

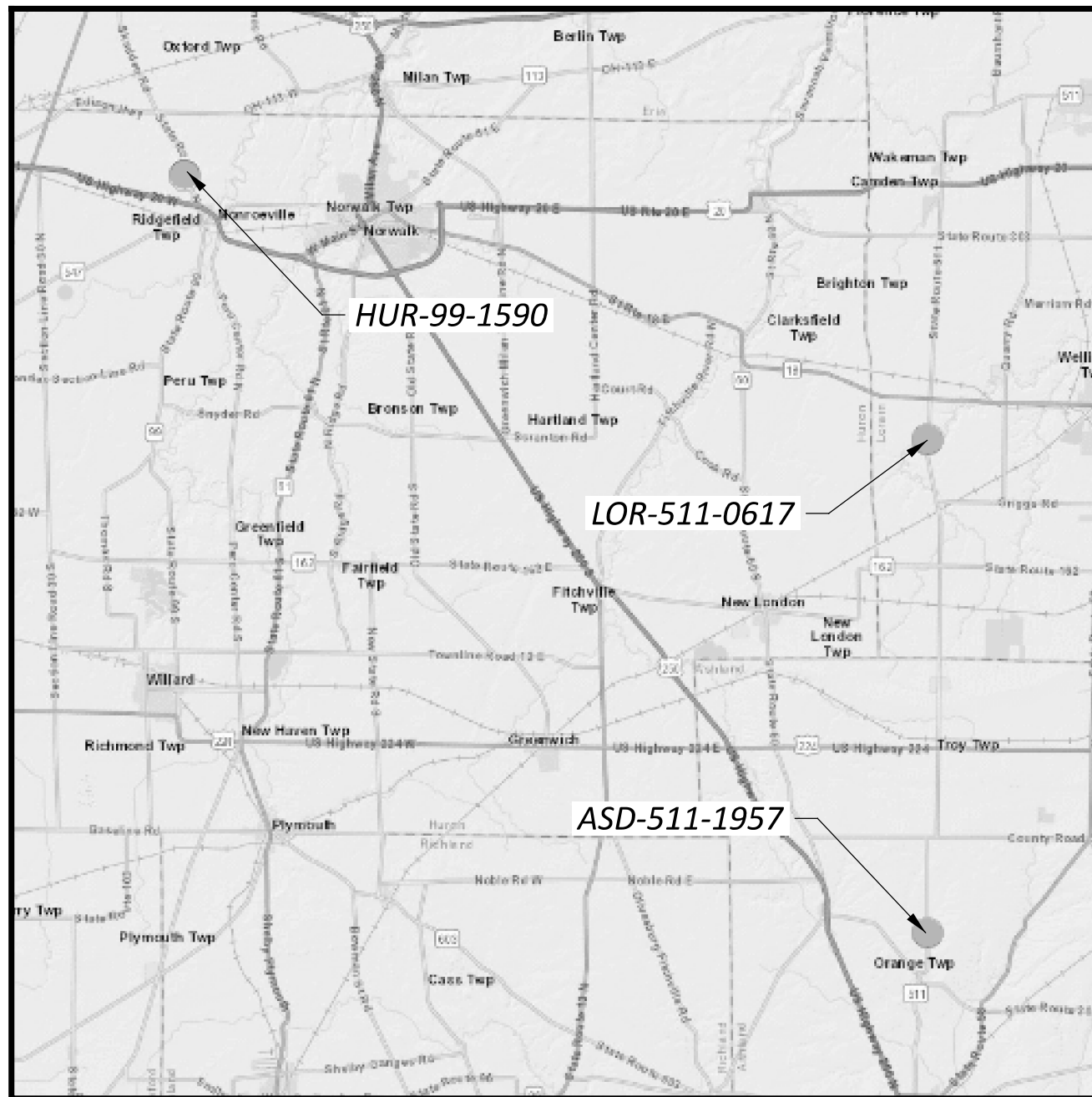
STATE OF OHIO DEPARTMENT OF TRANSPORTATION

D03-BH-FY2023(B)

ORANGE TOWNSHIP
ASHLAND COUNTY

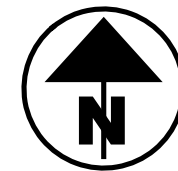
RIDGFIELD TOWNSHIP
HURON COUNTY

BRIGHTON TOWNSHIP
LORAIN COUNTY



LOCATION MAP

LATITUDE: 41° 7' 23" N LONGITUDE: 82° 26' 40" W



PORTION TO BE IMPROVED	●
INTERSTATE HIGHWAY	====
FEDERAL ROUTES	====
STATE ROUTES	====
COUNTY & TOWNSHIP ROADS	====
OTHER ROADS	-----

DESIGN DESIGNATION

DESIGN DESIGNATION	ASD-511-19.57	HUR-99-15.90	LOR-511-6.17
CURRENT YEAR ADT (2023)	1,300	2,400	2,200
DESIGN YEAR ADT (2043)	1,300	2,400	2,200
DESIGN HOURLY VOLUME (2043)	100	300	200
DIRECTIONAL DISTRIBUTION	58%	56%	63%
TRUCKS (24 HOUR B&C)	5%	13%	19%
Td	3%	13%	12%
SPEED LIMIT	55 MPH	55 MPH	55 MPH
NHS PROJECT	NO	NO	NO
DESIGN FUNCTIONAL CLASSIFICATION	E	E	E

- A = INTERSTATES
- B = OTHER FREEWAYS OR EXPRESSWAYS
- C = OTHER PRINCIPAL ARTERIAL
- D = MINOR ARTERIAL
- E = MAJOR COLLECTOR
- F = MINOR COLLECTOR
- G = LOCAL ROAD

INDEX OF SHEETS:

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ASD-511-1957 SFN 0305642	11 - 14
HUR-99-1590 SFN 3902498	15 - 17A, 18-19
LOR-511-0617 SFN 4707354	20 - 21A, 22-24
PLAN INSERT SHEETS	
PIS GR-3.4	25

FEDERAL PROJECT NUMBER

E220231

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE REABILITATION OF THREE STRUCTURES IN DISTRICT THREE BY COMPLETING NEW DECK OVERLAYS, APPROACH PATCHING, GUARDRAIL REMEDIATION AND REPLACEMENT, AND OTHER VARIOUS IMPROVEMENTS.

EARTH DISTURBED AREAS

PROJECT EDA:	N/A	ACRES*
ESTIMATED CONTRACTOR EDA:	N/A	ACRES*
NOTICE OF INTENT EDA:	N/A	ACRES*

EDA = EARTH DISTURBED AREA
* = (MAINTENANCE PROJECT)

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

PLANS PREPARED BY:

**OHIO DEPARTMENT OF
TRANSPORTATION**
DISTRICT THREE ENGINEERING
DESIGN TEAM ONE

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig



OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

ENGINEER'S SEAL:

SIGNED:
DATE: 2022-08-10

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
MGS-1.1	7/16/21	TC-41.20	10/18/13	800-2019 SEE PROPOSAL	
MGS-2.1	1/19/18	TC-42.20	10/18/13	832 7/15/22	
MGS-3.1	1/19/18	TC-52.10	10/18/13	848 1/15/21	
MGS-4.2	7/19/13	TC-52.20	1/15/21		
MGS-4.3	1/18/13	TC-61.30	7/19/19		
DBR-2-73	7/19/02				
DBR-3-11	7/15/11				
TST-1-99	1/15/21				
MT-96.11	4/16/21				
MT-96.20	7/15/16				
MT-97.10	4/19/19				
MT-101.60	1/17/20				
MT-101.90	7/17/20				
MT-105.10	1/17/20				

MAINTENANCE OF TRAFFIC ENDORSEMENT

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED HEREIN.

APPROVED:
DATE: 08/10/2022 ROBERT L. WEAVER, PE, PS
DISTRICT DEPUTY DIRECTOR

APPROVED: _____
DATE: _____ JACK MARCHBANKS, PhD, DIRECTOR
DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY	DISTRICT 3
ENGINEERING TEAM ONE	
DESIGNER	KCK
REVIEWER	JLL
PROJECT ID	08-01-22
SHEET TOTAL	105598
P.001	P.025

D03-BH-FY2023(B)

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 2022-09-14 TIME: 11:01:15 USER: knapp pvc:\ohiodot-pw-bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 03_D031055598\00-Engineering\Roadway\Sheets\105598_GT001.dgn

STRUCTURE REPAIR

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS (BDM 601.2-1)

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

STANDARD DRAWING	REVISED	SUPPLEMENTAL SPECIFICATION	REVISED
TST-1-99	1/15/2021	800	SEE PROPOSAL
DS-1-92	7/15/2022	832	7/15/2022
DBR-2-73	7/19/2002	848	1/15/2021
DBR-3-11	7/15/2011		

DESIGN SPECIFICATIONS (BDM 601.3-1)

THESE STRUCTURES CONFORM TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING (BDM 602.2-1)

DESIGN LOADING: N/A – REFER TO EXISTING PLANS LISTED IN THE "EXISTING PLANS" NOTE ON THIS SHEET FOR ORIGINAL DESIGN LOADING IF NECESSARY.

DESIGN DATA (BDM 602.3-1)

CONCRETE CLASS QC1 – COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE CLASS QC2 – COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

EXISTING STRUCTURE VERIFICATION (BDM 610.1-1)

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, 105.02 AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 202 – REMOVAL, MISC.: JOINT SEALER

AT LOCATIONS SPECIFIED IN THE PLANS, REMOVE THE EXISTING JOINT SEALER IN ITS ENTIRETY. THE REMOVED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR AND IS TO BE DISPOSED OF PROPERLY. PROTECT PORTIONS OF THE STRUCTURE TO REMAIN IN PLACE FROM DAMAGE RESULTING FROM THIS WORK. ANY DAMAGE TO THE EXISTING STRUCTURE RESULTING FROM THE PERFORMANCE OF THIS WORK IS TO BE IMMEDIATELY EVALUATED BY THE PROJECT ENGINEER. IF THE PROJECT ENGINEER DETERMINES THAT REPAIR TO THE EXISTING STRUCTURE IS NECESSITATED, THE CONTRACTOR IS TO REPAIR THE DAMAGED AREA UTILIZING MATERIALS AND METHODS APPROVED BY THE ENGINEER AND TO THE ENGINEER'S SATISFACTION.

PAYMENT FOR THIS WORK IS TO BE PER THE CONTRACT BID PRICE PER UNIT FOOT FOR ITEM 202 – REMOVAL, MISC.: JOINT SEALER AND IS TO INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NEEDED TO COMPLETE THIS WORK.

ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (WINGALL) ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (DECK EDGE)

ALL ITEMS

REMOVE THE PORTION OF THE STRUCTURE INDICATED IN THE PLANS IN ITS ENTIRETY USING METHODS AS APPROVED BY THE ENGINEER. UPON REMOVAL, THE REMOVED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR. ALL REMOVED MATERIAL SHALL BE DISPOSED OF PROPERLY. THE DEPARTMENT WILL PAY FOR THIS WORK ON A LUMP SUM BASIS FOR WORK ACTUALLY PERFORMED AND WILL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NEEDED TO COMPLETE THE WORK AS DETAILED IN THESE PLANS.

ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (WINGWALL)

REMOVE THE PORTION OF THE WINGWALL(S) AS INDICATED IN THE INDIVIDUAL STRUCTURE DETAIL SHEETS. TO ENSURE A CLEAN REMOVAL, SAWCUT THE WINGWALL AT THE BOUNDARIES OF THE REMOVAL TO A DEPTH OF 1.00" WITHOUT DAMAGING THE EXISTING REINFORCING STEEL. REMOVE THE CONCRETE WITHOUT DAMAGING THE EXISTING REINFORCING STEEL. IT IS NOT NECESSARY TO COMPLETELY CLEAN THE EXISTING REINFORCING STEEL, BUT A STATE SUITABLE FOR THE CONSIDERATIONS OF THE USE OF THE STEEL IS TO BE ACHIEVED, AS APPROVED BY THE ENGINEER. WHERE EXISTING REINFORCING STEEL WOULD PROTRUDE PAST THE SURFACE OF THE PROPOSED REPLACED CONCRETE, TRIM THE EXISTING STEEL TO AFFECT A COVER OF 2.00". THE REMOVAL OR RELOCATION OF EXISTING HORIZONTAL REINFORCING STEEL IS PERMITTED AT THE DIRECTION AND APPROVAL OF THE ENGINEER.

ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (DECK EDGE)

REMOVE THE PORTION OF THE DECK EDGE(S) AS INDICATED IN THE INDIVIDUAL STRUCTURE DETAIL SHEETS. TO ENSURE A CLEAN REMOVAL, SAWCUT THE DECK EDGE AT THE BOUNDARIES OF THE REMOVAL TO A DEPTH OF 1.00" WITHOUT DAMAGING THE EXISTING REINFORCING STEEL. REMOVE THE PORTIONS OF THE CONCRETE DECK EDGE AS INDICATED IN THESE PLANS WITHOUT DAMAGING THE EXISTING TRANSVERSE REINFORCING STEEL. LONGITUDINAL REINFORCING STEEL, TO BE REPLACED, MAY BE DAMAGED IN THE COURSE OF THIS WORK. IT IS NOT NECESSARY TO COMPLETELY CLEAN THE EXISTING REINFORCING STEEL, BUT A STATE SUITABLE FOR THE CONSIDERATIONS OF THE USE OF THE STEEL IS TO BE ACHIEVED, AS APPROVED BY THE ENGINEER.

ITEM 514 – FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN

ALL ASPECTS OF C&MS 514 FINISH COAT APPLY. THE COLOR OF THE FINISH COAT SHALL BE THE COLOR STANDARD AS SHOWN IN THE TABLE BELOW. UNLESS NOTED OTHERWISE, THE INTENT IS TO MOST NEARLY MATCH THE EXISTING COLORS.

STRUCTURE	PROPOSED AMS OR FEDERAL COLOR STANDARD	EXISTING COLOR
LOR-511-6.17	BLUE – AMS 595A, FCS 15526	EXISTING COLOR NUMBER UNKNOWN
HUR-99-15.90	BLUE – AMS 595A, FCS 15526	EXISTING COLOR NUMBER UNKNOWN

ITEM 509 – UNCOATED REINFORCING STEEL, AS PER PLAN (REPAIR OR REPLACEMENT OF EXISTING)

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE DUE TO CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

IN ADDITION TO THE PROVISION OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS.

PROVIDE CONTINUITY BETWEEN SEGMENTS OF EXISTING AND NEW REINFORCING STEEL BY MEANS OF A LAP SPLICE (36" MINIMUM FOR #5 BAR, 46" FOR #6 BAR) OR METHOD APPROVED BY THE ENGINEER.

PAYMENT FOR THE ABOVE SHALL BE MADE AT THE UNIT BID PRICE PER POUND FOR ITEM 509 – REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN, AND WILL INCLUDE ALL LABOR EQUIPMENT, MATERIALS, AND INCIDENTALS NEEDED TO COMPLETE THIS WORK. THE BELOW QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 509 – REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

ASD-511-1964	50 LBS
HUR-99-1588	100 LBS
LOR-511-0617	100 LBS
TOTAL	250 LBS

GENERAL NOTES

D03-BH-FY2023(B)

MODEL: Gen Notes 3 PAPER SIZE: 34x22 (in.) DATE: 10/27/2022 TIME: 10:40:08 AM USER: jlowery
pvc:\ohiodot-pw-bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 03_D03\105598\400-Engineering\Roadway\Sheets\105598_GN001.dgn

DESIGN AGENCY

DISTRICT 3



ENGINEERING
TEAM ONE

DESIGNER

JEW

REVIEWER

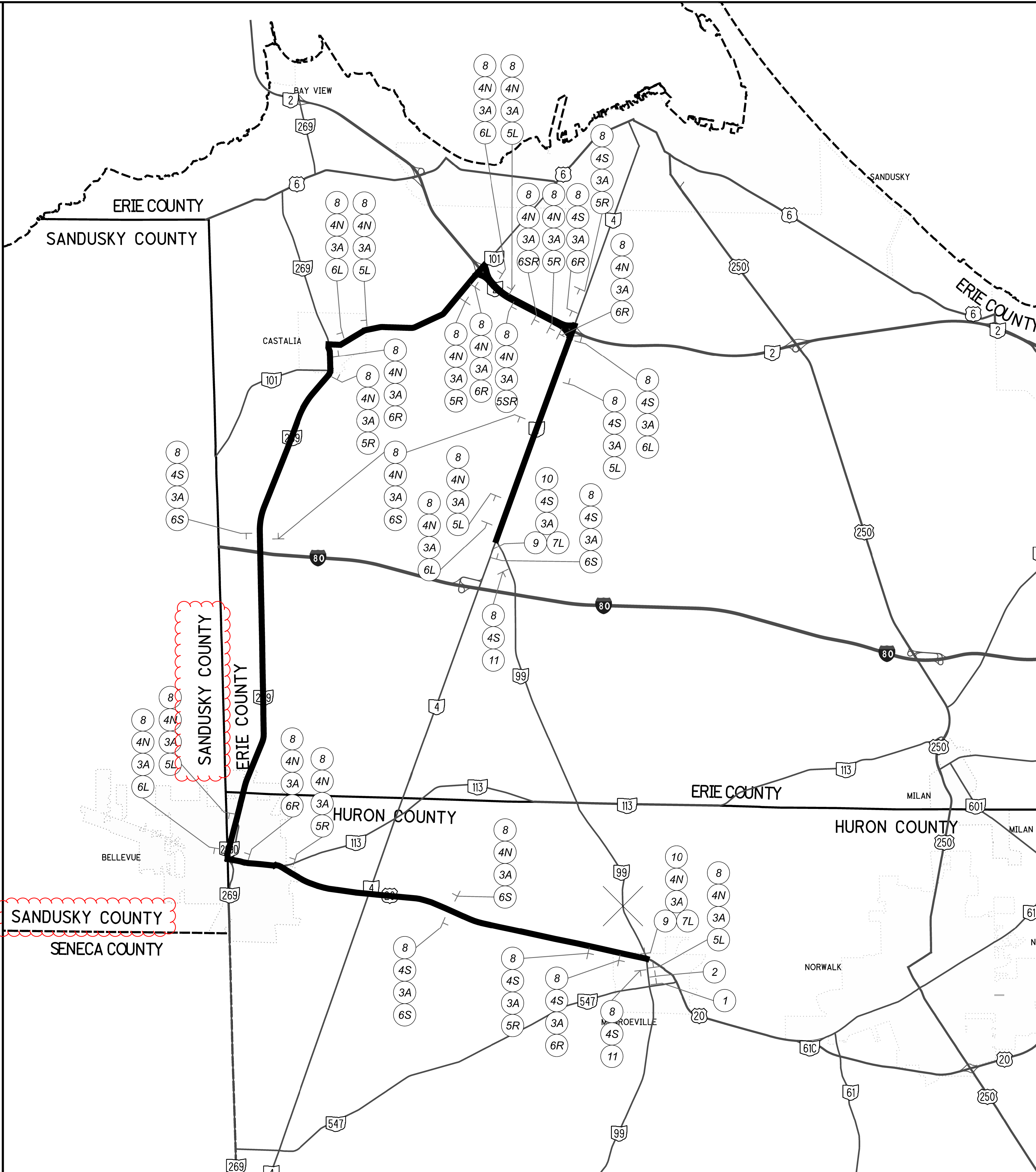
KCK 08-01-22

PROJECT ID

105598

SHEET TOTAL

P.004 P.025



ROAD CLOSED AHEAD
W20-3-48
1

DETOUR AHEAD
W20-2-48
2

99
M1-5-36-2
3A

511
M1-5-36-3
3B

NORTH
M3-1-36
4N

EAST
M3-2-36
4E

SOUTH
M3-3-36
4S

WEST
M3-4-36
4W

Left Turn
M5-2L-30
5SL

Right Turn
M5-1L-30
5L

Right Turn
M5-1R-30
5R

Right Turn
M5-2R-30
5SR

Left Arrow
M6-1-30
6L

Up Arrow
M6-2L-30
6S

Up Arrow
M6-3-30
6S

Up-Right Arrow
M6-2R-30
6SR

Right Arrow
M6-1-30
6R

Left Arrow
M4-10L-48
7L

Right Arrow
M4-10R-48
7R

ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-3a-60
9

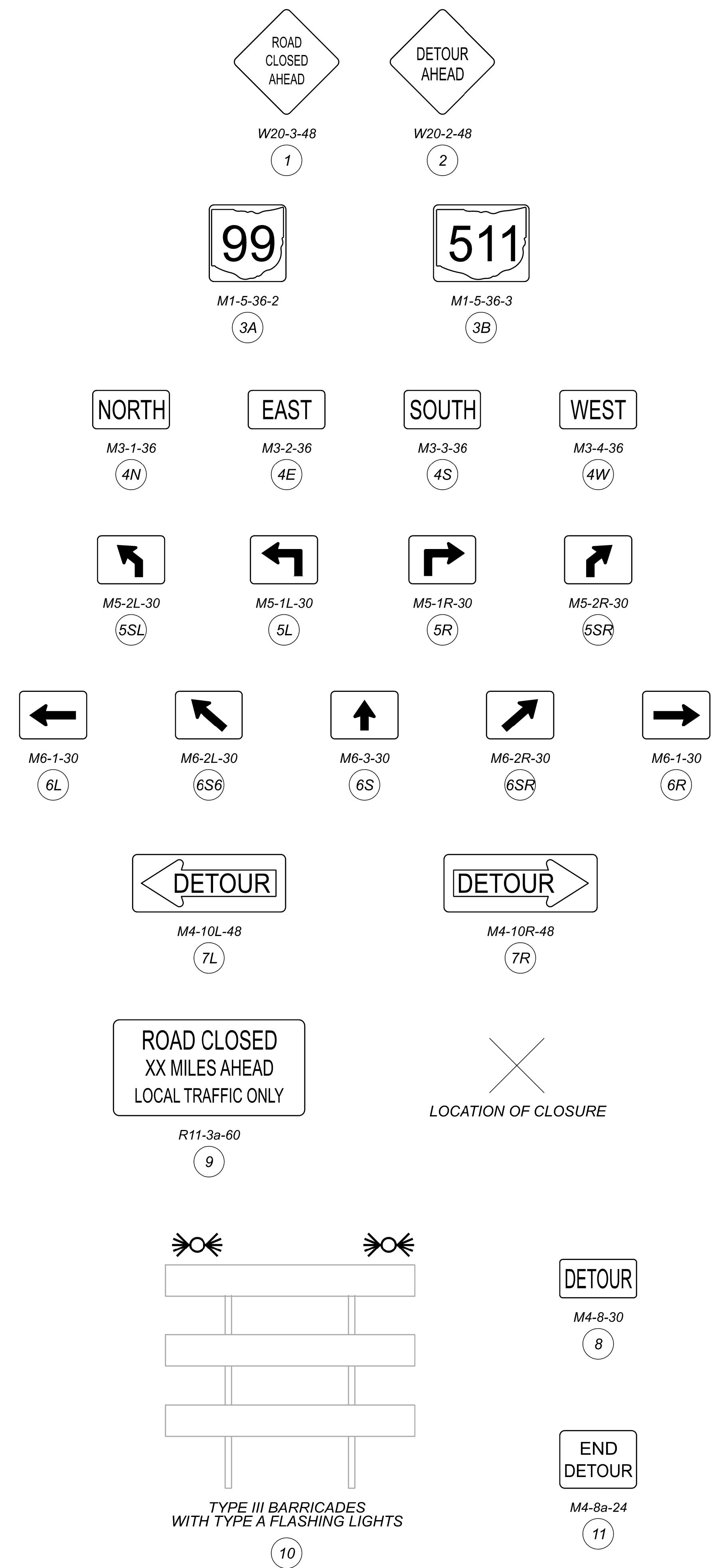
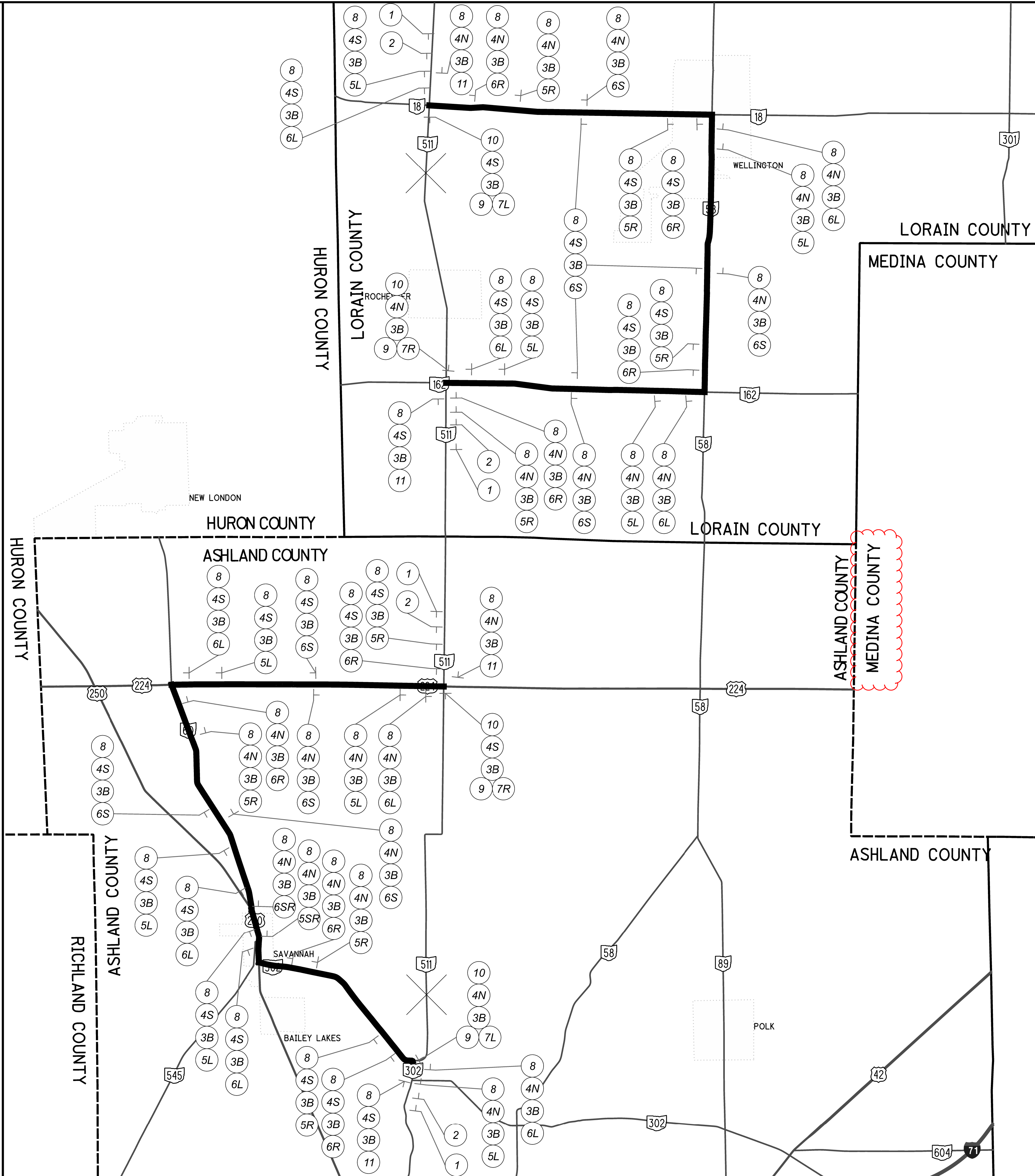
LOCATION OF CLOSURE

DETOUR
M4-8-30
8

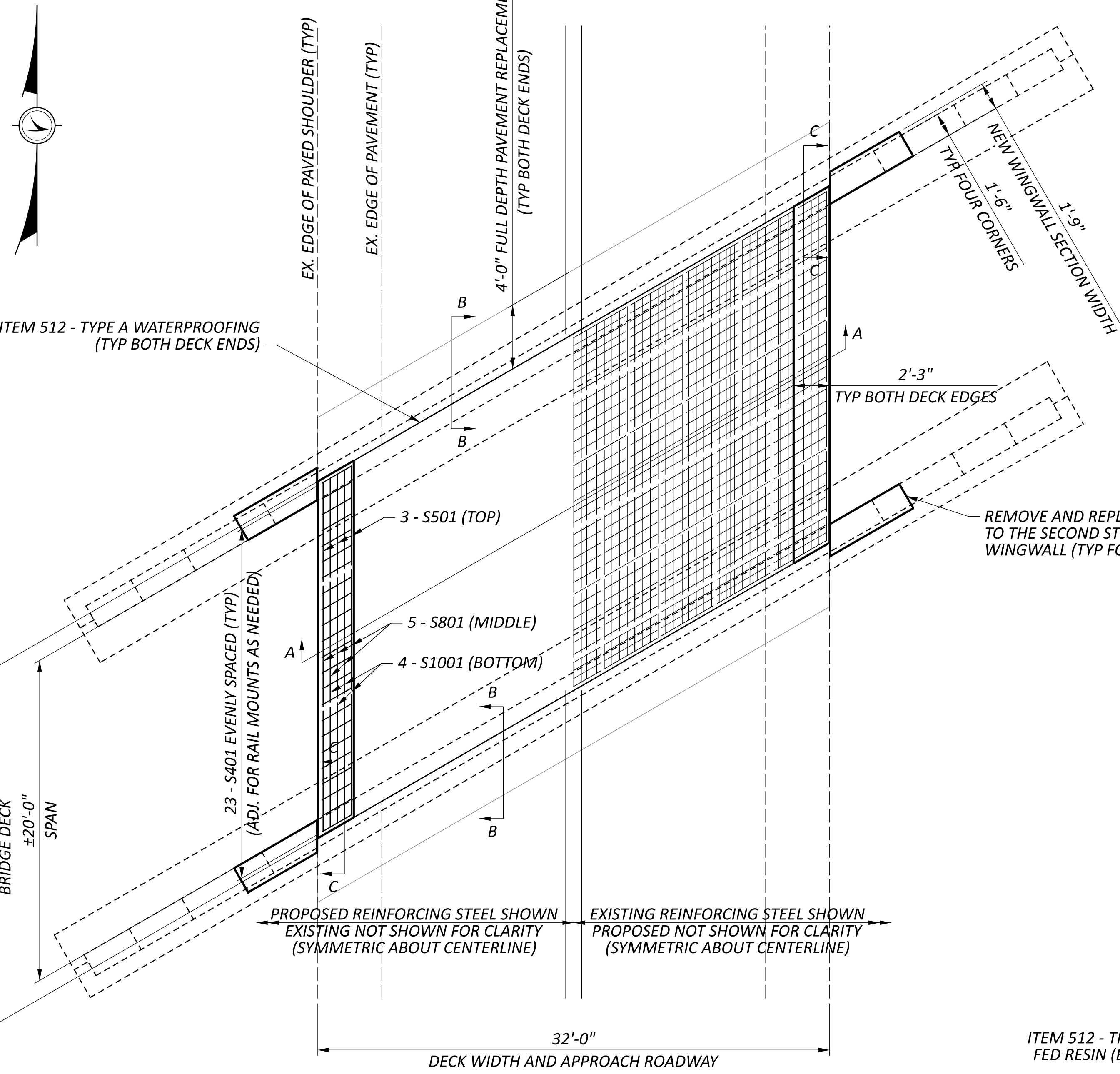
END DETOUR
M4-8a-24
11

TYPE III BARRICADES WITH TYPE A FLASHING LIGHTS
10

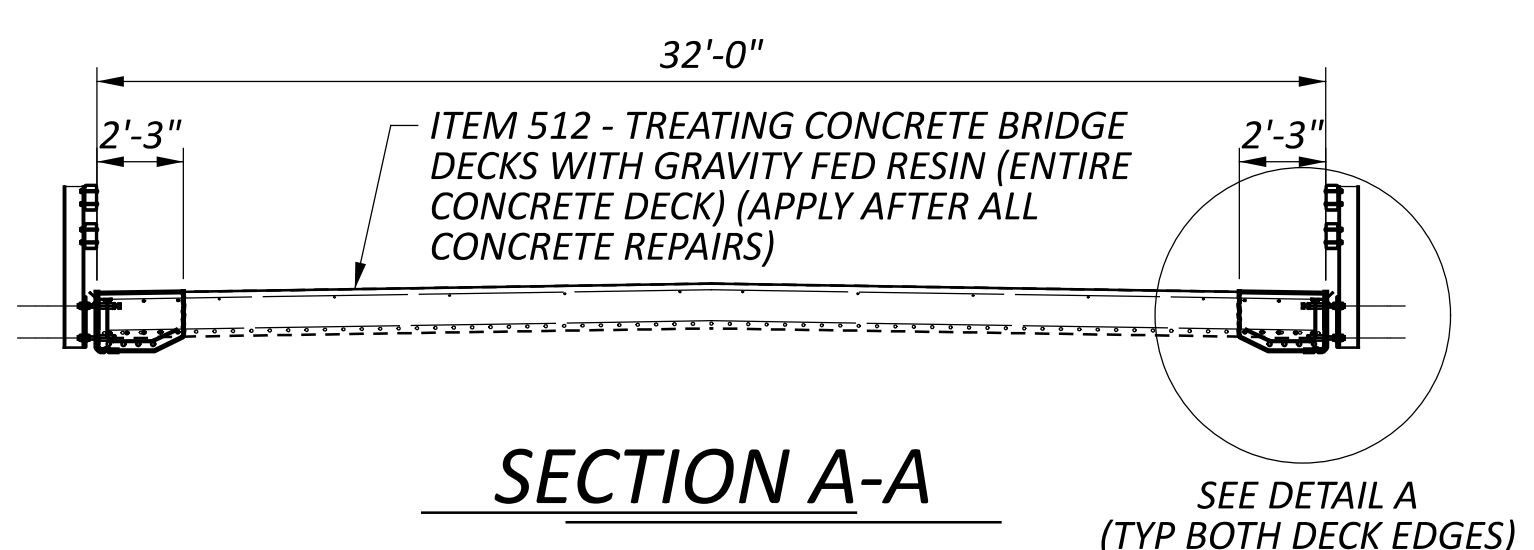
DETOUR DETAILS



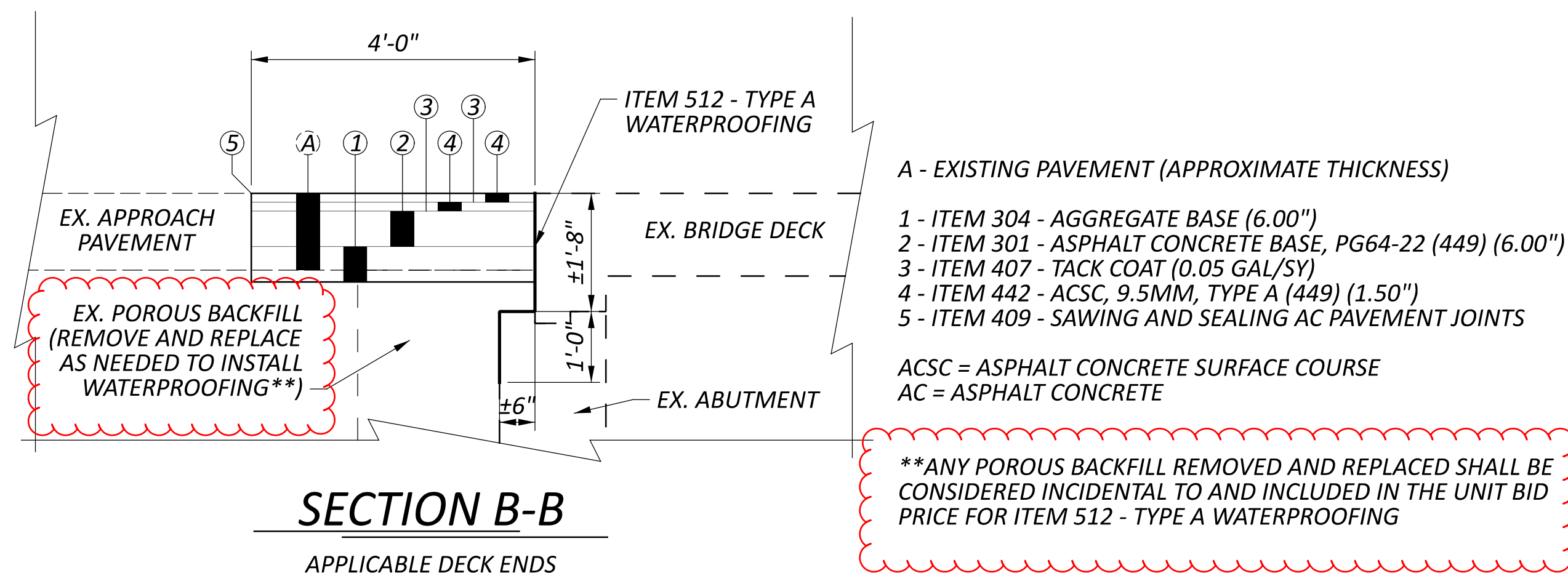
DETOUR DETAILS



PLAN VIEW



SECTION A-A

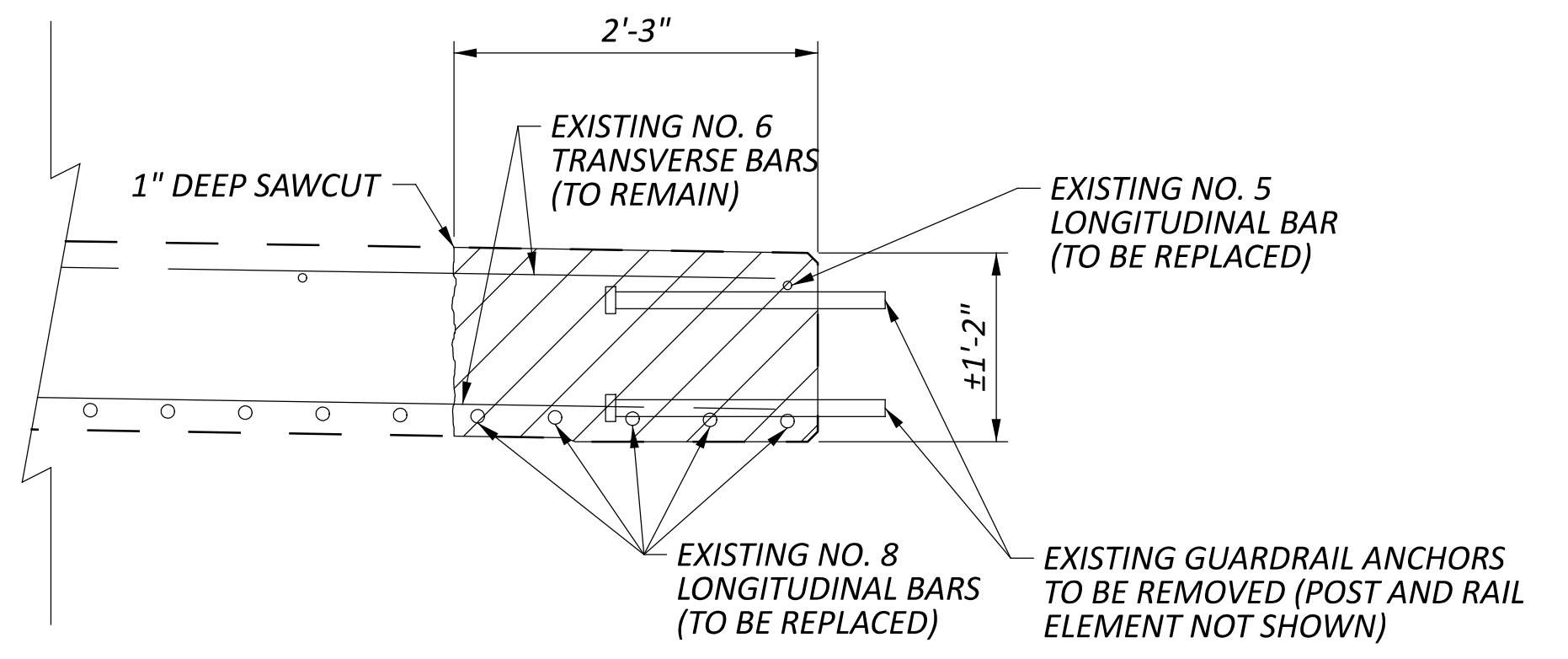


SECTION B-B

APPLICABLE DECK ENDS

- A - EXISTING PAVEMENT (APPROXIMATE THICKNESS)
- ITEM 304 - AGGREGATE BASE (6.00")
 - ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (449) (6.00")
 - ITEM 407 - TACK COAT (0.05 GAL/SY)
 - ITEM 442 - ACSC, 9.5MM, TYPE A (449) (1.50")
 - ITEM 409 - SAWING AND SEALING AC PAVEMENT JOINTS
- ACSC = ASPHALT CONCRETE SURFACE COURSE
AC = ASPHALT CONCRETE

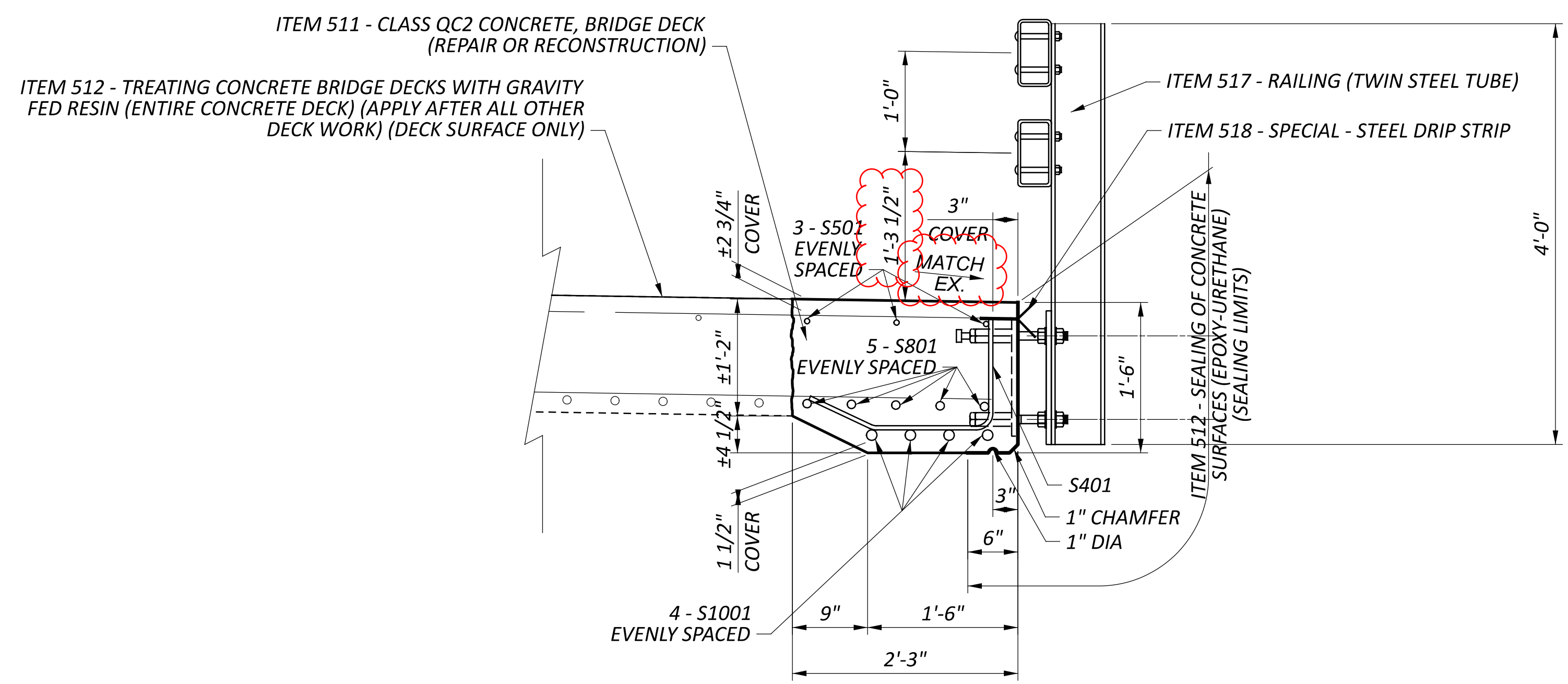
**ANY POROUS BACKFILL REMOVED AND REPLACED SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED IN THE UNIT BID PRICE FOR ITEM 512 - TYPE A WATERPROOFING



DETAIL A

EXISTING AND REMOVAL TYP BOTH DECK EDGES

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN



DETAIL A

PROPOSED WORK TYP BOTH DECK EDGES

SFN	0305642
DESIGN AGENCY	DISTRICT 3
ENGINEERING TEAM ONE	
DESIGNER	CHECKER
KCK	KAK
REVIEWER	
JLL	08-01-22
PROJECT ID	105598
SUBSET	TOTAL
1	4
SHEET	TOTAL
P.011	P.025

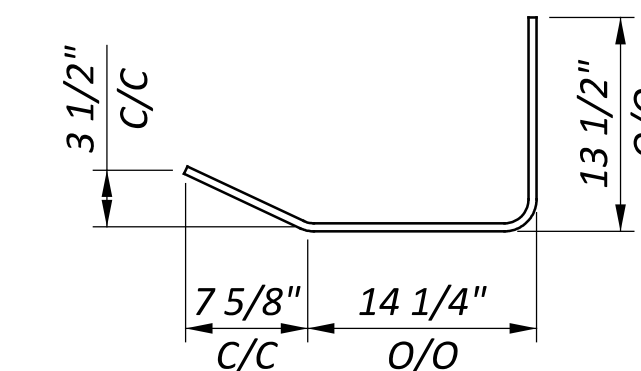
ESTIMATED QUANTITIES

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
202	11300	5	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (DECK EDGES)
202	11300	3	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (WINGWALLS)
202	23000	29	SY	PAVEMENT REMOVED
301	56000	5	CY	ASPHALT CONCRETE BASE, PG64-22 (449) (6.00")
304	20000	5	CY	AGGREGATE BASE (6.00")
407	10000	8	GAL	TACK COAT
409	30000	74	FT	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS
442	22000	3	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (449) (1.50")
509	25000	1,706	POUND	UNCOATED STEEL REINFORCEMENT
511	34410	6	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE (REPAIR OR RECONSTRUCTION)
511	44110	3	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING
512	10100	28	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	33300	27	SY	TYPE A WATERPROOFING
512	73500	80	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
516	13600	11	SF	1" PREFORMED EXPANSION JOINT FILLER
518	22300	40	FT	SPECIAL - STEEL DRIP STRIP
519	11100	159	SF	PATCHING CONCRETE STRUCTURE

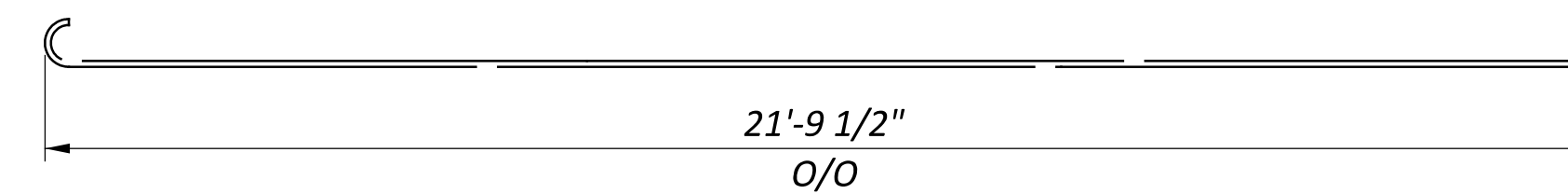
ALL QUANTITIES CARRIED TO GENERAL SUMMARY

BAR CHART

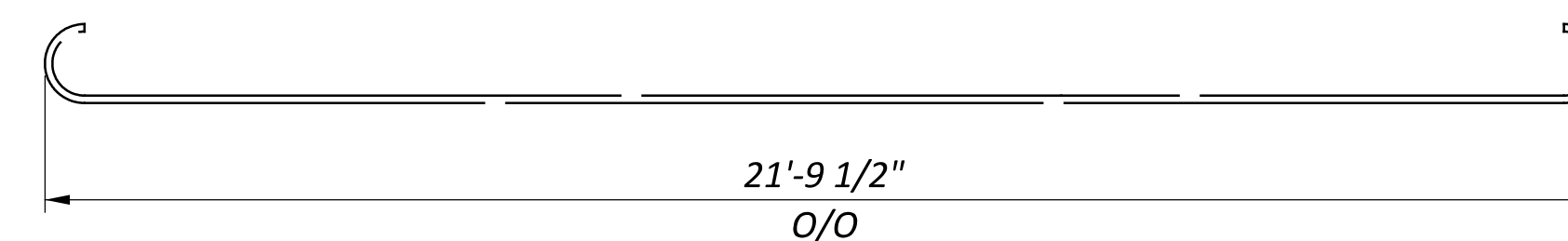
MARK	TYPE	LENGTH	QUANTITY	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
		FEET		LIN FT	LB/FT	LB
S401	BENT	2.902	46	133.49	0.67	89.44
S501	STRAIGHT	21.809	6	130.85	1.04	136.09
S801	BENT	23.667	10	236.67	2.67	631.91
S1001	BENT	24.667	8	197.34	4.30	848.54
TOTAL CARRIED TO GENERAL SUMMARY						1,706



S401



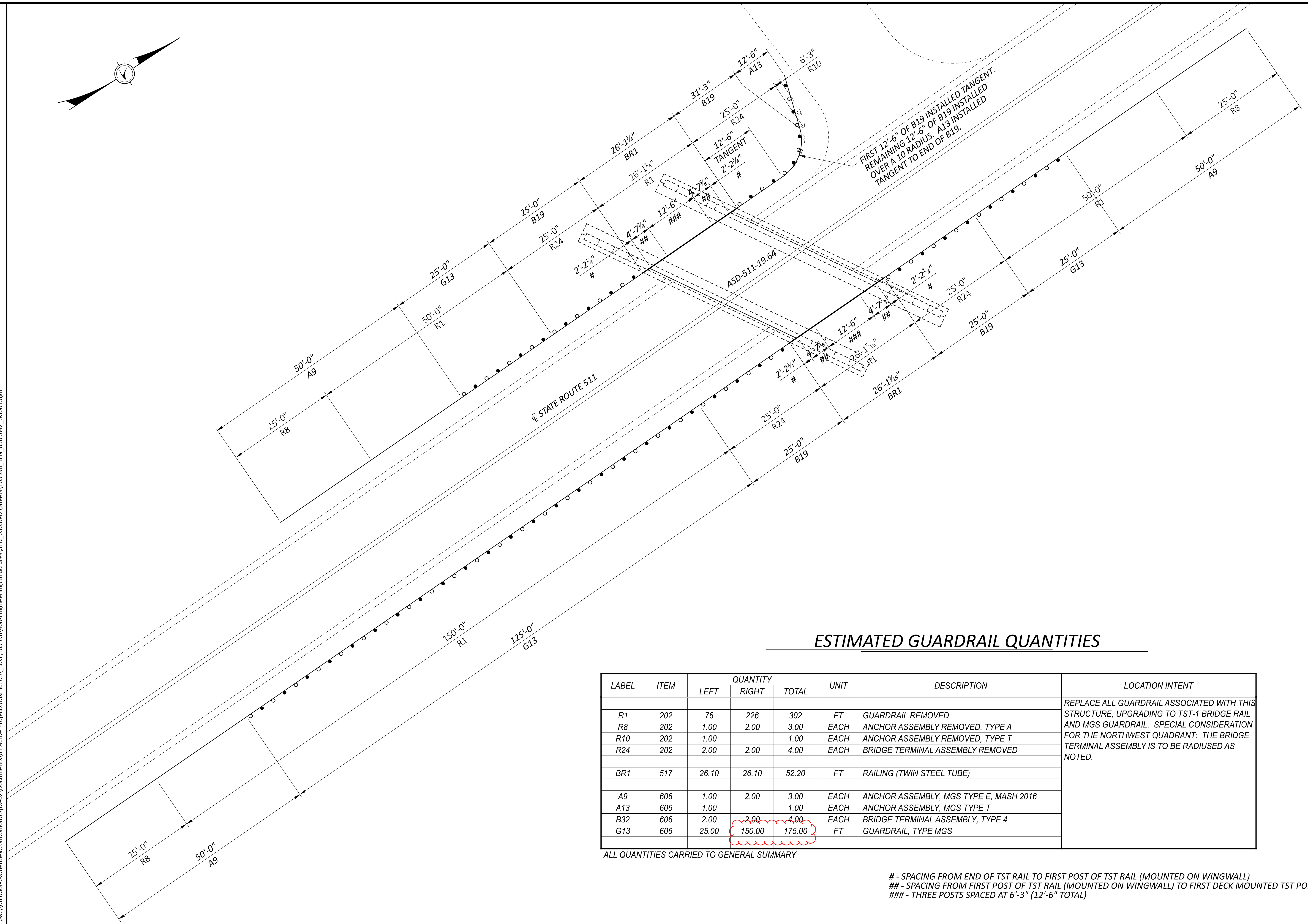
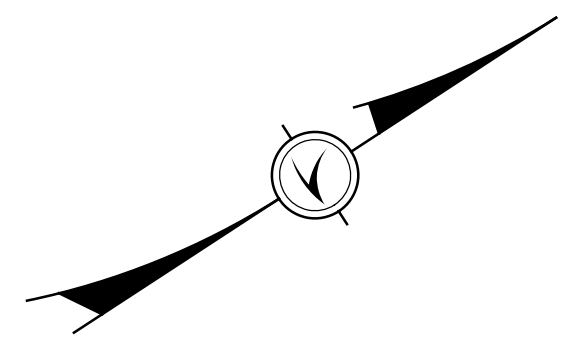
S801



S1001

BENDING DIAGRAMS

ALL DIMENSIONS TO THE CENTER OF THE BAR, ALONG THE LENGTH OF THE BAR




ESTIMATED GUARDRAIL QUANTITIES

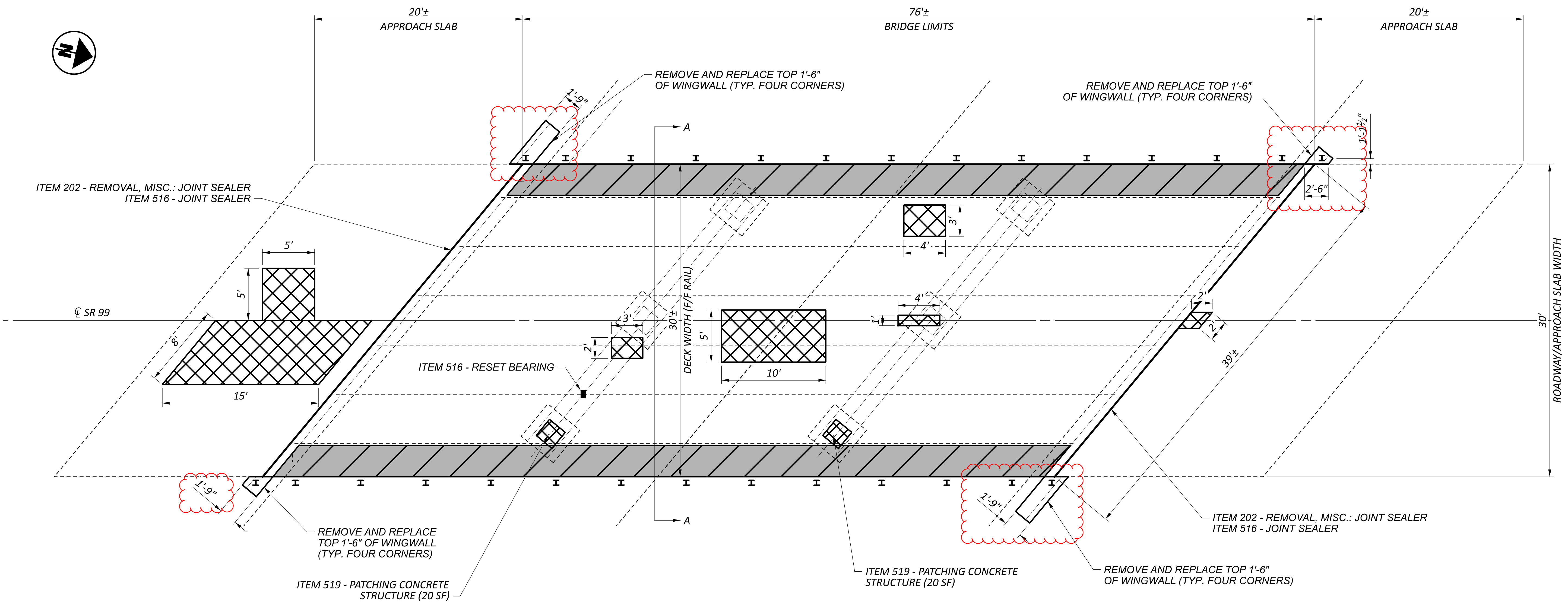
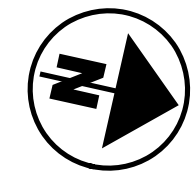
LABEL	ITEM	QUANTITY			UNIT	DESCRIPTION	LOCATION INTENT
		LEFT	RIGHT	TOTAL			
R1	202	76	226	302	FT	GUARDRAIL REMOVED	REPLACE ALL GUARDRAIL ASSOCIATED WITH THIS STRUCTURE, UPGRADING TO TST-1 BRIDGE RAIL AND MGS GUARDRAIL. SPECIAL CONSIDERATION FOR THE NORTHWEST QUADRANT: THE BRIDGE TERMINAL ASSEMBLY IS TO BE RADIUSSED AS NOTED.
R8	202	1.00	2.00	3.00	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
R10	202	1.00		1.00	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
R24	202	2.00	2.00	4.00	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
BR1	517	26.10	26.10	52.20	FT	RAILING (TWIN STEEL TUBE)	
A9	606	1.00	2.00	3.00	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
A13	606	1.00		1.00	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
B32	606	2.00	2.00	4.00	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
G13	606	25.00	150.00	175.00	FT	GUARDRAIL, TYPE MGS	

ALL QUANTITIES CARRIED TO GENERAL SUMMARY

- SPACING FROM END OF TST RAIL TO FIRST POST OF TST RAIL (MOUNTED ON WINGWALL)
 ## - SPACING FROM FIRST POST OF TST RAIL (MOUNTED ON WINGWALL) TO FIRST DECK MOUNTED TST POST
 ### - THREE POSTS SPACED AT 6'-3" (12'-6" TOTAL)

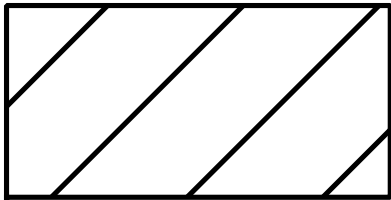

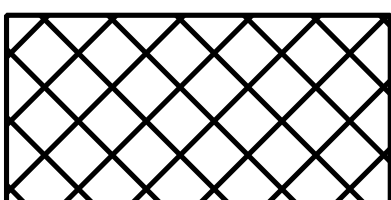
STRUCTURE DETAILS
 ASD-511-19.64
 CARRYING STATE ROUTE 511 OVER UNNAMED DITCH

SFN 0305642
 DESIGN AGENCY DISTRICT 3

 ENGINEERING TEAM ONE
 DESIGNER: KCK CHECKER: KAK
 REVIEWER: JLL 08-01-22
 PROJECT ID: 105598
 SUBSET 4 TOTAL 4
 SHEET P.014 TOTAL P.025



PLAN VIEW

LEGEND

-  ITEM 509 - UNCOATED REINFORCING STEEL
 ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE
 ITEM 518 - SPECIAL - STEEL DRIP STRIP
-  ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
-  ITEM 519 - PATCHING CONCRETE STRUCTURE

NOTES


1. SEAL THE APPROACH SLABS, TOPS OF BACKWALLS, AND THE ENTIRE DECK USING ITEM 512 - TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN.
2. APPROACH SLAB AND DECK REPAIR LOCATIONS ARE FOR REFERENCE USE ONLY. EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER. EXISTING REINFORCING STEEL SHALL BE PRESERVED AT ALL PATCH LOCATIONS.
3. PERFORM ALL JOINT SEALING AFTER ALL REPAIR WORK HAS BEEN COMPLETED.
4. SEE SHEETS 2, 3 AND 3A/5 FOR DECK EDGE AND STEEL REINFORCING DETAILS.
5. SEE SHEET 4/5 FOR PIER COLUMN AND ABUTMENT REPAIR DETAILS.
6. RESET BEARING #5 ON PIER 1.

ESTIMATED QUANTITIES

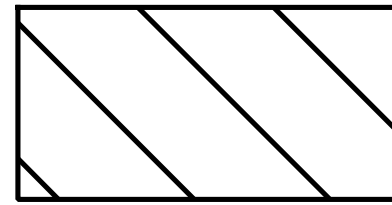
ITEM	QUANTITY	UNIT	DESCRIPTION
202	25	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (DECK EDGES)
202	1	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (WINGWALLS)
202	78	FT	REMOVAL, MISC.: JOINT SEALER
509	2,953	LB	UNCOATED REINFORCING STEEL
510	10	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALIC GROUT
511	25	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE (REPAIR OR RECONSTRUCTION)
511	2	CY	CLASS QC1 CONCRETE, ABUTMENT NOT INCLUDING FOOTING
512	33	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	387	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN
514	2,756	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL
514	2,756	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT
514	2,756	SF	FIELD PAINTING OF STRUCTURAL STEEL, INTERMEDIATE COAT
514	2,756	SF	FIELD PAINTING OF STRUCTURAL STEEL, FINISH COAT, AS PER PLAN
514	8	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL
514	3	EACH	FINAL INSPECTION REPAIR
516	78	FT	JOINT SEALER
516	1	EACH	RESET BEARING
518	184	FT	SPECIAL - STEEL DRIP STRIP
519	261	SF	PATCHING CONCRETE STRUCTURE

ALL QUANTITIES CARRIED TO THE GENERAL SUMMARY FOR INDIVIDUAL STRUCTURES

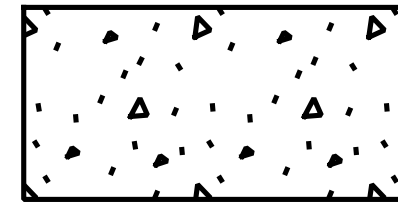
STRUCTURE DETAILS
 STRUCTURE HUR-99-15.90
 OVER SEYMOUR CREEK

SFN 3902498
 DESIGN AGENCY DISTRICT 3

 ENGINEERING TEAM ONE
 DESIGNER JLL CHECKER KAK
 REVIEWER
 KCK 08-01-22
 PROJECT ID 105598
 SUBSET 1 TOTAL 5
 SHEET P.015 TOTAL P.025

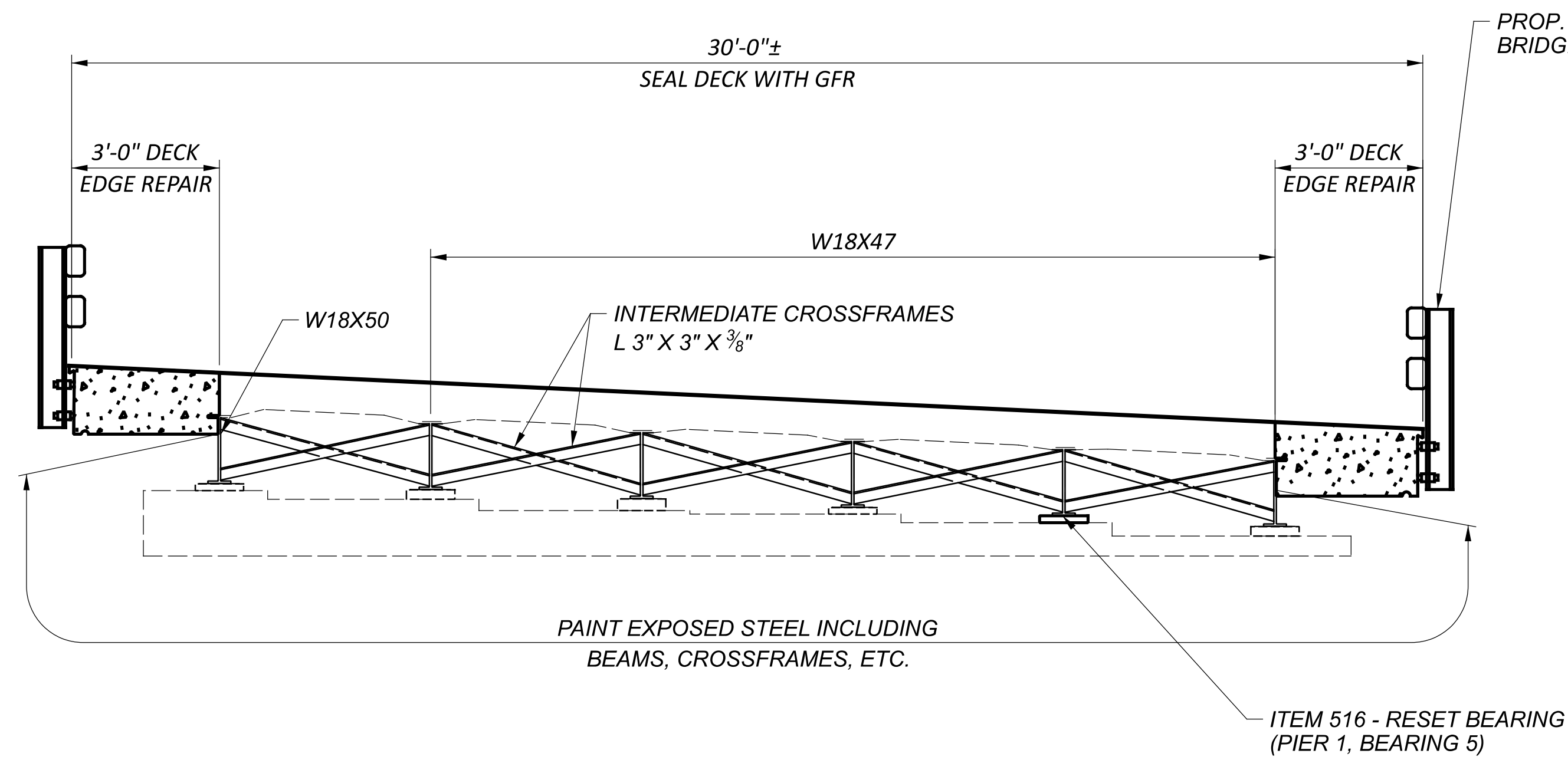
LEGEND



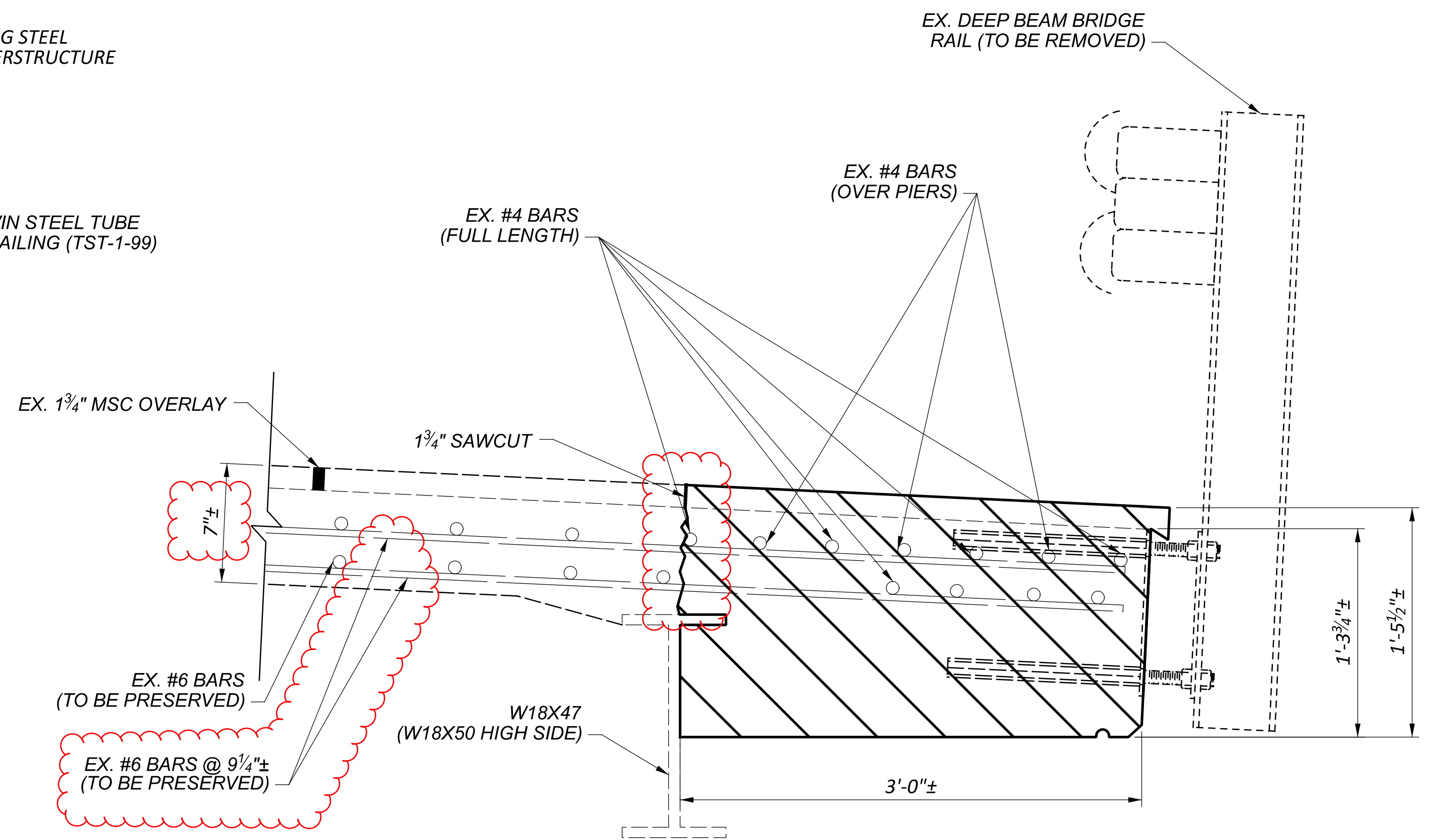
ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN



ITEM 509 - EPOXY-COATED REINFORCING STEEL
 ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE
 ITEM 518 - SPECIAL - STEEL DRIP STRIP

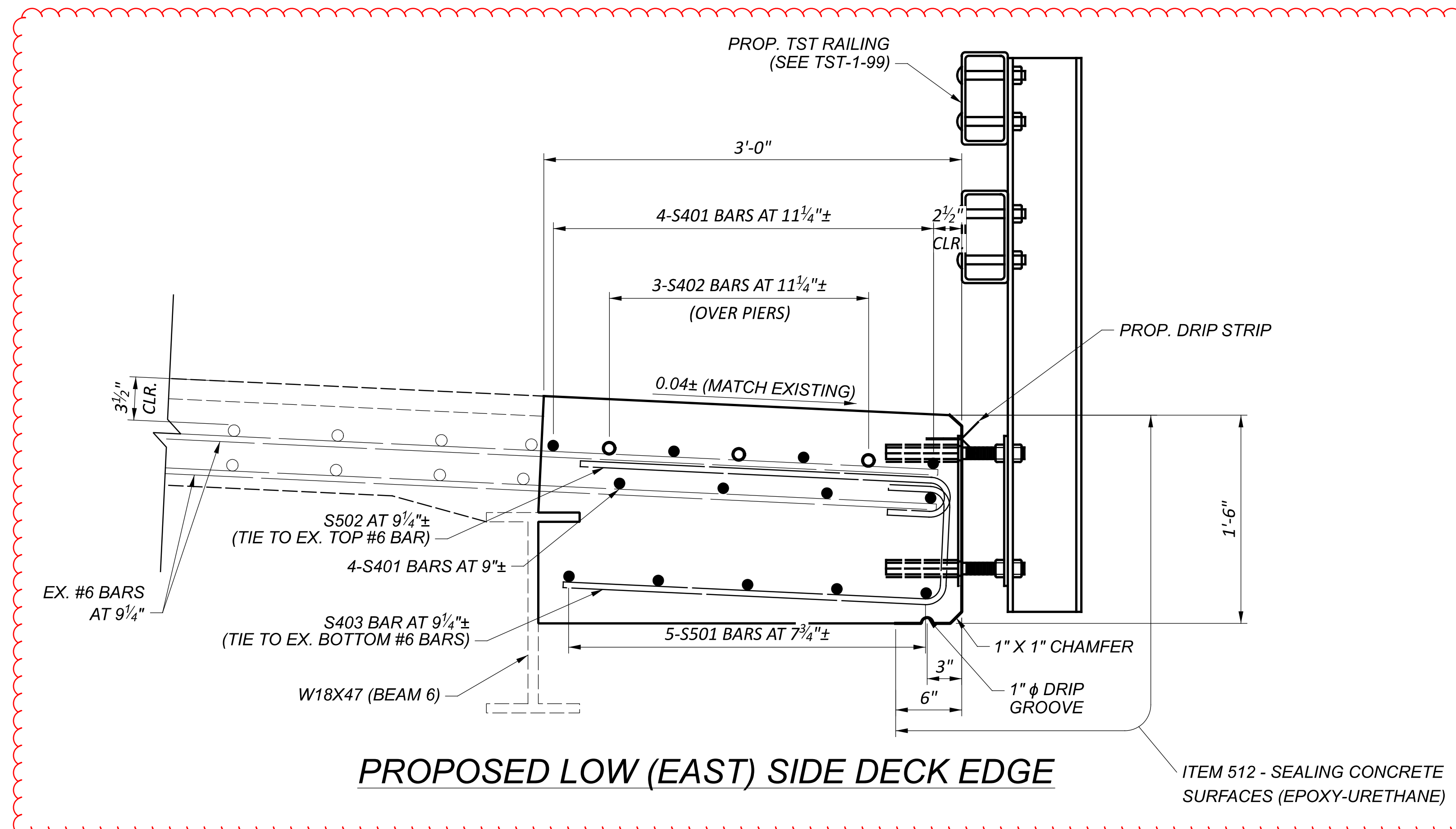


SECTION A-A



TYPICAL DECK EDGE REMOVAL

LOW SIDE SHOWN, HIGH SIDE SIMILAR



PROPOSED LOW (EAST) SIDE DECK EDGE

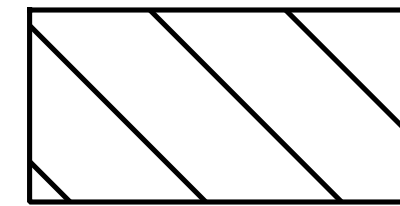
D03-BH-FY2023(B)

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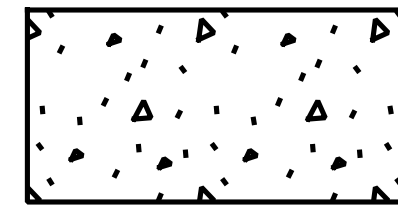
STRUCTURE DETAILS
 STRUCTURE HUR-99-15.90
 OVER SEYMOUR CREEK

SFN	3902498
DESIGN AGENCY	DISTRICT 3
ENGINEERING TEAM ONE	
DESIGNER	CHECKER
JLL	KAK
REVIEWER	
KCK	08-01-22
PROJECT ID	105598
SUBSET	TOTAL
2	5
SHEET	TOTAL
P.016	P.025

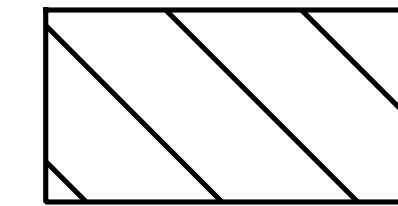
LEGEND



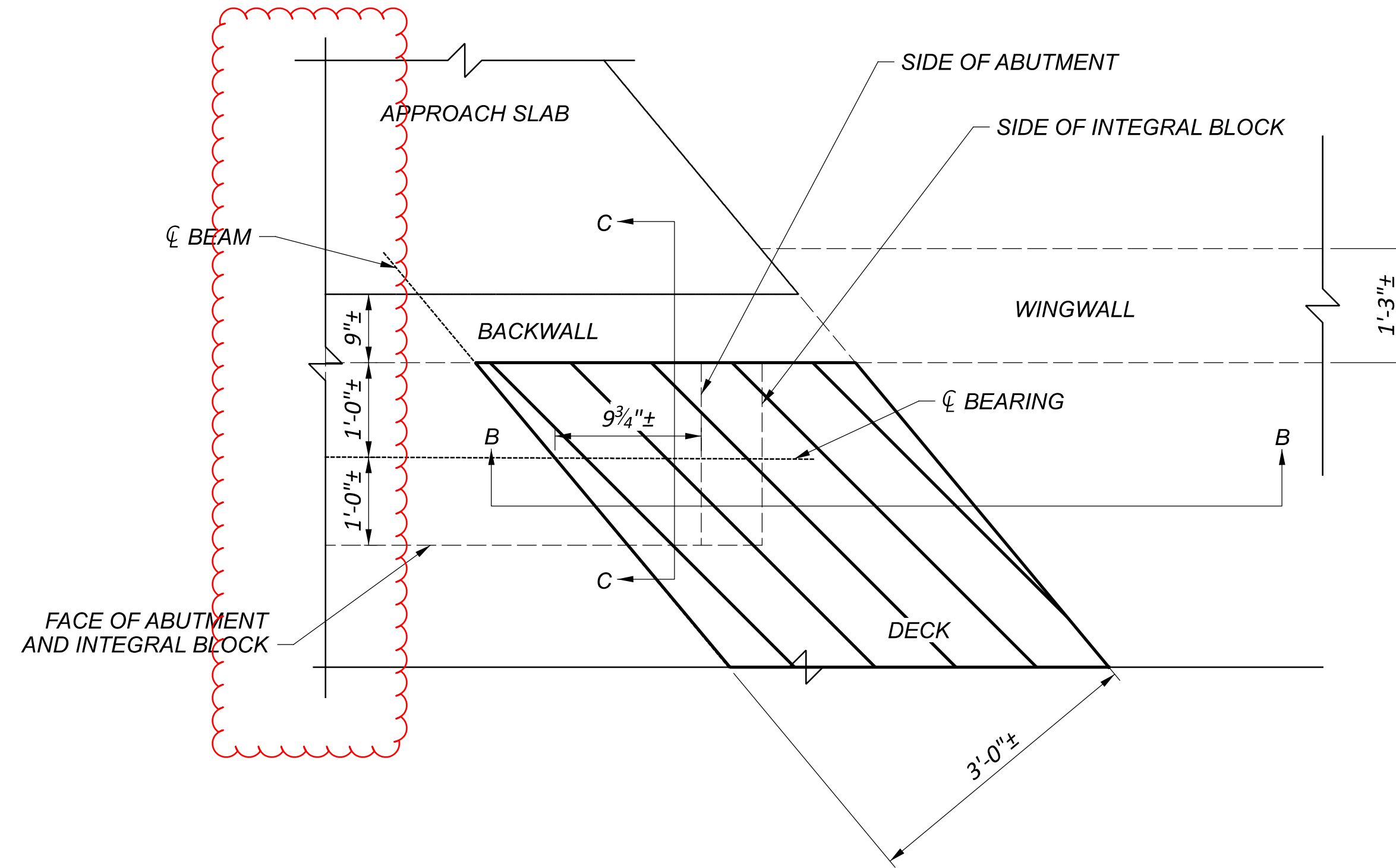
ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN



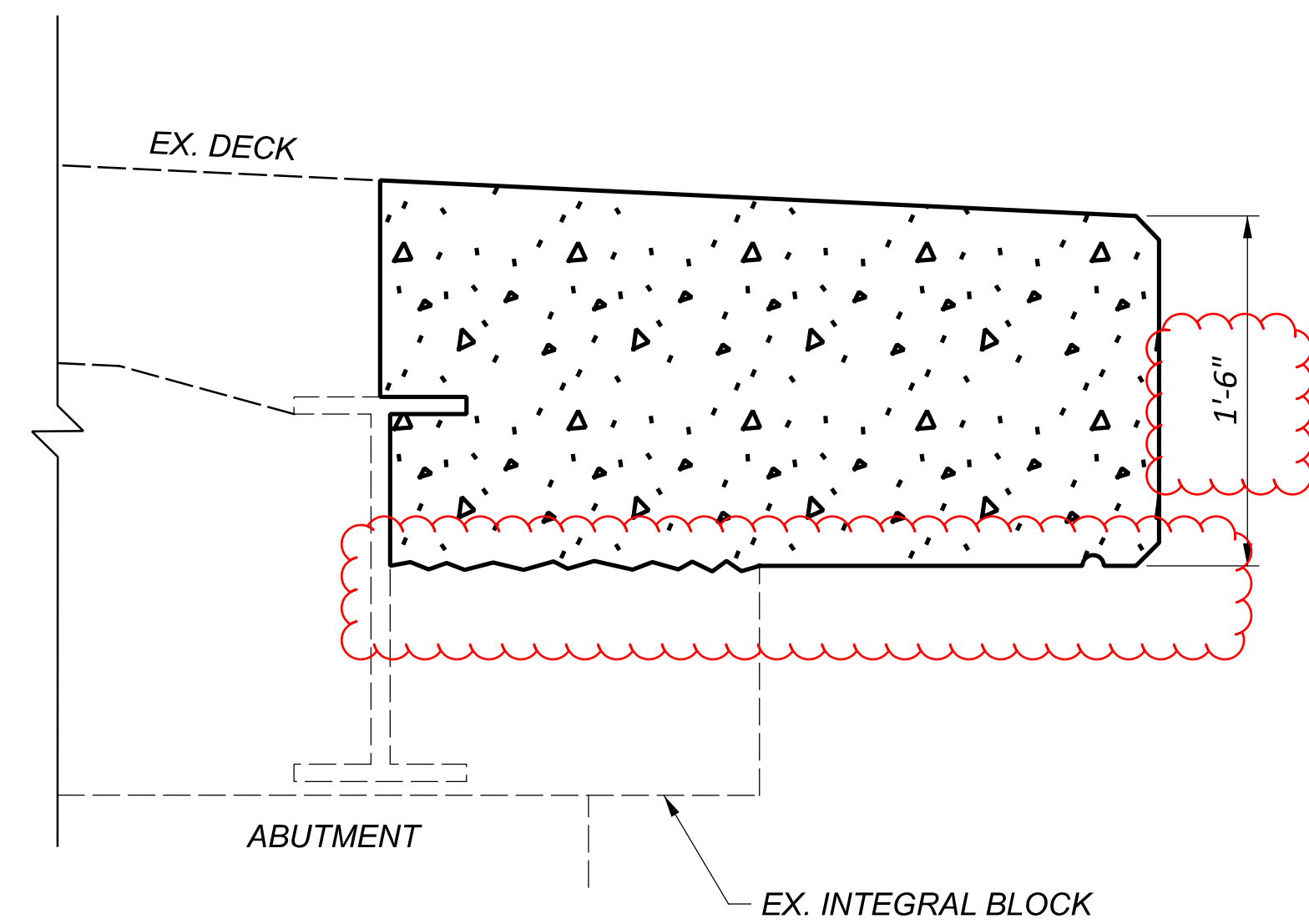
ITEM 509 - EPOXY-COATED REINFORCING STEEL
 ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE
 ITEM 518 - SPECIAL - STEEL DRIP STRIP



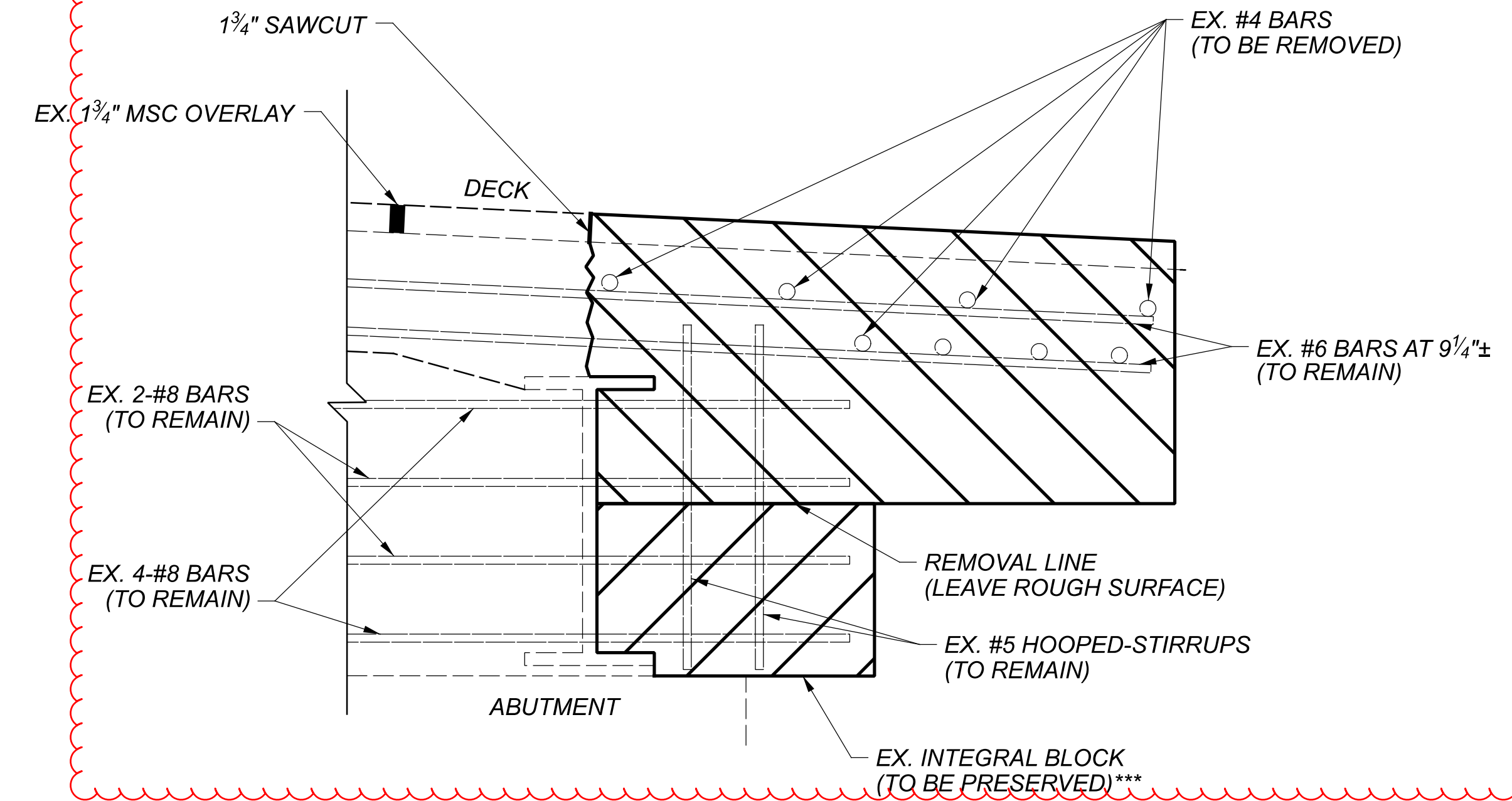
OPTIONAL REMOVAL AREA***



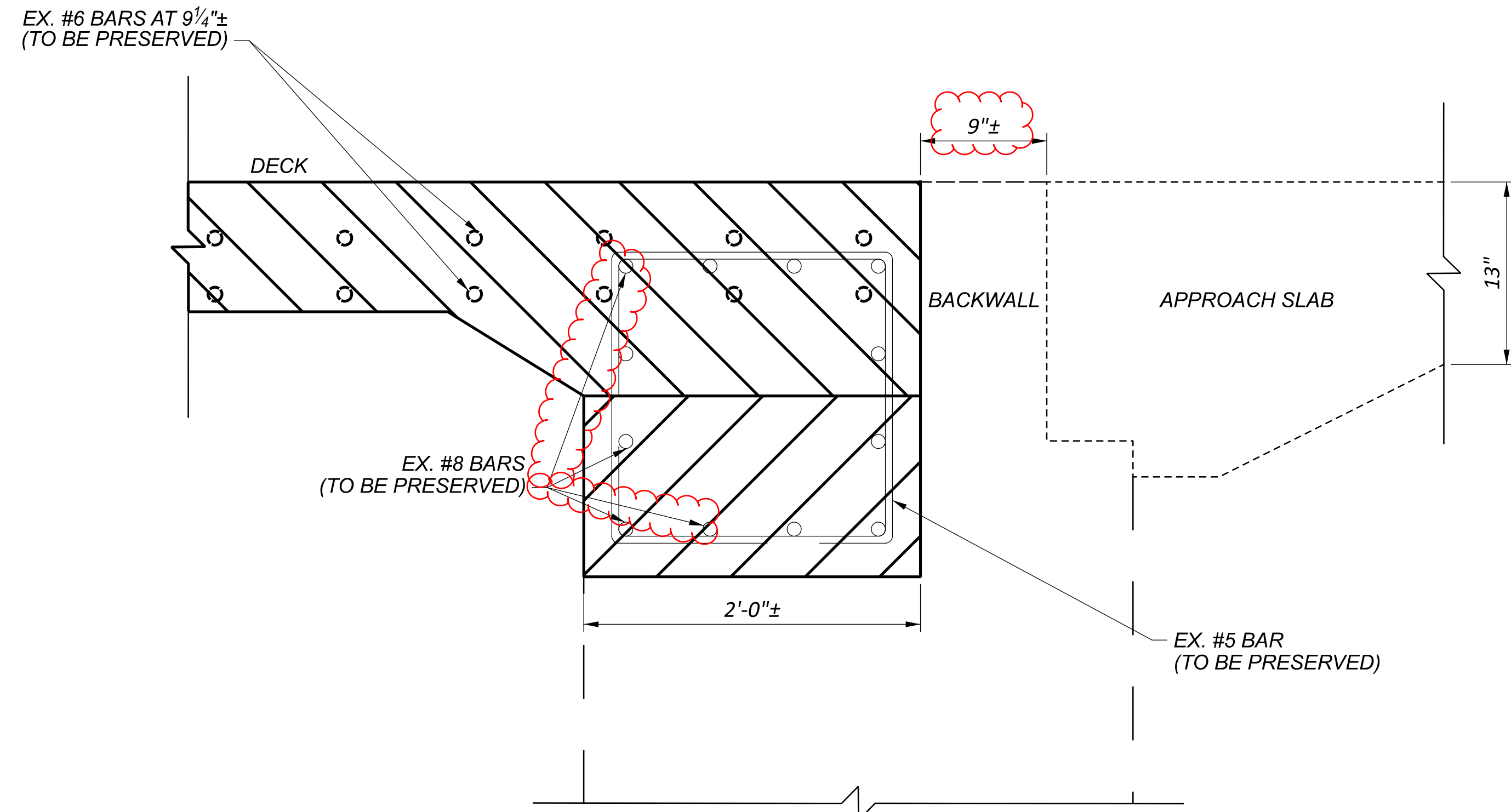
DECK REMOVAL AT CORNER
 NORTHEAST CORNER SHOWN, OTHER CORNERS SIMILAR



SECTION B-B
 (PROPOSED)
 EXISTING AND PROPOSED REINFORCING STEEL NOT SHOWN



SECTION B-B
 REMOVAL



SECTION C-C
 REMOVAL

***THE CONTRACTOR MAY REMOVE AND REPLACE EXISTING INTEGRAL BLOCK CONCRETE IN ORDER TO COMPLETE THE DECK EDGE REPLACEMENT. INTEGRAL BLOCK CONCRETE REMOVAL AND REPLACEMENT SHALL BE PAID AT THE CONTRACTOR'S EXPENSE. EXISTING BARS ARE TO REMAIN AND BE INCORPORATED INTO THE NEW CONSTRUCTION.

STRUCTURE DETAILS
 STRUCTURE HUR-99-15.90
 OVER SEYMOUR CREEK

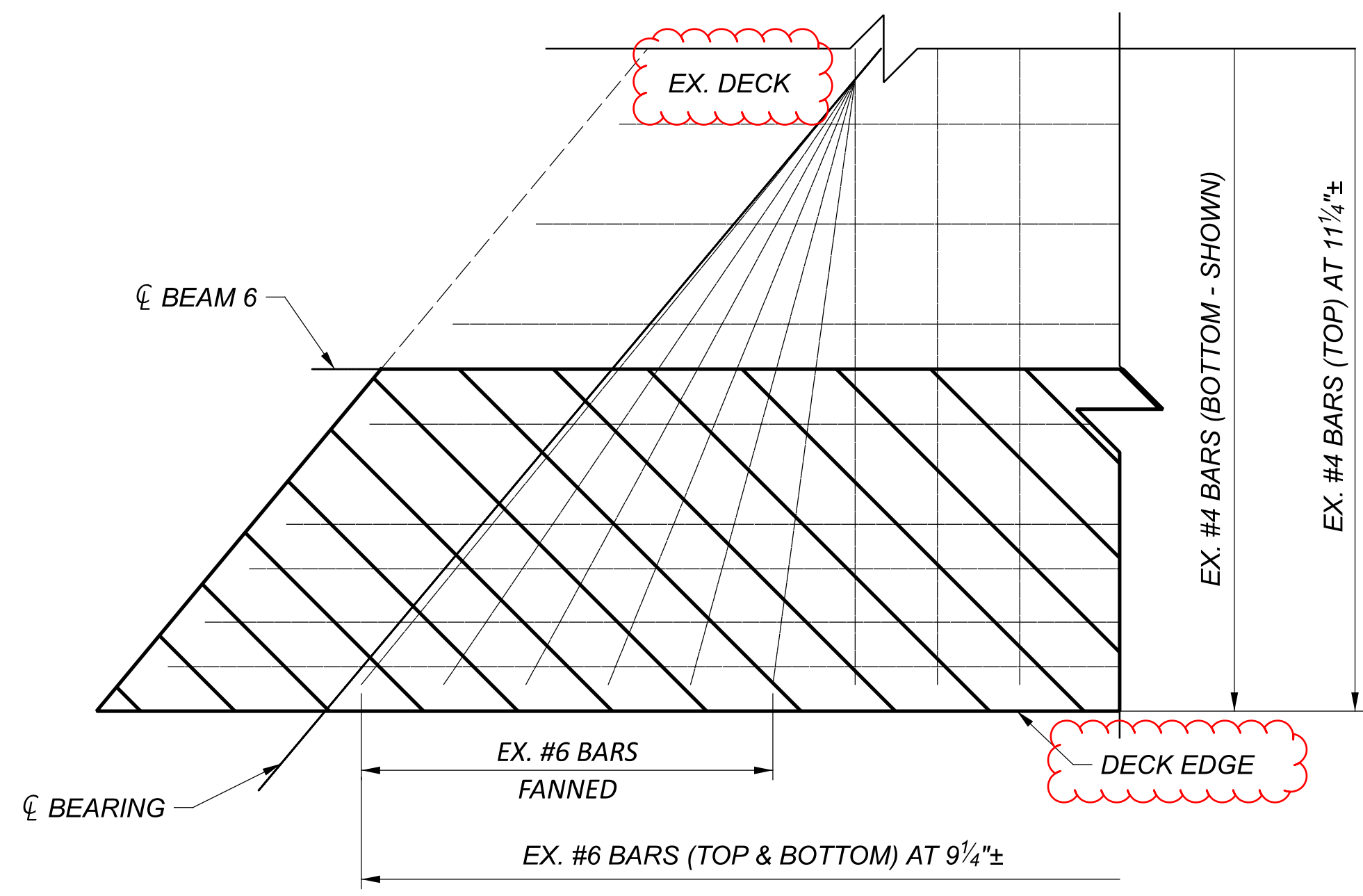
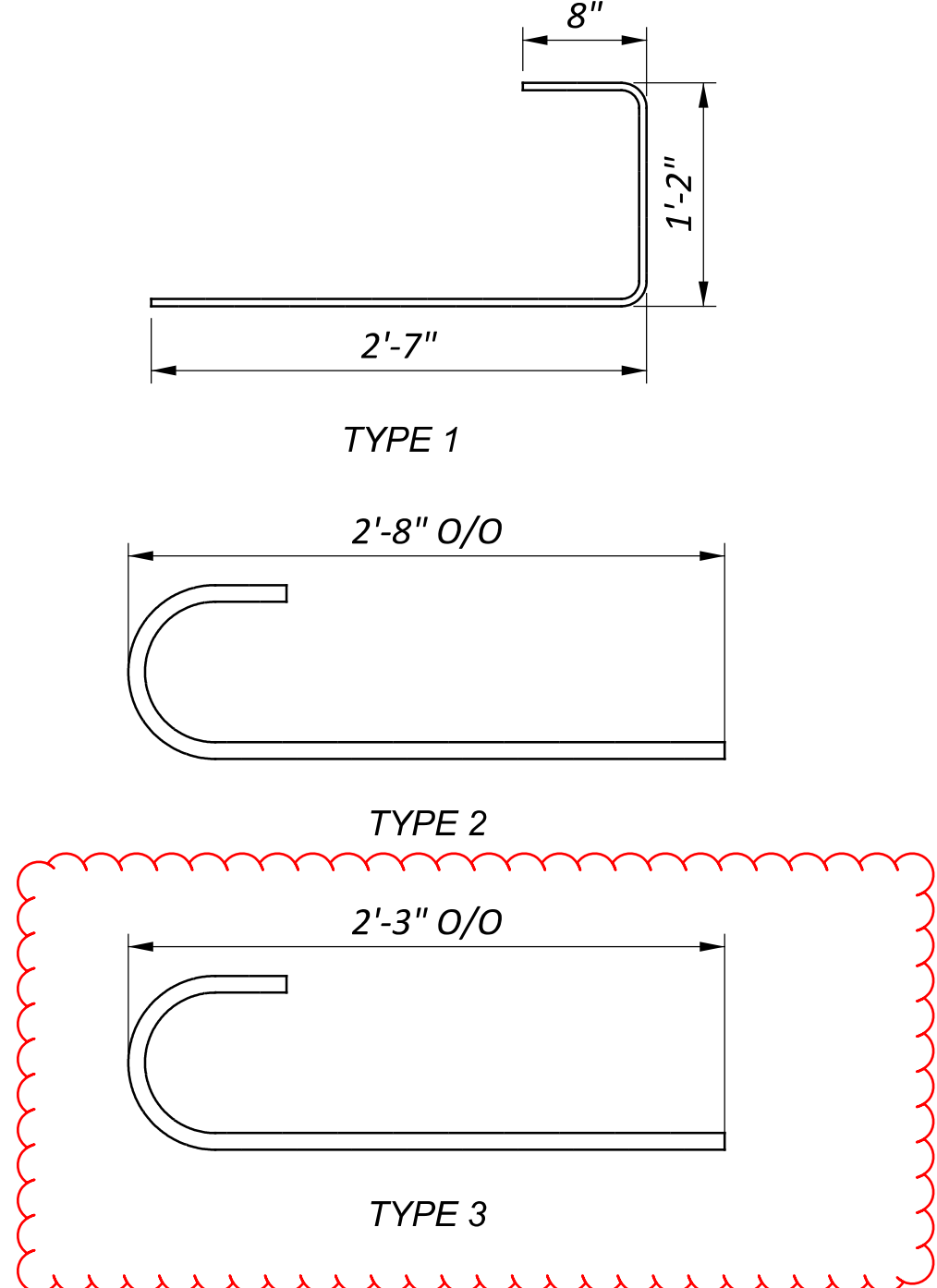
D03-BH-FY2023(B)

MODEL: Sheet3 PAPER: 34x42 (in.) DATE: 10/27/2022 TIME: 10:42:57 AM USER: jlowery
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SFN	3902498
DESIGN AGENCY	DISTRICT 3
ENGINEERING TEAM ONE	
DESIGNER	CHECKER
JLL	KAK
REVIEWER	
KCK	08-01-22
PROJECT ID	105598
SUBSET	TOTAL
3	5
SHEET	TOTAL
P.017	P.025

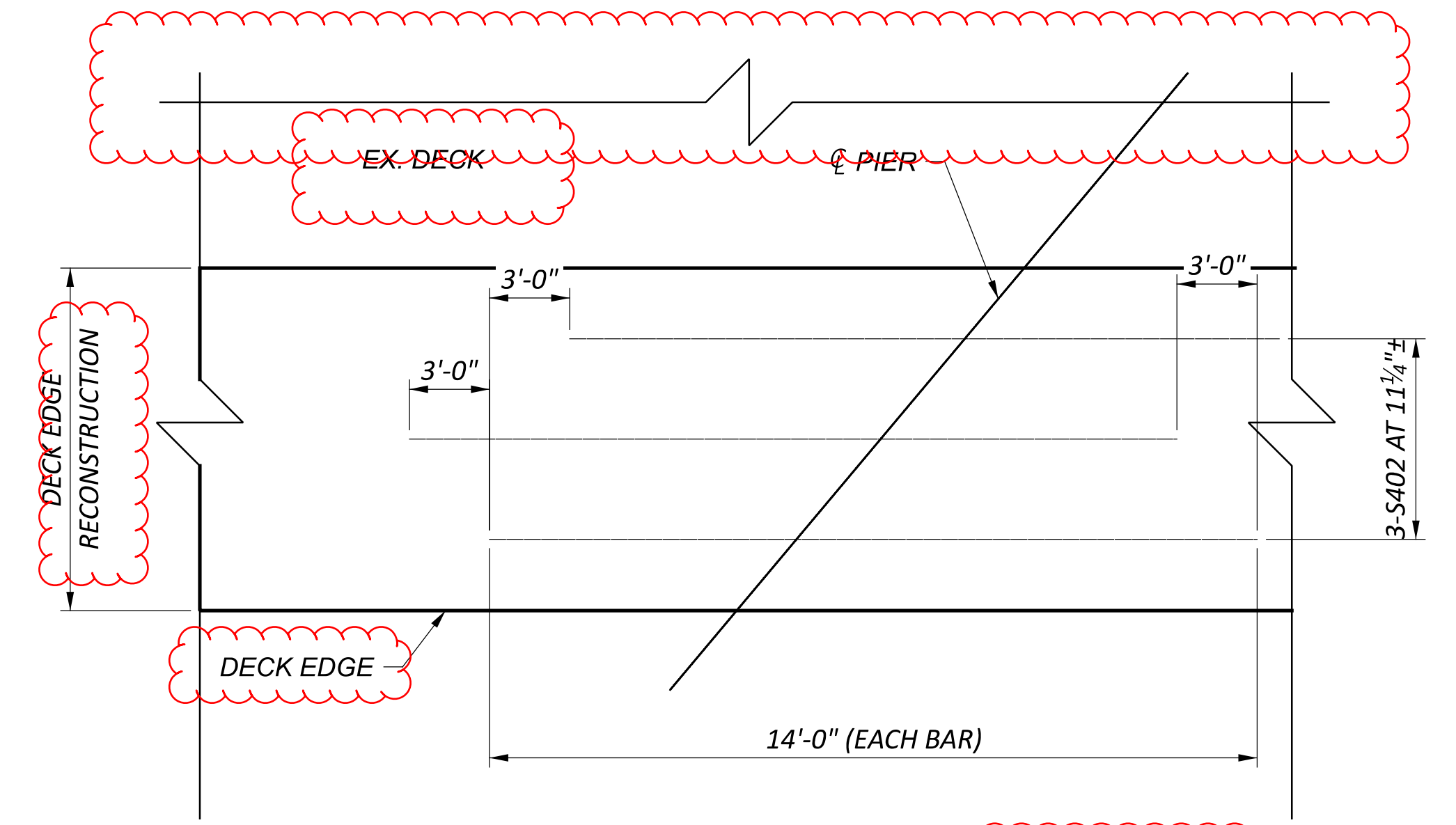
REINFORCING STEEL SCHEDULE					
MARK	TYPE	NUMBER	LENGTH	UNIT WEIGHT (LB/FT)	TOTAL WEIGHT (LB)
S401	STRAIGHT	48	26'-0"	0.668	834
S402	STRAIGHT	12	14'-0"	0.668	112
S403	1	186	4'-2"	0.668	518
S501	STRAIGHT	30	26'-6"	1.043	829
S502	2	186	3'-3"	1.043	630
S503	3	10	2'-10"	1.043	30
TOTAL CARRIED TO SHEET 1 / 5					2,953

BENDING DETAIL



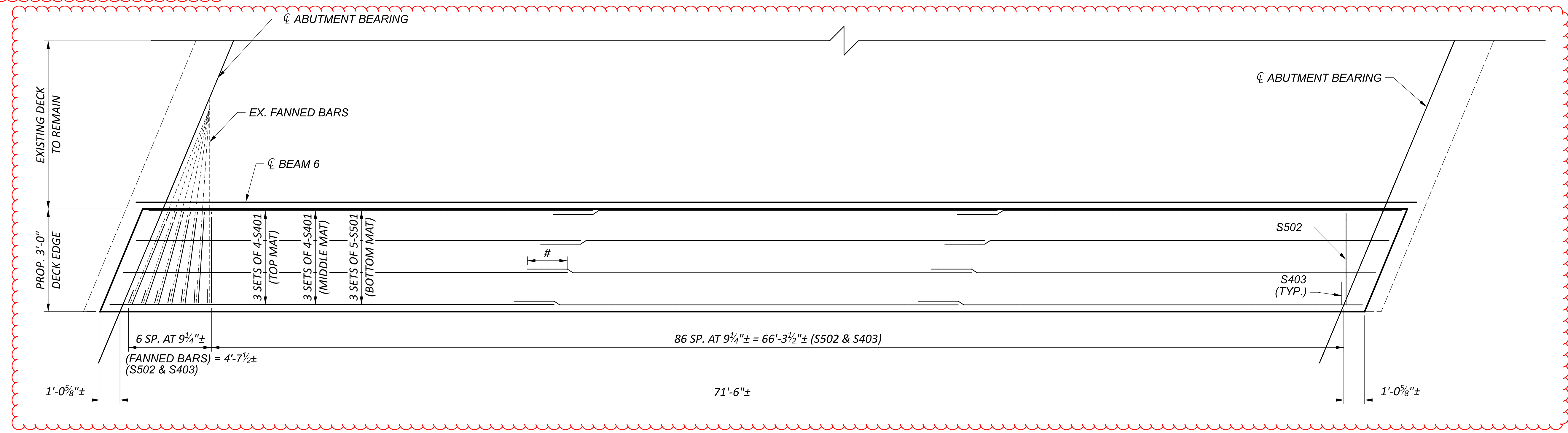
**EXISTING DECK (ACUTE CORNER),
BOTTOM REINFORCING MAT PLAN**

SOUTHEAST CORNER SHOWN
NORTHWEST CORNER SIMILAR



S402 (TOP, OVER PIERS) BAR STAGGER

BOTH PIERS SIMILAR
OTHER REINFORCING NOT SHOWN FOR CLARITY



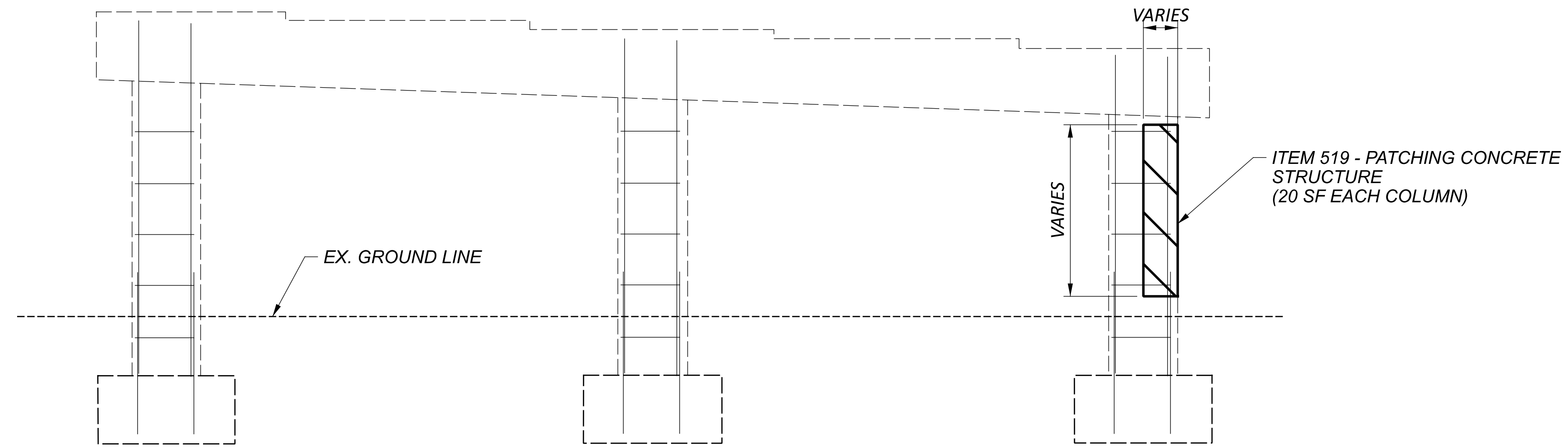
PROPOSED DECK EDGE REINFORCING PLAN

EAST SIDE EDGE SHOWN, BOTH EDGES SIMILAR
PIER BARS NOT SHOWN

= 28" (#4 BARS)
= 36" (#5 BARS)

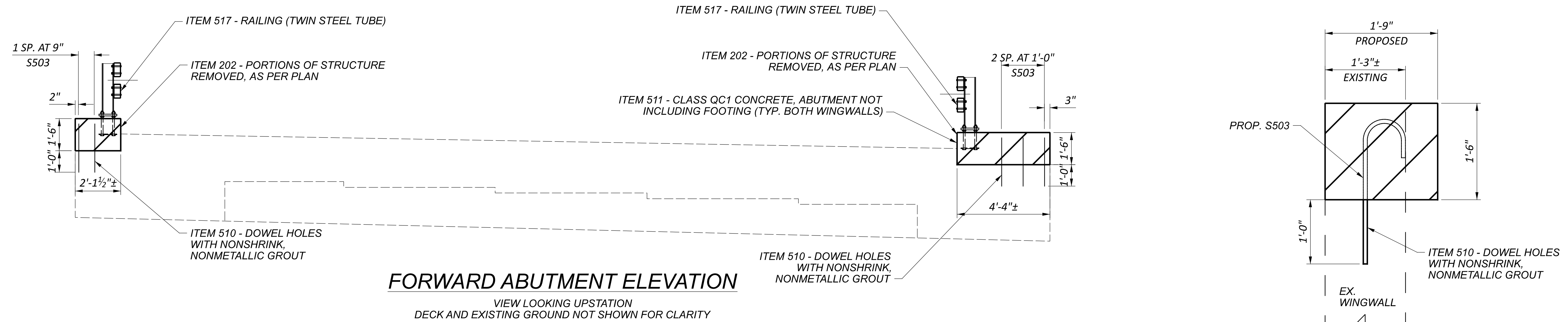
SFN	3902498
DESIGN AGENCY	DISTRICT 3
ENGINEERING TEAM ONE	
DESIGNER	CHECKER
JLL	KAK
REVIEWER	
KCK	08-01-22
PROJECT ID	105598
SUBSET	TOTAL
3A	5
SHEET	TOTAL
P.017A	P.025

- NOTES:
1. PATCH COLUMN 3 ON BOTH PIERS USING ITEM 519 - PATCHING CONCRETE STRUCTURE. ESTIMATED 20 SF AT EACH COLUMN.
 2. PIER COLUMN REPAIR LOCATIONS ARE FOR REFERENCE USE ONLY. EXACT LOCATIONS AND DIMENSIONS TO BE DETERMINED BY THE ENGINEER.
 3. ALL EXISTING ABUTMENT AND PIER COLUMN REINFORCING STEEL SHALL BE PRESERVED.



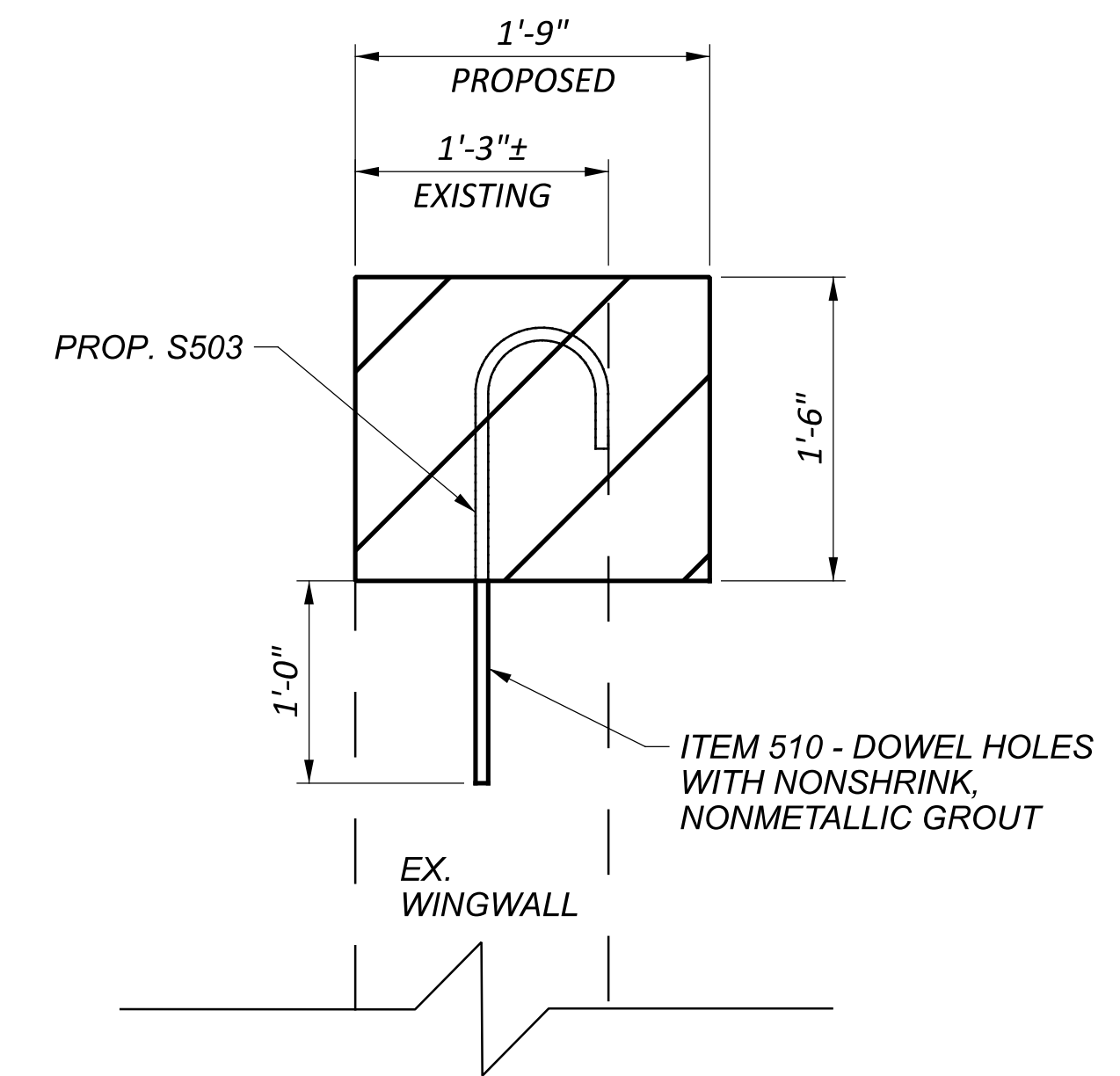
PIER COLUMN DETAIL

BOTH PIERS SIMILAR



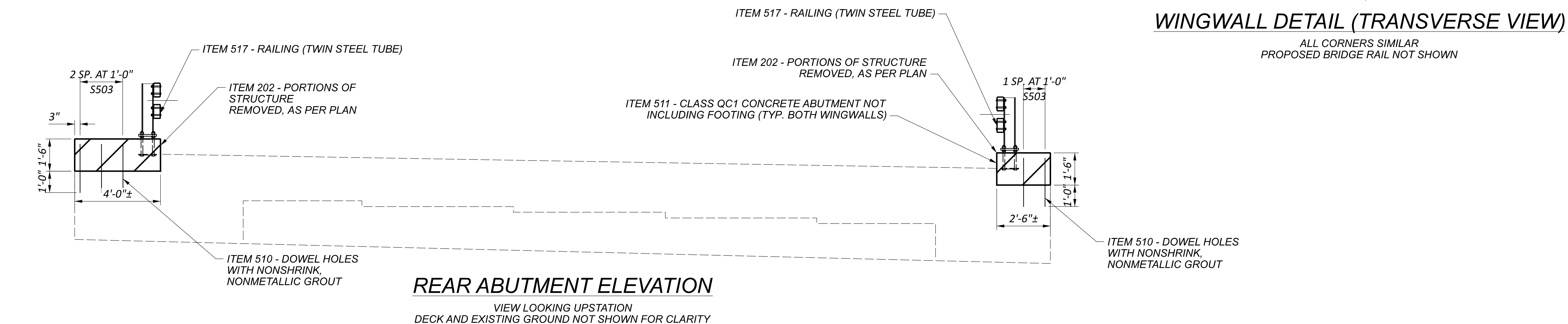
FORWARD ABUTMENT ELEVATION

VIEW LOOKING UPSTATION
DECK AND EXISTING GROUND NOT SHOWN FOR CLARITY



WINGWALL DETAIL (TRANSVERSE VIEW)

ALL CORNERS SIMILAR
PROPOSED BRIDGE RAIL NOT SHOWN



REAR ABUTMENT ELEVATION

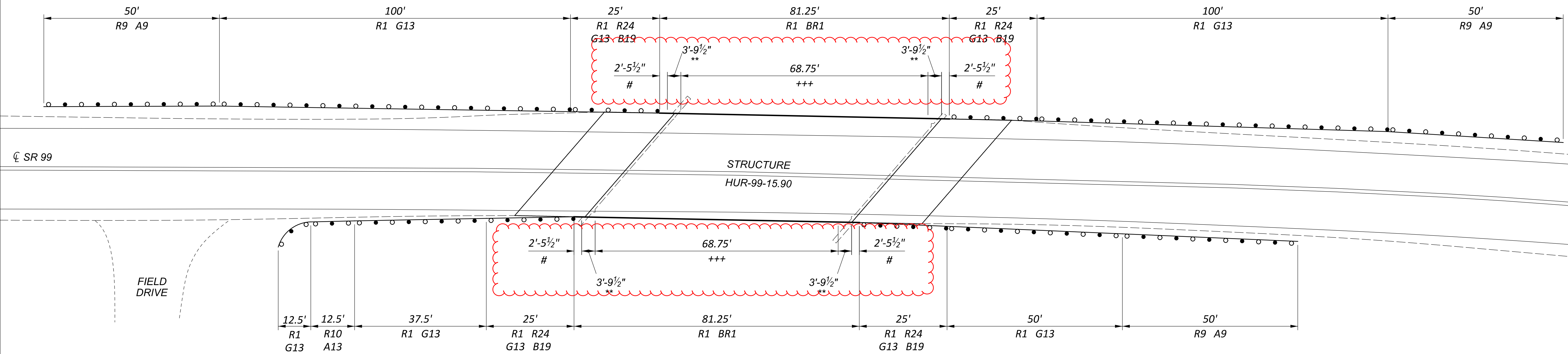
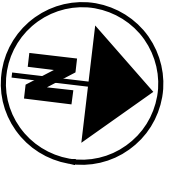
VIEW LOOKING UPSTATION
DECK AND EXISTING GROUND NOT SHOWN FOR CLARITY

D03-BH-FY2023(B)

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STRUCTURE DETAILS
STRUCTURE HUR-99-15.90
OVER SEYMOUR CREEK

SFN 3902498	
DESIGN AGENCY DISTRICT 3	
ENGINEERING TEAM ONE	
DESIGNER JLL	CHECKER KAK
REVIEWER KCK 08-01-22	
PROJECT ID 105598	
SUBSET 4	TOTAL 5
SHEET P.018	TOTAL P.025




STRUCTURE DETAILS
STRUCTURE HUR-99-15.90
OVER SEYMOUR CREEK

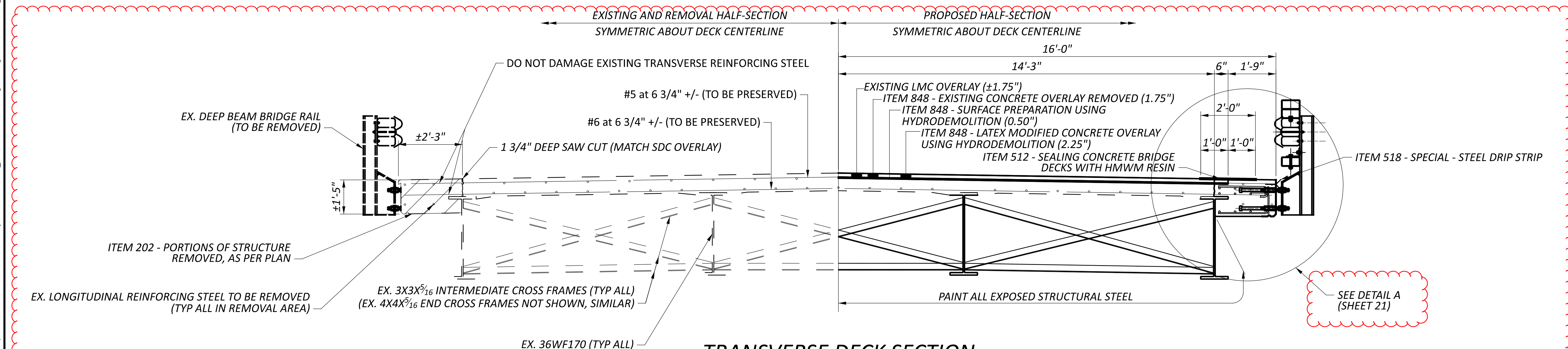
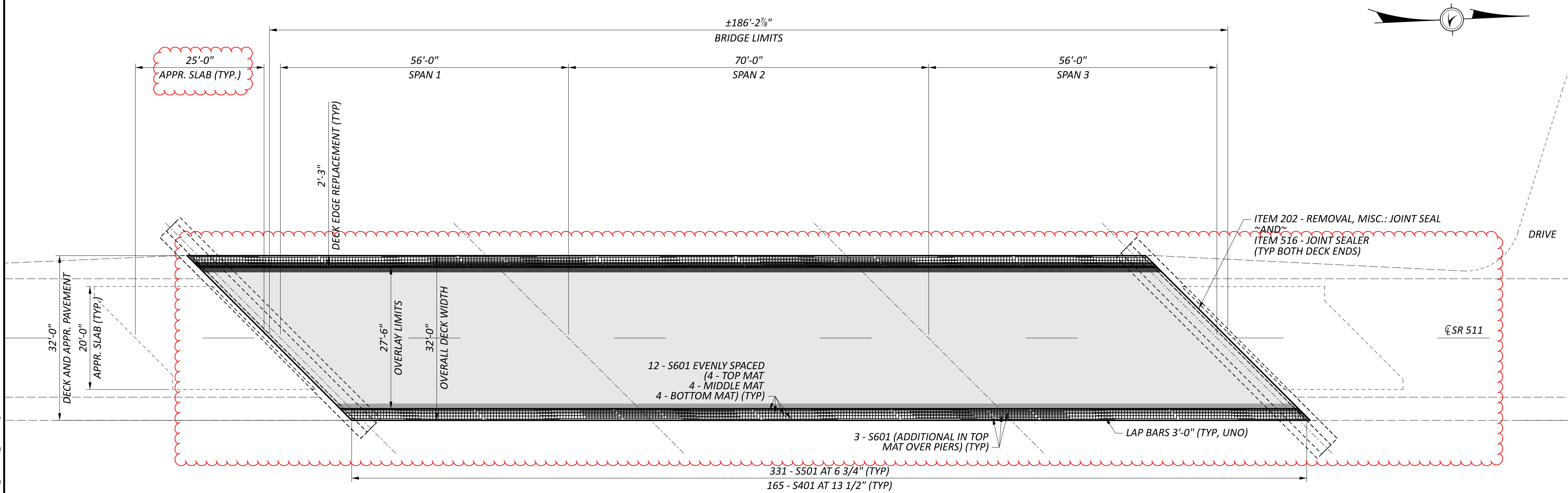
LABEL	ITEM	QUANTITY			UNIT	DESCRIPTION	LOCATION INTENT
		LEFT	RIGHT	TOTAL			
R1	202	331.25	231.25	562.5	FT	GUARDRAIL REMOVED	REPLACE EXISTING DEEP BEAM BRIDGE RAILING WITH TWIN STEEL TUBE RAILING.
R9	202	2	1	3	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E	
R10	202		1	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
R24	202	2	2	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
E3	209	3.500	2.125	5.625	STA	RESHAPING UNDER GUARDRAIL	REPLACE ALL EXISTING TYPE 5 GUARDRAIL WITH TYPE MGS GUARDRAIL.
BR1	517	81.25	81.25	162.5	FT	RAILING (TWIN STEEL TUBE)	
G13	606	250	150	400	FT	GUARDRAIL, TYPE MGS	
A9	606	2	1	3	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
A13	606		1	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
B19	606	2	2	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
M4	626	4	3	7	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	

ALL QUANTITIES CARRIED TO GENERAL SUMMARY

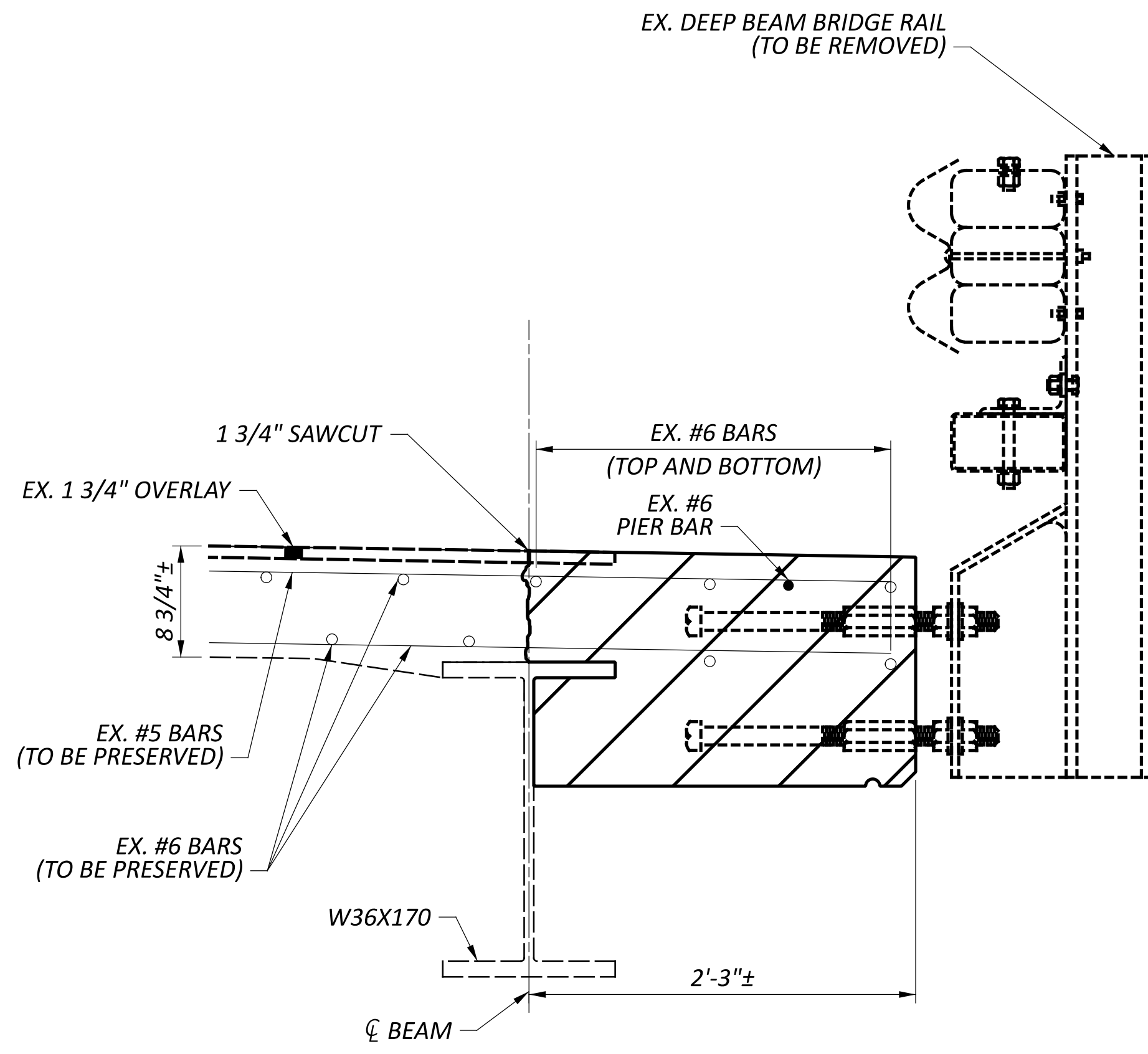
- SPACING FROM END OF TST RAIL TO FIRST POST OF TST RAIL (MOUNTED ON WINGWALL)
 ** - SPACING FROM FIRST POST OF TST RAIL (MOUNTED ON WINGWALL) TO FIRST DECK MOUNTED TST POST
 +++ - TWELVE POSTS SPACED AT 6'-3" (68'-9" TOTAL)

D03-BH-FY2023(B)
 MODEL SHEETS PAPER SIZE: 34x42 (in.) DATE: 10/27/2022 TIME: 10:42:59 AM USER: jlowery
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SFN
3902498
 DESIGN AGENCY
DISTRICT 3

 ENGINEERING
 TEAM ONE
 DESIGNER CHECKER
 JLL KAK
 REVIEWER
 KCK 08-01-22
 PROJECT ID
 105598
 SUBSET TOTAL
 5 5
 SHEET TOTAL
 P.019 P.025

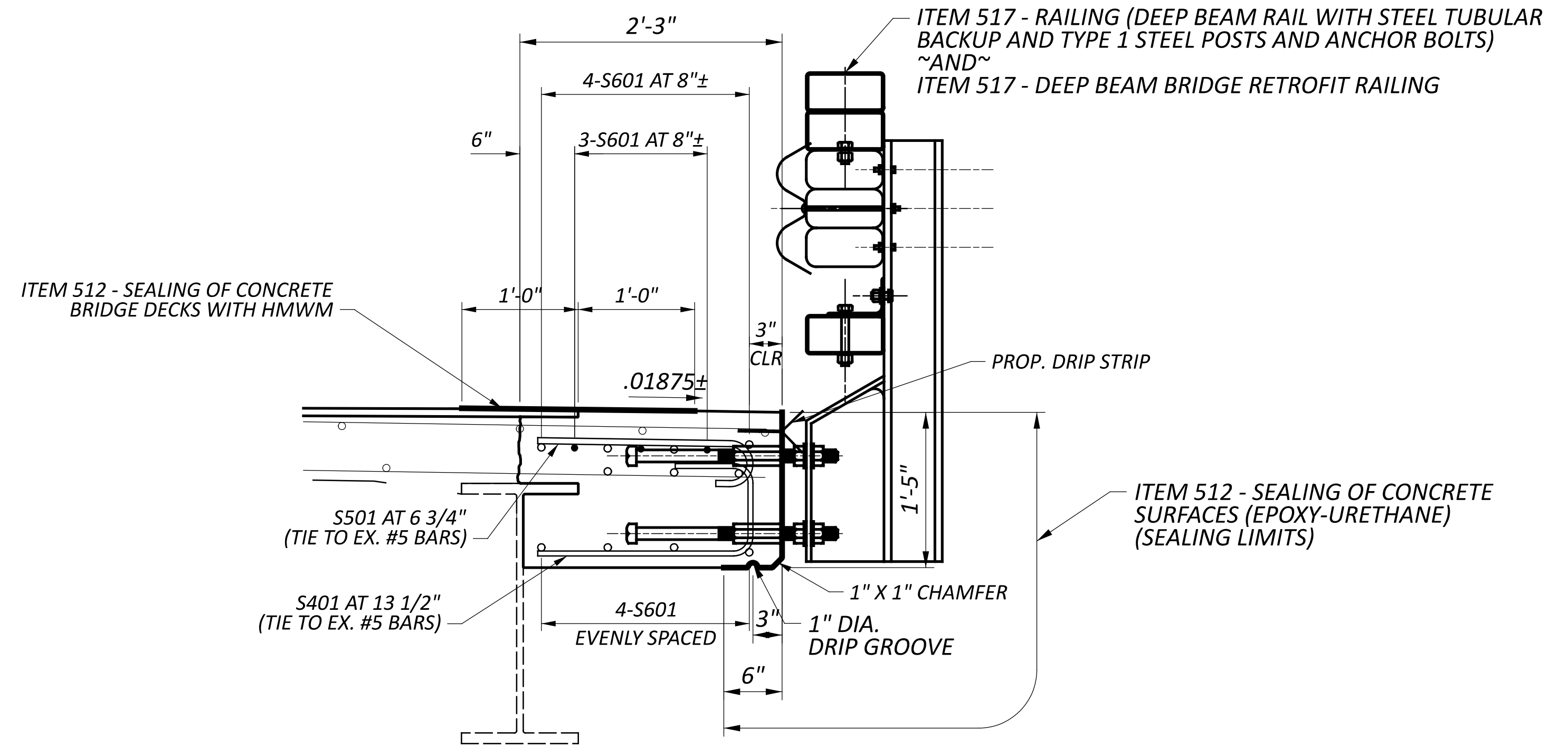


SFN	4707354
DESIGN AGENCY	DISTRICT 3
ENGINEERING TEAM ONE	
DESIGNER	CHECKER
ERC	KAK
REVIEWER	
KCK	08-01-22
PROJECT ID	105598
SUBSET	TOTAL
1	5
SHEET	TOTAL
P.020	P.025



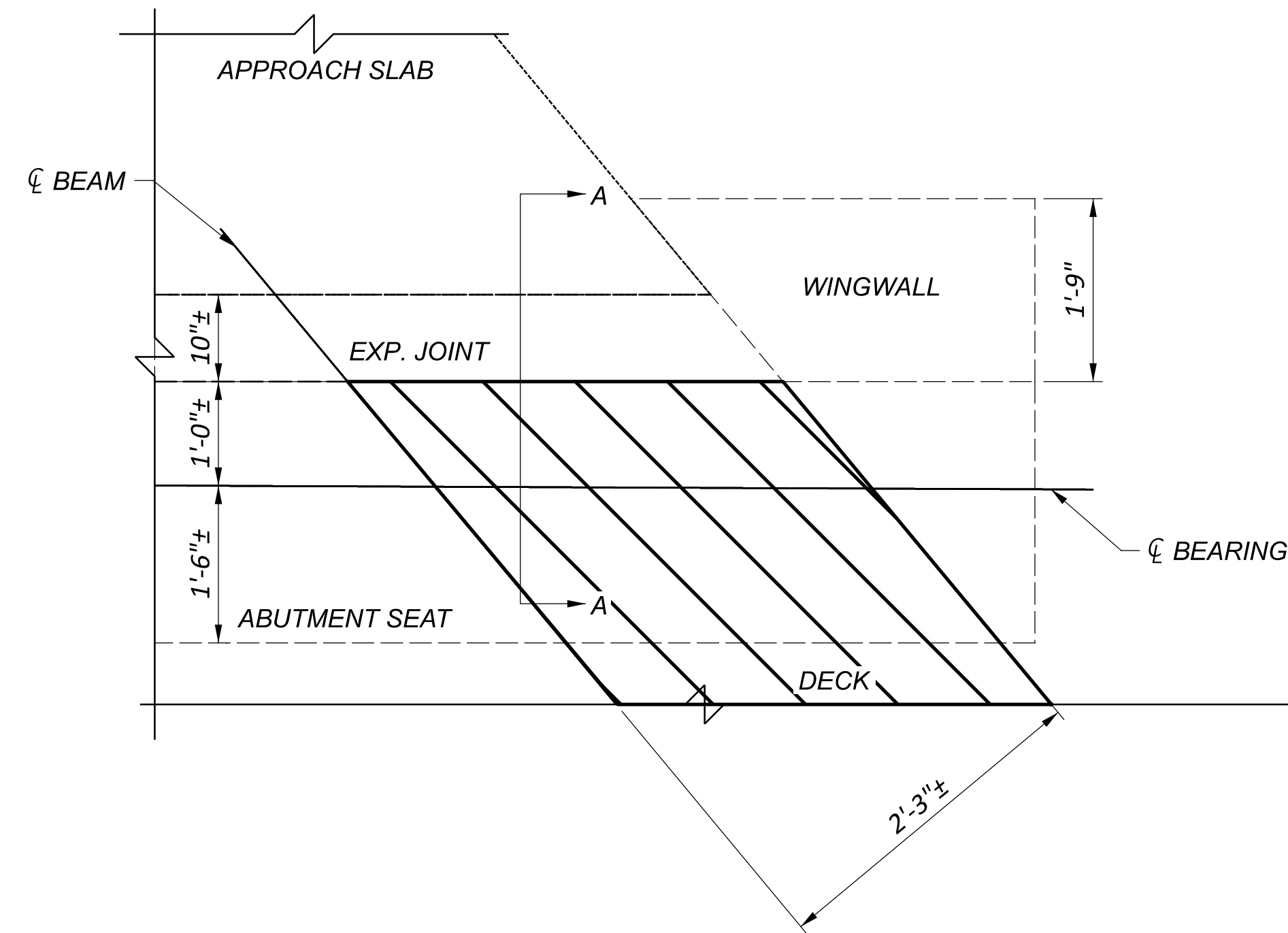
TYPICAL DECK EDGE REMOVAL

BOTH SIDES SIMILAR



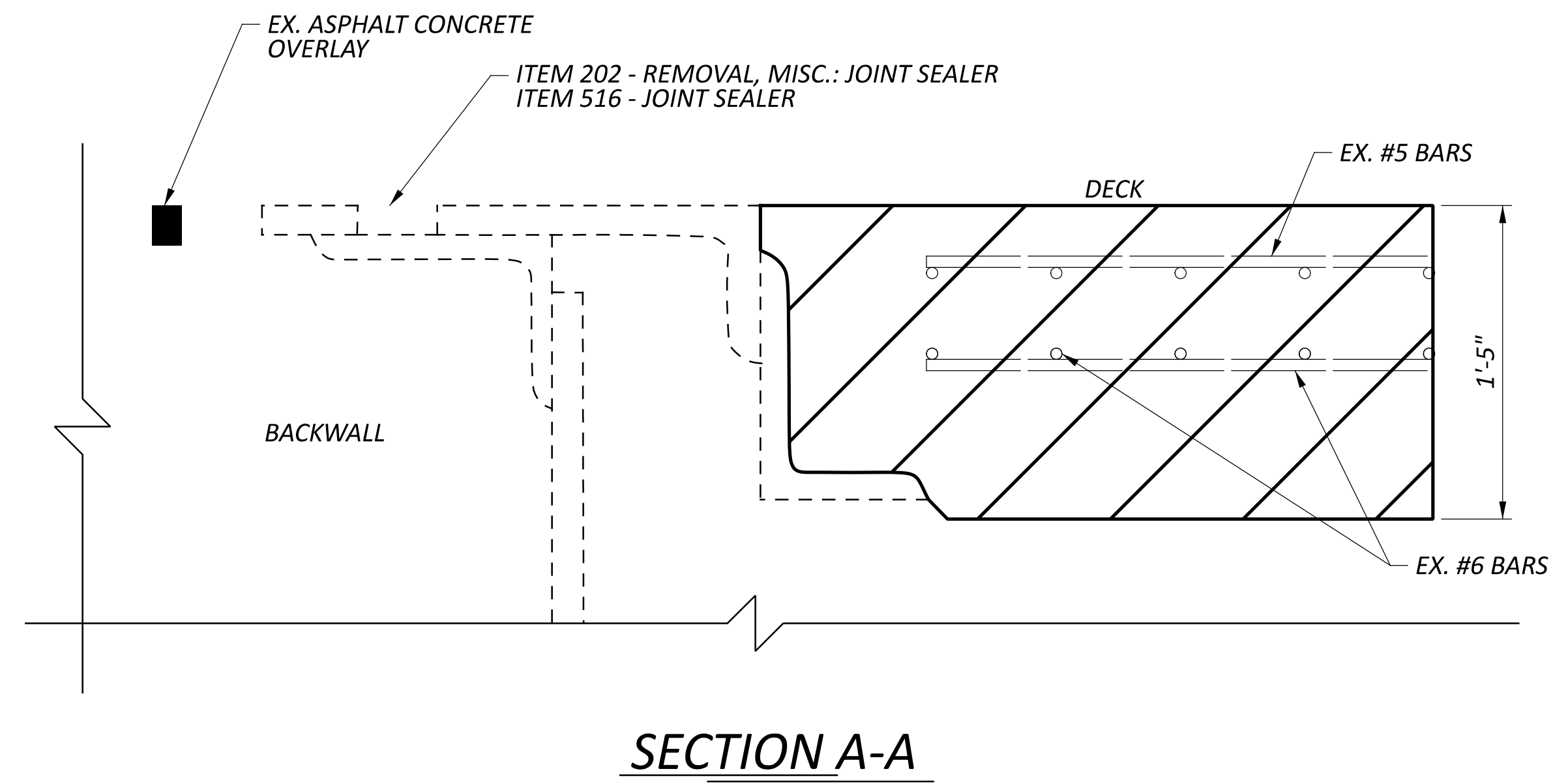
DETAIL A

VIEW OVER PIERS



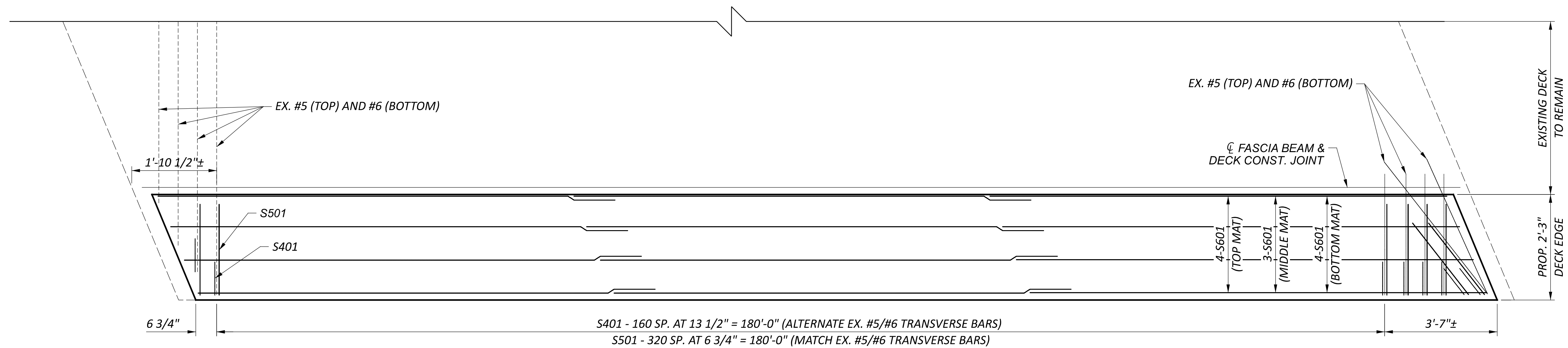
DECK REMOVAL AT CORNER

NORTHEAST CORNER SHOWN, OTHER CORNERS SIMILAR



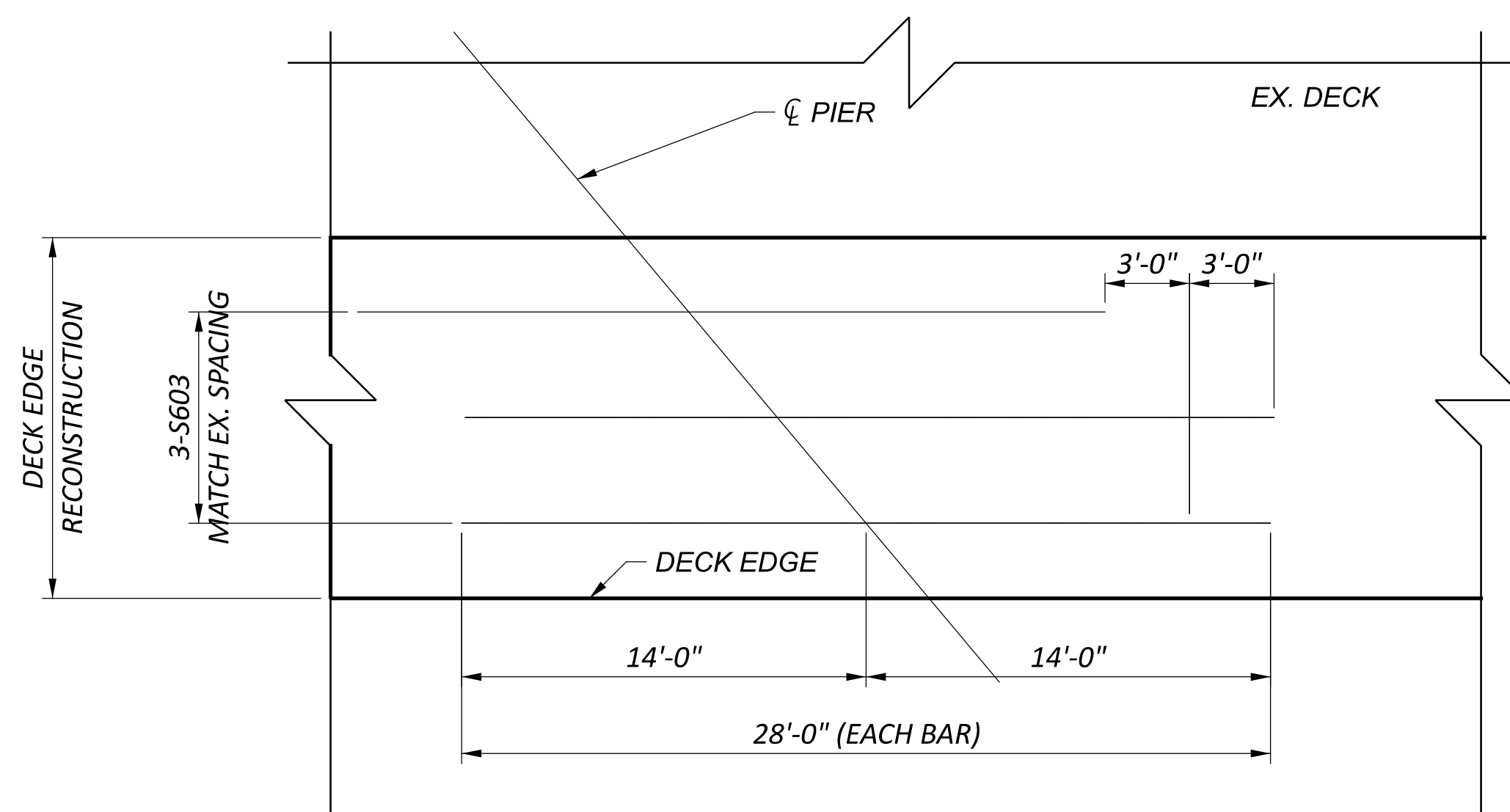
SECTION A-A

SFN	4707354
DESIGN AGENCY	DISTRICT 3
ENGINEERING TEAM ONE	
DESIGNER	CHECKER
ERC	KAK
REVIEWER	
KCK	08-01-22
PROJECT ID	105598
SUBSET	TOTAL
2	5
SHEET	TOTAL
P.021	P.025



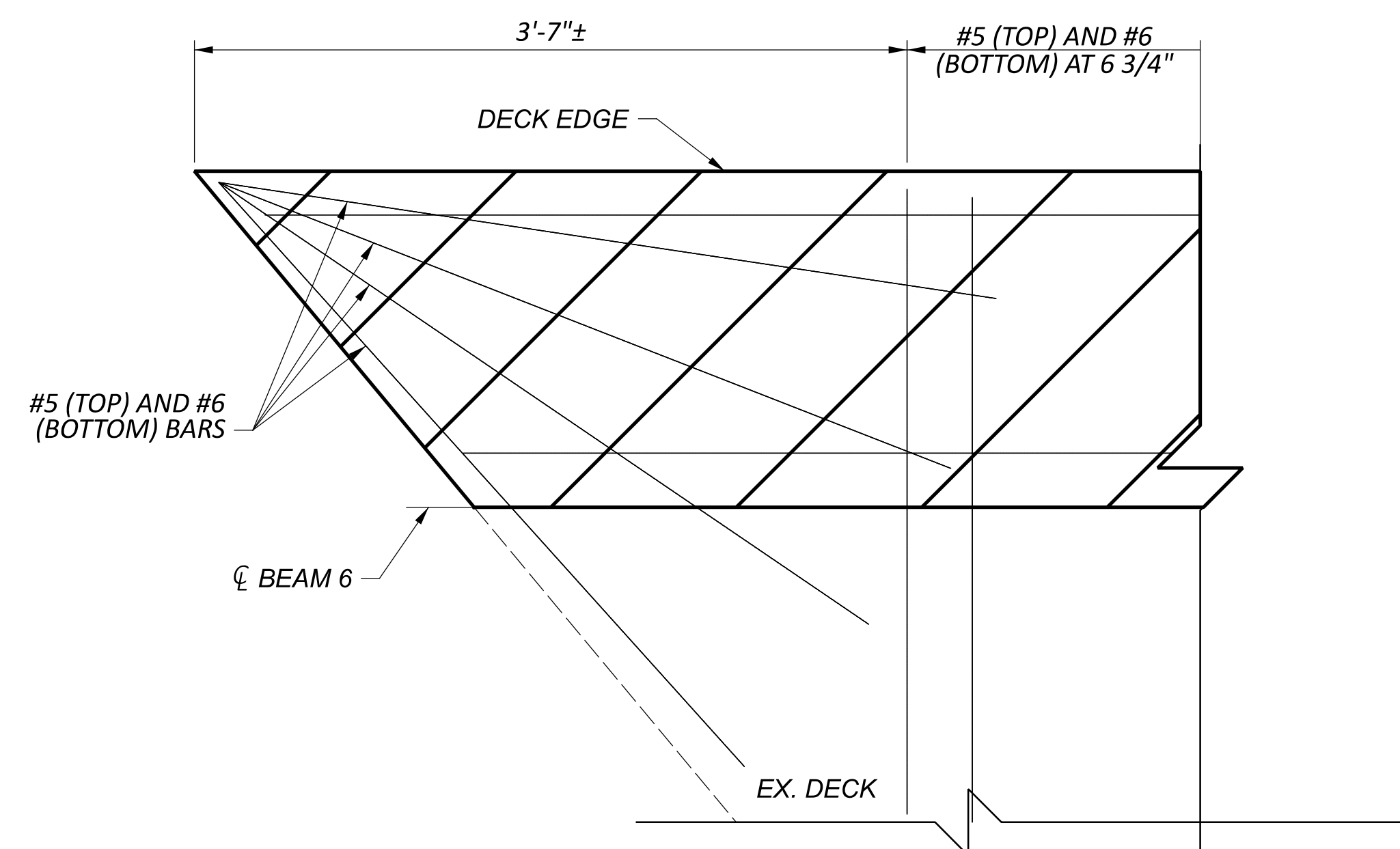
PROPOSED DECK EDGE REINFORCING PLAN

EAST SIDE EDGE SHOWN, BOTH EDGES SIMILAR (OPPOSITE CORNERS)
 PIER BARS NOT SHOWN



TOP BARS STAGGER OVER PIERS

BOTH PIERS SIMILAR
 OTHER REINFORCING NOT SHOWN FOR CLARITY



**EXISTING DECK (ACUTE CORNER),
 REINFORCING MAT PLAN**

SOUTHWEST CORNER SHOWN
 NORTHEAST CORNER SIMILAR

SFN 4707354	
DESIGN AGENCY DISTRICT 3	
ENGINEERING TEAM ONE	
DESIGNER ERC	CHECKER KAK
REVIEWER KCK 08-01-22	
PROJECT ID 105598	
SUBSET 2A	TOTAL 5
SHEET P.021A	TOTAL P.025

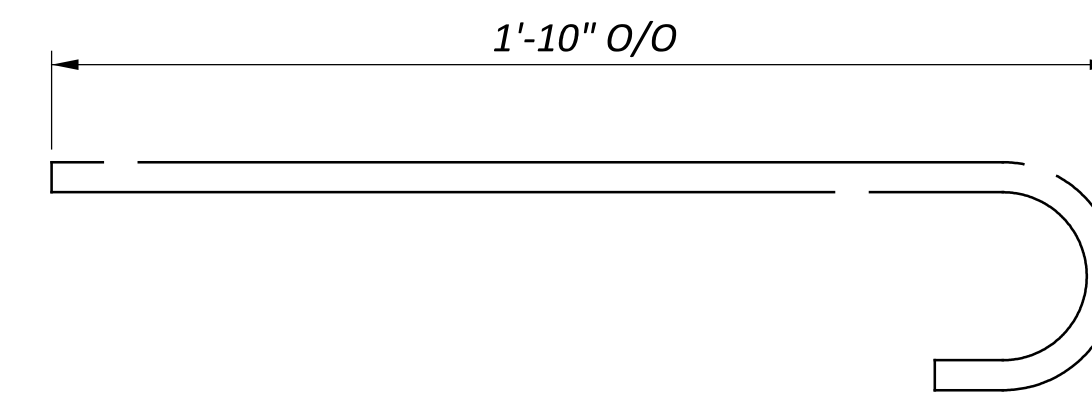
ESTIMATED QUANTITIES

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION
202	11301	42	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (TYP) (DECK EDGES)
202	98200	78	FT	REMOVAL MISC.: JOINT SEAL
254	01000	343	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")
407	10000	31	GAL	TACK COAT
442	22000	15	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (449)
509	25000	9,966	LB	UNCOATED STEEL REINFORCEMENT
511	34444	40	CY	CLASS QC2 CONCRETE, BRIDGE DECK (REPAIR OR RECONSTRUCTION) (TYP)
512	10100	76	SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE) (TYP BOTH DECK EDGES)
512	10300	83	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN
514	00050	7,922	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL
514	00056	7,922	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT
514	00060	7,922	SF	FIELD PAINTING OF STRUCTURAL STEEL, INTERMEDIATE COAT
514	00067	7,922	SF	FIELD PAINTING OF STRUCTURAL STEEL, FINISH COAT, AS PER PLAN
514	00504	13	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL
514	10000	7	EACH	FINAL INSPECTION REPAIR
516	31000	78	FT	JOINT SEALER (TYP BOTH DECK ENDS)
518	22300	373	FT	SPECIAL - STEEL DRIP STRIP
848	10100	590	SY	LATEX MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2.25" THICK)
848	20000	590	SY	SURFACE PREPARATION USING HYDRODEMOLITION (0.50")
848	50320	590	SY	EXISTING CONCRETE OVERLAY REMOVED (1.75")
848	30100	37	CY	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY
848	50000	59	SY	HAND CHIPPING
848	50100	LS	LS	TEST SLAB
848	50200	3	CY	FULL DEPTH REPAIR

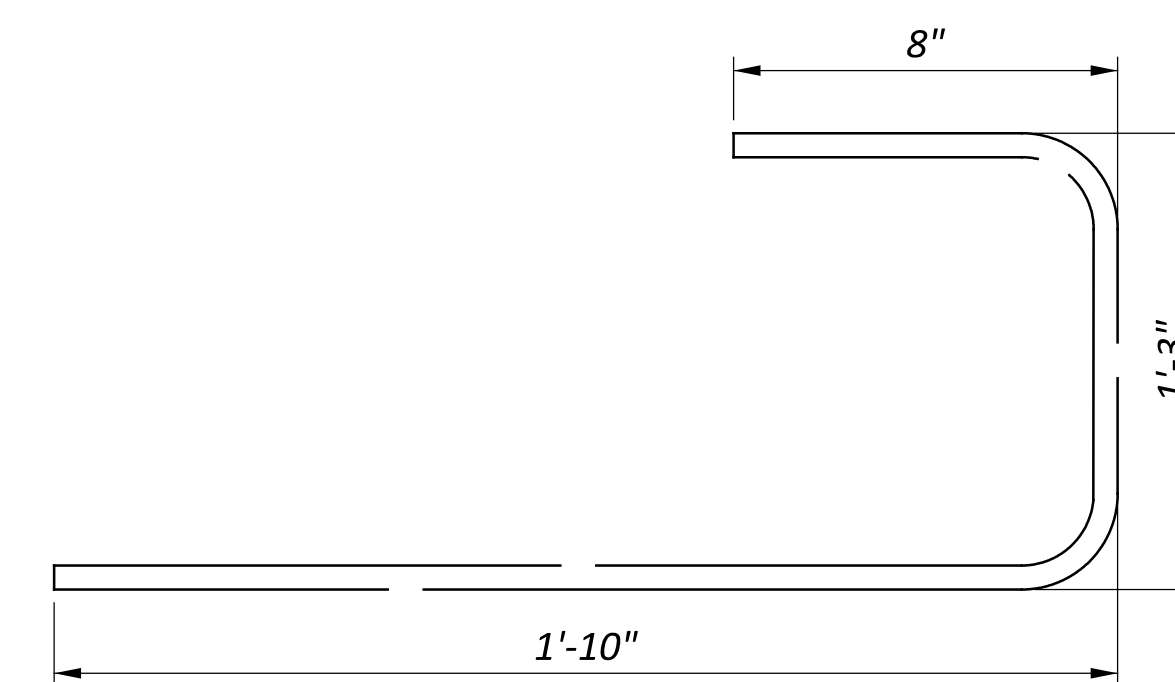
ALL QUANTITIES CARRIED TO GENERAL SUMMARY

BAR CHART

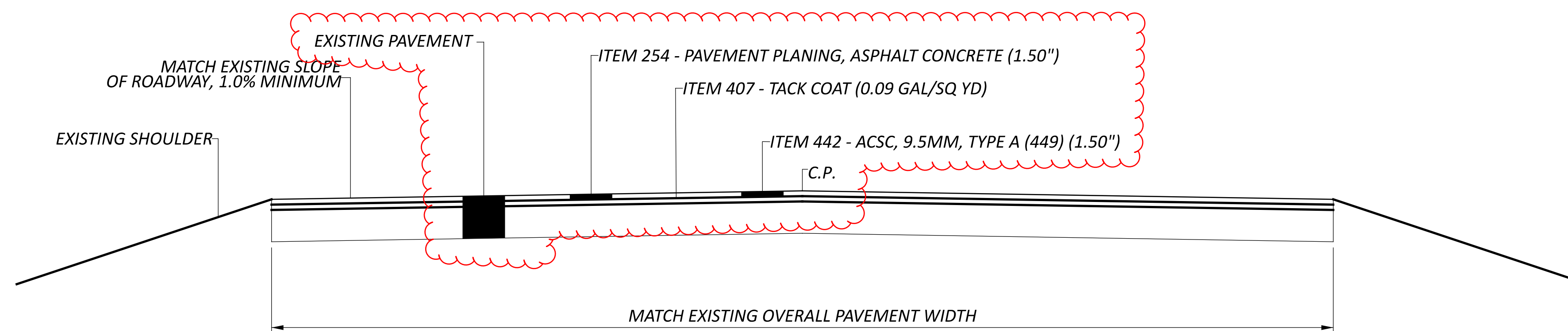
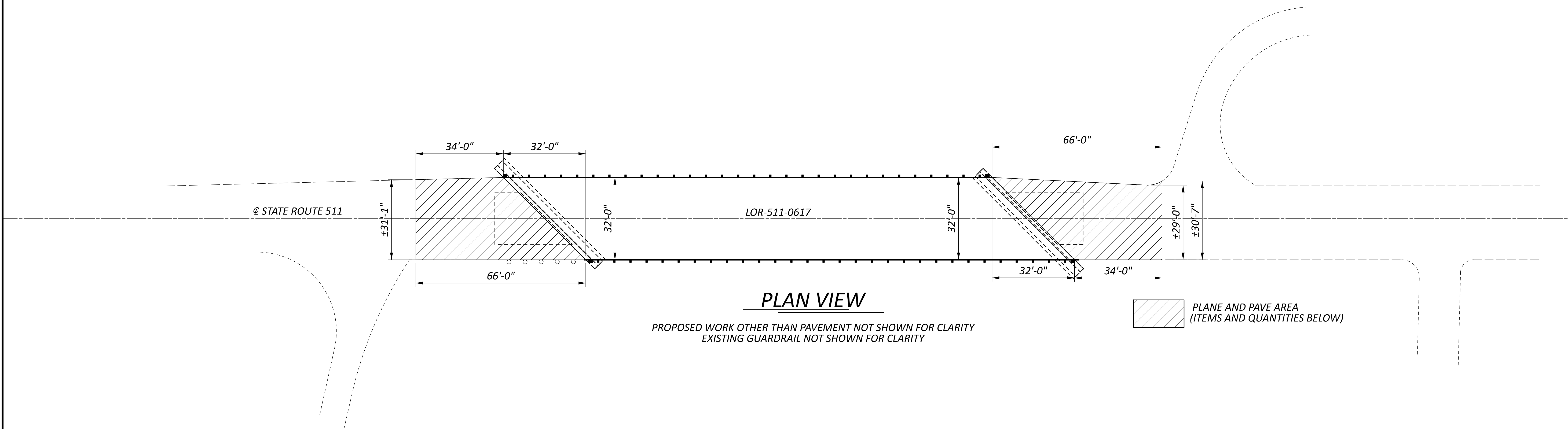
MARK	TYPE	LENGTH	QUANTITY	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
		FEET		LF	LB/FT	LB
S401	1	3'-9"	334	1,252.50	0.67	839
S501	2	2'-5"	836	2,065	1.04	2,148
S601	STRAIGHT	30'-0"	132	3,960	1.5	5,940
S602	STRAIGHT	23'-10"	22	524	1.5	786
S603	STRAIGHT	28'-0"	6	168.00	1.5	252
TOTAL CARRIED TO INDIVIDUAL STRUCTURE SUB-SUMMARY						9,966



S501 BENDING DIAGRAM (TYPE 2)



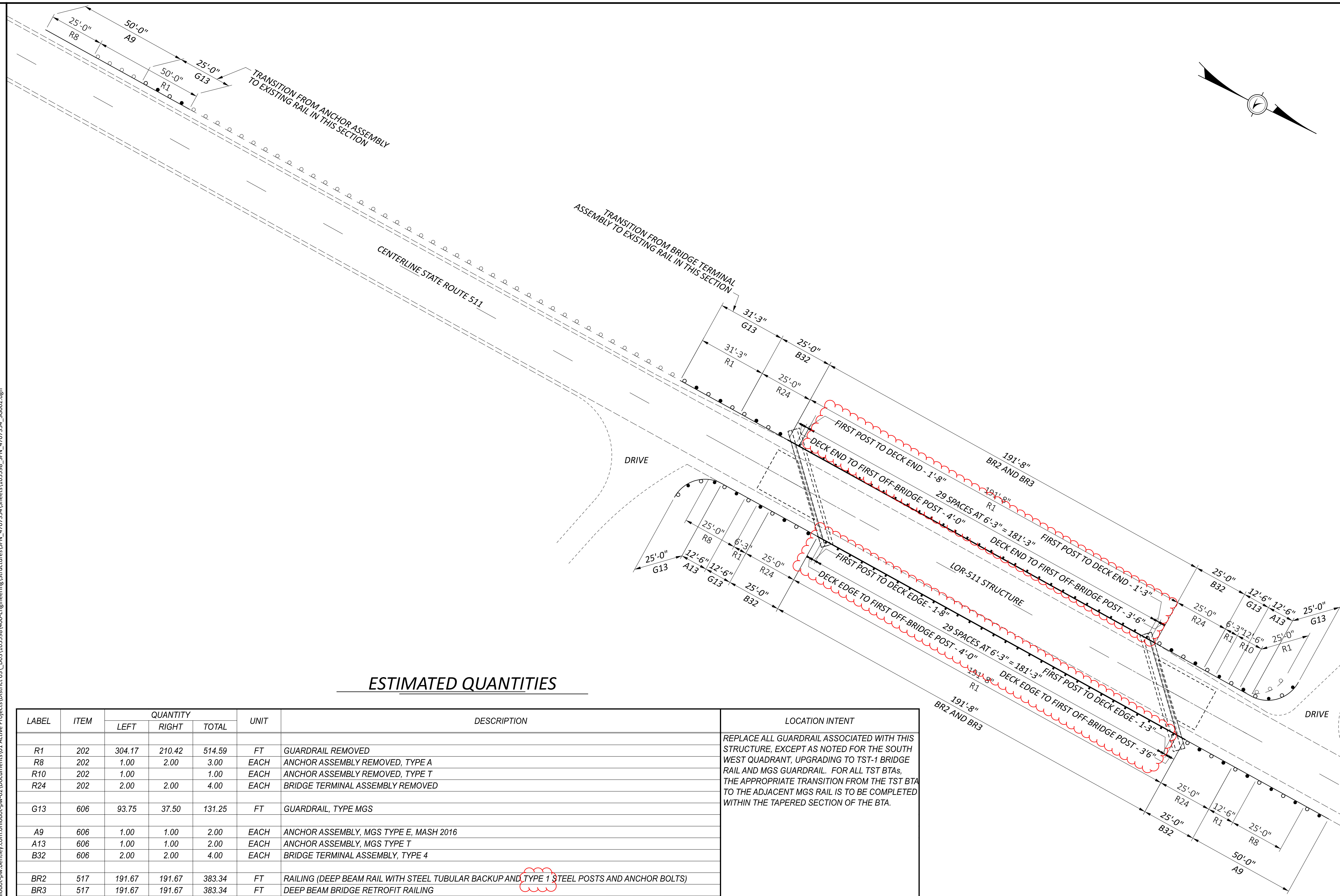
S401 BENDING DIAGRAM (TYPE 1)



ESTIMATED QUANTITIES

ITEM	QUANTITY	UNIT	DESCRIPTION
254	343	SY	PAVEMENT PLANING, ASPHALT CONCRETE (3.00")
407	31	GAL	TACK COAT (0.09 GAL/SQ YD)
442	15	SY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (449) (1.50")

ALL QUANTITIES CARRIED TO STRUCTURE SUBSUMMARY



ESTIMATED QUANTITIES

LABEL	ITEM	QUANTITY			UNIT	DESCRIPTION	LOCATION INTENT
		LEFT	RIGHT	TOTAL			
R1	202	304.17	210.42	514.59	FT	GUARDRAIL REMOVED	REPLACE ALL GUARDRAIL ASSOCIATED WITH THIS STRUCTURE, EXCEPT AS NOTED FOR THE SOUTH WEST QUADRANT, UPGRADING TO TST-1 BRIDGE RAIL AND MGS GUARDRAIL. FOR ALL TST BTAs, THE APPROPRIATE TRANSITION FROM THE TST BTA TO THE ADJACENT MGS RAIL IS TO BE COMPLETED WITHIN THE TAPERED SECTION OF THE BTA.
R8	202	1.00	2.00	3.00	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
R10	202	1.00	1.00	1.00	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
R24	202	2.00	2.00	4.00	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
G13	606	93.75	37.50	131.25	FT	GUARDRAIL, TYPE MGS	
A9	606	1.00	1.00	2.00	EACH	ANCHOR ASSEMBLY, MGS TYPE E, MASH 2016	
A13	606	1.00	1.00	2.00	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
B32	606	2.00	2.00	4.00	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
BR2	517	191.67	191.67	383.34	FT	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 1 STEEL POSTS AND ANCHOR BOLTS)	
BR3	517	191.67	191.67	383.34	FT	DEEP BEAM BRIDGE RETROFIT RAILING	

ALL QUANTITIES CARRIED TO GENERAL SUMMARY