# **City of Plymouth** Central Parking Structure Restoration 2022 Plymouth, Michigan

Issued for Bidding & Construction 7/22/2022

Project Number: 220597



fishbeck.com 800.456.3824 1515 Arboretum Drive, Grand Rapids, Michigan

<u>AREA MAP</u>

PROJECT LOCATION

OT INFO: 7/25/2022 12:00:27 PM C:\Work\Revit\2022\_PK\_220597\_dan.brownLDPWZ.rvt

PROJECT LOCATION



SHEET INDEX         Sheet Number         G001         G002         G003         SR101         SR102         SR103         SR104         SR501         SR502         SR511	Sheet Name COVER SHEET GENERAL NOTES GENERAL NOTES LEVEL 2 PLAN EAST STAIR REPAIR PLAN EAST STAIR REPAIR PLAN EAST STAIR REPLACEMENT PLANS RESTORATION DETAILS STRUCTURAL DETAILS WATERPROOFING DETAILS	Engineers   Architects   Scientists   Constructors
		Central Parking Structure Restoration 2022
PUBLIC ACT 53, 1974 THREE (3) FULL WOI HOLIDAYS) PRIOR T "MISS DIG" PARTICII THIS DOES NOT REL	C MISS DIG	7/22/2022       BIDDING & CONSTRU         Drawn By DEB       Designer FGE         Reviewer JBT       Manager JBT         Hard copy is intended to 24"x36" when plotted. Sca indicated and graphic quality

1.1 ALL COD A. B.	<ul> <li><b>1 - GENERAL REQUIREMENTS</b></li> <li><b>DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL,</b> DES/ORDINANCES AND FIRE CODES, INCLUDING THE FOLLOWING:</li> <li>CITY OF PLYMOUTH, MICHIGAN CODES AND ORDINANCES, ADOPTED 6/20/2022. MICHIGAN BUILDING CODE, 2015 EDITION</li> <li><b>SCIAL INSPECTIONS</b></li> <li>THE OWNER WILL ENGAGE ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE IN: TESTING DURING CONSTRUCTION. ALL SPECIAL INSPECTIONS AND TESTING SHALL CONF SPEC 014100 AND THE CODES LISTED IN ITEM 1.1.</li> <li>SPECIAL INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE LOCA INSPECTIONS SHALL NOT RELIEVE THE OWNER AND CONTRACTOR FROM REQUESTING TO INSPECTIONS REQUIRED BY IBC SECTION 110.</li> <li>SPECIAL INSPECTORS SHALL BE GIVEN PROPER NOTICE AND ACCESS TO THE SITE TO PE AS NECESSARY.</li> <li>REQUIRED CATEGORIES OF SPECIAL INSPECTIONS:</li> </ul>	ISPECTIONS AND MATERIALS FORM TO THE REQUIREMENTS OF AL BUILDING OFFICIAL. SPECIAL	1.9	CONCI A.	<ol> <li>HYDRO-DEMOLITION,ETC):</li> <li>DISCHARGE OF WATER, DUST,</li> <li>STORM DRAINS MUST BE PROT</li> <li>ANY WATER USED DURING CON COLLECTED FOR PROPER DISF</li> <li>GOOD HOUSEKEEPING PRACTI</li> </ol>
А. В. <b>1.2 SPE</b> А. В. С. D.	CITY OF PLYMOUTH, MICHIGAN CODES AND ORDINANCES, ADOPTED 6/20/2022. MICHIGAN BUILDING CODE, 2015 EDITION <b>ECIAL INSPECTIONS</b> THE OWNER WILL ENGAGE ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE IN: TESTING DURING CONSTRUCTION. ALL SPECIAL INSPECTIONS AND TESTING SHALL CONF SPEC 014100 AND THE CODES LISTED IN ITEM 1.1. SPECIAL INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE LOCA INSPECTIONS SHALL NOT RELIEVE THE OWNER AND CONTRACTOR FROM REQUESTING TO INSPECTIONS REQUIRED BY IBC SECTION 110. SPECIAL INSPECTORS SHALL BE GIVEN PROPER NOTICE AND ACCESS TO THE SITE TO PE AS NECESSARY. REQUIRED CATEGORIES OF SPECIAL INSPECTIONS:	FORM TO THE REQUIREMENTS OF AL BUILDING OFFICIAL. SPECIAL	1.9		<ol> <li>ANY WATER USED DURING CON COLLECTED FOR PROPER DISF</li> <li>GOOD HOUSEKEEPING PRACTI</li> <li>RETE WASHOUT</li> </ol>
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В. С. D.	TESTING DURING CONSTRUCTION. ALL SPECIAL INSPECTIONS AND TESTING SHALL CONF SPEC 014100 AND THE CODES LISTED IN ITEM 1.1. SPECIAL INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE LOCA INSPECTIONS SHALL NOT RELIEVE THE OWNER AND CONTRACTOR FROM REQUESTING TO INSPECTIONS REQUIRED BY IBC SECTION 110. SPECIAL INSPECTORS SHALL BE GIVEN PROPER NOTICE AND ACCESS TO THE SITE TO PE AS NECESSARY. REQUIRED CATEGORIES OF SPECIAL INSPECTIONS:	FORM TO THE REQUIREMENTS OF AL BUILDING OFFICIAL. SPECIAL		A.	
D.	SPECIAL INSPECTORS SHALL BE GIVEN PROPER NOTICE AND ACCESS TO THE SITE TO PE AS NECESSARY. REQUIRED CATEGORIES OF SPECIAL INSPECTIONS:				DO NOT DISCHARGE CONCRETE, MOR SYSTEM. PERFORM WASHOUT OF CON 1. DESIGNATED AREAS SHOULD E
	REQUIRED CATEGORIES OF SPECIAL INSPECTIONS:	RFORM TESTING AND INSPECTION			<ul> <li>WATER. PLACE DESIGNATED AI ALL DESIGNATED AREAS SHOU</li> <li>2. IF ONLY A SMALL AMOUNT OF C</li> </ul>
E.	<ol> <li>STEEL CONSTRUCTION (IBC SECTION 1705.2)</li> <li>CONCRETE CONSTRUCTION (IBC SECTION 1705.3)</li> <li>SOILS (IBC SECTION 1705.6)</li> </ol>			В. С.	UTILIZED A LINED ROLL-OFF BC ONCE CONCRETE WASHOUT HAS HAR SHOULD OCCUR ON A REGULAR BASIS WASHOUT FACILITIES MUST BE CLEAN
E.	4. INSPECTION OF FABRICATORS IS NOT REQUIRED WHERE THE FABRICATOR IS APP	ROVED IN ACCORDANCE WITH IBC.	1.10	WAST	E DISPOSAL - WASH WATER, PAINTS, S
	<ul> <li>DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:</li> <li>1. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO VERIFY THAT DOCUMENTS.</li> </ul>			A.	ANY USED CHEMICAL PRODUCTS OR S RAGS, AND CONTAINERS SHOULD BE F
	2. THE SPECIAL INSPECTOR SHALL NOT AUTHORIZE OR APPROVE DEVIATIONS FROM DEVIATIONS FROM THE CONTRACT DOCUMENTS MUST BE INITIATED BY THE CONT FOR INFORMATION (RFI) AND APPROVED BY THE ENGINEER OF RECORD PRIOR TO	RACTOR VIA A WRITTEN REQUEST	1.11	QUAN	
	3. THE SPECIAL INSPECTOR SHALL FURNISH WRITTEN INSPECTION REPORTS TO THE DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CON CORRECTIONS ARE NOT MADE, THE BUILDING OFFICIAL AND ENGINEER AND/OR A	TRACTOR FOR CORRECTION. IF		A.	CONTRACTOR SHALL NOTIFY ENGINEE ACTUAL QUANTITIES IN THE FIELD. SUI WITH THE WORK.
3 DEF	ERRED SUBMITTALS		1.12	CONS	TRUCTION PHASING
A. B.	IN ACCORDANCE WITH IBC 107.3.4.1 AND LOCAL BUILDING DEPARTMENT REQUIREMENTS, DEFINED AS THOSE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME O AND WHICH ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIO DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE PRIOR APPROVAL OF THE BUILDING OF	OF THE APPLICATION FOR PERMIT OD.		А. В.	CONTRACTOR SHALL BE RESPONSIBLE WITH OWNER FOR ALL CONSTRUCTION CONTRACTOR SHALL MAINTAIN TRAFF
D.	ENGINEER OF ANY SUBMITTAL ITEMS SHALL HAVE PRIOR APPROVAL OF THE BUILDING OF ENGINEER OF RECORD SHALL LIST THE DEFERRED SUBMITTALS ON THE PLANS AND CON DEFERRED SUBMITTAL DOCUMENTS FOR REVIEW BY THE BUILDING OFFICIAL.			C. D.	AREAS OF PARKING ABOVE AND AROL
C.	ALL DEFERRED ITEMS SHALL BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE LOCATED.	STATE WHERE THE PROJECT IS		D. E.	PROTECT PEDESTRIAN TRAFFIC THRO
D.	DOCUMENTS FOR DEFERRED SUBMITTAL SHALL BE SUBMITTED TO THE ARCHITECT OR E 30 DAYS PRIOR TO FABRICATION. DEFERRED SUBMITTAL DOCUMENTS WILL BE REVIEWE OF RECORD FOR GENERAL CONFORMANCE WITH CONTRACT DOCUMENTS. A COPY OF TI	D BY THE ARCHITECT OR ENGINEER HE DEFERRED SUBMITTAL		F.	STRUCTURE. IT WILL BE NECESSARY TO SCHEDULE EXISTING BUILDING OPERATIONS. CON
	DOCUMENTS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL WITH A NOTATION INDICAT SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED. THE DEFERRED SUBMITTAL ITEMS SHAL DESIGN AND SUBMITTAL DOCUMENTS HAVVE BEEN APPROVED BY THE BUILDING OFFICIA	LL NOT BE INSTALLED UNTIL THEIR		G. H.	ONE STAIR TOWER MUST REMAIN OPE EGRESS CANNOT BE MAINTAINED WHI CONTRACTOR SHALL SUBMIT PHASING
E.	DEFERRED SUBMITTAL ITEMS: 1. STEEL STAIRS, STRINGERS, AND LANDINGS 2. GUARDRAILS AND HANDRAILS			I.	REVIEW PRIOR TO START OF CONSTRU- PROVIDE OWNER APPROVED SIGNAGE DIRECT VEHICLES AN DPEDESTRIANS
.4 LOA	3. STEEL CONNECTIONS			J.	CONTRACTOR SHALL ONLY CLOSE AR
A LUA	LIVE LOADING:			K. L.	CONTRACTOR MAY NEED TO RECAPTU CONCRETE REPAIRS HAVE OCCURRED CONTRACTOR SHALL PROVIDE A WEEL
	SUPPORTED PARKING AND DRIVE AREAS:     I. UNIFORM LOAD     II. CONCENTRATED LOAD ACTING ON 20 SQ. IN. AREA	40 PSF 3000 LBS	1.13		WORK AND SHORING
	<ol> <li>SLAB ON GRADE:</li> <li>I. UNIFORM LOAD</li> <li>GONCENTRATED LOAD ACTING ON 20 SQ. IN. AREA</li> </ol>	100 PSF 3000 LBS		A.	DRAWINGS DO NOT INCLUDE NECESS/ CONTRACTOR IS RESPONSIBLE FOR A
	3. STAIRS AND EXITS: i. UNIFORM LOAD	100 PSF		B.	RIGGING, GUYS, SCAFFOLDING, FORM CONTRACTOR IS RESPONSIBLE FOR P
	<ul> <li>ii. CONCENTRATED LOAD ACTING ON 4 SQ. IN. AREA</li> <li>4. HANDRAILS AND GUARDS:</li> <li>i. UNIFORM LOAD</li> </ul>	300 LBS 50 PLF	1.14	CONC	RETE DELAMINATION REPAIR
	ii. CONCENTRATED LOAD 5. INTERMEDIATE RAILS, BALUSTERS, AND PANEL FILLERS:	200 LBS		А. В.	SOUND ALL AREAS AS INDICATED ON I SAWCUT AND CHIP AT PERIMETER OF
В.	i. CONCENTRATED LOAD ACTING ON 1 SQ. FT. AREA MAXIMUM SNOW LOADING: 1. GROUND SNOW LOAD (Pg)	50 LBS 38.0 PSF		C. D.	REMOVE EXISTING CONCRETE BEYON REMOVE EXISTING CONCRETE BEYON
	<ol> <li>GROUND SNOW LOAD (Fg)</li> <li>FLAT ROOF SNOW LOAD (Pf)</li> <li>EXPOSURE FACTOR (Ce)</li> </ol>	32.0 PSF 1.0		E.	INDICATED IN THE REPAIR DETAILS. PROVIDE UNIFORM HORIZONTAL SURF
	<ol> <li>THERMAL FACTOR (Ct)</li> <li>IMPORTANCE FACTOR (Is)</li> </ol>	1.2 1.0		F.	ONE BAR OR WIRE. CLEAN (AND COAT) ALL EXPOSED REIN
C.	LATERAL LOADS 1. THE LATERAL LOAD SYSTEM OF THE EXISTING STRUCTURE IS NOT BEING MODIFIED.			G. H.	PROVIDE SPRAY OR BRUSH APPLIED E PROVIDE PATCH MATERIAL AS INDICAT
.5 DAT				і. J. K.	FINISH OF UNFORMED CONCRETE PAT WHERE APPLICABLE CHAMFER CORNE CONCRETE PATCH SURFACES TO BE F
A.	ALL STRUCTURAL ELEVATIONS ARE REFERENCED FROM MEAN SEA LEVEL (MSL) UNLESS NOTED OTHERWISE			L. M.	NOMINAL SIZES OF MEMBERS ARE IND NOMINAL PATCH DEPTHS ARE INDICAT
6 00	INSTRUCTION AND COORDINATION NOTES			N.	PAY BASIS SHALL BE AS INDICATED ON
1.6 CON A.	METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILIT		2.1		EXISTING CONDITIONS
В.	CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE ALL STAGES OF CONSTRUCTION. CONSTRUCTION MEANS, METHODS, PROCEDURES, BRACING, AND SAFETY ARE THE SOLE			A.	FOR ADDITIONAL INFORMATION ON EX & BLACK ASSOCIATES, INC DATED 2/7/ CO DATED 4/29/1984.
D.	CONTRACTOR OR SUBCONTRACTOR. THE STRUCTURAL DRAWINGS REPRESENT THE CO FINISHED STATE.	MPLETE STRUCTURAL SYSTEM IN ITS		B.	FIELD VERIFY THE LOCATIONS OF EXIS
C.	OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUPPORTING FORMWORK FOR ELEVATED AND FOR REFERENCE OF CONSTRUCTION SHALL NOT BE REMOVED BEFORE THE CONCRETE HAS GAINED SUFFICIENT STRENGTH TO SAFELY SUPPORT PRIOR TO CONSTRUCT			WHERE DIMENSIONS ARE INDICATED F AND FOR REFERENCE ONLY. CONTRA PRIOR TO CONSTRUCTION. ANY VARI/ DRAWINGS SHALL BE REPORTED TO E	
D.	ALL OMISSIONS OR CONFLICTS AMONG VARIOUS ELEMENTS OF DRAWINGS AND/OR SPEC ENGINEER BEFORE PROCEEDING WITH ANY WORK.				
E.	NO STRUCTURAL MEMBERS SHALL BE PENETRATED OR CUT FOR PIPES, DUCTS, ETC., UN APPROVED IN WRITING BY ENGINEER. ALL PENETRATIONS SHALL BE SUBMITTED TO ENG APPROVAL.	SINEER OF RECORD FOR REVIEW AND			
F. G.	THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS AN DISCIPLINES AND COORDINATED WITH THE WORK OF ALL TRADES. SCALES NOTED ON THE DRAWINGS ARE FOR GENERAL REFERENCE ONLY. NO DIMENSIO				
Н.	OBTAINED BY DIRECT SCALING OF THE DRAWINGS. IF DRAWINGS AND SPECIFICATIONS ARE IN CONFLICT, THE MOST STRINGENT RESTRICTIONS				
	GOVERN. VISITS TO JOB SITE BY ENGINEER TO OBSERVE CONSTRUCTION DO NOT IN ANY WAY MEA WORK, NOR RESPONSIBILITY FOR COORDINATION, SUPERVISION, NOR SAFETY AT JOB SIT	TE.			
I.					
J.	CONTROLS".				
J. K. L.	CONTROLS". LOCAL NOISE ORDINANCE WILL GOVERN OPERATIONS. FIRE SUPPRESSION SYSTEM MUST BE MAINTAINED IN THE STRUCTURE AT ALL TIMES EXC				
J. K.	CONTROLS". LOCAL NOISE ORDINANCE WILL GOVERN OPERATIONS.				
J. K. L. M.	CONTROLS". LOCAL NOISE ORDINANCE WILL GOVERN OPERATIONS. FIRE SUPPRESSION SYSTEM MUST BE MAINTAINED IN THE STRUCTURE AT ALL TIMES EXC TAKE EXTREME CAUTION NOT TO DAMAGE IN ANY WAY THE EXISTING ELECTRICAL SERVIC COMPUTER LINES, ETC. LOCATE AND MARK ALL SERVICE LINES.				

NTS APPLY TO CONCRETE AND SAW CUTTING WORK (CUTTING, GRINDING, DRILLING,

R, DUST, OR DEBRIS FROM CONCRETE WORK TO STORM OR SANITARY SYSTEM IS PROHIBITED.

#### BE PROTECTED FROM DUST AND DEBRIS. RING CONCRETE WORK (INCLUDING SWEEPING AND SAW CUTTING) MUST BE CONTAINED AND PER DISPOSAL. SUGGESTED CONTROLS INCLUDE WET VACUUM OR ABSORBENTS.

PRACTICES MUST BE EMPLOYED AT THE JOBSITE. MINIMIZE DUST.

# ETE, MORTAR, OR GROUT INTO STORM DRAINS, CATCH BASINS, OR TO THE SANITARY SEWER OF CONCRETE TRUCKS IN DESIGNATED AREAS OR OFFSITE.

SHOULD BE CLEARLY LABELED. THEY SHOULD BE IN A PIT TO PREVENT RUNOFF OF WASTE NATED AREAS A MINIMUM OF 50 FEET FROM STORM DRAINS, BODIES OF WATER, AND DITCHES. AS SHOULD BE LINED TO PREVENT SEEPAGE AND SHOULD HAVE A BARRIER.

UNT OF CONCRETE WASHING IS TO OCCUR, AN\ ALTERNATIVE TO A DESIGNATED AREA IS TO L-OFF BOX OR DRUM (FOR VERY SMALL QUANTITIES).

HAS HARDENED, BREAK UP AND DISPOSE OF PROPERLY. DISPOSAL OF HARDENED CONCRETE LAR BASIS. BE CLEANED, OR NEW FACILITIES PROVIDED, ONCE THE WASHOUT AREA IS 75% FULL.

# AINTS, SOLVENTS, AND OTHER CHEMICALS

CTS OR SOLVENTS INCLUDING CHEMICAL AND SOLVENT MIXTURES, RESIDUES, CONTAMINATED OULD BE EVALUATED AND DISPOSED OF PROPERLY.

#### ENGINEER IF QUANTITIES SHOWN ON DRAWINGS ARE SUBSTANTIALLY DIFFERENT FROM THE FIELD. SUBJECT LOCATIONS SHALL BE REVIEWED WITH THE ENGINEER PRIOR TO PROCEEDING

# PONSIBLE FOR COORDINATION OF ALL CONSTRUCTION ACTIVITY AND SHALL COOPERATE FULLY TRUCTION PHASING.

AIN TRAFFIC FLOW TO ALL LEVELS OF THE STRUCTURE. AND AROUND SHORING SHALL BE CLOSED TO PARKING, PRIOR TO REPAIRS AND SHORING.

CTOR TO BE LOCATED ON SITE. CONTRACTOR SHALL COORDINATE WITH OWNER.

FIC THROUGHOUT STRUCTURE AND ON SIDEWALKS AROUND PERIMETER OF PARKING

# CHEDULE CONTRACTOR DELIVERIES AND WASTE HAULING TO MINIMIZE INTERFERENCE WITH

ONS. CONTRACTOR SHALL COORDINATE WITH OWNER. MAIN OPEN AT ALL TIMES. COORDINATE WITH THE OWNER AND ENGINEER IF EMERGENCY AINED WHILE WORK IS BEING PERFORMED.

PHASING PLANS, COMPLETE WITH TEMPORARY SIGNAGE AN DTRAFFIC FLOW DIAGRAMS, FOR CONSTRUCTION.

SIGNAGE AT THE BEGINNING OF THE CONSTRUCTION PHASE NECESSARY TO ADEQUATELY STRIANS TO ALTERNATE SAFE ROUTES.

CLOSE AREAS WHERE WORK IS CURRENTLY BEIGN PERFORMED.

#### RECAPTURE AREAS TO PERFORM WATERPROOFING AND/OR STAINING WORK AFTER THE CCURRED

DE A WEEKLY WORK SCHEDULE PRIOR TO PERFORMING WORK THE UPCOMING WEEK.

#### NECESSARY COMPONENTS FOR SAFETY OF BUILDING OR EQUIPMENT DURING CONSTRUCTION. LE FOR ALL WORK RELATING TO CONSTRUCTION, ERECTION METHODS, BRACING, SHORING, IG, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM WORK INDICATED.

BLE FOR PROVIDING APPROPRIATE SHORING.

# TED ON DRAWINGS AND MARK PERIMETER OF AREAS.

ETER OF DELAMINATED AREAS AS INDICATED IN THE REPAIR DETAILS. E BEYOND DELAMINATION TO SOUND CONCRETE AS INDICATED IN THE REPAIR DETAILS. E BEYOND DELAMINATION EXPOSING EXISTING REINFORCEMENT STEEL PERIMETER AS

ITAL SURFACE BETWEEN ADJACENT BARS OR WIRES WHEN CAVITY ENCOMPASSES MORE THAN

DSED REINFORCEMENT STEEL AND OTHER EMBEDDED STEEL. APPLIED BONDING GROUT TO EXCAVATED CAVITY SURFACE.

INDICATED IN GENERAL NOTE 3.2. RETE PATCH SURFACES TO MATCH ADJACENT AREAS.

ER CORNERS TO MATCH ADJACENT AREAS.

S TO BE PAINTED TO MATCH ADJACENT AREAS. SARE INDICATED ON DETAILS, ACTUAL SIZES MAY VERY.

E INDICATED ON DETAILS, ACTUAL DEPTH MAY VARY. CATED ON THE BID FORM.

#### ON ON EXISTING STRUCTURE, REFER TO ORIGINAL DESIGN DRAWINGS BY HOBBS ATED 2/7/1984 AND PRECAST SHOP DRAWINGS BY SHELBY PRECAST CONCRETE

S OF EXISTING UTILITIES, STRUCTURES, ETC AND NOTIFY ENGINEER OF ANY

#### DICATED FOR EXISTING STRUCTURES OR UTILITIES, THEY ARE APPROXIMATE CONTRACTOR SHALL VERIFY IN FIELD (VIF) ALL DIMENSIONS AND ELEVATIONS ANY VARIATIONS BETWEEN EXISTING DIMENSIONS AND/OR ELEVATIONS ON RTED TO ENGINEER.

**DIVISION 03 - CAST-IN-PLACE CONCRETE** 

# 3.1 ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

ACI 318-19 Α. B. ACI 362.1R-12

REFER TO DIVISION 3 SPECIFICATION "CAST-IN-PLACE CONCRETE FOR PARKING STRUCTURES" FOR INFORMATION NOT C. LISTED HEREIN

# 3.2 CONCRETE MIXES

		MAXIMUM	MAX W/C
DESCRIPTION	<u>F'C (PSI)</u>	CHLORIDE ION	RATIO
FOUNDATIONS	4000 STD	0.30	0.50
COLUMN & COLUMN CAP	4000 CNA2/SPA	0.15	0.40
SLAB-ON-GRADE	4500 STD/SF	0.15	0.40
SLAB TOPPING REPAIR	5000 CNA2/F	0.06	0.40
		OR REFER TO NOTE (10	)
CEILINGS/FLANGE REPAIR		REFER TO NOTE (11)	

# COLUMN/BEAM/WALL REPAIR

NOTES: (1) STD: DESIGNATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION SECTION 033126 WHICH DOES NOT REQUIRE SILICA FUME, GGBS/FLY ASH, OR CALCIUM NITRITE ADMIXTURE (2)

REFER TO NOTE (11)

- GAL/CY OF CALCIUM NITRITE CORROSION-INHIBITOR ADMIXTURE SPA: DESIGNATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION SECTION 033126 WHICH CONTAINS (4) 15% MINIMUM OF GGBS BY WEIGHT OF CEMENT. FLY ASH IS PERMITTED UP TO 15% WITH TOTAL OF FLY ASH AND GGBS NOT
- TO EXCEED 35% BY WEIGHT OF CEMENT. (5) SF: DESIGNATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION SECTION 033126 WHICH CONTAINS 4-1/2 LBS/CY OF STRUCTURAL MACRO FIBERS
- (6) F: DESIGNATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION SECTION 033126 WHICH CONTAINS 1-1/2
- LBS/CY OF FIBRILLATED FIBER REINFORCEMENT OR 1 LBS/CY MICROFILAMENT REINFORCEMENT AVERAGE AIR-ENTRAINED VALUES ARE FOR IN-PLACE CONCRETE. TOLERANCE ON TOTAL AIR CONTENT IS 1-1/2% PER ACI
- (7)
- (8) ALL NORMALWEIGHT CONCRETE SHALL HAVE A DENSITY OF APPROXIMATELY 145 PCF UNLESS NOTED OTHERWISE. THE WEIGHT OF FLY ASH AND GGBS MAY BE INCLUDED WITH THE WEIGHT OF CEMENT.
- (10) CONTRTACTOR MAY USE READY MIX CONCRETE OR POLYMER REPAIR MORTAR REPAIR MATERIAL. REFER TO SPECIFICATIONS.
- (11) VERTICAL/OVERHEAD POLYMER MODIFIED REPAIR MORTAR. REFER TO SPECIFICATIONS.

# 3.3 CEMENT

A. ASTM C 150 TYPE I OR III B. ASTM C 595 TYPE IL

# 3.4 AGGREGATES

A. ASTM C 33

# 3.5 MILD REINFORCEMENT (ZONE III/CC-2)

- MILD REINFORCEMENT, ASTM A 615 GRADE 60 A
- MILD REINFORCEMENT (LOW ALLOY WELDABLE), ASTM A 706 GRADE 60 B
- MECHANICAL TENSION AND COMPRESSION SPLICES AS INDICATED ON DRAWINGS
- MECHANICAL TERMINATION SIZES AS INDICATED ON DRAWINGS D EPOXY COATING FOR PLAIN AND DEFORMED MILD REINFORCEMENT, ASTM A 775
- (WELDED PLAIN WIRE FABRIC SHEETS, ASTM A 185, GRADE 65) (WELDED DEFORMED WIRE FABRIC SHEETS, ASTM A 497, F. GRADE 65)
- EPOXY COATING FOR PLAIN WELDED WIRE FABRIC, ASTM A 884 G.
- EPOXY COATING FOR DOWEL BARS SHALL BE THE SAME AS SPECIFIED FOR REINFORCEMENT TO BE SPLICED Н.
- WELDING FOR REINFORCING STEEL, AWS D1.4 CONCRETE PROTECTION SHALL BE PER ACI 362.1R, EXCEPT AS NOTED ON DRAWINGS AND SPECIFIED HEREIN. SPECIFIC J. DRAWINGS AND DETAILS MAY OR MAY NOT INDICATE EPOXY COATING OR UNCOATED REINFORCING. IN AREAS OF DISPUTE, THIS SCHEDULE SHALL GOVERN IN ALL CASES.

DESCRIPTION	COVER	PROTECTION
FOUNDATIONS	3"	UNCOATED
COLUMNS		
TIES	2" ALL SIDES	EPOXY COAT
VERTICAL REINFORCING	2 1/2"	UNCOATED
COLUMN CAPS		
STIRRUPS	2 1/2" TOP 1 1/2" SIDE & BOTTOM	EPOXY COATI
TOP REINFORCING	-	EPOXY COATI
SIDE REINFORCING	-	UNCOATED
BOTTOM REINFORCING	-	UNCOATED
TOPPING SLAB	1 1/2"	EPOXY COATI
SLAB-ON-GRADE	2" FROM TOP	UNCOATED

3.6 CONCRETE ACCESSORIES

MISCELLANEOUS STEEL SHAPES, PLATES, AND BARS, ASTM A 36, (TO RECEIVE ONE COAT OF RUST PREVENTIVE PRIMER Α. (ZONE 1)) (HOT-DIP GALVANIZED AFTER ASSEMBLY. STAINLESS STEEL ASTM A 666 OR ASTM A 276, TYPE 304L AS NOTED ON DRAWINGS. (ZONE 2 &3))

- ANCHOR BOLTS, ASTM F 1554 GRADE 36, (HOT-DIP GALVANIZED (ZONE 2 & 3)) В. HEADED STUD ANCHORS, ASTM A 108, TO BE IN ACCORDANCE WITH AWS D1.1-TYPE B, SIZES AS INDICATED ON DRAWINGS. C.
- D. POST-INSTALLED ANCHORS SHALL BE STAINLESS STEEL: ANCHOR CAPACITY USED IN DESIGN SHALL BE BASED ON THE TECHNICAL DATA PUBLISHED BY HILTI OR SUCH OTHER METHOD AS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS MUST BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS DEMONSTRATING THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED BY THEIR HAVING AN ICC ESR SHOWING COMPLIANCE WITH THE RELEVANT BUILDING CODE FOR SEISMIC USES, LOAD RESISTANCE, INSTALLATION CATEGORY, AND AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE, AND INSTALLATION
  - TEMPERATURE.
  - 2. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.
  - ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS
  - EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH THE SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY FERROSCAN, GPR, X-RAY, CHIPPING, OR OTHER MEANS.
- E. SLIDE BEARING SYSTEMS SHALL BE AS INDICATED ON DRAWINGS.

3.7 GROUT

A. PREMIXED, PACKAGED, NON-SHRINK, CHLORIDE-FREE, NON-STAINING, F'C = 6000 PSI MINIMUM, ASTM C 1107.

AVG AIR ENTRAINED N/A 6-1/2% 6-1/2% 6-1/2%

CNA2: DESIGNATES A CONCRETE MIX DESIGN IN ACCORDANCE WITH SPECIFICATION SECTION 033126 WHICH CONTAINS 2

TECTION

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# **ACI 318 REBAR DEVELOPMENT & SPLICE** LENGTHS

Class A Lap Splice Lengths (Tension Development Lengths)

	fc	4000 psi	f'c	5000 psi
	fy	60 ksi	fy	60 ksi
	Epoxy Coa	ted Rebar	Epoxy Coa	ted Rebar
Bar Size	Leng	gths	Len	gths
	Тор	Others	Тор	Others
#3	2'-1"	1'-10"	1'-10"	1'-8"
#4	2'-9"	2'-5"	2'-5"	2'-2"
#5	3'-5"	3'-0"	3'-1"	2'-8"
#6	4'-1"	3'-7"	3'-8"	3'-3"
#7	5'-11"	5'-3"	5'-4"	4'-8"
#8	6'-9"	6'-0"	6'-1"	5'-4"
#9	7'-7"	6'-9"	6'-10"	6'-0"
#10	8'-7"	7'-7"	7'-8"	6'-9"
#11	9'-6"	8'-5"	8'-6"	7'-6"

# **Class B Lap Splice Lengths**

	fc	4000 psi	fc	5000 psi
	fy	60 ksi	fy	60 ksi
	Epoxy Coate	d Rebar	Epoxy Coat	ed Rebar
Bar Size	Lengt	hs	Leng	ths
	Тор	Others	Тор	Others
#3	2'-9"	2'-5"	2'-5"	2'-2"
#4	3'-7"	3'-2"	3'-2"	2'-10"
#5	4'-6"	3'-11"	4'-1"	3'-6"
#6	5'-4"	4'-8"	4'-10"	4'-3"
#7	7'-9"	6'-10"	7'-0"	6'-1"
#8	8'-10"	7'-10"	7'-11"	7'-0"
#9	9'-11"	8'-10"	8'-11"	7'-10"
#10	11'-2"	9'-11"	10'-0"	8'-10"
#11	12'-5"	11'-0"	11'-1"	9'-9"

NOTES:

- 1 All top bars are defined as horizontal bars with more than 12" of concrete placed below bars.
- 2 When two different size bars are lapped together, the lap length shall be the larger of the development length of the larger bar or the class B lap length of the smaller bar.
- 3 The following criteria must be met: Clear spacing of bars being developed or spliced must not be less than db, clear cover not less than db, and stirrups and ties throughout ld not less than the code minimum or clear spacing of bars being developed or spliced not less than 2db and clear cover not less than db. Otherwise multiply values in table by 1.5.
- 4 For bundled bars multiply the lengths shown in the tables by 1.20 for 3 bar bundles and 1.33 for 4 bar bundles. Do not bundle more than 4 bars.

	$\checkmark$	Engineers   Architects   Scientists   Construct
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Control Darking Structure Restoration

7/22/2022 BIDDING & CONSTRUCTION

Drawn By DEB

Designer FGE

Reviewer JBT

Manager JBT

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PROJECT NO.

220597



# 3.8 GENERAL CAST-IN-PLACE CONCRETE

- A. REINFORCEMENT 1. PROVIDE EXTRA REINFORCING AROUND ALL OPENINGS, TWO #5 BARS ON ALL FOUR SIDES OF EACH OPENING. EXTEND TWO FEET BEYOND CORNERS OF OPENING.
  - PROVIDE STANDARD 90 DEGREE BAR HOOKS UNLESS NOTED OTHERWISE ON DRAWINGS.
  - 3. MINIMUM LENGTH OF LAP SPLICES SHALL BE BASED ON ACI 318 CLASS B, UNLESS NOTED OTHERWISE ON DRAWINGS.
- 4. APPROVED REBAR COUPLERS MAY BE USED AT CONTRACTOR'S OPTION TO AID PLACEMENT OF DOWELS THROUGH FORMS.
- 5. REINFORCING STEEL SHALL NOT BE BENT OR STRAIGHTENED UNLESS APPROVED BY ENGINEER OR AS INDICATED ON DRAWINGS.
- FIELD CUTTING OF REINFORCEMENT IS PROHIBITED UNLESS APPROVED BY ENGINEER. WELDING OF REINFORCEMENT IS PROHIBITED UNLESS SPECIFICALLY CALLED FOR ON DRAWINGS OR APPROVED BY ENGINEER. DO NOT WELD EPOXY COATED REINFORCEMENT.

# B. ACCESSORIES

- 1. ALL WELD ASSEMBLIES SHALL USE E70XX LOW HYDROGEN ELECTRODES. MINIMUM WELD SIZE IS 1/4 INCH. STAINLESS STEEL ELECTRODES SHALL BE TYPE 308L OR 347.
- 2. FOR FIELD WELDING GALVANIZED CONNECTION HARDWARE, REMOVE SLAG, WIRE BRUSH, AND APPLY THREE COATS OF Z.R.C. COLD GALVANIZING.
- 3. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN CONCRETE.
- 1. PROVIDE A 3/4 INCH CHAMFER ON EXPOSED CORNERS OF CONCRETE UNLESS OTHERWISE INDICATED ON DRAWINGS. TOP EDGES
- OF WALLS MAY BE TOOLED. 2. TOOL SLAB JOINTS AT THE TIME OF FINISHING. SAW CUTTING IS NOT ALLOWED UNLESS SPECIFICALLY CALLED FOR ON DRAWINGS
- OR APPROVED BY ENGINEER. 3. CAST WALLS WITH CONSTRUCTION AND CONTROL JOINTS AT 15 FEET ON CENTER MAXIMUM UNLESS NOTED ON DRAWINGS.
- 4. CAST SLAB ON GRADE WITH CONSTRUCTION AND CONTROL JOINTS IN STRIPS 15 FEET BY 100 FEET MAXIMUM UNLESS NOTED
- OTHERWISE ON DRAWINGS. 5. CONSTRUCTION JOINTS FOR SUPPORTED SLABS SHALL BE AS NOTED ON DRAWINGS OR AS APPROVED BY THE ENGINEER.
- 6. CONSTRUCTION JOINTS SHALL BE PREPARED BY ROUGHENING THE CONTACT SURFACE TO A FULL AMPLITUDE OF 1/4" AND LEAVING
- THE CONTACT SURFACE CLEAN AND FREE OF LAITANCE.
- D. GENERAL 1. THE USE OF CHLORIDES SUCH AS DEICING SALTS ARE PROHIBITED FOR USE OF MELTING ICE PRIOR TO PLACEMENT OF CONCRETE.

# **DIVISION 05 - METALS**

- 5.1 ALL DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
  - A. AISC 360-10
  - B. AISC 341-10 C. REFER TO SPECIFICATION SECTION 055000 FOR INFORMATION NOT LISTED HEREIN
- 5.2 W-SHAPES, ASTM A 992, GRADE 50
- 5.3 CHANNELS ANGLES, M-SHAPES, S-SHAPES, ASTM A 36
- 5.4 PLATES AND BARS, ASTM A 36
- 5.5 CORROSION-RESISTING STRUCTURAL STEEL, ASTM A 588, GRADE 50
- 5.6 HOLLOW STRUCTURAL SECTIONS, ASTM A 500, GRADE C
- 5.7 CORROSION-RESISTING COLD-FORMED STEEL TUBING, ASTM A 847
- 5.8 STEEL PIPE, ASTM A 53, TYPE E OR S, GRADE B STANDARD WEIGHT.
- 5.9 ALL WELDING SHALL BE MADE WITH E70XX LOW HYDROGEN ELECTRODES AND SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY SPECIFICATIONS. ALL WELDS SHALL BE PERFORMED BY AN AWS CERTIFIED WELDER.
- 5.10 BOLTED CONNECTIONS SHALL BE MADE USING ASTM A 325-N 3/4 INCH DIAMETER HIGH STRENGTH BOLTS, NUTS, AND WASHERS BEARING TYPE CONNECTION WITH THREADS INCLUDED IN SHEAR PLANE, OR ASTM A 325-SC FOR SLIP CRITICAL CONNECTIONS OR AS INDICATED OTHERWISE ON DRAWINGS. TURN OF THE NUT METHOD.
- A. FINISH: MECHANICALLY DEPOSITED ZINC COATING, ASTM B 645 CLASS 50.
- 5.12 CONNECTIONS NOT DETAILED ON DRAWINGS SHALL BE DESIGNED BY FABRICATOR IN ACCORDANCE WITH AISC SPECIFICATIONS
- 5.13 USE STANDARD AISC DOUBLE ANGLE CONNECTIONS WHERE POSSIBLE. SHOP CONNECTIONS NOT SPECIFICALLY DETAILED ON DRAWINGS SHALL BE BOLTED OR WELDED. FIELD CONNECTIONS SHALL BE BOLTED UNLESS SPECIFICALLY DETAILED OTHERWISE.
- 5.14 WHEN NO REACTIONS ARE INDICATED, DESIGN CONNECTIONS TO SUPPORT A REACTION VALUE EQUAL TO ONE HALF THE AISC TABULATED
- 5.15 NO SPLICED IN COLUMNS WILL BE PERMITTED UNLESS SPECIFICALLY NOTED ON DRAWINGS
- 5.16 SURFACE FINISH FOR STEEL METAL WORK SHALL BE:

ALLOWABLE UNIFORM LOAD VALUE (6 KIPS MINIMUM)

DESCRIPTION MISC FRAMING EXPOSED TO WEATHER MISC FRAMING NOT EXPOSED TO WEATHER

#### SURFACE FINISH HOT-DIP GALVANIZED HOT-DIP GALVANIZED

## **DIVISION 07 - THERMAL AND MOISTURE PROTECTION**

## 7.1 JOINT SEALANTS

A. REMOVE AND REPLACE HORIZONTAL AND VERTICAL JOINT SEALANTS AS INDICATED ON DRAWINGS.

## 7.2 TRAFFIC-BEARING MEMBRANE (DECK COATING)

- A. INSTALL DECK COATING (FULL SYSTEM) AT CONCRETE REPAIRS WHERE THERE IS EXISTING DECK COATING. 7.3 EXPANSION JOINTS A. REPAIR EXPANSION JOINT AS INDICATED ON DRAWINGS.

- **DIVISION 09 FINISHES** 9.1 CONCRETE STAIN
  - A. STAIN VERTICAL AND OVERHEAD CONCRETE REPAIRS TO MATCH EXISTING.
- 9.2 ELASTOMERIC COATING

A. INSTALL ELASTOMERIC COATING AT CONCRETE REPAIRS WHERE THERE IS EXISTING ELASTOMERIC COATING TO MATCH EXISTING.

# **DIVISION 22 - PLUMBING**

- 22.1 REMOVE AND REPLACE FLOOR DRAIN AS INDICATED ON DRAWINGS.
- **DIVISION 31 EARTHWORK**

# 31.3 GENERAL - SITE WORK

- A. THE DEEP FOUNDATION SYSTEM OF THE EXISTING STRUCTURE IS NOT BEING MODIFIED. PROJECT SCOPE INCLUDES WIDENING OF ONE EXISTING CAISSON CAP FOR PLACEMENT OF A NEW COLUMN.
- B. SLAB ON GRADE TO BE ON 12 INCHES MINIMUM OF COMPACTED GRANULAR SUBBASE (MDOT CLASS II OR MDOT 21AA).
- C. ALL MATERIALS TO BE COMPACTED STANDARD PROCTOR ASTM D 698. TESTING LABORATORY TO VERIFY ADEQUACY OF SUBGRADE
  - PREPARATION, FILL MATERIAL AND COMPACTION AS FOLLOWS: 1. BUILDING SLABS SUPPORTED ON GRADE: 95%

  - 2. PAVING AND WALKS: 95%
- 3. AREAS OF GENERAL GRADING AND EXTERIOR MECHANICAL AND ELECTRICAL BACKFILLING: 95% D. DETERMINE IN FIELD HORIZONTAL AND VERTICAL LOCATION OF ANY EXISTING UTILITY LINES AND/OR APPURTENANCES AND ADVISE

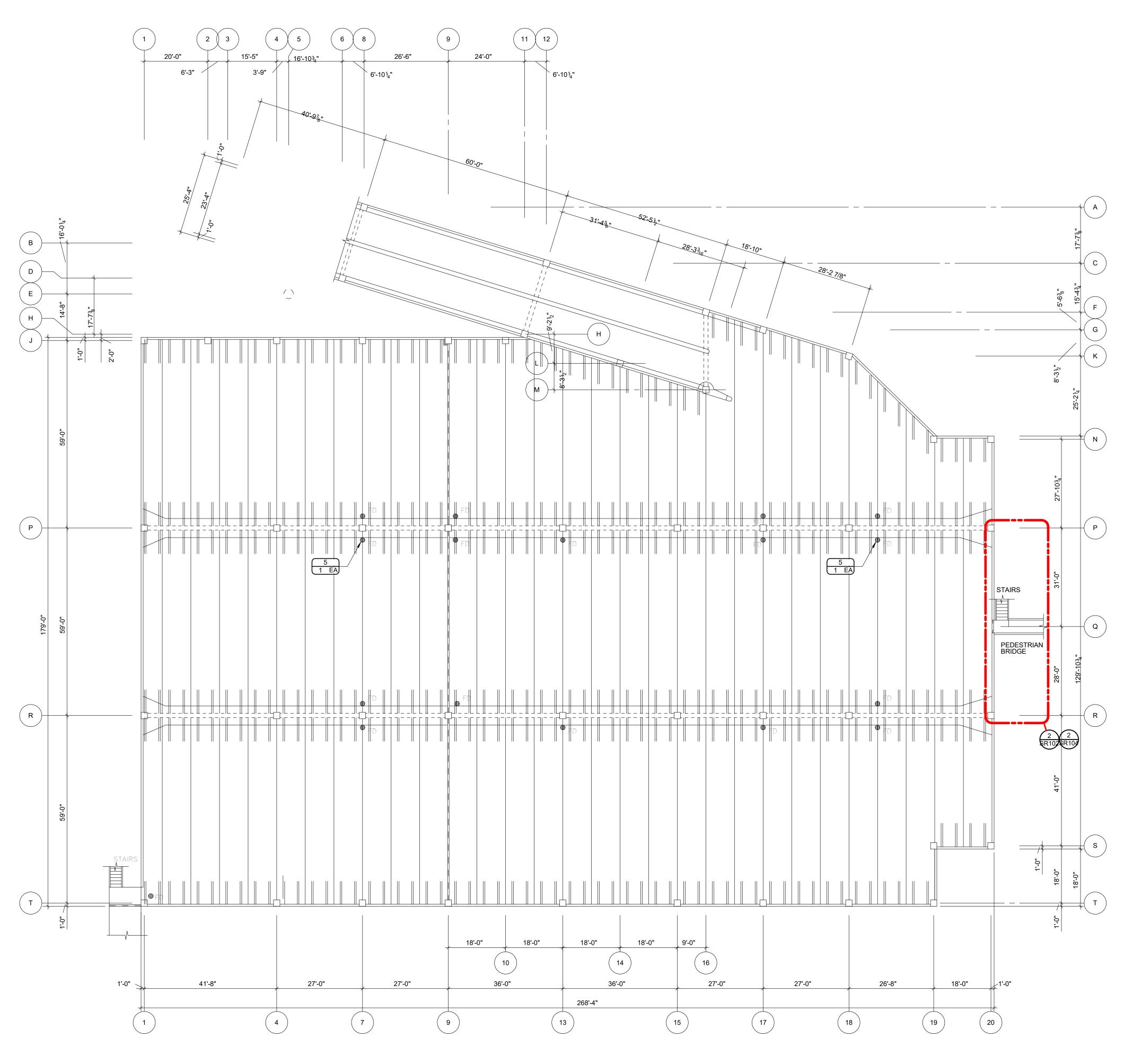
  - ENGINEER OF ANY CONFLICTS WITH NEW STRUCTURE PRIOR TO CONSTRUCTION. DO NOT DESTROY ANY EXISTING UNDERGROUND STRUCTURES UNLESS AUTHORIZATION IS OBTAINED PRIOR TO CONSTRUCTION.
- MAINTAIN SAFETY IN CONNECTION WITH EARTH SLOPES CAUSED BY TRENCHING, EXCAVATION, AND/OR FILL DURING CONSTRUCTION. E. WHERE HEIGHT OF SUCH SLOPES WILL EXCEED 8 FEET, SUBMIT FOR RECORD A DETAILED PLAN INDICATING DESIGN OF SOIL RETENTION SYSTEM WHICH WILL BE IMPLEMENTED (SUCH AS SHEETING AND SHORING OR OTHER METHODS), PREPARED, SIGNED, AND SEALED BY A GEOTECHNICAL AND/OR STRUCTURAL ENGINEER REGISTERED IN STATE WHICH PROJECT IS LOCATED.
- ANY UNUSUAL SOIL CONDITIONS (WATER, SOFT LAYERS, ODORS, ETC.) ENCOUNTERED DURING EXCAVATION FOR FOUNDATIONS SHOULD BE F IMMEDIATELY BROUGHT TO ATTENTION OF ENGINEER.

C. JOINTS

# ABBREVIATIONS

	_	ADDITIONAL
ADDL	=	
ALT	=	ALTERNATE
ARCH	=	ARCHITECTURAL
во	=	BOTTOM OF
BOT	=	BOTTOM
BRG	=	BEARING
CIP	=	CAST-IN-PLACE CONCRETE
CJ	=	CONSTRUCTION JOINT
CLR	=	CLEAR
CMU	=	CONCRETE MASONRY UNIT
COL	=	COLUMN
CONC	=	CONCRETE
CONN	=	CONNECTION
CONT	=	CONTINUOUS
DBA	=	DEFORMED BAR ANCHOR
DET	=	DETAIL
DIA	=	DIAMETER
DIAPH	=	DIAPHRAGM
DWL	=	DOWEL
EA	=	EACH
EC	=	EPOXY COATED
EE	=	EACH END
EF	=	EACH FACE
EL	=	ELEVATION
ELEC	=	ELECTRICAL
ELEV	=	ELEVATOR
ELEV	=	EQUAL
EW	=	EACH WAY
EXIST	=	EXISTING
EXP	=	EXPANSION
FD	=	FLOOR DRAIN
FDN	=	FOUNDATION
FT	=	FOOT
FTG	=	FOOTING
GA	=	GAUGE
GALV	=	GALVANIZED
GC	=	GENERAL CONTRACTOR
GGBS	=	GROUND GRANULATED BLAST-FURNACE SLAG
HK	=	НООК
HORIZ	=	HORIZONTAL
HSA	=	HEADED STUD ANCHOR
-	=	INFLECTION POINT
IP IT		
JT	=	JOINT
LT WALL	=	LIGHT WALL
MECH	=	MECHANICAL
MFR	=	MANUFACTURER
MIN	=	MINIMUM
NOM	=	NOMINAL
NSNS	=	NON-SHRINK, NON-STAIN
NTS	=	NOT TO SCALE
oc	=	ON CENTER
ОН	=	OPPOSITE HAND
PCC	=	PRECAST CONCRETE
PT	=	POST-TENSIONED
REINF	=	REINFORCING
REQD	=	REQUIRED
SECT	=	SECTION
-		
SIM	=	
SOG	=	SLAB ON GRADE
SPEC	=	SPECIFICATION
SS	=	STAINLESS STEEL
STD	=	STANDARD
STL	=	STEEL
то	=	TOP OF
тов	=	TOP OF BEAM
тос	=	TOP OF CONCRETE
TOF	=	TOP OF FOUNDATION
TOS	=	TOP OF SLAB
TOW	=	TOP OF WALL
TEMP	=	TEMPERATURE
TYP	=	
UNO	=	UNLESS NOTED OTHERWISE
VERT	=	VERTICAL
VIF	=	VERIFY IN FIELD
<b>W</b> /	=	WITH
WWF	=	WELDED WIRE FABRIC
ZRC	=	ZINC RICH COATING

fshbeck	Engineers   Architects   Scientists   Constructors	
City of Plymouth Plymouth, Michigan	Central Parking Structure Restoration 2022	
REVISIONS         7/22/2022       BIDDING & CONSTRUCTION         Drawn By DEB       Designer FGE         Reviewer JBT       Manager JBT         Manager JBT       Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.         PROJECT NO.       2205997         SHEET NO.       SHEET NO.		



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LEVEL 2 PLAN SCALE: 1/16" = 1'-0"

# SYMBOLS LEGEND

XXX	WORK ITEM NUMBER, REFER TO LIST BELOW
	QUANTITY UNIT
	QUANTITY OF REPAIR

 $\searrow$ 

SOFFIT REPAIR HATCH

# XXX X SF WORK ITEM NOTES

- 1. CEILING REPAIR, REFER TO DTL 5/SR501.
- 2. COLUMN REPAIR, REFER TO DTL 7/SR501.
- 3. WALL REPAIR, REFER TO DTL 8/SR501.
- 4. REMOVE & REPLACE COVE JOINT SEALANT, REFER TO DTL 3/SR511.
- 5. REMOVE & REPLACE FLOOR DRAIN, REFER TO DTL 8/SR511.

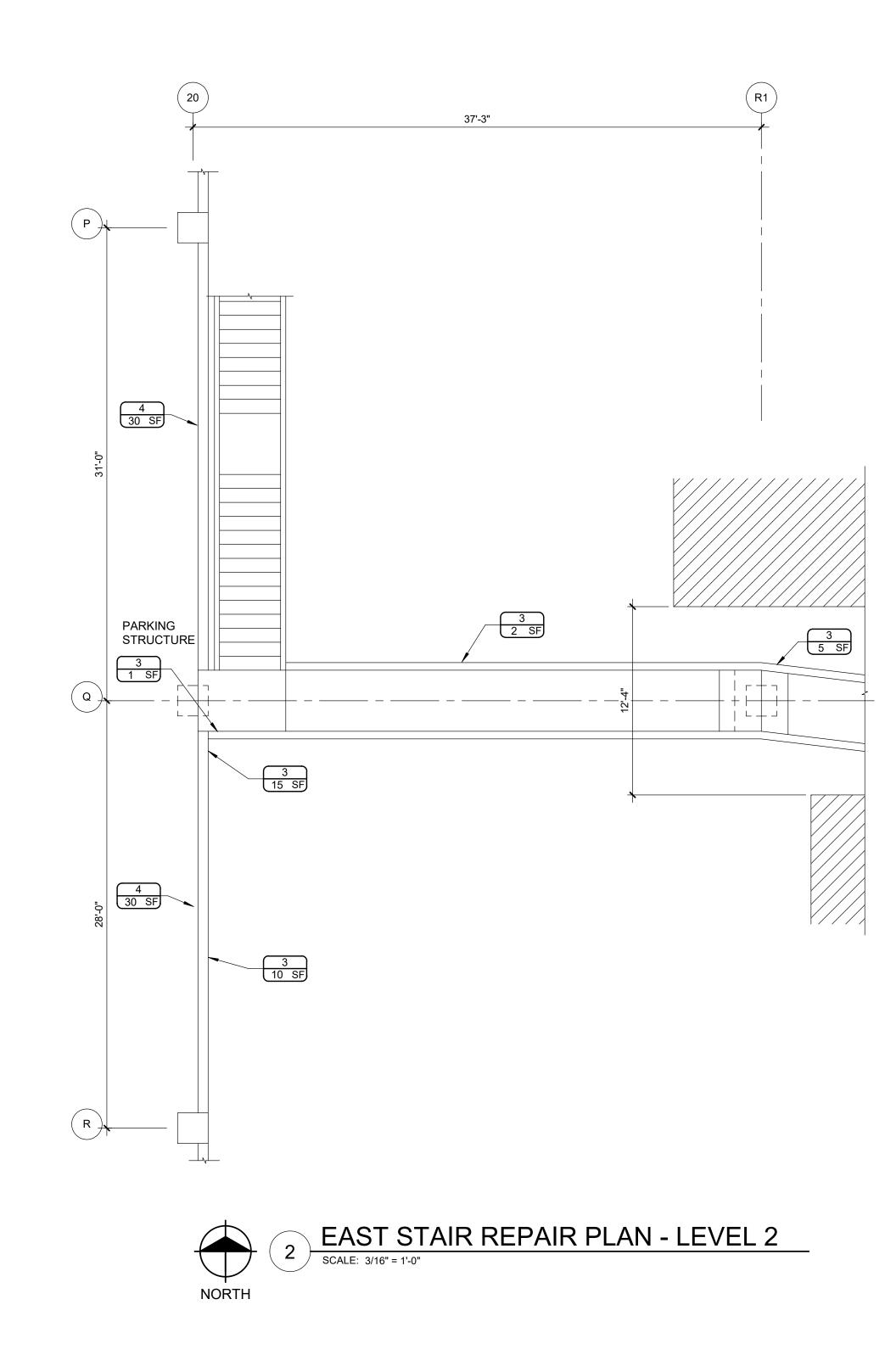
# SHEET NOTES

- 1. REFER TO G002 FOR GENERAL NOTES.
- 2. REPAIRS SHOWN ON PLANS ARE FOR THE FLOOR AND SOFFIT (OVERHEAD) OF REPRESENTED LEVEL.
- 3. SUPPORTED SLAB AND PEDESTRIAN BRIDGE HAVE AN EXISTING DECK COATING, EXCEPT AT VEHICULAR RAMP.
- 4. ALL COLUMNS AND WALLS HAVE AN EXISTING ELASTOMERIC COATING AT THE INTERIOR OF LEVEL 2, INCLUDING THE PEDESTRIAN BRIDGE.

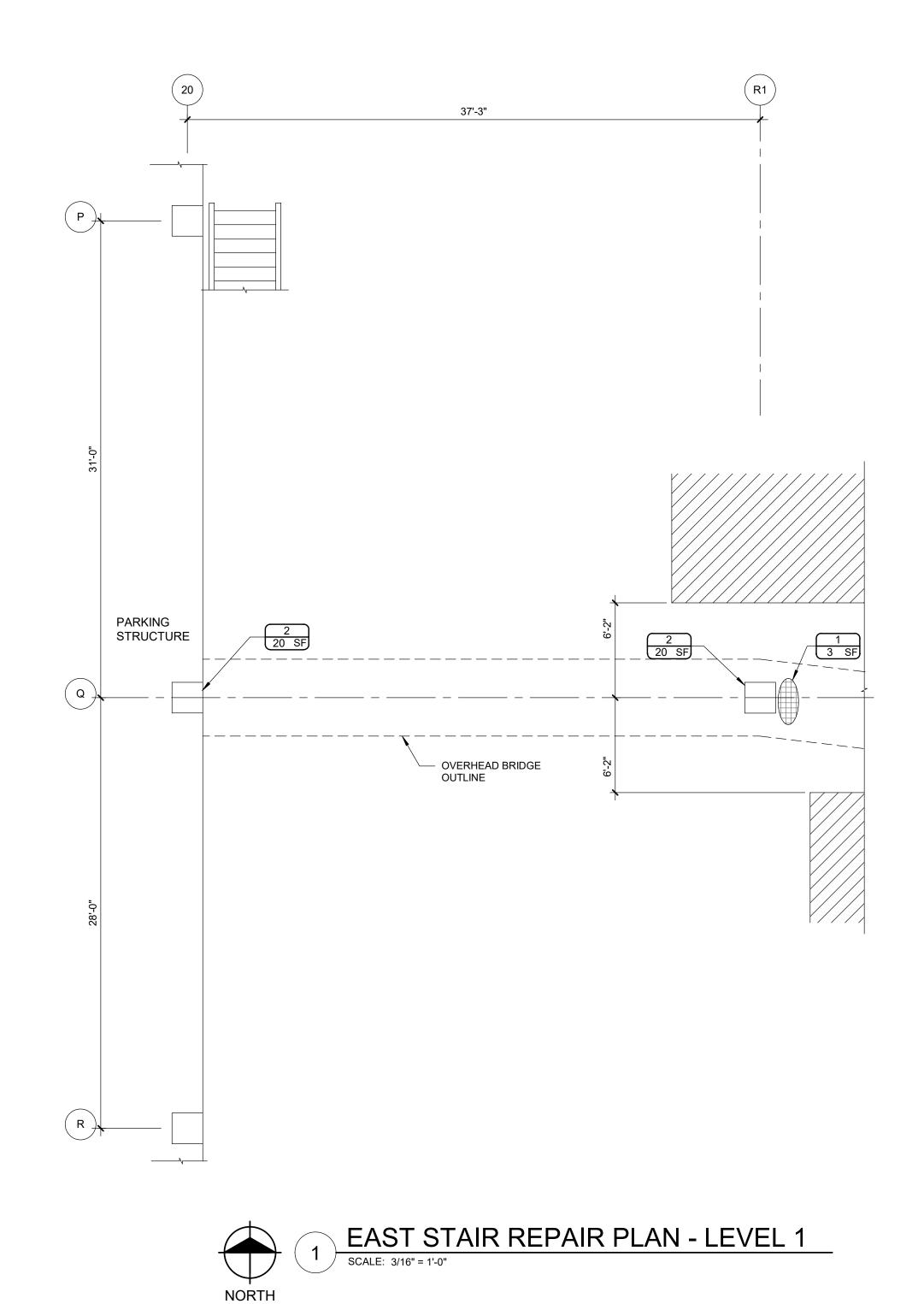
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City of Plymouth Plymouth, Michigan	Central Parking Structure Restoration 2022
REVIS	SIONS
Drawn By <sub>DEB</sub> Designer <sub>FGE</sub> Reviewer <sub>JBT</sub> Manager <sup>JBT</sup>	G & CONSTRUCTION
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# SYMBOLS LEGEND



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QUANTITY OF REPAIR
 SOFFIT REPAIR HATCH

— QUANTITY UNIT

------ WORK ITEM NUMBER, REFER TO LIST BELOW

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- 4. ALL COLUMNS AND WALLS HAVE AN EXISTING ELASTOMERIC COATING AT THE INTERIOR OF LEVEL 2, INCLUDING THE PEDESTRIAN BRIDGE.

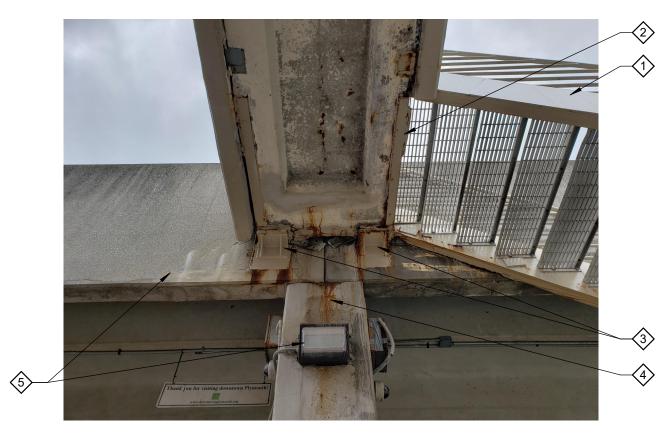
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City of Plymouth Plymouth, Michigan	Central Parking Structure Restoration 2022
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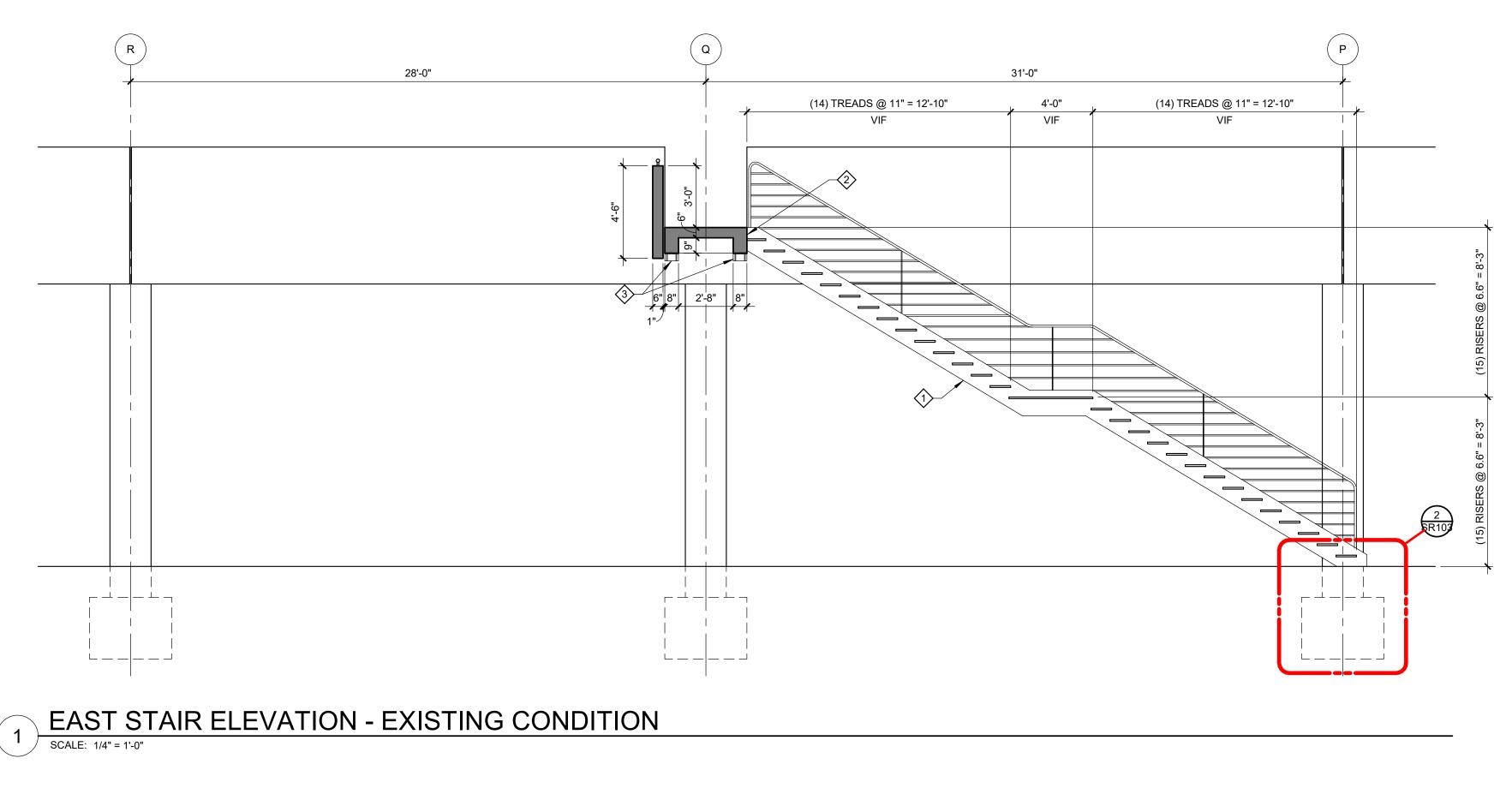
Manager <sup>JBT</sup>

# PROJECT NO. **220597**









31'-8" TO ⊈ 6" < OF LANDING £ - 1/4" CLOSURE PLATE EXIST. GRADE -CONC. SLAB EL. 718-2" – EXIST. 18" x 18" PEDESTAL (TYP. @ EACH STRINGER) — EXIST. (4) #5 x 2'-0" DOWELS - EXIST. CANTILEVERED CAISSION CAP . Á 🖏 · 4~A · · · · · 2 SECTION - EXISTING CONDITION SCALE: 1/2" = 1'-0"

# SHEET NOTES

- REFER TO G002 FOR GENERAL NOTES. 1.
- SUPPORTED SLAB AND PEDESTRIAN BRIDGE HAVE AN EXISTING DECK COATING, EXCEPT AT VEHICULAR RAMP. 2.
- ALL COLUMNS AND WALLS HAVE AN EXISTING ELASTOMERIC 3. COATING AT THE INTERIOR OF LEVEL 2, INCLUDING THE PEDESTRIAN BRIDGE.
- PROTECT EXISTING EXPANSION JOINT (WINGED SEAL) BETWEEN THE PEDESTRIAN BRIDGE AND PARKING STRUCTURE. REPAIR TO MATCH 4. EXISTING IF DAMAGED.

# ♦ KEY NOTES

- DEMOLISH EXISTING STEEL STAIR: STRINGERS, 1. RAILING, TREADS, AND CONNECTIONS.
- REMOVE EXISTING ANGLE AND FACE PLATE, 2. PERFORM BEAM REPAIR, REFER TO DETAIL 6/SR501.
- DEMOLISH EXIST BEARING ANGLES, CLEAN AND 3. PAINT EXISTING EMBED PLATES TO REMAIN.
- CLEAN EXISTING CONCRETE MEMBERS WHICH 4. HAVE BEEN STAINED BY PREVIOUS LEAKING OR LEACHING. REFER TO SECTION 02 41 23.
- RELOCATE EXISTING LIGHT FIXTURE FROM COLUMN TO FACE OF SPANDREL. CONDUIT TO MATCH 5. EXISTING.



**Plymouth** 

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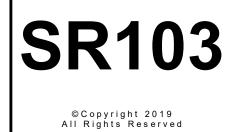
Drawn By <sub>DEB</sub>

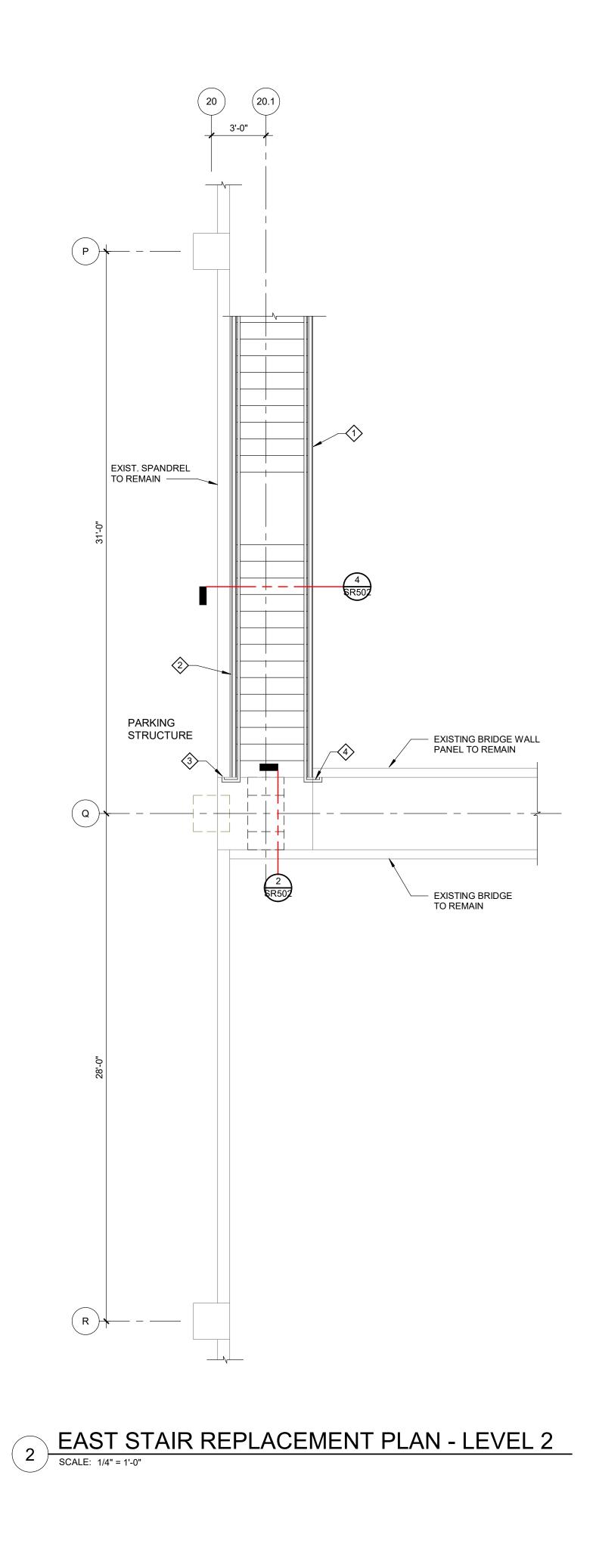
Designer FGE

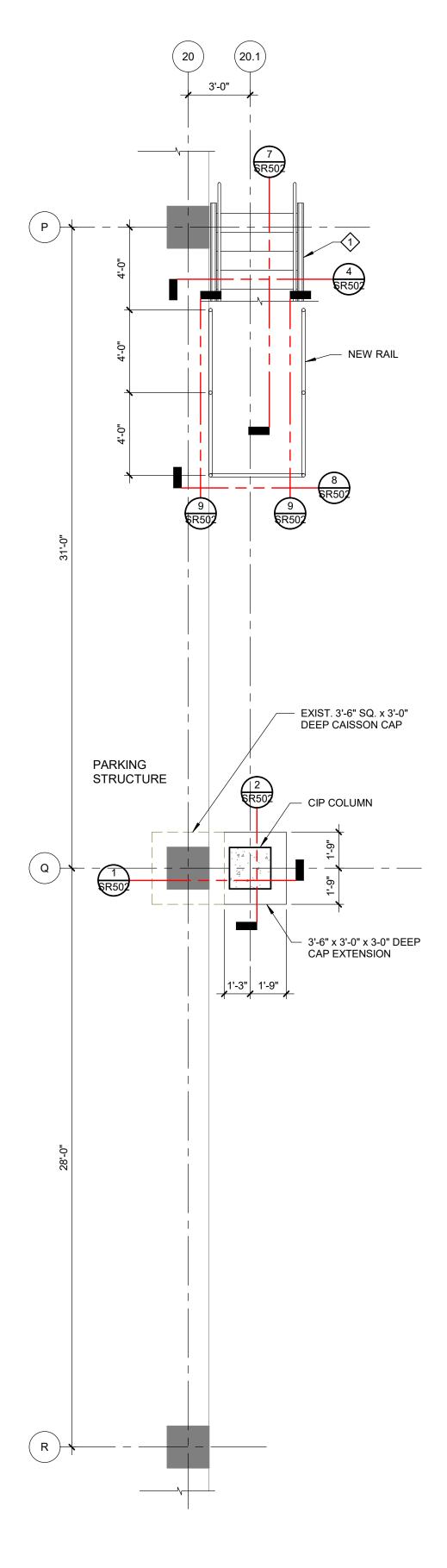
Reviewer JBT Manager JBT

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PROJECT NO. 220597

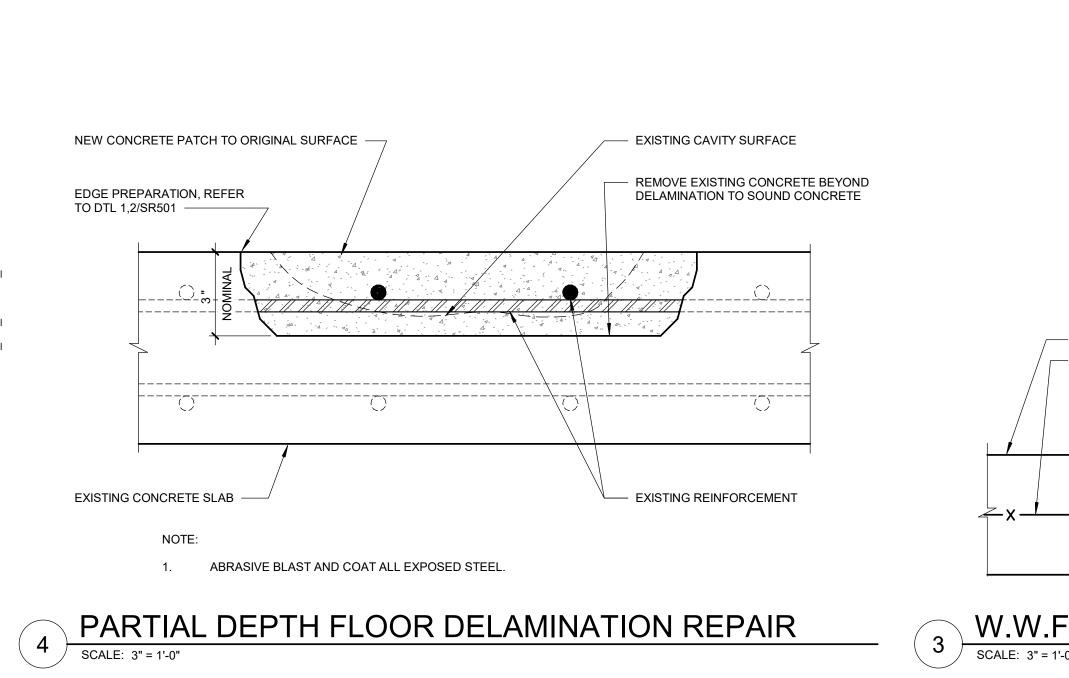






1 EAST STAIR REPLACEMENT PLAN - FOUNDATION & LEVEL 1 SCALE: 1/4" = 1'-0"

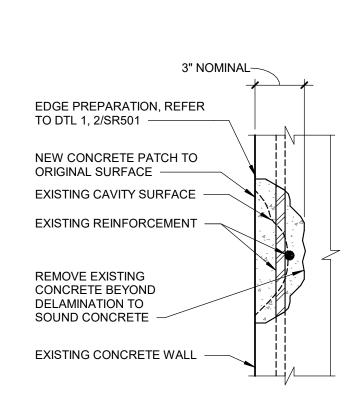
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2. DEPENDENT OF UNAL ANALYSIAN ALMANIA OF THE SECTOR 3. DEPENDENT OF THE EXECUTION OF ANALONE, AND THE PROVINCE 4. DEPENDENT OF THE EXECUTION OF ANALONE, AND THE PROVINCE COMPANY OF THE EXECUTION OF ANALONE, AND THE PROVINCE ANALONE, ANALONE,		RISER PLATES. IN DIRECTION OF TRAVEL, STAIR SHALL MATCH EXISTING TREADS AND LANDINGS DIMENSIONS (RISE AND RUN), REFER TO DET			
Central Darking Structure Restored Structures (Section 2014) (Sect	2.	NEW STAIR SHALL MAINTAIN A MINIMUM OF 1"			
<ul> <li>* Contrast Participantial Contrast Participantial Participantial Contrast Participantial</li></ul>	3.	LANDING, WRAP CORNER, AND RETURN HANDRAIL			
Instruction       Control         Central Darking Structure       Science and Structure         Description       Science and Structure         Descructand Structure </td <td>4.</td> <td>EXTEND HANDRAIL HORIZONTALLY ABOVE EXISTING LANDING, WRAP CORNER FOR 12" MIN AND RETURN</td> <td></td> <td>022</td>	4.	EXTEND HANDRAIL HORIZONTALLY ABOVE EXISTING LANDING, WRAP CORNER FOR 12" MIN AND RETURN		022	
7/22/2022       BIDDING & CONSTRUCTI         Drawn By DEB       Designer FGE         Designer FGE       Reviewer Jatt         Manager JBT       Hard copy is intended to be 24*336° when plotted. Scale(s indicated and graphic quality minot be accurate for any other size indicated and graphic quality minot be accurate for any other size         PROJECT NO.       220597         SHEET NO.       SHEET NO.			of ymout	ntral Parking Structure	
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Reviewer JBT <u>Manager</u> JBT Hard copy is intended to be 24"x36" when plotted. Scale(s indicated and graphic quality may not be accurate for any other siz PROJECT NO. 220597 SHEET NO.				& CONSTRUCTI	
24"x36" when plotted. Scale(s indicated and graphic quality ma not be accurate for any other siz PROJECT NO. 220597 SHEET NO.			Reviewer <sub>JBT</sub> Manager <sup>JBT</sup>	Reviewer JBT Manager JBT Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality ma not be accurate for any other size	
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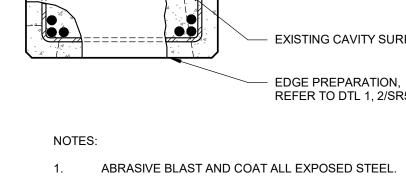




ABRASIVE BLAST AND COAT ALL EXPOSED STEEL. 1.

NOTES:



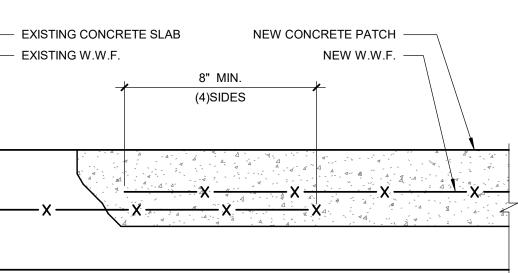


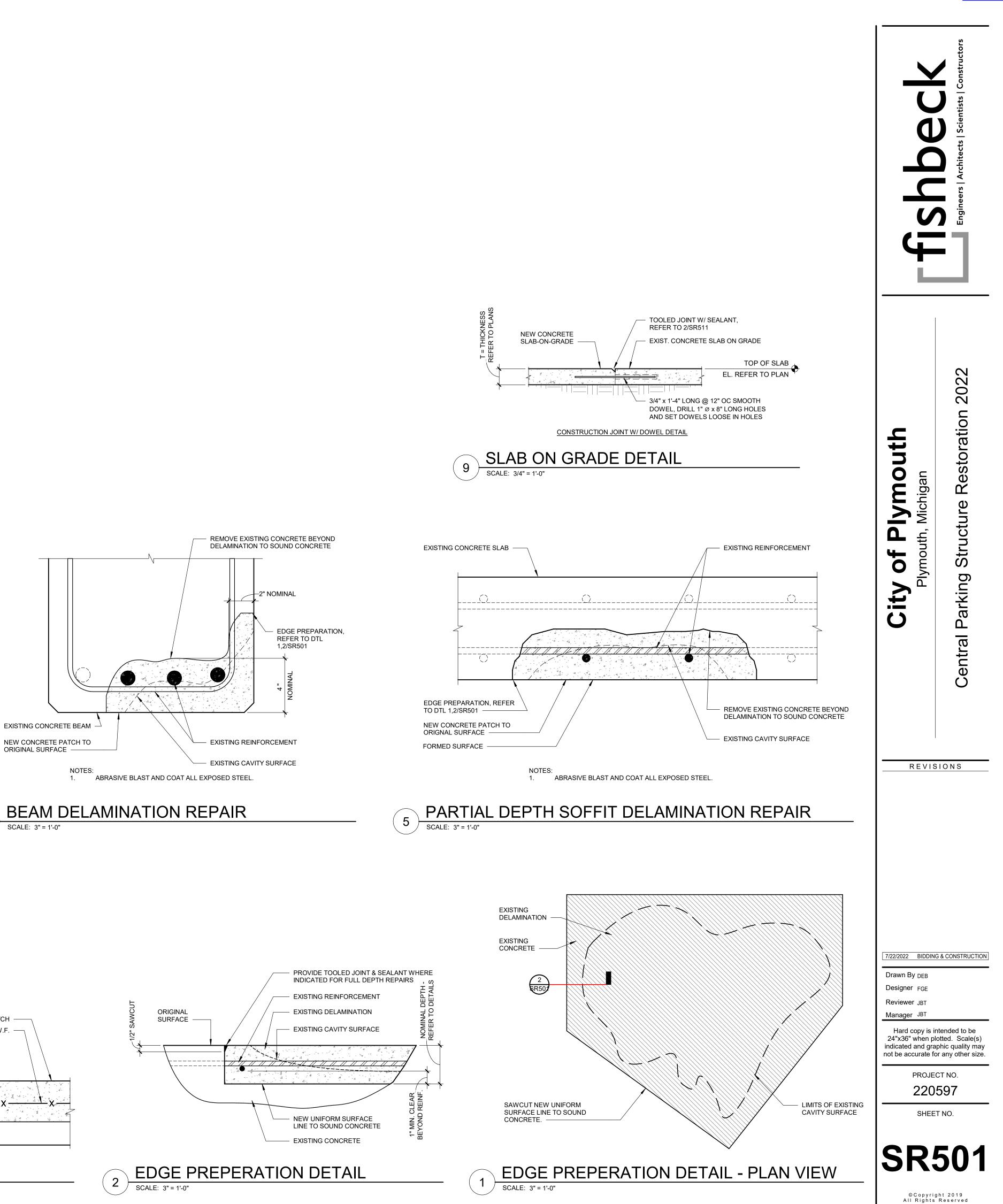
7

SCALE: 1" = 1'-0"

4" NOMINAL-

# 3 W.W.F. SPLICE DETAIL SCALE: 3" = 1'-0"





# COLUMN DELAMINATION REPAIR

REFER TO DTL 1, 2/SR501

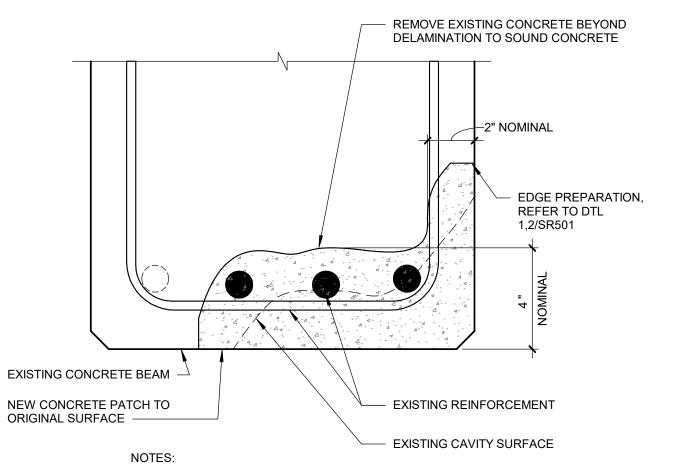
- EXISTING CAVITY SURFACE

- NEW CONCRETE PATCH TO ORIGINAL SURFACE

REMOVE EXISTING CONCRETE BEYOND DELAMINATION TO SOUND CONCRETE

EXISTING REINFORCEMENT

EXISTING CONCRETE COLUMN

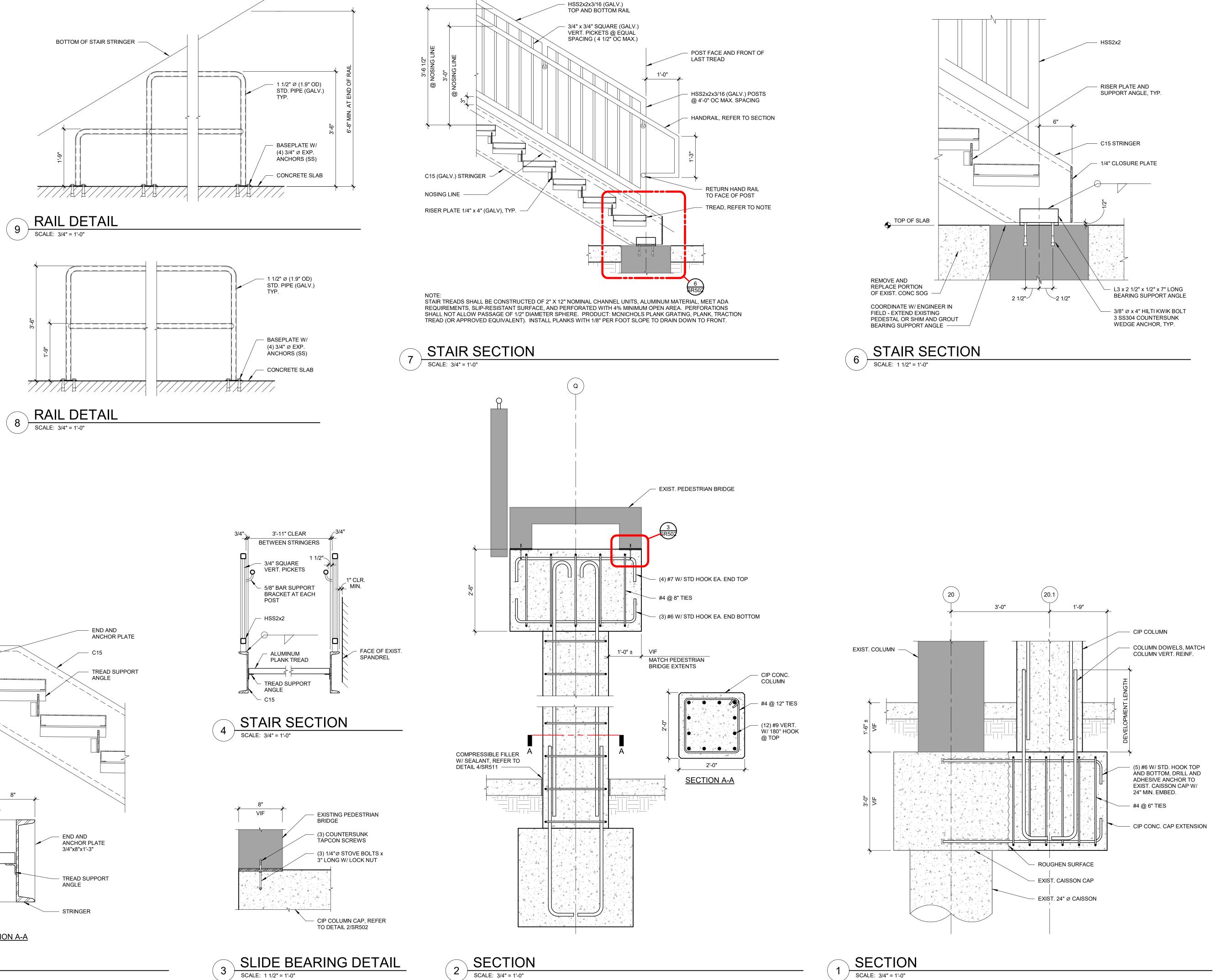


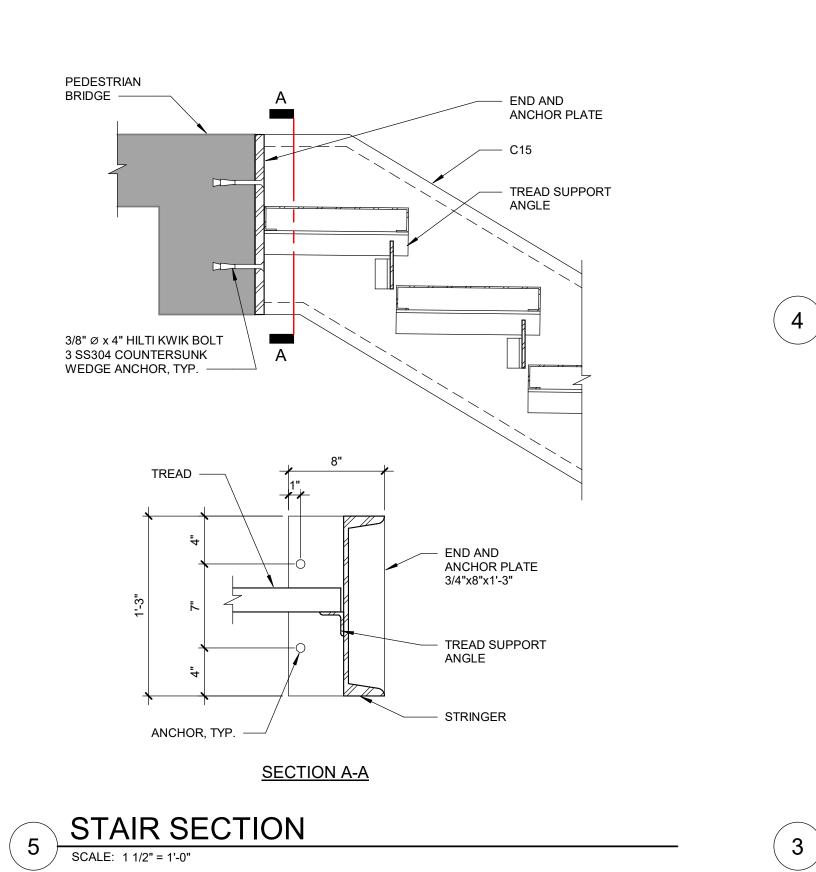
1.

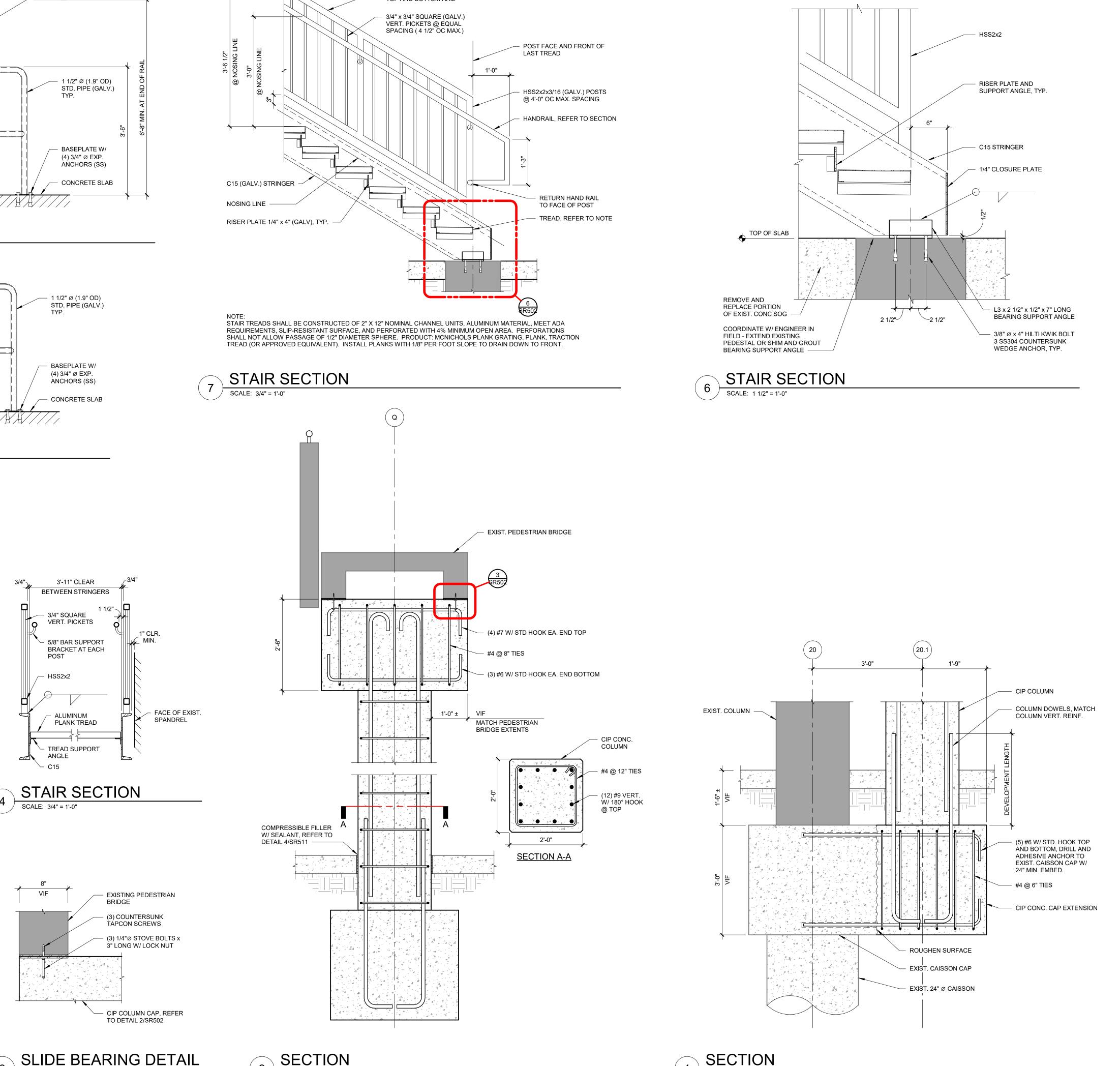
2

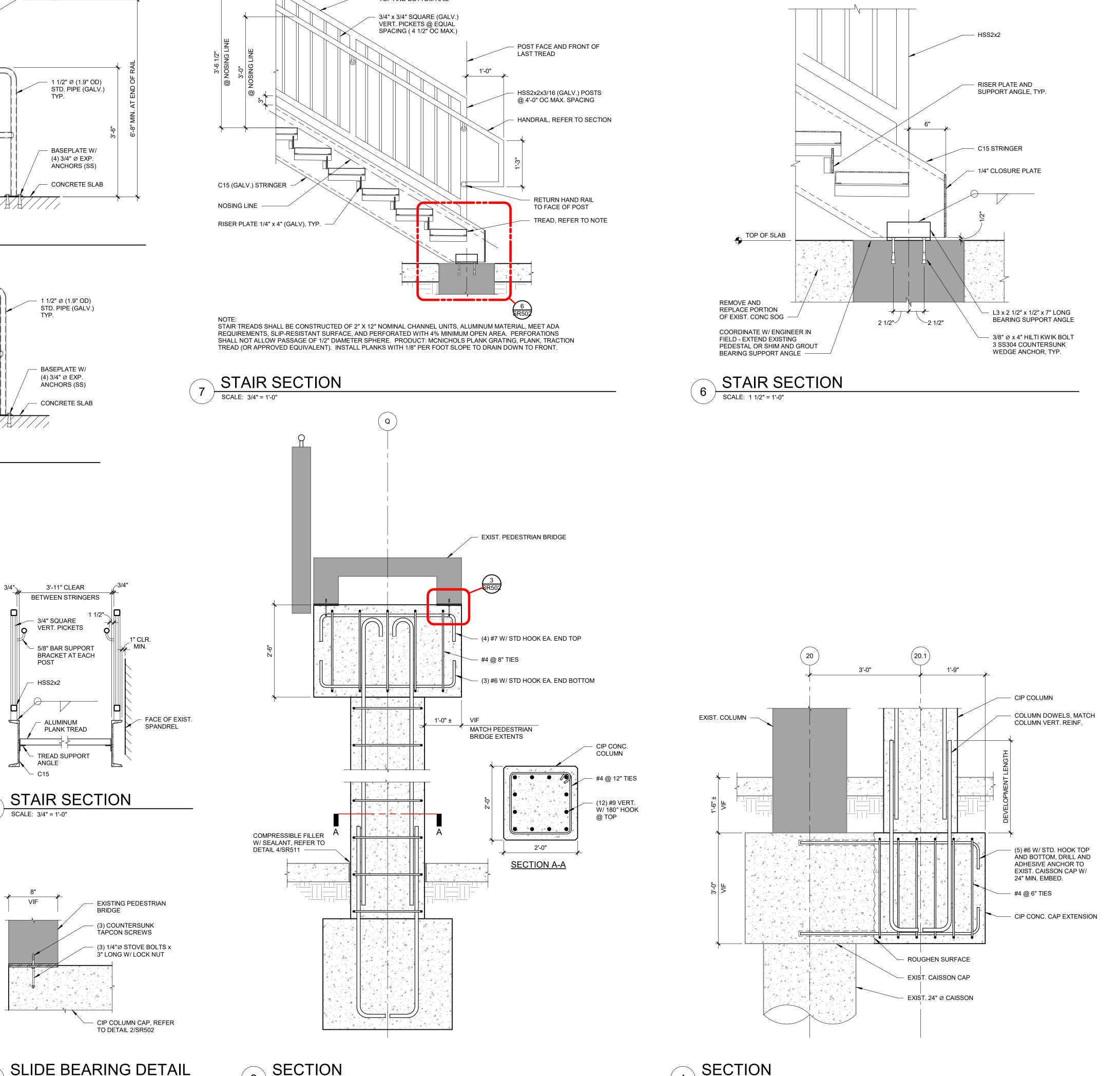
6

SCALE: 3" = 1'-0"









3 SCALE: 1 1/2" = 1'-0"

S 2022 Restoration **Plymouth** Michiga Structure th, of Parking it C Central REVISIONS 7/22/2022 BIDDING & CONSTRUCTION Drawn By <sub>DEB</sub> Designer FGE Reviewer JBT Manager JBT Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size. PROJECT NO. 220597 SHEET NO. **SR502** 

SCALE: 3/4" = 1'-0"

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