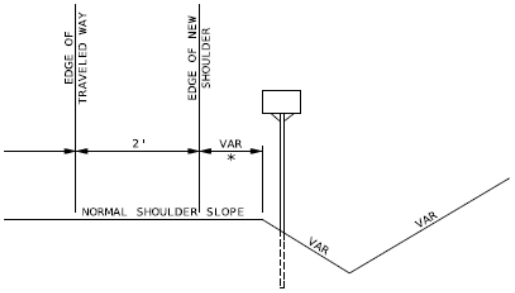
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	1.985 TON/CY QUANTITY	.08 GAL/SY TACK COAT	
FROM	T0	ROUTE	(MI)	(FT)	(TONS)	(GAL)	REMARKS
0.000	0.017	CC	0.017	VAR	26.82	-	Route CC Start - Tack Paid w/ Coldmill
0.017	0.036	CC	0.019	21.5	13.48	-	Tack Paid with Modified Coldmill
0.036	5.365	CC	5.329	21.5	3780.37	5377.3	-
5.365	5.395	CC, C	0.030	VAR	47.86	68.1	Route CC - C Entrance
5.395	11.852	CC	6.457	21.5	4580.56	6515.5	-
11.852	11.871	CC	0.019	21.5	13.48	-	Tack Paid with Modified Coldmill
11.871	11.881	CC	0.010	VAR	16.71	-	Route CC End - Tack Paid w/ Coldmill
0.000	11.881	CC	11.881		1188.10		100 TONS/MILE IRREGULARITIES
0.000	11.881	CC	11.881		8.55	13.6	MAILBOX TURNOUTS / ENTRANCES
				TOTALS	9,675.92	11974.5	ASSUMES 30' ENTRANCE WIDTHS.
				USE	9,675.9	11974	

3.2 Coldmilling quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	QUANTITY	.10 GAL/SY TACK COAT	
FROM	T0	ROUTE	(FT)	(FT)	(SY)	(GAL)	REMARKS
0.017	0.036	CC	100	21.5	238.9	23.9	
11.852	11.871	CC	100	21.5	238.9	23.9	
				TOTALS	477.8	47.8	
				USE	478	48	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	QUANTITY	.10 GAL/SY TACK COAT	
FROM	T0	ROUTE	(FT)	(FT)	(SY)	(GAL)	REMARKS
0.000	0.017	CC	89.76	VAR	476.9	47.7	
11.871	11.881	CC	52.00	VAR	297.1	29.7	
				TOTALS	774.0	77.4	
				USE	774	77	

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.^{2})	DESCRIPTION
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	25	400	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	11	176	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	7	112	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	12	192	NO CENTER LINE
36	WO8-11	48 X 48	16	24	384	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	1	8.75	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	6	9	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					1419.13	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	1420	USE
				ITEM NO. 616-10.25	40	CHANNELIZERS (TRIM-LINE)
				TOTAL ROUTE CC		
				616-99.01	**1**	**LS**
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Changeable Message Signs (CMS), Mobilization, and Contractor Furnished Surveying and Staking are as follows. Provide two CMS on the route currently under construction and two CMS on the route that is next in the construction sequence per Section 4.1 of the Work Zone Traffic Management JSP.

ITEM NO.	QTY.	DESCRIPTION
616-10.99	4 EACH	CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
APPROX. LOG MILE			LENGTH	4" SOLID YELLOW	4" SOLID	
FROM	T0	ROUTE	(FT)	(FT)	WHITE (FT)	REMARKS
0.000	11.881	CC	62731.68	125463.36	125463.36	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	125,463	125,463	ADJUST PAINT TO EXISTING
			USE	125,463	125,463	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

6.0 Permanent Aggregate Edge Treatment. Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE			LENGTH	AGGR 200 TON/MI	PRIME MC800 590 GAL/MI	
FROM	T0	ROUTE	(MI)	(TON)	(GAL)	REMARKS
0.017	5.365	CC	5.348	1069.6	3155.3	
5.365	5.395	CC	0.03	6.0	17.7	
5.395	11.871	CC	6.476	1295.2	3820.8	
			TOTALS	2,370.8	6993.9	
			USE	2,370.8	6,994	

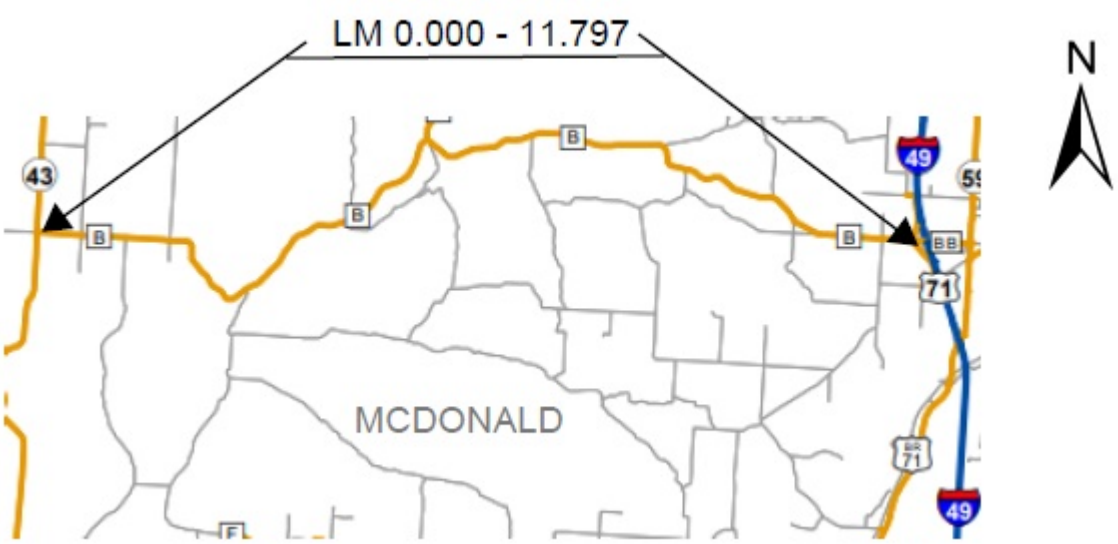
7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	66	11	330	GRAVEL (A) OR CRUSHED STONE (B)

G. Project Details and Quantities – Route B (McDonald)

1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 11.797. The total length of pavement limits are 11.797 miles with a total average width of 20.5 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

EXCEPTIONS			
APPROX. LOG MILE		Length	
FROM	TO	(FT)	COMMENTS/BRIDGE NUMBERS
5.763	5.804	216.48	X0567
8.478	8.505	142.56	S0874
	TOTAL	359.04	

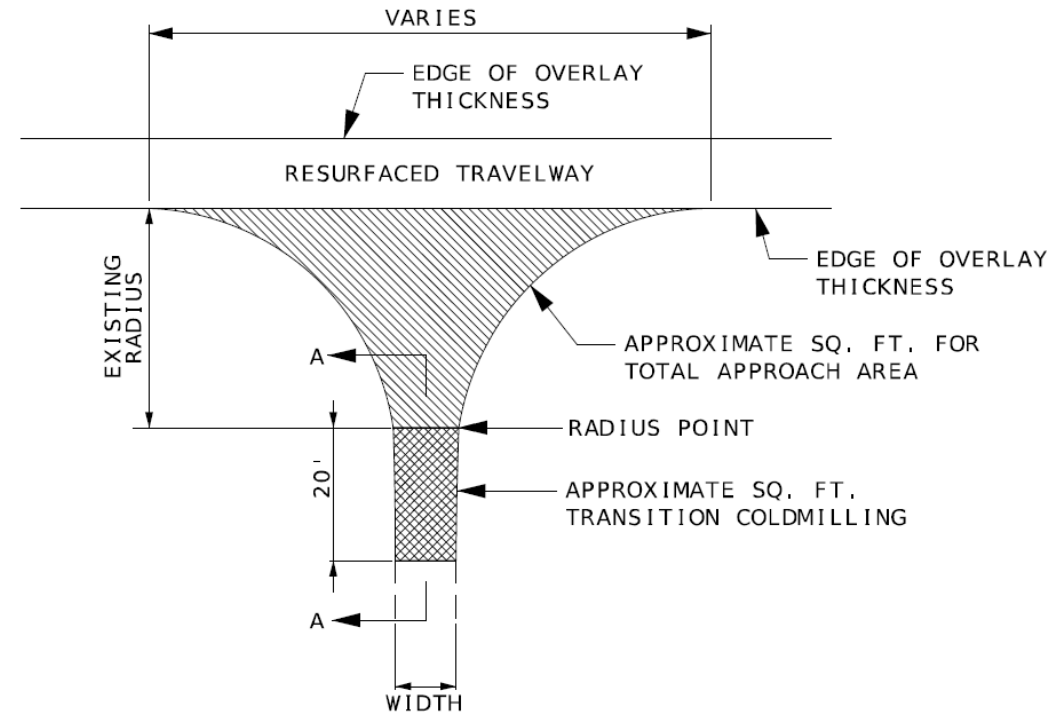


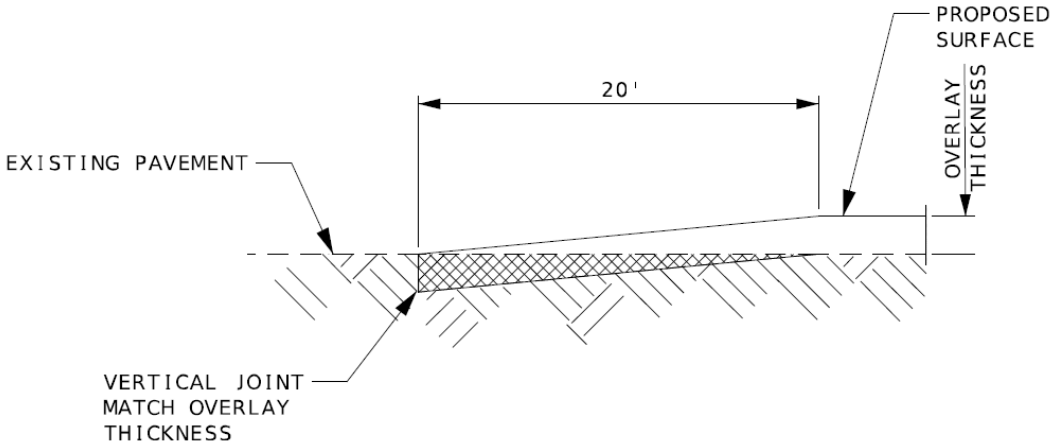
2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface Leveling PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd^2 the entire width of the traveled way for the length of the pavement limits, except that tack coat shall be applied at the rate of 0.10 gal/yd^2 in coldmilled areas. Include safety edge per Std. Plan 401.00.

2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, depth transitions shall be coldmilled at the rate of 1" in 100'.

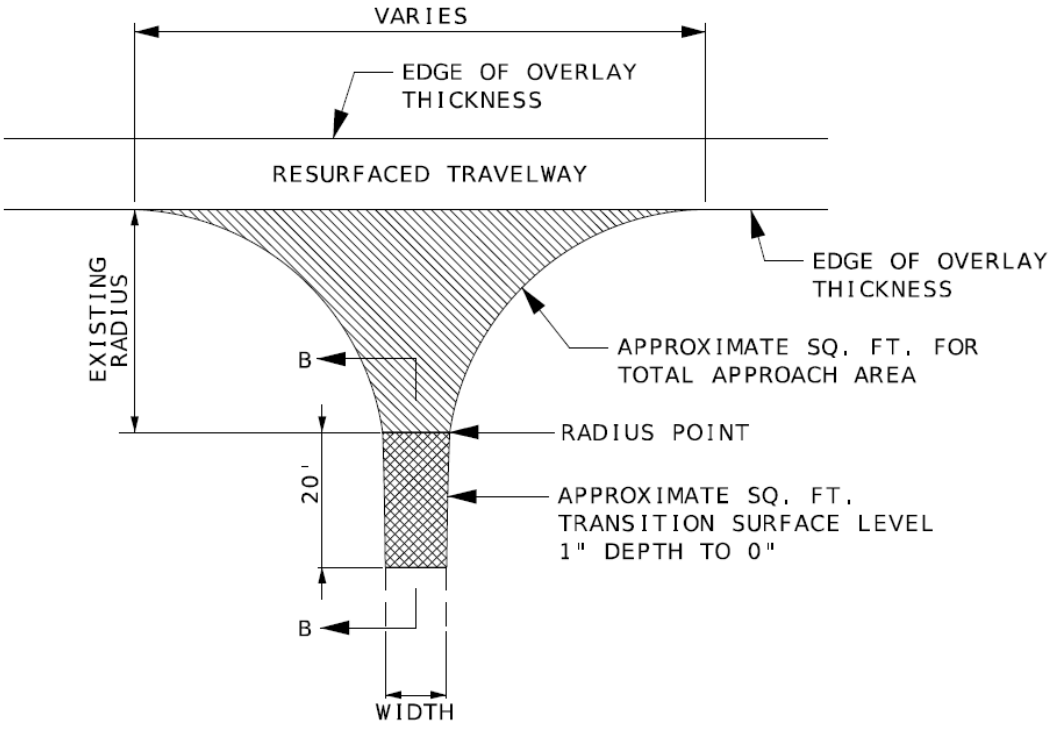
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

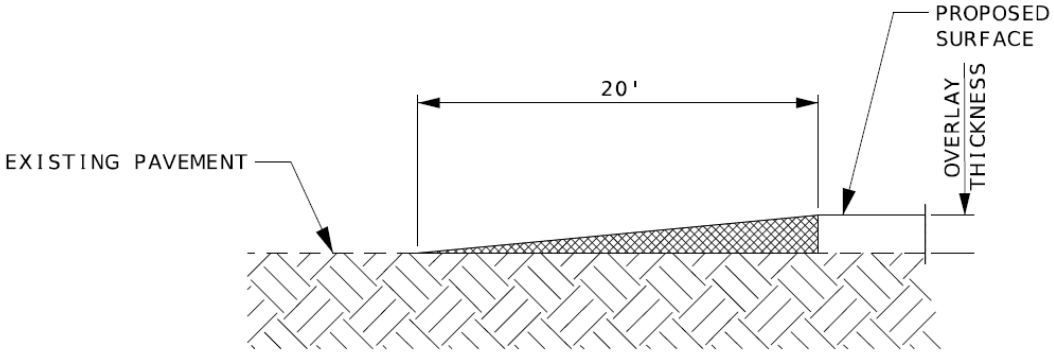




SECTION A-A

TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

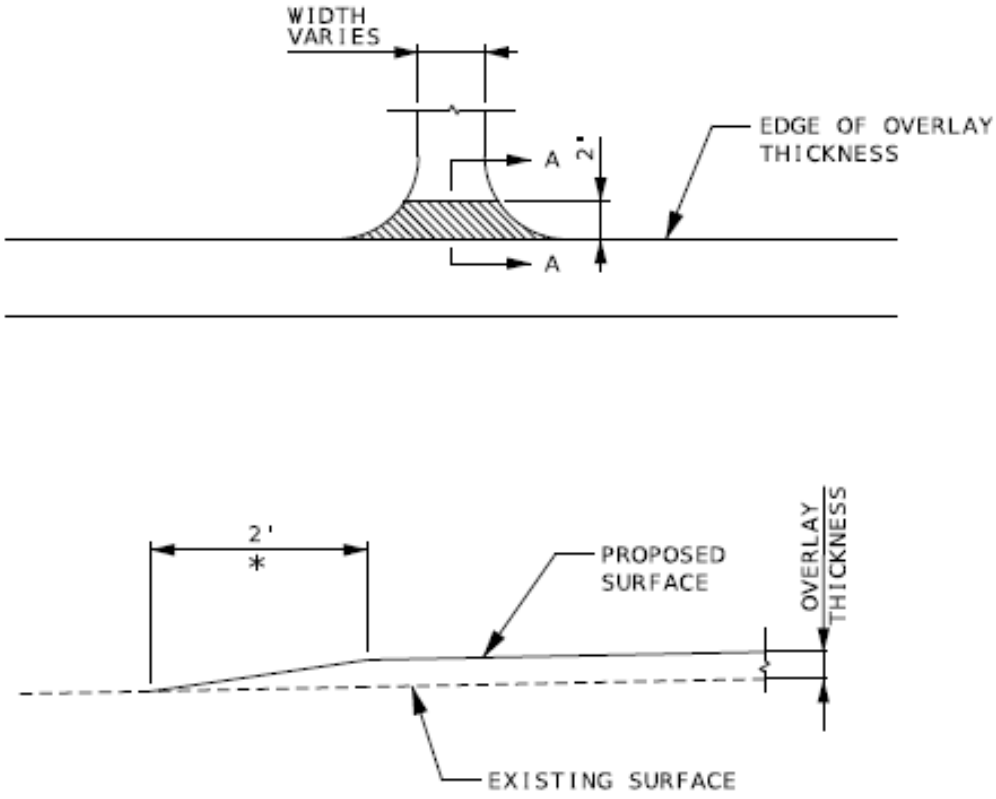




SECTION B-B

TYPICAL STATE ROUTE JUNCTION
(COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).



SECTION A-A

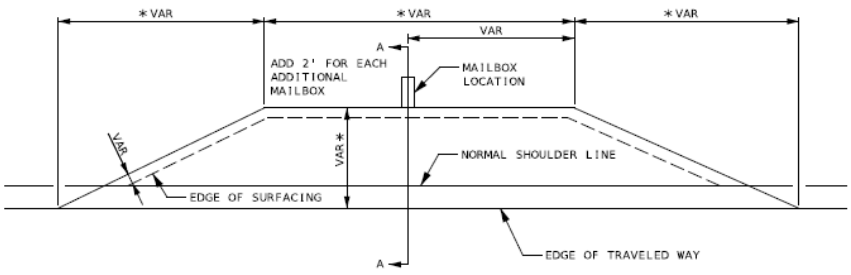
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

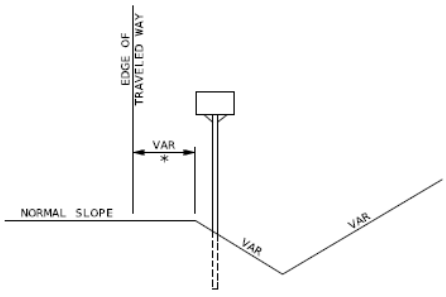
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

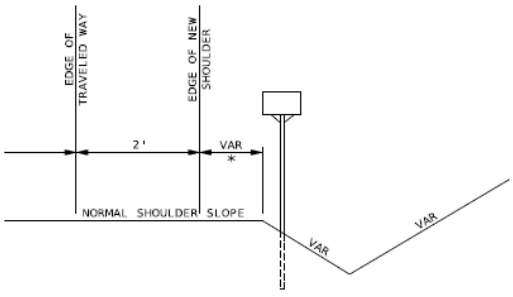
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	1.985 TON/CY QUANTITY	.08 GAL/SY TACK COAT	
FROM	T0	ROUTE	(MI)	(FT)	(TONS)	(GAL)	REMARKS
0.000	0.015	B	0.015	VAR	20.53	-	Route B Start - Tack Paid w/ Coldmill
0.015	0.034	B	0.019	20.5	12.85	-	Tack Paid with Modified Coldmill
0.034	5.541	B	5.507	20.5	3724.93	5298.5	-
5.541	5.564	B, Y	0.023	VAR	48.13	68.5	Route B - Y Entrance
5.564	5.744	B	0.180	20.5	121.75	173.2	-
5.744	5.763	B	0.019	21.5	13.48	-	Tack Paid with Modified Coldmill
5.763	5.804	B	0.041	EXC	-	-	Bridge Execption X0567
5.804	5.823	B	0.019	19.5	12.22	-	Tack Paid with Modified Coldmill
5.823	8.459	B	2.636	20.5	1782.99	2536.2	-
8.459	8.478	B	0.019	20.5	12.85	-	Tack Paid with Modified Coldmill
8.478	8.505	B	0.027	EXC	-	-	Bridge Exception S0874
8.505	8.524	B	0.019	20.5	12.85	-	Tack Paid with Modified Coldmill
8.524	11.425	B	2.901	20.5	1962.24	2791.1	-
11.425	11.544	B	0.119	40	157.06	223.4	Shoulder Section
11.544	11.563	B	0.019	40	25.08	-	Tack Paid with Modified Coldmill
0.000	11.563	B	11.563		1156.30		100 TONS/MILE IRREGULARITIES
0.000	11.563	B	11.563		8.55	13.6	MAILBOX TURNOUTS / ENTRANCES
				TOTALS	9,071.81	11104.4	ASSUMES 30' ENTRANCE WIDTHS.
				USE	9,071.8	11104	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE							
FROM	T0	ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
0.015	0.034	B	100	20.5	227.8	22.8	
5.744	5.763	B	100	21.5	238.9	23.9	
5.804	5.823	B	100	19.5	216.7	21.7	
8.459	8.478	B	100	20.5	227.8	22.8	
8.505	8.524	B	100	20.5	227.8	22.8	
11.544	11.563	B	100	40	444.4	44.4	
				TOTALS	1,583.4	158.4	
				USE	1,583	158	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE							
FROM	T0	ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
0.000	0.015	B	79.2	VAR	365.0	36.5	
				TOTALS	365.0	36.5	
				USE	365	37	

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.^{2})	DESCRIPTION
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	25	400	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	10	160	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	6	96	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	12	192	NO CENTER LINE
36	WO8-11	48 X 48	16	24	384	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	1	8.75	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	5	7.5	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					1385.63	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	1386	USE
				ITEM NO. 616-10.25	40	CHANNELIZERS (TRIM-LINE)
				TOTAL ROUTE B		
				616-99.01	**1**	**LS**
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Changeable Message Signs (CMS), Mobilization, and Contractor Furnished Surveying and Staking are as follows. Provide two CMS on the route currently under construction and two CMS on the route that is next in the construction sequence per Section 4.1 of the Work Zone Traffic Management JSP.

ITEM NO.	QTY.	DESCRIPTION
616-10.99	4 EACH	CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
APPROX. LOG MILE			LENGTH	4" SOLID YELLOW	4" SOLID	
FROM	T0	ROUTE	(FT)	(FT)	WHITE (FT)	REMARKS
0.000	11.797	B	62288.16	124576.32	124576.32	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	124,576	124,576	ADJUST PAINT TO EXISTING
			USE	124,576	124,576	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

6.0 Permanent Aggregate Edge Treatment. Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE			LENGTH	AGGR 200 TON/MI	PRIME MC800 590 GAL/MI	
FROM	T0	ROUTE	(MI)	(TON)	(GAL)	REMARKS
0.015	5.541	B	5.526	1105.2	3260.3	
5.541	5.564	B	0.023	4.6	13.6	
5.564	5.763	B	0.199	39.8	117.4	
5.804	8.478	B	2.674	534.8	1577.7	
8.505	11.563	B	3.058	611.6	1804.2	
			TOTALS	2,296.0	6773.2	
			USE	2,296.0	6,774	

7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	7	8	76	GRAVEL (A) OR CRUSHED STONE (B)

H. Project Details and Quantities – Route MM (McDonald)

1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 3.867. The total length of pavement limits are 3.867 miles with a total average width of 21 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

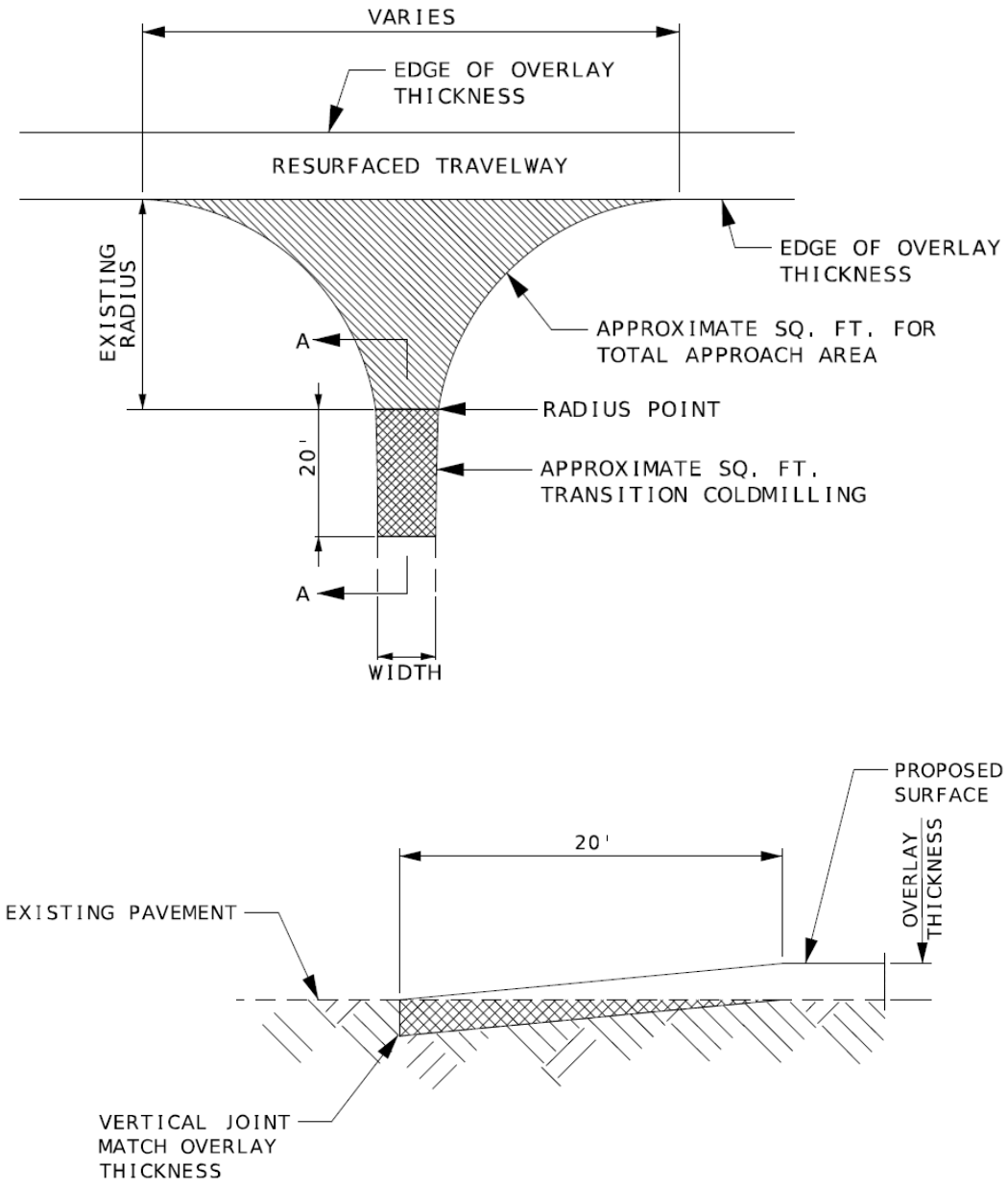
NONE

2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface Leveling PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd^2 the entire width of the traveled way for the length of the pavement limits, except that tack coat shall be applied at the rate of 0.10 gal/yd^2 in coldmilled areas. Include safety edge per Std. Plan 401.00.

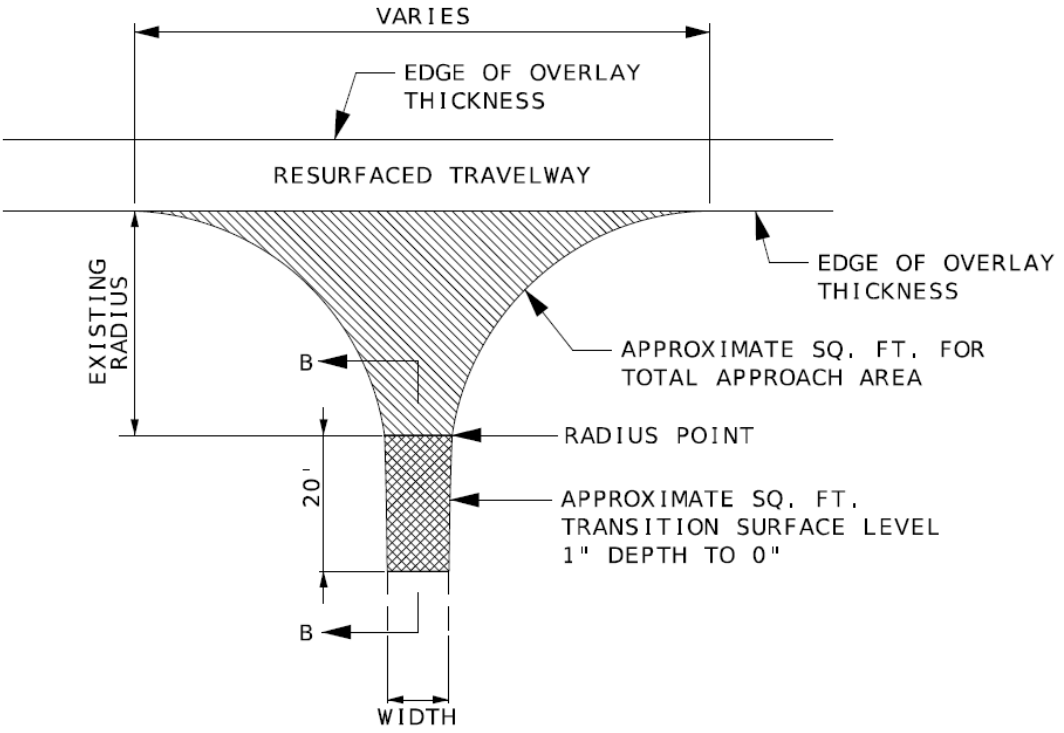
2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, depth transitions shall be coldmilled at the rate of 1" in 100'.

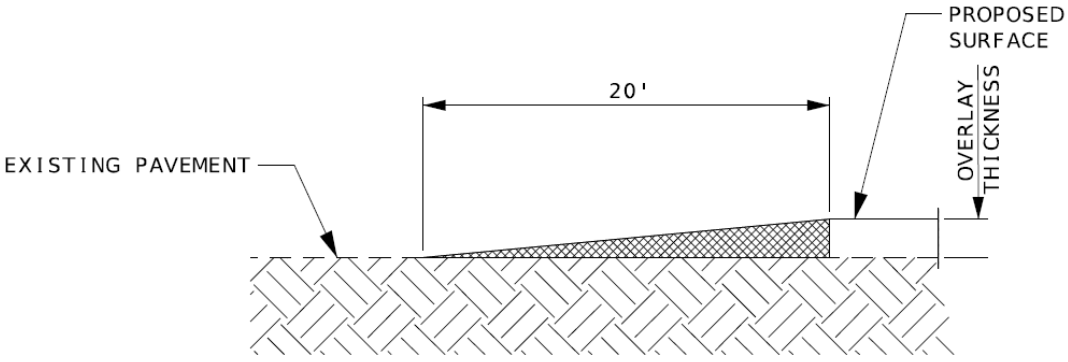
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).



SECTION A-A

TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

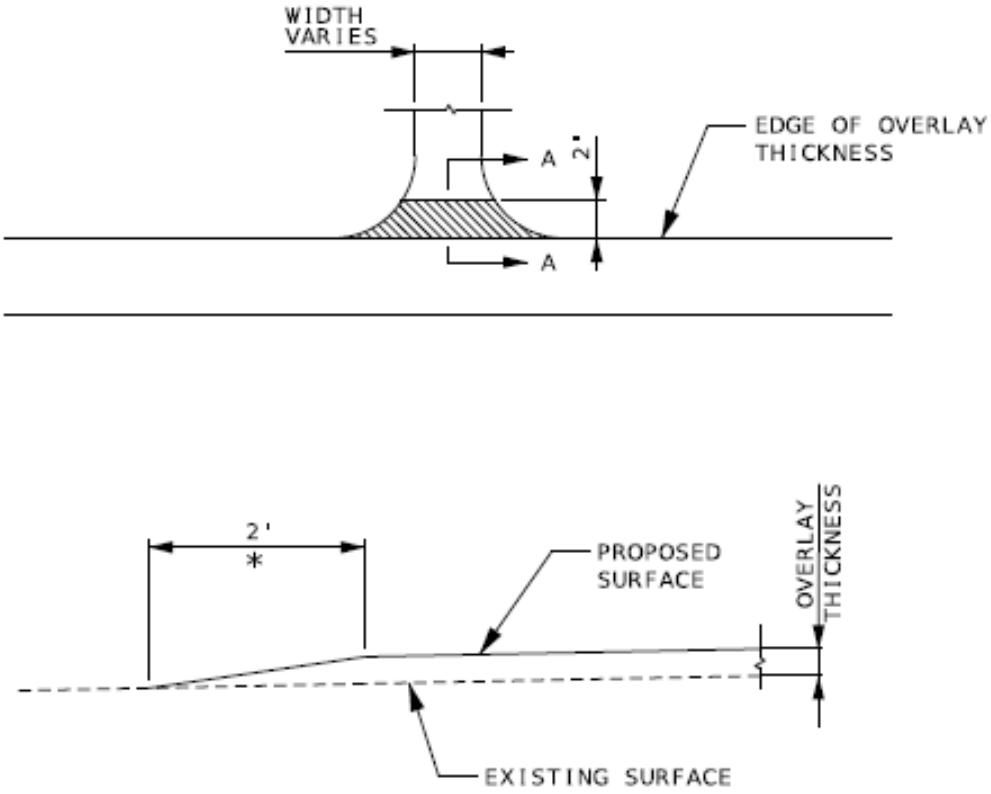




SECTION B-B

TYPICAL STATE ROUTE JUNCTION
(COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).



SECTION A-A

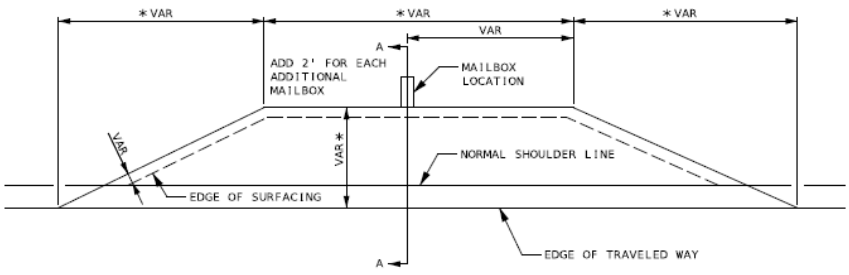
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

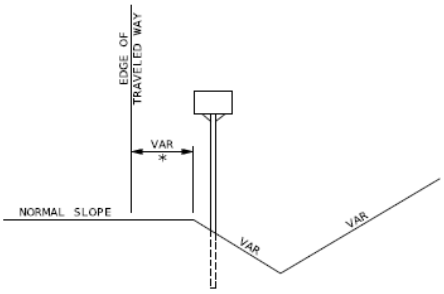
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

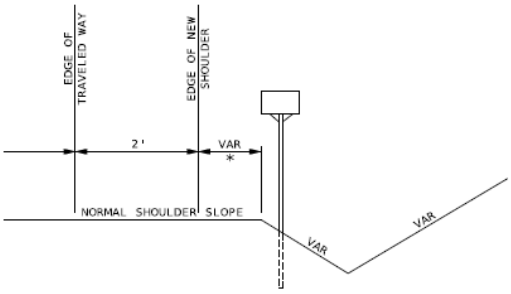
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	1.985 TON/CY QUANTITY	.08 GAL/SY TACK COAT	
FROM	T0	ROUTE	(MI)	(FT)	(TONS)	(GAL)	REMARKS
0.000	0.011	MM	0.011	VAR	17.59	-	Route MM Start - Tack Paid w/ Coldmill
0.011	0.030	MM	0.019	21	13.17	-	Tack Paid with Modified Coldmill
0.030	3.848	MM	3.818	21	2645.48	3763.0	-
3.848	3.867	MM	0.019	21	13.17	-	Route MM End Tack Paid with Modified Coldmill
0.000	3.867	MM	3.867		386.70		100 TONS/MILE IRREGULARITIES
0.000	3.867	MM	3.867		8.55	13.6	MAILBOX TURNOUTS / ENTRANCES
				TOTALS	3084.65	3776.6	ASSUMES 30' ENTRANCE WIDTHS.
				USE	3084.7	3777	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	QUANTITY	.10 GAL/SY TACK COAT	
FROM	T0	ROUTE	(FT)	(FT)	(SY)	(GAL)	REMARKS
0.011	0.030	MM	100	21	233.3	23.3	
3.848	3.867	MM	100	21	233.3	23.3	
				TOTALS	466.6	46.6	
				USE	467	47	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	QUANTITY	.10 GAL/SY TACK COAT	
FROM	T0	ROUTE	(FT)	(FT)	(SY)	(GAL)	REMARKS
0.000	0.011	MM	58.08	VAR	312.8	31.3	
				TOTALS	312.8	31.3	
				USE	313	31	

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.^{2})	DESCRIPTION
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	14	224	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	8	128	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	4	64	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	4	64	NO CENTER LINE
36	WO8-11	48 X 48	16	8	128	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	4	6	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					751.38	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	752	USE
				ITEM NO. 616-10.25	40	CHANNELIZERS (TRIM-LINE)
				TOTAL ROUTE MM		
				616-99.01	**1**	**LS**
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Changeable Message Signs (CMS), Mobilization, and Contractor Furnished Surveying and Staking are as follows. Provide two CMS on the route currently under construction and two CMS on the route that is next in the construction sequence per Section 4.1 of the Work Zone Traffic Management JSP.

ITEM NO.	QTY.	DESCRIPTION
616-10.99	4 EACH	CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
APPROX. LOG MILE			LENGTH	4" SOLID YELLOW	4" SOLID	
FROM	T0	ROUTE	(FT)	(FT)	WHITE (FT)	REMARKS
0.000	3.867	MM	20417.76	40835.52	40835.52	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	40,836	40,836	ADJUST PAINT TO EXISTING
			USE	40,836	40,836	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

PREFORMED THERMOPLASTIC PAVEMENT MARKING				
APPROX. LOG MILE	ROUTE	LENGTH (FT)	24" SOLID WHITE (FT)	REMARKS
0.005	MM	-	16	STOP BAR
		TOTALS	16	
		USE	16	
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.				

6.0 Permanent Aggregate Edge Treatment. Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE			LENGTH	AGGR 200 TON/MI	PRIME MC800 590 GAL/MI	
FROM	T0	ROUTE	(MI)	(TON)	(GAL)	REMARKS
0.011	3.867	MM	3.856	771.2	2275.0	
			TOTALS	771.2	2275.0	
			USE	771.2	2,276	

7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	36	9	198	GRAVEL (A) OR CRUSHED STONE (B)

I. Project Details and Quantities – Route TT (McDonald)

1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 2.244. The total length of pavement limits are 2.244 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

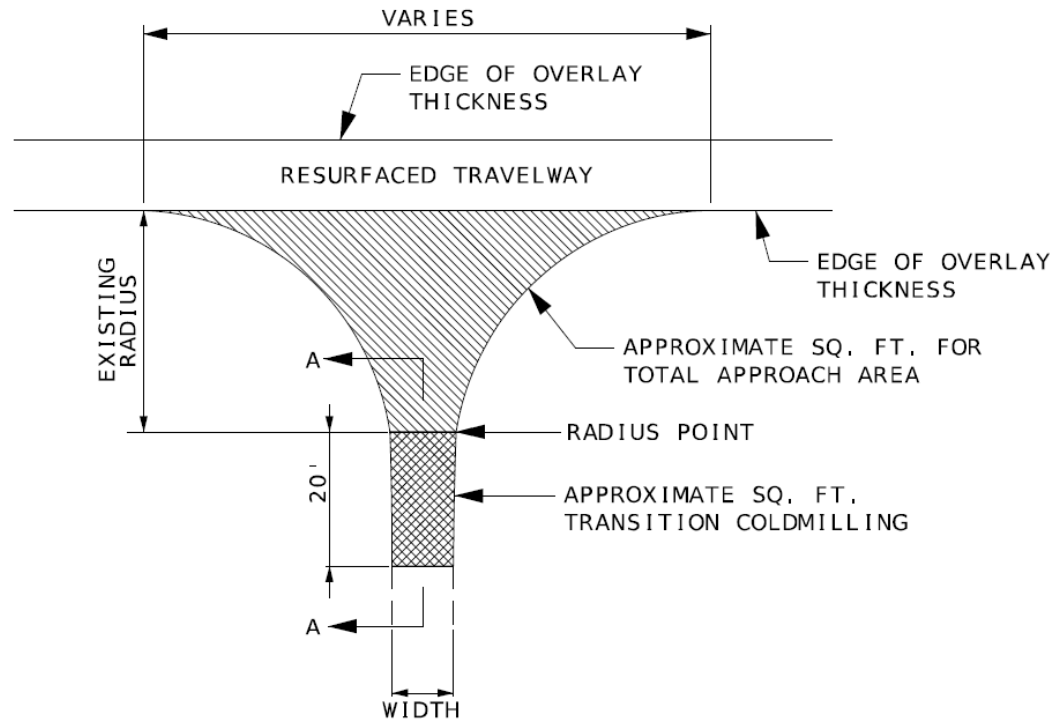
NONE

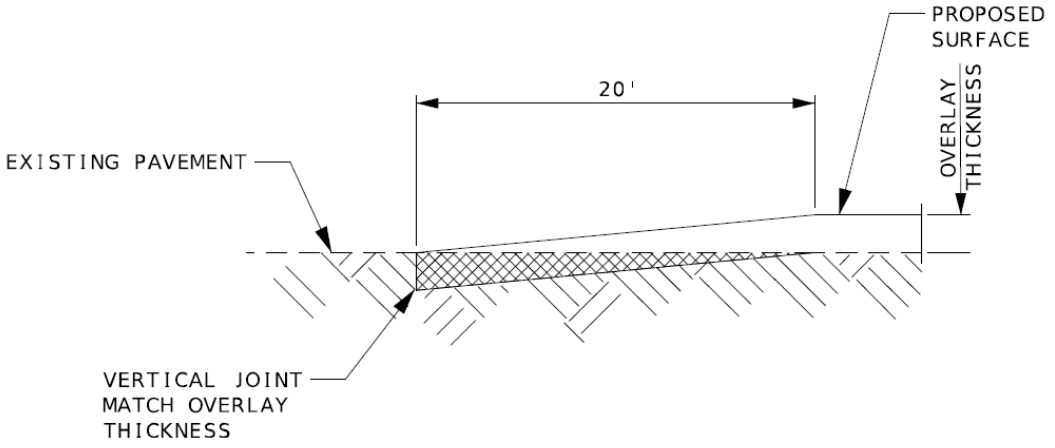
2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface Leveling PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd^2 the entire width of the traveled way for the length of the pavement limits, except that tack coat shall be applied at the rate of 0.10 gal/yd^2 in coldmilled areas. Include safety edge per Std. Plan 401.00.

2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, depth transitions shall be coldmilled at the rate of 1" in 100'.

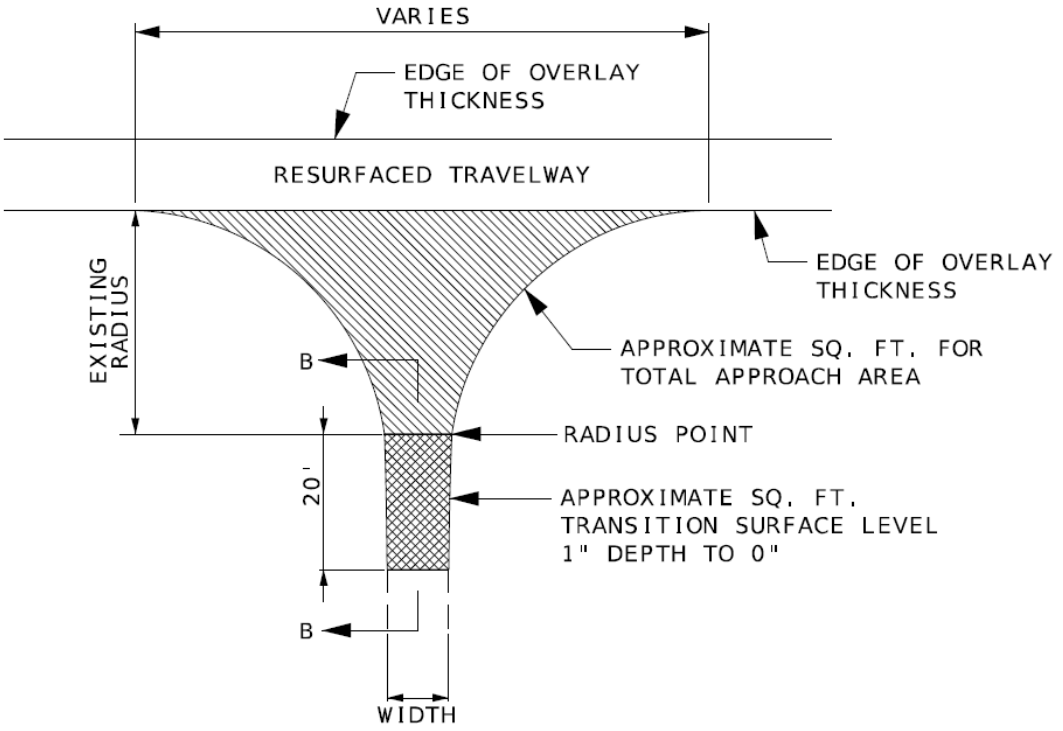
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

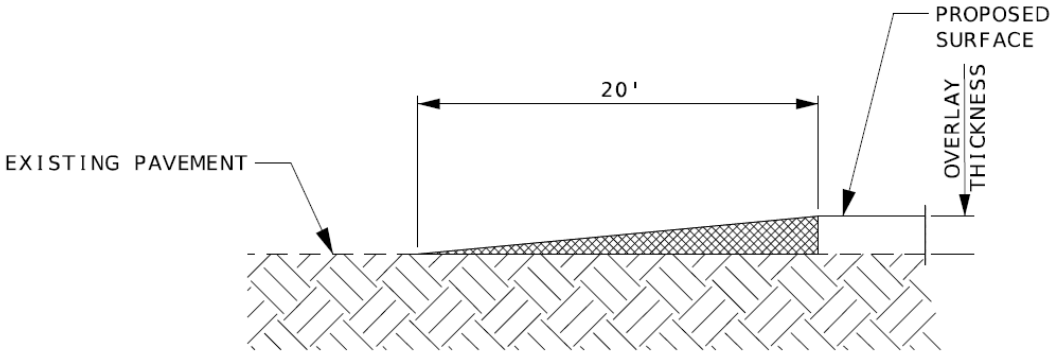




SECTION A-A

TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

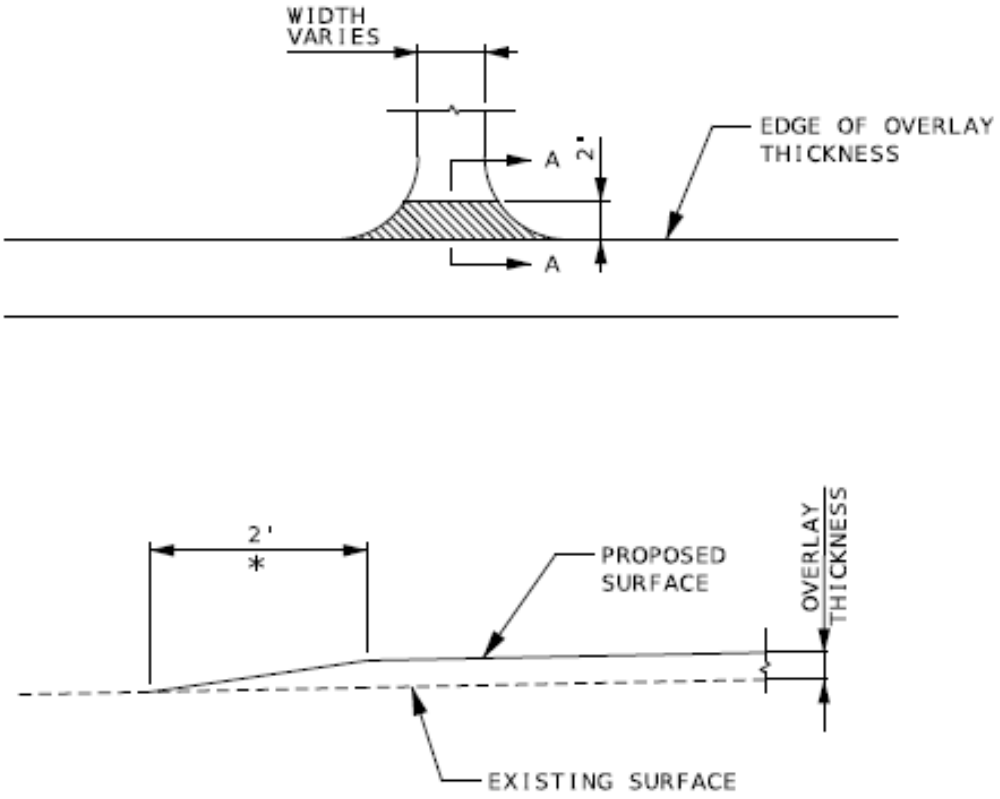




SECTION B-B

TYPICAL STATE ROUTE JUNCTION
(COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).

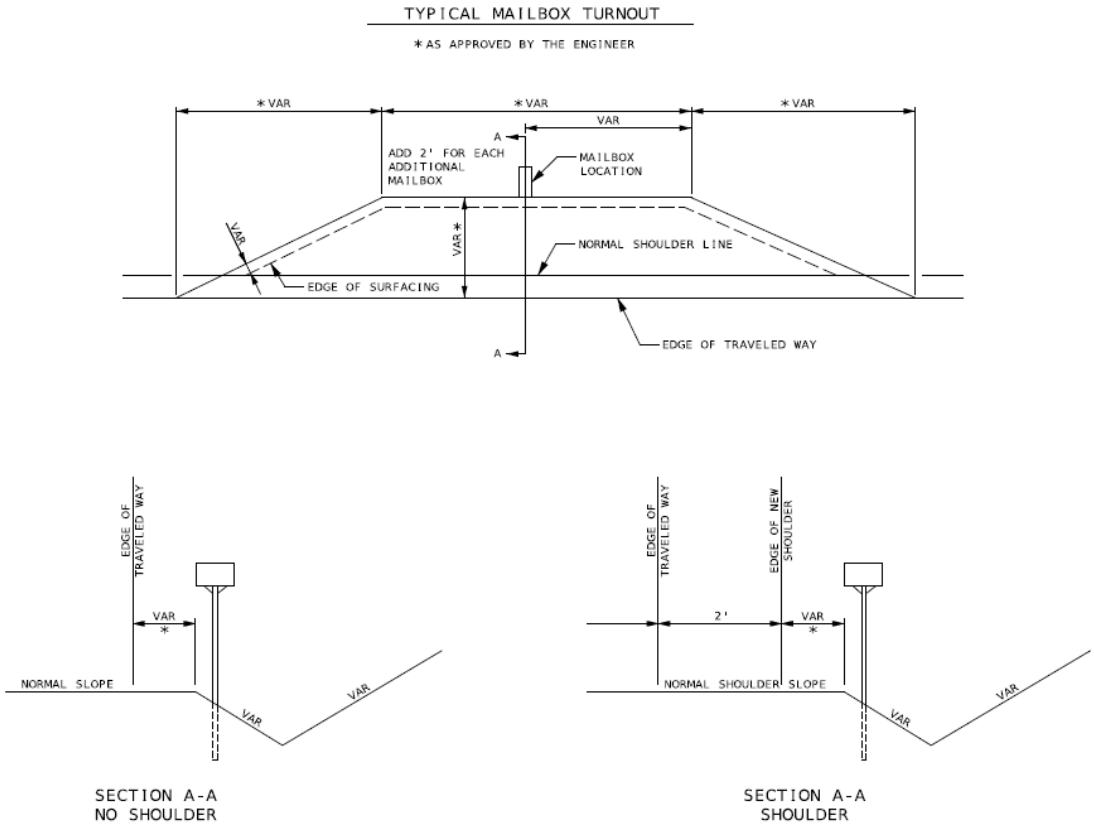


SECTION A-A

TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.



3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	1.985 TON/CY QUANTITY	.08 GAL/SY TACK COAT	
FROM	T0	ROUTE	(MI)	(FT)	(TONS)	(GAL)	REMARKS
0.000	2.200	TT	2.200	20	1451.78	2065.1	Route TT Start
2.200	2.219	TT	0.019	20	12.54	-	Tack Paid with Modified Coldmill
2.219	2.244	TT	0.025	VAR	23.96	-	Route TT End - Tack Paid w/ Coldmill
0.000	2.244	TT	2.244		224.40		100 TONS/MILE IRREGULARITIES
0.000	2.244	TT	2.244		8.55	13.6	MAILBOX TURNOUTS / ENTRANCES
				TOTALS	1721.23	2078.6	ASSUMES 30' ENTRANCE WIDTHS.
				USE	1721.2	2079	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	QUANTITY	.10 GAL/SY TACK COAT	
FROM	T0	ROUTE	(FT)	(FT)	(SY)	(GAL)	REMARKS
2.200	2.219	TT	100	20	222.2	22.2	
				TOTALS	222.2	22.2	
				USE	222	22	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	QUANTITY	.10 GAL/SY TACK COAT	
FROM	T0	ROUTE	(FT)	(FT)	(SY)	(GAL)	REMARKS
2.219	2.244	TT	132	VAR	426.0	42.6	
				TOTALS	426.0	42.6	
				USE	426	43	

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA (FT.^{2})	DESCRIPTION
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	10	160	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	8	128	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	4	64	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	4	64	NO CENTER LINE
36	WO8-11	48 X 48	16	6	96	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	4	6	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					655.38	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	656	USE
				ITEM NO. 616-10.25	40	CHANNELIZERS (TRIM-LINE)
				TOTAL ROUTE TT		
				616-99.01	**1**	**LS**
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Changeable Message Signs (CMS), Mobilization, and Contractor Furnished Surveying and Staking are as follows. Provide two CMS on the route currently under construction and two CMS on the route that is next in the construction sequence per Section 4.1 of the Work Zone Traffic Management JSP.

ITEM NO.	QTY.	DESCRIPTION
616-10.99	4 EACH	CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
APPROX. LOG MILE			LENGTH	4" SOLID YELLOW	4" SOLID	
FROM	T0	ROUTE	(FT)	(FT)	WHITE (FT)	REMARKS
0.000	2.244	TT	11848.32	23696.64	23696.64	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	23,697	23,697	ADJUST PAINT TO EXISTING
			USE	23,697	23,697	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

PREFORMED THERMOPLASTIC PAVEMENT MARKING				
APPROX. LOG MILE	ROUTE	LENGTH (FT)	24" SOLID WHITE (FT)	REMARKS
2.219	TT	-	14	STOP BAR
		TOTALS	14	
		USE	14	
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.				

6.0 Permanent Aggregate Edge Treatment. Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE			LENGTH	AGGR 200 TON/MI	PRIME MC800 590 GAL/MI	
FROM	T0	ROUTE	(MI)	(TON)	(GAL)	REMARKS
0.000	2.219	TT	2.219	443.8	1309.2	
			TOTALS	443.8	1309.2	
			USE	443.8	1,310	

7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	10	2	52	GRAVEL (A) OR CRUSHED STONE (B)

J. Project Details and Quantities – Route AA (Newton)

1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 4.009. The total length of pavement limits are 4.009 miles with a total average width of 21 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

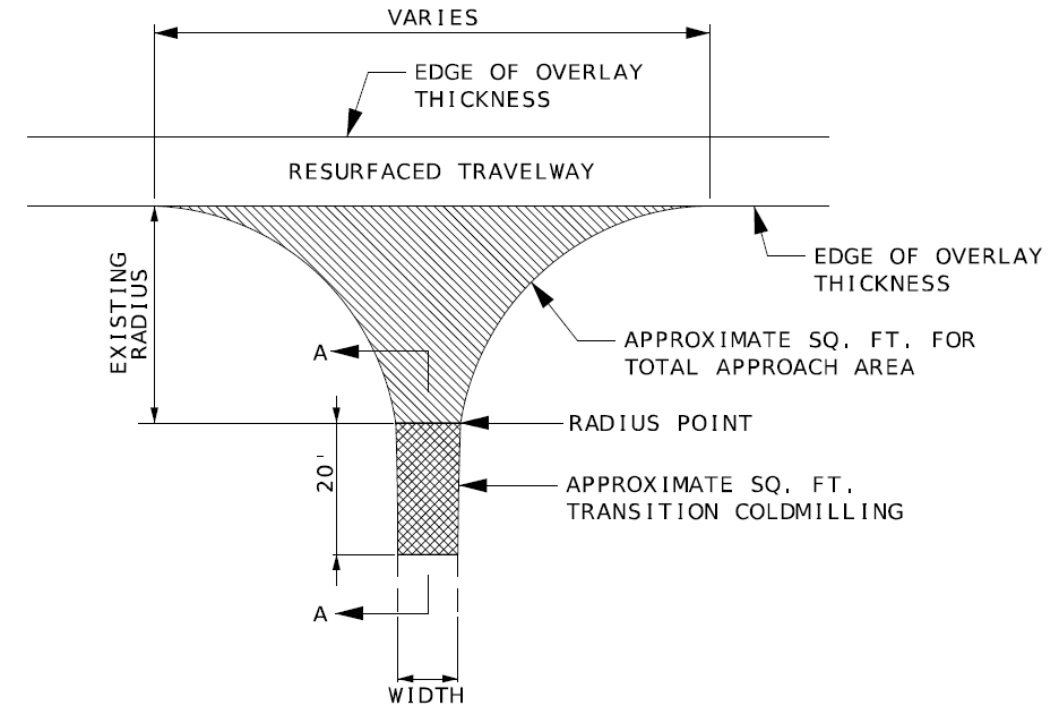
NONE

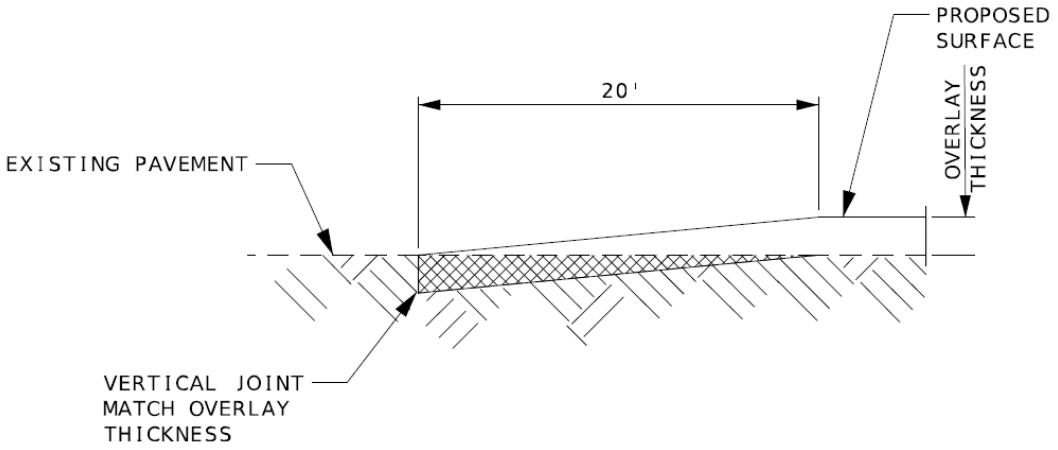
2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface Leveling PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd^2 the entire width of the traveled way for the length of the pavement limits, except that tack coat shall be applied at the rate of 0.10 gal/yd^2 in coldmilled areas. Include safety edge per Std. Plan 401.00.

2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, depth transitions shall be coldmilled at the rate of 1" in 100'.

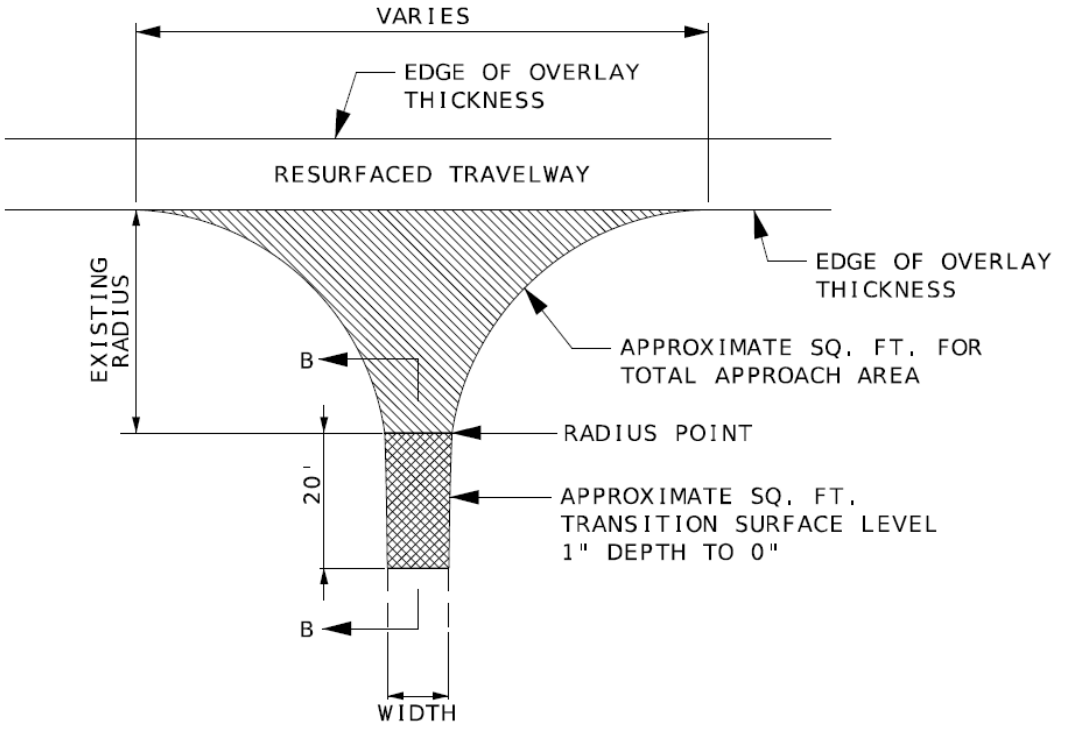
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).

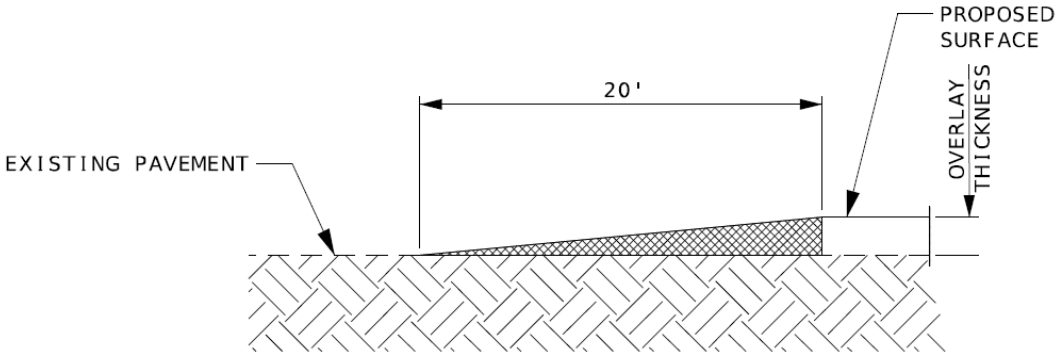




SECTION A-A

TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

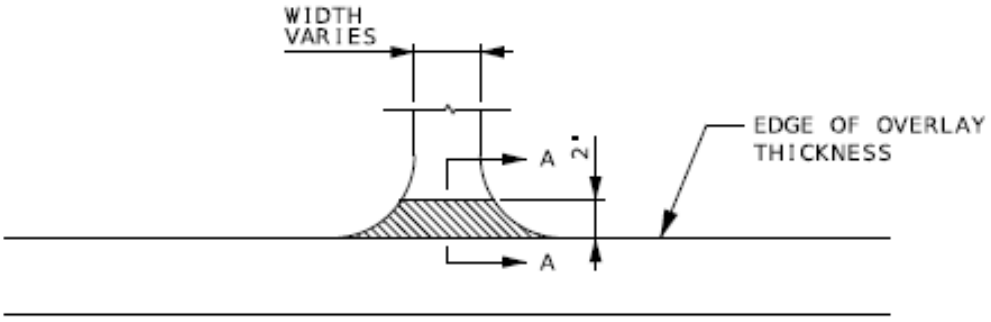


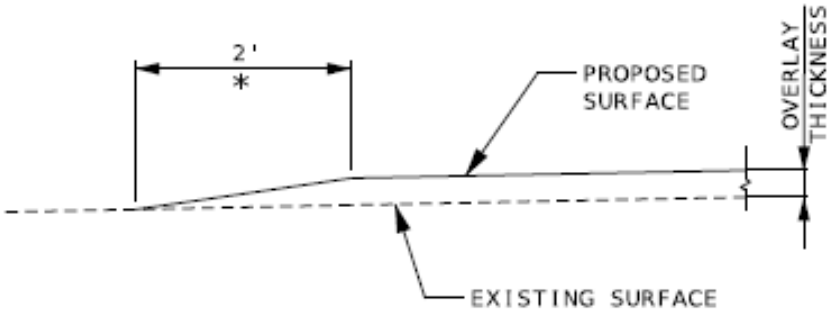


SECTION B-B

TYPICAL STATE ROUTE JUNCTION
(COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).





SECTION A-A

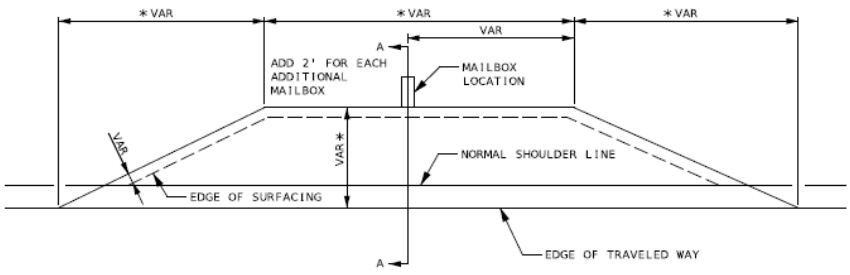
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

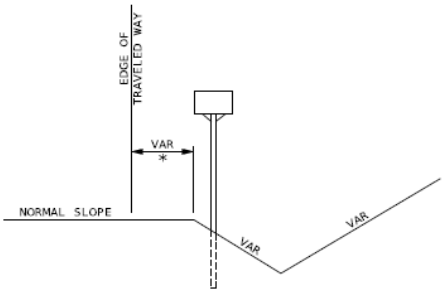
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

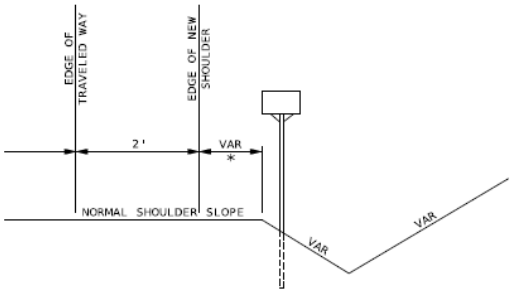
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	1.985 TON/CY QUANTITY	.08 GAL/SY TACK COAT	
FROM	T0	ROUTE	(MI)	(FT)	(TONS)	(GAL)	REMARKS
0.000	0.019	AA - N	0.019	21	13.17	-	Route AA Start Tack Paid with Modified Coldmill
0.019	3.643	AA - N	3.624	21	2511.06	3571.8	
3.643	3.811	AA - N	0.168	40	221.73	315.4	Shoulder Section
3.811	3.830	AA - N	0.019	40	25.08	-	Shoulder Section Tack Paid with Modified Coldmill
0.000	3.830	AA - N	3.830		383.00		100 TONS/MILE IRREGULARITIES
0.000	3.830	AA - N	3.830		8.85	13.6	MAILBOX TURNOUTS / ENTRANCES
				TOTALS	3,162.88	3900.8	ASSUMES 30' ENTRANCE WIDTHS.
				USE	3,162.9	3901	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	QUANTITY	.10 GAL/SY TACK COAT	
FROM	T0	ROUTE	(FT)	(FT)	(SY)	(GAL)	REMARKS
0.000	0.019	AA - N	100	21	233.3	23.3	
3.811	3.830	AA - N	100	40	444.4	44.4	
				TOTALS	677.7	67.7	
				USE	678	68	

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA ($FT.^2$)	DESCRIPTION
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	13	208	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	8	128	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	4	64	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	6	96	NO CENTER LINE
36	WO8-11	48 X 48	16	10	160	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	1	8.75	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	3	4.5	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					806.63	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	807	USE
				ITEM NO. 616-10.25	40	CHANNELIZERS (TRIM-LINE)
				TOTAL ROUTE AA(Newton)		
				616-99.01	**1**	**LS**
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Changeable Message Signs (CMS), Mobilization, and Contractor Furnished Surveying and Staking are as follows. Provide two CMS on the route currently under construction and two CMS on the route that is next in the construction sequence per Section 4.1 of the Work Zone Traffic Management JSP.

ITEM NO.	QTY.	DESCRIPTION
616-10.99	4 EACH	CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
APPROX. LOG MILE			LENGTH	4" SOLID YELLOW	4" SOLID	
FROM	T0	ROUTE	(FT)	(FT)	WHITE (FT)	REMARKS
0.000	4.009	AA - N	21167.52	42335.04	42335.04	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	42,335	42,335	ADJUST PAINT TO EXISTING
			USE	42,335	42,335	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

6.0 Permanent Aggregate Edge Treatment. Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE			LENGTH	AGGR 200 TON/MI	PRIME MC800 590 GAL/MI	
FROM	T0	ROUTE	(MI)	(TON)	(GAL)	REMARKS
0.000	3.830	AA - N	3.83	766.0	2259.7	
			TOTALS	766.0	2259.7	
			USE	766.0	2,260	

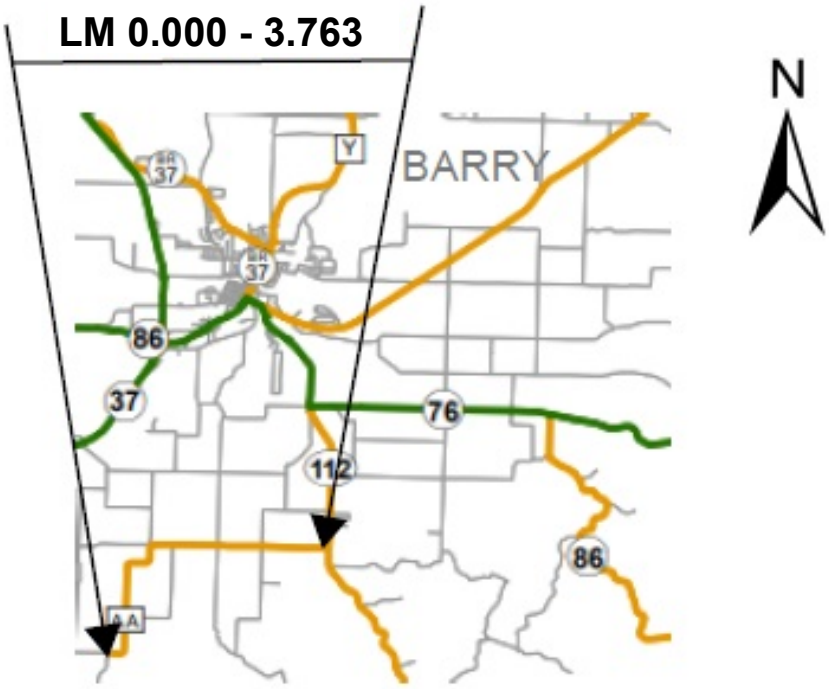
7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	51	3	222	GRAVEL (A) OR CRUSHED STONE (B)

K. Project Details and Quantities – Route AA (Barry)

1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 3.763. The total length of pavement limits are 3.763 miles with a total average width of 21 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

NONE

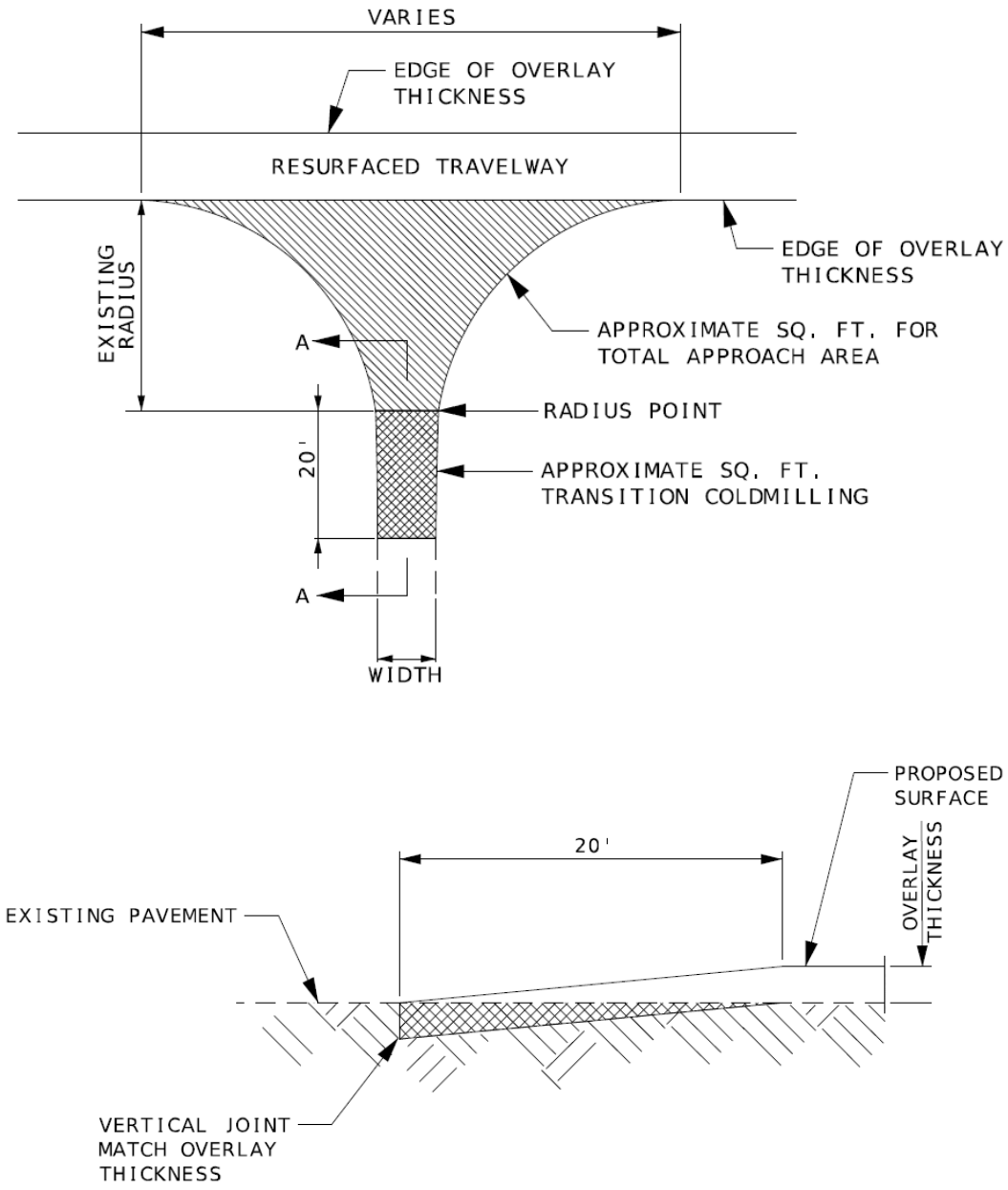


2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface Leveling PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd^2 the entire width of the traveled way for the length of the pavement limits, except that tack coat shall be applied at the rate of 0.10 gal/yd^2 in coldmilled areas. Include safety edge per Std. Plan 401.00.

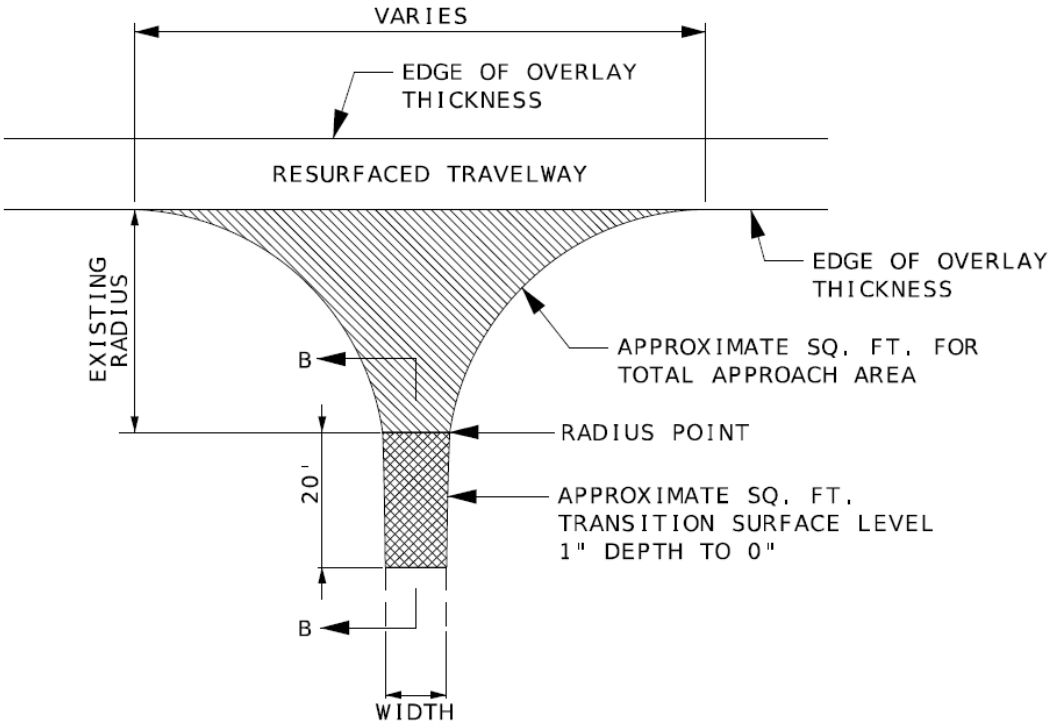
2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, depth transitions shall be coldmilled at the rate of 1" in 100'.

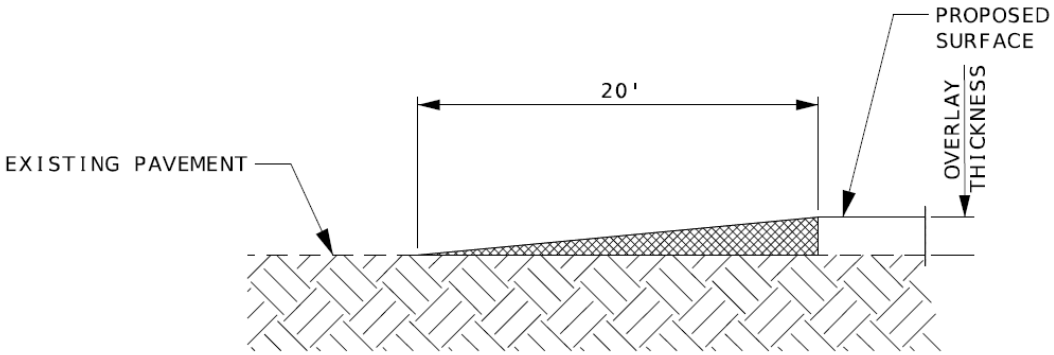
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).



SECTION A-A

TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

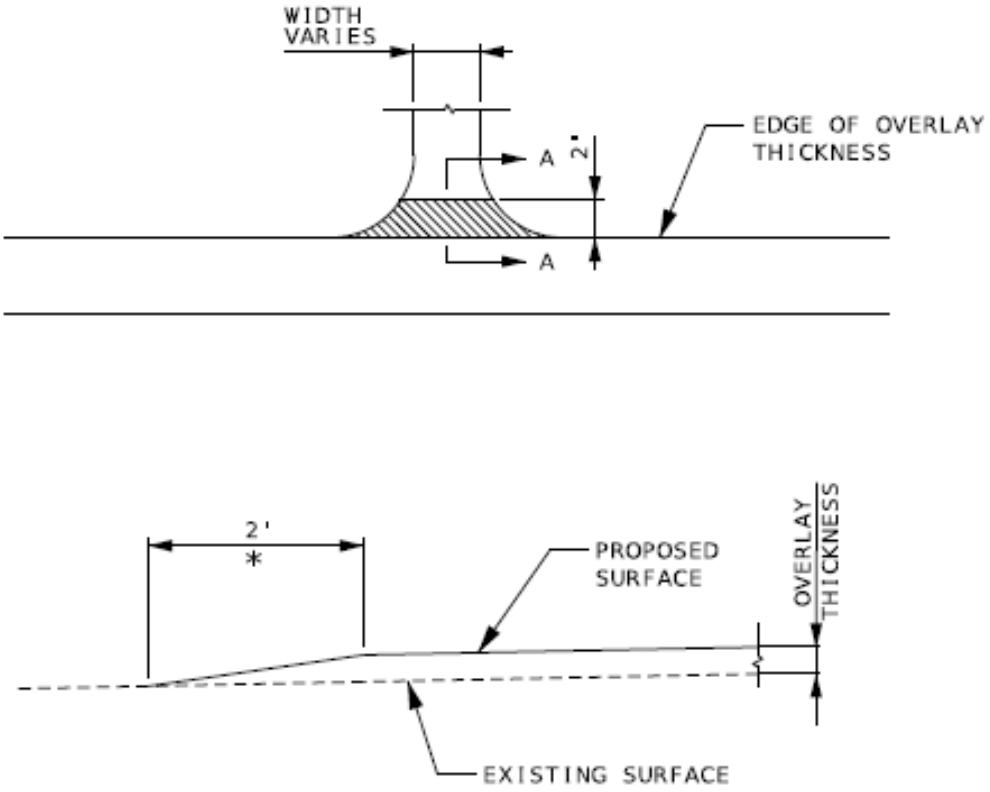




SECTION B-B

TYPICAL STATE ROUTE JUNCTION
(COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).



SECTION A-A

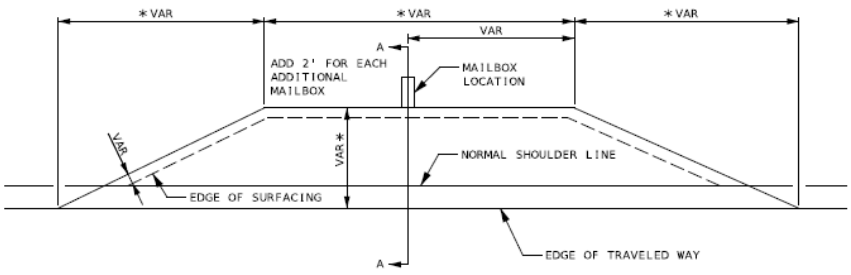
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

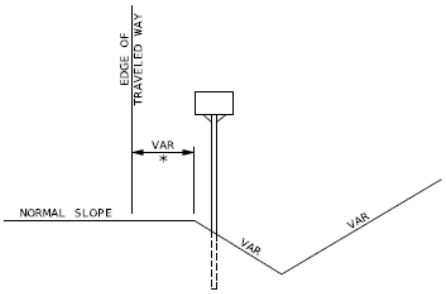
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

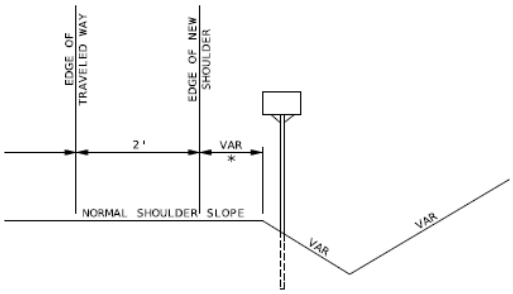
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	T0						
0.000	0.019	AA - B	0.019	21	13.17	-	Route AA Start Tack Paid with Modified Coldmill
0.019	3.732	AA - B	3.713	21	2572.73	3659.5	-
3.732	3.751	AA - B	0.019	21	13.17	-	Tack Paid with Modified Coldmill
3.751	3.763	AA - B	0.012	VAR	21.76	-	Route AA End - Tack Paid w/ Coldmill
0.000	3.763	AA - B	3.763		376.30		100 TONS/MILE IRREGULARITIES
0.000	3.763	AA - B	3.763		2.35	3.8	MAILBOX TURNOUTS / ENTRANCES
				TOTALS	2,999.47	3663.4	ASSUMES 30' ENTRANCE WIDTHS.
				USE	2,999.5	3663	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	T0						
0.000	0.019	AA-B	100	21	233.3	23.3	
3.732	3.751	AA-B	100	21	233.3	23.3	
				TOTALS	466.6	46.6	
				USE	467	47	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	T0						
3.751	3.763	AA - B	63.36	VAR	386.9	38.7	
				TOTALS	386.9	38.7	
				USE	387	39	

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA ($FT.^2$)	DESCRIPTION
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	13	208	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	9	144	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	5	80	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	4	64	NO CENTER LINE
36	WO8-11	48 X 48	16	8	128	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	5	7.5	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					768.88	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	769	USE
				ITEM NO. 616-10.25	40	CHANNELIZERS (TRIM-LINE)
				TOTAL ROUTE AA(Barry)		
				616-99.01	**1**	**LS**
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Changeable Message Signs (CMS), Mobilization, and Contractor Furnished Surveying and Staking are as follows. Provide two CMS on the route currently under construction and two CMS on the route that is next in the construction sequence per Section 4.1 of the Work Zone Traffic Management JSP.

ITEM NO.	QTY.	DESCRIPTION
616-10.99	4 EACH	CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
APPROX. LOG MILE			LENGTH	4" SOLID YELLOW	4" SOLID	
FROM	T0	ROUTE	(FT)	(FT)	WHITE (FT)	REMARKS
0.000	3.763	AA - B	19868.64	39737.28	39737.28	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	39,737	39,737	ADJUST PAINT TO EXISTING
			USE	39,737	39,737	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

6.0 Permanent Aggregate Edge Treatment. Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE			LENGTH	AGGR 200 TON/MI	PRIME MC800 590 GAL/MI	
FROM	T0	ROUTE	(MI)	(TON)	(GAL)	REMARKS
0.000	3.751	AA - B	3.751	750.2	2213.1	
			TOTALS	750.2	2213.1	
			USE	750.2	2,214	

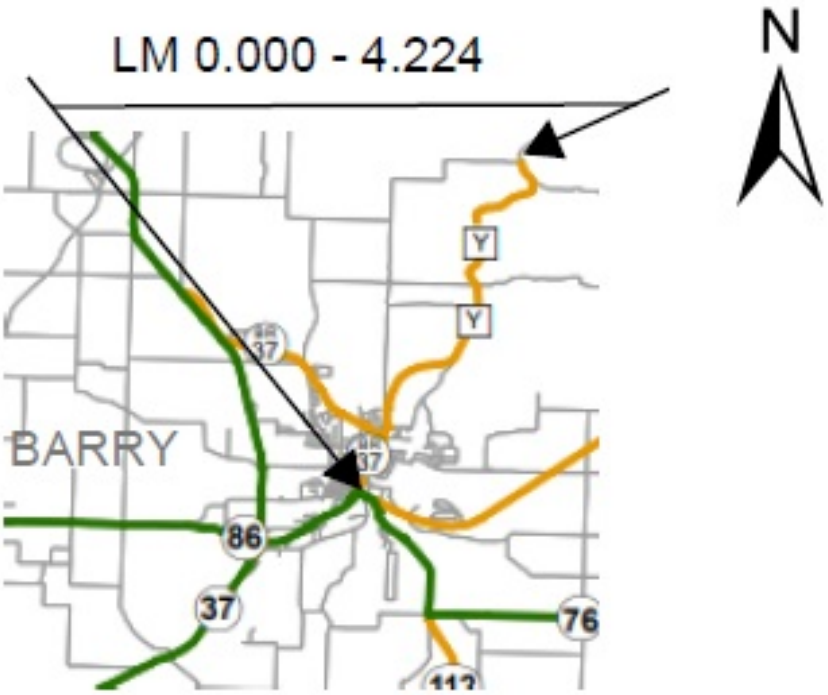
7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	25	1	106	GRAVEL (A) OR CRUSHED STONE (B)

L. Project Details and Quantities – Route Y (Barry)

1.0 Description. This project consists of applying a plant mix bituminous pavement (surface leveling) as described here in. The project limits are from Log Mile 0.000 to 4.224. The total length of pavement limits are 4.224 miles with a total average width of 20 feet. Lane width noted is typical lane width. Adjust paving widths to existing field conditions. Pavement will not be placed at the following exception locations listed below:

NONE

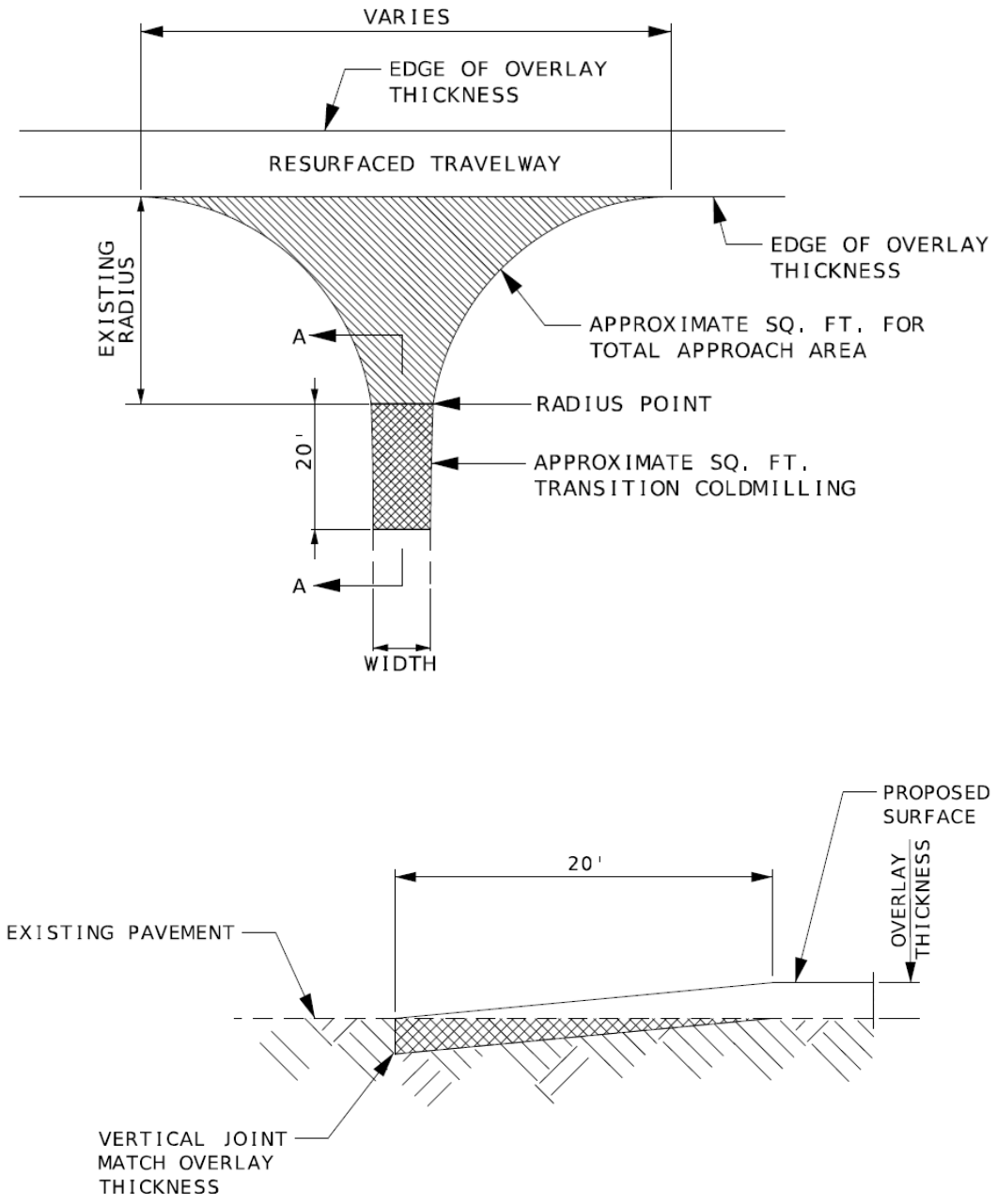


2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface Leveling PG 64-22 pavement shall be placed the entire width of the lanes, one pass per lane with no superelevation correction. Tack coat shall be applied at the rate of 0.08 gal/yd^2 the entire width of the traveled way for the length of the pavement limits, except that tack coat shall be applied at the rate of 0.10 gal/yd^2 in coldmilled areas. Include safety edge per Std. Plan 401.00.

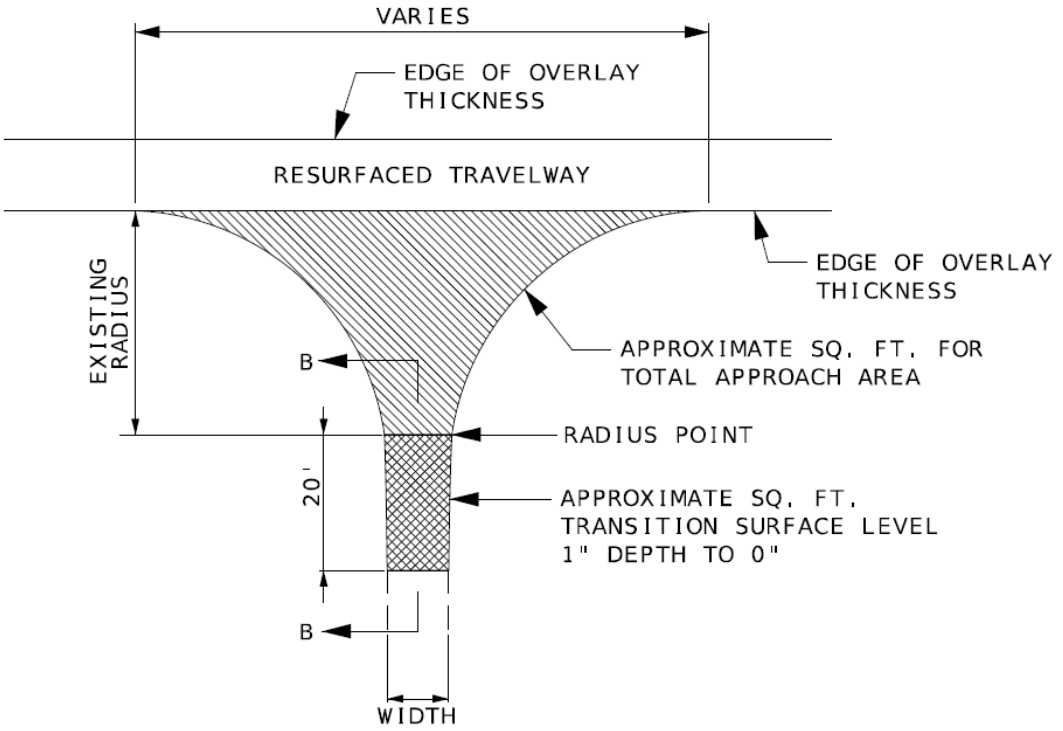
2.2 Depth transitions when beginning and ending at a state route shall be coldmilled at the rate of 1" in 100'. When beginning or ending mid-route, including exceptions, depth transitions shall be coldmilled at the rate of 1" in 100'.

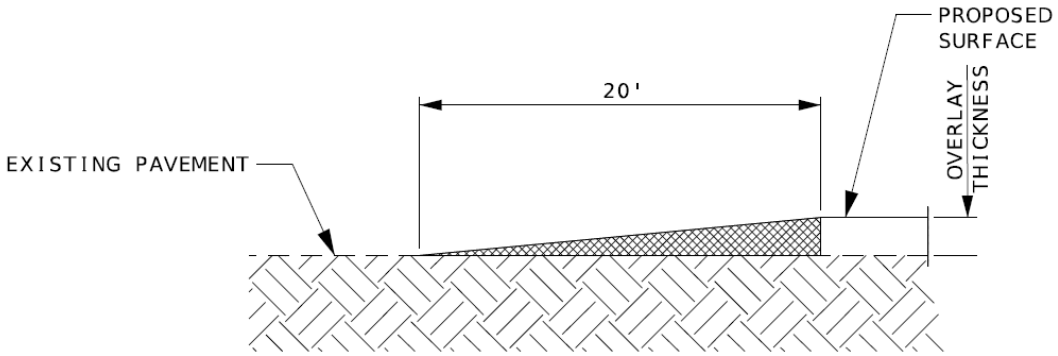
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).



SECTION A-A

TYPICAL STATE ROUTE JUNCTION
(COLDMILLED TRANSITION)

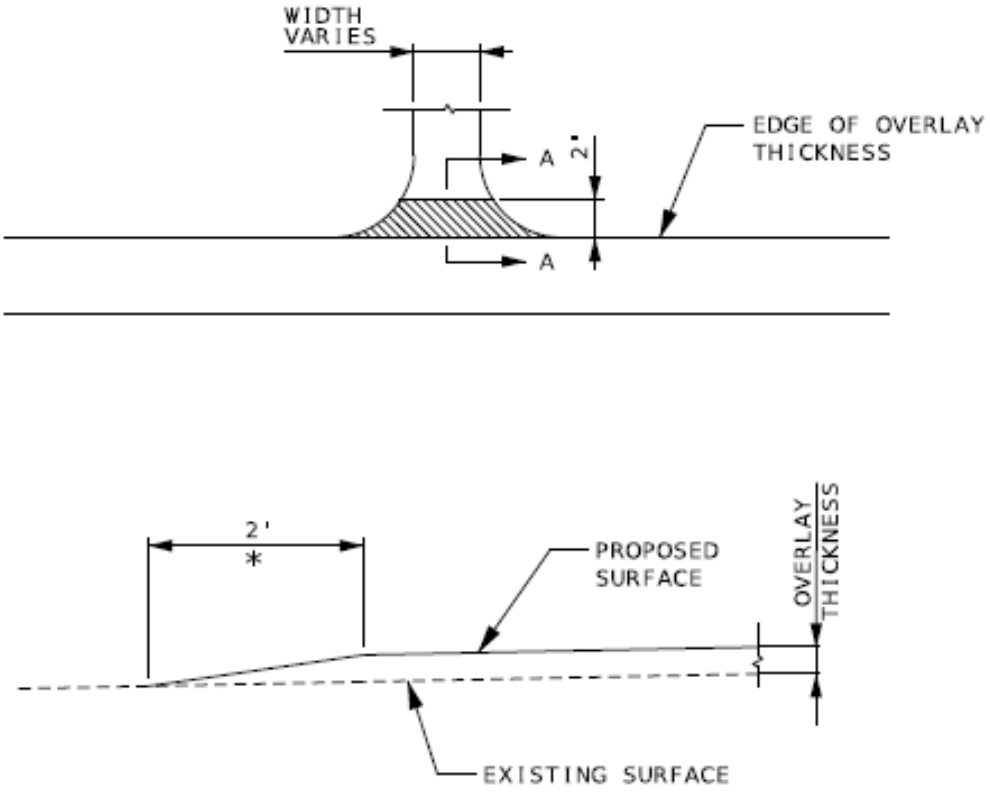




SECTION B-B

TYPICAL STATE ROUTE JUNCTION
(COLD MIX ROUTE TRANSITION)

2.4 The bituminous pavement shall be tapered at entrances and non-state routes (see pavement taper details below).



SECTION A-A

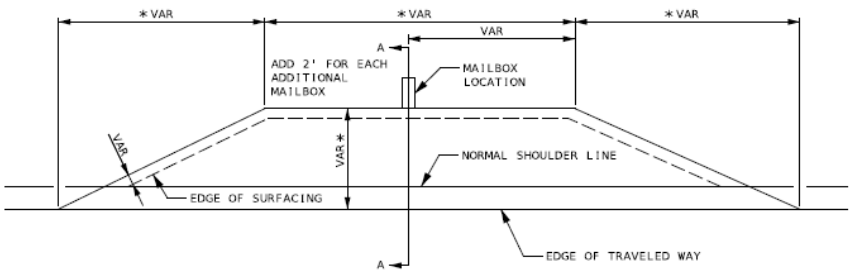
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

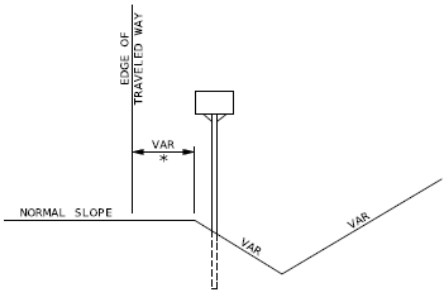
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

NOTE: MAILBOX TURNOUT QUANTITIES BASED ON 2' WIDTH AND 15' LENGTH. ADD 2' IN LENGTH PER ADDITIONAL MAILBOX AT SAME LOCATION, AS APPROVED BY THE ENGINEER.

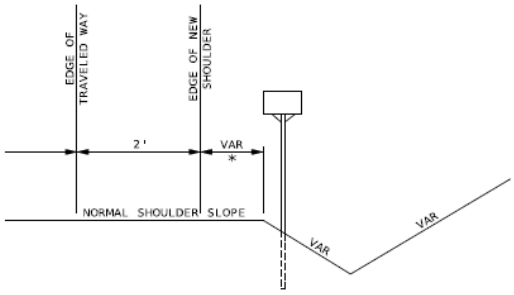
TYPICAL MAILBOX TURNOUT

*AS APPROVED BY THE ENGINEER





SECTION A-A
NO SHOULDER



SECTION A-A
SHOULDER

3.0 Pavement and Coldmilling Quantities.

3.1 Pavement quantities are as follows:

BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE		ROUTE	LENGTH (MI)	AVERAGE WIDTH (FT)	1.985 TON/CY QUANTITY (TONS)	.08 GAL/SY TACK COAT (GAL)	REMARKS
FROM	T0						
0.000	0.019	Y	0.019	20	12.54	-	Route Y Start Tack Paid with Modified Coldmilling
0.019	3.812	Y	3.793	20	2503.01	3560.4	
3.812	3.831	Y	0.019	20	12.54	-	Tack Paid w/ Modified Coldmilling
3.831	4.193	Y	0.362	20	238.88	-	Tack Paid with Coldmilling
4.193	4.224	Y	0.031	VAR	38.58	-	Route Y End - Tack Paid w/ Coldmilling
0.000	4.224	Y	4.224		422.40		100 TONS/MILE IRREGULARITIES
0.000	4.224	Y	4.224		2.56	4.1	MAILBOX TURNOUTS / ENTRANCES
				TOTALS	3,230.51	3564.5	ASSUMES 30' ENTRANCE WIDTHS.
				USE	3,230.5	3565	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	T0						
0.000	0.019	Y	100	20	222.2	22.2	
3.812	3.831	Y	100	20	222.2	22.2	
				TOTALS	444.4	44.4	
				USE	444	44	

COLDMILLING (3 IN. THICK OR LESS)							
APPROX. LOG MILE		ROUTE	LENGTH (FT)	AVERAGE WIDTH (FT)	QUANTITY (SY)	.10 GAL/SY TACK COAT (GAL)	REMARKS
FROM	T0						
3.831	4.193	Y	1911.36	20	4247.5	424.7	
4.193	4.224	Y	163.68	VAR	686.0	68.6	
				TOTALS	4,933.5	493.3	
				USE	4,933	493	

4.0 Temporary Traffic Control Plans. See Standard Plans 616.20 for standard temporary traffic control requirements.

4.1 Construction signs and channelizers are as follows:

CONSTRUCTION SIGNING AND CHANNELIZERS						
SIGN NO.	SIGN	SIZE (in.)	AREA (FT.2)	QTY.	TOTAL AREA ($FT.^2$)	DESCRIPTION
1*	GO20-1	60 X 24	10	2	20	ROAD WORK NEXT XX MILES & XX MILES
2**	WO20-1	48 X 48	16	14	224	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	7	112	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	3	48	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	6	96	NO CENTER LINE
36	WO8-11	48 X 48	16	10	160	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
58	GO20-4a	42 X 30	8.75	0	0	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	3	4.5	PILOT CAR IN USE WAIT & FOLLOW
59	CONST-8	48 X 36	12	2	24	WORK ZONE NO PHONE ZONE
	GO22-1	21 X 15	2.19	2	4.38	WET PAINT (ARROW PIVOTS)
					781.88	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	782	USE
				ITEM NO. 616-10.25	40	CHANNELIZERS (TRIM-LINE)
				TOTAL ROUTE Y		
				616-99.01	**1**	**LS**
* - IF LESS THAN TWO (2) MILES, DELETE SIGN NO. 1.						
** - ADDITIONAL SIGN NO. 2 USED AS SHOWN ON TRAFFIC CONTROL SHEET 3 OF 5 AND AS DIRECTED BY THE ENGINEER.						
REFER TO STANDARD PLANS 616.10 AND 903.03 FOR SIGN AND SIGN MOUNTING REQUIREMENTS.						

4.2 Changeable Message Signs (CMS), Mobilization, and Contractor Furnished Surveying and Staking are as follows. Provide two CMS on the route currently under construction and two CMS on the route that is next in the construction sequence per Section 4.1 of the Work Zone Traffic Management JSP.

ITEM NO.	QTY.	DESCRIPTION
616-10.99	4 EACH	CHANGEABLE MESSAGE SIGN WITH COMMUNICATION INTERFACE, CONTRACTOR FURNISHED, CONTRACTOR RETAINED
618-10.00	LUMP SUM	MOBILIZATION
627-40.00	LUMP SUM	CONTRACTOR FURNISHED SURVEYING AND STAKING

5.0 Pavement Marking. Pavement marking quantities are as follows:

STANDARD WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS						
APPROX. LOG MILE			LENGTH	4" SOLID YELLOW	4" SOLID WHITE	
FROM	T0	ROUTE	(FT)	(FT)	(FT)	REMARKS
0.000	4.224	Y	22302.72	44605.44	44605.44	
						ASSUMES SOLID DOUBLE YELLOW
			TOTALS	44,605	44,605	ADJUST PAINT TO EXISTING
			USE	44,605	44,605	FIELD CONDITIONS.
NOTE: TEMPORARY AND PERMANENT PAVEMENT MARKING SHALL BE IN ACCORDANCE WITH 620.10.						

6.0 Permanent Aggregate Edge Treatment. Permanent aggregate edge treatment quantities are as follows:

PERMANENT AGGREGATE EDGE TREATMENT						
APPROX. LOG MILE			LENGTH	AGGR 200 TON/MI	PRIME MC800 590 GAL/MI	
FROM	T0	ROUTE	(MI)	(TON)	(GAL)	REMARKS
0.000	3.831	Y	3.831	766.2	2260.3	
			TOTALS	766.2	2260.3	
			USE	766.2	2,261	

7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

GRAVEL (A) OR CRUSHED STONE (B)				
ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	13	0	52	GRAVEL (A) OR CRUSHED STONE (B)

M. Supplemental Revisions JSP-18-01CC

Compliance with 2 CFR 200.216 – Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment.

The Missouri Highways and Transportation Commission shall not enter into a contract (or extend or renew a contract) using federal funds to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as substantial or as critical technology as part of any system where the video surveillance and telecommunications equipment was produced by Huawei Technologies Company, ZTE Corporation, Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

Stormwater Compliance Requirements

1.0 Description. This provision requires the contractor to provide a Water Pollution Control Manager (WPCM) for any project that includes land disturbance on the project site and the total area of land disturbance, both on the project site, and all Off-site support areas, is one (1) acre or more. Regardless of the area of Off-site disturbance, if no land disturbance occurs on the project site, these provisions do not apply. When a WPCM is required, all sections within this provision shall be applicable, including assessment of specified Liquidated Damages for failure to correct Stormwater Deficiencies, as specified herein. This provision is in addition to any other stormwater, environmental, and land disturbance requirements specified elsewhere in the contract.

1.1 Definitions. The project site is defined as all areas designated on the plans, including temporary and permanent easements. The project site is equivalent to the "permitted site", as defined in MoDOT's State Operating Permit. An Off-site area is defined as any location off the project site the contractor utilizes for a dedicated project support function, such as, but not limited to, staging area, plant site, borrow area, or waste area.

1.2 Reporting of Off-Site Land Disturbance. If the project includes any planned land disturbance on the project site, prior to the start of work, the contractor shall submit a written report to the engineer that discloses all Off-site support areas where land disturbance is planned, the total acreage of anticipated land disturbance on those sites, and the land disturbance permit number(s). Upon request by the engineer, the contractor shall submit a copy of its land disturbance permit(s) for Off-site locations. Based on the total acreage of land disturbance, both on and Off-site, the engineer shall determine if these Stormwater Compliance Requirements shall apply. The Contractor shall immediately report any changes to the planned area of Off-site land disturbance. The Contractor is responsible for obtaining its own separate land disturbance permit for Off-site areas.

2.0 Water Pollution Control Manager (WPCM). The Contractor shall designate a competent person to serve as the Water Pollution Control Manager (WPCM) for projects meeting the description in Section 1.0. The Contractor shall ensure the WPCM completes all duties listed in Section 2.1.

2.1 Duties of the WPCM:

(a) Be familiar with the stormwater requirements including the current MoDOT State Operating Permit for construction stormwater discharges/land disturbance activities; MoDOT's statewide Stormwater Pollution Prevention Plan (SWPPP); the Corps of Engineers Section 404 Permit,

when applicable; the project specific SWPPP, the Project's Erosion & Sediment Control Plan; all applicable special provisions, specifications, and standard drawings; and this provision;

(b) Successfully complete the MoDOT Stormwater Training Course within the last 4 years. The MoDOT Stormwater Training is a free online course available at MoDOT.org;

(c) Attend the Pre-Activity Meeting for Grading and Land Disturbance and all subsequent Weekly Meetings in which grading activities are discussed;

(d) Oversee and ensure all work is performed in accordance with the Project-specific SWPPP and all updates thereto, or as designated by the engineer;

(e) Review the project site for compliance with the Project SWPPP, as needed, from the start of any grading operations until final stabilization is achieved, and take necessary actions to correct any known deficiencies to prevent pollution of the waters of the state or adjacent property owners prior to the engineer's weekly inspections;

(f) Review and acknowledge receipt of each MoDOT Inspection Report (Land Disturbance Inspection Record) for the Project within forty eight (48) hours of receiving the report and ensure that all Stormwater Deficiencies noted on the report are corrected as soon as possible, but no later than stated in Section 5.0.

3.0 Pre-Activity Meeting for Grading/Land Disturbance and Required Hold Point. A Pre-Activity meeting for grading/land disturbance shall be held prior to the start of any land disturbance operations. No land disturbance operations shall commence prior to the Pre-Activity meeting except work necessary to install perimeter controls and entrances. Discussion items at the pre-activity meeting shall include a review of the Project SWPPP, the planned order of grading operations, proposed areas of initial disturbance, identification of all necessary BMPs that shall be installed prior to commencement of grading operations, and any issues relating to compliance with the Stormwater requirements that could arise in the course of construction activity at the project.

3.1 Hold Point. Following the pre-activity meeting for grading/land disturbance and subsequent installation of the initial BMPs identified at the pre-activity meeting, a Hold Point shall occur prior to the start of any land disturbance operations to allow the engineer and WPCM the time needed to perform an on-site review of the installation of the BMPs to ensure compliance with the SWPPP is met. Land disturbance operations shall not begin until authorization is given by the engineer.

4.0 Inspection Reports. Weekly and post run-off inspections will be performed by the engineer and each Inspection Report (Land Disturbance Inspection Record) will be entered into a web-based Stormwater Compliance database. The WPCM will be granted access to this database and shall promptly review all reports, including any noted deficiencies, and shall acknowledge receipt of the report as required in Section 2.1 (f.).

5.0 Stormwater Deficiency Corrections. All stormwater deficiencies identified in the Inspection Report shall be corrected by the contractor within 7 days of the inspection date or any extended period granted by the engineer when weather or field conditions prohibit the corrective work. If the contractor does not initiate corrective measures within 5 calendar days of the inspection date or any extended period granted by the engineer, all work shall cease on the project except for work to correct these deficiencies, unless otherwise allowed by the engineer. All impact costs related to this halting of work, including, but not limited to stand-by time for equipment, shall be borne by the Contractor. Work shall not resume until the engineer approves the corrective work.

5.1 Liquidated Damages. If the Contractor fails to complete the correction of all Stormwater Deficiencies listed on the MoDOT Inspection Report within the specified time limit, the Commission will be damaged in various ways, including but not limited to, potential liability, required mitigation, environmental clean-up, fines, and penalties. These damages are not reasonably capable of being computed or quantified. Therefore, the contractor will be charged with liquidated damages specified in the amount of $2,000 per day for failure to correct one or more of the Stormwater Deficiencies listed on the Inspection Report within the specified time limit. In addition to the stipulated damages, the stoppage of work shall remain in effect until all corrections are complete.

6.0 Basis of Payment. No direct payment will be made for compliance with this provision.

Delete Sec 106.9 in its entirety and substitute the following:

106.9 Buy America Requirements.
Buy America Requirements are waived if the total amount of Federal financial assistance applied to the project, through awards or subawards, is below $500,000.

106.9.1 Buy America Requirements for Iron and Steel.
On all federal-aid projects, the contractor's attention is directed to Title 23 CFR 635.410 *Buy America Requirements*. Where steel or iron products are to be permanently incorporated into the contract work, steel and iron material shall be manufactured, from the initial melting stage through the application of coatings, in the USA except for "minimal use" as described herein. Furthermore, any coating process of the steel or iron shall be performed in the USA. Under a general waiver from FHWA the use of pig iron and processed, pelletized, and reduced iron ore manufactured outside of the USA will be permitted in the domestic manufacturing process for steel or iron material.

106.9.1.1 Buy America Requirements for Iron and Steel for Manufactured items.
A manufactured item will be considered iron and steel if it is "predominantly" iron or steel. Predominantly iron or steel means that the cost of iron or steel content of a product is more than 50 percent of the total cost of all its components.

106.9.2 Any sources other than the USA as defined will be considered foreign. The required domestic manufacturing process shall include formation of ingots and any subsequent process. Coatings shall include any surface finish that protects or adds value to the product.

106.9.3 "Minimal use" of foreign steel, iron or coating processes will be permitted, provided the cost of such products does not exceed 1/10 of one percent (0.1 percent) of the total contract cost or $2,500.00, whichever is greater. If foreign steel, iron, or coating processes are used, invoices to document the cost of the foreign portion, as delivered to the project, shall be provided and the engineer's written approval obtained prior to placing the material in any work.

106.9.4 Buy America requirements include a step certification for all fabrication processes of all steel or iron materials that are accepted per Sec 1000. The AASHTO Product Evaluation and Audit Solutions compliance program verifies that all steel and iron products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and is an acceptable standard per 23 CFR 635.410(d). AASHTO Product Evaluation and Audit Solutions compliant suppliers will not be required to submit step certification documentation with the shipment for some selected steel and iron materials. The AASHTO Product Evaluation and Audit Solutions compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

106.9.4.1 Items designated as Category 1 will consist of steel girders, piling, and reinforcing steel installed on site. Category 1 items require supporting documentation prior to incorporation into the project showing all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements. This includes the Mill Test Report from the original producing steel mill and certifications documenting the manufacturing process for all subsequent fabrication, including coatings. The certification shall include language that certifies the following. That all steel and iron materials permanently incorporated in this project was procured and processed domestically and all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410.

106.9.4.2 Items designated as Category 2 will include all other steel or iron products not in Category 1 and permanently incorporated in the project. Category 2 items shall consist of, but not be limited to items such as fencing, guardrail, signing, lighting and signal supports. The prime contractor is required to submit a material of origin form certification prior to incorporation into the project from the fabricator for each item that the product is domestic. The Certificate of Materials Origin form (link to certificate form) from the fabricator must show all steps of manufacturing, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements and be signed by a fabricator representative. The engineer reserves the right to request additional information and documentation to verify that all Buy America requirements have been satisfied. These documents shall be submitted upon request by the engineer and retained for a period of 3 years after the last reimbursement of the material.

106.9.4.3 Any minor miscellaneous steel or iron items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically. Examples of these items would be bolts for sign posts, anchorage inserts, etc. The certification shall read “I certify that all steel and iron materials permanently incorporated in this project during all manufacturing processes, including coating, as being completed in the United States and in accordance with CFR Title 23 Section 635.410 Buy America Requirements procured and processed domestically in accordance with CFR Title 23 Section 635.410 Buy America Requirements. Any foreign steel used was submitted and accepted under minor usage”. The certification shall be signed by an authorized representative of the prime contractor.

106.9.5 When permitted in the contract, alternate bids may be submitted for foreign steel and iron products. The award of the contract when alternate bids are permitted will be based on the lowest total bid of the contract based on furnishing domestic steel or iron products or 125 percent of the lowest total bid based on furnishing foreign steel or iron products. If foreign steel or iron products are awarded in the contract, domestic steel or iron products may be used; however, payment will be at the contract unit price for foreign steel or iron products.

106.9.6 Buy America Requirements for Construction Materials other than iron and steel materials. Construction materials means articles, materials, or supplies that consist of only one of the items listed. Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material. Upon request by the engineer, the contractor shall submit a domestic certification for all construction materials listed that are incorporated into the project.

(a) Non-ferrous metals
(b) Plastic and Polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables)
(c) Glass (including optic glass)

(d) Fiber optic cable (including drop cable)
(e) Optical fiber
(f) Lumber
(g) Engineered wood
(h) Drywall

106.9.6.1 Minimal Use allowance for Construction Materials other than iron or steel.
"The total value of the non-compliant products is no more than the lesser of $1,000,000 or 5% of total applicable costs for the project." The contractor shall submit to the engineer any non-domestic materials and their total material cost to the engineer. The contractor and the engineer will both track these totals to assure that the minimal usage allowance is not exceeded.

106.9.7 Buy America Requirements for Manufactured Products.
Manufactured products means:

(a) Articles, materials, or supplies that have been:
    (i) Processed into a specific form and shape; or
    (ii) Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.
(b) If an item is classified as an iron or steel product, a construction material, or a section 70917(c) material under § 184.4(e) and the definitions set forth in this section, then it is not a manufactured product. However, an article, material, or supply classified as a manufactured product under § 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or section 70917(c) materials.

106.9.7.1 Manufactured products are exempt from Buy America requirements. To qualify as a manufactured product, items that consist of two or more of the listed construction materials that have been combined together through a manufacturing process, and items that include at least one of the listed materials combined with a material that is not listed through a manufacturing process, should be treated as manufactured products, rather than as construction materials.

106.9.7.2 Manufactured items are covered under a general waiver to exclude them from Buy America Requirements. To qualify for the exemption the components must comprise of 55% of the value of materials in the item. The final assembly must also be performed domestically.

Pavement Marking Paint Requirements for Standard Waterborne and Temporary

1.0 Description. High Build acrylic waterborne pavement marking paint shall be used in lieu of standard acrylic waterborne pavement marking paint for all Standard Waterborne Pavement Marking Paint items and all Temporary Pavement Marking Paint items. Paint thickness, bead type, bead application rate, retroreflectivity requirements, and all other specifications shall remain as stated in the Missouri Standard Specifications for Highway Construction, except as otherwise amended in the contract documents.

2.0 Material Requirements. Material requirements for Sec 620.20.2.5 Standard Waterborne Paint, and Sec 620.10.2 Temporary Pavement Marking Paint shall be per Sec 1048.20.1.2 High Build Acrylic Waterborne Pavement Marking Paint.

N. Contractor Quality Control for Plant Mix Bituminous Surface Leveling NJSP-15-21A

1.0 Description. The contractor shall provide Quality Control (QC) testing and shall perform verification procedures associated with the production and placement of Plant Mix Bituminous Surface Leveling Mixture in accordance with this provision.

2.0 Asphalt Plant Requirements. The contractor shall perform quality control testing in the production of the Surface Leveling Mixture and report the results electronically on MoDOT-provided forms. All reports shall include the Contract ID, Project Number, Route, County, and Job Mix number.

2.1 Calibration of the asphalt plant shall be in accordance with Sec 403.17.2.2. Record retention for verification of test reports shall be in accordance with Sec 403.17.3.2.

2.2 At a minimum, the contractor shall perform one QC sieve analysis test for each day of production of Surface Level mixture in excess of 100 tons to verify the aggregate is within the required gradation range. Results of the QC sieve analysis test shall be reported to the engineer daily. A split of each sample shall be clearly labeled and stored by the contractor in a manner that prevents contamination. The engineer will collect a minimum of one random QC split sample, and one full sample from plant production, for testing per each 10,000 tons of production. Uncollected QC split samples shall be retained by the contractor until the engineer authorizes disposal or until the Final Inspection, whichever occurs earlier.

2.3 The contractor shall monitor the quantity of asphalt binder used in the production of the mix, including any commercial mix, and report that quantity to the engineer. Original asphalt binder delivery tickets shall accompany the report submitted to the engineer. The engineer will perform a minimum of one asphalt binder content test per each 10,000 tons of production for any project that exceeds a total of 5,000 tons of production.

2.4 The contractor shall take a daily QC sample of the asphalt binder per instructions in Section 460.3.13 of the EPG. The engineer will collect the QC samples and ship to the MoDOT Central lab for random testing. In addition, the engineer will take a minimum of one random Quality Assurance sample per project from the binder line. The engineer sample will be shipped to the Central Lab along with the daily samples and will be designated for testing.

2.5 The contractor shall perform one moisture content test for each day of production of Surface Level mixture in excess of 100 tons. The frequency of the moisture test may be reduced if approved by the engineer.

3.0 Roadway Requirements. The contractor shall perform quality control verification of the Surface Leveling Mixture on the roadway and shall monitor the asphalt tonnage placed in relation to plan quantity.

3.1 Irregularities. Additional tons of Surface Leveling mix will be provided for irregularities in the existing roadway surface. The tonnage specified for irregularities is an estimated quantity and shall only be placed at locations where it is necessary to fill ruts and other low points. Prior to placing the mix, the contractor and engineer shall evaluate the entire route and develop a plan that best utilizes the tonnage needed for irregularities. Any excess quantity of irregularities shall not be placed.

3.2 Tack. On the first day of production, the contractor shall demonstrate proper application of tack coat in the presence of the engineer. Thereafter, when the engineer is not present to witness the application of the tack coat, the contractor shall document the tack application by taking a minimum of

two high-resolution date/time stamped photographs of the tacked surface per one-mile segment. Pictures should be taken just in front of the paver in order to account for loss of tack from truck tires. The contractor shall also monitor and document the application rate. The contractor shall take distributor readings at the beginning and ending of each shift and document the quantity used.

3.3 Spreading and Rolling. On the first day of production, the contractor shall demonstrate successful spreading and compaction of the mixture, including proper rolling patterns, in the presence of the engineer. Thereafter, the contractor shall monitor all roadway production procedures and document daily. Use of approved Intelligent Compaction technology is an allowable substitute for daily documentation.

3.4 Monitoring of Quantity. The contractor shall monitor the quantity of Surface Level mix placed and report that information to the engineer and production staff as specified herein.

3.4.1 The contractor shall verify that the quantity of Surface Leveling mix in the contract for each route is sufficient to cover the roadway as shown on the typical sections, including any surface irregularities. Any discrepancies shall be brought to the engineer's attention in writing prior to the pre-construction conference. Plan quantity shall be defined as the total tons computed to cover the surface area according to the typical section, plus any amount pre-approved by the engineer for pavement irregularities.

3.4.2 The contractor shall provide temporary log mile reference points at no less than ½ mile intervals along each route to monitor the tons of Surface Leveling mix laid in relation to plan quantity. Entrances, shoulders, or other irregular areas will be monitored as directed by the engineer.

3.4.3 During production, the contractor shall document the total tons placed in each one-mile segment, along with the plan quantity and the percent over/under for that segment. The cumulative quantity and percent over/under for the route should also be documented. After each one-mile segment, the contractor shall provide a status report to the production manager and the engineer. When the engineer is not present on the project, the contractor shall send an electronic status report to the engineer.

3.4.4 The goal is to keep the placed quantity within 2% of plan quantity for the project. The engineer will monitor the status reports and will advise the contractor on how to proceed when there is an excessive variance from plan quantity. The engineer may decrease the frequency of the electronic status reports when the variances are consistently low.

3.4.5 The contractor shall collect asphalt tickets from the delivery trucks and group them per each one-mile segment. The contractor shall submit to the engineer a daily summary report that includes all of the information specified in Section 3.4.3. The contractor shall sign the summary report confirming that the information is accurate and that the attached tickets represent the asphalt material placed.

3.4.6 The contractor shall be equipped with a contractor-furnished cellular device capable of providing and maintaining a reliable means of immediate communication with the engineer when the engineer is not present on the project.

4.0 Excessive Quantity. If the contractor places Surface Level mix on any one-mile segment, or any other isolated areas, in excess of plan quantity by 5% or more, without prior approval from the engineer, further investigation may be required to determine if the excess was warranted. If directed by the engineer, the contractor shall core the pavement at locations established by the engineer to determine the amount that was excessive, if any. No payment will be made for the cost to core the pavement or for the tons of Surface Level mix that the engineer determines to be excessive. If the amount of Surface

Level mix is determined to be justified, payment will be made for the mix, and for the cost of coring at the fixed price established in Sec 109. Placement of asphalt in excess of plan quantity for two consecutive segments without prior approval from the engineer may result in issuance of an Order Record to stop work.

5.0 Basis of Payment. No direct payment will be made for compliance with this provision. All costs shall be considered completely covered under the pay items provided in the contract.

O. Lump Sum Temporary Traffic Control JSP-22-01A

1.0 Delete Sec 616.11 and insert the following:

616.11 Method of Measurement. Measurement for relocation of post-mounted signs will be made to the nearest square foot of sign area only for the signs designated for payment on the plans. All other sign relocations shall be incidental. Measurement for construction signs will be made to the nearest square foot of sign area. Measurement will be made per each for each of the temporary traffic control items provided in the contract.

616.11.1 Lump Sum Temporary Traffic Control. No measurement will be made for temporary traffic control items grouped and designated to be paid per lump sum. The list of lump sum items provided in the plans or contract is considered an approximation and may be subject to change based on field conditions. This is not a complete list and may exclude quantities for duplicate work zone packages used in simultaneous operations. The contractor shall provide all traffic control devices required to execute the provided traffic control plans for each applicable operation, stage, or phase. No measurement will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer.

2.0 Delete Sec 616.12 and insert the following:

616.12 Basis of Payment. All temporary traffic control devices authorized for installation by the engineer will be paid for at the contract unit price for each of the pay items included in the contract. Whether the devices are paid individually, or per lump sum, no direct payment will be made for the following:

(a) Incidental items necessary to complete the work, unless specifically provided as a pay item in the contract.

(b) Installing, operating, maintaining, cleaning, repairing, removing, or replacing traffic control devices.

(c) Covering and uncovering existing signs and other traffic control devices.

(d) Relocating temporary traffic control devices, including permanent traffic control devices temporarily relocated, unless specifically included as a pay item in the contract.

(e) Worker apparel.

(f) Flaggers, AFADs, PFDs, pilot vehicles, and appurtenances at flagging stations.

(g) Furnishing, installing, operating, maintaining, and removing construction-related vehicle and equipment lighting.

(h) Construction and removal of temporary equipment crossovers, including restoring pre-existing crossovers.

(i) Provide and maintaining work zone lighting and work area lighting.

616.12.1 Lump Sum Temporary Traffic Control. Traffic control items grouped together in the contract or plans for lump sum payment shall be paid incrementally per Sec 616.12.1.1. Alternately, upon request from the contractor, the engineer will consider a modified payment schedule that more accurately reflects completion of traffic control work. No payment will be made for any additional signs or devices needed except for changes in the traffic control plan directed by the engineer. Additional items directed by the engineer will be paid for in accordance with Sec 109.4. No adjustment to the price will be made for overruns or underruns of other work or for added work that is completed within existing work zones.

616.12.1.1 Partial payments. For purposes of determining partial payments, the original contract amount will be the total dollar value of all original contract line items less the price for Lump Sum Temporary Traffic Control (LSTTC). If the contract includes multiple projects, this determination will be made for each project. Partial payments will be made as follows:

(a) The first payment will be made when five percent of the original contract amount is earned. The payment will be 50 percent of the price for LSTTC, or five percent of the original contract amount, whichever is less.

(b) The second payment will be made when 50 percent of the original contract amount is earned. The payment will be 25 percent of the price for LSTTC, or 2.5 percent of the original contract amount, whichever is less.

(c) The third payment will be made when 75 percent of the original contract amount is earned. The payment will be 20 percent of the price for LSTTC, or two percent of the original contract amount, whichever is less.

(d) Payment for the remaining balance due for LSTTC will be made when the contract has been accepted for maintenance or earlier as approved by the engineer.

616.12.1.2 Temporary traffic control will be paid for at the contract lump sum price for Item:

Item No.	Unit	Description
616-99.01	Lump Sum	Misc. Lump Sum Temporary Traffic Control

P. Bridge End Transitions – SW

1.0 At all bridge exceptions, the engineer will determine in the field the ending point of the transition. This point will not necessarily be at the bridge end, but will be located at a point which provides a smooth transition and approach to the bridge. The limits of all bridge end transitions shall be approved by the engineer before any milling proceeds on these transitions. Where bridges are to be resurfaced, the surfacing shall be from curb to curb.

Q. Pavement Marking Log – SW

1.0 Description. This work shall consist of the Contractor documenting the location of all existing pavement markings prior to coldmilling or resurfacing and installing new pavement markings to match the scheme that was in place prior to the project.

2.0 Construction Requirements. Prior to the start of resurfacing work, the Contractor shall document the color, type, and location of the existing pavement markings, including any change in pavement marking (e.g., solid yellow to intermittent yellow on the centerline) and no passing zones. The Contractor shall submit the method of documentation to the Engineer for approval prior to recording the existing pavement marking information.

2.1 The existing pavement marking documentation provided by the Contractor shall include the location of existing pavement markings by either station or log mile. The Engineer shall reserve the right to make adjustments to the final pavement marking locations. The Engineer will provide the Contractor with any adjusted locations. Under no circumstances shall the Contractor make adjustments to the location of permanent pavement markings without the Engineer's approval.

2.2 All permanent pavement markings shall be installed in accordance with Sec 620.

3.0 Temporary Pavement Marking. The Contractor shall provide temporary pavement marking in accordance with Sec 620 and Standard Plan 620.10. No compensation will be made to the Contractor for temporary pavement marking.

4.0 Method of Measurement. Measurement will be made in accordance with Sec 620.

5.0 Basis of Payment. No direct compensation will be made to the Contractor for compliance with this provision. All costs associated with the equipment, labor, materials, and time necessary to fulfill the requirements of this provision shall be considered completely covered by the pavement marking (Sec 620) line items in the contract.

R. Permanent Pavement Marking – SW

1.0 Description. This work shall consist of furnishing and placing permanent centerline, edge line, and lane line markings as specified, at locations shown on the plans or as approved by the engineer. This work shall be in accordance with Section 620 and specifically as follows.

2.0 Construction Requirements. On roadways open to traffic, permanent centerline, edge line, and lane line markings shall be in place no later than five days after the final paving operations. This requirement applies per individual route if multiple routes are included in a contract or if a 15 mile section of an individual route is open to traffic within a contract. This requirement also applies to divided highways, once a directional segment of 15 mile, or the entire directional segment if less than 15 miles, is paved and open to traffic within a contract. To fulfill this requirement, the contractor may have to mobilize more than once for the installation of permanent centerline, edge line, and lane line markings. The contractor will also need to coordinate the permanent pavement marking with the installation of rumble strips.

3.0 Basis of Payment. The accepted quantity of permanent pavement marking paint will be paid for at the contract unit price for each of the pay items include in the contract. Payment will be considered

full compensation for all labor, equipment, material, and time necessary to complete the described work including any other incidental items.

S. Permanent Aggregate Edge Treatment – SW

1.0 Description. This work shall consist of furnishing and placing an aggregate material on the shoulders of the resurfaced route in areas indicated in the plans or as directed by the engineer. This work and material shall be in accordance with Section 310 except as follows. The edge treatment shall be at least 2' wide.

2.0 Material.

2.1 Aggregate Material utilized for permanent aggregate edge treatment shall be either commercial base or coldmillings. Any material shall be approved by the engineer prior to use.

2.1.1 Coldmilling material shall be an asphaltic material created by the equipment and operations as defined in Standard Specification 622.10.

2.1.2 Aggregate material shall be a 1" commercial base.

3.0 Construction Requirements. The contractor shall furnish, haul, and spread aggregate material or coldmillings to bring the shoulders up to match the overlaid pavement elevation as shown in the typical sections.

3.1 Aggregate or coldmillings shall be simultaneously deposited and spread on the sub-grade and shall not be deposited on the pavement or shoulder and bladed into place without prior approval from the engineer. Aggregate material or coldmillings shall be shaped according to the typical section and compacted until there is no visible evidence of further consolidation.

3.2 Density shall be obtained from reasonable compactive efforts consisting of no less than three passes with a roller until no further visible compaction can be achieved, or by other methods approved by the engineer.

3.3 After all placing, shaping, and compactive effort operations are completed, the permanent aggregate edge treatment shall match the overlaid pavement elevation as shown in the typical sections.

3.4 A prime coat (MC-800) in accordance with Section 408, shall be placed on top of all permanent aggregate edge treatment, regardless of material used, at a target rate of 0.25 GAL/SY.

4.0 Method of Measurement. Measurement of material furnished for shoulder aggregate shall be dependent upon the material the contractor chooses to use for this work. If the contractor chooses to use a 1" commercial base, measurement will be made per ton and in accordance with Section 310.5.3. If the contractor chooses to use coldmillings, measurement will be made per linear foot. In regard to utilizing coldmillings, the Contractor is hereby being informed that it shall be their responsibility to review the existing slopes on the project and ensure there is sufficient material to install new slopes in accordance with the specifications and plans. Measurement for all prime (MC-800) will be in accordance with Sec 408.5.

5.0 Basis of Payment.

5.1 The bid item for the shoulder material is for the 1" commercial base option. The accepted quantities of permanent aggregate edge treatment will be paid for at the contract unit price for PERMANENT AGGREGATE EDGE TREATMENT, pay item 304-99.10, including all labor, equipment, and material costs required to fulfill the requirements of this special provision.

5.1.1 Should the contractor choose to construct the permanent aggregate edge treatment with coldmillings, notification must be given to the engineer in advance of the work so that a change order can be issued to facilitate payment of the permanent aggregate edge treatment with a contingent item as specified herein.

5.1.2 For the coldmilling option, a zero-cost change order will be issued to zero out the tonnage of permanent aggregate edge treatment so that it can be converted to a linear foot quantity pay item. A contingent item for the permanent aggregate edge treatment paid by the linear foot will be added to the change order. The linear footage added to the contract shall be double the centerline miles of the project. A unit price for the permanent aggregate edge treatment, coldmilling option, will be determined by multiplying the original permanent aggregate edge treatment unit bid price and the tonnage included in the contract, then dividing by double the centerline miles of the project.

5.2 The prime coat (MC-800) shall be paid for at the contract unit price for PRIME (MC-800), pay item 408-10.18, regardless of the material used to construct the edge treatment.

T. Culvert Location – SW

1.0 Description. This work shall consist of the Contractor documenting the location of all existing crossroad culverts prior to conducting grading operations or placement of permanent aggregate edge treatment.

2.0 Construction Requirements. Prior to the start of grading or edge treatment work, the Contractor shall document the location of the existing crossroad culverts. The Contractor shall submit the method of documentation to the Engineer for approval prior to recording the existing culvert location.

2.1 The documentation provided by the Contractor shall include the location of existing crossroad culverts by either station or log mile. Under no circumstances shall the Contractor begin grading or edge treatment work without the Engineer's approval.

2.2 The location of each crossroad culvert shall be indicated with a lathe or other identifier that can be seen during contractor operations.

2.3 The contractor shall exercise reasonable care in the locations of the crossroad culverts and all driveway culverts to ensure that grading or edge treatment operations do not result in the blockage of the culvert.

2.4 The contractor, as directed by the engineer, shall remove any material from all culverts that was placed by grading or edge treatment operations.

3.0 Basis of Payment. No direct compensation will be made to the Contractor for compliance with this provision. All costs associated with the equipment, labor, materials, and time necessary to fulfill the requirements of this provision shall be considered completely covered by line items in the contract.

U. Gravel A or Crushed Stone B – SW

1.0 Description. This work shall consist of furnishing and placing gravel or crushed stone surfacing for transitions at aggregate side roads and entrances upon completion of overlay and shoulder work. This work and material shall be in accordance with Sec 310 except as follows.

2.0 Construction Requirements. The contractor shall furnish, haul, and spread gravel or crushed stone surfacing to smooth up the transitions and eliminate any edge drop offs created at aggregate side roads and entrances created from the construction of shoulders as approved by the engineer.

3.0 Method of Measurement. Measurement of material furnished for gravel or crushed stone will be made in accordance with Sec 310.5.3, excluding any deductions for moisture.

4.0 Basis of Payment. The accepted quantities of gravel or crushed stone will be paid for at the contract unit price, including all labor, equipment, and material costs required to fulfill the requirements of this special provision.

V. Contractor Furnished Surveying and Staking – SW

In addition to the requirements of Section 627 of the Missouri Standard Specifications for Highway Construction, the following shall apply:

1.0 Description. The contractor shall be responsible for all layout required on the project. This responsibility shall include, but not be limited to the following: Construction signing, transition milling, pavement marking, loop detectors, etc.

1.1 The above list is not all inclusive. The contractor shall have the primary responsibility for these operations. The contractor shall provide the Resident Engineer (RE) with a staking plan layout for approval prior to the installation of signs. The RE will also provide assistance during this layout provided a request is submitted to the RE or Construction Project Manager 48 hours in advance. This will ensure that all permanently mounted traffic control devices remain consistent with District policy and avoid re-staking. If the contractor installs any signs without engineer approval, all costs associated with re-staking and/or relocation will be at the contractor's expense.

1.2 The intent of this provision is to increase the quality of our work zones and minimize negative impacts to the contractor's schedule that can result from delays in staking.

1.3 Any adjustments to the plan quantities or line numbers established in the contract shall be approved by the Engineer.

2.0 Basis of Payment. No direct payment will be made to cover the costs associated with these additional requirements. All costs will be considered completely covered by the unit bid price submitted for Contractor Furnished Surveying and Staking.

W. Damage to Existing Pavement, Shoulders, Side Roads, and Entrances – SW

1.0 Description. This work shall consist of repairing any damage to existing pavement, shoulders, side roads and entrances caused by contractor operations. This shall include, but is not limited to, damage caused by the traffic during contractor operations within the project limits including the work zone signing.

2.0 Construction Requirements. Any cracking gouging, or other damage to the existing pavement, shoulders, side roads, or entrances from general construction shall be repaired within twenty-four (24) hours of the time of damage at the contractor's expense. Repair of the damaged pavement, shoulders, side roads, or entrances shall be as determined by the engineer.

3.0 Method of Measurement. No measurement of damaged pavement or shoulder areas or damaged side roads or entrances as described above shall be made.

4.0 Basis of Payment. No payment will be made for repairs to existing pavement, shoulders, side roads or entrances damaged by contractor operations.

X. Multi-Year, Multi-Location Project – Special Requirements NJSP-22-02

1.0 Description. Whereas this project is identified by a single Job Number, and the project requires work be performed at multiple Locations, and the contract allows for work to be performed in multiple calendar years, these special requirements and allowances shall apply. A Location is generally identified in the contract or plans by Route and County but may be otherwise identified.

2.0 Winter Shut-Down Period. A Winter Shut-Down Period is required if all work on the project is not completed prior to December 1 of the calendar year in which the Notice to Proceed is made. The date range of the Winter Shut-Down Period shall be determined by the contractor and shall be shown on the contractor's most current Progress Schedule. The contractor's designated Winter Shut-Down Period shall begin no later than December 1 of the calendar year in which the Notice to Proceed is made and shall end on or after March 15 of the following year. No work shall be performed during the Winter Shut-Down Period, except for maintenance work that may be required per Sec 104.7 or 105.13 unless approved by the Engineer. Regardless of the length of the Winter Shut-Down Period, all work shall be complete prior to the contract Completion Date. All weather limitations specified elsewhere in the contract shall apply.

3.0 Completion of Work per Location. This contract includes work at multiple Locations, with non-contiguous project limits defined at each Location. Once work begins at a Location, the contractor shall diligently pursue completion of the work at that Location until all work is complete. If work at a Location begins prior to the Winter Shut-Down Period, all work at that Location shall be fully completed prior to the Winter Shut-Down Period, including permanent or temporary pavement marking. Work shall not begin at a Location if the long-range forecast is not conducive for completion of all work at that Location prior to the Winter Shut-Down Period.

3.1 Partial Acceptance per Location. Upon request by the contractor, a Location of work will be evaluated by the engineer for partial acceptance in accordance with Sec 105.15.1 after completion of all work at that Location.

4.0 Administration of Calendar Days. The total number of Calendar Days allowed to complete the work on this project and administration of Calendar Days shall be as specified in the Contract Liquidated Damages job special provision, except as specified herein. The count of Calendar Days will be paused during the Winter Shut-Down Period. The count of Calendar Days will be paused when work is complete at all Locations in which work had begun.

5.0 Pavement Marking. Pavement marking shall be as specified elsewhere in the contract, except as specified herein.

5.1 Temporary Raised Pavement Markers. All Temporary Raised Pavement Markers shall be removed as part of the Temporary Pavement Marking prior to the Winter Shut-Down Period. If Temporary Pavement Marking is required during the Winter Shut-Down Period, the contractor shall use and maintain Temporary Pavement Marking Paint at the contractor's expense.

5.2 Cold Weather Pavement Marking Paint. If permanent pavement marking paint cannot be completed due to weather limitations specified in Sec 620.20.2.4, the contractor shall apply cold weather paint, as specified in Sec 620.10.6, in lieu of Standard Waterborne Paint, at no additional cost to the Commission. Retroreflectivity acceptance requirements and payment adjustments for Standard Waterborne Paint shall apply when using Cold weather paint. Cold weather paint that meets all contract requirements will be accepted in lieu of Standard Waterborne Paint and paid for as such. If retroreflectivity does not meet the minimum requirements for Standard Waterborne Paint but does meet the minimum requirements for Temporary Pavement Marking Paint, the Cold weather paint shall be considered Temporary Pavement Marking Paint and shall be re-marked with Standard Pavement Marking Paint when temperatures allow. No payment will be made until the Standard Pavement Marking Paint or Cold Weather Paint is accepted.

6.0 Basis of Payment. No additional payment will be made for compliance with these Special Requirements and Allowances provisions.