ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN (MASH 2016):

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

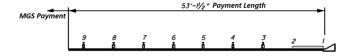
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THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

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, AS PER PLAN SHALL BE 53'-11/2" (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, 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 MANUFACTURER.

# ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL):

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE I IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE I IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

#### ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION:

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER TO RESTORE DISTURBED AREAS AT THE ABUTMENT SLOPES DUE TO CONSTRUCTION **ACTIVITIES:** 

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION

#### ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2:

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED TO CONSTRUCT FLUMES AS PER SCD DM-4.1 FOR EACH STRUCTURE, AS DETAILED ON SHEETS AND :

ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2

= 150 SY

= 180 CY

### GRADING AND EROSION CONTROL:

AREAS DISTURBED BY GUARDRAIL ACTIVITIES AND AREAS WHERE EMBANKMENT HAS BEEN PLACED SHALL BE REPAIRED WITH THE FOLLOWING QUANTITIES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY:

ITEM	QUANTITY	UNIT	DESCRIPTION	
659	788	CY	TOPSOIL	
659	7128	SY	SEEDING AND MULCHING	
659	<i>356</i>	SY	REPAIR SEEDING AND MULCHING	
659	<i>356</i>	SY	INTER-SEEDING	
659	0.96	TON	COMMERCIAL FERTILIZER	
659	1.47	<b>ACRE</b>	LIME	
659	39	MGAI	WATER	

#### ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442):

THE BELOW PROVIDED QUANTITY IS TO BE USED AS DIRECTED BY THE ENGINEER TO REPAIR RAMPS A. C. AND D WITHIN THE US 23/SR 98 INTERCHANGE. SEE SHEET 5 FOR DETAILS.

THE FOLLOWING QUANTITY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY:

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)

= 880 SY

## 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.

BUTT JOINTS SHALL BE PROVIDED AT THE BEGINNING AND END OF PAVING LIMITS AND AT THE APPROACH SLABS OF ALL STRUCTURES NOT BEING PAVED.

THE CONTRACTOR SHALL LIMIT THE PLANING OPERATION TO ONE LANE AT A TIME AS TO ENSURE THAT THE PROPOSED SURFACE COURSE IS BUTTING UP TO EITHER PROPOSED OR EXISTING ASPHALT. AT NO TIME SHALL TRAFFIC BE EXPOSED TO PLANED PAVEMENT.

FAILURE TO COMPLY SHALL SUBJECT THE CONTRACTOR TO LIQUIDATED DAMAGES AS PER SECTION 108.07 OF CMS.

THE INTENT OF THE VARIABLE DEPTH PAVEMENT PLANING IS TO REMOVE THE PAVEMENT TAPERS UP TO THE 3.25" BRIDGE DECK OVERLAYS PAVED WITH RESURFACING PROJECT DO6-PPM-FY17G, PID 101207, AS WELL AS PLAN AN ADDITIONAL 1.50" TO PROVIDE THE CORRECT PROFILE FOR RESURFACING.

## ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PI AN:

THE CONTRACTOR SHALL MILL 2 INCHES BY 2 FEET WIDE OF THE EXISTING ASPHALT SHOULDER IN ORDER TO REMOVE THE EXISTING RUMBLE STRIPS IN THE AREA WHERE TRAFFIC IS SHIFTED. THE CONTRACTOR SHALL THEN COAT ALL MILLED SURFACES HORIZONTAL AND VERTICAL WITH APPROVED AC LIQUID. NEXT THE CONTRACTOR SHALL PLACE 2 INCHES OF ITEM 442 -ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448).

ONCE THE PROJECT IS COMPLETE, THE CONTRACTOR SHALL INSTALL NEW RUMBLE STRIPS AS PER THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 618.

ALL COST ASSOCIATED WITH THE REMOVAL OF EXISTING PAVEMENT, PLACEMENT OF THE SURFACE COURSE AND INSTALLATION OF THE RUMBLE STRIPS SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT OF ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY:

ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN

= 8830 FT

### ITEM 626 - BARRIER REFLECTOR, TYPE 1, ONE-WAY:

THIS ITEM SHALL BE USED ON THE BRIDGE PARAPET OF ALL FOUR STRUCTURES.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY:

ITEM 626 - BARRIER REFLECTOR, TYPE 1, ONE-WAY

= 12 EACH

## ITEM 644 - PAVEMENT MARKING ITEM 646 - PAVEMENT MARKING:

IT IS THE INTENT OF THE PROPOSED PAVEMENT MARKINGS TO BE THE SAME AS EXISTING. ANY DEVIATION FROM EXISTING WILL BE IDENTIFIED WITHIN THIS PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION. SIZE AND SHAPE OF THESE EXISTING PAVEMENT MARKINGS BEFORE THE RESURFACING WORK OBLITERATES THEM. ANY PAVEMENT MARKING WHICH IS PLACED AT THE WRONG LOCATION SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

## ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN:

THE ITEM SHALL CONSIST OF STATION USING 3 FT LATH STAKES OR PAINT MARKINGS. THE STAKES OR PAINT MARKINGS SHALL BE SPACED EVERY 200' FOR THE ENTIRE LENGTH. PLACEMENT OF THE STAKES OR PAINT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED, MISSING STAKES, OR PAINT MARKINGS, PAINT MARKINGS SHALL BE PLACED ON CURBS AND USED IN AREAS WERE THE PLACEMENT OF STAKES IS NOT POSSIBLE AND APPROVED BY THE PROJECT ENGINEER.

### ITEM 304 - AGGREGATE BASE:

THIS ITEM HAS BEEN PROVIDED FOR THE INSTALLATION OF APPROACH SLABS AT THE FOLLOWING LOCATIONS. THE PROPOSED THICKNESS WILL BE 71/2". SEE STRUCTURE SHEETS AND STANDARD DRAWINGS AS-1-15 AND AS-2-15 FOR MORE DETAILS.

MAR-23-01851 55 CY MAR-23-0185R 55 CY MAR-23-0204L 58 CY MAR-23-0204R 46 CY

THE FOLLOWING TOTAL HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 304 - AGGREGATE BASE 214 CY

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