PROJECT INFORMATION

EXISTING BRIDGE WIDTH: 81'-1" SPACING FROM CENTERLINE OF TPG TO TPG

EXISTING SPAN LAYOUT: TWO SPAN, 62'-0" LENGTH PROPOSED SUPERSTRUCTURE: REHABILITATE STEEL MEMBERS

TRACK LAYOUT: ONE ACTIVE TRACK (ORIGINALLY THREE TRACKS), BALLAST DECK

CONCRETE AND STEEL REPAIRS

SPECIFICATION

PROPOSED SUBSTRUCTURE:

ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (2023) **CONSTRUCTION:**

CINCINNATI SUPPLEMENT TO ODOT CONSTRUCTION AND MATERIAL

SPECIFICATIONS (2023)

SUPPLEMENT SPECIFICATIONS

DIMENSIONS: THESE CONTRACT DRAWINGS ARE BASED UPON FIELD

MEASUREMENTS OF THE EXISTING BRIDGE AS DRAWINGS OF THE EXISTING STRUCTURE ARE NOT AVAILABLE. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS IN THE FIELD BEFORE

FABRICATION TO ENSURE PROPER FIT OF NEW MATERIAL

2023 EDITION OF THE AMERICAN RAILWAY ENGINEERING AND DESIGN:

MAINTENANCE OF WAY ASSOCIATION (AREMA) "MANUAL FOR RAILWAY ENGINEERING" CHAPTER 15 - STEEL STRUCTURES, CHAPTER

8-CONCRETE STRUCTURES & FOUNDATIONS

STEEL: ALL STELL SHALL BE ASTM A709 GRADE 50. ALL MATERIAL MATERIAL: SHALL BE STRAIGHT AND FREE FROM SHARP KINKS OR BENDS.

ANY STEEL MATERIAL EXHIBITING SUCH DEFICIENCIES SHALL BE

CAUSE OF REJECTION OF THE MATERIAL.

GROUT GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI USING ASTM D695. THE GROUT MIX SHALL BE

SUBMITTED TO THE ENGINEER FOR APPROVAL

DISPOSAL OF REMOVED BRIDGE

MATERIAL:

ALL ELEMENTS OF THE EXISTING BRIDGE THAT ARE SHOWN IN THE PLANS AS TO BE REMOVED, SHALL BE REMOVED AND DISPOSED, OF BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A RECORD OF WHERE THE MATERIAL IS DISPOSED.

CONTACT INFORMATION

OWNER PROJECT MANAGER:

BRAD MOOK

CELL (513) 800-6384

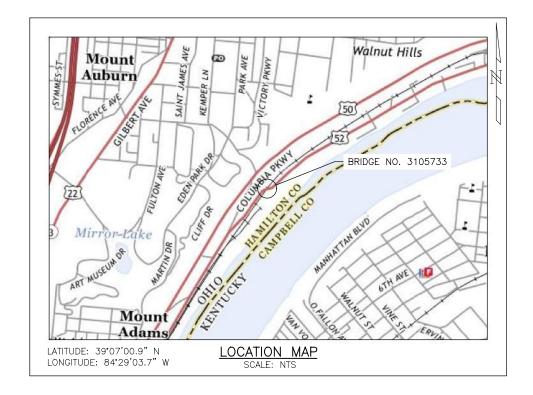
RAILROAD DIRECTOR OF ENGINEERING:

MIKE McGRAW

CELL (513) 222-5301

SOUTHWEST OHIO REGIONAL TRANSPORTATION AUTHORITY **BRIDGE NO. 3105733 OVER RIVERSIDE DRIVE**

CINCINNATI, OH **BRIDGE REHABILITATION**



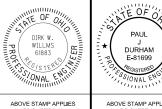
ABBREVIATIONS

ABUT. APPROX. ASSOC. B.F. B/B BOT. BRG. C/C C.F. CCNC. CONN. CP C.Y. DIM. DIM. DIM. DUWG. EA.	ABUTMENT APPROXIMATE ASSOCIATED BACK FACE BACK TO BACK BOTTOM BEARING CENTER TO CENTER CENTERLINE CUBIC FOOT CLEAR CONCRETE CONNECTION CONTROL POINT CUBIC YARDS DIAMETER DIMENSION DRAWING EACH	ELEV. EQ. EX. EXP. FB FCM FI.F. FFBW FIX. FT. GALV. HORIZ. INT. IPS LBS. L.S. MAX. MBF	ELEVATION EQUAL EXISTING EXPANSION FLOOR BEAM FRACTURE CRITICAL MEMBER FAR FACE FRONT FACE BACKWALL FIXED LINEAR FOOT GALLONS GALVANIZED HORIZONTAL INTERMEDIATE IRON PIN SET POUNDS LUMP SUM MAXIMUM THOUSAND BOARD FEET	NIC OHE O/O P PROP. REQ. ROW S.E. S.F. SPA. STD. STR STR STR. STR. STR. TPG TYP. T/R TOR	NOT IN CONTRACT OVERHEAD ELECTRICAL OUT TO OUT PLATE PROPOSED REQUIRED RIGHT OF WAY SUPERELEVATION SQUARE FOOT SPACE STATION STANDARD STRAIGHT STRINGER SQUARE YARD THROUGH PLATE GIRDER TYPICAL TOP OF RAIL
EA.	EACH	MBF	THOUSAND BOARD FEET	TOR	TOP OF RAIL
E.F. EL.	EACH FACE ELEVATION	MIN. N.F.	MINIMUM NEAR FACE	UNO. VERT.	UNLESS NOTED OTHERWISE VERTICAL

CONSTRUCTION PLAN SET

ESTIMATED QUANTITIES QTY. UNIT DESCRIPTION SEE DRAWING NO. NO. 3105733-02 LOT MOT NO. 3105733-03 NO. 3105733-04 NO. 3105733-02 LAW ENFORCEMENT OFFICER WITH PATROL CAR 24 NO. 3105733-03 HOURS FOR ASSISTANCE NO. 3105733-05 NO. 3105733-02 LOT WORK ZONE TRAFFIC SIGNAL NO. 3105733-03 NO. 3105733-06 NO. 3105733-02 940 PORTABLE BARRIER, UNANCHORED NO. 3105733-03 FT NO. 3105733-07 NO. 3105733-02 WORK ZONE IMPACT ATTENUATOR, 24" WIDE EACH NO. 3105733-03 HAZARDS (BIDIRECTIONAL) NO. 3105733-08 NO. 3105733-02 800 INCREASED BARRIER DELINEATION NO. 3105733-03 NO. 3105733-09 NO. 3105733-02 OBJECT MARKER, TWO WAY NO. 3105733-03 NO. 3105733-10 NO. 3105733-02 WORK ZONE EDGE LINE, CLASS I, 4", 740.06, 0.25 MILE NO. 3105733-03 NO. 3105733-11 NO. 3105733-02 WORK ZONE STOP LINE, CLASS I, 12", 740.06, 25 FT NO. 3105733-03 TYPE 1 NO. 3105733-12 802 LBS. BOTTOM FLANGE PLATE NO. 3105733-08 120 LBS. STIFFENER ANGLE NO. 3105733-08 1,032 LBS. STEEL COLUMNS PLATE NO. 3105733-09 52 S.F. CONCRETE PATCH NO. 3105733-09 LOT CLEANING BEARING SEATS NO. 3105733-07 25 LBS. TOP FLANGE PLATE NO. 3105733-08 15 FT. FENCING NO. 3105733-07 NO. 3105733-07 LOT REMOVE FLORA NO. 3105733-08 40 LBS. PIER PLATE NO. 3105733-07 CONCRETE PATCH FOR TPG C.Y. NO. 3105733-08 30 C.Y. REMOVE BALLAST AND BACKWALL BLOCKING NO. 3105733-07 NO. 3105733-07 BLAST CLEAN AND PAINT SUPERSTRUCTURE AND NO. 3105733-08 LOT SUBSTRUCTURE STEEL NO. 3105733-09

NOTE: ADDITIONAL MOT QUANTITIES FOR INFORMATION ONLY ARE PROVIDED ON DRAWING NO. 3105733-02



REVISIONS

HDR ENGINEERING, INC CINCINNATI, OHIO 45242

FILE: NO. 3105733-GT01.dgr

SORTA ENGINEERING DEPARTMENT CINCINNATI, OHIO

> BRIDGE NO. 3105733 CROSSING RIVERSIDE DRIVE

COVER SHEET

HAMILTON COUNTY CINCINNATI ZONF: SUBDIVISION SCALE: AS SHOWN VAL. SEC DRAWING NO DATE: 08/20/202 DESIGN: RCV NO. 3105733-0 DRAWN: NME HECKED

MAINTAINING TRAFFIC (AT ALL TIMES)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT. PEDESTRIAN ROUTES SHALL ALSO BE MAINTAINED AT ALL TIMES.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS WHERE NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

AT THE PRE-CONSTRUCTION MEETING, SUBMIT TO THE ENGINEER THE NAME AND TELEPHONE NUMBER OF A PERSON(S) WHO CAN BE CONTACTED 24 HOURS A DAY BY THE CITY OF CINCINNATI AND ALL INTERESTED POLICE AGENCIES. THE PERSON(S) SHALL BE RESPONSIBLE FOR REPLACING AND MAINTAINING NECESSARY TRAFFIC CONTROL

THE CONTRACTOR IS REQUIRED TO OBTAIN PRIOR APPROVAL FROM THE ENGINEER FOR ANY WORK ON THE WEEKEND OR NIGHTS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE CITY OF CINCINNATI TRAFFIC SAFETY HANDBOOK, THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) SECTION 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, THE CITY OF CINCINNATI SUPPLEMENT TO ODOT, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR MAINTAINING TRAFFIC.

SEQUENCE OF CONSTRUCTION

THE SEQUENCE OF CONSTRUCTION OUTLINED BELOW IS INTENDED TO MAINTAIN TRAFFIC ON RIVERSIDE DRIVE. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO ENSURE THAT ENTRANCE TO COMMERCIAL DRIVES ARE MAINTAINED AT ALL TIMES DURING CONSTRUCTION

THE FOLLOWING IS A SUGGESTED SEQUENCE.

PHASE 1 — CLOSE THE WESTBOUND TRAVEL LANE OF RIVERSIDE DR WITH PORTABLE BARRIER AND A TEMPORARY SIGNAL ACCORDING TO ODOT STANDARD CONSTRUCTION DRAWING (SCD) MT—96.11, MT—96.20, MT—96.26, AND AS SPECIFIED IN THE PLANS, IN ORDER TO PERFORM REPAIRS ON THE NORTH SIDE OF THE BRIDGE. EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE COVERED OR REMOVED.

PHASE 2 — CLOSE EASTBOUND TRAVEL LANE OF RIVERSIDE DR WITH PORTABLE BARRIER AND A TEMPORARY SIGNAL ACCORDING TO ODOT STANDARD CONSTRUCTION DRAWING (SCD) MT—96.11, MT—96.20, MT—96.26, AND AS SPECIFIED IN THE PLANS IN ORDER TO PERFORM REPAIRS ON AND PAINT THE SOUTH SIDE OF THE BRIDGE. EXISTING CONFLICTING PAVEMENT MARKINGS SHALL BE COVERED OR REMOVED. PEDESTRIAN TRAFFIC SHALL BE MAINTAINED ON THE SIDEWALK TO THE EXTENT POSSIBLE. WHEN PEDESTRIAN DETOURS ARE NECESSARY, A TEMPORARY ACCESSIBLE ROUTE SHALL BE PROVIDED ACCORDING TO MT—110.10. THE TEMPORARY ROUTE SHALL HAVE A CONTINUOUS HARD SURFACE, BE FREE FROM ABRUPT GRADE CHANGES, HAVE A MINIMUM WIDTH OF 60" AND HEIGHT OF 96", AND HAVE ADA COMPLIANT PROFILES AND CROSS SLOPES. PEDESTRIANS SHALL BE PROTECTED FROM OVERHEAD HAZARDS AT ALL TIMES.

PHASE 3 — CLOSE THE WESTBOUND TRAVEL LANE OF RIVERSIDE DR WITH PORTABLE BARRIER AND A TEMPORARY SIGNAL ACCORDING TO ODOT STANDARD CONSTRUCTION DRAWING MT-96.20, MT-96.26, AND AS SPECIFIED IN THE PLANS, IN ORDER TO PAINT THE NORTH SIDE

THE PRE—EXISTING PAVEMENT MARKINGS SHALL BE UNCOVERED OR RESTORED AS ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE BEING REMOVED.

THE CONTRACTOR IS ENCOURAGED TO USE FLAGGERS ACCORDING TO SCD MT-97.10 FOR ANY SHORT DURATION ACTIVITIES WHERE LANES MAY BE OPEN TO TRAFFIC OUTSIDE OF THE CONTRACTOR'S WORKING HOURS.

DESIGN DESIGNATION

THE FOLLOWING DESIGN DESIGNATION FOR RIVERSIDE DRIVE WAS USED FOR THE DEVELOPMENT THE MOT PLANS:

CURRENT ADT (2024)6,749
DESIGN HOURLY VOLUME1,250
TRUCKS (24 HR B&C)5%
DESIGN SPEED35 MPH
LEGAL SPEED35 MPH
FUNCTIONAL CLASSURBAN PRINCIPAL ARTERIAL

STORAGE OF EQUIPMENT AND MATERIALS

THE STORAGE OF EQUIPMENT AND MATERIALS WITHIN THE ROAD RIGHT OF WAY WILL ONLY BE PERMITTED IN AREAS OUTSIDE THE CLEAR ZONE FOR VEHICULAR TRAFFIC OR PROTECTED BY PORTABLE CONCRETE BARRIER. THE CONTRACTOR MAY STORE EQUIPMENT AND MATERIALS IN THE HATCHED WORK ZONE AREAS SHOWN ON THE MOT SHEETS.

REQUIRED ITEMS AND QUANTITIES

ESTIMATED QUANTITIES AND BID ITEMS FOR MAINTENANCE OF TRAFFIC WORK HAVE BEEN

THE FOLLOWING ADDITIONAL ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR INFORMATION ONLY. PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR MAINTENANCE OF TRAFFIC.

ITEM DESCRIPTION	TOTAL	UNITS
WORK ZONE SIGNING INCLUDING SUPPORTS AND WARNING LIGHTS	13	EACH
DRUMS	54	EACH
TYPE III BARRICADES	2	EACH

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

THE CONTRACTOR SHALL FURNISH AND INSTALL NON-GATING IMPACT ATTENUATORS AT THE ENDS OF ALL PORTABLE BARRIER RUNS. FURNISH IMPACT ATTENUATORS FROM THE ODOT OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE

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.

PAYMENT FOR THE ABOVE WORK 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.

FULLY-ACTUATED OPERATION OF WORK ZONE TRAFFIC SIGNAL

THE WORK ZONE SIGNAL CONTROL REQUIRED FOR THIS PROJECT AND SHOWN ON SHEETS 3 & 4 AND TRAFFIC STANDARD CONSTRUCTION DRAWINGS MT-96.11, MT-96.20 AND MT-96.26 SHALL BE FULLY TRAFFIC-ACTUATED AND OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN SECTION 733.02 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

THE INITIAL CONTROLLER TIMING SHALL BE AS FOLLOWS:

	ALL PHASES OF CONSTRUCTION			
	1 (ALL RED) DUMMY PHASE	2 MAINLINE (EASTBOUND)	3 (ALL RED) DUMMY PHASE	4 MAINLINE (WESTBOUND)
MIN. GREEN		10		10
EXTENSION		4		4
MAX. 1 GREEN (AM PEAK)		15		57
MAX. 2 GREEN (PM PEAK)		58		14
MAX. 3 GREEN (OFF PEAK)		21		21
YELLOW		4.0		4.0
ALL RED	20		20	
RECALL	ON	OFF	OFF	OFF

	TIMING PLANS				
DAY(S) OF WEEK	PLAN NAME	HOURS	PLAN NO.	CYCLE LENGTH (SEC)	
MON-FRI	AM PEAK	0700-0900	1	120	
MON-FRI	MID-DAY	0900-1500	3	FREE	
MON-FRI	PM PEAK	1500-1800	2	120	
MON-FRI	OFF PEAK	1800-0700	3	FREE	
SAT-SUN	WEEKEND	ALL	3	FREE	

THE CONTRACTOR SHALL ALSO DESIGN, FURNISH, INSTALL AND MAINTAIN A TRAFFIC DETECTOR (RADAR) ON EACH TRAFFIC APPROACH WHICH WILL RELIABLY DETECT ALL LEGAL TRAFFIC APPROACHING (BUT NOT LEAVING) THE SIGNAL AS IT PASSES OR WAITS IN THE DESIGNATED DETECTOR ZONE SHOWN IN THE PLANS. DETECTOR DESIGNS WHICH DO NOT PROVIDE RELIABLE DETECTION, FREE FROM FALSE CALLS, SHALL BE IMMEDIATELY REPLACED BY THE CONTRACTOR.

DELINEATION OF PORTABLE AND PERMANENT BARRIEF

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PIERS) 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 SCD_MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS

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

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER SCD MT-101.70.

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 SCD MT-101.70.

LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTED, A UNITED WITH AN OFFICIAL PATROL CAR (CAR WITH TOP—MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR LANE CLOSURES DURING INITIAL SET—UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG—TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFICE CONTROL SETLIP) TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEE THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO—WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW—UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

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 14 DAYS PRIOR TO CLOSURE OR IN ADVANCE OF IMPLEMENTATION. TO ASSURE MAINTENANCE OF ADEQUATE TRAFFIC CONTROL AT ALL TIMES, DO NOT INSTALL OR REMOVE ANY TRAFFIC CONTROL DEVICES WITHOUT THE APPROVAL OF THE CITY TRAFFIC ENGINEER, HIS OR HER DESIGNEE AND THE ENGINEER.

NOTIFY THE FOLLOWING, FIVE WORKING DAYS PRIOR TO THE START OF WORK OR PHYSICAL SETUP OF ANY SIGNS OR OTHER TRAFFIC CONTROL DEVICES.

- A. LOCAL POLICE DISTRICT
- QUEEN CITY METRO/SORTA
- D. LOCAL SCHOOLS
- LOCAL HOSPITALS
 ABUTTING PROPERTY OWNERS
- G. ADDITIONAL CONTACTS AS REQUIRED BY THE ENGINEER

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

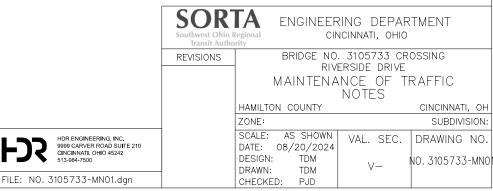
ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER WITHIN THE SAME TIMEFRAME.

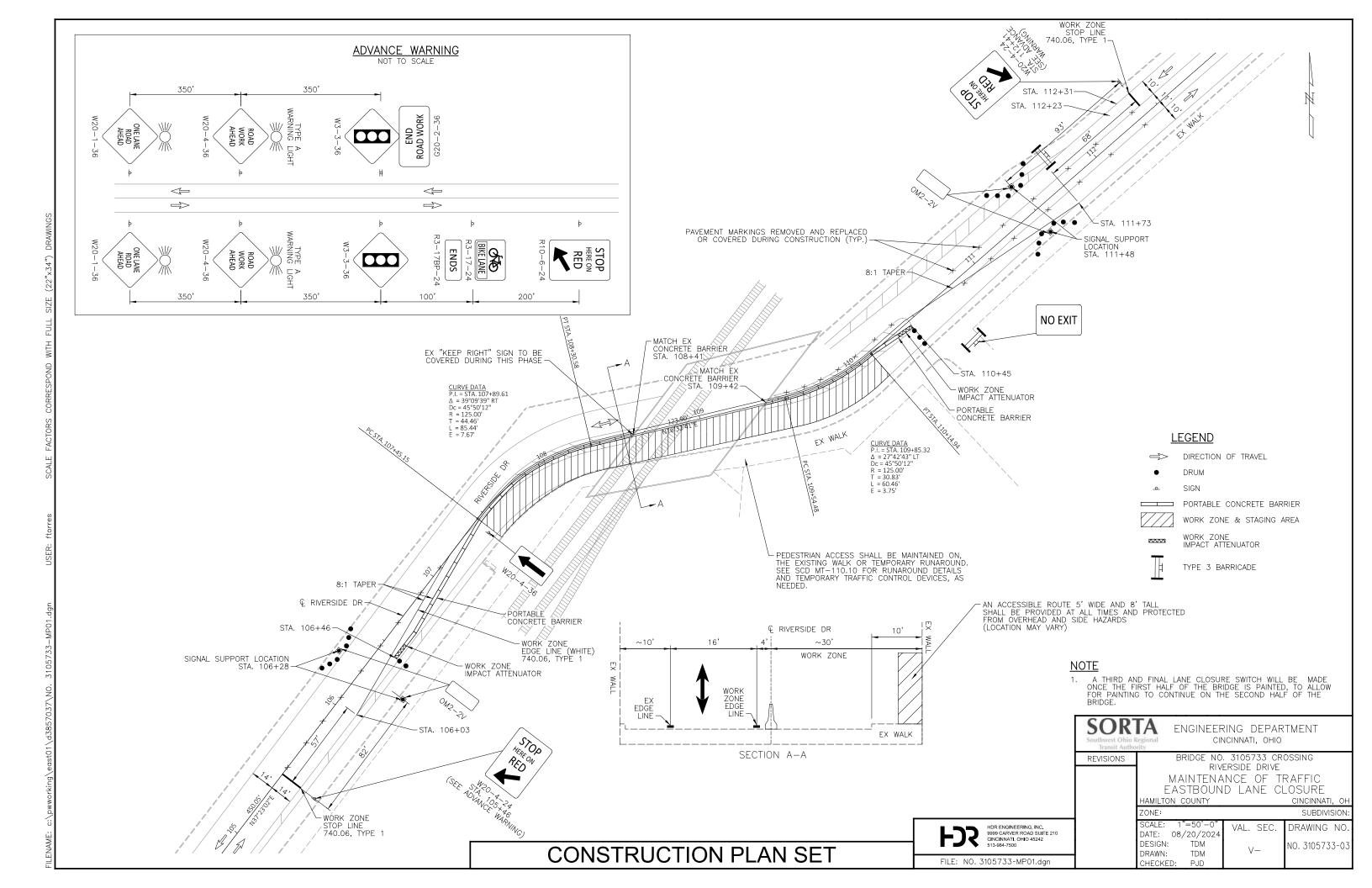
STANDARD CONSTRUCTION DRAWING LIST

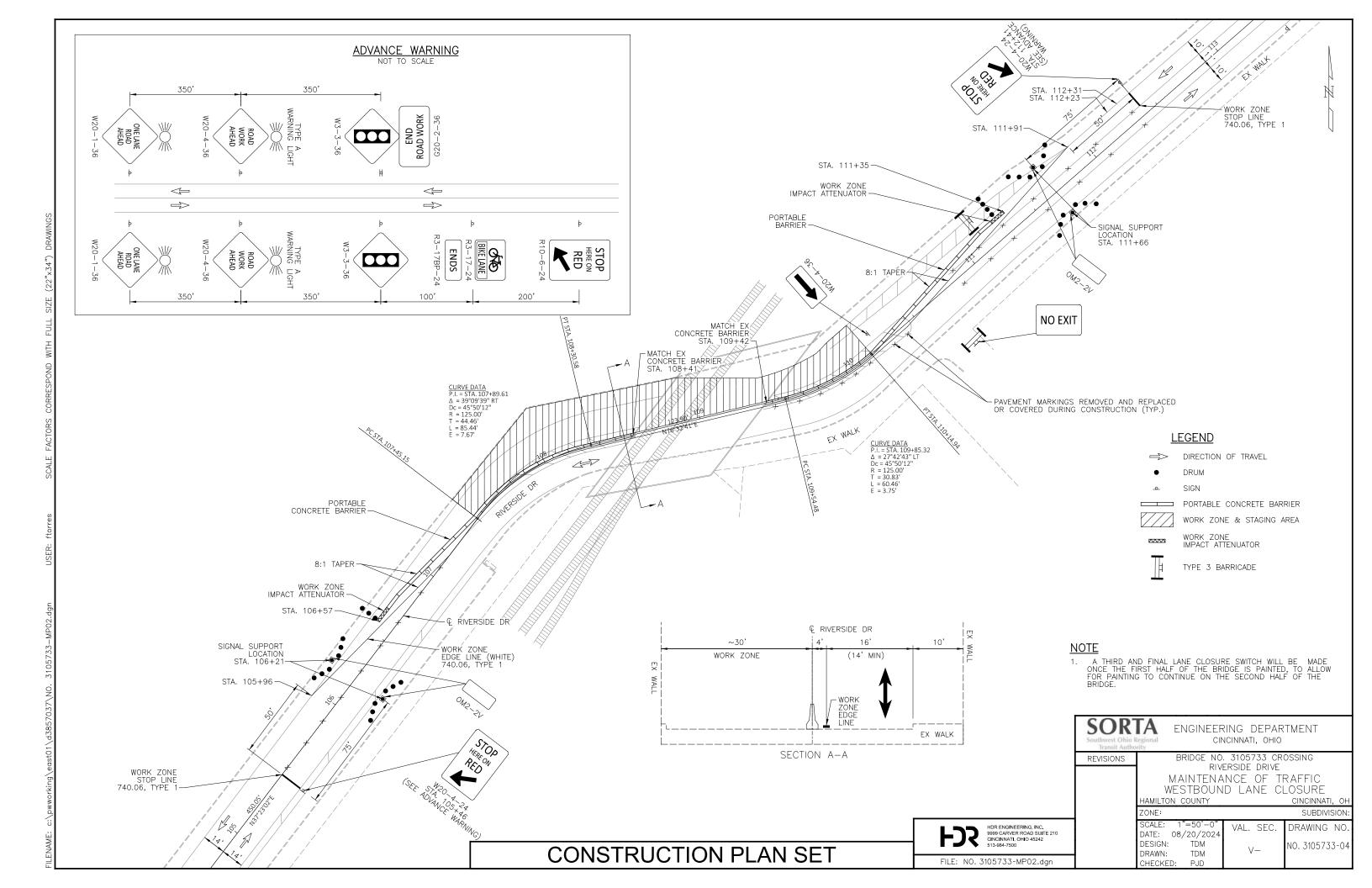
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THE FOLLOWING ODOT STANDARD CONSTRUCTION DRAWINGS ARE REFERENCED HEREIN WITH THE REVISION DATES BELOW AND CAN BE FOUND ON ODOT'S WEBSITE.

MT-96.11	7/21/2023	MT-101.70	4/21/2023
MT-96.20	7/21/2023	MT-105.10	1/17/2020
MT-96.26	1/18/2019	MT-110.10	7/19/2013
MT-97.10	4/19/2019		







GENERAL NOTES

STANDARD SPECIFICATIONS:

DESIGN

2023 EDITION OF THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION (AREMA) "MANUAL FOR RAILWAY ENGINEERING" CHAPTER 15 — STEEL STRUCTURES, CHAPTER 8 — CONCRETE STRUCTURES & FOUNDATIONS.

DESIGN CRITERIA

CONTROL OF WORK:

ALL WORK INVOLVED IN THE CONSTRUCTION OF THE RAILWAY STRUCTURE SHALL BE PERFORMED SATISFACTORY TO THE ENGINEER AND SOUTHWEST REGIONAL TRANSPORTATION AUTHORITY (SORTA). ALL METHODS OF HANDLING WORK AFFECTING THE SAFETY OF RAIL OPERATIONS MUST BE APPROVED BY SORTA. CONTRACTOR SHALL COORDINATE WORK ON AND AROUND THE TRACK (INCLUDING FLAGGERS AND CLOSURES) WITH RAILROAD THROUGH SORTA.

CONSTRUCTION REQUIREMENTS

ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT AREMA "MANUAL FOR RAILWAY ENGINEERING" AND THE SPECIFICATIONS FOR THIS CONTRACT.

THE CONTRACTOR SHALL NOT INTERFERE WITH OR PERFORM ANY CONSTRUCTION ON OR NEAR OPERATING TRACKS WITHOUT THE RAILROAD'S PERMISSION. WHEN THE CONTRACTOR IS WORKING NEAR ANY TRACK, HE WILL BE REQUIRED TO HAVE A FLAGMAN FROM THE RAILROAD ON DUTY.

CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES ARE SHOWN FOR INFORMATION ONLY. NO CONSTRUCTION JOINTS, EXCEPT THOSE SHOWN ON THE PLANS, WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.

CONTRACTOR RESPONSIBILITY

- COORDINATE ALL CONSTRUCTION ACTIVITIES WITH SORTA AND THE RAILROAD (GENESEE & WYOMING/IORY).
- 2. COORDINATE ALL ACCESS TO THE JOBSITE WITH THE CITY OF CINCINNATI, OHIO, DEPARTMENT OF PUBLIC WORKS AND THE RAILROAD.
- 3. VERIFY THE LOCATION, RELOCATION, ABANDONMENT, AND/OR TEMPORARY SUPPORT OF ALL UTILITIES AFFECTED BY THE CONSTRUCTION OF THE STRUCTURE AND COORDINATE THESE ACTIVITIES WITH THE APPROPRIATE UTILITY COMPANIES, AGENCIES, AND/OR AUTHORITIES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGE WHICH MIGHT OCCUR DUE TO CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.
- 4. APPLY FOR AND OBTAIN ANY CONSTRUCTION PERMITS NECESSARY TO PERFORM THE WORK.
- 5. PROVIDE SORTA AND RAILROAD WITH A DETAILED CONSTRUCTION PLAN DETAILING THE ACTIVITY, SCHEDULE, AND PROCEDURE FOR EACH ASPECT OF THE WORK. CONSTRUCTION SHALL NOT BEGIN UNTIL THE CONSTRUCTION PLAN HAS BEEN APPROVED BY SORTA AND THE RAILROAD.
- 6. FURNISH AND INSTALL ALL MATERIALS AS DESIGNATED IN THE APPROVED PLANS AND SPECIFICATIONS. WORK SHALL BE COMPLETE WITH FINAL ACCEPTANCE OF THE WORK BY SORTA AND THE RAILROAD.
- 7. RESTORE ALL AREAS THROUGHOUT THE LENGTH OF THE BRIDGE TO ORIGINAL CONDITION OR BETTER, AND AS DIRECTED BY SORTA, CITY OF CINCINNATI AND THE RAILROAD.

CONSTRUCTION NOTES

FIELD WELDING

WELDING MUST BE IN COMPLIANCE WITH REQUIREMENTS SPECIFIED IN AWS D1.5, CURRENT EDITION. WELDING MUST BE ACCOMPLISHED WITH THE SMAW PROCESS. WELDING ELECTRODES MUST BE E7018. WELDERS MUST POSSESS VALID CERTIFICATION.

CONSTRUCTION TOLERANCE

TOLERANCE FOR CONCRETE CONSTRUCTION SHALL CONFORM TO ALL REQUIREMENTS OF ACI 117, EXCEPT AS MODIFIED BELOW, IN THE SPECIAL PROVISIONS AND BY THE REQUIREMENTS OF THESE DRAWINGS. MAXIMUM ALLOWABLE DEVIATIONS FROM DIMENSIONS, ELEVATIONS, AND POSITIONS SHOWN ON THE DRAWINGS SHALL BE AS FOLLOWS.

STRUCTURAL STEEL NOTES

GENERAL

PRIOR TO FABRICATION, CONTRACTOR/FABRICATOR SHALL SUBMIT THE FOLLOWING FOR APPROVAL BY THE ENGINEER:

- 1. SHOP DRAWINGS INDICATING MATERIALS, SIZES, CONNECTIONS, ANCHORS, AND PAINTING.
- $\hbox{2. PRODUCT DATA, INCLUDING MANUFACTURER'S CATALOG SHEETS ON PRE-MANUFACTURED ITEMS.}\\$

FABRICATION:

- FABRICATION OF ALL STEEL MEMBERS SHALL BE ACCORDING TO THE AREMA MANUAL FOR RAILWAY ENGINEERING, CHAPTER 15, PART 3 — FABRICATION.
- 2. SHOP ASSEMBLY OF ALL STRUCTURAL STEEL IS REQUIRED TO ENSURE PROPER FIT AND ALIGNMENT OF THE STEEL MEMBERS. ALL MEMBERS SHALL BE MATCH MARKED WITH THE USE OF STEEL PUNCHES.
- 3. ALL STEEL MATERIAL THAT REQUIRES CUTTING SHALL BE CUT WITH EITHER A MECHANICALLY GUIDED BURNER OR A CUT-OFF SAW. AT NO TIME WILL FREEHAND FLAME CUTTING OR FREEHAND SAWING WITH A HANDHELD SAW OR MECHANICALLY OPERATED HAND HELD SAW BE ALLOWED. THE SURFACES SHALL NOT BE ROUGHER THAN ANSI B46.1 SURFACE TEXTURE OF 1000.
- 4. PLUMB AND TRUE VERTICAL AND HORIZONTAL MEMBERS TO TOLERANCE OF $\pm 1/8$ IN 10 FT.

DELIVERY, STORAGE, AND HANDLING:

- TAG MISCELLANEOUS STEEL (INCLUDING ANCHOR BOLTS/RODS), CONCRETE ANCHORS, SLEEVE, AND BASES, OR OTHERWISE MARK FOR EASE OF IDENTIFICATION AT PROJECT SITE.
- 2. CONTRACTOR IS RESPONSIBLE FOR SAFELY TRANSPORTING, STORING, AND HANDLING ALL MATERIALS. ALL MATERIALS SHALL BE PROTECTED FROM DAMAGE DURING ALL PHASES OF CONSTRUCTION

STRUCTURAL STEEL:

- 1. ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50 T2.
- 2. FABRICATE DETAILS AND CONNECTION ASSEMBLIES IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS, WITH PROJECTING CORNERS CLIPPED AND FILLER PIECES WELDED FLUSH.
- 3. FIT WORK TOGETHER IN FABRICATION SHOP AND DELIVER COMPLETE OR IN PARTS, READY TO BE SET IN PLACE OR ASSEMBLED IN FIELD.
- 4. ALL MATERIAL SHALL BE STRAIGHT AND FREE FROM SHARP KINKS OR BENDS. ANY STEEL MATERIAL EXHIBITING SUCH DEFICIENCIES SHALL BE CAUSE FOR THE REJECTION OF THE MATERIAL. STRAIGHTENING OF THE MATERIAL SHALL NOT BE ACCEPTABLE.

BOLTS

- 1. BOLTED CONNECTIONS SHALL BE MADE WITH 7/8" DIA. ASTM F3125, GRADE A325, HIGH STRENGTH, TYPE 1 BOLTS UNLESS NOTED OTHERWISE. ALL 7/8" DIA. BOLTS SHALL BE TIGHTENED TO A MINIMUM TENSION PER BOLT OF 39,000 LBS.
- 2. ANY BOLTS THAT REQUIRE REMOVAL AFTER BEING TIGHTENED TO THEIR PROOF LOAD SHALL BE DISCARDED AND A NEW BOLT INSTALLED.
- 3. ALL BOLT HOLES SHALL BE SUB-DRILLED AND REAMED OR DRILLED FROM THE SOLID. AT NO TIME ARE HOLES TO BE SUB-PUNCHED AND REAMED OR PUNCHED FULL SIZE. ALL HOLES SHALL BE 1/16" LARGER THAN THE SPECIFIED BOLT SIZE UNLESS NOTED OTHERWISE.
- 4. DRILL FIELD HOLES FOR BOLTS. DO NOT BURN HOLES. NEW OR ENLARGING HOLES BY USE OF CUTTING TORCH IS CAUSE FOR REJECTION OF ENTIRE MEMBER.

VELDING:

- 1. ALL FIELD WELDS TO BE MADE WITH E7018 LOW HYDROGEN ELECTRODES WITH ON-SITE PROTECTION AND USE OF ELECTRODE HEATING UNITS PER CURRENT A.W.S. SPECIFICATIONS.
- 2. ALL WELDS ARE TO BE SHOP WELDS UNLESS NOTED OTHERWISE. WELD SIZES SHALL BE AS SHOWN ON THE DRAWINGS.
- 3. THERE SHALL BE THOROUGH FUSION BETWEEN WELD METAL AND BASE METAL AND BETWEEN SUCCESSIVE PASSES OF THE WELD. ALL CRATERS SHALL BE FILLED TO THE FULL CROSS SECTION OF THE WELD.
- 4. ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT AREMA SPECIFICATIONS AND THE PROJECT SPECIFICATIONS. WELDING PRACTICES TO BE IN ACCORDANCE WITH AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE D1.5, CURRENT ISSUE. ALL WELDS TO BE CONTINUOUS UNLESS OTHERWISE SHOWN.
- 5. QUALIFY WELDING OPERATORS IN ACCORDANCE WITH AWS D1.1. QUALIFICATION TESTS SHALL BE RUN BY RECOGNIZED TESTING LABORATORY APPROVED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. PRIOR TO WELDING, EACH WELDER SHALL HAVE BEEN CERTIFIED IN ACCORDANCE WITH AWS REQUIREMENTS DURING A PERIOD OF ONE (1) YEAR PRIOR TO WORK ON THE BRIDGE. THE FABRICATOR SHALL FURNISH THE PROJECT ENGINEER WITH AN AWS CERTIFICATE FOR EACH WELDER, COVERING THEIR ABILITY TO MAKE A COMPLETE AND SATISFACTORY WELD OF EACH KIND TO BE USED ON THE PROJECT.
- 6. CONFORM TO CODES FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION OF AWS AND TO AISC SPECIFICATIONS. SURFACES TO BE WELDED SHALL BE FREE FROM LOOSE SCALE, RUST, GREASE, PAINT, AND OTHER FOREIGN MATERIAL, EXCEPT MILL SCALE WHICH WILL WITHSTAND VIGOROUS WIRE BRUSHING MAY REMAIN. NO WELDING SHALL BE DONE WHEN BASE METAL TEMPERATURE IS LOWER THAN O'F.
- 7. GRIND EXPOSED EDGES OF WELDS TO 1/8" MINIMUM RADIUS. GRIND BURRS, JAGGED EDGES, AND SURFACE DEFECTS SMOOTH.
- 8. PREPARE WELDS AND ADJACENT AREAS SO THERE IS:
 A. NO UNDERCUTTING OR REVERSE RIDGES ON WELD BEAD.
 B. NO WELD SPATTER ON OR ADJACENT TO WELD OR OTHER AREA TO BE PAINTED OR COATED.
 C. NO SHARP PEAKS OR RIDGES ALONG WELD BEAD.
 D. GRIND EMBEDDED PIECES OF ELECTRODE OR WIRE FLUSH WITH ADJACENT SURFACE OF

PAINTING OR COATING AND FINISHES:

- 1. ALL STRUCTURAL STEEL WITH THE EXCEPTION OF THE ANCHOR BOLTS/RODS AND MACHINE FINISHED SURFACES SHALL BE SHOP PAINTED. SORTA SHALL BE CONTACTED SO THAT AN INSPECTION OF THE FULLY ASSEMBLED FABRICATED STEEL CAN BE PERFORMED.
- 2. REFER TO PROJECT SPECIFICATIONS FOR PAINTING REQUIREMENTS.

ANCHOR BOLTS/RODS:

- 1. PER AREMA 15-5.3.2.2 ANCHOR BOLTS/RODS SHALL CONFORM TO ASTM F1554 SPECIFICATIONS WITH A DIAMETER AS SHOWN IN THE PLANS. ANCHOR BOLTS/RODS SHALL BE GALVANIZED.
- 2. ANCHOR BOLTS/RODS LOCATED AT THE FIXED AND EXPANSION BEARINGS SHALL BE SET TO ALLOW A 1/4" GAP BETWEEN THE BOTTOM OF THE LOCKNUT AND TOP OF WASHER.

WATERPROOFING

WATERPROOFING SHALL CONSIST OF AMSTED RPS BALLAST MATS OR ENGINEER APPROVED EQUAL WITH DS BROWN "DECKGUARD" SPRAY APPLIED MEMBRANE OR AN ENGINEER APPROVED EQUAL.

CAST-IN-PLACE CONCRETE

IATERIAL:

- 1. CONCRETE SHALL BE IN ACCORDANCE WITH CHAPTER 8, CONCRETE STRUCTURES AND FOUNDATIONS, OF THE AREMA MANUAL.
- 2. CEMENT SHALL CONFORM TO THE FOLLOWING:
- A. STANDARD CONCRETE CEMENT SHALL BE PORTLAND CEMENT, TYPE I, IA, CONFORMING TO THE REQUIREMENTS OF ASTM C 150.
- B. HIGH—EARLY STRENGTH CEMENT SHALL BE PORTLAND CEMENT, TYPE III OR IIIA, CONFORMING TO THE REQUIREMENTS OF ASTM C 150.
- C. THE TYPE OF CEMENT SHALL BE AS SHOWN ON THE PLANS
- 3. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS, SLUMP SHALL BE 3" FOR SUBSTRUCTURE UNITS AND SLUMP FOR DECK SUPERSTRUCTURE SHALL BE 4". CONCRETE SHALL BE MADE WITH EITHER TYPE 1 OR TYPE 1A PORTLAND CEMENT CONFORMING TO THE REQUIREMENTS OF ASTM C150. MINIMUM CEMENT CONTENT SHALL BE 6 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
- 4. WATER CEMENT RATIO SHALL BE IN ACCORDANCE WITH AREMA RECOMMENDATIONS.
- 5. AIR-ENTRAINING ADMIXTURE SHALL BE OF THE NEUTRALIZED VINSOL RESIN TYPE AND CONFORM TO THE REQUIREMENTS OF ASTM C 260. AIR CONTENT SHALL BE 6% (BY VOLUME) UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 6. ADMIXTURES, EXCEPT AIR—ENTRAINING AGENTS, USED TO ALTER THE NORMAL PROPERTIES OF CONCRETE SHALL BE USED ONLY UPON THE APPROVAL OF THE ENGINEER AND CONFORM TO THE REQUIREMENTS OF ASTM C 494. CHEMICAL ADMIXTURES FOR FLOWING CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 1017.
- 7. ALL EXPOSED CONCRETE SURFACES SHALL HAVE A SMOOTH TROWELED FINISH AND HAVE NO DEPRESSIONS WHICH HOLD WATER.
- 8. ALL EXPOSED EDGES SHALL HAVE A 3/4" x 3/4" CHAMFER.

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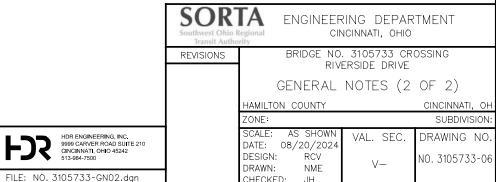
- 9. REINFORCING BARS SHALL MEET THE FOLLOWING REQUIREMENTS:
- A. ALL REINFORCEMENT BARS SHALL BE IN ACCORDANCE WITH CHAPTER 8, CONCRETE STRUCTURES AND FOUNDATIONS, OF THE AREMA MANUAL.
- B. BARS SHALL BE INTERMEDIATE GRADE, NEW DEFORMED BILLET STEEL, CONFORMING TO THE REQUIREMENTS OF ASTM A 615, GRADE 60.
- C. SIZE, GRADE, SHAPE AND LENGTH SHALL BE AS SHOWN ON THE PLANS.
- D. ALL DIMENSIONS FOR REINFORCING BARS REFER TO THE CENTERLINE OF BAR EXCEPT IN THE BAR BENDING DETAILS WHERE DIMENSIONS ARE OUT—TO—OUT.
- E. BARS SHALL BE FREE FROM DIRT, PAINT, OIL, GREASE, THICK RUST AND OTHER FOREIGN SUBSTANCES.
- F. REINFORCING BARS SHALL MEET THE LAP REQUIREMENTS OF AREMA CHAPTER 8 CONCRETE STRUCTURES, SECTION 2.14 AND 2.22.3 FOR CLASS A AND CLASS B SPLICES. THE FOLLOWING TABLE MAY BE USED FOR MINIMUM LAP SPLICE LENGTH OF BARS SPACED AT LEAST 6 INCHES ON CENTER, NOT BUNDLED WITH MORE THAN 2 BARS.

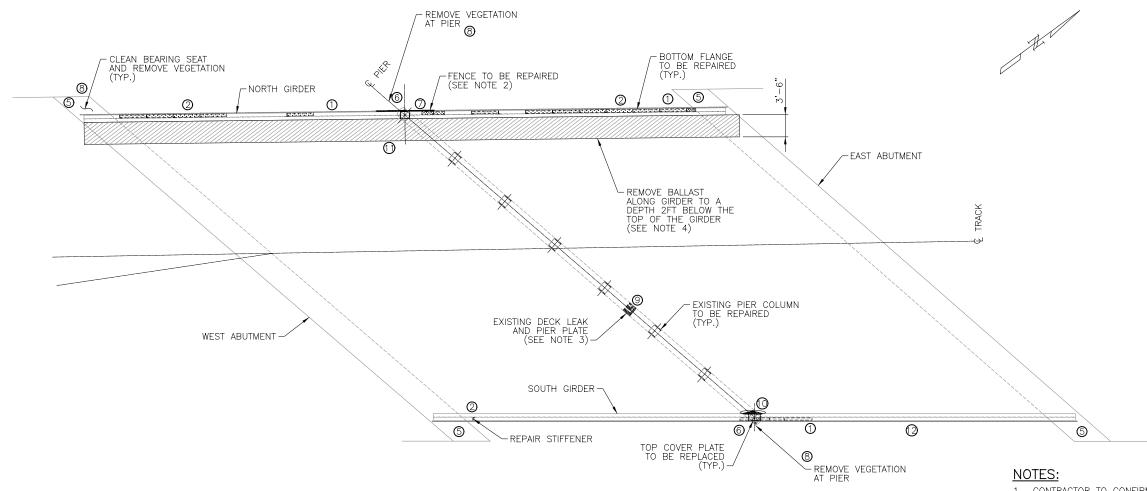
MINIMUM SPLICE LENGTHS						
BAR SIZE	UNCOATED	BAR SIZE	UNCOATED			
#4	2'-3"	#8	4'-5"			
#5	2'-9"	#9	5'-6"			
#6	3'-4"	#10	6'-9"			
#7	3'-10"	#11	8'-1"			

SORTA ENGINEERING DEPARTMENT CINCINNATI, OHIO BRIDGE NO. 3105733 CROSSING REVISIONS RIVERSIDE DRIVE GENERAL NOTES (1 OF 2) HAMILTON COUNTY CINCINNATI ZONF: SUBDIVISION SCALE: DRAWING NO VAL. SEC DATE: 08/20/202 DESIGN: NO. 3105733-05 DRAWN: NME HECKED

BAR SIZES NO. 3 THROUGH NO. 8: 6 BAR DIAMETERS MINIMUM BAR SIZES NO. 9 THROUGH NO. 11: 8 BAR DIAMETERS MINIMUM BAR SIZES NO. 14 AND NO. 18: 10 BAR DIAMETERS MINIMUM

- H. THE MINIMUM CLEAR DISTANCE FROM THE REINFORCING STEEL TO SURFACE OF THE CONCRETE SHALL BE IN ACCORDANCE WITH AREMA CHAPTER 8 CONCRETE STRUCTURES, SECTION 2.6.1 MINIMUM CONCRETE COVER.
- I. BARS SHALL BE BENT IN THE PLANE FOR WHICH THEY WERE DESIGNED. MAXIMUM ALLOWABLE DEVIATION FOR NO. 7 BARS AND UNDER SHALL BE 1/2" OUT OF PLANE AND FOR NO. 8 BARS AND OVER 1 INCH OUT OF PLANE.
- J. FABRICATION, BENDING, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CURRENT AREMA GUIDELINES FOR CONCRETE STRUCTURES AND FOUNDATIONS.
- K. REINFORCEMENT SUPPORTS SHALL BE ALL PLASTIC OR ALL STAINLESS STEEL.
- 10. TIE WIRES USED FOR TYING REINFORCING BARS SHALL BE A MINIMUM DIAMETER OF NO. 16 GAUGE, BLACK, SOFT IRON WIRE.
- 11. DOWELS SHALL BE MADE FROM NEW, DEFORMED BILLET STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A 615, GRADE 60.
- 12. ANCHOR BOLTS/RODS SHALL BE OF THE TYPE AND OF THE DIAMETER AS SHOWN ON THE PLANS.
- 13. EPOXY BONDING COMPOUND SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 881, TYPE II, GRADE 1 OR 2, AND SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- 14. GROUT FOR ANCHOR BOLTS/RODS AND DOWEL PLACEMENT SHALL BE NON—SHRINK, NON—METALLIC AND CONFORM TO THE REQUIREMENTS OF ASTM C 1107, GRADE B AND CRD C 621. THE MINIMUM COMPRESSIVE STRENGTH AFTER 28 DAYS SHALL BE 5,000 PSI.
- 15. NON-EPOXY BONDING COMPOUND SHALL CONFORM TO ASTM C 1059 TYPE II. COMPOUND SHALL BE ONLY USED WHEN JOINING NEW TO EXISTING CONCRETE WHERE BONDING COMPOUND CANNOT BE PLACED IMMEDIATELY PRIOR TO POURING NEW CONCRETE.
- 16. PREFORMED EXPANSION JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF ASTM D 1751.





REPAIR 02: INSTALL STIFFENERS ANGLE REPAIR 03: INSTALL STEEL COLUMNS PLATE REPAIR 04: PATCH SPALLED CONCRETE REPAIR 05: CLEAN BEARING SEATS REPAIR 06: REPLACE TOP FLANGE PLATE REPAIR 07: REPLACE MISSING FENCING SECTIONS REPAIR 08: REMOVE FLORA REPAIR 09: REPAIR 10: PATCH CONCRETE ON INSIDE FACE OF THE TPG REMOVE BALLAST AND PROVIDE BLOCKING AT BACKWALL REPAIR 11:

BLAST CLEAN AND PAINT STEEL

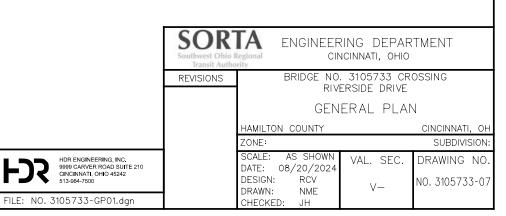
INSTALL BOTTOM FLANGE PLATE

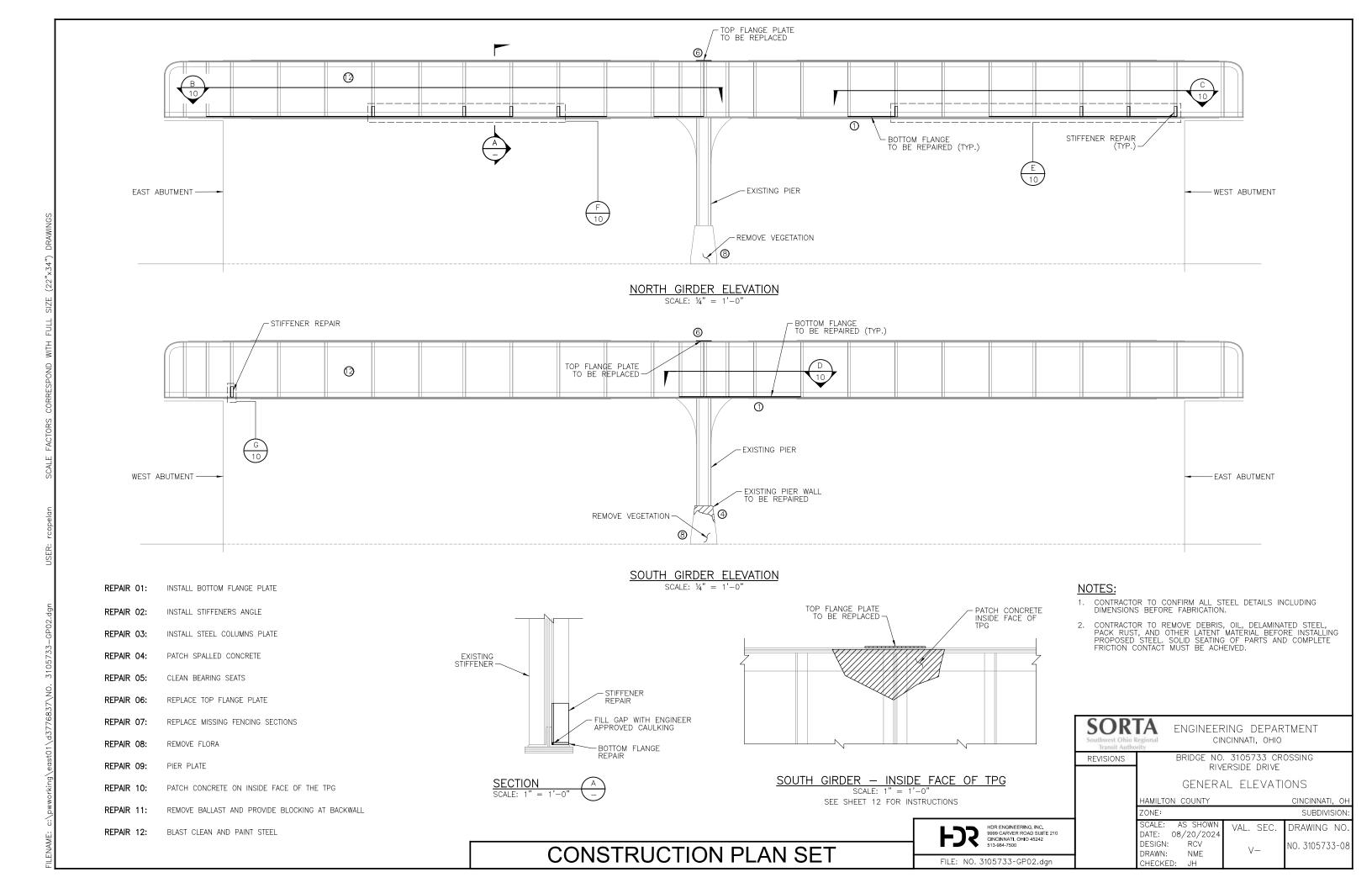
REPAIR 01:

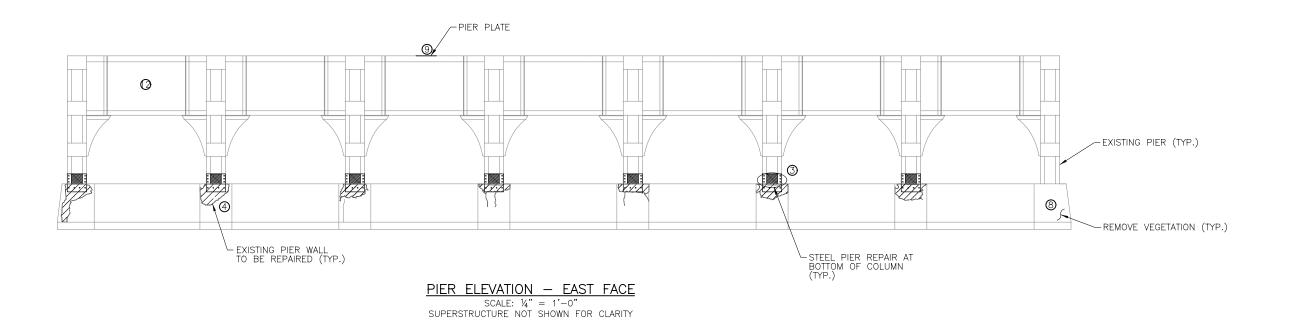
REPAIR 12:

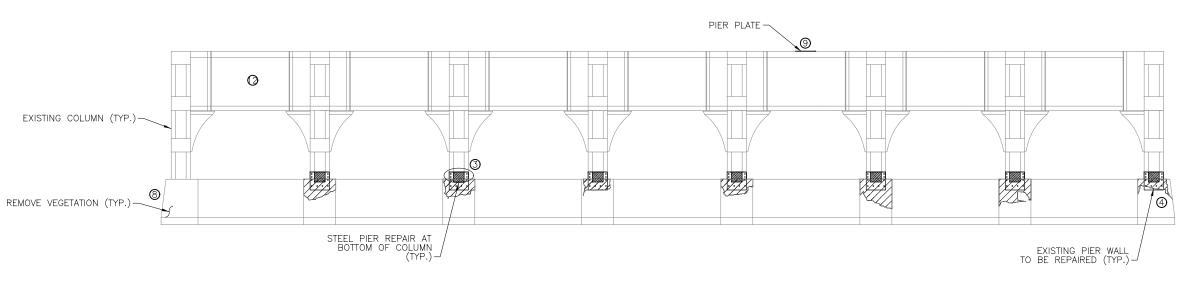
 $\frac{\text{PLAN}}{\text{SCALE: } \frac{1}{8}" = 1'-0"}$

- 1. CONTRACTOR TO CONFIRM ALL STEEL DETAILS INCLUDING DIMENSIONS BEFORE FABRICATION.
- 2. SORTA TO PROVIDE FENCING, CONTRACTOR TO INSTALL THE FENCING WHERE SHOWN. CONTRACTOR MIGHT HAVE TO MODIFY THE FENCING TO INSTALL. CONTACT THE OWNER FOR DIRECTION.
- 3. CONTRACTOR TO INSTALL PIER PLATE TO TOP FLANGE OF CROSS GIRDER.
- 4. APPROVAL FROM RAILROAD MUST BE ACQUIRED.









PIER ELEVATION - WEST FACE

SCALE: V_4 " = 1'-0" SUPERSTRUCTURE NOT SHOWN FOR CLARITY

REPAIR 03: INSTALL STEEL COLUMNS PLATE

REPAIR 04: PATCH SPALLED CONCRETE

REPAIR 08: REMOVE FLORA

REPAIR 09: PIER PLATE

REPAIR 12: BLAST CLEAN AND PAINT STEEL

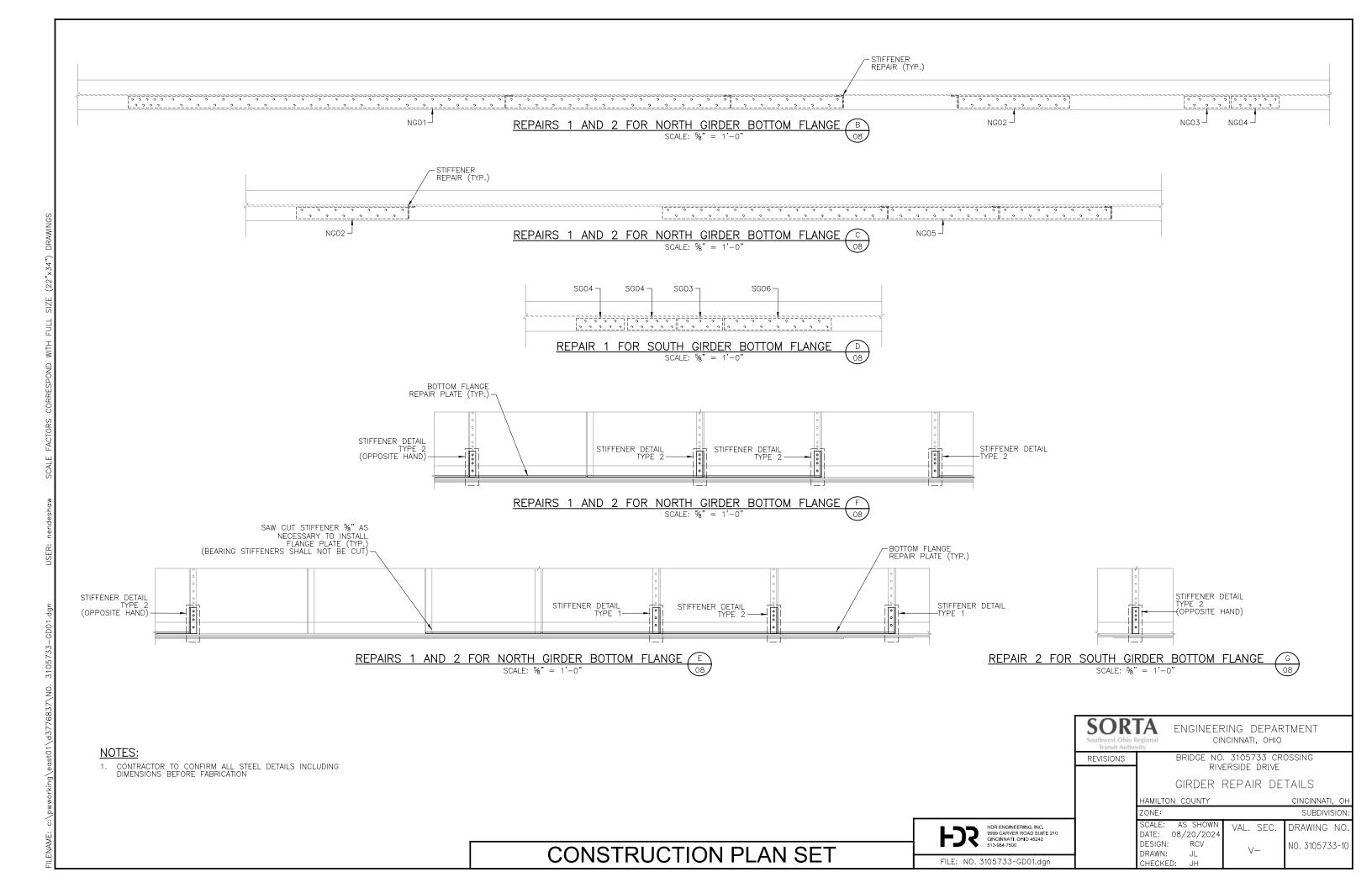
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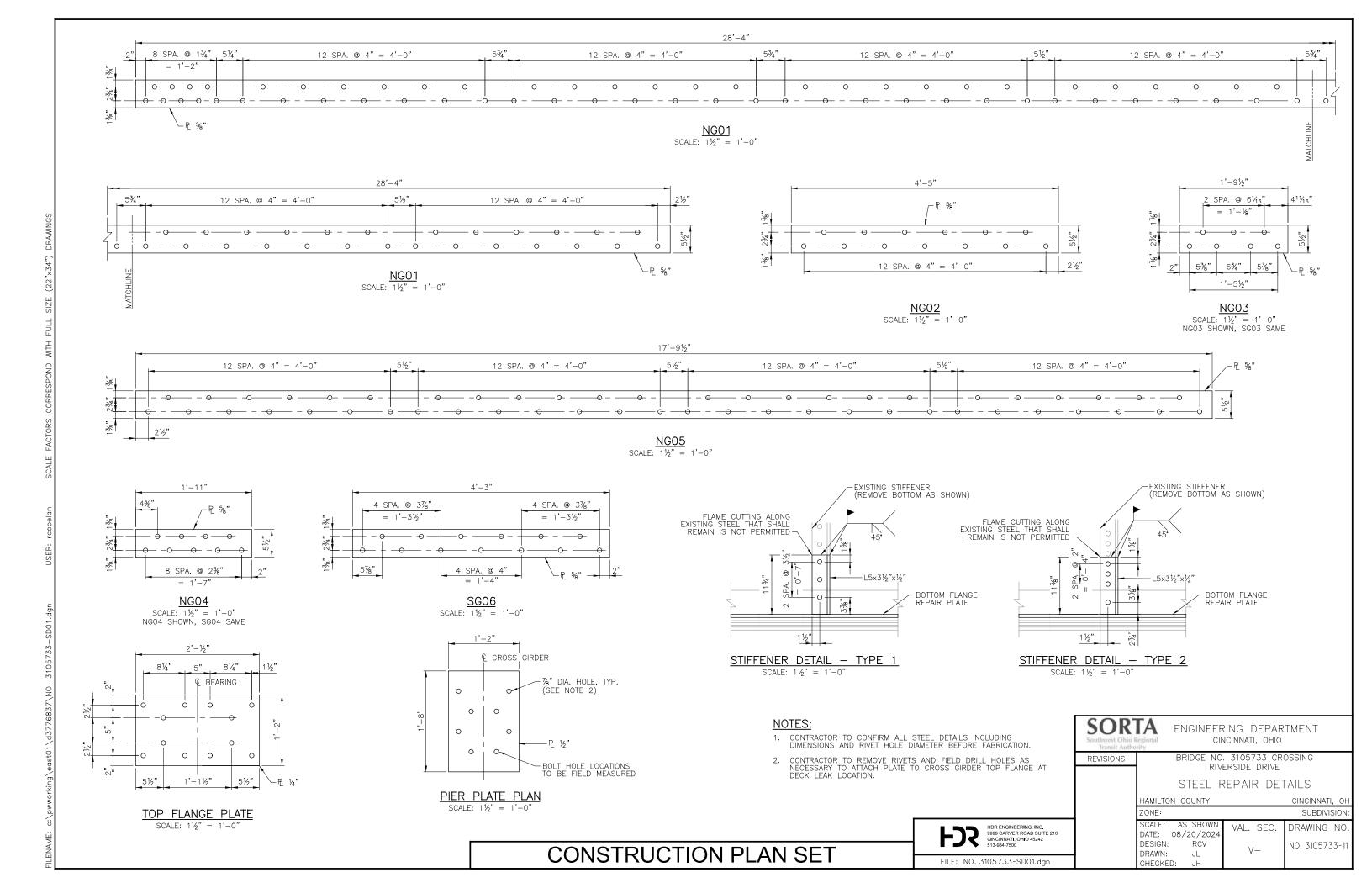
CONTRACTOR TO CONFIRM ALL STEEL DETAILS INCLUDING DIMENSIONS BEFORE FABRICATION

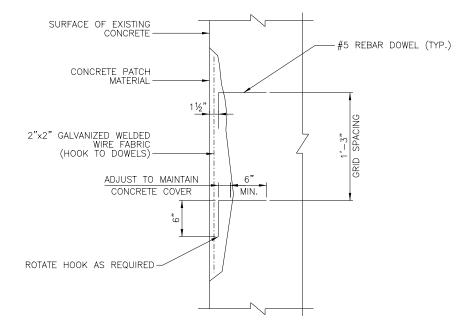
HDR ENGINEERING, INC.
9999 CARVER ROAD SUITE 210
CINCINNATI, OHIO 45242
513-984-7500

FILE: NO. 3105733-GP03.dgn

			RING DEPAR	RTMENT	
REVISIONS		. 3105733 CROSSING ERSIDE DRIVE			
		N ELEVATIONS			
HAMILTON COUNTY			CINCINNATI, OH		
ZONE:				SUBDIVISION	
		AS SHOWN 8/20/2024	VAL. SEC.	DRAWING NO	
	DESIGN: DRAWN:	RCV NME	V-	NO. 3105733-09	
	CHECKED:	JH			





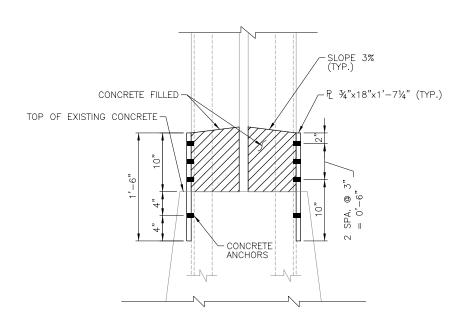


TYPICAL CONCRETE PATCH DETAIL

SCALE: $1\frac{1}{2}$ " = 1'-0" APPLIES TO BOTH TPG REPAIR AND PIER REPAIR

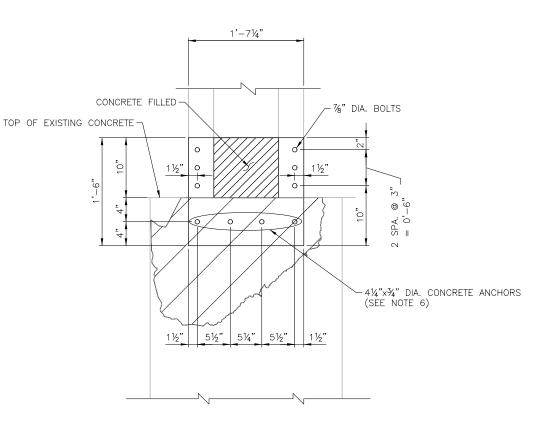
CONCRETE PATCH PROCEDURE

- REMOVE ANY UNSOUND CONCRETE IN OR AROUND THE PATCH AREA, DRILL HOLES FOR DOWEL BARS. CLEAN CONCRETE SURFACE OF ANY DEBRIS OR DUST.
- 2. APPLY BONDING COMPOUND CONFORMING TO THE GENERAL NOTES.
- 3. INSTALL EMBEDDED DOWEL BARS AND GALVANIZED WELDED WIRE FABRIC AS SHOWN.
- PLACE SPEED CRETE RED LINE BY EUCLID CHEMICAL OR AN APPROVED ALTERNATE CONCRETE PATCH MATERIAL. THE MANUFACTURE'S APPLICATION INSTRUCTIONS SHALL BE STRICTLY FOLLOWED.
- 5. PROPOSED FACE OF PATCH MATERIAL SHALL MATCH THE FACE OF EXISTING CONCRETE.
- 6. REFER TO ODOT 519 PATCHING OF CONCRETE STRUCTURES.



TYPICAL CONCRETE PIER COLUMN SECTION

SCALE: 1½" = 1'-0"
CONCRETE PATCHING NOT SHOWN FOR CLARITY



TYPICAL CONCRETE PIER COLUMN ELEVATION

CONCRETE PIER REPAIR NOTES

- CONCRETE SPALLS WERE OBSERVED VISUALLY BY THE ENGINEER. ALL SIZING INFORMATION IS THEREFORE APPROXIMATE AS ACCESSIBILITY AT THE TIME OF THE INSPECTION WAS LIMITED. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SIZING THE REPAIR BASED ON THE PROVIDED TYPICAL DETAIL AND PROCEDURE.
- IF ADDITIONAL SIGNIFICANT SPALLS ARE LOCATED BY THE CONTRACTOR, THEY SHALL BE REPORTED TO THE ENGINEER AND OWNER.
- 3. CONTRACTOR TO CONFIRM ALL STEEL DETAILS INCLUDING DIMENSIONS BEFORE FABRICATION.
- 4. CONCRETE ANCHORS TO BE 41/4" X 3/4" DIA. HILTI KWIK BOLT TZ2 WEDGE ANCHOR.
- 5. DRILL THROUGH EXISTING STEEL AS NECESSARY FOR CONCRETE ANCHOR INSTALLATION.



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STEEL DELAMINATION AT BOTTOM FLANGE ANGLE, STEEL DETERIORATION STIFFENER ANGLE, AND LEAKING BALLAST AND INVASIVE FLORA



BROKEN TOP FLANGE SPLICE PLATE FOR EACH GIRDER



MISSING FENCE SECTIONS ALONG THE NORTH GIRDER



SPALLED CONCRETE AT INSIDE FACE OF TPG



SPALLED CONCRETE AT PIER WALL, VEGETATION AROUND THE PIER WALL, AND STEEL PIER



WATER LEAKING THROUGH DECK JOINT

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