

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

- AS-2-15 REVISED 7/21/23
- EXJ-6-17 REVISED 1/19/24
- VPF-1-24 REVISED 1/17/25

DESIGN SPECIFICATIONS:

THESE STRUCTURES CONFORM TO THE 10TH 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.

DESIGN DATA:

CONCRETE CLASS QC2- COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONRETE CLASS QC 1- COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE REINFORCEMENT:

EPOXY COATED STEEL REINFORCEMENT- MINIMUM YIELD STRENGTH 60 KSI

RIGHT OF WAY:

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS OR WITHIN STATE PROPERTY. ALL WORK ON RETAINING WALLS IS TO BE PERFORMED FROM I-77 SIDE OF WALLS.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE 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. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD. DETAILS SHOWN IN GREY ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE, BOXED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES. THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 12 OFFICE
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:

HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/
CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX

NOTIFICATION

ALL WORK ON THE OMNITRAX BRIDGES SHALL BE COORDINATED WITH RAILWORKS AND THEY SHALL BE NOTIFIED IN WRITING AT LEAST 14 DAYS PRIOR TO THE START OF CONSTRUCTION.

RAILWORKS SIGNALS AND COMMUNICATIONS LLC
ATTN: COLLIN CONNOR
PHONE: 904-238-3828
EMAIL: CCONNOR@RAILWORKS.COM



ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN:

AT ALL LOCATIONS THIS ITEM INCLUDES THE REMOVAL OF TREES AND BRUSH IN ORDER TO GAIN ACCESS TO APPLICABLE AREAS OF THE STRUCTURES TO PERFORM THE SPECIFIED WORK UP TO THE RIGHT OF WAY LINE. ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL IN THE PLANS, THEY SHOULD BE REMOVED AT THE DIRECTION OF THE ENGINEER. PAYEMENT FOR LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK IS INCLUDED FOR PAYMENT AT THE LUMP SUM CONTRACT PRICE FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

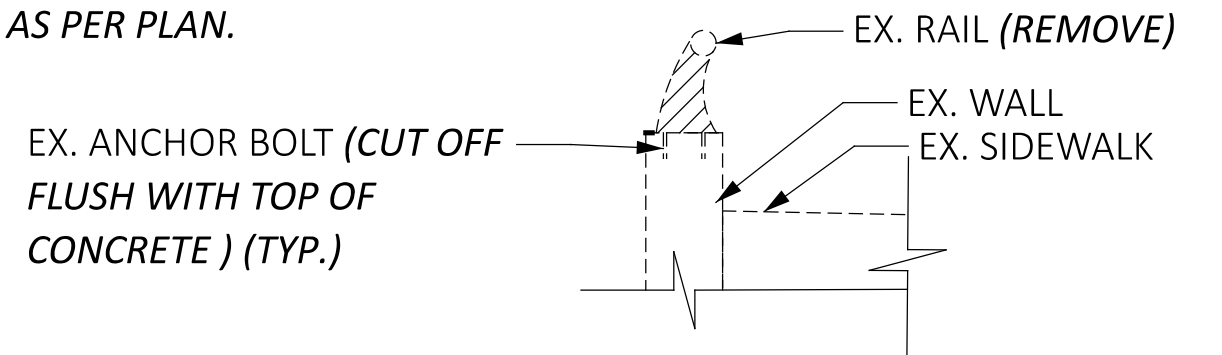
ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN DESCRIPTION:

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 BE DIRECTED TO BE REMOVED BY THE ENGINEER. THE DEPARTMENT WILL NOT PERMIT THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS. DO NOT BEGIN WORK UNTIL THE ENGINEER ACCEPTS THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING CONCRETE REINFORCEMENT TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH CONCRETE REINFORCEMENT THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING C&MS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP OR GREATER IF NOTED IN PLANS. REMOVE CONCRETE TO A ROUGH SURFACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES. THOROUGHLY CLEAN THE JOINT SURFACE BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE. SEAL WITH HMWM AS NOTED IN PLANS.

ITEM 202 - BRIDGE RAILING REMOVED, AS PER PLAN:

AT LOCATION 14 (CUY-00077-12.720L), CONTRACTOR SHALL REMOVE EXISTING METAL RAILING ATTACHED TO THE TOP OF WALL. EXISTING ANCHOR BOLTS SHALL BE CUT FLUSH WITH THE TOP OF CONCRETE. SEE DETAIL BELOW. INCLUDE ALL COSTS FOR THIS REMOVAL AT THE LINEAR FOOT CONTRACT PRICE ITEM 202 BRIDGE RAILING REMOVED, AS PER PLAN.



ITEM 202 - FENCE REMOVED, AS PER PLAN:

AT LOCATION 8 (CUY-18395-0.241R) AND LOCATION 11 (CUY-00077-11.897R), CONTRACTOR SHALL REMOVE EXISTING FENCE ATTACHED TO THE TOP OF WALL. EXISTING ANCHOR BOLTS SHALL BE CUT FLUSH WITH THE TOP OF CONCRETE. INCLUDE ALL COSTS FOR THIS REMOVAL AT THE PER LINEAR FOOT CONTRACT PRICE FOR ITEM 202 - FENCE REMOVED, AS PER PLAN.

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN:

DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING NONSHRINK, NONMETALLIC GROUT, 705.20 AND ROTARY-IMPACT (HAMMER) DRILL. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR WHILE MAINTAINING A MINIMUM CONCRETE COVER OF 3 INCHES. ALL WORK AND EQUIPMENT REQUIRED FOR LOCATING EXISTING BARS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 510, DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN.

ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN:

SPECIFIC CRACK REPAIR LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN:

SEAL CONCRETE LOCATIONS AS SPECIFIED IN THE PLANS. BRICK AREAS SHALL NOT BE SEALED. EPOXY-URETHANE SHALL BE FEDERAL COLOR NO. 595B-25630, LIGHT GREY (SEMIGLOSS)

ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN:

REMOVE EXISTING COATINGS IN LOCATIONS TO RECEIVE SEALING. IF EXISTING UTILITIES ARE LOCATED WITHING THE SPECIFIED REMOVAL LOCATIONS, THE COST FOR REMOVAL AND REINSTALLING THE UTILITIES SHALL BE INCLUDED IN THIS ITEM. CONTRACTOR SHALL ENSURE ANY EXISTING UTILITIES AND OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE REMOVAL OPERATIONS.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN:

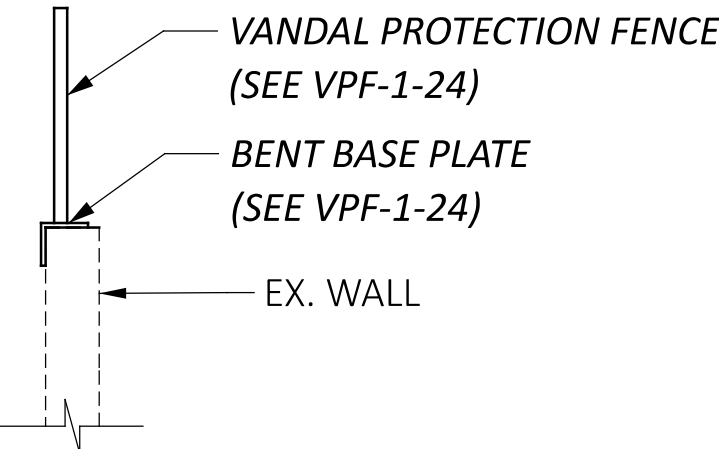
SPECIFIC PATCHING LOCATIONS SHALL BE DETERMINED BY THE ENGINEER. IF EXISTING UTILITIES ARE LOCATED WITHIN THE SPECIFIED PATCHING AREAS, THE COST FOR REMOVAL AND REINSTALLING THE UTILITIES SHALL BE INCLUDED IN THIS ITEM. PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIALS, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED STEEL REINFORCEMENT. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. CONTRACTOR SHALL ENSURE ANY EXISTING UTILITIES AND OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE PATCHING OPERATIONS.

IN ADDITION TO THE REQUIREMENTS OF C&MS 519, PLACE AND FINISH CLASS QC5 CONCRETE WITHIN THIRTY (30) DAYS OF BEGINNING THE REMOVAL OF DISINTEGRATED CONCRETE FOR A GIVEN PATCHING AREA. DO NOT BEGIN THE REMOVAL IF ANTICIPATED WEATHER CONDITIONS OR MATERIAL AVAILABILITY DOES NOT REASONABLY ALLOW THE THIRTY (30) DAY LIMITATION ON CONCRETE PLACEMENT TO BE MET. INCLUDE ALL COSTS ASSOCIATED WITH COMPLYING WITH THIS REQUIREMENT IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

ITEM 607 - VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN:

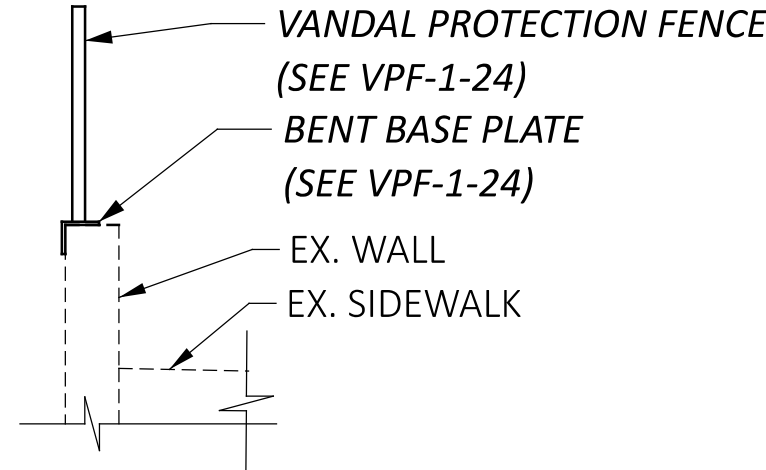
AT LOCATION 11 (CUY-00077-11.897R), CONTRACTOR SHALL INSTALL NEW 6' STRAIGHT VANDAL PROTECTION FENCE PER VPF-1-24 ALONG THE LENGTH OF THE WALL. SEE DETAIL BELOW. THE PVC COATING SHALL BE BLACK IN COLOR.

PRIOR TO ORDERING FENCE MATERIALS, FIELD MEASURE THE LOCATIONS OF EXISTING ANCHOR BOLTS AND RETAINING WALL JOINTS AND DETERMINE A LAYOUT OF PROPOSED FENCE POST LOCATIONS THAT AVOIDS INTERFERENCE. GENERALLY, THE PROPOSED LAYOUT SHALL USE AS MANY EQUAL POST SPACINGS AS PRACTICABLE, NOT EXCEEDING THE MAXIMUM POST SPACINGS STATED IN THE STANDARD DRAWING. PREPARE AND SUBMIT A DRAWING OF THE LAYOUT FOR REVIEW AND APPROVAL BY THE ENGINEER.



ITEM 607 - VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC, AS PER PLAN:

AT LOCATION 14 (CUY-00077-12.720L), CONTRACTOR SHALL INSTALL 8' STRAIGHT VANDAL PROTECTION FENCE PER VPF-1-24 ALONG THE LENGTH OF THE WALL. SEE DETAIL BELOW. THE PVC COATING SHALL BE BLACK IN COLOR. PRIOR TO ORDERING FENCE MATERIALS, FIELD MEASURE THE LOCATIONS OF EXISTING ANCHOR BOLTS AND RETAINING WALL JOINTS AND DETERMINE A LAYOUT OF PROPOSED FENCE POST LOCATIONS THAT AVOIDS INTERFERENCE. GENERALLY, THE PROPOSED LAYOUT SHALL USE AS MANY EQUAL POST SPACINGS AS PRACTICABLE, NOT EXCEEDING THE MAXIMUM POST SPACINGS STATED IN THE STANDARD DRAWING. PREPARE AND SUBMIT A DRAWING OF THE LAYOUT FOR REVIEW AND APPROVAL BY THE ENGINEER.



ITEM SPECIAL - STRUCTURE, MISC.: REMOVE AND REPLACE MAN DOOR:

AT LOCATION 1 (BRIDGE CUY-14684-0.350). THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO REMOVE AND REPLACE EXISTING ACCESS DOORS AND DOOR FRAMES IN ABUTMENTS. REPLACEMENT DOORS SHALL BE COMMERCIAL GRADE FLUSH MOUNT DOORS AS MANUFACTURED BY STEELCRAFT OR AN APPROVED EQUAL AND SHALL HAVE THE FOLLOWING FEATURES:

- MINIMUM 14 GAGE DOOR, 12 GAGE FRAME, A60 GALVANIZED OR BETTER
- DOOR SHALL BE STEEL STIFFENED WITH REINFORCEMENT AT THE LOCK LOCATIONS
- MINIMUM OF 3 SAFETY STUDS ON HINGE SIDE
- KNOB DOOR HANDLE
- TAMPER PROOF OR NON-REMOVABLE HINGES
- DOORS PREPPED FOR INSTALLATION INTO CONCRETE
- DOORS SHOULD BE OUTSWING
- THREE LOCKSETS, ALL KEYED ALIKE

DOOR FRAMES SHALL BE ANCHORED INTO THE EXISTING CONCRETE AS RECOMMENDED BY THE MANUFACTURER. EXISTING DOORS ARE APPROXIMATELY 36" X 72". CONTRACTOR SHALL FIELD MEASURE DOOR OPENINGS PRIOR TO ORDERING MATERIALS. INCLUDE ALL COSTS FOR LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK IN THE CONTRACT PRICE FOR SPECIAL- STRUCTURE, MISC: REMOVE AND REPLACE DOOR.

DESIGN AGENCY

AECOM
564 White Pond Drive
Akron, OH 44320
(330) 836-9111
www.aecom.com

DESIGNER

PN

REVIEWER

MRW 07/10/26

PROJECT ID

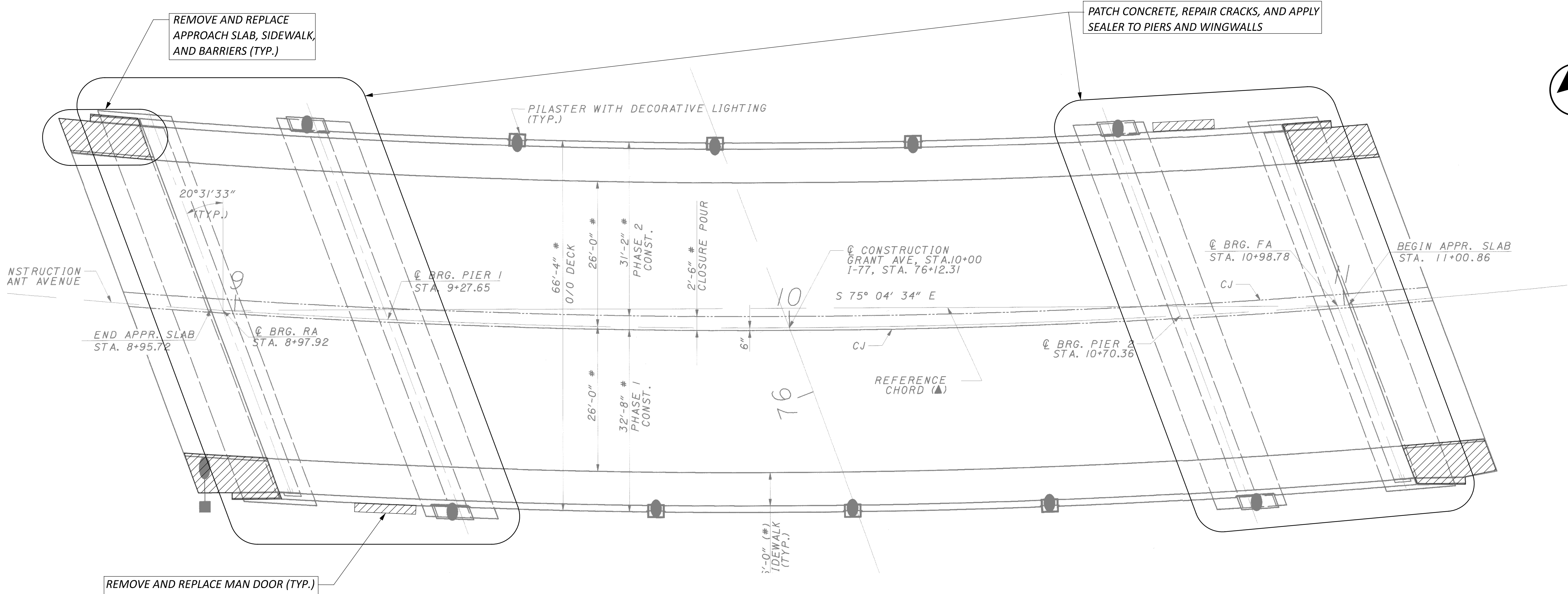
105743

SHEET

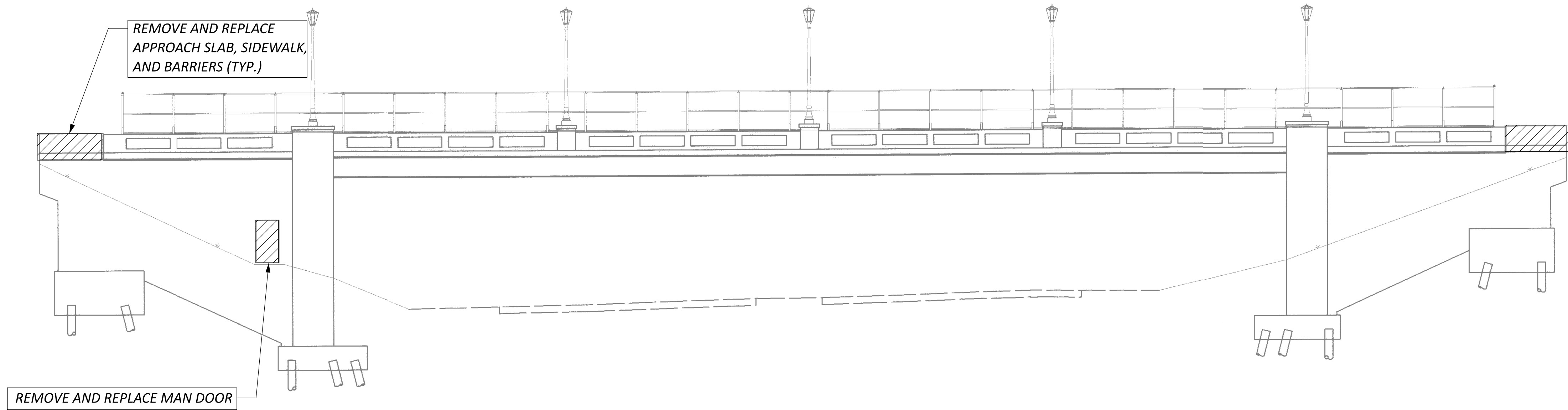
P.3

TOTAL

P.28



PLAN



ELEVATION

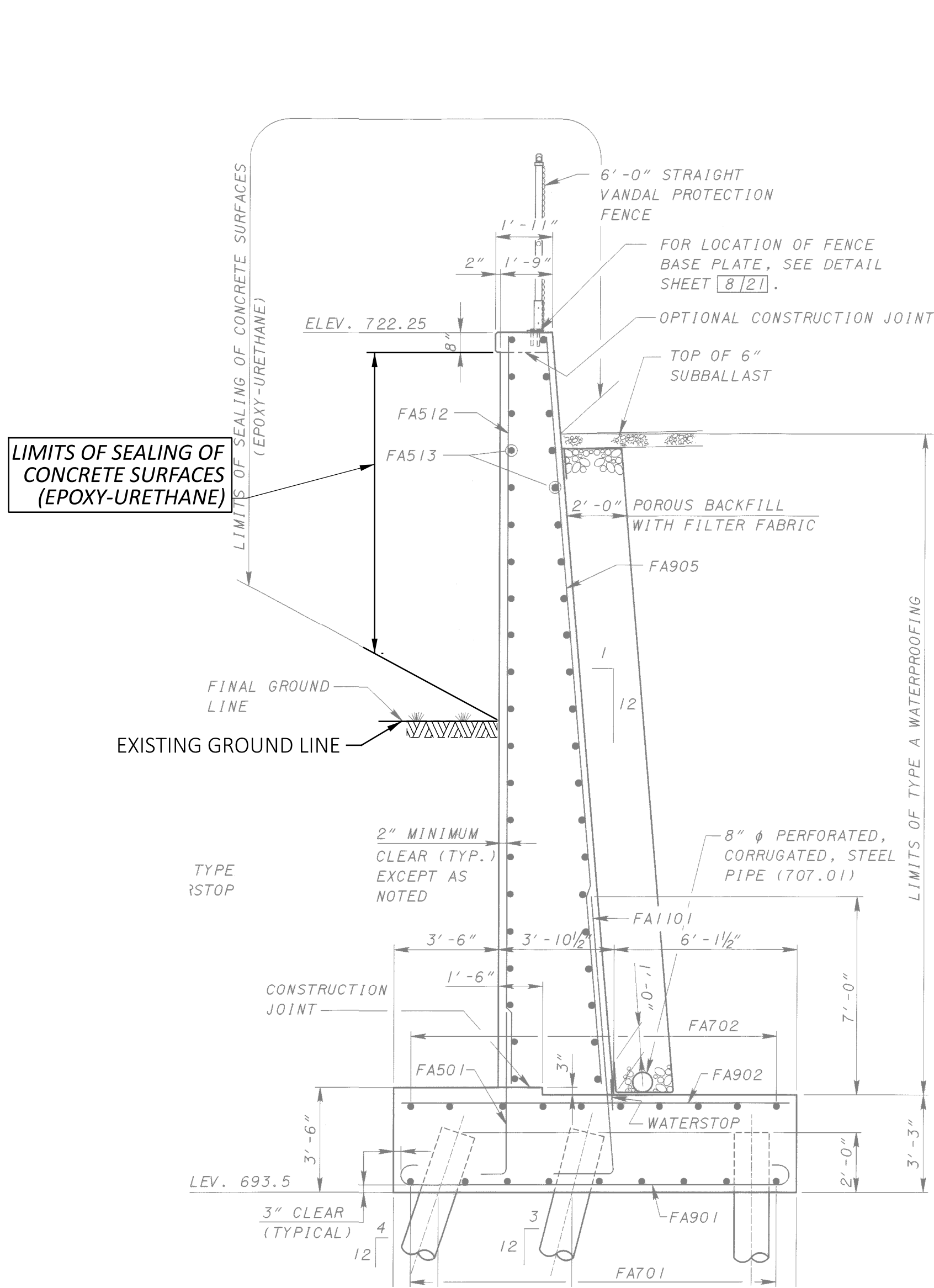
NOTES:
1. **NOT USED.**

2. IMAGES SHOWN ARE TAKEN FROM EXISTING PLANS.

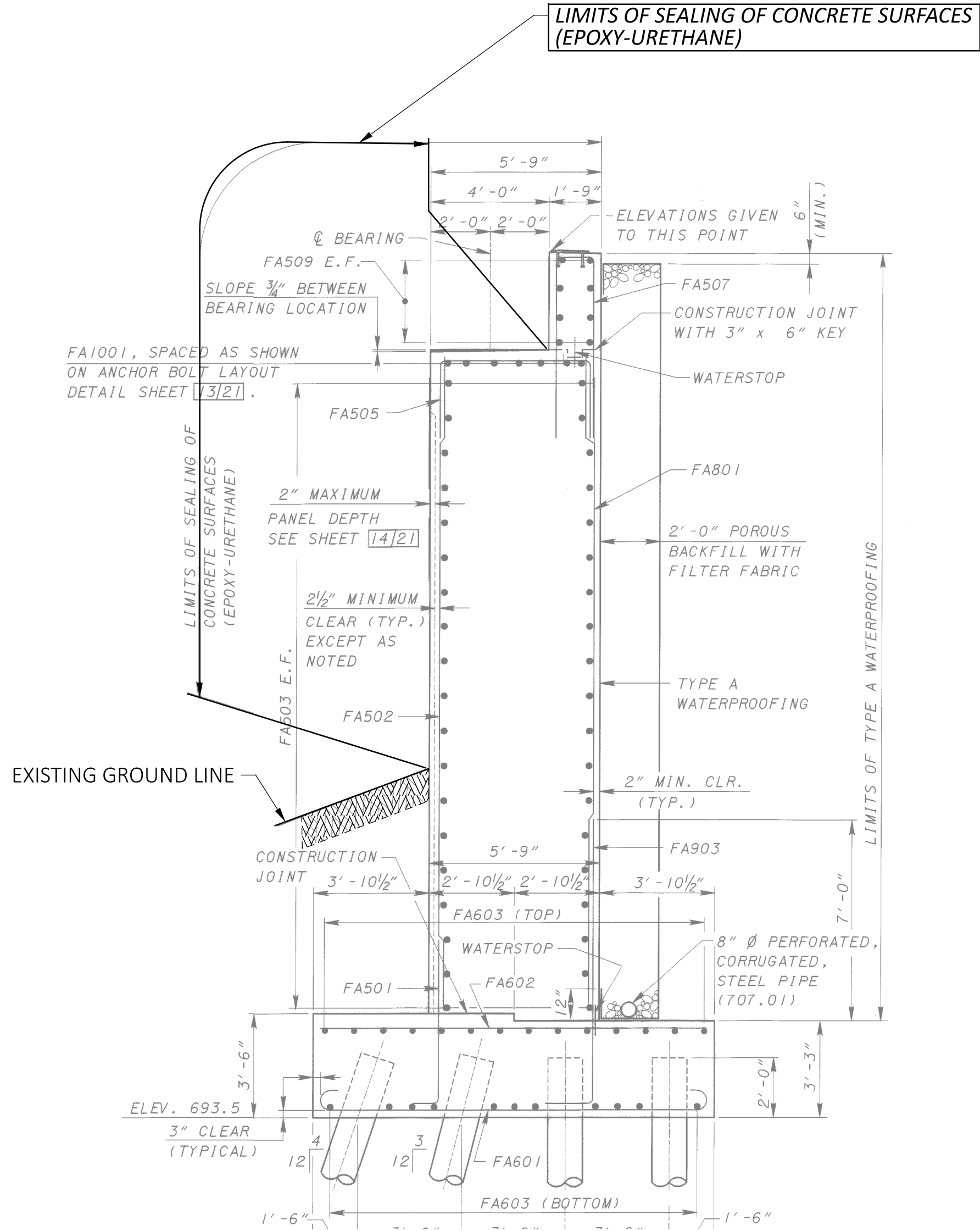
LEGEND:
LIMITS OF REMOVAL

GENERAL PLAN - LOCATION 1
BRIDGE NO. CUY-14684-0.350
GRANT AVE. OVER I.R. 77

SFN	
1806378	
DESIGN AGENCY	
AECOM 564 White Pond Drive Akron, OH 44320 (330) 836-9111 www.aecom.com	
DESIGNER	CHECKER
PN	TMB
REVIEWER	
MRW 07/10/26	
PROJECT ID	
105743	
SUBSET	TOTAL
1	7
SHEET	TOTAL
P.5	P.28



WINGWALL TYPICAL SECTION



ABUTMENT TYPICAL SECTION

NOTES:
1. IMAGE SHOWN IS A TYPICAL SECTION AND DOESNT REPRESENT THE EXACT DIMENSIONS.

ESTIMATED QUANTITIES						CALCULATED BY: PN
						CHECKED BY: JDM
ITEM ODOT	EXT.	PARTICIPATION 04/IMS	TOTAL	UNIT	DESCRIPTION	REF. SHEET
201	11001	LS	LS		CLEARING AND GRUBBING, AS PER PLAN	P.3
512	10101	420	420	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	P.3
512	10601	100	100	FT	CONCRETE REPAIR BY EPOXY INJECTION, AS PER PLAN	P.3
512	74001	420	420	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	P.3
514	00050	14,513	14,513	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
514	00056	14,513	14,513	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
514	00060	14,513	14,513	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
514	00066	14,513	14,513	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
514	00504	22	22	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
514	10000	6	6	EACH	FINAL INSPECTION REPAIR	
519	11101	10	10	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	P.3