

WATER (CONTINUED)

IF A LEAD TAP IS EITHER DAMAGED DURING CONSTRUCTION OR IS PART OF A PLANNED WATER TAP RELOCATION/REPLACEMENT, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS:

1. IF DAMAGED, IMMEDIATELY CONTACT LEW FLEMISTER, DIVISION OF WATER, (614-645-7028), TO REQUEST THE SHUT OFF OF THE EXISTING CURB STOP. IF LEW CANNOT BE REACHED, CONTACT THE DIVISION OF WATER DISTRIBUTION ENGINEERING OFFICE AT 614-645-7677 TO REQUEST THE SHUT OFF.

2. CONTRACTOR SHALL EXPOSE THE OWNER'S SIDE OF THE WATER SERVICE TO CONFIRM THE MATERIAL. THE INSPECTOR SHALL BE PRESENT FOR THIS.

3. IF THE CUSTOMER'S PRIVATE SERVICE MATERIAL IS LEAD, STOP WORK AND NOTIFY THE DIVISION OF WATER DISTRIBUTION ENGINEERING OFFICE (614-645-7677) IMMEDIATELY. IF THE MATERIAL IS NOT LEAD, THE CONTRACTOR SHALL REPLACE THE LEAD TAP (FROM EXISTING CORPORATION STOP TO CURB STOP) AND REINSTATE SERVICE TO THE CUSTOMER. PARTIAL REPAIRS OF THE LEAD TAP ARE NOT PERMITTED.

4. REFER TO DIVISION OF WATER STANDARD DRAWINGS L-7102C AND L-9901 FOR INFORMATION ON WATER TAP RELOCATIONS, PLACING NEW CURB STOPS, AND RELOCATING CURB BOXES.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM CONSISTS OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 15 INCH DIAMETER CONDUIT AND FILLING THE AREA SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

LOCATE THE BULKHEADS AT THE LIMITS OF THE AREA TO BE FILLED, AS INDICATED ON THE PLANS. THE BULKHEADS CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

PUMP THE FILL MATERIAL INTO PLACE OR BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH IS FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR IS THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED PER 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

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

THE CONTRACTOR SHALL MILL 2 INCHES BY 2 FEET WIDE OF THE EXISTING ASPHALT SHOULDER IN ORDER TO REMOVE THE EXISTING RUMBLE STRIPS WITHIN THE PROJECT LIMITS 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 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-28.

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

AN ESTIMATED QUANTITY OF 9190 FEET HAS BEEN CARRIED TO THE MAINTENANCE OF TRAFFIC SUBSUMMARY.

COORDINATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COORDINATE WORK ON THIS PROJECT WITH ADJACENT CONSTRUCTION PROJECTS, INCLUDING PID 105839 SPOT PAVE WORK, WHILE THIS PROJECT IS UNDER CONSTRUCTION.

PAVEMENT CUTTING, SAWING, AND EXCAVATION OPERATIONS NOTE:

ALL PUBLIC AGENCIES AND PRIVATE CONTRACTORS PERFORMING PAVEMENT-CUTTING OPERATIONS ON CITY OF COLUMBUS STREETS AND ROADWAYS SHALL PROTECT THE ENVIRONMENT FROM DISCHARGES CREATED BY THEIR PAVEMENT CUTTING OPERATIONS. NOTE THAT COLUMBUS CITY CODE 1145 PROHIBITS NON-STORM WATER DISCHARGE INTO THE CITY OF COLUMBUS SEWER SYSTEM, CURB INLETS AND ANY PART OF ITS MS4 (MUNICIPAL SEPARATE STORM SEWER SYSTEM).

THE REQUIREMENT INCLUDES BUT IS NOT LIMITED TO WET OR DRY SAW-CUTTING, JACK HAMMERING, EXCAVATION EQUIPMENT USE, ETC. THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR WORK CREWS SHALL RECOVER AND DISPOSE OF DETRITUS, POLLUTED WATERS, OR OTHER SUCH DISCHARGES RESULTING FROM THEIR PAVEMENT CUTTING OPERATIONS AND PROTECT ALL STORM SEWER INLETS FROM RECEIVING ANY DISCHARGES FROM THE CONSTRUCTION OPERATIONS. THE AGENCY OR CONTRACTOR RESPONSIBLE FOR EACH PAVEMENT CUTTING ACTIVITY SHALL BE SOLELY LIABLE FOR NOTICE OF VIOLATIONS (NOV/S) AND FINES ISSUED BY CITY OF COLUMBUS AND/OR STATE OF OHIO AUTHORITIES.

EQUIPMENT, MATERIALS AND METHODS SHALL BE PROVIDED BY THE RESPONSIBLE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR TO WORK CREWS PERFORMING THE PAVEMENT CUTTING ACTIVITY AND MADE AVAILABLE TO WORK CREWS FOR USE IN CLEANING UP DISCHARGES RESULTING FROM SUCH CUTTING ACTIVITIES AND PREVENTING RUNOFF. ALL WORK CREWS SHALL BE TRAINED TO EXERCISE AND EMPLOY EQUIPMENT, MATERIALS, AND ENVIRONMENTAL PROTECTIVE MEASURES TO PREVENT POLLUTED DISCHARGES FROM ENTERING THE CITY OF COLUMBUS STORM SEWER SYSTEM AND WATERS OF THE STATE OF OHIO.

THE PUBLIC AGENCY AND/OR PRIVATE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT THE INLET PROTECTION IS ADEQUATE. THE MOST STRINGENT PROJECT PLANS, NOTES AND/OR DRAWINGS INCLUDING STORMWATER POLLUTION PREVENTION PLAN (SWP3) OR SPILL PREVENTION/REMEDICATION PLAN SHALL APPLY TO ALL PAVEMENT CUTTING, SAWING OR EXCAVATION OPERATIONS.

NOTE TO SPECIFICATION WRITERS: IF SWP3 OR SPILL PREVENTION/REMEDICATION PLANS ARE INCLUDED IN CONTRACT DOCUMENTS, THEY SHOULD BE CITED IN THE LAST PARAGRAPH ABOVE BY VOLUME, PAGE OR SHEET NUMBERS; SO DIRECTING THE READER TO SUCH PLAN.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

| | |
|-------------------------------------|----------|
| ITEM 614, BARRIER REFLECTOR, TYPE B | 739 EACH |
| ITEM 614, OBJECT MARKER, 1-WAY | 329 EACH |

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS

COORDINATION WITH ADJACENT PROJECTS

THE CONTRACTOR SHALL COORDINATE WORK WITH ODOT AND THE CONTRACTORS ON THE ADJACENT PROJECTS INCLUDING PID 110696. COORDINATION SHALL BE MADE TO PREVENT CONFLICTING ADVANCE WARNING SIGNS, CONFLICTING DETOUR ROUTES, OVERLAPPING/CONFLICTING LANE CLOSURES, AND TO ENSURE THAT A MINIMUM DISTANCE OF 2 MILES BETWEEN ADJACENT LANE CLOSURES IS MAINTAINED. THIS IS NOT AN EXHAUSTIVE LIST OF COORDINATION ITEMS THAT MAY NEED TO BE RESOLVED BETWEEN PROJECTS. THE DEPARTMENT RESERVES THE RIGHT TO DECIDE WHICH PROJECT'S ACTIVITIES TAKE PRECEDENCE. PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WILL CONSIDER THIS AN EXCUSABLE, NON-COMPENSABLE DELAY PER 108.06.B. ON PROJECTS THAT HAVE ACTIVITIES DELAYED DUE TO CONFLICTS WHERE THE CONTRACTOR FAILED TO MEET THE NOTIFICATION REQUIREMENTS, THE DELAYS SHALL NOT BE CONSIDERED EXCUSABLE OR COMPENSABLE. ATTENDANCE AT DEPARTMENT ORDERED TRAFFIC COORDINATION MEETINGS BETWEEN ADJACENT PROJECTS SHALL BE CONSIDERED MANDATORY FOR EACH PROJECT'S SUPERINTENDENT AND WORKSITE TRAFFIC SUPERVISOR (WTS)*, AND INCIDENTAL TO THE LUMP SUM MAINTENANCE OF TRAFFIC PAYMENT ITEM

*IF REQUIRED BY THE PROJECT

ITEM 611 - CONDUIT, BORED OR JACKED, TYPE B, 15"
ITEM 611 - CONDUIT, BORED OR JACKED, TYPE B, 18"

ITEM 611 - CONDUIT BORED OR JACKED WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION IS PERMITTED WITHIN 5 FEET OF THE (EDGE OF PAVEMENT) (NEAREST RAIL). PROVIDE A STEEL CASING PIPE CONFORMING TO 748.06. JOINTS WITH A CIRCUMFERENCIAL FULLY PENETRATING BUTT WELD THAT IS PERFORMED BY A CERTIFIED WELDER FOR WELDING CODE AMERICAN WELDING SOCIETY (AWS) D1.1 OR MACHINED INTERLOCKING JOINTS ARE PERMITTED. THE INSTALLED CASING PIPE IS THE STORM WATER CONVEYANCE CARRIER UNLESS OTHERWISE SPECIFIED IN THE PLANS. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.



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GENERAL NOTES

FRA - 270-51.50

WEEKLY MAINTENANCE OF TRAFFIC MEETING

AFTER THE INITIAL PRE-MAINTENANCE OF TRAFFIC MEETING, THE CONTRACTOR SHALL MEET WITH THE PROJECT ENGINEER ON A WEEKLY BASIS TO GO OVER A DETAILED MAINTENANCE OF TRAFFIC REPORT OF AT LEAST 7 CALENDAR DAYS. THIS MEETING SHOULD BE HELD ON THE SAME DAY AND TIME OF EACH WEEK.

THE CONTRACTOR WILL PROVIDE TO THE PROJECT ENGINEER A WRITTEN DETAIL OF THE INFORMATION REQUIRED BY THE NOTIFICATION OF TRAFFIC RESTRICTIONS NOTE PRIOR TO THE MEETING.

IN ADDITION TO THE DETAILED MAINTENANCE OF TRAFFIC REPORT THE CONTRACTOR SHALL GIVE A GENERAL LOOK AHEAD OF AN ADDITIONAL 2 WEEKS OF UPCOMING WORK ACTIVITIES. THIS WILL INCLUDE ANY NOTIFICATION REQUIREMENTS FOR RESTRICTIONS THAT HAVE A DURATION GREATER THAN 12 HOURS.

PRE-MAINTENANCE OF TRAFFIC MEETING

A PRE-MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD (MINIMUM 14 WORK DAYS) PRIOR TO WORK BEGINNING OR ANY CHANGE OF PHASING. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER (DO6.MOT@DOT.OHIO.GOV) AS WELL AS THE CONTRACTOR AND ANY OF HIS SUB-CONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL. FOR COLUMBUS SECTIONS OF ROADWAY, ALSO INCLUDE THE TEMPORARY CONTROL COORDINATOR (614-645-6269 OR 614-645-5845) FROM THE CITY OF COLUMBUS TRANSPORTATION DIVISION.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER

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ITEM 614, WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621. RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM NOVEMBER THROUGH APRIL. A

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

THE FOLLOWING BID ITEMS SHOULD BE INCLUDED IN THE PLANS:

ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE 3200 SY A

ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN 500 EACH A

PAYMENT FOR RESURFACING WITHIN THE TRANSITION AREA SHALL BE PAID FOR UNDER THE APPROPRIATE BID ITEMS FOR THE WORK REQUIRED, AS PROVIDED FOR IN THE PLANS.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

TRANSVERSE DRAINAGE CROSSINGS OF IR 270 AND US 23

BEFORE ANY ROADWAY CONSTRUCTION BEGINS THE CONTRACTOR SHALL CONSTRUCT THE TRANSVERSE DRAINAGE CROSSINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ADEQUATE DRAINAGE THROUGHOUT ALL PHASES OF CONSTRUCTION. THIS MAY REQUIRE CONSTRUCTION OF TEMPORARY CONDUITS AND/OR TEMPORARY DITCHING. TRAFFIC CONTROL DURING THIS OPERATION SHALL BE AS PER STANDARD DRAWING MT-97.10. ANY LANE RESTRICTIONS CAUSED BY THE TRANSVERSE DRAINAGE CROSSING WORK SHALL BE LIMITED TO BETWEEN THE HOURS OF 9:30 AM TO 3:30 PM TO MINIMIZE THE IMPACT ON TRAFFIC.

ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 UNLESS OTHERWISE NOTED IN THE PLANS.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING REMOVAL AND INSTALLATION OF PIPES UNDER ITEMS 203 AND 603.

ITEM 301 ASPHALT CONCRETE BASE, PG64-22 150 CY

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 9 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. THE TRENCH WIDTH IS ASSUMED TO EQUAL THE SPAN TIMES 1.25 PLUS ONE FOOT.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITED STATED ABOVE AT NO ADDITIONAL COST.

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.

2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.

3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND ONLINE.

4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:

- A. COLLABORATE WITH ODOT AND SAFETY FORCES;
- B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND

C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.

5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.

6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:

A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:

- I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
- II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
- III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
- IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
- V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
- VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE

B. FOLLOWING AN INCIDENT/CRASH:

- I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
- II. RECOMMEND ROADWAY REPAIR NEEDS.
- III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
- IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.



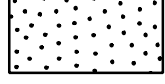





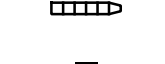

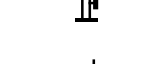





THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

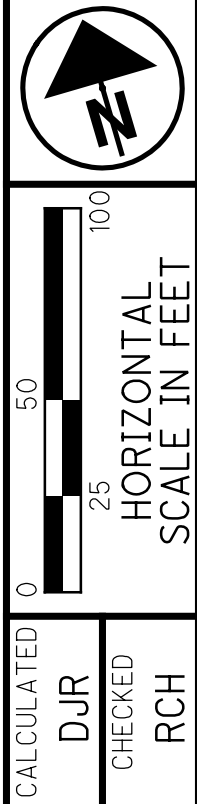
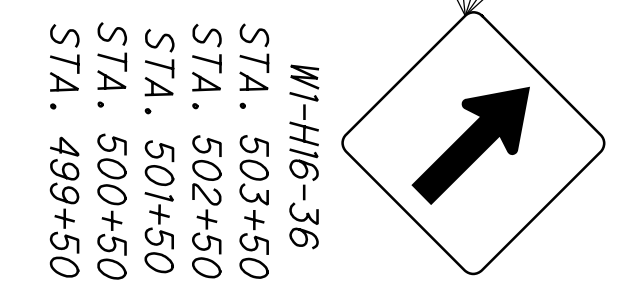
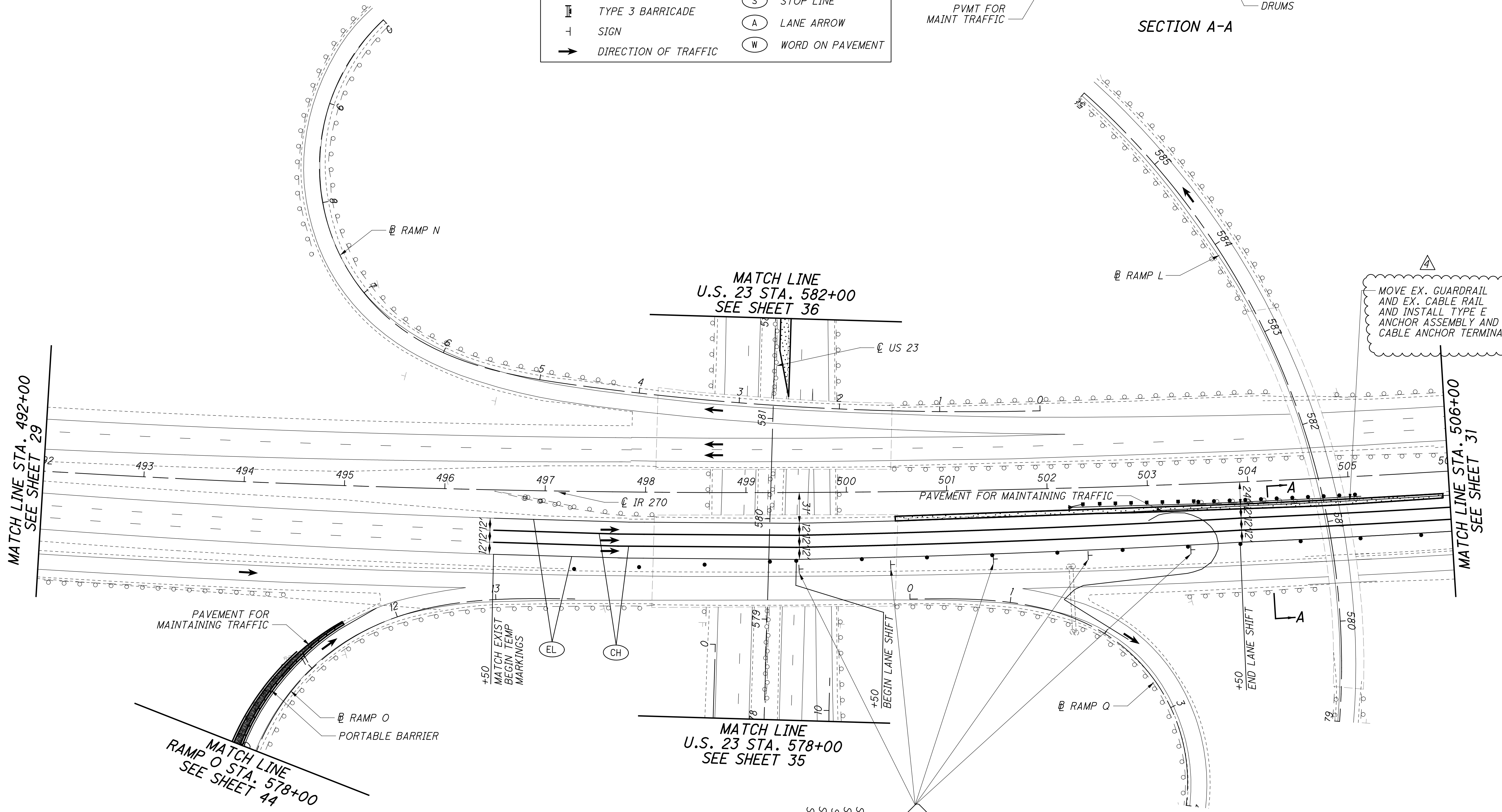
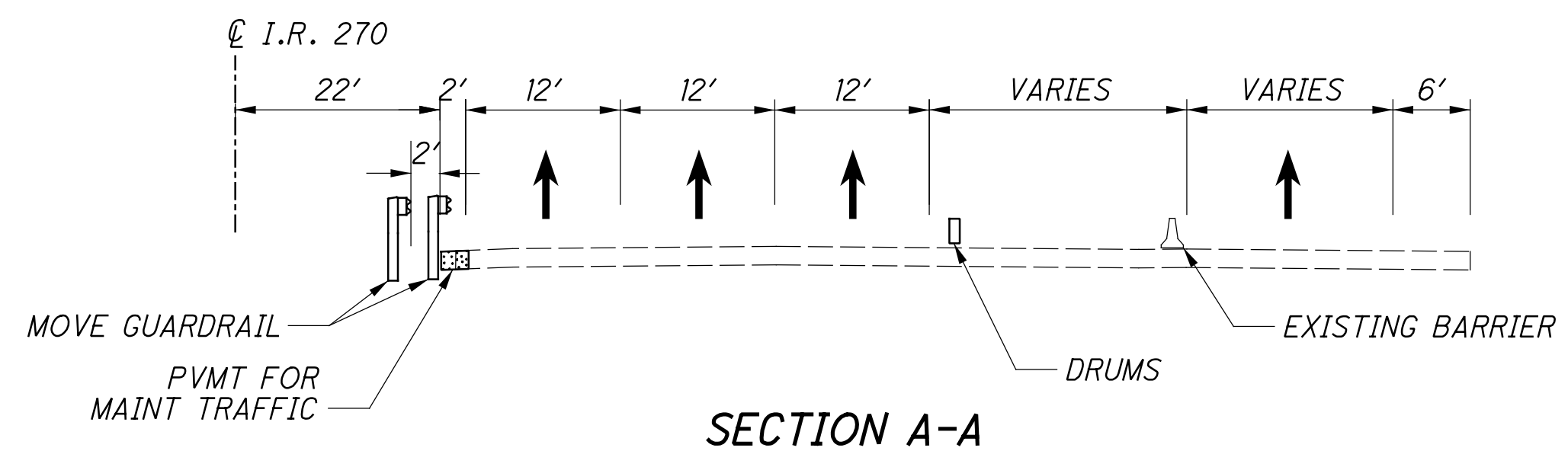
ITEM 614, BARRIER REFLECTOR, TYPE (2, 3, 4, OR 5) (ONE-WAY OR BI-DIRECTIONAL) 1 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEMS).

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LEGEND

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|  WORK ZONE |  EDGE LINE |
|  PAVEMENT FOR MAINTAINING TRAFFIC |  LANE LINE |
|  32" PORTABLE BARRIER |  CHANNELIZING LINE |
|  DRUMS |  TRANSVERSE LINE |
|  IMPACT ATTENUATOR |  DOTTED LINE |
|  TYPE 3 BARRICADE |  STOP LINE |
|  SIGN |  LANE ARROW |
|  DIRECTION OF TRAFFIC |  WORD ON PAVEMENT |



MAINTENANCE OF TRAFFIC - PHASE 1
I-270 STA. 492+00 TO STA. 506+00

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| SHEET NUM. | | | | | | | | | | | | PART. | | | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. | CALCULATED ACF | CHECKED | CSR |
|------------|-------|----|----|----|----|----|----|--------|-------|--------|--------|-----------|-----------|-----------|------|----------|-------------|------|---|---------------|----------------|---------|-----|
| 15 | 16 | 21 | 22 | 38 | 85 | 86 | 87 | 89 | 90 | 91 | 324 | 01/IMS/04 | 02/IMS/14 | 03/NHS/43 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | 7.79 | | | | | | | | | | | 7.79 | | | 659 | 20000 | 7.79 | TON | COMMERCIAL FERTILIZER | | | | |
| | 10.38 | | | | | | | | | | | 10.38 | | | 659 | 31000 | 10.38 | ACRE | LIME | | | | |
| | 407 | | | | | | | | | | | 407 | | | 659 | 35000 | 407 | MGAL | WATER | | | | |
| | 113 | | | | | | | | | | | 113 | | | 659 | 40000 | 113 | MSF | MOWING | | | | |
| | | | | | | | | | | | | 2,242 | | | 670 | 00700 | 2,242 | SY | DITCH EROSION PROTECTION | | | | |
| | | | | | | | | | | | 47,045 | 47,045 | | | 670 | 00500 | 47,045 | SY | SLOPE EROSION PROTECTION | | | | |
| | | | | | | | | | | | | LUMP | | | 832 | 15000 | LS | | STORM WATER POLLUTION PREVENTION PLAN | | | | |
| | | | | | | | | | | | | LUMP | | | 832 | 15002 | LS | | STORM WATER POLLUTION PREVENTION INSPECTIONS | | | | |
| | | | | | | | | | | | | LUMP | | | 832 | 15010 | LS | | STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE | | | | |
| | | | | | | | | | | | | 758,114 | | | 832 | 30000 | 758,114 | EACH | EROSION CONTROL | | | | |
| | | | | | | | | | | | | 1,850 | | | 836 | 10000 | 1,850 | SY | SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1 | | | | |
| | | | | | | | | | | | | 245 | | | 836 | 10020 | 245 | SY | SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 2 | | | | |
| | | | | | | | | | | | | | | | | | | | DRAINAGE | | | | |
| | | | | | | | | 73 | 12 | 2 | | 87 | | | 602 | 20000 | 87 | CY | CONCRETE MASONRY | | | | |
| | | | | | | | | 300 | | | | 300 | | | 605 | 05200 | 300 | FT | 4" UNCLASSIFIED PIPE UNDERDRAINS | | | | |
| | | | | | | | | 11,235 | 7,566 | 13,893 | | 32,694 | | | 605 | 06000 | 32,694 | FT | 4" BASE PIPE UNDERDRAINS | | | | |
| | 200 | | | | | | | | | | | 200 | | | 605 | 13300 | 200 | FT | 6" UNCLASSIFIED PIPE UNDERDRAINS | | | | |
| | 50 | | | | | | | | | | | 50 | | | 605 | 31100 | 50 | FT | AGGREGATE DRAINS | | | | |
| | | | | | | | | 90 | 55 | 134 | | 279 | | | 611 | 00100 | 279 | FT | 4" CONDUIT, TYPE B | | | | |
| | | | | | | | | 243 | 2,995 | 268 | | 3,506 | | | 611 | 00510 | 3,506 | FT | 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS | | | | |
| | 200 | | | | | | | 36 | 34 | 165 | | 435 | | | 611 | 00900 | 435 | FT | 6" CONDUIT, TYPE B | | | | |
| | 100 | | | | | | | | | | | 100 | | | 611 | 01100 | 100 | FT | 6" CONDUIT, TYPE C | | | | |
| | 200 | | | | | | | | 56 | 36 | | 292 | | | 611 | 01400 | 292 | FT | 6" CONDUIT, TYPE E | | | | |
| | 300 | | | | | | | | 18 | | | 318 | | | 611 | 01500 | 318 | FT | 6" CONDUIT, TYPE F | | | | |
| | | | | | | | | | | 89 | | 89 | | | 611 | 04400 | 89 | FT | 12" CONDUIT, TYPE B, 706.02 | | | | |
| | | | | | | | | | 60 | | | 60 | | | 611 | 05700 | 60 | FT | 15" CONDUIT, TYPE A 706.02, 707.01 ALUMINIZED, 707.04, 707.33 CPE SMOOTH LINED | | | | |
| | | | | | | | | 95 | | 170 | | 265 | | | 611 | 05900 | 265 | FT | 15" CONDUIT, TYPE B | | | | |
| | | | | | | | | 24 | | | | 24 | | | 611 | 05901 | 24 | FT | 15" CONDUIT, TYPE B, AS PER PLAN, 707.13 | | | | |
| | | | | | | | | | | 80 | | 80 | | | 611 | 06400 | 80 | FT | 15" CONDUIT, TYPE D | | | | |
| | | | | | | | | 81 | | | | 81 | | | 611 | 06700 | 81 | FT | 15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21, OR 707.33 | | | | |
| | | | | | | | | | 64 | | | 64 | | | 611 | 07200 | 64 | FT | 18" CONDUIT, TYPE A, 706.02 | | | | |
| | | | | | | | | 16 | | | | 16 | | | 611 | 07400 | 16 | FT | 18" CONDUIT, TYPE B | | | | |
| | | | | | | | | 95 | | | | 95 | | | 611 | 13200 | 95 | FT | 30" CONDUIT, TYPE A 706.02, 707.01 ALUMINIZED, 707.04, 707.33 CPE SMOOTH LINED | | | | |
| | | | | | | | | | 250 | | | 250 | | | 611 | 22200 | 250 | FT | 54" CONDUIT, TYPE A, 707.02(0.109) ALUMINIZED, 707.04 (0.064 POLYMERIC), 706.02 | | | | |
| | | | | | | | | 70 | | | | 70 | | | 611 | 26000 | 70 | FT | 72" CONDUIT, TYPE A, 706.02 | | | | |
| | | | | | | | | | 31 | | | 31 | | | 611 | 30001 | 31 | FT | 96" CONDUIT, TYPE A, AS PER PLAN, 707.03 (0.249) | | | | |
| | | | | | | | | 287 | | | | 287 | | | 611 | 96600 | 287 | FT | CONDUIT, BORED OR JACKED, TYPE B, 18" | | | | |
| | | | | | | | | 122 | | | | 122 | | | 611 | 96600 | 122 | FT | CONDUIT, BORED OR JACKED, TYPE B, 15" | | | | |
| | | | | | | | | 1 | | | | 1 | | | 611 | 98180 | 1 | EACH | CATCH BASIN, NO. 3A | | | | |
| | | | | | | | | | | 2 | | 2 | | | 611 | 98370 | 2 | EACH | CATCH BASIN, NO. 6 | | | | |
| | | | | | | | | 1 | | | | 1 | | | 611 | 98410 | 1 | EACH | CATCH BASIN, NO. 8 | | | | |
| | | | | | | | | | | 1 | | 1 | | | 611 | 98470 | 1 | EACH | CATCH BASIN, NO. 2-2B | | | | |
| | | | | | | | | 1 | | | | 1 | | | 611 | 98630 | 1 | EACH | CATCH BASIN ADJUSTED TO GRADE | | | | |
| | | | | | | | | | | 1 | | 1 | | | 611 | 99094 | 1 | EACH | INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B | | | | |
| | | | | | | | | 3 | | | | 3 | | | 611 | 99574 | 3 | EACH | MANHOLE, NO. 3 | | | | |
| | | | | | | | | 3 | | | | 3 | | | 611 | 99654 | 3 | EACH | MANHOLE ADJUSTED TO GRADE | | | | |
| | 10 | | | | | | | 15 | 13 | 13 | | 51 | | | 611 | 99710 | 51 | EACH | PRECAST REINFORCED CONCRETE OUTLET | | | | |
| | | | | | 2 | | | | | | | 2 | | | 611 | 99900 | 2 | EACH | DRAINAGE STRUCTURE, MISC.: FLAP GATE REMOVED | | | | |
| | | | | | | | | 2 | | | | 2 | | | 611 | 99900 | 2 | EACH | DRAINAGE STRUCTURE, MISC.: FLAP GATE, 72" | | | | |
| | | | | | | | | | 212 | | | 212 | | | 613 | 41200 | 212 | CY | LOW STRENGTH MORTAR BACKFILL | | | | |
| | | | | | | | | | | 200 | | 200 | | | 839 | 29000 | 200 | FT | TRENCH DRAIN, TYPE A, WITH STANDARD GRATE | | | | |

GENERAL SUMMARY

FRA - 270-51.50

ADDENDUM #4
05/08/2023

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| SHEET NUM. | | | | | | PART. | | | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION |
|------------|-----|-----|--------|------|-----|-----------|-----------|-----------|---------|----------|-------------|------|--|
| 21 | 22 | 22A | 23 | 38 | 509 | 01/IMS/04 | 02/IMS/14 | 03/NHS/43 | | | | | |
| | | | | | 8 | | | | 516 | 44101 | 8 | EACH | STRUCTURE REPAIR (FRA-270-5264, SFN 2513536) |
| | | | | | 4 | | | | 516 | 44101 | 4 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (LOAD PLATE 20" X 16" X 1.50", NEOPRENE 15" DIA. X 2.950") |
| | | | | | 8 | | | | 516 | 44101 | 8 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (LOAD PLATE 28" X 19" X 1.50", NEOPRENE 20" X 18" X 3.850") |
| | | | | | 48 | | | | 518 | 21200 | 48 | CY | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (LOAD PLATE 25" X 25" X 1.50", NEOPRENE 24" DIA. X 4.975") |
| | | | | | 456 | | | | SPECIAL | 51900100 | 456 | SF | POROUS BACKFILL WITH GEOTEXTILE FABRIC |
| | | | | | 98 | | | | 519 | 11100 | 98 | SF | COMPOSITE FIBER WRAP SYSTEM |
| | | | | | 148 | | | | 526 | 25010 | 148 | SY | PATCHING CONCRETE STRUCTURE |
| | | | | | 58 | | | | 526 | 90030 | 58 | FT | REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15") |
| | | | | | | | | | | | | | TYPE C INSTALLATION |
| | | | | | | | | | | | | | MAINTENANCE OF TRAFFIC |
| | | 150 | | | | | | | 301 | 46000 | 150 | CY | ASPHALT CONCRETE BASE, PG64-22 |
| | | | 122 | | | | | | 611 | 04400 | 122 | FT | 12" CONDUIT, TYPE B |
| | | | 2 | | | | | | 611 | 98470 | 2 | EACH | CATCH BASIN, NO. 2-2B |
| | 400 | | | | | | | | 614 | 11110 | 400 | HOUR | LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE |
| | | | 17 | | | | | | 614 | 12384 | 17 | EACH | WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) |
| LUMP | | | | | | | | | 614 | 12420 | LS | | DETOUR SIGNING |
| 10 | | | | | | | | | 614 | 12500 | 10 | EACH | REPLACEMENT SIGN |
| 100 | | | | | | | | | 614 | 12600 | 100 | EACH | REPLACEMENT DRUM |
| | | 500 | 4,763 | | | | | | 614 | 12800 | 5,263 | EACH | WORK ZONE RAISED PAVEMENT MARKER |
| | | | 739 | | | | | | 614 | 13310 | 739 | EACH | BARRIER REFLECTOR, TYPE 1, ONE-WAY |
| | | | 321 | | | | | | 614 | 13350 | 321 | EACH | OBJECT MARKER, ONE WAY |
| 72 | | | | | | | | | 614 | 18601 | 72 | SNMT | PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN |
| | | | | | | | | | 614 | 20560 | 3.53 | MILE | WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT |
| | | | | | | | | | 614 | 20000 | 0.08 | MILE | WORK ZONE LANE LINE, CLASS I, 4" |
| | | | 0.08 | | | | | | 614 | 22000 | 15.54 | MILE | WORK ZONE EDGE LINE, CLASS I, 4" |
| | | | 15.54 | | | | | | 614 | 23000 | 55,082 | FT | WORK ZONE CHANNELIZING LINE, CLASS I, 8" |
| | | | 55,082 | | | | | | 614 | 24000 | 2,540 | FT | WORK ZONE DOTTED LINE, CLASS I |
| | | | 2,540 | | | | | | 614 | 25000 | 254 | FT | WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I |
| | | | 254 | | | | | | 614 | 22360 | 1.67 | MILE | WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT |
| | | | | | | | | | 614 | 26000 | 112 | FT | WORK ZONE STOP LINE, CLASS I |
| | | | 112 | | | | | | 614 | 30000 | 14 | EACH | WORK ZONE ARROW, CLASS I |
| | | | 14 | | | | | | 614 | 31640 | 8 | EACH | WORK ZONE WORD ON PAVEMENT, 96", CLASS I |
| | | | 8 | | | | | | | | | | ROADS FOR MAINTAINING TRAFFIC |
| | | | | LUMP | | | | | 615 | 10000 | LS | | PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A |
| | | | 21,695 | | | | | | 615 | 20000 | 21,695 | SY | |
| | | | | | | | | | 616 | 10000 | 50 | MGAL | WATER |
| | | | 15,930 | | | | | | 622 | 41100 | 15,930 | FT | PORTABLE BARRIER, UNANCHORED |
| | | | | | | | | | | | | | INCIDENTALS |
| | | | | | | | | | LUMP | 108 | 10000 | LS | CPM PROGRESS SCHEDULE |
| | | | | | | | | | LUMP | 614 | 11000 | LS | MAINTAINING TRAFFIC |
| | | | | | | | | | 24 | 619 | 16020 | MNTH | FIELD OFFICE, TYPE C |
| | | | | | | | | | LUMP | 623 | 10000 | LS | CONSTRUCTION LAYOUT STAKES AND SURVEYING |
| | | | | | | | | | LUMP | 624 | 10000 | LS | MOBILIZATION |

CALCULATED
 ACF
 CHECKED
 CSR
GENERAL SUMMARY
FRA - 270-51.50
 84
 554

ADDENDUM #4
05/08/2023

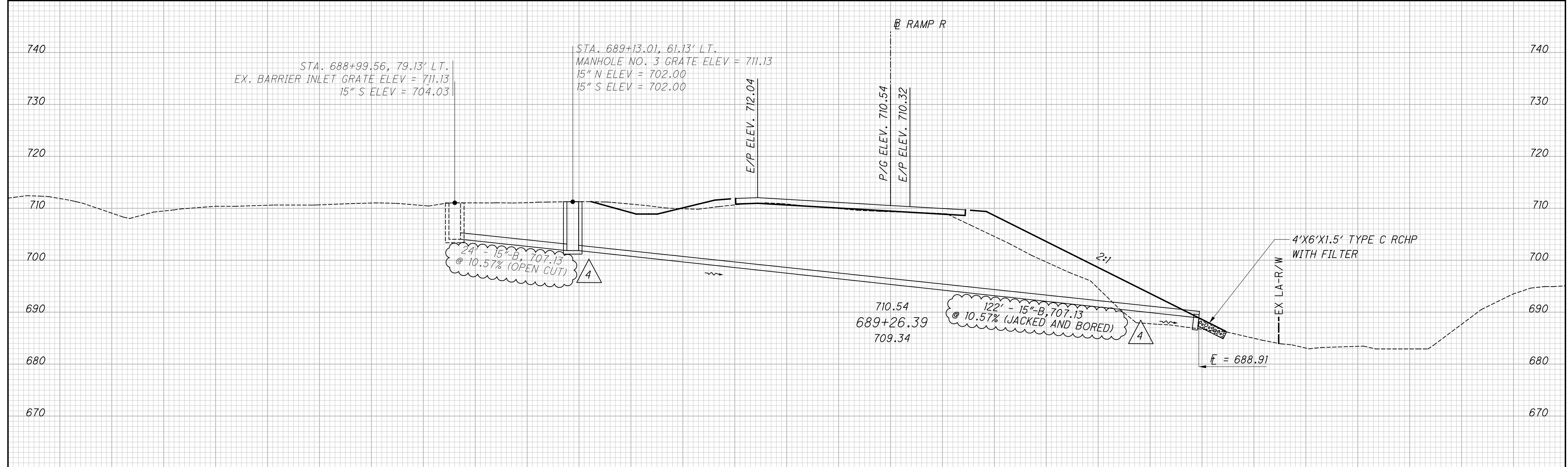
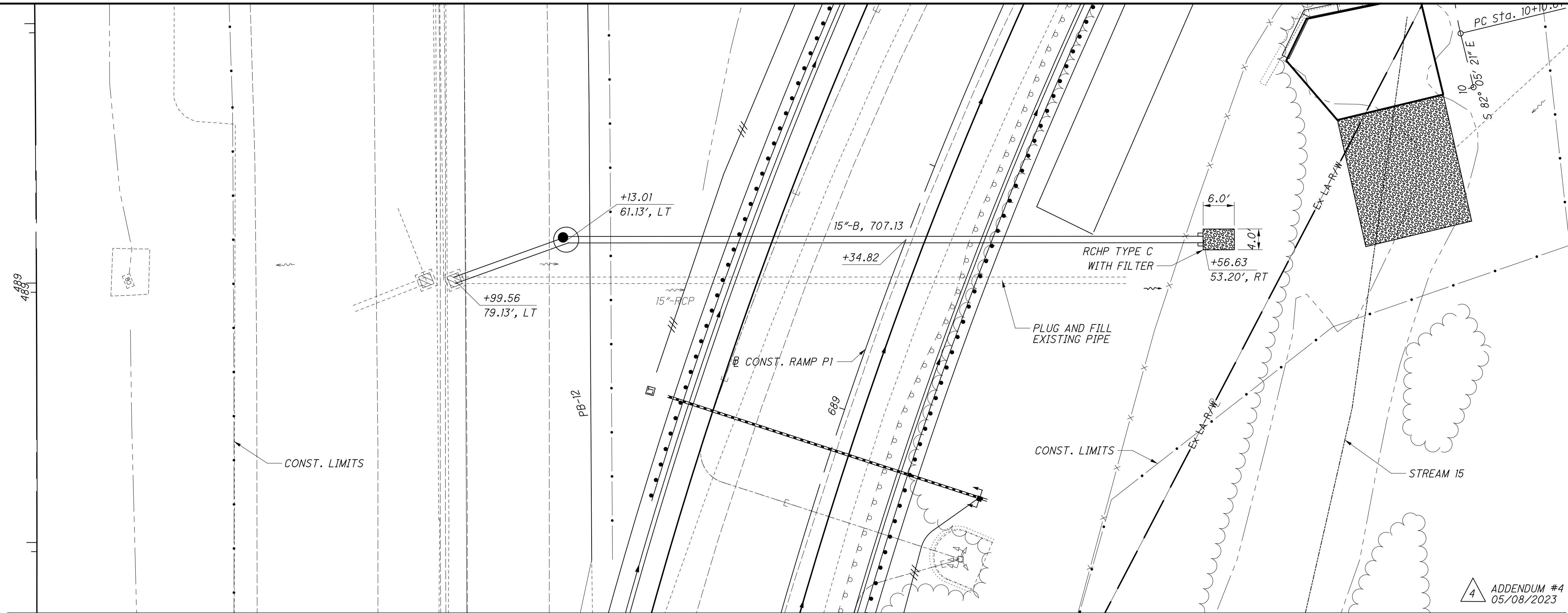
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| REF NO. | SHEET NO. | STATION TO STATION | | | | QUANTITIES | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-----------|--------------------|--|-----------|-------|---------------------|-------------------------------------|-----------------------------|-----------------------------|--------------------------------------|---|---|-------------------|--|--------------------|-------------------------------------|--|--|--|--|--|--|--|--|--|---|--|--|--|
| | | | | | | GUARDRAIL, TYPE MGS | GUARDRAIL, BARRIER DESIGN, TYPE MGS | ANCHOR ASSEMBLY, MGS TYPE E | ANCHOR ASSEMBLY, MGS TYPE T | MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 | IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL) | IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL), 55 MPH (36") | FENCE, MISC.:GATE | CONCRETE BARRIER, SINGLE SLOPE, TYPE B | BARRIER TRANSITION | BARRIER REFLECTOR, TYPE 2 (ONE-WAY) | | | | | | | | | | | | | |
| | | | | | FT | FT | EACH | EACH | EACH | EACH | EACH | FT | FT | EACH | EACH | | | | | | | | | | | | | | |
| TO | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| I-270 EASTBOUND | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G1 | 103 | 500+44.77 | | 503+38.84 | RT | 295 | | | | | | | | | | | | | | | | | | | | | | | |
| I-270 WESTBOUND | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G2 | 106 | 500+70.78 | | 504+25.05 | LT | 352 | | | | | | | | | | | | | | | | | | | | | | | |
| G3 | 106 | 504+82.15 | | 506+00.00 | LT | 225 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| US-23 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G4 | 175 | 582+44.24 | | 586+65.17 | LT | 325 | | | | | | | | | | | | | | | | | | | | | | | |
| G5 | 175 | 586+10.41 | | 586+55.44 | LT&RT | 25 | | | | | | 1 | | | | | | | | | | | | | | | | | |
| RAMP L | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G6 | 203 | 576+90.47 | | 579+33.44 | RT | 175 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | |
| G7 | 204 | 576+20.16 | | 588+20.20 | LT | 442 | | | | | 2 | | | | | | | | | | | | | | | | | | |
| G8 | 204 | 583+09.74 | | 588+28.58 | LT | 484 | | | | | 2 | | | | | | | | | | | | | | | | | | |
| G9 | 205 | 590+53.42 | | 598+29.31 | RT | 750 | | | | | 1 | | | | | | | | | | | | | | | | | | |
| G10 | 205 | 590+49.58 | | 594+38.86 | LT | 375 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| RAMP M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G11 | 220 | 00+00.00 | | 19+82.58 | RT | 1975 | | | | | | | | | | | | | | | | | | | | | | | |
| G12 | 220 | 09+09.45 | | 15+83.47 | LT | 688 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| RAMP O | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G13 | 225 | 02+64.49 | | 05+39.98 | LT | 275 | | | 1 | 1 | | | 1 | | | | | | | | | | | | | | | | |
| G14 | 226 | 08+25.21 | | 11+79.36 | LT | 338 | | | | 2 | | | | | | | | | | | | | | | | | | | |
| B1 | 226 | 05+39.98 | | 08+25.21 | LT | | | | | | | | 309 | | | | | | | | | | | | | | | | |
| G15 | 226 | 07+95.17 | | 13+72.93 | RT | 563 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| RAMP P1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G16 | 228 | 684+89.82 | | 695+74.46 | RT | 650.0 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| F1 | 229 | 692+00.45 | | 692+00.68 | RT | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| G17 | 229 | 693+02.12 | | 695+64.70 | RT | 262.5 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| G18 | 229 | 688+00.00 | | 694+73.37 | LT | 612.5 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | |
| RAMP P2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B1 | 257 | 867+00.00 | | 869+88.72 | LT | | | | | | | | 288 | | | | | | | | | | | | | | | | |
| RAMP R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G19 | 268 | 267+95.79 | | 579+35.50 | LT | 1125 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | |
| G20 | 268 | 268+53.45 | | 728+31.26 | RT | 3287.5 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| RAMP S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G21 | 301 | 798+76.29 | | 813+97.52 | LT | 1537.5 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | |
| G22 | 301 | 799+25.63 | | 803+62.50 | RT | 487.5 | | 1 | | | | | | | | | | | | | | | | | | | | | |
| B1 | 304 | 813+97.52 | | 814+47.71 | LT | | | | | | | | 50 | | | | | | | | | | | | | | | | |
| G23 | 304 | 814+47.72 | | 815+80.00 | LT | 112.5 | | | | 1 | | | | | | | | | | | | | | | | | | | |
| I-270 EASTBOUND MERGE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B1 | 138 | 711+19.56 | | 718+08.53 | RT | | | | | | | | 690 | 1 | | | | | | | | | | | | | | | |
| US-23 DECELERATION LANE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G-24 | 189 | 549+08.41 | | 550+17.63 | RT | 12.5 | 50 | | 1 | | | 1 | | | | | | | | | | | | | | 6 | | | |
| G-25 | 189 | 549+90.66 | | 551+00.00 | RT/LT | 12.5 | 50 | | 1 | | | 1 | | | | | | | | | | | | | | 6 | | | |
| G-26 | 189 | 548+91.18 | | 550+18.57 | RT | 62.5 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| G-27 | 191 | 559+42.42 | | 560+21.82 | RT | 75 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | 15523 | 100 | 13 | 9 | 13 | 2 | 2 | 1 | 1337 | 1 | | | | | | | | | | | | | | |

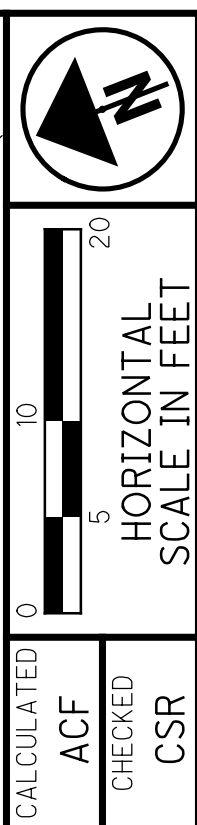
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GUARDRAIL ESTIMATED QUANTITIES
FRA - 270-51.50
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ADDENDUM #4
05/08/2023

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4 ADDENDUM #4
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CALCULATED ACF CHECKED CSR
STORM SEWER PROFILE - RAMP P1
STA. 689+26

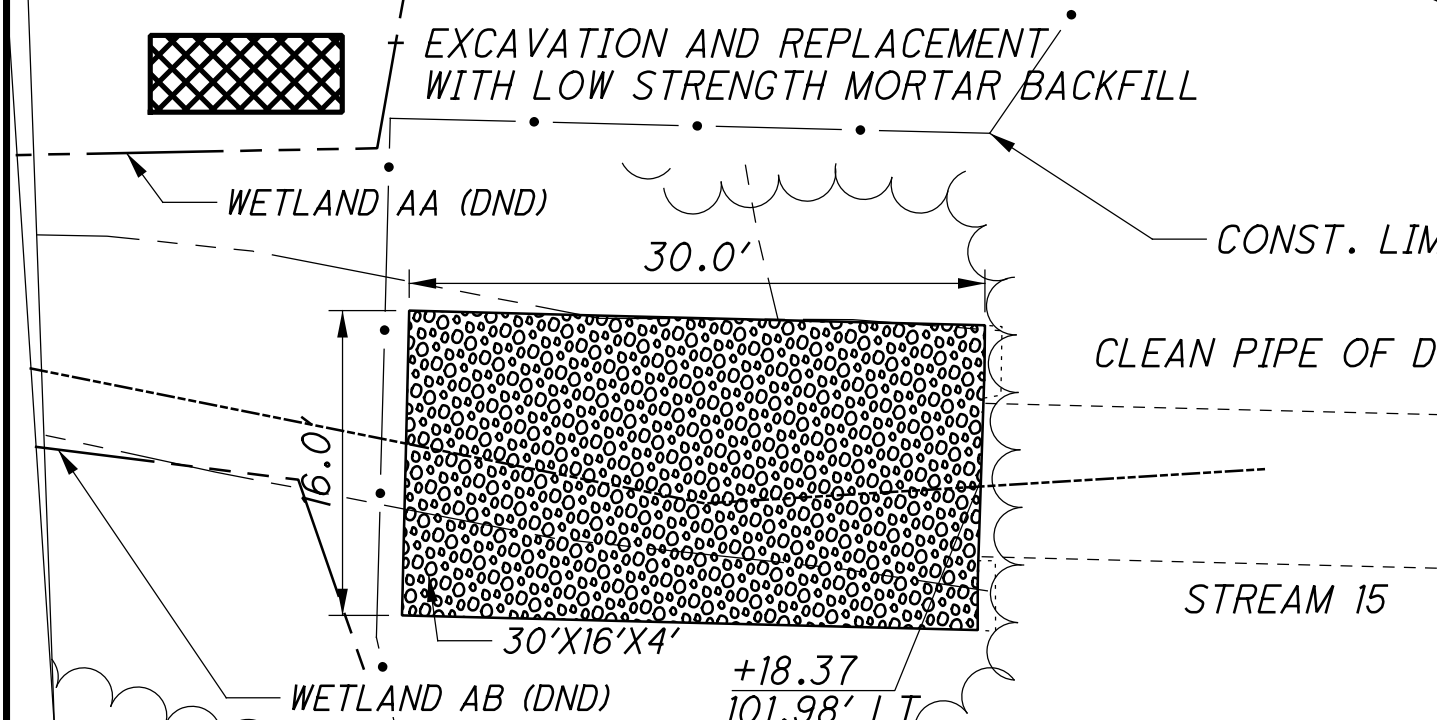
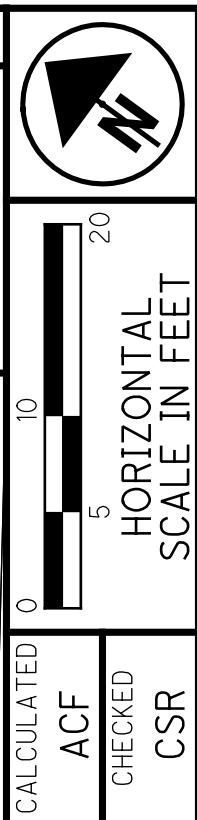
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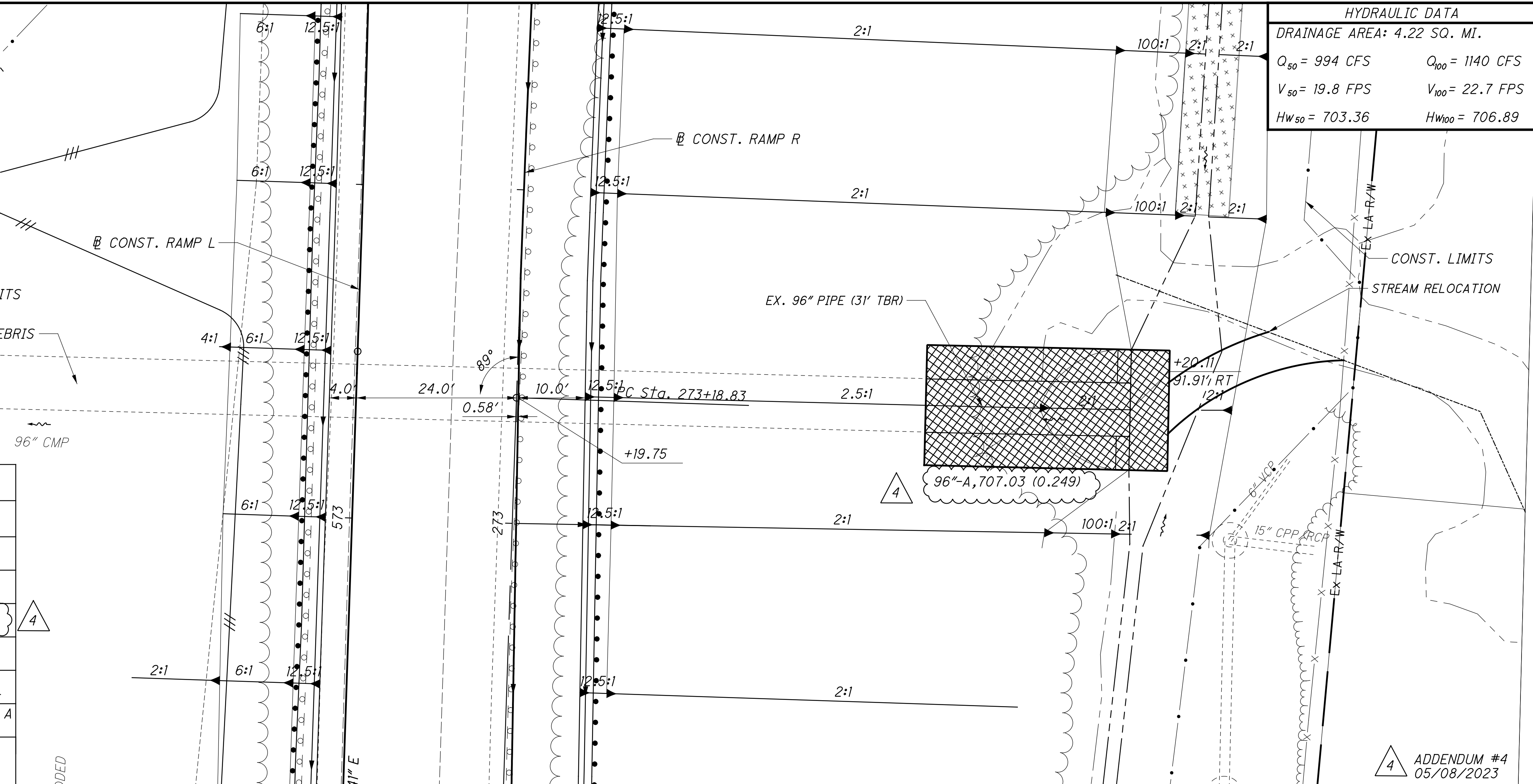
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| EXISTING STRUCTURE DATA | | | |
|-------------------------|------------------|----------------------|-------------|
| CFN: | 1869019 | DESIGN SERVICE LIFE: | 75 YEARS |
| SIZE: | 96" | STREAM pH: | 7.0 |
| TYPE: | CORRUGATED METAL | ABRASIVENESS: | N/A |
| LENGTH: | 126' | HEADWALL: | HALF HEIGHT |
| DATE CONSTRUCTED: | 1963 | | |

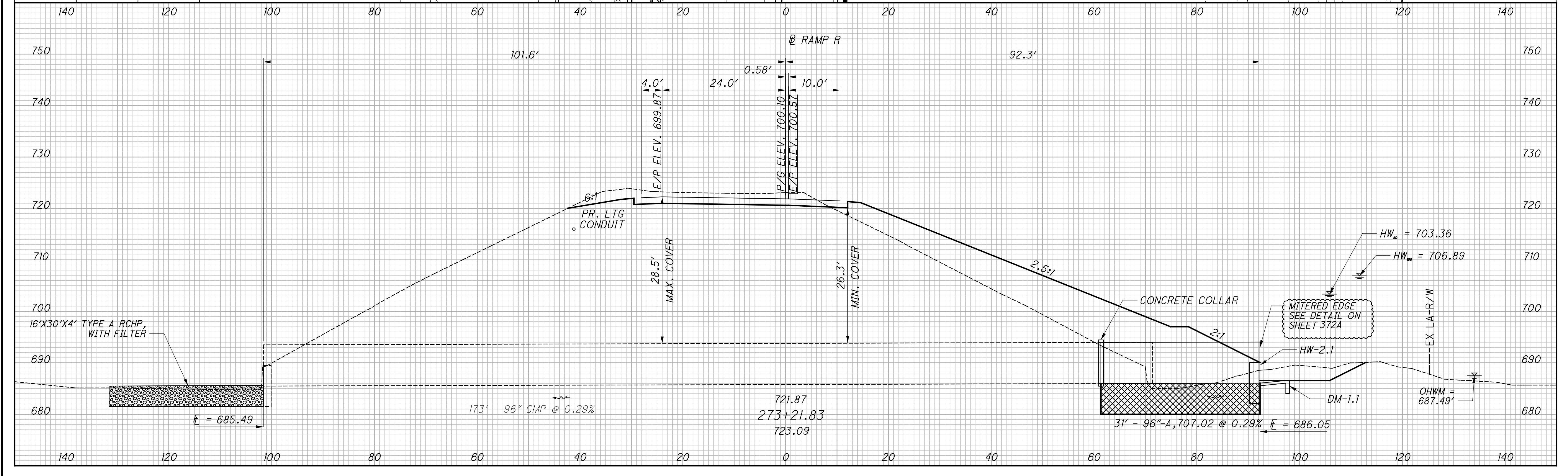
| HYDRAULIC DATA | |
|-----------------------------|----------------------|
| DRAINAGE AREA: 4.22 SQ. MI. | |
| $Q_{50} = 994$ CFS | $Q_{100} = 1140$ CFS |
| $V_{50} = 19.8$ FPS | $V_{100} = 22.7$ FPS |
| $HW_{50} = 703.36$ | $HW_{100} = 706.89$ |



| ESTIMATED QUANTITIES | | | |
|----------------------|----------|------|--|
| ITEM | QUANTITY | UNIT | DESCRIPTION |
| 601 | 12 | SY | RIPRAP, TYPE D |
| 602 | 8 | CY | CONCRETE MASONRY |
| 611 | 31 | FT | 96" CONDUIT, TYPE A, AS PER PLAN, 707.03 (0.249) |
| 203 | 146 | CY | EXCAVATION |
| 613 | 146 | CY | LOW STRENGTH MORTAR BACKFILL |
| 601 | 71 | CY | ROCK CHANNEL PROTECTION, TYPE A WITH FILTER |



4 ADDENDUM #4
05/08/2023



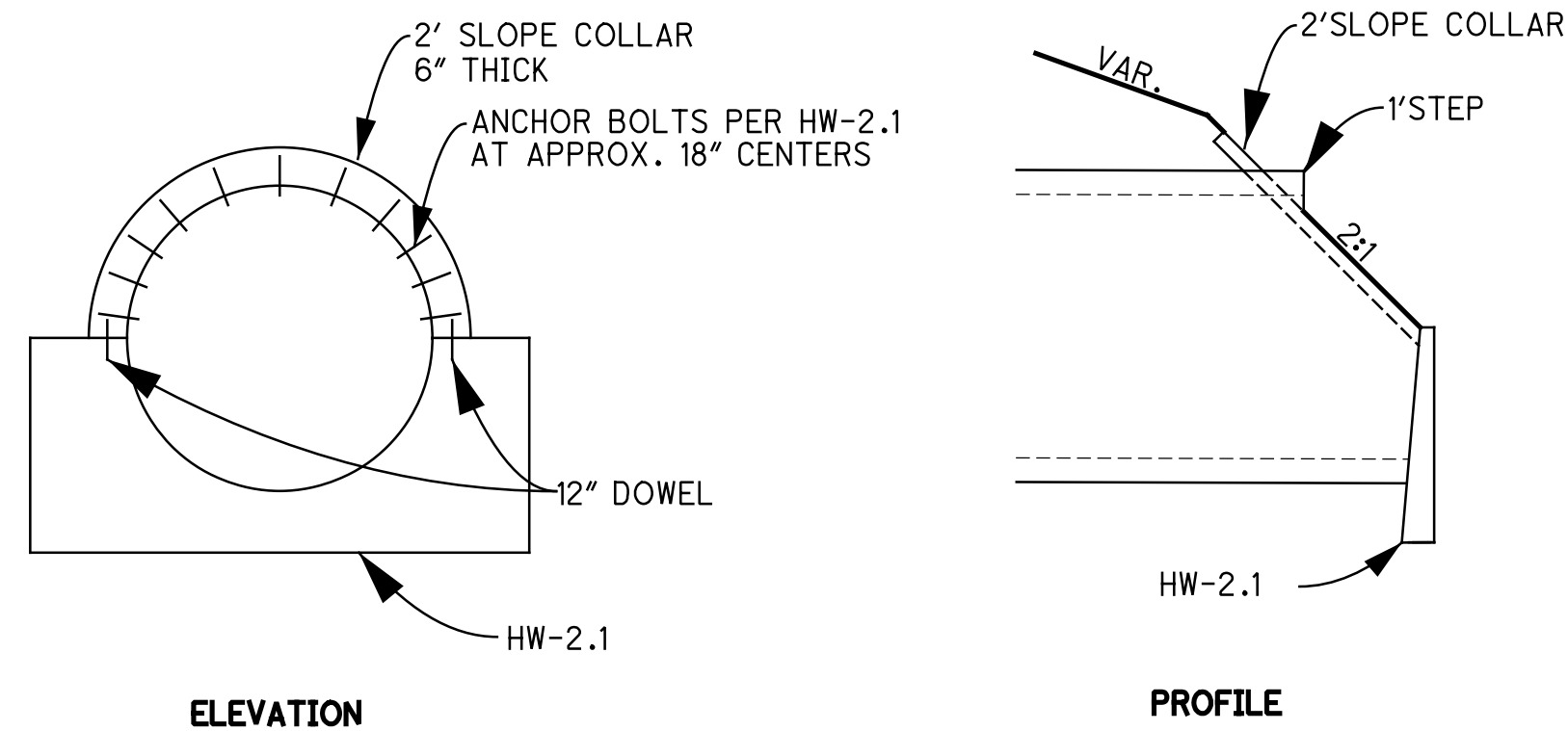
CULVERT DETAIL - RAMP R
STA. 273+22.00

FRA - 270-51.50

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DETAIL A



ITEM 611 96" CONDUIT, TYPE A, AS PER PLAN 707.03(0.249)

THE ABOVE CONDUIT SHALL BE MITER-CUT(STEP-BEVEL) TO FIT THE EMBANKMENT SLOPE. FOR THE DETAILS AND QUANTITIES FOR THE MITER-CUT(STEP-BEVEL) END SECTIONS, SEE SHEETS 78 AND 372, RESPECTIVELY.

THE MATERIAL USED FOR THE BEDDING AND BACKFILL IS LIMITED TO ITEM 603 GRANULAR MATERIAL TYPE 1. IT SHALL BE COMPACTED PER 603.081 METHOD A.

THE CONTRACTOR SHALL PROVIDE A MANUFACTURER'S REPRESENTATIVE WHO SHALL BE RESPONSIBLE FOR THE ERECTION OF THE CULVERT.

THE STRUCTURE SHALL BE EXTERNALLY COATED PER AASHTO M243.

THE CONTRACTOR SHALL PROVIDE A MANUFACTURER'S REPRESENTATIVE WHO SHALL THROUGH THE ENGINEER, INSPECT, TEST, REJECT, OR APPROVE THE FILL MATERIAL AND ITS PLACEMENT. THE REPRESENTATIVE SHALL ALSO MONITOR THE CONDUIT DURING ITS ASSEMBLY AND ERECTION TO MAKE CERTAIN THE STRUCTURE IS SYMMETRICAL AND PROPERLY SHAPED. THE REPRESENTATIVE SHALL ALSO MONITOR THE SHAPE FOR ANY DISTORTION OF THE THE CONDUIT DURING THE PLACING OF FILL TO ENSURE ANY MOVEMENT OR DISTORTION IS WITHIN THE MANUFACTURER'S TOLERANCE RANGE.

THE REPRESENTATIVE SHALL PROVIDE THE ENGINEER A WRITTEN INSPECTION REPORT, SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, OF ALL TESTS, MEASUREMENTS, AND FINDINGS.

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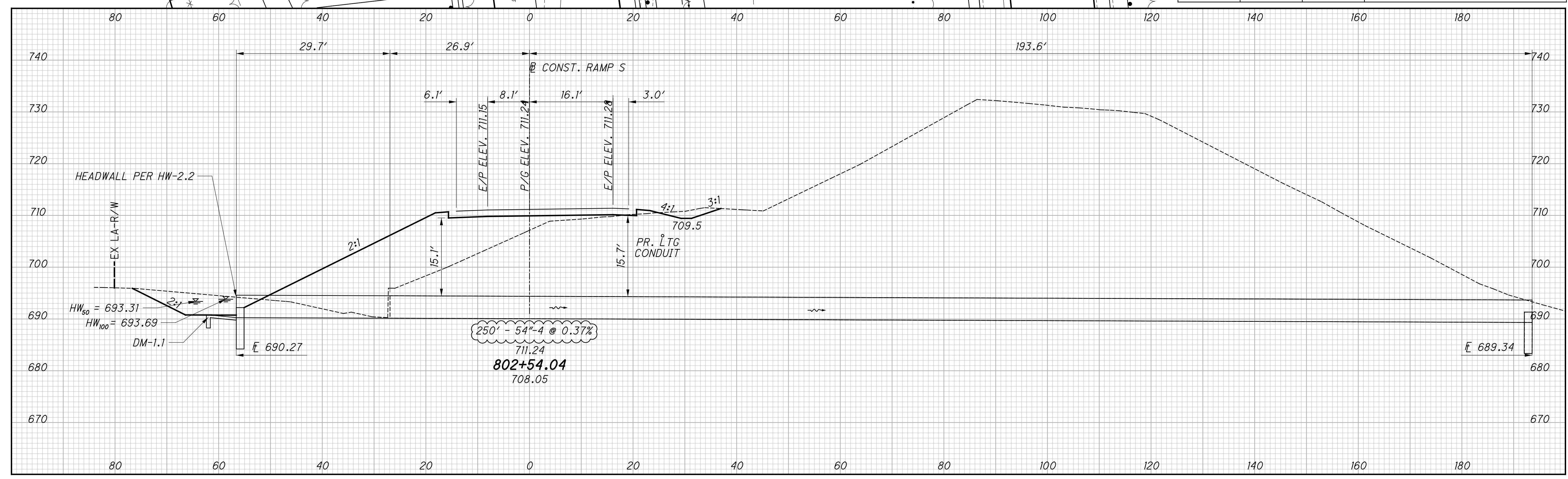
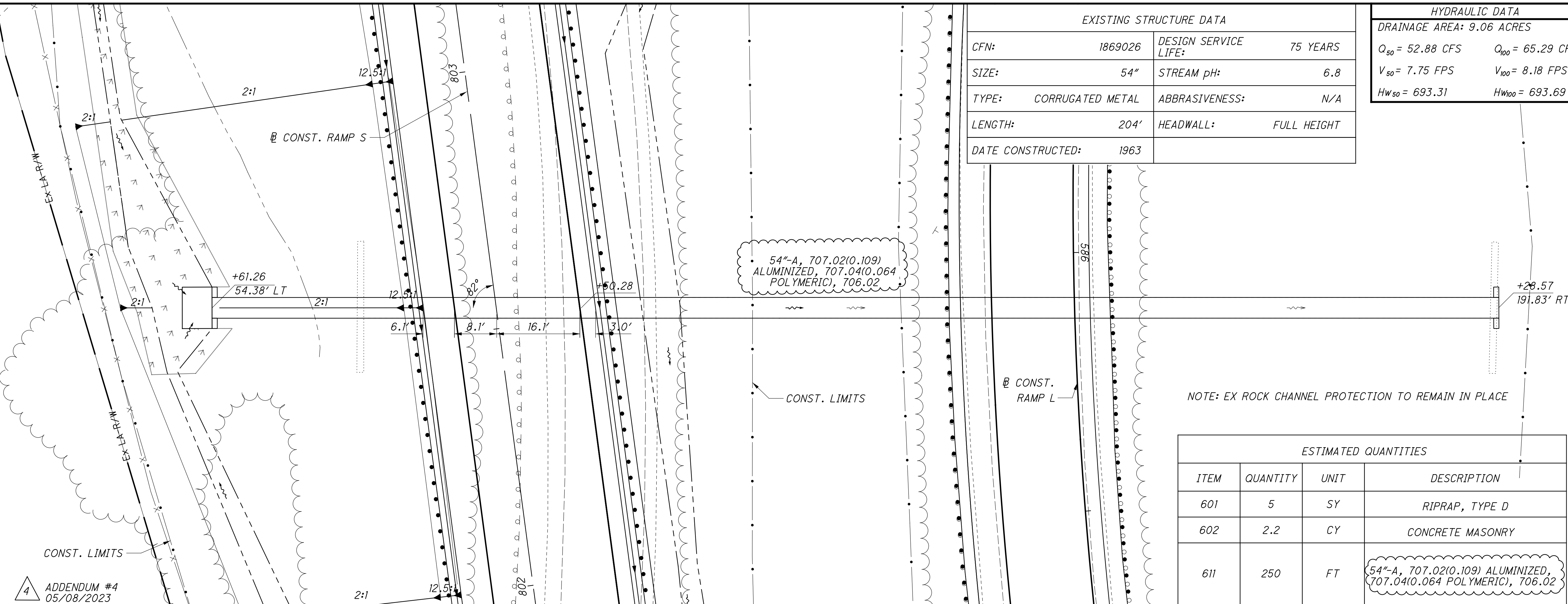
CULVERT DETAIL SHEET
96" PIPE WITH MITERED EDGE

FRA - 270 - 51.50

4 ADDENDUM #4
05/08/2023

372A
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4 ADDENDUM #4
05/08/2023

| ESTIMATED QUANTITIES | | | |
|----------------------|----------|------|--|
| ITEM | QUANTITY | UNIT | DESCRIPTION |
| 601 | 5 | SY | RIPRAP, TYPE D |
| 602 | 2.2 | CY | CONCRETE MASONRY |
| 611 | 250 | FT | 54"-A, 707.02(0.109) ALUMINIZED, 707.04(0.064 POLYMERIC), 706.02 |

CULVERT DETAIL - RAMP S

STA. 802+54.00

FRA - 270-51.50

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