

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E, AS PER PLAN (NCHRP 350 OR 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.

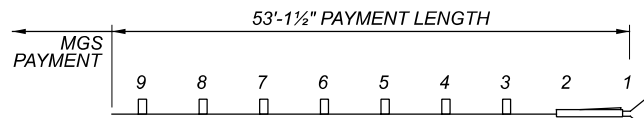
WHEN THE FACE OF THE ADJACENT (ATTACHED) GUARDRAIL IS LESS THAN 4' OFFSET FROM THE PROPOSED EDGE LINE, THE PROPOSED TYPE E ANCHOR ASSEMBLY SHALL BE INSTALLED USING A 25:1 FLARE RATE (24" OFFSET DESIGN) AS DETAILED IN THE SHOP DRAWINGS AND AS DIRECTED BY THE ENGINEER.

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, 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 623 - MONUMENT BOX ADJUSTED TO GRADE:**  
THIS ITEM OF WORK WILL PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, AND HARDWARE NECESSARY TO ADJUST TO GRADE THE EXISTING MONUMENT BOX TO 1/4" INCH BELOW THE PROPOSED ASPHALT ELEVATION.

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

ITEM 623 - MONUMENT BOX ADJUSTED TO GRADE = 4 EACH

**FARM DRAINS:**  
ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE (RIGHT OF WAY) (CONSTRUCTION) LIMITS BY ITEM 611 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 611 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 611, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEIR OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 611 - 6" CONDUIT, TYPE B = 50 FT  
ITEM 611 - 8" CONDUIT, TYPE E = 50 FT  
ITEM 611 - 10" CONDUIT, TYPE F = 50 FT

**REVIEW OF DRAINAGE FACILITIES:**  
BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTORS OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

**MANHOLES AND OTHER CASTING STRUCTURES:**  
THE CASTING TOPS OF MANHOLES, VALVE BOXES, AND OTHER STRUCTURES OWNED BY PUBLIC SERVICE CORPORATIONS MAY BE ADJUSTED TO GRADE BY THEIR RESPECTIVE OWNERS OR GIVE AUTHORIZATION TO ODOT TO ADJUST AS PART OF THIS CONTRACT. THIS WORK NEEDS TO BE COMPLETED PRIOR TO THE CONSTRUCTION OF THE SURFACE COURSE. THE CONTRACTOR SHALL NOTIFY SUCH PUBLIC SERVICE CORPORATIONS A MINIMUM OF 7 CALENDAR DAYS IN ADVANCE OF WORK OPERATIONS SO THAT WORK MAY BE PROPERLY SCHEDULED.

THE CASTING TOPS OF MANHOLES, VALVE BOXES, AND OTHER STRUCTURES REQUIRING ADJUSTMENT THAT ARE OWNED BY PRIVATE UTILITIES NEED TO BE ADJUSTED TO GRADE BY THEIR RESPECTIVE OWNERS. THE ODOT CONTRACTOR SHALL NOTIFY THE PRIVATE OWNER A MINIMUM OF 7 CALENDAR DAYS IN ADVANCE OF WORK OPERATIONS SO THE WORK MAY BE PROPERLY SCHEDULED.

IF ADJUSTMENTS HAVE NOT BEEN COMPLETED 14 CALENDAR DAYS AFTER NOTIFICATION, THE ODOT CONTRACTOR WILL NOTIFY THE ODOT PROJECT ENGINEER AND PROVIDE SPECIFIC STATION LOCATIONS AND OWNER INFORMATION. THE ODOT PROJECT ENGINEER WILL WORK WITH THE DISTRICT UTILITY COORDINATOR TO ISSUE AN OBSTRUCTION REMOVAL NOTICE WITHIN 5 DAYS OF RECEIPT WHICH WILL INFORM THE PRIVATE UTILITY TO ADJUST THE STRUCTURES AS NECESSARY OR ODOT WILL AUTHORIZE THE ODOT CONTRACTOR TO ADJUST AS NEEDED AND BILL THE OWNER OF THE FACILITY FOR THE ADJUSTMENT TO THE STRUCTURE.

SHOULD THE CONTRACTOR FAIL TO NOTIFY PUBLIC SERVICE CORPORATIONS OR PRIVATE UTILITIES OF EXISTING MANHOLES, VALVE BOXES, AND OTHER STRUCTURES THAT REQUIRE ADJUSTMENT TO GRADE, AND COVER THESE WITH THE PROPOSED ASPHALT TREATMENT, THE CONTRACTOR WILL BE REQUIRED TO UNCOVER THE MANHOLES, VALVE BOXES, AND OTHER STRUCTURES AT THEIR OWN EXPENSE SO THAT THE NECESSARY ADJUSTMENTS CAN BE MADE. THE METHOD OF REMOVAL AND REPAIR OF THE ASPHALT SHALL MEET ALL REQUIREMENTS OF THE ODOT ENGINEER AND SHALL BE AT THE CONTRACTORS EXPENSE.

THESE ITEMS PROVIDED BELOW ARE CONTINGENCY QUANTITIES TO BE USED AS DIRECTED BY THE PROJECT ENGINEER AT VARIOUS LOCATIONS. THESE ITEMS SHALL INCLUDE THE COST OF ALL MATERIAL, LABOR, EQUIPMENT, AND HARDWARE NECESSARY TO ADJUST CASTINGS TO GRADE TO THE PROPOSED ASPHALT ELEVATION DIRECTED.

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

ITEM 611 - MANHOLE ADJUSTED TO GRADE = 4 EACH  
ITEM 638 - VALVE BOX ADJUSTED TO GRADE = 4 EACH

**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN, 3":**  
ALL REPAIR AREAS SHALL BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF WORK. REPAIRS SHALL CONSIST OF REMOVING 3" OF PAVEMENT AND PLACING 3" OF ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS DETAILED ON SHEET P.4. WORK SHALL BE PERFORMED PRIOR TO THE RESURFACING AND REPAIR AREAS ARE TO BE INCLUDED INTO GENERAL RESURFACING.

IN ADDITION TO SPECIFIC REPAIR LOCATIONS LISTED ON SHEET P.17, THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER AND HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN, 3" = 59 SY

**ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN, 6":**  
ALL REPAIR AREAS SHALL BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF WORK. REPAIRS SHALL CONSIST OF REMOVING 6" OF PAVEMENT AND PLACING 6" OF ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, AS DETAILED ON SHEET P.4. WORK SHALL BE PERFORMED PRIOR TO THE RESURFACING AND REPAIR AREAS ARE TO BE INCLUDED INTO GENERAL RESURFACING.

IN ADDITION TO SPECIFIC REPAIR LOCATIONS LISTED ON SHEET P.17, THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER AND HAS BEEN CARRIED TO THE GENERAL SUMMARY:


ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (ASPHALT CONCRETE BASE), AS PER PLAN, 6" = 427 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. GREAT CARE SHALL BE TAKEN TO PREVENT 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 TO ENSURE THAT THE PROPOSED SURFACE COURSE IS BUTTING UP TO EITHER PROPOSED OR EXISTING ASPHALT.

AT NO TIME OUTSIDE OF THE WORK SHIFT SHALL TRAFFIC BE EXPOSED TO PLANED PAVEMENT ON THE MAINLINE ROADWAY OR SIDE STREETS.

MILLINGS GENERATED ON THE PROJECT SHALL BE DELIVERED TO THE CITY OF LONDON. THE DELIVERY LOCATION SHALL BE AS SHOWN BELOW OR AS DIRECTED BY THE CITY OF LONDON STREET SUPERINTENDENT, TO BE CONTACTED AT LEAST 10 DAYS PRIOR TO THE PAVEMENT PLANING:  
233 JENKINSON AVE, LONDON, OH 43140  
**BILL LONG**  
STREET SUPERINTENDENT  
740-852-1404  
blong@londonohio.gov

DESIGN AGENCY	
DESIGNER	KLM
REVIEWER	DKR 08/30/21
PROJECT ID	106266
SHEET	TOTAL
P.7	42