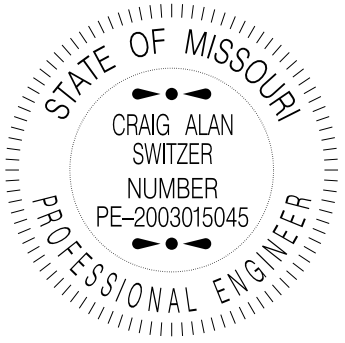
Job No.: JST0045
Route: EE, J, K, NN, PP, W, Y
County: McDonald & Newton

JOB SPECIAL PROVISIONS TABLE OF CONTENTS

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

Job No.: JST0045
Route: EE, J, K, NN, PP, W, Y
County: McDonald & Newton



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

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: JST0045
McDONALD / NEWTON COUNTY, MO
DATE PREPARED: 07/25/2023

ADDENDUM DATE:

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

Job No.: JST0045
Route: EE, J, K, NN, PP, W, Y
County: McDonald & Newton

JOB
SPECIAL PROVISION

A. General – State JSP-09-02J

1.0 Description. The Federal Government is participating in the cost of construction of this project. All applicable Federal laws, and the regulations made pursuant to such laws, shall be observed by the contractor, and the work will be subject to the inspection of the appropriate Federal Agency in the same manner as provided in Sec 105.10 of the Missouri Standard Specifications for Highway Construction with all revisions applicable to this bid and contract.

1.1 This contract requires payment of the prevailing hourly rate of wages for each craft or type of work required to execute the contract as determined by the Missouri Department of Labor and Industrial Relations and requires adherence to a schedule of minimum wages as determined by the United States Department of Labor. For work performed anywhere on this project, the contractor and the contractor's subcontractors shall pay the higher of these two applicable wage rates. State Wage Rates, Information on the Required Federal Aid Provisions, and the current Federal Wage Rates are available on the Missouri Department of Transportation web page at www.modot.org under "Doing Business with MoDOT", "Contractor Resources". Effective Wage Rates will be posted 10 days prior to the applicable bid opening. These supplemental bidding documents 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.

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 2023 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 (job numbers) shall be completed on or before the Contract Completion date specified below. Completion by this date shall be in accordance with the requirements of Sec 108.7.1.

Notice to Proceed Date: November 6, 2023
Contract Completion Date: November 1, 2024

2.1 Calendar Days. 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
JST0045	N/A	$1800

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 above 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 1000 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 1000 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 1000 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.

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 417-223-4319	McDonald County Office of Emergency Management 417-223-7575
Newton County Sheriff 417-451-8300	Newton County Office of Emergency Management 417-451-4357

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
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 – McDonald County Route EE

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 log mile to 7.877, and from log mile 8.215 to log mile 11.205. The total length of pavement limits are 10.867 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:

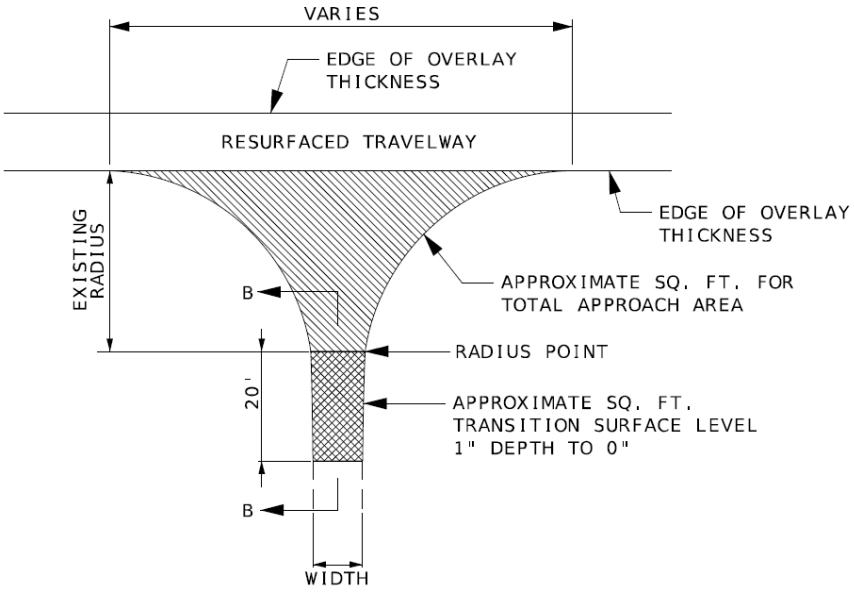
EXCEPTIONS			
APPROX. LOG MILE		Length	
FROM	TO	(FT)	COMMENTS/BRIDGE NUMBERS
2.409	2.433	126.72	BR R0447 HONEY LAKE VALLEY
8.37	8.397	142.56	BR H0794 KCR RR
8.594	8.667	385.44	BR A8892 INDIAN CREEK
	TOTAL	654.72	

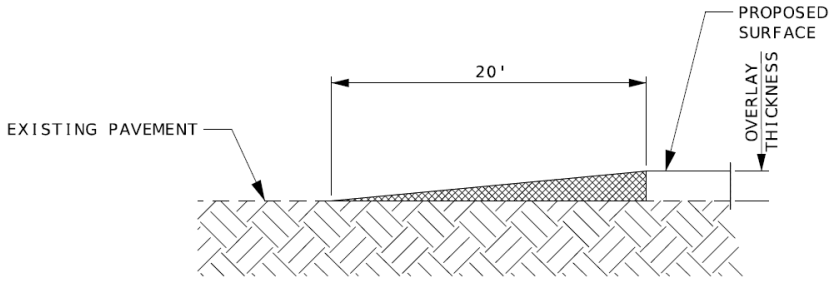
2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface 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 across the entire width of the traveled way for the length of the pavement limits, except apply tack coat at a rate of 0.1 gal/yd^2 in coldmilled areas.

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).

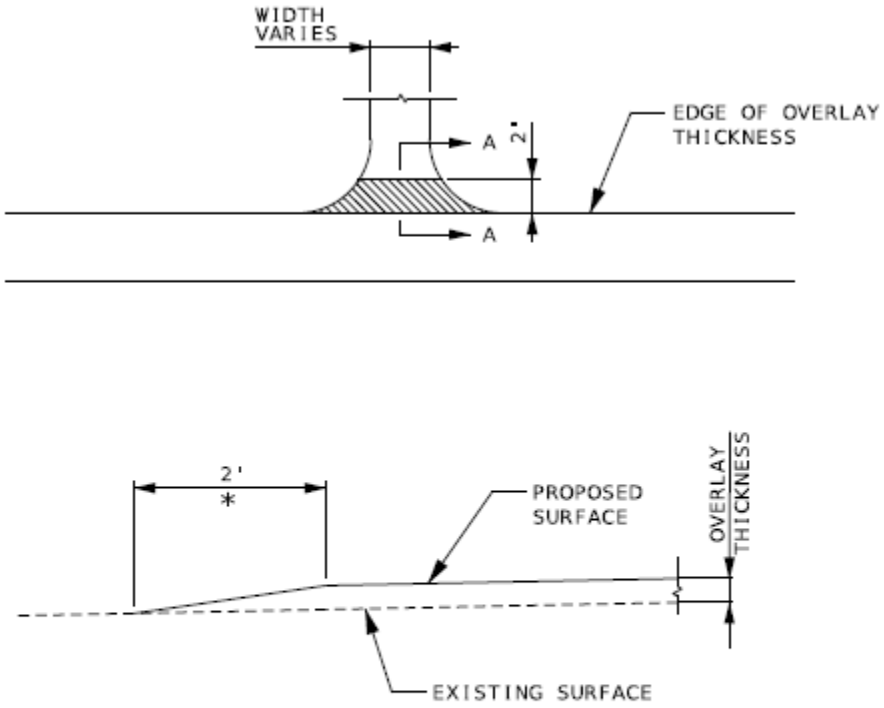




SECTION B-B

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

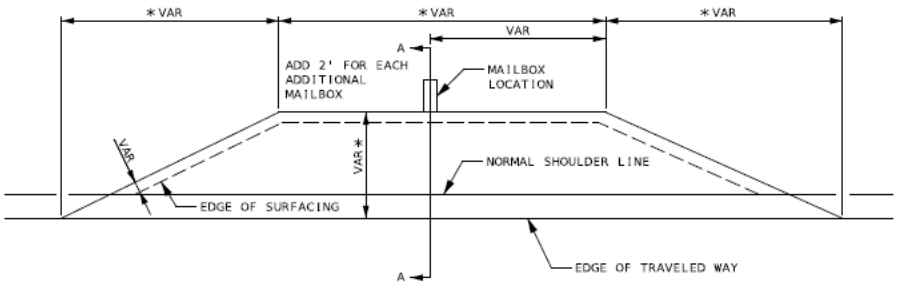
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

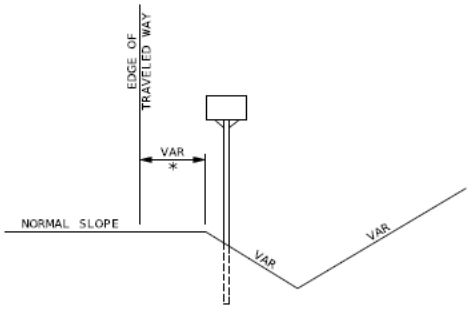
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

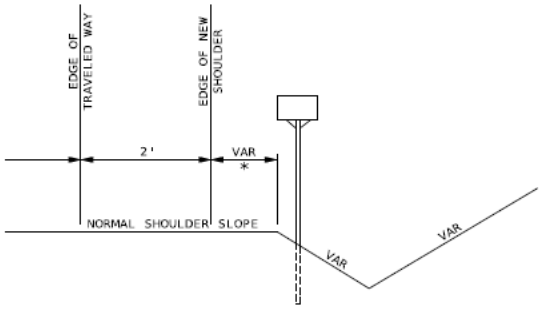
TYPICAL MAILBOX TURNOUT

*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:

1" 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	2.409	EE	2.409	20	1558.53	2261.2	BR R0447 HONEY LAKE VALLEY
2.433	7.877	EE	5.444	20	3522.07	5110.1	BR R0447 HONEY LAKE VALLEY
4.737		EE	VAR.	VAR.	38.66	70.4	RTE. DD INTERSECTION
8.215	8.370	EE	0.155	20	100.28	145.5	BR H0794 KCR RR
8.397	8.594	EE	0.197	20	127.45	184.9	BR A8892 INDIAN CREEK
8.667	11.205	EE	2.538	20	1641.99	2382.3	END
3.351	3.377	EE	0.026	20	16.82	24.4	DRIVING LANE AT Y SECTION
3.551		EE	VAR.	20	199.75	291.0	TURN LANE, (2) Y AREAS
						-360.0	SUBTRACTION OF COLDMILLING TACK
					1076.90		100 TONS/MILE IRREGLARITIES
					5.70	8.3	MAILBOX/ENTRANCES
				TOTALS	8,288.15	10118.1	ASSUMES 30' ENTRANCE WIDTHS.
				USE	8,288.1	10118	

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	EE	100	20	222.2	22.2	BEG ROUTE
2.390	2.409	EE	100	20	222.2	22.2	BR R0447
2.433	2.452	EE	100	20	222.2	22.2	BR R0447
4.737		EE	VAR.	VAR.	92.7	70.4	RTE. DD INTERSECTION
7.859	7.877	EE	100	20	222.2	22.2	WEST JCT. AT MO 59
8.215	8.234	EE	100	20	222.2	22.2	EAST JCT. AT MO 59
8.352	8.371	EE	100	20	222.2	22.2	BR H0794
8.397	8.416	EE	100	20	222.2	22.2	BR H0794
8.575	8.594	EE	100	20	222.2	22.2	BR A8892
8.667	8.686	EE	100	20	222.2	22.2	BR A8892
11.186	11.205	EE	100	20	222.2	22.2	END ROUTE
3.351	3.377	EE	137.28	20	305.1	30.5	DRIVING LANE AT Y SECTION
3.351		EE	165.22	20	367.2	36.7	TURN LANE AND (2) Y AREAS
			0		0.0	0.0	
				TOTALS	2,987.0	359.6	
				USE	2,987	360	

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	4	40	ROAD WORK NEXT 8 MILES & 3 MILES
2**	WO20-1	48 X 48	16	35	560	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	2	32	NO CENTER LINE
36	WO8-11	48 X 48	16	15	240	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
56	CONST-7	48 X 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 X 30	8.75	2	17.5	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	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)
					1249.88	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	1250	USE
				ITEM NO. 616-10.25	10	CHANNELIZERS (TRIM-LINE)
* - 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.						

4.2 Other Traffic Control Devices and Mobilization and Contractor Furnished Surveying and Staking are as follows:

612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
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" INT. YELLOW	4" SOLID YELLOW	4" SOLID WHITE	
FROM	T0	ROUTE	(FT)	(FT)	(FT)	(FT)	REMARKS
0.000	7.877	EE	41590.56		83181.12	83181.12	ASSUME SOLID DOUBLE YELLOW.
			0				ADJUST PAINT TO EXISTING
			0				FIELD CONDITIONS.
2.390	2.539	EE	785			1570	8" WIDE WHITE LINE, BR R0447
4.737		EE	VAR.		251		RTE. DD INTERSECTION
8.215	11.205	EE	15787.2		31574.4	31574.4	ASSUME SOLID DOUBLE YELLOW.
3.351		EE	VAR.		502	341.9	INTERSECTION AT MO59
			TOTALS	0	115,509	116,667	ADJUST PAINT TO EXISTING
			USE	0	115,509	116,667	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	7.877	EE	7.877	1575.4	4647.4	BEGIN
4.737		EE	0.2	40.0	118.0	RTE. DD INTERSECTION
8.215	11.205	EE	2.99	598.0	1764.1	END
			TOTALS	2,213.4	6529.5	
			USE	2,213.4	6,530	

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

ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	55	8	268	GRAVEL (A) OR CRUSHED STONE (B)

G. Project Details and Quantities – McDonald County Route K

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 log mile 9.475. The total length of pavement limits are 9.475 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:

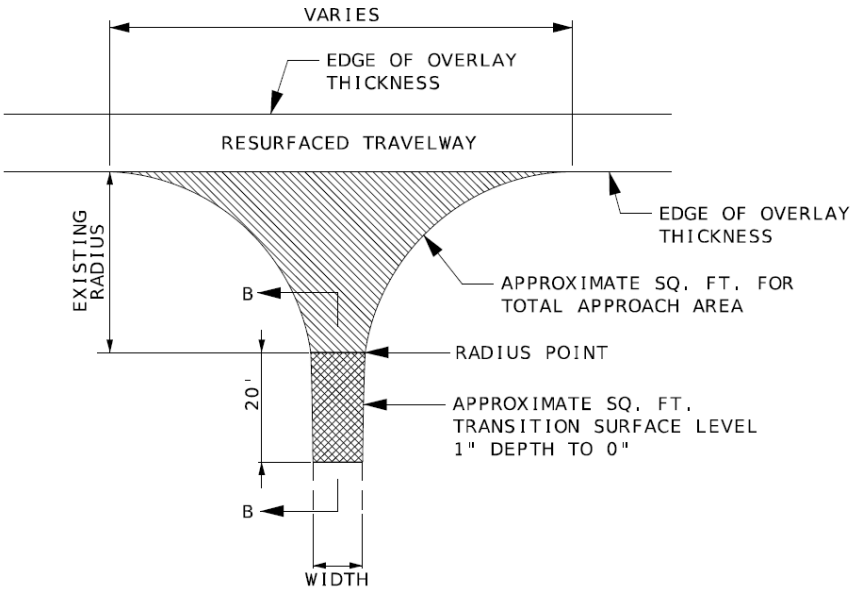
EXCEPTIONS			
APPROX. LOG MILE		Length	
FROM	TO	(FT)	COMMENTS/BRIDGE NUMBERS
0.261	0.319	305.7	BR A1825-LITTLE SUGAR CREEK
		0	
	TOTAL	305.712	

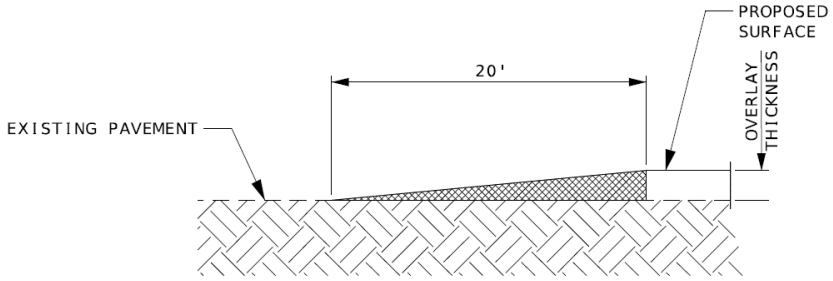
2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface 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 across the entire width of the traveled way for the length of the pavement limits, except apply tack coat at a rate of 0.1 gal/yd^2 in coldmilled areas.

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).

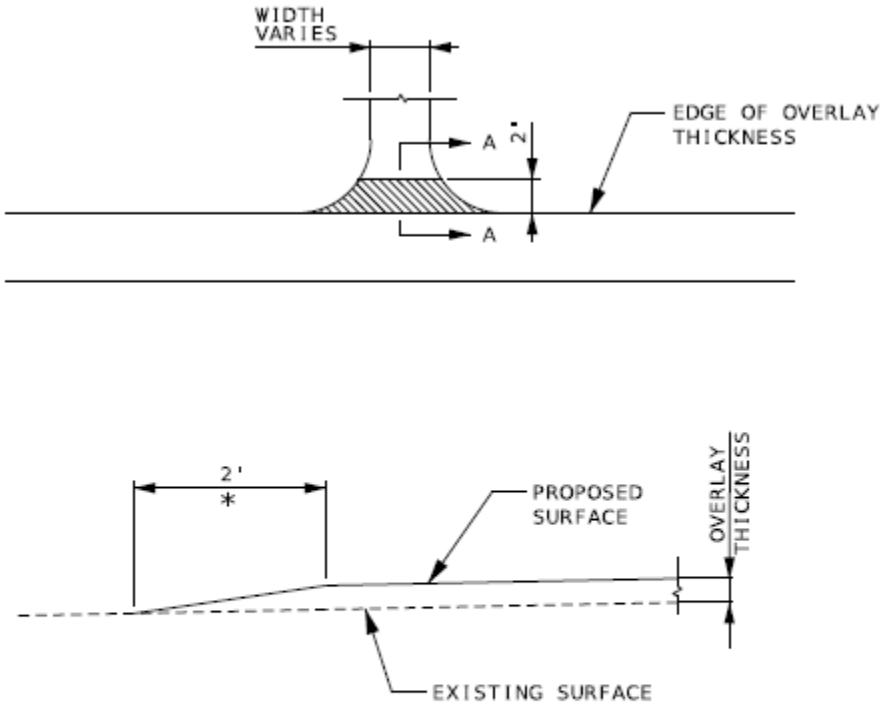




SECTION B-B

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

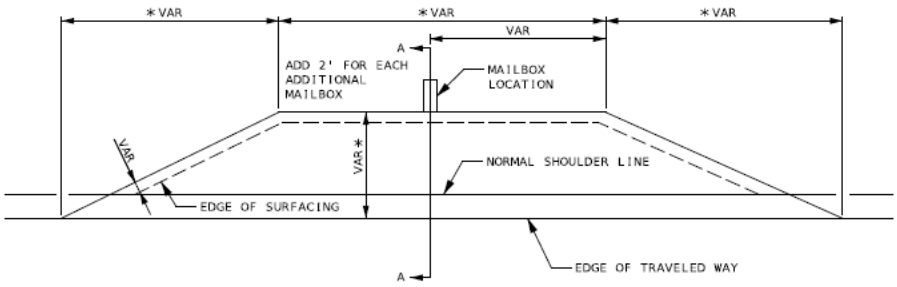
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

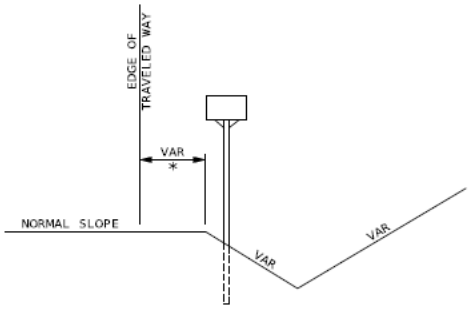
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

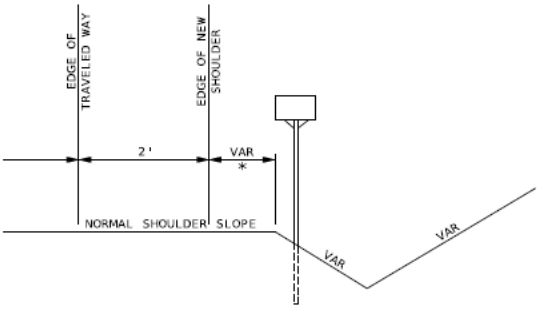
TYPICAL MAILBOX TURNOUT

*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:

1 " 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	0.261	K	0.261	20	168.86	245.0	BEG TO BR A1825
0.319	9.475	K	9.156	20	5923.59	8594.4	FROM BR A1825 TO END
						-89.0	SUBTRACTION OF COLDMILLING TACK
					941.70	0.0	100 TONS/MILE IRREGULARITIES
					4.96	7.2	MAILBOX/ENTRANCES
				TOTALS	7,039.11	8757.6	ASSUMES 30' ENTRANCE WIDTHS.
				USE	7,039.1	8758	

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	K	100	20	222.2	22.2	BEG ROUTE
0.242	0.261	K	100	20	222.2	22.2	BR A1825
0.319	0.338	K	100	20	222.2	22.2	BR A1825
9.456	9.475	K	100	20	222.2	22.2	END ROUTE
				TOTALS	888.8	88.8	
				USE	889	89	

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	4	40	ROAD WORK NEXT 10 MILES
2**	WO20-1	48 X 48	16	45	720	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	8	128	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	65	1040	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	25	400	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	4	64	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
56	CONST-7	48 X 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 X 30	8.75	2	17.5	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	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)
					2545.88	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	2546	USE
				ITEM NO. 616-10.25	10	CHANNELIZERS (TRIM-LINE)
* - 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.						

4.2 Other Traffic Control Devices, Mobilization, Contractor Furnished Surveying and Staking are as follows:

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
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" INT. YELLOW	4" SOLID YELLOW	4" SOLID WHITE	
FROM	T0	ROUTE	(FT)	(FT)	(FT)	(FT)	REMARKS
0.000	9.475	K	50028		100056	100056	ASSUME SOLID DOUBLE YELLOW.
							ADJUST PAINT TO EXISTING
							FIELD CONDITIONS.
			TOTALS	0	100,056	100,056	ADJUST PAINT TO EXISTING
			USE	0	100,056	100,056	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	9.475	K	9.475	1895.0	5590.3	
			0	0.0	0.0	
			0	0.0	0.0	
			TOTALS	1,895.0	5590.3	
			USE	1,895.0	5,591	

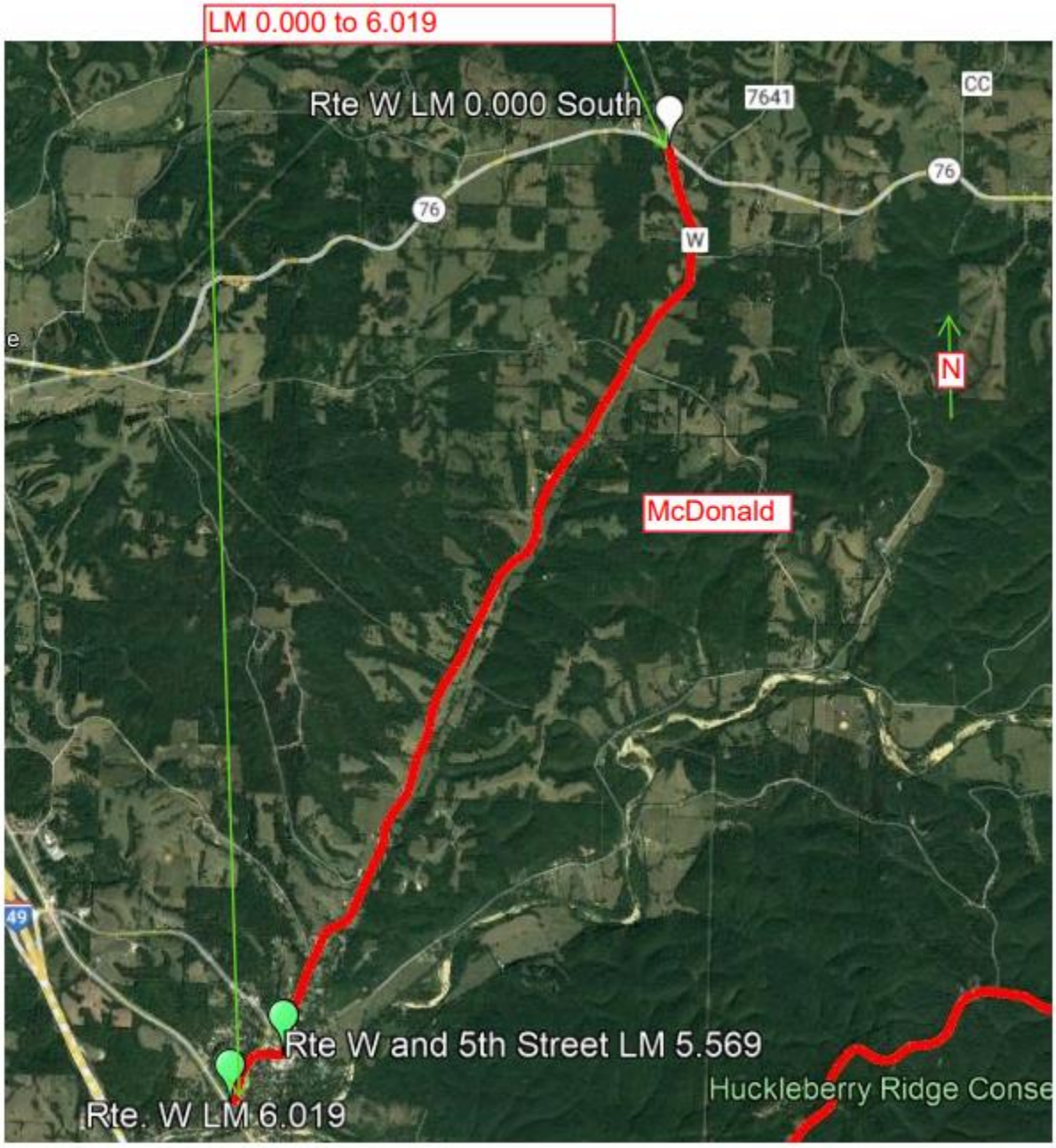
7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	67	14	352	GRAVEL (A) OR CRUSHED STONE (B)

H. Project Details and Quantities – McDonald County Route W

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 log mile 6.019. The total length of pavement limits are 6.019 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

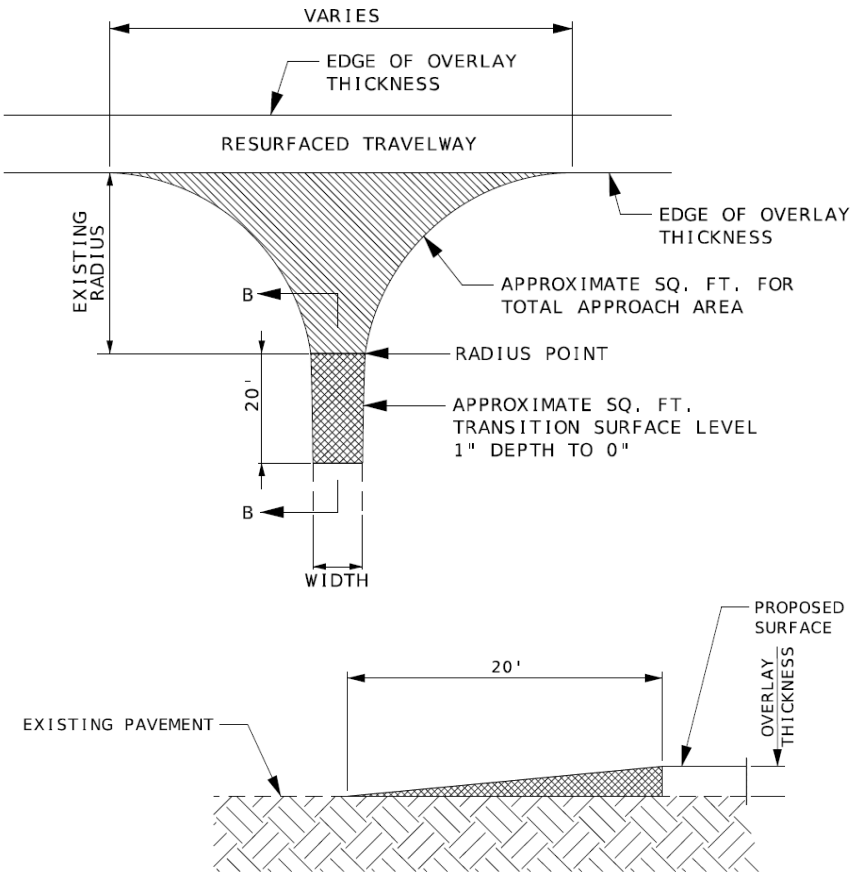


2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface 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 across the entire width of the traveled way for the length of the pavement limits, except apply tack coat at a rate of 0.1 gal/yd^2 in coldmilled areas.

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'.

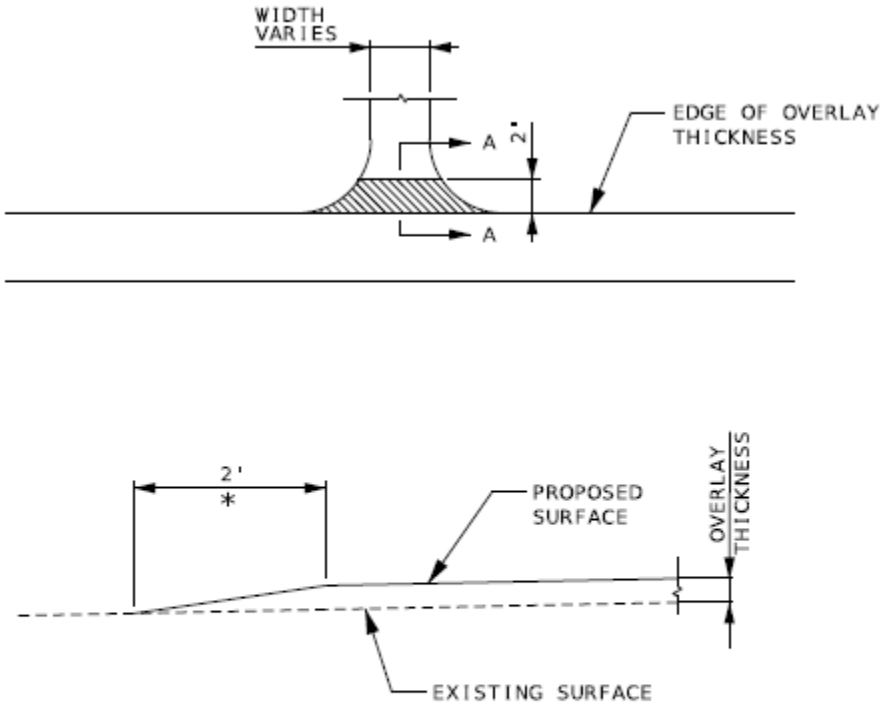
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).



SECTION 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

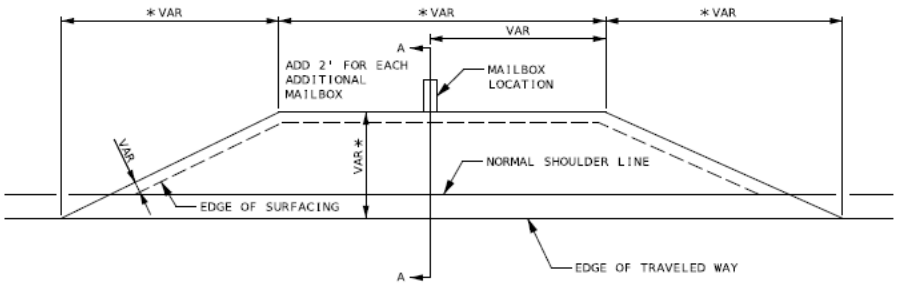
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

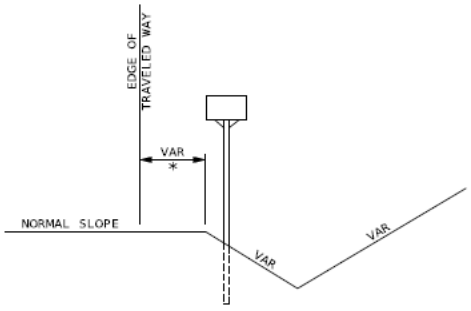
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

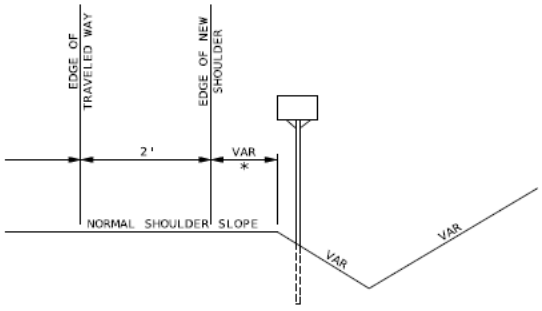
TYPICAL MAILBOX TURNOUT

*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:

1" 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	6.019	W	6.019	20	3894.07	5649.8	
						-44.0	SUBTRACTION OF COLDMILLING TACK
					601.90	0.0	100 TONS/MILE IRREGULARITIES
					8.27	12.0	MAILBOX/ENTRANCES
				TOTALS	4,504.24	5617.8	ASSUMES 30' ENTRANCE WIDTHS.
				USE	4,504.2	5618	

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	W	100	20	222.2	22.2	BEG ROUTE
6.000	6.019	W	100	20	222.2	22.2	END ROUTE
				TOTALS	444.4	44.4	
				USE	444	44	

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
5.359	5.673	W	1658	20	3684.4	368.4	CURB AND GUTTER
							AND ON STREET SECTION
				TOTALS	3,684.4	368.4	
				USE	3,684	368	

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 7 MILES
2**	WO20-1	48 X 48	16	65	1040	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	12	192	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	8	128	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	2	32	NO CENTER LINE
36	WO8-11	48 X 48	16	26	416	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
56	CONST-7	48 X 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 X 30	8.75	2	17.5	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)
					2015.38	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	2016	USE
				ITEM NO. 616-10.25	10	CHANNELIZERS (TRIM-LINE)
* - 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.						

4.2 Other Traffic Control Devices and Mobilization and Contractor Furnished Surveying and Staking are as follows:

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
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" INT. YELLOW	4" SOLID YELLOW	4" SOLID WHITE	
FROM	T0	ROUTE	(FT)	(FT)	(FT)	(FT)	REMARKS
0.000	6.019	W	31780.32		63560.64	63560.64	ASSUME SOLID DOUBLE YELLOW.
							ADJUST PAINT TO EXISTING
							FIELD CONDITIONS.
			TOTALS	0	63,561	63,561	ADJUST PAINT TO EXISTING
			USE	0	63,561	63,561	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	6.019	W	6.019	1203.8	3551.2	
			TOTALS	1,203.8	3551.2	
			USE	1,203.8	3,552	

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	96	8	432	GRAVEL (A) OR CRUSHED STONE (B)

I. Project Details and Quantities – McDonald / Newton County Route Y

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 log mile 5.605. The total length of pavement limits are 5.605 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:

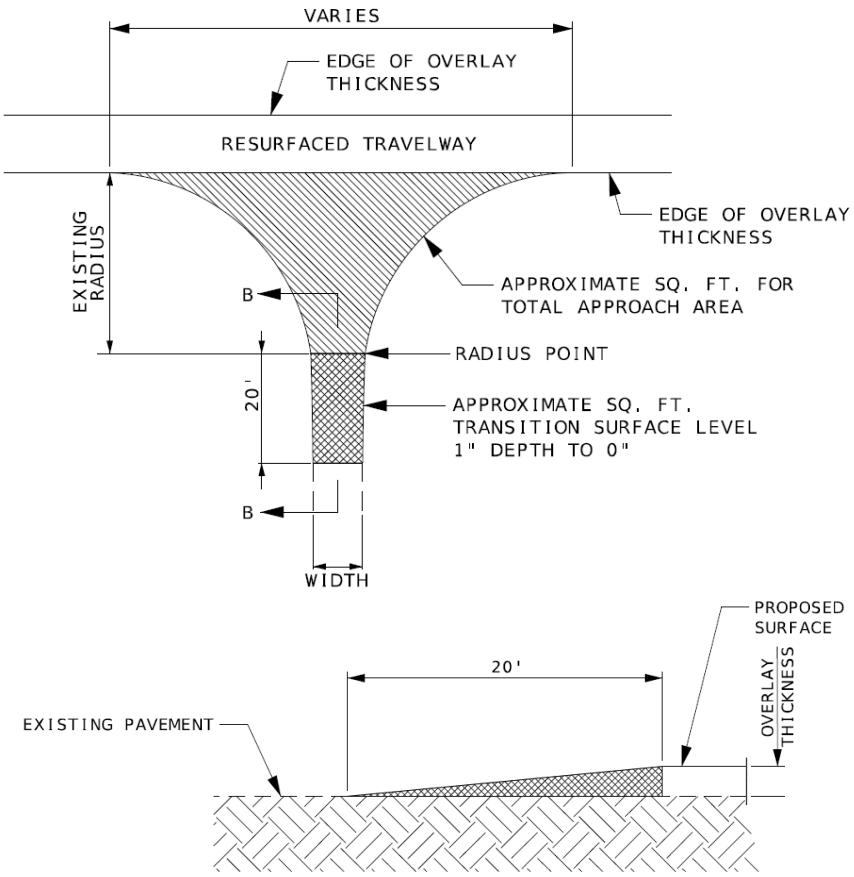
NONE

2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface 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 across the entire width of the traveled way for the length of the pavement limits, except apply tack coat at a rate of 0.1 gal/yd^2 in coldmilled areas.

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'.

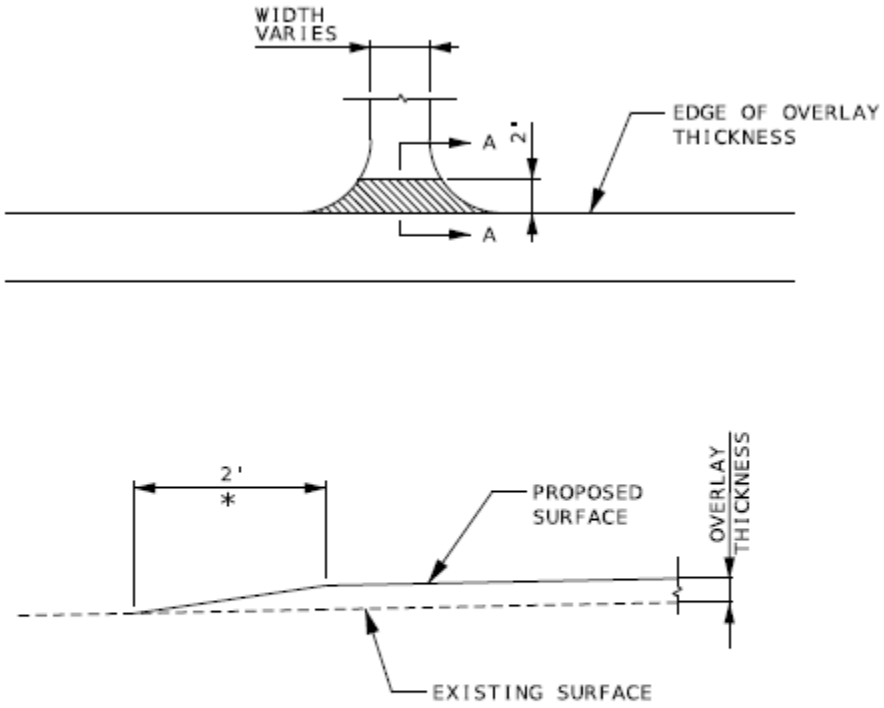
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).



SECTION 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

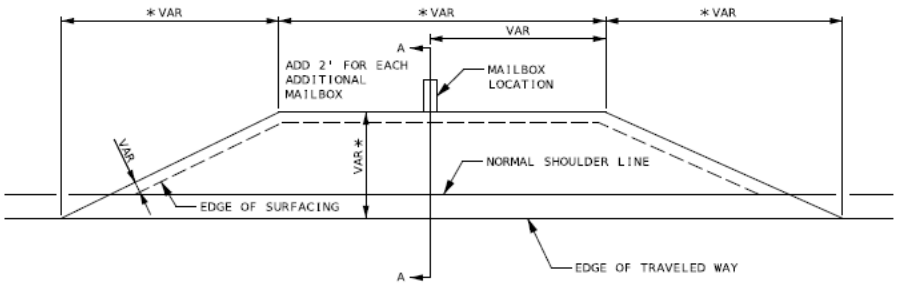
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

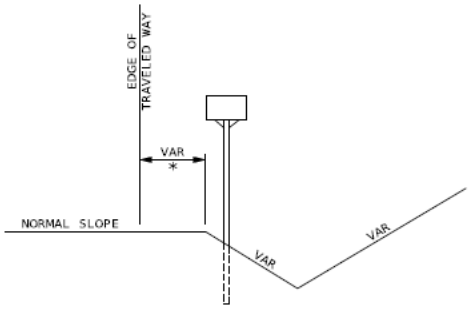
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

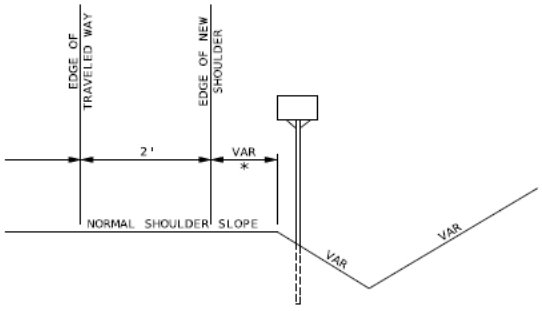
TYPICAL MAILBOX TURNOUT

*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	.08 GAL/SY TACK COAT	
FROM	T0	ROUTE	(MI)	(FT)	QUANTITY (TONS)	(GAL)	REMARKS
0.000	5.605	Y	5.605	20	3626.23	5261.2	
1.770		Y	VAR.	VAR.	19.13	28.2	RTE. DD INTERSECTION
						-80.0	SUBTRACTION OF COLDMILLING TACK
					560.50	0.0	100 TONS/MILE IRREGULARITIES
					7.17	10.4	MAILBOX/ENTRANCES
				TOTALS	4,213.03	5219.8	ASSUMES 30' ENTRANCE WIDTHS.
				USE	4,213.0	5220	

3.2 Coldmilling Quantities are as follows:

MODIFIED COLDMILLING (DEPTH TRANSITIONS)							
APPROX. LOG MILE			LENGTH	AVERAGE	QUANTITY	.10 GAL/SY TACK	
FROM	T0	ROUTE	(FT)	WIDTH (FT)	(SY)	COAT (GAL)	REMARKS
0.000	0.019	Y	100	20	222.2	22.2	BEG ROUTE
1.770		Y	VAR.	VAR.	84.0	35.2	RTE. DD INTERSECTION
5.586	5.605	Y	100	20	222.2	22.2	END ROUTE
				TOTALS	528.4	79.6	
				USE	528	80	

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 6 MILES
2**	WO20-1	48 X 48	16	30	480	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	12	192	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	12	192	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	20	320	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	2	32	NO CENTER LINE
36	WO8-11	48 X 48	16	16	256	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
56	CONST-7	48 X 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 X 30	8.75	2	17.5	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)
					1583.38	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	1584	USE
				ITEM NO. 616-10.25	10	CHANNELIZERS (TRIM-LINE)
* - 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.						

4.2 Other Traffic Control Devices and Mobilization and Contractor Furnished Surveying and Staking are as follows:

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
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" INT. YELLOW	4" SOLID YELLOW	4" SOLID WHITE	
FROM	T0	ROUTE	(FT)	(FT)	(FT)	(FT)	REMARKS
0.000	5.605	Y	29594.4		59188.8	59188.8	ASSUME SOLID DOUBLE YELLOW.
							ADJUST PAINT TO EXISTING
							FIELD CONDITIONS.
1.770		Y	125		250		RTE. DD INTERSECTION
			TOTALS	0	59,439	59,189	ADJUST PAINT TO EXISTING
			USE	0	59,439	59,189	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	5.605	Y	5.605	1121.0	3307.0	
1.770		Y	0.021	4.2	12.4	RTE. DD INTERSECTION
			TOTALS	1,125.2	3319.3	
			USE	1,125.2	3,320	

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

ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	39	5	186	GRAVEL (A) OR CRUSHED STONE (B)

J. Project Details and Quantities – McDonald County Route NN

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 log mile 4.359. The total length of pavement limits are 4.359 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:

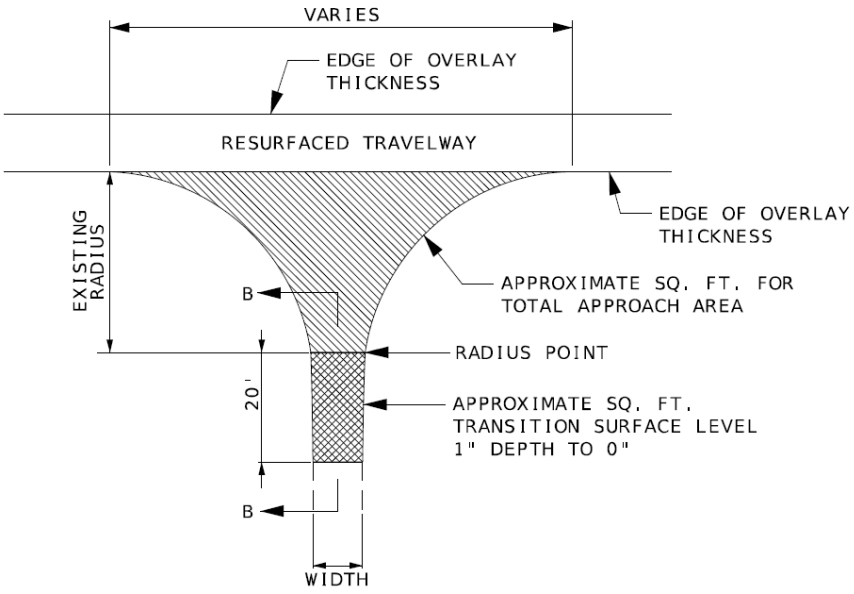
NONE

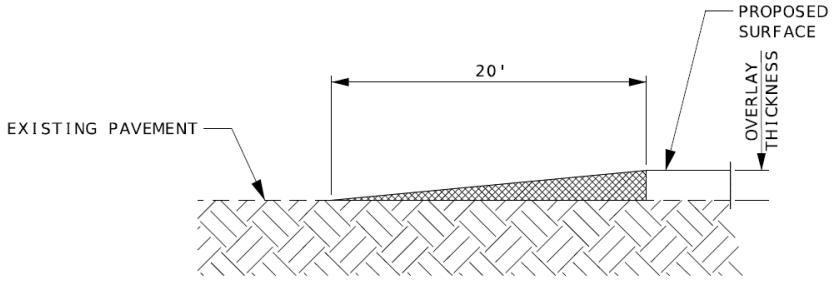
2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface 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 across the entire width of the traveled way for the length of the pavement limits, except apply tack coat at a rate of 0.1 gal/yd^2 in coldmilled areas.

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).

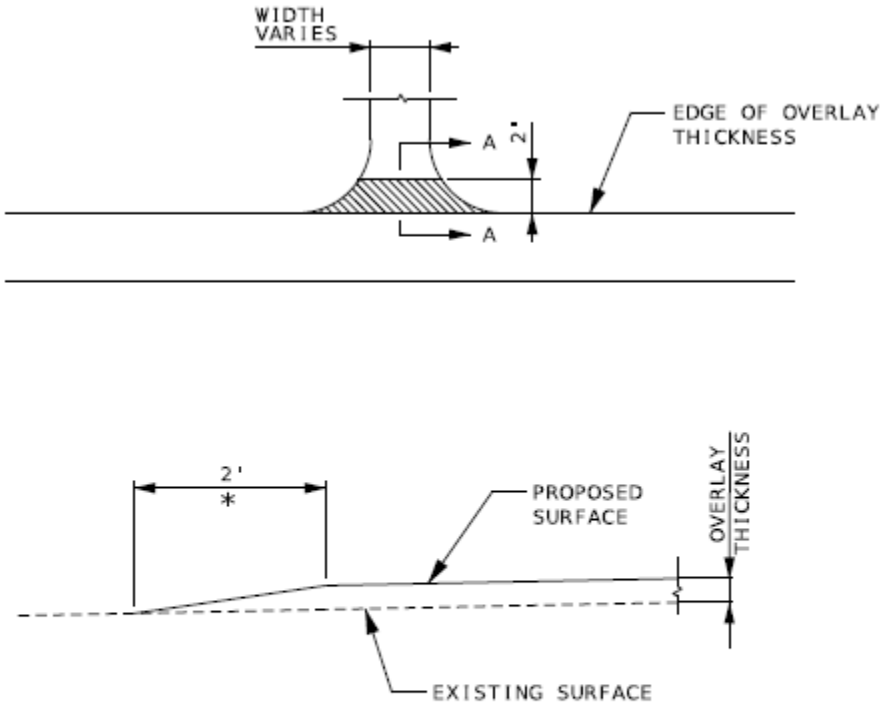




SECTION B-B

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

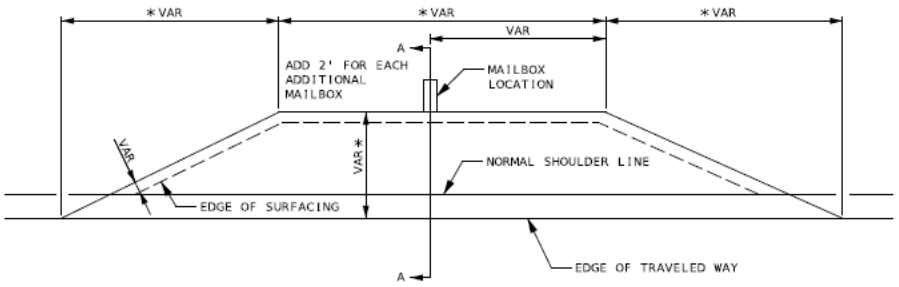
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

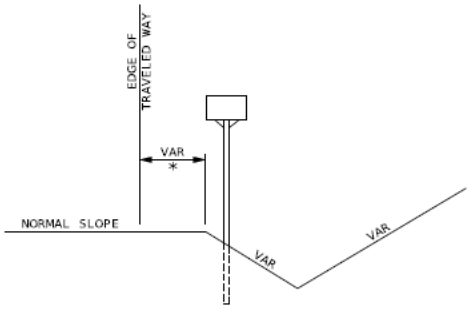
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

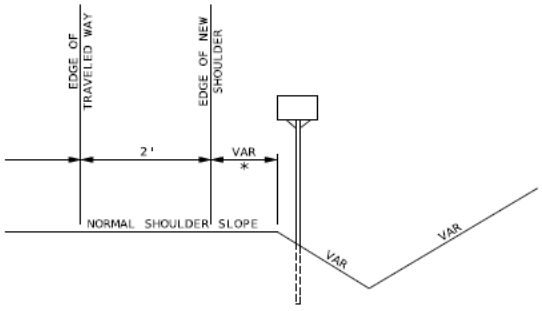
TYPICAL MAILBOX TURNOUT

*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:

1" 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	4.359	NN	4.359	20	2820.11	4091.6	
						-44.0	SUBTRACTION OF COLDMILLING TACK
					435.90	0.0	100 TONS/MILE IRREGULARITIES
					3.12	4.5	MAILBOX/ENTRANCES
				TOTALS	3,259.13	4052.1	ASSUMES 30' ENTRANCE WIDTHS.
				USE	3,259.1	4052	

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	NN	100	20	222.2	22.2	BEG ROUTE
4.340	4.359	NN	100	20	222.2	22.2	END ROUTE
				TOTALS	444.4	44.4	
				USE	444	44	

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 5 MILES
2**	WO20-1	48 X 48	16	6	96	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	2	32	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	2	32	NO CENTER LINE
36	WO8-11	48 X 48	16	2	32	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
56	CONST-7	48 X 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 X 30	8.75	2	17.5	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	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)
					397.88	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	398	USE
				ITEM NO. 616-10.25	10	CHANNELIZERS (TRIM-LINE)
* - 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.						

4.2 Other Traffic Control Devices, Mobilization, Contractor Furnished Surveying and Staking are as follows:

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
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" INT. YELLOW	4" SOLID YELLOW	4" SOLID WHITE	
FROM	T0	ROUTE	(FT)	(FT)	(FT)	(FT)	REMARKS
0.000	4.359	NN	23015.52		46031.04	46031.04	ASSUME SOLID DOUBLE YELLOW.
							ADJUST PAINT TO EXISTING
							FIELD CONDITIONS.
			TOTALS	0	46,031	46,031	ADJUST PAINT TO EXISTING
			USE	0	46,031	46,031	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	4.359	NN	4.359	871.8	2571.8	
			0	0.0	0.0	
			TOTALS	871.8	2571.8	
			USE	871.8	2,572	

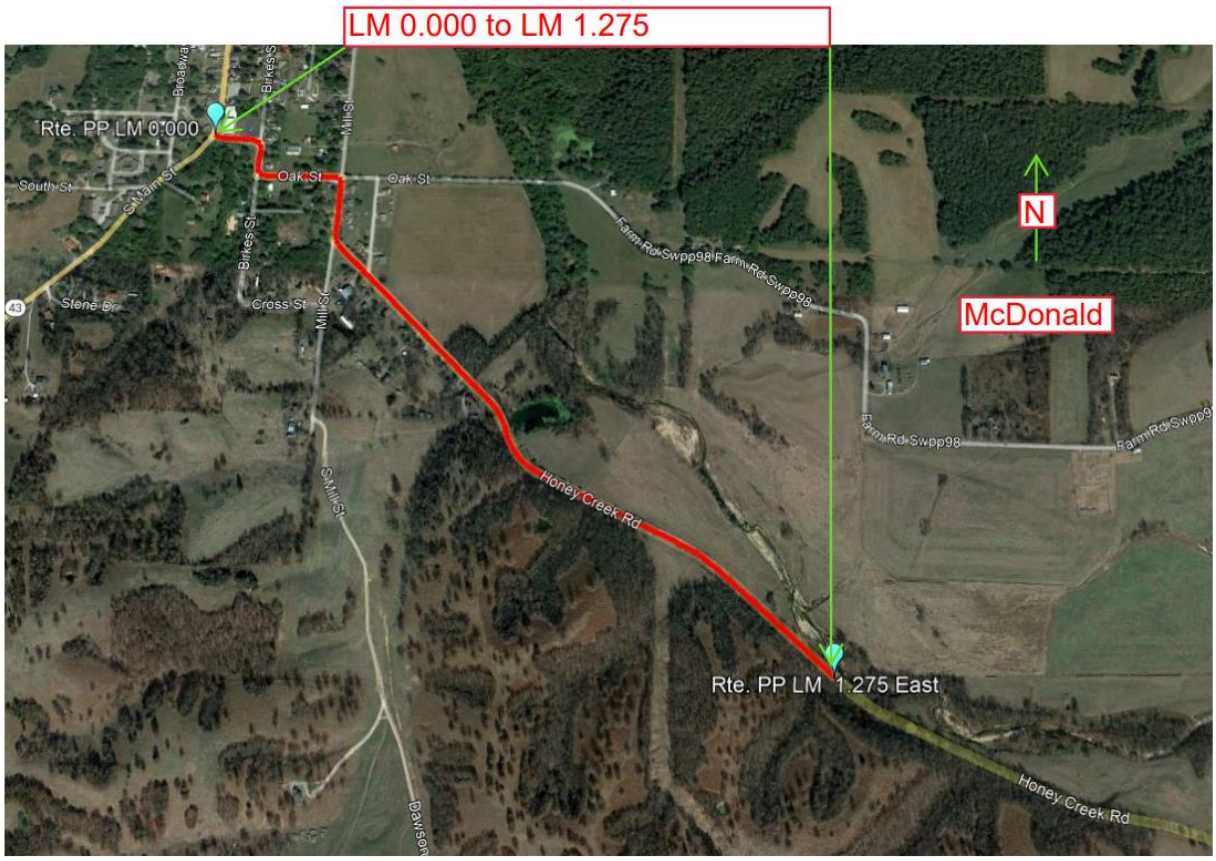
7.0 Gravel (A) or Crushed Stone (B). Gravel (A) or Crushed Stone (B) quantities are as follows:

ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	39	5	186	GRAVEL (A) OR CRUSHED STONE (B)

K. Project Details and Quantities – McDonald County Route PP

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 log mile 1.275. The total length of pavement limits are 1.275 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

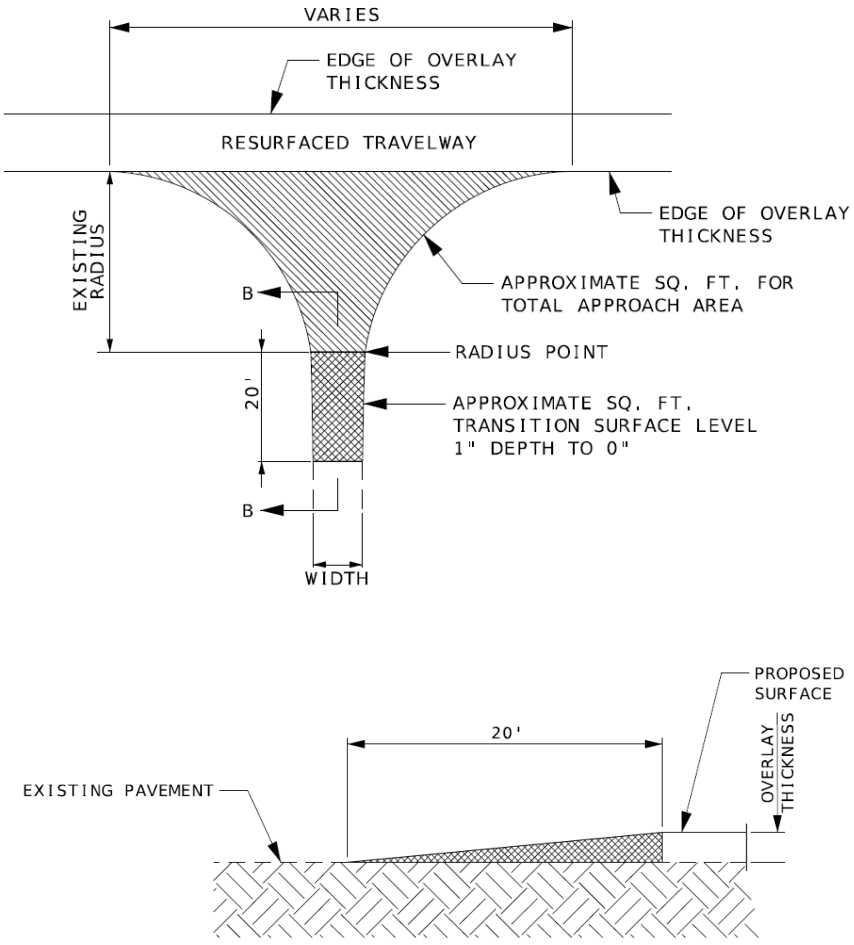


2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface 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 across the entire width of the traveled way for the length of the pavement limits, except apply tack coat at a rate of 0.1 gal/yd^2 in coldmilled areas.

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'.

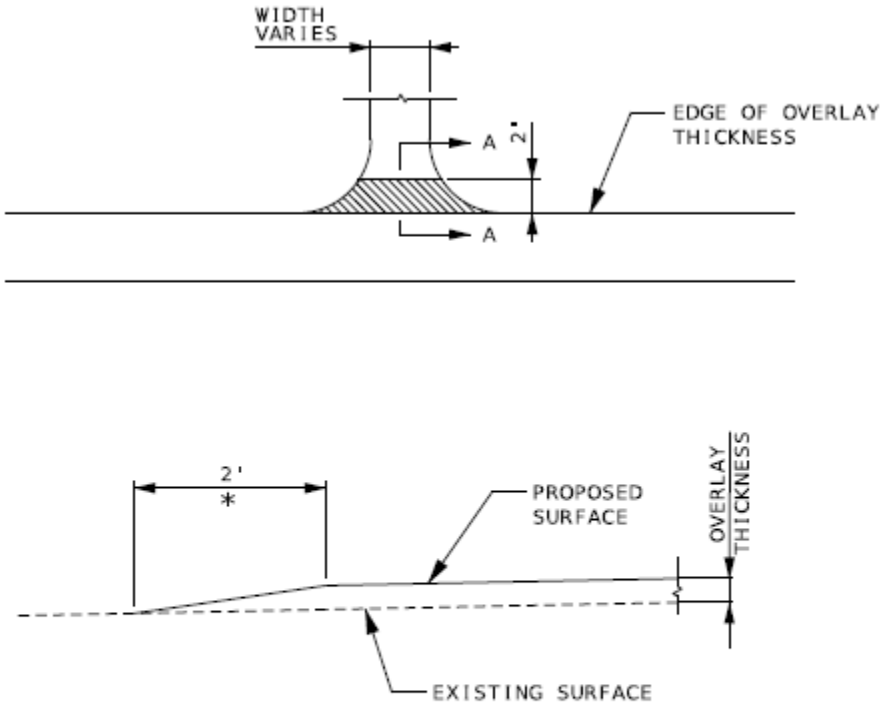
2.3 Coldmilling and pavement tapers at intersecting state routes will vary. See quantities for the approximate paved approach and coldmilling areas (see transition area details below).



SECTION 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

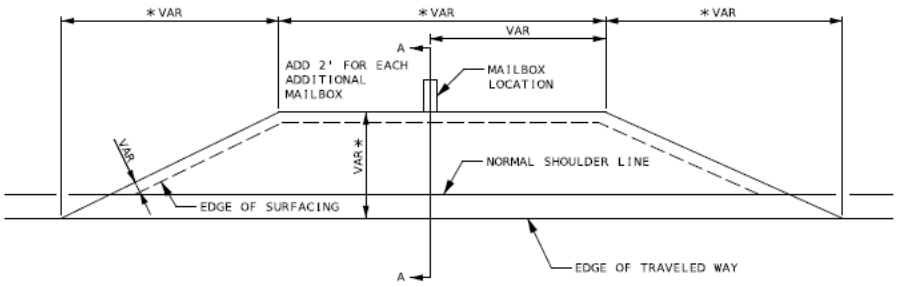
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

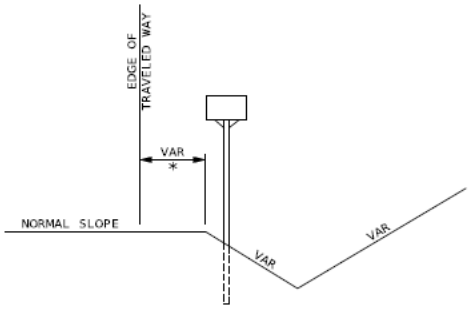
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

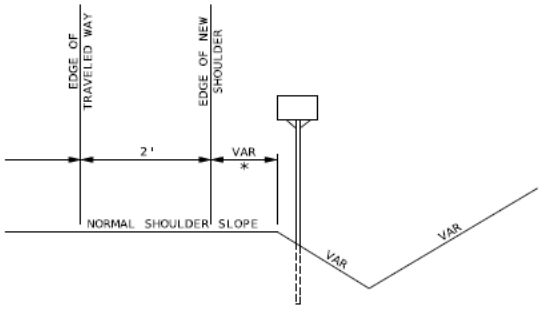
TYPICAL MAILBOX TURNOUT

*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:

1" BITUMINOUS PAVEMENT MIXTURE PG64-22 SURFACE LEVELING							
APPROX. LOG MILE			LENGTH	AVERAGE WIDTH	1.985 TON/CY	.08 GAL/SY TACK COAT	
FROM	T0	ROUTE	(MI)	(FT)	QUANTITY (TONS)	(GAL)	REMARKS
0.000	1.275	PP	1.275	20	824.88	1196.8	BEG TO END
						-44.0	SUBTRACTION OF COLDMILLING TACK
					127.50	0.0	100 TONS/MILE IRREGULARITIES
					1.84	2.7	MAILBOX/ENTRANCES
				TOTALS	954.22	1155.5	ASSUMES 30' ENTRANCE WIDTHS.
				USE	954.2	1155	

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	PP	100	20	222.2	22.2	BEG ROUTE
1.256	1.275	PP	100	20	222.0	22.2	END ROUTE
				TOTALS	444.2	44.4	
				USE	444	44	

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 2 MILES
2**	WO20-1	48 X 48	16	4	64	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	4	64	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	2	32	FLAGGER (SYMBOL) WITH FLAGS
11	WO3-4	48 X 48	16	2	32	BE PREPARED TO STOP
26	GO20-2	48 X 24	8	2	16	END ROAD WORK
35	WO8-12	48 X 48	16	2	32	NO CENTER LINE
36	WO8-11	48 X 48	16	2	32	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
56	CONST-7	48 X 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 X 30	8.75	2	17.5	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	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)
					365.88	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	366	USE
				ITEM NO. 616-10.25	10	CHANNELIZERS (TRIM-LINE)
* - 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.						

4.2 Other Traffic Control Devices and Mobilization and Contractor Furnished Surveying and Staking are as follows:

ITEM NO.	QTY.	DESCRIPTION
612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
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" INT. YELLOW	4" SOLID YELLOW	4" SOLID WHITE	
FROM	T0	ROUTE	(FT)	(FT)	(FT)	(FT)	REMARKS
0.000	1.275	PP	6732		13464	13464	ASSUME SOLID DOUBLE YELLOW.
							ADJUST PAINT TO EXISTING
							FIELD CONDITIONS.
			TOTALS	0	13,464	13,464	ADJUST PAINT TO EXISTING
			USE	0	13,464	13,464	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	1.275	PP	1.275	255.0	752.3	
			TOTALS	255.0	752.3	
			USE	255.0	753	

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	2	112	GRAVEL (A) OR CRUSHED STONE (B)

L. Project Details and Quantities – McDonald County Route J

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 log mile 0.608, and from log mile 0.002 to log mile 0.182. The total length of pavement limits are 0.788 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:

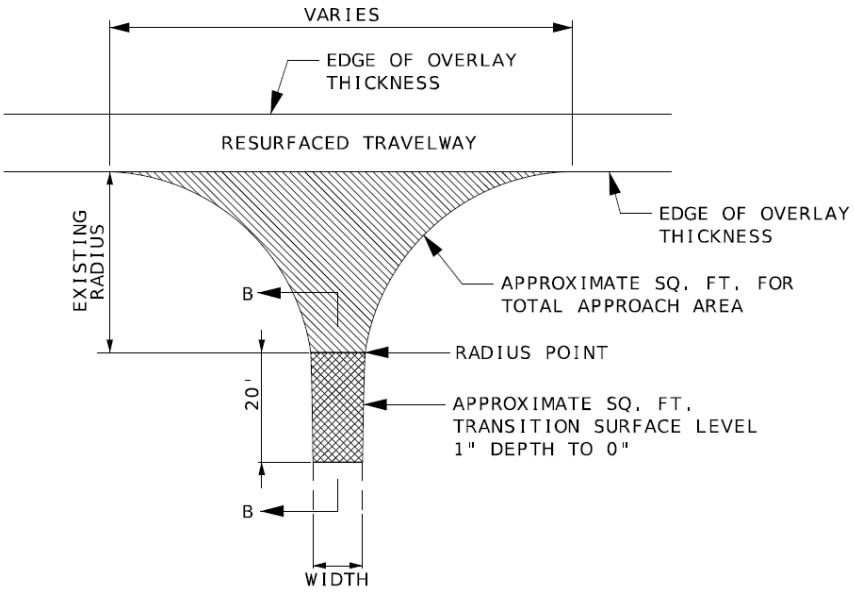
NONE

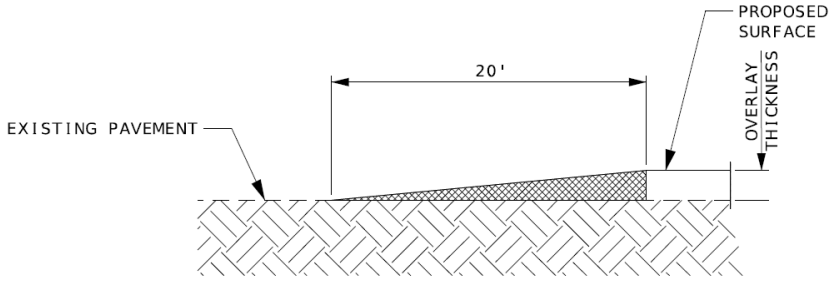
2.0 Mix and Pavement Transitions.

2.1 1" Plant Mix Bituminous Surface 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 across the entire width of the traveled way for the length of the pavement limits, except apply tack coat at a rate of 0.1 gal/yd^2 in coldmilled areas.

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).

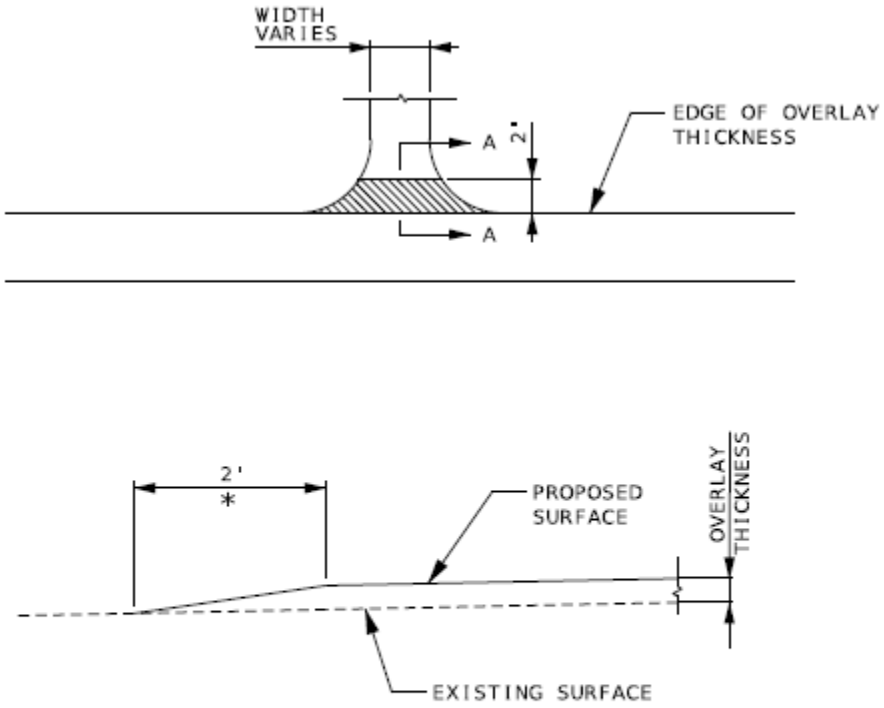




SECTION B-B

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

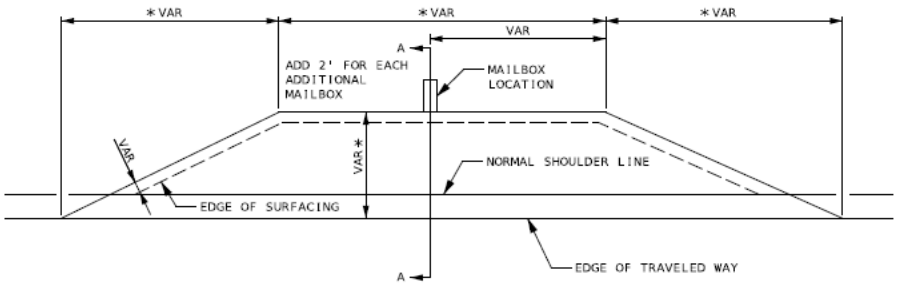
TYPICAL ENTRANCE - NO SHOULDER
(FIELD, PRIVATE OR COUNTY ROAD)
*TAPER AT 1:1 FOR FIELD ENTRANCE

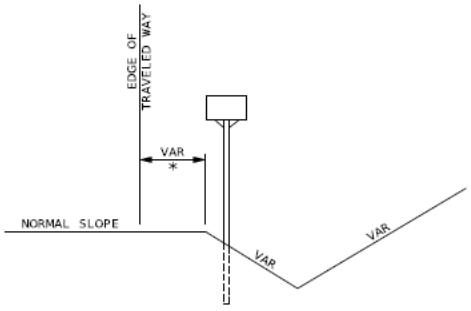
2.5 Bituminous pavement shall be placed at mailbox turnouts (see typical details below).

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.

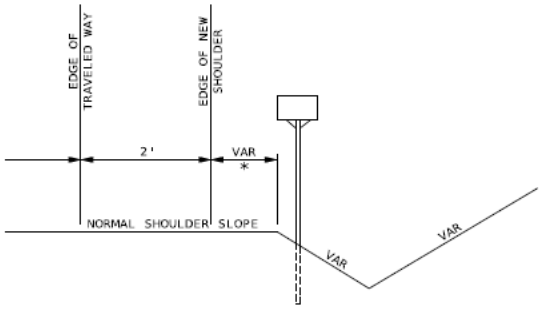
TYPICAL MAILBOX TURNOUT

*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:

1" 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	0.608	J	0.608	20	393.35	570.7	BEG TO END
0.002	0.182	J	0.180	20	116.45	169.0	ADDITIONAL SECTION
						-67.0	SUBTRACTION OF COLDMILLING TACK
					78.8	0.0	100 TONS/MILE IRREGULARITIES
					1.29	1.9	MAILBOX/ENTRANCES
				TOTALS	589.89	674.6	ASSUMES 30' ENTRANCE WIDTHS.
				USE	589.9	675	

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	J	100	20	222.2	22.2	BEG ROUTE
0.589	0.608	J	100	20	222.2	22.2	END ROUTE
0.163	0.182	J	100	20	222.2	22.2	END ROUTE
				TOTALS	666.6	66.6	
				USE	667	67	

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 1 MILES
2**	WO20-1	48 X 48	16	2	32	ROAD WORK AHEAD
7	WO20-4	48 X 48	16	2	32	ONE LANE ROAD AHEAD
8	WO20-7a	48 X 48	16	2	32	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	2	32	NO CENTER LINE
36	WO8-11	48 X 48	16	2	32	UNEVEN LANES
53	GO20-4	36 X 18	4.5	2	9	PILOT CAR FOLLOW ME
56	CONST-7	48 X 24	8	2	16	RATE OUR WORK ZONE
58	GO20-4a	42 X 30	8.75	2	17.5	PILOT CAR IN USE WAIT & FOLLOW
58	GO20-4a	18 X 12	1.5	2	3	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)
					333.88	CONSTRUCTION SIGNS SUBTOTAL
				ITEM NO. 616-10.05	334	USE
				ITEM NO. 616-10.25	10	CHANNELIZERS (TRIM-LINE)
* - 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.						

4.2 Other Traffic Control Devices and Mobilization and Contractor Furnished Surveying and Staking are as follows:

612-30.00A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
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" INT. YELLOW	4" SOLID YELLOW	4" SOLID WHITE	
FROM	T0	ROUTE	(FT)	(FT)	(FT)	(FT)	REMARKS
0.000	0.608	J	3210.24		6420.48	6420.48	ASSUME SOLID DOUBLE YELLOW.
0.002	0.182	J	950.4		1900.8	1900.8	ADJUST PAINT TO EXISTING
							FIELD CONDITIONS.
			TOTALS	0	8,321	8,321	ADJUST PAINT TO EXISTING
			USE	0	8,321	8,321	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	0.608	J	0.608	121.6	358.7	
0.002	0.182	J	0.180	36.0	106.2	
			TOTALS	157.6	464.9	
			USE	157.6	465	

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

ITEM NO.	# OF AGGR ENTRANCES (4 TONS EACH)	# OF AGGR COUNTY ROADS (6 TONS EACH)	TOTAL QTY. (TONS)	DESCRIPTION
310-50.02	19	0	76	GRAVEL (A) OR CRUSHED STONE (B)

M. Project Totals for Bid Items

Route	Mod. Coldmill SY	Tack Coat GAL	Cold Milling SY	Constr. Signs SF	Channelizers Each	TMA
EE	2,987	10,478		1,250	10	2
K	889	8,847		2,546	10	2
W	444	6,030	3,684	2,016	10	2
Y	528	5,300		1,584	10	2
NN	444	4,096		398	10	2
PP	444	1,199		366	10	2
J	667	742		334	10	2
Total	**6,403**	**36,692**	**3,684**	**8,494**	**70**	**14**

Route	4" Yellow LF	4" White LF	MC800 Asphalt GAL	Mob LS	Surveying & Staking LS
EE	115,509	116,667	6,530	1	1
K	100,056	100,056	5,591	1	1
W	63,561	63,561	3,552	1	1
Y	59,439	59,189	3,320	1	1
NN	46,031	46,031	2,572	1	1
PP	13,464	13,464	753	1	1
J	8,321	8,321	465	1	1
Total	**406,381**	**407,289**	**22,783**	**1**	**1**

N. Supplemental Revisions JSP-18-01Z

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.

Anti-Discrimination Against Israel Certification

By signing this contract, the Company certifies it is not currently engaged in and shall not, for the duration of the contract, engage in a boycott of goods or services from the State of Israel, companies doing business in or with Israel or authorized by, licensed by, or organized under the laws of the State of Israel, or persons or entities doing business in the State of Israel as defined by Section 34.600 RSMo. This certification shall not apply to contracts with a total potential value of less than One Hundred Thousand Dollars ($100,000) or to contractors with fewer than ten (10) employees.

Ground Tire Rubber (GTR) Dry Process Modification of Bituminous Pavement Material

1.0 Description. This work shall consist of the dry process of adding ground tire rubber (GTR) to modify bituminous material to be used in highway construction. Existing GTR requirements in Section 1015 pertain to the wet process method of GTR modification that blends GTR with the asphalt binder (terminal blending or blending at HMA plant). The following requirements shall govern for dry process GTR modification. The dry process method adds GTR as a fine aggregate or mineral filler during mix production. All GTR modified asphalt mixtures shall be in accordance with Secs 401, 402, or 403 as specified in the contract; except as revised by this specification.

2.0 Materials. The contractor shall furnish a manufacturer's certification to the engineer for each shipment of GTR furnished stating the name of the manufacturer, the chemical composition, workability additives, and certifying that the GTR supplied is in accordance with this specification.

2.1 Product Approval. The GTR product shall contain a Trans-Polyoctenamer (TOR) added at 4.5 % of the weight of the crumb rubber or an engineered crumb rubber (ECR) workability additive that has proven performance in Missouri. Other GTR additives shall be demonstrated and proven prior to use such as a five-year field performance history in other states or performance on a federal or state-sanctioned accelerated loading facility.

2.2 General. GTR shall be produced from processing automobile or truck tires by ambient or cryogenic grinding methods. Heavy equipment tires, uncured or de-vulcanized rubber will not be permitted. GTR shall also meet the following material requirements:

Table 1 – GTR Material Properties

Property	Test Method	Criteria
Specific Gravity	ASTM D1817	1.02 to 1.20
Metal Contaminates	ASTM D5603	$\leq$ 0.01%
Fiber Content	ASTM D5603	$\leq$ 0.5%
Moisture Content	ASTM D1509	$\leq$ 1.0%*
Mineral Filler	AASHTO M17	$\leq$ 4.0%

*Moisture content of the GTR shall not cause foaming when combined with asphalt binder and aggregate during mix production

2.3 Gradation. The GTR material prior to TOR or ECR workability additives shall meet the following gradation and shall be tested in accordance with ASTM D5603 and ASTM D5644.

Table 2 – GTR Gradation	
Sieve	**Percent Passing by Weight**
No. 20	100
No. 30	98-100
No. 40	50-70
No. 100	5-15

3.0 Delivery, Storage, and Handling. The GTR shall be supplied in moisture-proof packaging or other appropriate bulk containers. GTR shall be stored in a dry location protected from rain before use. Each bag or container shall be properly labeled with the manufacturer's designation for the GTR and specific type, mesh size, weight and manufacturer's batch or Lot designation.

4.0 Feeder System. Dry Process GTR shall be controlled with a feeder system using a proportioning device that is accurate to within ± 3 percent of the amount required. The system shall automatically adjust the feed rate to always maintain the material within this tolerance and shall have a convenient and accurate means of calibration. The system shall provide in-process monitoring, consisting of either a digital display of output or a printout of feed rate, in pounds per minute, to verify feed rate. The supply system shall report the feed in 1-pound increments using load cells that will enable the user to monitor the depletion of the GTR. Monitoring the system volumetrically will not be allowed. The feeder shall interlock with the aggregate weight system and asphalt binder pump to maintain correct mixture proportions at all production rates.

Flow indicators or sensing devices for the system shall be interlocked with the plant controls to interrupt mixture production if GTR introduction rate is not within ± 3 percent. This interlock will immediately notify the operator if GTR introduction rate exceeds introduction tolerances. All plant production will cease if the introduction rate is not brought back within tolerance after 30 seconds. When the interlock system interrupts production and the plant has to be restarted, upon restarting operations; the modifier system shall run until a uniform feed can be observed on the output display. All mix produced prior to obtaining a uniform feed shall be rejected.

4.1 Batch Plants. GTR shall be added to aggregate in the weigh hopper. Mixing times shall be increased per GTR manufacturer recommendations.

4.2 Drum Plants. The feeder system shall add GTR to aggregate and liquid binder during mixing and provide sufficient mixing time to produce a uniform mixture. The feeder system shall ensure GTR does not become entrained in the exhaust system of the drier or plant and is not exposed to the drier flame at any point after introduction.

5.0 Testing During Mixture Production. Testing of asphalt mixes containing GTR shall not begin until at least 30 minutes after production or per additive supplier's recommendation.

6.0 Construction Requirements. Mixes containing GTR shall have a target mixing temperature of 325 F or as directed by the GTR additive supplier. The additive supplier's recommendations shall be followed to allow for GTR binder absorption/reaction. This may

include holding mix in the silo to allow time for binder to absorb into the GTR. Rolling operations may need to be modified.

7.0 Mix Design Test Method Modification. A formal mixing procedure from the additive supplier shall be provided to the contractor and engineer that details the proper sample preparation, including blending GTR with the binder or other additives. Samples shall be prepared and fabricated in accordance with this procedure by the engineer and contractor throughout the duration of the project.

8.0 Mix design Volumetrics. Mix design volumetric equations shall be modified as follows:

8.1 Additional virgin binder added to offset GTR absorption of binder shall be counted as part of the mix virgin binder

8.2 GTR shall be included as part of the aggregate when calculating VMA of the mix.

8.2.1 GTR SPG shall be 1.15

8.3 Mix G_{sb} used to determine VMA shall be calculated as follows:

$$G_{sb\,(JMF)} = \frac{(100 - P_{bmv})}{\left(\frac{P_s}{G_{sb}} + \frac{P_{GTR}}{G_{GTR}}\right)}$$

$$where:$$

$G_{sb\,(JMF)} = bulk\ specific\ gravity\ of\ the\ combined\ aggregate\ including\ GTR$

$P_{bmv} = percent\ virgin\ binder\ by\ total\ mixture\ weight$

$P_s = percent\ aggregate\ by\ total\ mixture\ weight\ (not\ including\ GTR)$

$P_{GTR} = percent\ GTR\ by\ total\ mixture\ weight$

$G_{sb} = bulk\ specific\ gravity\ of\ the\ combined\ aggregate\ (not\ including\ GTR)$

$G_{GTR} = GTR\ specific\ gravity$

8.4 G_{se} shall be calculated as follows:

$$G_{se} = \frac{(100 - P_b - P_{GTR})}{\left(\frac{100}{G_{mm}} - \frac{P_b}{G_b} - \frac{P_{GTR}}{G_{GTR}}\right)}$$

8.5 P_{be} shall be calculated as follows:

$$P_{be} = P_b - \frac{P_{ba}}{100} * (P_s + P_{GTR})$$

9.0 Minimum GTR Amount. The minimum dosage rate for GTR shall be 5 % by weight of total binder for an acceptable one bump grade or 10 % by weight of total binder for an acceptable two bump grade as detailed in the following table. Varying percentage blends of GTR and approved additives may be used as approved by the engineer with proven performance and meeting the specified requirements of the contract grade.

Contract Binder Grade	Percent Effective Virgin Binder Replacement Limits	Required Virgin Binder Grade	Minimum GTR Dosage Rate
PG 76-22	0 - 20	PG 70-22	5 %
		PG 64-22	10 %
PG 70-22	0 - 30	PG 64-22	5 %
		PG 58-28	10 %
PG 64-22	0 – 40*	PG 58-28	5 %
		PG 52-34	10 %
PG 58-28	0 – 40*	PG 52-34	5 %
		PG 46-34	10 %

* Reclaimed Asphalt Shingles (RAS) may be used when the contract grade is PG 64-22 or PG 58-28. RAS replacement shall follow the 2 x RAS criteria when calculating percent effective binder replacement in accordance Sec 401.

Buy America

In addition to Section 106.9 of the Missouri Standard Specifications for Highway Construction, the following requirements will also be in effect for this project.

1.0 Description. The Bipartisan Infrastructure Law (BIL) was enacted on November 15, 2021. The BIL includes Build America, Buy America Act Publication L. No. 117-58. This provision expands the Buy America requirements beyond what is currently only required for steel and iron products. The steel and iron provisions have not changed with the new bill. Cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives are excluded from this requirement. All other materials and manufactured products permanently incorporated into the project will be subject to Buy America requirements. There are three categories requiring Buy America Certification:

a) Iron and steel – no changes to the current specification requirements.

b) Manufactured products – these are currently exempted under the 1983 waiver from FHWA.

c) Construction materials consisting primarily of:
   - Non-ferrous metals;

- Plastic and polymer-based products (including polyvinylchloride, composite build materials, and polymers used in fiber optic cables);
- Glass (including optic glass);
- Lumber; or
- Drywall

1.1 All products and or materials will only be classified under one of these categories and not under multiple categories. It is the prime contractor's responsibility to assure all submittals required for Buy America are submitted to the Engineer prior to the products and or materials being incorporated in the job. The implementation of this policy will be in effect for all projects awarded after November 10, 2022.

1.2 New items designated as construction materials under this requirement will require the prime contractor to submit a material of origin form certification prior to incorporation into the project. The Certificate of Material origin form (link to certificate form) from the supplier and/or fabricator must show all steps of the manufacturing being completed in the United States. The Certificate of Material form shall be filed with the contract documents.

1.3 Any minor miscellaneous construction material items that are not included in the materials specifications shall be certified by the prime contractor as being procured domestically The certification shall read "I certify all materials permanently incorporated in this project covered under this provision have been to the best of my knowledge procured and all manufactured domestically." The certification shall be signed by an authorized representative of the prime contractor.

1.4 The National Transportation Product Evaluation Program (NTPEP) compliance program verifies that some non-iron and steel products fabrication processes conform to 23 CFR 635.410 Buy America Requirements and an acceptable standard per 23 CFR 635.410(d). NTPEP compliant suppliers will not be required to submit step certification documentation with the shipment for some selected non-iron and steel materials. The NTPEP compliant supplier shall maintain the step certification documentation on file and shall provide this documentation to the engineer upon request.

2.0 Basis of Payment. Any costs incurred by the contractor by reason of compliance with the above requirements shall be considered as included in and completely covered by the unit price bid for the various items of work included in the contract.

Delete Sec 403.19.2 and substitute the following:

403.19.2 Lots. The lot size shall be designated in the contractor's QC Plan. Each lot shall contain no less than four sublots and the maximum sublot size shall be 1,000 tons. The maximum lot size shall be 4,000 tons for determination of pay factors. Sublots from incomplete lots shall be combined with the previous complete lot for determination of pay factors. When no previous lot exists, the mixture shall be treated in accordance with Sec 403.23.7.4.1. A new lot shall begin when the asphalt content of a mixture is adjusted in accordance with Sec 403.11.

O. 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.

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, lane line markings, and preformed thermoplastic pavement marking, as specified, at locations shown on the plans or as approved by the engineer. The preformed thermoplastic pavement marking includes, but not limited to, 24" White (Stop Bars) and 24" Yellow (Hash Mark), 6" White for Crosswalks, Turn Arrows, Railroad Crossings, Yield Markings, and the word "ONLY". 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. The contractor shall place the preformed thermoplastic pavement marking after the permanent centerline, edge line, and lane line marking is installed by the contractor or by others. The contractor will have 5 five days after the permanent centerline, edge line, and lane line markings are placed to start the preformed thermoplastic pavement marking installation and shall be placed in accordance with manufacturer's recommendations or as approved by the engineer.

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 or 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 0.25Gal/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 Section 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 the 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 Section 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 Section 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 the 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 expenses.

X. Sensitive Streams or Waterbodies Near Project Area

1.0 Description. The project crosses, or is in the vicinity of, a sensitive stream or watershed. Waterbodies within and near the project area may serve as habitat for federal and state listed sensitive species. To avoid any negative impacts to these species and their habitats, water quality shall be protected from construction impacts.

1.1 The contractor shall prevent any debris and materials from construction activities from entering streams and other waterbodies. If debris or materials do enter waterbodies, and if deemed necessary

by the engineer or MoDOT's environmental personnel, it shall be removed as directed by the engineer at the contractor's expense.

2.0 Basis of Payment. No direct payment will be made for any expense incurred by the contractor by reason of compliance with the specific requirements of the provision, including any delay, inconvenience, or extra work except for those items for which payment is included in the contract.

Y. Cooperation Between Contractors (Routes W, Y and PP)

1.0 Description. This contract is one of several contemplated relative to the overall project. Separate contracts may be let that will be within this contract's area.

2.0 Construction Requirements.

2.1 The work for this project shall be performed in the order necessary to best facilitate the early completion of the combined projects on this improvement. The contractor shall be required to arrange the storage of materials and equipment, and to perform the construction operations so as not to unduly interfere with the operations of other contractors. This may require the contractor to store equipment and materials off state right of way and make the necessary arrangements for storage sites.

2.2 Full cooperation of the contractors involved with this improvement in careful and complete coordination of their respective activities in the area will be required. Each contractor involved shall schedule and conduct work so as to avoid unnecessary inconvenience and/or delay to another, and a manner as not to damage work being performed or completed by another. When necessary for proper prosecution of work, each contractor shall permit the other access through the overlapping construction areas and the use of any access or haul roads constructed by others.

3.0 Route W Requirements.

3.1 The contractor shall be aware that another contract (designated job number J7S3519) will be administered within the limits of this contract. Job number J7S3519 is an ADA project that will upgrade pedestrian facilities within the cities of Anderson, Pineville, Goodman and Southwest City. ADA work on Route W in the city of Pineville will involve construction of sidewalks, curb ramps and midblock crossings. The ADA project will be awarded in December 2023 with a notice to proceed in January 2024. The completion date for the ADA project is November 1, 2024.

3.2 The contractor shall coordinate with the J7S3519 contractor to facilitate the construction of the sidewalks, curb ramps and midblock crossings. The contractor shall be advised that new curb ramps will be constructed within the area of the resurfacing, and shall coordinate with the ADA contractor to construct the curb ramps so that compliant tie-ins to the new pavement can be made.

3.3 Midblock pavement markings will be installed as part of the ADA contract, however the contractor shall coordinate with the ADA contractor to ensure that pavement marking at the crosswalks is installed within ten business days of completion of the resurfacing.

4.0 Route Y Requirements.

4.1 The contractor shall be aware that another contract (designated job number JSR0095) will be administered within the limits of this contract. Job number JSR0095 is a resurfacing and intersection improvement project that will add turn lanes at the intersection of U.S. Route 60 and Route Y. The

resurfacing and intersection improvement project will be awarded in February 2024 with a notice to proceed in March 2024. The completion date for the resurfacing and intersection improvement project is June 30, 2025.

4.2 The contractor shall coordinate with the JSR0095 contractor to facilitate construction at the intersection of U.S. Route 60 and Route Y. The contractor shall be advised that U.S. Route 60 will be widened as a result of the turn lane construction, which will change the location of the radius points at the Route Y tie-in.

5.0 Route PP Requirements.

5.1 The contractor shall be aware that another contract (designated job number J7S3519) will be administered within the limits of this contract. Job number J7S3519 is an ADA project that will upgrade pedestrian facilities within the cities of Anderson, Pineville, Goodman and Southwest City. ADA work on Route PP in the city of Southwest City will involve construction of a curb ramp in the northeast quadrant of the Route 43 and Route PP intersection. The ADA project will be awarded in December 2023 with a notice to proceed in January 2024. The completion date for the ADA project is November 1, 2024.

5.2 The contractor shall coordinate with the ADA contractor to facilitate the construction of the curb ramp in the northeast quadrant of the intersection of Route 43 and Route PP. The contractor shall be advised that the new curb ramp will be constructed within the modified coldmilling area at the intersection of Route 43 and Route PP, and shall coordinate with the ADA contractor to construct the curb ramp following the modified coldmilling and resurfacing at the intersection so that a compliant tie-in to the new pavement can be made.

6.0 Method of Measurement. No measurement will be made.

7.0 Basis of Payment. Payment for the above-described work will be considered completely covered by the contract unit price for other items included in the contract.

Z. Prime Contractor Requirements JSP-16-09

1.0 The limitation in Sec 108.1.1 of the Missouri Standard Specifications for Highway Construction that "the contractor's organization shall perform work amounting to not less than 40 percent of the total contract cost" is waived for this project. Instead, for the purposes of constructing this project only, the less restrictive terms of the Federal Highway Administration's rule at Title 23 Code of Federal Regulations (CFR) § 635.116(a) shall apply, so that the contractor must perform project work with its own organization equal to not less than 30 percent of the total original contract price. All other provisions in Sec 108.1.1 et seq. of the Missouri Standard Specifications for Highway Construction shall remain in full force and effect, and shall continue to govern the contractor and its subcontractors, in accordance with the provisions of Title 23 CFR § 635.116.