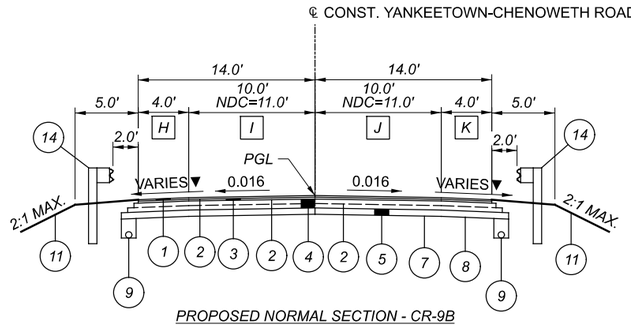


PROPOSED NORMAL SECTION - CR-9B

STA. 22+07.50 TO STA. 23+31.71 = 124.21 FEET

STA. 26+68.29 TO STA. 27+92.50 = 124.21 FEET

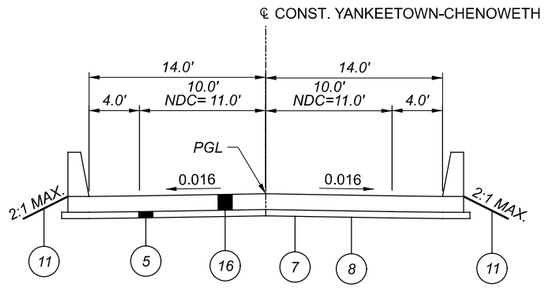
H VARIES FROM 0.0' TO 4.0' FROM STA. 22+07.50 TO STA. 23+11.10
VARIES FROM 4.0' TO 0.0' FROM STA. 26+83.68 TO STA. 27+92.50

I VARIES FROM 9.7' TO 10.0' FROM STA. 22+07.50 TO STA. 23+29.85

J VARIES FROM 11.2' TO 10.0' FROM STA. 22+07.50 TO STA. 23+33.57

K VARIES FROM 0'.0 TO 4.0' FROM STA. 22+07.50 TO STA. 23+16.32
VARIES FROM 4'.0 TO 2.0' FROM STA. 26+88.90 TO STA. 27+37.99

▼TRANSITION SHOULDER CROSS SLOPE FROM EXISTING TO 0.016 AND FROM 0.016 TO EXISTING WITHIN FULL DEPTH PAVEMENT LIMITS.

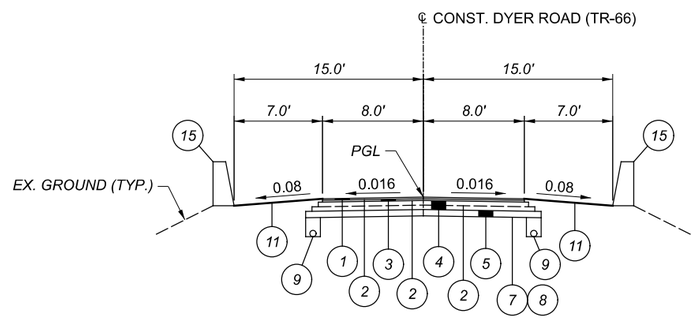


PROPOSED APPROACH SLAB SECTION - CR-9B

STA. 23+31.71 TO STA. 23+56.71 = 25.00 FEET

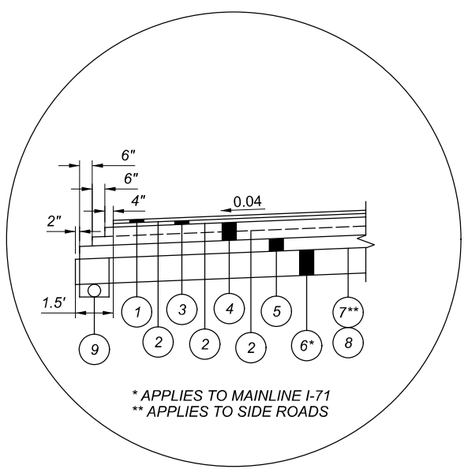
STA. 23+56.71 TO STA. 26+43.29 = 286.58 FEET (BRIDGE LIMITS)

STA. 26+43.29 TO STA. 26+68.29 = 25.00 FEET



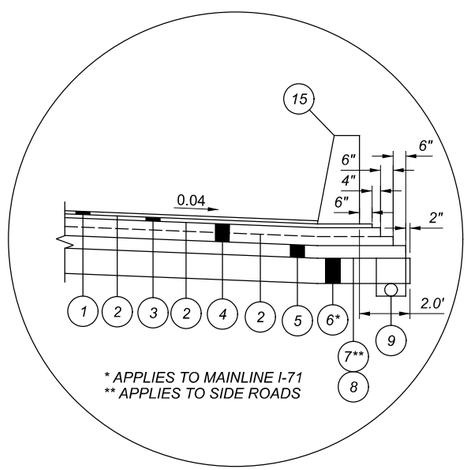
PROPOSED NORMAL SECTION - TR-66

STA. 23+75.00 TO STA. 26+25.00 = 250.00 FEET



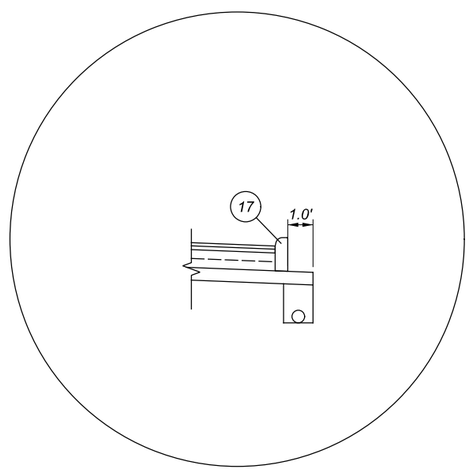
* APPLIES TO MAINLINE I-71
** APPLIES TO SIDE ROADS

EDGE COURSE DETAIL #1



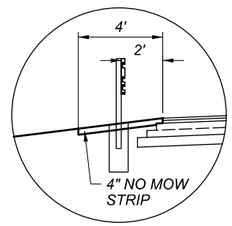
* APPLIES TO MAINLINE I-71
** APPLIES TO SIDE ROADS

EDGE COURSE DETAIL #2



CURB DETAIL
CR-9B, TR-66

SEE PLAN AND PROFILE SHEET FOR LIMITS



CABLE BARRIER DETAIL

THE CONTRACTOR SHALL PROVIDE A 4 INCH DEEP MOW STRIP WITH MATERIALS CONFORMING TO ITEM 608 - CONCRETE WALK, AS SHOWN IN THE DETAIL. THE MOW STRIP SHALL BE PLACED ON COMPACTED EARTH AND CONSTRUCTED USING CLASS QC1 CONCRETE WITH A CURING COMPOUND MEETING THE SPECIFICATIONS OF 705.07 OF THE CMS. THE MOW STRIP SHALL BE EITHER INTEGRAL TO THE SOCKETED CONCRETE FOUNDATION OR HAVE AN EXPANSION JOINT WITH MATERIALS MEETING THE REQUIREMENTS OF 705.03 OF THE CMS BETWEEN THE SOCKETED CONCRETE FOUNDATION AND THE CONCRETE MOW STRIP. THE MOW STRIP SHALL HAVE A TRANSVERSE JOINT EVERY 100 FEET. THE METHODS AND MATERIALS USED TO CONSTRUCT THE JOINTS SHALL CONFORM TO CMS 608.03(C).

*FOR LEGEND, SEE SHEET P.3

TYPICAL SECTIONS

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St. Suite 800 Cleveland, Ohio
950 Goodale Blvd. Suite 180 Grandview Heights, Ohio
DESIGNER MLL
REVIEWER MJC 04/26/22
PROJECT ID 115717
SHEET P.5 TOTAL 458

MAD-71-4.56
MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/12/2023 TIME: 10:25:22 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GY203.dgn

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

COLUMBIA GAS OF OHIO
(DISTRIBUTION)
843 PIATT AVENUE
CHILLICOTHE, OH 45601
O: (740) 774-8231
C: (740)-591-9841
ATTN: TIFFANY WOODYARD
trwoodyward@nisource.com

AMERICAN ELECTRIC POWER
8600 SMITHS MILL ROAD
NEW ALBANY, OH 43054
(380) 205-5072
ATTN: MIKE CARR
TI_PublicProjects@aep.com

AES (FORMERLY DP&L)
DISTRIBUTION
1900 DRYDEN RD
DAYTON, OH 45439
(937) 331-4497
ATTN: BILL WARD
William.ward@aes.com

SOUTH CENTRAL POWER
2780 COONPATH RD
LANCASTER, OH 43130
ATTN: MIKE CHALFAN
(740) 689-6168
chalfan@southcentralpower.com
ATTN: KEVIN CARO
caro@southcentralpower.com

BRIGHTSPEED (FORMERLY LUMEN)
125 N. MAIN ST.
SYDNEY, OH 45365
(937) 498-5105
ATTN: GAGE RYAN & DUSTIN DEBO
Gage.Ryan@brightspeed.com
Dustin.x.Debo@brightspeed.com

TC ENERGY
700 LOUISIANA STREET
SUITE 700
HOUSTON, TX 77002
(800) 562-8931
ATTN: RANDALL MUSIC
randall_music@tcenergy.com
ATTN: CROSSINGS & ENCROACHMENTS
us_crossings@tcenergy.com

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 8 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT STATIC
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18 (ADJUSTED TO PRIOR ODOT CONTROL)

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS-80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE
COMBINED SCALE FACTOR: 1.0000000000
ORIGIN OF COORDINATE
SYSTEM: 0,0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. LIMITS ARE FROM LA ROW TO LA ROW AND WITHIN CHANNEL EASEMENT REGARDLESS OF CONSTRUCTION LIMITS SHOWN. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEETS 3 - 5 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 98 HOUR.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST 2 EACH
659, TOPSOIL 10,486 CU. YD.
659, SEEDING AND MULCHING 94,473 SQ. YD.
659, REPAIR SEEDING AND MULCHING 4,724 SQ. YD.
659, INTER-SEEDING 4,724 SQ. YD.
659, COMMERCIAL FERTILIZER 13.18 TON
659, LIME 19.52 ACRES
659, WATER 523 M. GAL.
659, MOWING 213 M. SQ.FT.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

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.

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.

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 - CABLE GUARDRAIL

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE HIGH TENSION FOUR CABLE GUARDRAIL SYSTEMS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION, AND ITEM 606 CABLE BARRIER, ANCHOR ASSEMBLY AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL HIGH TENSION CABLE GUARDRAIL SYSTEM NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER. THE LENGTH OF THE TENSIONED CABLE NECESSARY TO INSTALL A FUNCTIONAL ANCHOR SYSTEM SHALL BE INCLUDED IN ITEM 606, CABLE BARRIER WITH CONCRETE LINE POST FOUNDATION.

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

SYSTEMS SHALL HAVE A MAXIMUM DEFLECTION OF 8 FEET AND THE MAXIMUM LONGITUDINAL DISTANCE BETWEEN POSTS SHALL BE 15'.

INSTALLATION WILL BE A FOUR CABLE HIGH TENSION SYSTEM INSTALLED IN SOCKETED POSTS FOUNDATION WITH A FOUR FOOT WIDE "NO MOW STRIP" AS SHOWN IN THE TYPICAL SECTION DETAIL. ALL COST TO CONSTRUCT THE NO MOW STRIP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 606 - CABLE BARRIER.

DELINEATE THE CABLE BARRIER USING TYPE 6 BARRIER REFLECTORS PER ITEM 626 OR USING FLEXIBLE POSTS PER ITEM 620 AS CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.

ANCHOR TERMINAL STRUTS SHALL BE COVERED COMPLETELY ON BOTH SIDES WITH YELLOW TYPE J, ASTM D 4956 TYPE XI REFLECTIVE SHEETING, PER CMS 730.193.

TRANSITIONS TO W-BEAM GUARDRAIL ARE NOT ALLOWED.

REFER TO MANUFACTURER FOR MAXIMUM OFFSET FROM BREAK POINT.

TORPEDO OR BULLET SPLICES ARE NOT ALLOWED. ALL CABLE SPLICES SHALL BE A SWAGED OR OPEN BODY DESIGN THAT ALLOWS FOR ANNUAL INSPECTION BETWEEN THE WEDGE AND STRANDS OF CABLE.

POSTS ARE SET IN SOCKETED CONCRETE FOUNDATIONS AND SHALL NOT BE PERMANENTLY INSTALLED UNTIL THEIR RESPECTIVE RUNS OF TENSIONED CABLE GUARDRAIL ARE READY FOR FINAL CONNECTION TO THE END TERMINAL ASSEMBLY. THE CONTRACTOR SHALL REPLACE ANY POSTS DAMAGED DURING INSTALLATION AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

MEDIAN AND/OR CURBING ON APPROACH SLABS

WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

GENERAL NOTES

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St. Suite 800 Cleveland, Ohio
950 Goodale Blvd. Suite 180 Grandview Heights, Ohio
DESIGNER MLL
REVIEWER MJC 04/26/22
PROJECT ID 115717
SHEET P.6 TOTAL 458

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/12/2023 TIME: 10:19:48 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GN201.dgn

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

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 SHALL BE CLOSER THAN 30 FEET TO THE EDGE OF PAVEMENT PROVIDE A STEEL CASING PIPE CONFORMING TO 748.06. JOINTS WITH A CIRCUMFERENCIAL FULLY PENETRATING B-U4B 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.

FARM DRAINS

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE CONSTRUCTION LIMITS WITH ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY.

DITCH USING ITEM 611, TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

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

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

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

611 6" CONDUIT, TYPE B 25 FT.
611 6" CONDUIT, TYPE E 25 FT.
611 6" CONDUIT, TYPE F 25 FT.
601 ROCK CHANNEL PROTECTION TYPE C WITH FILTER 1 CU. YD.

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

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

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

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

ITEM 601, TIED CONCRETE BLOCK MAT, TYPE 1 3.6 SQ. YD.
ITEM 611, 6" CONDUIT, TYPE F 25 FT.
ITEM 611, PRECAST REINFORCED CONCRETE OUTLET 2 EACH
ITEM 605, 6" UNCLASSIFIED PIPE UNDERDRAINS 25 FT.

302 ASPHALT CONCRETE BASE, AS PER PLAN

MIX DESIGN *- FOLLOW THE REQUIREMENTS OF 302.02 EXCEPT AS MODIFIED BELOW:*

- *USE A MAXIMUM F/A RATIO OF 1.4. IF THE F/A RATIO IS GREATER THAN 1.2, RECALCULATE THE F/A RATIO USING THE EFFECTIVE ASPHALT BINDER CONTENT.*
- *THE TSR IS REQUIRED AND THE MINIMUM TSR IS 0.70 AS DETERMINED USING SUPPLEMENT 1051. ADD ANTISTRIP ADDITIVE AS SPECIFIED IN 440.06 IF REQUIRED BASED ON TSR AND ENSURE THE MINIMUM IS 0.80 AFTER ANTISTRIP.*

QUALITY CONTROL AND ACCEPTANCE – *FOLLOW THE REQUIREMENTS AS SPECIFIED IN 403 USING 446 ACCEPTANCE EXCEPT AS MODIFIED BELOW:*

- *RUN MSG AND AIR VOIDS AND FOLLOW 403.06.G INSTEAD OF 403.06.F.*

MIX CHARACTERISTIC	OUT OF SPECIFICATION
	LIMITS [5]
ASPHALT BINDER CONTENT [1]	-0.5% TO 0.5%
1/2 INCH (12.5MM) SIEVE [1]	-7.0% TO 7.0%
NO. 4 (4.75MM) SIEVE [1]	-6.0% TO 6.0%
NO. 8 (2.36MM) SIEVE [1]	-5.0% TO 5.0%
NO. 200 (75µM) SIEVE [1]	-2.0% TO 2.0%
AIR VOIDS [2]	2.5% TO 5.5%
MSG [3]	-0.015 TO 0.015
F/A [4]	1.4 MAX
VMA	12.0 MIN

[1] DEVIATION FROM THE JMF.

[2] FOR DESIGN AIR VOIDS OF 4.0%. COMPACT USING A SIX-INCH MARSHALL HAMMER WITH 70 BLOWS ON BOTH SIDES PER 302.02.

[3] DEVIATION FROM THE MTD.

[4] IF THE F/A RATIO IS GREATER THAN 1.2, RECALCULATE THE F/A RATIO USING THE EFFECTIVE ASPHALT BINDER CONTENT.

[5] DO NOT FOLLOW THE MINIMUM 7% RETAINED DURING PRODUCTION PER 403.06.F.5.

- REPLACE MSG COMPARISON IN TABLE 403.10-1 WITH 0.015.
- NOTIFY ERIC BIEHL - OMM 614-275-1380 AND JULIA MILLER – OCA 614-466-3165 ONE WEEK PRIOR TO PLANNED BEGINNING PRODUCTION AND PLACEMENT. YOU MAY EMAIL THEM AS WELL.

302 ASPHALT CONCRETE BASE, AS PER PLAN

DENSITY ACCEPTANCE *- FOLLOW THE REQUIREMENTS OF 446 ASPHALT CONCRETE CORE DENSITY ACCEPTANCE, INCLUDING JOINT CORES, EXCEPT AS MODIFIED BELOW:*
OBTAIN 6-INCH DIAMETER CORES ON EACH LIFT PLACED.
OBTAIN JOINT CORES AT COLD LONGITUDINAL JOINTS SUCH THAT THE CORE'S CLOSEST EDGE IS 6 INCHES (152 MM) FROM THE EDGE OF THE MAT.
PAY FACTORS FOR EACH LIFT OF 302 APP WILL BE AS SPECIFIED IN THE FOLLOWING TABLE.

MEAN OF LOT CORE DENSITY [1]	PAY FACTOR
	302, AS PER PLAN
> 98.0%	[2]
> 97.0% TO 98.0%	[3]
92.0% TO 97.0%	1.00
91.0% TO 91.9%	0.90
90.0% TO 90.9%	0.80
89.0% TO 89.9%	0.70
< 89.0%	[4]

[1] MEAN OF CORES AS PERCENT OF AVERAGE MSG FOR THE PRODUCTION DAY.

[2] THE DISTRICT WILL DETERMINE WETHER THE MATERIAL MAY REMAIN IN PLACE, THE PAY FACTOR FOR MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.50.

[3] THE DISTRICT WILL DETERMINE WETHER THE MATERIAL MAY REMAIN IN PLACE, THE PAY FACTOR FOR THE MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.70.

[4] THE DISTRICT WILL DETERMINE WETHER THE MATERIAL MAY REMAIN IN PLACE. THE PAY FACTOR FOR THE MATERIAL ALLOWED TO REMAIN IN PLACE IS 0.50.

IF THE MATERIAL IS REMOVED AND REPLACED, REMOVE AND REPLACE THE FULL LIFT AND ALL COURSES ON THE LIFT.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM CONSISTS OF THE CONSTRUCTION OF BULKHEADS IN AN EXISTING 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 ENGTH 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.

PVC VENT TUBES SHALL BE PROVIDED TO VERIFY CONDUIT IS FILLED AND CAPPED ONCE FILL MATERIAL RUNS OUT VENT TUBE. VENT TUBES SHALL BE PLACED AT 30%, 60%, 90% OF CONDUIT LENGTH AND SHALL EXTEND TO THE DOWNSTREAM END OF THE CONDUIT BEING FILLED. THE PRICE OF THE PVC VENT TUBES TO BE PAID FOR WITH SPECIAL - FILL AND PLUG EXISTING CONDUIT.

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.

GENERAL NOTES

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950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER MLL
REVIEWER MJC 04/26/22
PROJECT ID 115717
SHEET P.7 TOTAL 458

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/12/2023 TIME: 5:10:17 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Roadway\Sheets\107630_GN202.dgn

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, 2.00":

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 2 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 2.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 2.0 INCHES OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448). GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN,
TYPE 1 200 SY

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, 3.00":

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 4 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 3.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 3.0 INCHES OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448) (2 LIFTS). GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN,
TYPE 2 800 SY

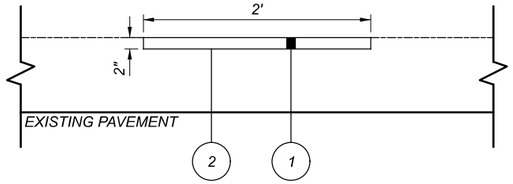
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, 6.00":

ALL REPAIR AREAS ARE TO BE DETERMINED BY THE PROJECT ENGINEER BEFORE THE BEGINNING OF THE WORK. THE REPAIR AREAS SHALL BE OF VARYING LENGTH AND HAVE AN AVERAGE WIDTH OF NOT LESS THAN 6 FEET. THE AVERAGE DEPTH OF REPAIRS SHALL BE 6.0 INCHES AS DETAILED ON THIS SHEET.

REPAIR AREAS SHALL BE REFILLED WITH 6.0 INCHES OF ITEM 301 - ASPHALT CONCRETE BASE (449). GREAT CARE SHALL BE TAKEN TO MAINTAIN THE EXISTING PAVEMENT CROSS SLOPE (CROWN) AS WELL AS ALL LONGITUDINAL SLOPES. NO MORE PARTIAL DEPTH PAVEMENT REPAIR SHALL BE STARTED AND PERFORMED THAN CAN BE COMPLETED IN THE SAME WORKING DAY.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

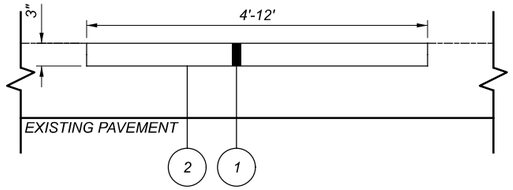
ITEM 251, PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN,
TYPE 3 6000 SY



2" REPAIR DEPTH DETAIL

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 1

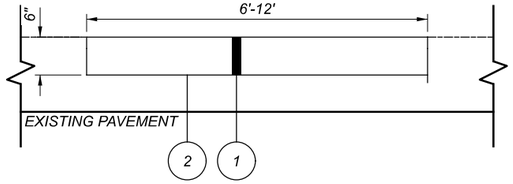
FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 1, SEE NOTE TO THE LEFT.



3" REPAIR DEPTH DETAIL

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 2

FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 2, SEE NOTE TO THE LEFT.



6" REPAIR DEPTH DETAIL

PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 3

FOR MORE INFORMATION REGARDING ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN TYPE 3, SEE NOTE TO THE LEFT.

LEGEND:

(1) ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449)

(2) ITEM 407 - NON-TRACKING TACK COAT (RATE PER CMS TABLE 407.06-1)

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON THIS SHEET.

MONUMENT TABLE - I-71

POINT	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION	REFERENCE MONUMENT SET
CMON1	295+00.00	0.00	1726223.22	632554.32		1
CMON2	305+00.00	0.00	1727144.77	632942.59		1
CMON3	315+00.00	0.00	1728066.32	633330.86		1
CMON4	325+00.00	0.00	1728987.86	633719.12		1
CMON5	331+89.28	0.00	1729623.07	633986.75	PI	1
CMON6	340+00.00	0.00	1730370.03	634301.89		1
CMON7	346+34.69	0.00	1730954.81	634548.60	PC	1
CMON8	350+00.00	0.00	1731289.23	634695.59		1
CMON9	355+00.00	0.00	1731739.56	634912.76		1
CMON10	360+00.00	0.00	1732180.68	635148.10		1
CMON11	362+30.86	0.00	1732381.04	635262.77	PT	1
CMON12	375+00.00	0.00	1733476.55	635903.53		1
CMON13	385+00.00	0.00	1734339.74	636408.41		1
CMON14	395+00.00	0.00	1735202.93	636913.29		1
CMON15	405+00.00	0.00	1736066.12	637418.17		1
CMON16	415+00.00	0.00	1736929.31	637923.05		1
CMON17	425+00.00	0.00	1737792.50	638427.93		1
CMON18	435+00.00	0.00	1738655.69	638932.81		1
TOTAL ITEM 623 - REFERENCE MONUMENT CARRIED TO GENERAL SUMMARY						18

PROJECT CONTROL INFORMATION

POINT NAME	STATION	OFFSET	DIRECTION	ELEVATION	NORTHING (GRID)	EASTING (GRID)	NORTHING (GROUND)	EASTING (GROUND)
CP #1	346+35.57	99.58	LT	943.45	634640.6905	1730916.9012	634640.6905	1730916.9012
CP #2	362+29.90	99.96	LT	948.24	635348.5773	1732329.7506	635348.5773	1732329.7506
CP #3	440+00.92	100.11	LT	941.57	639272.1281	1739037.5302	639272.1281	1739037.5302
CP #4	541+97.57	100.03	LT	907.44	644420.1307	1747839.2165	644420.1307	1747839.2165
CP #5	552+52.74	99.82	LT	910.67	644981.7295	1748723.5432	644981.7295	1748723.5432
CP #6	610+63.14	99.93	RT	925.75	648111.8654	1753622.8106	648111.8654	1753622.8106
CP #7	620+93.88	99.88	RT	926.59	648661.4291	1754486.0470	648661.4291	1754486.0470
CP #8	673+36.83	100.13	RT	917.19	651315.8758	1759007.3798	651315.8758	1759007.3798
CP #9	790+46.47	100.04	LT	929.79	657417.4308	1769003.7247	657417.4308	1769003.7247
CP #10	843+41.52	97.41	LT	898.94	660093.5530	1773572.8024	660093.5530	1773572.8024
CP #11	562+00.87	100.44	LT	914.86	645519.8540	1749504.1563	645519.8540	1749504.1563
CP #12	662+00.70	99.89	RT	917.43	650740.8201	1758027.5305	650740.8201	1758027.5305
CP #13	796+01.30	99.82	LT	931.31	657697.9224	1769482.4956	657697.9224	1769482.4956

GENERAL NOTES

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DESIGNER MLL

REVIEWER MJC 04/26/22

PROJECT ID 115717

SHEET P.8 TOTAL 458

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/12/2023 TIME: 4:13:05 PM USER: mcornett
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ITEM 614, REPLACEMENT SIGN

FLATSHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 5 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 150 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS WILL BE AS DIRECTED BY THE ENGINEER.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 72 SIGN MONTH ASSUMING 2 PCMS SIGNS FOR 36 MONTHS

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.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

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 OCTOBER 15 THROUGH APRIL 1.

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 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN 1,392 EACH

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.

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

ITEM 614, BARRIER REFLECTOR, TYPE 2, ONE WAY 52 EACH

ITEM 614, OBJECT MARKER, ONE-WAY 52 EACH

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

TRENCH FOR WIDENING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME FRAME TABLE

ITEM	DURATION OF CLOSURE	NOTIFICATION DUE TO DISTRICT 6 COMMUNICATIONS OFFICE
RAMP & ROAD CLOSURES	>=2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	>12 HOURS & <2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<=12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>=2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPEMENTAION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

DESIGN AGENCY
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REVIEWER MJC 04/26/22
PROJECT ID 115717

MAD-71-4.56
MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/12/2023 TIME: 5:13:14 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\MOT\Sheets\107630_MN203.dgn

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
7	8	9	65	66	68		206	214		240	241	06/IMS/04	07/IMS/03						
																		DRAINAGE	
							LS					LS	LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
				5.7			12.2					13	4.9	602	20000	17.9	CY	CONCRETE MASONRY	
								58,428				39,732	18,696	605	11100	58,428	FT	6" SHALLOW PIPE UNDERDRAINS	
25								488				349	164	605	13300	513	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
								59,367				40,370	18,997	605	14000	59,367	FT	6" BASE PIPE UNDERDRAINS	
								2,643				1,798	845	611	00510	2,643	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
25												17	8	611	00900	25	FT	6" CONDUIT, TYPE B	
25												17	8	611	01400	25	FT	6" CONDUIT, TYPE E	
50												34	16	611	01500	50	FT	6" CONDUIT, TYPE F	
				16								11	5	611	04600	16	FT	12" CONDUIT, TYPE C	
				431								294	137	611	05900	431	FT	15" CONDUIT, TYPE B	
				758								516	242	611	06100	758	FT	15" CONDUIT, TYPE C	
				16								11	5	611	06700	16	FT	15" CONDUIT, TYPE F	
				594								404	190	611	07400	594	FT	18" CONDUIT, TYPE B	
				417								284	133	611	07600	417	FT	18" CONDUIT, TYPE C	
				461								314	147	611	10400	461	FT	24" CONDUIT, TYPE B	
				663								451	212	611	10600	663	FT	24" CONDUIT, TYPE C	
				310								211	99	611	13400	310	FT	30" CONDUIT, TYPE B	
							219					149	70	611	54200	219	FT	97" X 151" CONDUIT, TYPE A, 706.04	
							210					143	67	611	96600	210	FT	CONDUIT, BORED OR JACKED, 36" TYP A	
				1								1		611	98180	1	EACH	CATCH BASIN, NO. 3A	
				2								2		611	98300	2	EACH	CATCH BASIN, NO. 5	
				21								15	6	611	98410	21	EACH	CATCH BASIN, NO. 8	
				2								2		611	98470	2	EACH	CATCH BASIN, NO. 2-2B	
				1								1		611	98510	1	EACH	CATCH BASIN, NO. 2-3	
				4								3	1	611	99574	4	EACH	MANHOLE, NO. 3	
2								7				7	2	611	99710	9	EACH	PRECAST REINFORCED CONCRETE OUTLET	
				1								1		611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.:BLIND TAP	203
																		PAVEMENT	
	200											136	64	251	01021	200	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, 2.00"	8
	800											544	256	251	01021	800	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, 3.00"	8
	6,000											4,080	1,920	251	01021	6,000	SY	PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN, 6.00"	8
		14,258										9,696	4,562	254	01000	14,258	SY	PAVEMENT PLANING, ASPHALT CONCRETE (T=1.5")	
					44,429							30,212	14,217	302	56001	44,429	CY	ASPHALT CONCRETE BASE, (449), AS PER PLAN, PG64-22	7
					32,389							22,025	10,364	304	20000	32,389	CY	AGGREGATE BASE	
		855			33,285							23,216	10,924	407	20000	34,140	GAL	NON-TRACKING TACK COAT	
					10,638							7,234	3,404	442	00100	10,638	CY	ANTI-SEGREGATION EQUIPMENT	
		594			7,674							5,623	2,645	442	10300	8,268	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (447)	
					8,953							6,089	2,864	442	10080	8,953	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 12.5 MM, TYPE A (446)	
			396									270	126	609	24510	396	FT	CURB, TYPE 4-C	
		600										408	192	618	40101	600	FT	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE), AS PER PLAN	9
		1.28									11.16	9	3.44	618	40600	12.44	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	
																		TRAFFIC CONTROL	
		28									516	370	174	621	00100	544	EACH	RPM	
		28									256	194	90	621	54000	284	EACH	RAISED PAVEMENT MARKER REMOVED	
										3		3		625	32000	3	EACH	GROUND ROD	
			48									33	15	626	00102	48	EACH	BARRIER REFLECTOR, TYPE 1, (ONE-WAY)	
			212									145	67	626	00110	212	EACH	BARRIER REFLECTOR, TYPE 2, (ONE-WAY)	
			147									100	47	626	00118	147	EACH	BARRIER REFLECTOR, TYPE 6	
										87		60	27	630	02100	87	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
										40.5		28	12.5	630	03100	40.5	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
										30		21	9	630	04100	30	FT	GROUND MOUNTED SUPPORT, NO. 4 POST	
										42		29	13	630	07600	42	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12	

GENERAL SUMMARY

DESIGN AGENCY

E.L. ROBINSON ENGINEERING

1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio

DESIGNER KRF

REVIEWER MJC 04/26/22

PROJECT ID 115717

SHEET P.55 | TOTAL 458

MAD-71-4.56

CULVERT SUBSUMMARY

REF.	SHEET	STATION FROM	STATION TO	SIDE	202 STRUCTURE REMOVED LS	202 HEADWALL REMOVED EACH	202 PIPE REMOVED, OVER 24" FT		202 SPECIAL - FILL AND PLUG EXISTING CONDUIT FT	209 DITCH CLEANOUT FT	601 RIPRAP SY	601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER CY	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER CY	602 CONCRETE MASONRY CY	611 97" X 151" CONDUIT, TYPE A, 706.04 FT		503 COFFERDAMS AND EXCAVATION BRACING LS		611 CONDUIT, BORED OR JACKED, 36" TYPE A FT		
	207	379+08	379+08	LT/RT	1	2				100		75		10.8	219		LS				
	208	393+50	393+50	LT/RT		2	20		184	100	8		7.7	1.4					210		
TOTALS CARRIED TO GENERAL SUMMARY					1	4	20		184	200	8	75	8	12	219		LS		210		

DESIGN AGENCY

E.L. ROBINSON ENGINEERING

1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER JOF

REVIEWER END 04/26/22

PROJECT ID 115717

SHEET P.206 | TOTAL 458

MAD-71-4.56

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/13/2023 TIME: 2:45:53 PM USER: mcornett
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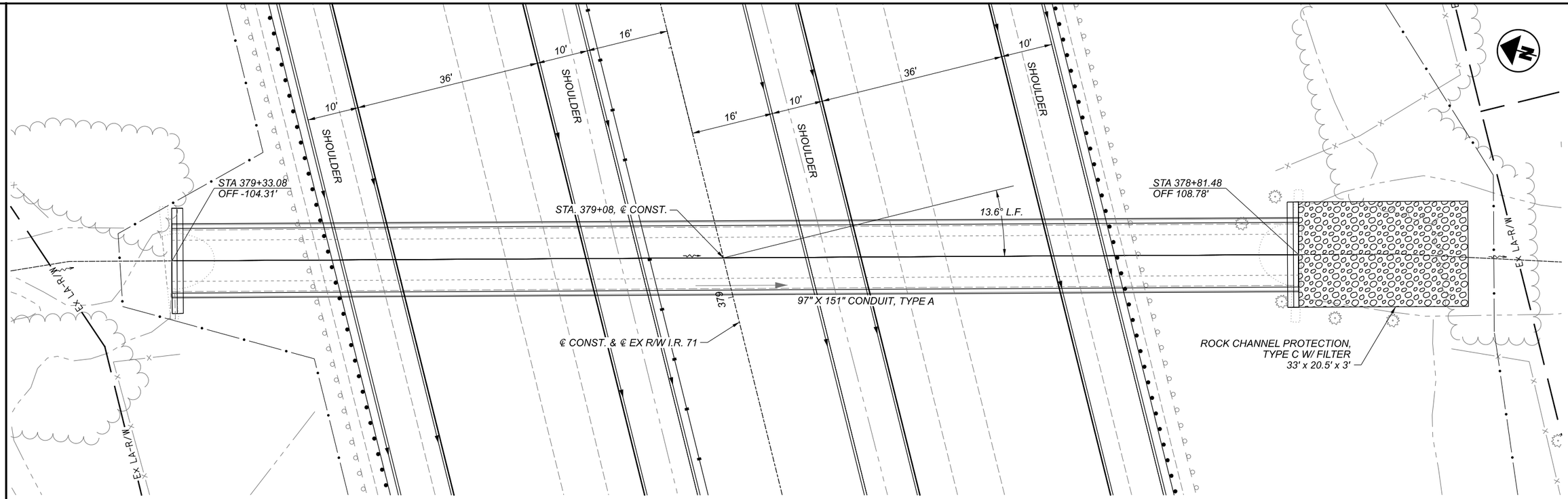
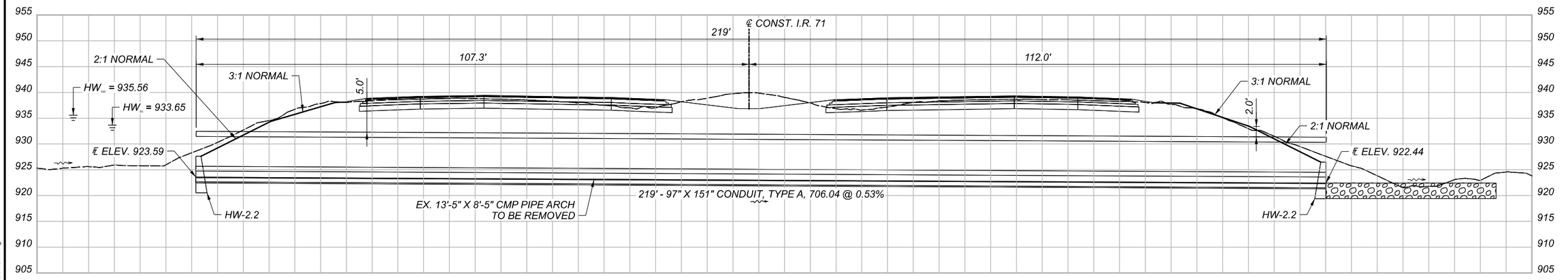




EXISTING STRUCTURE	
TYPE:	13'-5" X 8'-5" CMP ARCH
LENGTH:	220' +/-
SKEW:	13° L.F.
WEARING SURFACE:	ASPHALT CONCRETE
YEAR BUILT:	
CONDITION:	GOOD
CFN:	

HYDRAULIC DESIGN DATA			
DRAINAGE AREA:	=	2131	AC
Q50	=	893	CFS
Q100	=	1064	CFS
HW50	=	933.65	
HW100	=	935.56	
V50	=	14.33	FPS
V100	=	15.27	FPS
ORDINARY HIGH WATER MARK	=	926.29	FT
SERVICE LIFE	=	75	YR
pH	=	7.2	
ABRASION LEVEL	=	1	
CFN	=		

I.R. 71 STA. 379+08 - ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	LS	STRUCTURE REMOVED
202	2	EACH	HEADWALL REMOVED
209	100	FT	PITCH CLEANOUT
503		LS	COFFERDAMS AND EXCAVATION BRACING
601	75	CY	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER
602	10.8	CY	CONCRETE MASONRY
611	219	FT	97" X 151" CONDUIT, TYPE A, 706.04 OR 706.03

QUANTITIES CARRIED TO DRAINAGE SUBSUMMARY, SHEET 206

HORIZONTAL SCALE IN FEET
0 5 10 20

CULVERT DETAILS I.R. 71 STA. 379+08

MAD-71-4.56

MODEL: Culvert 379+00 PAPERSIZE: 17x11 (in.) DATE: 1/3/2023 TIME: 2:41:39 PM USER: mcornett
P:_OHDOT_Worksets\107630\400-Engineering\Drainage\Sheets\107630_DC20.dgn

DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER JAB
REVIEWER ENB 04/26/22
PROJECT ID 115717
SHEET P.207 TOTAL 458

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	7/17/2015	DM-1.1	REVISED	7/17/2020
AS-2-15	REVISED	1/18/2019	RM-4.2	REVISED	4/17/2020
PCB-91	REVISED	7/17/2020			
PSID-1-13	REVISED	1/15/2021			
SBR-1-20	REVISED	7/17/2020			

AND THE FOLLOWING SUPPLEMENTAL SPECFICATION(S):

800 DATED 10/21/2022

DESIGN SPECIFICATIONS:

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN STRESSES:

DESIGN DATA :
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

GFRP - C&MS 705.28 (MODULUS = 8,700 KSI)

WELDED WIRE FABRIC - 70 KSI

CONCRETE FOR PRESTRESSED BEAMS: COMPRESSIVE STRENGTH (RELEASE) - 6.0 KSI
COMPRESSIVE STRENGTH (FINAL) - 8.0 KSI

PRESTRESSING STRAND: AREA - 0.217 SQ. IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING BRIDGE PLANS:

FOR INFORMATION NOT SHOWN, EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO, 43015.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS.

UTILITIES:

FOR UTILITY NOTES, SEE ROADWAY SHEETS.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.022 AND 513.04 FOR FURTHER INFORMATION.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 42,500 FT/LBS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 40.5 KSI.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE (UBV) IS 302 KIPS PER PILE FOR THE REAR ABUTMENT PILES AND 299 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. THE UBV FOR THE ABUTMENT PILES INCLUDES AN ADDITIONAL 7 KIPS AND 4 KIPS FOR THE PILES DUE TO THE POSSIBILITY OF LOSING 1.0 FEET OF FRICTIONAL RESISTANCE DUE TO SCOUR AT THE REAR AND FORWARD ABUTMENT, RESPECTIVELY. DRIVE ABUTMENT PILES TO THE UBV OR A TIP ELEVATION OF 922.5, WHICHEVER IS DEEPER. PERFORM ONE DYNAMIC LOAD TEST AT EACH ABUTMENT FOR THE LEFT BRIDGE. USE THE PILE DRIVING CRITERIA DETERMINED FROM THE DYNAMIC LOAD TESTING ON THE LEFT BRIDGE TO DRIVE PILES FOR THE CORRESPONDING ABUTMENT ON THE RIGHT BRIDGE.

ABUTMENT PILES:
20 - 12"∅ CIP PILES 70' LONG, ORDER LENGTH - REAR ABUTMENT
20 - 12"∅ CIP PILES 85' LONG, ORDER LENGTH - FORWARD ABUTMENT
2 DYNAMIC LOAD TESTING ITEMS (ONE FOR EACH ABUTMENT)

PROVIDE PLAIN CYLINDRICAL CASINGS WITH A MINIMUM PILE WALL THICKNESS OF 0.312 INCH FOR THE CAST-IN-PLACE REINFORCED CONCRETE PILES.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES AND/OR HEADACHE BALLS WILL NOT BE PERMITTED. HOE-RAMS ARE PERMITTED FOR USE TO REMOVE ALL ELEMENTS ON THE STRUCTURES EXCEPT THE EXISTING LEFT PIERS AND WITHIN 5'-0" OF THE PORTIONS OF THE LEFT STRUCTURE TO REMAIN IN SERVICE DURING PHASE I REMOVAL. IF HOE-RAMS ARE USED, THE STRUCTURAL ELEMENTS ARE TO BE SAW CUT FIRST TO DISCONNECT THE ELEMENTS. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL BE PERMITTED SUBJECT TO THE LIMITATIONS ABOVE. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER.

REMOVE REAR ABUTMENTS TO ELEV. 937.90.
REMOVE FORWARD ABUTMENTS TO ELEV. 937.57.

ITEM 203 - EMBANKMENT, AS PER PLAN

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 296+50.00 TO 297+68.55 AND BETWEEN STATIONS 298+52.89 TO 300+00.00. QUANTITY PAID FOR WITH ROADWAY ITEMS.

ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN:

THE DESIGN SHOWN IN THE TABLE BELOW FOR TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN IN THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS AT THE SQUARE FOOT PRICE FOR STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

THE STEEL SHEET PILING SHALL CONFORM TO ASTM A328 AND SHALL HAVE THE FOLLOWING:

LOCATION	REAR & FORWARD ABUTMENTS
ELASTIC SECTION MODULUS REQUIRED (CU. IN/FT.) (MIN.)	18.4
MINIMUM YIELD STRESS, Fy (KSI)	39
DESIGN EXCAVATION DEPTH (FT.)	10.5
DESIGN EMBEDMENT DEPTH (FT.)	10.5
DESIGN TOTAL DEPTH (FT.)	21.0

ITEM 622 - PORTABLE BARRIER ANCHORED, AS PER PLAN

DURING PHASE 1, PROVIDE ANCHORED BARRIER AS PER STANDARD DRAWING PCB-91 OR EASI-SET WORLDWIDE BARRIER AS PER THE FOLLOWING WEBSITE:
HTTPS://WWW.TRANSPORTATION.OHIO.GOV/STATIC/WORKING/ENGINEERING/ROADWAY/APPROVED-PRODUCTS/JJHOOK-ANCHORED.PDF
QUANTITIES TO BE CARRIED IN ROADWAY PLANS.

STEEL PILE POINTS:

USE CONICAL STEEL PILE POINTS TO PROTECT THE TIPS OF THE PROPOSED STEEL CIP REINFORCED CONCRETE PIPE PILES AT BOTH ABUTMENTS.

DECK PLACEMENT ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 K FOR STRUCTURE 4903154 DURING PHASE 1 AND PHASE 2. AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.5 K FOR STRUCTURE 4903189 DURING PHASE 3.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".
A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.
A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65"

ABBREVIATIONS:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPR. - APPROACH
B - BOTTOM
℄ - BASELINE
B.F. - BACK FACE
BM - BENCHMARK
BOT. OR BTM. - BOTTOM
BRG. - BEARING
℄ - CENTERLINE
C/C - CENTER TO CENTER
C.I.P. - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEAR
C&MS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONST./CONSTR. - CONSTRUCTION
CVN - CHARPY V-NOTCH
DIA. - DIAMETER
DIM. - DIMENSION
DWG. - DRAWING
E - EAST
EB - EASTBOUND
E.F. - EACH FACE
EL. OR ELEV. - ELEVATION
EOP - EDGE OF PAVEMENT
EQ. - EQUAL
EST. - ESTIMATED
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F/F - FACE TO FACE
F.F. - FRONT FACE
F.S. - FIELD SPLICE
FT. - FOOT OR FEET
FWD. - FORWARD
HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE
HW - HIGH WATER
IN. - INCH
JT. - JOINT
LB - LEFT BRIDGE
LEOD - LEFT EDGE OF DECK
L.F. - LEFT FORWARD
LT. - LEFT
LTBR - LEFT TOE BRIDGE RAILING
MAX. - MAXIMUM
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MSE - MECHANICALLY STABILIZED EARTH
N - NORTH
NB - NORTHBOUND
NO. - NUMBER
N.P.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE
OHWM - ORDINARY HIGH WATER MARK
O/O - OUT TO OUT
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PROP. - PROPOSED
PSF - POUNDS PER SQUARE FOOT
P.V.I. - POINT OF VERTICAL INTERSECTION
Q - FLOW RATE
R - RADIUS
R.A. - REAR ABUTMENT
RB - RIGHT BRIDGE
RCP - ROCK CHANNEL PROTECTION
REOD - RIGHT EDGE OF DECK
REQD. - REQUIRED
R.F. - RIGHT FORWARD
R.R. - RAILROAD
RT. - RIGHT
RTBR - RIGHT TOE BRIDGE RAILING
R/W - RIGHT OF WAY
S - SOUTH
SB - SOUTHBOUND
SDC - SUPERPLASTICIZED DENSE CONCRETE
SER. - SERIES
SHLDR - SHOULDER
SLPR. - SLEEPER
SPA. - SPACE OR SPACES
STA. - STATION
STD. - STANDARD
STR - STRAIGHT
T - TOP
T&B - TOP & BOTTOM
TBR - TO BE REMOVED
TEMP. - TEMPORARY
T.O.S. OR T/S - TOP OF SLOPE
T/T - TOE TO TOE
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
V - VELOCITY
W - WEST
WB - WESTBOUND
WWR - WELDED WIRE REINFORCEMENT

GENERAL NOTES
BRIDGE NO. MAD-00071-04.560L&R
IR 71 OVER MUD RUN

SFN 4903154
SFN 4903189
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER JOL | CHECKER MMD
REVIEWER DFT 06/29/21
PROJECT ID 115717
SUBSET 4 | TOTAL 40
SHEET P.245 | TOTAL 458

MAD-71-4.56
MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 1/11/2023 TIME: 11:24:23 AM USER: jdeary
P:_OHDOT_Worksets\107630\400-Engineering\Structures\4903154\Sheets\107630_4903154_SN001.dgn

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

SBR-1-20	REVISED	7/17/2020
PCB-91	REVISED	7/17/2020
RM-4.2	REVISED	4/17/2020

AND THE FOLLOWING SUPPLEMENTAL SPECFICATION(S):

800	DATED	10/21/2022
867	DATED	1/15/2021

DESIGN SPECIFICATIONS:

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN STRESSES:

DESIGN DATA :
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
GFRP - C&MS 705.28 (MODULUS = 8,700 KSI)

EXISTING BRIDGE PLANS:

FOR INFORMATION NOT SHOWN, EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO, 43015.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS.

UTILITIES:

FOR UTILITY NOTES, SEE ROADWAY SHEETS.

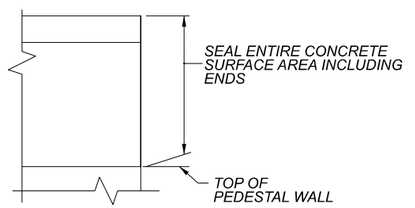
EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05 AND 105.02 FOR FURTHER INFORMATION.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

SEALING OF PRECAST STRUCTURE END, PEDESTAL WALLS, AND WINGWALLS:

ALL EXPOSED PRECAST STRUCTURE END, PEDESTAL WALL, AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAM BELOW AND IN THE PLANS. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES.



PRECAST STRUCTURE END

FOUNDATION BEARING RESISTANCE:

PRECAST STRUCTURE AND WINGWALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 3.0 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 4.6 KIPS PER SQUARE FOOT. THE FACTORED BEARING RESISTANCE IS 8.0 KIPS PER SQUARE FOOT.

ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

REMOVE PORTIONS OF EACH STRUCTURE FOLLOWING THE SEQUENCE ILLUSTRATED IN THE PHASE CONSTRUCTION DRAWINGS IN THIS PLAN SET. EXISTING PIER FOOTINGS AND PIER PILES ARE TO BE REMOVED TO A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF THE PROPOSED PEDESTAL FOOTING. REMOVE EXISTING ABUTMENTS TO ELEVATION 939.0 OR LOWER.

THE USE OF EXPLOSIVES AND/OR HEADACHE BALLS WILL NOT BE PERMITTED. HOE-RAMS ARE PERMITTED FOR USE TO REMOVE ALL ELEMENTS ON THE STRUCTURES EXCEPT THE EXISTING LEFT PIERS AND WITHIN 5'-0" OF THE PORTIONS OF THE LEFT STRUCTURE TO REMAIN IN SERVICE DURING PHASE I REMOVAL. IF HOE-RAMS ARE USED, THE STRUCTURAL ELEMENTS ARE TO BE SAW CUT FIRST TO DISCONNECT THE ELEMENTS. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

ITEM 504 - STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN:

THE DESIGN SHOWN IN THE TABLE BELOW FOR TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN IN THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE ABUTMENTS AT THE SQUARE FOOT PRICE FOR STEEL SHEET PILING LEFT IN PLACE, AS PER PLAN. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

THE STEEL SHEET PILING SHALL CONFORM TO ASTM A328 AND SHALL HAVE THE FOLLOWING:

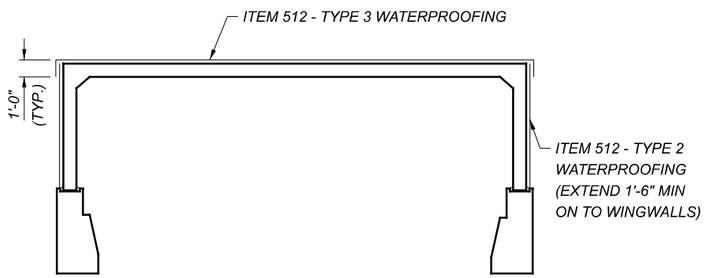
LOCATION	REAR & FWD ABUTMENTS	WINGWALLS
ELASTIC SECTION MODULUS REQUIRED (CU. IN/FT.) (MIN.)	18.1	18.1
MINIMUM YIELD STRESS, Fy (KSI)	39	39
DESIGN EXCAVATION DEPTH (FT.)	9.0	8.0
DESIGN EMBEDMENT DEPTH (FT.)	9.0	8.0
DESIGN TOTAL DEPTH (FT.)	18.0	16.0

ITEM 512 - TYPE 2 WATERPROOFING:

MEMBRANE WATERPROOFING, PER C&MS 512.09 AND 711.25, SHALL EXTEND VERTICALLY DOWN ALL SIDES FOR THE PORTIONS OF THE PRECAST WALL WHICH SHALL BE IN CONTACT WITH THE BACKFILL. JOINT WRAP AS SPECIFIED IN 611.08 AND CONCRETE SEALING AS SPECIFIED IN 611.09 ARE NOT REQUIRED UNDER THE LIMITS OF THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD ITEM 512, TYPE 2 WATERPROOFING.

ITEM 512 - TYPE 3 WATERPROOFING:

TYPE 3 WATERPROOFING, PER C&MS 512 AND 711.29 SHALL BE APPLIED TO THE ENTIRE TOP SURFACE OF THE PRECAST STRUCTURE SECTIONS AND SHALL EXTEND ONE FOOT VERTICALLY DOWN THE SIDES. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE YARD FOR ITEM 512 - TYPE 3 WATERPROOFING.



WATERPROOFING DETAILS

ITEM 516 - PREFORMED EXPANSION JOINT FILLER:

PREFORMED EXPANSION JOINT FILLER (P.E.J.F.) CONFORMING TO C&MS 705.03, 1 INCH THICK, SHALL BE PLACED ABOVE THE FOOTING BETWEEN THE SIDES OF THE PRECAST STRUCTURE AND THE ENDS OF THE WINGWALLS. PAYMENT FOR MATERIALS AND INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:

THIS WORK CONSISTS OF FABRICATING, INSTALLING, AND REMOVING TEMPORARY SUPPORTS FOR THE EXISTING PIER CAPS ACCORDING TO THE LOCATIONS AND DETAILS DEFINED IN THE PROJECT PLANS. INSTALL CONCRETE ANCHORS IN DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT AS PER C&MS 510 AND THE MANUFACTURER'S RECOMMENDATIONS. PAYMENT FOR THIS ITEM INCLUDES ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO INSTALL THE TEMPORARY SUPPORTS. THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED WORK AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 518 - POROUS BACKFILL WITH GEOTEXTILE FABRIC:

POROUS BACKFILL WITH FILTER FABRIC 2'-0" THICK SHALL BE PLACED BEHIND THE WINGWALLS, PRECAST STRUCTURE, AND PEDESTAL WALL AND SHALL EXTEND FROM THE BOTTOM OF PAVEMENT OR TOP OF THE PRECAST STRUCTURE TO THE TOP OF FOOTING. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP OF FOOTING.

ITEM 611 - CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT, AS PER PLAN (33'-4" SPAN X 10'-0" RISE)

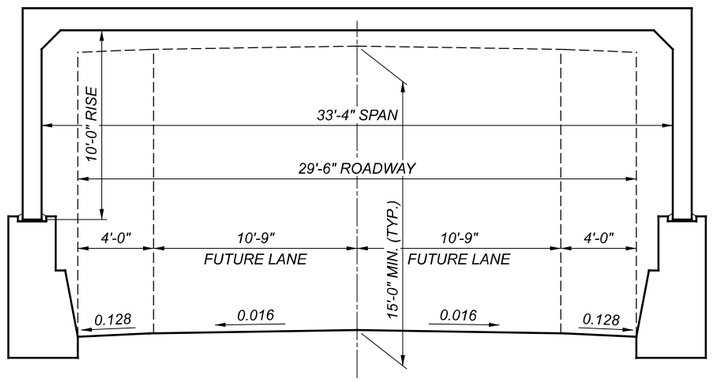
IN ADDITION TO THE DEAD LOAD OF THE PAVEMENT AND FILL, DESIGN THE END SEGMENTS FOR THE DEAD LOAD OF THE PARAPET AND HEADWALL. DESIGN THE TOP SLAB REINFORCEMENT IN THE END SEGMENTS FOR RAILING TEST LEVEL TL-5 AS SPECIFIED IN AASHTO SECTION A.13.4.

THE WALL AND TOP SLAB THICKNESS SHOWN ON THE PLANS WERE ESTIMATED AT THE TIME THE PLANS WERE PREPARED. IF THE WALL AND/OR TOP SLAB THICKNESS OF THE PRECAST STRUCTURE PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN IN THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT PRECAST DIMENSIONS, SHALL BE SUBMITTED FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE. PROVIDE A MINIMUM TOP SLAB THICKNESS AND LEG THICKNESS OF 12 INCHES.

PROVIDE BOTH EPOXY COATED REINFORCEMENT AND CORROSION INHIBITING ADMIXTURES. PROVIDE 2 INCH MINIMUM COVER FOR ALL REINFORCEMENT.

THE JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST STRUCTURE SECTIONS SHALL BE FILLED WITH NON-SHRINK CEMENTITIOUS MORTAR PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING.

PROVIDE CLEARANCES AS SHOWN BELOW.



GENERAL NOTES (1 OF 2)
BRIDGE NO. MAD-00071-06.310L&R
IR 71 OVER DYER ROAD

SFN	4903278
SFN	4903308
DESIGN AGENCY	E.L. ROBINSON ENGINEERING
	1468 West 9th St, Suite 800 Cleveland, Ohio 950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER	MMD
CHECKER	JOL
REVIEWER	DFT 04/05/22
PROJECT ID	115717
SUBSET	4
TOTAL	25
SHEET	P.285
TOTAL	458

MAD-71-4.56

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	REVISED	7/17/2015
AS-2-15	REVISED	1/18/2019
BP-5.1	REVISED	1/18/2019
DM-1.1	REVISED	7/17/2020
GSD-1-19	DATED	1/15/2021
MGS-3.1	REVISED	1/19/2018
MGS-3.2	REVISED	1/18/2013
PCB-91	REVISED	7/17/2020
RM-4.2	REVISED	4/17/2020
SBR-1-20	REVISED	7/17/2020

AND THE FOLLOWING SUPPLEMENTAL SPECFICATION(S):

800	DATED	10/21/2022

DESIGN SPECIFICATIONS:

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN STRESSES:

DESIGN DATA :
CONCRETE CLASS QC2- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50 KSI
STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI
GFRP - C&MS 705.28 (MODULUS = 8,700 KSI)

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING BRIDGE PLANS:

FOR INFORMATION NOT SHOWN, EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE DISTRICT 6 OFFICE, 400 EAST WILLIAM STREET, DELAWARE, OHIO, 43015.

MAINTENANCE OF TRAFFIC:

FOR MAINTENANCE OF TRAFFIC PLANS, SEE ROADWAY SHEETS.

UTILITIES:

FOR UTILITY NOTES, SEE ROADWAY SHEETS.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04 FOR FURTHER INFORMATION.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 192 KIPS PER PILE FOR THE ABUTMENT PILES. THE ULTIMATE BEARING VALUE IS 199 KIPS PER PILE FOR THE PIER PILES. THE UBV FOR THE ABUTMENT PILES INCLUDES AN ADDITIONAL 3 KIPS FOR THE REAR ABUTMENT PILES AND 0 KIPS FOR THE FORWARD ABUTMENT PILES DUE TO THE POSSIBILITY OF LOSING 4.76 FEET OF FRICTIONAL RESISTANCE DUE TO SCOUR. THE UBV FOR THE PIER PILES INCLUDES AN ADDITIONAL 7 KIPS FOR PIER 1 AND 5 KIPS FOR PIER 2 DUE TO THE POSSIBILITY OF LOSINGS 5.51 FEET OF FRICTIONAL RESISTANCE DUE TO SCOUR. DRIVE ABUTMENT PILES TO THE UBV OR A TIP ELEVATION OF 903.0 FOR THE ABUTMENTS. DRIVE PIER PILES TO THE UBV OR A TIP ELEVATION OF 889.0 FOR THE PIERS.

ABUTMENT PILES:
40 - HP12x53 PILES 45 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER PILES:
44 - HP12x53 PILES 45 FEET LONG, ORDER LENGTH (PIER 1)
44 - HP12x53 PILES 55 FEET LONG, ORDER LENGTH (PIER 2)
1 DYNAMIC LOAD TESTING ITEM

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 42,500 FT/LBS. ENSURE THAT STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 PSI.

PILE SPLICES:

IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN C&MS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
8 WOOD HOLLOW RD. PLAZA 1
PARSIPPANY, NEW JERSEY 07054

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DECK PLACEMENT ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.2 K FOR STRUCTURE 4903332 DURING PHASE 1 AND PHASE 2. AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.5 K FOR STRUCTURE 4903367 DURING PHASE 3.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65"

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

THIS ITEM IS TO INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES AND/OR HEADACHE BALLS WILL NOT BE PERMITTED. HOE-RAMS ARE PERMITTED FOR USE TO REMOVE ALL ELEMENTS ON THE STRUCTURES EXCEPT THE EXISTING PIERS AND WITHIN 5'-0" OF THE PORTIONS OF THE LEFT STRUCTURE ABUTMENTS TO REMAIN IN SERVICE DURING PHASE I REMOVAL. IF HOE-RAMS ARE USED, THE STRUCTURAL ELEMENTS ARE TO BE SAW CUT FIRST TO DISCONNECT THE ELEMENTS. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER IS TO BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING STEEL PILING TO BE PRESERVED. CHIPPING HAMMERS ARE NOT TO BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS ARE NOT TO BE PLACED IN DIRECT CONTACT WITH STEEL PILING THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

SUBSTRUCTURE (PIER AND PORTIONS OF LEFT BRIDGE ABUTMENTS DURING PHASE I REMOVAL) CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER IS NOT TO BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH PILING THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

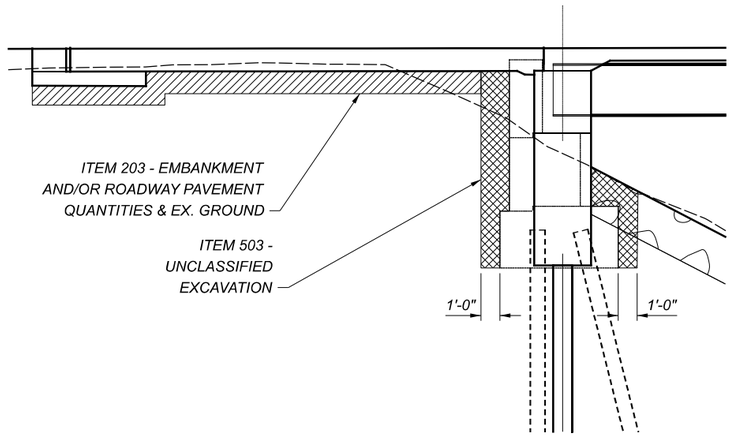
REMOVE REAR ABUTMENT TO ELEV. 921.80.
REMOVE FORWARD ABUTMENT TO ELEV. 922.30.

ITEM 203 - EMBANKMENT, AS PER PLAN:

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 408+00.00 TO 409+14.59 AND BETWEEN STATIONS 410+84.59 TO 412+00.00. QUANTITY PAID FOR WITH ROADWAY ITEMS. SEE SHEETS 68/444 THRU 73/444 FOR MORE INFORMATION.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN:

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.



ITEM 503 PAY LIMITS DIAGRAM

GENERAL NOTES (1 OF 2)
BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

SFN 4903332
SFN 4903367
DESIGN AGENCY
E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800 Cleveland, Ohio
950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER TAS | CHECKER MRV
REVIEWER DFT 04/05/22
PROJECT ID 115717
SUBSET 4 | TOTAL 52
SHEET P.310 | TOTAL 458

MAD-71-4.56

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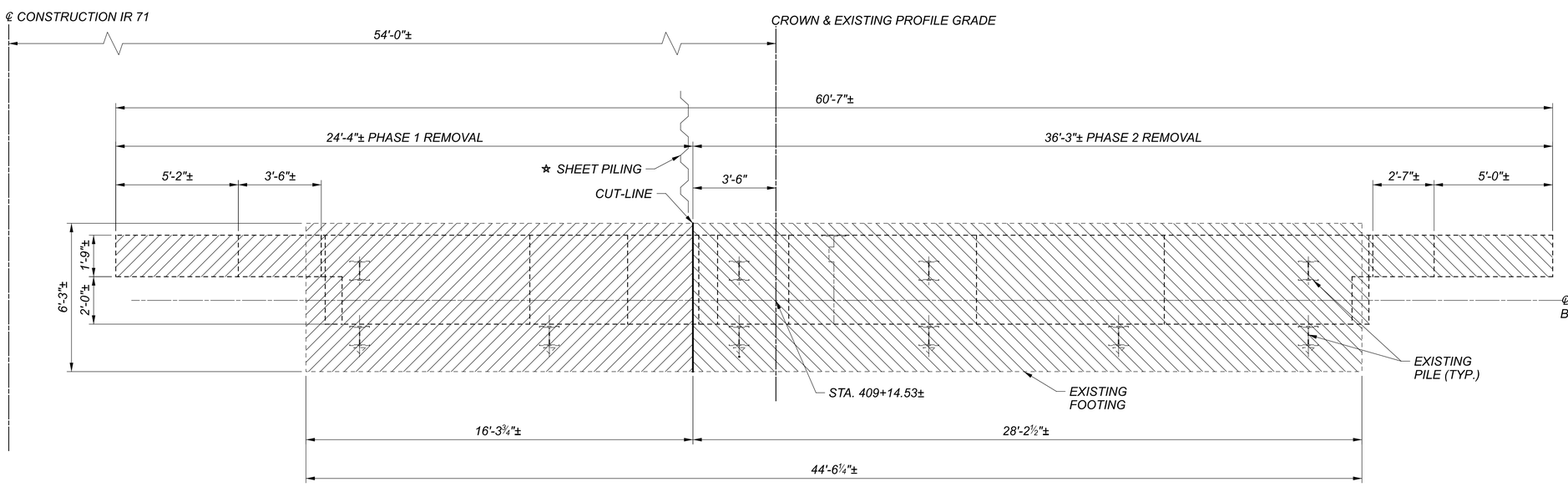
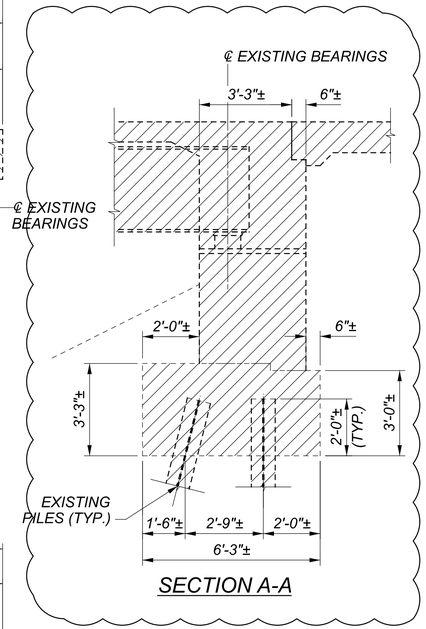
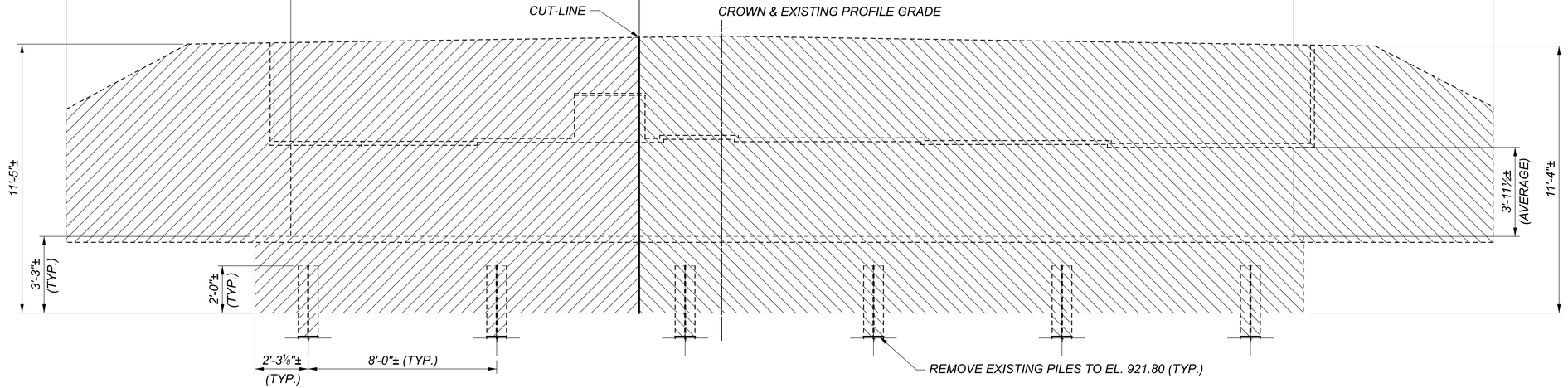


PLAN



SECTION A-A



ELEVATION

NOTES:

1. ABUTMENT REMOVAL SHALL BE PAID FOR UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

LEGEND:

☆ - SHEET PILING IS TO BE LEFT IN PLACE AND CUT TO ALLOW PLACEMENT OF THE PROPOSE STRUCTURE.

- PHASE 1 REMOVAL
- PHASE 2 REMOVAL
- DENOTES BATTERED PILE
- DENOTES STRAIGHT PILE

REAR ABUTMENT REMOVAL DETAILS - LEFT BRIDGE
BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

SFN	4903332
SFN	4903367
DESIGN AGENCY	E.L. ROBINSON ENGINEERING
	1468 West 9th St, Suite 800 Cleveland, Ohio
	950 Goodale Blvd, Suite 180 Grandview Heights, Ohio
DESIGNER / CHECKER	BCW / TAS
REVIEWER	DFT 04/05/22
PROJECT ID	115717
SUBSET / TOTAL	12 / 52
SHEET / TOTAL	P.318 / 458

MAD-71-4.56

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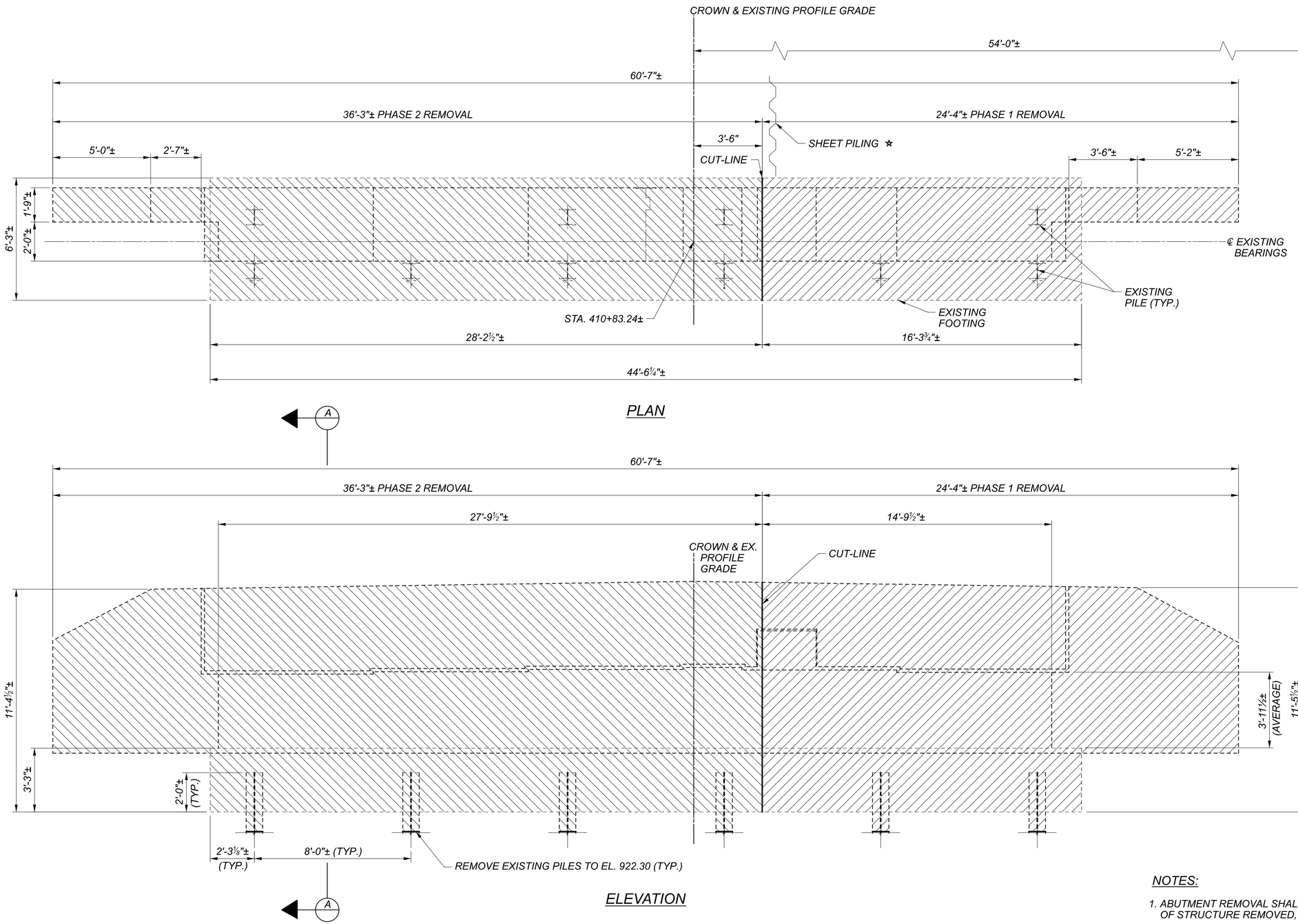

NOTES:

1. ABUTMENT REMOVAL SHALL BE PAID FOR UNDER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

LEGEND:

✯ - SHEET PILING IS TO BE LEFT IN PLACE AND CUT TO ALLOW PLACEMENT OF THE PROPOSE STRUCTURE.

- PHASE 1 REMOVAL
- PHASE 2 REMOVAL
- DENOTES BATTERED PILE
- DENOTES STRAIGHT PILE

FORWARD ABUTMENT REMOVAL DETAILS - LEFT BRIDGE
BRIDGE NO. MAD-00071-06.680L&R
IR 71 OVER BRADFORD CREEK

SFN 4903332

SFN 4903367

DESIGN AGENCY

E.L. ROBINSON ENGINEERING
1468 West 9th St, Suite 800
Cleveland, Ohio
950 Goodale Blvd, Suite 180
Grandview Heights, Ohio

DESIGNER	CHECKER
BCW	TAS

REVIEWER
DFT 04/05/22

PROJECT ID 115717

SUBSET	TOTAL
13	52

SHEET	TOTAL
P.319	458

MAD-71-4.56

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