SEE SHEET 2 FOR
LOCATION MAP

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

MAR-309-0.00

MONTGOMERY, BIG ISLAND, GRAND, MARION, AND SALT ROCK TOWNSHIPS

MARION COUNTY

PROJECT DESCRIPTION

ASPHALT CONCRETE PAVEMENT REHABILITATION WITH PAVEMENT REPAIRS AND MINOR BRIDGE REHABILITATION WORK FROM THE HARDIN COUNTY LINE (SLM 0.00) TO THE MARION CITY LIMITS (SLM 15.35).

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	N/A* ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	N/A* ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A* ACRES

* MAINTENANCE PROJECT

INDEX OF SHEETS:

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

PLANS CERTIFIED BY:

NAME: Mark A. Katona DATE: 9/10/2020

DISTRICT 6
OHIO DEPT. OF TRANSPORTATION

DESIGN DESIGNATION

SEE SHEET 2

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLAN PREPARED BY:
ODOT IN HOUSE DESIGN

ENGINEERS SEAL:

MARK A. KATONA E-51370 REGISTERED PROFESSIONAL ENGINEER

SIGNED: Mark A. Katona

DATE: 9/10/2020

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	01/17/20	MT-95.32	4/19/19				800-2019	10/16/20	
BP-3.2	1/18/19	MT-97.10	4/19/19				821	4/20/12	
BP-4.1	7/19/13	MT-97.12	1/20/17				832	10/19/18	
		MT-101.90	7/17/20				846	4/17/15	
MGS-1.1	1/19/18	MT-105.10	1/17/20				872	4/17/20	
MGS-2.1	1/19/18						874	4/17/20	
MGS-2.3	7/18/14	TC-52.10	10/18/13				875	1/18/19	
MGS-4.1	1/20/17	TC-52.20	7/20/18				921	4/20/12	
MGS-4.2	7/19/13	TC-61.30	7/19/19						
MGS-4.3	1/18/13	TC-64.10	1/17/20						
MGS-5.2	7/15/16	TC-65.10	1/17/14						
MGS-5.3	7/15/16	TC-65.11	7/21/17						
		TC-71.10	1/19/18						
RM-1.1	7/18/14								
MT-95.31	7/19/19								

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

APPROVED _____
DISTRICT DEPUTY DIRECTOR

DATE 9/10/2020

APPROVED _____
DIRECTOR, DEPARTMENT OF TRANSPORTATION

DATE _____

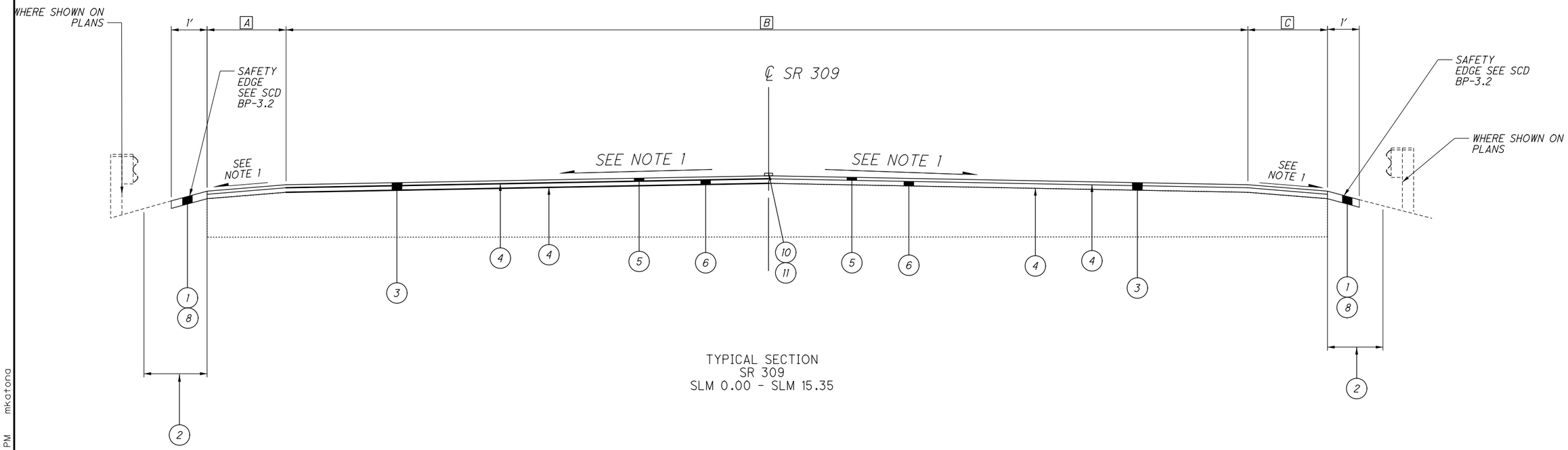
FEDERAL PROJECT NO. E191 (008)

PID NO. 110597

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

MAR-309-0.00



TYPICAL SECTION
SR 309
SLM 0.00 - SLM 15.35

NOTE 1: MATCH EXISTING SLOPE
NOTE 2: LONGITUDINAL JOINT PREPARATION SHALL BE INSTALLED IN ACCORDANCE WITH SCD BP-3.1
NOTE 3: RUMBLE STRIPES SHALL BE INSTALLED IN SPECIFIC LOCATIONS THAT ARE DETAILED IN THE PAVEMENT SUBSUMMARY.

LEGEND:

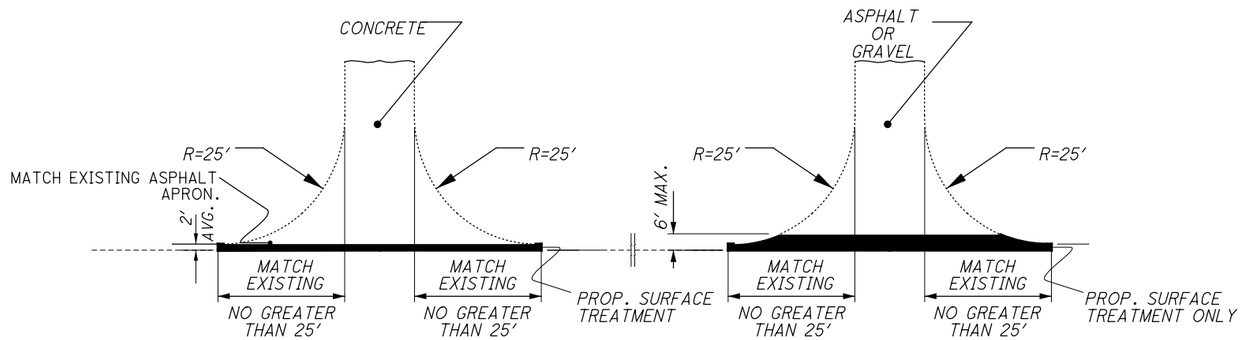
A B C SEE SUBSUMMARY SHEET TABLES FOR PAVEMENT WIDTHS.

1. ITEM 209 - PREPARING SUBGRADE FOR SHOULDER PAVING
2. ITEM 209 - LINEAR GRADING, AS PER PLAN (5' AVG.)
3. 3 " ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
3a. 1.5" ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
3b. 1.25" ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE
4. ITEM 407 - NON-TRACKING TACK COAT (RATE PER CMS TABLE 407.06-1)
5. 1.25" ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22, AS PER PLAN
6. 1.75" ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
7. 1.50" ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) (ONLY FOR SR 37 AND MARION-WILLIAMSPORT ROAD RESURFACING)
8. ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN (1' WIDE X 3" DEPTH)
9. 1.25 " ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE - FOR MAIL BOX APPROACHES
10. ITEM 618 - CENTERLINE RUMBLE STRIPES (ASPHALT CONCRETE)
11. ITEM 874 - LONGITUDINAL JOINT PREPARATION

CALCULATED MAK
CHECKED LLW

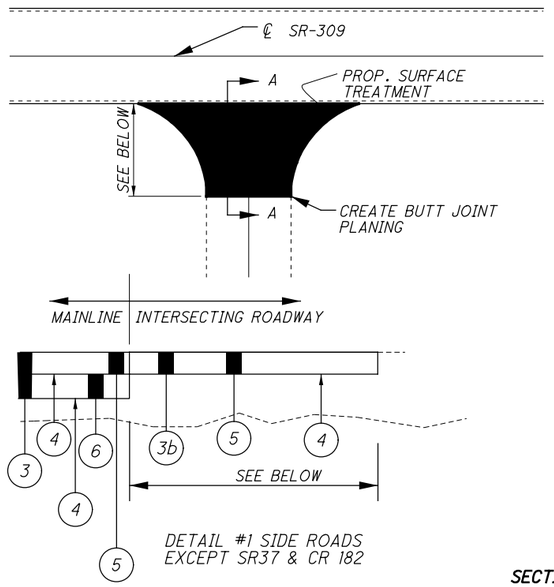
TYPICAL SECTIONS

MAR-309-0.00

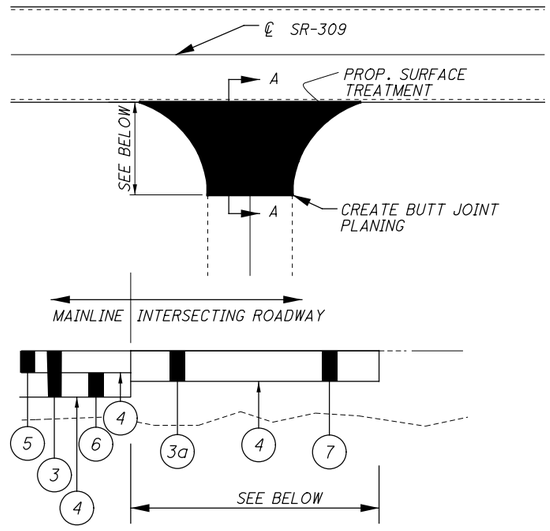


TYPICAL DRIVEWAY APPROACH DETAILS

FOR MORE INFORMATION INVOLVING TAPERS AND FEATHERING SEE STANDARD DRAWING BP-3.1



DETAIL #1 SIDE ROADS EXCEPT SR37 & CR 182



DETAIL # 2 SR 37 & CR 182

SECTION A-A

TYPICAL INTERSECTION DETAIL

LOC 1 SR 309	SLM 2.04 AT	SR 37	RT & LT	250' BACK WITH ITEM 442
LOC 1 SR 309	SLM 5.69 AT	CO RD 213	RT	PAVE BACK TO STOP SIGN (LARGER INTERSECTION)
LOC 1 SR 309	SLM 6.00 AT	CO RD 213	RT	PAVE BACK TO ROW (LARGER INTERSECTION)
LOC 1 SR 309	SLM 6.56 AT	CO RD 66	LT	PAVE BACK TO START OF PHYSICAL GORE PERPENDICULAR TO SIDE ROAD
LOC 1 SR 309	SLM 6.69 AT	CO RD 25	LT	PAVE BACK TO START OF PHYSICAL GORE PERPENDICULAR TO SIDE ROAD
LOC 1 SR 309	SLM 7.21 AT	TWP RD 64	RT	PAVE BACK TO ROW (LARGER INTERSECTION)
LOC 1 SR 309	SLM 7.35 AT	TWP RD 64	RT	PAVE BACK TO ROW (LARGER INTERSECTION)
LOC 1 SR 309	SLM 9.45 AT	CO RD 33	LT	PAVE BACK TO ROW (LARGER INTERSECTION)
LOC 1 SR 309	SLM 11.38 AT	SR 203	LT & RT	PAVE BACK TO CHIP SEAL LIMIT (APPROX. 30' LT & 75' RT)
LOC 1 SR 309	SLM 14.03 AT	CO RD 162	LT & RT	PAVE BACK TO STOP BARS ON N & S WITH ITEM 442 (WIDER INTERSECTION)
LOC 1 SR 309	SLM 14.11 AT	TWP RD 96	RT	PAVE BACK TO CURRENT BREAK (APPROX. 35')
LOC 1 SR 309	SLM 14.50 AT	CO RD 175	LT	PAVE BACK TO ROW (SKEWED, LARGER INTERSECTION)
LOC 1 SR 309	SLM 14.95 AT	TWP RD 1042	LT	PAVE BACK TO CURRENT BREAK (APPROX. 25')
LOC 1 SR 309	SLM 15.04 AT	TWP RD 94	LT	PAVE BACK TO CURRENT BREAK (APPROX. 20')
LOC 1 SR 309	SLM 15.30 AT	CO RD 95	LT & RT	PAVE BACK TO CURRENT BREAK (APPROX. 35' LT, 0' RT)

ALL OTHER INTERSECTIONS ARE TO BE PAVED BACK TO THE ROW LINE, WITH A MINUMUM DISTANCE OF 20'

FOR LEGEND, SEE SHEET NO. 4

CALCULATED MAK
CHECKED LLW

DRIVEWAYS AND SIDE ROADS

MAR-309-0.00

GENERAL:
THE CONTRACTOR SHALL SUBMIT IN WRITING A SCHEDULE OF OPERATIONS TO THE ENGINEER (SEE 108.02) AND RECEIVE APPROVAL IN WRITING BEFORE WORK IS STARTED ON THIS PROJECT. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

ALIGNMENT AND PROFILE:
THE WORK INVOLVED IN THIS PROJECT IS TO PLANE PAVEMENT WHILE MAINTAINING THE EXISTING CROSS-SLOPE (CROWN).

CONTRACTORS EQUIPMENT - OPERATION AND STORAGE:
THE CONTRACTORS EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC WHERE PRACTICAL. EQUIPMENT SHALL HAVE AT LEAST ONE AMBER FLASHING LIGHT. WHEN PARKED ALONG THE HIGHWAY, THE EQUIPMENT SHALL BE LOCATED EITHER A MINIMUM OF THIRTY FEET FROM THE EDGE OF PAVEMENT OR SIX FEET BEHIND GUARDRAIL WITH A MINIMUM OF 125 FEET OF GUARDRAIL PRECEDING THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT AN APPROVED CONTRACTORS STORAGE AREA.

CONTINGENCY QUANTITIES:
THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

REMOVAL ITEMS:
UNLESS OTHERWISE INSTRUCTED, ASPHALT, GUARDRAIL, POSTS, DEBRIS, AND MISCELLANEOUS HARDWARE DESIGNATED FOR REMOVAL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE REMOVED ITEM.

WORK LIMITS:
THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

DRIVEWAYS, SIDE ROADS, AND MAILBOX APPROACHES:
QUANTITIES AND DETAILS HAVE BEEN PROVIDED FOR THE TREATMENT OF DRIVEWAYS, INTERSECTIONS, AND MAILBOX APPROACHES. THE CONTRACTOR SHALL EXPECT TO "PAVE BACK" ON ALL EXISTING SIDE ROADS AS LISTED AND DETAILED IN THE TYPICAL DETAIL SECTION OF THIS PLAN. ONLY EXISTING ASPHALT MAILBOXES SHALL RECEIVE PROPOSED ASPHALT TREATMENTS. QUANTITIES OF ITEM 617 COMPACTED AGGREGATE HAS BEEN PROVIDED IN THE PLANS TO ACCOMMODATE FOR NON-ASPHALT APPROACHES.

COORDINATION WITH O.D.O.T.'S CENTRAL OHIO TRAFFIC MANAGEMENT PROGRAM (COTMP):
THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES ON A WEEKLY BASIS. WHEN DETOURS ARE PLANNED, THIS NOTIFICATION SHALL BE AT THE PRE-CONSTRUCTION MEETING OR 30 DAYS IN ADVANCE ONCE CONSTRUCTION HAS BEGUN. LANE AND RAMP CLOSURES FOR 2 OR MORE WEEKS SHALL BE REPORTED 2 WEEKS IN ADVANCE OF CLOSURE. LANE AND RAMP CLOSURES OF LESS THAN 2 WEEKS DURATION AND MORE THAN 2 DAYS SHALL BE REPORTED AT LEAST 3 WORKING DAYS IN ADVANCE. FOR SHORT TERM LANE OR RAMP CLOSURES (2 DAYS OR LESS) NOTIFICATION SHALL BE MADE AT LEAST 1 WORKING DAY IN ADVANCE. INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO ALL CONSTRUCTION ACTIVITIES THAT IMPACT TRAFFIC AT PRESENT AND IN THE NEXT 30 DAYS. THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL WHO WILL BE RESPONSIBLE FOR PREPARING THIS REPORT AT THE PRE-CONSTRUCTION MEETING. ANY UNFORESEEN IMPACTS TO TRAFFIC SHALL BE REPORTED TO THE PROJECT ENGINEER AS SOON AS POSSIBLE. THE PROJECT ENGINEER SHALL PROVIDE THIS INFORMATION TO COTMP. ALL CONSTRUCTION ACTIVITIES THAT INTERFERE WITH TRAFFIC SHALL BE REPORTED TO COTMP. THIS INFORMATION SHALL BE PROVIDED TO COTMP AT 740-833-8323, OR BY FAX AT 740-833-8090.

BUTT JOINTS:
BUTT JOINTS SHALL BE PLACED AT BEGINNING AND END OF PROJECT, AT MILLING LIMITS AND BRIDGES NOT INTENDED TO BE PAVED OVER.

THE BUTT JOINTS SHALL INCLUDE SAWCUTTING THE PAVEMENT TO MAKE A CLEAN JOINT AND SEALING THE JOINT.

ITEM 202 GUARDRAIL REMOVED, AS PER PLAN:
ITEM 202 ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN:
ITEM 202 BRIDGE TERMINAL ASSEMBLY REMOVED, AS PER PLAN:
IN ADDITION TO THE REQUIREMENTS OF ITEM 202, REMOVAL OF SPECIFIED GUARDRAIL ITEMS SHALL INCLUDE BUT NOT BE LIMITED TO ANY ATTACHED POSTS, SIGNS AND DELINEATORS (NOT OTHERWISE SPECIFIED). THIS REMOVAL WILL INCLUDE ALL POSTS, ANCHORS AND HARDWARE UNDER GROUND.

THE CONTRACTOR SHALL EXPECT TO REMOVE ALL CONCRETE FOUNDATIONS COMPLETELY AT ALL LOCATIONS UNLESS OTHERWISE INSTRUCTED OR APPROVED BY THE ENGINEER. REMOVING EXISTING CONCRETE FOUNDATION TO A MINIMUM OF 1 FOOT BELOW THE GRADE OF THE SURROUNDING AREA MAY ONLY BE PERMITTED IF THE EXISTING CONCRETE DOES NOT FALL WITHIN 6 FEET OF THE PROPOSED AS TO NOT COMPROMISE THE PERFORMANCE OF THE PROPOSED GUARDRAIL SYSTEM(S).

ALL HOLES AND VOIDS REMAINING AFTER REMOVAL OF GUARDRAIL POSTS AND FOUNDATIONS SHALL BE FILLED WITH GRANULAR MATERIAL CONFORMING TO CMS 203.02R. FILL MATERIAL CONTAINING SOD SHALL NOT BE USED. ALL FILL MATERIAL SHALL BE APPROVED BY THE ENGINEER. MATERIAL PLACED IN HOLES SHALL BE THOROUGHLY COMPACTED AND LEVELED OFF AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPLICABLE GUARDRAIL REMOVAL ITEM.

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR THE ACTUAL TIME NECESSARY TO REMOVE THE EXISTING GUARDRAIL, PREPARE THE SITE, AND INSTALL NEW GUARDRAIL IN A CONTINUOUS OPERATION. GUARDRAIL DESIGNATED FOR REMOVAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF.

ITEM 203 - EMBANKMENT, AS PER PLAN:
QUANTITIES FOR ITEM 203 - EMBANKMENT HAVE BEEN PROVIDED THROUGHOUT THIS PLAN TO BUILD UP FORE-SLOPES AND ENSURE PROPER GRADING FOR THE PROPOSED ANCHOR ASSEMBLIES. THIS ITEM OF WORK INCLUDES ANY CLEARING AND GRUBBING NECESSARY TO PLACE THE EMBANKMENT AT THE LOCATIONS SPECIFIED OR DIRECTED. THE CONTRACTOR SHALL BE PREPARED TO USE EMBANKMENT AT THE LOCATIONS SPECIFIED IN THE PLANS AND ANY OTHER AREAS "AS DIRECTED BY THE ENGINEER".

ITEM 209 - LINEAR GRADING, AS PER PLAN:
CONTINGENCY QUANTITIES FOR ITEM 209 - LINEAR GRADING, AS PER PLAN, HAVE BEEN PROVIDED BELOW. THE PURPOSE OF THIS ITEM IS TO ENSURE PROPER GRADING FOR THE EARTH SHOULDERS. THE WIDTH SHALL BE AN AVERAGE OF 5'. THE CONTRACTOR SHALL BE PREPARED TO USE LINEAR GRADING AT THE LOCATIONS SPECIFIED "AS DIRECTED BY THE ENGINEER".

A QUANTITY OF 3.9 MILES OF ITEM 209 - LINEAR GRADING HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE "AS DIRECTED BY THE ENGINEER"

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), 6", AS PER PLAN:
REPAIRS SHALL CONSIST OF REMOVING 6" OF PAVEMENT AND PLACING 6" OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22. WORK SHALL BE PERFORMED ACCORDING TO SCD MT-101.90. WORK SHALL BE PERFORMED PRIOR TO RESURFACING.

SEE SHEET NO. 7 FOR DETAILS.
SEE SHEETS 20 & 21 FOR QUANTITIES AND LOCATIONS

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), 9", AS PER PLAN:
REPAIRS SHALL CONSIST OF REMOVING 9" OF PAVEMENT AND PLACING 9" OF ITEM 301 ASPHALT CONCRETE BASE, PG64-22 MIN. 2 LIFTS. WORK SHALL BE PERFORMED ACCORDING TO SCD MT-101.90. WORK SHALL BE PERFORMED PRIOR TO RESURFACING.

SEE SHEET NO. 7 FOR DETAILS.
SEE SHEETS 20 & 21 FOR QUANTITIES AND LOCATIONS

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE:
THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO THE CONTRACTORS EQUIPMENT THAT MAY RESULT FROM THE PLANING OPERATION, INCLUDING DAMAGE CAUSED BY CASTINGS AND LOOP DETECTORS. THE DEPTH OF PLANING CLOSE TO THE CASTINGS SHALL BE AS DIRECTED; TO ACHIEVE A SMOOTH RIDING FINISHED PAVEMENT. GREAT CARE SHALL BE TAKEN TO PREVENET THE REMOVAL OF THE EXISTING PAVEMENT CROSS-SLOPE (CROWN) DURING THE PLANING OPERATIONS.

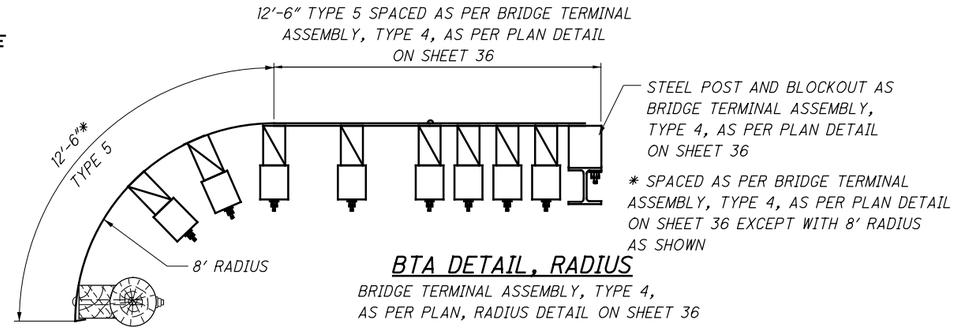
THE CONTRACTOR SHALL LIMIT THE PLANING OPERATION TO ONE LANE AT A TIME AS TO ENSURE THAT THE PROPOSED SURFACE AND INTERMEDIATE COURSE IS BUTTING UP TO EITHER PROPOSED OR EXISTING ASPHALT. BECAUSE OF THIS REQUIREMENT, THE CONTRACTOR WILL BE REQUIRED TO COMPLETE ONE DIRECTION UP TO THE SURFACE COURSE BEFORE PLANING AND COMPLETING THE ADJACENT LANE. THIS REQUIREMENT WILL WAIVE THE LAPPING OF THE BASE LONGITUDINAL JOINT ON SCD BP-3.1.

PLANED PAVEMENT SHALL NEVER BE EXPOSED TO TRAFFIC ON SR-309 AND THE CONTRACTOR SHALL PERFORM THE ASPHALT intermediate COURSE CONCURRENTLY AS TO NOT VIOLATE THE DROPOFF POLICY PER SCD MT-101.90. PLANED PAVEMENT SHALL BE PERMITTED FOR A MINIMUM OF 14 CONSECUTIVE DAYS ON SIDE ROADS, DRIVEWAYS, AND MAILBOX APPROACHES ONLY IF THE CONDITION DOES NOT VIOLATE THE DROPOFF POLICY PER SCD MT-101.90.

FAILURE TO MEET ANY OF THE ABOVE REQUIREMENTS WILL SUBJECT THE CONTRACTOR TO A DISINCENTIVE OF $1000/DAY.

ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN:
BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN SHALL BE CONSTRUCTED AS PER THE GUARDRAIL DETAILS (PLAN INSERT) ON SHEET 36. PAYMENT FOR THIS ITEM SHALL BE MADE AT THE UNIT PRICE BID OF EACH AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, MATERIALS, AND ALL TYPE 5 GUARDRAIL COMPONENTS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL BRIDGE TERMINAL ASSEMBLY, TYPE 4.

ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN, RADIUS:
THIS ITEM SHALL INCLUDE THE COST OF ALL COMPONENTS INCLUDING TYPE 5 GUARDRAIL, POSTS AND OTHER HARDWARE. SEE SHEET 26 FOR LOCATION OF THIS WORK. RADII SHOWN ON THE SHEET.



BTA DETAIL, RADIUS

* SPACED AS PER BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN DETAIL ON SHEET 36 EXCEPT WITH 8' RADIUS AS SHOWN

BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN, RADIUS DETAIL ON SHEET 36

CALCULATED MAK
CHECKED DKR

GENERAL NOTES

MAR-309-0.00

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350 OR MASH 2016), AS PER PLAN:
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

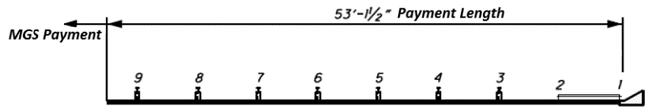
WHEN THE FACE OF THE ADJACENT (ATTACHED) GUARDRAIL IS LESS THAN 4' OFFSET FROM THE PROPOSED EDGE LINE, THE PROPOSED TYPE E ANCHOR ASSEMBLY SHALL BE INSTALLED USING A 25:1 FLARE RATE (24" OFFSET DESIGN) AS DETAILED IN THE SHOP DRAWINGS AND AS DIRECTED BY THE ENGINEER.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE PAYMENT LIMIT (LENGTH) FOR THE PROPOSED ANCHOR ASSEMBLY, MGS TYPE E, (NCHRP 350 OR MASH 2016), AS PER PLAN, SHALL BE 53'- 1 1/2" (TO THE STANDARD MGS CONNECTION) AS DETAILED BELOW.



PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURE.

ITEM 606 - CURVED RAIL ELEMENTS:
ALL RADII OF CURVED RAIL ARE ESTIMATED AND ACTUAL RADII OF PROPOSED RAIL SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING. LENGTH OF CURVED RAIL ELEMENTS, WHERE CALLED FOR IN A RUN, SHALL BE INCLUDED IN THE TOTAL LENGTH OF RUN SHOWN IN THE GUARDRAIL COLUMN AND THE CURVED RAIL ELEMENT TOTAL ARE INCLUDED WITH THE GUARDRAIL TOTALS ON THE GENERAL SUMMARY SHEET.

ITEM 606 - GUARDRAIL, MISC.: ALTERNATIVE GUARDRAIL PLACEMENT:
THIS ITEM SHALL BE USED WHEN THE CONTRACTOR IS REQUIRED TO USE AN ALTERNATE METHOD TO SET POSTS TO PREVENT DAMAGE TO AN UNDERGROUND OBSTACLE, SUCH AS A UTILITY. THE USE OF THIS ITEM WILL BE AS DEEMED NECESSARY BY THE ENGINEER. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NEEDED TO SET AND BACKFILL POSTS WHILE MEETING THE REQUIREMENTS OF THE APPLICABLE GUARDRAIL ITEM BEING PERFORMED. APPLICABLE GUARDRAIL ITEMS INCLUDE BUT ARE NOT LIMITED TO SETTING POSTS (AND SLEEVES) FOR TYPE 5,TYPE MGS, BARRIER DESIGN, ANCHOR ASSEMBLIES, AND BRIDGE TERMINAL ASSEMBLIES. PAYMENT SHALL BE AT THE UNIT BID PRICE OF EACH AND SHALL BE PAID FOR IN ADDITION TO THE APPLICABLE GUARDRAIL PLACEMENT ITEM LISTED ABOVE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED:
ITEM 606 - GUARDRAIL, MISC.: ALTERNATIVE GUARDRAIL PLACEMENT = 50 FT

ITEM 617 - WATER:
THIS ITEM SHALL BE USED AS DIRECTED BY THE ENGINEER.

ITEM 617 - WATER:

LOCATION	COUNTY	ROUTE	QUANTITY	UNIT
1	MAR	309	5	MGAL
		TOTAL	5	MGAL

THE FOLLOWING QUANTITY HAS BEEN PROVIDED AND THE TOTAL HAS BEEN CARRIED TO THE GENERAL SUMMARY.
ITEM 617 - WATER: = 5 MGAL

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN:
THIS ITEM SHALL CONSIST OF STATIONING USING 3 FT LATH STAKES. THE STAKES SHALL BE SPACED AT 200 FT INTERVALS AND SHALL EXTEND THROUGHOUT THE LENGTH OF THE PROJECT AND THROUGHOUT THE LENGTH OF ALL RAMPS. PLACEMENT OF THE STAKES SHALL BE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED OR MISSING STAKES.

CONSTRUCTION LAYOUT STAKES, AS PER PLAN WILL BE PAID FOR AT THE CONTRACT LUMP SUM BID, WHICH SHALL BE FULL COMPENSATION FOR ALL SERVICES, MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS, INCLUDING THE REMOVAL, NECESSARY TO COMPLETE THIS ITEM.

THIS ITEM SHALL ALSO BE USED TO ESTABLISH THE EXISTING RIGHT OF WAY TO VERIFY THAT ALL NEW WORK (OUTSIDE OF THE ROADWAY) IS CONTAINED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), AS PER PLAN, PG64-22:
JOINT CORING IN ACCORDANCE WITH 446.06 IS NOT REQUIRED FOR COLD LONGITUDINAL JOINTS PLACED OVER VOID REDUCING ASPHALT MEMBRANE (VRAM). CONSTRUCT COLD LONGITUDINAL JOINTS OVER VRAM USING THE SAME TECHNIQUES, EQUIPMENT, AND ROLLER PATTERNS USED ON THE REST OF THE MAT. OBTAIN 10 MAT CORES FOR EACH LOT OF MATERIAL IN ACCORDANCE WITH 446.04. PAY FACTORS FOR EACH LOT OF MATERIAL WILL BE DETERMINED ACCORDING TO TABLE 446.04-2.

ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN:
THIS WORK SHALL CONSIST OF PLACING CENTERLINE MONUMENTS AT THE LOCATIONS AS SHOWN BELOW:

CONLEY-THOMPSON ROAD (CO RD 63) - NORTHERN LEG
CONLEY-THOMPSON ROAD (CO RD 63) - SOUTHERN LEG

THE PROPOSED MONUMENT SHALL BE EAST JORDAN IRON WORKS CATALOG #2965A, H & Z AND 2966Z OR APPROVED EQUAL. SEE SHEETS 8 - 11 FOR DETAILS.

A REGISTERED SURVEYOR FROM DISTRICT 6 SURVEY SHALL BE RESPONSIBLE FOR REFERENCING AND VERIFYING THE LOCATIONS OF THE PROPOSED CENTERLINE MONUMENTS. THE CONTRACTOR SHALL NOTIFY THE SURVEY SECTION AT (704) 833-8250 - 48 HOURS PRIOR TO START OF MONUMENT WORK.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE, AND EQUIPMENT REQUIRED FOR PLACEMENT. PAYMENT WILL BE AT CONTRACT BID PRICE PER EACH.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED: ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN = 2 EACH

ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE:
THERE ARE MONUMENT BOXES LOCATED AT THE FOLLOWING LOCATIONS:

A. ROBINSON ROAD (TWP RD 19)
B. SR 37
C. DRY LANE RD (CO RD 30)
D. DECLIFF RD (TWP RD 29)
E. OSBUM RD (CO RD 30)
F. CRAMER RD (CO RD 64)
G. BUMFORD RD (TWP RD 62)
H. LEE RD (CO RD 87)
I. SR 203
J. WATERWORKS RD (CO RD 96)

A CONTINGENCY QUANTITY OF 4 MONUMENTS TO BE ADJUSTED TO GRADE HAS BEEN ADDED TO THE PLANS.

IF DURING THE RAISING OF THE BOXES TO THE NEW GRADE, THE BOX IS DAMAGED AND NEEDS TO BE REPLACED, THE PROPOSED MONUMENT SHALL BE EAST JORDAN IRON WORKS CATALOG #2965A, H & Z AND 2966Z OR APPROVED EQUAL.

THE SAME REQUIREMENTS AS ITEM 623 - MONUMENT ASSEMBLY, AS PER PLAN SHALL BE USED FOR THE REPLACEMENT MONUMENT BOXES.

PAYMENT FOR THIS ITEM SHALL INCLUDE ALL NECESSARY LABOR, MISCELLANEOUS HARDWARE, AND EQUIPMENT REQUIRED. PAYMENT WILL BE AT CONTRACT BID PRICE PER EACH.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED: ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE = 4 EACH

CALCULATED MAK CHECKED DKR

GENERAL NOTES

MAR-309-0.00

SHEET NUM.								PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
12-14	16-17	21	22	23	24	40	41	01/STR/PV	02/S<2/PV						
														ROADWAY	
			2,679.25					2,679.25		202	38001	2,679.25	FT	GUARDRAIL REMOVED, AS PER PLAN	12
			38					38		202	42001	38	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	12
			36					36		202	47001	36	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED, AS PER PLAN	12
			1,936.73					1,936.73		203	20001	1,936.73	CY	EMBANKMENT, AS PER PLAN	12
			69					69		209	60200	69	STA	LINEAR GRADING	
3.9								3.9		209	60501	3.9	MILE	LINEAR GRADING, AS PER PLAN	12
				30.38				28.68	1.7	209	72050	30.38	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING	
			2,737.5					2,737.5		606	15050	2,737.5	FT	GUARDRAIL, TYPE MGS	
			662.5					662.5		606	15100	662.5	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
			2					2		606	25550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE A	
			28					28		606	26151	28	EACH	ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN (NCHRP 350 OR MASH 2016)	13
			4					4		606	26550	4	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
			36					36		606	35141	36	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	13
			2					2		606	35141	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN , RADIUS	13
50								50		606	98000	50	FT	GUARDRAIL, MISC.: ALTERNATIVE GUARDRAIL PLACEMENT	13
2								2		623	38501	2	EACH	MONUMENT ASSEMBLY, AS PER PLAN	13
4								4		623	39500	4	EACH	MONUMENT BOX ADJUSTED TO GRADE	
														EROSION CONTROL	
						1,288		1,288		659	00300	1,288	CY	TOPSOIL	
						11,619.8		11,619.8		659	10000	11,619.8	SY	SEEDING AND MULCHING	
						581		581		659	14000	581	SY	REPAIR SEEDING AND MULCHING	
						581		581		659	15000	581	SY	INTER-SEEDING	
						1.57		1.57		659	20000	1.57	TON	COMMERCIAL FERTILIZER	
						2.4		2.4		659	31000	2.4	ACRE	LIME	
						63		63		659	35000	63	MGAL	WATER	
								2,000		832	30000	2,000	EACH	EROSION CONTROL	
														PAVEMENT	
		22,373						22,373		251	01041	22,373	SY	PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN, 6"	12
		905						905		251	01041	905	SY	PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN, 9"	12
					8,953			8,953		254	01000	8,953	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.25"	
					2,450			2,450		254	01000	2,450	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	
				226,588				220,845	5,743	254	01000	226,588	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 3"	
				32,376	969			32,298	1,047	407	20000	33,345	GAL	NON-TRACKING TACK COAT	
				8,188	310			8,237	261	441	10101	8,498	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), AS PER PLAN , PG64-22	13
				11,016				10,651	365	441	10200	11,016	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)	
					103			103		442	10000	103	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
				1,486	310			1,758	38	617	10101	1,796	CY	COMPACTED AGGREGATE, AS PER PLAN	13
5								4.5	0.5	617	25000	5	MGAL	WATER	
				13.55				12.82	0.73	618	43000	13.55	MILE	RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE)	
				15.22				14.37	0.85	874	21000	15.22	MILE	LONGITUDINAL JOINT PREPARATION	
														TRAFFIC CONTROL	
							1,118	1,057	61	621	00100	1,118	EACH	RPM	
							1,118	1,057	61	621	54000	1,118	EACH	RAISED PAVEMENT MARKER REMOVED	
			179					179		626	00110	179	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)	
98								98		630	02100	98	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
14								14		630	80100	14	SF	SIGN, FLAT SHEET	
							30.94	29.16	1.78	642	00104	30.94	MILE	EDGE LINE, 6", TYPE 1	
							15.47	14.58	0.89	642	00300	15.47	MILE	CENTER LINE, TYPE 1	
							540	540		644	00400	540	FT	CHANNELIZING LINE, 8"	
							216	216		644	00500	216	FT	STOP LINE	
							8	8		644	01300	8	EACH	LANE ARROW	
														STRUCTURE REPAIR QUANTITIES, SEE SHEET NO. 63	

CALCULATED XXX CHECKED XXX

GENERAL SUMMARY

MAR-309-0.00

SHEET NUM.							PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
12-14	16-17	21	22	23	24	40	01/STR/PV	02/SK2/PV						
													MISCELLANEOUS STRUCTURE	
			524.5				524.5		517	75500	524.5	FT	BRIDGE RAILING REBUILT	
													MAINTENANCE OF TRAFFIC	
	60						60		614	11110	60	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	99						99		614	12461	99	EACH	WORK ZONE MARKING SIGN, AS PER PLAN	16
	30.94						29.16	1.78	614	21550	30.94	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
	1,080						1,080		614	23680	1,080	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
	432						432		614	26610	432	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
													INCIDENTALS	
							LS		614	11000	LS		MAINTAINING TRAFFIC	
LS							LS		623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	13
							LS		624	10000	LS		MOBILIZATION	

CALCULATED XXX
CHECKED XXX

GENERAL SUMMARY

MAR-309-0.00

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SHEET NUMBER	REF. NO.	LOCATION	COUNTY	ROUTE	GENERAL SLM	SIDE	202			203	209	517	606								626		REMARKS
							GUARDRAIL REMOVED, AS PER PLAN	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	BRIDGE TERMINAL ASSEMBLY REMOVED, AS PER PLAN	EMBANKMENT, AS PER PLAN	LINEAR GRADING	BRIDGE RAILING REBUILT, AS PER PLAN	GUARDRAIL, TYPE MGS	GUARDRAIL, TYPE MGS, WITH LONG POSTS	GUARDRAIL, TYPE MGS, 25' LONG-SPAN	ANCHOR ASSEMBLY, MGS TYPE A	ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN (NCHRP 350 or MASH 2016)	ANCHOR ASSEMBLY, MGS TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN, RADIUS	BARRIER REFLECTORS, TYPE 2, BI-DIRECTIONAL		
							FT	EACH	EACH	CU YD	STATION	FT	FT	FT	FT	EACH	EACH	EACH	EACH		EACH		
25	*GR-1*	1	MARION	SR 309	*1.35*	L	112.50	1	1	49.80	1.7		75.00				1		1		4		
25	*GR-2*	1	MARION	SR 309	*1.34*	R	137.50	1	1	63.80	1.6		100.00				1		1		4		
25	*GR-3*	1	MARION	SR 309	*1.38*	L	100.00	1	1	50.33	2.0		62.50				1		1		4		
25	*GR-4*	1	MARION	SR 309	*1.38*	R	150.00	1	1	64.70	2.1		112.50				1		1		4		
26	*GR-5*	1	MARION	SR 309	*3.23*	L		1	1	42.60	1.3		37.50				1		1		4		
26	*GR-6*	1	MARION	SR 309	*3.23*	R	12.50	1	1	49.20	1.6		75.00				1		1		4		
26	*GR-7*	1	MARION	SR 309	*3.27*	L	12.50	1	1	34.70	1.2		75.00					1	1		4		
26	*GR-8*	1	MARION	SR 309	*3.27*	R		1	1	30.80	1.0		12.50				1		1		4		
27	*GR-9*	1	MARION	SR 309	*4.25*	L	65.00	1	1	42.80	1.2		25.00				1		1		4		
27	*GR-10*	1	MARION	SR 309	*4.24*	R	62.50	1	1	51.20	1.6		75.00				1		1		4		
27	*GR-11*	1	MARION	SR 309	*4.38*	L	65.00	1	1	41.50	1.2		25.00				1		1		4		
27	*GR-12*	1	MARION	SR 309	*4.27*	R	62.50	1	1	39.40	1.3		37.50				1		1		4		
28	*GR-13*	1	MARION	SR 309	*5.04*	L	25.00		1	36.50	1.0		62.50			1				1	3		
28	*GR-14*	1	MARION	SR 309	*5.05*	R	40.00	1	1	26.40	0.8		25.00			1				1	3		
28	*GR-15*	1	MARION	SR 309	*5.04*	L	578.00		1	239.20	7.4			662.50			1	1			5		
28	*GR-16*	1	MARION	SR 309	*5.05*	R	125.00	1	1	62.00	2.0		75.00				1	1			4		
29	*GR-17*	1	MARION	SR 309	*5.72*	L	18.75	1	1	48.60	1.6	130.00	62.50						1		6		
29	*GR-18*	1	MARION	SR 309	*5.73*	R	56.25	1	1	36.00	1.2	130.00	37.50						1		6		
29	*GR-19*	1	MARION	SR 309	*5.77*	L	50.00	1	1	39.60	1.3		37.50						1		3		
29	*GR-20*	1	MARION	SR 309	*5.78*	R	25.00	1	1	40.20	1.3		37.50						1		3		
30	*GR-21*	1	MARION	SR 309	*8.65*	L	50.00	1	1	33.70	1.3		50.00				1		1		3		
30	*GR-22*	1	MARION	SR 309	*8.64*	R	50.00	1	1	44.90	1.7		75.00				1		1		3		
30	*GR-23*	1	MARION	SR 309	*8.68*	L	262.50	1	1	100.30	3.7		275.00				1		1		6		
30	*GR-24*	1	MARION	SR 309	*8.68*	R	62.50	1	1	49.40	1.6		87.50				1		1		3		
31	*GR-25*	1	MARION	SR 309	*9.39*	L	56.25	1	1	27.60	1.4	6.25	50.00				1		1		4		
31	*GR-26*	1	MARION	SR 309	*9.38*	R	43.75	1	1	39.20	1.9	6.25	100.00				1		1		4		
31	*GR-27*	1	MARION	SR 309	*9.41*	L	43.75	1	1	44.50	2.0		100.00				1		1		4		
31	*GR-28*	1	MARION	SR 309	*9.41*	R	43.75	1	1	29.20	1.4		50.00				1		1		4		
32	*GR-29*	1	MARION	SR 309	*9.56*	L		1	1	29.00	1.4		50.00				1		1		7		
32	*GR-30*	1	MARION	SR 309	*9.56*	R		1	1	38.90	1.9		100.00				1		1		7		
32	*GR-31*	1	MARION	SR 309	*9.60*	L		1	1	38.40	1.9		100.00				1		1		5		
32	*GR-32*	1	MARION	SR 309	*9.60*	R		1	1	26.00	1.4		50.00				1		1		4		
33	*GR-33*	1	MARION	SR 309	*10.88*	L	25.00	1		50.50	1.5		50.00						1		7		
33	*GR-34*	1	MARION	SR 309	*10.88*	R	25.00	1		48.00	1.7		75.00						1		7		
33	*GR-35*	1	MARION	SR 309	*10.91*	L	25.00	1		59.20	1.7		75.00						1		4		
33	*GR-36*	1	MARION	SR 309	*10.91*	R	25.00	1		36.50	1.3		37.50						1		3		
34	*GR-37*	1	MARION	SR 309	13.11	L	200.00	1	1	61.90	2.7	126.00	175.00				1		1		8		
34	*GR-38*	1	MARION	SR 309	13.13	R	68.75	1	1	40.60	1.8	126.00	87.50				1		1		7		
34	*GR-39*	1	MARION	SR 309	13.19	L		1	1	20.30	1.0		62.50					1	1		4		
34	*GR-40*	1	MARION	SR 309	13.18	R		1	1	29.30	1.3		37.50				1		1		4		
TOTALS CARRIED TO GENERAL SUMMARY							2,679.25	38	36	1,936.73	69.0	524.50	2,737.50	662.50		2	28	4	36	2	179		

CALCULATED MAK
CHECKED DKR

GUARDRAIL SUBSUMMARY

MAR-309-0.00

STATE ROUTE 309
PAVEMENT SUB-SUMMARY

MAR-309-0.00

CALCULATED MAK
CHECKED DKR

LOCATION							DESIGN								QUANTITIES									REMARKS
								AVG. PAVEMENT WIDTH							209	254	407	441		442	617	618	874	
LOCATION	COUNTY	ROUTE	BEG SLM	END SLM	LENGTH	LENGTH	TYPICAL	A	B	C	D	E	F	TOTAL PAV. AREA	PREPARING SUBGRADE FOR SHOULDER PAVING	PAVEMENT PLANING, ASPHALT CONCRETE 3"	NON-TRACKING TACK COAT	1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22	1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (446)	1.50" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	COMPACTED AGGREGATE, AS PER PLAN (1' WIDE X 3" DEEP)	RUMBLE STRIPES, CENTER LINE (ASPHALT CONCRETE)	LONGITUDINAL JOINT PREPARATION	
					MI	FT		FT	FT	FT	FT	FT	FT	SY	MILE	SQ YD	GAL	CU YD	CU YD	CU YD	CU YD	MILE	MILE	
1	MAR	309	0.00	1.00	1.00	5,280	1	1.5	22.0	1.5				14,667	2.00	14,667	2,053	509	713		98	1.00	1.00	START AT INTERSECTION PAVEMENT BREAK
1	MAR	309	1.00	1.38	0.38	2,006	1	1.5	22.0	1.5				5,573	0.76	5,573	780	194	271		38	0.38	0.38	
1	MAR	309	1.38	1.39																				BRIDGE OVER HOLLAND RUN
1	MAR	309	1.39	2.00	0.61	3,221	1	1.5	22.0	1.5				8,947	1.22	8,947	1,253	311	435		60	0.61	0.61	
1	MAR	309	2.00	2.04	0.04	211	1	1.5	22.0	1.5				587	0.08	587	82	20	29		4	0.04	0.04	
1	MAR	309	2.04	3.00	0.96	5,069	1	1.5	22.0	1.5				14,080	1.92	14,080	1,971	489	684		94	0.96	0.96	
1	MAR	309	3.00	3.26	0.26	1,373	1	1.5	22.0	1.5				3,813	0.52	3,813	534	132	185		26	0.26	0.26	
1	MAR	309	3.26	3.29	0.03	158															2	0.03	0.03	BRIDGE OVER ENOCH DITCH
1	MAR	309	3.29	4.00	0.71	3,749	1	1.5	22.0	1.5				10,413	1.42	10,413	1,458	362	506		70	0.71	0.71	
1	MAR	309	4.00	4.27	0.27	1,426	1	1.5	22.0	1.5				3,960	0.54	3,960	554	138	193		26	0.27	0.27	
1	MAR	309	4.27	4.28																				BRIDGE OVER BROWN RUN
1	MAR	309	4.28	5.00	0.72	3,802	1	1.5	22.0	1.5				10,560	1.44	10,560	1,478	367	513		70	0.72	0.72	
1	MAR	309	5.00	5.05	0.05	264	1	1.5	22.0	1.5				733	0.10	733	103	25	36		4	0.05	0.05	
1	MAR	309	5.05	5.76	0.71	3,749	1	1.5	22.0	1.5				10,413	1.42	10,413	1,458	362	506		70	0.69	0.71	END 618 @ 5.74
1	MAR	309	5.76	5.78																				BRIDGE OVER DRAKE DITCH
1	MAR	309	5.78	6.00	0.22	1,162	1	1.5	22.0	1.5				3,227	0.44	3,227	452	112	157		22		0.22	
1	MAR	309	6.00	7.00	1.00	5,280	1	1.5	22.0	1.5				14,667	2.00	14,667	2,053	509	713		98	0.84	1.00	PAVE OVER BRIDGE @ 6.16 RESUME 618 @ 6.16
1	MAR	309	7.00	8.00	1.00	5,280	1	1.5	22.0	1.5				14,667	2.00	14,667	2,053	509	713		98	1.00	1.00	
1	MAR	309	8.00	8.67	0.67	3,538	1	1.5	22.0	1.5				9,827	1.34	9,827	1,376	341	478		66	0.67	0.67	
1	MAR	309	8.67	8.69																				BRIDGE OVER TYMOTCHTEE CREEK
1	MAR	309	8.69	9.00	0.31	1,637	1	1.5	22.0	1.5				4,547	0.62	4,547	637	158	221		30	0.31	0.31	
1	MAR	309	9.00	9.59	0.59	3,115	1	1.5	22.0	1.5				8,653	1.18	8,653	1,211	300	421		58	0.59	0.59	PAVE OVER BRIDGE @ 9.42
1	MAR	309	9.59	9.61																				BRIDGE OVER TYMOTCHTEE CREEK
1	MAR	309	9.61	10.00	0.39	2,059	1	1.5	22.0	1.5				5,720	0.78	5,720	801	199	278		38	0.39	0.39	
1	MAR	309	10.00	10.91	0.91	4,805	1	1.5	22.0	1.5				13,347	1.82	13,347	1,869	463	649		88	0.91	0.91	
1	MAR	309	10.91	10.92																				BRIDGE OVER BELL-HARRAMAN DITCH
1	MAR	309	10.920	11.000	0.08	422	1	1.5	22.0	1.5				1,173	0.16	1,173	164	41	57		8	0.08	0.08	
1	MAR	309	11.000	12.000	1.00	5,280	1	1.5	22.0	1.5				14,667	2.00	14,667	2,053	509	713		98	0.30	1.00	END 618 @ SLM 11.30 RESUME @ 12.45
1	MAR	309	12.000	12.720	0.72	3,802	1	1.5	23.0	1.5				10,982	1.44	10,982	1,537	381	534		70	0.27	0.72	PAVEMENT WIDENS TO 26' PAVE OVER BRIDGE @12.47
1	MAR	309	12.720	12.730	0.01	53	1	10.0	23.0	10.0				252	0.02	252	35	9	12			0.01	0.01	WIDER PAVEMENT @ BRIDGE
1	MAR	309	12.730	12.740																				BRIDGE OVER LYDDANE DITCH
1	MAR	309	12.740	12.750	0.01	53	1	10.0	23.0	10.0				252	0.02	252	35	9	12			0.01	0.01	WIDER PAVEMENT @ BRIDGE
1	MAR	309	12.750	13.000	0.25	1,320	1	1.5	22.0	1.5				3,667	0.50	3,667	513	127	178		24	0.25	0.25	
1	MAR	309	13.000	13.170	0.17	898	1	1.5	22.0	1.5				2,493	0.34	2,493	349	87	121		16	0.17	0.17	
1	MAR	309	13.170	13.200																				BRIDGE OVER LITTLE SCIOTO RIVER
1	MAR	309	13.200	13.860	0.66	3,485	1	1.5	22.0	1.5				9,680	1.32	9,680	1,355	336	471		64	0.66	0.66	DO NOT PAVE WIDENED AREA ON RIGHT 13.61
1	MAR	309	13.860	14.000	0.14	739	1	2.0	36.0	2.0				3,285	0.28	3,285	460	114	160		14	0.14	0.14	AVERAGE WIDTH = 40' (EXTRA CL)
1	MAR	309	14.000	14.220	0.22	1,162	1	2.0	36.0	2.0				5,163	0.44	5,163	723	179	251		22	0.22	0.22	AVERAGE WIDTH = 40' (EXTRA CL)
1	MAR	309	14.22	15.00	0.78	4,118	1	1.5	22.0	1.5				11,440	1.56	11,440	1,602	397	556		76	0.78	0.78	
1	MAR	309	15.00	15.23	0.23	1,214	1	1.5	22.0	1.5				3,373	0.46	3,373	472	117	164		22	0.23	0.23	END 618 @ SLM 15.23
1	MAR	309	15.23	15.35	0.12	634	1	1.5	22.0	1.5				1,760	0.24	1,760	246	61	86		12		0.12	END PROJECT
																	656	321						SAFETY EDGE
																			NO RUMBLE STRIPES ACROSS BRIDGES					
TOTALS CARRIED TO GENERAL SUMMARY															**30.38**	**226,588**	**32,376**	**8,188**	**11,016**		**1,486**	**13.55**	**15.22**	

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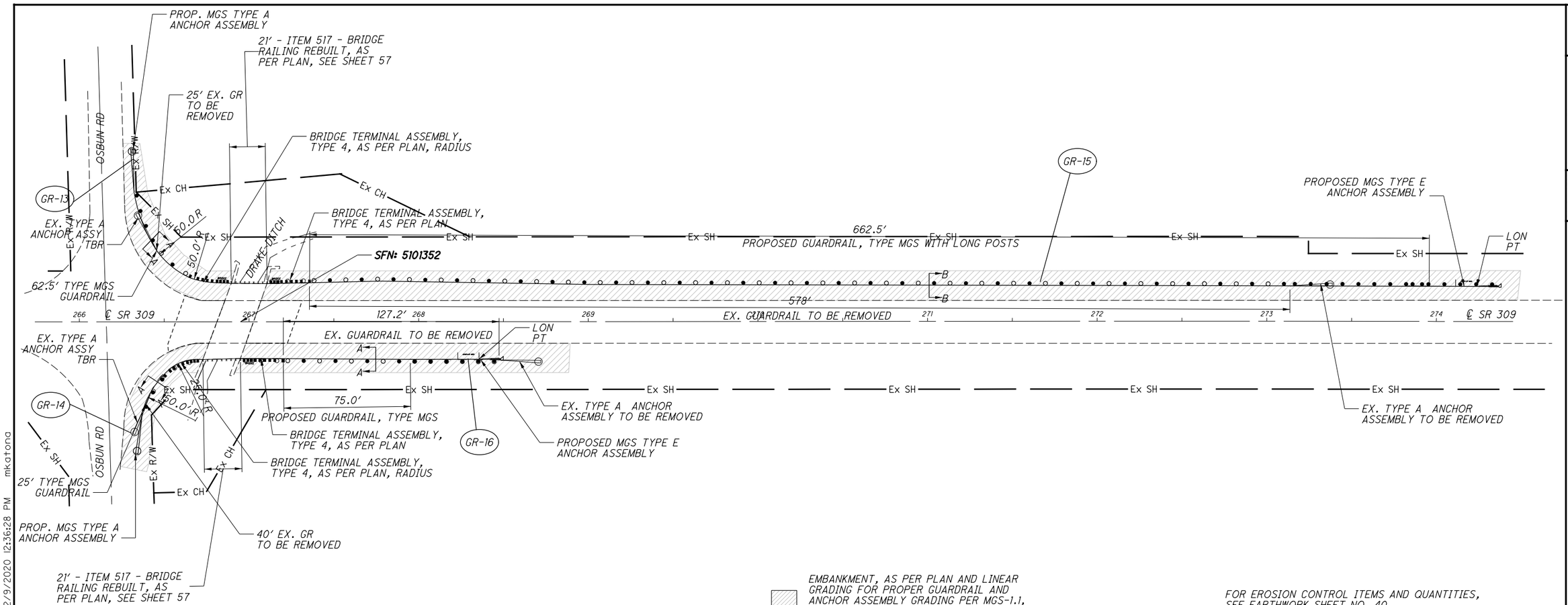
LOCATION							DESIGN								QUANTITIES										REMARKS
								AVG. PAVEMENT WIDTH							209	254			407	441		442	617		
LOCATION	COUNTY	ROUTE	BEG SLM	END SLM	LENGTH	LENGTH	TYPICAL	A	B	C	D	E	F	TOTAL PAV. AREA	PREPARING SUBGRADE FOR SHOULDER PAVING	PAVEMENT PLANING, ASPHALT CONCRETE 3"	PAVEMENT PLANING, ASPHALT CONCRETE 1.5"	PAVEMENT PLANING, ASPHALT CONCRETE 1.25"	NON-TRACKING TACK COAT	1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22	1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (446)	1.50" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	COMPACTED AGGREGATE, AS PER PLAN (1' WIDE X 2" DEEP)	
					MI	FT		FT	FT	FT	FT	FT	FT	SY	MILE	SQ YD	SQ YD	SQ YD	GAL	CU YD	CU YD	CU YD	CU YD	
1	MAR	C19				20								83				83	7	3					ROBINSON ROAD - RT.
1	MAR	37	2.04			250								950			950		81			40			SR 37 - LT
1	MAR	37	2.04			250								900			900		77			38			SR 37 - RT
1	MAR	T28	3.05			20								100				100	9	3					DRY LANE - LT
1	MAR	T28	3.05			20								75				75	6	3					DRY LANE - RT
1	MAR	C29	3.05			20								95				95	8	3					DECLIFFE - LT
1	MAR	C29	3.05			20								85				85	7	3					DECLIFF - RT
1	MAR	C30	5.05			20								190				190	16	7					OSBUN ROAD - LT
1	MAR	T30	5.05	5.06		20								150				150	13	5					OSBUN ROAD - RT
1	MAR	C213	5.71			22								305				305	26	11					MAIN STREET - RT
1	MAR	C213	6.04			20								115				115	10	4					MAIN STREET - RT
1	MAR	T31	6.05			20								140				140	12	5					AGOSTA-MEEKER ROAD - LT
1	MAR	T31	6.05			20								100				100	9	3					AGOSTA-MEEKER ROAD - LT
1	MAR	C66A	6.56			20	1							200				200	17	7					KENTON-GALION ROAD - LT
1	MAR	C25	6.71			20								170				170	14	6					MEEKER-UPPER SANDUSKY ROAD - LT
1	MAR	T64A	7.21			20								140				140	12	5					FRAME ROAD - RT
1	MAR	T64A	7.33			20								170				170	14	6					FRAME ROAD - RT
1	MAR	T65	7.60			20								80				80	7	3					CRAMER ROAD - RT
1	MAR	T63	8.10			20								80				80	7	3					CONLEY-THOMPSON ROAD - LT
1	MAR	T63	8.12			20								110				110	9	4					CONLEY-THOMPSON ROAD - RT
1	MAR	C88	8.85			20								55				55	5	2					PLEASANT HILL ROAD - LT
1	MAR	C33	9.46			20								85				85	7	3					WILDCAT ROAD - RT
1	MAR	T62	9.73			20								80				80	7	3					BUMFORD ROAD - LT
1	MAR	T62	9.73			20								85				85	7	3					BUMFORD ROAD - RT
1	MAR	T87	10.25			20								65				65	6	2					LEE ROAD - LT
1	MAR	C83	11.390			30								105				105	9	4					PROSPECT-UPPER SANDUSKY ROAD N - LT
1	MAR	C203R	11.390			75								380				380	32	13					PROSPECT-UPPER SANDUSKY ROAD N - RT
1	MAR	TRON	11.900			20								80				80	7	3					TRON ROAD - LT
1	MAR	C95	12.890			20								155				155	13	5					HOLLAND ROAD - LT
1	MAR	C95	12.890			20								120				120	10	4					HOLLAND ROAD - RT
1	MAR	C162	14.04											240			240		20			10			MARION-WILLIAMSPORT ROAD - PAVE TO STOP LINE - N
1	MAR	C162	14.04											360			360		31			15			MARION-WILLIAMSPORT ROAD - PAVE TO STOP LINE - S
1	MAR	T96	14.12			35								100				100	9	3					WATERWORKS ROAD - RT
1	MAR	C175	14.52			20								100				100	9	3					C175 - LT
1	MAR	T1042	14.97			25								115				115	10	4					COTTAGE STREET - LT
1	MAR	C94	15.06			20								125				125	11	4					FOUNTAIN STREET - LT
1	MAR	C95	15.31			35								210				210	18	7					HOLLAND ROAD - LT
1	MAR	C95	15.31			5								60				60	5	2					HOLLAND ROAD - RT
VARIOUS DRIVEWAYS / MAILBOX APP.														41,800				4,645	395	161				310	DRIVES AND MAILBOX APPROACHES
TOTALS CARRIED TO GENERAL SUMMARY																	2,450	8,953	969	310		103	310		

CALCULATED XXX
CHECKED XXX

STATE ROUTE 309
PAVEMENT SUB-SUMMARY

MAR-309-0.00



EMBANKMENT, AS PER PLAN AND LINEAR GRADING FOR PROPER GUARDRAIL AND ANCHOR ASSEMBLY GRADING PER MGS-1.1, MGS-5.2, MGS-5.3, AND SECTION A-A AND SECTION B-B ON SHEET 35.

FOR EROSION CONTROL ITEMS AND QUANTITIES, SEE EARTHWORK SHEET NO. 40

UNLESS OTHERWISE DIRECTED, GUARDRAIL OFFSETS REMAIN THE SAME.

FOR BRIDGE TERMINAL ASSEMBLY DETAIL, SEE SHEET NO. 36

FOR BRIDGE RAIL REPLACEMENT, SEE SHEET NO. 57

REF. NO.	SLM	SIDE	202 GUARDRAIL REMOVED, AS PER PLAN	202 ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	202 BRIDGE TERMINAL ASSEMBLY REMOVED, AS PER PLAN	203 EMBANKMENT, AS PER PLAN	209 LINEAR GRADING	606 GUARDRAIL, TYPE MGS	606 GUARDRAIL, TYPE MGS, WITH LONG POSTS	606 GUARDRAIL, TYPE MGS, 25' LONG-SPAN	606 ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN (NCHRP 350 or MASH 2016)	606 ANCHOR ASSEMBLY, MGS TYPE T	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN, RADIUS	626 BARRIER REFLECTORS, TYPE 2, BI-DIRECTIONAL
			FT	EACH	EACH	CU YD	STATION	FT	FT	FT	EACH	EACH	EACH	EACH	EACH
GR-13	5.04	L	25.00		1	36.5	1.0	62.50			1			1	3
GR-14	5.05	R	40.00	1	1	26.4	0.8	25.00			1			1	3
GR-15	5.04	L	578.00		1	239.2	7.4		662.50			1	1		5
GR-16	5.05	R	125.00	1	1	62.0	2.0	75.00				1	1		4
			768.00	2	4	364.1	11.2	162.50	662.50		2	2	2	2	15

HORIZONTAL SCALE IN FEET: 0, 15, 30, 60

CALCULATED MAK CHECKED DKR

GUARDRAIL PLAN
SR 309 SLM 5.06

MAR-309-0.00

28
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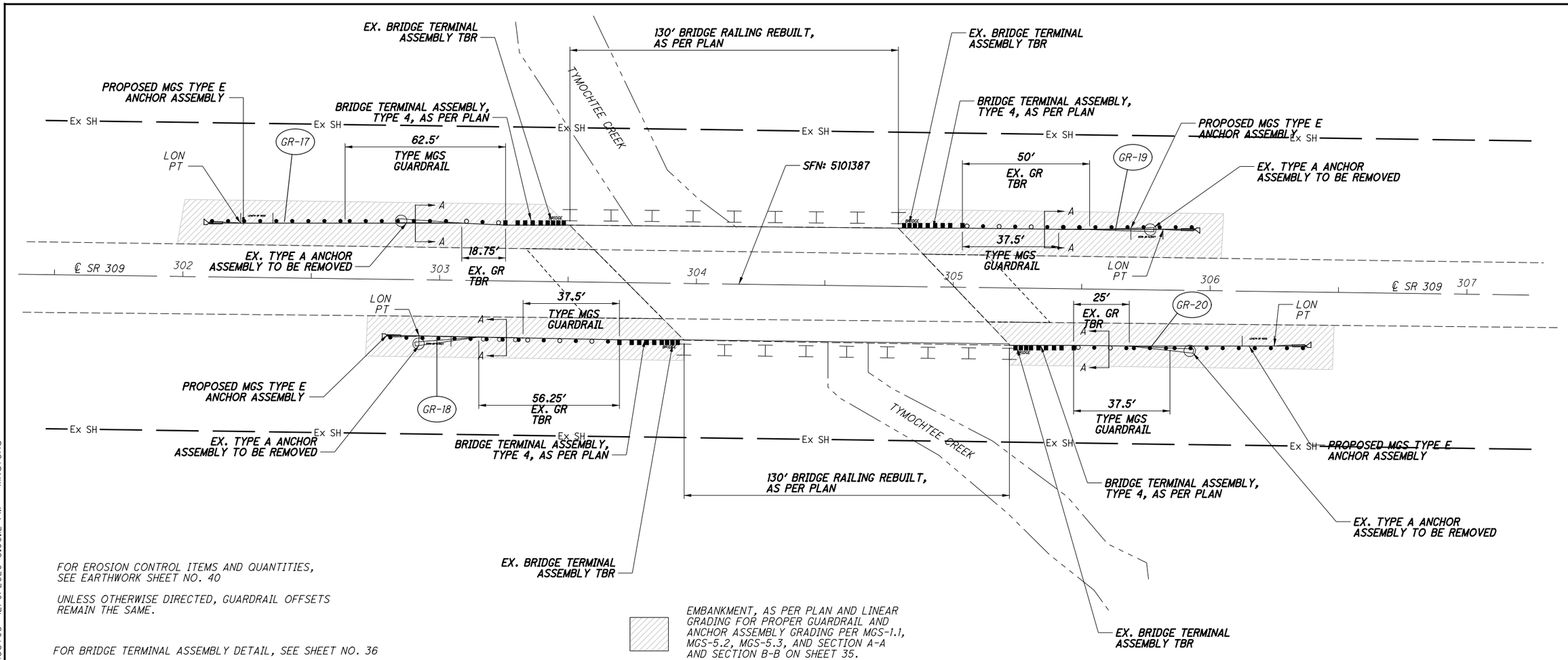

FOR EROSION CONTROL ITEMS AND QUANTITIES, SEE EARTHWORK SHEET NO. 40

UNLESS OTHERWISE DIRECTED, GUARDRAIL OFFSETS REMAIN THE SAME.

FOR BRIDGE TERMINAL ASSEMBLY DETAIL, SEE SHEET NO. 36

EMBANKMENT, AS PER PLAN AND LINEAR GRADING FOR PROPER GUARDRAIL AND ANCHOR ASSEMBLY GRADING PER MGS-1.1, MGS-5.2, MGS-5.3, AND SECTION A-A AND SECTION B-B ON SHEET 35.

REF. NO.	SLM	SIDE	202 GUARDRAIL REMOVED, AS PER PLAN	202 ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	202 BRIDGE TERMINAL ASSEMBLY REMOVED, AS PER PLAN	203 EMBANKMENT, AS PER PLAN	209 LINEAR GRADING	517 BRIDGE RAILING REBUILT, AS PER PLAN	606 GUARDRAIL, TYPE MGS	606 GUARDRAIL, TYPE MGS, WITH LONG POSTS	606 GUARDRAIL, TYPE MGS, 25' LONG-SPAN	606 ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350 or MASH 2016)	606 ANCHOR ASSEMBLY, MGS TYPE T	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN	606 BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN, RADIUS	626 BARRIER REFLECTORS, TYPE 2, BI-DIRECTIONAL
			FT	EACH	EACH	CU YD	STATION	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH
GR-17	5.72	L	18.75	1	1	48.6	1.6	130.00	62.50					1		6
GR-18	5.73	R	56.25	1	1	36.0	1.2	130.00	37.50					1		6
GR-19	5.77	L	50.00	1	1	39.6	1.3		37.50					1		3
GR-20	5.78	R	25.00	1	1	40.2	1.3		37.50					1		3
			150.00	4	4	164.4	5.4	260.00	175.00					4		18

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED MAK CHECKED DKR

GUARDRAIL PLAN
SR 309 SLM 5.76

MAR-309-0.00

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64

SHEET NUM.									PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
54	55	56	57	58	59	60	61	62	03/STR/BR						
														STRUCTURE REPAIR MAR-309-0138 (5101263)	
46									46	517	75501	46	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
24									24	519	12300	24	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
6									6	626	00110	6	EACH	**BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)**	
40									40	846	00110	40	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
														STRUCTURE REPAIR MAR-309-0326 (5101298)	
	125								125	517	75501	125	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
	6								6	626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)	
	20								20	846	00110	20	CF	**POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM**	
														STRUCTURE REPAIR MAR-309-0427 (5101328)	
		42							42	517	75501	42	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
		6							6	626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)	
		22							22	846	00110	22	CF	**POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM**	
														STRUCTURE REPAIR MAR-309-0506 (5101352)	
			41						41	517	75501	41	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
			6						6	626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)	
			22						22	846	00110	22	CF	**POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM**	
														STRUCTURE REPAIR MAR-309-0867 (5101468)	
				431					431	254	01000	431	SY	PAVEMENT PLANING, ASPHALT CONCRETE 3.0"	
				29					29	407	20000	29	GAL	NON-TRACKING TACK COAT	
				160					160	409	30000	160	FT	**SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS**	
				15.1					15.1	441	10000	15.1	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22 1.25"	
				21					21	441	10200	21	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446) 1.75"	
				94					94	517	75501	94	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
				6					6	626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)	
														STRUCTURE REPAIR MAR-309-0942 (5101484)	
					50				50	254	01000	50	SY	PAVEMENT PLANING, ASPHALT CONCRETE 3.0"	
					7				7	407	20000	7	GAL	NON-TRACKING TACK COAT	
					48				48	409	30000	48	FT	**SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS**	
					1.7				1.7	441	10000	1.7	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22	
					2.4				2.4	441	10200	2.4	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)	
					12.5				12.5	517	75501	12.5	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
					6				6	626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 BI-DIRECTIONAL	
														STRUCTURE REPAIR MAR-309-0959 (5101514)	
						317			317	254	01000	317	SY	PAVEMENT PLANING, ASPHALT CONCRETE 3.0"	
						19			19	407	20000	19	GAL	NON-TRACKING TACK COAT	
						128			128	409	30000	128	FT	**SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS**	
						11			11	441	10000	11	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22 1.25"	
						15.3			15.3	441	10200	15.3	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446) 1.75"	
						78			78	517	75501	78	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
						6			6	626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)	
														STRUCTURE REPAIR MAR-309-1091 (5101530)	
							9		9	203	20000	9	CY	EMBANKMENT	
							833		833	254	01001	833	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN 0" -3" VARIABLE	52
							365		365	407	20000	365	GAL	**NON-TRACKING TACK COAT**	
							100		100	409	30000	100	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS	
							11.3		11.3	441	10000	11.3	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22 1.25"	
							15.9		15.9	441	10200	15.9	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446) 1.75"	
							35		35	517	75501	35	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
							12		12	519	12300	12	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
							6		6	626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)	
							9		9	659	00300	9	CY	TOPSOIL	
							112		112	659	10000	112	SY	SEEDING AND MULCHING	
							0.02		0.02	659	20000	0.02	TON	COMMERCIAL FERTILIZER	
							0.3		0.3	659	35000	0.3	MGAL	WATER	

CALCULATED MAK
CHECKED TAP

STRUCTURE ESTIMATED QUANTITIES

MAR-309-0.00

63
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SHEET NUM.									PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
54	55	56	57	58	59	60	61	62	03/STR/BR						
														STRUCTURE REPAIR MAR-309-1398 (5101727)	
								365	365	254	01000	365	SY	PAVEMENT PLANING, ASPHALT CONCRETE 3.0"	
								51	51	407	20000	51	GAL	NON-TRACKING TACK COAT	
								144	144	409	30000	144	FT	**SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS**	
								12.7	12.7	441	10000	12.7	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22 1.25"	
								102	102	517	75501	102	FT	BRIDGE RAILING REBUILT, AS PER PLAN	52
								6	6	626	00110	6	EACH	BARRIER REFLECTOR, TYPE 2 BI-DIRECTIONAL	

CALCULATED MAK
CHECKED TAP

STRUCTURE ESTIMATED QUANTITIES

MAR-309-0.00

64
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