



THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY

CONTRACT RR-16-4255

ROADWAY AND BRIDGE REHABILITATION I-355 VETERANS MEMORIAL TOLLWAY

VOLUME 5 OF 6

MILE POST 12.1 TO MILE POST 22.3
STATION 733 + 95.55 TO STATION 1275 + 00.00

VOLUME 1
GENERAL PLANS
ALIGNMENT AND TIES
MAINTENANCE OF TRAFFIC

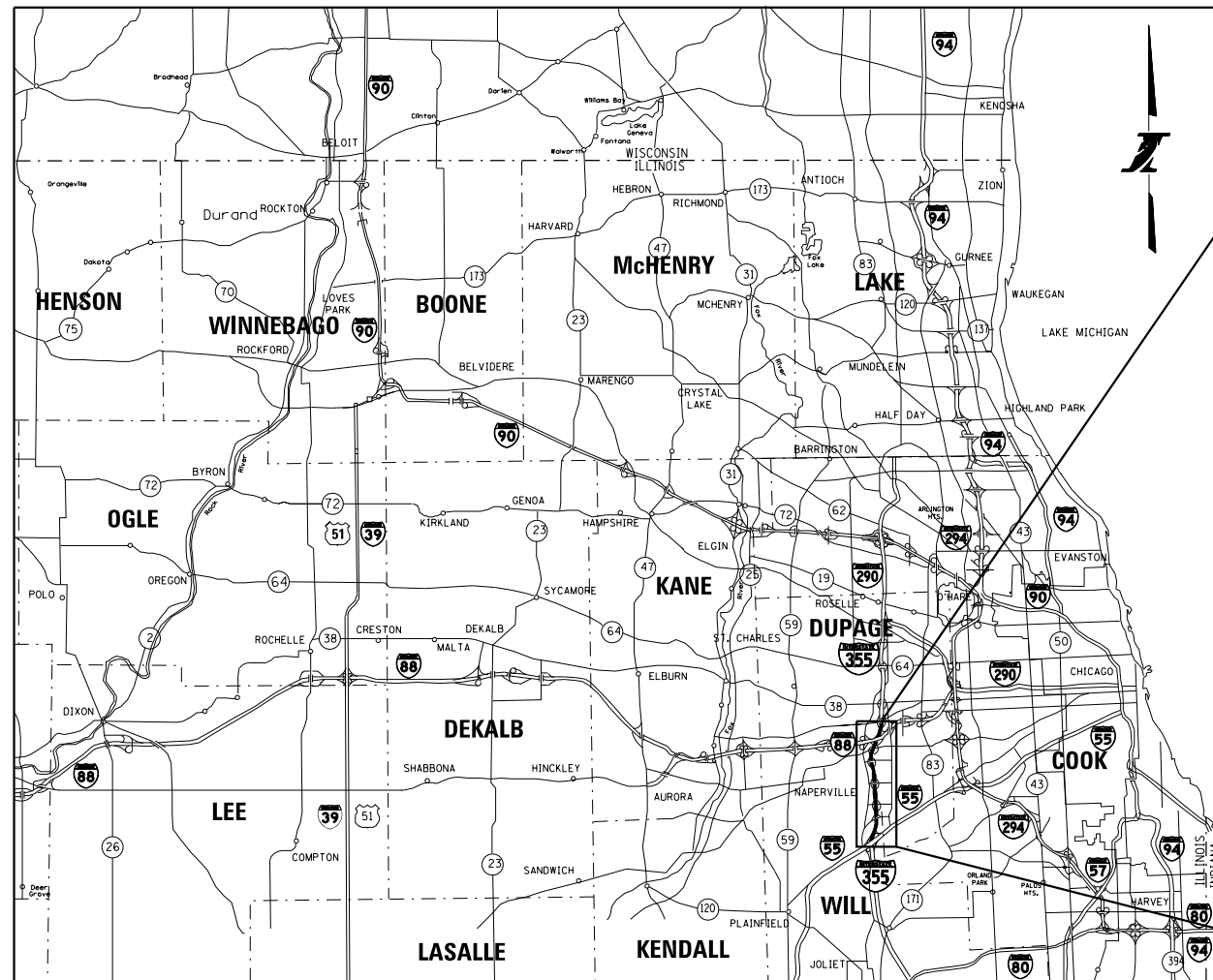
VOLUME 2
MAINTENANCE OF TRAFFIC
REMOVAL PLANS
ROADWAY PLANS

VOLUME 3
DRAINAGE PLANS
GRADING PLANS
EROSION CONTROL & LANDSCAPE
PAVEMENT MARKING & SIGNING
ITS PLANS

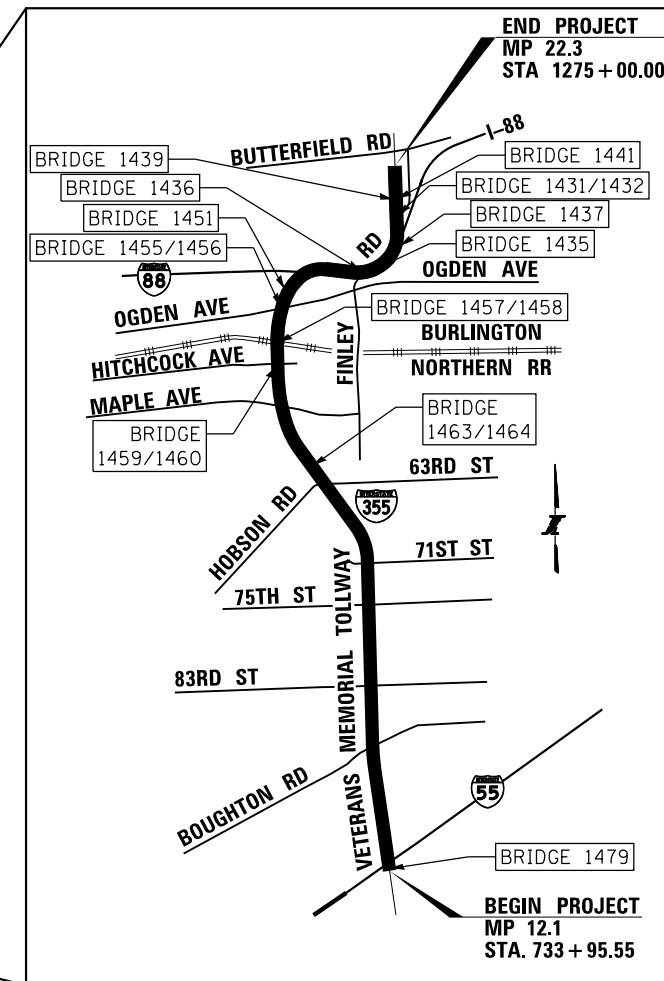
VOLUME 4
LIGHTING PLANS
BRIDGE PLANS

VOLUME 5
BRIDGE PLANS

VOLUME 6
BRIDGE PLANS
NOISE WALL PLANS
RETAINING WALL PLANS
CROSS SECTIONS



LOCATION MAP



CONSTRUCTION AREA MAP

DESIGN SECTION ENGINEER:

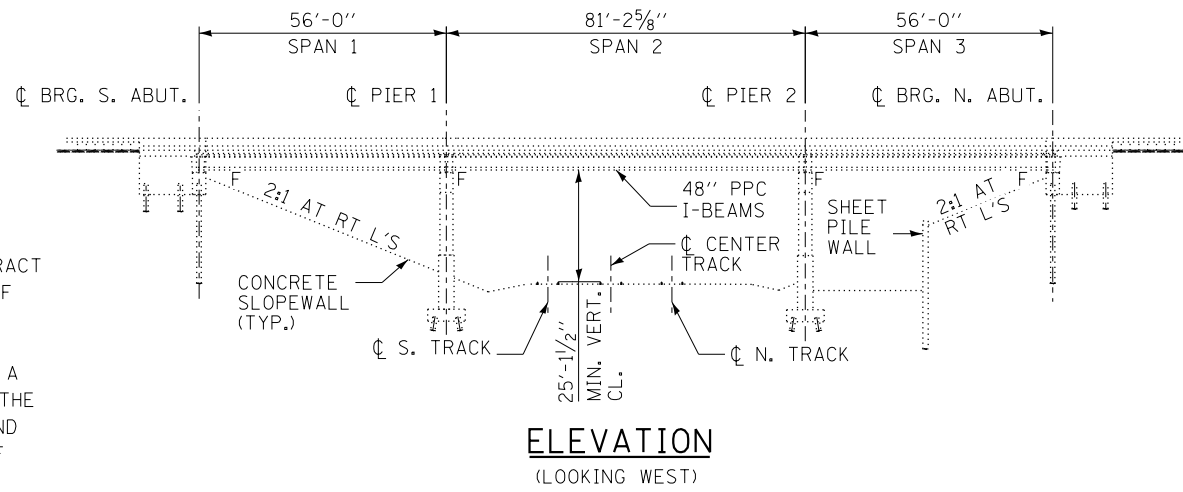


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BENCH MARK:
 CONCRETE MONUMENT WITH BRASS
 CAP-EL. 722.882 LOCATED IN N.E. 1/4
 SEC. 2-38-10 +/- 42' S. OF CL OGDEN AVE.

EXISTING STRUCTURE:
 BRIDGE NUMBERS 1457 (SOUTHBOUND TOLLWAY)
 AND 1458 (NORTHBOUND TOLLWAY) WERE
 CONSTRUCTED IN 1989 IN CONTRACT CIP-615.
 BRIDGE 1457 WAS WIDENED IN 2008 ON CONTRACT
 I-07-5476. THE SUPERSTRUCTURE CONSISTS OF
 THREE SPANS OF 48" PRECAST PRESTRESSED
 CONCRETE BEAMS WITH A TOTAL LENGTH OF
 196'-3 1/8" BK. TO BK. OF ABUTS. SUPPORTING A
 CAST-IN-PLACE 7 1/2" CONCRETE DECK SLABS. THE
 OUT-TO-OUT WIDTH OF B.N. 1457 IS 81'-7" AND
 IT VARIES FOR B.N. 1458 WITH A MAXIMUM OF
 96'-7 9/8". THE SUBSTRUCTURE IS TWO
 CAST-IN-PLACE INTEGRAL ABUTMENTS ON PILES
 AND TWO CAST-IN-PLACE CONCRETE
 MULTI-COLUMN PIERS ON PILES. SKEWED 9°56'48".

TRAFFIC TO BE MAINTAINED UTILIZING STAGE
 CONSTRUCTION.



HIGHWAY CLASSIFICATION

I-355
 FUNCTIONAL CLASS: INTERSTATE
 ADT: 152,000 (2015), 152,841 (2032)
 ADTT: 15,200 (2015), 15,284 (2032)
 DHV: 8,990/8,655 NB/SB (2015),
 9,040/8,703 NB/SB (2032)
 DESIGN SPEED: 65 MPH
 POSTED SPEED: 60 MPH
 DIRECTIONAL DISTRIBUTION: 51:49

RAILROAD INFORMATION

BNSF RAILWAY COMPANY
 DOT/AAR NUMBER 928129U
 MILEPOST 23.59
 DUPAGE COUNTY
 RAILROAD DIVISION: CHICAGO
 RAILROAD SUBDIVISION: CHICAGO
 NUMBER OF MAIN TRACKS: 3
 AVERAGE NUMBER OF DAILY TRAINS: 156
 AVERAGE NUMBER OF DAILY PASSENGER
 TRAINS: 104
 PASSENGER TRAIN TYPE: COMMUTER,
 INTERCITY PASSENGER
 TRAIN SPEED: 70 MPH

DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES,
 17TH EDITION WITH ALL INTERIMS.
 ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, MARCH 2017.
 ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL,
 JANUARY 2012.
 ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGN
 MEMORANDUMS.
 ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS
 DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR
 ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017.
 ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL
 PROVISIONS (GBSP'S).
 ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL
 SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED
 JANUARY 1, 2018.
 ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD
 SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED
 APRIL 1, 2016.

DESIGN STRESSES

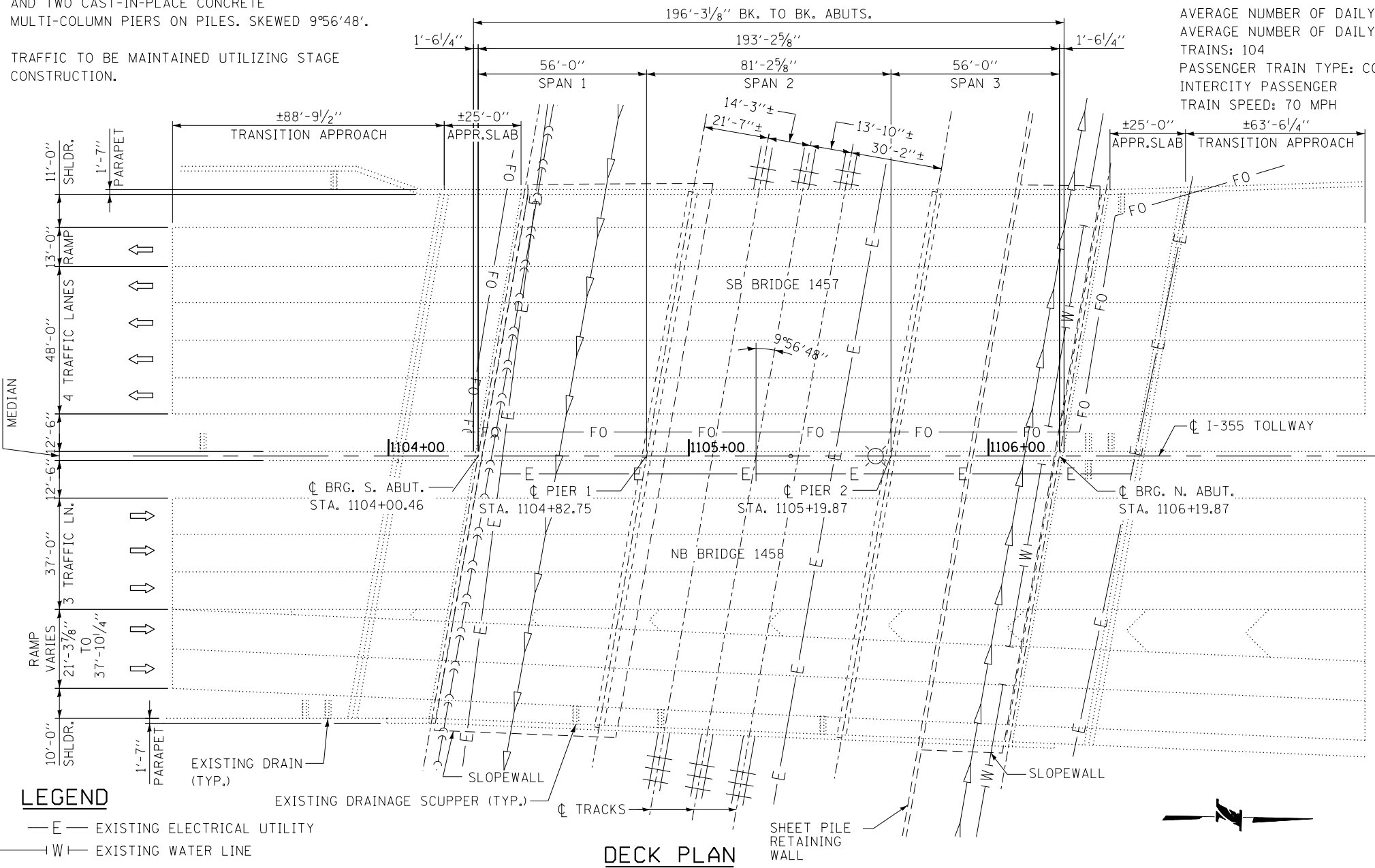
NEW CONSTRUCTION
 f'c = 4,000 PSI (CLASS AX- DECK/APPROACH/TRANSITION REPAIRS)
 f'c = 4,000 PSI (CLASS BS - PARAPETS AND BARRIER REPAIRS)
 f'c = 3,500 PSI (CLASS SI - SUBSTRUCTURE REPAIRS)
 fy = 60,000 PSI (REINFORCEMENT)

DESIGN LOADS

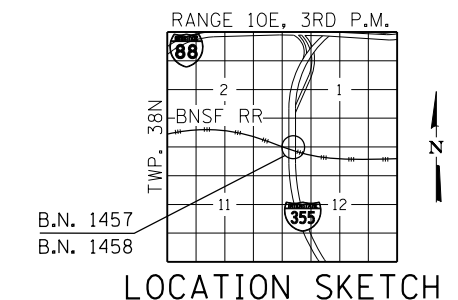
EXISTING STRUCTURE
 LIVE LOAD:
 HS20-44 AND ALTERNATE MILITARY LOADING
 DEAD LOAD:
 25 PSF FOR FUTURE WEARING SURFACE

PROPOSED SCOPE OF WORK:

- SCARIFY 1" EXISTING BRIDGE DECKS AND APPROACH SLABS, AND 3/4" TRANSITION SLABS.
- RESURFACE BOTH BRIDGE DECKS AND APPROACH SLABS USING 2 1/4" BRIDGE DECK LATEX CONCRETE OVERLAY AND BRIDGE DECK GROOVING. SEE ROADWAY PLANS FOR TRANSITION SLAB RESURFACING.
- SEAL CRACKS AND REPAIR SPALLS IN PARAPETS AND MEDIAN BARRIER.
- CLEAN AND ADJUST EXISTING SCUPPERS.
- RECONSTRUCT APPROACH AND TRANSITION SLAB EXPANSION JOINTS.
- REPAIR AND SEAL ALL CRACKS AND SPALLS ON PPC I-GIRDERS.
- SEAL CRACKS AND REPAIR DELAMINATED AND SPALLED CONCRETE IN SUBSTRUCTURE.
- REMOVE AND REPLACE PREFORMED JOINT FILLER BETWEEN WINGWALLS AND BRIDGE 1457 ABUTMENTS.
- REERECT TRAFFIC BARRIER TERMINAL ATTACHED TO THE NORTH END OF THE PARAPET ON BRIDGE 1458.



- LEGEND**
- E — EXISTING ELECTRICAL UTILITY
 - W — EXISTING WATER LINE
 - S — EXISTING STORM SEWER
 - FO — EXISTING FIBER OPTIC LINE
 - O — EXISTING FIBER OPTIC LINE



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 CHECKED BY MMH DATE 3/11/2018

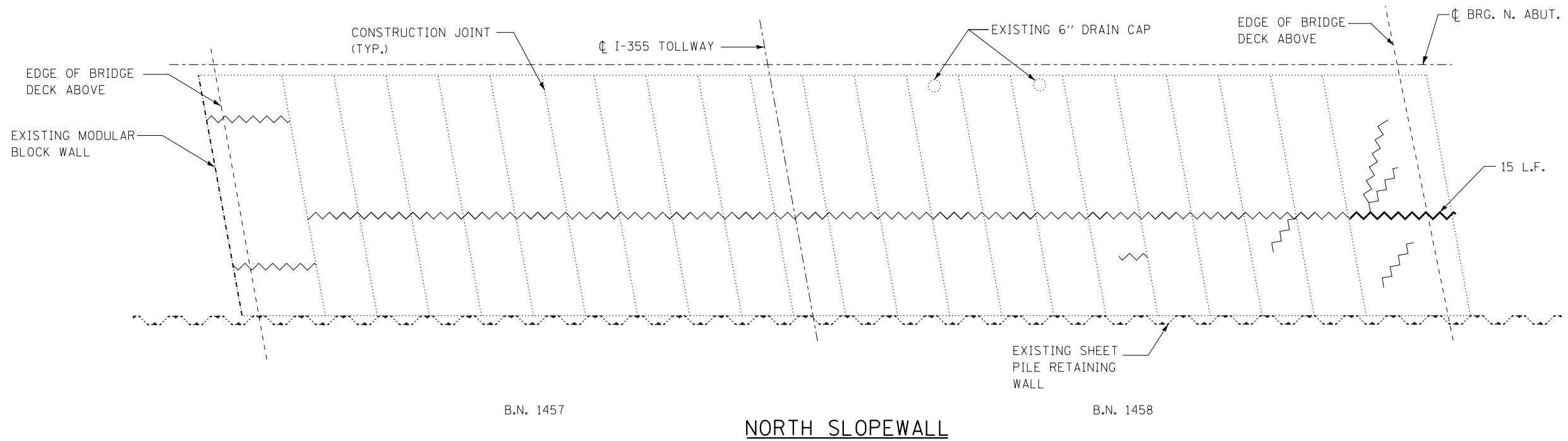


THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 GENERAL PLAN AND ELEVATION

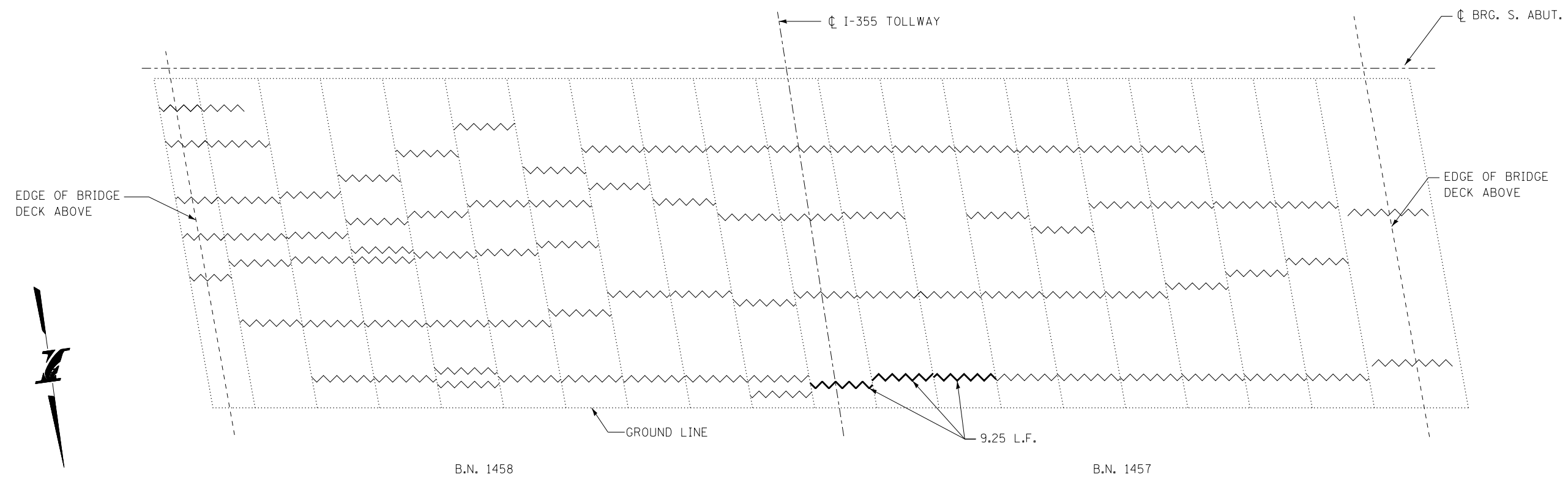
SD-01 OF SD-21
 SHT NO. SD-01
 DRAWING NO. 1003 OF 1517



B.N. 1457

NORTH SLOPEWALL

B.N. 1458

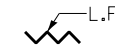
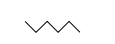


B.N. 1458

SOUTH SLOPEWALL

B.N. 1457

LEGEND

-  SLOPE WALL CRACK SEALING
-  CRACKS < 1/4" (FOR INFORMATION ONLY)

NOTE:
CRACKS 1/4" AND LARGER SHALL BE SEALED WITH "SLOPE WALL CRACK SEALING".

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
X0323491	SLOPE WALL CRACK SEALING	FOOT	28	15	43

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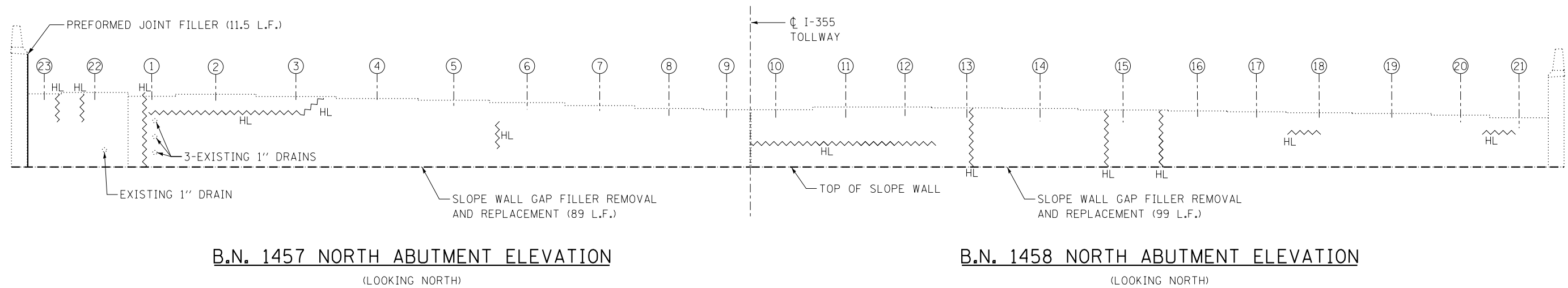
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REVISIONS	
NO.	DATE DESCRIPTION

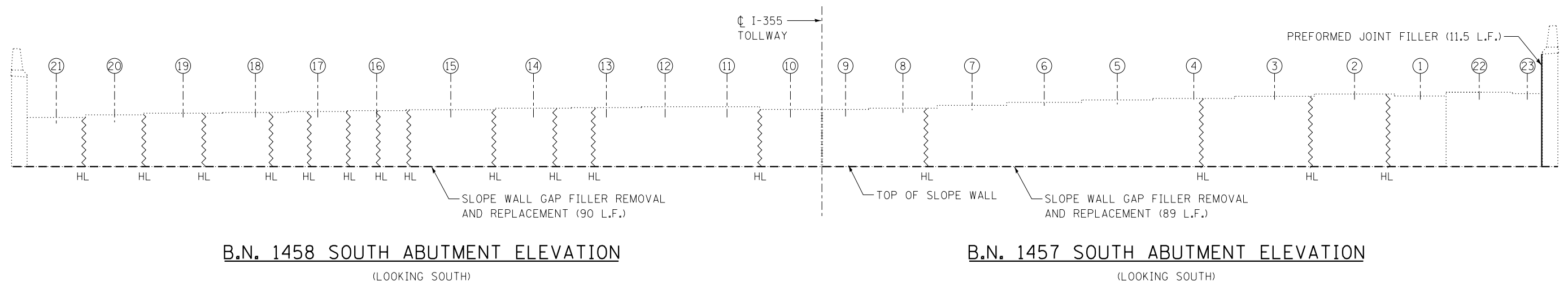
CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 SLOPEWALL REPAIR DETAILS

SD-04 OF SD-21
 SHT NO. SD-04
 DRAWING NO. 1006 OF 1517



B.N. 1457 NORTH ABUTMENT ELEVATION
(LOOKING NORTH)

B.N. 1458 NORTH ABUTMENT ELEVATION
(LOOKING NORTH)



B.N. 1458 SOUTH ABUTMENT ELEVATION
(LOOKING SOUTH)

B.N. 1457 SOUTH ABUTMENT ELEVATION
(LOOKING SOUTH)

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
JT599105	SLOPE WALL GAP FILLER REMOVAL AND REPLACEMENT	FOOT	178	189	367
Z0043900	PREFORMED JOINT FILLER	FOOT	23	-	23

LEGEND

- PREFORMED JOINT FILLER
- - - SLOPE WALL GAP FILLER REMOVAL AND REPLACEMENT
- HL HAIRLINE CRACK (FOR INFORMATION ONLY)

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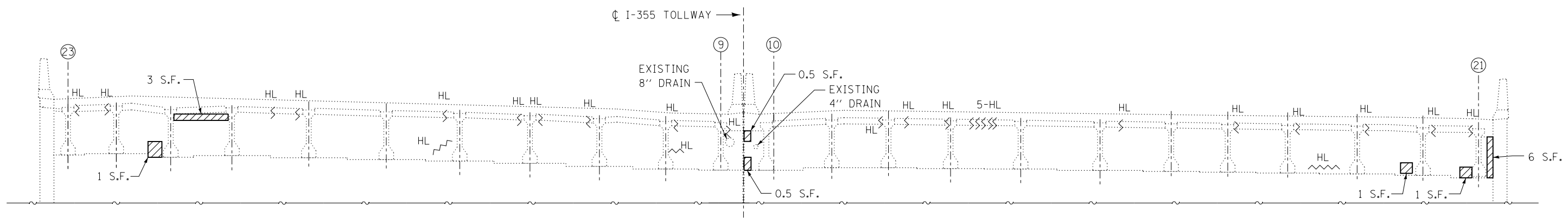


REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
B.N. 1457 & 1458 (SN 022-9979)
ABUTMENT REPAIRS

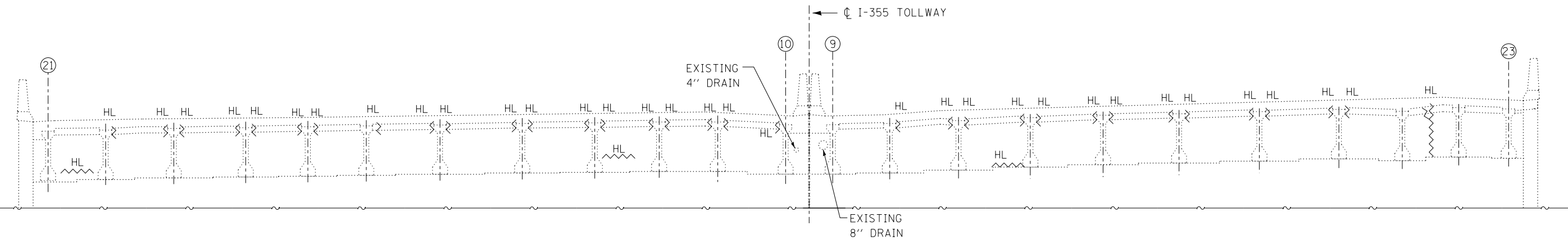
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SHT NO. SD-05
DRAWING NO. 1007 OF 1517

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B.N. 1457 DIAPHRAGMS AT NORTH ABUTMENT
(LOOKING NORTH)

B.N. 1458 DIAPHRAGMS AT NORTH ABUTMENT
(LOOKING NORTH)



B.N. 1458 DIAPHRAGMS AT SOUTH ABUTMENT
(LOOKING SOUTH)

B.N. 1457 DIAPHRAGMS AT SOUTH ABUTMENT
(LOOKING SOUTH)

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	4	9	13

LEGEND

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)
- HAIRLINE CRACK (FOR INFORMATION ONLY)

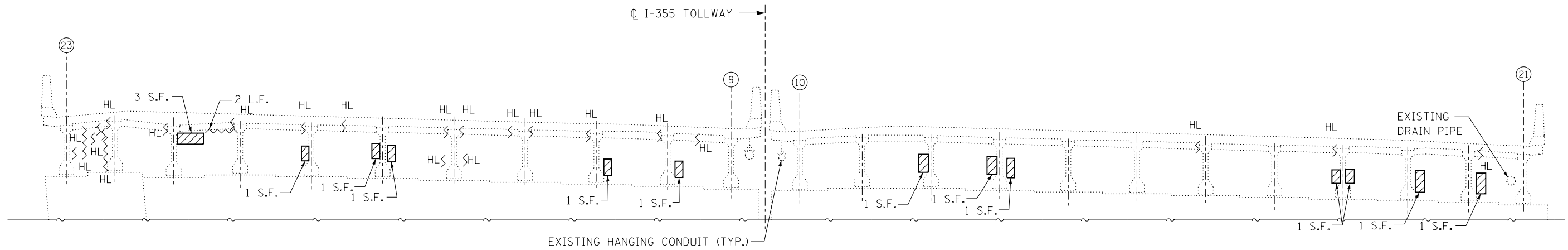
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NO.	DATE

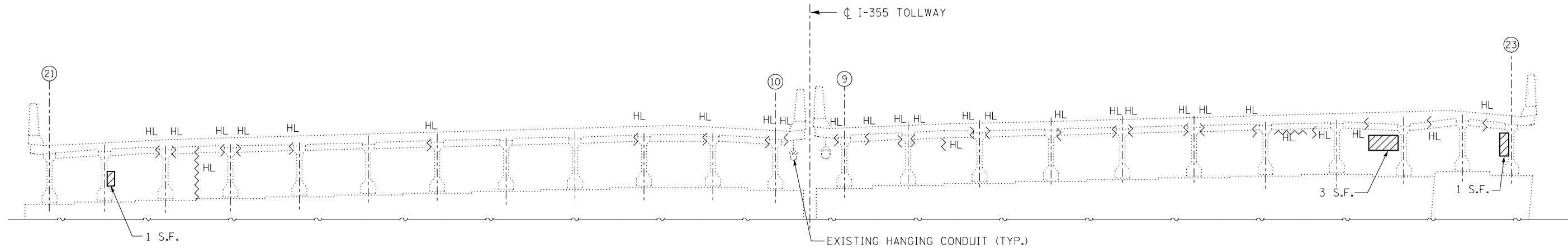
CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 DIAPHRAGM REPAIRS 1

SD-06 OF SD-21
 SHT NO. SD-06
 DRAWING NO. 1008 OF 1517



B.N. 1457 DIAPHRAGMS AT PIER 2
(LOOKING NORTH)




B.N. 1458 DIAPHRAGMS AT PIER 2
(LOOKING NORTH)



B.N. 1458 DIAPHRAGMS AT PIER 2
(LOOKING SOUTH)

B.N. 1457 DIAPHRAGMS AT PIER 2
(LOOKING SOUTH)

LEGEND

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)
-  LOW PRESSURE EPOXY INJECTION
-  HAIRLINE CRACK (FOR INFORMATION ONLY)

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	2	-	2
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	12	8	20

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NO.	DATE

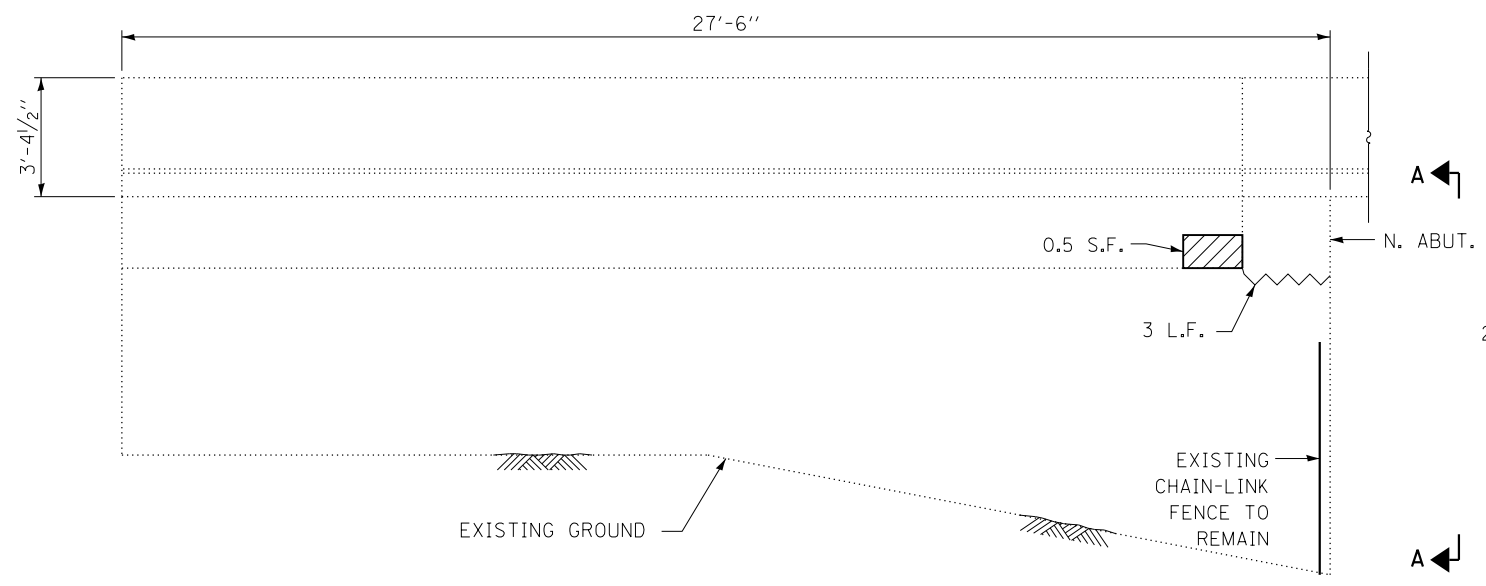
CONTRACT NO. RR-16-4255
B.N. 1457 & 1458 (SN 022-9979)
DIAPHRAGM REPAIRS 3

SD-08 OF SD-21

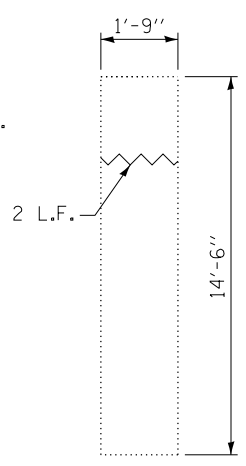
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DRAWING NO. 1010 OF 1517

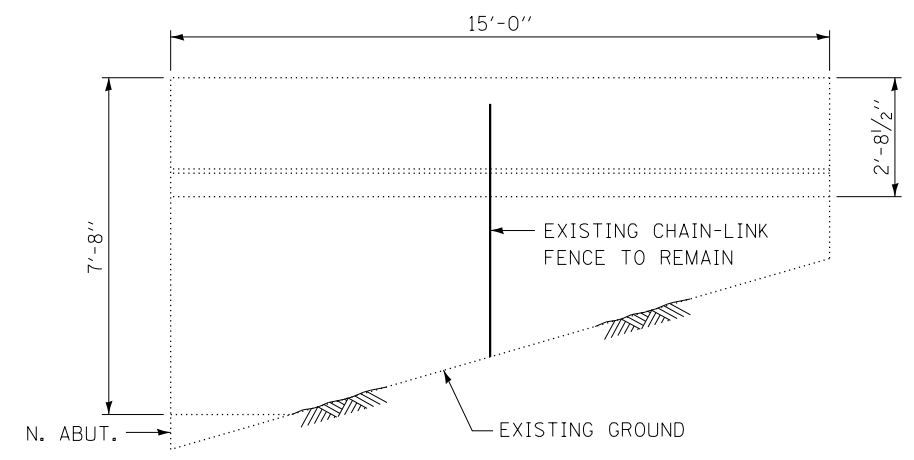
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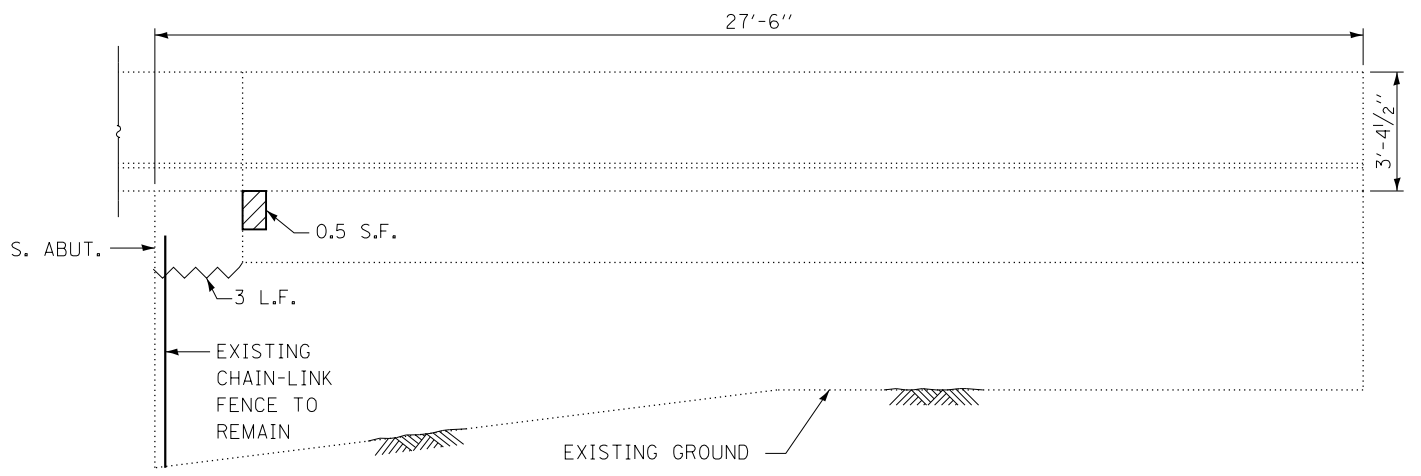
B.N. 1457 NORTHWEST WINGWALL
(LOOKING EAST)



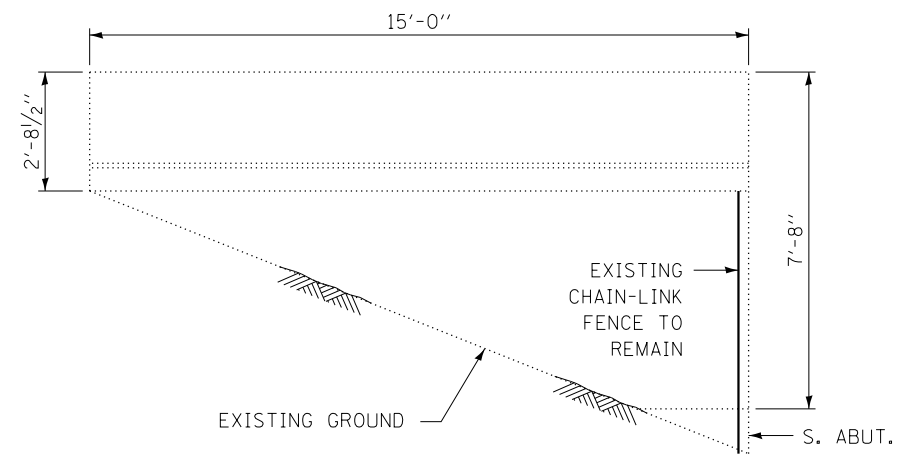
VIEW A-A



B.N. 1458 NORTHEAST WINGWALL
(LOOKING WEST)



B.N. 1457 SOUTHWEST WINGWALL
(LOOKING EAST)



B.N. 1458 SOUTHEAST WINGWALL
(LOOKING WEST)

LEGEND

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)
- LOW PRESSURE EPOXY INJECTION

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	8	-	8
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	1	-	1

SD-09 OF SD-21

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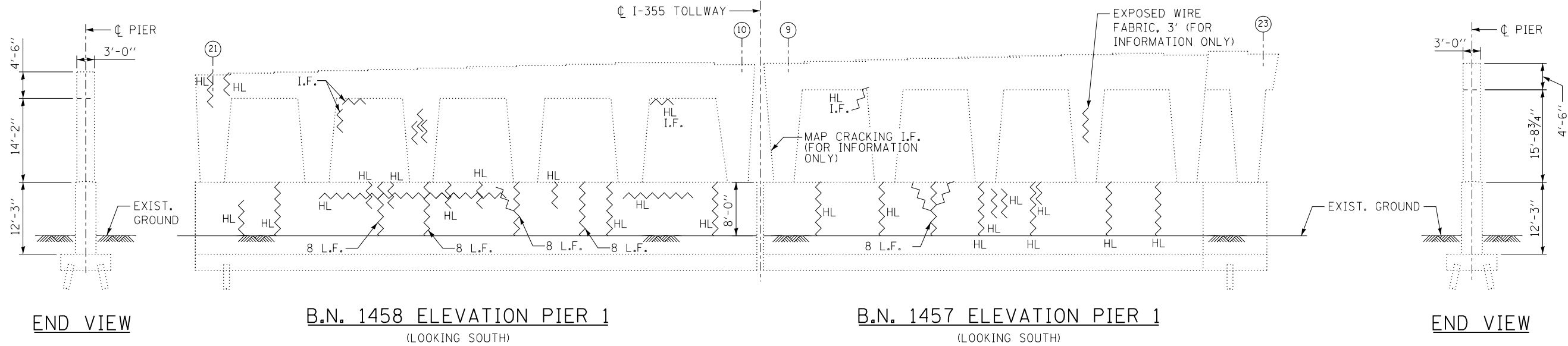
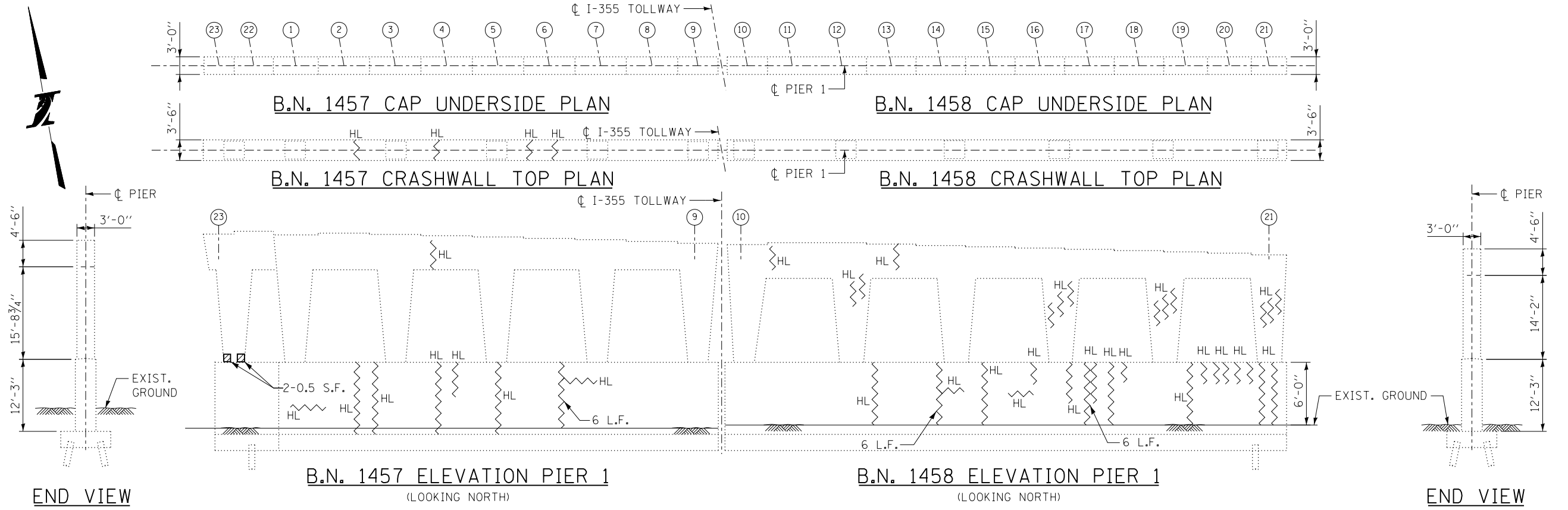


THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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


REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 WINGWALL REPAIRS

SHT NO. SD-09
 DRAWING NO.
 1011 OF 1517



LEGEND

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN TO 5 IN.)
-  LOW PRESSURE EPOXY INJECTION
-  HAIRLINE CRACK (FOR INFORMATION ONLY)

BILL OF MATERIAL

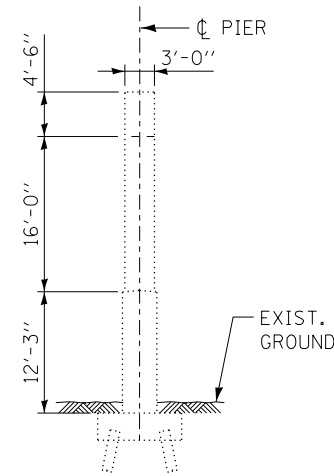
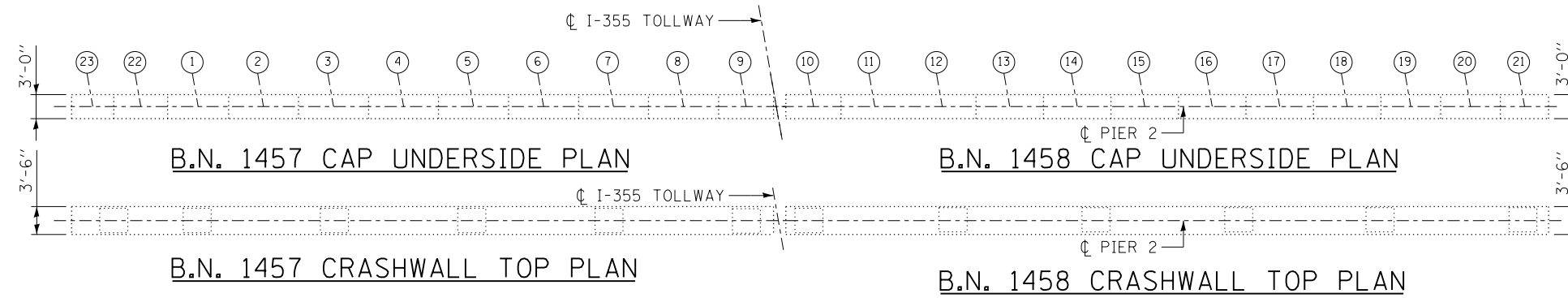
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JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	14	44	58
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN TO 5 IN.)	SQ. FT.	1	-	1

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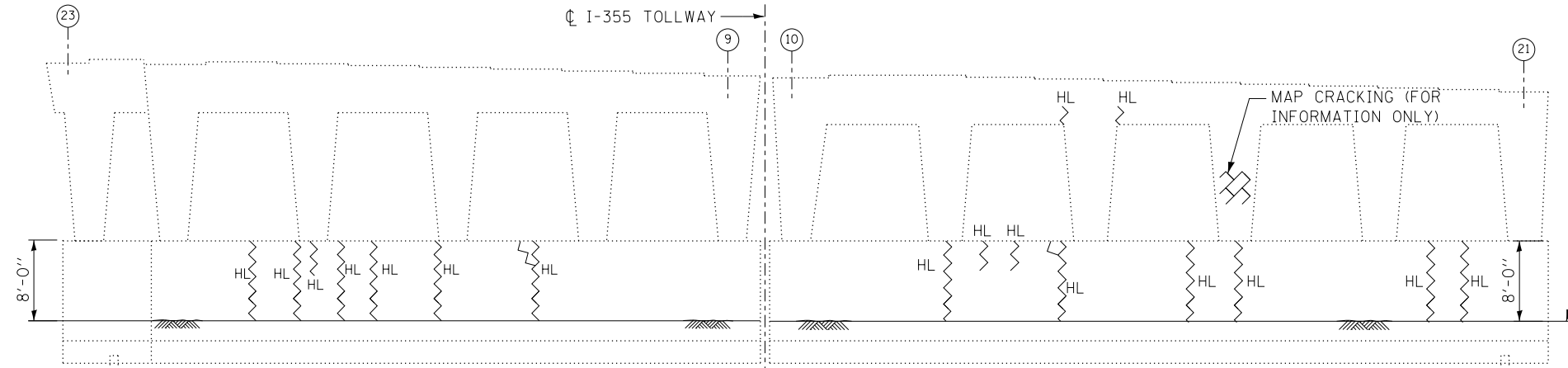


REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 PIER 1 REPAIR DETAILS

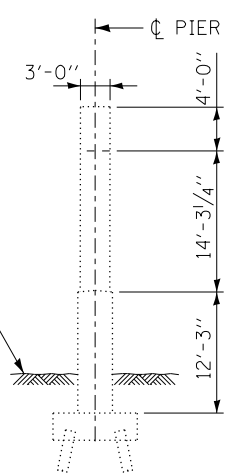


END VIEW

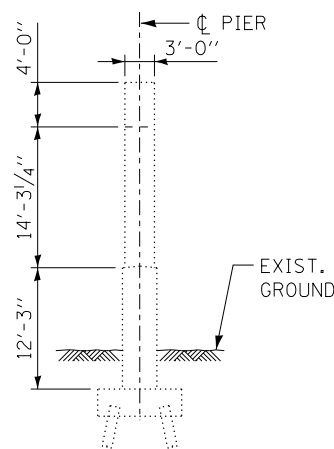


B.N. 1457 ELEVATION PIER 2
(LOOKING NORTH)

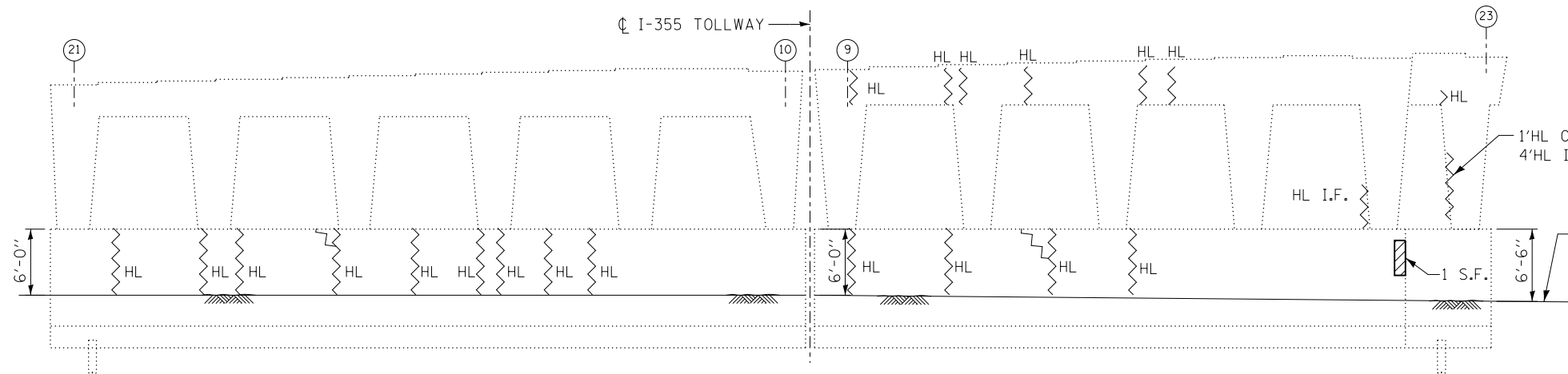
B.N. 1458 ELEVATION PIER 2
(LOOKING NORTH)



END VIEW

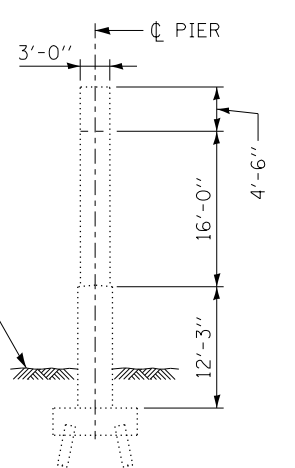


END VIEW



B.N. 1458 ELEVATION PIER 2
(LOOKING SOUTH)

B.N. 1457 ELEVATION PIER 2
(LOOKING SOUTH)



END VIEW

LEGEND

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)
- HAIRLINE CRACK (FOR INFORMATION ONLY)

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	1	-	1

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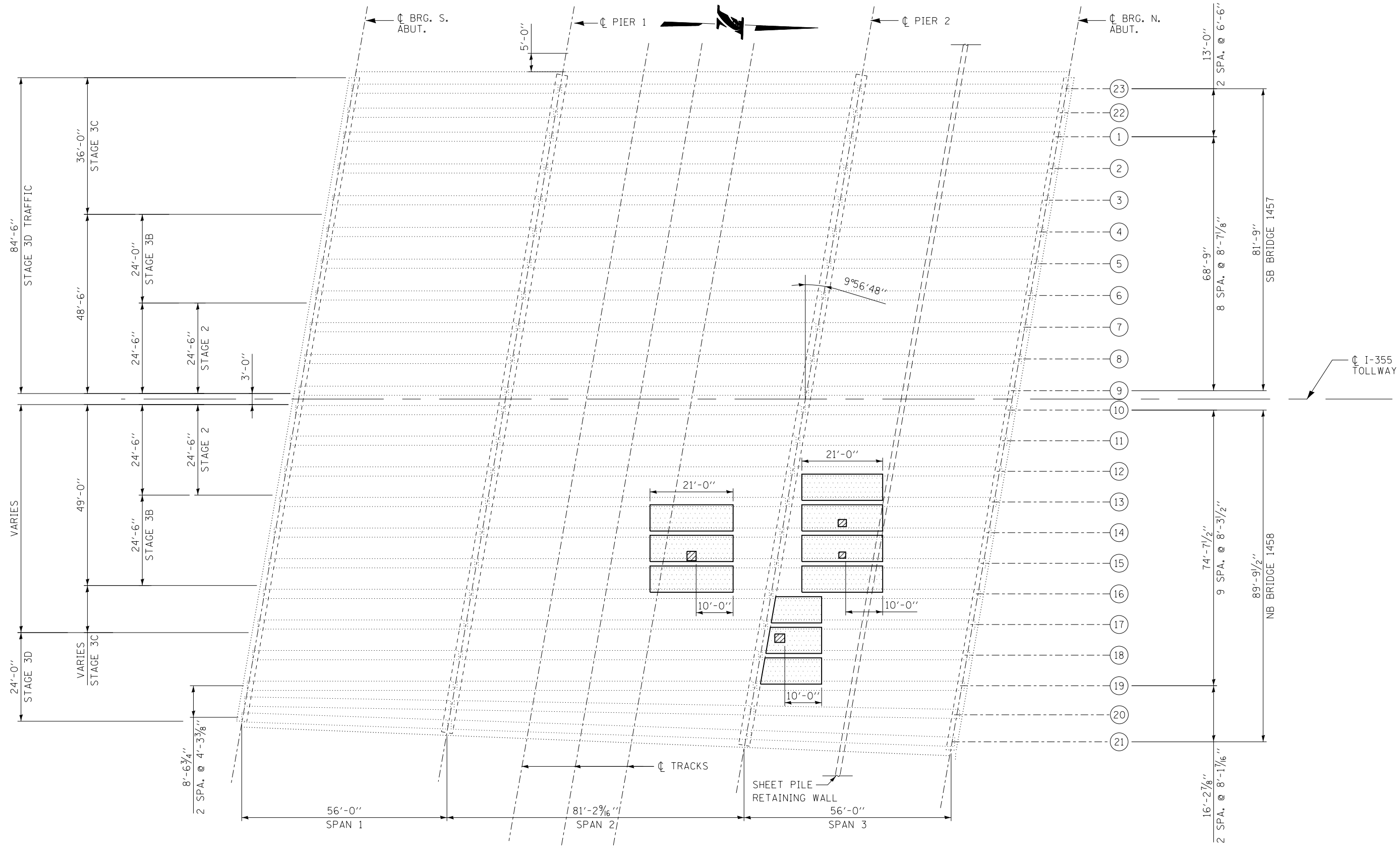


REVISIONS		
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 B.N. 1457 & 1458 (SN 022-9979)
 PIER 2 REPAIR DETAILS

SD-11 OF SD-21
 SHT NO. SD-11
 DRAWING NO. 1013 OF 1517

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LEGEND

	PROTECTIVE SHIELD
	SPALL (FOR INFORMATION ONLY)

1457 & 1458 FRAMING PLAN & DECK UNDERSIDE

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
50157300	PROTECTIVE SHIELD	SQ. YD.	-	164	164

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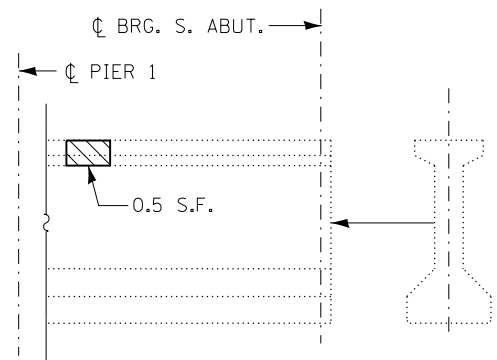


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 DOWNERS GROVE,
 ILLINOIS 60515

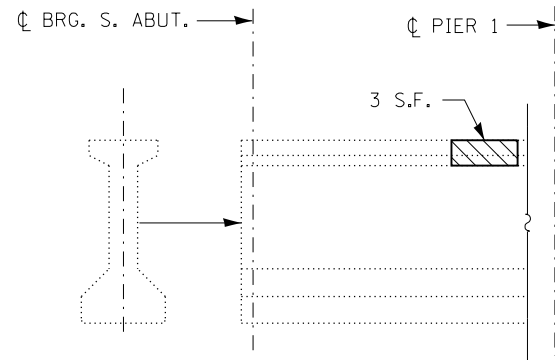
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 FRAMING PLAN

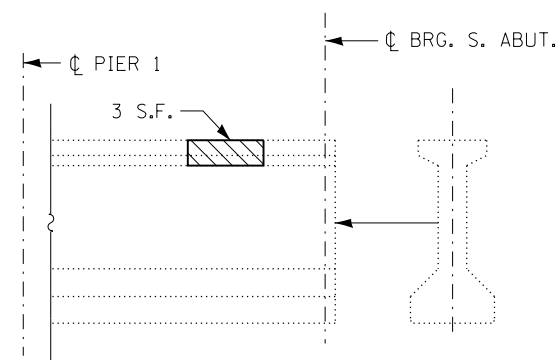
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 SHT NO. SD-12
 DRAWING NO.
 1014 OF 1517



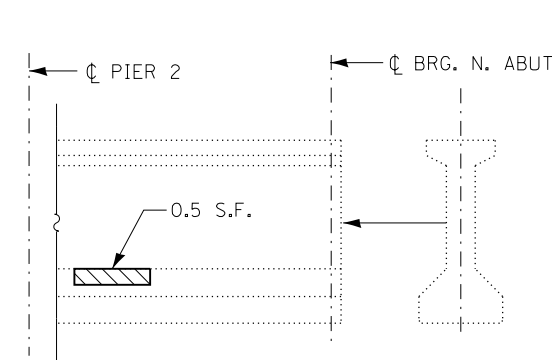
WEST FACE OF BEAM 22



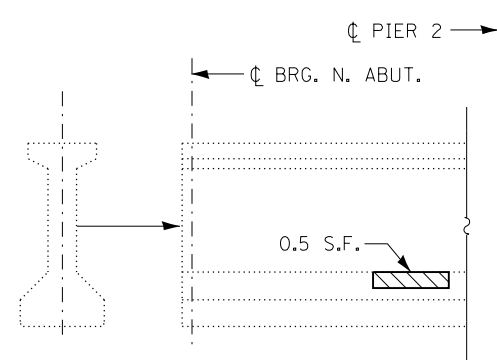
EAST FACE OF BEAM 1



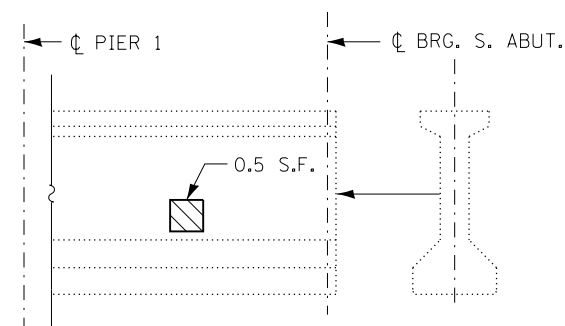
WEST FACE OF BEAM 1



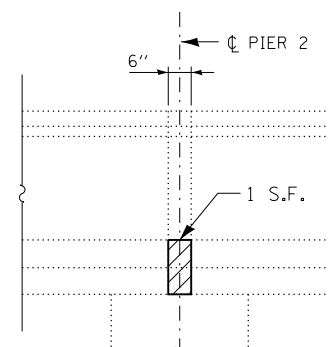
EAST FACE OF BEAM 4



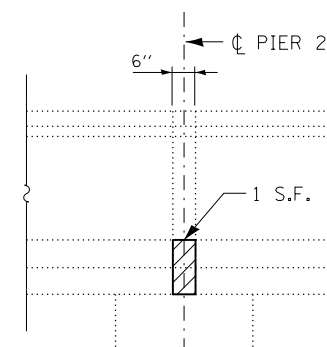
WEST FACE OF BEAM 4



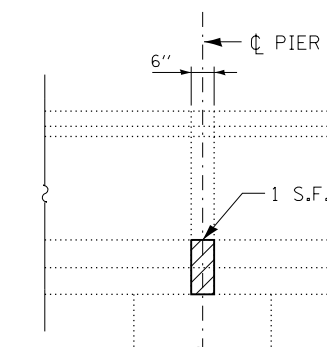
WEST FACE OF BEAM 7



EAST FACE OF BEAM 9



WEST FACE OF BEAM 10



EAST FACE OF BEAM 21

NOTES:

- BEAMS 1-9, 22 & 23 SUPPORT BRIDGE 1457. BEAMS 10-21 SUPPORT BRIDGE 1458.
- BEAMS 22 & 23 WERE CONSTRUCTED UNDER CONTRACT I-07-5476 IN 2008.
- REPAIR OF THE EXISTING BEAMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

LEGEND

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)
- POLYMER MODIFIED PORTLAND CEMENT MORTAR

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	1	2	3
X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	8	-	8

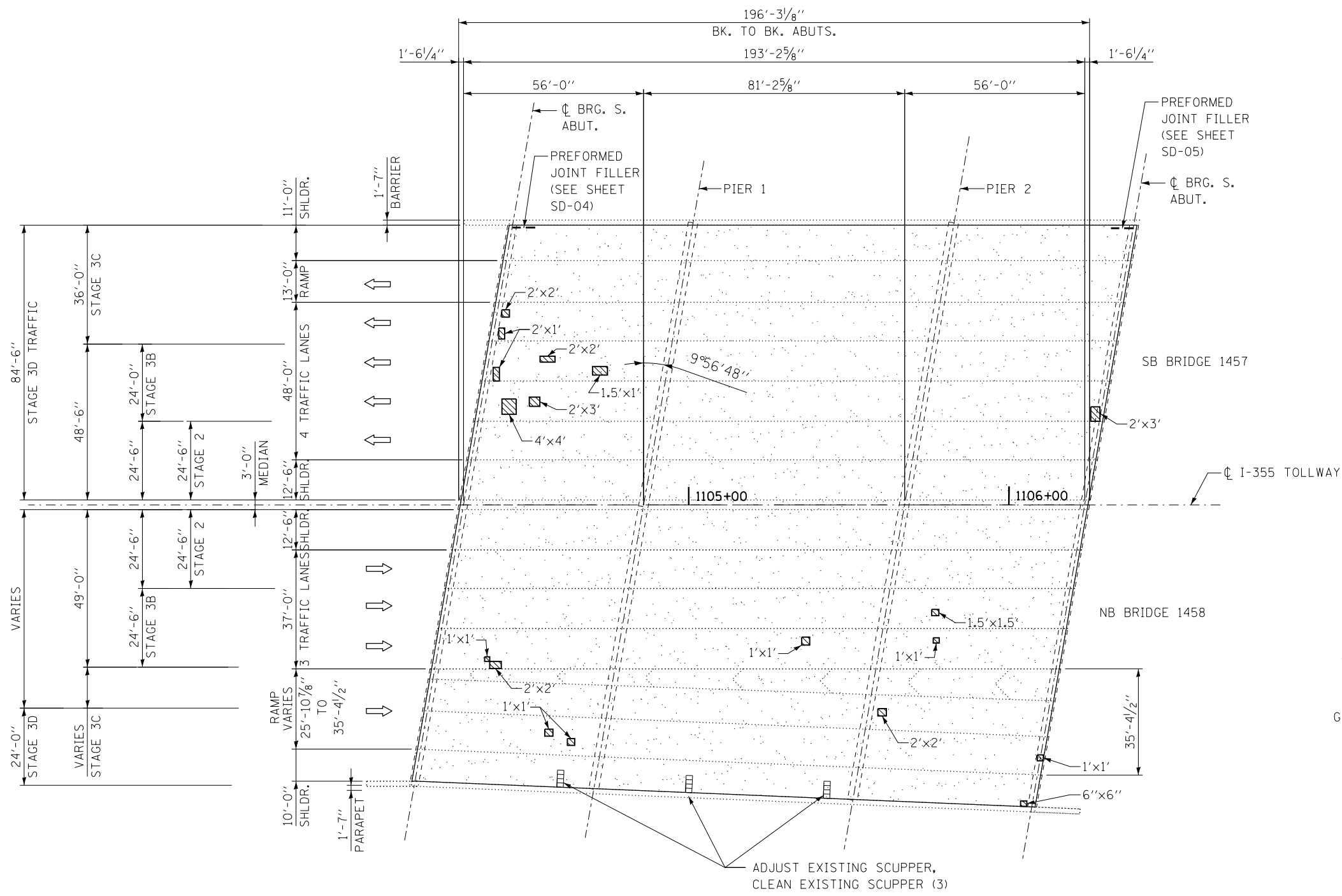
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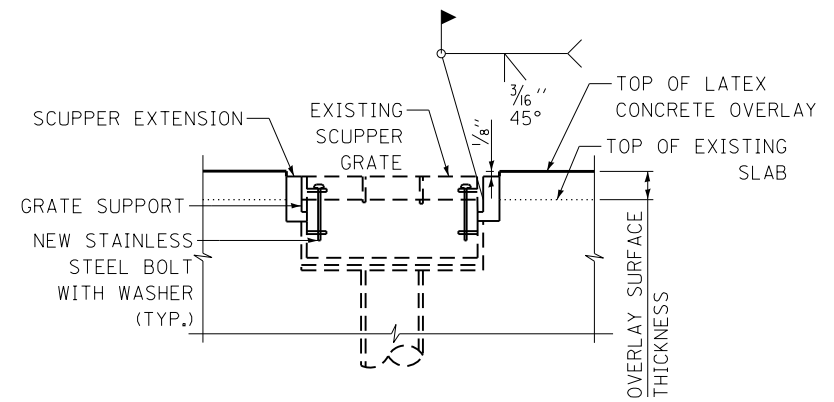
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NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 PPC BEAM REPAIR DETAILS

SD-13 OF SD-21
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DECK PLAN



SCUPPER ADJUSTMENT DETAIL

LEGEND

- BRIDGE DECK SCARIFICATION (1 INCH), BRIDGE DECK LATEX CONCRETE OVERLAY (2 1/4 INCHES), BRIDGE DECK GROOVING
- SPALL (FOR INFORMATION ONLY)
- PREFORMED JOINT FILLER

NOTE:

1. DECK SURVEY CONDUCTED ON 10/15/2016.
2. THE CONTRACTOR COULD PROPOSE AN ALTERNATE SCUPPER ADJUSTMENT SYSTEM AND SUBMIT PLANS TO THE ENGINEER FOR APPROVAL BEFORE FABRICATION.

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
50300260	BRIDGE DECK GROOVING	SQ. YD.	1,772	1,896	3,668
JS120810	ADJUST EXISTING SCUPPER	EACH	-	3	3
JS120815	CLEAN EXISTING SCUPPER	EACH	-	3	3
Z0012132	BRIDGE DECK SCARIFICATION, 1"	SQ. YD.	1,815	1,939	3,754
Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES	SQ. YD.	1,815	1,939	3,754

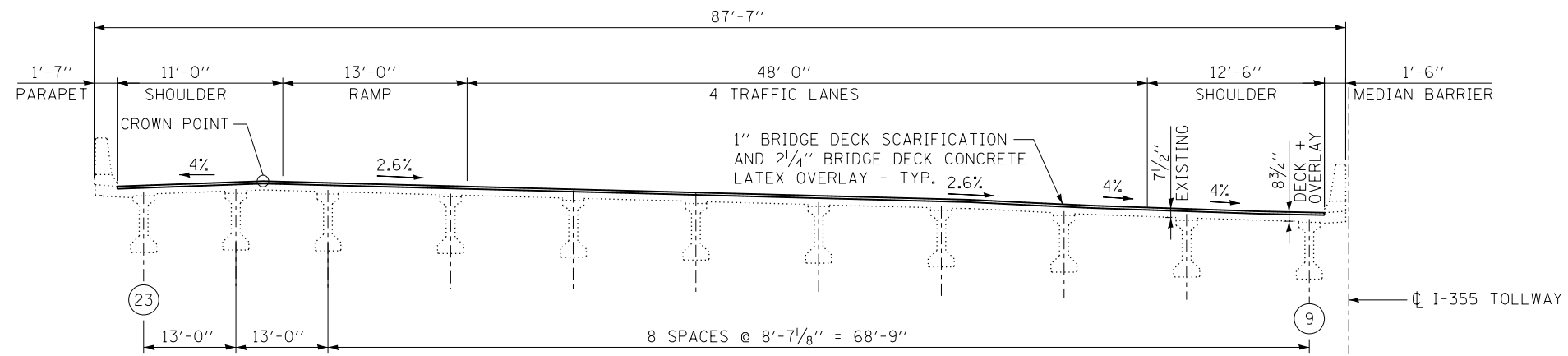
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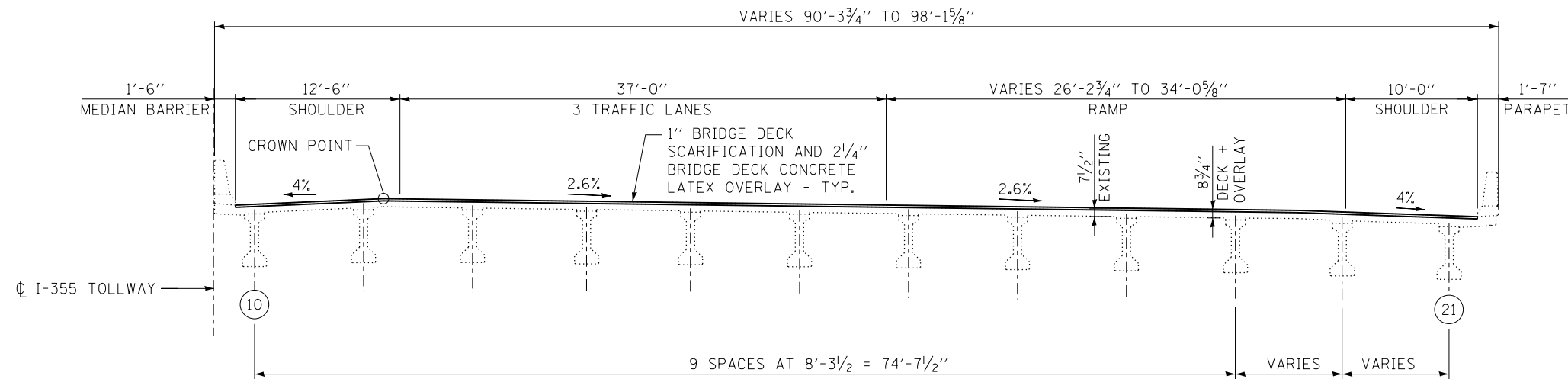
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 B.N. 1457 & 1458 (SN 022-9979)
 DECK REPAIRS

SD-14 OF SD-21
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BN 1457 CROSS SECTION

(LOOKING NORTH)



BN 1458 CROSS SECTION

(LOOKING NORTH)

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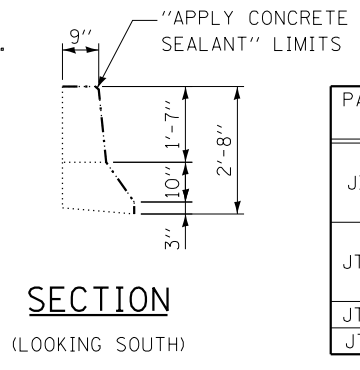
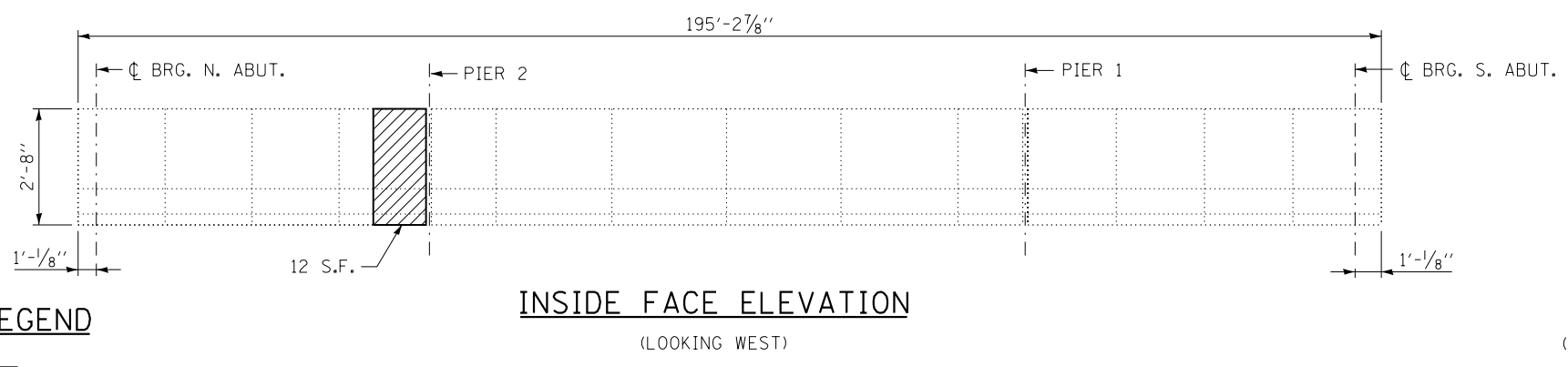
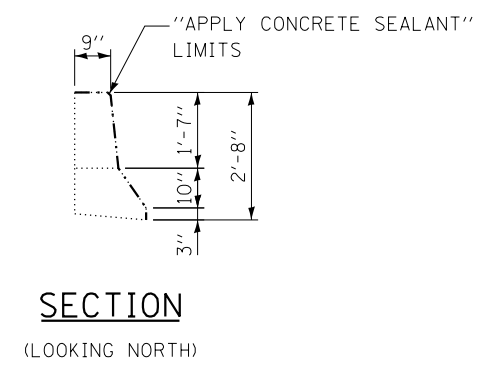
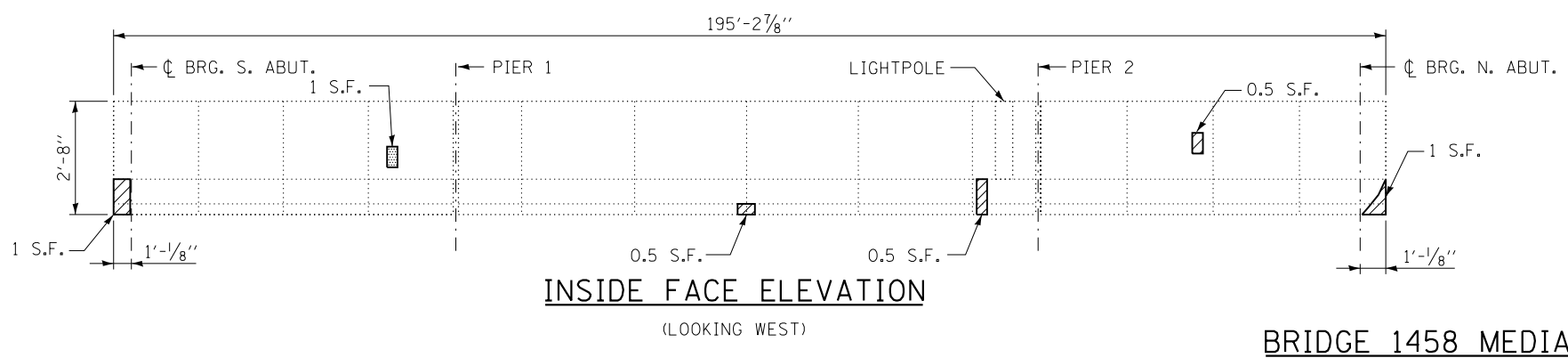
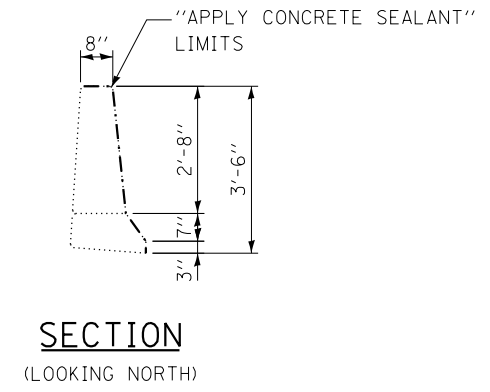
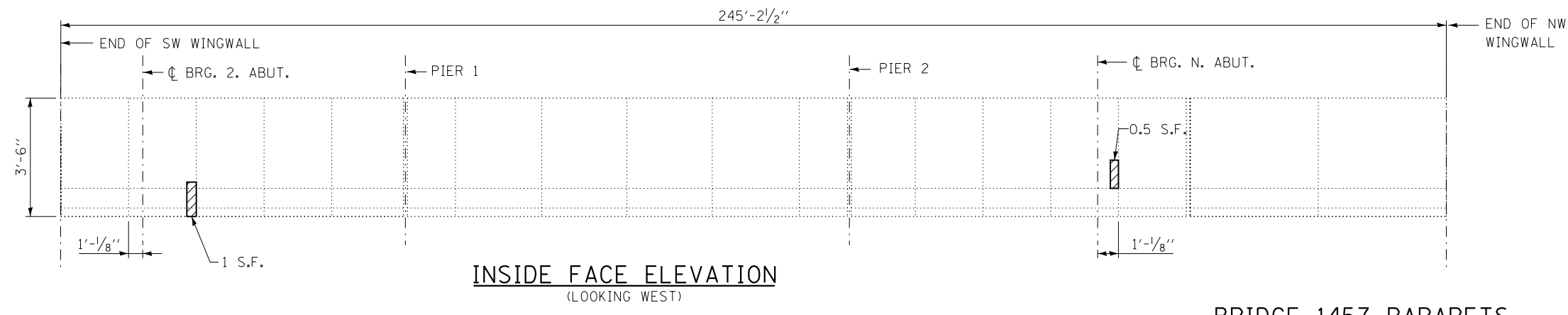
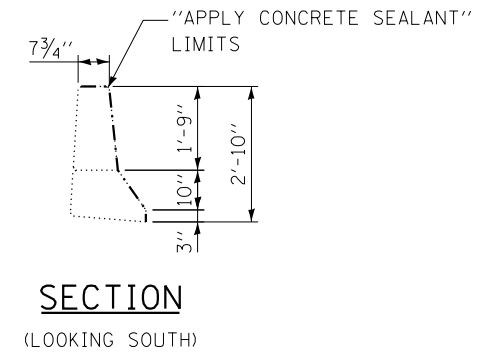
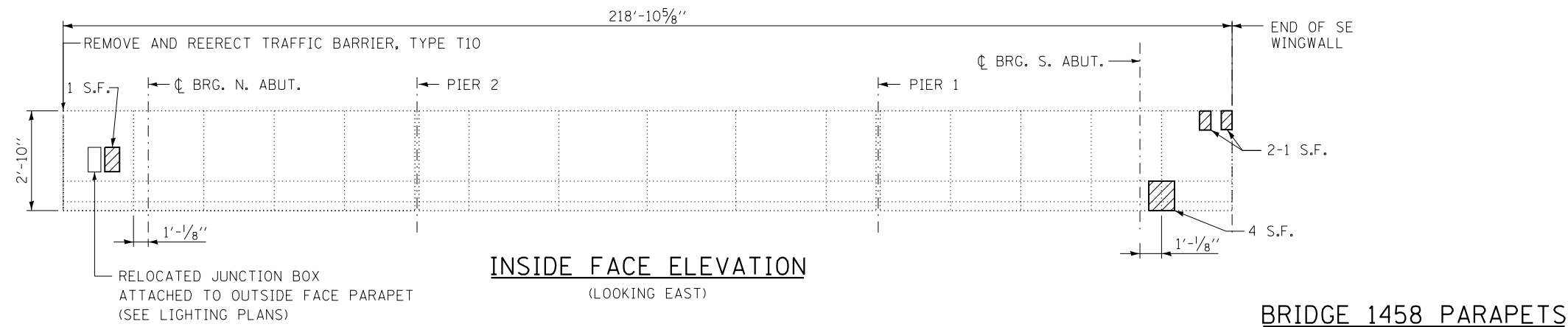


NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 STRUCTURE CROSS SECTION

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LEGEND

- SHALLOW CONCRETE REPAIR
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
J1633140	REMOVE AND REERECT TRAFFIC BARRIER TERMINAL, TYPE T10	EACH	-	1	1
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	14	11	25
JT503050	SHALLOW CONCRETE REPAIR	EACH	-	1	1
JT524015	BRIDGE DECK CONCRETE SEALER	SQ. FT.	1,763	1,509	3,272

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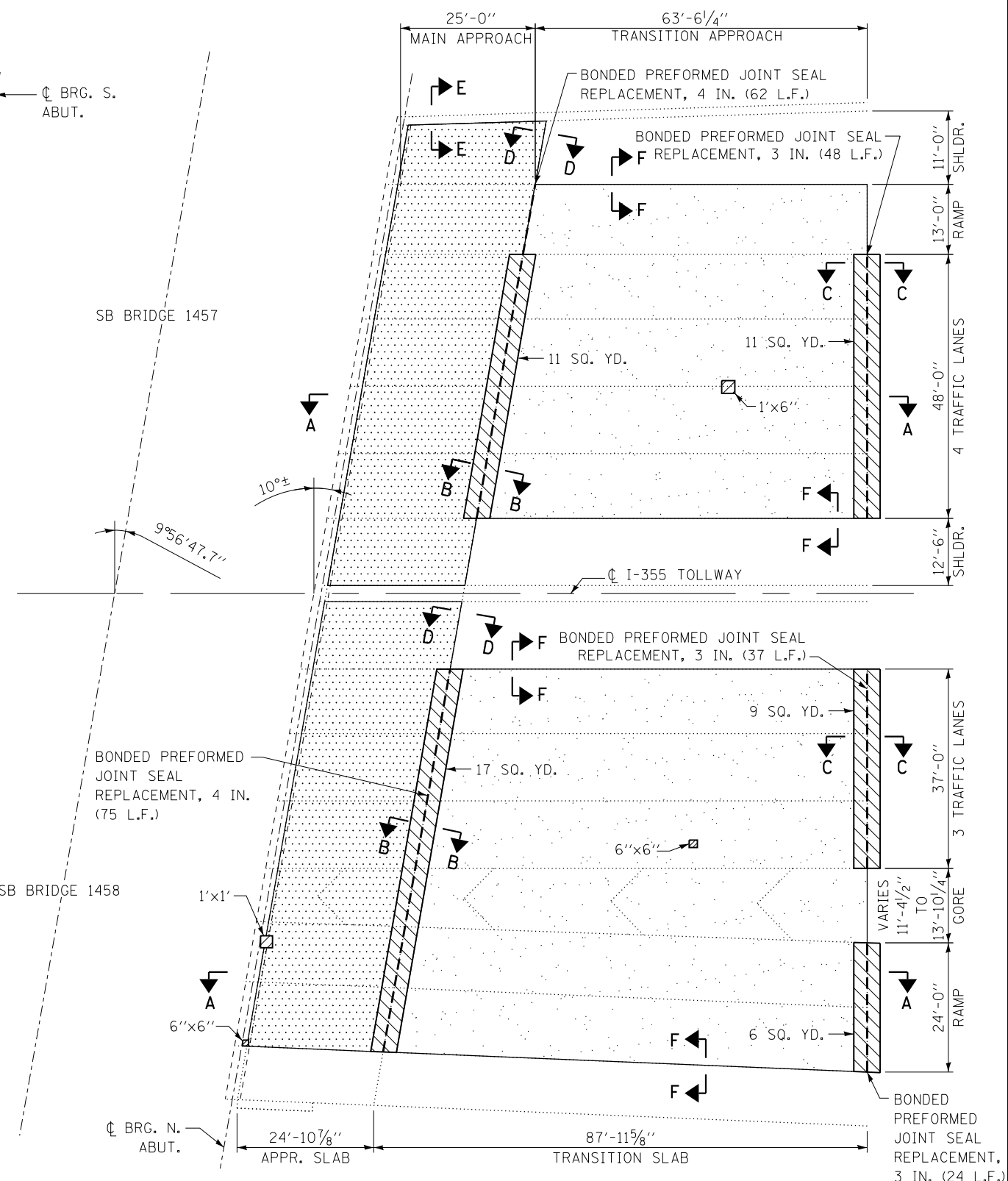
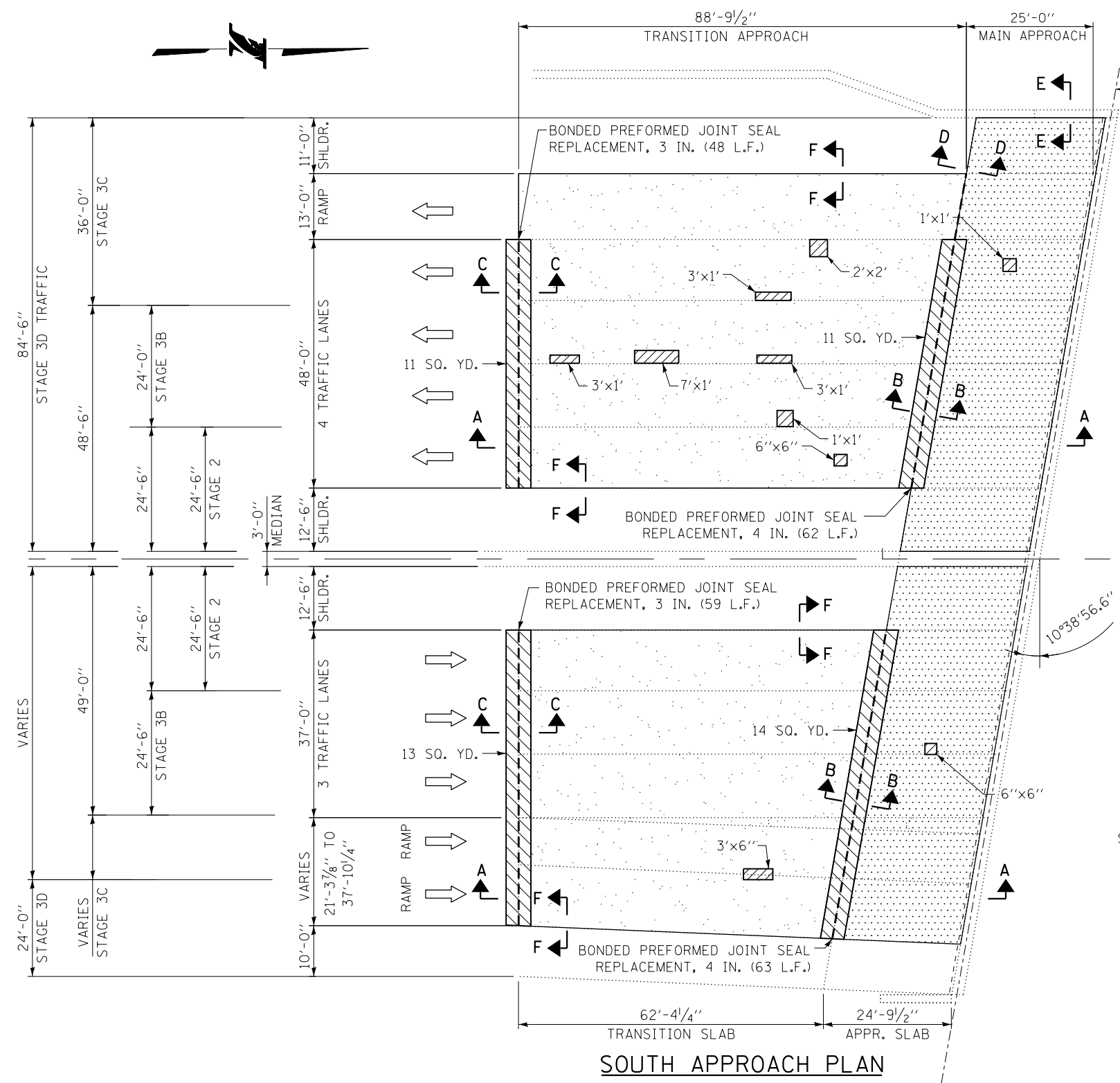


REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 PARAPET REPAIR DETAILS

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APPROACH SLAB REPAIR DETAILS

LEGEND

- BRIDGE DECK SCARIFICATION, 1", BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES.
- CONCRETE PAVEMENT SCARIFICATION, 3/4", ASPHALT OVERLAY
- SPALL (FOR INFORMATION ONLY)
- ACCELERATED APPROACH SLAB REPAIR (PARTIAL)
- BONDED PREFORMED JOINT SEAL REPLACEMENT
- BRIDGE DECK GROOVING

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
50300260	BRIDGE DECK GROOVING	SQ. YD.	460	441	901
JT503013	ACCELERATED APPROACH SLAB REPAIR (PARTIAL)	SQ. YD.	44	59	103
JT525230	BONDED PREFORMED JOINT SEAL REPLACEMENT, 3 IN	FOOT	96	120	216
JT525235	BONDED PREFORMED JOINT SEAL REPLACEMENT, 4 IN	FOOT	124	138	262
Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES	SQ. YD.	470	452	922
Z0012132	BRIDGE DECK SCARIFICATION, 1"	SQ. YD.	470	452	922
Z0012800	CONCRETE PAVEMENT SCARIFICATION	SQ. YD.	995	786	1,231

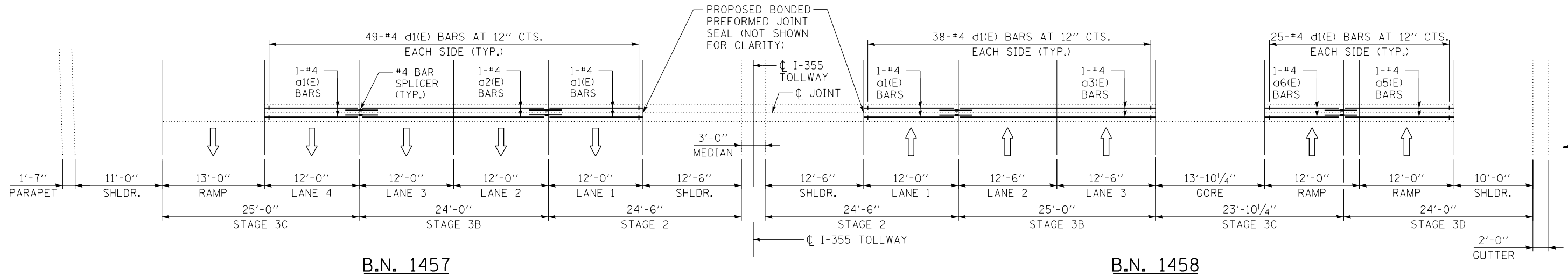
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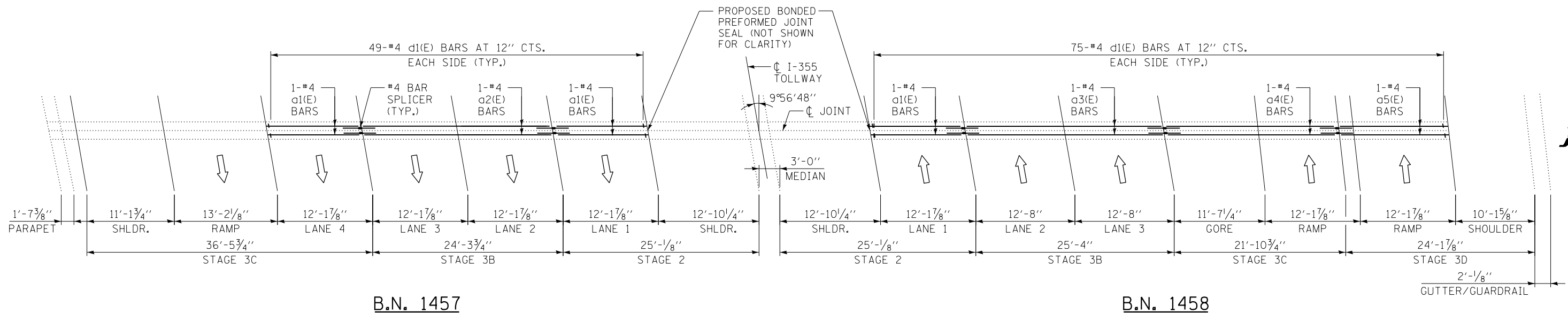
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 B.N. 1457 & 1458 (SN 022-9979)
 APPROACH REPAIRS

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NORTH TRANSITION APPROACH JOINT REPAIR PLAN

CUT BARS TO FIT



BAR SCHEDULE

BAR	NO.		SIZE	LENGTH	SHAPE
	BN: 1457	BN: 1458			
a1(E)	8	4	#4	11'-10"	—
a2(E)	4	-	#4	24'-0"	—
a3(E)	-	4	#4	25'-0"	—
a4(E)	-	4	#4	21'-7"	—
a5(E)	-	4	#4	13'-8"	—
a6(E)	-	2	#4	9'-8"	—
d1(E)	196	276	#4	1'-5"	C

NORTH MAIN APPROACH JOINT REPAIR PLAN

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	320	470	790
50800515	BAR SPLICERS	EACH	8	10	18

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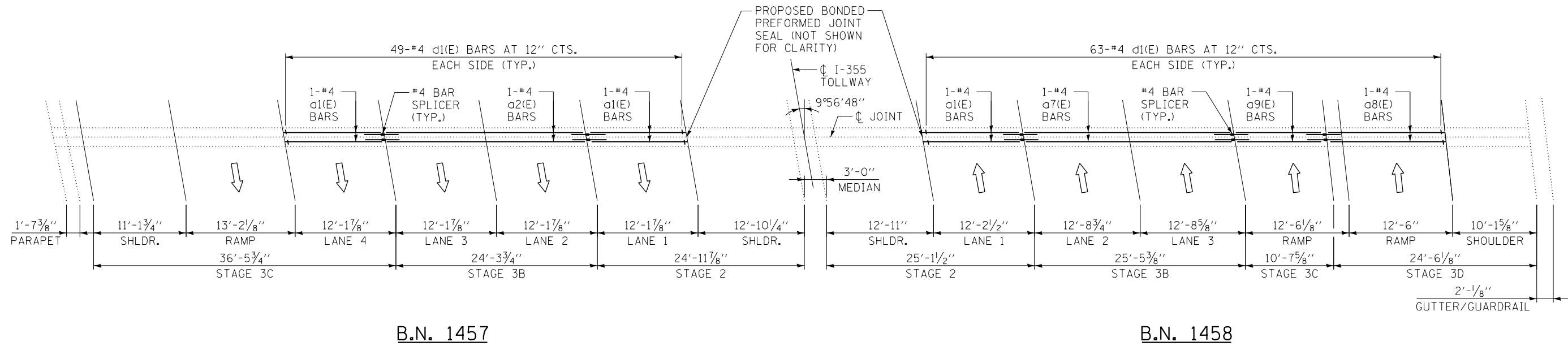
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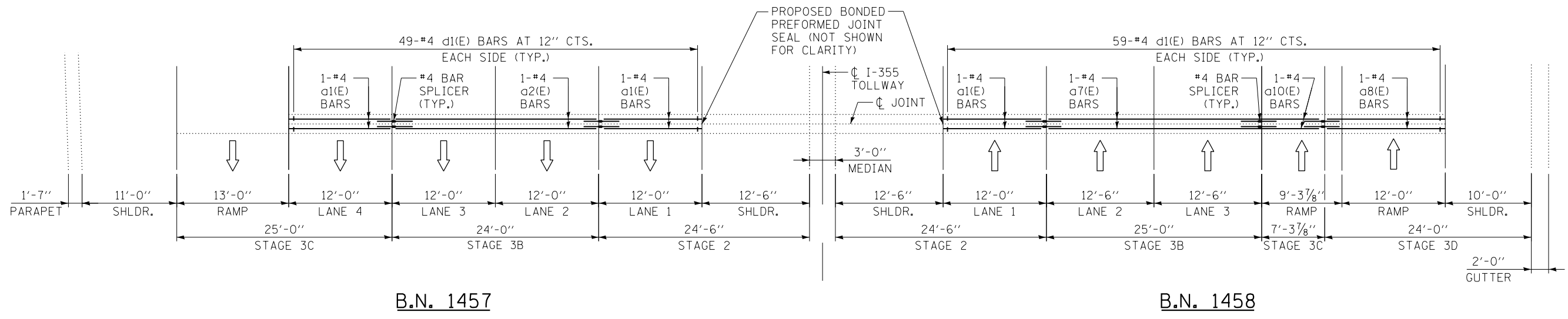
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CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 EXPANSION JOINT REPAIR DETAILS 1

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 DRAWING NO. 1020 OF 1517



SOUTH MAIN APPROACH JOINT REPAIR PLAN



SOUTH TRANSITION APPROACH JOINT REPAIR PLAN

BAR SCHEDULE

BAR	NO.		SIZE	LENGTH	SHAPE
	BN: 1457	BN: 1458			
a1(E)	8	4	#4	11'-10"	—
a2(E)	4	-	#4	24'-0"	—
a7(E)	-	4	#4	25'-2"	—
a8(E)	-	4	#4	12'-2"	—
a9(E)	-	2	#4	10'-4"	—
a10(E)	-	2	#4	7'-0"	—
d1(E)	196	266	#4	1'-5"	C

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BRIDGE 1457	BRIDGE 1458	TOTAL QUANTITY
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	320	410	730
50800515	BAR SPLICERS	EACH	8	12	20

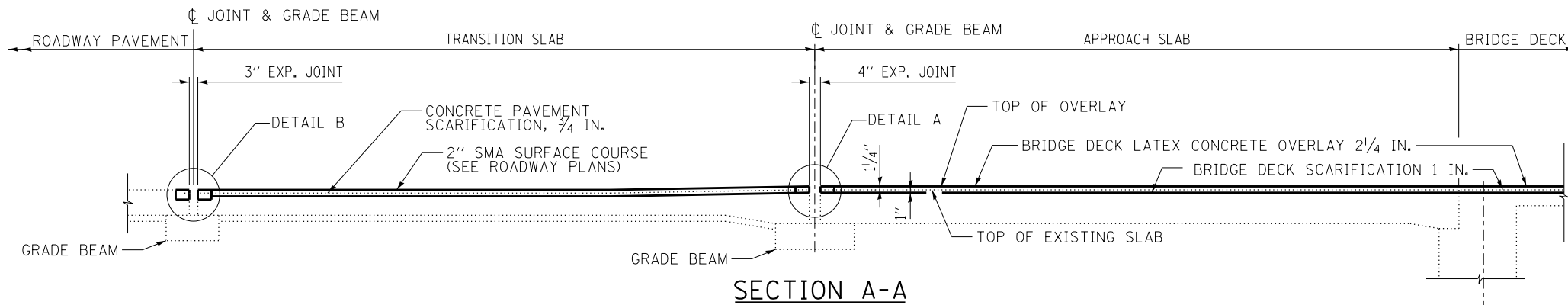
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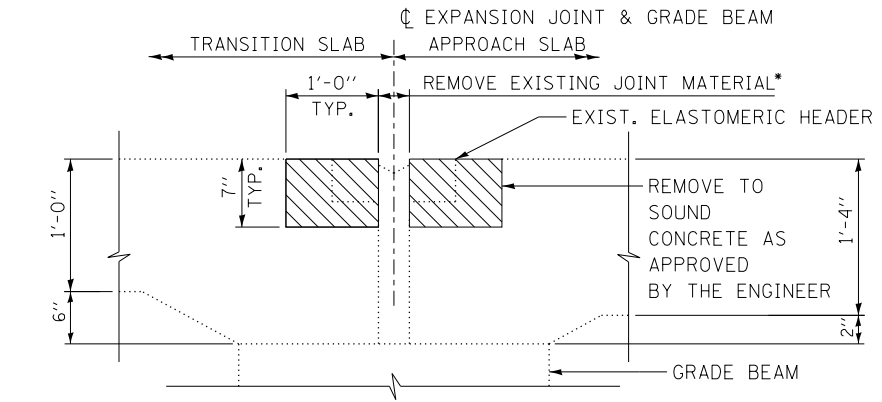
REVISIONS		
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CONTRACT NO. RR-16-4255
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 EXPANSION JOINT REPAIR DETAILS 2

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 DRAWING NO. 1021 OF 1517

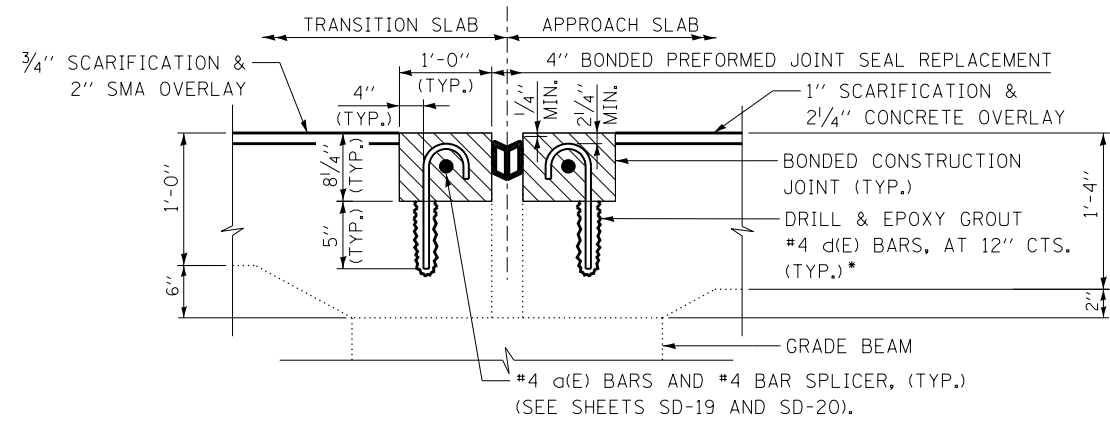


SECTION A-A



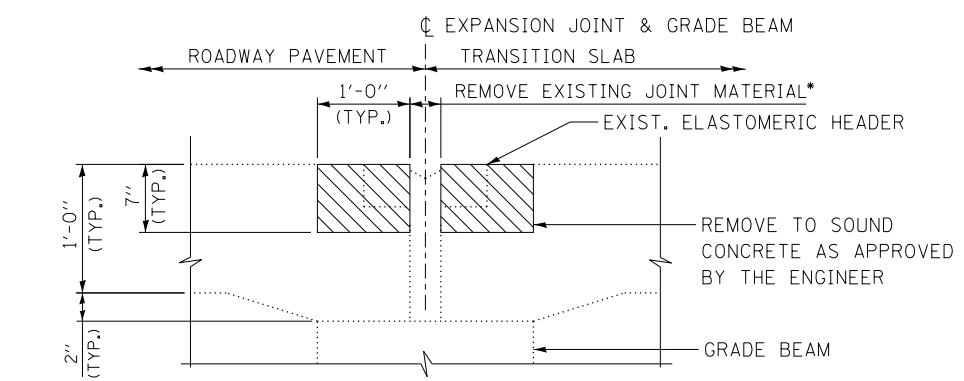
SECTION B-B EXPANSION JOINT REMOVAL

*COST INCLUDED WITH ACCELERATED APPROACH SLAB REPAIR (PARTIAL)



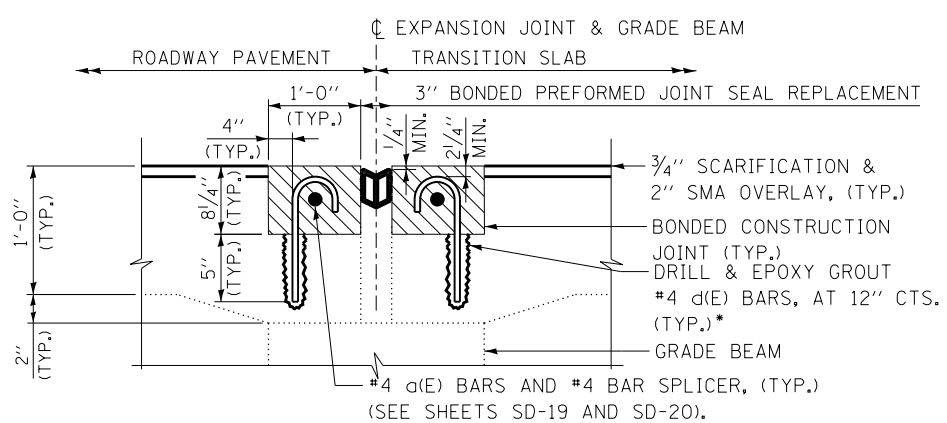
DETAIL A PROPOSED EXPANSION JOINT

*COST INCLUDED WITH REINFORCEMENT BARS, EPOXY COATED



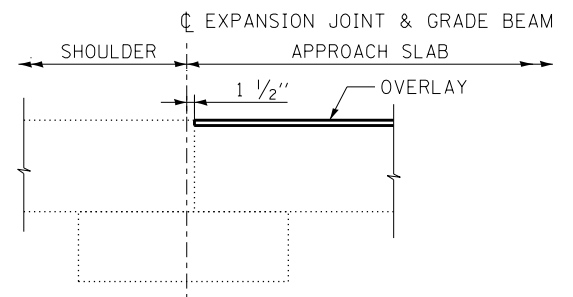
SECTION C-C EXPANSION JOINT REMOVAL

*COST INCLUDED WITH ACCELERATED APPROACH SLAB REPAIR (PARTIAL)

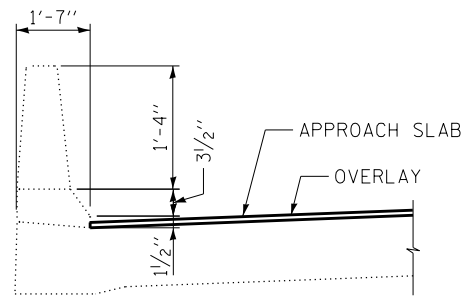


DETAIL B PROPOSED EXPANSION JOINT

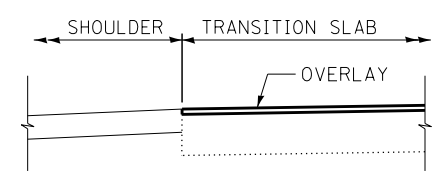
*COST INCLUDED WITH REINFORCEMENT BARS, EPOXY COATED



SECTION D-D



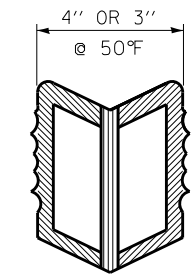
SECTION E-E



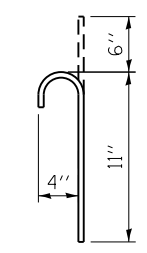
SECTION F-F

NOTES:

1. SUBJECT TO THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY ELECT TO MODIFY THE SHOWN REMOVAL AND PROPOSED DIMENSIONS TO SUIT THEIR MEANS AND METHOD FOR JOINT INSTALLATION; HOWEVER THE OVERALL TRAFFIC STAGING SCHEME SHALL NOT BE MODIFIED.
2. ALL EXISTING CONCRETE SURFACES TO BE IN CONTACT WITH NEW CONCRETE SHALL BE BLAST CLEANED BEFORE NEW CONCRETE CONSTRUCTION.
3. ALL WORK SHALL BE PERFORMED WITH THE USE OF TEMPORARY ONE-LANE AND TWO-LANE CLOSURES ONLY AS PER MOT PLANS. FOR ALLOWABLE CLOSURE TIMES AND DURATIONS, SEE MOT PLANS AS WELL AS SPECIAL PROVISIONS.
4. DIMENSIONS TAKEN FROM EXISTING PLANS. ACTUAL SIZE AND LOCATION OF REPAIR AREAS SHALL BE FIELD VERIFIED BY THE ENGINEER.
5. FOR PAY ITEMS, QUANTITIES AND SECTIONS A-A, B-B, C-C, D-D, E-E & F-F SEE SHEET SD-17.



BONDED PREFORMED JOINT SEAL



d(E) BARS

LEGEND



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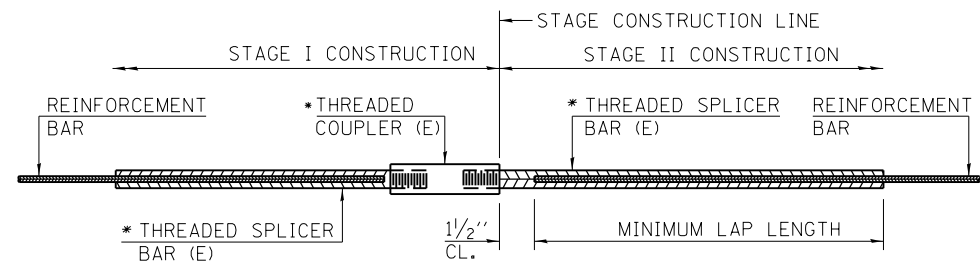
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NO.	DATE

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 EXPANSION JOINT REPAIR DETAILS 3

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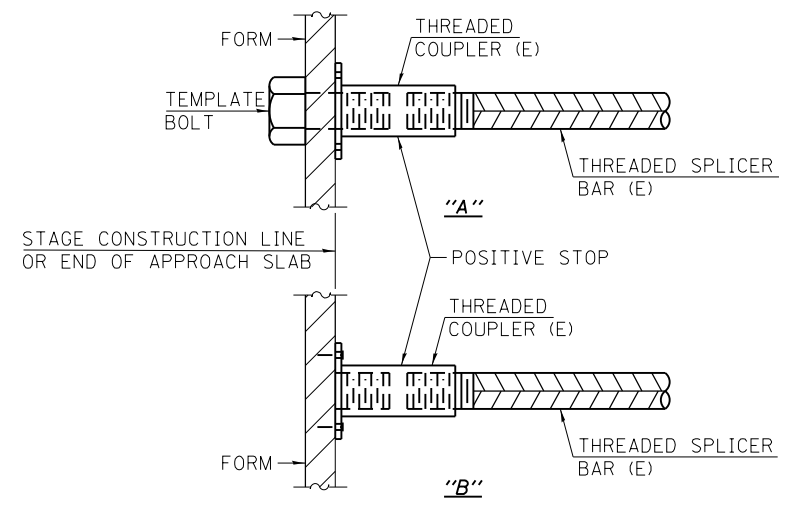


STANDARD BAR SPLICER ASSEMBLY

THREADED SPLICER BAR LENGTH = MIN. LAP LENGTH + 1/2" + THREAD LENGTH

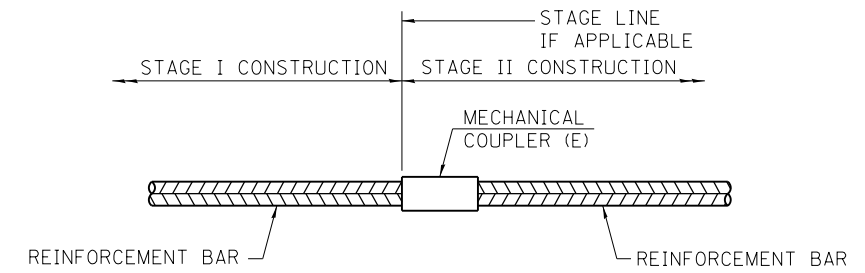
- EPOXY NOT REQUIRED ON BAR SPLICER ASSEMBLY COMPONENTS USED IN CONJUNCTION WITH BLACK BARS.

LOCATION	BAR SIZE	NO. ASSEMBLIES REQUIRED	MINIMUM LAP LENGTH
1457 APPR. SLABS	#4	16	2'-0"
1458 APPR. SLABS	#4	22	2'-0"



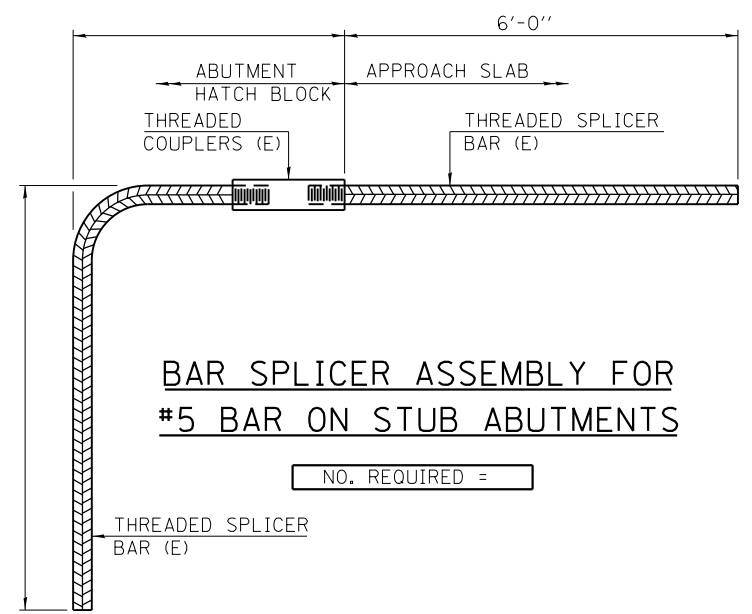
INSTALLATION AND SETTING METHODS

- "A" : SET BAR SPLICER ASSEMBLY BY MEANS OF A TEMPLATE BOLT.
- "B" : SET BAR SPLICER ASSEMBLY BY NAILING TO WOOD FORMS OR CEMENTING TO STEEL FORMS.
- (E) : INDICATES EPOXY COATING.



STANDARD MECHANICAL SPLICER

LOCATION	BAR SIZE	NO. ASSEMBLIES REQUIRED



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

NO. REQUIRED =

NOTES

- SPLICER BARS SHALL BE DEFORMED WITH THREADED ENDS AND HAVE A MINIMUM 60 KSI YIELD STRENGTH.
- ALL REINFORCEMENT SHALL BE LAPPED AND TIED TO THE SPLICER BARS.
- BAR SPLICER ASSEMBLIES SHALL BE EPOXY COATED ACCORDING TO THE REQUIREMENTS FOR REINFORCEMENT BARS. SEE SECTION 508 OF THE STANDARD SPECIFICATIONS.
- SEE APPROVED LIST OF BAR SPLICER ASSEMBLIES AND MECHANICAL SPLICERS FOR ALTERNATIVES.

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DATE

CONTRACT NO. RR-16-4255
 B.N. 1457 & 1458 (SN 022-9979)
 BAR SPLICER DETAILS

SD-21 OF SD-21
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GENERAL NOTES

CAST IN PLACE CONCRETE

- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCING BARS

- REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A706), GRADE 60, DEFORMED BARS.
- REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
- REINFORCEMENT BAR BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- BARS NOTED THUS, 3X2-#5 INDICATES 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.
- COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

CONSTRUCTION

- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR SHALL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.
- CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COST WILL BE AT THE CONTRACTOR S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.
- NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E., 800-892-0123.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL FIBER OPTIC UTILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL INITIATE THE LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM FILLED IN ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE.
- EXISTING REINFORCEMENT WHICH IS TO BE INCORPORATED INTO THE NEW CONSTRUCTION SHALL BE BLAST CLEANED TO GREY METAL, STRAIGHTENED (WITHOUT HEATING), AND CUT TO FIT. COST OF WHICH SHALL BE INCLUDED WITH CONCRETE REMOVAL.
- THE PROTECTIVE SHIELD SYSTEM SHALL EXTEND A MINIMUM OF 10' BEYOND THE INDICATED LIMITS OF REPAIR SHOWN IN THE PLANS OR 5' BEYOND THE ACTUAL LIMITS OF PARTIAL OR FULL DEPTH REPAIR AS IDENTIFIED IN THE FIELD, WHICHEVER IS GREATER.
- CONCRETE SEALER SHALL BE APPLIED TO THE SURFACES OF ABUTMENT SEATS, INCLUDING BACKWALLS LOCATED BELOW ROADWAY EXPANSION JOINTS. SEALER SHALL ALSO BE APPLIED TO ALL EXPOSED SURFACES OF PIERS IN THE MEDIAN OR PIERS, ABUTMENTS AND WINGWALLS THAT ARE ADJACENT TO THE ROADWAY.
- AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP), WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS, AND THE LATEST NATIONAL BRIDGE INSPECTIONS STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.

TOTAL BILL OF MATERIAL

S.P.	PAY ITEM NO.	ITEM	UNIT	BRIDGE 1455 (SB)		BRIDGE 1456 (NB)		TOTAL	RECORD QUANTITY
				SUPER	SUB	SUPER	SUB		
	50102400	CONCRETE REMOVAL	CU. YD.	9.7	-	8	-	17.7	
	50157300	PROTECTIVE SHIELD	SQ. YD.	1,397	-	1,122	-	2,519	
	50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	11.1	-	9	-	20.1	
	50300260	BRIDGE DECK GROOVING	SQ. YD.	2,470	-	1,866	-	4,336	
	50300300	PROTECTIVE COAT	SQ. YD.	54	-	40	-	94	
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,900	-	1,500	-	3,400	
	50800515	BAR SPLICERS	EACH	16	-	16	-	32	
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	182	-	141	-	323	
*	J1506010	CLEANING AND SEALING JOINTS	FOOT	302	-	221	-	523	
**	JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	17	4	10	12	43	
*	JT503015	ACCELERATED APPROACH SLAB REPAIR (PARTIAL)-(SPECIAL)	SQ. YD.	14	-	9	-	23	
*	JT503033	ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE II)	SQ. YD.	5.0	-	7.3	-	12.3	
*	JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	1	49	20	23	93	
*	JT503102	BEAM END ENCASMENT	EACH	3	-	3	-	6	
*	JT524010(*)	APPLY CONCRETE SEALANT	SQ. FT.	-	5,904	-	4,564	10,468	
*	JT524015	BRIDGE DECK CONCRETE SEALER	SQ. FT.	1,769	-	1,785	-	3,554	
*	JT525235	BONDED PREFORMED JOINT SEAL REPLACEMENT, 4 IN.	FOOT	60	-	37	-	97	
*	X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	-	-	2	-	2	
*	X0326331	CLEANING AND PAINTING BEARINGS	EACH	22	-	16	-	38	
*	Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES	SQ. YD.	2,470	-	1,866	-	4,336	
*	Z0012132	BRIDGE DECK SCARIFICATION, 1"	SQ. YD.	2,470	-	1,866	-	4,336	
*	Z0012800	CONCRETE PAVEMENT SCARIFICATION	SQ. YD.	7,723	-	5,143	-	12,866	

- * INDICATES ISTHA SPECIAL PROVISION
- ** INDICATES TOLLWAY SUPPLEMENTAL SPECIFICATION
- (*) COST INCLUDES QUANTITY FOR "APPLY CONCRETE SEALANT" AT CENTER PIER. QUANTITY FOR PIER IS 3,120 SQ.FT. FOR BRIDGE 1455 AND 2,337 SQ.FT. FOR BRIDGE 1456, 5457 SQ.FT. TOTAL.

LIST OF ABBREVIATIONS

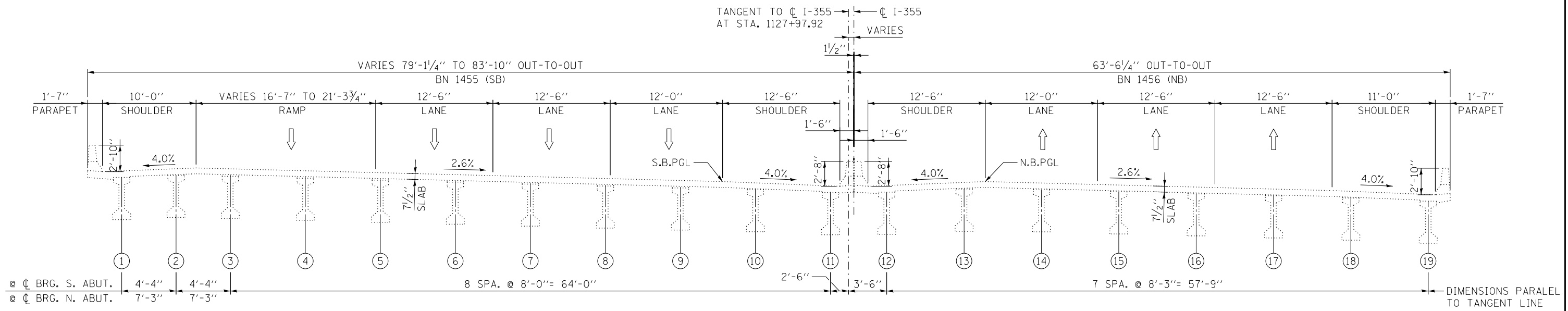
APPR.	APPROACH
B.F.	BACK FACE
B/	BOTTOM OF
B/W	BETWEEN
BK/	BACK OF
B	BASELINE
BN	BRIDGE NUMBER
BOT.	BOTTOM
BRG.	BEARING
C.I.P.	CAST-IN-PLACE
CL	CENTERLINE
CL.	CLEARANCE
CONST.	CONSTRUCTION
CTS.	CENTERS
E.F.	EACH FACE
ELEV.	ELEVATION
EXIST.	EXISTING
EXP.	EXPANSION
F.F.	FRONT FACE
FIO	FOR INFORMATION ONLY
I.F.	INSIDE FACE
MAX.	MAXIMUM
MIN.	MINIMUM
N. ABUT.	NORTH ABUTMENT
N.B.	NORTHBOUND
O.F.	OUTSIDE FACE
OPP.	OPPOSITE
P.J.F.	PREFORMED JOINT FILLER
P.J.S.	PREFORMED JOINT SEALER
PGL	PROFILE GRADE LINE
PREF.	PREFORMED
PROP.	PROPOSED
S. ABUT.	SOUTH ABUTMENT
S.B.	SOUTHBOUND
SHLDR	SHOULDER
SIM.	SIMILAR
STA.	STATION
T/	TOP OF
TYP.	TYPICAL
W/	WITH

INDEX OF SHEETS

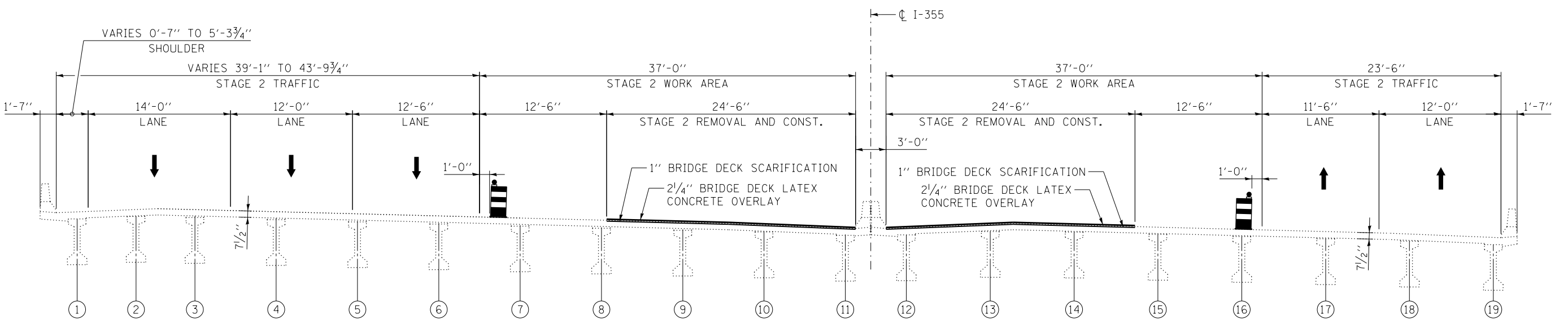
SE-01	GENERAL PLAN & ELEVATION
SE-02	GENERAL NOTES, INDEX OF SHEETS & TOTAL BILL OF MATERIAL
SE-03	CONSTRUCTION STAGING 1
SE-04	CONSTRUCTION STAGING 2
SE-05	NORTH ABUTMENT REPAIR DETAILS
SE-06	SOUTH ABUTMENT REPAIR DETAILS
SE-07	CURTAINWALLS REPAIR DETAILS
SE-08	BRIDGE DECK AND APPROACH REPAIR PLAN
SE-09	EXP. JT. REPAIR PLAN, BN1455(SB) 1/2
SE-10	EXP. JT. REPAIR PLAN, BN1455(SB) 2/2
SE-11	EXP. JT. REPAIR PLAN, BN1456(NB) 1/2
SE-12	EXP. JT. REPAIR PLAN, BN1456(NB) 2/2
SE-13	EXP. JT. REPLACEMENT DETAILS
SE-14	PREFORMED JOINT STRIP SEAL DETAILS
SE-15	PARAPET REPAIRS 1
SE-16	PARAPET REPAIRS 2
SE-17	BEAM END REPAIR PLAN & DETAILS
SE-18	APPROACH SLAB EXP. JT. REPLACEMENT
SE-19	BAR SPLICER ASSEMBLY DETAILS

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						NO.	DATE		
CHECKED BY BGK	DATE 3/11/2018							BRIDGE NOS. 1455(SB) & 1456(NB)	DRAWING NO. 1025
								GENERAL NOTES, INDEX OF SHEETS & TOTAL BILL OF MATERIAL	OF 1517

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EXISTING TRAFFIC CONFIGURATION
LOOKING NORTH



STAGE 2 CONSTRUCTION
LOOKING NORTH

- NOTE**
1. DIMENSIONS SHOWN ARE RADIAL UNLESS NOTED OTHERWISE.
 2. SEE ROADWAY M.O.T. PLANS FOR ITEMS NOT SHOWN.
 3. PROVIDE PROTECTIVE SHIELD PER SHEET SE-08.

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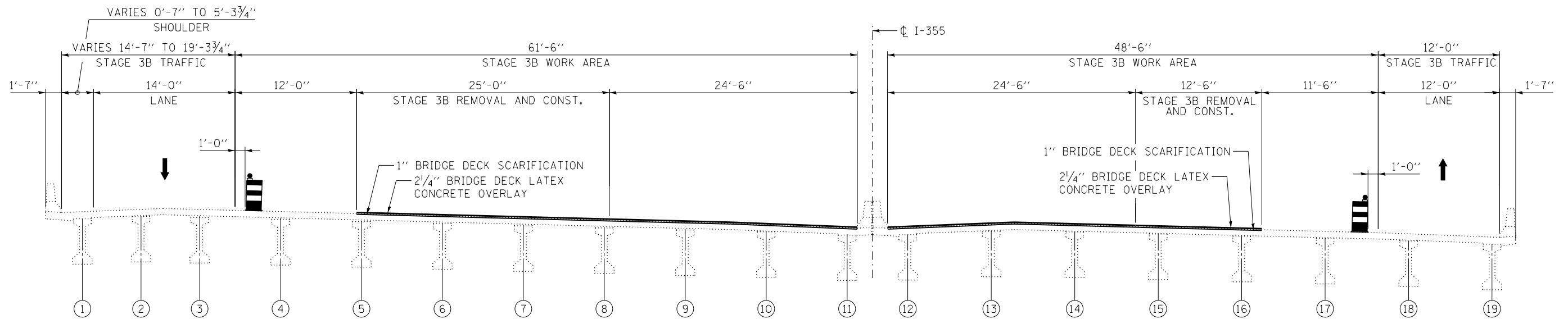
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Structural Engineers
Chicago, IL

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ILLINOIS 60515

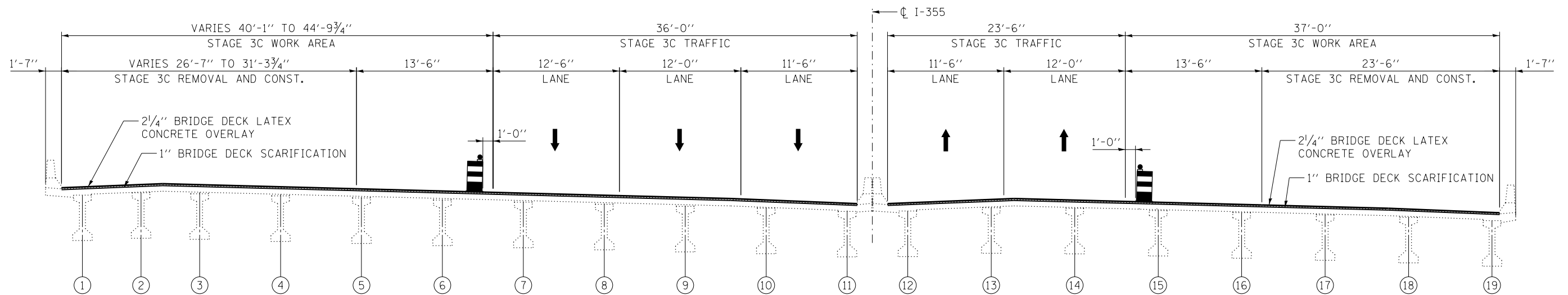
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NO.	DATE	

CONTRACT NO. RR-16-4255
BRIDGE NOS. 1455(SB) & 1456(NB)
CONSTRUCTION STAGING 1

SE-03 OF SE-19
DRAWING NO.
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STAGE 3 CONSTRUCTION
LOOKING NORTH



STAGE 4 CONSTRUCTION
LOOKING NORTH

- NOTE**
1. DIMENSIONS SHOWN ARE RADIAL UNLESS NOTED OTHERWISE.
 2. SEE ROADWAY M.O.T. PLANS FOR ITEMS NOT SHOWN.
 3. PROVIDE PROTECTIVE SHIELD PER SHEET SE-08.

DRAWN BY LS DATE 3/11/2018
CHECKED BY BGK DATE 3/11/2018

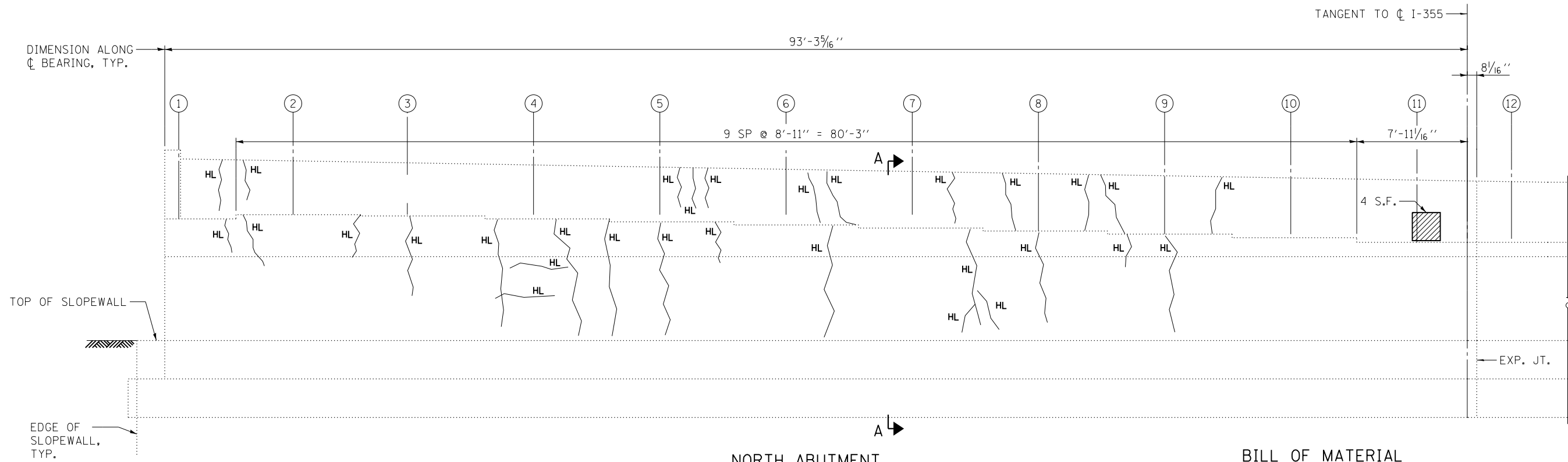
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Chicago, IL

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ILLINOIS 60515

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CONTRACT NO. RR-16-4255
BRIDGE NOS. 1455(SB) & 1456(NB)
CONSTRUCTION STAGING 2

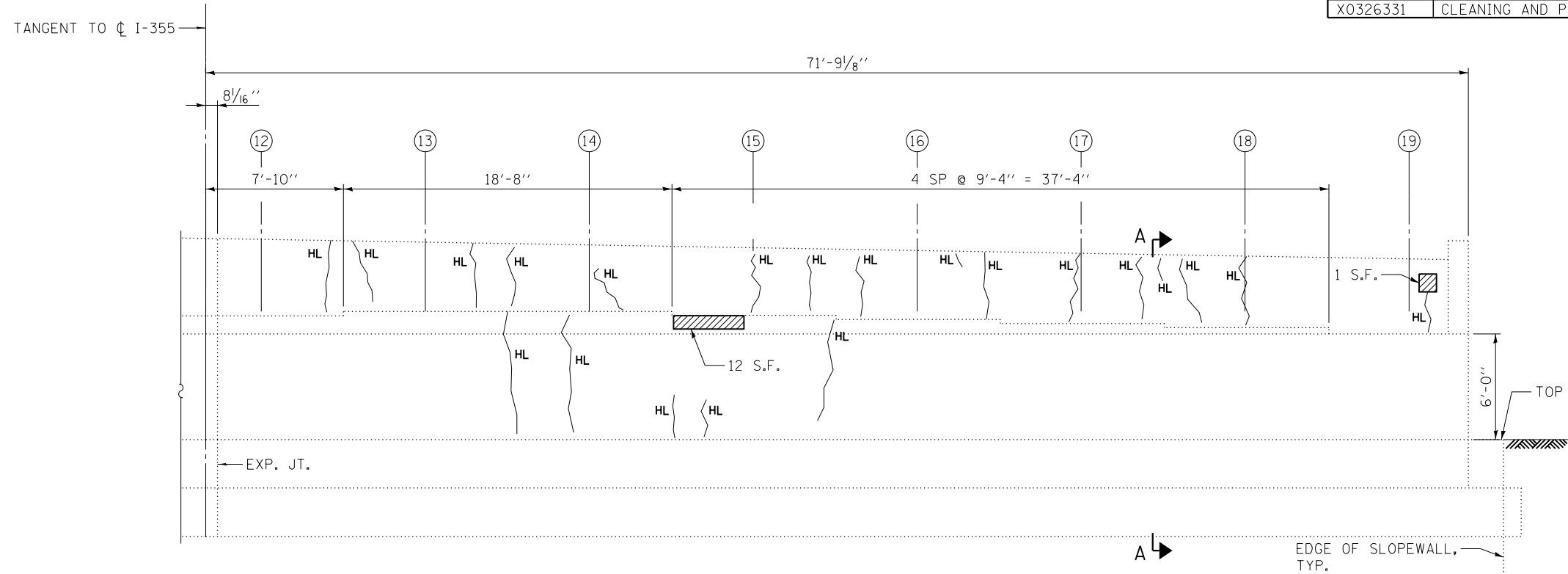
SE-04 OF SE-19
SHT NO. SE-04
DRAWING NO. 1027 OF 1517



NORTH ABUTMENT
BN 1455
LOOKING NORTH

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BN 1455 QUANTITY	BN 1456 QUANTITY	TOTAL
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	4	13	17
JT524010	APPLY CONCRETE SEALANT	SQ. FT.	1440	1125	2565
XO326331	CLEANING AND PAINTING BEARINGS	EACH	11	8	19



NORTH ABUTMENT
BN 1456
LOOKING NORTH

LEGEND:

- HL HAIRLINE CRACK (NOT TO BE SEALED)
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)

NOTES:

1. FOR SECTION A-A SEE SHEET SE-06.
2. FOR LIMITS OF "CLEANING AND PAINTING BEARINGS" SEE TYP. EXIST. BEARING DETAIL, SHEET SE-06.
3. FOR LIMITS OF "APPLY CONCRETE SEALANT" SEE SECTION A-A, SHEET SE-06.

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DRAWN BY LS DATE 3/11/2018
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 Chicago, IL

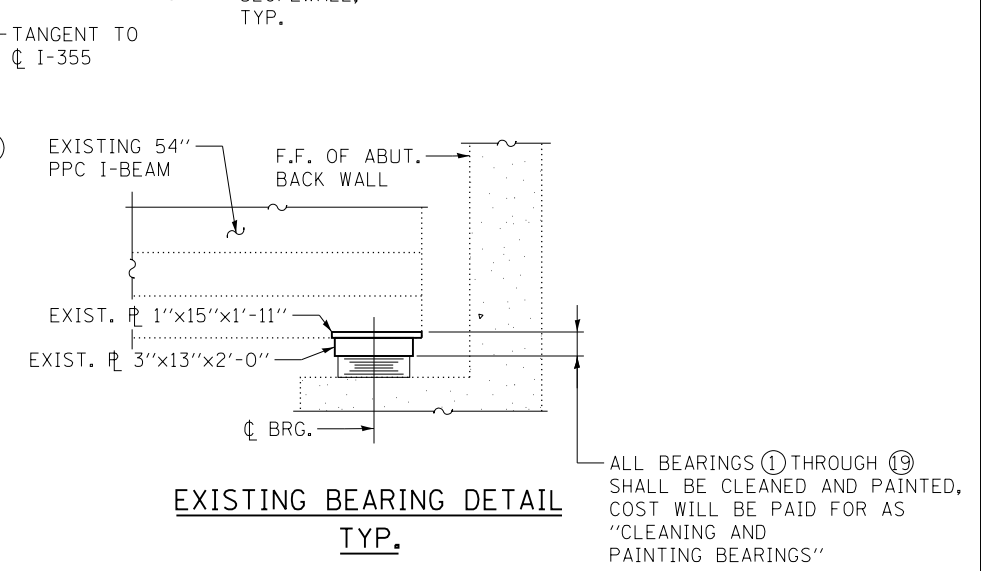
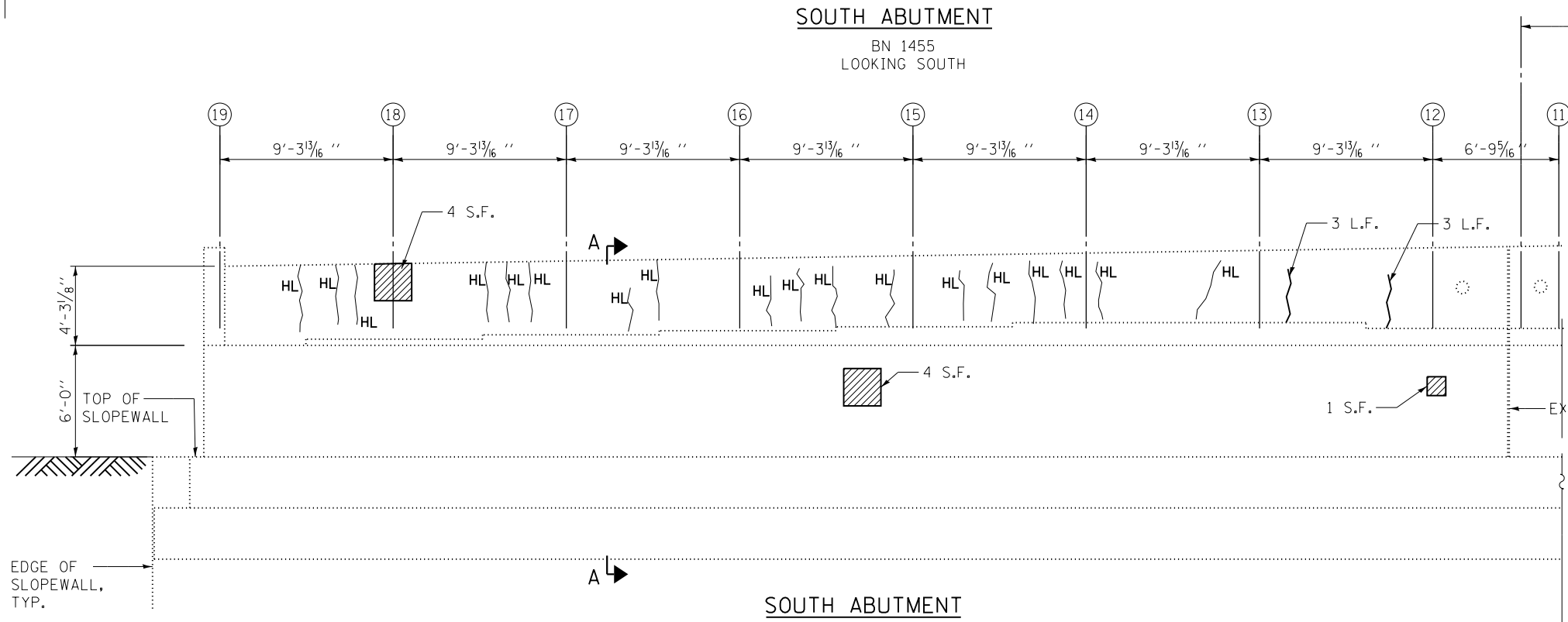
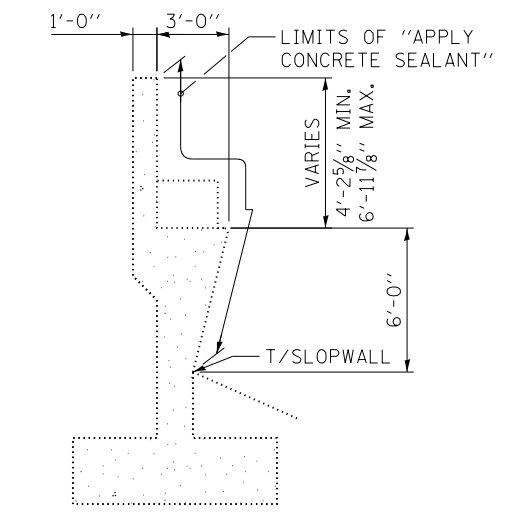
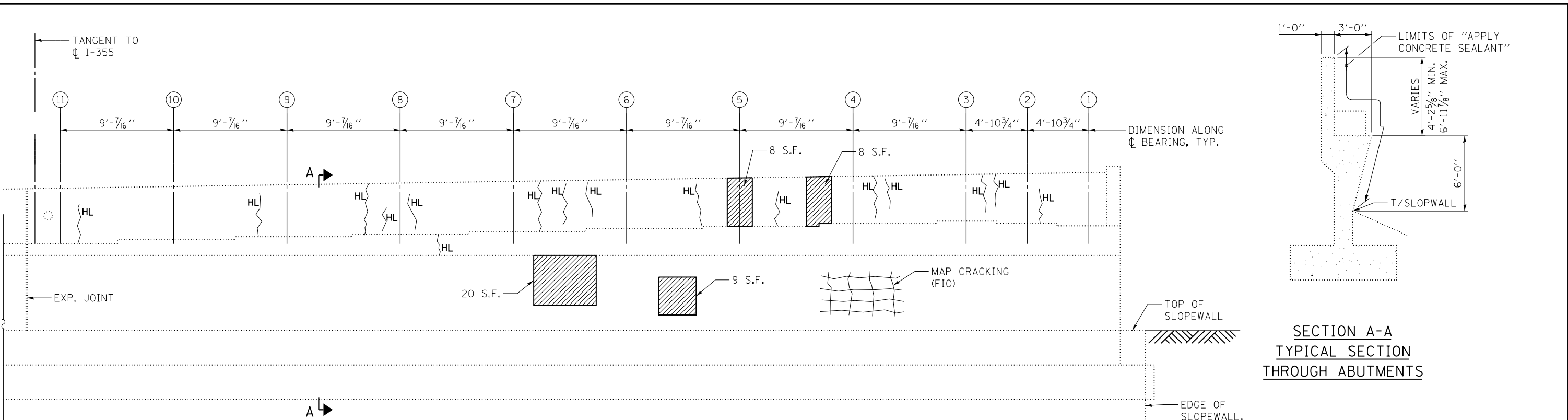
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 ILLINOIS 60515

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CONTRACT NO. RR-16-4255
 BRIDGE NOS. 1455(SB) & 1456(NB)
 NORTH ABUTMENT REPAIR DETAILS

SE-05 OF SE-19
 SHT NO. SE-05
 DRAWING NO.
 1028 OF 1517

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BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BN 1455 QUANTITY	BN 1456 QUANTITY	TOTAL
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	0	6	6
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ. FT.	45	9	54
JT524010	APPLY CONCRETE SEALANT	SQ. FT.	1,344	1,102	2,446
X0326331	CLEANING AND PAINTING BEARINGS	EACH	11	8	19

- LEGEND:**
- HL HAIRLINE CRACK (NOT TO BE SEALED)
 - 4 L.F. LOW PRESSURE EPOXY INJECTION (CRACKS > 1/16")
 - [Hatched Box] STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)

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 CHECKED BY BGK DATE 3/11/2018

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 Structural Engineers
 Chicago, IL

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 DOWNERS GROVE,
 ILLINOIS 60515

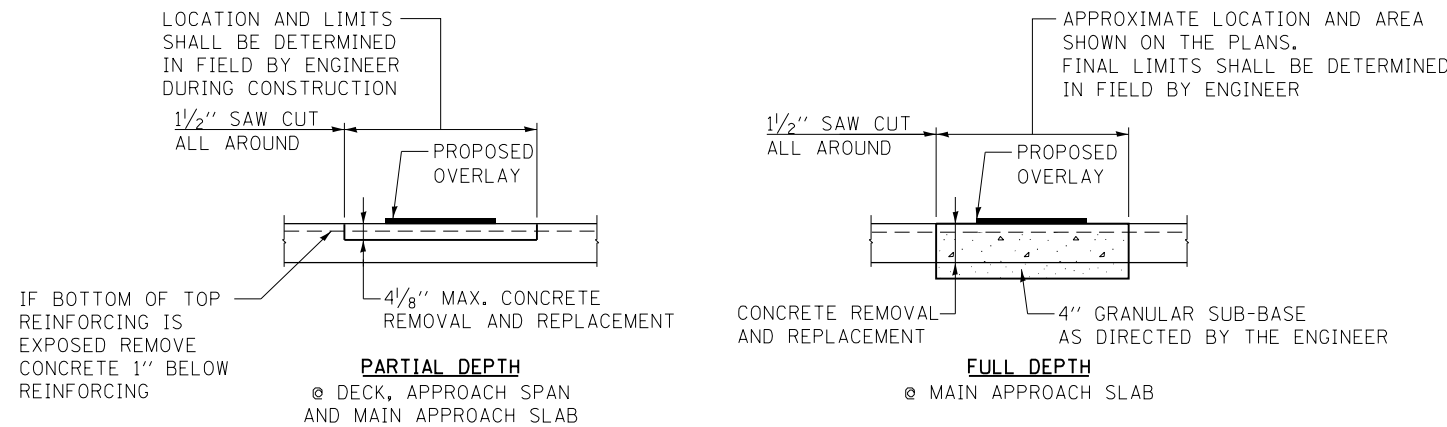
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CONTRACT NO. RR-16-4255
 BRIDGE NOS. 1455(SB) & 1456(NB)
 SOUTH ABUTMENT REPAIR DETAILS

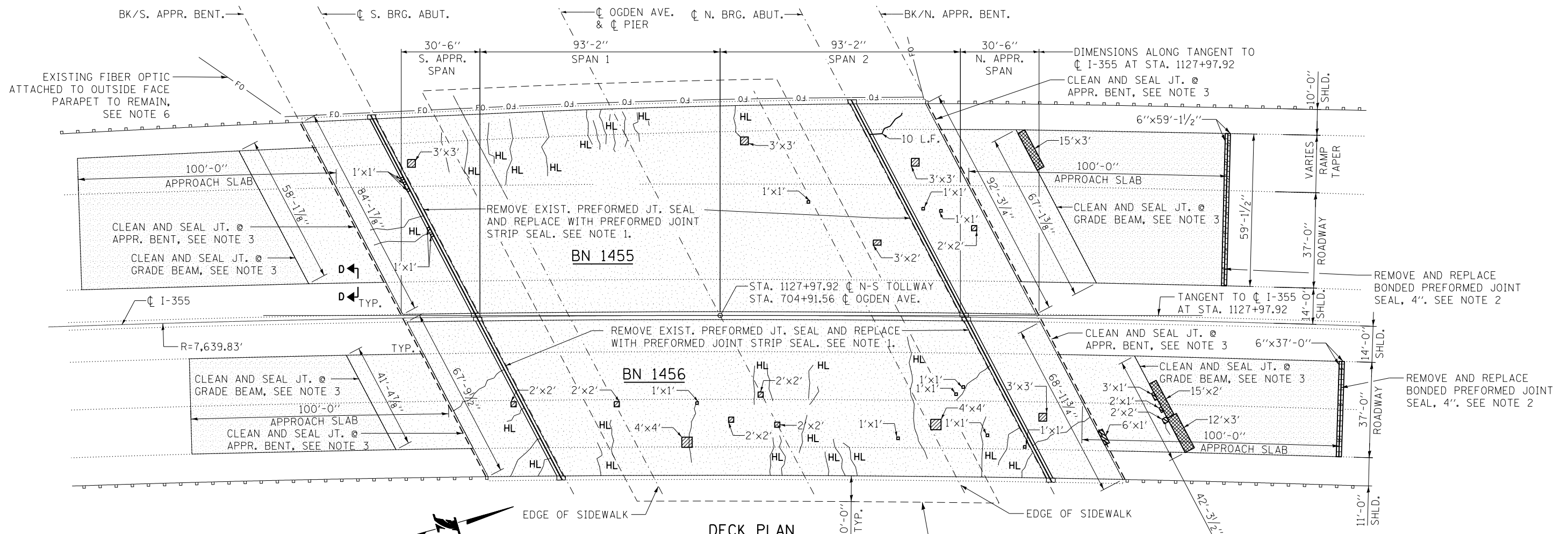
SE-06 OF SE-19
 SHT NO. SE-06
 DRAWING NO. 1029 OF 1517

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BN 1455 QUANTITY	BN 1456 QUANTITY	TOTAL
50157300	PROTECTIVE SHIELD	SQ. YD.	1,397	1,122	2,519
50300260	BRIDGE DECK GROOVING	SQ. YD.	2,470	1,866	4,336
J1506010	CLEANING AND SEALING JOINTS	FOOT	302	221	523
JT503033	ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE II)	SQ. YD.	5.0	7.3	12.3
Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4" INCHES	SQ. YD.	2,470	1,866	4,336
Z0012132	BRIDGE DECK SCARIFICATION, 1"	SQ. YD.	2,470	1,866	4,336
Z0012800	CONCRETE PAVEMENT SCARIFICATION	SQ. YD.	7,723	5,143	12,866



REPAIR DETAILS



LEGEND:

- 4 L.F. HAIRLINE CRACK (NOT TO BE SEALED)
- CRACKS > 1/16" (F10)
- ACCELERATED DECK SLAB REPAIR (PARTIAL) (F10)
- ACCELERATED APPROACH SLAB REPAIR (PARTIAL) (F10)
- ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE II)
- ACCELERATED APPROACH SLAB REPAIR (PARTIAL)-(SPECIAL)
- BRIDGE DECK SCARIFICATION, 1"
- BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES
- CONCRETE PAVEMENT SCARIFICATION, 3/4"
- SMA SURFACE COURSE (SEE ROADWAY PLANS)

NOTES:

- FOR EXPANSION JOINT REPLACEMENT AT ABUTMENTS SEE SHEETS SE-09 TO SE-13.
- FOR APPROACH SLAB EXPANSION JOINT REPAIRS SEE SHEET SE-18.
- FOR CLEANING AND SEALING JT. DETAILS AT GRADE BEAM & APPR. BENT SEE SHEET SE-18.
- PROVIDE PROTECTIVE SHIELD PER CONSTRUCTION NOTES, SEE SHEET SE-02.
- FOR SECTION D-D SEE SHEET SE-18.
- EXISTING FIBER OPTIC CONDUIT TO REMAIN IN PLACE. PROTECT DURING CONSTRUCTION.

SE-08 OF SE-19

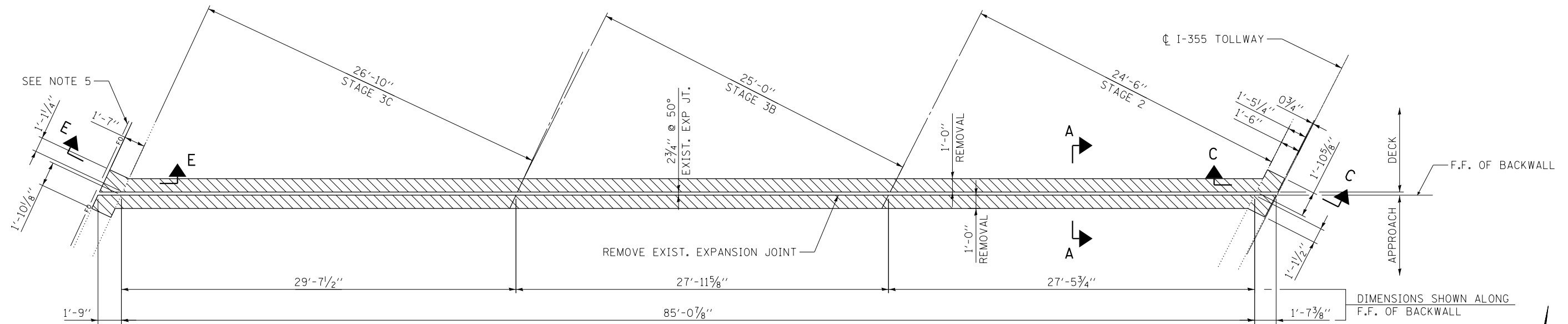
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 Structural Engineers
 Chicago, IL

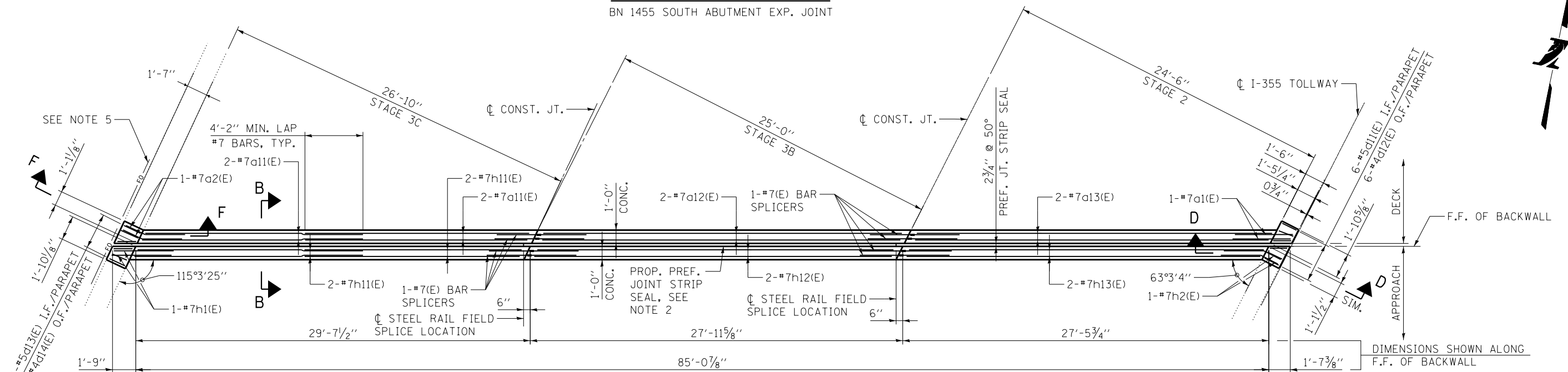
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

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NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NOS. 1455(SB) & 1456(NB)
 BRIDGE DECK AND APPROACH REPAIR PLAN
 SHT NO. SE-08
 DRAWING NO. 1031 OF 1517



EXP. JOINT REMOVAL PLAN
BN 1455 SOUTH ABUTMENT EXP. JOINT



EXP. JOINT REPLACEMENT PLAN
BN 1455 SOUTH ABUTMENT EXP. JOINT

BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
o1(E)	2	#7	6'-4"	—
o2(E)	2	#7	6'-4"	—
o11(E)	4	#7	17'-1"	—
o12(E)	2	#7	27'-8"	—
o13(E)	2	#7	27'-2"	—
h1(E)	2	#7	6'-4"	—
h2(E)	2	#7	6'-4"	—
h11(E)	4	#7	17'-1"	—
h12(E)	2	#7	27'-8"	—
h13(E)	2	#7	27'-2"	—
d11(E)	6	#5	3'-9"	—
d12(E)	6	#4	5'-0"	—
d13(E)	6	#5	3'-11"	—
d14(E)	6	#4	5'-2"	—

BILL OF MATERIALS

PAY ITEM NO.	ITEM	UNIT	BN 1455 QUANTITY
50102400	CONCRETE REMOVAL	CU. YD.	4.7
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	5.4
50300300	PROTECTIVE COAT	SQ. YD.	19
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	920
50800515	BAR SPLICERS	EACH	8
52000110	PREFORMED JOINT STRIP SEAL	FOOT	88

LEGEND:



NOTES:

- FOR SECTIONS AND DETAILS SEE SHT. SE-13.
- FOR PREFORMED JOINT STRIP SEAL DETAILS SEE SHEET SE-14.
- FOR BARS o2(E), h2(E), d11(E), d12(E), d13(E) AND d14(E) SEE SHEET SE-12.
- EXISTING FIBER OPTIC CONDUIT TO REMAIN IN PLACE. PROTECT DURING CONSTRUCTION.

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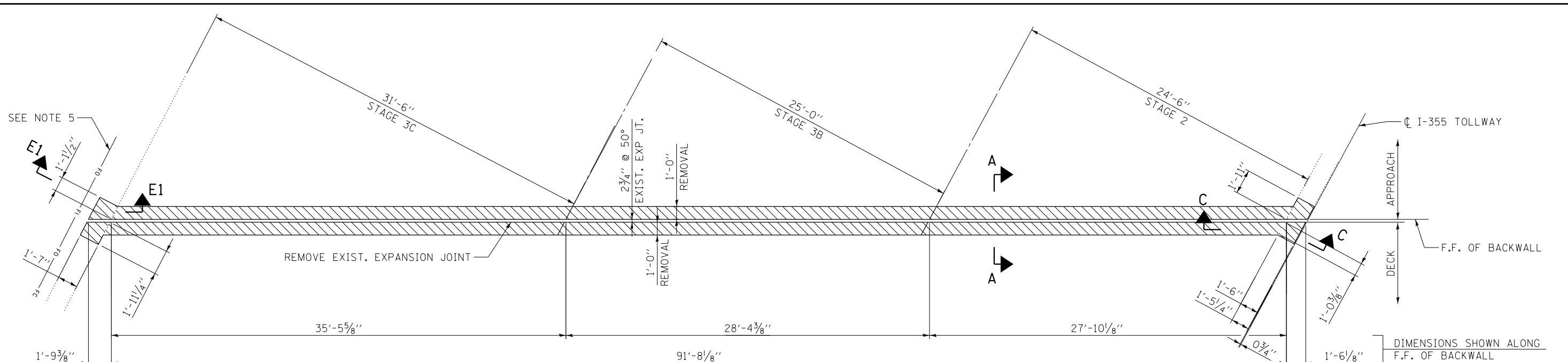
GKE GARZA KARHOFF ENGINEERING, LLC
 Structural Engineers
 Chicago, IL

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 ILLINOIS 60515

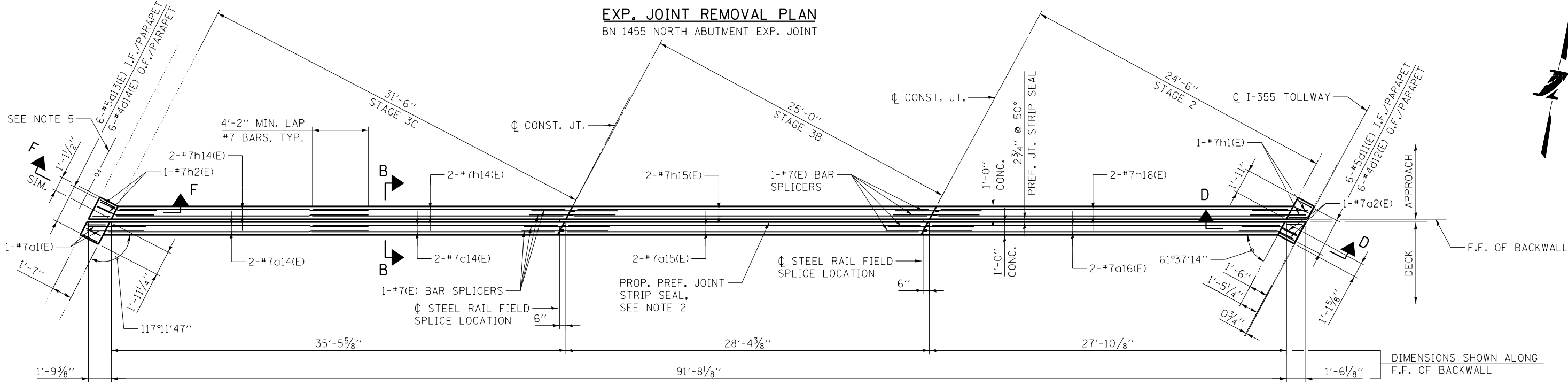
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NOS. 1455(SB) & 1456(NB)
 EXP. JT. REPAIR PLAN, BN1455(SB) 1/2

SE-09 OF SE-19
 SHT NO. SE-09
 DRAWING NO.
 1032 OF 1517



EXP. JOINT REMOVAL PLAN
BN 1455 NORTH ABUTMENT EXP. JOINT



EXP. JOINT REPLACEMENT PLAN
BN 1455 NORTH ABUTMENT EXP. JOINT

BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
o1(E)	2	#7	6'-4"	—
o2(E)	2	#7	6'-4"	—
o14(E)	4	#7	20'-0"	—
o15(E)	2	#7	28'-1"	—
o16(E)	2	#7	27'-7"	—
h1(E)	2	#7	6'-4"	—
h2(E)	2	#7	6'-4"	—
h14(E)	4	#7	20'-0"	—
h15(E)	2	#7	28'-1"	—
h16(E)	2	#7	27'-7"	—
d11(E)	6	#5	3'-9"	—
d12(E)	6	#4	5'-0"	—
d13(E)	6	#5	3'-11"	—
d14(E)	6	#4	5'-2"	—

BILL OF MATERIALS

PAY ITEM NO.	ITEM	UNIT	BN 1455 QUANTITY
50102400	CONCRETE REMOVAL	CU. YD.	5.0
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.	5.7
50300300	PROTECTIVE COAT	SQ. YD.	21
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	980
50800515	BAR SPLICERS	EACH	8
52000110	PREFORMED JOINT STRIP SEAL	FOOT	94

LEGEND:



NOTES:

- FOR SECTIONS AND DETAILS SEE SH. SE-13.
- FOR PREFORMED JOINT STRIP SEAL DETAILS SEE SHEET SE-14.
- FOR BARS o2(E), h2(E), d11(E), d12(E), d13(E) AND d14(E) SEE SHEET SE-12.
- EXISTING FIBER OPTIC CONDUIT TO REMAIN IN PLACE. PROTECT DURING CONSTRUCTION.

Projects:2016:20161616:Veterans Memorial Tollway/Drawings/Current Drawings Files:4255:Structural:Sheet:4255-ah:1455-1456-exp.joint-GKE02.dgn
 Date: 3/11/2018 10:58:00 AM
 User: gkewong

DRAWN BY LS DATE 3/11/2018
 CHECKED BY BGK DATE 3/11/2018

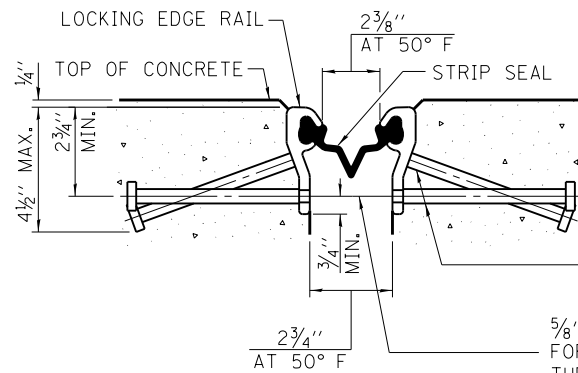
GKE GARZA KARHOFF ENGINEERING, LLC
 Structural Engineers
 Chicago, IL

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

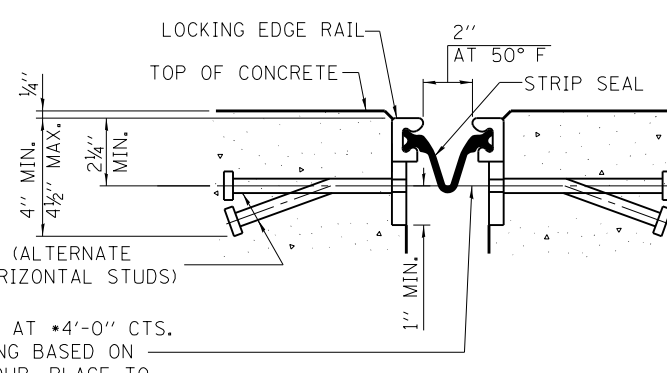
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NOS. 1455(SB) & 1456(NB)
 EXP. JT. REPAIR PLAN, BN1455(SB) 2/2

SE-10 OF SE-19
 SHT NO. SE-10
 DRAWING NO.
 1033 OF 1517



SHOWING ROLLED RAIL JOINT

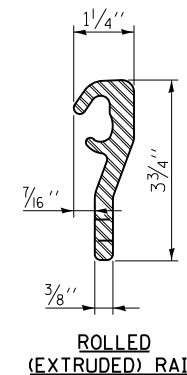


SHOWING WELDED RAIL JOINT

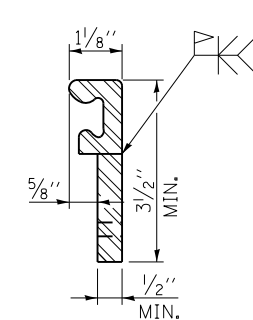
• 5/8" Ø x 6" STUDS @ 6" CTS. (ALTERNATE ANGLED/BENT STUDS WITH HORIZONTAL STUDS)
 5/8" Ø THREADED RODS IN 1/16" Ø HOLES AT 4'-0" CTS. FOR HOLDING THE PROPER JOINT OPENING BASED ON THE TEMPERATURE DURING THE DECK POUR. PLACE TO MISS STUDS. ALL RODS SHALL BE BURNED, OR SAWED OFF FLUSH WITH THE PLATES AFTER CONCRETE IS SET.

SECTION A-A

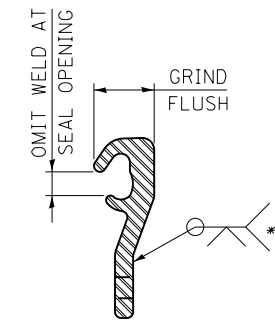
• GRANULAR OR SOLID FLUX FILLED HEADED STUDS CONFORMING TO ARTICLE 1006.32 OF THE STD. SPECS., AUTOMATICALLY END WELDED.



ROLLED (EXTRUDED) RAIL



WELDED RAIL

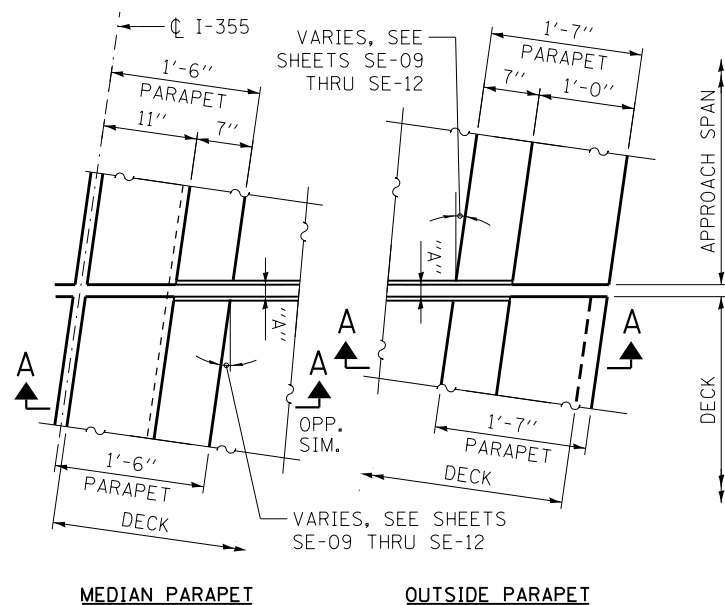


LOCKING EDGE RAIL SPLICE

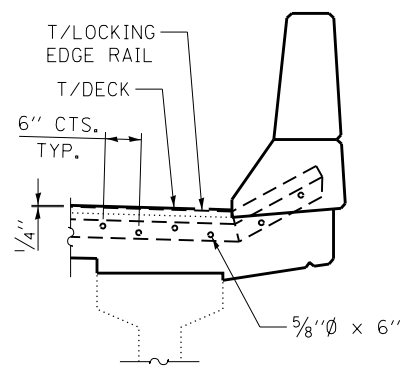
THE INSIDE OF THE LOCKING EDGE RAIL GROOVE SHALL BE FREE OF WELD RESIDUE. ROLLED RAIL SHOWN, WELDED RAIL SIMILAR.

LOCKING EDGE RAILS

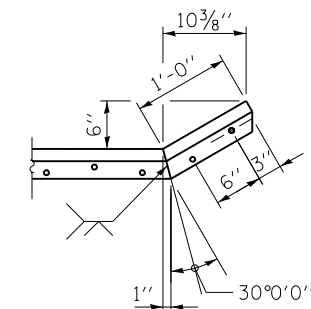
** BACK GOUGE NOT REQUIRED IF COMPLETE JOINT PENETRATION IS VERIFIED BY MOCK-UP.



PLAN AT PARAPETS



SECTION A-A



FRAME RAIL SECTION

NOTES:

1. THE STRIP SEAL SHALL BE MADE CONTINUOUS AND SHALL HAVE A MINIMUM THICKNESS OF 1/4". THE CONFIGURATION OF THE STRIP SEAL SHALL MATCH THE CONFIGURATION OF THE LOCKING EDGE RAILS. OPEN OR "WEBBED" STRIP SEAL GLAND CONFIGURATIONS ARE NOT PERMITTED. THE GLAND SHALL BE SIZED FOR A MAXIMUM RATED MOVEMENT OF 4 INCHES.
2. THE LOCKING EDGE RAILS DEPICTED ARE CONFIGURED FOR TYPICAL APPLICATIONS AND ARE CONCEPTUAL ONLY. THE ACTUAL CONFIGURATION OF THE LOCKING EDGE RAILS AND MATCHING STRIP SEAL MAY VARY FROM MANUFACTURER TO MANUFACTURER PROVIDED THEY FIT THE APPLICATION AND MEET THE MINIMUM ANCHORAGE SHOWN. FLANGED EDGE RAILS, HOWEVER, WILL NOT BE ALLOWED. LOCKING EDGE RAILS MAY EXCEED THE 4 1/2" MAXIMUM DEPTH PROVIDED THE ANCHORAGE SYSTEM IS REVISED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.
3. THE MANUFACTURER'S RECOMMENDED INSTALLATION METHODS SHALL BE FOLLOWED.
4. ALL STEEL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION ACCORDING TO ARTICLE 520.03 OF THE STANDARD SPECIFICATIONS.
5. THE MAXIMUM SPACE BETWEEN LOCKING EDGE RAIL SEGMENTS SHALL BE 3/16" AND SEALED WITH A SUITABLE SEALANT; HOWEVER, ANY RAIL JOINT WITHIN 10' MEASURED PERPENDICULAR TO THE FACE OF THE CURB OR PARAPET SHALL BE WELDED AS SHOWN IN THE LOCKING EDGE RAIL SPLICE DETAIL.
6. THE TOP SURFACE OF SIDEWALK SLIDING PLATES SHALL HAVE A RAISED PATTERN ACCORDING TO ASTM A786.
7. COST OF PARAPET SLIDING PLATES, SIDEWALK SLIDING PLATES, EMBEDDED PLATES, ANCHORAGE STUDS, AND EXPANSION ANCHORS INCLUDED WITH PREFORMED JOINT STRIP SEAL.
8. THE CONCRETE OPENING BELOW THE STRIP SEAL WILL VARY BASED ON THE LOCKING EDGE RAIL CHOSEN BY THE CONTRACTOR. DECK AND PARAPET LENGTHS SHOWN ELSEWHERE IN THE PLANS ARE DIMENSIONED TO THE CONCRETE OPENING, NOT THE JOINT OPENING, AND ARE BASED ON THE ROLLED LOCKING EDGE RAIL. IF THE CONTRACTOR ELECTS TO USE A DIFFERENT LOCKING EDGE RAIL, DIMENSIONAL ADJUSTMENTS MAY BE REQUIRED. ONE EXCEPTION TO THIS WOULD BE THE STRIP SEAL JOINT AT THE END OF THE PRECAST BRIDGE APPROACH SLAB. FOR THESE CASES THE PAVEMENT CONNECTOR LENGTH SHALL BE ADJUSTED, NOT THE LENGTH OF THE BRIDGE APPROACH SLAB.

DRAWN BY LS DATE 3/11/2018
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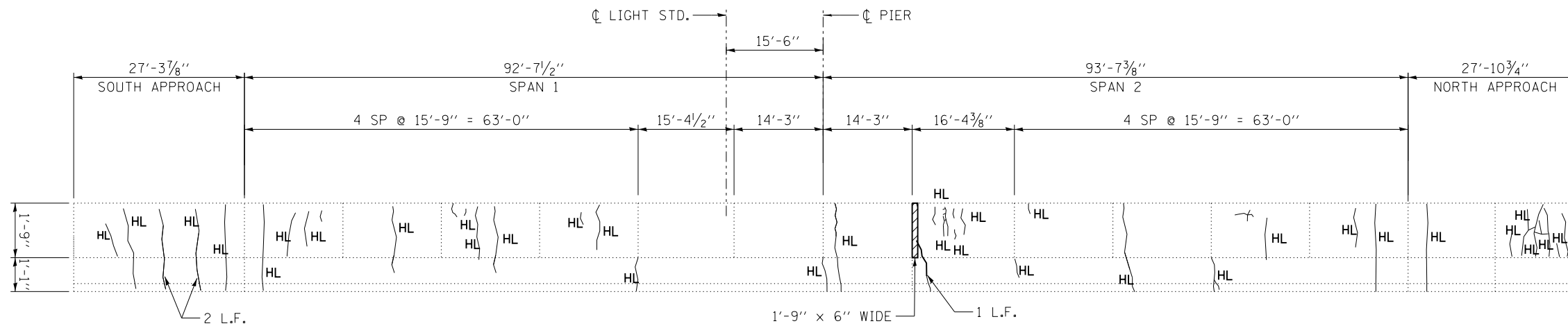
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NOS. 1455(SB) & 1456(NB)
 PREFORMED JOINT STRIP SEAL DETAILS

SHT NO. SE-14
 DRAWING NO. 1037 OF 1517

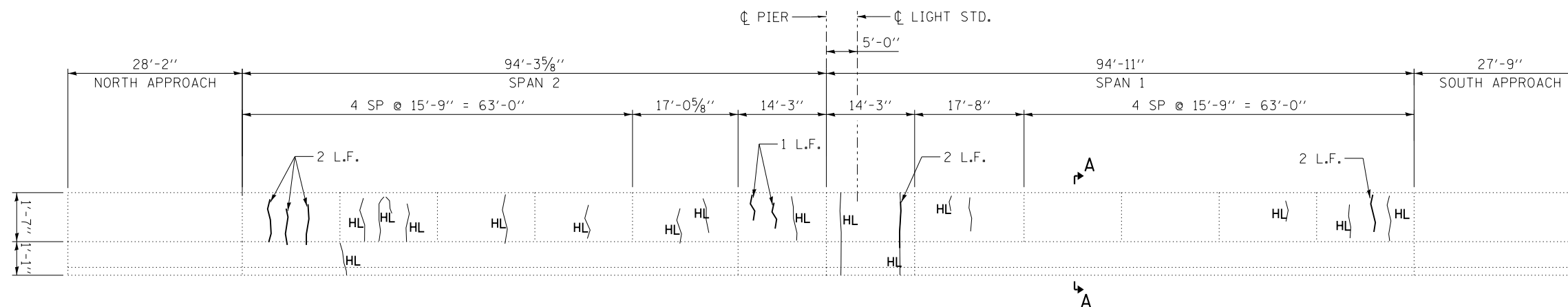
BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BN 1455 QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	17
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SO. FT.	1
JT524015	BRIDGE DECK CONCRETE SEALER	SO. FT.	1,769



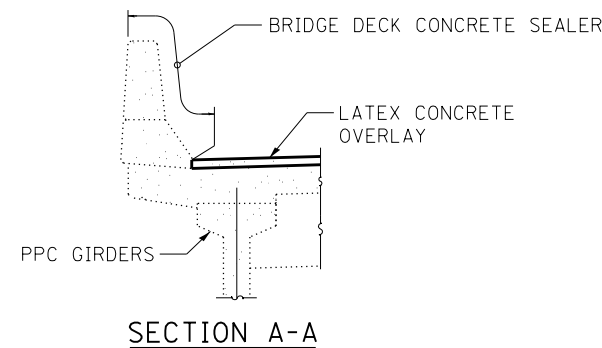
INSIDE ELEVATION OF OUTSIDE PARAPET

BN 1455
LOOKING WEST



INSIDE ELEVATION OF MEDIAN PARAPET

BN 1455
LOOKING EAST



- LEGEND:**
- HL HAIRLINE CRACK (NOT TO BE SEALED)
 - 4 L.F. LOW PRESSURE EPOXY INJECTION (CRACKS > 1/16")
 - STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)

- NOTES:**
- DIMENSIONS SHOWN ARE ALONG INSIDE FACE OF PARAPET.

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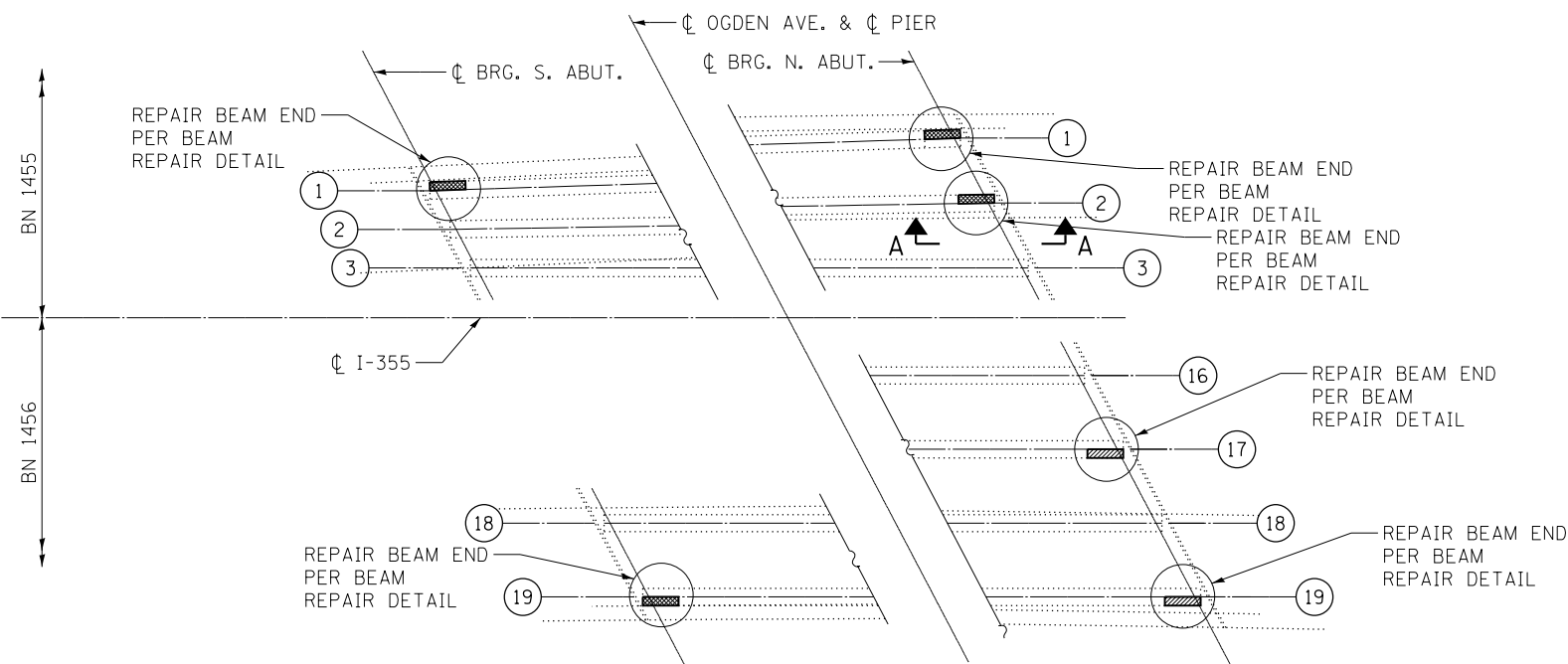
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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NOS. 1455(SB) & 1456(NB)
PARAPET REPAIRS 1

SE-15 OF SE-19
SHT NO. SE-15
DRAWING NO.
1038 OF 1517



BAR LIST

BAR	NO.		SIZE	LENGTH		SHAPE
	BN 1455	BN 1456		BN 1455	BN 1456	
g21(E)	6	6	#4	2'-1"	2'-1"	—
s21(E)	9	9	#4	1'-10"	1'-10"	U
d21(E)	18	18	#4	0'-8"	0'-8"	—
TOTAL			#4	41'-0"	41'-0"	

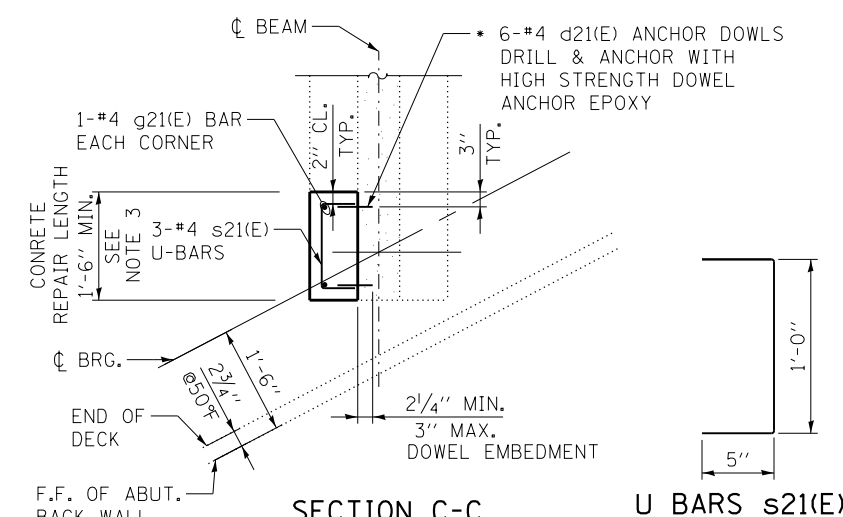
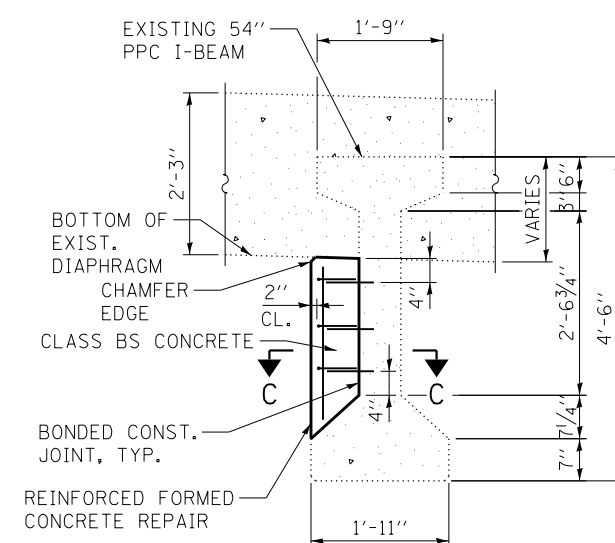
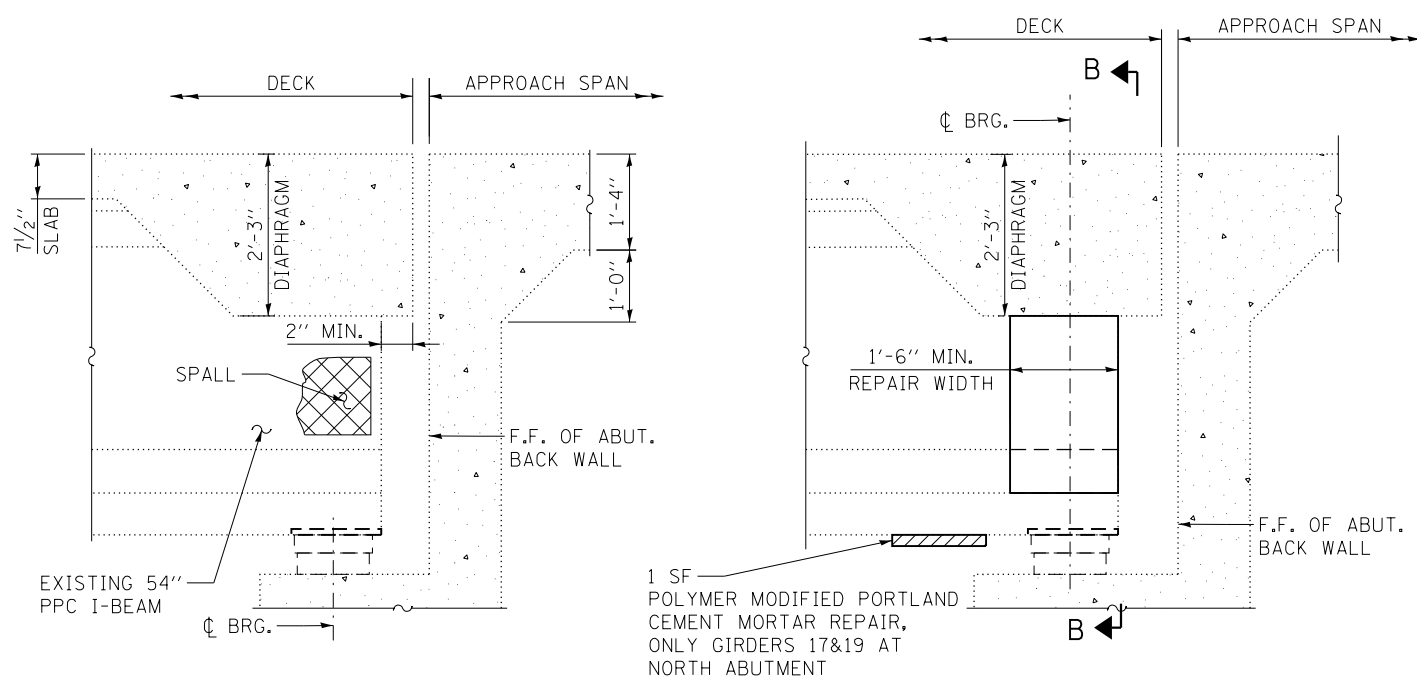
- THIS BAR LIST INCLUDES THE REINFORCEMENT QUANTITIES FOR ONE "BEAM END ENCASEMENT" (6 THUS).
- SEE NOTE 5

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	BN 1455 QUANTITY	BN 1456 QUANTITY	TOTAL
JT503102	BEAM END ENCASEMENT	EACH	3	3	6
X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	0	2	2

NOTES:

- CONTRACTOR SHALL SOUND THE WEB AND FLANGE CONCRETE TO DETERMINE THE LIMITS OF REPAIR AND INSTALL CONCRETE ENCASEMENT WITHIN THE LIMITS APPROVED BY ENGINEER.
- CUTTING OR NICKING EXISTING REINFORCEMENT OR PRESTRESSING STRANDS IS NOT PERMITTED. LOCATION OF HOLES IN THE PPC I-BEAM WEB SHOULD BE LOCATED TO CLEAR ALL REINFORCING BARS. A PACOMETER OR BAR LOCATOR SHALL BE USED TO LOCATE EXISTING REINFORCEMENT AND PRESTRESSING STRANDS.
- WHERE REPAIR AREA EXCEEDS THE 1'-6" MINIMUM LENGTH, ADDITIONAL VERTICAL BARS SHALL BE PROVIDED WHERE SPACING OF VERTICAL BARS EXCEEDS 1'-3".
- HIGH STRENGTH DOWEL ANCHOR ADHESIVE SHALL BE DRILLED AND ANCHOR DOWELS SET ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
- ALL MATERIALS AND WORK ASSOCIATED WITH "BEAM END ENCASEMENT" SHALL CONFORM TO THE SPECIAL PROVISION "BEAM END ENCASEMENT" AND WILL BE INCLUDED IN THE COST OF "BEAM END ENCASEMENT".



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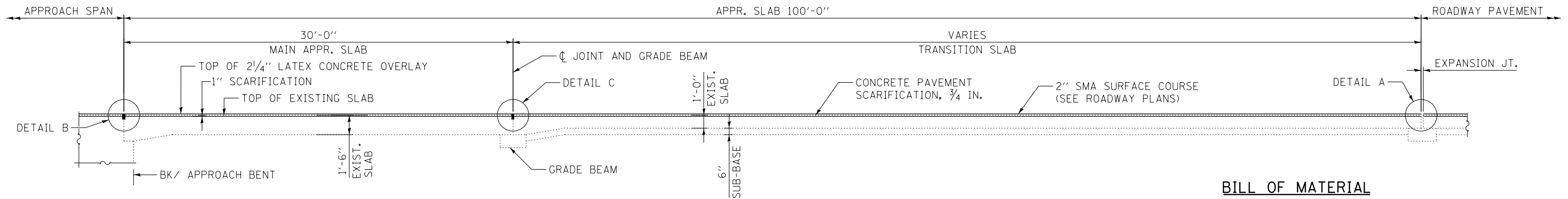
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Structural Engineers
Chicago, IL

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ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NOS. 1455(SB) & 1456(NB)
BEAM END REPAIR PLAN & DETAILS

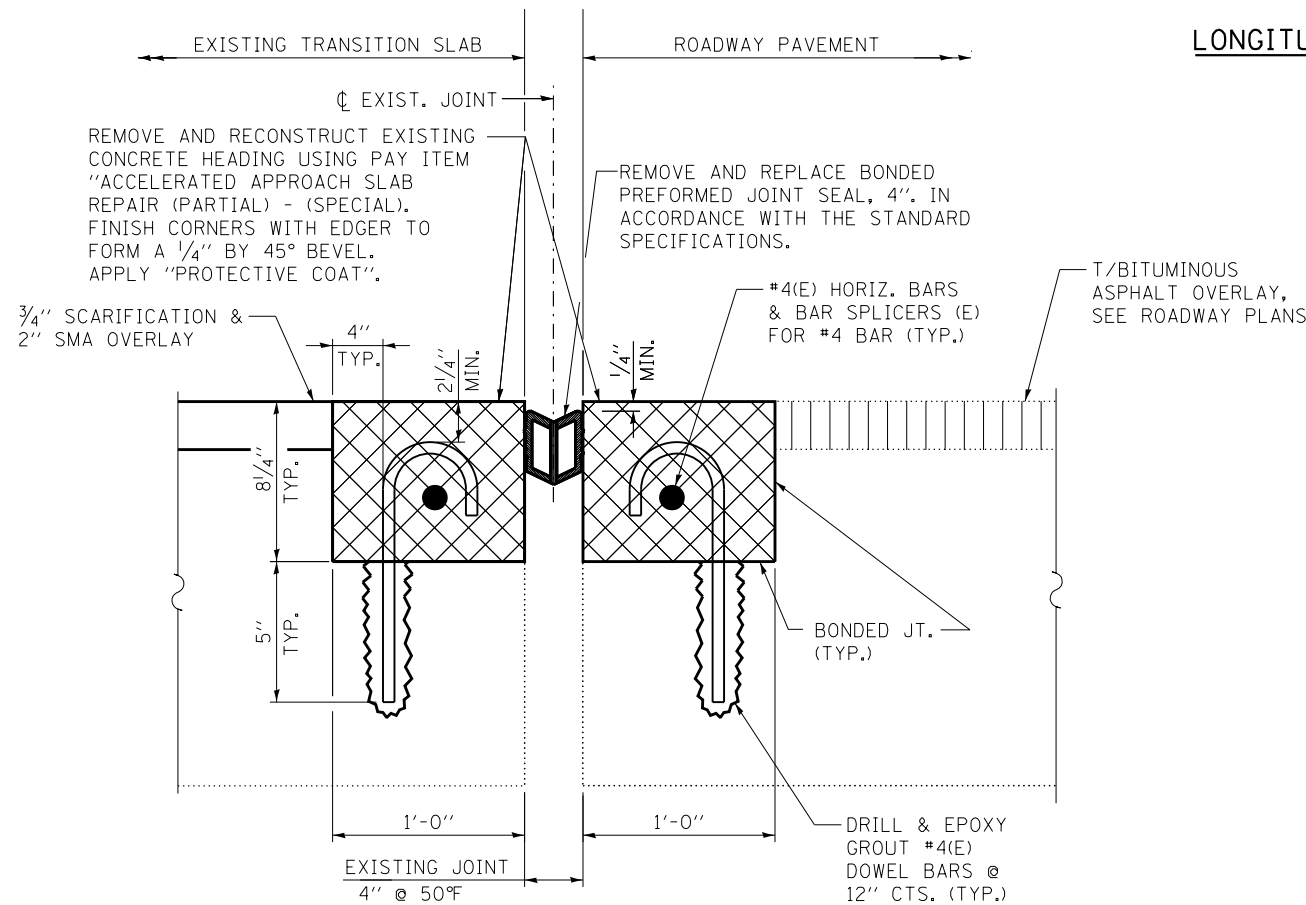
SE-17 OF SE-19
SHT NO. SE-17
DRAWING NO. 1040 OF 1517



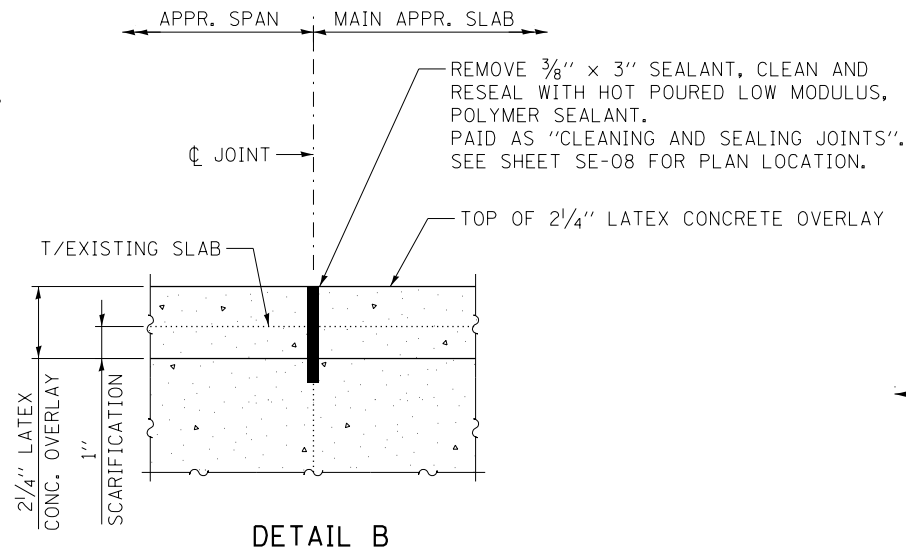
LONGITUDINAL CROSS SECTION

BILL OF MATERIAL

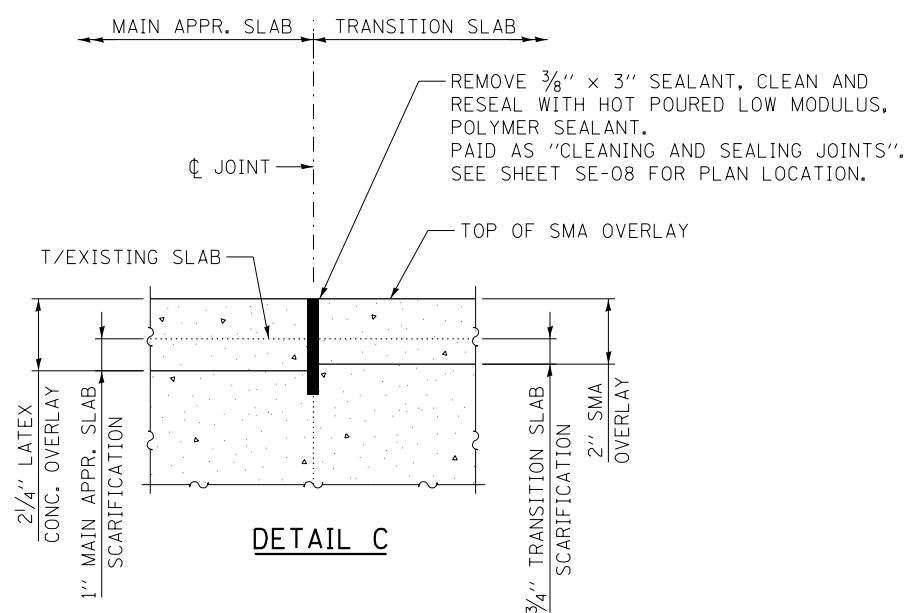
PAY ITEM NO.	ITEM	UNIT	BN 1455 QUANTITY	BN 1456 QUANTITY	TOTAL
50300300	PROTECTIVE COAT	SQ. YD.	14	9	23
JT503015	ACCELERATED APPROACH SLAB REPAIR (PARTIAL)-(SPECIAL)	SQ. YD.	14	9	23
JT525235	BONDED PREFORMED JOINT SEAL REPLACEMENT, 4 IN.	FOOT	60	37	97



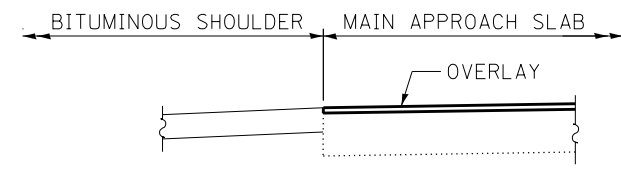
DETAIL A



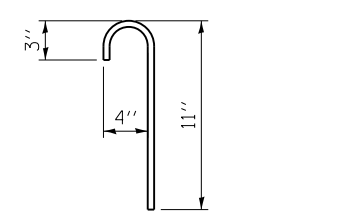
DETAIL B



DETAIL C

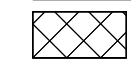


SECTION D-D



DOWEL BAR BENT DETAIL

LEGEND:



NOTES:

1. COST OF DRILL AND EPOXY GROUT DOWEL BARS, REINFORCING BARS AND BAR SPLICERS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE PAY ITEM "ACCELERATED APPROACH SLAB REPAIR (PARTIAL)-(SPECIAL)".
2. APPLY PROTECTIVE COAT TO TOP SURFACE OF NEW CONCRETE.

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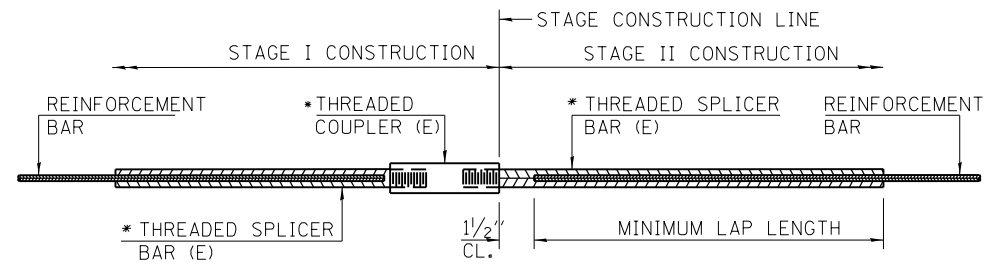
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 Structural Engineers
 Chicago, IL

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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NOS. 1455(SB) & 1456(NB)
 APPROACH SLAB EXP. JT. REPLACEMENT

SE-18 OF SE-19
 SHT NO. SE-18
 DRAWING NO. 1041 OF 1517

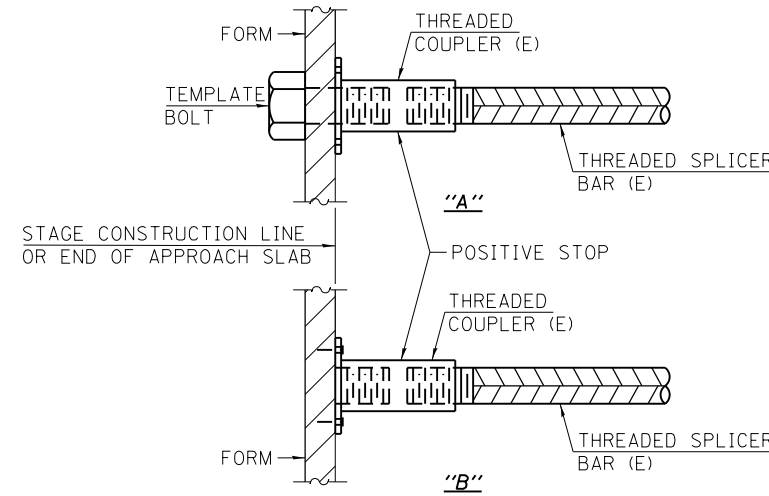


STANDARD BAR SPLICER ASSEMBLY

THREADED SPLICER BAR LENGTH = MIN. LAP LENGTH + 1/2" + THREAD LENGTH

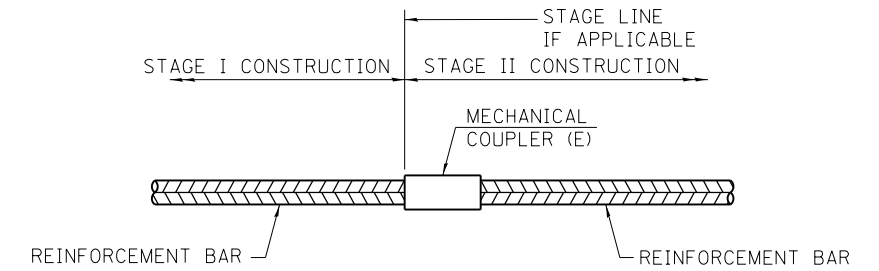
- * EPOXY NOT REQUIRED ON BAR SPLICER ASSEMBLY COMPONENTS USED IN CONJUNCTION WITH BLACK BARS.

LOCATION	BAR SIZE	NO. ASSEMBLIES REQUIRED	MINIMUM LAP LENGTH
BN 1455 SOUTH ABUTMENT EXP. JOINT	#7	8	4'-2"
BN 1455 NORTH ABUTMENT EXP. JOINT	#7	8	4'-2"
BN 1456 SOUTH ABUTMENT EXP. JOINT	#7	8	4'-2"
BN 1456 NORTH ABUTMENT EXP. JOINT	#7	8	4'-2"



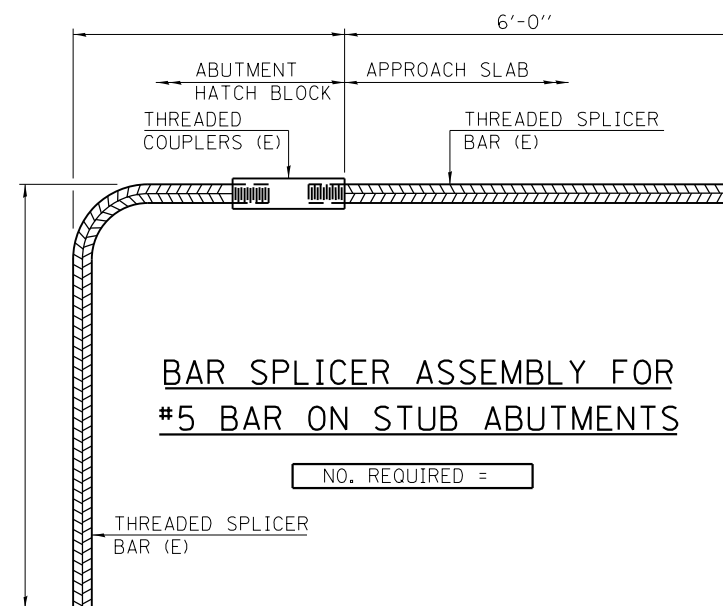
INSTALLATION AND SETTING METHODS

- "A" : SET BAR SPLICER ASSEMBLY BY MEANS OF A TEMPLATE BOLT.
- "B" : SET BAR SPLICER ASSEMBLY BY NAILING TO WOOD FORMS OR CEMENTING TO STEEL FORMS.
- (E) : INDICATES EPOXY COATING.



STANDARD MECHANICAL SPLICER

LOCATION	BAR SIZE	NO. ASSEMBLIES REQUIRED



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

NOTES

- SPLICER BARS SHALL BE DEFORMED WITH THREADED ENDS AND HAVE A MINIMUM 60 KSI YIELD STRENGTH.
- ALL REINFORCEMENT SHALL BE LAPPED AND TIED TO THE SPLICER BARS.
- BAR SPLICER ASSEMBLIES SHALL BE EPOXY COATED ACCORDING TO THE REQUIREMENTS FOR REINFORCEMENT BARS. SEE SECTION 508 OF THE STANDARD SPECIFICATIONS.
- SEE APPROVED LIST OF BAR SPLICER ASSEMBLIES AND MECHANICAL SPLICERS FOR ALTERNATIVES.

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DRAWN BY LS DATE 3/11/2018
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 ILLINOIS 60515

REVISIONS	
NO.	DATE

CONTRACT NO. RR-16-4255
 BRIDGE NOS. 1455(SB) & 1456(NB)
 BAR SPLICER ASSEMBLY DETAILS

SE-19 OF SE-19
 SHT NO. SE-19
 DRAWING NO.
 1042 OF 1517

EXISTING STRUCTURE, BN 1453, BUILT AS PART OF CONTRACT CIP-615 IN 1989, DECK AND APPROACH SLAB REPAIRS IN 2010 AS PART OF CONTRACT RR-08-5475, AND DECK REPAIR AND OVERLAY IN 2013 AS PART AS CONTRACT RR-13-4138. LENGTH IS 262'-11 $\frac{7}{8}$ " BACK TO BACK OF APPROACH BENTS WITH TWO SPANS, 87'-0 $\frac{1}{4}$ " AND 103'-0 $\frac{3}{8}$ " WITH 54" PPC BEAMS.

BENCH MARK: CONCRETE MONUMENT WITH BRASS CAP, LOCATED IN N.E. $\frac{1}{4}$ SEC 2-38-10 \pm 42'-0" S. OF \bar{C} OGDEN AVE ELEV. 722.882

PROPOSED SCOPE OF WORK

1. REMOVE LOOSE AND DAMAGED PORTION OF THE CONCRETE PARAPET AND RECONSTRUCT IN-KIND.
2. REPAIR SPALLED AREAS OF DECK AND APPROACH SLABS.
3. CLEAN AND PAINT EXPOSED REINFORCEMENT ON THE UNDERSIDE OF DECK.
4. REMOVE DEBRIS AND CLEAN BRIDGE DECK EXPANSION JOINTS.
5. REMOVE AND REPLACE PREFORMED JOINT SEAL BETWEEN BRIDGE DECK AND APPROACH SLAB.
6. CLEAN AND APPLY BRIDGE DECK CONCRETE SEALER TO DECK AND APPROACH SLABS.
7. APPLY CONCRETE SEALANT TO TOP AND TRAFFIC FACE OF PARAPETS, ABUTMENTS, BRIDGE SEATS, BACKWALLS, AND PIERS.
8. REPAIR SPALLED AND DELAMINATED CONCRETE IN ABUTMENTS, PIERS, WINGWALLS, AND SLOPE WALLS.
9. CLEAN AND SEAL CRACKS WIDER THAN $\frac{1}{16}$ " AND ALL LEACHING CRACKS IN ABUTMENTS AND PIERS. SEAL ALL CRACKS IN SLOPEWALL GREATER THAN $\frac{1}{2}$ ".
10. CLEAN AND SEAL ALL CRACKS ON THE PPC BEAMS.
11. REPAIR SPALLED AND DELAMINATED CONCRETE WITH POLYMER CONCRETE CEMENT MORTAR WITH FIBER WRAP ON PPC BEAMS.

DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION.

ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, ADOPTED MARCH 2017.

CONSTRUCTION SPECIFICATIONS

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS, (GBSP's).

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

ILLINOIS DEPARTMENT OF TRANSPORTATION STRUCTURAL SERVICES MANUAL ADOPTED JUNE 30, 2017.

LOADING HS20-44

(FROM 1991 RECORD PLANS)

ALLOWANCE FOR 25 PSF FUTURE WEARING SURFACE

DESIGN STRESSES

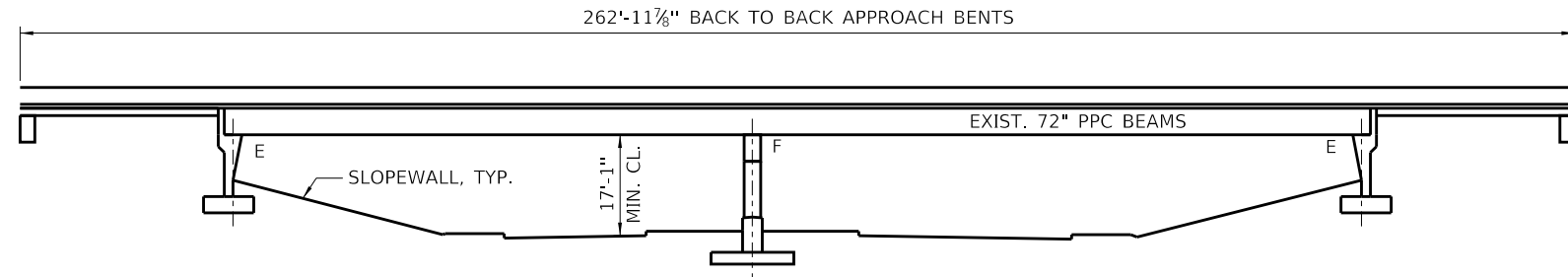
FIELD UNITS

- f'c = 3,500 PSI (CLASS SI SUBSTRUCTURE REPAIRS)
- f'c = 4,000 PSI (CLASS BS PARAPETS AND BARRIER REPAIRS)
- f'c = 4,000 PSI (CLASS AX BRIDGE DECK & APPROACH SLAB REPAIRS)
- fy = 60,000 PSI (REINFORCEMENT)

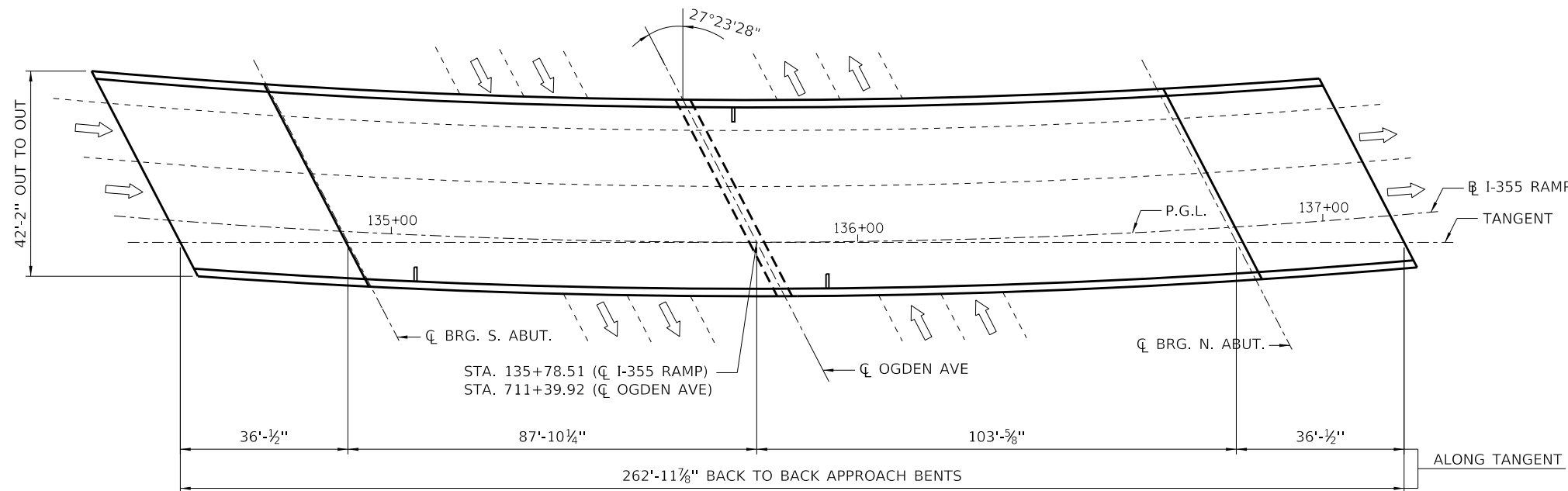
HIGHWAY CLASSIFICATION

I-355 RAMP (ON ROUTE)
 FUNCTIONAL CLASS: INTERSTATE
 ADT: 33,800 (2016)
 ADTT: N/A (2016)

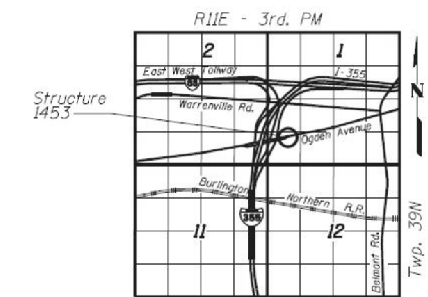
OGDEN AVENUE (UNDER)
 FUNCTIONAL CLASS: OTHER PRINCIPAL ARTERIAL
 ADT: 30,600 (2016)
 ADTT: 1,530 (2016)



ELEVATION



PLAN



LOCATION SKETCH

C:\Users\jmm\OneDrive\Projects\Tollway\Contract 17-RR-4255\Working\CADD_Sheets\SEA-BN\1453\4255-1453-SEA-01-01.dgn

DRAWN BY JMM DATE 03/11/2018
 CHECKED BY PRD DATE 03/11/2018



REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1453 (S.N. 022-9977)
 GENERAL PLAN AND ELEVATION

SHT NO. SEA-01
 DRAWING NO. 1043 OF 1517

GENERAL NOTES

CONSTRUCTION

1. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION TOLERANCES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.
2. CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES ARE SHOWN FOR INFORMATION ONLY.
3. NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
4. THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COSTS WILL BE AT THE CONTRACTOR'S EXPENSE.
5. NO CONCRETE CUTTING WILL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINES BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E. 1-800-892-0123.
7. WHENEVER THE MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF THE EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.
8. CONCRETE SEALANT SHALL BE APPLIED TO THE TOP AND TRAFFIC FACE OF ALL REPAIRED AREAS OF THE BRIDGE DECK REPAIRS AND PARAPET, INCLUDING PARAPET ON BRIDGE WINGWALLS. SEALANT SHALL ALSO BE APPLIED TO THE REPAIRED AREAS OF THE VISIBLE FACES OF THE PIER COLUMNS, CRASHWALLS AND CAPS, PIERS AND ABUTMENTS, BACKWALLS, AND BEARING SEATS. EXISTING SURFACES SHALL BE POWERED WASHED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 592 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
9. AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP), WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS. AND THE LATEST NATIONAL BRIDGE INSPECTIONS STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.
10. ALL DIMENSIONS ARE TAKEN FROM THE FOLLOWING EXISTING PLANS:
TOLLWAY CONTRACT NO. CIP-615 (1989), RR-08-5475 (2010), AND RR-13-4138 (2013).

GENERAL NOTES (CONT.)

CAST-IN-PLACE CONCRETE

1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF 1 FOOT BELOW FINISHED GROUND LEVEL.

REINFORCING BARS

1. REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM 706), GRADE 60, DEFORMED BARS.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

ABBREVIATIONS

- ABUT. - ABUTMENT
- APPROX. - APPROXIMATE
- BPJS - BONDED PREFORMED JOINT SEAL
- BRG. - BEARING
- CL. - CLEAR
- DIM. - DIMENSION
- E. - EAST
- ELEV. - ELEVATION
- EXIST. - EXISTING
- MAX. - MAXIMUM
- MIN. - MINIMUM
- N. - NORTH
- N.B. - NORTHBOUND
- NO. - NUMBER
- P.G.L. - PROFILE GRADE LINE
- S. - SOUTH
- S.B. - SOUTHBOUND
- SHLDR. - SHOULDER
- STA. - STATION
- TYP. - TYPICAL
- W. - WEST
- W.W.F. - WELDED WIRE FABRIC

LIST OF SHEETS

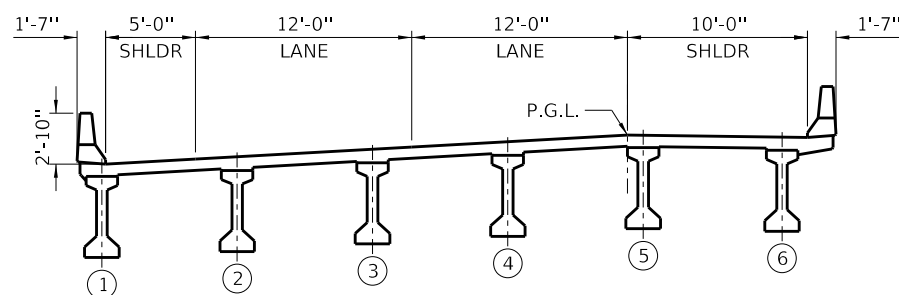
SEA-01	GENERAL PLAN AND ELEVATION
SEA-02	GENERAL DATA, SOQ, CROSS SECTION, AND LIST OF SHEETS
SEA-03	CONSTRUCTION STAGING
SEA-04	ABUTMENT REPAIR DETAILS
SEA-05	WINGWALL REPAIR DETAILS
SEA-06	SLOPEWALL REPAIR DETAILS
SEA-07	PIER REPAIR DETAILS
SEA-08	BEAM REPAIR DETAILS
SEA-09	DECK REPAIR DETAILS
SEA-10	PARAPET REPAIR DETAILS

TOTAL BILL OF MATERIALS

(BN 1453)

CODE	ITEM	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL	RECORDED QUANTITIES
* JS06010	CLEANING AND SEALING JOINT	FOOT	-	96	96	
* JS120815	CLEAN EXISTING SCUPPERS	EACH	-	3	3	
* JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	432	130	562	
* JS121300	HIGH PRESSURE EPOXY INJECTION	FOOT	-	35	35	
* JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	77	17	94	
* JT503100	FIBER WRAP REPAIR	SQ FT	-	20	20	
* JT524010	APPLY CONCRETE SEALANT	SQ FT	5,271	-	5,271	
* JT514015	BRIDGE DECK CONCRETE SEALER	SQ FT	-	14,792	14,792	
GBSP JT525230	BONDED PREFORMED JOINT SEAL REPLACEMENT, 3 IN.	FOOT	-	97	97	
* JT599105	SLOPE WALL GAP FILLER REMOVAL AND REPLACEMENT	FOOT	105	-	105	
GBSP X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ FT	-	11	11	
** Z0065700	SLOPEWALL REPAIR	SQ YD	3	-	3	

* TOLLWAY SPECIAL PROVISION ITEM
 ** IDOT SPECIAL PROVISION ITEM
 GBSP IDOT GUIDE BRIDGE SPECIAL PROVISION



TYPICAL CROSS SECTION
(LOOKING NORTH)

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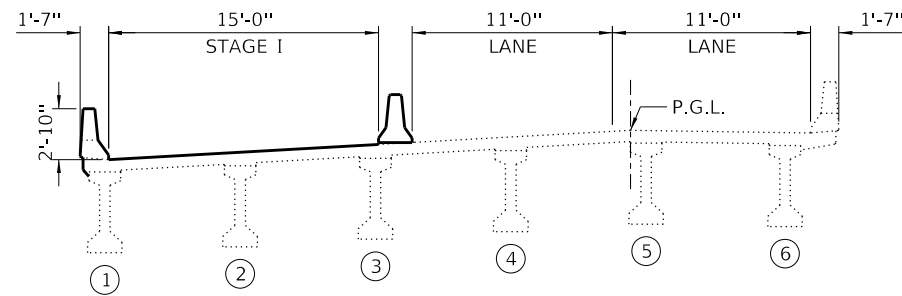
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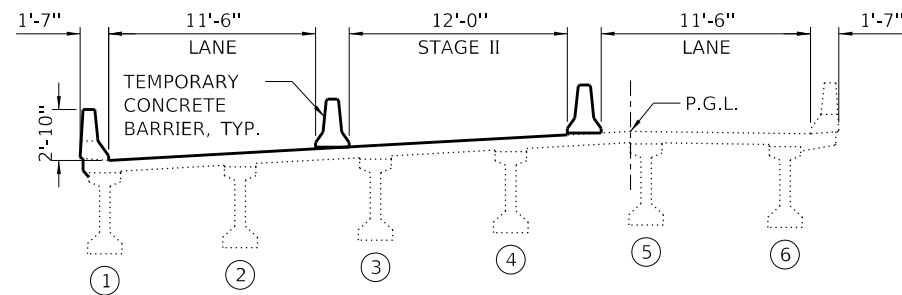
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1453 (S.N. 022-9977)
 GENERAL DATA

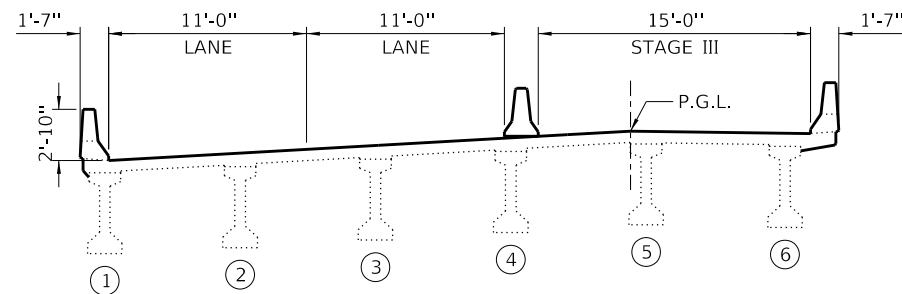
SEA-02 OF SEA-10
 SHT NO. SEA-02
 DRAWING NO. 1044 OF 1517



STAGE I CONSTRUCTION
(LOOKING NORTH)



STAGE II CONSTRUCTION
(LOOKING NORTH)



STAGE III CONSTRUCTION
(LOOKING NORTH)

NOTE:

SEE IDOT STANDARD MOT DRAWINGS UNLESS OTHERWISE NOTED ON MOT DRAWINGS.

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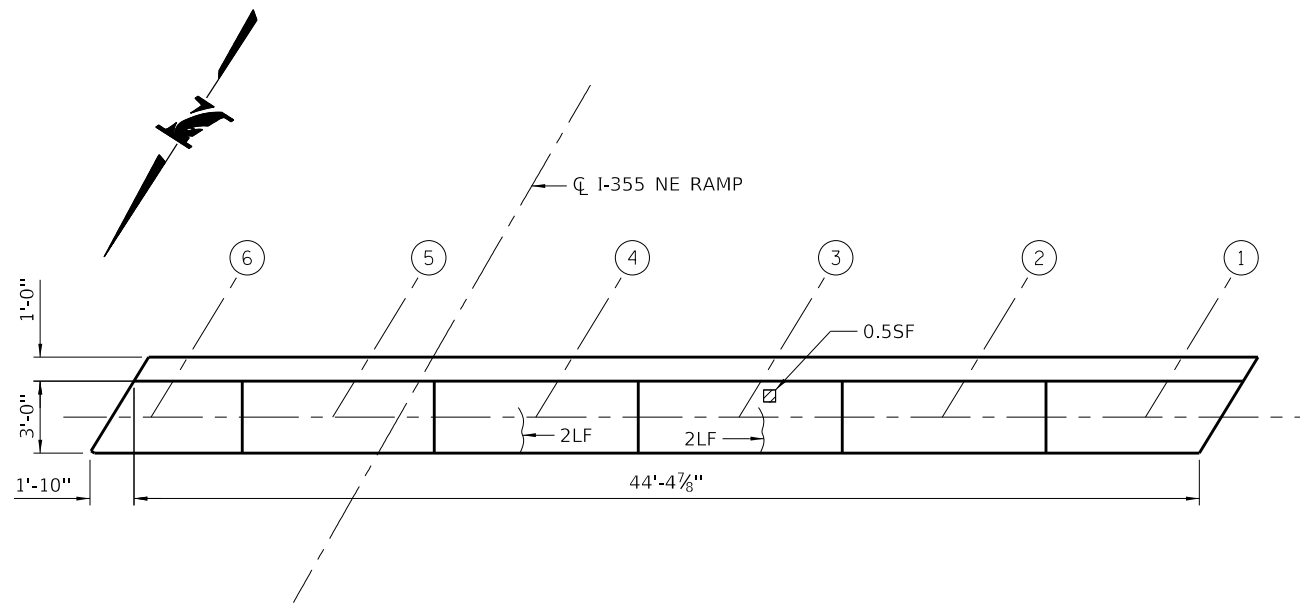


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NO.	DATE

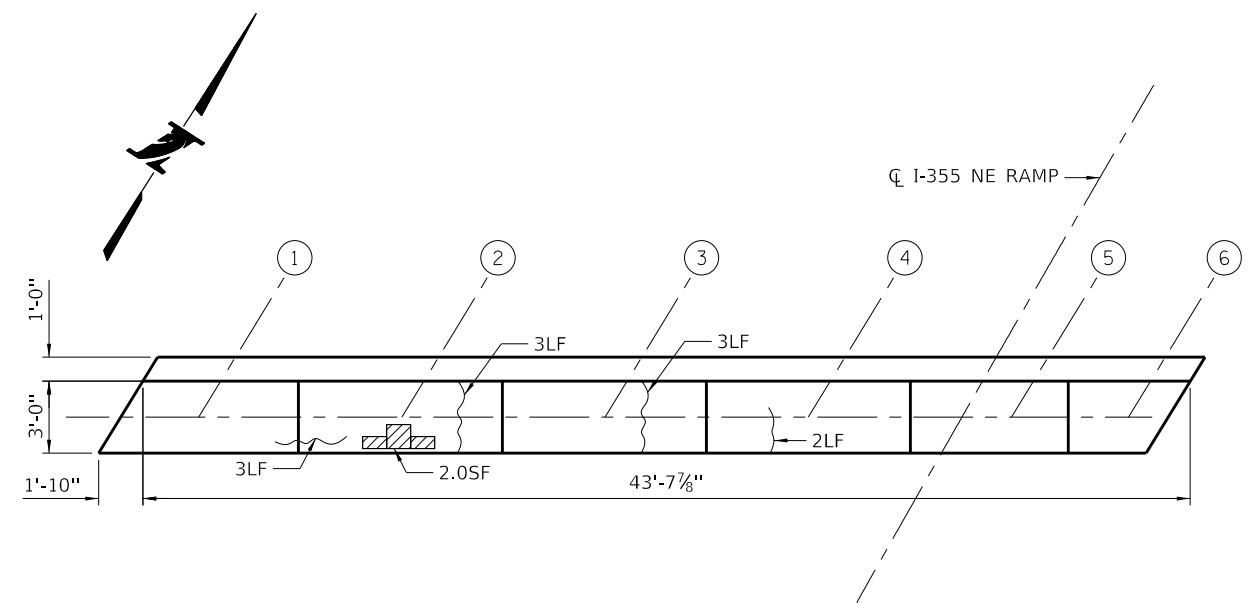
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BRIDGE NO. 1453 (S.N. 022-9977)
CONSTRUCTION STAGING

SEA-03 OF SEA-10

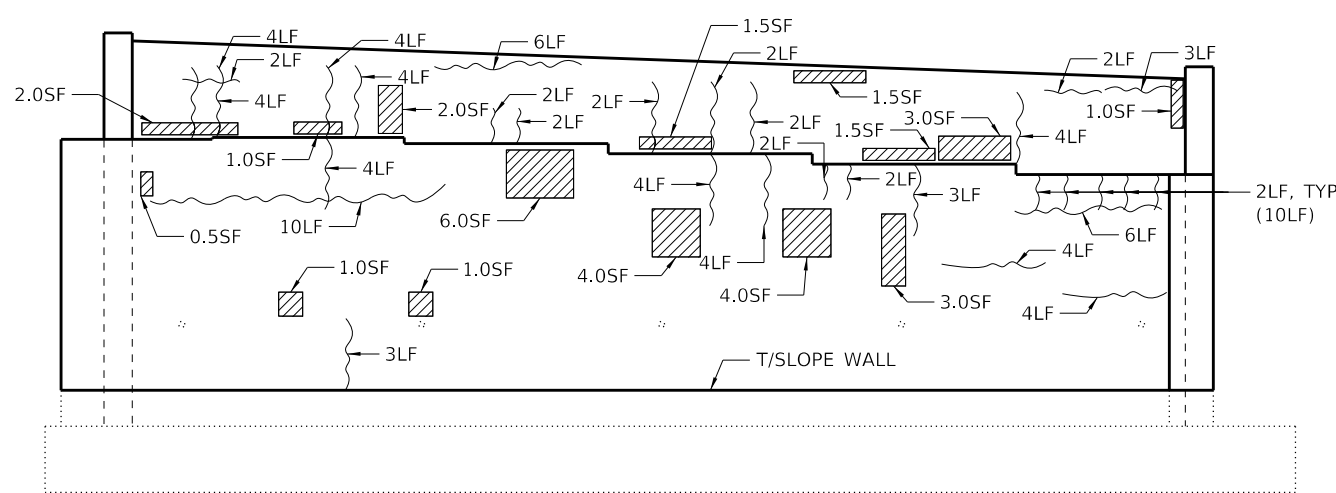
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DRAWING NO.
1045 OF 1517



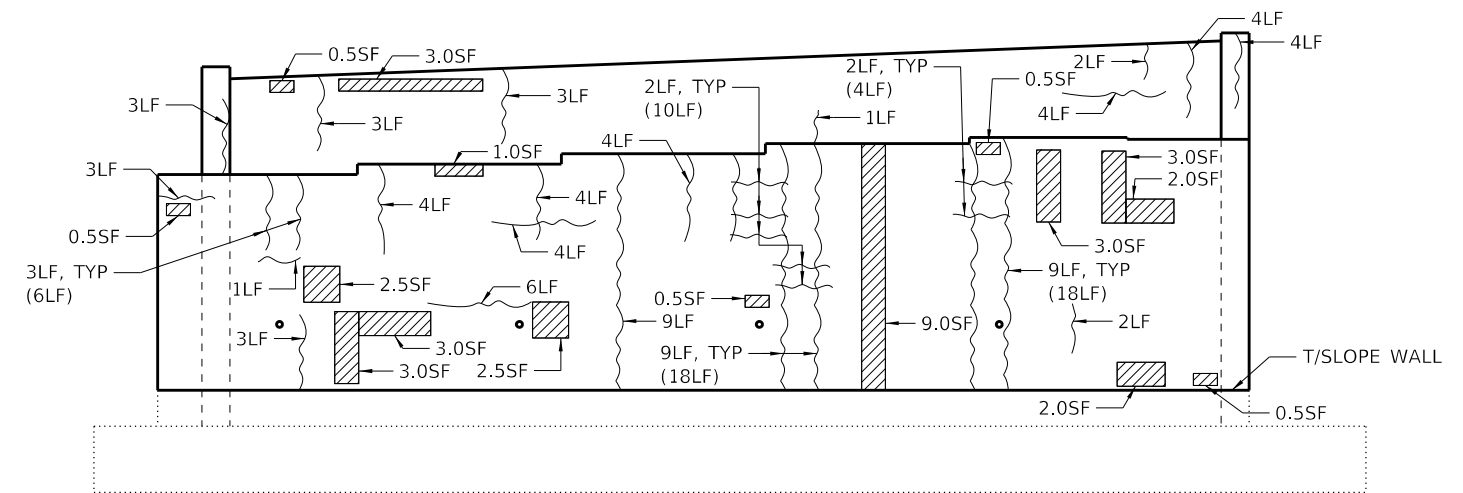
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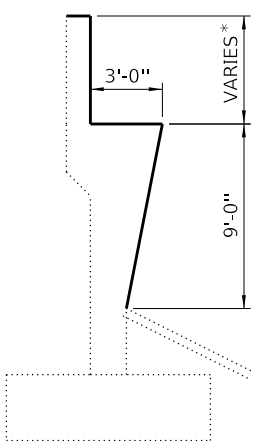
NORTH ABUTMENT PLAN



SOUTH ABUTMENT ELEVATION
(LOOKING SOUTH)



NORTH ABUTMENT ELEVATION
(LOOKING NORTH)



SECTION THRU ABUTMENT
(SHOWING LIMITS OF CONCRETE SEALANT)

* SOUTH ABUTMENT: 3'-11 7/8" TO 5'-6 7/8"
NORTH ABUTMENT: 4'-0 1/2" TO 5'-7 1/8"

LEGEND

- CONCRETE REPAIR (<5")
- CRACKS TO BE LOW PRESSURE EPOXY INJECTED

REPAIR NOTES

1. HAIRLINE CRACKS (<1/16") SHALL NOT BE EPOXY INJECTED.
2. CONTRACTOR SHALL VERIFY ALL REPAIR ITEMS SHOWN ON PLANS.
3. ALL EXPOSED FACES OF ABUTMENTS SHALL BE SEALED WITH CONCRETE SEALANT.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	234
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	72
APPLY CONCRETE SEALANT	SQ FT	1,566

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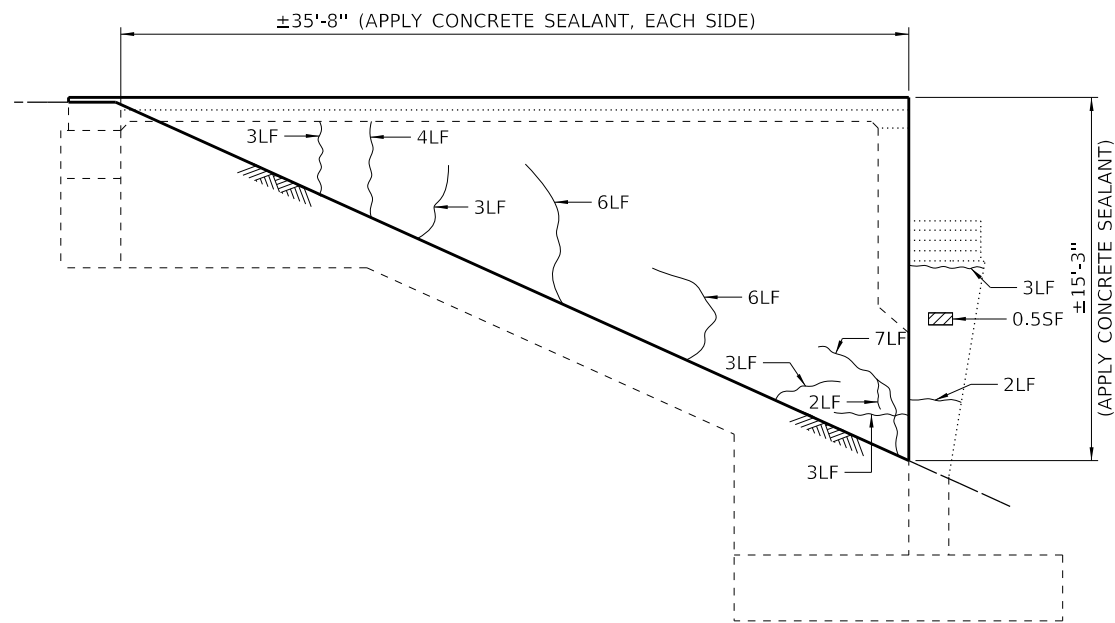


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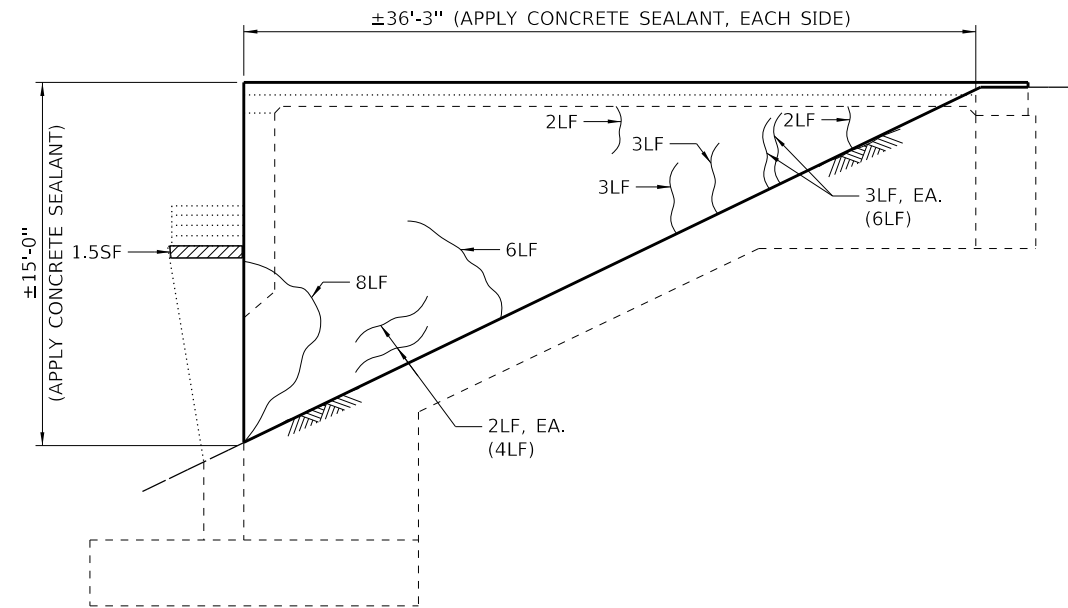
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BRIDGE NO. 1453 (S.N. 022-9977)
ABUTMENT REPAIR DETAILS

SEA-04 OF SEA-10

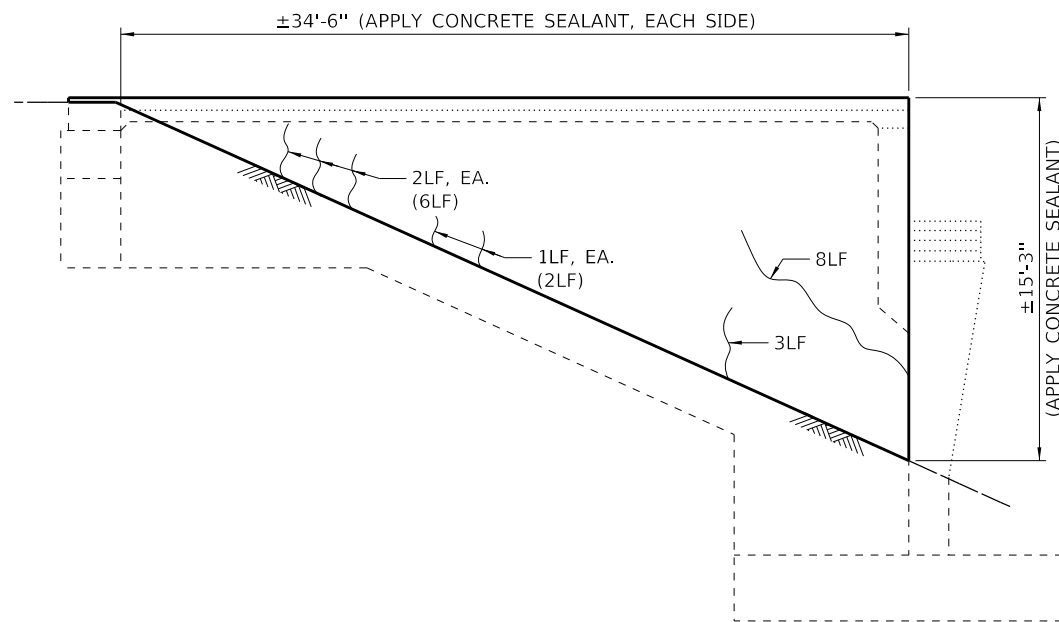
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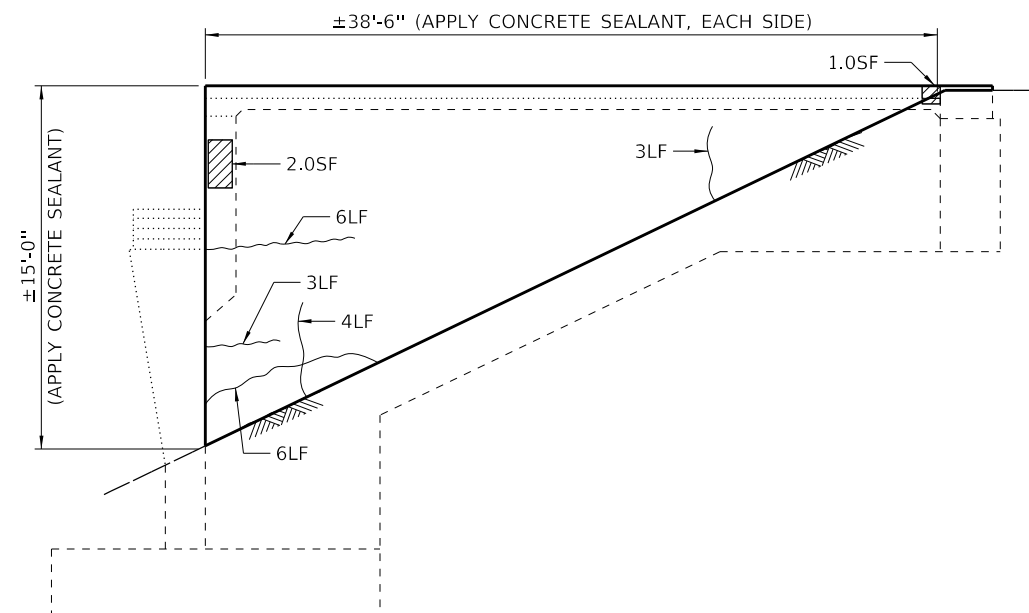
NORTH WEST ELEVATION



NORTH EAST ELEVATION



SOUTH EAST ELEVATION



SOUTH WEST ELEVATION

LEGEND

- CONCRETE REPAIR (<5")
- CRACKS TO BE LOW PRESSURE EPOXY INJECTED

REPAIR NOTES

1. HAIRLINE CRACKS (<1/16") SHALL NOT BE EPOXY INJECTED.
2. CONTRACTOR SHALL VERIFY ALL REPAIR ITEMS SHOWN ON PLANS.
3. ALL EXPOSED FACES OF WINGWALLS SHALL BE SEALED WITH CONCRETE SEALANT.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	117
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	5
APPLY CONCRETE SEALANT	SQ FT	2,193

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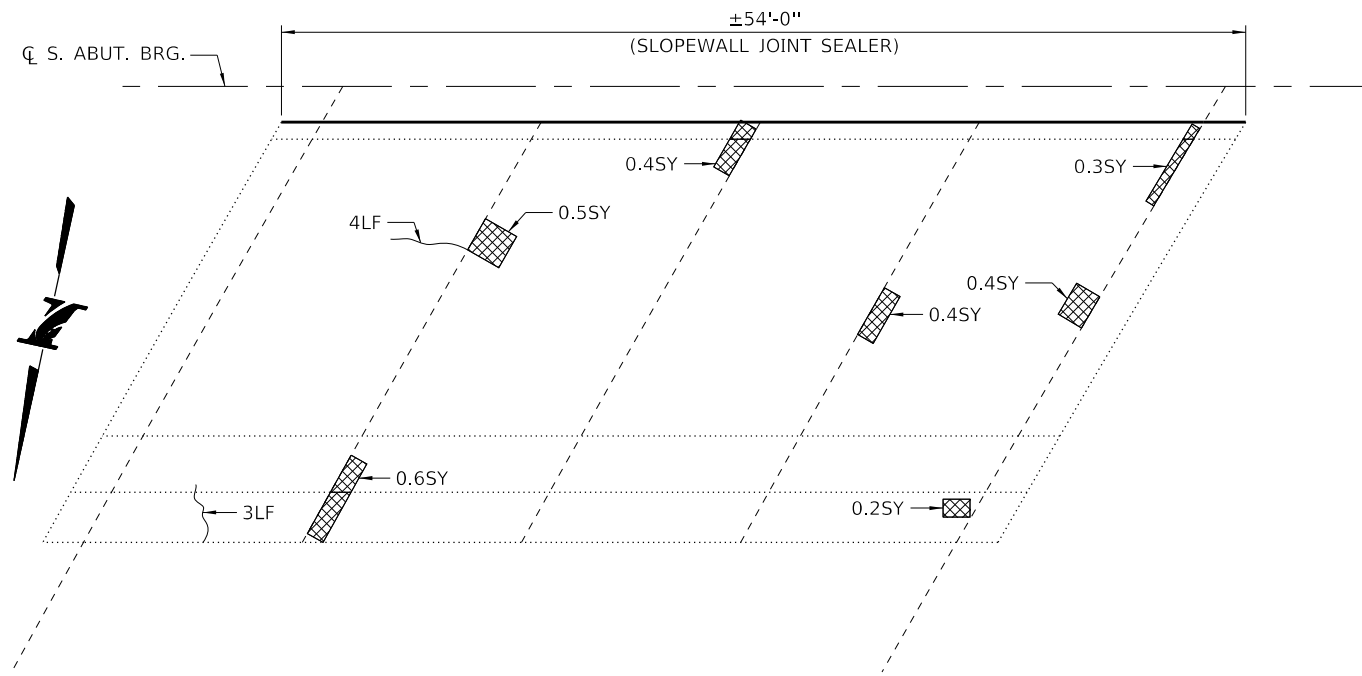


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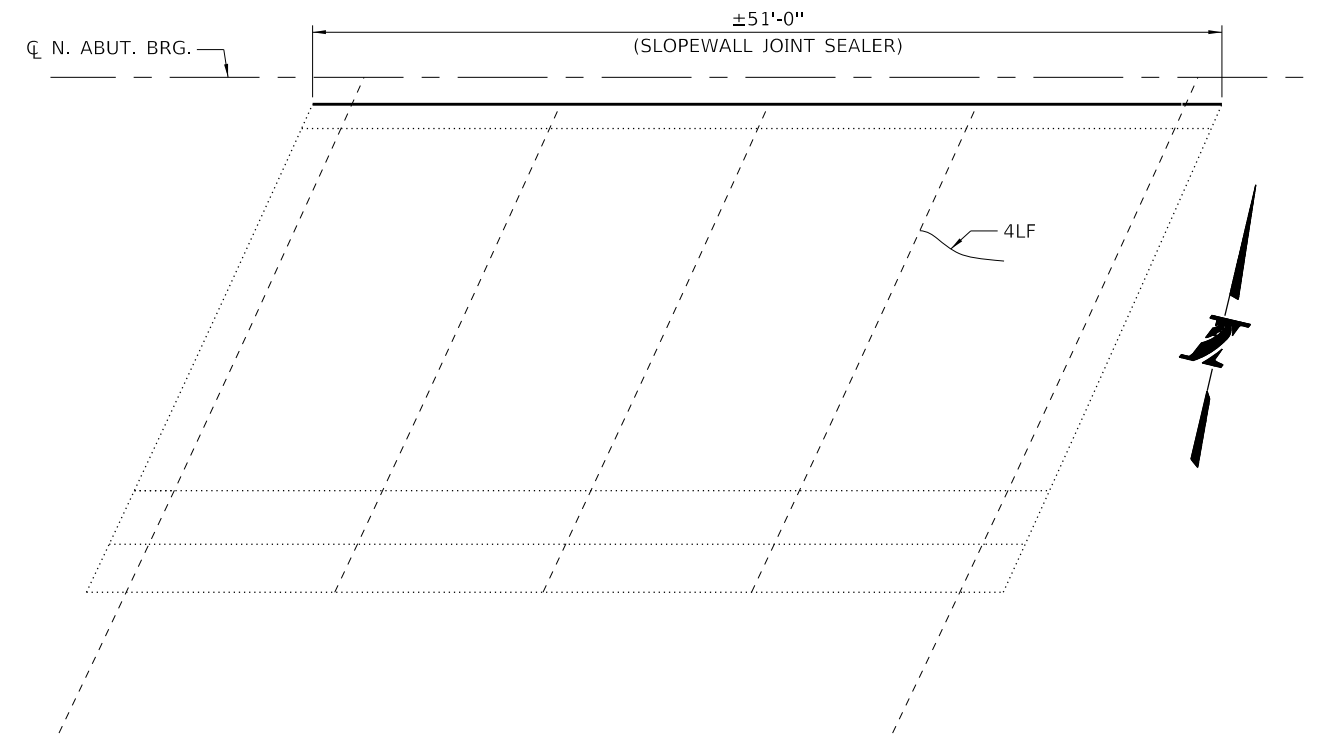
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 BRIDGE NO. 1453 (S.N. 022-9977)
 WINGWALL REPAIR DETAILS

SEA-05 OF SEA-10

SHT NO. SEA-05
 DRAWING NO.
 1047 OF 1517



SOUTH SLOPEWALL



NORTH SLOPEWALL

LEGEND

- { SLOPEWALL CRACK SEALING
- ▨ SLOPEWALL REPAIR

REPAIR NOTES

1. CRACKS (>½") SHALL BE SEALED.
2. CONTRACTOR SHALL VERIFY ALL REPAIR ITEMS SHOWN ON PLANS.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
SLOPE WALL GAP FILLER REMOVAL AND REPLACEMENT	FOOT	105
SLOPE WALL CRACK SEALING	FOOT	11
SLOPE WALL REPAIR	SQ YD	3

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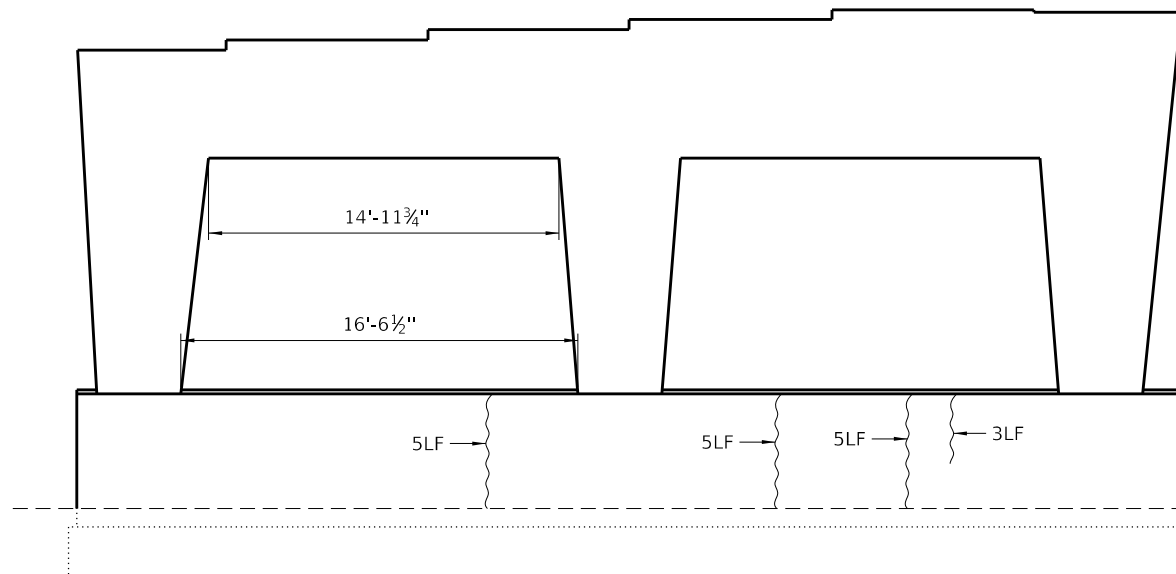
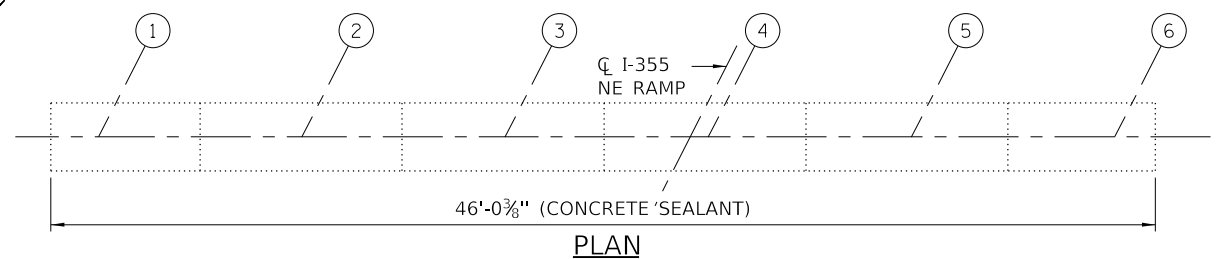
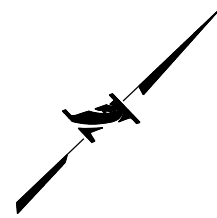
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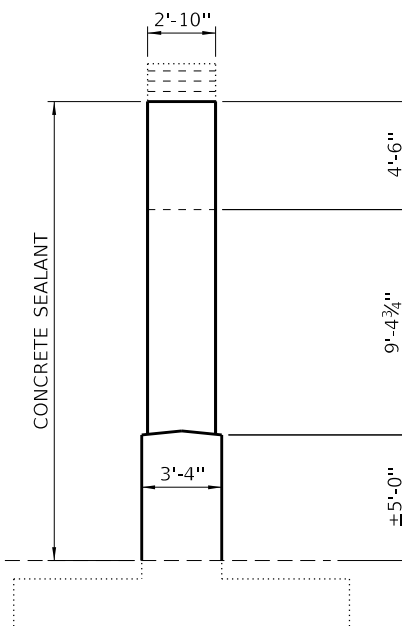
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CONTRACT NO. RR-16-4255
 BRIDGE NO. 1453 (S.N. 022-9977)
 WINGWALL REPAIR DETAILS

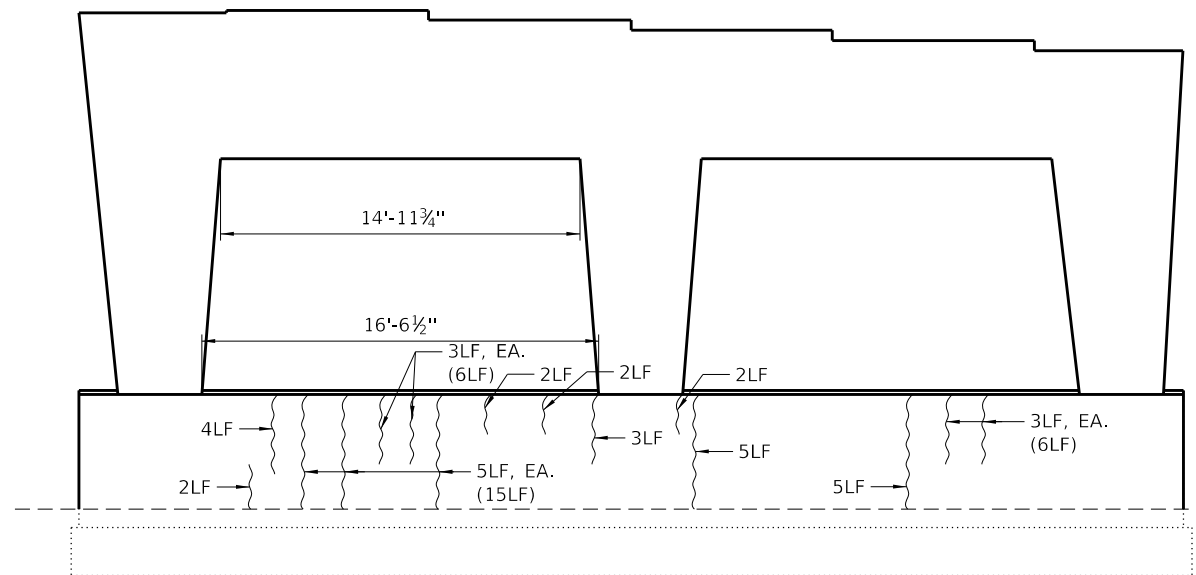
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 SHT NO. SEA-06
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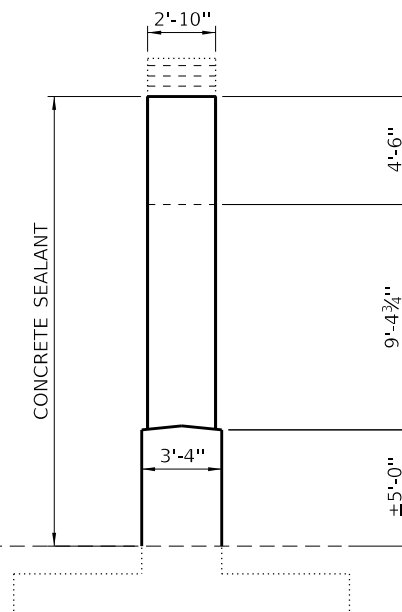
ELEVATION
(LOOKING NORTH)



END VIEW



ELEVATION
(LOOKING SOUTH)



END VIEW

LEGEND

{ CRACKS TO BE LOW PRESSURE EPOXY INJECTED

REPAIR NOTES

- HAIRLINE CRACKS (<math>< \frac{1}{16}</math>") SHALL NOT BE EPOXY INJECTED.
- CONTRACTOR SHALL VERIFY ALL REPAIR ITEMS SHOWN ON PLANS.
- ALL EXPOSED FACES OF PIER SHALL BE SEALED WITH CONCRETE SEALANT.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	70
APPLY CONCRETE SEALANT	SQ FT	1,512

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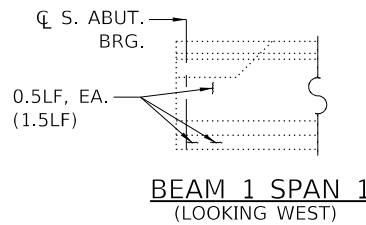


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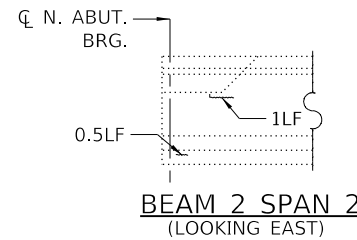
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 BRIDGE NO. 1453 (S.N. 022-9977)
 PIER REPAIR DETAILS

SEA-07 OF SEA-10

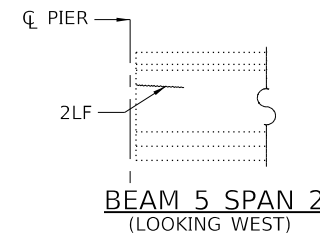
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 DRAWING NO.
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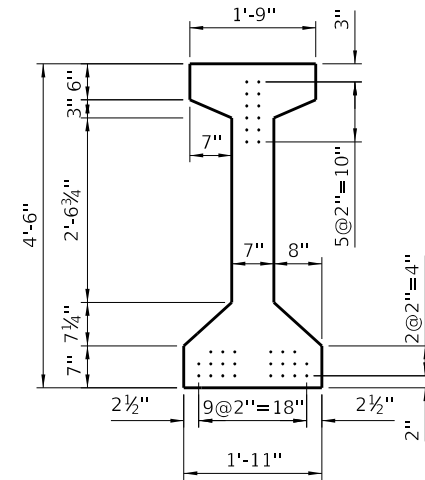
BEAM 1 SPAN 1
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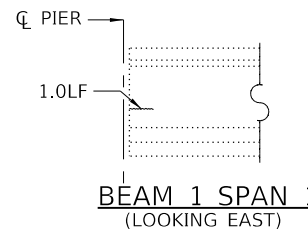
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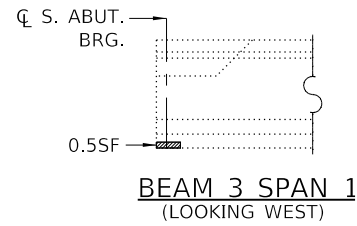
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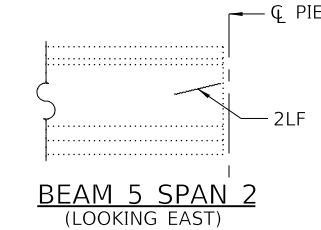
TYPICAL BEAM SECTION
(AT BEAM ENDS)



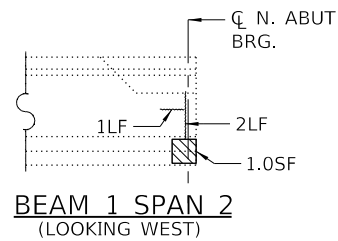
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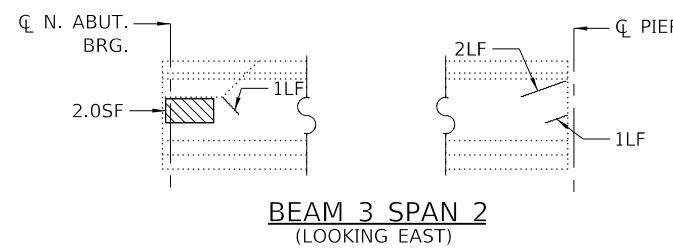
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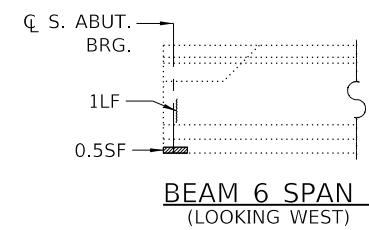
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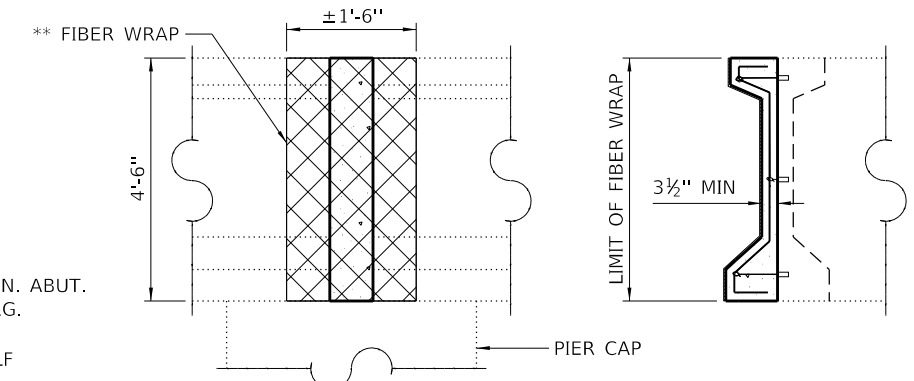
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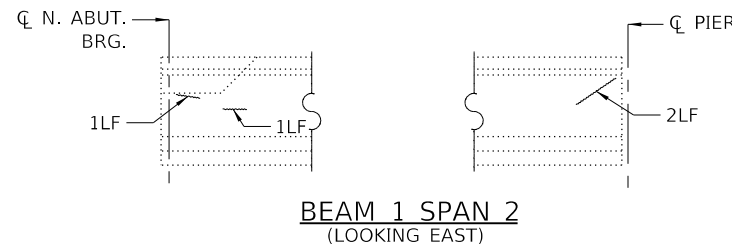
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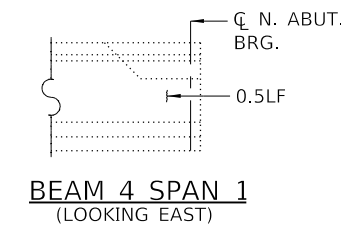
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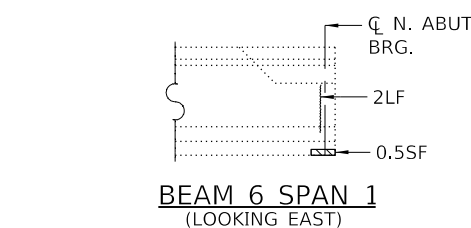
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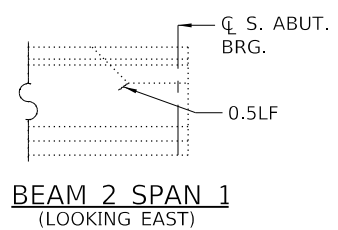
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(LOOKING EAST)



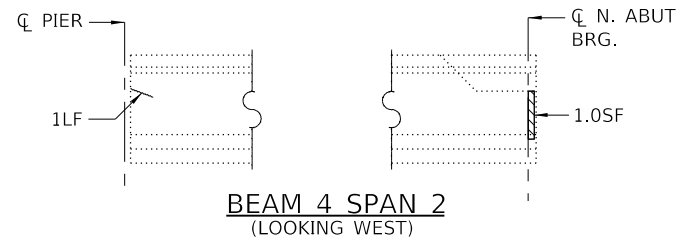
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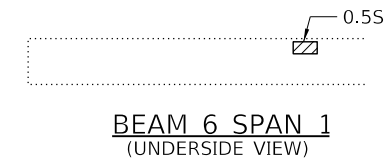
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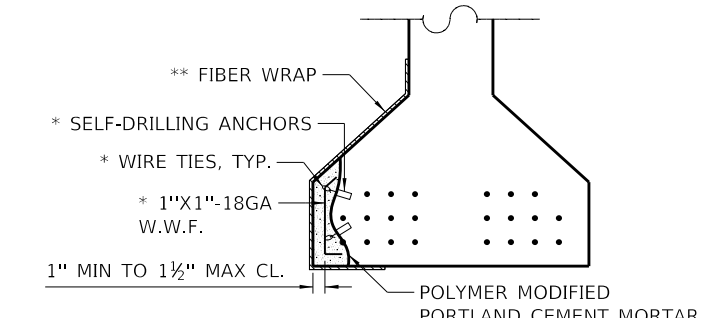
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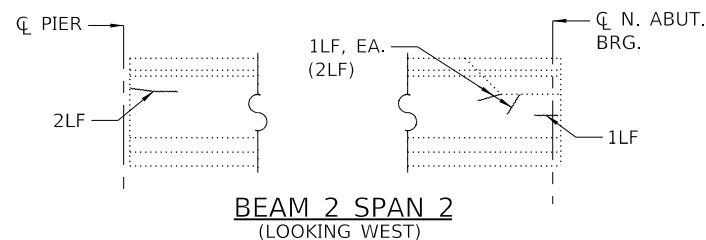
BEAM 4 SPAN 2
(LOOKING WEST)



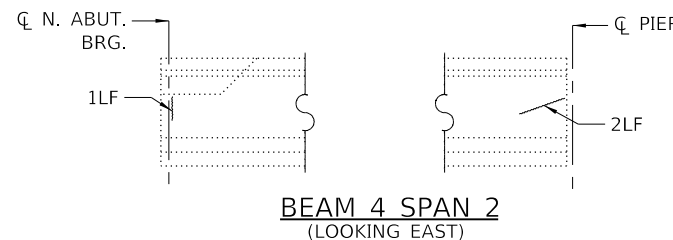
BEAM 6 SPAN 1
(UNDERSIDE VIEW)



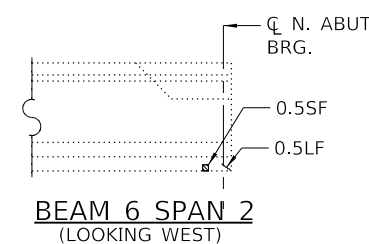
BEAM REPAIR DETAIL



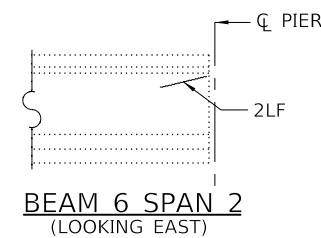
BEAM 2 SPAN 2
(LOOKING WEST)



BEAM 4 SPAN 2
(LOOKING EAST)



BEAM 6 SPAN 2
(LOOKING WEST)



BEAM 6 SPAN 2
(LOOKING EAST)

LEGEND

- CRACKS TO BE HIGH PRESSURE EPOXY INJECTED
- SPALL TO BE PATCHED WITH POLYMER MODIFIED PORTLAND CEMENT MORTAR AND FIBER WRAPPED
- SPALL TO BE PATCHED WITH POLYMER MODIFIED PORTLAND CEMENT MORTAR ONLY (NO FIBER WRAP)

REPAIR NOTES

1. HAIRLINE CRACKS (<math>< \frac{1}{16}"</math>) SHALL BE HIGH PRESSURED EPOXY INJECTED.
2. CONTRACTOR SHALL VERIFY ALL REPAIR ITEMS SHOWN ON PLANS.
3. FOR DIAPHRAGM OVER PIER, REMOVE CONCRETE AS SHOWN IN DIAPHRAGM OVER PIER REPAIR DETAIL. REPAIR DIAPHRAGM SAME AS SHOWN IN BEAM REPAIR DETAIL.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
HIGH PRESSURE EPOXY INJECTION	FOOT	35
FIBER WRAP REPAIR	SQ FT	20
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ FT	11

- * INCLUDED IN THE COST OF POLYMER MODIFIED PORTLAND CEMENT MORTAR
- ** FIBER WRAP SHALL EXTEND AT LEAST 6" BEYOND ALL SIDES OF POLYMER MODIFIED PORTLAND CEMENT MORTAR REPAIR.

SEA-08 OF SEA-10

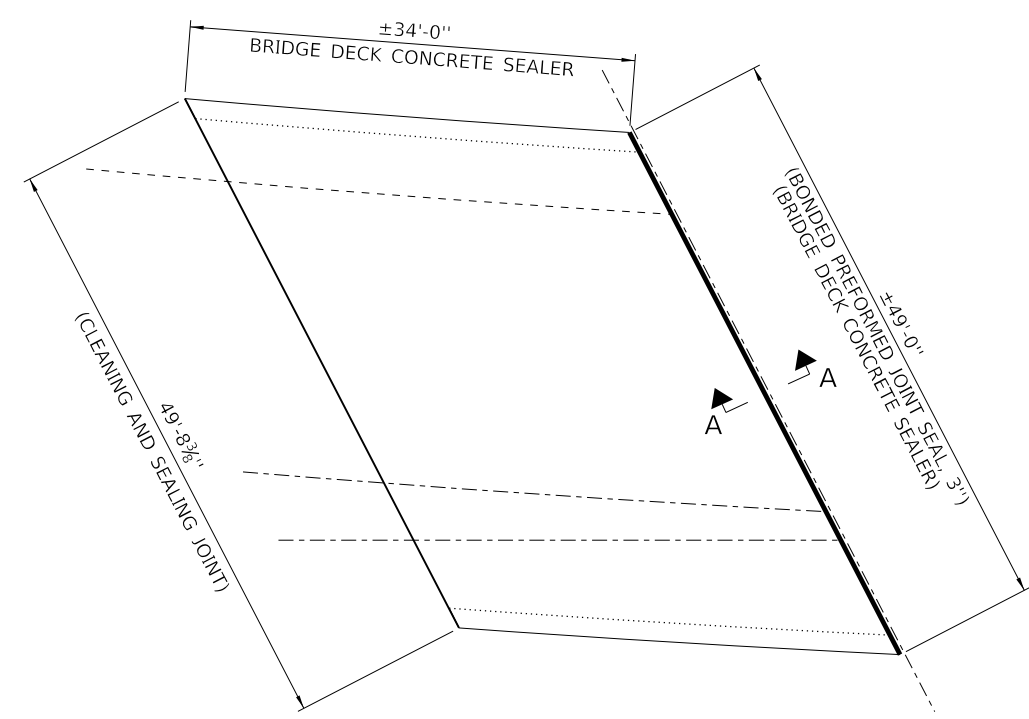
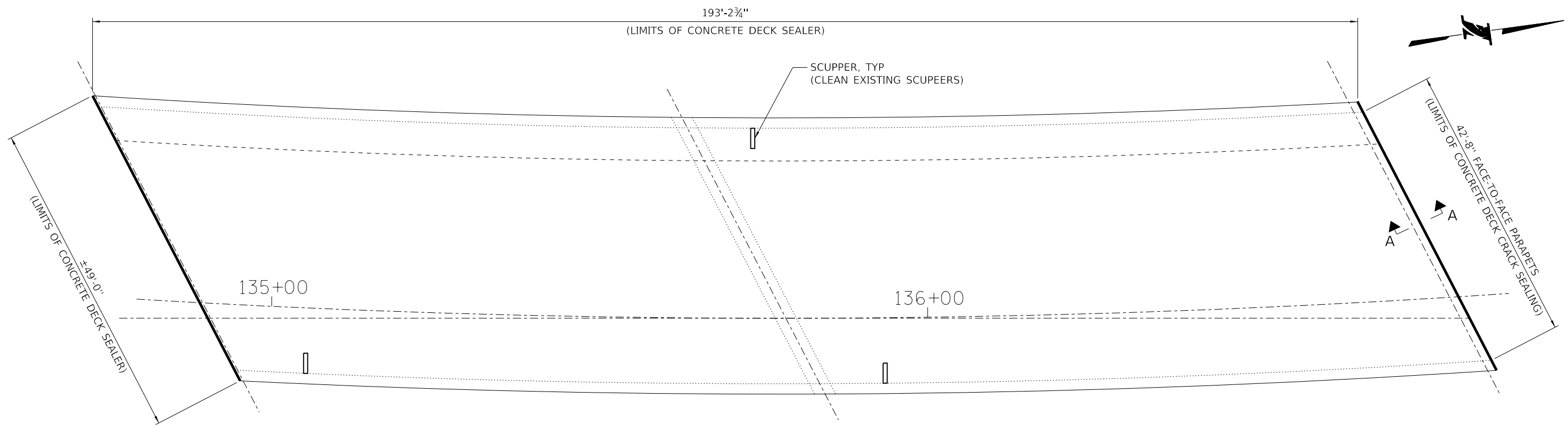
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CHECKED BY PRD DATE 03/11/2018



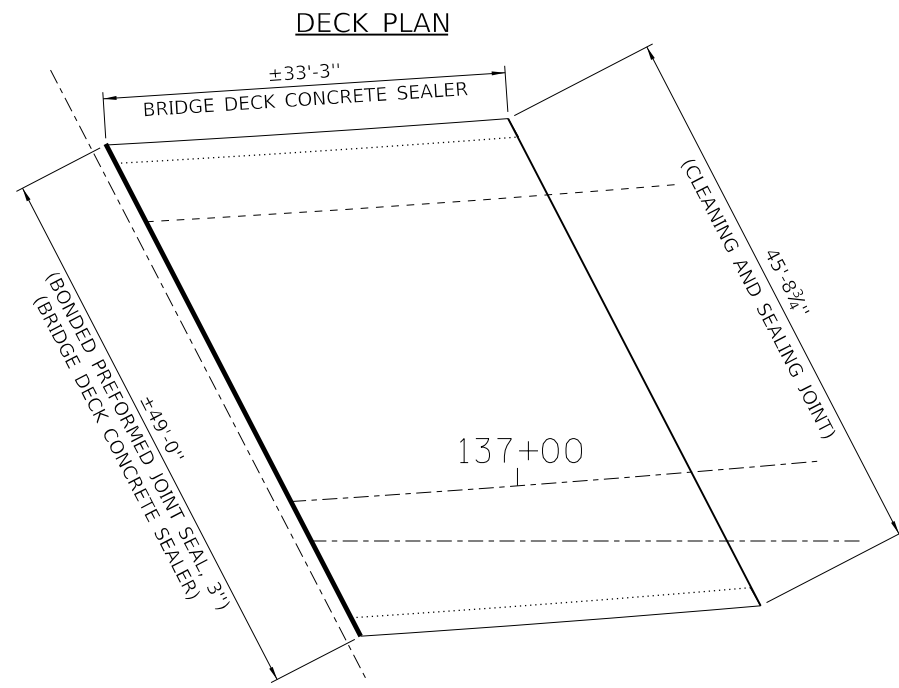
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NO.	DATE	

CONTRACT NO. RR-16-4255
BRIDGE NO. 1453 (S.N. 022-9977)
BEAM REPAIR DETAILS

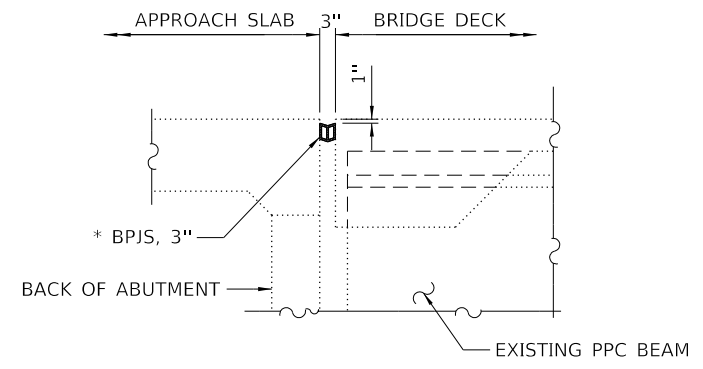
SHT NO. SEA-08
DRAWING NO. 1050 OF 1517



SOUTH APPROACH PLAN



NORTH APPROACH PLAN



SECTION A-A

* CLEAN AND INSTALL PER MANUFACTURER'S SPECIFICATIONS

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
CLEANING AND SEALING JOINT	FOOT	96
CLEAN EXISTING SCUPEERS	EACH	3
BRIDGE DECK CONCRETE SEALER	SQ FT	12,765
BONDED PREFORMED JOINT SEAL REPLACEMENT, 3 IN.	FOOT	97

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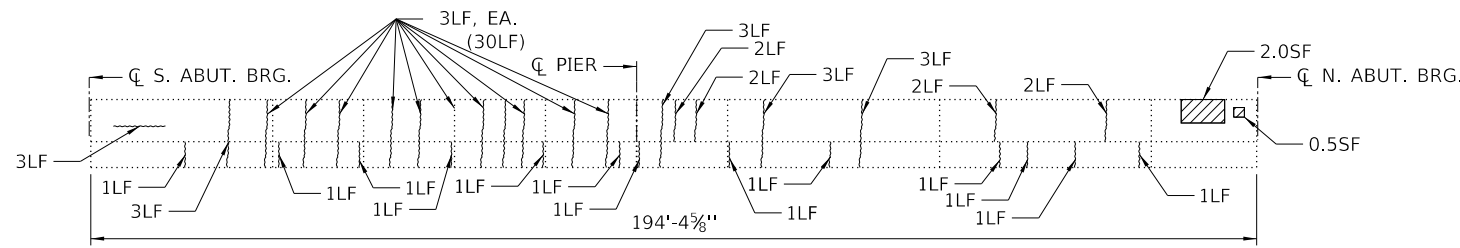
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

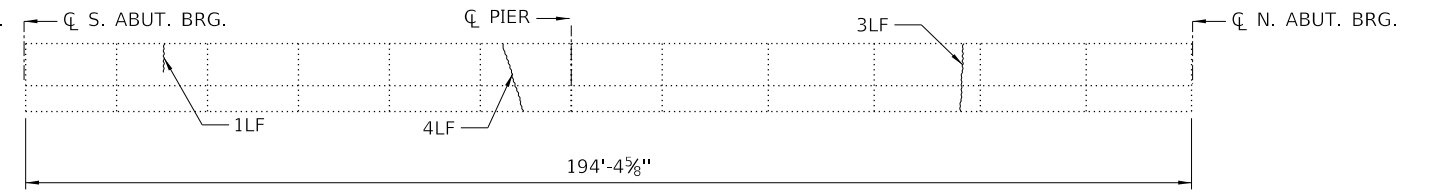
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 BRIDGE NO. 1453 (S.N. 022-9977)
 DECK REPAIR DETAILS

SEA-09 OF SEA-10
 SHT NO. SEA-09
 DRAWING NO.
 1051 OF 1517

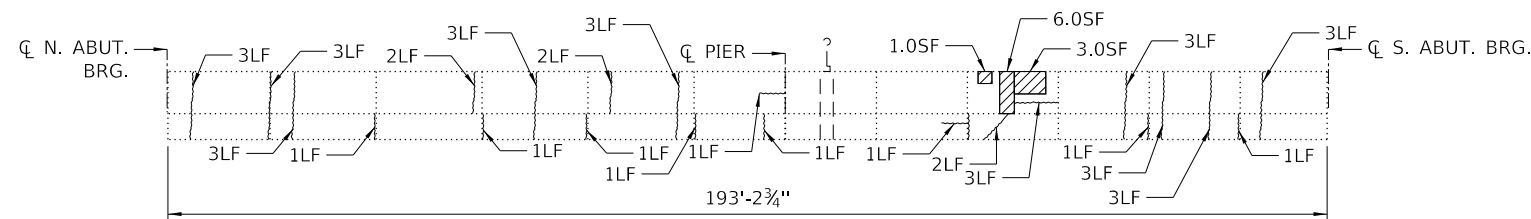
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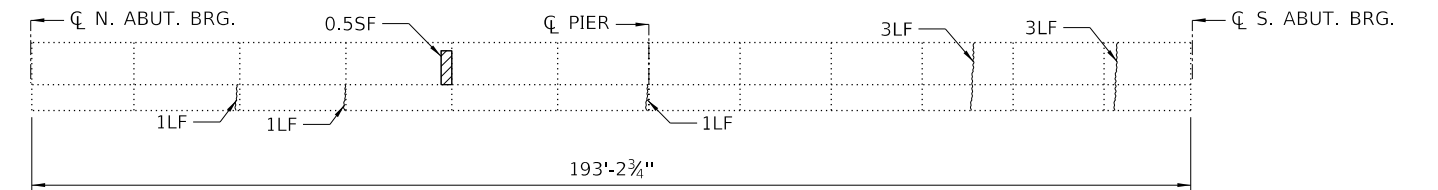
OUTSIDE ELEVATION OF WEST PARAPET



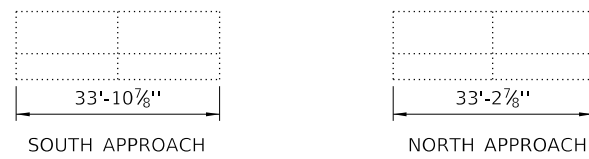
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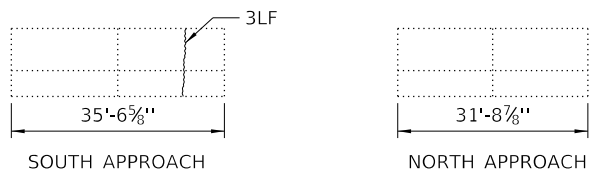
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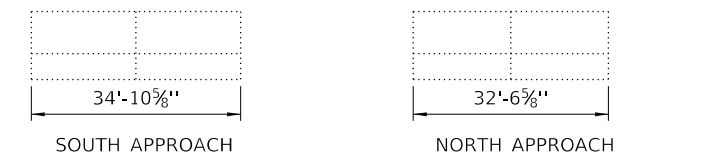
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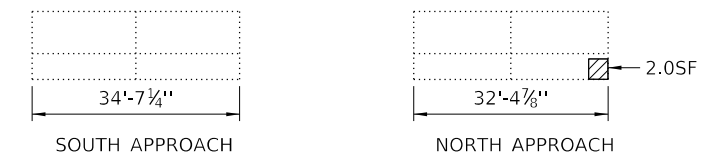
OUTSIDE ELEVATION OF WEST PARAPET



OUTSIDE ELEVATION OF EAST PARAPET



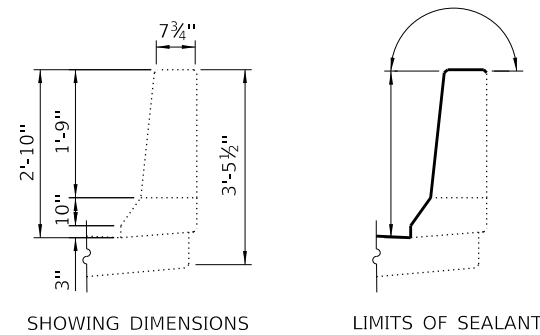
INSIDE ELEVATION OF WEST PARAPET



INSIDE ELEVATION OF EAST PARAPET

LEGEND

- CRACKS TO BE HIGH PRESSURE EPOXY INJECTED
- STRUCTURAL REPAIR OF CONCRETE (<5")



TYPICAL PARAPET SECTION

REPAIR NOTES

1. HAIRLINE CRACKS (<1/16") SHALL NOT BE EPOXY INJECTED.
2. CONTRACTOR SHALL VERIFY ALL REPAIR ITEMS SHOWN ON PLANS.
3. ALL EXPOSED FACES OF PARAPETS SHALL BE SEALED WITH BRIDGE DECK CONCRETE SEALER.

BILL OF MATERIALS

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	130
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	17
BRIDGE DECK CONCRETE SEALER	SQ FT	2,027

SEA-10 OF SEA-10

DRAWN BY JMM DATE 03/11/2018
 CHECKED BY PRD DATE 03/11/2018



REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1453 (S.N. 022-9977)
 PARAPET REPAIR DETAILS

SHT NO. SEA-10
 DRAWING NO. 1052 OF 1517

INDEX OF SHEETS

- SF-01 GENERAL PLAN AND ELEVATION
- SF-02 GENERAL NOTES, INDEX OF SHEETS, AND TOTAL BILL OF MATERIAL
- SF-03 CONSTRUCTION STAGING
- SF-04 ABUTMENT REPAIR
- SF-05 RETAINING WALL "V"
- SF-06 RETAINING WALLS "W" AND "G"
- SF-07 BEAM FRAMING PLAN
- SF-08 BEAM REPAIR DETAILS
- SF-09 DECK REPAIR PLAN
- SF-10 APPROACH REPAIR PLAN

LIST OF ABBREVIATIONS

- N.B. NORTHBOUND
- S.B. SOUTHBOUND
- STA. STATION
- ELEV. ELEVATION
- C.I.P. CAST-IN-PLACE
- CL CENTERLINE
- BRG BEARING
- S. ABUT. SOUTH ABUTMENT
- N. ABUT. NORTH ABUTMENT
- TYP. TYPICAL
- MAX. MAXIMUM
- MIN. MINIMUM
- BOT. BOTTOM
- EXIST. EXISTING
- EXP. EXPANSION
- SHLDR SHOULDER
- BL BASELINE
- P.G.L. PROFILE GRADE LINE
- E.F. EACH FACE
- F.F. FRONT FACE
- B.F. BACK FACE
- I.F. INSIDE FACE
- O.F. OUTSIDE FACE
- P.J.F. PREFORMED JOINT FILLER
- P.J.S. PREFORMED JOINT SEALER
- BK. BACK OF
- B/ BOTTOM OF
- T/ TOP OF
- PROP. PROPOSED
- HP H-PILE
- WF W-FLANGE
- CL. CLEARANCE
- SQ. FT. SQUARE FOOT
- SQ. FT. SQUARE FOOT
- SQ. YD. SQUARE YARD
- SQ. YD. SQUARE YARD
- L.F. LINEAR FOOT
- CU. FT. CUBIC FEET
- EA EACH
- BIT. BITUMINOUS
- PAV. PAVEMENT
- T.B.O.M. TOTAL BILL OF MATERIAL

GENERAL NOTES

CAST-IN-PLACE CONCRETE:

1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCING BARS:

1. REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A706), GRADE 60, DEFORMED BARS.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

CONSTRUCTION:

1. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR SHALL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.
2. THE CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
3. NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
4. THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COST WILL BE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.
5. NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E., 811.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL FIBER OPTIC UTILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL INITIATE THE LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM FILLED IN ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE.
8. EXISTING REINFORCEMENT WHICH IS TO BE INCORPORATED INTO THE NEW CONSTRUCTION SHALL BE CLEANED, STRAIGHTENED (WITHOUT HEATING), CUT AND/OR BENT TO FIT AND EPOXY PAINTED IF GOUGED. COST OF WHICH SHALL BE INCLUDED WITH "STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)", "ACCELERATED DECK SLAB REPAIR (PARTIAL)", OR "ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE I)".
9. CONCRETE SEALANT SHALL BE APPLIED TO THE CRASHWALLS, ABUTMENT BRESTWALLS, BACKWALLS AND BEARING SEATS. EXISTING SURFACES SHALL BE POWER WASHED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 592 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
10. WHENEVER ANY MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THAT DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.
11. THE PROTECTIVE SHIELD SYSTEM SHALL EXTEND A MINIMUM OF 10' BEYOND THE INDICATED LIMITS OF REPAIR SHOWN IN THE PLANS OR 5' BEYOND THE ACTUAL LIMITS OF PARTIAL OR FULL DEPTH REPAIR AS IDENTIFIED IN THE FIELD, WHICHEVER IS GREATER.

TOTAL BILL OF MATERIAL

S.P.	PAY ITEM NO.	DESCRIPTION	UNIT	SUPER	SUB	PLAN QUANTITY	RECORDED QUANTITY
	50157300	PROTECTIVE SHIELD	SQ. YD.	59	-	59	
*	J1506010	CLEANING AND SEALING JOINTS	FOOT	37	-	37	
**	JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	-	62	62	
**	JS121300	HIGH PRESSURE EPOXY INJECTION	FOOT	4	-	4	
*	JT503012	ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.	1	-	1	
*	JT503023	ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE I)	SQ. YD.	2	-	2	
*	JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ. FT.	-	188	188	
*	JT503100	FIBER WRAP REPAIR	SQ. FT.	15	-	15	
*	JT524010	APPLY CONCRETE SEALANT	SQ. FT.	-	9,428	9,428	
*	JT524015	BRIDGE DECK CONCRETE SEALER	SQ. FT.	7,433	-	7,433	
*	X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	1	-	1	
*	X0323818	CLEANING AND PAINTING EXPOSED REBAR	SQ. FT.	0.5	0.5	1	
*	X0326331	CLEANING AND PAINTING BEARINGS	EACH	12	-	12	

- * INDICATES SPECIAL PROVISION
- ** INDICATES ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATION

CONSTRUCTION (CONT.):

12. AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP), WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS AND THE LATEST NATIONAL BRIDGE INSPECTIONS STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.
13. A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF ILLINOIS, SHALL PREPARE AND SUBMIT STRUCTURE ASSESSMENT REPORTS (SARS) FOR THE PROPOSED WORK ASSOCIATED WITH REMOVING, MODIFYING OR RECONSTRUCTING EXISTING STRUCTURES OR PORTIONS THEREOF. UNLESS NOTED OTHERWISE, A SAR SHALL BE REQUIRED WHEN THE CONTRACTOR'S MEANS AND METHODS APPLY LOADS TO THE STRUCTURE OR CHANGE ITS STRUCTURAL BEHAVIOR. A SAR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING THE WORK, IN ACCORDANCE WITH THE LATEST IDOT GUIDE BRIDGE SPECIAL PROVISION, "STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS" PRIOR TO BEGINNING THE WORK COVERED BY THAT SAR. SEPARATE PORTIONS OF THE WORK MAY BE COVERED BY SEPARATE SARS WHICH MAY BE SUBMITTED AT DIFFERENT TIMES OR AS DICTATED BY THE CONTRACTOR'S SCHEDULE.

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 CHECKED BY MMZ/MMH DATE 3/11/2018

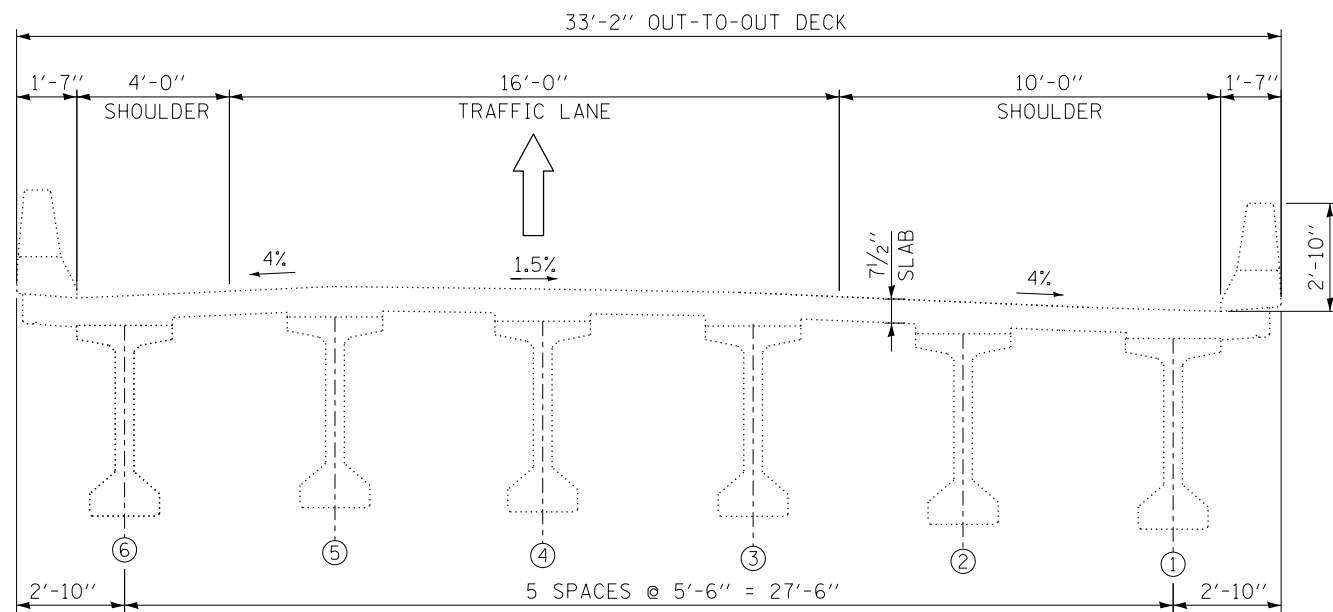


REVISIONS	
NO.	DESCRIPTION

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 B.N. 1451 (S.N. 022-9976)
 GEN. NOTES, INDEX OF SHEETS, & T.B.O.M.

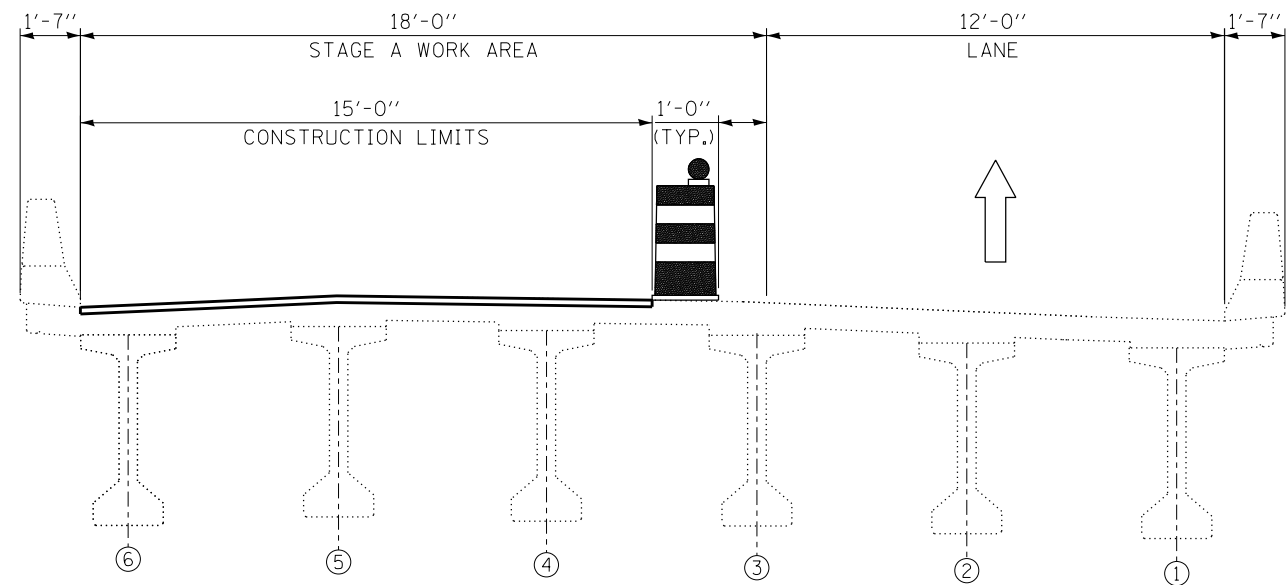
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 SHT NO. SF-02
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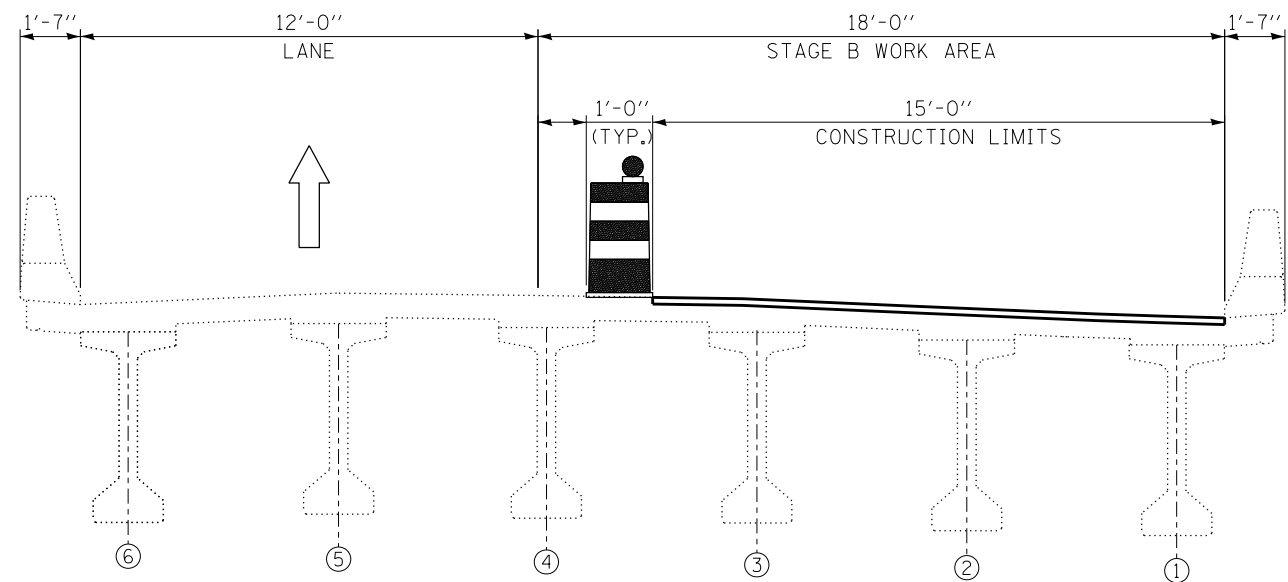


TYPICAL CROSS SECTION
(LOOKING SOUTH)

NOTES:
SEE MOT-18 FOR MORE DETAILS



STAGE A CONSTRUCTION
(LOOKING SOUTH)



STAGE B CONSTRUCTION
(LOOKING SOUTH)

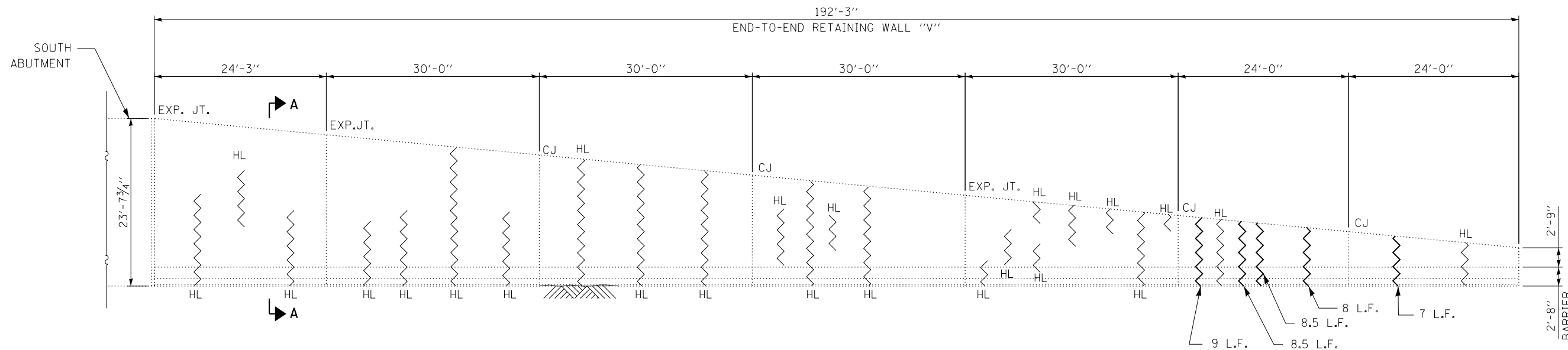
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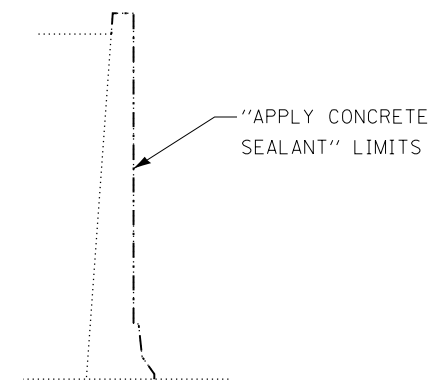
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CONTRACT NO. RR-16-4255
B.N. 1451 (S.N. 022-9976)
CONSTRUCTION STAGING

SF-03 OF SF-10
SHT NO. SF-03
DRAWING NO.
1055 OF 1517



RETAINING WALL "V" ELEVATION
(LOOKING SOUTH)



SECTION A-A

LEGEND

- LOW PRESSURE EPOXY INJECTION
- HAIRLINE CRACK (FOR INFORMATION ONLY)
- HAIRLINE CRACK (FOR INFORMATION ONLY)
- CONSTRUCTION JOINT

NOTES:

1. "APPLY CONCRETE SEALANT" SHALL BE APPLIED TO BACK, TOP, AND ROAD-FACING SURFACES OF RETAINING WALL "V".

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	41
JT524010	APPLY CONCRETE SEALANT	SQ. FT.	3,264

DRAWN BY PAB DATE 3/11/2018
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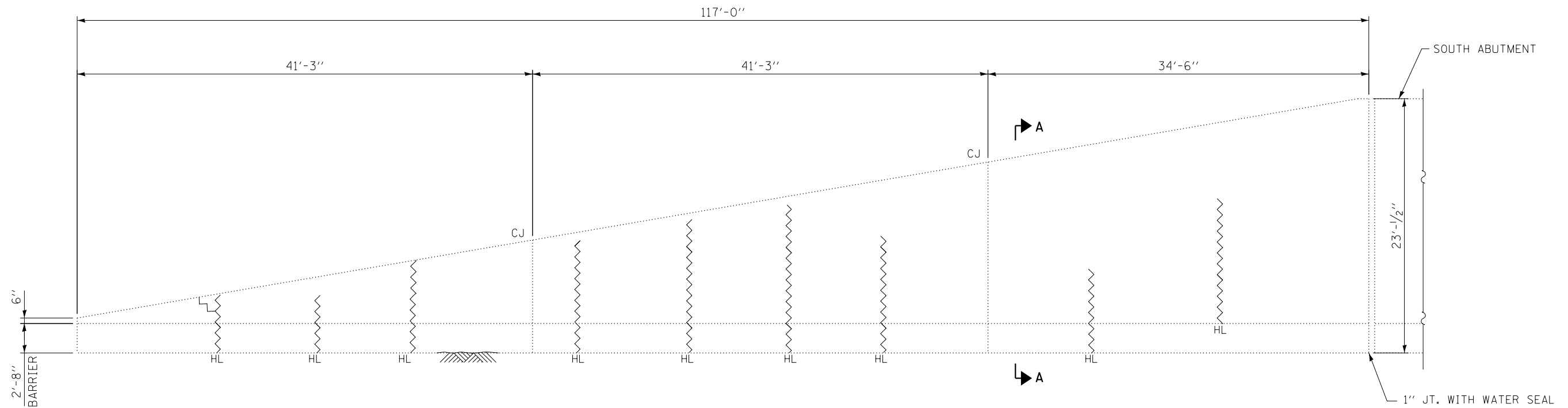


THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

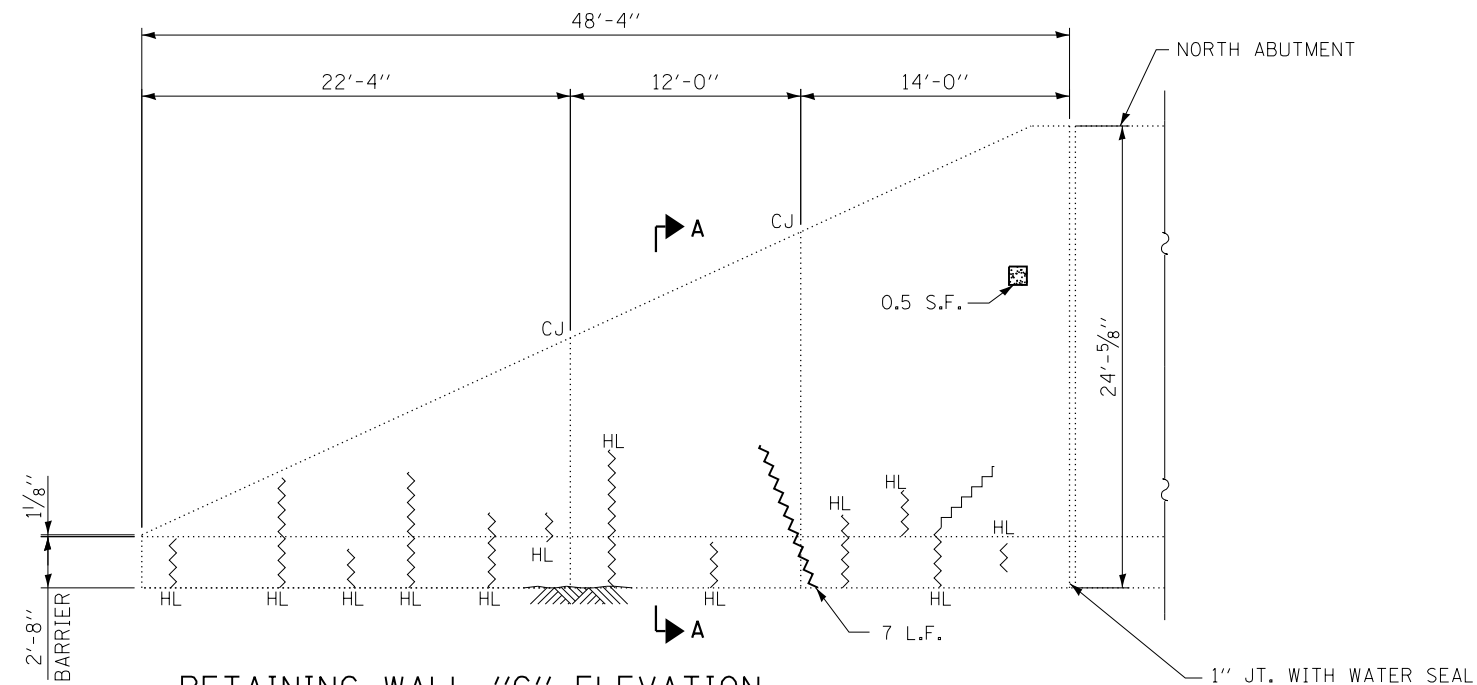
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 B.N. 1451 (S.N. 022-9976)
 RETAINING WALL "V"

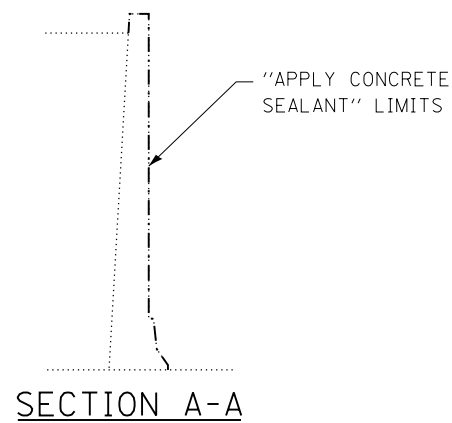
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 SHT NO. SF-05
 DRAWING NO.
 1057 OF 1517



RETAINING WALL "W" ELEVATION
(LOOKING SOUTH)







RETAINING WALL "G" ELEVATION
(LOOKING NORTH)



SECTION A-A

LEGEND

-  CLEANING AND PAINTING EXPOSED REBAR
-  LOW PRESSURE EPOXY INJECTION
-  HAIRLINE CRACKS (FOR INFORMATION ONLY)
-  CONSTRUCTION JOINT

NOTE:

"APPLY CONCRETE SEALANT" SHALL BE APPLIED TO ROAD-FACING SURFACES OF RETAINING WALLS "G" AND "W".

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	7
JT524010	APPLY CONCRETE SEALANT	SQ. FT.	2,586
X0323818	CLEANING AND PAINTING EXPOSED REBAR	SQ. FT.	0.5

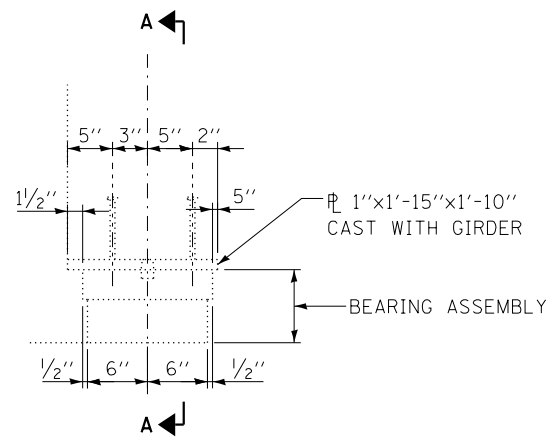
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DRAWN BY PAB DATE 3/11/2018
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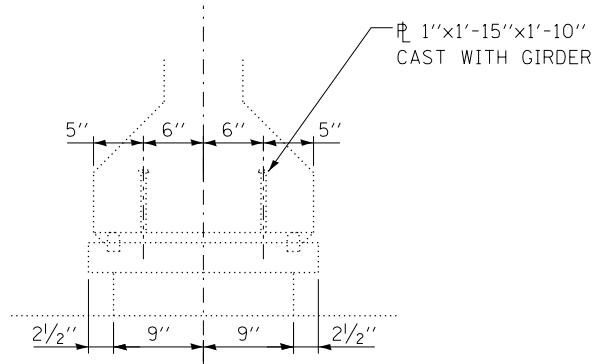


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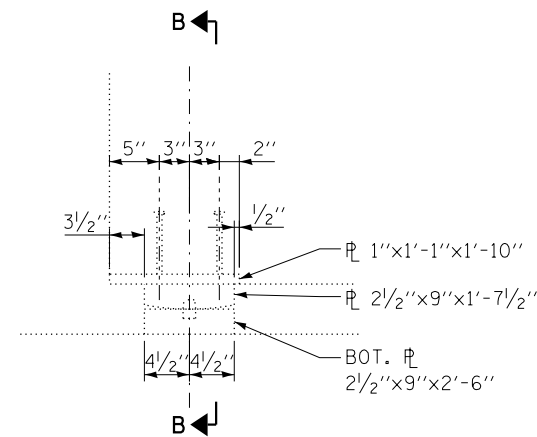
CONTRACT NO. RR-16-4255
B.N. 1451 (S.N. 022-9976)
RETAINING WALLS "W" AND "G" REPAIRS
SHT NO. SF-06
DRAWING NO. 1058 OF 1517



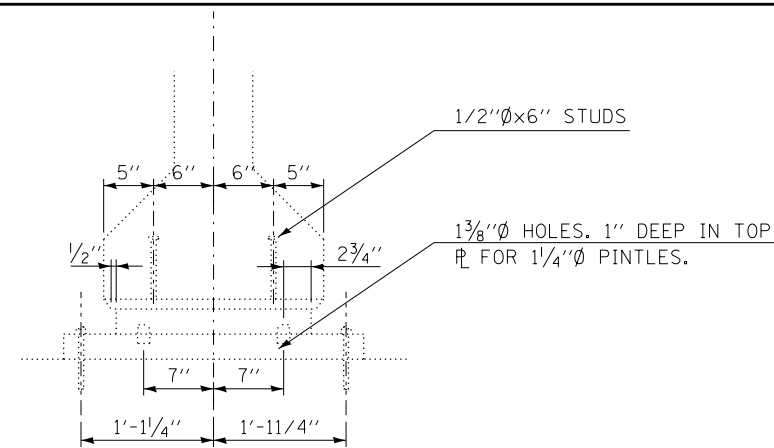
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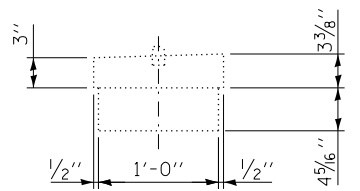
SECTION A-A



SECTION AT N. ABUT.

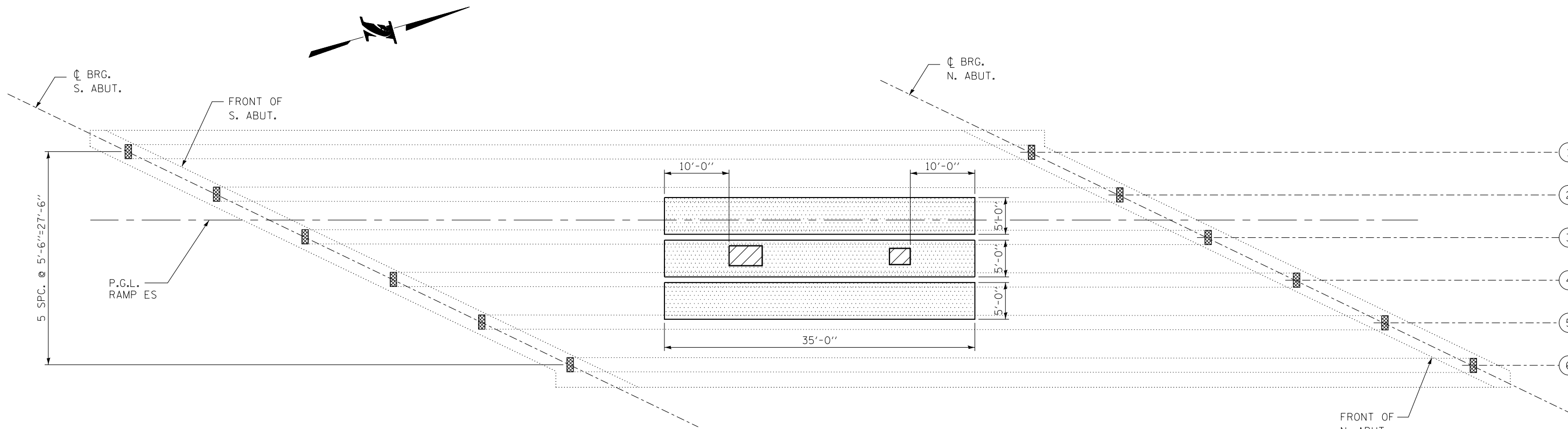


SECTION B-B



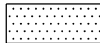
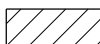

BEARING ASSEMBLY

BEARING DETAILS



FRAMING PLAN

LEGEND

-  PROTECTIVE SHIELD
-  ACCELERATED DECK SLAB REPAIR (PARTIAL) (FOR INFORMATION ONLY, SEE SHT. SF-09)
-  CLEANING AND PAINTING BEARINGS

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
50157300	PROTECTIVE SHIELD	SQ. YD.	59
X0326331	CLEANING AND PAINTING BEARINGS	EACH	12

DRAWN BY PAB DATE 3/11/2018
 CHECKED BY MMZ/MMH DATE 3/11/2018

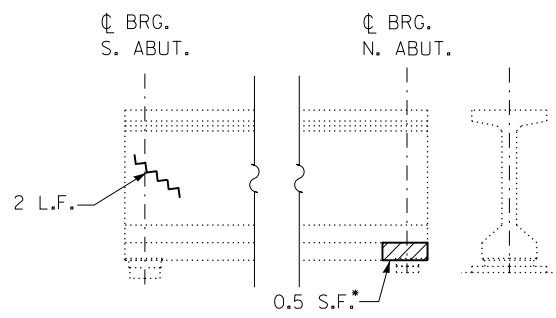


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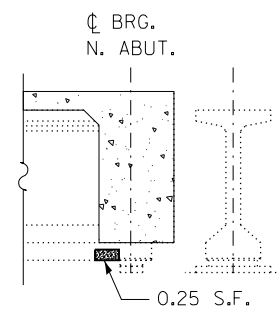
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1451 (S.N. 022-9976)
 BEAM FRAMING PLAN

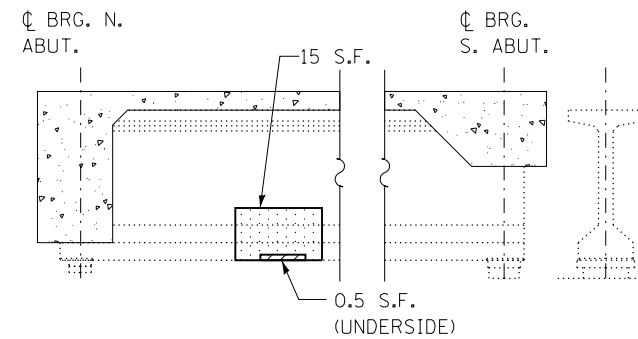
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 SHT NO. SF-07
 DRAWING NO. 1059 OF 1517



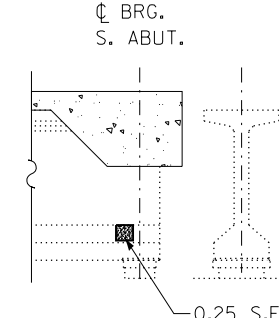
EAST FACE OF BEAM 6



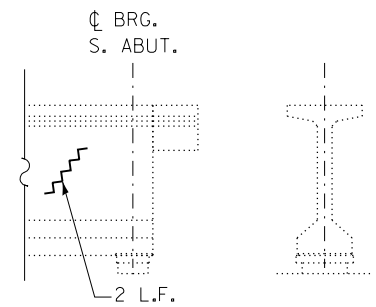
EAST FACE OF BEAM 5



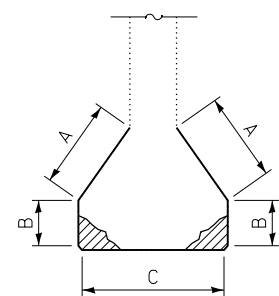
WEST FACE OF BEAM 5



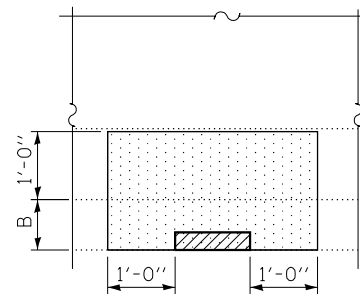
WEST FACE OF BEAM 3



WEST FACE OF BEAM 1



BEAM NO.	A	B	C
1 THROUGH 6	10"	7"	1'-10"



BEAM SCHEDULE

LEGEND

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- FIBER WRAP REPAIR
- HIGH PRESSURE EPOXY INJECTION
- CLEANING AND PAINTING EXPOSED REBAR

NOTE:

ALL BEARINGS TO BE CLEANED AND PAINTED USING "CLEANING AND PAINTING BEARINGS".

* SPALL IS FROM PREVIOUS PATCH

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
JS121300	HIGH PRESSURE EPOXY INJECTION	FOOT	4
JT503100	FIBER WRAP REPAIR	SQ. FT.	15
X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	1
X0323818	CLEANING AND PAINTING EXPOSED REBAR	SQ. FT.	0.5

DRAWN BY PAB DATE 3/11/2018
 CHECKED BY MMZ/MMH DATE 3/11/2018

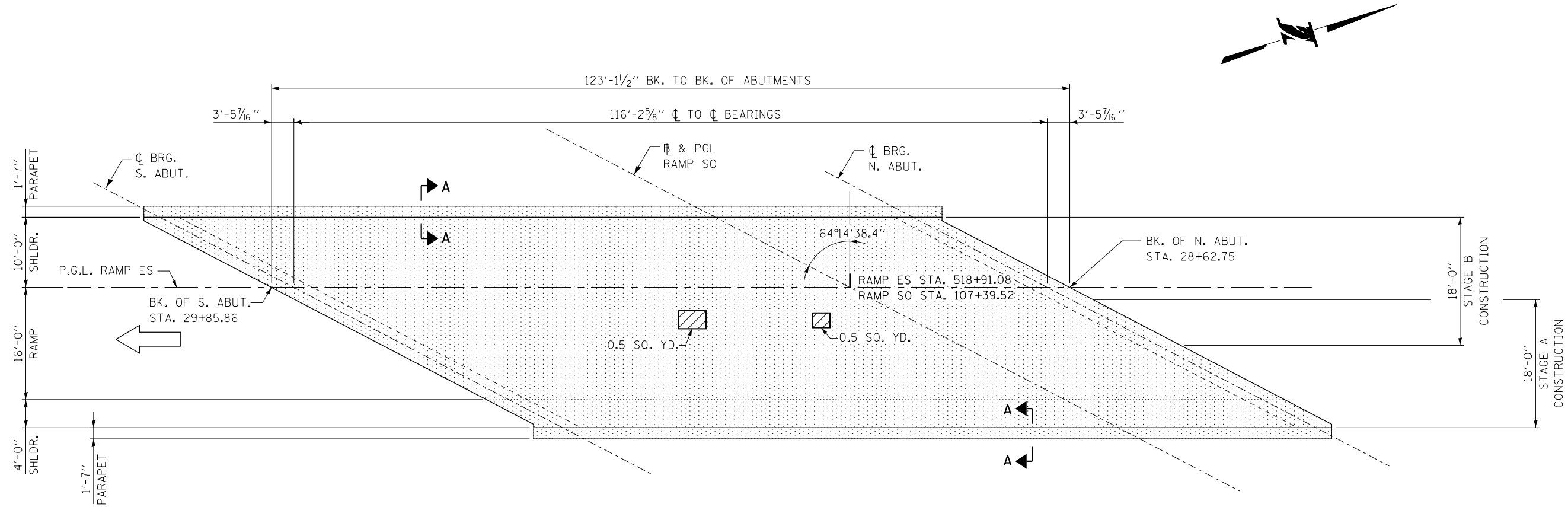


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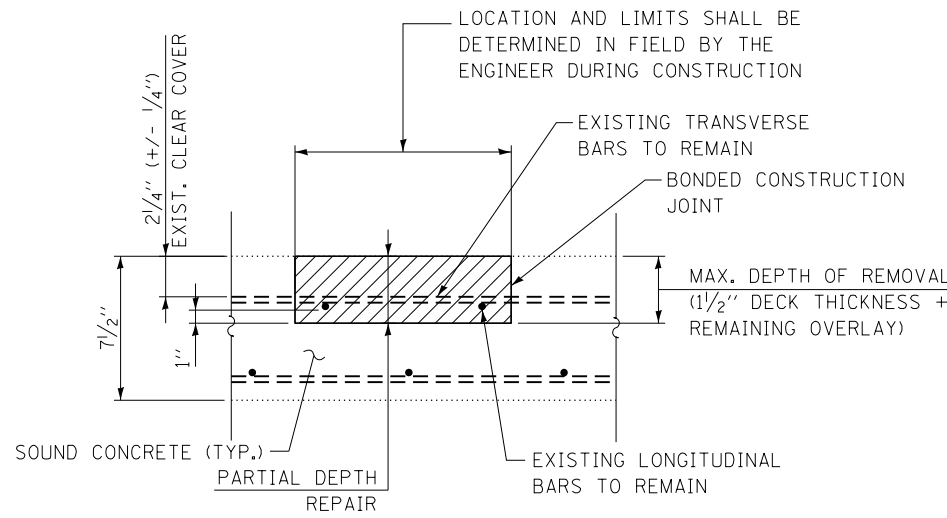
REVISIONS	
NO.	DATE

CONTRACT NO. RR-16-4255
 B.N. 1451 (S.N. 022-9976)
 BEAM REPAIR DETAILS

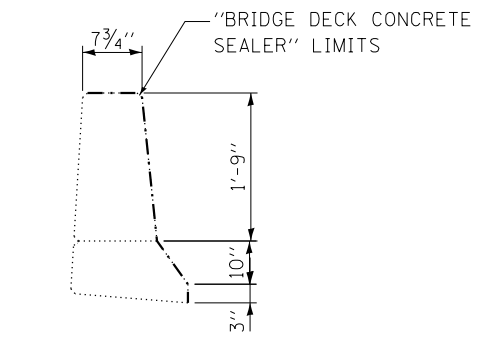
SHT NO. SF-08
 DRAWING NO.
 1060 OF 1517



DECK PLAN



DECK SLAB PARTIAL DEPTH REPAIR DETAIL



SECTION A-A

NOTES:

- "BRIDGE DECK CONCRETE SEALER" SHALL BE APPLIED TO THE ENTIRE DECK SURFACE AND TOP AND TRAFFIC FACES OF DECK PARAPET.
- DECK SURVEY CONDUCTED 10/15/2016.

LEGEND

- ACCELERATED DECK SLAB REPAIR (PARTIAL)
- BRIDGE DECK CONCRETE SEALER

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
JT503012	ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.	1
JT524015	BRIDGE DECK CONCRETE SEALER	SQ. FT.	4,595

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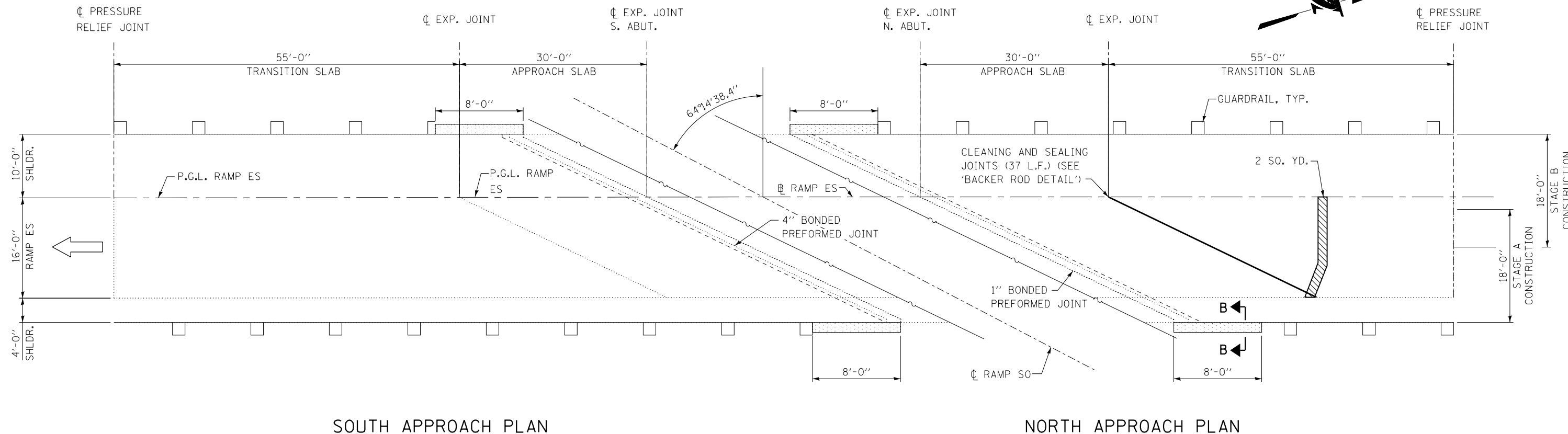


REVISIONS	
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 B.N. 1451 (S.N. 022-9976)
 DECK REPAIR PLAN

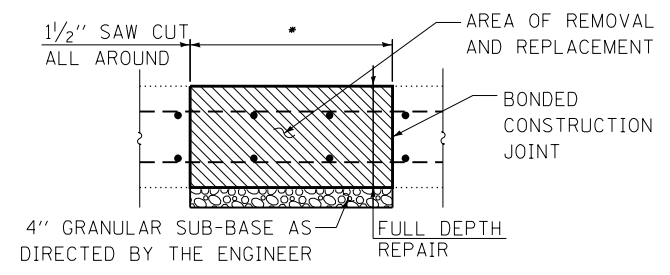
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 SHT NO. SF-09
 DRAWING NO. 1061 OF 1517

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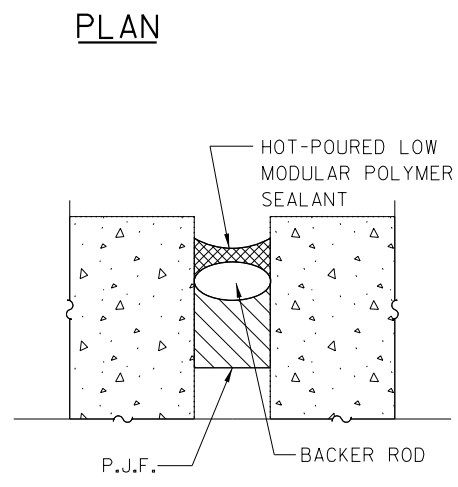
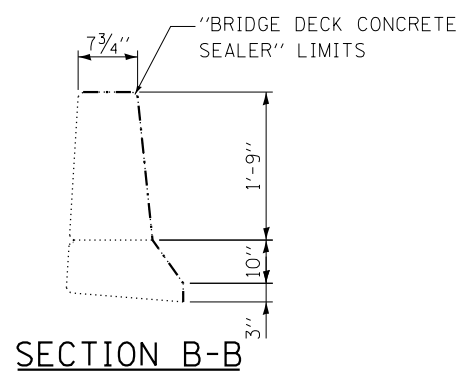
SOUTH APPROACH PLAN

NORTH APPROACH PLAN



APPROACH OR TRANSITION SLAB FULL DEPTH REPAIR

*APPROXIMATE LOCATION AND AREA ARE SHOWN ON THE PLANS. FINAL LIMITS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.



BACKER ROD DETAIL

LEGEND

- ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE I)
- APPLY CONCRETE SEALANT
- CLEANING AND SEALING JOINTS

NOTE:

1. "BRIDGE DECK CONCRETE SEALER" TO BE APPLIED TO BOTH APPROACH AND TRANSITION SLABS AND TOP AND TRAFFIC FACE OF APPROACH PARAPETS.
2. APPROACH SLAB SURVEY CONDUCTED 10/15/2016.

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
J1506010	CLEANING AND SEALING JOINTS	FOOT	37
JT503023	ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE I)	SQ. YD.	2
JT524015	BRIDGE DECK CONCRETE SEALER	SQ. FT.	2,838

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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 B.N. 1451 (S.N. 022-9976)
 APPROACH REPAIR PLAN

SHT NO. SF-10
 DRAWING NO. 1062 OF 1517

BENCHMARK

CONCRETE MONUMENT WITH BRASS CAP LOCATED IN N.E. 1/4 SEC. 2-38-10, ±47' SOUTH OF SOUTH EDGE OF EASTBOUND LANE EAST-WEST TOLLWAY AND ±500' WEST OF OVERHEAD POWERLINES
ELEVATION: 723.817

EXISTING STRUCTURE

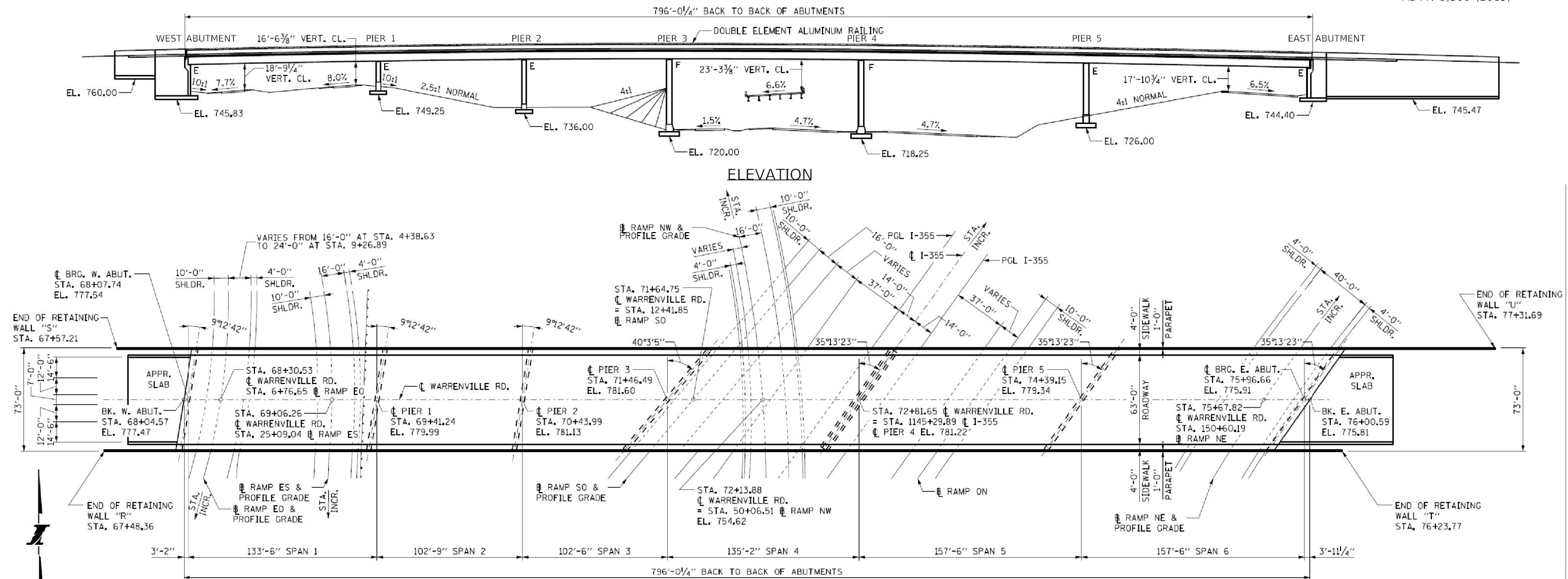
BRIDGE NUMBER 1449 WAS ORIGINALLY CONSTRUCTED IN 1989 UNDER ILLINOIS TOLLWAY CONTRACT CIP-615. THE BRIDGE CARRIES WARRENVILLE ROAD OVER I-355 AND VARIOUS RAMP. THE SUPERSTRUCTURE CONSISTS OF A 6 SPAN, CONTINUOUS, STEEL PLATE GIRDER ON A REINFORCED CONCRETE DECK, SKEWED 35°13'23" TO THE CL OF I-355. THE BRIDGE SPANS 796'-0 1/4" BACK TO BACK OF ABUTMENTS. THE SUBSTRUCTURE CONSISTS OF REINFORCED CONCRETE CLOSED ABUTMENTS AND 5 REINFORCED CONCRETE, TRAPEZOIDAL MULTI-COLUMN PIER BENTS WITH CAP BEAMS AND CRASH WALLS.

TRAFFIC WILL BE MAINTAINED UTILIZING STAGED CONSTRUCTION.

HIGHWAY CLASSIFICATION

WARRENVILLE ROAD (ON ROUTE)
FUNCTIONAL CLASS: MINOR ARTERIAL
ADT: 8,700 (2016)
ADTT: 870 (2016)

I-355 (UNDER)
FUNCTIONAL CLASS: INTERSTATE
ADT: 92,000 (2015)
ADTT: 9,300 (2015)



CONSTRUCTION SPECIFICATIONS

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS (GBSP's).

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

ILLINOIS DEPARTMENT OF TRANSPORTATION STRUCTURAL SERVICES MANUAL ADOPTED JUNE 30, 2017.

DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS, 17TH EDITION WITH ALL SUBSEQUENT INTERIMS

ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL ADOPTED MARCH 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL DATED JANUARY 2012

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGN MEMORANDUMS

DESIGN LOADS

EXISTING STRUCTURE

LIVE LOAD:
HS20-44

DEAD LOAD:
25 P.S.F. FUTURE WEARING SURFACE

DESIGN STRESSES

EXISTING UNITS

f'c = 4,000 PSI (CONCRETE)
fy = 60,000 PSI (REINFORCEMENT)
fy = 50,000 PSI (FLANGES AND WEB STRUCTURAL STEEL)
fy = 36,000 PSI (STIFFENERS AND CROSS FRAMES STRUCTURAL STEEL)

FIELD UNITS

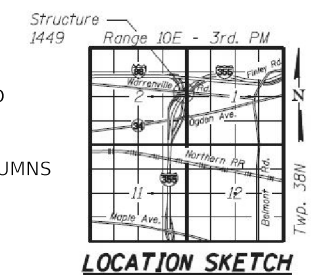
f'c = 3,500 PSI (CLASS SI SUBSTRUCTURE REPAIRS)
f'c = 4,000 PSI (CLASS BS PARAPETS AND BARRIER REPAIRS)
f'c = 4,000 PSI (CLASS AX BRIDGE DECK & APPROACH SLAB REPAIRS)
fy = 60,000 PSI (REINFORCEMENT)

SCOPE OF WORK

- REPAIR SPALLED AND UNSOUND CONCRETE ON BRIDGE AND APPROACH PARAPETS.
- INSTALL PROTECTIVE SHIELDING.
- PARTIAL DEPTH AND FULL DEPTH BRIDGE DECK REPAIRS.
- PARTIAL DEPTH APPROACH SLAB REPAIRS.
- APPLY BRIDGE DECK CONCRETE SEALANT TO DECK, SIDEWALKS AND PARAPETS.

SCOPE OF WORK (CONTINUED)

- REMOVE LOOSE CONCRETE FROM DECK SOFFIT OVER TRAFFIC LANES AND SHOULDERS.
- CLEAN AND PAINT EXPOSED REBAR IN DECK SOFFIT.
- REPAIR SPALLED AND UNSOUND CONCRETE ON ABUTMENT WALLS, CAPS AND BARRIERS.
- CLEAN AND SEAL CRACKS >1/16" ON ABUTMENT WALLS, CAPS AND BARRIERS.
- REPAIR SPALLED AND UNSOUND CONCRETE ON CENTER PIER COLUMNS AND CAP.
- CLEAN AND SEAL CRACKS >1/16" ON PIER COLUMNS AND CAP.
- APPLY CONCRETE SEALANT TO ABUTMENTS, ABUTMENT CAPS, BEARING SEATS AND BACKWALLS.
- APPLY CONCRETE SEALANT TO PIER 1 W, S & N FACES OF THE CRASH WALL, COLUMNS AND CAP FACE.
- APPLY CONCRETE SEALANT TO PIER 3 E, S & N FACES OF THE CRASH WALL AND COLUMNS.
- APPLY CONCRETE SEALANT TO ALL FACES OF PIER 4 CRASH WALL AND COLUMNS.
- REPAIR DAMAGED DRAINAGE SYSTEM AT WEST ABUTMENT.



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DRAWN BY JW DATE 03/11/2018
CHECKED BY NH/KS DATE 03/11/2018

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2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1449
GENERAL PLAN AND ELEVATION

SFA-01 OF SFA-14
SHT NO. SFA-01
DRAWING NO. 1063 OF 1517

GENERAL NOTES

CONSTRUCTION

- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION TOLERANCES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.
- CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES ARE SHOWN FOR INFORMATION ONLY.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COSTS WILL BE AT THE CONTRACTOR'S EXPENSE.
- NO CONCRETE CUTTING WILL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINES BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E. 1-800-892-0123.
- EXISTING REINFORCEMENT WHICH IS TO BE INCORPORATED INTO THE NEW CONSTRUCTION SHALL BE BLAST CLEANED TO GREY METAL, STRAIGHTENED (WITHOUT HEATING), AND CUT TO FIT. COST SHALL BE INCLUDED WITH THAT FOR "CONCRETE REMOVAL".
- WHENEVER MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF THE EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.
- THE PROTECTIVE SHIELD SYSTEM SHALL EXTEND A MINIMUM OF 10 FEET BEYOND THE INDICATED LIMITS OF REPAIR SHOWN IN THE PLANS OR 5 FEET BEYOND THE ACTUAL LIMITS OF PARTIAL OR FULL DEPTH REPAIRS AS IDENTIFIED IN THE FIELD, WHICHEVER IS GREATER.
- CONCRETE SEALANT SHALL BE APPLIED TO THE TOP AND TRAFFIC FACE OF ALL REPAIRED AREAS OF THE BRIDGE DECK REPAIRS AND PARAPET, INCLUDING PARAPET ON BRIDGE WINGWALLS. SEALANT SHALL ALSO BE APPLIED TO THE REPAIRED AREAS OF THE VISIBLE FACES OF THE PIER COLUMNS, CRASHWALLS AND CAPS, PIERS AND ABUTMENTS, BACKWALLS, AND BEARING SEATS. EXISTING SURFACES SHALL BE POWERED WASHED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 592 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF ILLINOIS, SHALL PREPARE AND SUBMIT STRUCTURAL ASSESSMENT REPORTS (SARS) FOR THE PROPOSED WORK ASSOCIATED WITH REMOVING, MODIFYING OR RECONSTRUCTING EXISTING STRUCTURES OR PORTIONS THEREOF. UNLESS NOTED OTHERWISE, A SAR SHALL BE REQUIRED WHEN THE CONTRACTOR'S MEANS AND METHODS APPLY LOADS TO THE STRUCTURE OR CHANGE ITS STRUCTURAL BEHAVIOR. A SAR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING WORK, IN ACCORDANCE WITH THE LATEST IDOT GUIDE BRIDGE SPECIAL PROVISION, "STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS". THIS INCLUDES THE WORK COVERED BY SEPARATE SARS WHICH MAY BE SUBMITTED AT DIFFERENT TIMES OR AS DICTATED BY THE CONTRACTOR'S SCHEDULE.
- AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP) WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS. AND THE LATEST NATIONAL BRIDGE INSPECTIONS STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.

- ALL STAINLESS STEEL HARDWARE FOR DRAINAGE SYSTEMS SHALL BE COATED WITH ANTI-SEIZE COMPOUND.

CAST-IN-PLACE CONCRETE

- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF 1 FOOT BELOW FINISHED GROUND LEVEL.

REINFORCING BARS

- REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM 706), GRADE 60, DEFORMED BARS.
- REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.

- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

LIST OF ABBREVIATIONS

ABUT.	- ABUTMENT
APPROX.	- APPROXIMATE
BRG.	- BEARING
CL.	- CLEAR
DIM.	- DIMENSION
E.	- EAST
EXIST.	- EXISTING
MAX.	- MAXIMUM
MIN.	- MINIMUM
N.	- NORTH
N.B.	- NORTHBOUND
NO.	- NUMBER
P.G.L.	- PROFILE GRADE LINE
S.	- SOUTH
S.B.	- SOUTHBOUND
SHLDR.	- SHOULDER
STA.	- STATION
TYP.	- TYPICAL
W.	- WEST

INDEX OF SHEETS

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SFA-02	GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
SFA-03	CONSTRUCTION STAGING
SFA-04	EAST ABUTMENT REPAIRS
SFA-05	WEST ABUTMENT REPAIRS
SFA-06	PIER 1 REPAIRS
SFA-07	PIER 2 REPAIRS
SFA-08	PIER 3 REPAIRS
SFA-09	PIER 4 REPAIRS
SFA-10	PIER 5 REPAIRS
SFA-11	DECK REPAIRS PLAN
SFA-12	DECK SOFFIT REPAIR PLAN
SFA-13	APPROACH SLAB REPAIRS
SFA-14	MISCELLANEOUS REPAIRS

TOTAL BILL OF MATERIAL

PAY ITEMS	DESCRIPTION	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	QUANTITY	RECORDED QUANTITY
50157300	PROTECTIVE SHIELD	SQ. YD.		876	876	
J1505040	REPAIR BRIDGE DRAINAGE SYSTEM	EACH		1	1	
J5121200	LOW PRESSURE EPOXY INJECTION	FOOT	217		217	
JT503012	ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.		9	9	
JT503013	ACCELERATED APPROACH SLAB REPAIR (PARTIAL)	SQ. YD.		5	5	
JT503022	ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ. YD.		0.5	0.5	
JT503032	ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ. YD.		0.8	0.8	
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ. FT.	190	43	233	
JT524010	APPLY CONCRETE SEALANT	SQ. FT.	16627		16627	
JT524015	BRIDGE DECK CONCRETE SEALER	SQ. FT.		53475	53475	
X0323818	CLEANING AND PAINTING EXPOSED REBAR	SQ. FT.		181	181	
Z0013300	CONCRETE REMOVAL (SPECIAL)	SQ. YD.		0.5	0.5	

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 CHECKED BY **NH/KS** DATE **03/11/2018**



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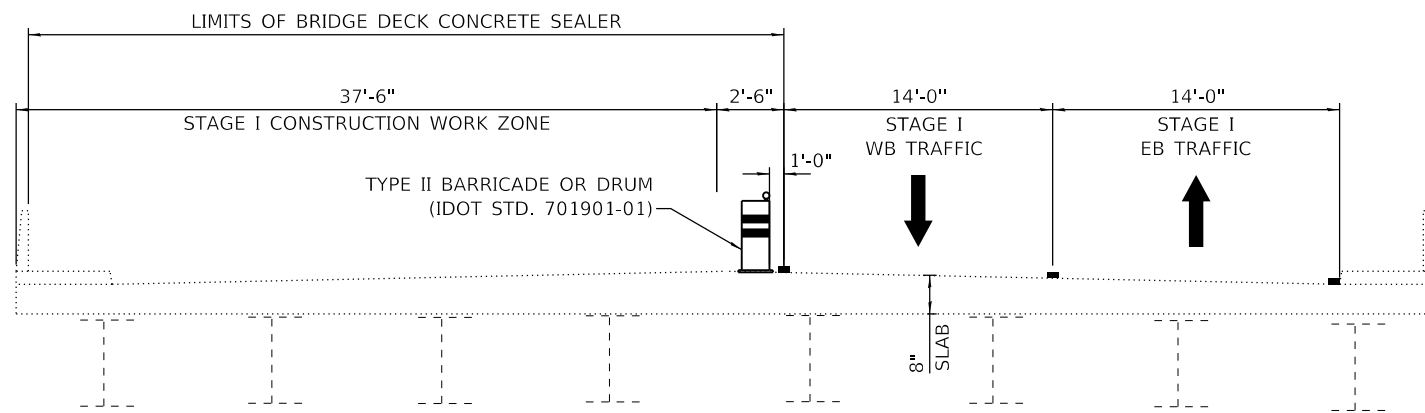


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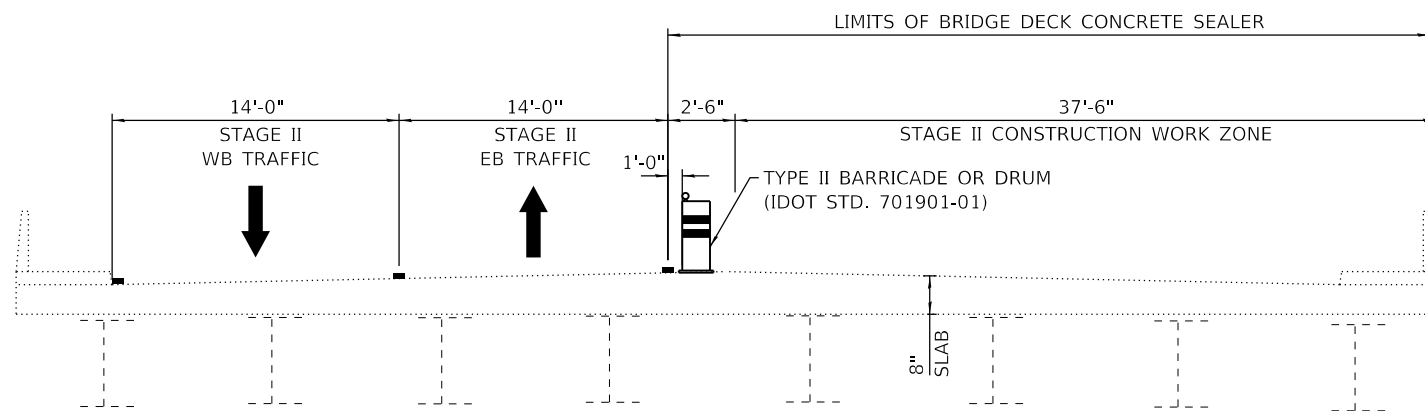
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1449 - GENERAL NOTES,
 INDEX OF SHEETS & TOTAL BILL OF MATERIAL

SFA-02 OF SFA-14
 SHT NO. SFA-02
 DRAWING NO.
 1064 OF 1517



STAGE I CONSTRUCTION
(WARRENVILLE RD, LOOKING EAST)



STAGE II CONSTRUCTION
(WARRENVILLE RD, LOOKING EAST)

CONSTRUCTION SEQUENCING

1. I-355 MAINLINE STAGE I: REPAIR AND SEAL EAST FACE OF PIER 3.
2. I-355 MAINLINE STAGE II: REPAIR AND SEAL PIER 4.
3. I-88 EB RAMP TO OGDEN AVENUE, PARTIAL RAMP CLOSURE: REFER TO MOT SHEET 257. REPAIR AND SEAL WEST ABUTMENT. REPAIR DRAINAGE SYSTEM.
4. I-88 EB RAMP TO I-355 SB, PARTIAL RAMP CLOSURE: REFER TO MOT SHEET 257. REPAIR AND SEAL WEST FACE OF PIER 1.
5. I-355 NB RAMP TO I-88 EB, PARTIAL RAMP CLOSURE: REFER TO MOT SHEET 257. REPAIR AND SEAL EAST ABUTMENT.
6. OFF-ROAD OPERATIONS: REPAIR EAST FACE PIER 1, PIER 2, WEST FACE PIER 3 AND PIER 5.
7. WARRENVILLE STAGE I: PARTIAL DEPTH DECK PATCHING, SEAL DECK AND PARAPET, NORTH HALF.
8. WARRENVILLE STAGE II: PARTIAL DEPTH DECK PATCHING, SEAL DECK AND PARAPET, SOUTH HALF.

NOTES

1. THE STAGED CONSTRUCTION SECTIONS SHOWN ARE ONLY FOR BRIDGE DECK AND PARAPET REPAIRS. SEE MAINLINE I-355 MOT PLANS FOR MORE DETAILS REGARDING MOT.
2. FOR DETAILS REGARDING PARTIAL RAMP CLOSURES, REFER TO SHEETS MOT-237 AND MOT-238.
3. UTILIZE IDOT HIGHWAY STANDARD 701611-01 URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN FOR FURTHER DETAILS ON CONSTRUCTION STAGING FOR WARRENVILLE RD.

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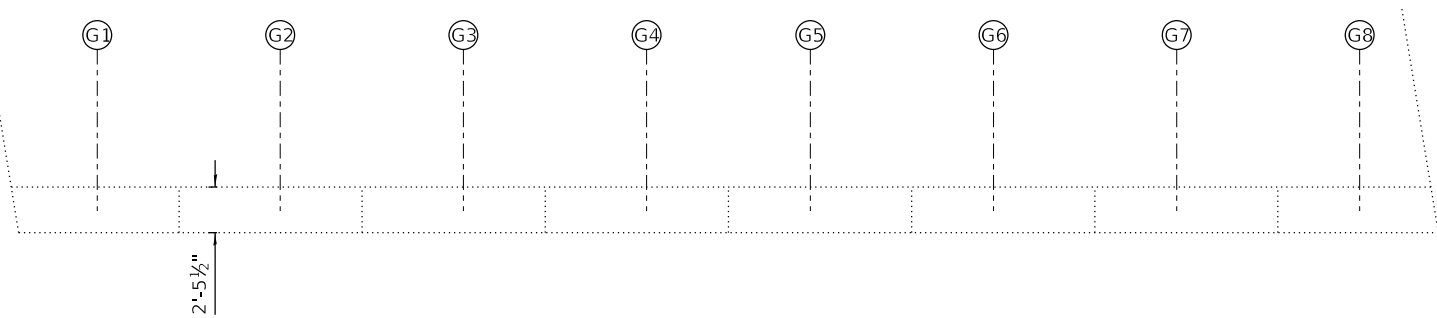


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CONTRACT NO. RR-16-4255
BRIDGE NO. 1449
CONSTRUCTION STAGING

SFA-03 OF SFA-14
SHT NO. SFA-03
DRAWING NO.
1065 OF 1517



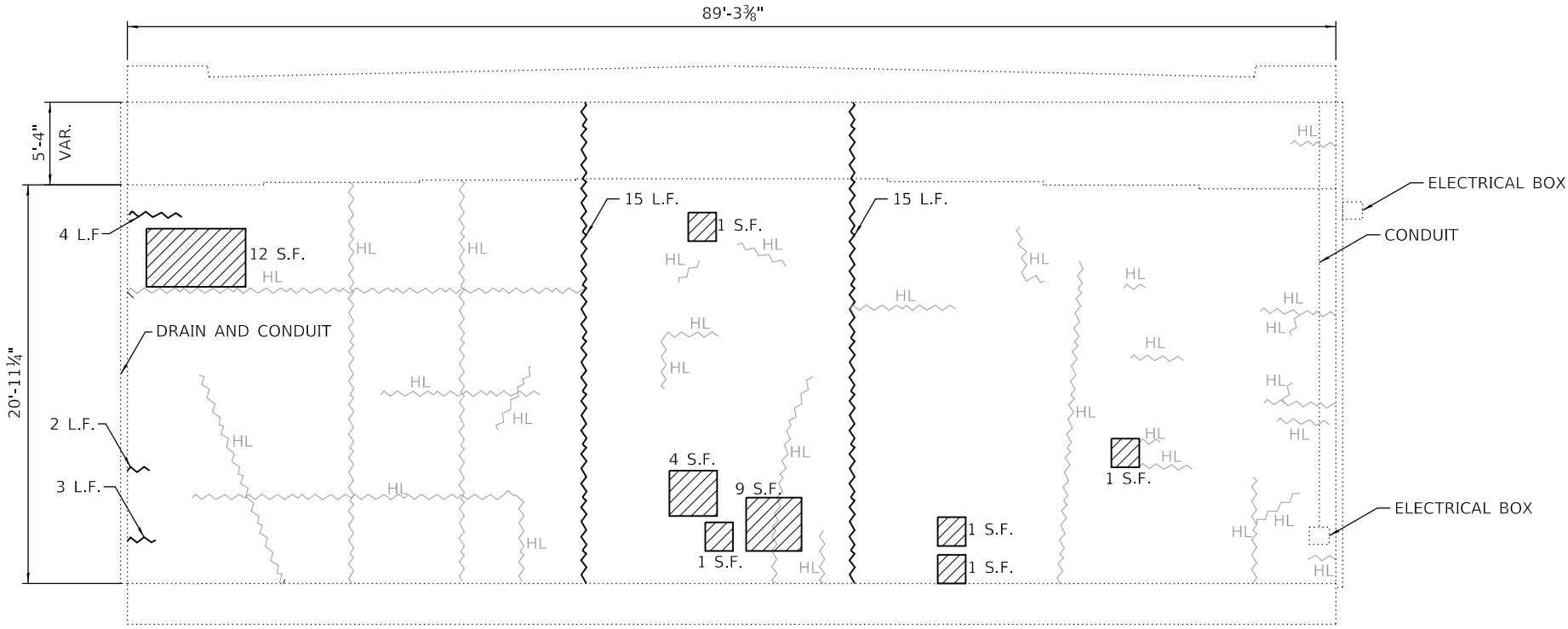
EAST ABUTMENT
(PLAN VIEW)

NOTES:

APPLY CONCRETE SEALER TO ABUTMENT FACE, ABUTMENT SEAT, AND BACKWALL.

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.



EAST ABUTMENT
(LOOKING EAST)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	39
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	30
APPLY CONCRETE SEALANT	SQ. FT.	2565

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK (FOR REFERENCE ONLY)
- LOW PRESSURE EPOXY INJECTION

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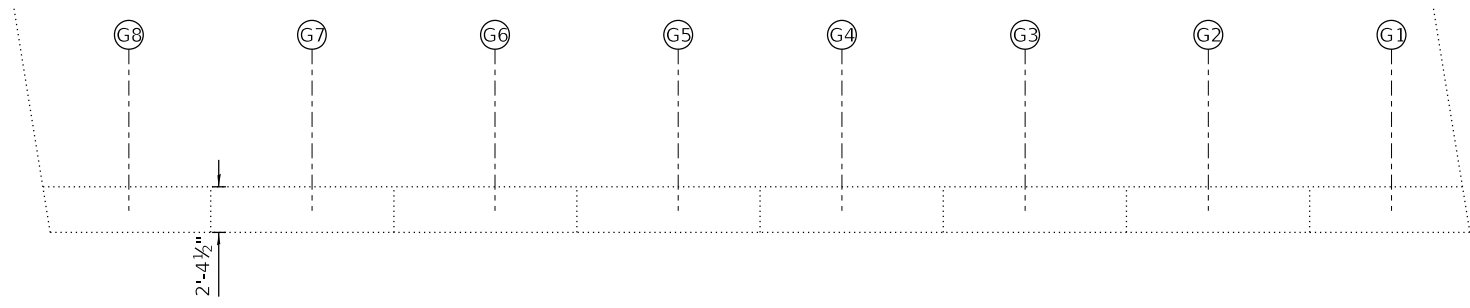
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CONTRACT NO. RR-16-4255
 BRIDGE NO. 1449
 EAST ABUTMENT REPAIRS

SFA-04 OF SFA-14
 SHT NO. SFA-04
 DRAWING NO.
 1066 OF 1517



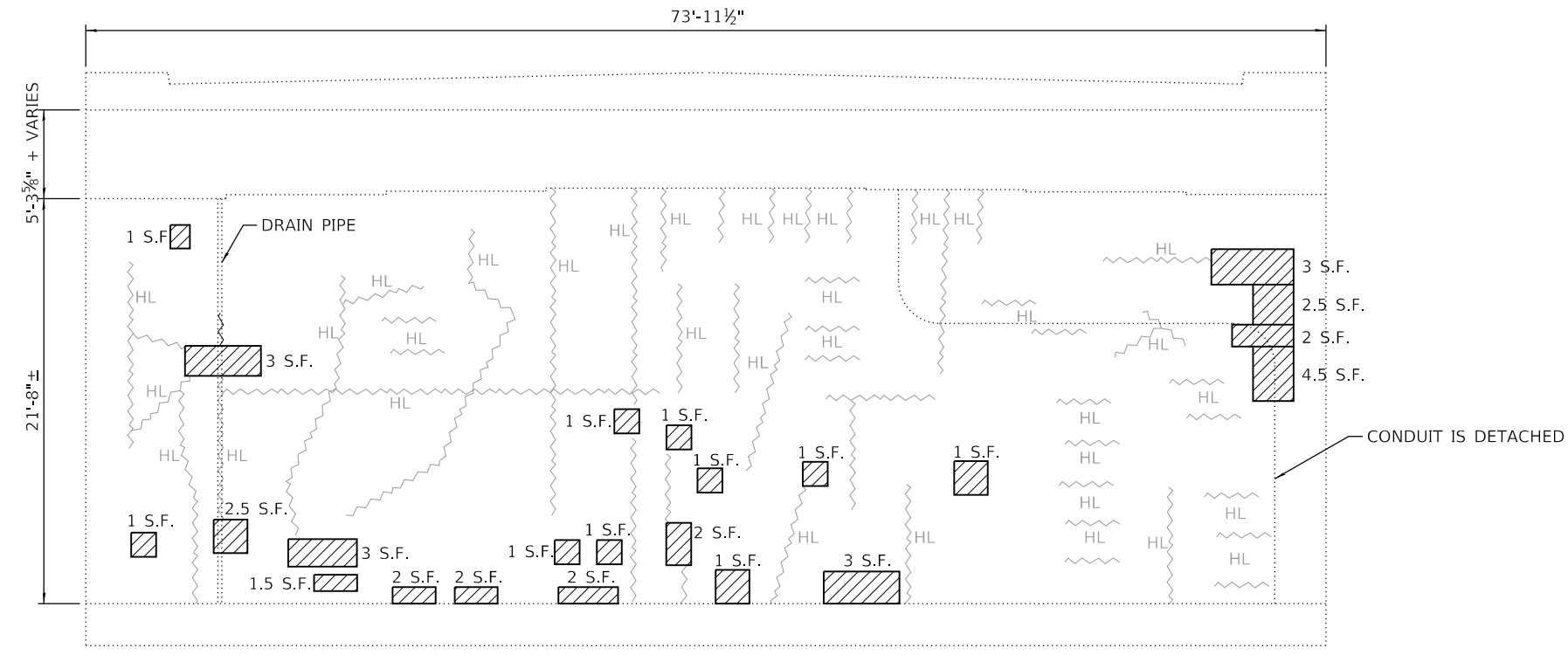
WEST ABUTMENT
(PLAN VIEW)

NOTES:

APPLY CONCRETE SEALER TO ABUTMENT FACE, ABUTMENT SEAT, AND BACKWALL.

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.



WEST ABUTMENT
(LOOKING WEST)

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HL HAIRLINE CRACK (FOR REFERENCE ONLY)
- L.F. LOW PRESSURE EPOXY INJECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	43
APPLY CONCRETE SEALANT	SQ. FT.	2170

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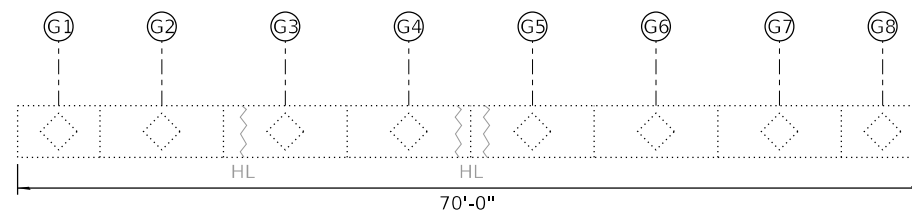
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lombard, il 60148
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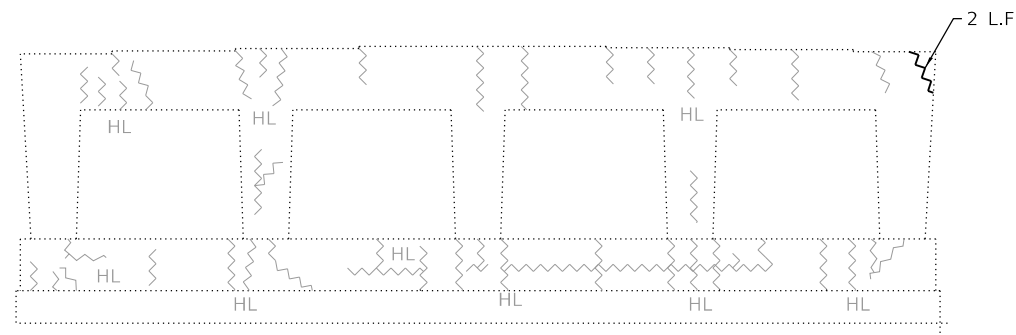
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1449
WEST ABUTMENT REPAIRS

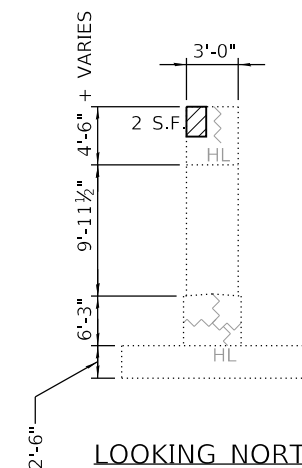
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SHT NO. SFA-05
DRAWING NO. 1067 OF 1517



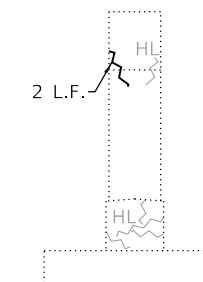
TOP OF PIER



PIER 1 ELEVATION
(LOOKING WEST)



LOOKING NORTH



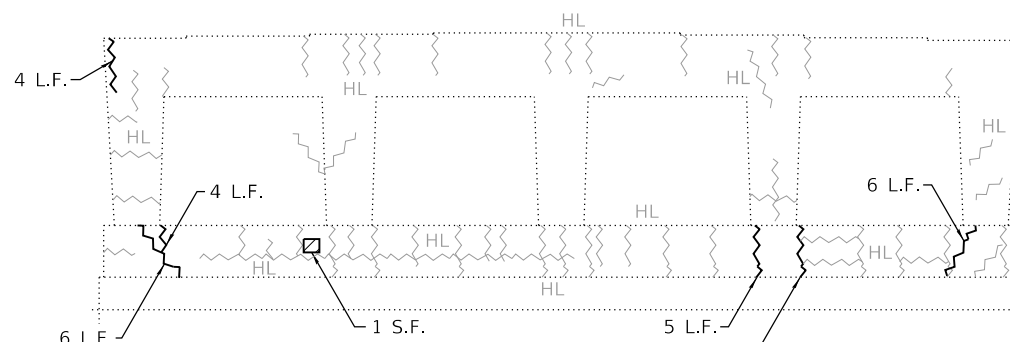
LOOKING SOUTH

NOTES:

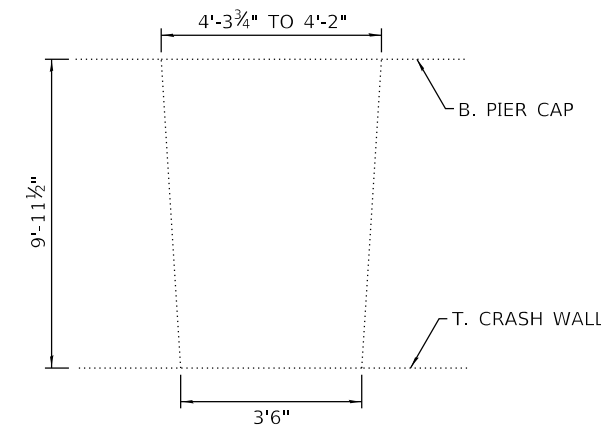
APPLY CONCRETE SEALER TO WEST FACE AND ENDS OF CRASHWALL, WEST AND SIDE FACES OF COLUMNS, AND WEST AND END FACES OF PIER CAP.

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.



PIER 1 ELEVATION
(LOOKING EAST)



COLUMN DIMENSION DETAIL



TOP OF CRASH WALL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	34
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	3
APPLY CONCRETE SEALANT	SQ. FT.	1543

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK (FOR REFERENCE ONLY)
- LOW PRESSURE EPOXY INJECTION

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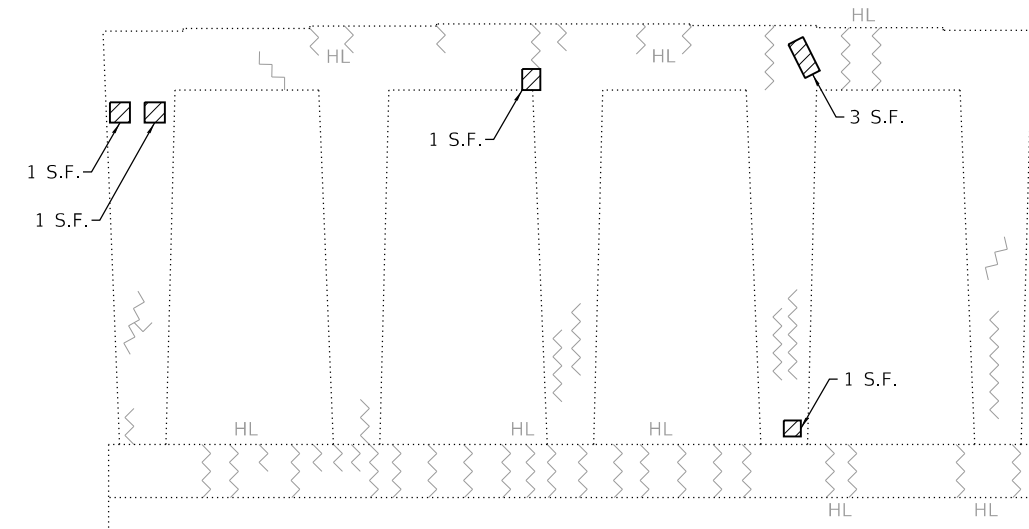
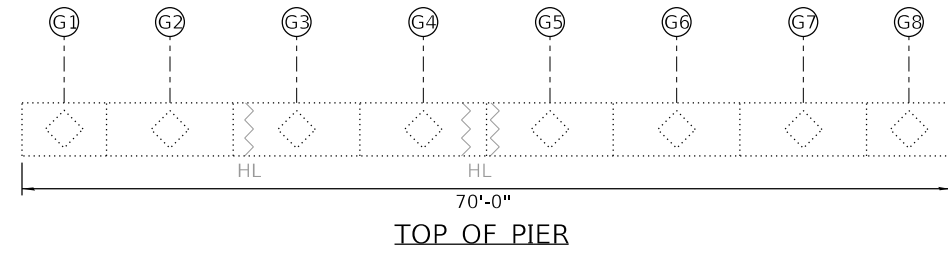


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ILLINOIS 60515

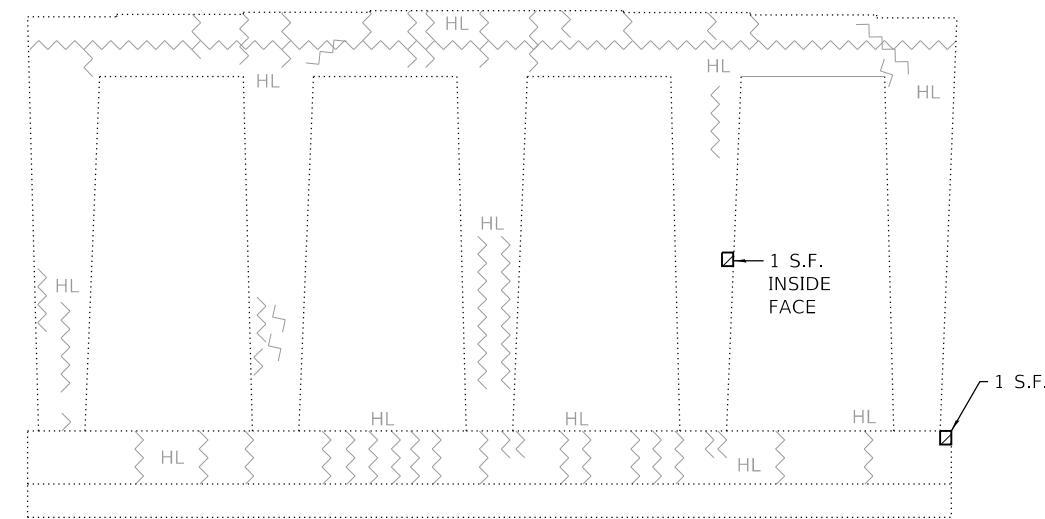
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NO.	DATE

CONTRACT NO. RR-16-4255	SHT NO. SFA-06
BRIDGE NO. 1449	DRAWING NO.
PIER 1 REPAIRS	1068 OF 1517

SFA-06 OF SFA-14



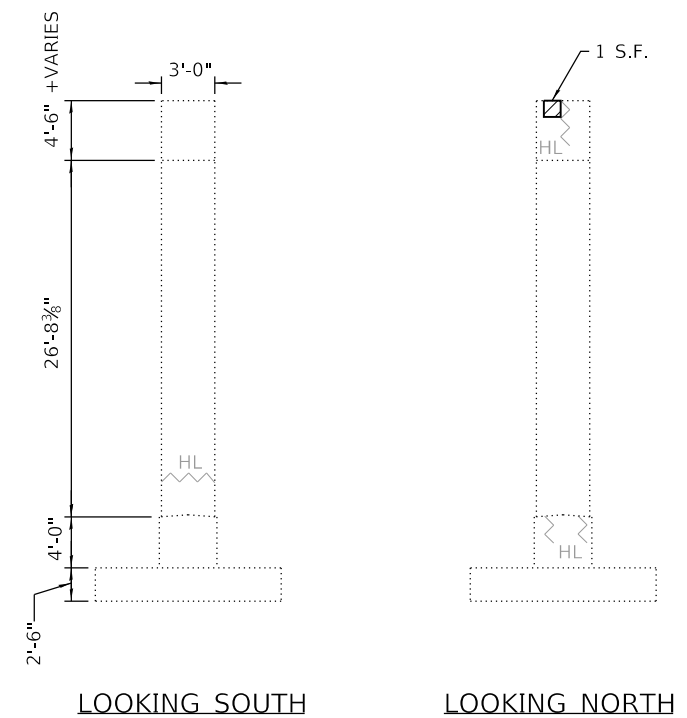
PIER 2 ELEVATION
(LOOKING WEST)



PIER 2 ELEVATION
(LOOKING EAST)

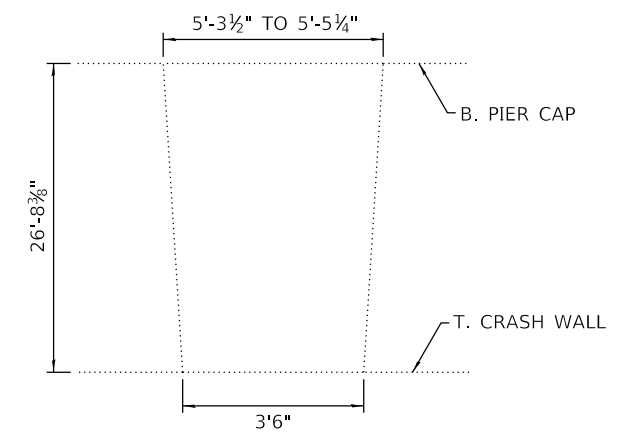


TOP OF CRASH WALL



LOOKING SOUTH

LOOKING NORTH



COLUMN DIMENSION DETAIL

NOTES:
REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	9

- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - HAIRLINE CRACK (FOR REFERENCE ONLY)
 - LOW PRESSURE EPOXY INJECTION

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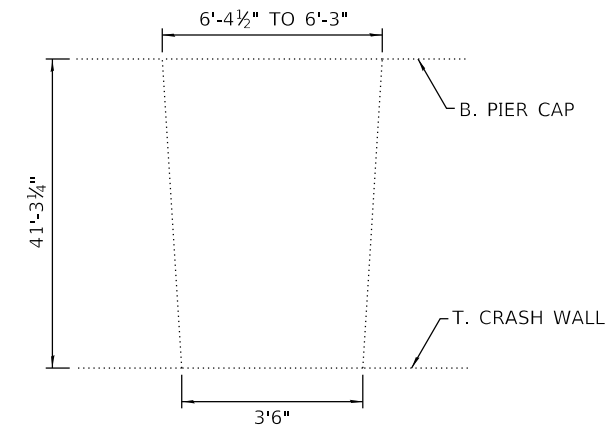
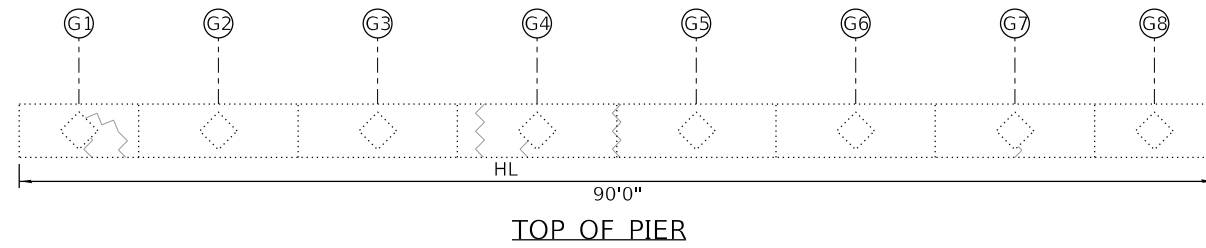
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lombard, il 60148
phone: 855-533-1700



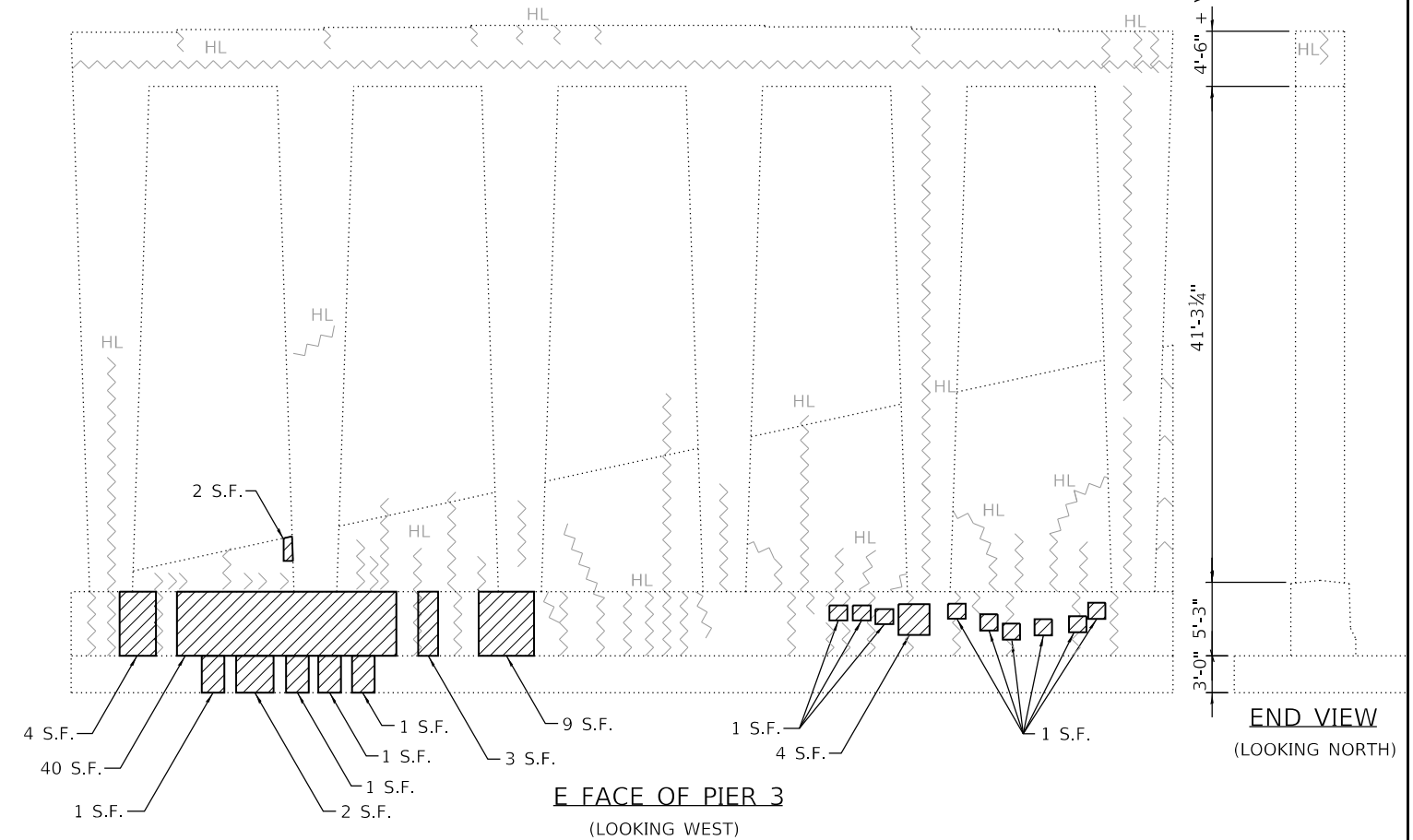
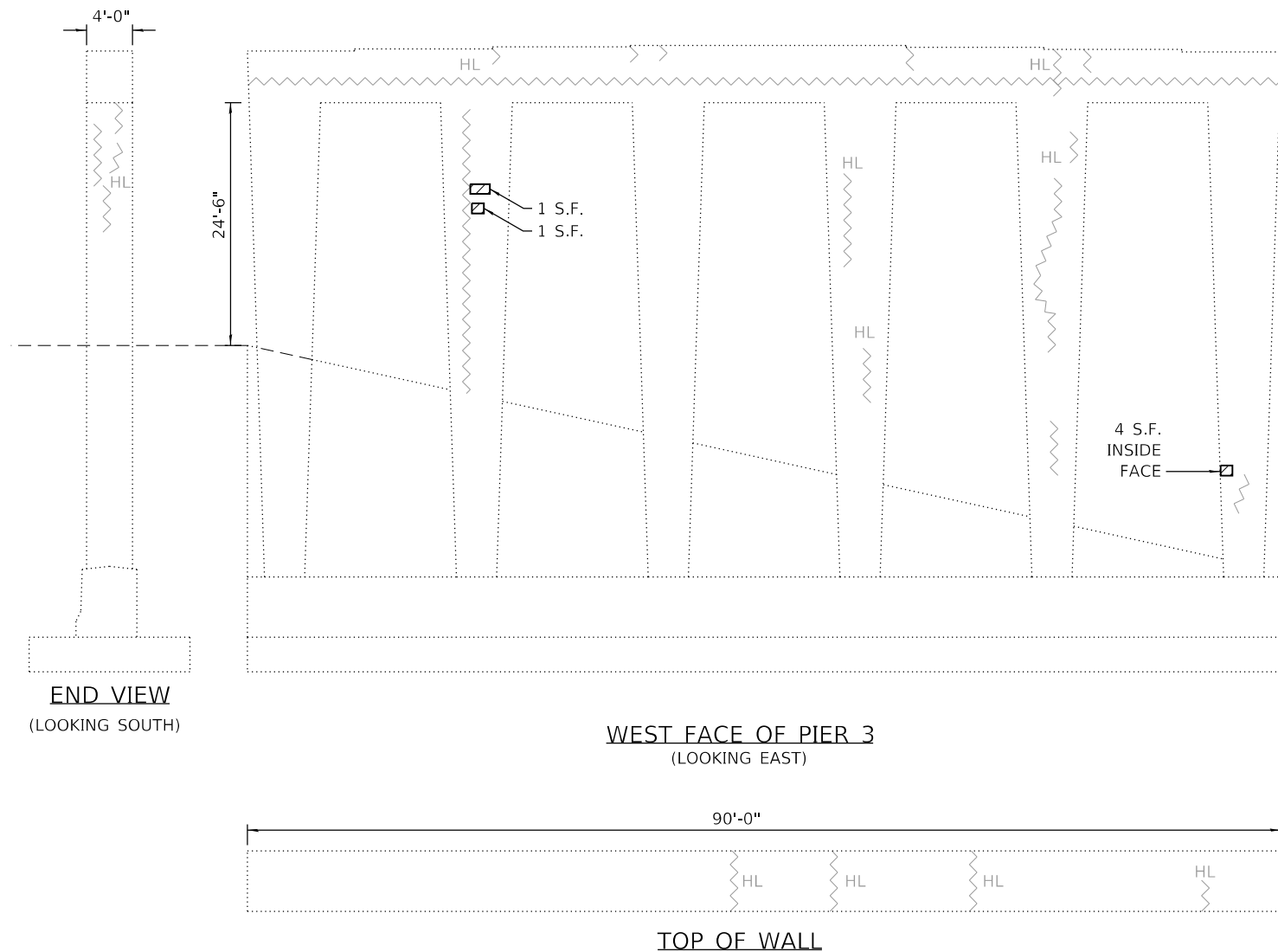
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NO.	DATE	

CONTRACT NO. RR-16-4255
BRIDGE NO. 1449
PIER 2 REPAIRS

SFA-07 OF SFA-14
SHT NO. SFA-07
DRAWING NO. 1069 OF 1517



COLUMN DIMENSION DETAIL



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	83
APPLY CONCRETE SEALANT	SQ. FT.	4768

NOTES:

APPLY CONCRETE SEALER TO EAST FACE AND ENDS OF CRASHWALL, EAST AND SIDE FACES OF COLUMNS, AND TOP AND BOTH FACES OF RETAINING WALL.

REPAIRS OF THE EXISTING PIER SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK (FOR REFERENCE ONLY)
- LOW PRESSURE EPOXY INJECTION

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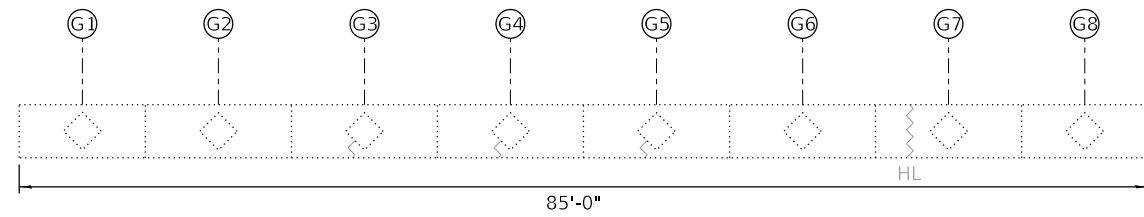


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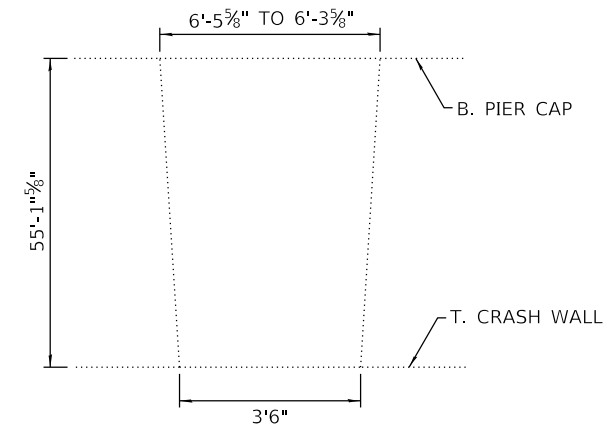
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CONTRACT NO. RR-16-4255
 BRIDGE NO. 1449
 PIER 3 REPAIRS

SFA-08 OF SFA-14
 SHT NO. SFA-08
 DRAWING NO. 1070 OF 1517

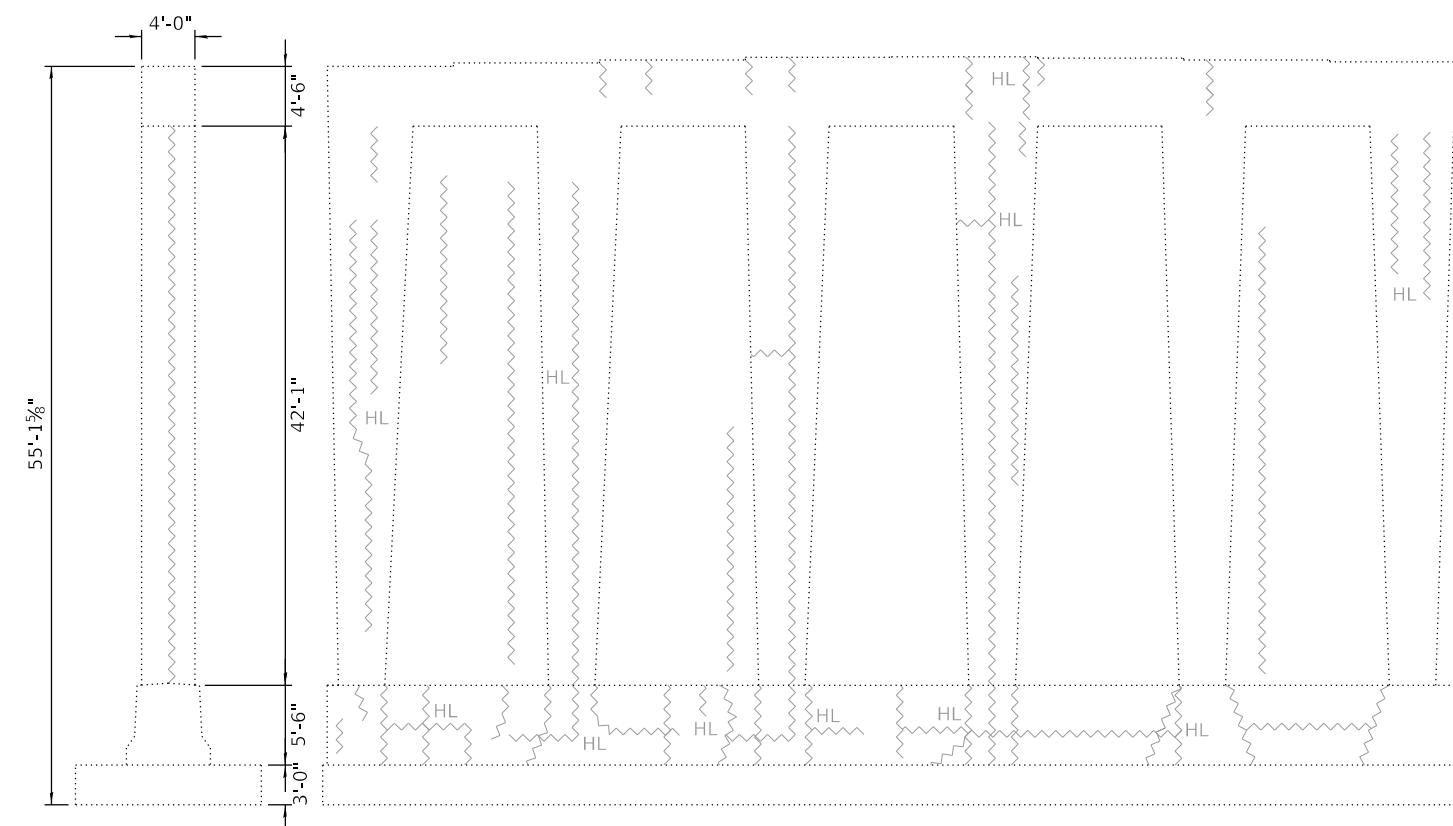


TOP OF PIER

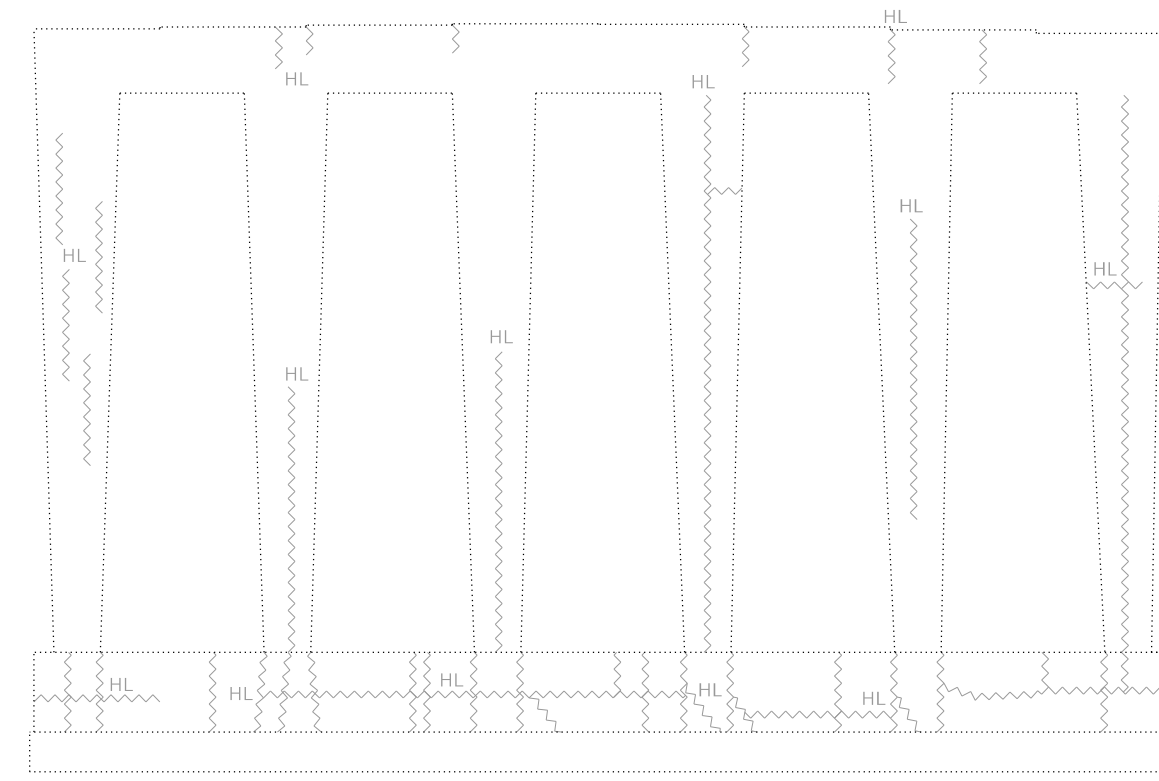


COLUMN DIMENSION DETAIL

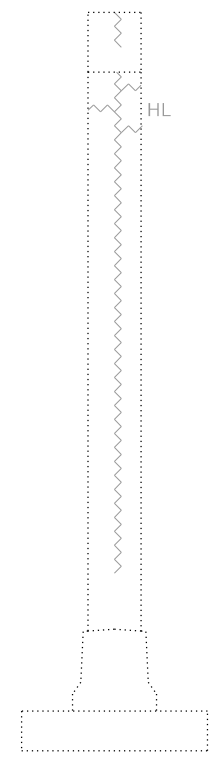
NOTES:
 APPLY CONCRETE SEALER TO EACH FACE OF CRASHWALL AND COLUMNS.
 REPAIRS OF THE EXISTING PIER SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN, THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.



WEST FACE OF PIER 4
(LOOKING EAST)



EAST FACE OF PIER 4
(LOOKING WEST)



END VIEW
(LOOKING SOUTH)



TOP OF CRASHWALL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	5581

- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - HAIRLINE CRACK (FOR REFERENCE ONLY)
 - LOW PRESSURE EPOXY INJECTION

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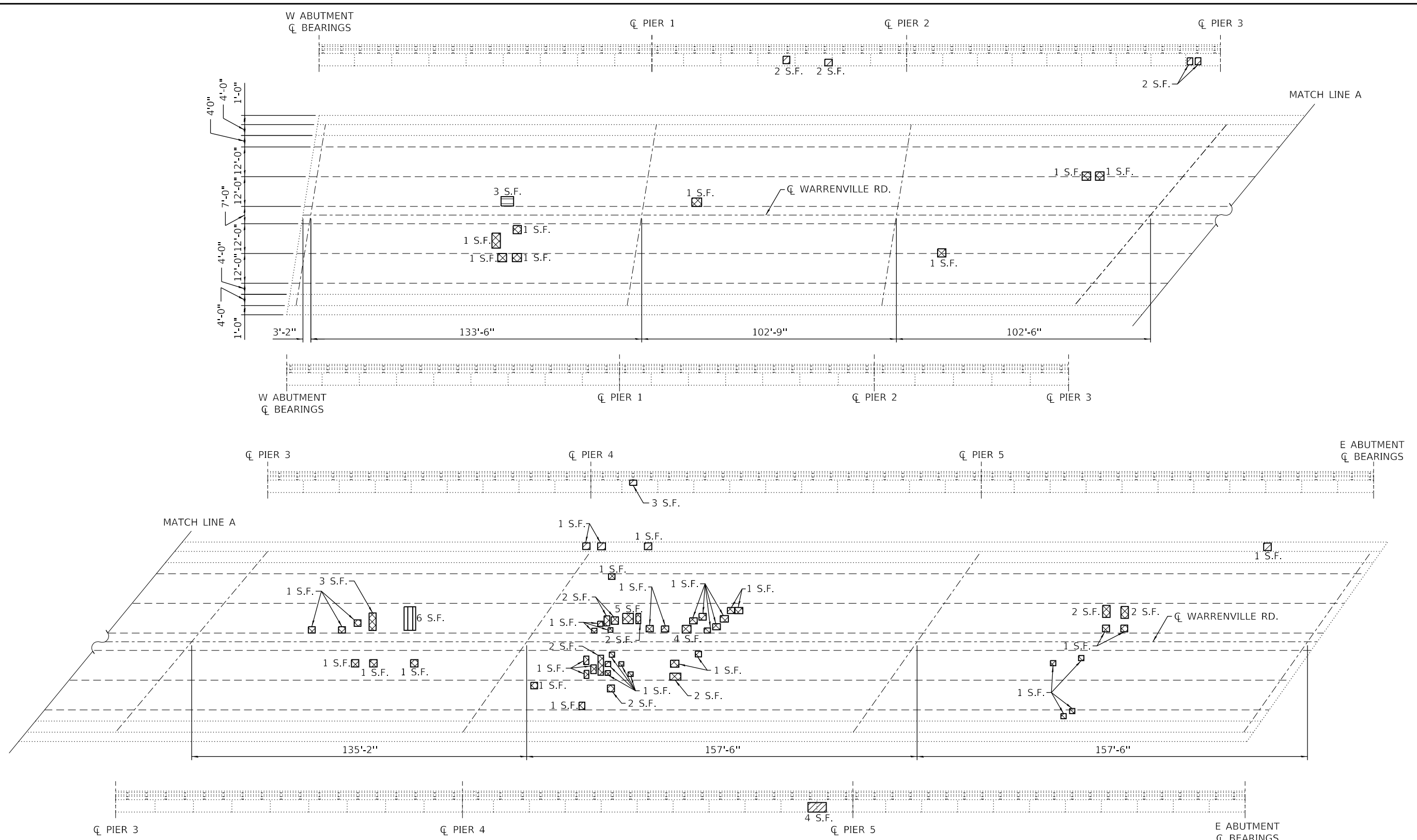
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CONTRACT NO. RR-16-4255
 BRIDGE NO. 1449
 PIER 4 REPAIRS

SFA-09 OF SFA-14
 SHT NO. SFA-09
 DRAWING NO.
 1071 OF 1517



DECK PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	42
ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.	9
ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE 1)	SQ. YD.	0.5
ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE 2)	SQ. YD.	0.8

NOTES:
HAIRLINE CRACKS REMOVED FOR CLARITY

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCH)
- ACCELERATED DECK SLAB REPAIR (PARTIAL)
- ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE 1)
- ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE 2)

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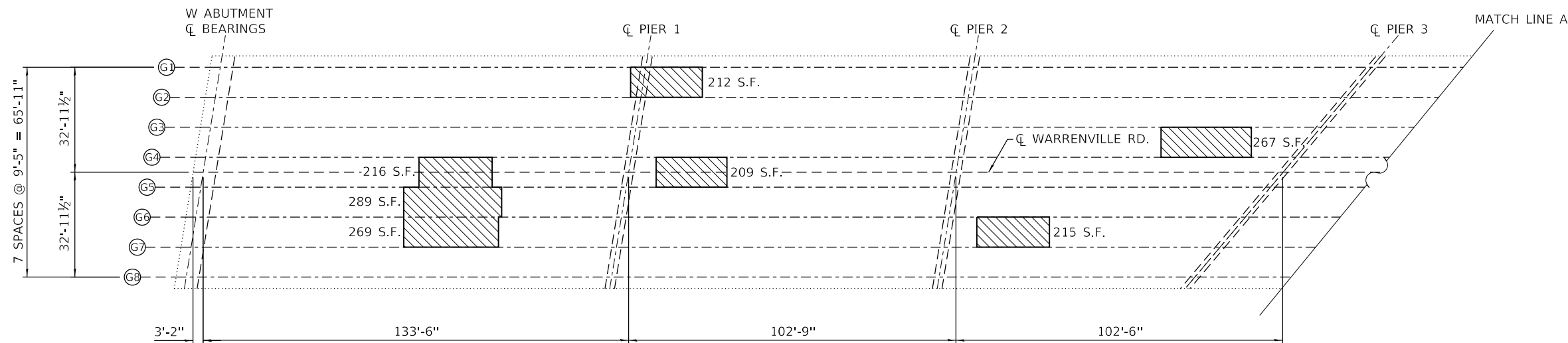
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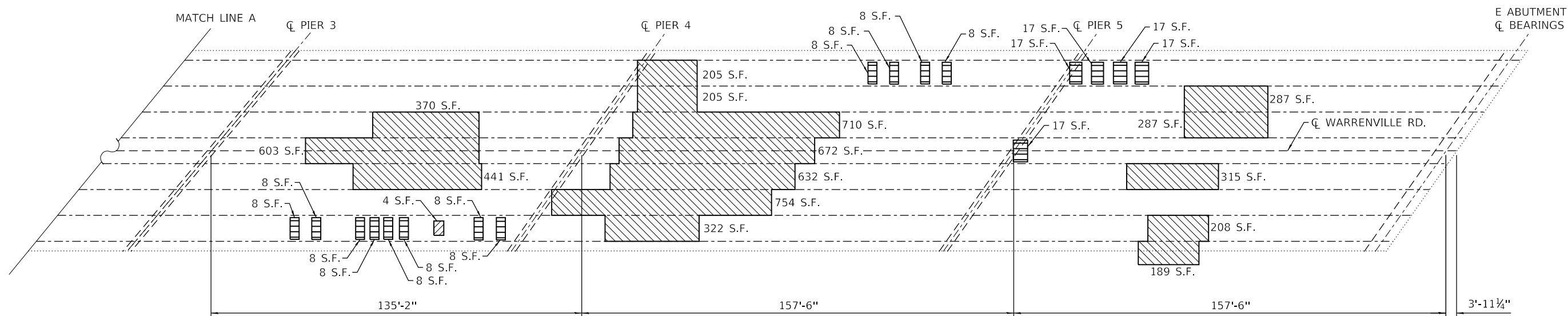
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CONTRACT NO. RR-16-4255
BRIDGE NO. 1449
DECK REPAIR PLAN

SFA-11 OF SFA-14
SHT NO. SFA-11
DRAWING NO. 1073 OF 1517



DECK PLAN



DECK PLAN

LEGEND:

- PROTECTIVE SHIELD
- CONCRETE REMOVAL (SPECIAL)
- CLEAN & PAINT EXPOSED REBAR

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
PROTECTIVE SHIELD	SQ. YD.	876
CONCRETE REMOVAL (SPECIAL)	SQ. YD.	0.5
CLEANING & PAINTING EXPOSED REBAR	SQ. YD.	181

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 BRIDGE NO. 1449
 DECK SOFFIT REPAIR PLAN

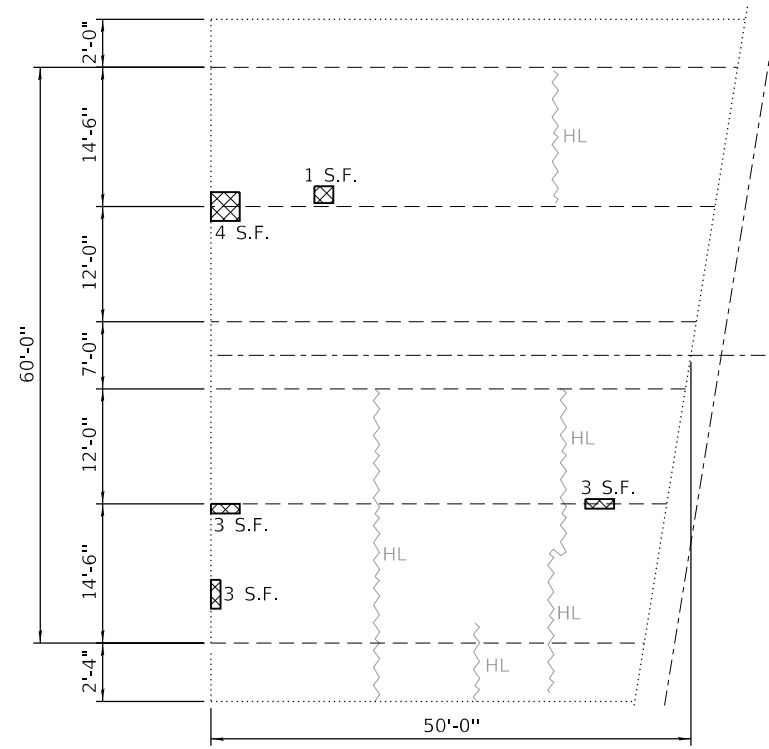
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 1074 OF 1517



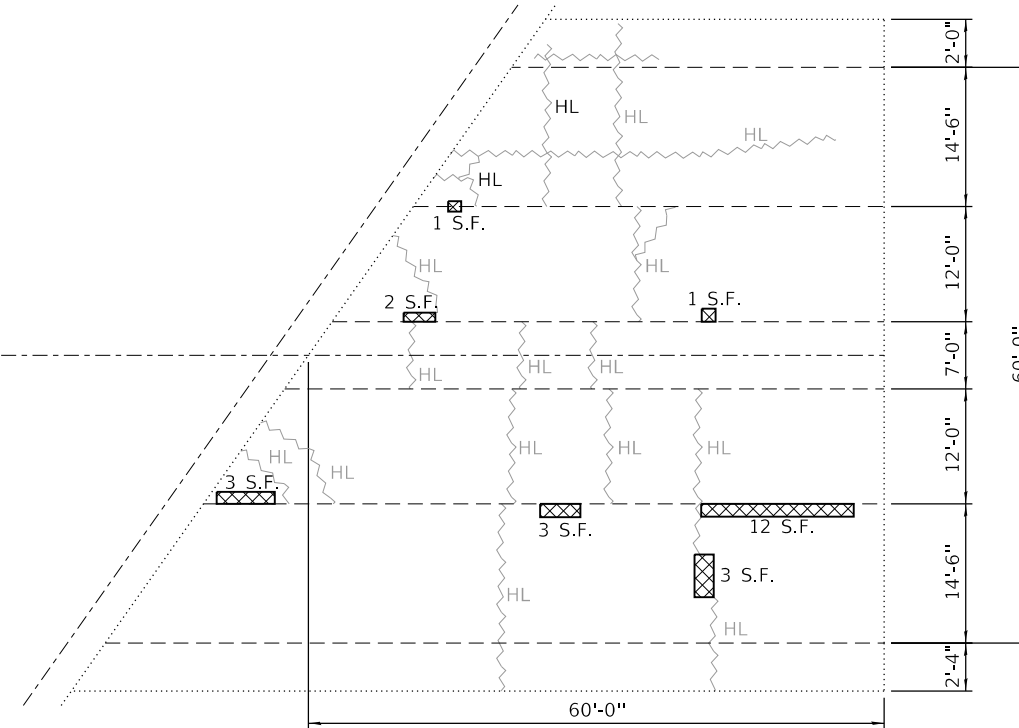
NORTHWEST APPROACH PARAPET



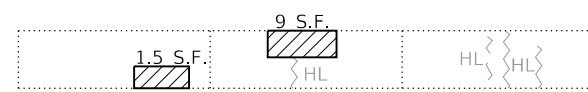
NORTHEAST APPROACH PARAPET



WEST APPROACH SLAB



EAST APPROACH SLAB



SOUTHWEST APPROACH PARAPET



SOUTHEAST APPROACH PARAPET

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	23
ACCELERATED APPROACH SLAB REPAIR (PARTIAL)	SQ. YD.	5

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- ACCELERATED APPROACH SLAB REPAIR (PARTIAL)
- HL HAIRLINE CRACK (FOR REFERENCE ONLY)

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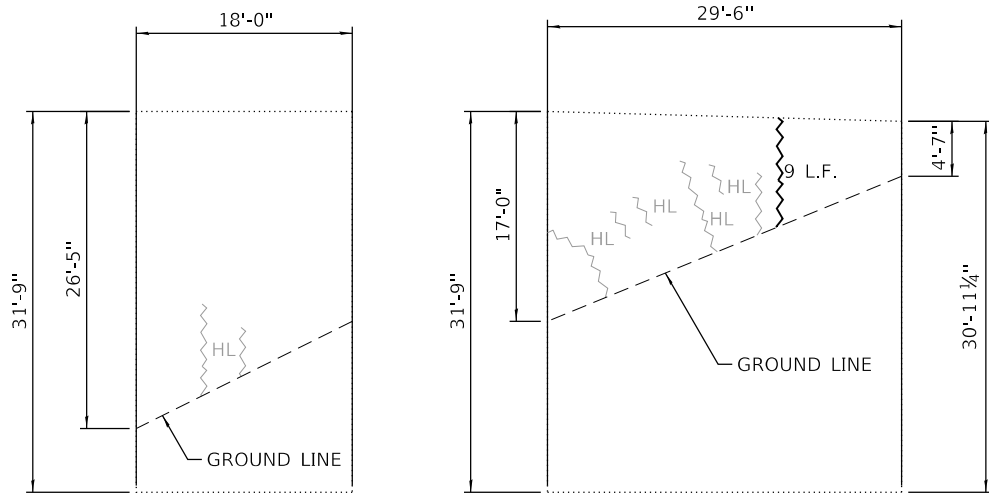
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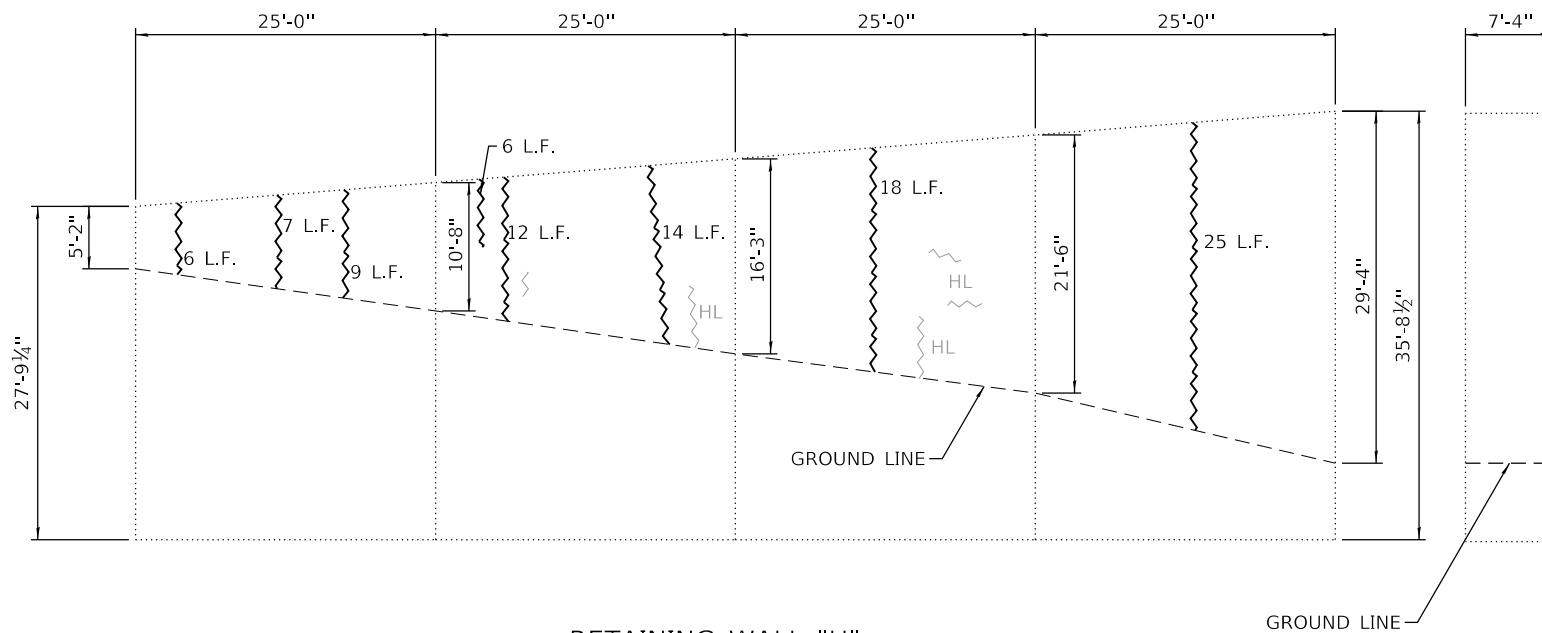
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1449
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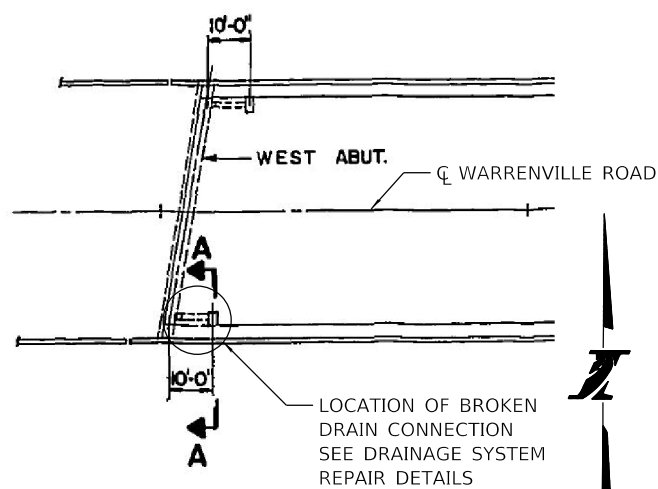
SFA-13 OF SFA-14
 SHT NO. SFA-13
 DRAWING NO.
 1075 OF 1517



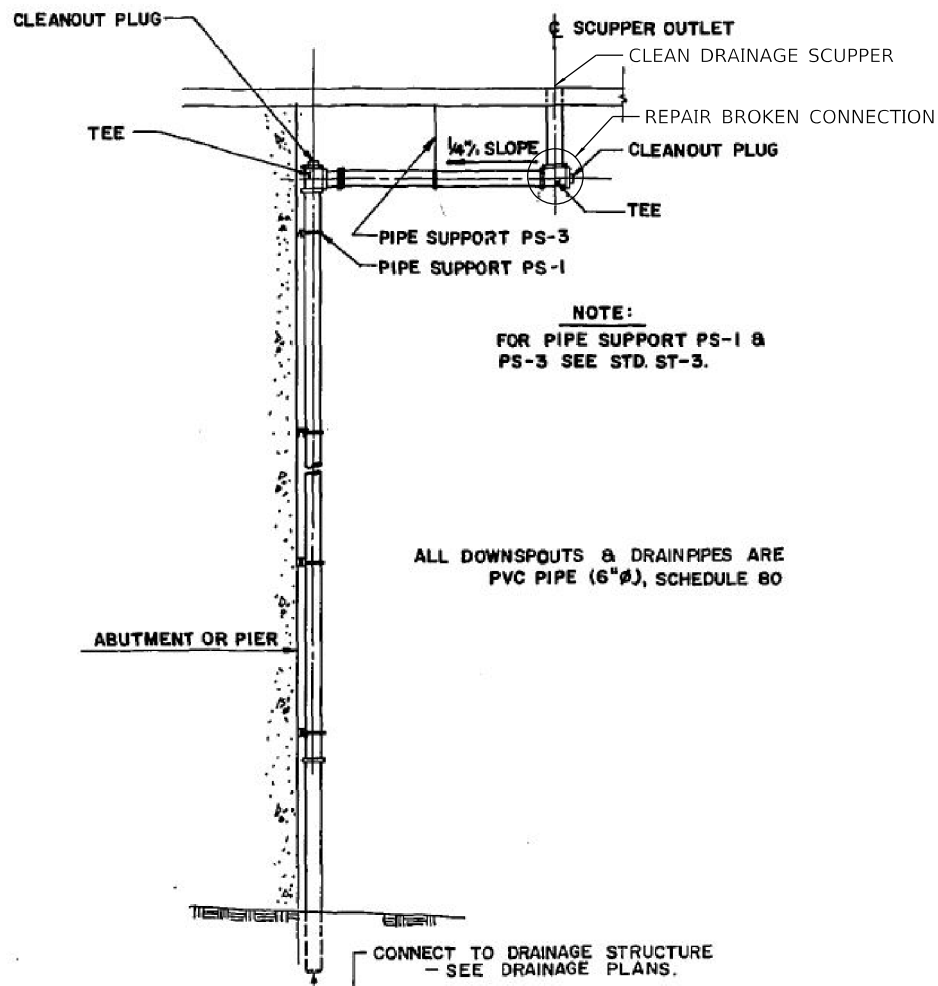
RETAINING WALL "T"
(LOOKING NORTH)



RETAINING WALL "U"
(LOOKING SOUTH)



DRAINAGE SYSTEM REPAIR PLAN



DRAINAGE SYSTEM REPAIR DETAILS

NOTE:
FOR PIPE SUPPORT PS-1 &
PS-3 SEE STD. ST-3.

ALL DOWNSPOUTS & DRAINPIPES ARE
PVC PIPE (6"Ø), SCHEDULE 80

NOTES:

REPAIRS OF THE EXISTING RETAINING WALLS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

NO REPAIRS NOTED ON RETAINING WALLS R AND S. REPAIRS, IF ANY, WILL BE DETERMINED BY THE ENGINEER AT TIME OF CONSTRUCTION

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK (FOR REFERENCE ONLY)
- LOW PRESSURE EPOXY INJECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	106
REPAIR BRIDGE DRAINAGE SYSTEM	EACH	1

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DOWNERS GROVE,
ILLINOIS 60515

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NO.	DATE	

CONTRACT NO. RR-16-4255
BRIDGE NO. 1449
MISCELLANEOUS REPAIRS

SFA-14 OF SFA-14
SHT NO. SFA-14
DRAWING NO.
1076 OF 1517

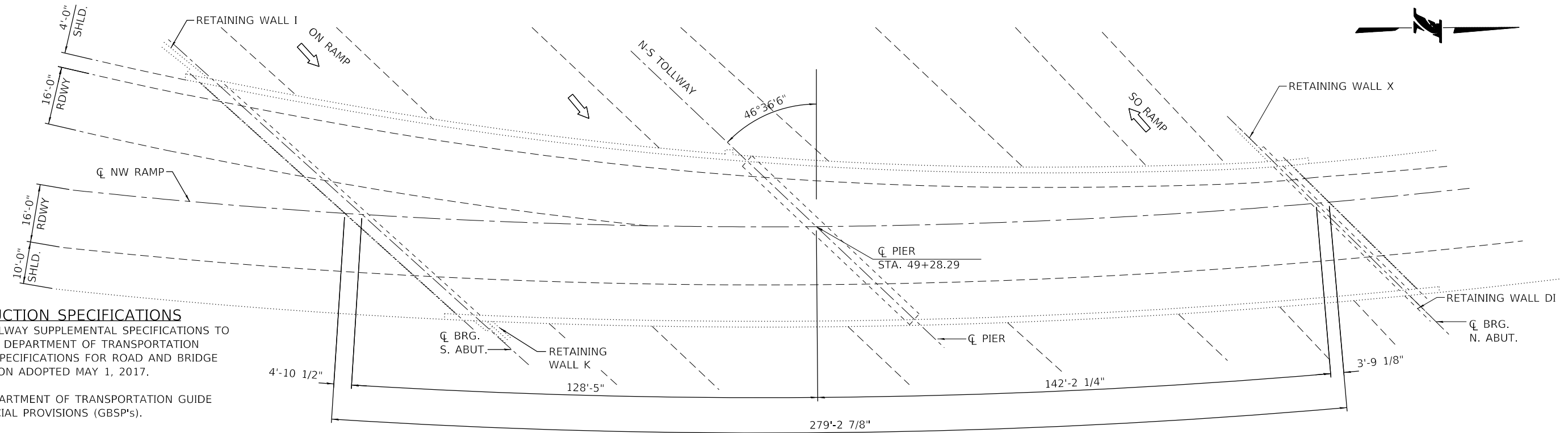
BENCHMARK

CONCRETE MONUMENT WITH BRASS CAP LOCATED IN N.E. 1/4 SEC. 2-38-10, ±47' SOUTH OF SOUTH EDGE OF EASTBOUND LANE EAST-WEST TOLLWAY AND ±500' WEST OF OVERHEAD POWERLINES
ELEVATION: 723.817

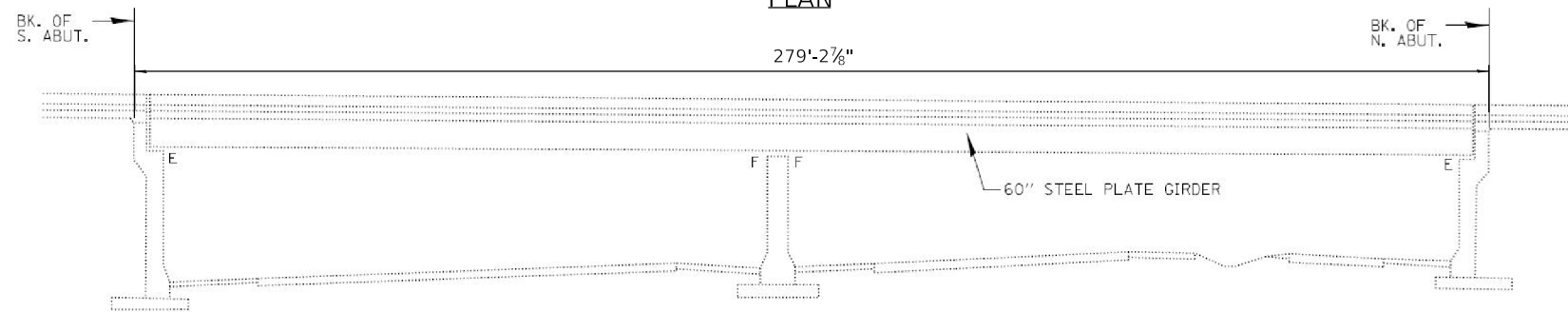
EXISTING STRUCTURE

BRIDGE NUMBER 1447 WAS ORIGINALLY CONSTRUCTED IN 1989 UNDER ILLINOIS TOLLWAY CONTRACT CIP-615. THE BRIDGE CARRIES N.W. RAMP OVER I-355. THE SUPERSTRUCTURE CONSISTS OF A TWO SPAN, CURVED, CONTINUOUS, STEEL PLATE GIRDER. THE BRIDGE SPANS 279'-2 7/8" BACK TO BACK OF ABUTMENTS. THE SUBSTRUCTURE CONSISTS OF REINFORCED CONCRETE WALL TYPE ABUTMENTS AND ONE REINFORCED CONCRETE, TRAPEZOIDAL MULTI-COLUMN PIER BENT WITH A CAP BEAM AND CRASH WALL.

TRAFFIC WILL BE MAINTAINED UTILIZING STAGED CONSTRUCTION.



PLAN



ELEVATION

CONSTRUCTION SPECIFICATIONS

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS (GBSP's).

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

ILLINOIS DEPARTMENT OF TRANSPORTATION STRUCTURAL SERVICES MANUAL ADOPTED JUNE 30, 2017.

DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS, 17TH EDITION WITH ALL SUBSEQUENT INTERIMS

ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL ADOPTED MARCH 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL DATED JANUARY 2012

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGN MEMORANDUMS

DESIGN STRESSES

EXISTING UNITS

f'c = 4,000 PSI (CONCRETE)
fy = 60,000 PSI (REINFORCEMENT)
fy = 50,000 PSI (FLANGE AND WEB STRUCTURAL STEEL)
fy = 36,000 PSI (STIFFENER AND CROSSFRAME STRUCTURAL STEEL)

FIELD UNITS

f'c = 3,500 PSI (CLASS SI SUBSTRUCTURE REPAIRS)
f'c = 4,000 PSI (CLASS BS PARAPETS AND BARRIER REPAIRS)
f'c = 4,000 PSI (CLASS AX BRIDGE DECK & APPROACH SLAB REPAIRS)
fy = 60,000 PSI (REINFORCEMENT)

DESIGN LOADS

EXISTING STRUCTURE
LIVE LOAD:
HS20-44 AND ALTERNATIVE MILITARY LOADING

DEAD LOAD:
25 P.S.F. FUTURE WEARING SURFACE

SCOPE OF WORK

1. REMOVE AND REPLACE CONCRETE SUPERSTRUCTURE ON EAST PARAPET.
2. CLEAN AND BRIDGE DECK EXPANSION JOINTS.
3. CLEAN AND SEAL RELIEF JOINTS.
4. CLEAN AND PAINT EXPOSED REBAR ON DECK SOFFIT.
5. REPAIR SPALLED AND UNSOUND CONCRETE ON ABUTMENT WALLS, CAPS AND BARRIERS.
6. CLEAN AND SEAL CRACKS >1/16" ON ABUTMENT WALLS, CAPS AND BARRIERS.
7. REPAIR SPALLED AND UNSOUND CONCRETE ON CENTER PIER COLUMNS AND CAP.

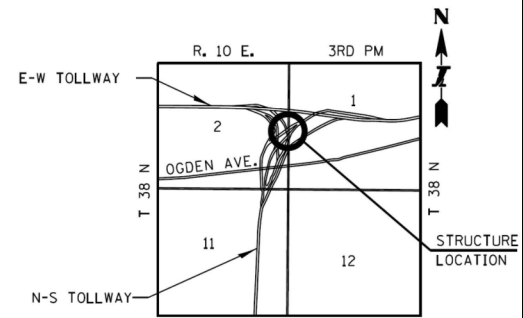
SCOPE OF WORK (CONTINUED)

7. CLEAN AND SEAL CRACKS >1/16" ON PIER COLUMNS AND CAP.
8. APPLY CONCRETE SEALANT TO ABUTMENT WALLS, CAP FACES AND BARRIERS.
9. APPLY CONCRETE SEALANT TO PIER COLUMNS, CAP FACES AND CRASH WALL.
10. APPLY BRIDGE DECK CONCRETE SEALANT TO INSIDE FACE OF PARAPETS.
11. REMOVE VEGETATION FROM RETAINING WALL I DRAIN.
12. CLEAN DRAINAGE SYSTEM ON WEST SHOULDER.

HIGHWAY CLASSIFICATION

N.W. RAMP I-355 N.B. TO I-88 W.B.
FUNCTIONAL CLASS: INTERSTATE
ADT: 17,100 (2016)
ADTT: 2,394 (2016)

I-355 (UNDER)
FUNCTIONAL CLASS: INTERSTATE
ADT: 92,000 (2015)
ADTT: 8,280 (2015)



LOCATION SKETCH

SFB-01 OF SFB-07

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DRAWN BY: JW DATE: 03/11/2018
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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1447
GENERAL PLAN & ELEVATION

SHT NO. SFB-01
DRAWING NO. 1077 OF 1517

GENERAL NOTES

CONSTRUCTION

- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION TOLERANCES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.
- CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES ARE SHOWN FOR INFORMATION ONLY.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COSTS WILL BE AT THE CONTRACTOR'S EXPENSE.
- NO CONCRETE CUTTING WILL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINES BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E. 1-800-892-0123.
- EXISTING REINFORCEMENT WHICH IS TO BE INCORPORATED INTO THE NEW CONSTRUCTION SHALL BE BLAST CLEANED TO GREY METAL, STRAIGHTENED (WITHOUT HEATING), AND CUT TO FIT. COST SHALL BE INCLUDED WITH THAT FOR "CONCRETE REMOVAL".
- WHENEVER MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF THE EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.
- THE PROTECTIVE SHIELD SYSTEM SHALL EXTEND A MINIMUM OF 10 FEET BEYOND THE INDICATED LIMITS OF REPAIR SHOWN IN THE PLANS OR 5 FEET BEYOND THE ACTUAL LIMITS OF PARTIAL OR FULL DEPTH REPAIRS AS IDENTIFIED IN THE FIELD, WHICHEVER IS GREATER.
- CONCRETE SEALANT SHALL BE APPLIED TO THE TOP AND TRAFFIC FACE OF ALL REPAIRED AREAS OF THE BRIDGE DECK REPAIRS AND PARAPET, INCLUDING PARAPET ON BRIDGE WINGWALL. SEALANT SHALL ALSO BE APPLIED TO THE REPAIRED AREAS OF THE VISIBLE FACES OF THE PIER COLUMNS, CRASHWALLS AND CAPS, PIERS AND ABUTMENTS, BACKWALLS, AND BEARING SEATS. EXISTING SURFACES SHALL BE POWERED WASHED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 592 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF ILLINOIS, SHALL PREPARE AND SUBMIT STRUCTURAL ASSESSMENT REPORTS (SARS) FOR THE PROPOSED WORK ASSOCIATED WITH REMOVING, MODIFYING OR RECONSTRUCTING EXISTING STRUCTURES OR PORTIONS THEREOF. UNLESS NOTED OTHERWISE, A SAR SHALL BE REQUIRED WHEN THE CONTRACTOR'S MEANS AND METHODS APPLY LOADS TO THE STRUCTURE OR CHANGE ITS STRUCTURAL BEHAVIOR. A SAR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING WORK, IN ACCORDANCE WITH THE LATEST IDOT GUIDE BRIDGE SPECIAL PROVISION, "STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS". THIS INCLUDES THE WORK COVERED BY SEPARATE SARS WHICH MAY BE SUBMITTED AT DIFFERENT TIMES OR AS DICTATED BY THE CONTRACTOR'S SCHEDULE.
- AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP) WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS-BUILT" PLANS. AND THE LATEST NATIONAL BRIDGE INSPECTIONS STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.

CAST-IN-PLACE CONCRETE

- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF 1 FOOT BELOW FINISHED GROUND LEVEL.

REINFORCING BARS

- REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM 706), GRADE 60, DEFORMED BARS.
- REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

LIST OF ABBREVIATIONS

ABUT.	- ABUTMENT
APPROX.	- APPROXIMATE
BRG.	- BEARING
CL.	- CLEAR
DIM.	- DIMENSION
E.	- EAST
EXIST.	- EXISTING
MAX.	- MAXIMUM
MIN.	- MINIMUM
N.	- NORTH
N.B.	- NORTHBOUND
NO.	- NUMBER
P.G.L.	- PROFILE GRADE LINE
S.	- SOUTH
S.B.	- SOUTHBOUND
SHLDR.	- SHOULDER
STA.	- STATION
TYP.	- TYPICAL
W.	- WEST

INDEX OF SHEETS

SFB-01	GENERAL PLAN & ELEVATION
SFB-02	GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
SFB-03	CONSTRUCTION STAGING
SFB-04	SOUTH ABUTMENT REPAIRS
SFB-05	NORTH ABUTMENT REPAIRS
SFB-06	PIER REPAIRS
SFB-07	DECK SLAB REPAIRS

TOTAL BILL OF MATERIAL

PAY ITEMS	DESCRIPTION	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	QUANTITY	RECORDED QUANTITY
50102400	CONCRETE REMOVAL	CU. YD.		1	1	
50157300	PROTECTIVE SHIELD	SQ. YD.		20	20	
50300255	CONCRETE SUPERSTRUCTURE	CU. YD.		1	1	
J1506010	CLEANING AND SEALING JOINT	FOOT		52	52	
J15121200	LOW PRESSURE EPOXY INJECTION	FOOT	97		97	
JT201005	REMOVE VEGETATION	L. SUM	1		1	
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ. FT.	114		114	
JT524010	APPLY CONCRETE SEALANT	SQ. FT.	12800		12800	
JT524015	BRIDGE DECK CONCRETE SEALER	SQ. FT.		2276	2276	
JT525225	BONDED PREFORMED JOINT SEAL REPLACEMENT, 2 IN.	FOOT		152	152	
JT602830	CLEAN DRAINAGE SYSTEM	EACH		1	1	
X0323818	CLEANING AND PAINTING EXPOSED REBAR	SQ. FT.		16	16	
Z0043900	PREFORMED JOINT FILLER REPLACEMENT	FOOT	25		25	

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SFB-02 OF SFB-07

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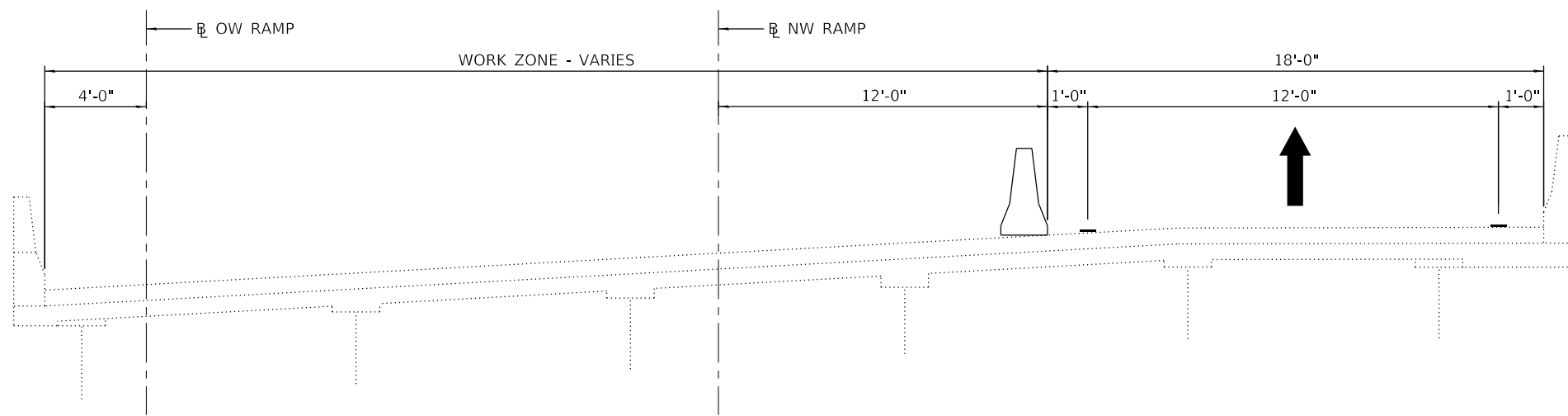
thomas engineering group, llc
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 lombard, il 60148
 phone: 855-533-1700



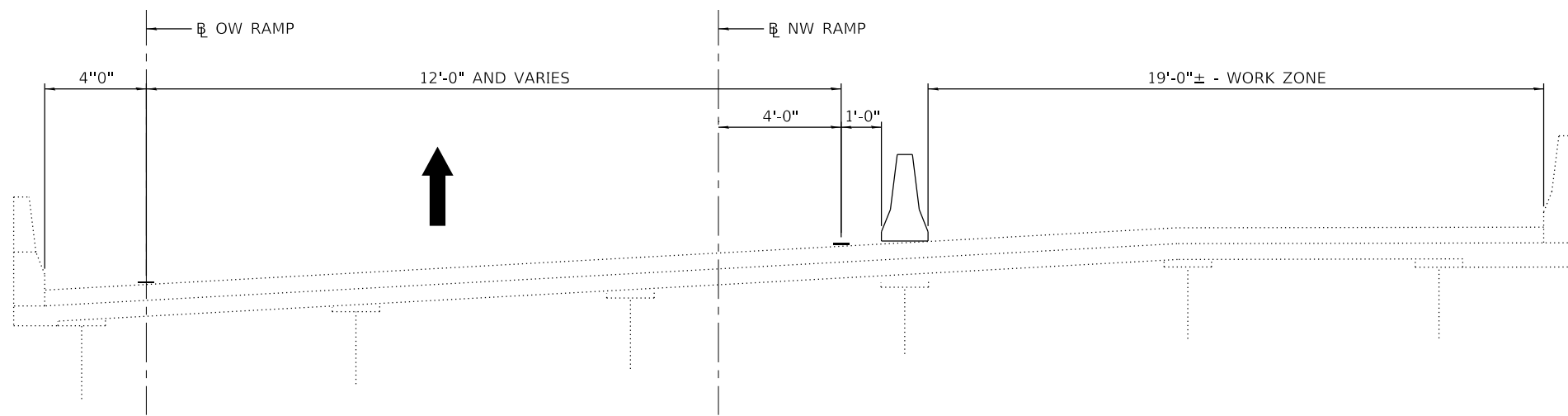
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1447 - GENERAL NOTES,
 INDEX OF SHEETS & TOTAL BILL OF MATERIAL

SHT NO. SFB-02
 DRAWING NO.
 1078 OF 1517



STAGE I CONSTRUCTION
(LOOKING NORTH)



STAGE II CONSTRUCTION
(LOOKING NORTH)

CONSTRUCTION STAGING

1. I-355 MAINLINE STAGE I: REPAIR AND SEAL ABUTMENTS AND RETAINING WALLS.
2. I-355 MAINLINE STAGE II: REPAIR AND SEAL PIER.
3. I-355 NB TO I-88 WB RAMP STAGE I: JOINT REPAIRS, WEST HALF OF STRUCTURE. OFF-PEAK HOURS FULL RAMP CLOSURE FOR RAMP FROM OGDEN AVENUE TO I-88 WB. SEE DETOUR PLAN.
4. I-355 NB TO I-88 WB RAMP STAGE II: JOINT AND PARAPET REPAIRS, EAST HALF OF STRUCTURE.

NOTES

1. THE STAGED CONSTRUCTION SECTIONS SHOWN ARE ONLY FOR BRIDGE DECK, JOINT AND PARAPET REPAIRS. SEE MAINLINE I-355 MOT PLANS FOR MORE DETAILS.
2. REPAIRS TO JOINTS AT THE SOUTH APPROACH SLAB WILL REQUIRE THE CLOSURE AND DETOUR OF THE OGDEN AVENUE RAMP TO I-88 WB. REFER TO DETOUR PLANS FOR DETAILS.

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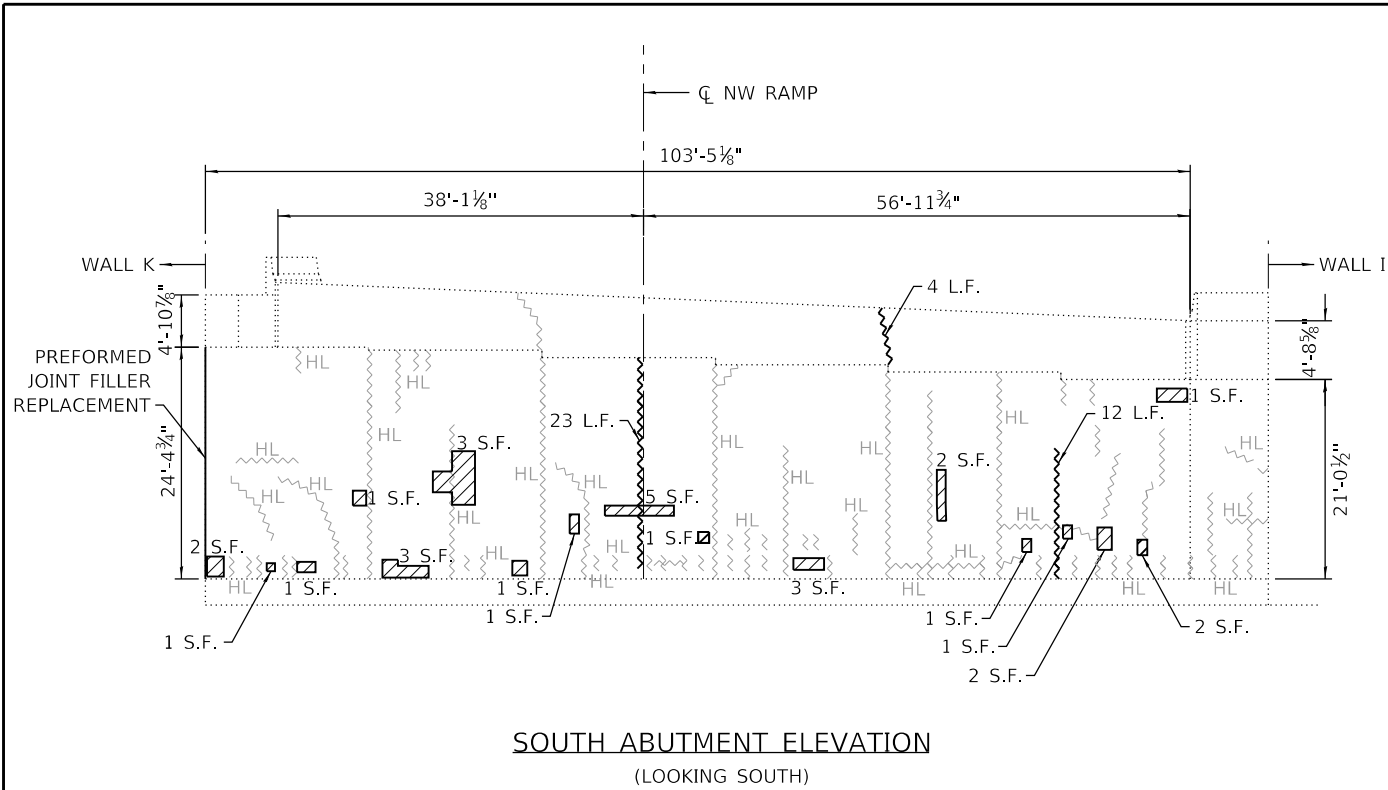


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 ILLINOIS 60515

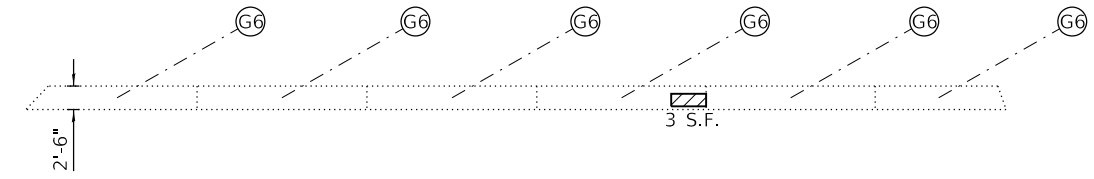
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1447
 CONSTRUCTION STAGING

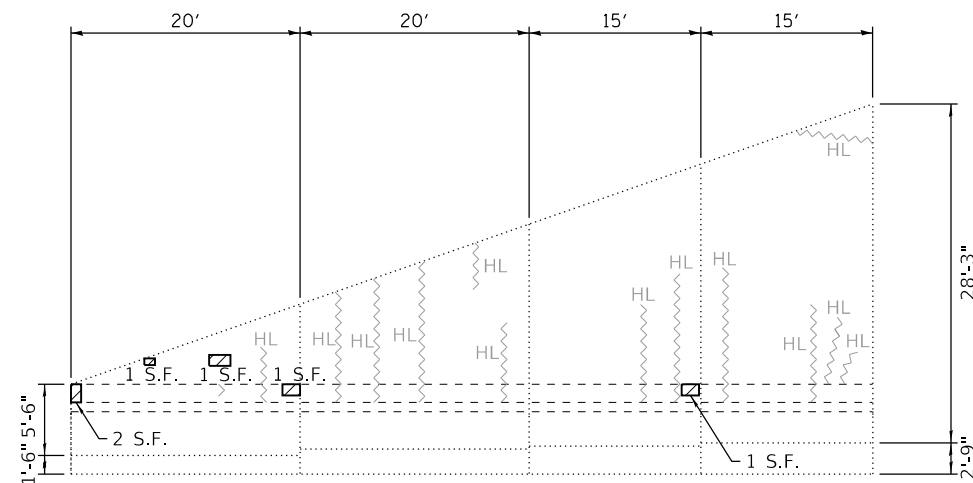
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 SHT NO. SFB-03
 DRAWING NO.
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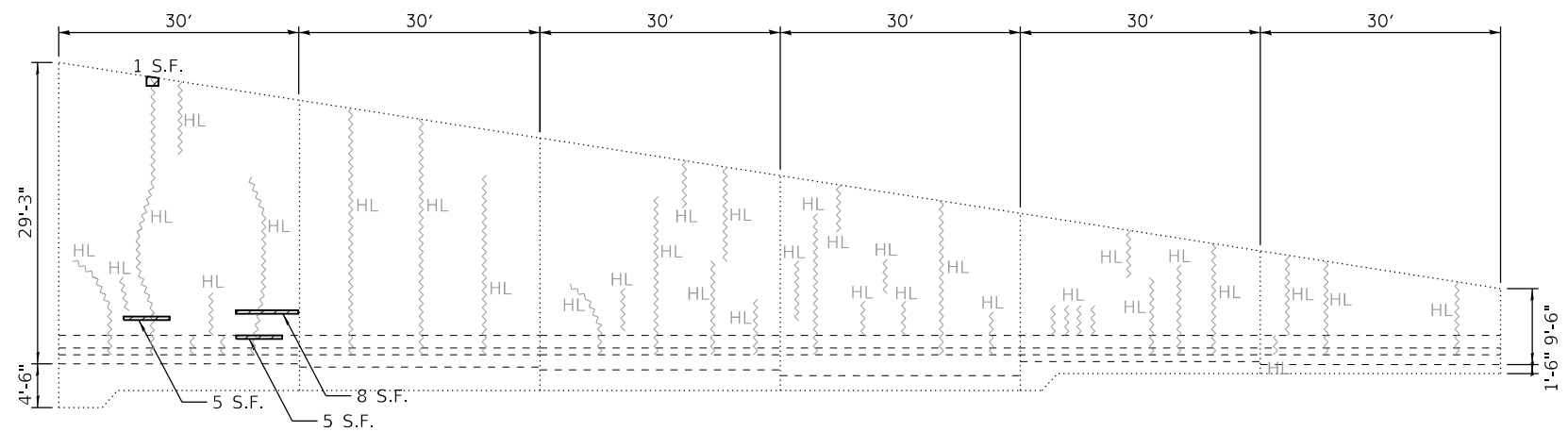
SOUTH ABUTMENT ELEVATION
(LOOKING SOUTH)



SOUTH ABUTMENT CAP
(TOP VIEW)



RETAINING WALL K
(LOOKING SOUTH)



RETAINING WALL I
(LOOKING SOUTH)

NOTES:




APPLY CONCRETE SEALER TO ABUTMENT FACE, WINGWALL FACE, ABUTMENT SEAT, AND BACKWALL.

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVE VEGETATION FROM DRAIN AT BACK OF WALL I.

REMOVAL AND RE-ATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

LEGEND:

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  HAIRLINE CRACK (FOR INFORMATION ONLY)
-  LOW PRESSURE EPOXY INJECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	39
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	56
APPLY CONCRETE SEALANT	SQ. FT.	6856
PREFORMED JOINT FILLER REPLACEMENT	FOOT	25
REMOVE VEGETATION	L SUM	1

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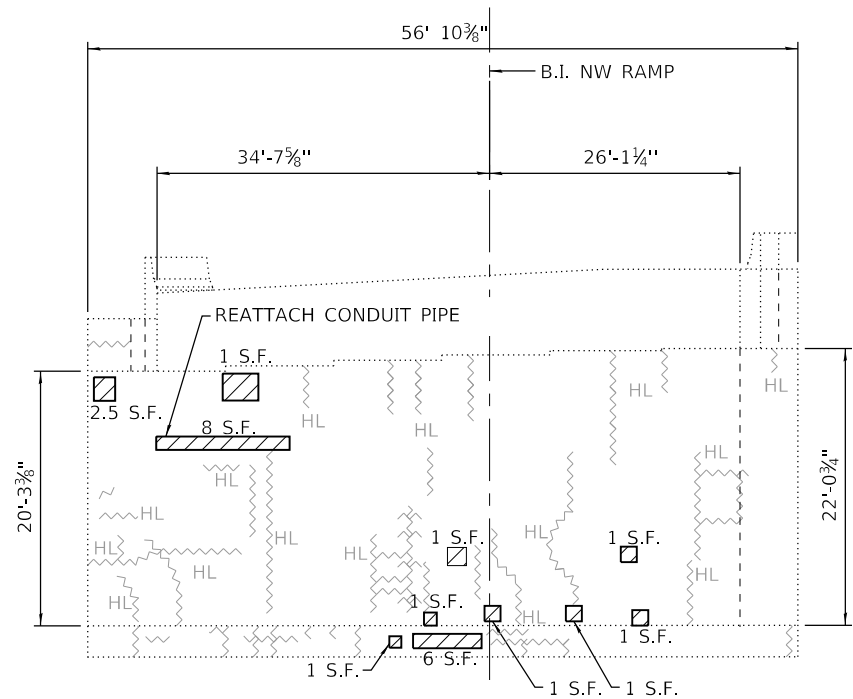
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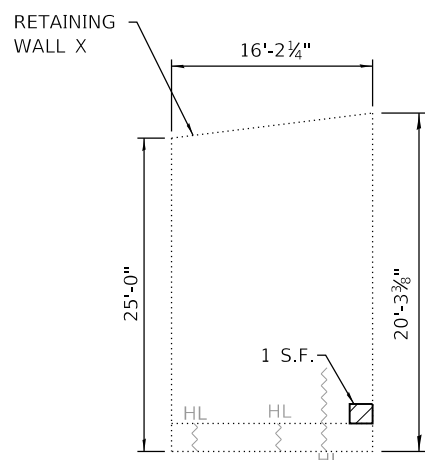
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CONTRACT NO. RR-16-4255
 BRIDGE NO. 1447
 SOUTH ABUTMENT REPAIRS

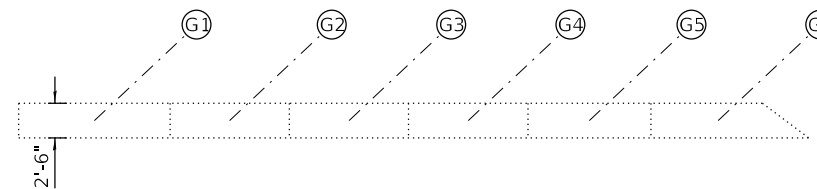
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 SHT NO. SFB-04
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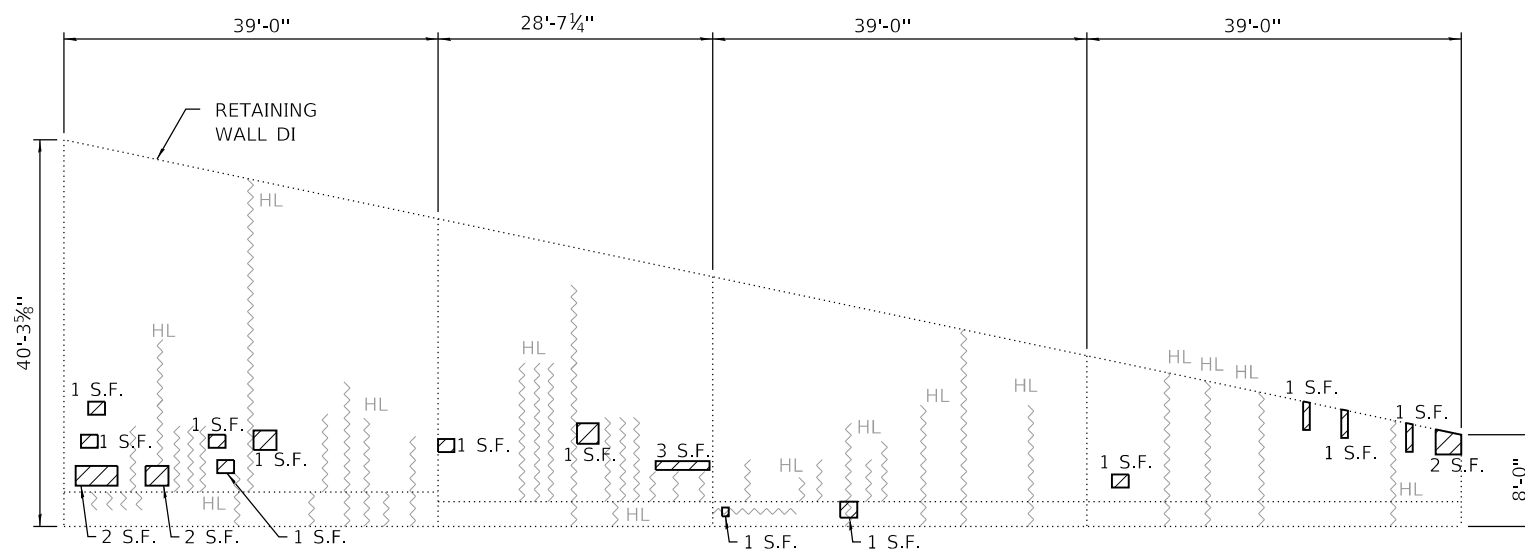
NORTH ABUTMENT ELEVATION
(LOOKING NORTH)



RETAINING WALL X
(LOOKING NORTH)



NORTH ABUTMENT CAP
(TOP VIEW)



RETAINING WALL D1
(LOOKING NORTH)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	53
APPLY CONCRETE SEALANT	SQ. FT.	3826

NOTES:

APPLY CONCRETE SEALER TO ABUTMENT FACE, WINGWALL FACE, ABUTMENT SEAT, AND BACKWALL.

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND RE-ATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT OR LIGHTING, IF NECESSARY ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK (FOR INFORMATION ONLY)
- LOW PRESSURE EPOXY INJECTION

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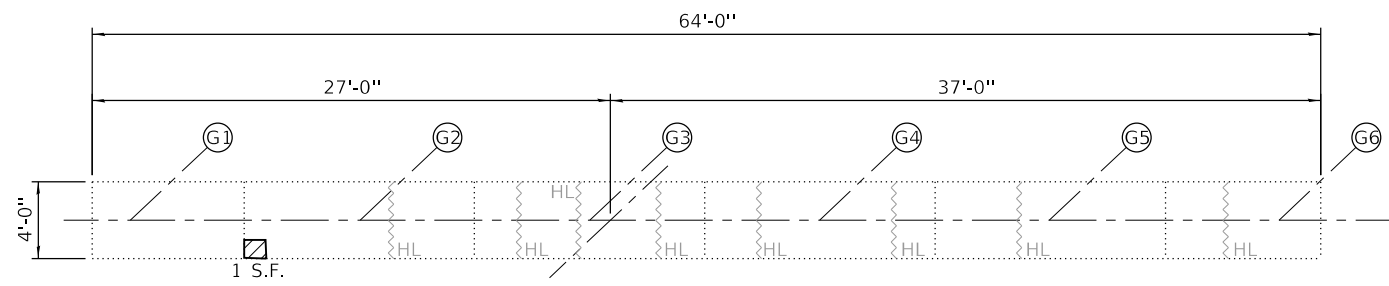
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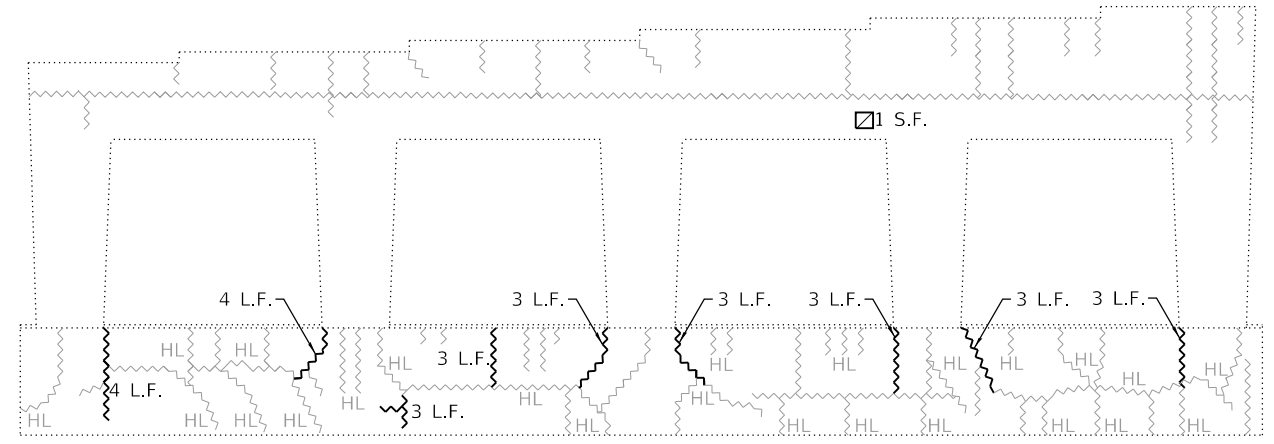
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CONTRACT NO. RR-16-4255
BRIDGE NO. 1447
NORTH ABUTMENT REPAIRS

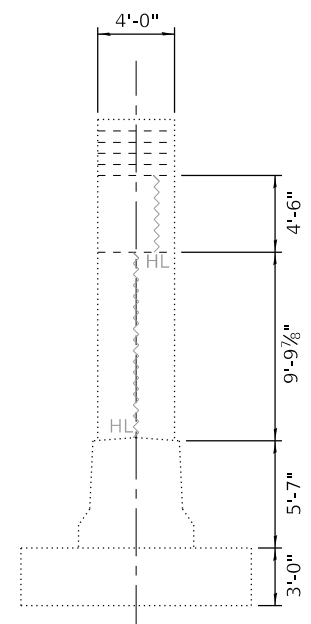
SFB-05 OF SFB-07
SHT NO. SFB-05
DRAWING NO. 1081 OF 1517



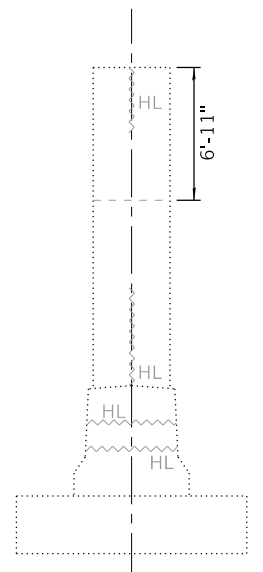
TOP OF PIER



ELEVATION
(LOOKING EAST)



END VIEW
(LOOKING NORTHEAST)



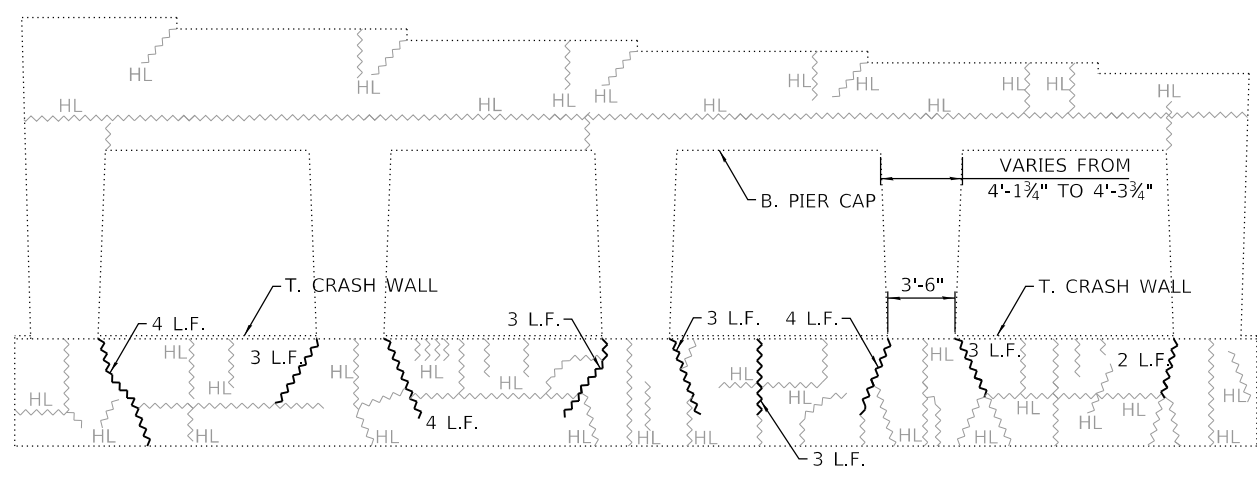
END VIEW
(LOOKING SOUTHWEST)

NOTES:

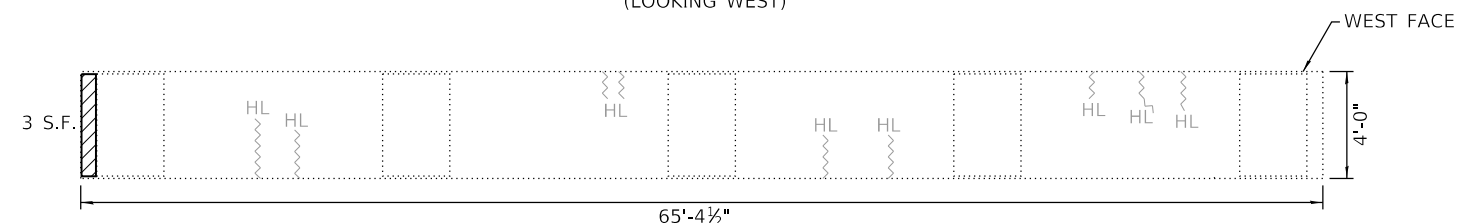
APPLY CONCRETE SEALER TO ALL PIER SURFACES EXCEPT TOP OF CAP.

REPAIRS SHALL INCLUDE, BUT MAY NOT BE LIMITED TO, THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND RE-ATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.



ELEVATION
(LOOKING WEST)



CRASH WALL PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	58
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	5
APPLY CONCRETE SEALANT	SQ. FT.	2118

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK (FOR INFORMATION ONLY)
- LOW PRESSURE EPOXY INJECTION

T:\Projects\17-025 ISTHA I-355 Phase II\05-CADD\1447-Sheets\4255-shc-1447-pier.dgn

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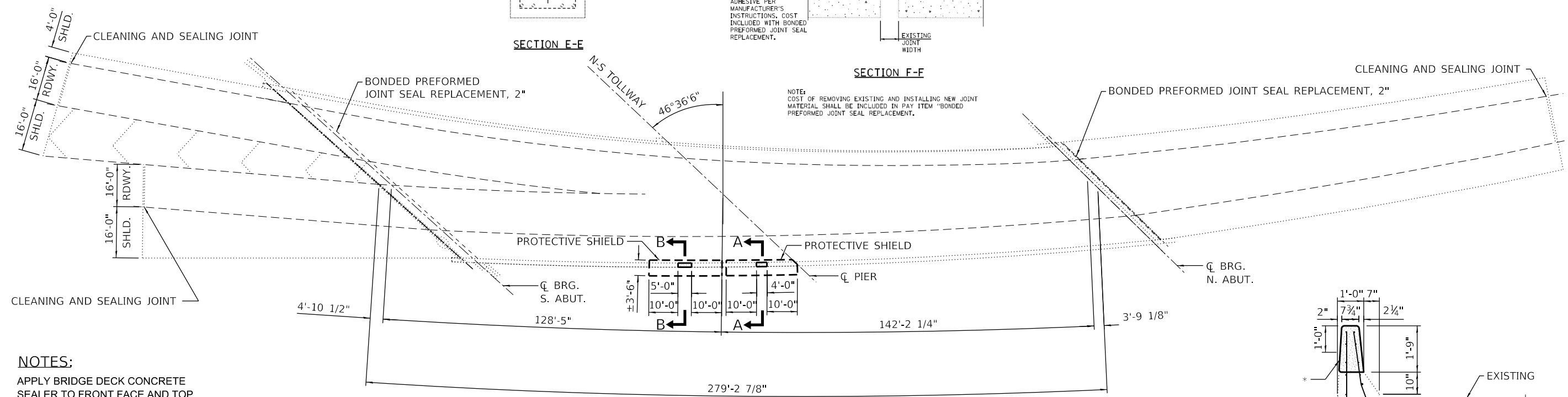
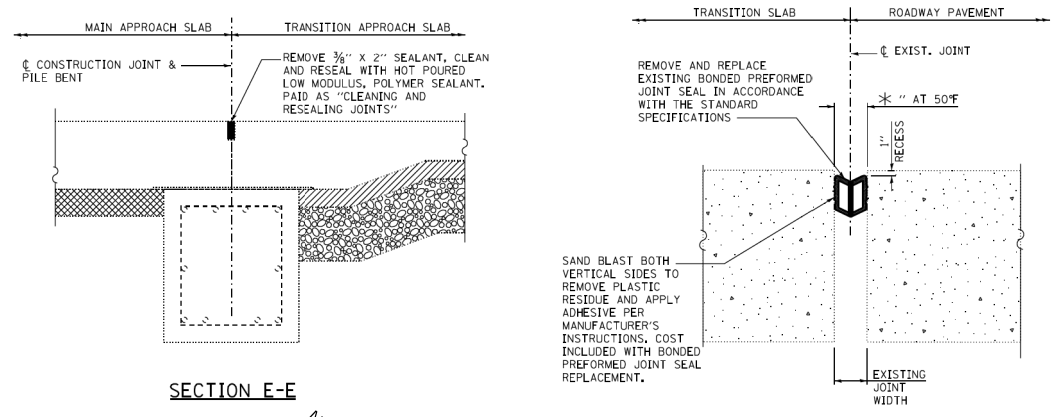
thomas engineering group, llc
55 w. 22nd street
suite 300
lombard, il 60148
phone: 855-533-1700



NO.		DATE	REVISIONS DESCRIPTION

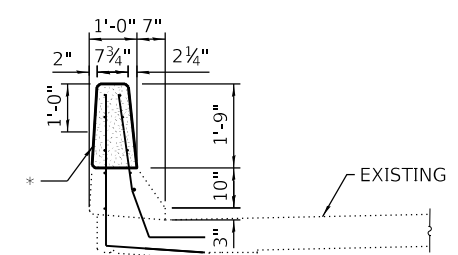
CONTRACT NO. RR-16-4255
BRIDGE NO. 1447
PIER REPAIRS

SFB-06 OF SFB-07
SHT NO. SFB-06
DRAWING NO. 1082 OF 1517

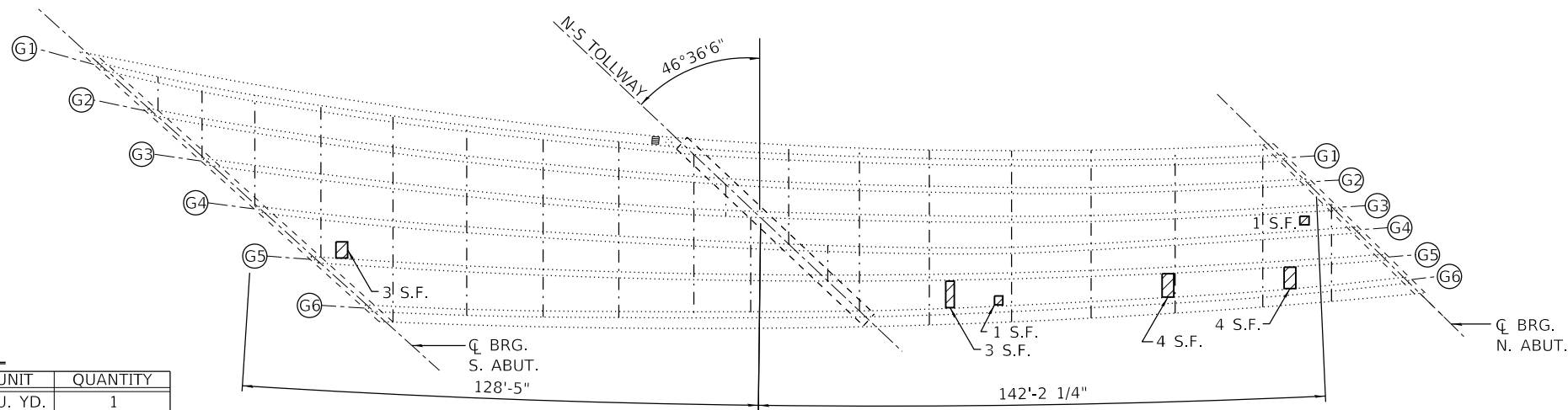
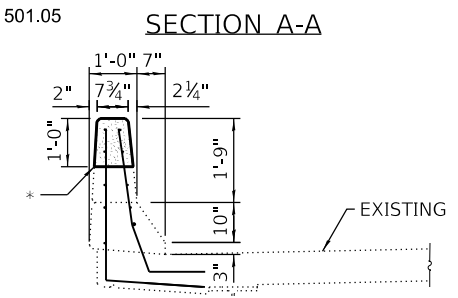


NOTE:
COST OF REMOVING EXISTING AND INSTALLING NEW JOINT MATERIAL SHALL BE INCLUDED IN PAY ITEM "BONDED PREFORMED JOINT SEAL REPLACEMENT."

NOTES:
APPLY BRIDGE DECK CONCRETE SEALER TO FRONT FACE AND TOP OF PARAPETS.



* REUSE OF EXISTING REINFORCEMENT SHALL BE IN ACCORDANCE WITH ARTICLE 501.05



BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
CONCRETE REMOVAL	CU. YD.	1
CONCRETE SUPERSTRUCTURE	CU. YD.	1
CLEAN AND PAINT EXPOSED REBAR	SQ. FT.	16
PROTECTIVE SHIELD	SQ. YD.	20
CLEANING AND SEALING JOINT	FOOT	52
BONDED PREFORMED JOINT SEAL REPLACEMENT, 2"	FOOT	152
BRIDGE DECK CONCRETE SEALER	SQ. FT.	2276

LEGEND:	
	CLEAN AND PAINT EXPOSED REPAIR
	CONCRETE REMOVAL AND REPLACEMENT
	CONCRETE SUPERSTRUCTURE

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engineering group
service of the highest grade.

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1447
DECK REPAIR PLAN

SFB-07 OF SFB-07
SHT NO. SFB-07
DRAWING NO.
1083 OF 1517

BENCHMARK:

CUT SQUARE IN TOP OF SINGLE FACE BARRIER WALL ATTACHED TO THE NW WINGWALL OF THE RAMP BRIDGE FROM EB I-88 TO SB I-355, SOUTH OF WARRENVILLE ROAD BRIDGE. ±STA. 1142+49, 146' LT. ELEVATION: 728.34

DESIGN LOADS

EXISTING STRUCTURE
LIVE LOAD:
HS20-44 AND THE ALTERNATE MILITARY LOADING

DEAD LOAD:
25 P.S.F. FUTURE WEARING SURFACE

DESIGN STRESSES

EXISTING UNITS

$f'_c = 4,000$ PSI (CONCRETE)
 $f_y = 60,000$ PSI (REINFORCEMENT)
 $f'_c = 5,000$ PSI (POST TENSIONED CONCRETE)
 $f'_{ci} = 4,200$ PSI (POST TENSIONED CONCRETE RELEASE STRENGTH)
 $f'_s = 270,000$ PSI (POST TENSIONED STRAND ULTIMATE STRENGTH)
 $f_y = 229,000$ PSI (POST TENSIONED STRAND YIELD STRENGTH)
 $f_{si} = 216,000$ PSI (POST TENSIONED STRAND INITIAL TENSION)

USE 1/2" DIAMETER 0.153 in² AREA LOW RELAXATION STRANDS

FIELD UNITS

$f'_c = 3,500$ PSI (CLASS SI SUBSTRUCTURE REPAIRS)
 $f'_c = 4,000$ PSI (CLASS BS PARAPETS AND BARRIER REPAIRS)
 $f'_c = 4,000$ PSI (CLASS AX BRIDGE DECK & APPROACH SLAB REPAIRS)
 $f_y = 60,000$ PSI (REINFORCEMENT)

CONSTRUCTION SPECIFICATIONS

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS, (GBSP's).

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

ILLINOIS DEPARTMENT OF TRANSPORTATION STRUCTURAL SERVICES MANUAL ADOPTED JUNE 30, 2017.

DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS, 17TH EDITION WITH ALL SUBSEQUENT INTEREMS

ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL ADOPTED MARCH 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL DATED JANUARY 2012

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGN MEMORANDUMS

EXISTING STRUCTURE

BRIDGE NUMBER 1445 WAS ORIGINALLY CONSTRUCTED IN 1989 UNDER ILLINOIS TOLLWAY CONTRACT CIP-615. THE BRIDGE CARRIES I-88 OVER I-355 NW RAMP AND VARIOUS RAMPS. THE SUPERSTRUCTURE CONSISTS OF A ONE SPAN, PRESTRESSED CONCRETE SLABS 367'-0 3/8" WIDE AND SPANS 41'-8" BACK TO BACK OF ABUTMENTS. THE SUBSTRUCTURE CONSISTS OF REINFORCED CONCRETE CAP BEAM ON TOP OF WALL ABUTMENTS SUPPORTED BY DRILLED SHAFTS.

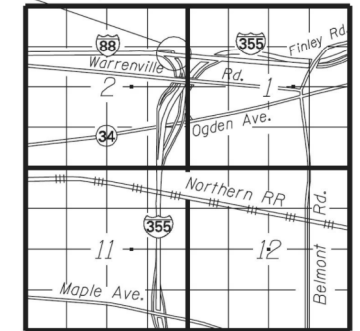
TRAFFIC WILL BE MAINTAINED UTILIZING STAGED CONSTRUCTION.

HIGHWAY CLASSIFICATION

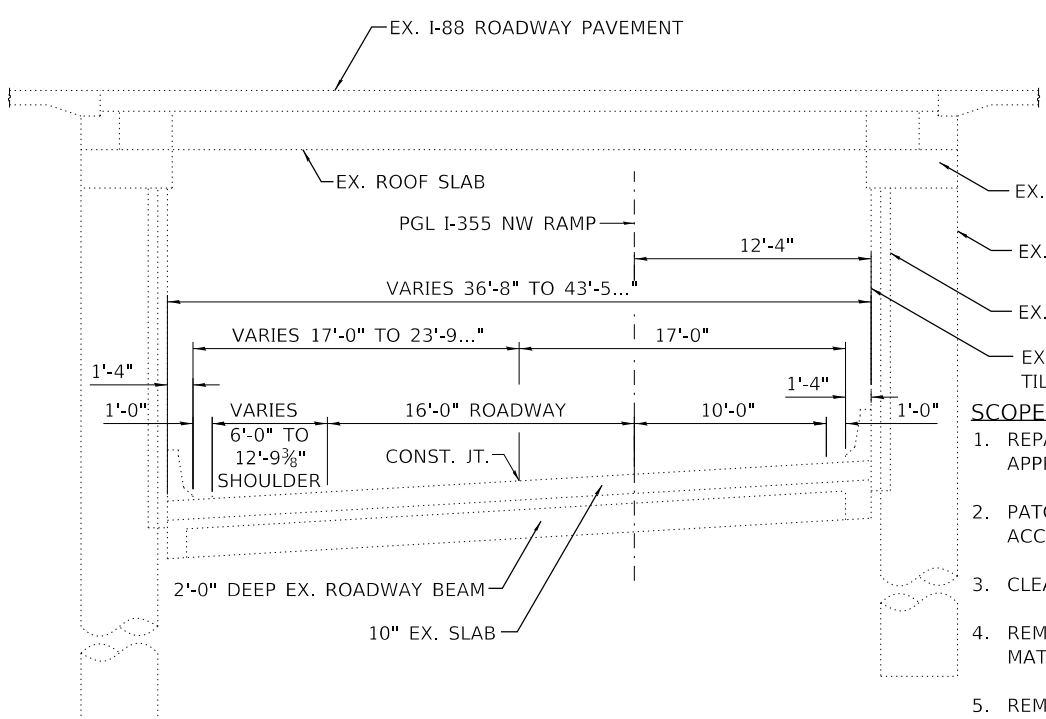
INTERSTATE (I-88)
FUNCTIONAL CLASS: INTERSTATE
ADT: 172,000 (2014)
ADTT: 18,920 (2014)

I-355 (UNDER)
FUNCTIONAL CLASS: INTERSTATE
ADT: 18,800 (2014)
ADTT: 0.00 (2014)

PROJECT LOCATION RANGE 10E - 3RD PM



LOCATION SKETCH



ELEVATION (LOOKING WEST)

SCOPE OF WORK

1. REPAIR SPALLED AND UNSOUND CONCRETE ON I-88 BRIDGE AND APPROACH PARAPETS.
2. PATCH SPALLS/POTHOLES ON I-88 WEARING SURFACE WITH ACCELERATED APPROACH SLAB REPAIRS.
3. CLEAN AND RESEAL BRIDGE DECK JOINTS.
4. REMOVE AND REPLACE APPROACH SLAB TRANSITION JOINT MATERIALS.
5. REMOVE AND REPLACE RELIEF JOINT MATERIALS.
6. REMOVE UNSOUND CONCRETE FROM END OF SLAB AND OUTSIDE OF PARAPET AT THE WEST BRIDGE OPENING.
7. CLEAN AND PAINT EXPOSED REBAR ON END OF SLAB AND OUTSIDE OF PARAPET AT THE WEST BRIDGE OPENING.

PLAN

SCOPE OF WORK (CONTINUED)

8. REMOVE LOOSE OR CRACKED CERAMIC WALL TILES FROM ABUTMENT WALLS INCLUDING BOND COAT.
9. REPAIR SPALLED AND UNSOUND CONCRETE ON ABUTMENT WALLS, CAPS AND BARRIERS.
10. CLEAN AND SEAL CRACKS >1/16" ON ABUTMENT WALLS, CAPS AND BARRIERS.
11. REPLACE ALL MISSING CERAMIC WALL TILES.
12. REPAIR SPALLED AND UNSOUND CONCRETE ON RETAINING WALLS.
13. CLEAN AND SEAL CRACKS >1/16" ON RETAINING WALLS.
14. APPLY CONCRETE SEALANT TO ABUTMENT BARRIERS.

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NO.	DATE	DESCRIPTION	

CONTRACT NO. RR-16-4255
BRIDGE NO. 1445
GENERAL PLAN & ELEVATION

SFC-01 OF SFC-08
SHT NO. SFC-01
DRAWING NO. 1084 OF 1517

GENERAL NOTES

CONSTRUCTION

- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION TOLERANCES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.
- CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES ARE SHOWN FOR INFORMATION ONLY.
- NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
- THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COSTS WILL BE AT THE CONTRACTOR'S EXPENSE.
- NO CONCRETE CUTTING WILL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINES BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E. 1-800-892-0123.
- EXISTING REINFORCEMENT WHICH IS TO BE INCORPORATED INTO THE NEW CONSTRUCTION SHALL BE BLAST CLEANED TO GREY METAL, STRAIGHTENED (WITHOUT HEATING), AND CUT TO FIT. COST SHALL BE INCLUDED WITH THAT FOR "CONCRETE REMOVAL".
- WHENEVER MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF THE EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.
- CONCRETE SEALANT SHALL BE APPLIED TO THE TOP AND TRAFFIC FACE OF ALL REPAIRED AREAS OF THE BRIDGE DECK REPAIRS AND PARAPET, INCLUDING PARAPET ON BRIDGE WINGWALLS. SEALANT SHALL ALSO BE APPLIED TO THE REPAIRED AREAS OF THE VISIBLE FACES OF THE PIER COLUMNS, CRASHWALLS AND CAPS, PIERS AND ABUTMENTS, BACKWALLS, AND BEARING SEATS. EXISTING SURFACES SHALL BE POWERED WASHED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 592 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF ILLINOIS, SHALL PREPARE AND SUBMIT STRUCTURAL ASSESSMENT REPORTS (SARS) FOR THE PROPOSED WORK ASSOCIATED WITH REMOVING, MODIFYING OR RECONSTRUCTING EXISTING STRUCTURES OR PORTIONS THEREOF. UNLESS NOTED OTHERWISE, A SAR SHALL BE REQUIRED WHEN THE CONTRACTOR'S MEANS AND METHODS APPLY LOADS TO THE STRUCTURE OR CHANGE ITS STRUCTURAL BEHAVIOR. A SAR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING WORK, IN ACCORDANCE WITH THE LATEST IDOT GUIDE BRIDGE SPECIAL PROVISION, "STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS". THIS INCLUDES THE WORK COVERED BY SEPARATE SARS WHICH MAY BE SUBMITTED AT DIFFERENT TIMES OR AS DICTATED BY THE CONTRACTOR'S SCHEDULE.
- AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP) WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS. AND THE LATEST NATIONAL BRIDGE INSPECTIONS STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.

CAST-IN-PLACE CONCRETE

- ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF 1 FOOT BELOW FINISHED GROUND LEVEL.

REINFORCING BARS

- REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM 706), GRADE 60, DEFORMED BARS.
- REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

LIST OF ABBREVIATIONS

- ABUT. - ABUTMENT
- APPROX. - APPROXIMATE
- BRG. - BEARING
- CL. - CLEAR
- DIM. - DIMENSION
- E. - EAST
- EXIST. - EXISTING
- MAX. - MAXIMUM
- MIN. - MINIMUM
- N. - NORTH
- N.B. - NORTHBOUND
- NO. - NUMBER
- P.G.L. - PROFILE GRADE LINE
- S. - SOUTH
- S.B. - SOUTHBOUND
- SHLDR. - SHOULDER
- STA. - STATION
- TYP. - TYPICAL
- W. - WEST

INDEX OF SHEETS

- SFC-01 GENERAL PLAN & ELEVATION
- SFC-02 GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
- SFC-03 CONSTRUCTION STAGING
- SFC-04 EAST ABUTMENT REPAIRS
- SFC-05 WEST ABUTMENT REPAIRS
- SFC-06 RETAINING WALL (WALL L) REPAIRS
- SFC-07 DECK SLAB REPAIRS
- SFC-08 MISCELLANEOUS REPAIRS

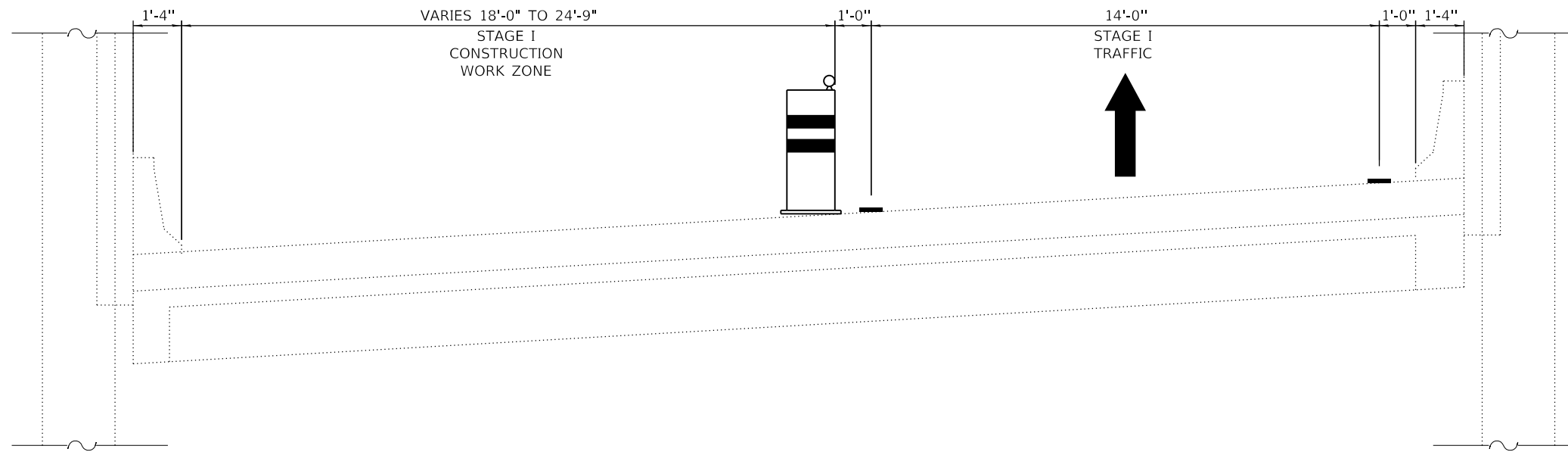
TOTAL BILL OF MATERIAL

PAY ITEMS	DESCRIPTION	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	QUANTITY	RECORDED QUANTITY
J1506010	CLEANING AND SEALING JOINT	FOOT		726	726	
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	671		671	
JT503013	ACCELERATED APPROACH SLAB REPAIR (PARTIAL)	SQ. YD.		2	2	
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ. FT.	57	13	70	
JT524010	APPLY CONCRETE SEALANT	SQ. FT.	10962		10962	
JT525130	BONDED PREFORMED JOINT SEAL, 3	FOOT		456	456	
JT525225	BONDED PREFORMED JOINT SEAL REPLACEMENT, 2 IN.	FOOT		204	204	
JT602830	CLEAN DRAINAGE SYSTEM	EACH		1	1	
JT900050	REMOVAL OF CERAMIC WALL TILES*	SQ. FT.	894		894	
X0323818	CLEANING AND PAINTING EXPOSED REBAR	SQ. FT.		9	9	
	CERAMIC TILES	SQ. FT.	980		980	
Z0013300	CONCRETE REMOVAL (SPECIAL)	SQ. YD.		1	1	

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SFC-02 OF SFC-08

DRAWN BY AZ DATE 03/11/2018 CHECKED BY NH/KS DATE 03/11/2018	 thomas engineering group, llc 55 w. 22nd street suite 300 lombard, il 60148 phone: 855-533-1700	 THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY 2700 OGDEN AVENUE DOWNERS GROVE, ILLINOIS 60515	<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> <th rowspan="2">DESCRIPTION</th> </tr> <tr> <th>NO.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REVISIONS		DESCRIPTION	NO.	DATE							CONTRACT NO. RR-16-4255 BRIDGE NO. 1445 - GENERAL NOTES, INDEX OF SHEETS & TOTAL BILL OF MATERIAL	SHT NO. SFC-02 DRAWING NO. 1085 OF 1517
REVISIONS		DESCRIPTION														
NO.	DATE															



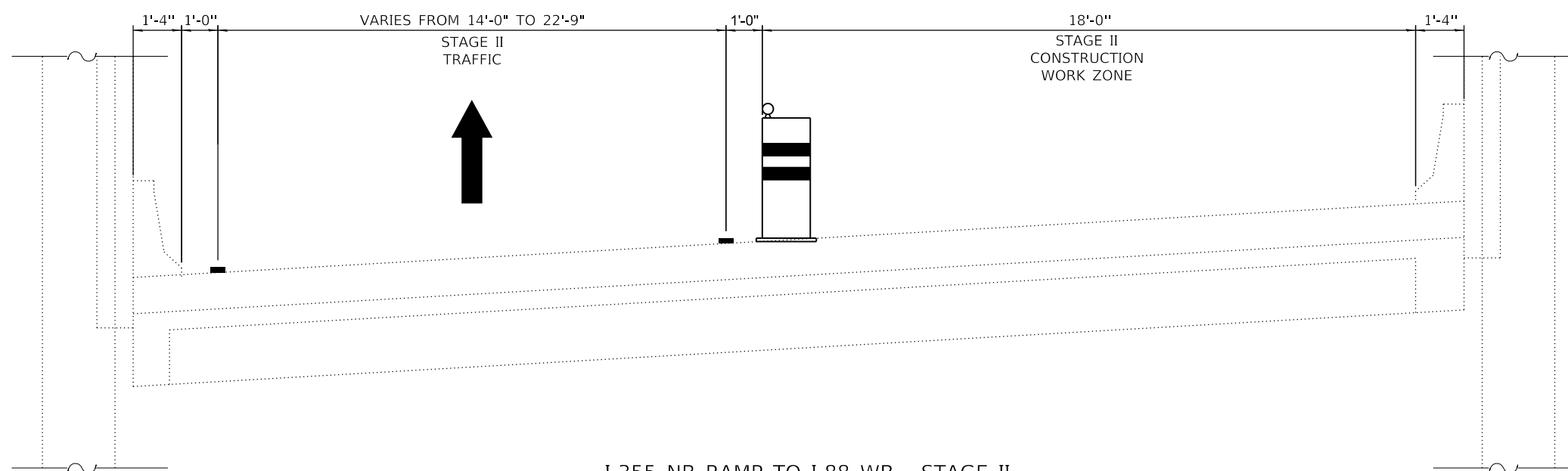
I-355 NB RAMP TO I-88 WB - STAGE I
(LOOKING WEST)

CONSTRUCTION SEQUENCING

1. I-355 NB TO I-88 WB RAMP STAGE I: WEST ABUTMENT REPAIRS, RETAINING WALL L AND SUPERSTRUCTURE REPAIRS.
2. I-355 NB TO I-88 WB RAMP STAGE II: EAST ABUTMENT REPAIRS AND SUPERSTRUCTURE REPAIRS.
3. I-88 MOT. JOINT REPAIRS, BRIDGE APPROACH SLAB PATCHING AND BRIDGE DECK & PARAPET SEALING.

NOTES

1. THE STAGE CONSTRUCTION SECTIONS SHOWN ARE ONLY FOR CONSTRUCTION STAGES BENEATH THE STRUCTURE. SEE MAINLINE I-355 MOT PLAN SHEETS FOR MORE DETAILS.
2. MOT FOR THE WORK ON THE DECK SURFACE (I-88) WILL BE PERFORMED UNDER CONTRACT RR-17-4313. THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACT TO PERFORM THIS WORK.



I-355 NB RAMP TO I-88 WB - STAGE II
(LOOKING WEST)

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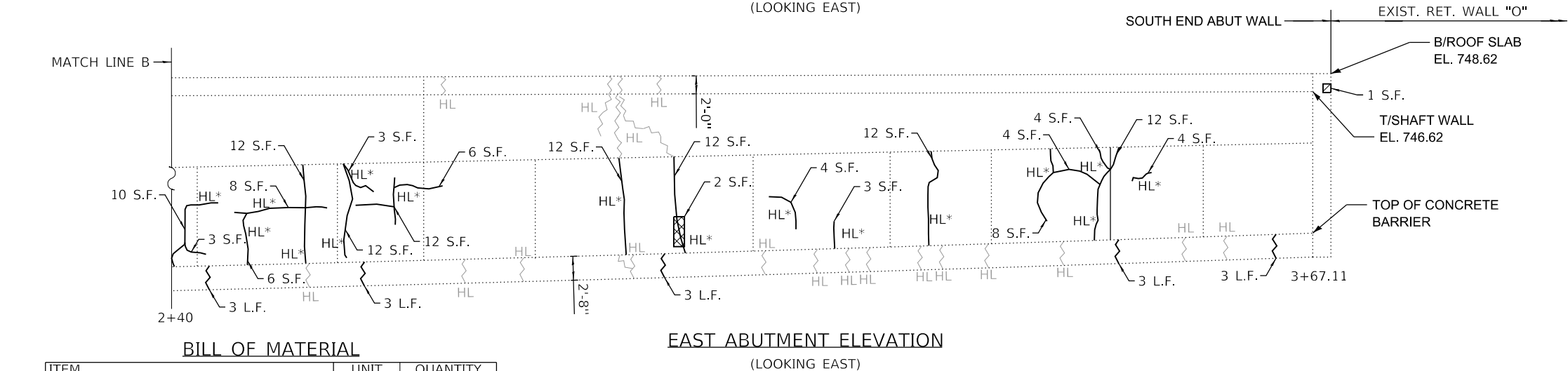
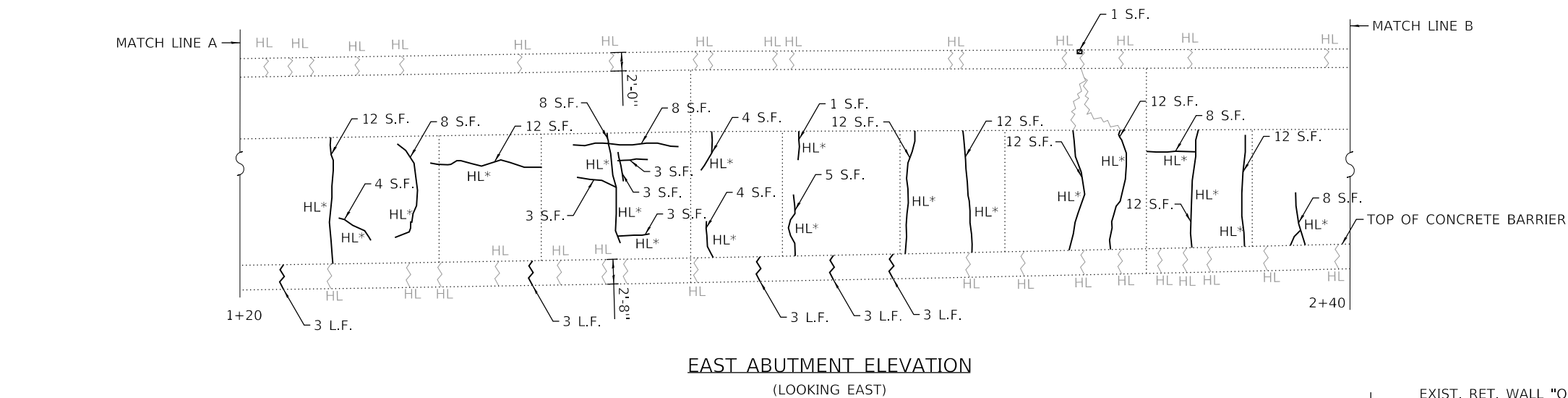
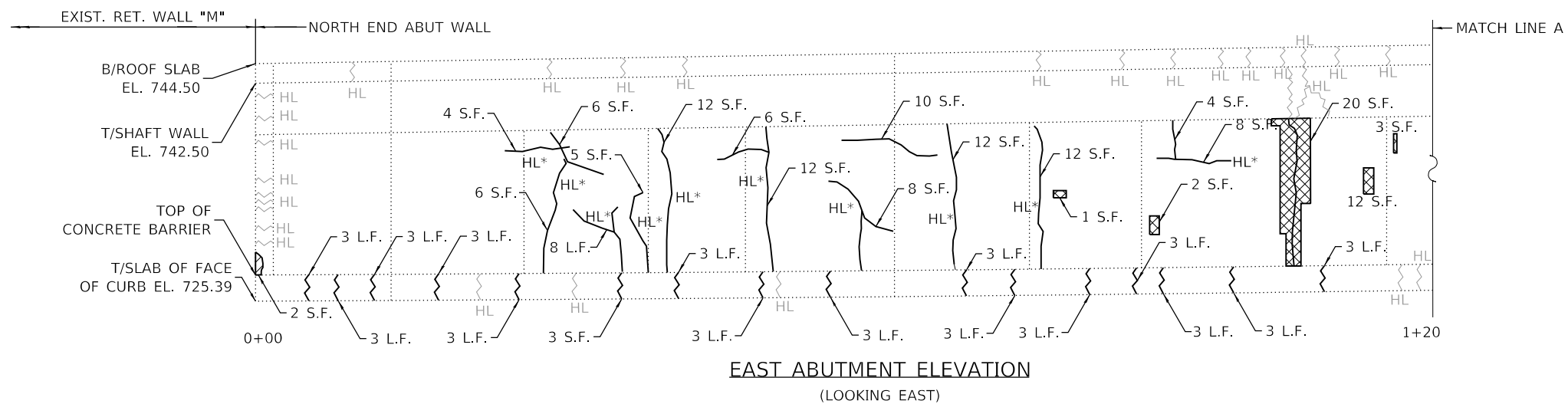
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lombard, il 60148
phone: 855-533-1700



REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1445
CONSTRUCTION STAGING

SFC-03 OF SFC-08
SHT NO. SFC-03
DRAWING NO. 1086 OF 1517



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	164*
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	4
REMOVAL OF CERAMIC WALL TILES	SQ. FT.	426
CERAMIC TILES	SQ. FT.	466
APPLY CONCRETE SEALANT	SQ. FT.	981

* ASSUME A 20% LOW EPOXY INJECTION REPAIR FOR ALL HL* TILE CRACK REMOVAL

LEGEND:

- TILE REPAIR (SEE NOTES)
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK (FOR INFORMATION ONLY)
- LOW PRESSURE EPOXY INJECTION
- HL CRACK IN TILE (SEE NOTES)

NOTES:

CRACKED CERAMIC TILES AND MARKED TILE REPAIR AREAS WILL BE REMOVED AS DIRECTED BY THE ENGINEER. ABUTMENT SURFACE TO BE INVESTIGATED AND REPAIRED AS DIRECTED BY THE ENGINEER. ONCE REPAIRS TO ABUTMENT (IF ANY) ARE COMPLETE, CONTRACTOR MAY PROCEED WITH INSTALLATION OF NEW TILES

APPLY CONCRETE SEALER TO SINGLE FACE CONCRETE BARRIER WALL

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

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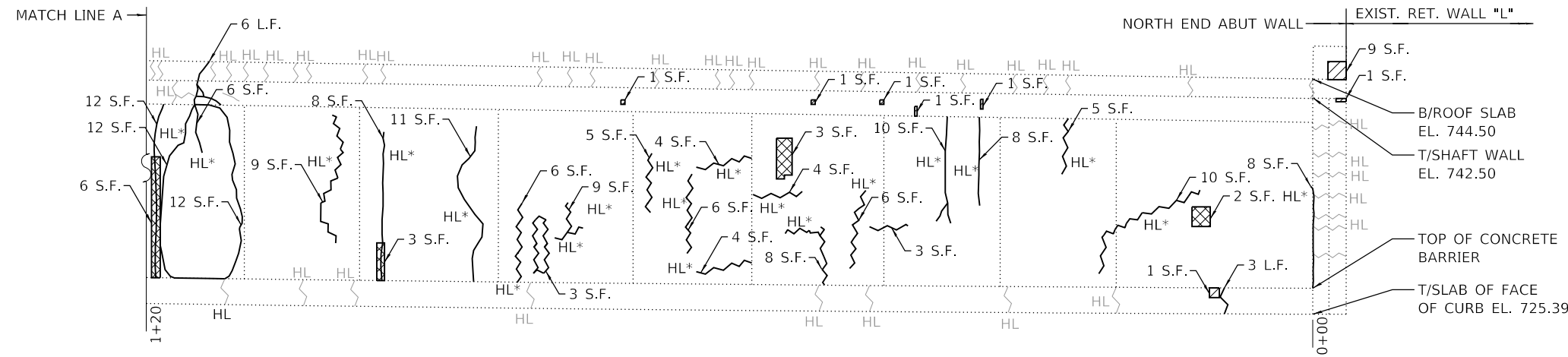
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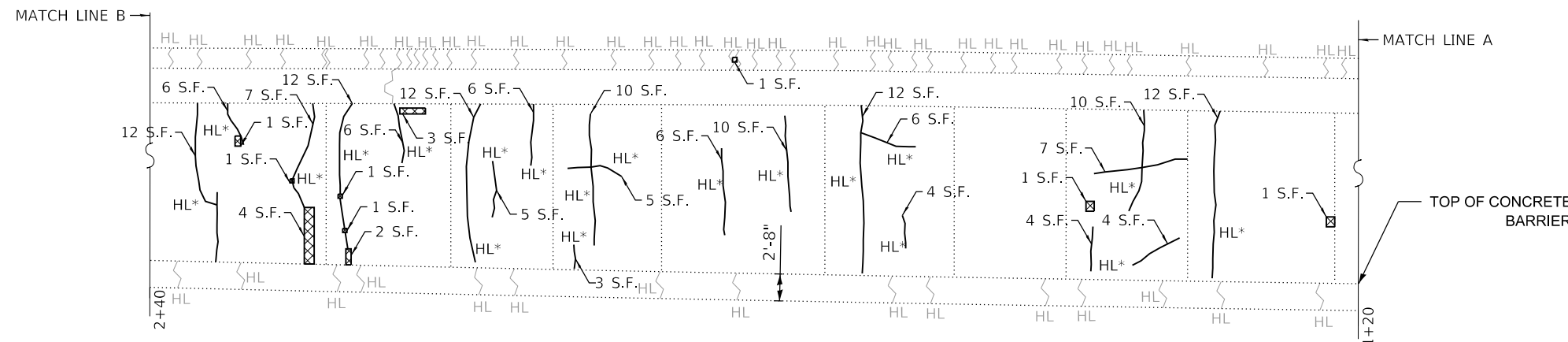
NO.		REVISIONS	
DATE	DESCRIPTION	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1445
 EAST ABUTMENT REPAIRS

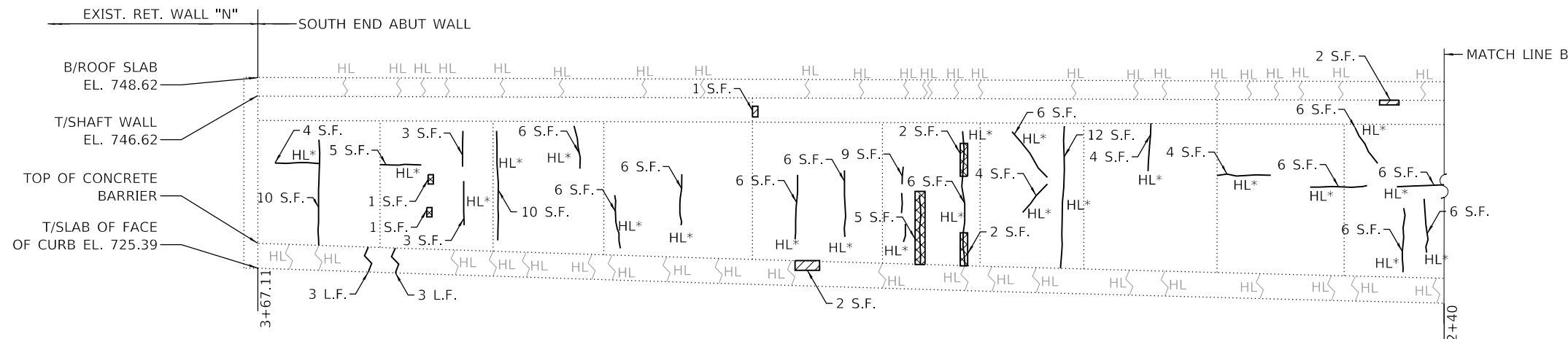
SFC-04 OF SFC-08
 SHT NO. SFC-04
 DRAWING NO. 1087 OF 1517



WEST ABUTMENT ELEVATION
(LOOKING WEST)



WEST ABUTMENT ELEVATION
(LOOKING WEST)



WEST ABUTMENT ELEVATION
(LOOKING WEST)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	112*
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	22
REMOVAL OF CERAMIC WALL TILES	SQ. FT.	468
CERAMIC TILES	SQ. FT.	514
APPLY CONCRETE SEALANT	SQ. FT.	981

* ASSUME A 20% LOW EPOXY INJECTION REPAIR FOR ALL HL* TILE CRACK REMOVAL

LEGEND:

- TILE REPAIR (SEE NOTES)
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK (FOR INFORMATION ONLY)
- LOW PRESSURE EPOXY INJECTION
- HL CRACK IN TILE (SEE NOTES)

NOTES:

CRACKED CERAMIC TILES AND MARKED TILE REPAIR AREAS WILL BE REMOVED AS DIRECTED BY THE ENGINEER. ABUTMENT SURFACE TO BE INVESTIGATED AND REPAIRED AS DIRECTED BY THE ENGINEER. ONCE REPAIRS TO ABUTMENT (IF ANY) ARE COMPLETE, CONTRACTOR MAY PROCEED WITH INSTALLATION OF NEW TILES

APPLY CONCRETE SEALER TO SINGLE FACE CONCRETE BARRIER WALL

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

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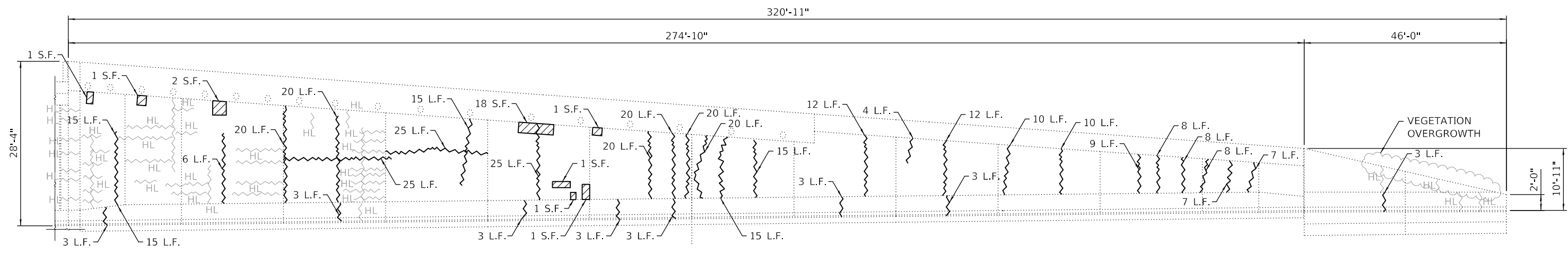
thomas engineering group, llc
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phone: 855-533-1700



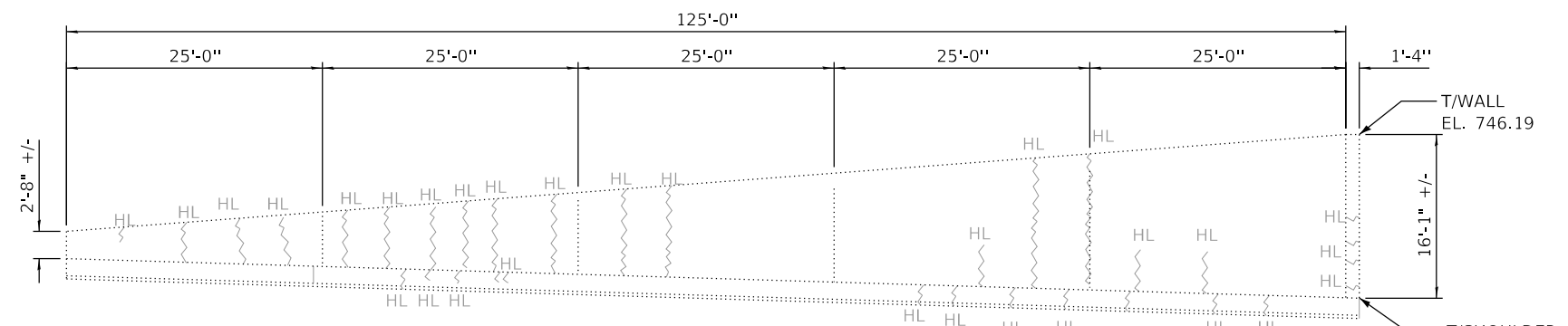
NO.		DATE		REVISIONS	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1445
WEST ABUTMENT REPAIRS

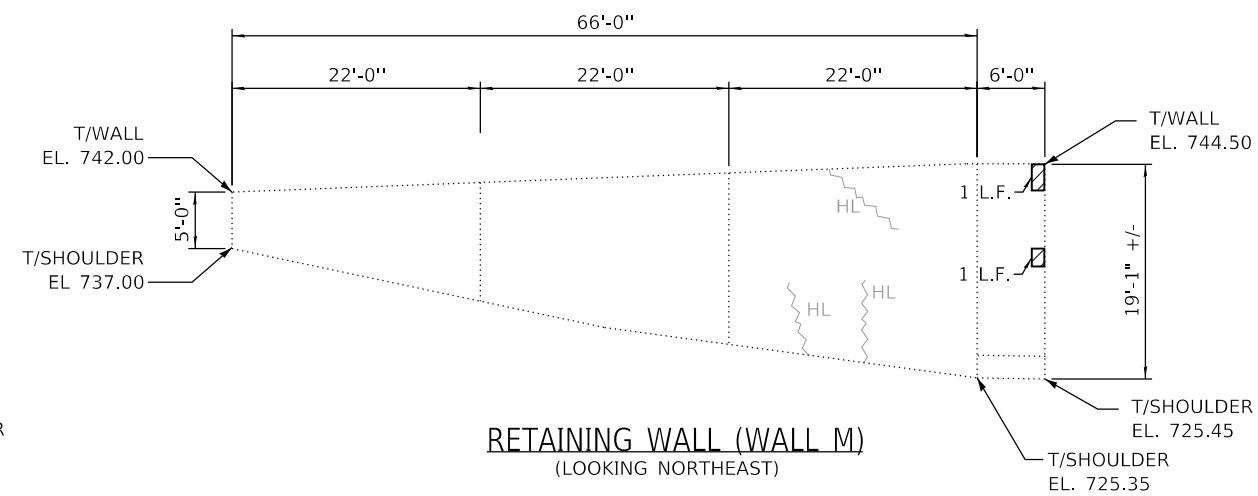
SFC-05 OF SFC-08
SHT NO. SFC-05
DRAWING NO. 1088 OF 1517



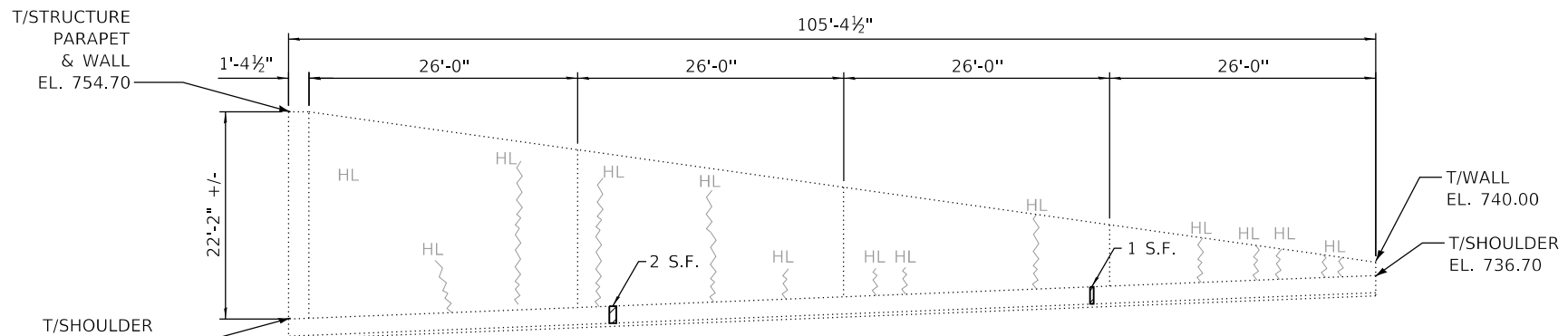
RETAINING WALL (WALL L)
(LOOKING SOUTH)



RETAINING WALL (WALL N)
(LOOKING SOUTH)



RETAINING WALL (WALL M)
(LOOKING NORTHEAST)



RETAINING WALL (WALL O)
(LOOKING NORTH)

- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - HAIRLINE CRACK (FOR INFORMATION ONLY)
 - LOW PRESSURE EPOXY INJECTION

- NOTES:**
- APPLY CONCRETE SEALER TO SINGLE FACE CONCRETE BARRIER WALL
 - REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION
 - REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	395
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	31
APPLY CONCRETE SEALANT	SQ. FT.	9000
VEGETATION OVERGROWTH REMOVAL	EACH	1

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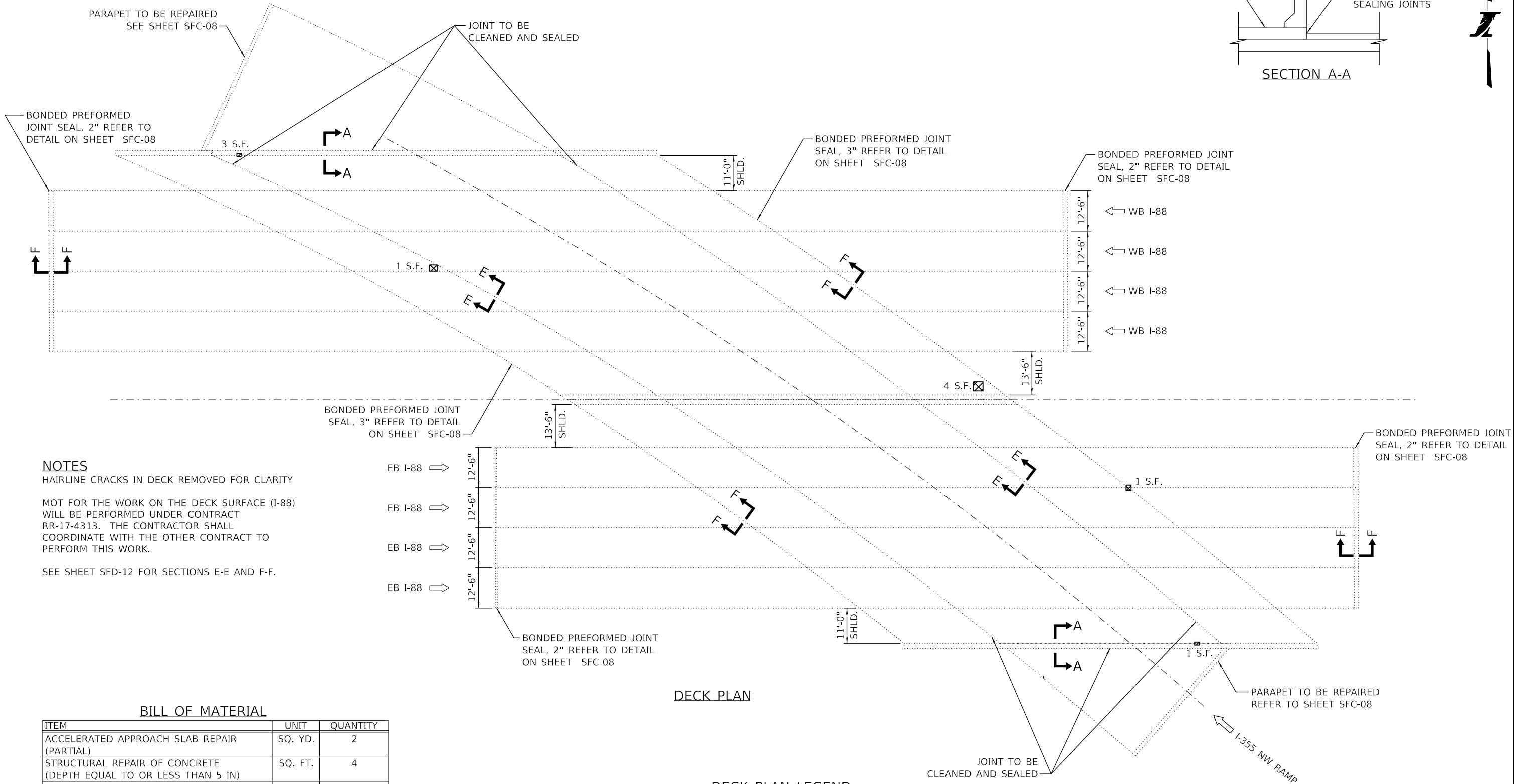
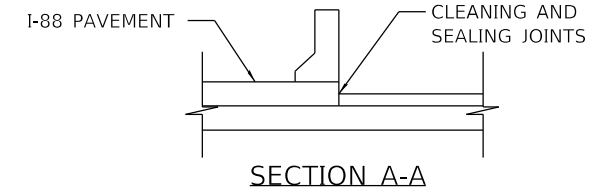
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 suite 300
 Lombard, IL 60148
 phone: 855-533-1700



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NO.	DATE	DESCRIPTION	

CONTRACT NO. **RR-16-4255**
 BRIDGE NO. **1445**
 RETAINING WALL (WALL L) REPAIRS

SFC-06 OF SFC-08
 SHT NO. **SFC-06**
 DRAWING NO. **1089 OF 1517**



NOTES
 HAIRLINE CRACKS IN DECK REMOVED FOR CLARITY
 MOT FOR THE WORK ON THE DECK SURFACE (I-88) WILL BE PERFORMED UNDER CONTRACT RR-17-4313. THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACT TO PERFORM THIS WORK.
 SEE SHEET SFD-12 FOR SECTIONS E-E AND F-F.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
ACCELERATED APPROACH SLAB REPAIR (PARTIAL)	SQ. YD.	2
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	4
CLEANING AND SEALING JOINTS	FOOT	726
BONDED PREFORMED JOINT SEAL, 2 IN	FOOT	204
BONDED PREFORMED JOINT SEAL, 3 IN	FOOT	456

DECK PLAN

DECK PLAN LEGEND:
 ACCELERATED APPROACH SLAB REPAIR (PARTIAL)
 STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

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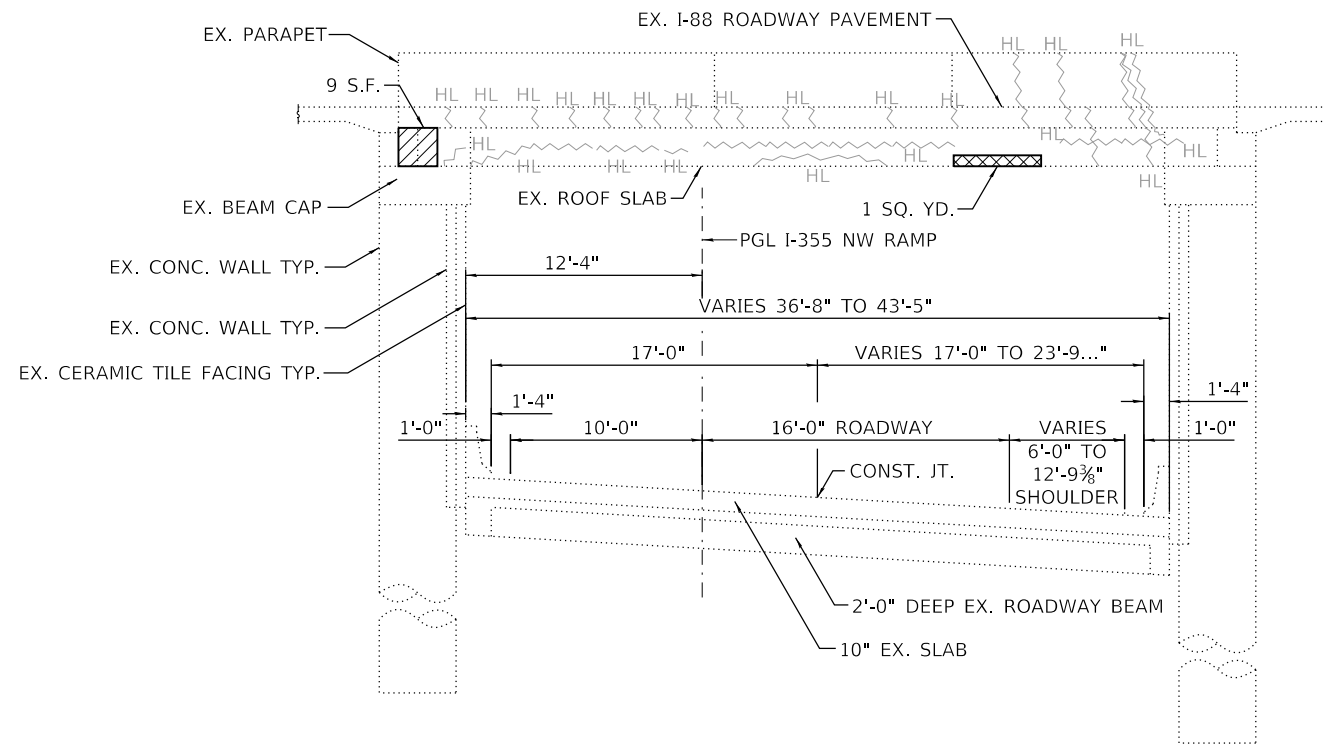
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REVISIONS		
NO.	DATE	DESCRIPTION




CONTRACT NO. RR-16-4255
 BRIDGE NO. 1445
 DECK REPAIR PLAN

SFC-07 OF SFC-08
 SHT NO. SFC-07
 DRAWING NO. 1090 OF 1517



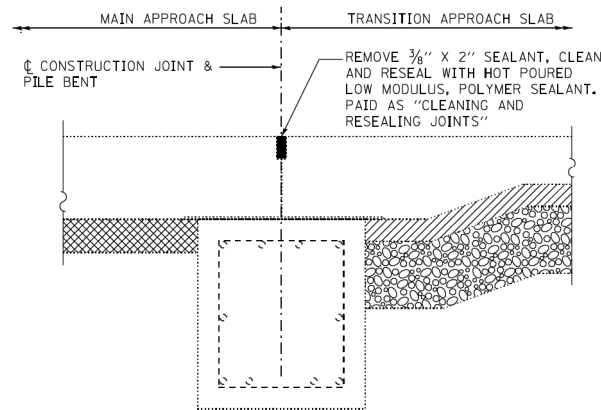
WEST ELEVATION
(LOOKING EAST)

LEGEND:

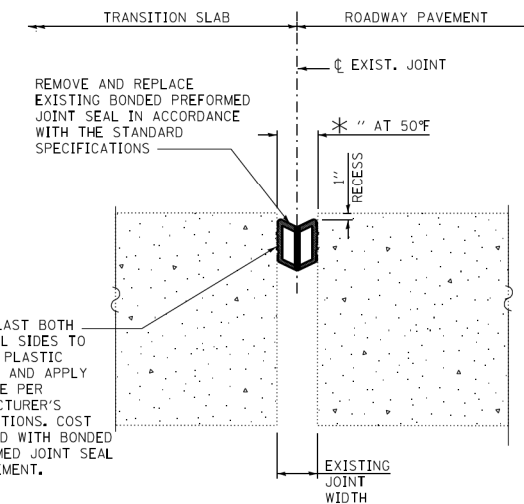
-  CONCRETE REMOVAL (SPECIAL)*
-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)
-  HAIRLINE CRACK (FOR INFORMATION ONLY)

NOTE:

AFTER LOOSE CONCRETE IS REMOVED, CLEAN AND PAINT EXPOSED REBAR OR REPAIR AS DIRECTED BY THE ENGINEER

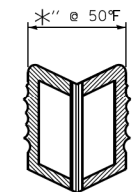


SECTION E-E



SECTION F-F

NOTE:
COST OF REMOVING EXISTING AND INSTALLING NEW JOINT MATERIAL SHALL BE INCLUDED IN PAY ITEM "BONDED PREFORMED JOINT SEAL REPLACEMENT."



BONDED PREFORMED
JOINT SEAL

* SEE SHEET SFC-07
FOR PREFORMED
JOINT SEAL WIDTH

JOINT CLEANING DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	9
CONCRETE REMOVAL SPECIAL	SQ. YD.	1

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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1445
MISCELLANEOUS REPAIRS

SFC-08 OF SFC-08
SHT NO. SFC-08
DRAWING NO.
1091 OF 1517

BENCHMARK:

3 1/2" BRASS TABLE STAMPED WITH "ISTHA BENCHMARK" SET IN TOP OF PARAPET OF EAST PORTAL OF STRUCTURE CARRYING I-355 UNDER I-88, B/N 1143 APPROXIMATELY 13 FEET NORTH OF WB I-88 BARRIER WALL ELEVATION: 769.71

EXISTING STRUCTURE

BRIDGE NUMBER 1443 WAS ORIGINALLY CONSTRUCTED IN 1989 UNDER ILLINOIS TOLLWAY CONTRACT CIP-615. THE BRIDGE CARRIES I-88 OVER I-355. THE SUPERSTRUCTURE CONSISTS OF A TWO SPANS, PRESTRESSED CONCRETE T-BEAMS WITH AN OVERALL WIDTH OF 609'-0" AND SPANS 128'-8" BACK TO BACK OF ABUTMENTS. THE SUBSTRUCTURE CONSISTS OF REINFORCED CONCRETE CAP BEAM ON TOP OF WALL ABUTMENTS SUPPORTED BY DRILLED SHAFTS AND A CIRCULAR MULTI-COLUMN PIER WITH A CAP AND CRASHWALL. THE COLUMNS OF THE PIER CONTINUE THROUGH THE CRASHWALL AND ACT AS DRILLED SHAFTS TO SUPPORT THE PIER.

DESIGN STRESSES

EXISTING UNITS

f'c = 4,000 PSI (CONCRETE)
 fy = 60,000 PSI (REINFORCEMENT)
 f'c = 5,000 PSI (POST TENSIONED CONCRETE)
 f'ci = 4,200 PSI (POST TENSIONED CONCRETE RELEASE STRENGTH)
 f's = 270,000 PSI (POST TENSIONED STRAND ULTIMATE STRENGTH)
 fy = 229,000 PSI (POST TENSIONED STRAND YIELD STRENGTH)
 fsi = 216,000 PSI (POST TENSIONED STRAND INITIAL TENSION)
 USE 1/2" DIAMETER 0.153 in² AREA LOW RELAXATION STRANDS

FIELD UNITS

f'c = 3,500 PSI (CLASS SI SUBSTRUCTURE REPAIRS)
 f'c = 4,000 PSI (CLASS BS PARAPETS AND BARRIER REPAIRS)
 f'c = 4,000 PSI (CLASS AX BRIDGE DECK & APPROACH SLAB REPAIRS)
 fy = 60,000 PSI (REINFORCEMENT)

DESIGN LOADS

EXISTING STRUCTURE

LIVE LOAD:
 HS20-44 AND THE ALTERNATE MILITARY LOADING

DEAD LOAD:

25 P.S.F. FUTURE WEARING SURFACE

HIGHWAY CLASSIFICATION

INTERSTATE (I-88)
 FUNCTIONAL CLASS: INTERSTATE
 ADT: 177,200 (2015)
 ADTT: 19,300 (2015)

I-355 (UNDER)
 FUNCTIONAL CLASS: INTERSTATE
 ADT: 100,300 (2015)
 ADTT: 8,000 (2015)

CONSTRUCTION SPECIFICATIONS

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS (GBSP's).

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

ILLINOIS DEPARTMENT OF TRANSPORTATION STRUCTURAL SERVICES MANUAL ADOPTED JUNE 30, 2017.

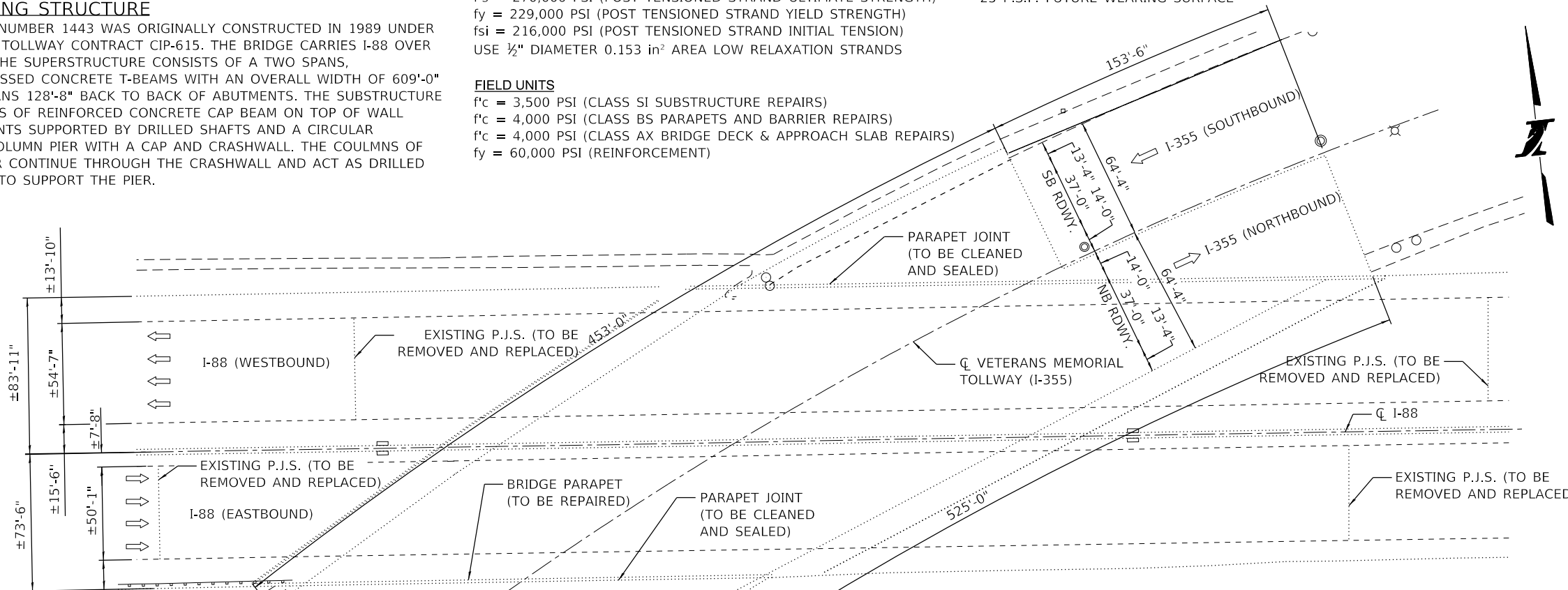
DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS, 17TH EDITION WITH ALL SUBSEQUENT INTERIMS

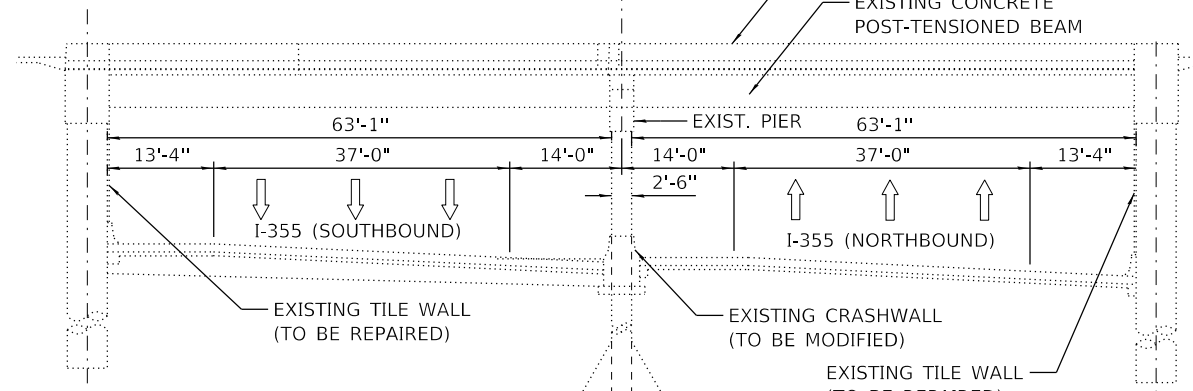
ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL ADOPTED MARCH 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL DATED JANUARY 2012

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGN MEMORANDUMS



PLAN



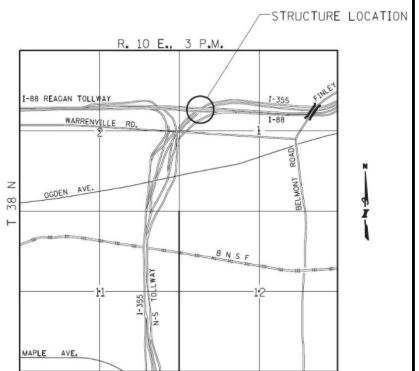
ELEVATION
(LOOKING EAST)

SCOPE OF WORK

1. REPAIR SPALLED AND UNSOUND CONCRETE ON I-88 BRIDGE AND APPROACH PARAPETS.
2. PATCH SPALLS/POTHoles ON I-88 WEARING SURFACE WITH ACCELERATED BRIDGE DECK REPAIRS.
3. CLEAN AND RESEAL BRIDGE DECK JOINTS.
4. REMOVE AND REPLACE APPROACH SLAB TRANSITION JOINT MATERIALS.
5. REMOVE AND REPLACE RELIEF JOINT MATERIALS.
6. CLEAN AND RESEAL JOINTS BEHIND PARAPET WALLS.
7. RECONSTRUCT CENTER PIER CRASH WALL.
8. REPAIR SPALLED AND UNSOUND CONCRETE ON CENTER PIER COLUMNS AND CAP.
9. CLEAN AND SEAL CRACKS >1/16" ON PIER COLUMNS AND CAP.

SCOPE OF WORK (CONTINUED)

10. REMOVE LOOSE OR CRACKED CERAMIC WALL TILES FROM ABUTMENT WALLS INCLUDING BOND COAT.
11. REPAIR SPALLED AND UNSOUND CONCRETE ON ABUTMENT WALLS, CAPS AND BARRIERS.
12. CLEAN AND SEAL CRACKS >1/16" ON ABUTMENT WALLS, CAPS AND BARRIERS.
13. REPLACE ALL MISSING CERAMIC WALL TILES.
14. APPLY CONCRETE SEALANT TO ABUTMENT BARRIERS, PIER COLUMNS AND PROPOSED PIER CRASH WALL.
15. REPAIR DRAINAGE STRUCTURE AT SW CORNER.



LOCATION SKETCH

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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1443
 GENERAL PLAN & ELEVATION

SFD-01 OF SFD-13

SHT NO. SFD-01
 DRAWING NO.
 1092 OF 1517

GENERAL NOTES

CONSTRUCTION

1. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION TOLERANCES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.
2. CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES ARE SHOWN FOR INFORMATION ONLY.
3. NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
4. THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COSTS WILL BE AT THE CONTRACTOR'S EXPENSE.
5. NO CONCRETE CUTTING WILL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINES BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E. 1-800-892-0123.
7. EXISTING REINFORCEMENT WHICH IS TO BE INCORPORATED INTO THE NEW CONSTRUCTION SHALL BE BLAST CLEANED TO GREY METAL, STRAIGHTENED (WITHOUT HEATING), AND CUT TO FIT. COST SHALL BE INCLUDED WITH THAT FOR "CONCRETE REMOVAL".
8. WHENEVER MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF THE EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.
9. CONCRETE SEALANT SHALL BE APPLIED TO THE TOP AND TRAFFIC FACE OF ALL REPAIRED AREAS OF THE BRIDGE DECK REPAIRS AND PARAPET, INCLUDING PARAPET ON BRIDGE WINGWALLS. SEALANT SHALL ALSO BE APPLIED TO THE REPAIRED AREAS OF THE VISIBLE FACES OF THE PIER COLUMNS, CRASHWALLS AND CAPS, PIERS AND ABUTMENTS, BACKWALLS, AND BEARING SEATS. EXISTING SURFACES SHALL BE POWERED WASHED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 592 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
10. A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF ILLINOIS, SHALL PREPARE AND SUBMIT STRUCTURAL ASSESSMENT REPORTS (SARS) FOR THE PROPOSED WORK ASSOCIATED WITH REMOVING, MODIFYING OR RECONSTRUCTING EXISTING STRUCTURES OR PORTIONS THEREOF. UNLESS NOTED OTHERWISE, A SAR SHALL BE REQUIRED WHEN THE CONTRACTOR'S MEANS AND METHODS APPLY LOADS TO THE STRUCTURE OR CHANGE ITS STRUCTURAL BEHAVIOR. A SAR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING WORK, IN ACCORDANCE WITH THE LATEST IDOT GUIDE BRIDGE SPECIAL PROVISION, "STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS. THIS INCLUDES WORK COVERED BY SEPARATE SARS WHICH MAY BE SUBMITTED AT DIFFERENT TIMES OR AS DICTATED BY THE CONTRACTOR'S SCHEDULE.
11. AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP) WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS. AND THE LATEST NATIONAL BRIDGE INSPECTIONS STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL FIBER OPTIC UTILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL INITIATE THE LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM FILLED IN ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE.
13. THE CONTRACTOR SHALL USE CARE WHEN EXCAVATING AROUND EXISTING FOUNDATIONS. ANY DAMAGE TO THE EXISTING STRUCTURE AND/OR SUPPORTING FOUNDATION SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.
14. ALL STAINLESS STEEL HARDWARE FOR DRAINAGE SYSTEMS SHALL BE COATED WITH ANTISEIZE COMPOUND.

CAST-IN-PLACE CONCRETE

1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF 1 FOOT BELOW FINISHED GROUND LEVEL.

REINFORCING BARS

1. REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM 706), GRADE 60, DEFORMED BARS.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY-COATED.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

LIST OF ABBREVIATIONS

ABUT.	-	ABUTMENT
APPROX.	-	APPROXIMATE
BRG.	-	BEARING
CL.	-	CLEAR
DIM.	-	DIMENSION
E.	-	EAST
EXIST.	-	EXISTING
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
N.	-	NORTH
N.B.	-	NORTHBOUND
NO.	-	NUMBER
P.G.L.	-	PROFILE GRADE LINE
S.	-	SOUTH
S.B.	-	SOUTHBOUND
SHLDR.	-	SHOULDER
STA.	-	STATION
TYP.	-	TYPICAL
W.	-	WEST

INDEX OF SHEETS

SFD-01	GENERAL PLAN & ELEVATION
SFD-02	GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
SFD-03	CONSTRUCTION STAGING
SFD-04	SOUTH ABUTMENT REPAIRS
SFD-05	SOUTH ABUTMENT REPAIRS
SFD-06	NORTH ABUTMENT REPAIRS
SFD-07	NORTH ABUTMENT REPAIRS
SFD-08	PIER REPAIRS
SFD-09	PIER REPAIRS
SFD-10	PIER REPAIRS
SFD-11	PIER REPAIRS
SFD-12	MISCELLANEOUS REPAIRS
SFD-13	MISCELLANEOUS REPAIRS

TOTAL BILL OF MATERIAL

PAY ITEMS	DESCRIPTION	UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL QUANTITY	RECORDED QUANTITY
50102400	CONCRETE REMOVAL	CU. YD.	208		208	
50300225	CONCRETE STRUCTURES	CU. YD.	493		493	
50800205	REINFORCEMENT BARS, EPOXY	POUND	20900		20900	
J1505040	REPAIR BRIDGE DRAINAGE SYSTEM	EACH		1	1	
J1506010	CLEANING AND SEALING JOINT	FOOT	1208	1240	2448	
J5121200	LOW PRESSURE EPOXY INJECTION	FOOT	541		541	
JT503012	ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.		3	3	
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ. FT.	195	24	219	
JT524010	APPLY CONCRETE SEALANT	SQ. FT.	21774		21774	
JT525130	BONDED PREFORMED JOINT SEAL, 3	FOOT		204	204	
JT525135	BONDED PREFORMED JOINT SEAL, 4	FOOT		425	425	
JT900050	REMOVAL OF CERAMIC WALL TILES	SQ. FT.	1077		1077	
Z0018905	DRILL AND GROUT BARS	EACH	1208		1208	
Z0043900	PREFORMED JOINT FILLER REPLACEMENT	FOOT	410		410	
	CERAMIC TILES	SQ. FT.	1077		1077	

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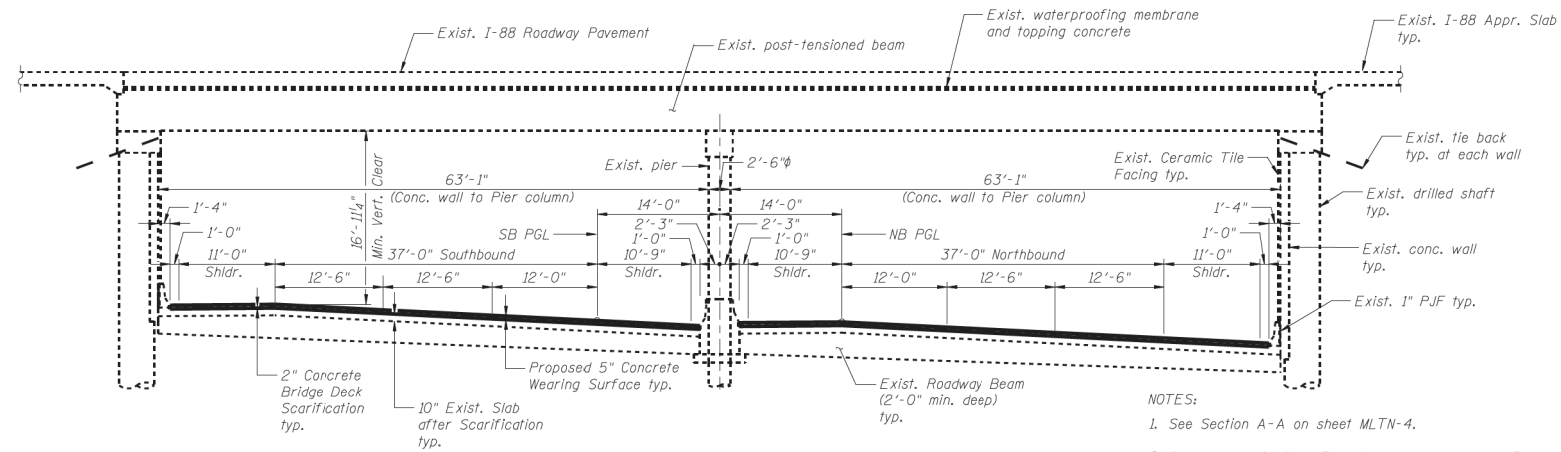
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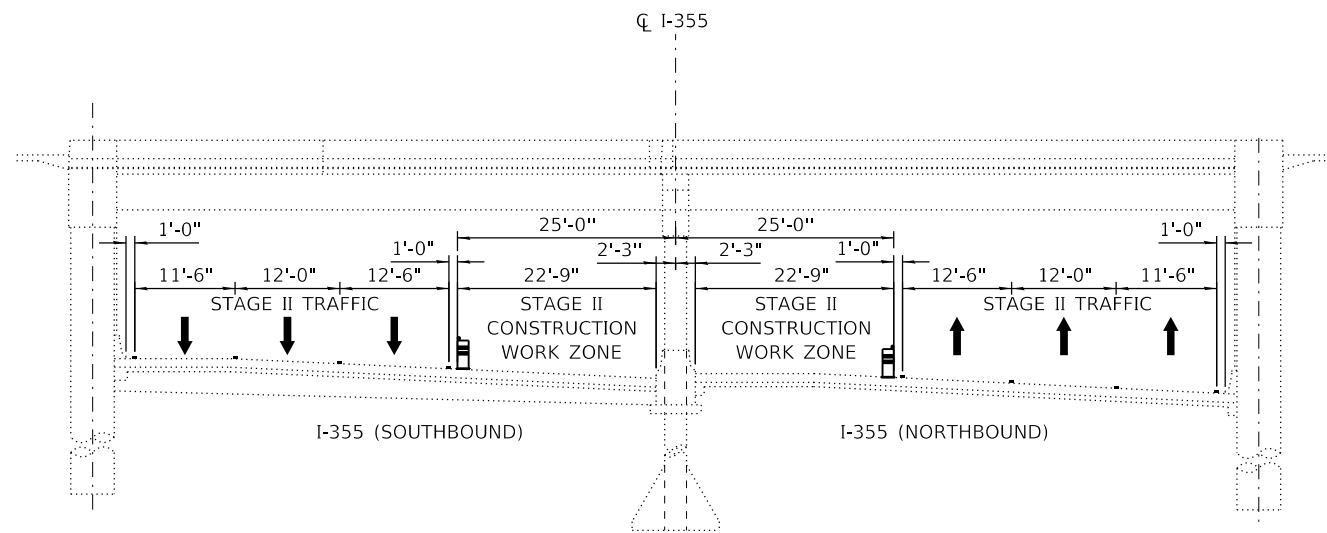
CONTRACT NO. RR-16-4255
 BRIDGE NO. 1443 - GENERAL NOTES,
 INDEX OF SHEETS & TOTAL BILL OF MATERIAL

SFD-02 OF SFD-13
 SHT NO. SFD-02
 DRAWING NO. 1093 OF 1517

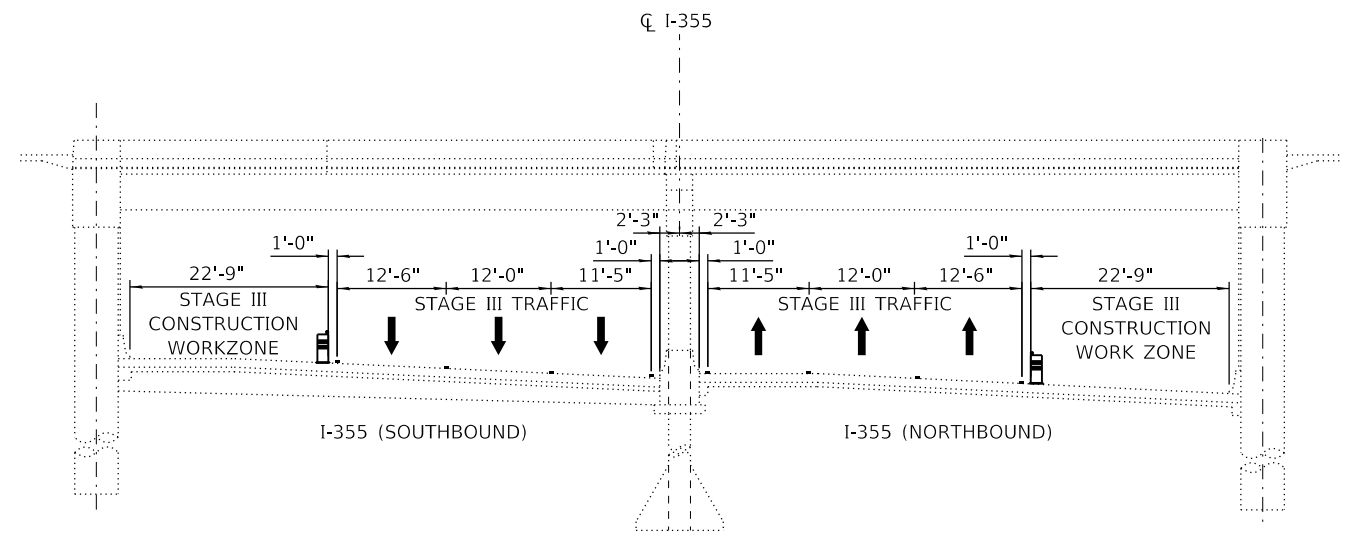


EXISTING CONDITIONS
(LOOKING EAST)

NOTES:
1. See Section A-A on sheet MLTN-4.
2. See Wearing Surface Elevations on sheets MLTN-5 and 6.



STAGE II CONSTRUCTION
(LOOKING EAST)



STAGE III CONSTRUCTION
(LOOKING EAST)

CONSTRUCTION SEQUENCING

1. STAGE II: PIER REPAIRS AND SUPERSTRUCTURE REPAIRS OVER NB AND SB INSIDE SHOULDERS AND INSIDE LANES. SUPERSTRUCTURE REPAIRS OVER NB AND SB MIDDLE LANES DONE IN OFF-PEAK LANE CLOSURES, APPROVED BY THE ILLINOIS TOLLWAY, ADJACENT TO STAGE II WORK ZONE.
2. STAGE III: ABUTMENT REPAIRS AND SUPERSTRUCTURE REPAIRS OVER NB AND SB OUTSIDE SHOULDERS AND OUTSIDE LANES.
3. I-88 MOT. JOINT REPAIRS, BRIDGE DECK PATCHING AND BRIDGE DECK & PARAPET SEALING.

NOTES

1. THE STAGE CONSTRUCTION SECTIONS SHOWN ARE ONLY FOR CONSTRUCTION STAGES BENEATH THE STRUCTURE. SEE MAINLINE I-355 MOT PLAN SHEETS FOR MORE MOT STAGES, INCLUDING STAGE I, AND ADDITIONAL MOT DETAILS.
2. MOT FOR THE WORK ON THE DECK SURFACE (I-88) WILL BE PERFORMED UNDER CONTRACT RR-17-4313. THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACT TO PERFORM THIS WORK.

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





NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. RR-16-4255
BRIDGE NO. 1443
CONSTRUCTION STAGING

SFD-03 OF SFD-13
SHT NO. SFD-03
DRAWING NO. 1094 OF 1517

LEGEND:

-  TILE REPAIR (SEE NOTES)
-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  HL HAIRLINE CRACK (FOR INFORMATION ONLY)
-  LF LOW PRESSURE EPOXY INJECTION
-  HL* HL CRACK IN TILE (SEE NOTES)
-  - - - - REMOVE AND REPLACE PJF

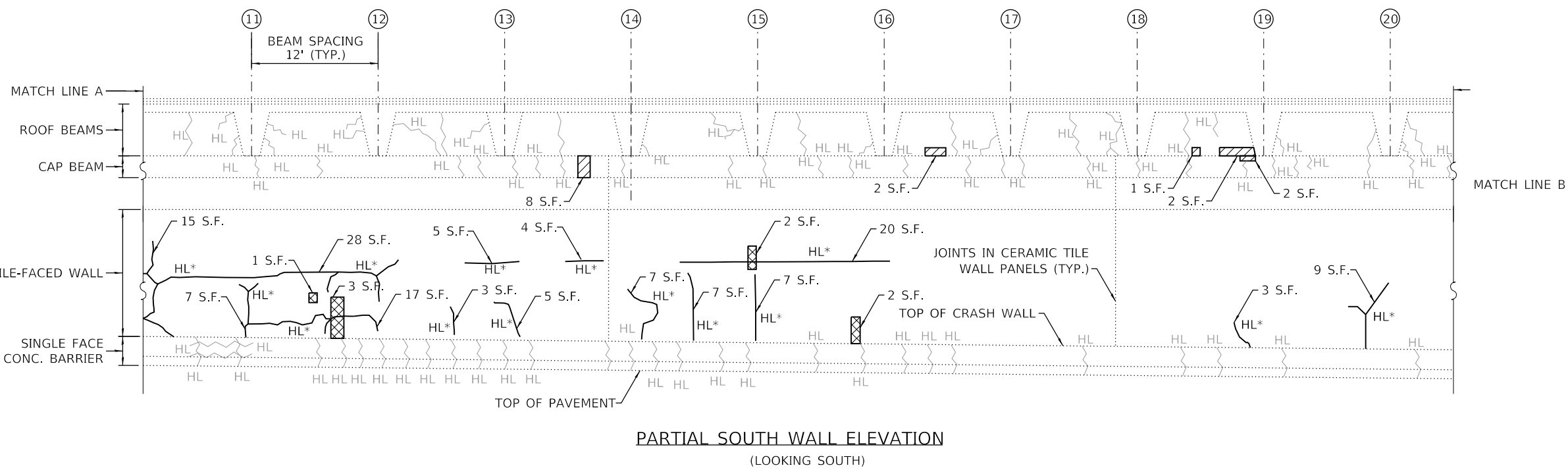
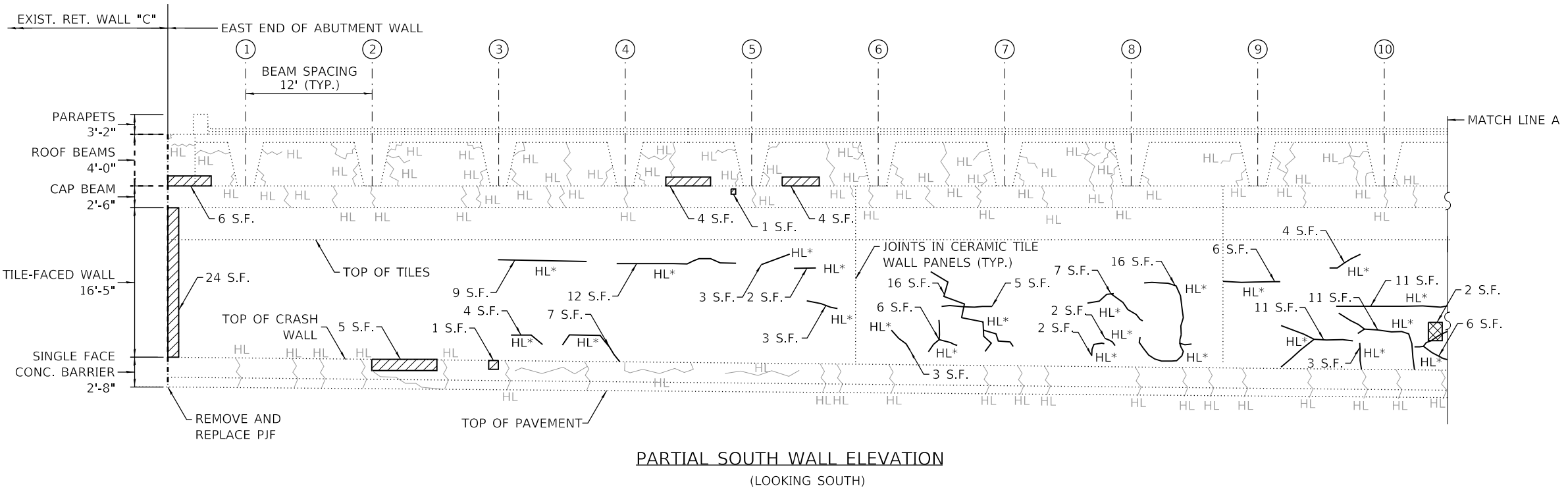
NOTES:

CRACKED CERAMIC TILES AND MARKED TILE REPAIR AREAS WILL BE REMOVED AS DIRECTED BY THE ENGINEER. ABUTMENT SURFACE TO BE INVESTIGATED AND REPAIRED AS DIRECTED BY THE ENGINEER. ONCE REPAIRS TO ABUTMENT (IF ANY) ARE COMPLETE, CONTRACTOR MAY PROCEED WITH INSTALLATION OF NEW TILES

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

CONTRACTOR TO APPLY CONCRETE SEALANT TO THE FACE OF ABUTMENT CRASH WALLS.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	57*
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	60
REMOVAL OF CERAMIC WILL TILES	SQ. FT.	296
PREFORMED JOINT FILLER REPLACEMENT	FOOT	29
APPLY CONCRETE SEALANT	SQ. FT.	680
CERAMIC TILES	SQ. FT.	296

* ASSUME A 20% LOW EPOXY INJECTION REPAIR FOR ALL HL* TILE CRACK REMOVAL

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





NO.		DATE		REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1443
 SOUTH ABUTMENT REPAIRS

SFD-04 OF SFD-13
 SHT NO. SFD-04
 DRAWING NO. 1095 OF 1517

LEGEND:

-  TILE REPAIR (SEE NOTES)
-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  HAIRLINE CRACK (FOR INFORMATION ONLY)
-  LOW PRESSURE EPOXY INJECTION
-  HL CRACK IN TILE (SEE NOTES)
-  REMOVE AND REPLACE PJF

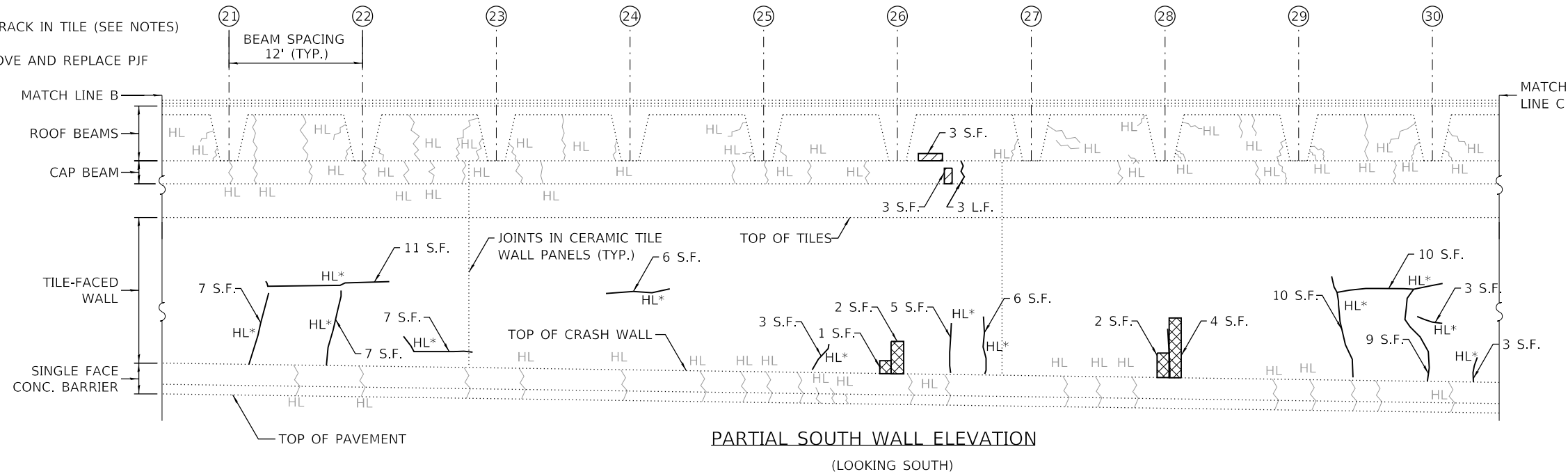
NOTES:

CRACKED CERAMIC TILES AND MARKED TILE REPAIR AREAS WILL BE REMOVED AS DIRECTED BY THE ENGINEER. ABUTMENT SURFACE TO BE INVESTIGATED AND REPAIRED AS DIRECTED BY THE ENGINEER. ONCE REPAIRS TO ABUTMENT (IF ANY) ARE COMPLETE, CONTRACTOR MAY PROCEED WITH INSTALLATION OF NEW TILES

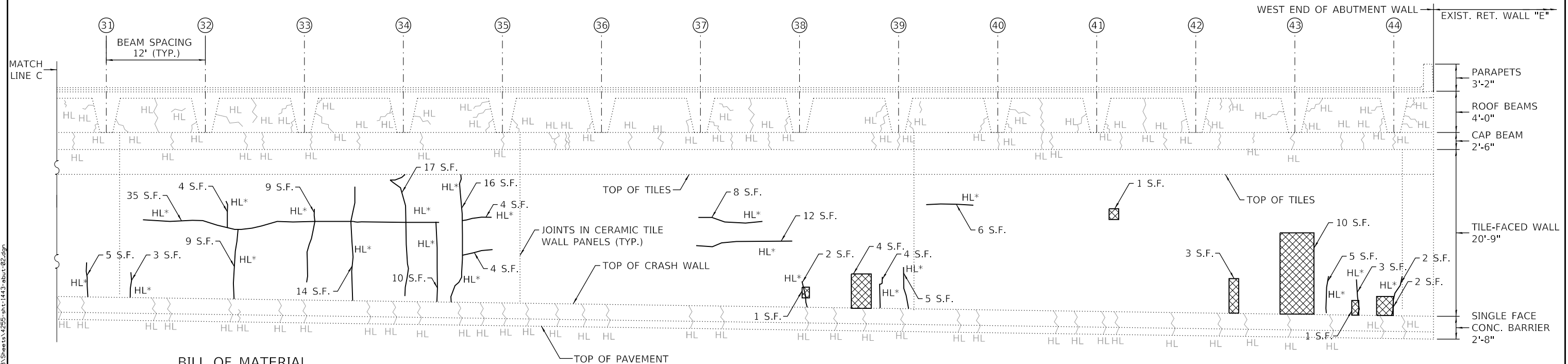
REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

CONTRACTOR TO APPLY CONCRETE SEALANT TO THE FACE OF ABUTMENT CRASH WALLS.



PARTIAL SOUTH WALL ELEVATION
(LOOKING SOUTH)



PARTIAL SOUTH WALL ELEVATION
(LOOKING SOUTH)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	56*
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	6
REMOVAL OF CERAMIC WILL TILES	SQ. FT.	294
APPLY CONCRETE SEALANT	SQ. FT.	770
CERAMIC TILES	SQ. FT.	294

* ASSUME A 20% LOW EPOXY INJECTION REPAIR FOR ALL HL* TILE CRACK REMOVAL.

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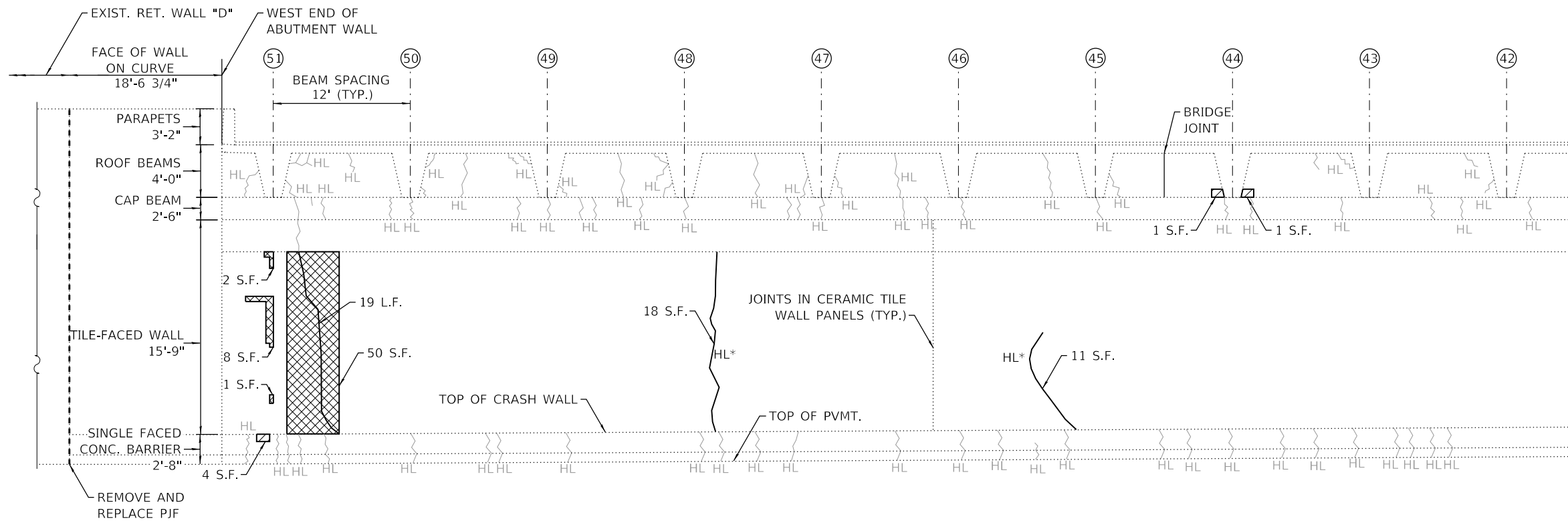
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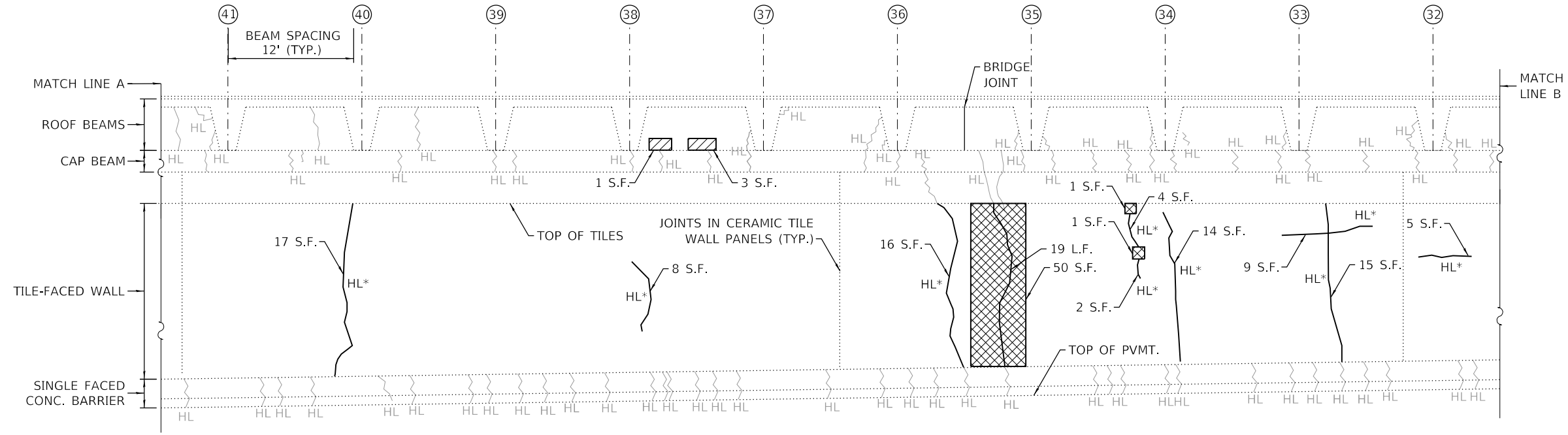
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1443
SOUTH ABUTMENT REPAIRS

SFD-05 OF SFD-13
SHT NO. SFD-05
DRAWING NO. 1096 OF 1517



PARTIAL NORTH WALL ELEVATION
(LOOKING NORTH)



PARTIAL NORTH WALL ELEVATION
(LOOKING NORTH)

- LEGEND:**
- TILE REPAIR (SEE NOTES)
 - STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - HL HAIRLINE CRACK (FOR INFORMATION ONLY)
 - L.F. LOW PRESSURE EPOXY INJECTION
 - HL* HL CRACK IN TILE (SEE NOTES)
 - REMOVE AND REPLACE PJF

NOTES:

CRACKED CERAMIC TILES AND MARKED TILE REPAIR AREAS WILL BE REMOVED AS DIRECTED BY THE ENGINEER. ABUTMENT SURFACE TO BE INVESTIGATED AND REPAIRED AS DIRECTED BY THE ENGINEER. ONCE REPAIRS TO ABUTMENT (IF ANY) ARE COMPLETE, CONTRACTOR MAY PROCEED WITH INSTALLATION OF NEW TILES

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

CONTRACTOR TO APPLY CONCRETE SEALANT TO THE FACE OF ABUTMENT CRASH WALLS.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	62*
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	10
REMOVAL OF CERAMIC WILL TILES	SQ. FT.	232
PREFORMED JOINT FILLER REPLACEMENT	FOOT	29
APPLY CONCRETE SEALANT	SQ. FT.	640
CERAMIC TILES	SQ. FT.	232

* ASSUME A 20% LOW EPOXY INJECTION REPAIR FOR ALL HL* TILE CRACK REMOVAL.

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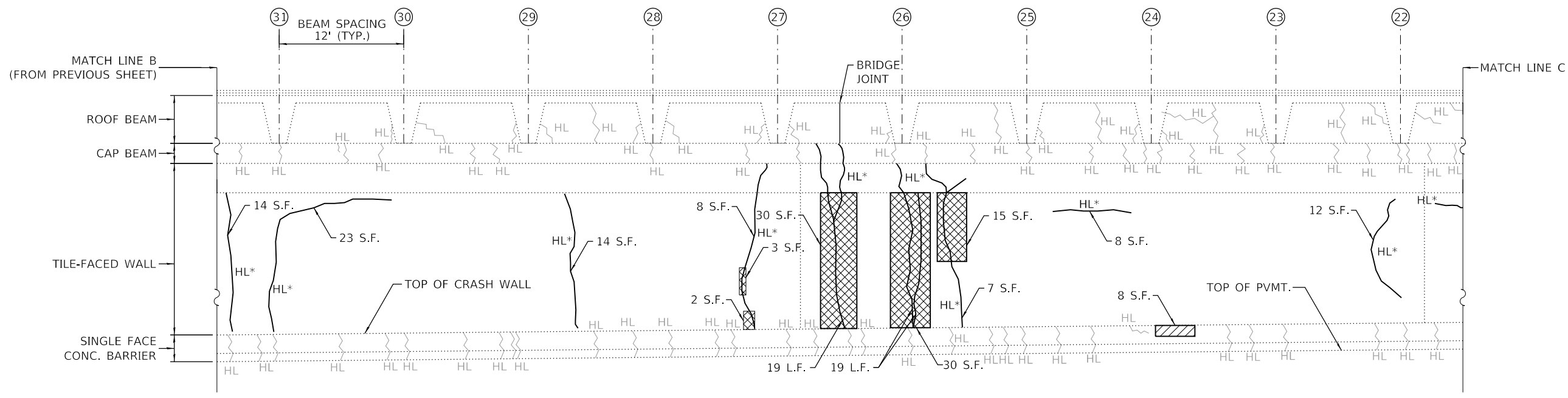
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 lombard, il 60148
 phone: 855-533-1700



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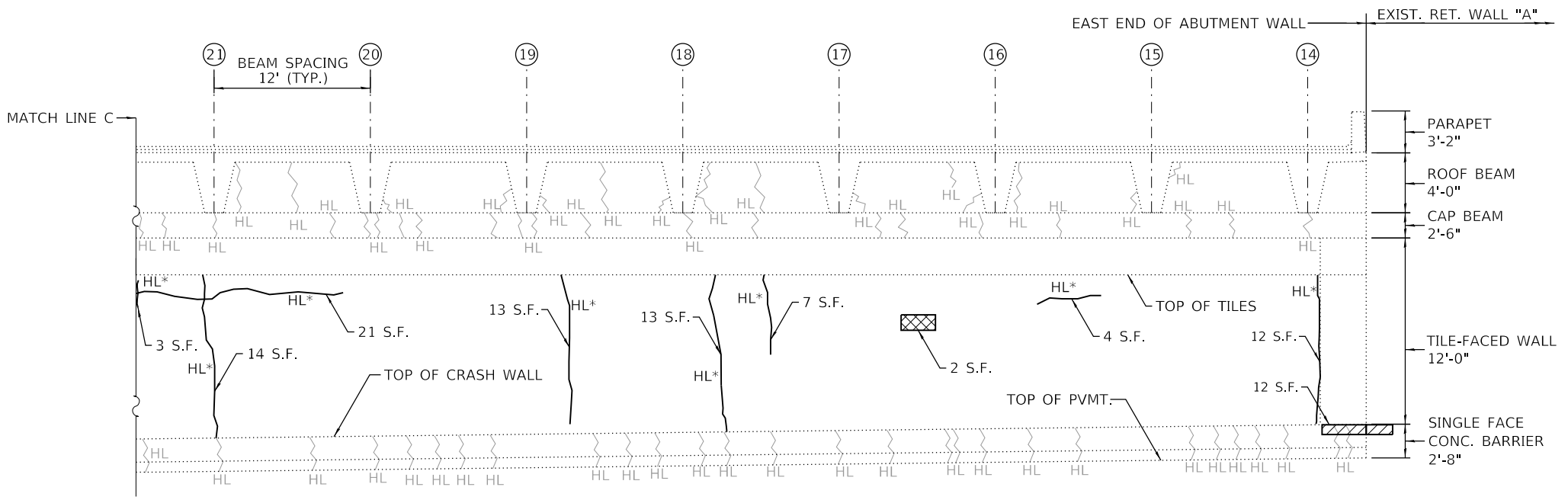
CONTRACT NO. RR-16-4255
 BRIDGE NO. 1443
 NORTH ABUTMENT REPAIRS

SFD-06 OF SFD-13
 SHT NO. SFD-06
 DRAWING NO. 1097 OF 1517



PARTIAL NORTH WALL ELEVATION
(LOOKING NORTH)

- LEGEND:**
- TILE REPAIR (SEE NOTES)
 - STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - HAIRLINE CRACK (FOR INFORMATION ONLY)
 - LOW PRESSURE EPOXY INJECTION
 - HL CRACK IN TILE (SEE NOTES)



PARTIAL NORTH WALL ELEVATION
(LOOKING NORTH)

- NOTES:**
- CRACKED CERAMIC TILES AND MARKED TILE REPAIR AREAS WILL BE REMOVED AS DIRECTED BY THE ENGINEER. ABUTMENT SURFACE TO BE INVESTIGATED AND REPAIRED AS DIRECTED BY THE ENGINEER. ONCE REPAIRS TO ABUTMENT (IF ANY) ARE COMPLETE, CONTRACTOR MAY PROCEED WITH INSTALLATION OF NEW TILES
- REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
- REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.
- CONTRACTOR TO APPLY CONCRETE SEALANT TO THE FACE OF ABUTMENT CRASH WALLS.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	92*
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	20
REMOVAL OF CERAMIC WILL TILES	SQ. FT.	255
APPLY CONCRETE SEALANT	SQ. FT.	580
CERAMIC TILES	SQ. FT.	255

* ASSUME A 20% LOW EPOXY INJECTION REPAIR FOR ALL HL* TILE CRACK REMOVAL.

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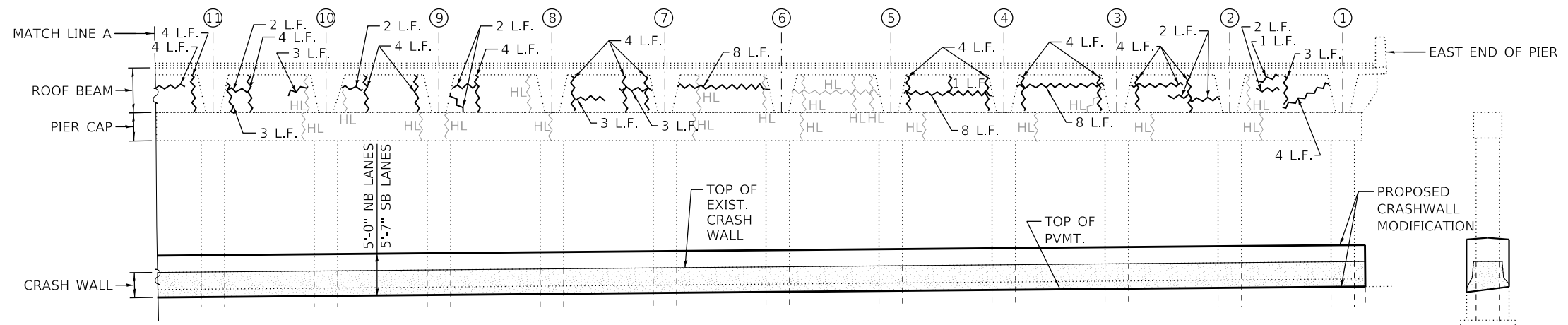
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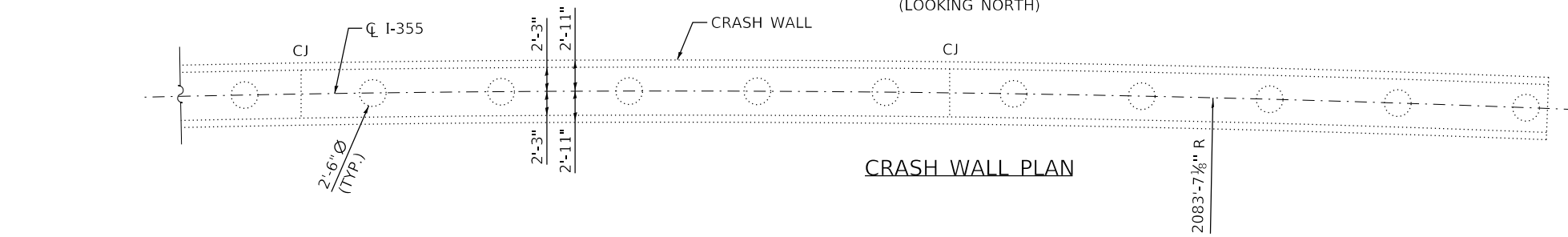
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1443
 NORTH ABUTMENT REPAIRS

SFD-07 OF SFD-13
 SHT NO. SFD-07
 DRAWING NO. 1098 OF 1517

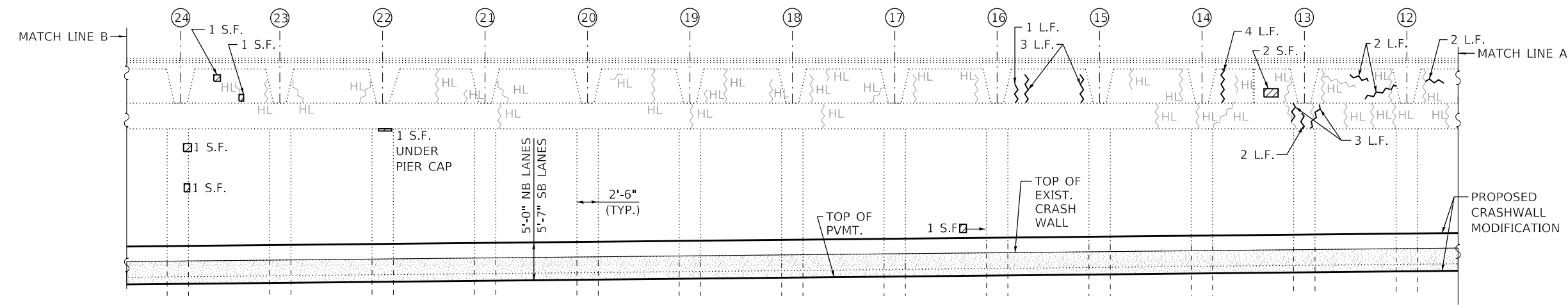


ELEVATION
(LOOKING NORTH)

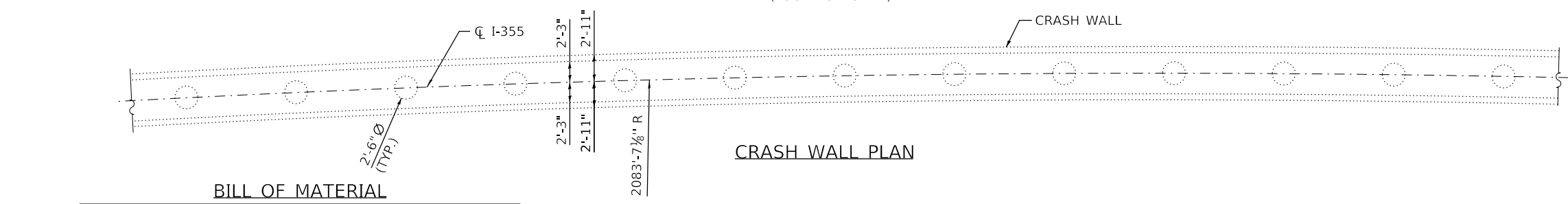


CRASH WALL PLAN

TYPICAL SECTION



ELEVATION
(LOOKING NORTH)



CRASH WALL PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	148
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	8
APPLY CONCRETE SEALANT	SQ. FT.	4308

- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - HL HAIRLINE CRACK (FOR INFORMATION ONLY)
 - L.F. LOW PRESSURE EPOXY INJECTION
 - CONCRETE REMOVAL

NOTES
CRASH WALL TO BE MODIFIED SEE DETAIL ON PAGE SFD-12

REPAIRS OF THE EXISTING PIER SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

CONTRACTOR TO APPLY CONCRETE SEALANT TO THE PIERS, PIER CAP, AND MODIFIED CRASH WALL. THE QUANTITY FOR "APPLY CONCRETE SEALANT" FOR THE MODIFIED CRASH WALL CAN BE FOUND ON PAGE SFD-12.

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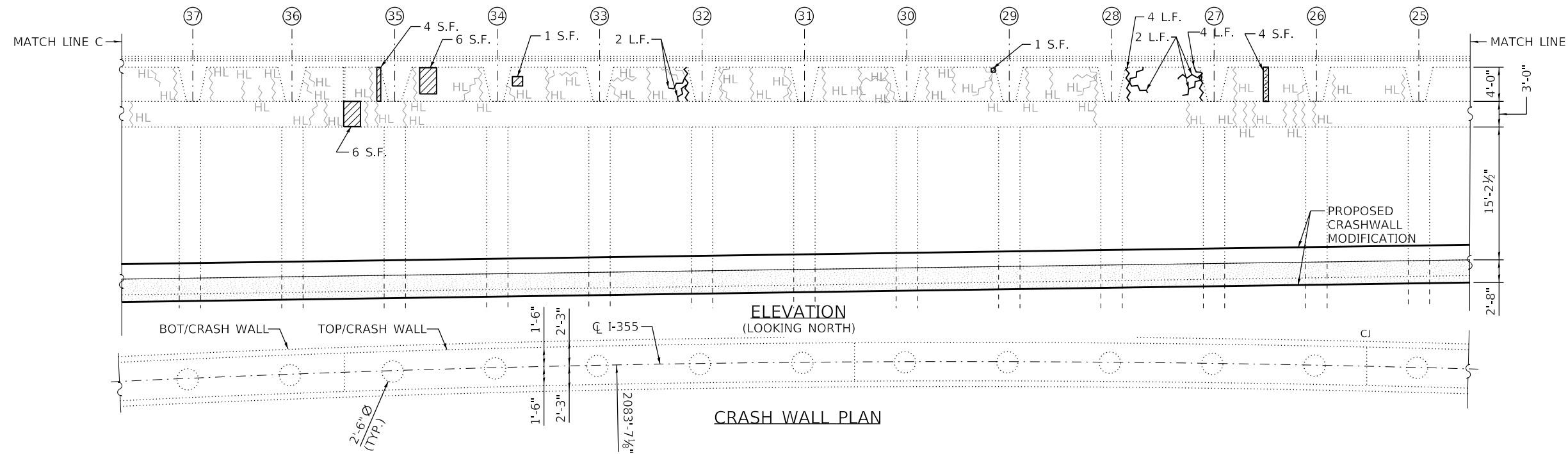
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CONTRACT NO. RR-16-4255
BRIDGE NO. 1443
PIER REPAIRS

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SHT NO. SFD-08
DRAWING NO. 1099 OF 1517



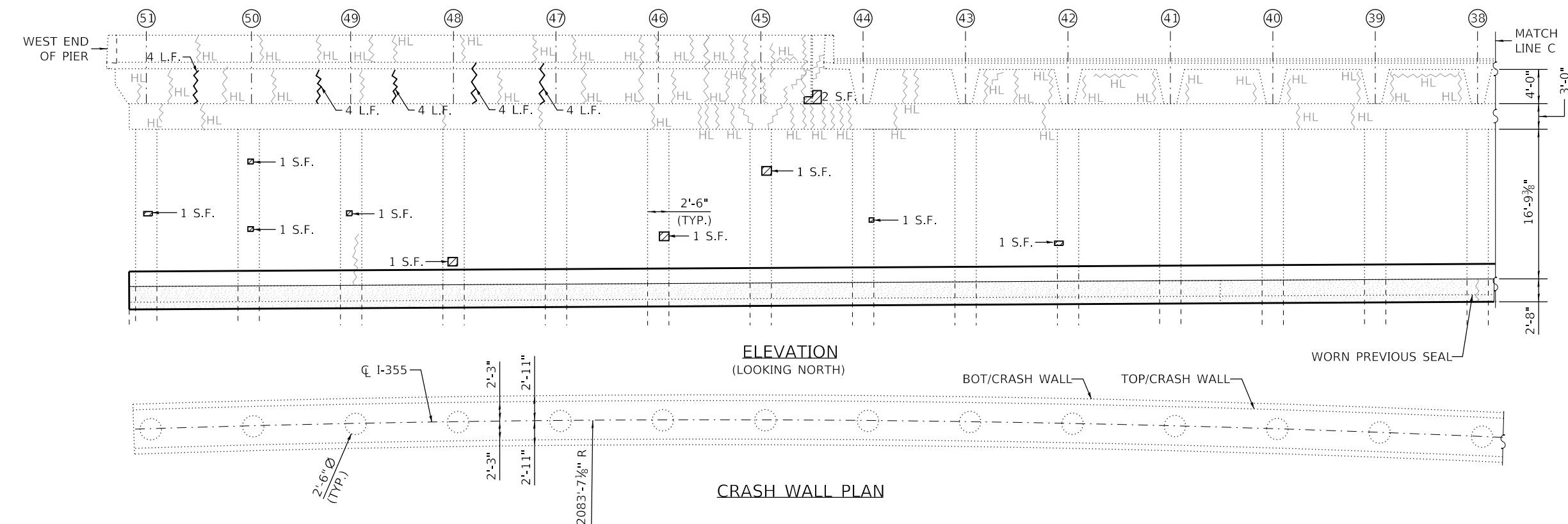
- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - HAIRLINE CRACK (FOR INFORMATION ONLY)
 - LOW PRESSURE EPOXY INJECTION
 - CONCRETE REMOVAL

NOTES
 CRASH WALL TO BE MODIFIED SEE
 DETAIL ON PAGE SFD-12

REPAIRS OF THE EXISTING PIER SHALL
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CONTRACTOR TO APPLY CONCRETE
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 FOR "APPLY CONCRETE SEALANT" FOR
 THE MODIFIED CRASH WALL CAN BE
 FOUND ON PAGE SFD-12.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	38
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	33
APPLY CONCRETE SEALANT	SQ. FT.	5486

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





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NO.	DATE	DESCRIPTION

CONTRACT NO. **RR-16-4255**
 BRIDGE NO. **1443**
 PIER REPAIRS

SFD-09 OF SFD-13
 SHT NO. **SFD-09**
 DRAWING NO.
1100 OF 1517

LEGEND:

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  HL HAIRLINE CRACK (FOR INFORMATION ONLY)
-  L.F. LOW PRESSURE EPOXY INJECTION
-  CONCRETE REMOVAL

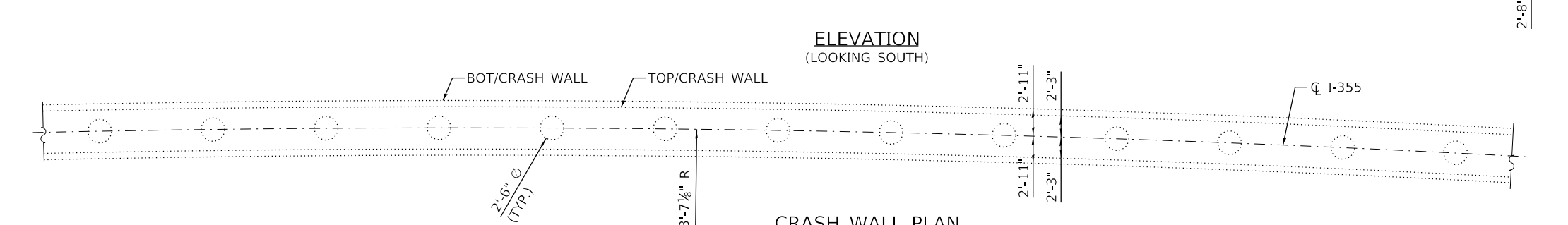
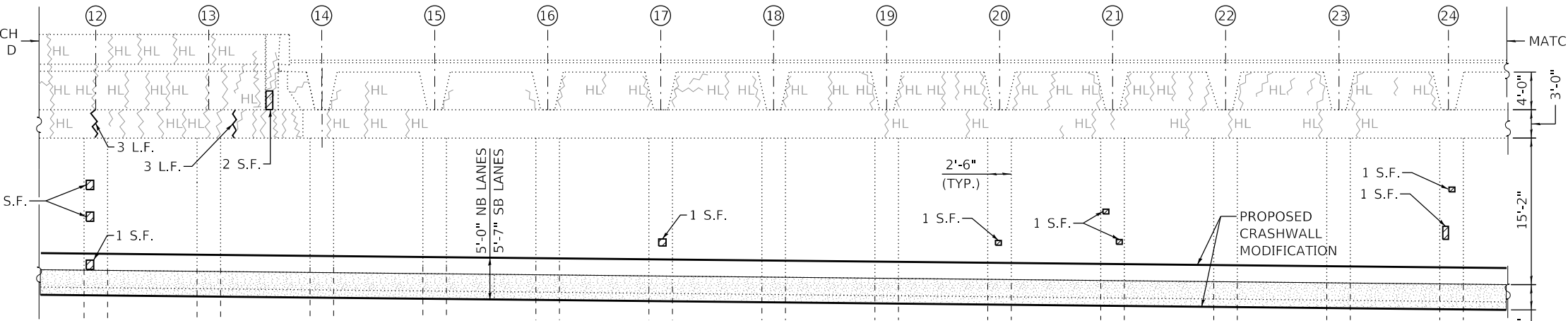
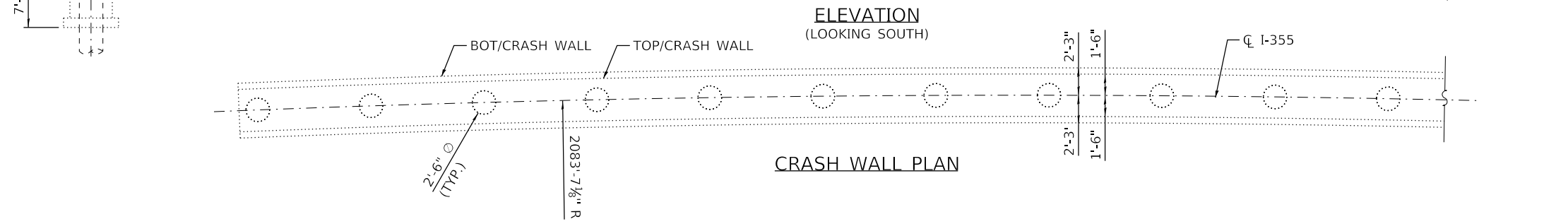
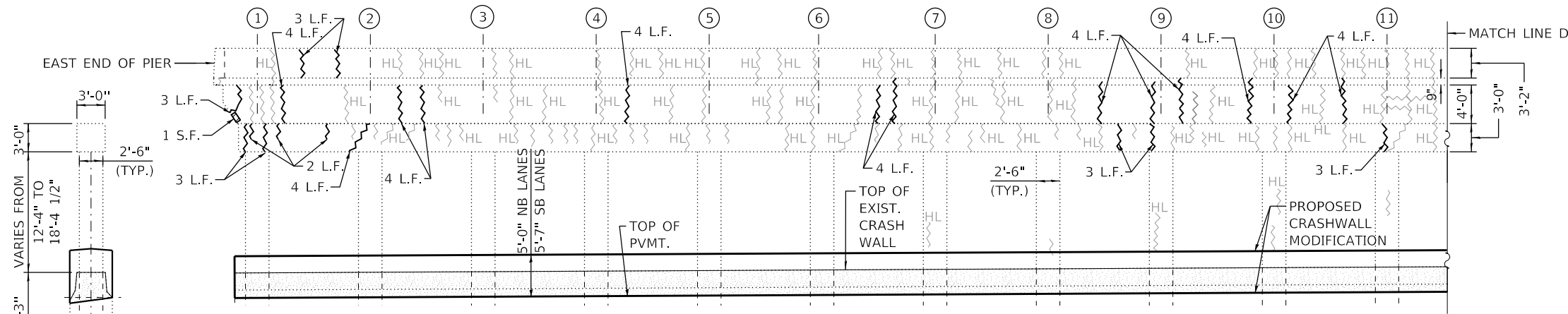
NOTES

CRASH WALL TO BE MODIFIED SEE DETAIL ON PAGE SFD-12

REPAIRS OF THE EXISTING PIER SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION

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CONTRACTOR TO APPLY CONCRETE SEALANT TO THE PIERS, PIER CAP, AND MODIFIED CRASH WALL. THE QUANTITY FOR "APPLY CONCRETE SEALANT" FOR THE MODIFIED CRASH WALL CAN BE FOUND ON PAGE SFD-12.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
LOW PRESSURE EPOXY INJECTION	FOOT	88
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	12
APPLY CONCRETE SEALANT	SQ. FT.	*

* SEE SHEET SFD-08

T:\Projects\17-025 ISTHA I-355 Phase II\05.CADD\1443.Sheets\4255.sht-1443-pier-03.dgn

DRAWN BY: AZ DATE: 03/11/2018
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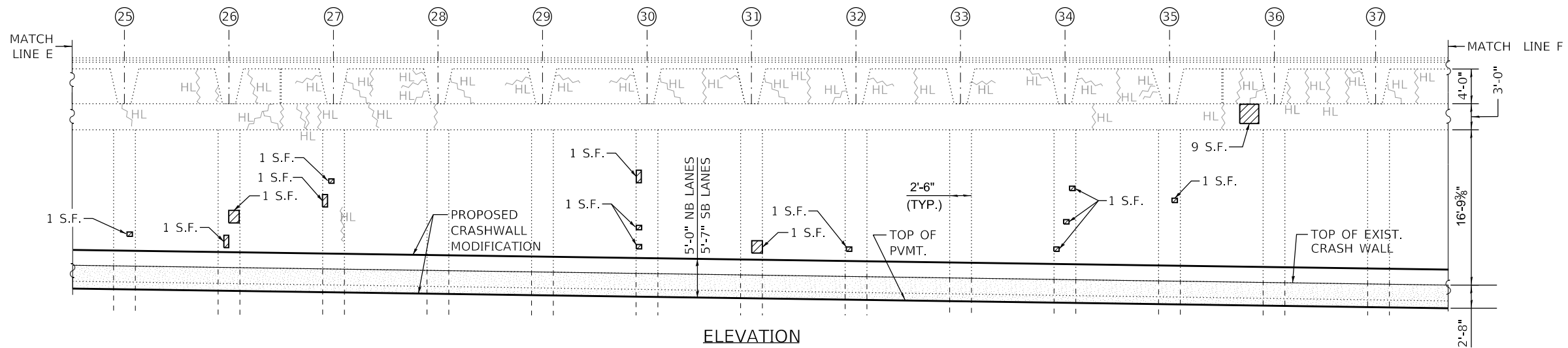
thomas engineering group, llc
 55 w. 22nd street
 suite 300
 lombard, il 60148
 phone: 855-533-1700



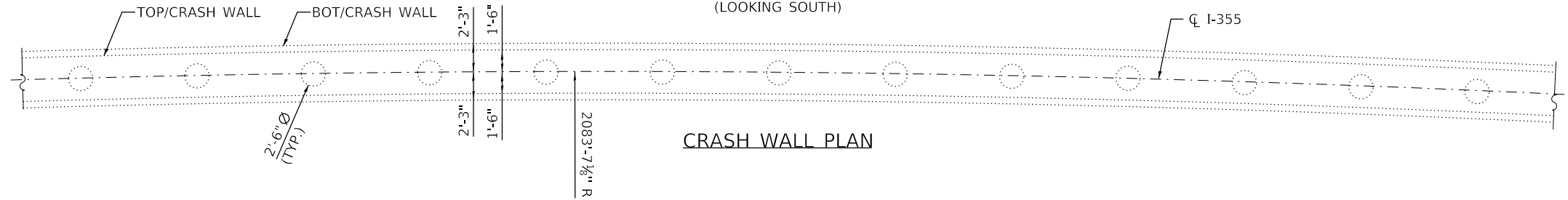
NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1443
 PIER REPAIRS

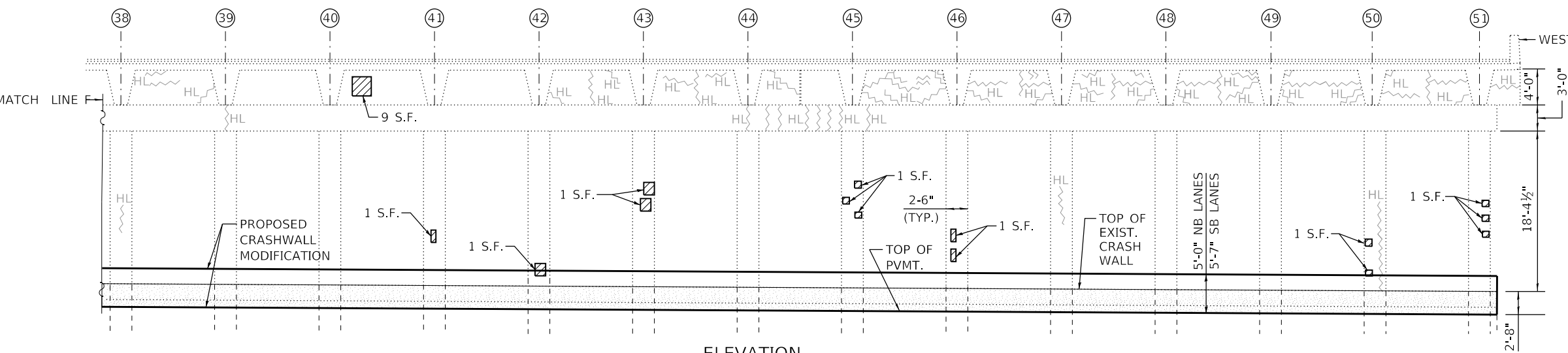
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 SHT NO. SFD-10
 DRAWING NO. 1101 OF 1517



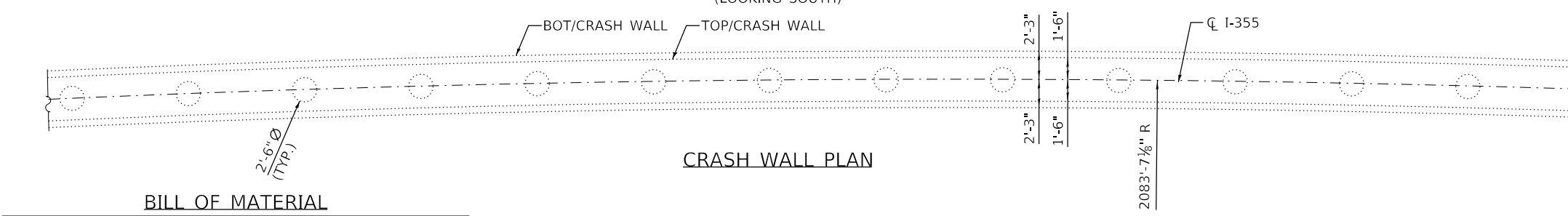
ELEVATION
(LOOKING SOUTH)



CRASH WALL PLAN



ELEVATION
(LOOKING SOUTH)



CRASH WALL PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	46
APPLY CONCRETE SEALANT	SQ. FT.	*

* SEE SHEET SFD-09

- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - HL HAIRLINE CRACK (FOR INFORMATION ONLY)
 - L.F. LOW PRESSURE EPOXY INJECTION
 - CONCRETE REMOVAL

NOTES
 CRASH WALL TO BE MODIFIED SEE DETAIL ON PAGE SFD-12

REPAIRS OF THE EXISTING PIER SHALL INCLUDE, BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION

REMOVAL AND REATTACHMENT OF DRAINAGE PIPE, ELECTRICAL CONDUIT, OR LIGHTING, IF NECESSARY, ARE INCIDENTAL TO STRUCTURAL REPAIR OF CONCRETE.

CONTRACTOR TO APPLY CONCRETE SEALANT TO THE PIERS, PIER CAP, AND MODIFIED CRASH WALL. THE QUANTITY FOR "APPLY CONCRETE SEALANT" FOR THE MODIFIED CRASH WALL CAN BE FOUND ON PAGE SFD-12.

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CONTRACT NO. RR-16-4255
 BRIDGE NO. 1443
 PIER REPAIRS

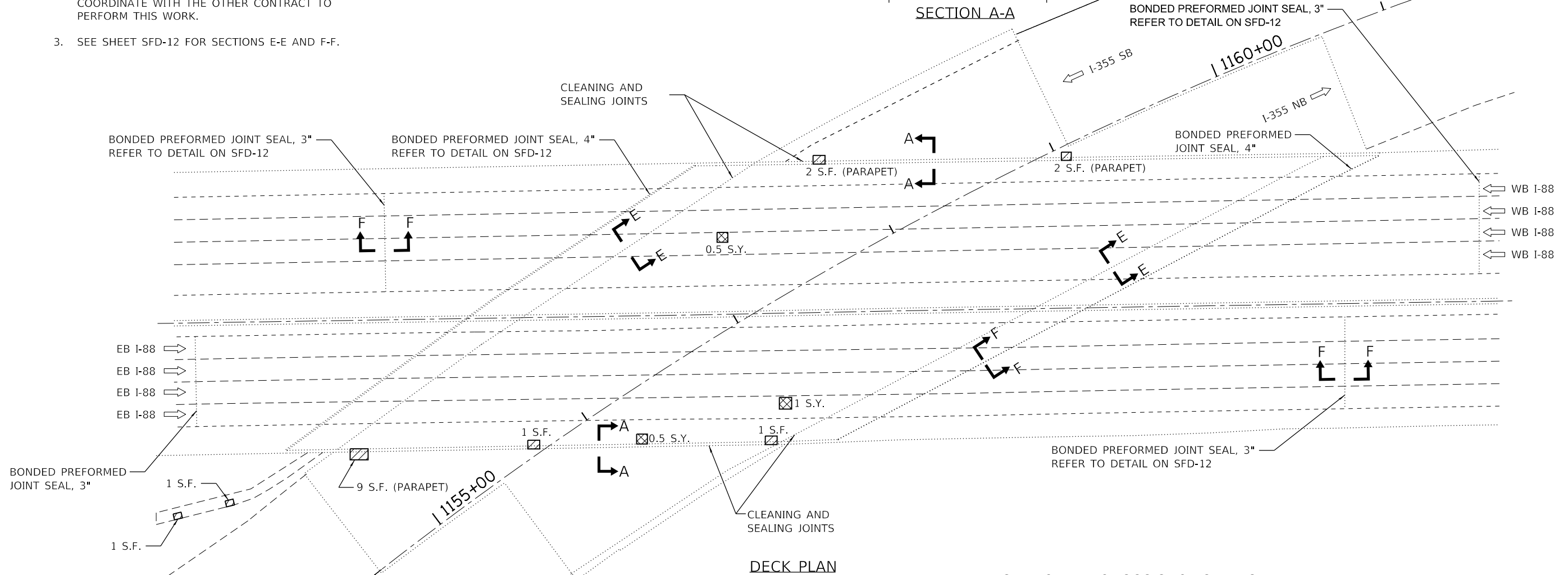
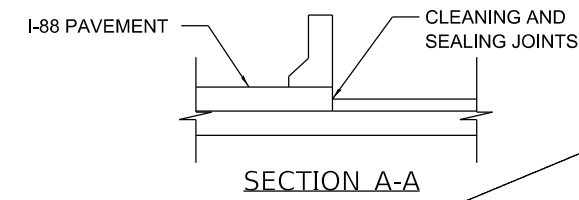
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 SHT NO. SFD-11
 DRAWING NO. 1102 OF 1517

NOTES




- HAIRLINE CRACKS IN DECK REMOVED FOR CLARITY
- MOT FOR THE WORK ON THE DECK SURFACE (I-88) WILL BE PERFORMED UNDER CONTRACT RR-17-4313. THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACT TO PERFORM THIS WORK.
- SEE SHEET SFD-12 FOR SECTIONS E-E AND F-F.

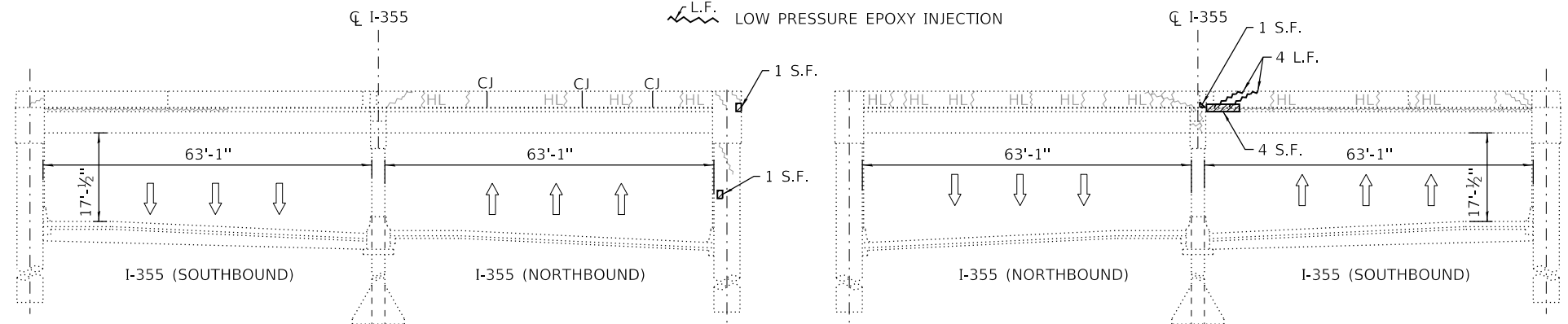
DECK PLAN LEGEND:

-  ACCELERATED BRIDGE DECK REPAIR (PARTIAL)
-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)



STRUCTURE CROSS SECTION LEGEND:

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  HAIRLINE CRACK (FOR INFORMATION ONLY)
-  LOW PRESSURE EPOXY INJECTION



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
ACCELERATED BRIDGE DECK REPAIR (PARTIAL)	SQ. YD.	3
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	24
CLEANING AND SEALING JOINTS	FOOT	1240
BONDED PREFORMED JOINT SEAL, 3 IN	FOOT	204
BONDED PREFORMED JOINT SEAL, 4 IN	FOOT	425
LOW PRESSURE EPOXY INJECTION	FOOT	8

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REVISIONS		DESCRIPTION
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CONTRACT NO. RR-16-4255
 BRIDGE NO. 1443
 MISCELLANEOUS REPAIRS

SFD-13 OF SFD-13
 SHT NO. SFD-13
 DRAWING NO. 1104 OF 1517

BENCHMARK

SEE SHEET ALI-19 OF ROADWAY PLANS, CONTROL #78

EXISTING STRUCTURE

BRIDGE NUMBER 1441, IDOT S.N. Q22-9971, WAS DESIGNED IN 1987 ON CONTRACT CIP-616. THE BRIDGE ISA RAMP CONNECTING I-355 SOUTHBOUND TO I-88 EAST BOUND.
 SUPERSTRUCTURE: 14 SPANS OF A HORIZONTALLY CURVED PRECAST POST-TENSIONED CONCRETE SEGMENTAL BOX GIRDER.
 SUBSTRUCTURE: TWO HIGH WALL ABUTMENTS ON SPREAD FOOTING.
 PIERS 1, 13: POST-TENSIONED CONCRETE CANTILEVERED CAP AND COLUMN ON A SPREAD FOOTING.
 PIERS 2, 3, 4, 6, 7, 8, 9: CONCRETE COLUMN WITH A HAMMERHEAD CAP ON A SPREAD FOOTING.
 PIERS 5, 10: CONCRETE DOUBLE SHAFT COLUMN WITH A SINGLE HAMMERHEAD CAP ON A SPREAD FOOTING.
 PIERS 11, 12: POST-TENSIONED CONCRETE SINGLE COLUMN WITH A HAMMERHEAD CAP ON A SPREAD FOOTING.
 WORK ON TOP OF DECK WILL BE PERFORMED UNDER STAGE CONSTRUCTION.

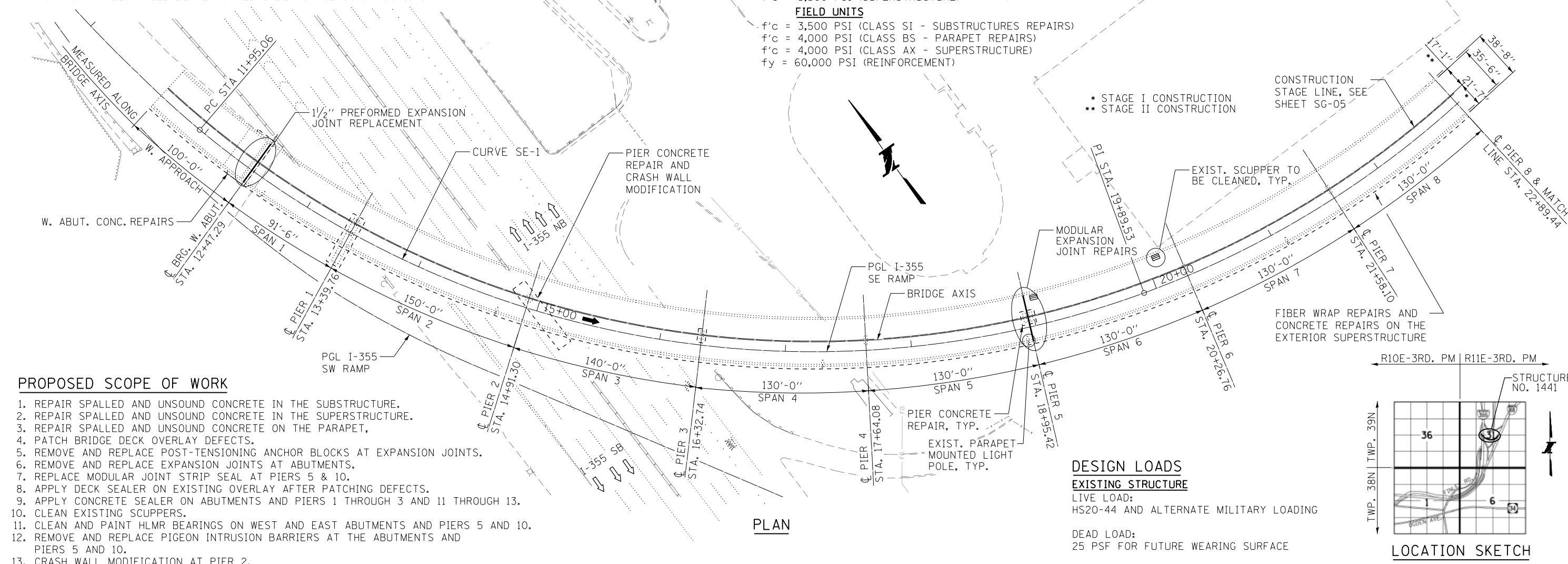
DESIGN STRESSES

EXISTING UNITS

f'c = 4,000 PSI (TYPICAL FOOTINGS)
 f'c = 4,500 PSI (SPECIAL FOOTINGS)
 f'c = 4,500 PSI (SUBSTRUCTURE)
 f'c = 5,500 PSI (SPECIAL BENTS)
 f'c = 5,500 PSI (SUPERSTRUCTURE)

FIELD UNITS

f'c = 3,500 PSI (CLASS SI - SUBSTRUCTURES REPAIRS)
 f'c = 4,000 PSI (CLASS BS - PARAPET REPAIRS)
 f'c = 4,000 PSI (CLASS AX - SUPERSTRUCTURE)
 fy = 60,000 PSI (REINFORCEMENT)



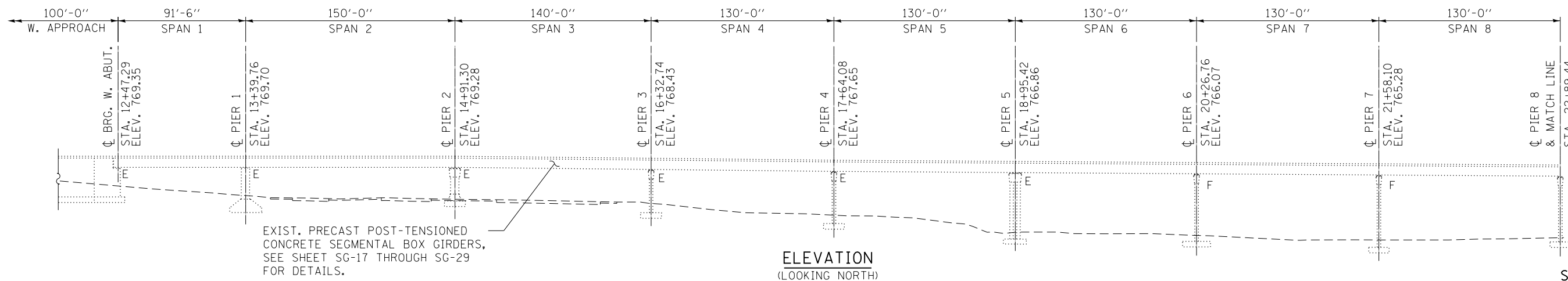
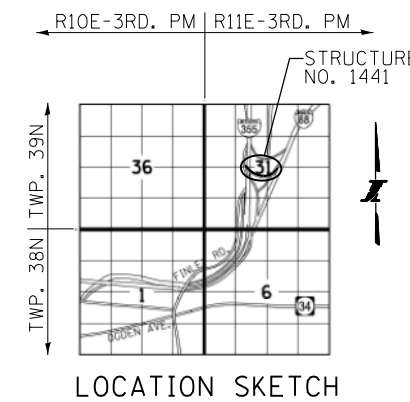
PROPOSED SCOPE OF WORK

1. REPAIR SPALLED AND UNSOUND CONCRETE IN THE SUBSTRUCTURE.
2. REPAIR SPALLED AND UNSOUND CONCRETE IN THE SUPERSTRUCTURE.
3. REPAIR SPALLED AND UNSOUND CONCRETE ON THE PARAPET,
4. PATCH BRIDGE DECK OVERLAY DEFECTS.
5. REMOVE AND REPLACE POST-TENSIONING ANCHOR BLOCKS AT EXPANSION JOINTS.
6. REMOVE AND REPLACE EXPANSION JOINTS AT ABUTMENTS.
7. REPLACE MODULAR JOINT STRIP SEAL AT PIERS 5 & 10.
8. APPLY DECK SEALER ON EXISTING OVERLAY AFTER PATCHING DEFECTS.
9. APPLY CONCRETE SEALER ON ABUTMENTS AND PIERS 1 THROUGH 3 AND 11 THROUGH 13.
10. CLEAN EXISTING SCUPPERS.
11. CLEAN AND PAINT HLMR BEARINGS ON WEST AND EAST ABUTMENTS AND PIERS 5 AND 10.
12. REMOVE AND REPLACE PIGEON INTRUSION BARRIERS AT THE ABUTMENTS AND PIERS 5 AND 10.
13. CRASH WALL MODIFICATION AT PIER 2.

DESIGN LOADS

EXISTING STRUCTURE

LIVE LOAD:
 HS20-44 AND ALTERNATE MILITARY LOADING
 DEAD LOAD:
 25 PSF FOR FUTURE WEARING SURFACE



ELEVATION

(LOOKING NORTH)

SG-01 OF SG-43

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 GENERAL PLAN AND ELEVATION I

SHT NO. SG-01
 DRAWING NO.
 1105 OF 1517

HIGHWAY CLASSIFICATION

SB I-355 SE RAMP

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL/INTERSTATE
 ADT: 30,500 (2016); 16,264 (2032)
 ADTT: 4,880 (2016); 2,602 (2032)
 DHV: 3,050
 DESIGN SPEED: 50 MPH
 POSTED SPEED: 45 MPH

ROUTE UNDER: I-88

ADT: 74,610 (EB, 2016)
 ADT: 57,690 (WB, 2016)

ROUTE UNDER: FINLEY RD.

ADT: 20,800 (2018)

CONSTRUCTION SPECIFICATIONS

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATION TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS (GBSP's)

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISION ADOPTED JANUARY 1, 2018.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS, 17TH EDITION WITH ALL SUBSEQUENT INTERIMS
 ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL ADOPTED MARCH 2017

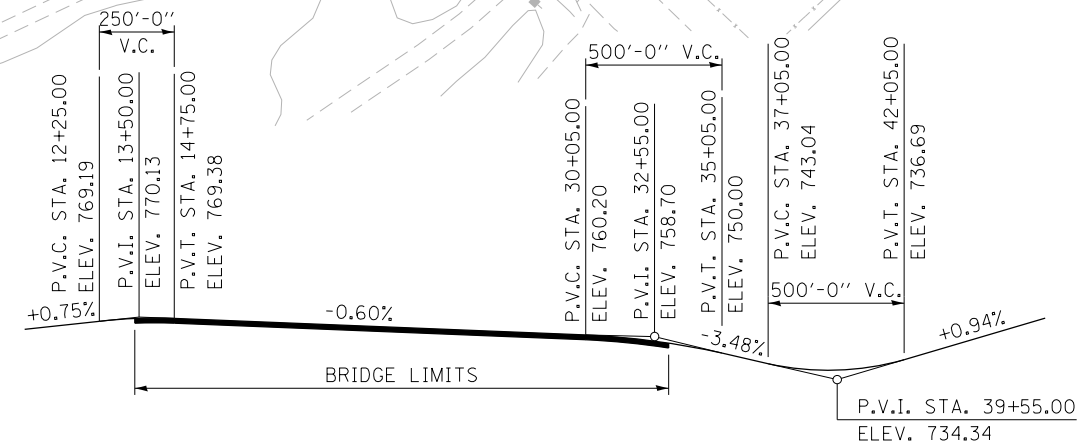
ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL DATED JANUARY 2012

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGN MEMORANDUMS

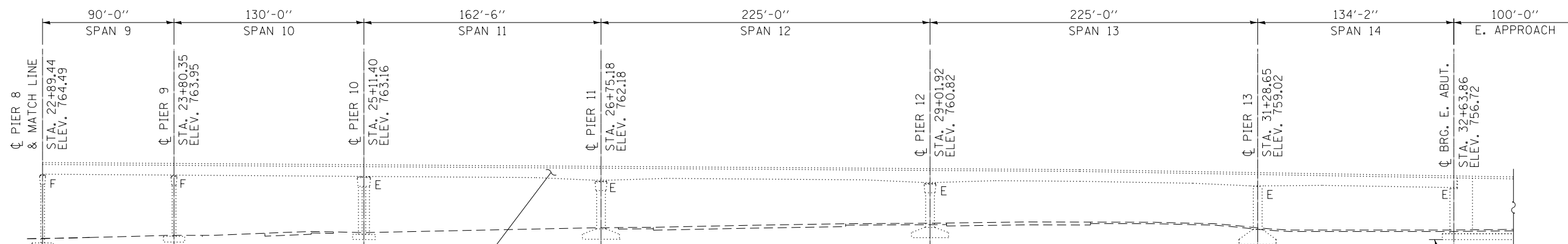
CURVE DATA

CURVE SE-1	CURVE SE-2
P.I. STA. = 19+89.53	PI STA. = 29+67.73
$\Delta = 92^\circ 32' 24''$ (LT)	$\Delta = 56^\circ 39' 44''$ (LT)
D = $7^\circ 32' 20''$	D = $5^\circ 39' 58''$
R = 760.00'	R = 1,011.18'
T = 794.46'	T = 545.17'
L = 1,227.50'	L = 1,000.00'
E = 339.44'	E = 137.60'
P.C. STA. = 11+95.06	P.C. STA. = 24+22.56
P.T. STA. = 24+22.56	P.T. STA. = 34+22.56

PLAN



VERTICAL ALIGNMENT



ELEVATION
(LOOKING NORTH)

• STAGE I CONSTRUCTION
 •• STAGE II CONSTRUCTION



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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 GENERAL PLAN AND ELEVATION II

SG-02 OF SG-43
 SHT NO. SG-02
 DRAWING NO. 1106 OF 1517

GENERAL NOTES

CAST-IN-PLACE CONCRETE

ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS

REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A706), GRADE 60, DEFORMED BARS.

REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.

REINFORCEMENT BAR BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.

REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.

BARS NOTED THUS, 3x2-#5 INDICATED 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.

COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

CONSTRUCTION

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER THE CONTRACTOR SHALL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.

CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.

THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COST WILL BE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E., 800-892-0123.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL FIBER OPTIC UTILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL INITIATE THE LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM FILLED IN ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE.

EXISTING REINFORCEMENT WHICH IS TO BE INCORPORATED INTO THE NEW CONSTRUCTION SHALL BE BLAST CLEANED TO GREY METAL, STRAIGHTENED (WITHOUT HEATING), AND CUT TO FIT. COST OF WHICH SHALL BE INCLUDED WITH "CONCRETE REMOVAL."

WHENEVER ANY MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.

ALL OF THE CONSTRUCTION REPAIR WORK SHOWN FOR THIS BRIDGE WILL BE COMPLETED UTILIZING TEMPORARY LANE CLOSURES IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC SPECIAL PROVISION AND THE PROVIDED DETAILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT BEFORE SUCH TEMPORARY WORK AREAS OPEN FOR TRAFFIC, ALL LOOSE ITEMS ARE REMOVED OR SECURED, AND THE AREAS ARE SAFE FOR OPENING TO TRAFFIC. SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR MORE INFORMATION.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF PASSING VEHICLES FROM FALLING OBJECTS AND/OR MATERIALS UNTIL COMPLETION OF THE WORK.

CONTRACTOR SHALL NOT CUT CONCRETE REINFORCEMENT (INCLUDING TENDONS) WHILE DRILLING INTO CONCRETE.

CONSTRUCTION (CONTINUED)

NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.

A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF ILLINOIS, SHALL PREPARE AND SUBMIT STRUCTURE ASSESSMENT REPORTS (SARS) FOR THE PROPOSED WORK ASSOCIATED WITH REMOVING, MODIFYING OR RECONSTRUCTING EXISTING STRUCTURES OR PORTIONS THEREOF. UNLESS NOTED OTHERWISE, A SAR SHALL BE REQUIRED WHEN THE CONTRACTOR'S MEANS AND METHODS APPLY LOADS TO THE STRUCTURE OR CHANGE ITS STRUCTURAL BEHAVIOR. A SAR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING THE WORK, IN ACCORDANCE WITH THE LATEST IDOT GUIDE BRIDGE SPECIAL PROVISION, "STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS" PRIOR TO BEGINNING THE WORK COVERED BY THAT SAR. SEPARATE PORTIONS OF THE WORK MAY BE COVERED BY SEPARATE SARS WHICH MAY BE SUBMITTED AT DIFFERENT TIMES OR AS DICTATED BY THE CONTRACTOR'S SCHEDULE.

AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP) WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS, AND THE LATEST NATIONAL BRIDGE INSPECTION STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.

SUPPLEMENTAL

CONCRETE SEALANT SHALL BE APPLIED TO THE TOP AND TRAFFIC FACE OF THE BRIDGE DECK BARRIERS AND PARAPETS. SEALANT SHALL ALSO BE APPLIED TO THE SURFACES OF ALL PIERS AND ABUTMENT SEATS, INCLUDING BACKWALLS, LOCATED BELOW ROADWAY EXPANSION JOINTS. SEALER SHALL ALSO BE APPLIED TO ALL EXPOSED SUBSTRUCTURE SURFACES ADJACENT TO THE ROADWAY. EXISTING SURFACES SHALL BE POWER WASHED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 592 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

FIBER REINFORCED POLYMER (FRP) REPAIRS

SURFACE MUST BE CLEAN, SOUND AND DRY. REMOVE DUST, LAITANCE, GREASE, CURING COMPOUNDS, IMPREGNATIONS, WAXES, FOREIGN ARTICLES, DISINTEGRATED MATERIALS, AND OTHER BOND INHIBITING MATERIALS FROM THE SURFACE. (SEE SPECIAL PROVISIONS FOR COMPLETE DETAILS).

EXISTING UNEVEN SURFACES MUST BE FILLED WITH AN APPROPRIATE REPAIR MORTAR (SEE SPECIAL PROVISION FOR COMPLETE DETAILS).

CRACKS WITH WIDTH GREATER THAN 0.012 INCHES MUST BE STABILIZED USING EPOXY INJECTION METHODS. USE MANUFACTURERS DATA SHEETS FOR INFORMATION ON MIXING EPOXY RESIN.

SYSTEM IS A VAPOR BARRIER. DON'T ENCAPSULATE CONCRETE IF ANY SURFACE MOISTURE IS PRESENT. CARBON FABRIC IS NON- REACTIVE, HOWEVER, CAUTION MUST BE USED WHEN HANDLING, SINCE A FINE "CARBON DUST" MAY BE PRESENT ON THE SURFACE.

GLOVES AND PROTECTIVE FACE MASKS MUST THEREFORE BE WORN TO PROTECT AGAINST ANY RESPIRATORY PROBLEMS AND SKIN IRRITATION. WRAP THE IDENTIFIED PIERS WITH THE SPECIFIED NUMBER OF WRAPS AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

GENERAL INSTALLATION PROCEDURES ARE GIVEN IN THE SPECIAL PROVISION, "FIBER WRAP REPAIR (TOLLWAY)".

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY PROTRUSIONS IN THE CONCRETE IN THE FIBER WRAP AREA.

CONCRETE EDGES SHALL BE ROUNDED TO AT LEAST 3/4" RADIUS AND SMOOTHED TO A SURFACE FINISH PRIOR TO APPLICATION OF FIBER WRAP.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF PASSING VEHICLES FROM FALLING OBJECTS AND/OR MATERIALS UNTIL COMPLETION OF WORK.

ACRYLIC COATING SHALL BE APPLIED TO ALL SURFACES OF THE FIBER WRAP.

FRP MATERIAL PROPERTIES

TENSILE STRENGTH	500 KSI
TENSILE MODULUS	33,000 KSI
ULTIMATE ELONGATION	1.5%

LIST OF ABBREVIATIONS:

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT.	ABUTMENT
APPR.	APPROACH
BK.	BACK
B	BASELINE
BOM	BILL OF MATERIAL
BRG.	BEARING
C	CENTERLINE
CU. FT.	CUBIC FEET
Ø	DIAMETER
E.	EAST
EB	EASTBOUND
ELEV.	ELEVATION
EXIST.	EXISTING
FRP	FIBER REINFORCED POLYMER
JT.	JOINT
L.F.	LINEAR FEET
LONG.	LONGITUDINAL
MAX.	MAXIMUM
MIN.	MINIMUM
N.	NORTH
NB	NORTHBOUND
PARA.	PARAPET
P	PLATE
PSI	POUNDS PER SQUARE INCH
RT.	RIGHT
SHLDR.	SHOULDER
S.	SOUTH
SB	SOUTHBOUND
S.P.	SPECIAL PROVISION
SQ. FT.	SQUARE FOOT
SQ. YD.	SQUARE YARD
STA.	STATION
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
W.	WEST
WB	WESTBOUND

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DRAWN BY SBA DATE 3/11/2018
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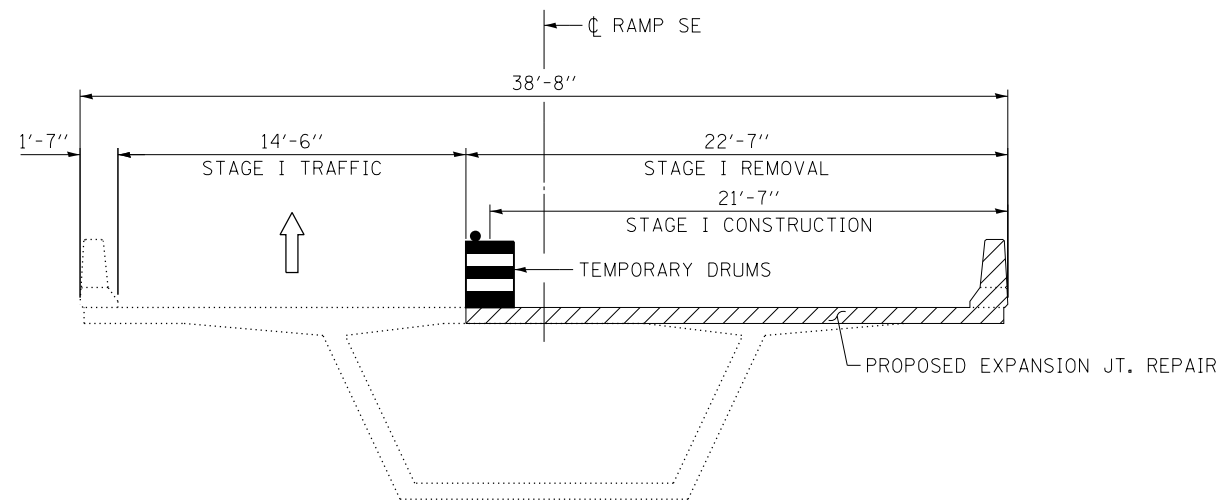


THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

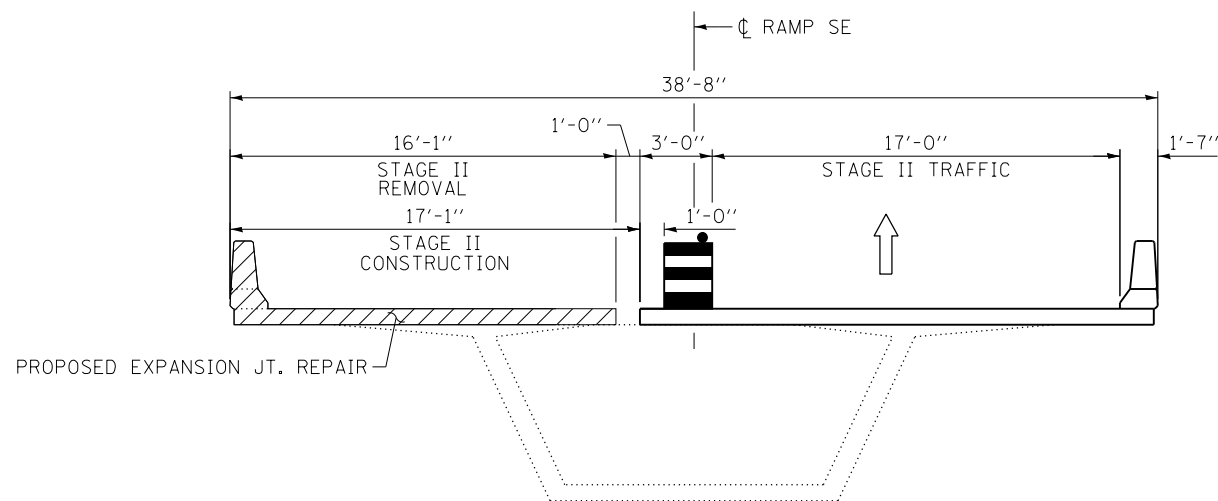
REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 GENERAL NOTES

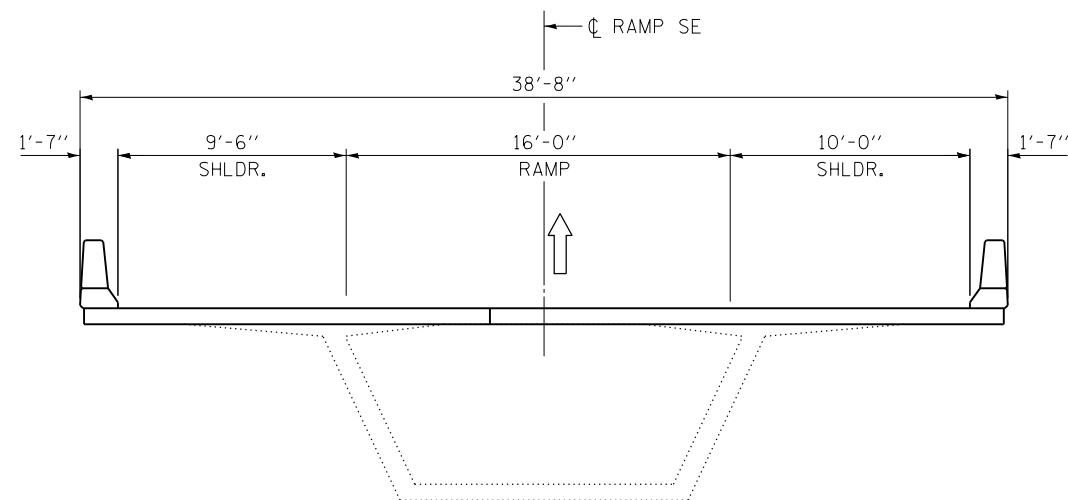
SHT NO. SG-03
 DRAWING NO.
 1107 OF 1517



STAGE I CONSTRUCTION
(LOOKING EAST)



STAGE II CONSTRUCTION
(LOOKING EAST)



TYPICAL SECTION
(LOOKING EAST)

STAGE CONSTRUCTION NOTES:

THE CONSTRUCTION WIDTH SHOWN IS THE MAXIMUM RANGE FROM THE TEMPORARY TYPE II BARRICADE. THE ACTUAL REHABILITATION WIDTH SHALL BE ADJUSTED IN THE FIELD.

SEE IDOT STANDARD 701601-09 FOR DETAILS OF MAINTENANCE OF TRAFFIC.

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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018


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 5507 North Cumberland Avenue
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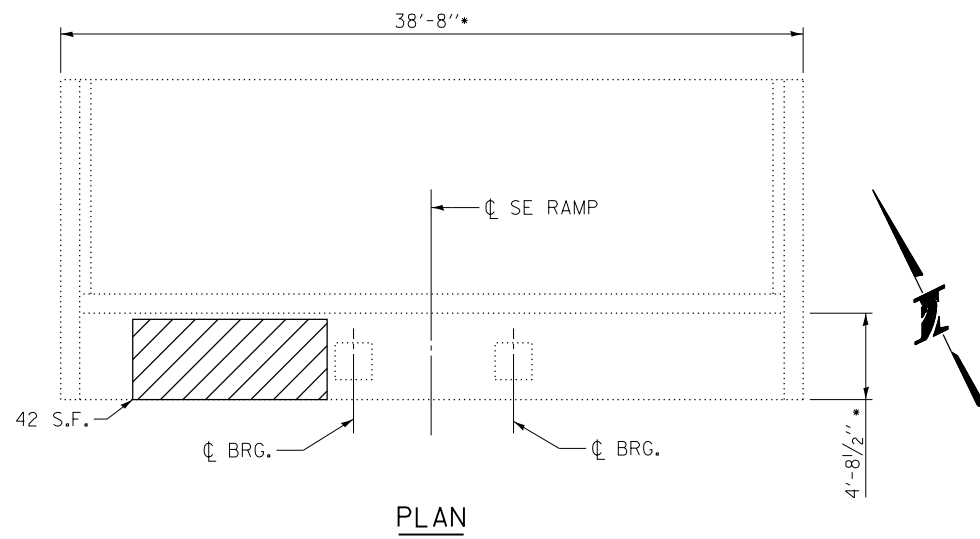
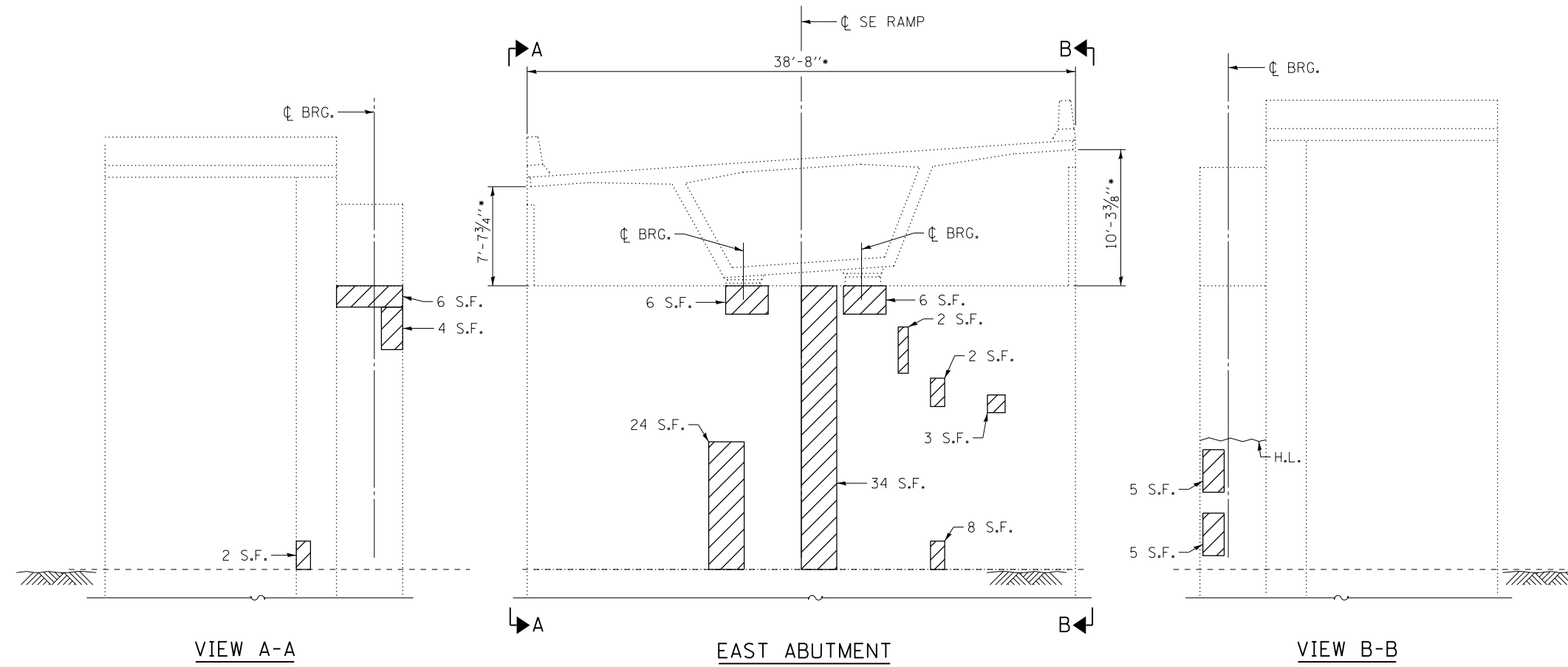

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 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 CONSTRUCTION STAGING

SG-05 OF SG-43
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 1109 OF 1517

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NOTES:

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 *APPLY CONCRETE SEALANT ON THE ABUTMENT SEAT AND ABUTMENT BACKWALL.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	149
APPLY CONCRETE SEALANT	SQ. FT.	529

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
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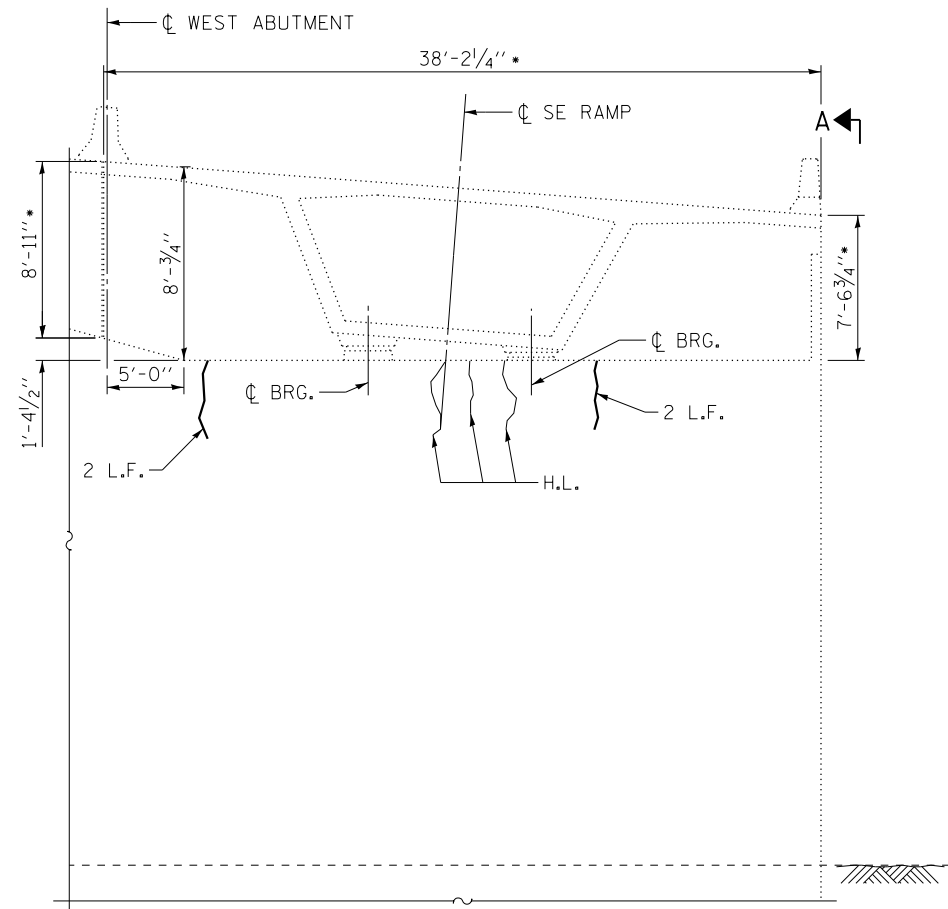
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

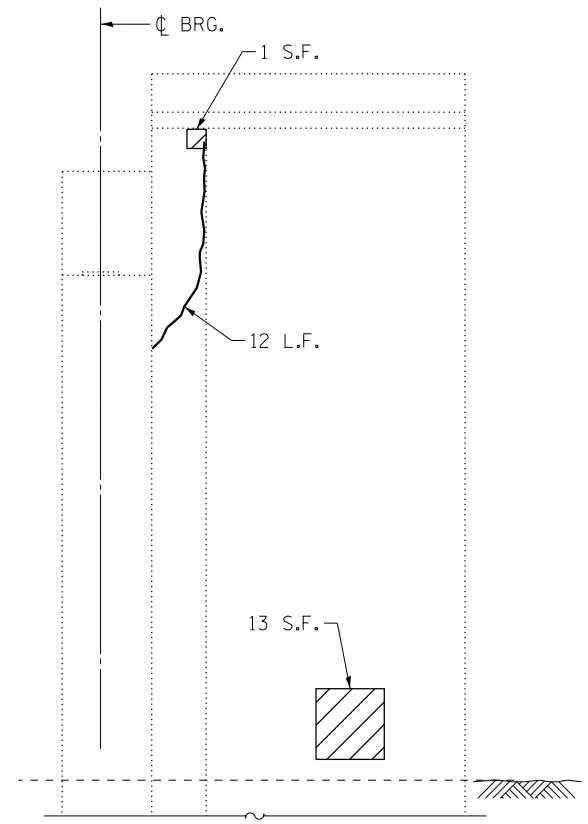
CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 EAST ABUTMENT REPAIRS

SG-06 OF SG-43
 SHT NO. SG-06
 DRAWING NO.
 1110 OF 1517

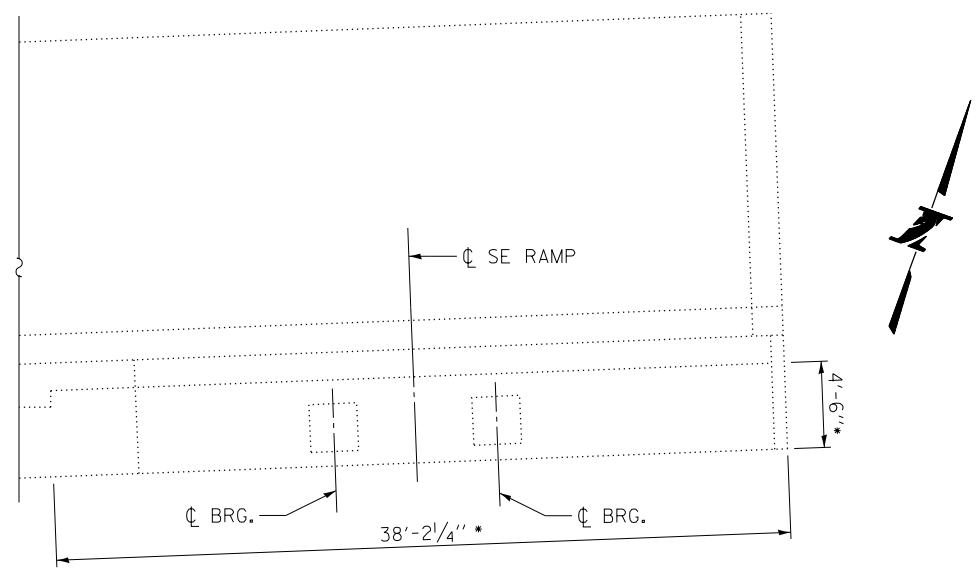
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WEST ABUTMENT



VIEW A-A



PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	14
LOW PRESSURE EPOXY INJECTION	FOOT	16
APPLY CONCRETE SEALANT	SQ. FT.	474

LEGEND:

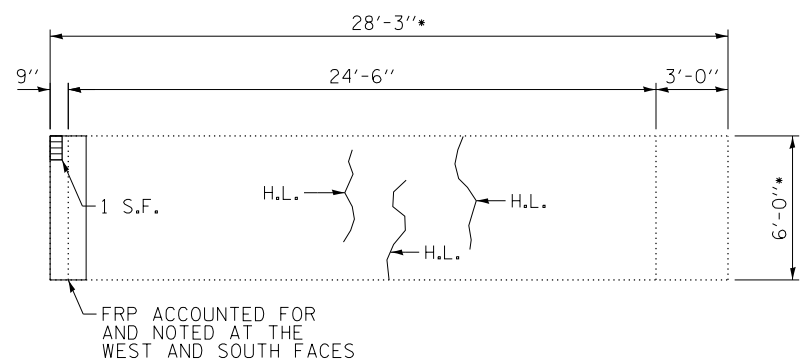
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
- 2 L.F. LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

NOTES:

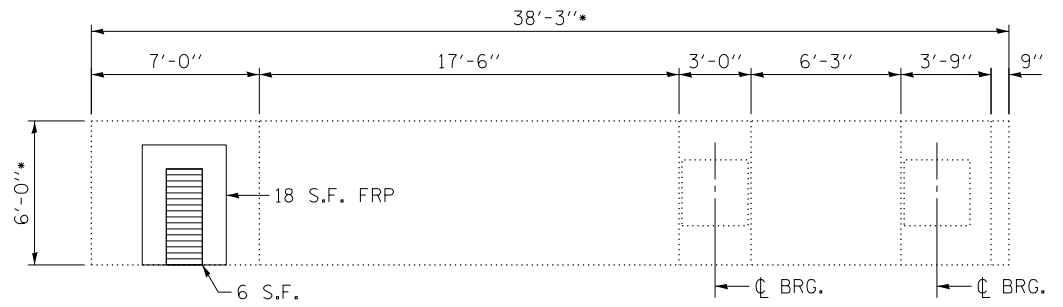
CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

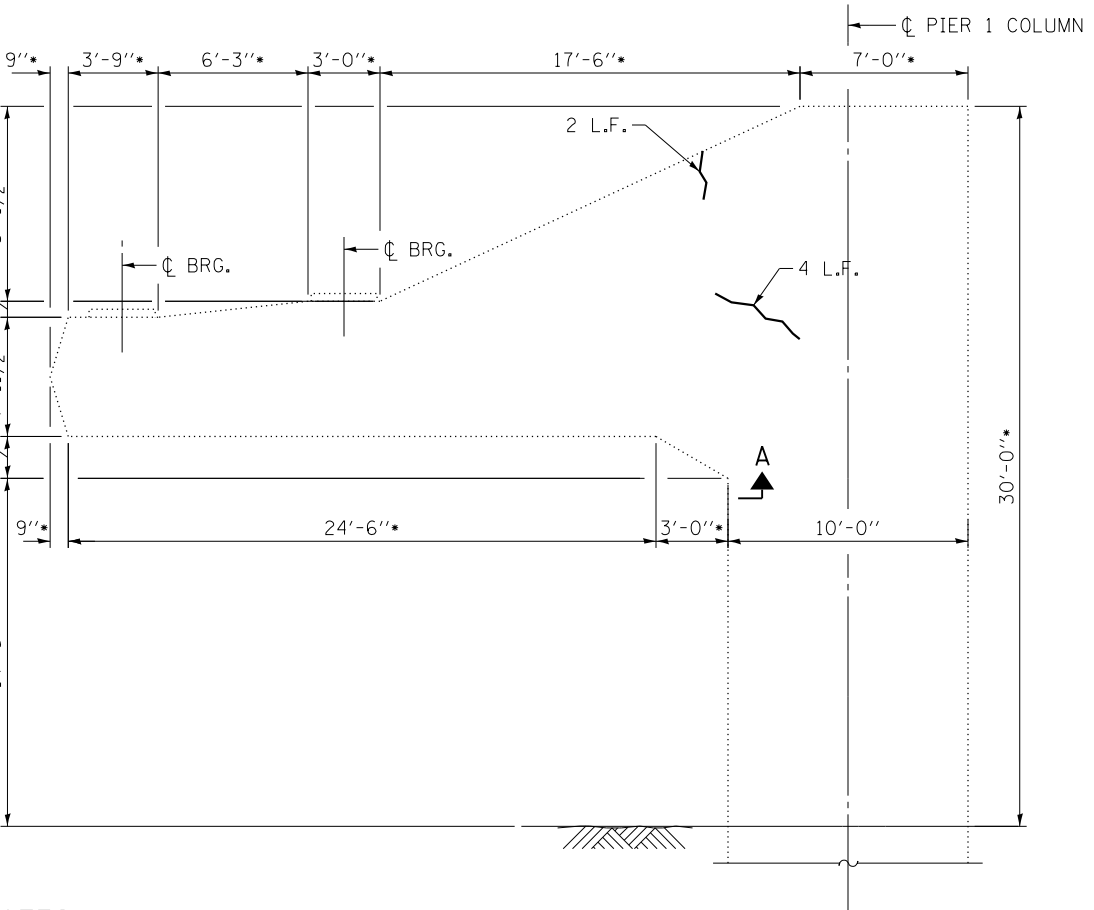
*APPLY CONCRETE SEALANT ON THE ABUTMENT SEAT AND ABUTMENT BACKWALL.



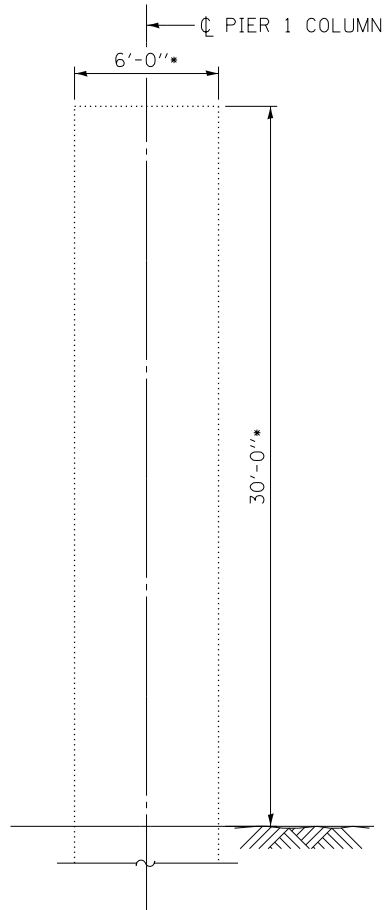
VIEW A-A



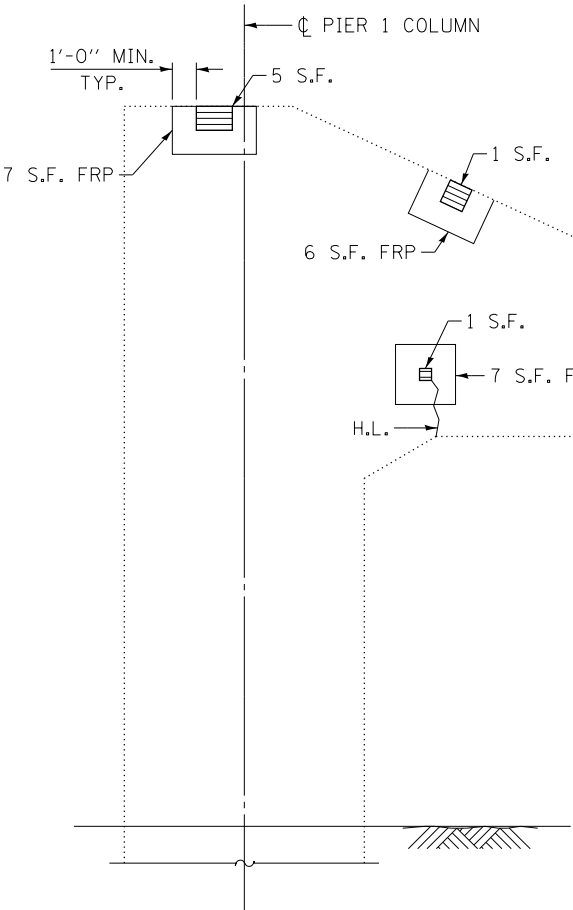
PIER CAP PLAN



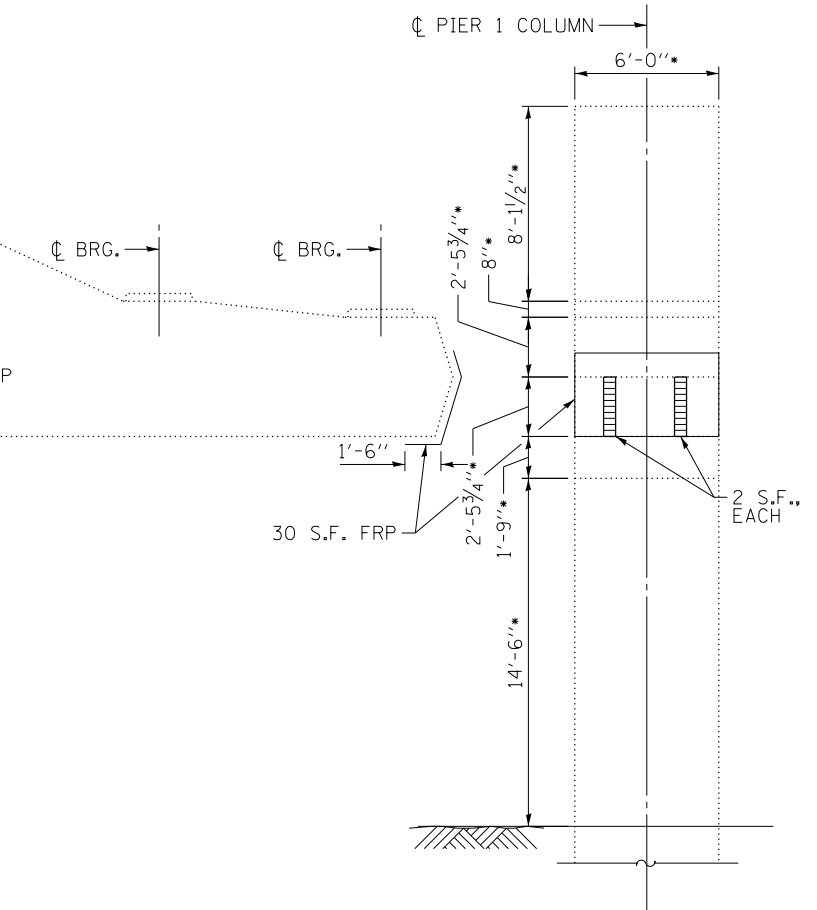
NORTH FACE



EAST FACE



SOUTH FACE



WEST FACE

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS. SEE SHEET SG-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 1.

LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- 4 L.F. HIGH PRESSURE EPOXY INJECTION
- H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	18
HIGH PRESSURE EPOXY INJECTION	FOOT	6
APPLY CONCRETE SEALANT	SQ. FT.	1,705
FIBER WRAP REPAIR	SQ. FT.	68

SG-08 OF SG-43

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

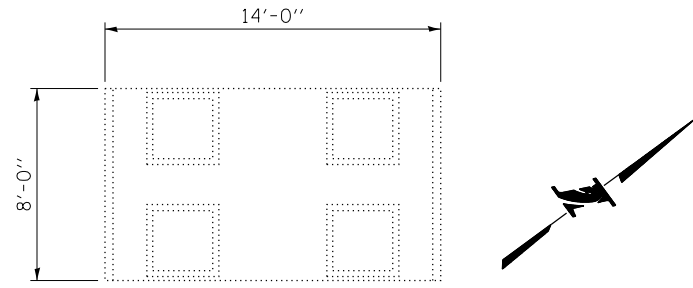
Ciorba Group, Inc.
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 5507 North Cumberland Avenue
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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

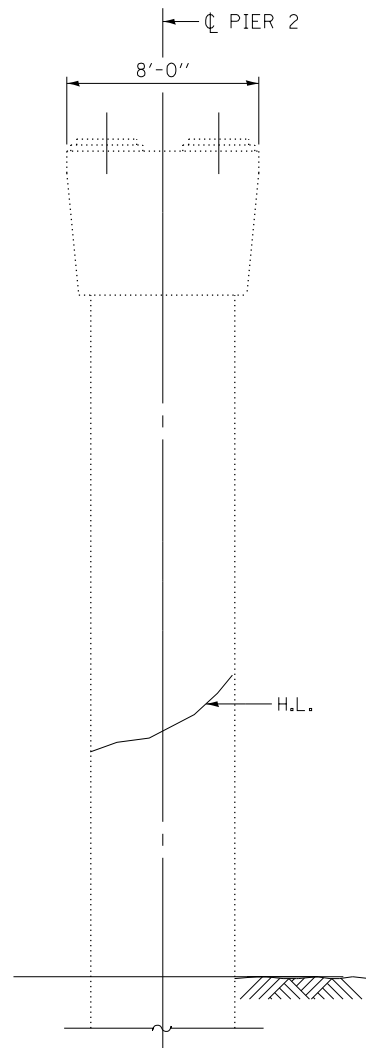
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		DESCRIPTION	

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 1 REPAIRS

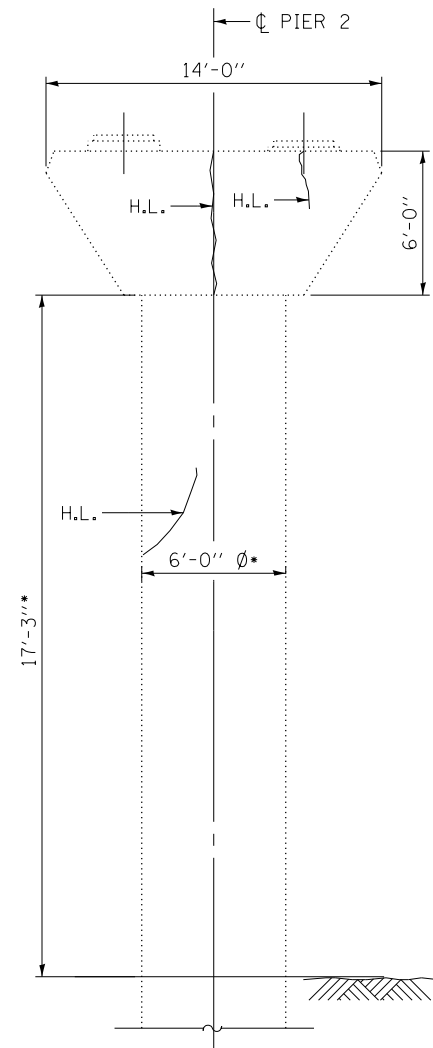
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 DRAWING NO.
 1112 OF 1517



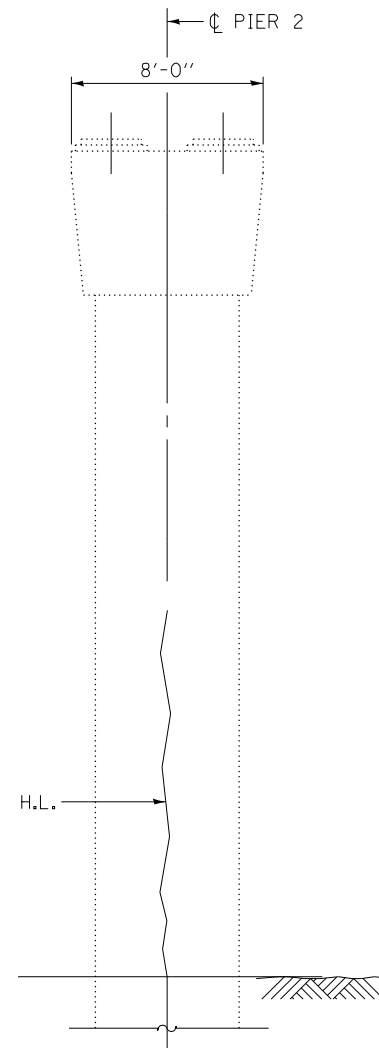
PIER CAP PLAN



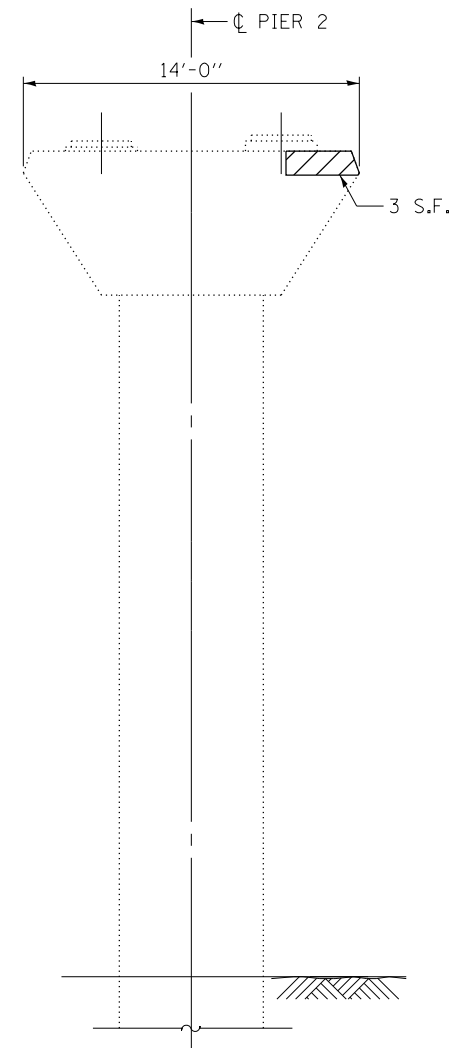
WEST FACE



SOUTH FACE



EAST FACE



NORTH FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 2 COLUMN.

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	3
APPLY CONCRETE SEALANT	SQ. FT.	326

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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

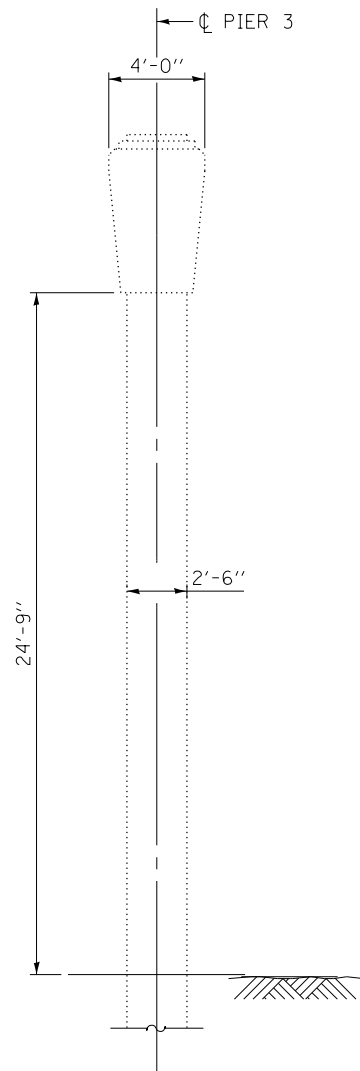
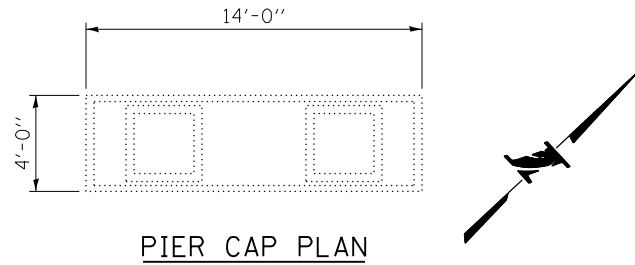
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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

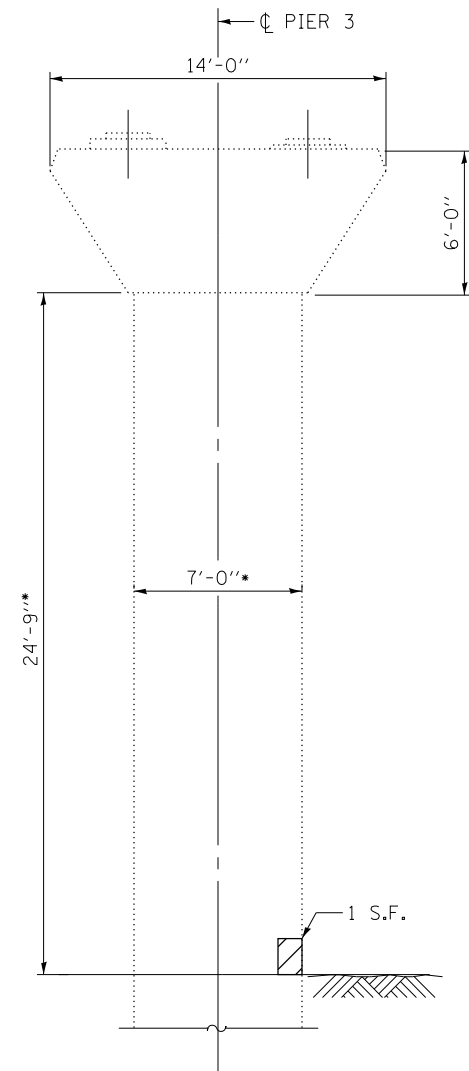
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 2 REPAIRS

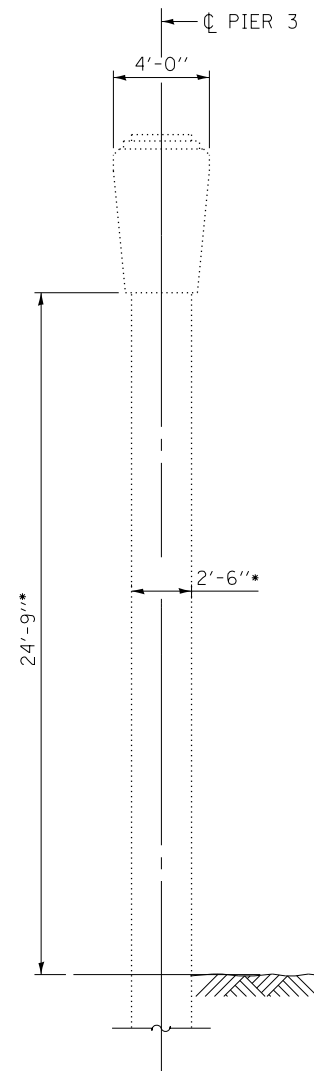
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 SHT NO. SG-09
 DRAWING NO.
 1113 OF 1517



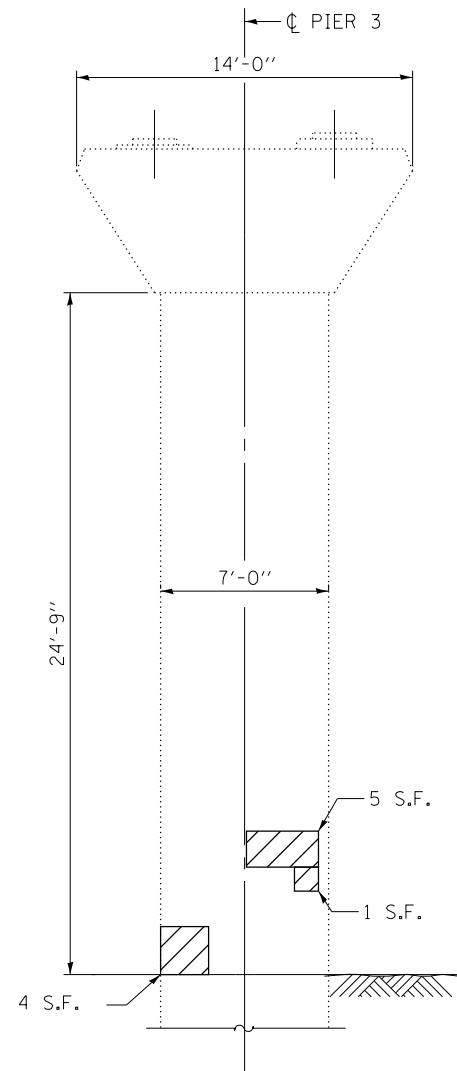
NORTH FACE



WEST FACE



SOUTH FACE



EAST FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON THE WEST AND SOUTH FACES OF PIER 3 COLUMN.

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

H.L. HAIRLINE CRACKS - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	11
APPLY CONCRETE SEALANT	SQ. FT.	236

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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

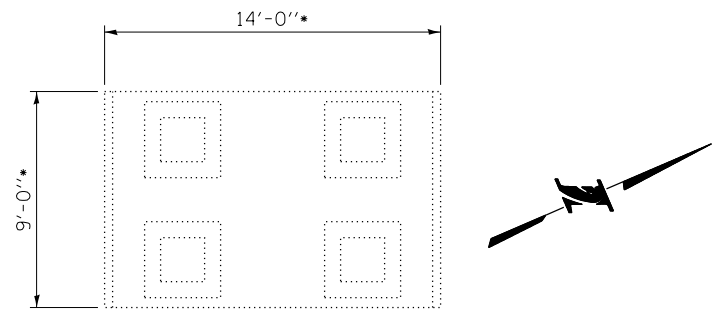
Ciorba Group, Inc.
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 ILLINOIS 60515

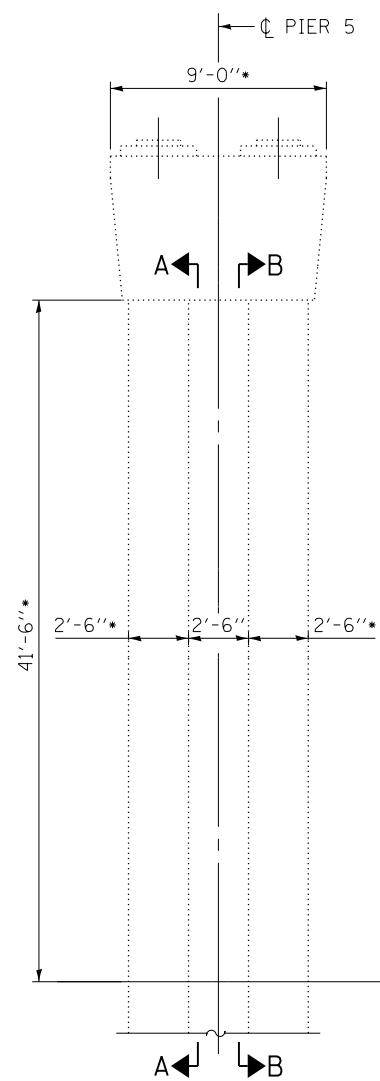
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NO.	DATE

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 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 3 REPAIRS

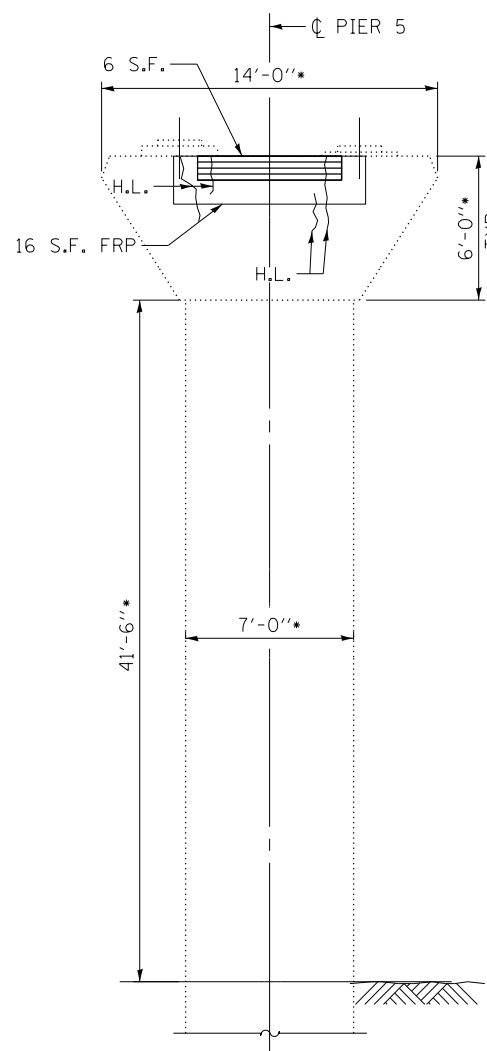
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 SHT NO. SG-10
 DRAWING NO.
 1114 OF 1517



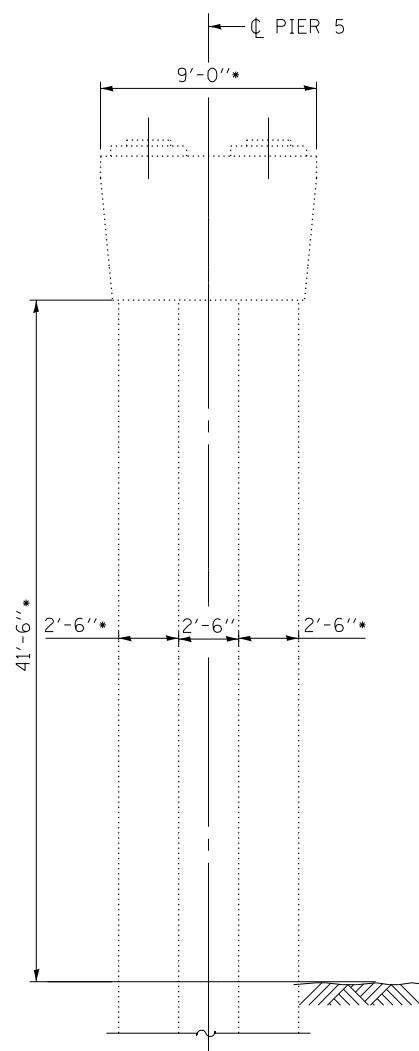
PIER CAP PLAN



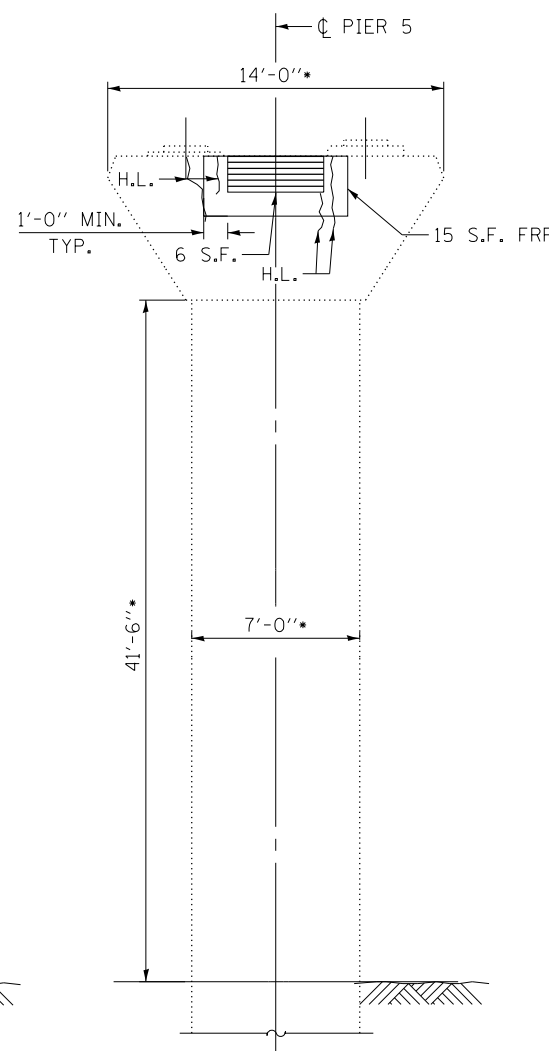
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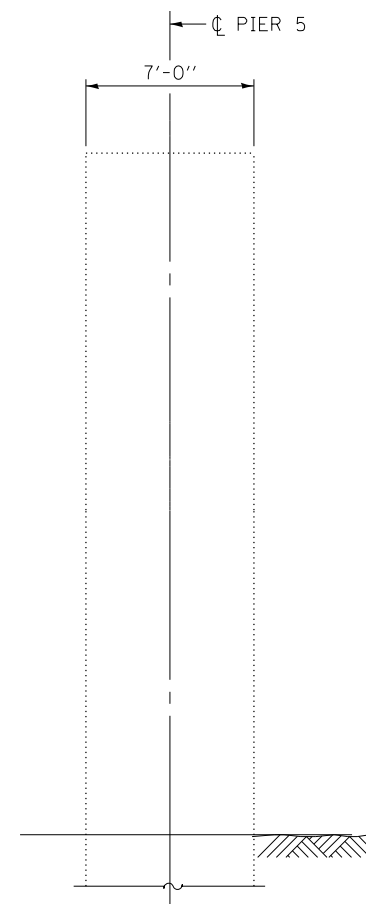
WEST FACE



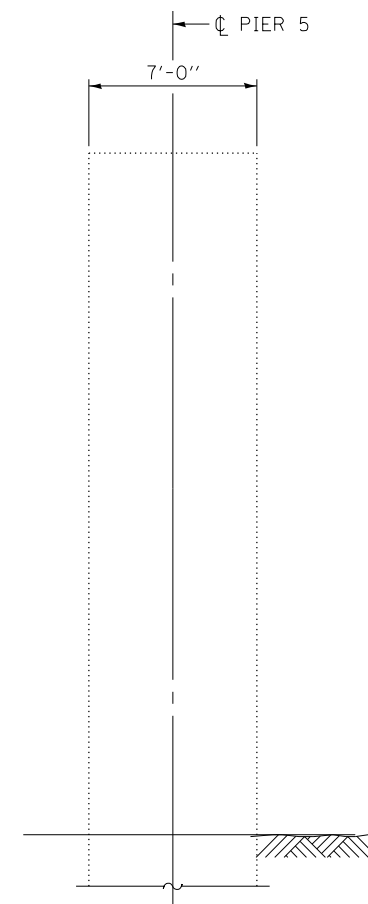
SOUTH FACE



EAST FACE



VIEW A-A



VIEW B-B

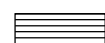

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS. SEE SHEET SG-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 5.

LEGEND:

-  POLYMER MODIFIED PORTLAND CEMENT MORTAR
-  H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	12
APPLY CONCRETE SEALANT	SQ. FT.	1,347
FIBER WRAP REPAIR	SQ. FT.	31

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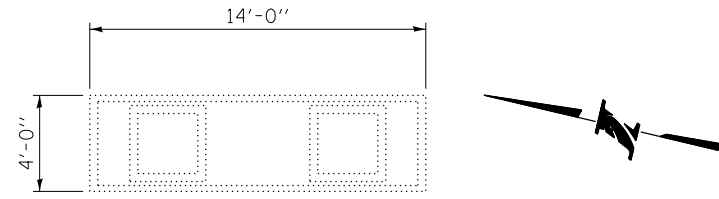
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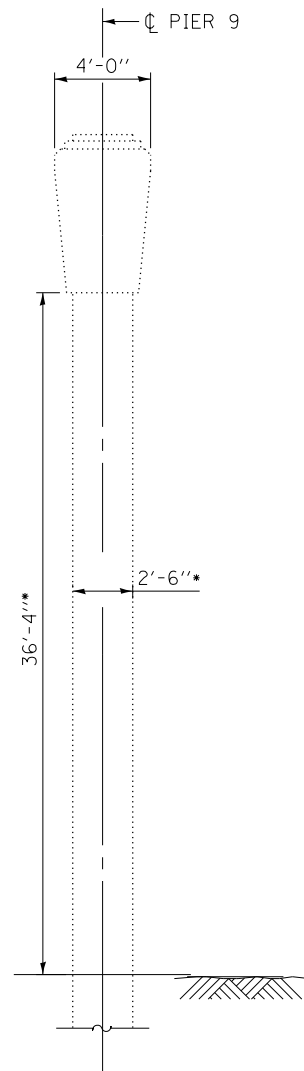
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NO.	DATE	

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 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 5 REPAIRS

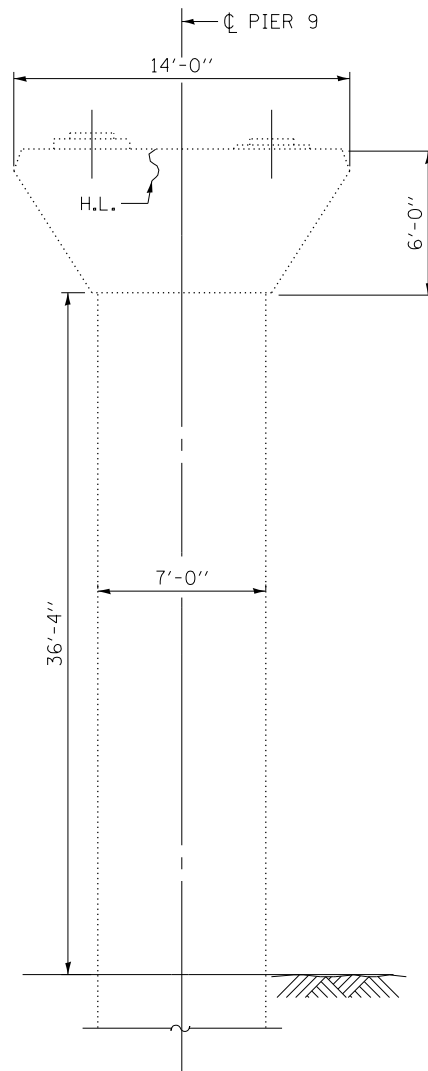
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 SHT NO. SG-11
 DRAWING NO.
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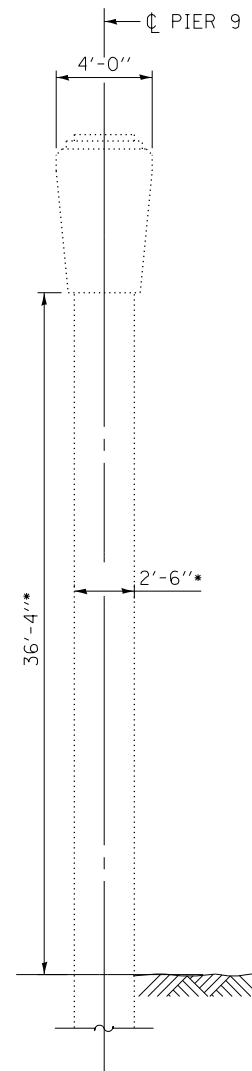
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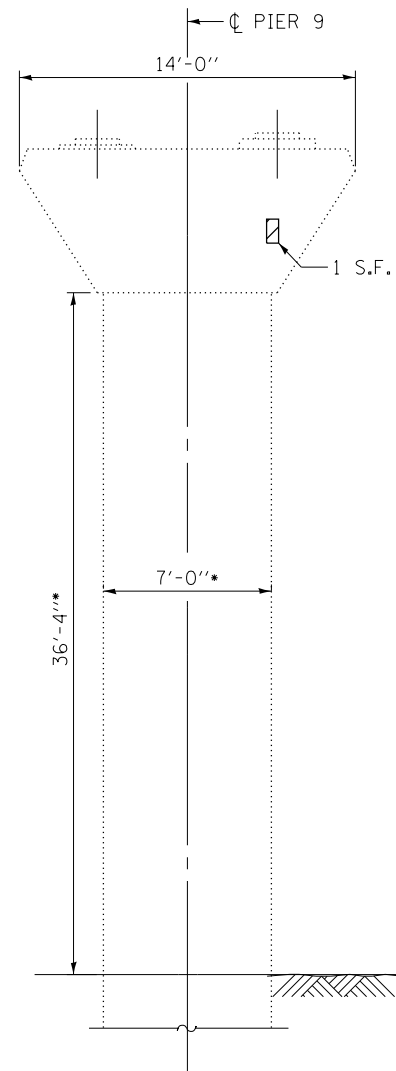
NORTH FACE



WEST FACE



SOUTH FACE



EAST FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES, EXCEPT WEST FACE, OF PIER 9 COLUMN.

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

H.L. HAIRLINE CRACKS - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	1
APPLY CONCRETE SEALANT	SQ. FT.	436

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DRAWN BY SBA DATE 3/11/2018
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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

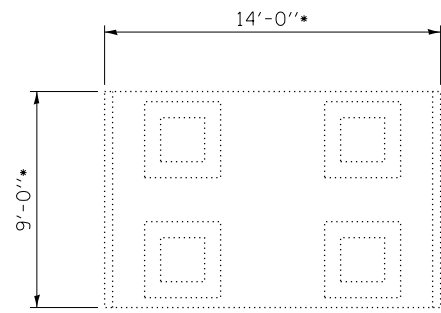
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CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 9 REPAIRS

SG-12 OF SG-43

SHT NO. SG-12

DRAWING NO.
 1116 OF 1517



PIER CAP PLAN



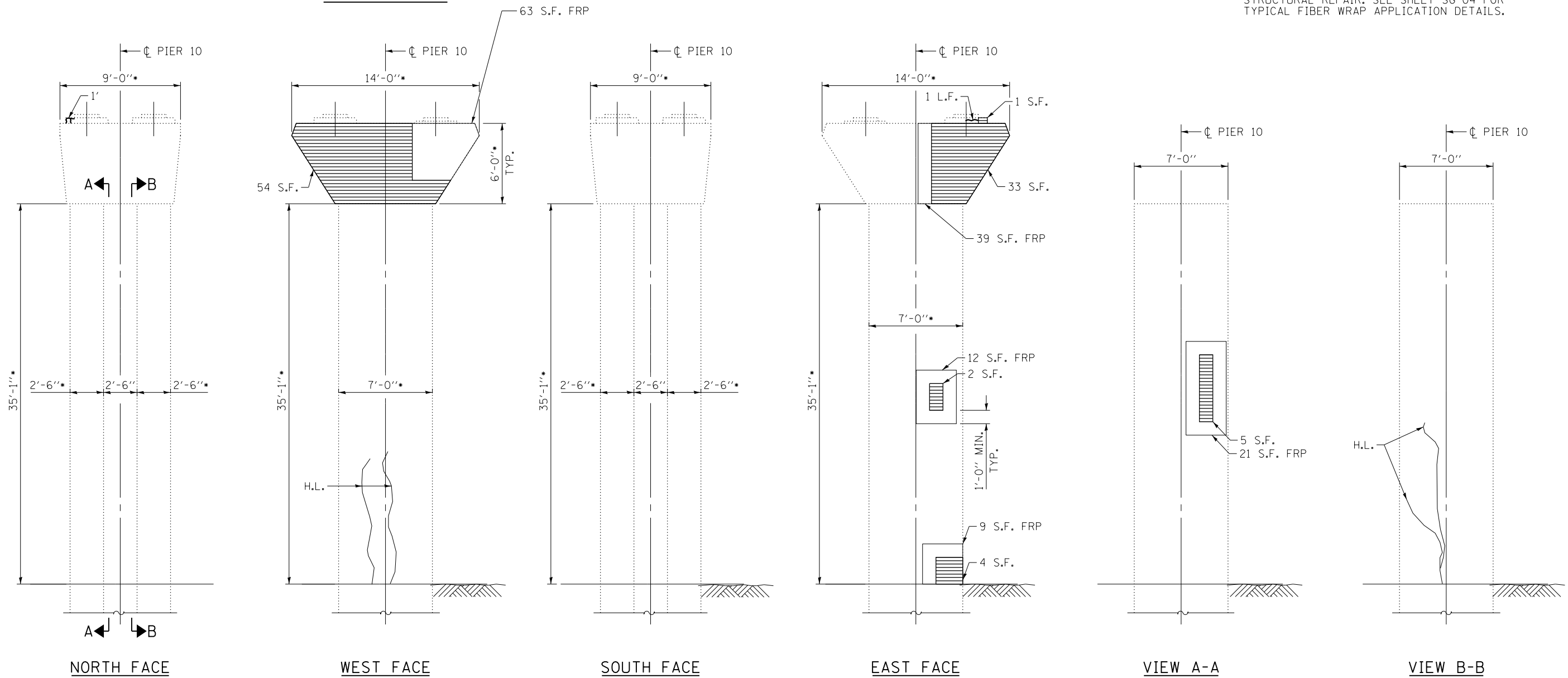
NOTES:

CRACKS THAT ARE 1/8"± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 10.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIR. SEE SHEET SG-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.



LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- 1' —> LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"
- H.L. —> HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	99
LOW PRESSURE EPOXY INJECTION	FOOT	2
APPLY CONCRETE SEALANT	SQ. FT.	1,193
FIBER WRAP REPAIR	SQ. FT.	144

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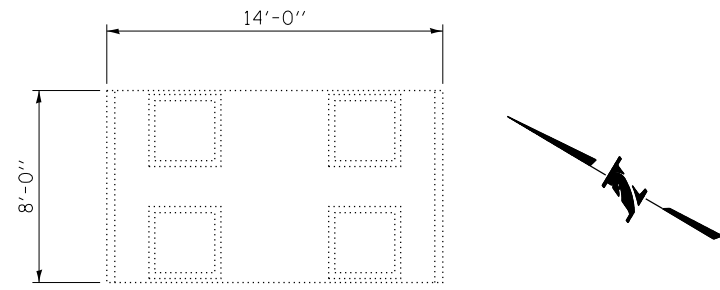
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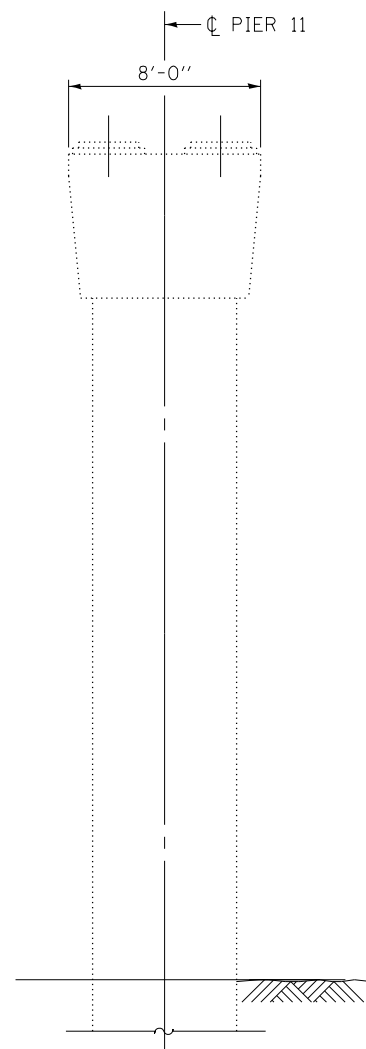
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NO.	DATE	DESCRIPTION

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 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 10 REPAIRS

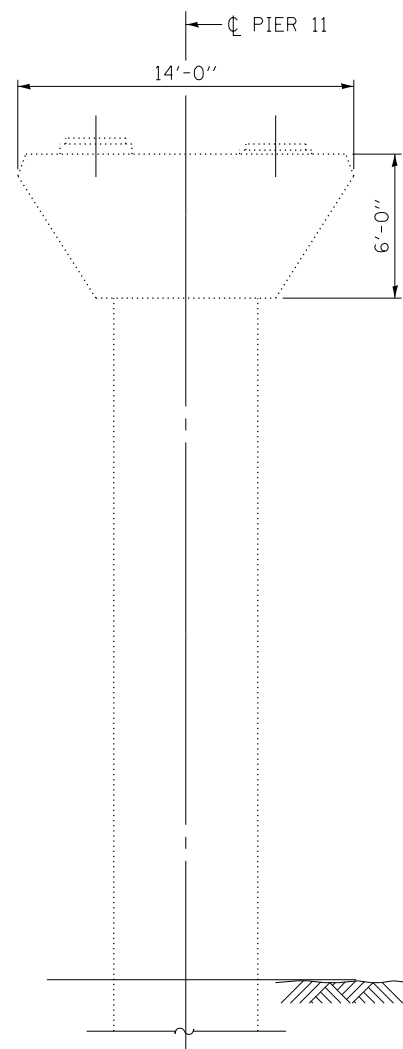
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 DRAWING NO. 1117 OF 1517



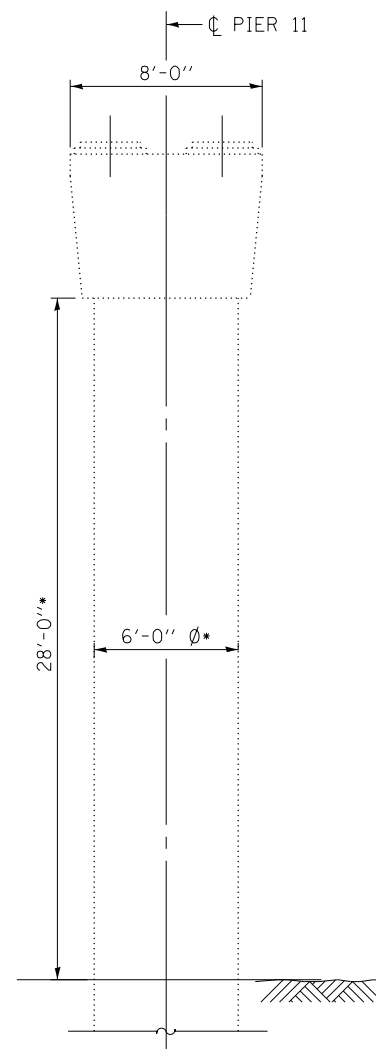
PIER CAP PLAN



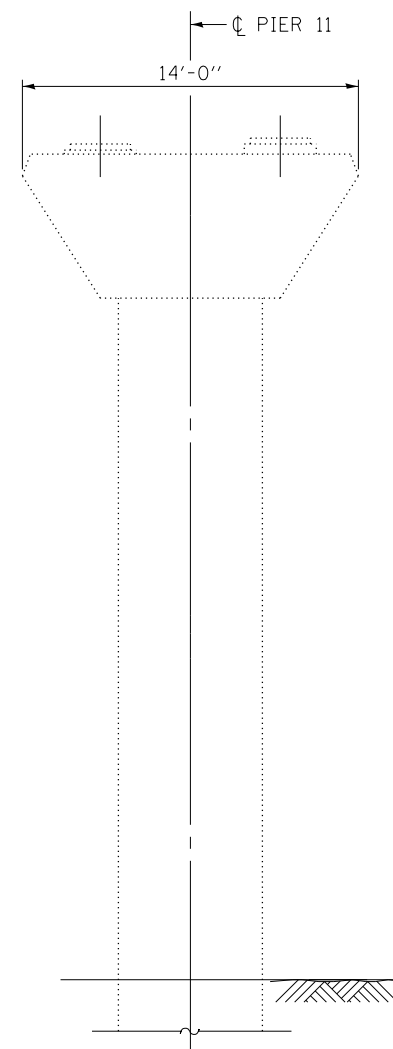
NORTH FACE



WEST FACE



SOUTH FACE



EAST FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 11 COLUMN.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	528

Projects\2016\20161616 - Veterans Memorial Tollway\Drawings\Current Drawings Files\4255\Structural\Sheet\4255-sht-1441-pier-C011.dgn

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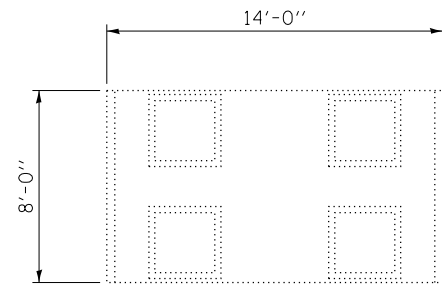

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 DOWNERS GROVE,
 ILLINOIS 60515

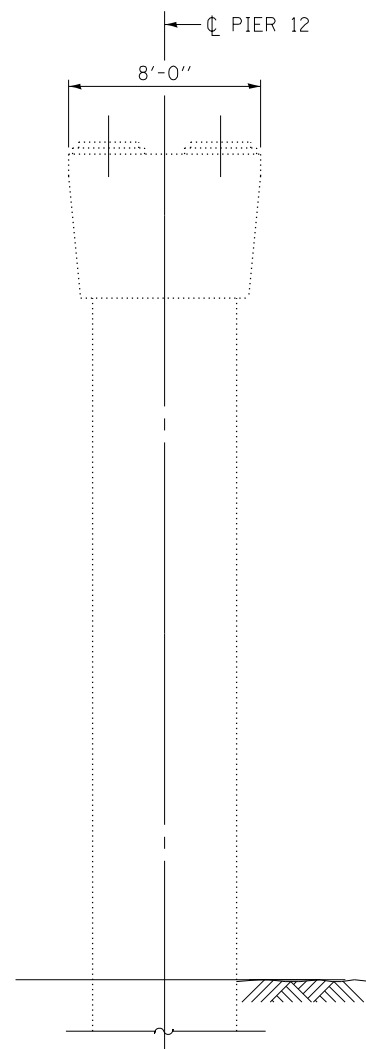
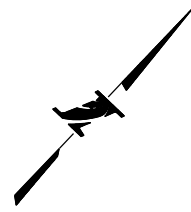
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 11 REPAIRS

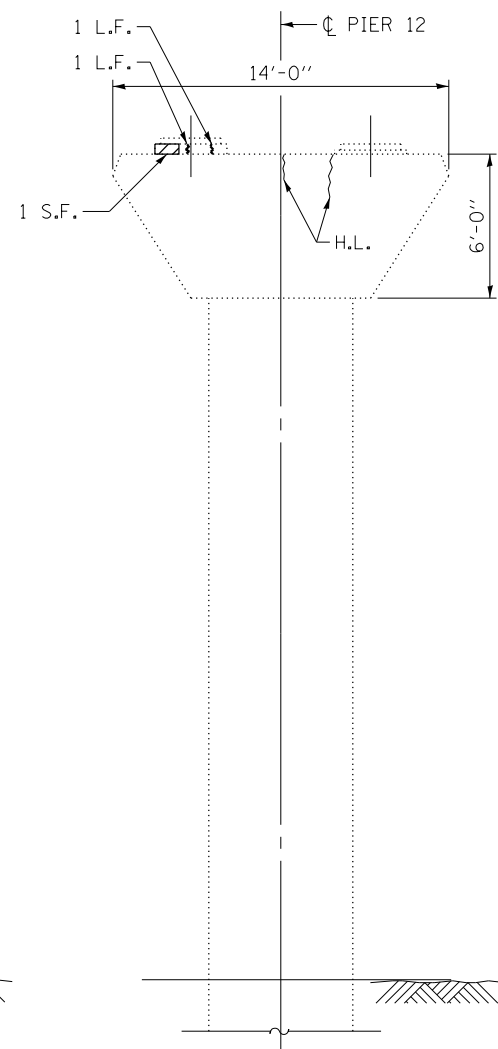
SG-14 OF SG-43
 SHT NO. SG-14
 DRAWING NO.
 1118 OF 1517



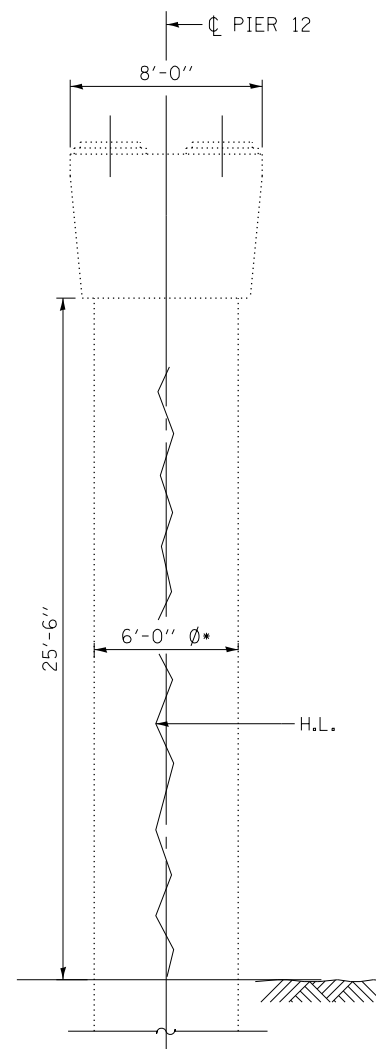
PIER CAP PLAN



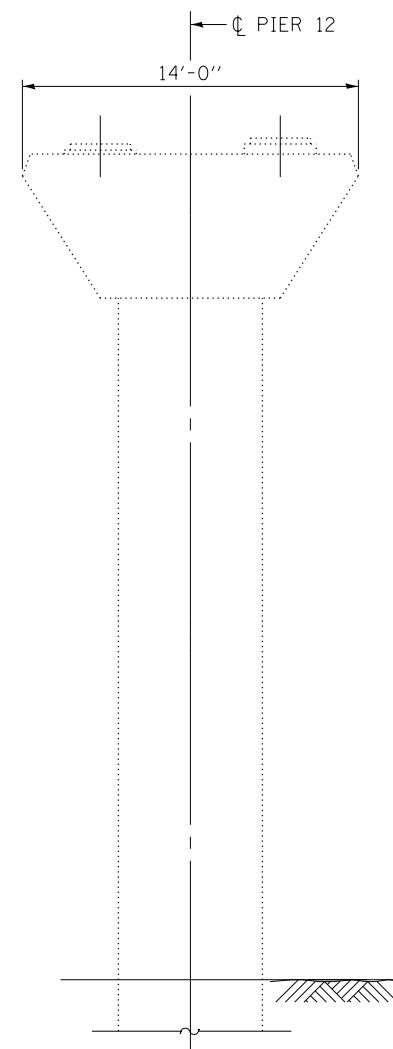
WEST FACE



SOUTH FACE



EAST FACE



NORTH FACE

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 12 COLUMN.

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

1 L.F. LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	1
LOW PRESSURE EPOXY INJECTION	FOOT	2
APPLY CONCRETE SEALANT	SQ. FT.	481

Projects\2016\20161616 - Veterans Memorial Tollway\Drawings\Current Drawing Files\2255 Structural\Sheet\2255-ah-1441-pier-0112.dgn

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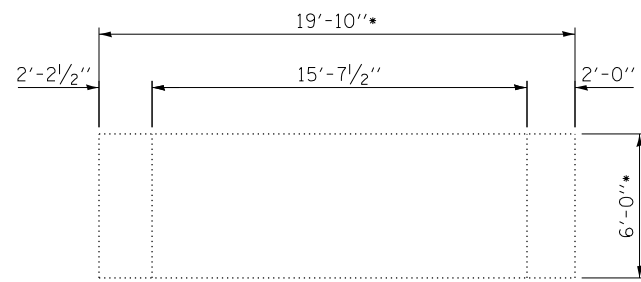
Ciorba Group, Inc.
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 ILLINOIS 60515

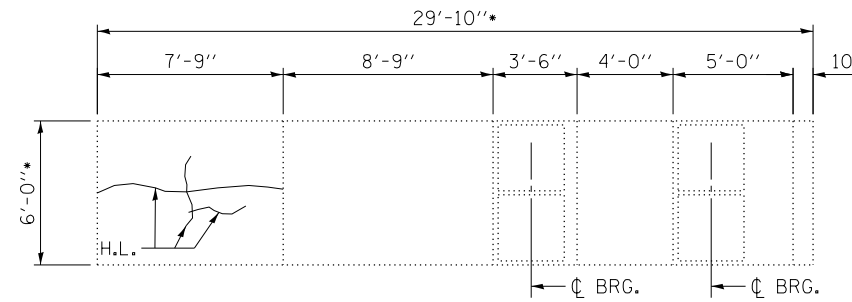
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 12 REPAIRS

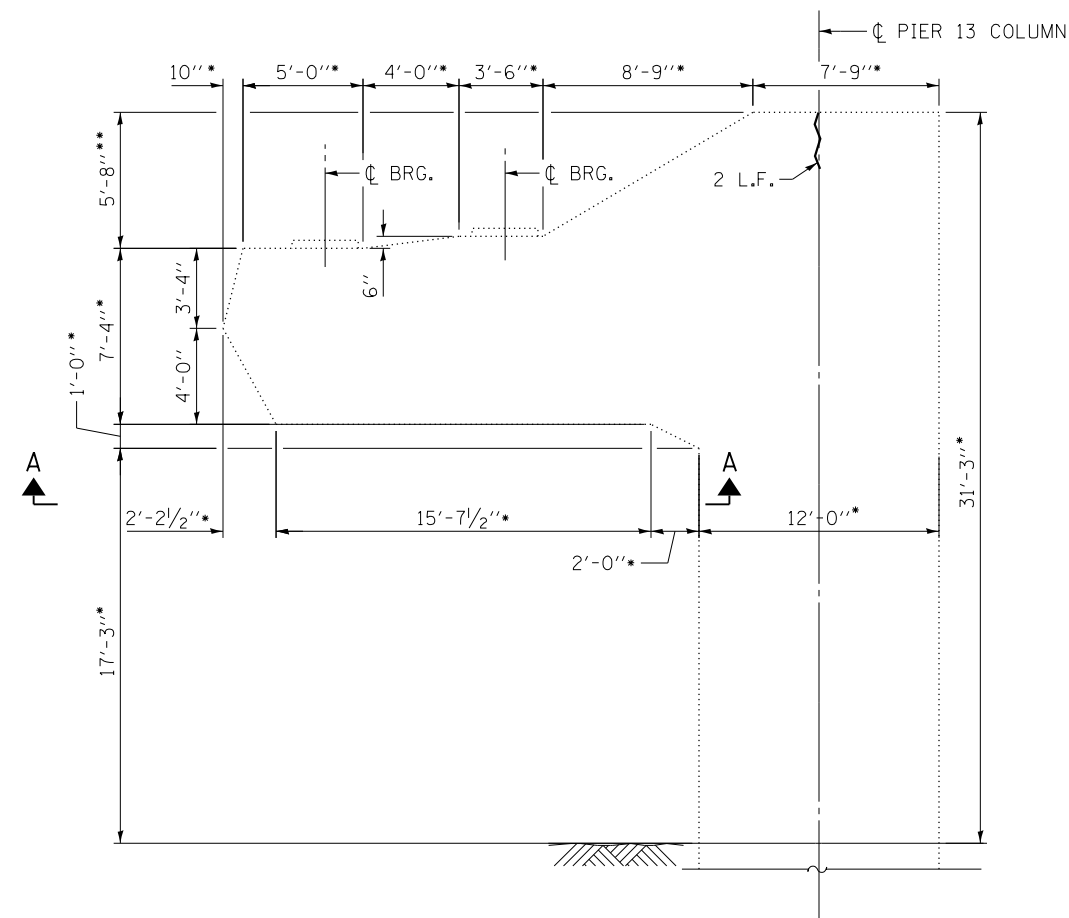
SG-15 OF SG-43
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 DRAWING NO.
 1119 OF 1517



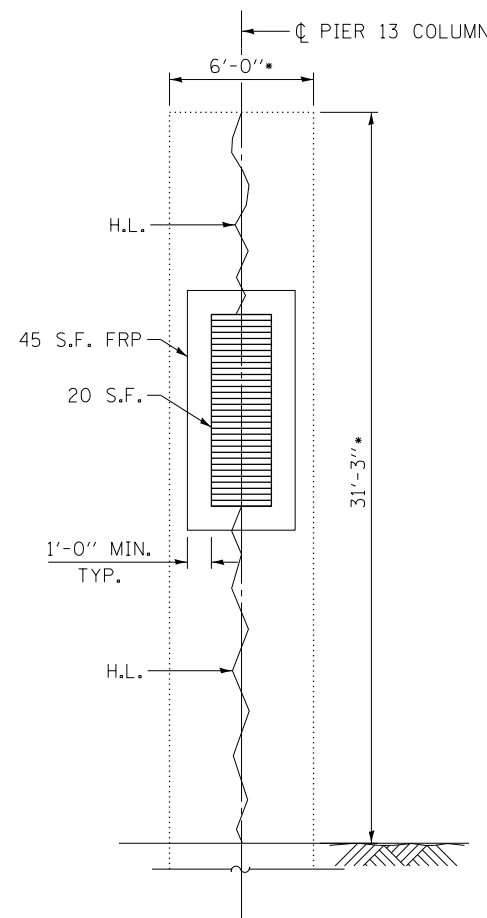
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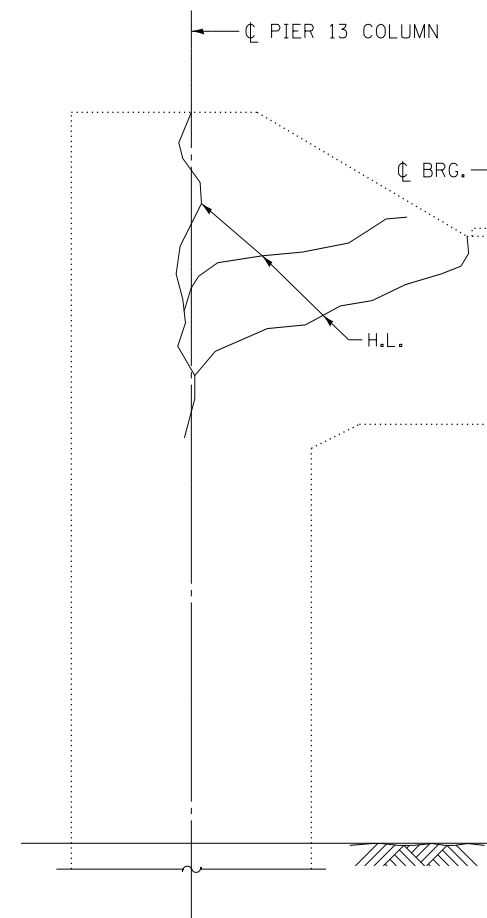
PIER CAP PLAN



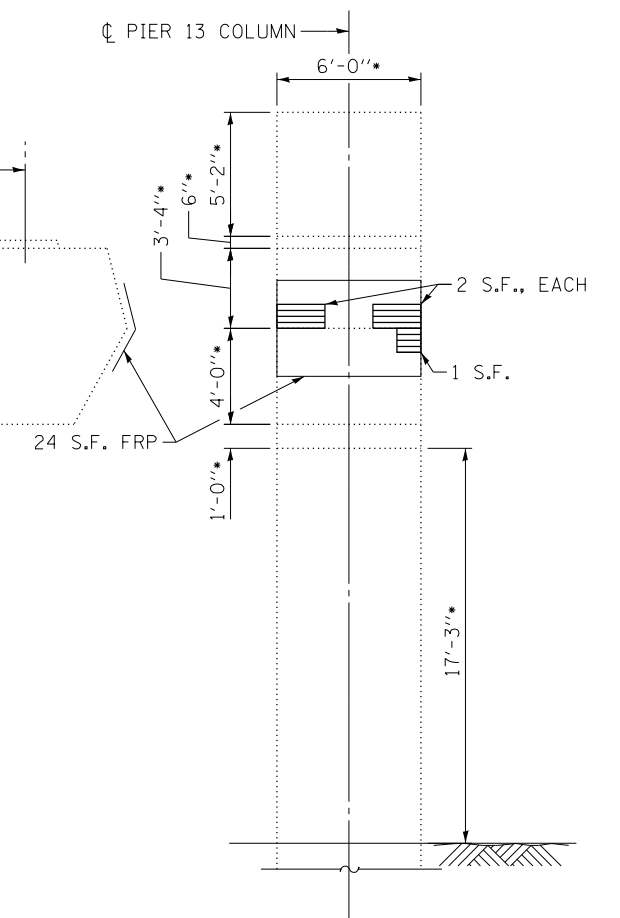
SOUTH FACE



EAST FACE



NORTH FACE



WEST FACE

NOTES:


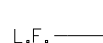
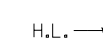
CRACKS THAT ARE 1/8"± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS. SEE SHEET SG-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.

* APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 13.

LEGEND:

-  POLYMER MODIFIED PORTLAND CEMENT MORTAR
-  2 L.F. → HIGH PRESSURE EPOXY INJECTION
-  H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	25
HIGH PRESSURE EPOXY INJECTION	FOOT	2
APPLY CONCRETE SEALANT	SQ. FT.	1,651
FIBER WRAP REPAIR	SQ. FT.	69

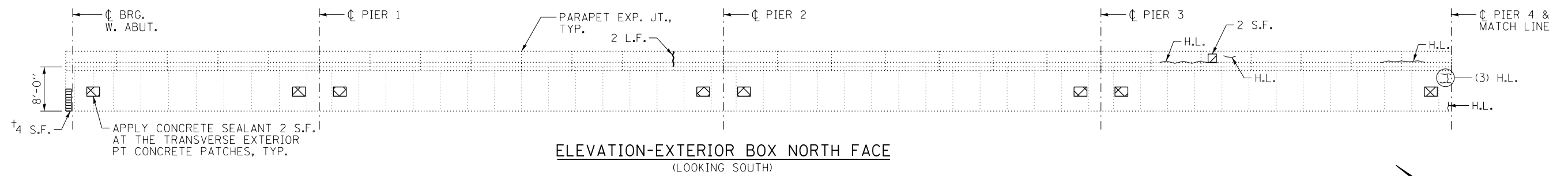
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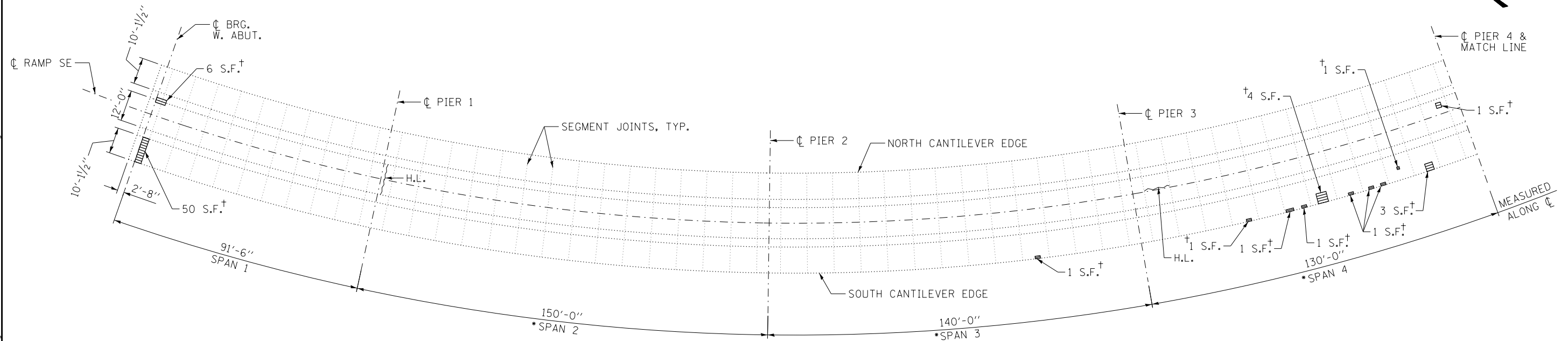
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 PIER 13 REPAIRS

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 DRAWING NO.
 1120 OF 1517

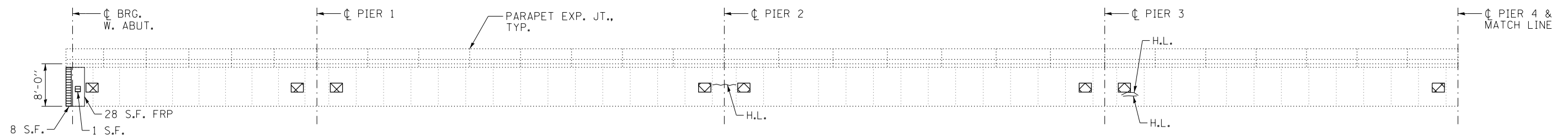


ELEVATION-EXTERIOR BOX NORTH FACE
(LOOKING SOUTH)



UNDERSIDE OF BRIDGE PLAN

* SPAN IS ABOVE LIVE TRAFFIC OR TOLLWAY MAINTENANCE YARD, APPROPRIATE PROTECTION FOR TRAFFIC BELOW FROM CONCRETE REPAIRS PERFORMED ON THE UNDERSIDE OF BRIDGE, BOX EXTERIOR, AND PARAPET EXTERIOR FACE IS REQUIRED AND INCLUDED IN COST OF POLYMER MODIFIED PORTLAND CEMENT MORTAR AND STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)".



ELEVATION-EXTERIOR BOX SOUTH FACE
(LOOKING NORTH)

NOTES:
CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.




REPAIRS OF THE EXISTING EXTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SG-20.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS.

† APPLY FIBER WRAP AROUND DEFECTS AT A 1'-0" CLEARANCE EXCEPT AT THE STRUCTURE EDGES, SEE SHEET SG-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.

LEGEND:

-  POLYMER MODIFIED PORTLAND CEMENT MORTAR
-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  APPLY CONCRETE SEALANT
- H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
- 2 L.F. → LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

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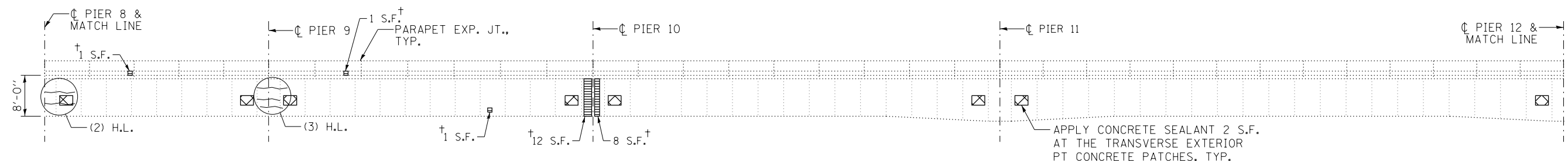
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ILLINOIS 60515

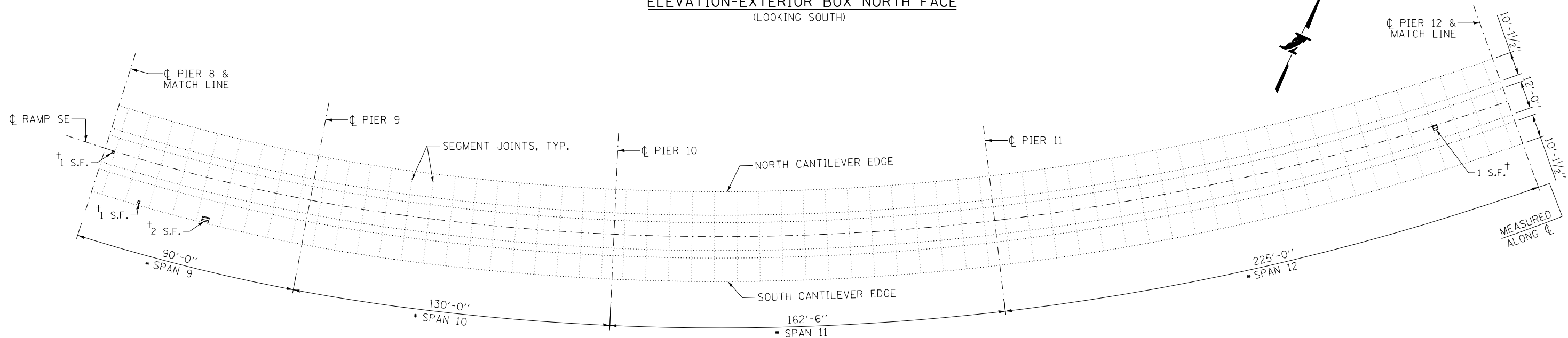
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1441 (SE) S.N. 022-9971
EXTERIOR SUPERSTRUCTURE REPAIRS I

SG-17 OF SG-43
SHT NO. SG-17
DRAWING NO. 1121 OF 1517

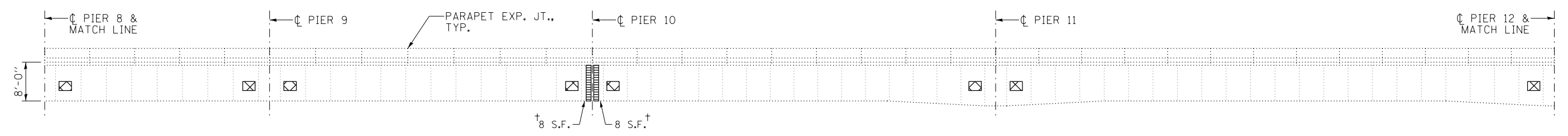


ELEVATION-EXTERIOR BOX NORTH FACE
(LOOKING SOUTH)



UNDERSIDE OF BRIDGE PLAN

* SPAN IS ABOVE LIVE TRAFFIC OR TOLLWAY MAINTENANCE YARD. APPROPRIATE PROTECTION FOR TRAFFIC BELOW FROM CONCRETE REPAIRS PERFORMED ON THE UNDERSIDE OF BRIDGE, BOX EXTERIOR, AND PARAPET EXTERIOR FACE IS REQUIRED AND INCLUDED IN COST OF "POLYMER MODIFIED PORTLAND CEMENT MORTAR" AND "STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)".



ELEVATION-EXTERIOR BOX SOUTH FACE
(LOOKING NORTH)

NOTES:
 REPAIRS OF THE EXISTING EXTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 FOR BILL OF MATERIAL, SEE SHEET SG-20.
 APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS.

† APPLY FIBER WRAP AROUND DEFECTS AT A 1'-0" CLEARANCE EXCEPT AT THE STRUCTURE EDGES, SEE SHEET SG-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.

- LEGEND:**
- POLYMER MODIFIED PORTLAND CEMENT MORTAR
 - APPLY CONCRETE SEALANT
 - HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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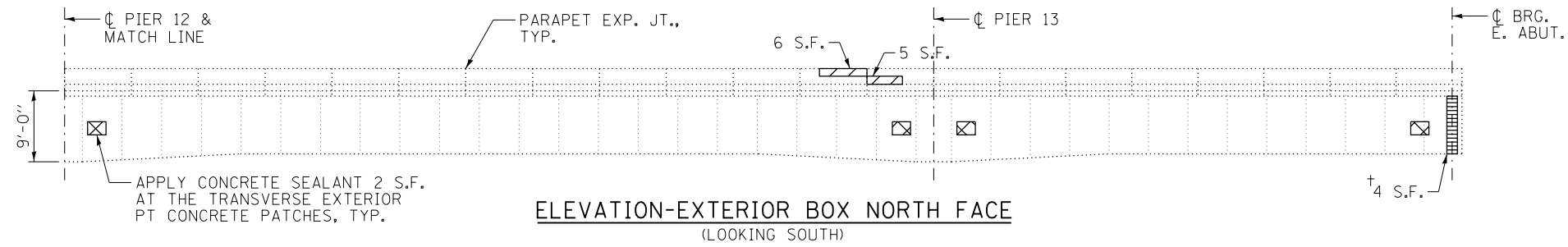
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 DOWNERS GROVE,
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 EXTERIOR SUPERSTRUCTURE REPAIRS III

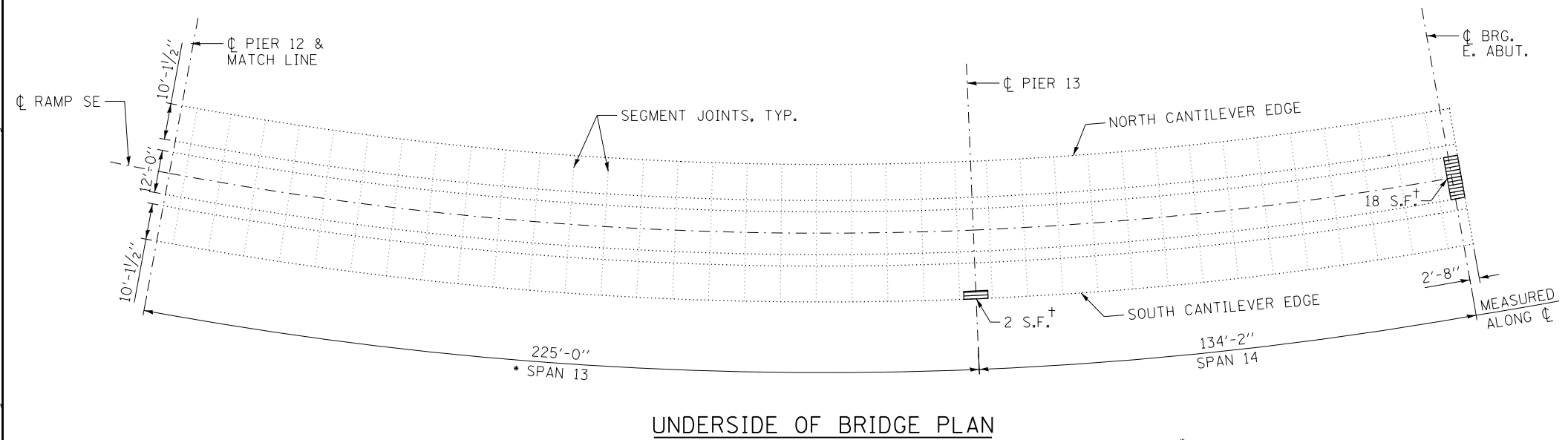
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 SHT NO. SG-19
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 1123 OF 1517



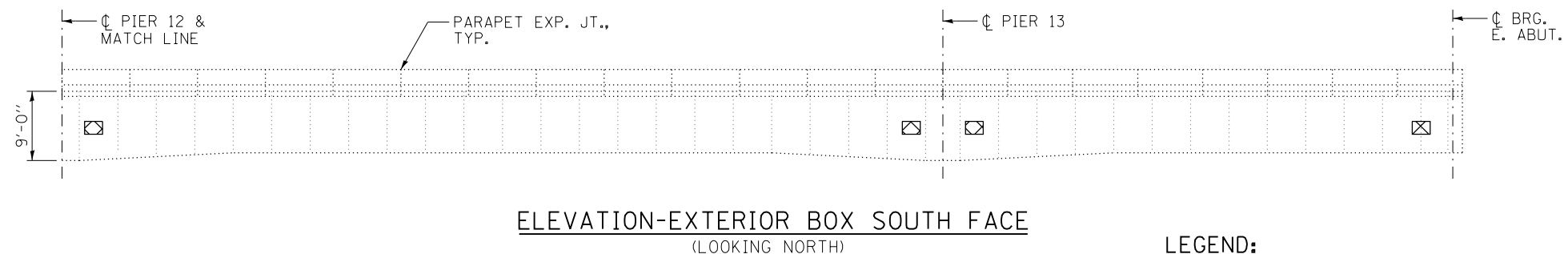
NOTES:
 REPAIRS OF THE EXISTING EXTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS.

†APPLY FIBER WRAP REPAIR AROUND DEFECTS AT A 1'-0" CLEARANCE UNLESS AT THE STRUCTURE EDGES, SEE SHEET SG-04 FOR FIBER WRAP APPLICATION DETAILS.



*SPAN IS ABOVE LIVE TRAFFIC OR TOLLWAY MAINTENANCE YARD. APPROPRIATE PROTECTION FOR TRAFFIC BELOW FROM CONCRETE REPAIRS PERFORMED ON THE UNDERSIDE OF BRIDGE, BOX EXTERIOR, AND PARAPET EXTERIOR FACE IS REQUIRED AND INCLUDED IN COST OF "POLYMER MODIFIED PORTLAND CEMENT MORTAR" AND "STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)".



- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - POLYMER MODIFIED PORTLAND CEMENT MORTAR
 - APPLY CONCRETE SEALANT

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	23
LOW PRESSURE EPOXY INJECTION	FOOT	2
APPLY CONCRETE SEALANT	SQ. FT.	112
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	202
FIBER WRAP REPAIR	SQ. FT.	587

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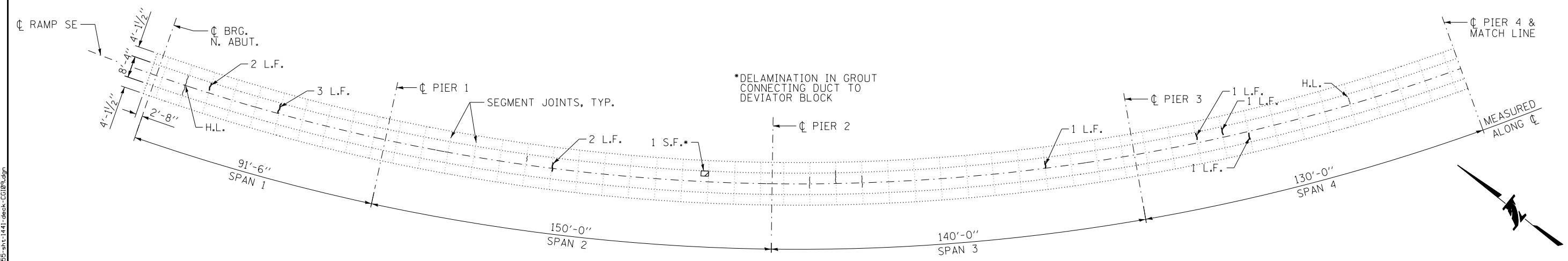
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NO.	DATE

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 EXTERIOR SUPERSTRUCTURE REPAIRS IV

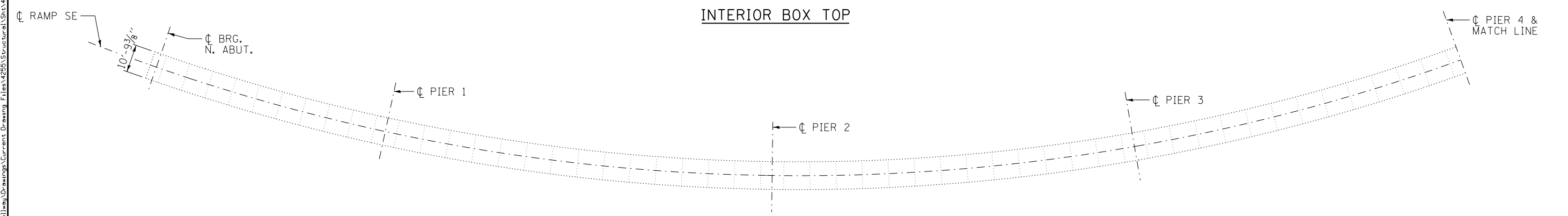
SG-20 OF SG-43
 SHT NO. SG-20
 DRAWING NO. 1124 OF 1517



INTERIOR BOX NORTH FACE
(LOOKING NORTH)



INTERIOR BOX TOP



INTERIOR BOX BOTTOM



INTERIOR BOX SOUTH FACE
(LOOKING SOUTH)




NOTES:

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REPAIRS OF THE EXISTING INTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SG-24.

LEGEND:

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
-  4' → HIGH PRESSURE EPOXY INJECTION

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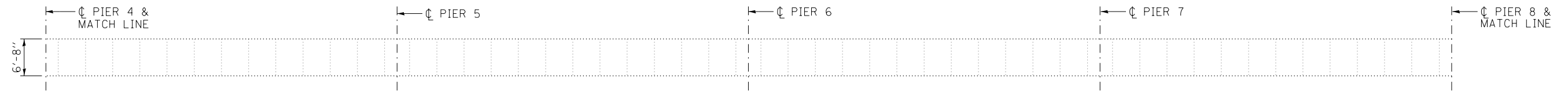
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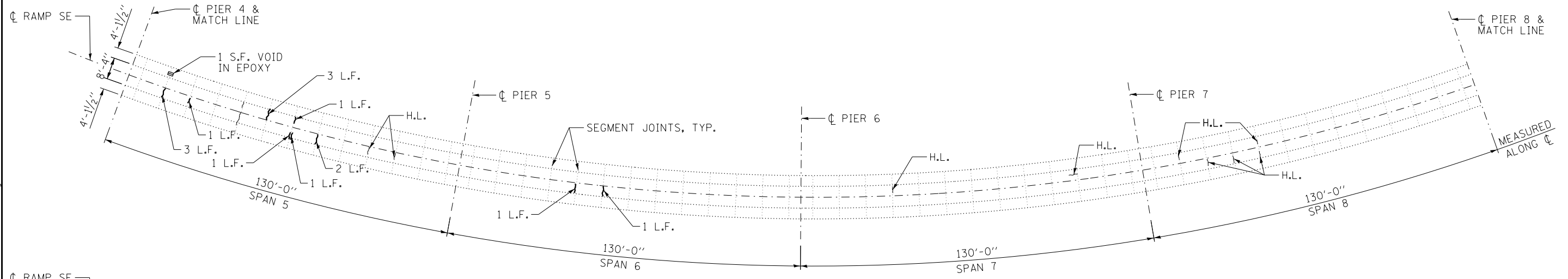
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CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 INTERIOR SUPERSTRUCTURE REPAIRS I

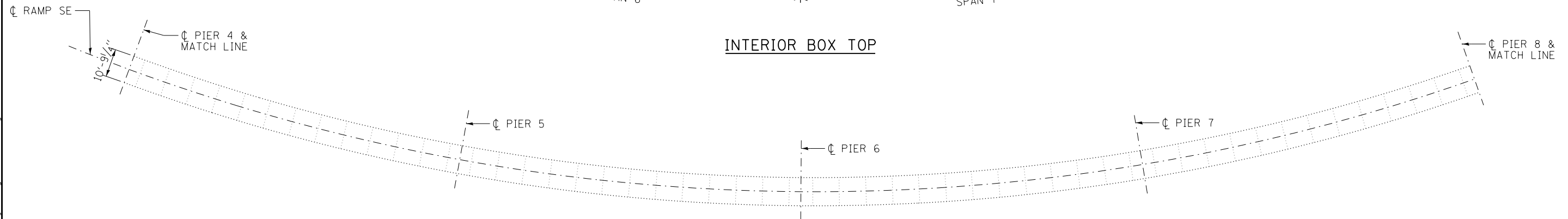
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 SHT NO. SG-21
 DRAWING NO. 1125 OF 1517



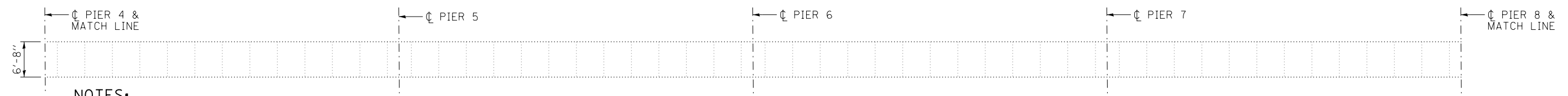
INTERIOR BOX NORTH FACE
(LOOKING NORTH)



INTERIOR BOX TOP



INTERIOR BOX BOTTOM



INTERIOR BOX SOUTH FACE
(LOOKING SOUTH)

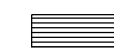
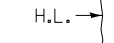
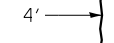
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REPAIRS OF THE EXISTING INTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SG-24.

LEGEND:

-  POLYMER MODIFIED PORTLAND CEMENT MORTAR
-  HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
-  HIGH PRESSURE EPOXY INJECTION

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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

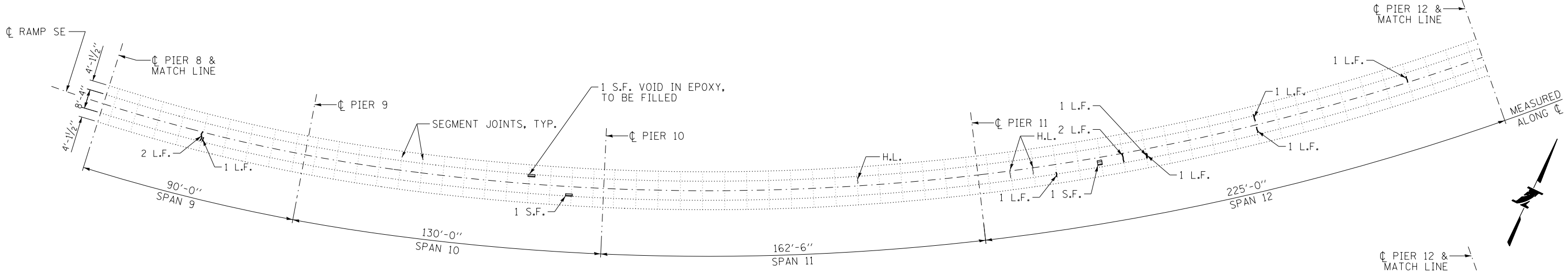
CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 INTERIOR SUPERSTRUCTURE REPAIRS II

SG-22 OF SG-43
 SHT NO. SG-22
 DRAWING NO.
 1126 OF 1517

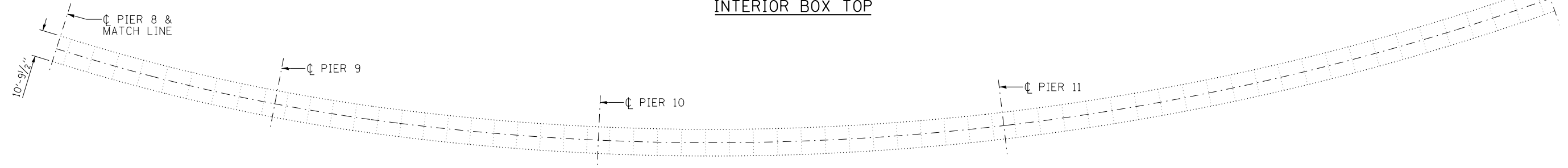
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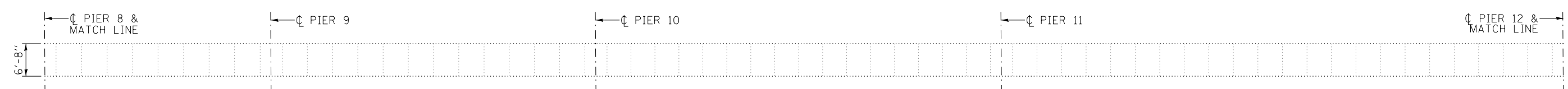
INTERIOR BOX NORTH FACE
(LOOKING NORTH)



INTERIOR BOX TOP



INTERIOR BOX BOTTOM



INTERIOR BOX SOUTH FACE
(LOOKING SOUTH)

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING INTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SG-24.

LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
- HIGH PRESSURE EPOXY INJECTION

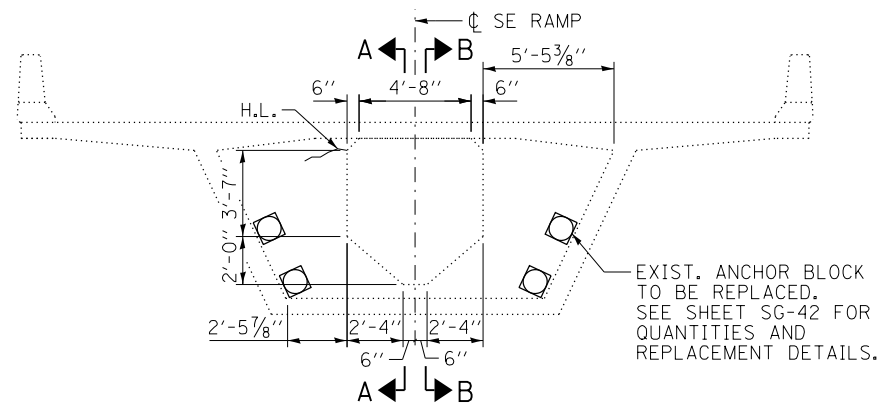
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 CHECKED BY BWS DATE 3/11/2018



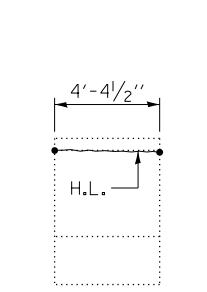
NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 INTERIOR SUPERSTRUCTURE REPAIRS III

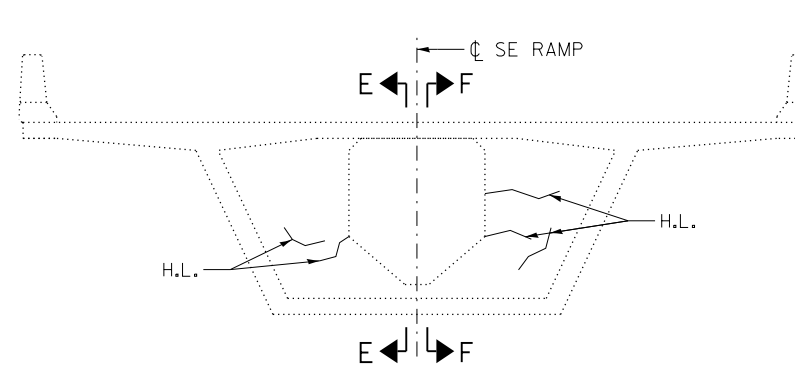
SHT NO. SG-23
 DRAWING NO. 1127 OF 1517



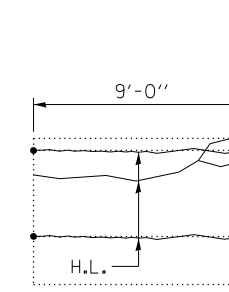
DIAPHRAGM ELEVATION-WEST ABUTMENT
(LOOKING UPSTATION)



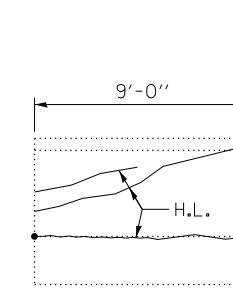
SECTION A-A



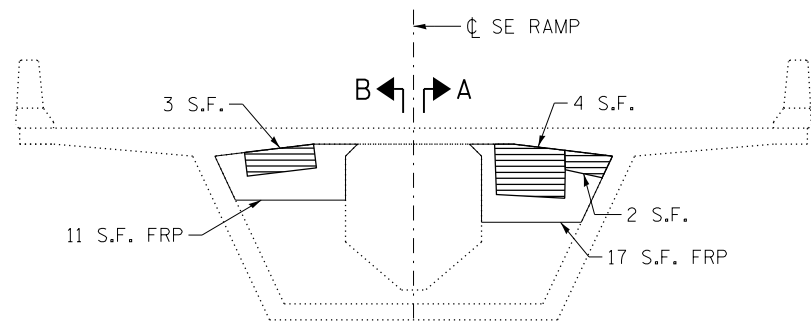
DIAPHRAGM ELEVATION-PIER 2
(LOOKING UPSTATION)



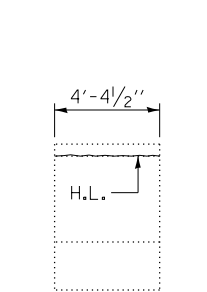
SECTION E-E



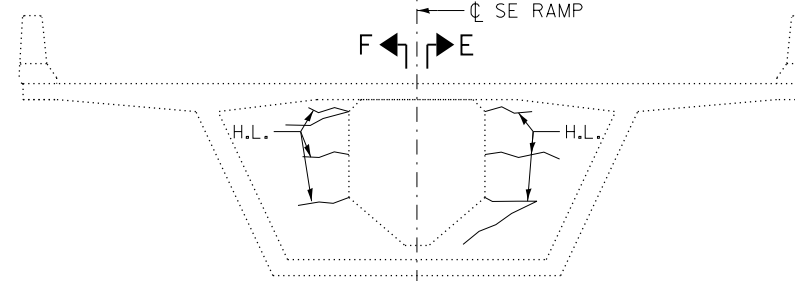
SECTION F-F



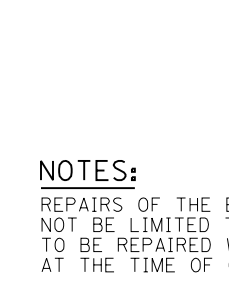
DIAPHRAGM ELEVATION-WEST ABUTMENT
(LOOKING DOWNSTATION)



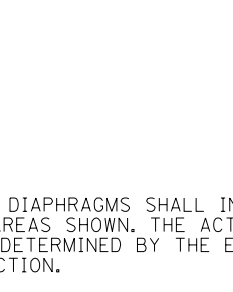
SECTION B-B



DIAPHRAGM ELEVATION-PIER 2
(LOOKING DOWNSTATION)



SECTION G-G



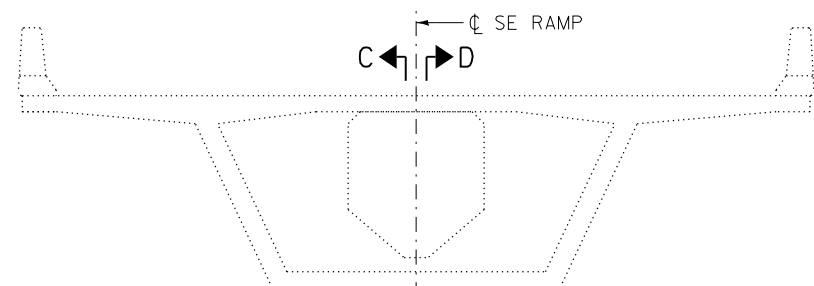
SECTION H-H

NOTES:
REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

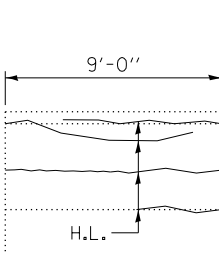
ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

FOR BILL OF MATERIAL AND FIBER WRAP APPLICATION DETAILS, SEE SHEET SG-29.

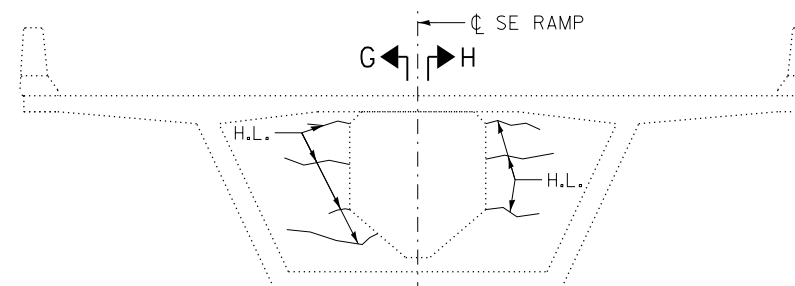
APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS.



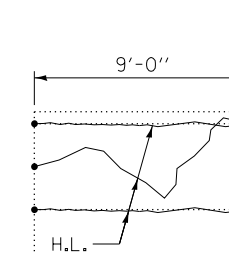
DIAPHRAGM ELEVATION-PIER 1
(LOOKING UPSTATION)



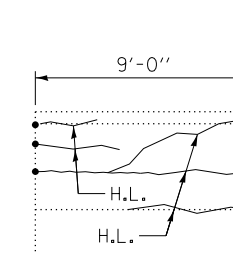
SECTION C-C




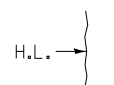
DIAPHRAGM ELEVATION-PIER 3
(LOOKING UPSTATION)

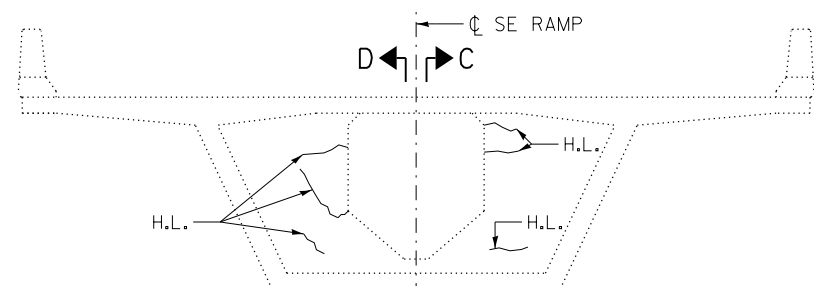


SECTION G-G

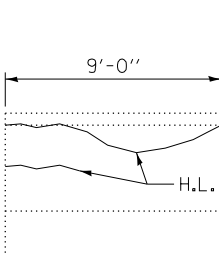


SECTION H-H

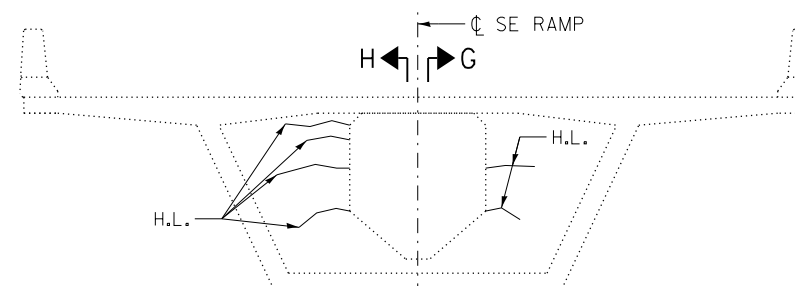
LEGEND:
 POLYMER MODIFIED PORTLAND CEMENT MORTAR
 HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)



DIAPHRAGM ELEVATION-PIER 1
(LOOKING DOWNSTATION)



SECTION D-D



DIAPHRAGM ELEVATION-PIER 3
(LOOKING DOWNSTATION)

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 DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

CG Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4009
 Fax 773.775.4014
 Email: chicago@ciorba.com

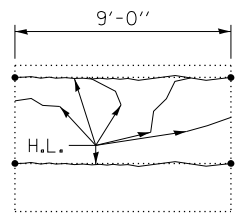
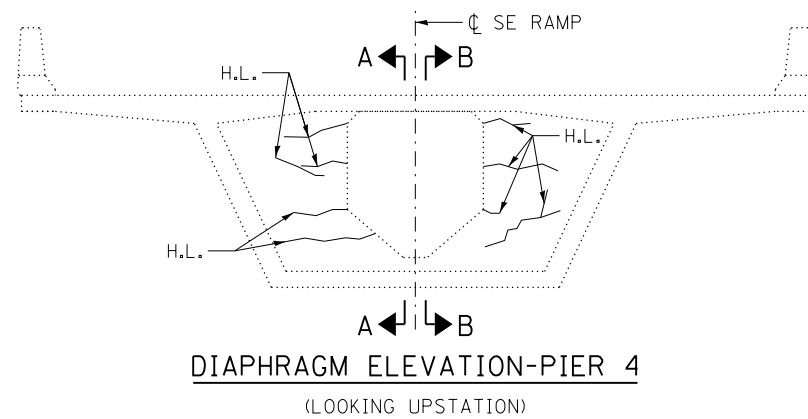
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

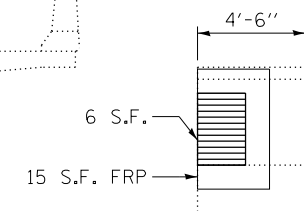
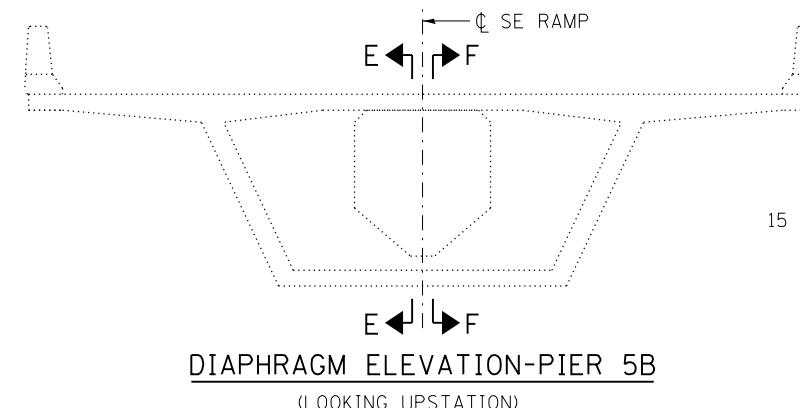
CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 DIAPHRAGM REPAIRS I

SG-25 OF SG-43
 SHT NO. SG-25
 DRAWING NO.
 1129 OF 1517

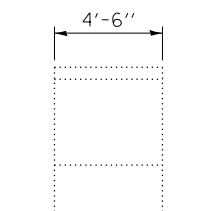
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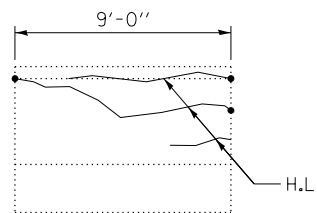
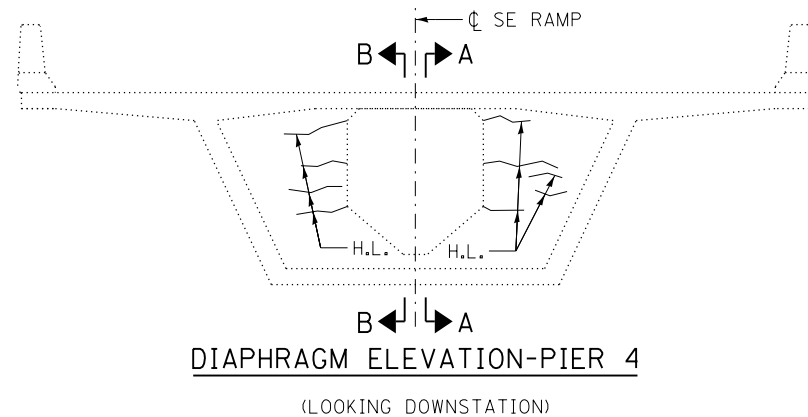
SECTION A-A



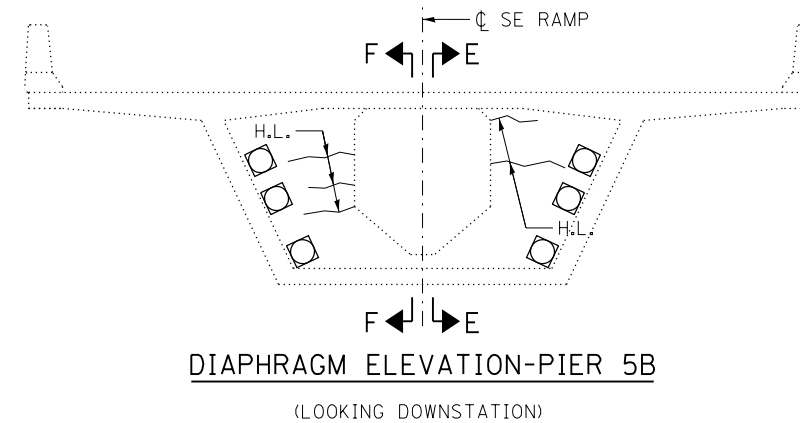
SECTION E-E



SECTION F-F



SECTION B-B



DIAPHRAGM ELEVATION-PIER 5B

(LOOKING DOWNSTATION)

NOTES:

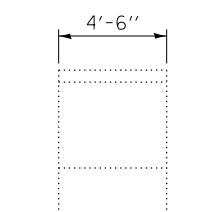
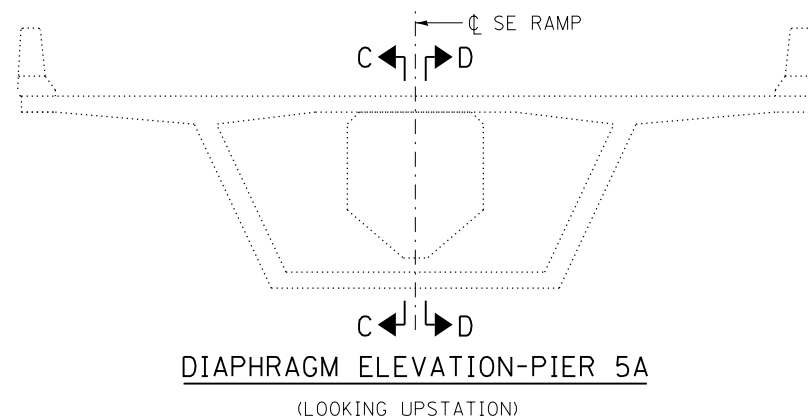
CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

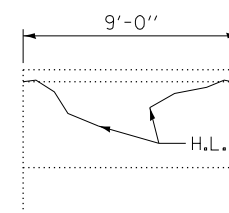
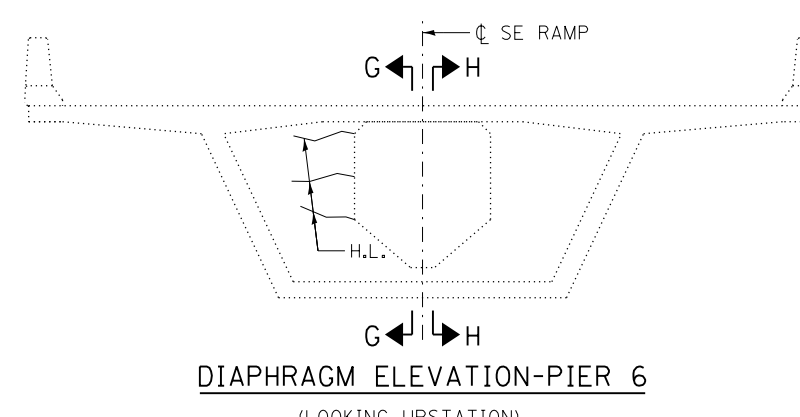
APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS.

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

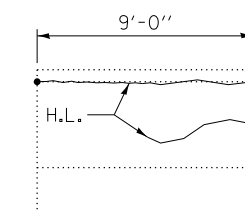
FOR BILL OF MATERIAL AND FIBER WRAP APPLICATION DETAILS, SEE SHEET SG-29.



SECTION C-C



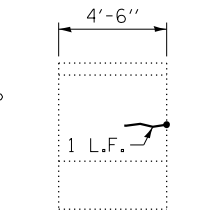
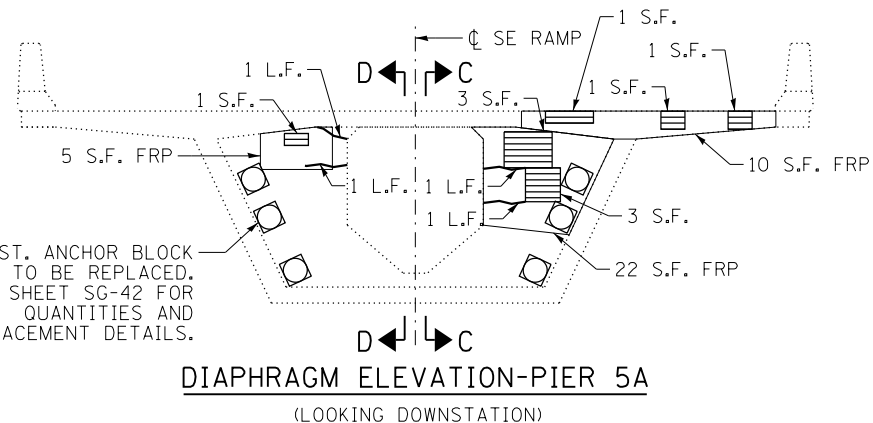
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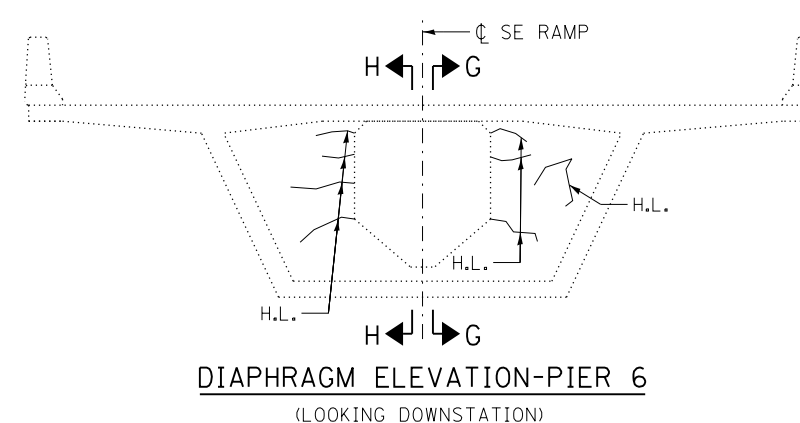
SECTION H-H

LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
- 4 L.F. HIGH PRESSURE EPOXY INJECTION



SECTION D-D



DIAPHRAGM ELEVATION-PIER 6

(LOOKING DOWNSTATION)

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

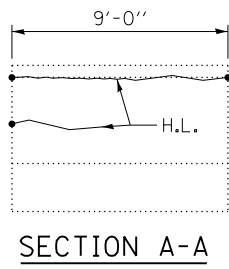
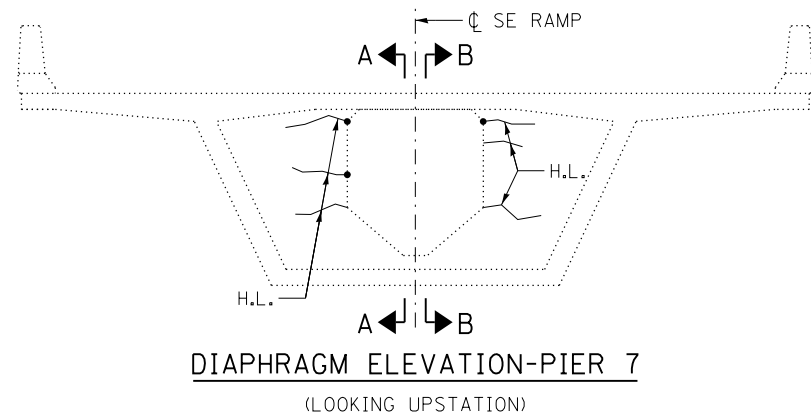
CG Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

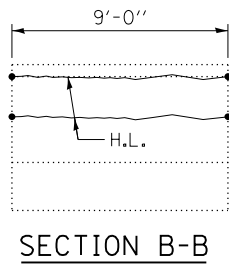
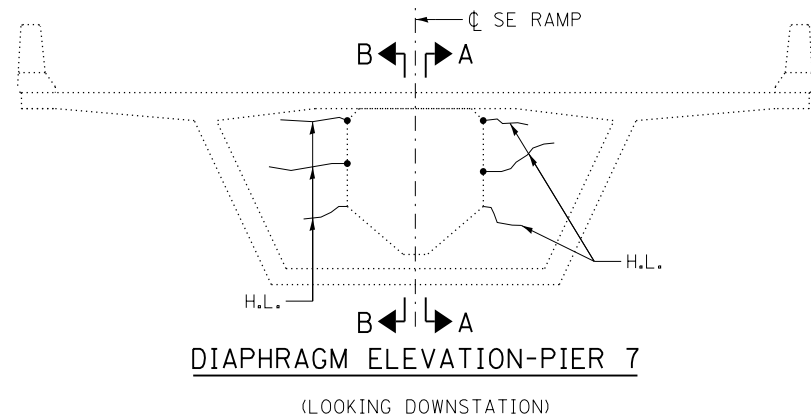
REVISIONS	
NO.	DATE

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 DIAPHRAGM REPAIRS II

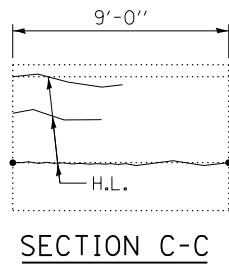
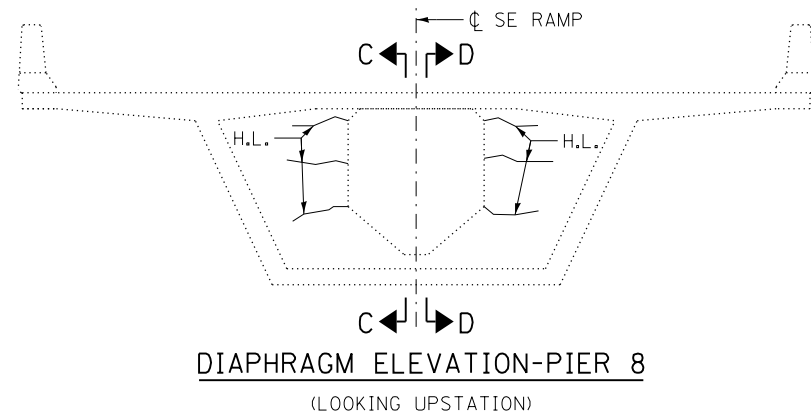
SG-26 OF SG-43
 SHT NO. SG-26
 DRAWING NO.
 1130 OF 1517



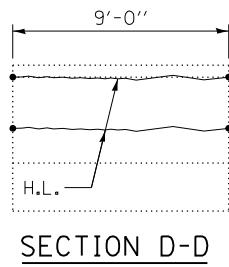
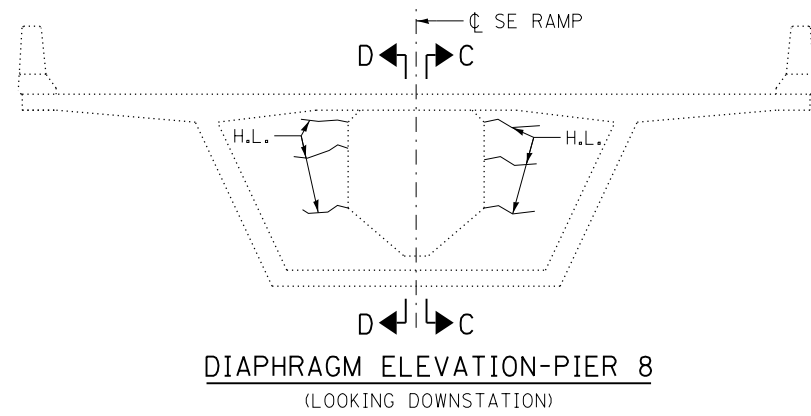
DIAPHRAGM ELEVATION-PIER 7
(LOOKING UPSTATION)



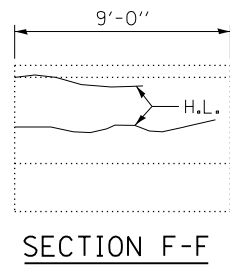
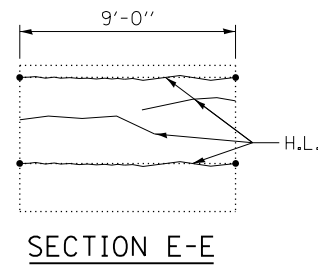
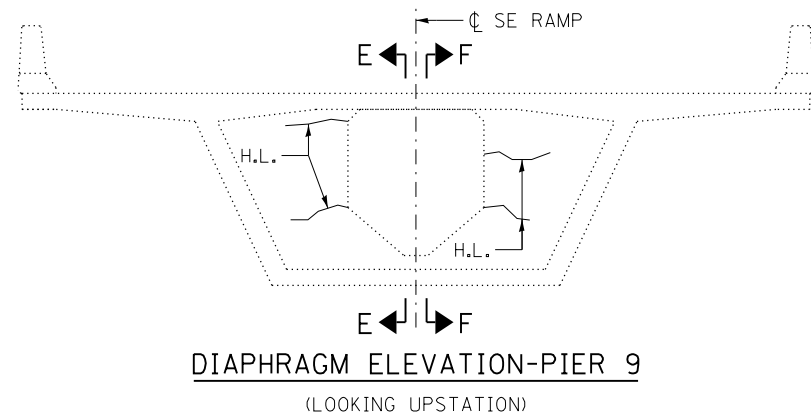
DIAPHRAGM ELEVATION-PIER 7
(LOOKING DOWNSTATION)



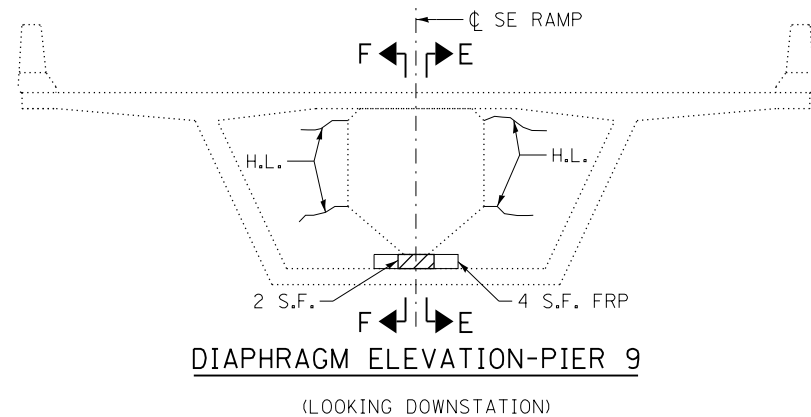
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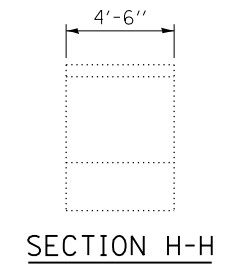
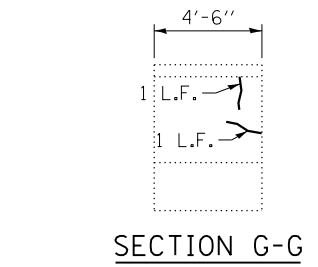
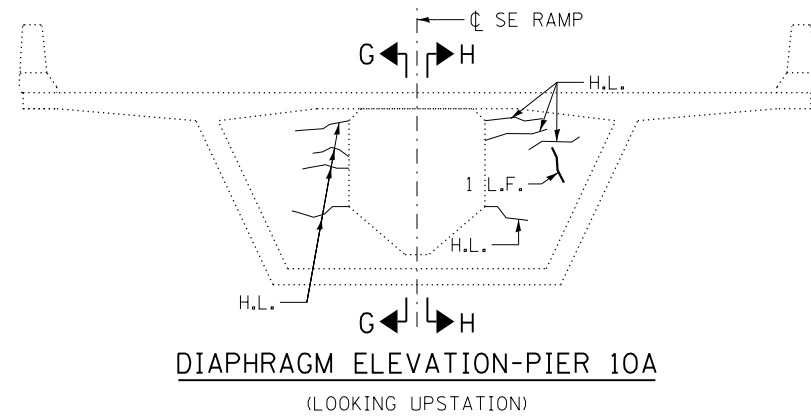
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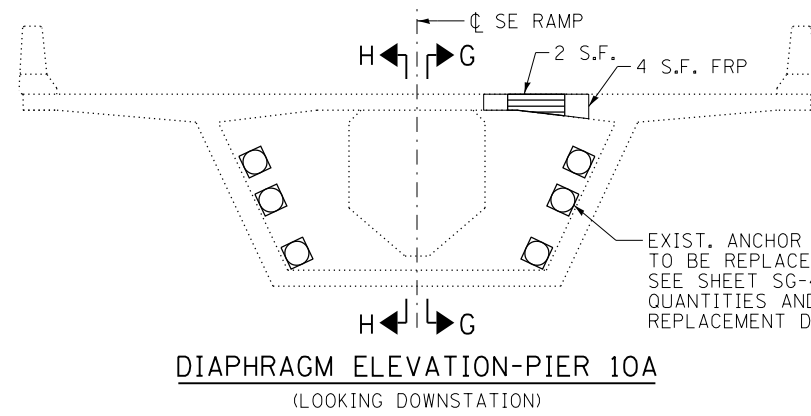
DIAPHRAGM ELEVATION-PIER 9
(LOOKING UPSTATION)



DIAPHRAGM ELEVATION-PIER 9
(LOOKING DOWNSTATION)



DIAPHRAGM ELEVATION-PIER 10A
(LOOKING UPSTATION)



DIAPHRAGM ELEVATION-PIER 10A
(LOOKING DOWNSTATION)

NOTES:

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REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

FOR BILL OF MATERIAL AND FIBER WRAP DETAILS, SEE SHEET SG-29.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS.

LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
- HIGH PRESSURE EPOXY INJECTION

Projects\2016\20161616-Veterans Memorial Tollway\Drawings\Current Drawing Files\4255-Struc\al\Sheet\4255-sh-1441-deck-CG1015.dgn
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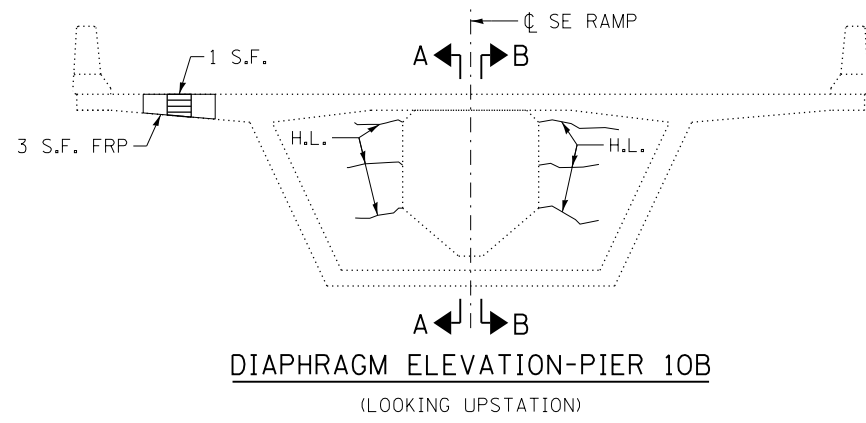
DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



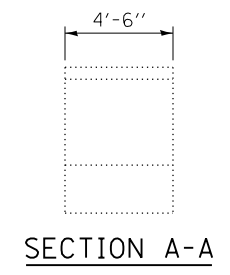
NO.	DATE	REVISIONS	
		DESCRIPTION	

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 DIAPHRAGM REPAIRS III

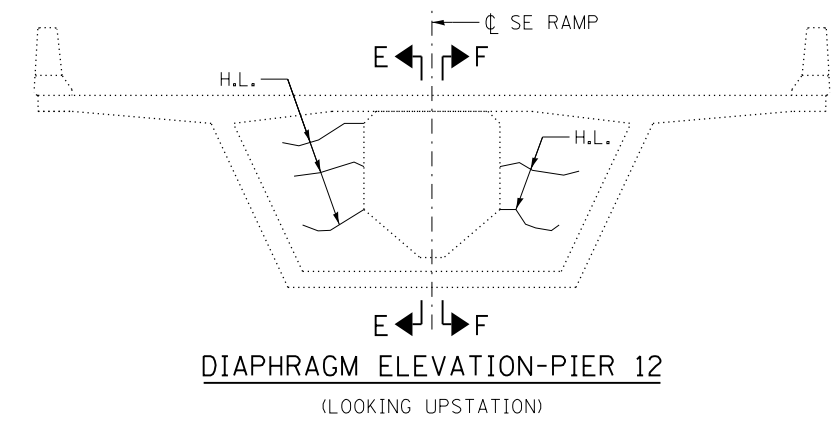
SG-27 OF SG-43
 SHT NO. SG-27
 DRAWING NO.
 1131 OF 1517



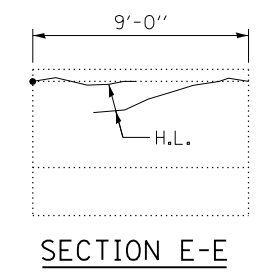
DIAPHRAGM ELEVATION-PIER 10B
(LOOKING UPSTATION)



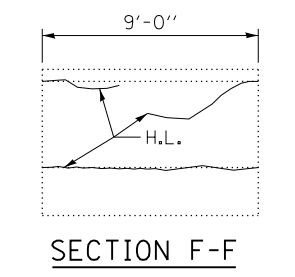
SECTION A-A



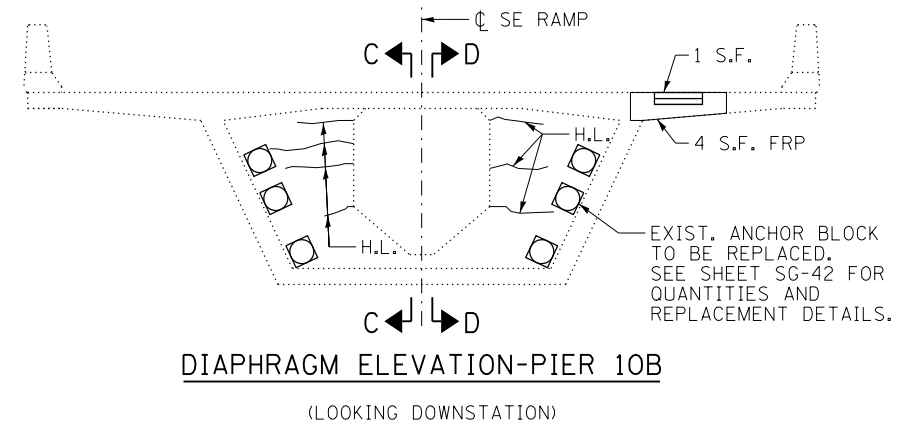
DIAPHRAGM ELEVATION-PIER 12
(LOOKING UPSTATION)



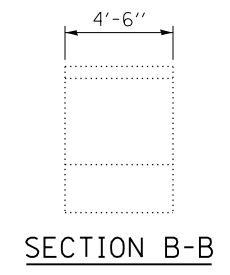
SECTION E-E



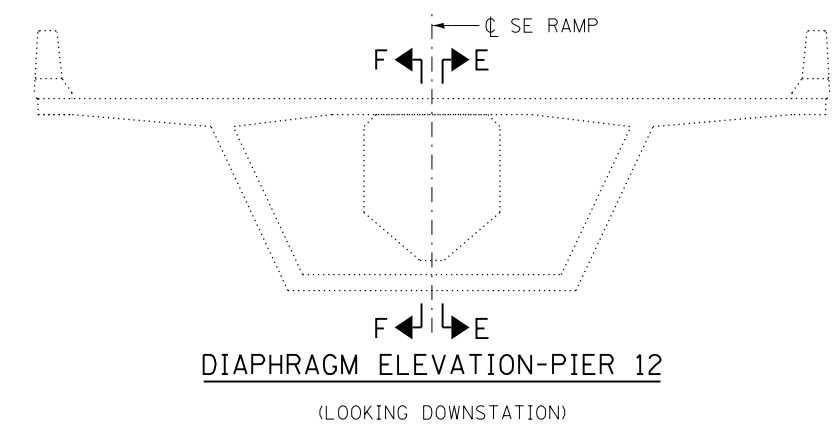
SECTION F-F



DIAPHRAGM ELEVATION-PIER 10B
(LOOKING DOWNSTATION)



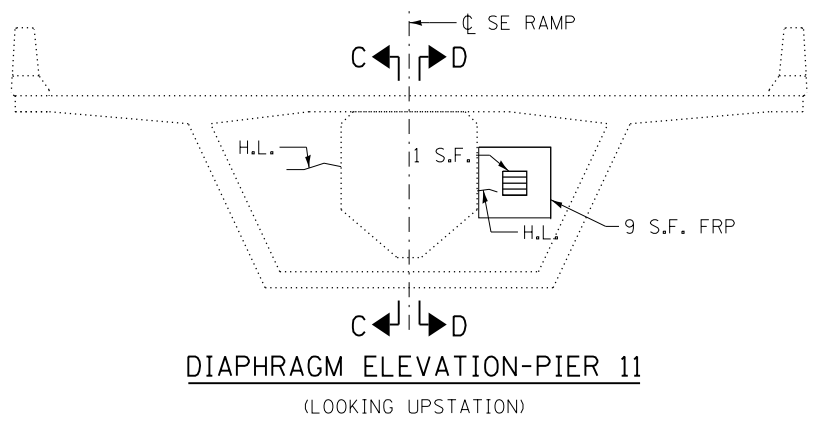
SECTION B-B



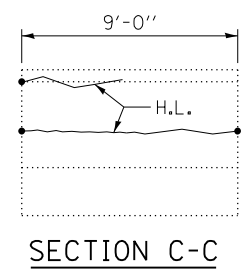
DIAPHRAGM ELEVATION-PIER 12
(LOOKING DOWNSTATION)

NOTES:
REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

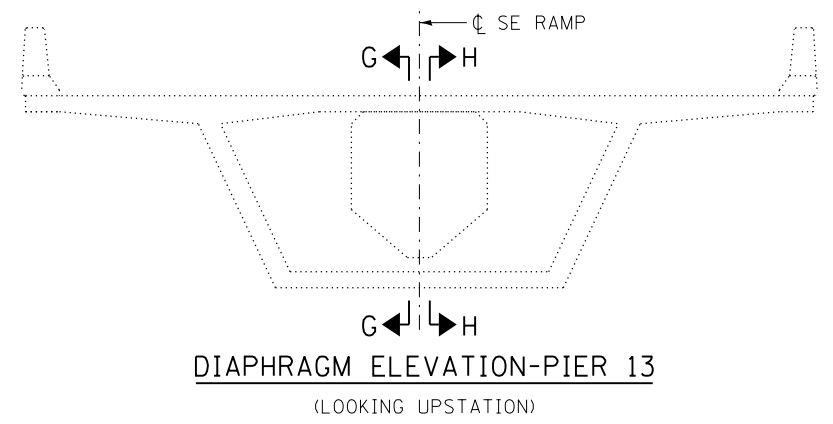
ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.
FOR BILL OF MATERIAL AND FIBER WRAP APPLICATION DETAILS, SEE SHEET SG-29.
APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS.



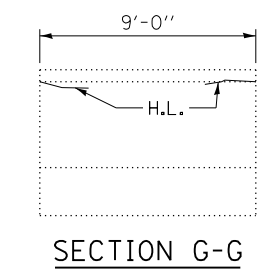
DIAPHRAGM ELEVATION-PIER 11
(LOOKING UPSTATION)



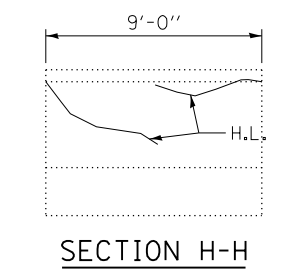
SECTION C-C



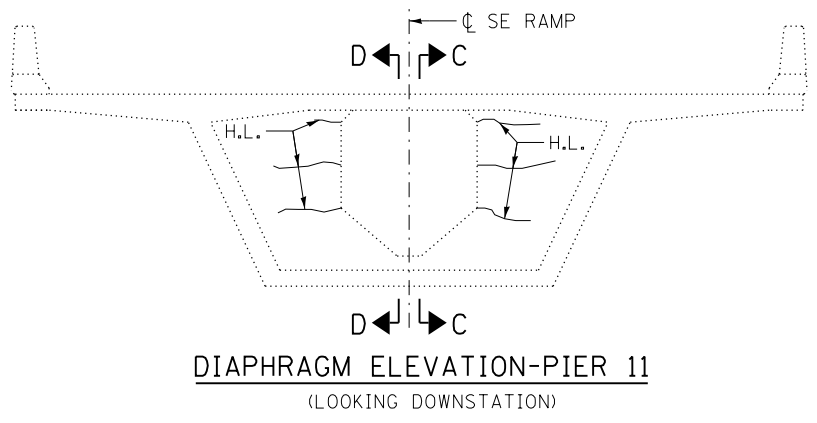
DIAPHRAGM ELEVATION-PIER 13
(LOOKING UPSTATION)



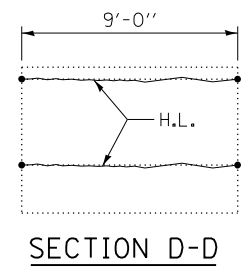
SECTION G-G



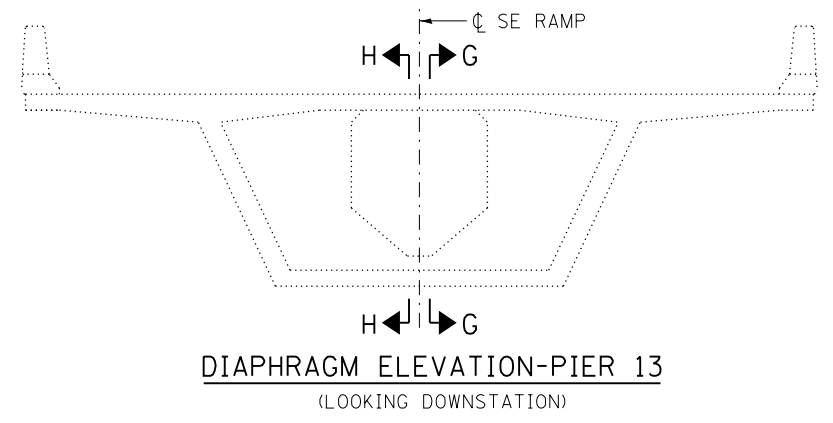
SECTION H-H



DIAPHRAGM ELEVATION-PIER 11
(LOOKING DOWNSTATION)



SECTION D-D



DIAPHRAGM ELEVATION-PIER 13
(LOOKING DOWNSTATION)

LEGEND:
 POLYMER MODIFIED PORTLAND CEMENT MORTAR
 HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

I:\Projects\2016\20161616_Veterans Memorial Tollway\Drawings\Current Drawing Files\2016\Structural\Sheet\4255-sht-1441-deck-CG1016.dgn
 DRAWN BY SBA DATE 3/11/2018
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CG Ciorba Group, Inc.
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 5507 North Cumberland Avenue
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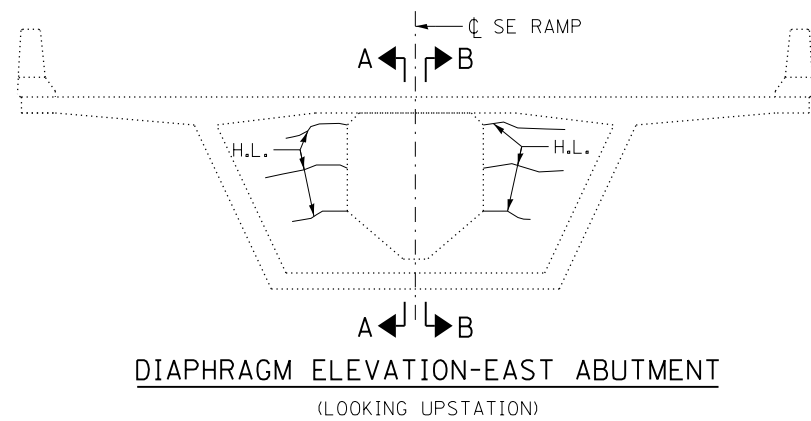
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

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NO.	DATE	DESCRIPTION	

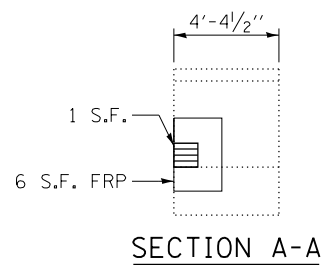
CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 DIAPHRAGM REPAIRS IV

SG-28 OF SG-43
 SHT NO. SG-28
 DRAWING NO.
 1132 OF 1517

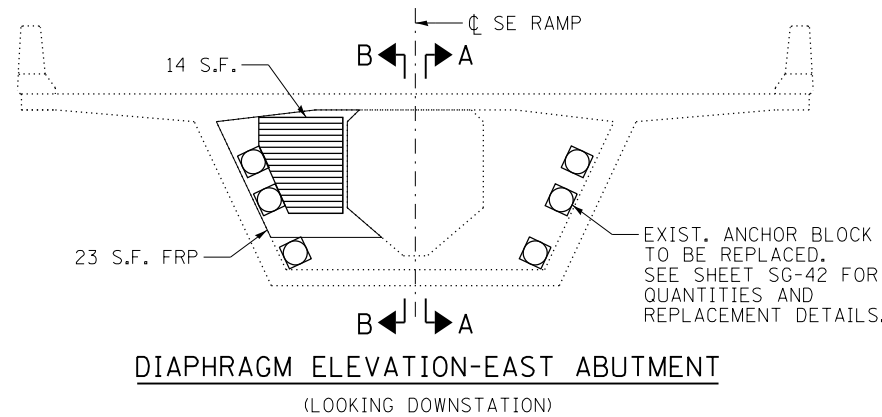
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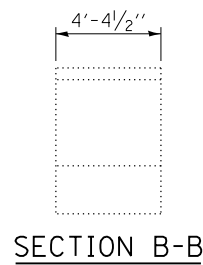
DIAPHRAGM ELEVATION-EAST ABUTMENT
(LOOKING UPSTATION)



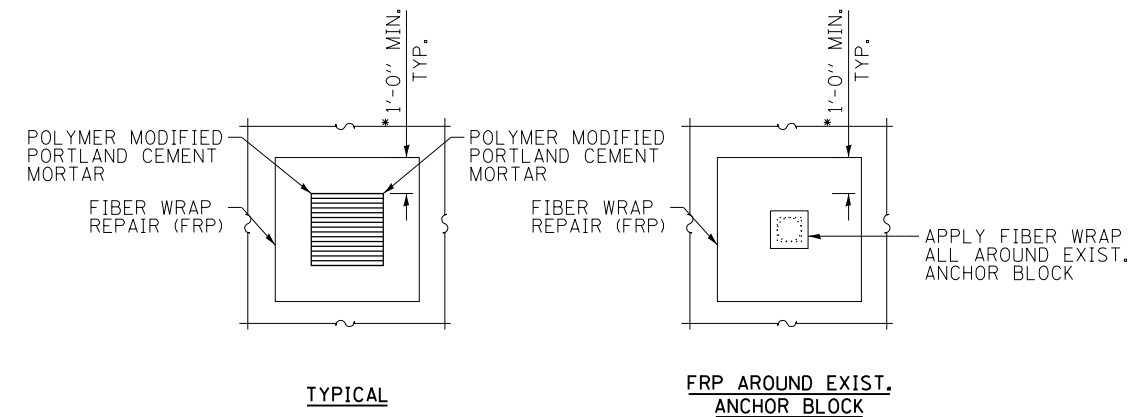
SECTION A-A



DIAPHRAGM ELEVATION-EAST ABUTMENT
(LOOKING DOWNSTATION)

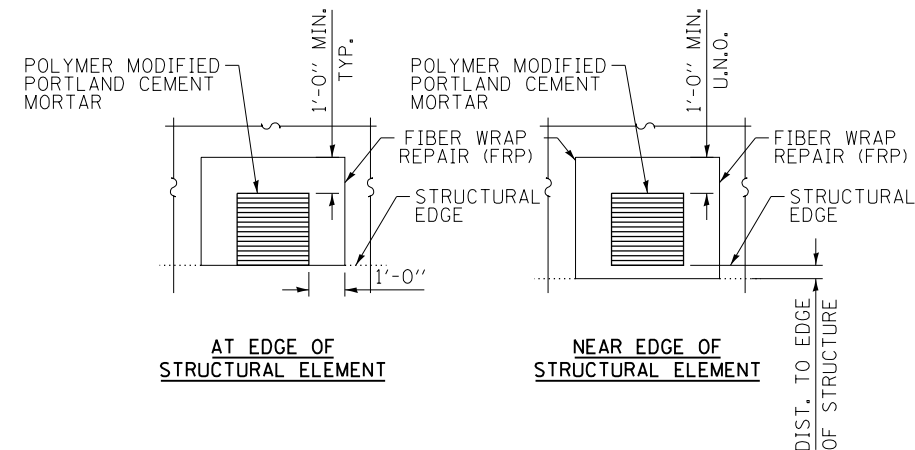


SECTION B-B



TYPICAL

FRP AROUND EXIST. ANCHOR BLOCK



AT EDGE OF STRUCTURAL ELEMENT

NEAR EDGE OF STRUCTURAL ELEMENT

DIST. TO EDGE OF STRUCTURE

FIBER WRAP APPLICATION DETAIL

USE WHEN APPLY FIBER WRAP ON THE BRIDGE DIAPHRAGMS ONLY, U.N.O.

NOTES:

REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS.

LEGEND:

POLYMER MODIFIED PORTLAND CEMENT MORTAR

HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	47
HIGH PRESSURE EPOXY INJECTION	FOOT	8
FIBER WRAP REPAIR	SQ. FT.	133

SG-29 OF SG-43

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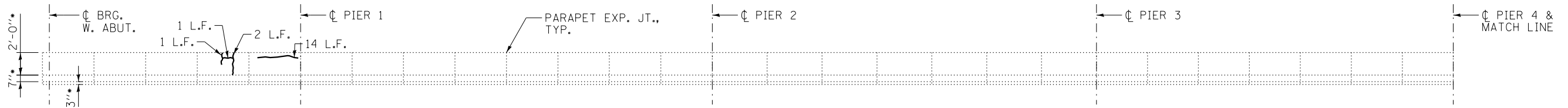
CG Ciorba Group, Inc.
CONSULTING ENGINEERS
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Suite 402 Chicago, Illinois 60656
Tel. 773.775.4008
Fax 773.775.4014
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DOWNERS GROVE,
ILLINOIS 60515

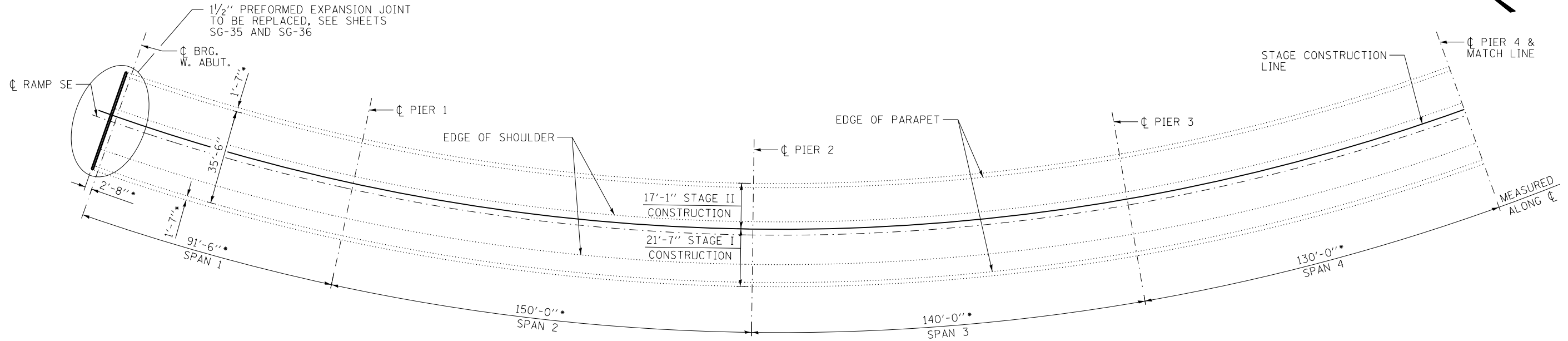
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1441 (SE) S.N. 022-9971
DIAPHRAGM REPAIRS V

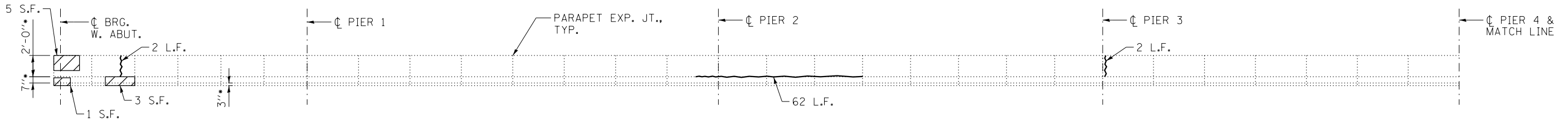
SHT NO. SG-29
DRAWING NO.
1133 OF 1517



INSIDE FACE OF NORTH PARAPET
(LOOKING NORTH)



TOP DECK PLAN



INSIDE FACE OF SOUTH PARAPET
(LOOKING SOUTH)

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING PARAPETS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SG-33.

*APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE AFTER REPAIRS.

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- 4' } LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

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DRAWN BY **SBA** DATE **3/11/2018**
 CHECKED BY **BWS** DATE **3/11/2018**

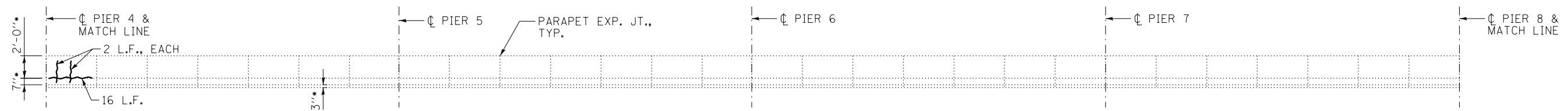
Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

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 DOWNERS GROVE,
 ILLINOIS 60515

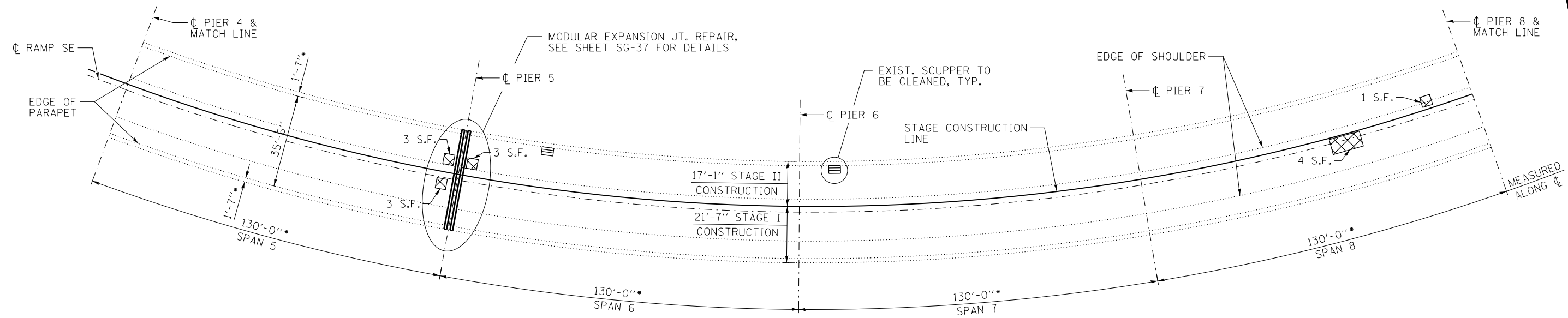
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 TOP OF DECK REPAIRS I

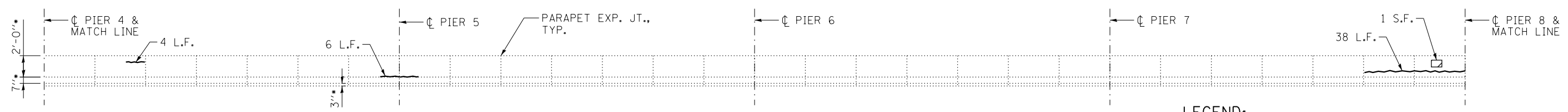
SG-30 OF SG-43
 SHT NO. SG-30
 DRAWING NO.
 1134 OF 1517



INSIDE FACE OF NORTH PARAPET
(LOOKING NORTH)



TOP DECK PLAN



INSIDE FACE OF SOUTH PARAPET
(LOOKING SOUTH)

NOTES:




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REPAIRS OF THE EXISTING PARAPETS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)." SEE SHEET SG-04 FOR TYPICAL DETAIL.

*APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE AFTER REPAIRS.

LEGEND:

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  ACCELERATED DECK SLAB REPAIR (PARTIAL)
-  4' } LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

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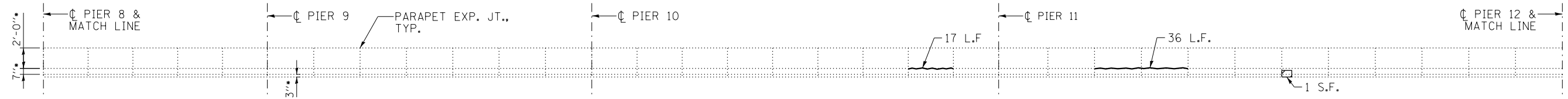
CG Ciorba Group, Inc.
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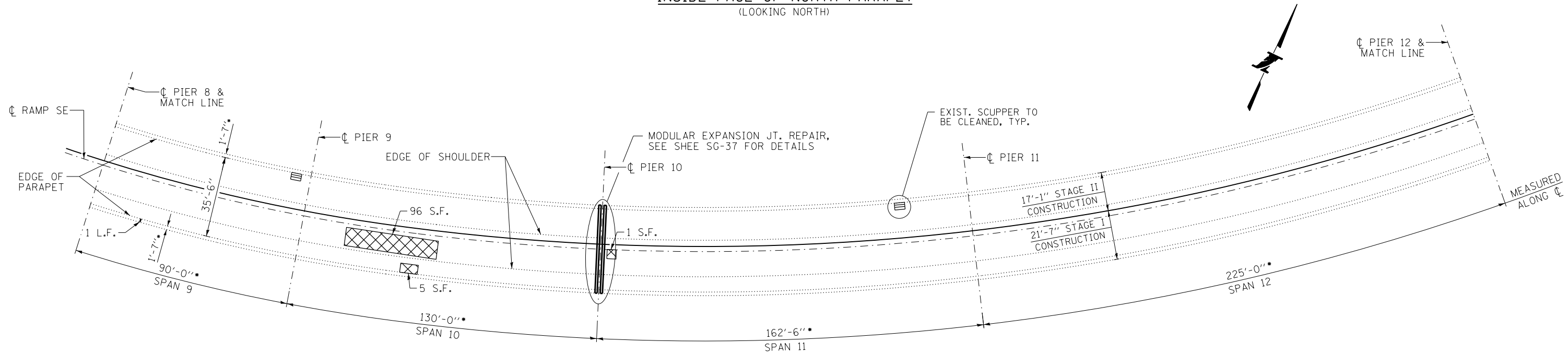
NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1441 (SE) S.N. 022-9971
TOP OF DECK REPAIRS II

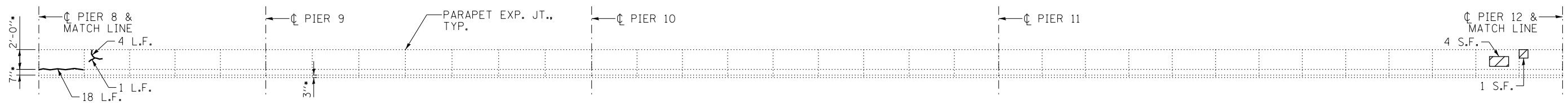
SG-31 OF SG-43
SHT NO. SG-31
DRAWING NO.
1135 OF 1517



INSIDE FACE OF NORTH PARAPET
(LOOKING NORTH)



TOP DECK PLAN



INSIDE FACE OF SOUTH PARAPET
(LOOKING SOUTH)

NOTES:

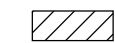

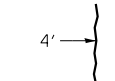
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REPAIRS OF THE EXISTING PIERS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)." SEE SHEET SG-04 FOR TYPICAL DETAIL.

*APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE AFTER REPAIRS.

LEGEND:

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  ACCELERATED DECK SLAB REPAIR (PARTIAL)
-  4' } LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

Projects\2016\20161616_Veterans Memorial Tollway\Drawings\Current Drawing Files\4255\sh-1441-deck-CG103.dgn
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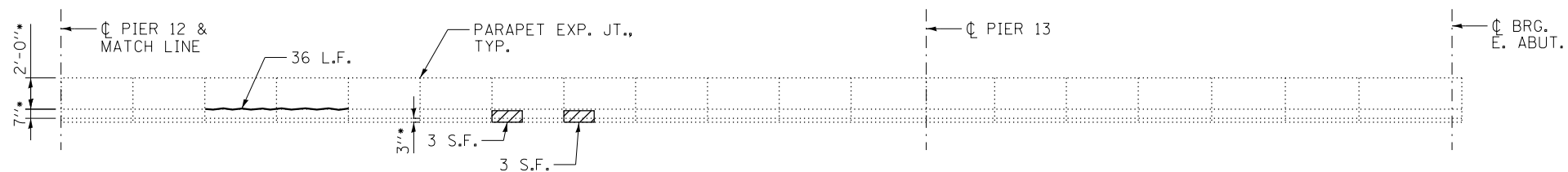
DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



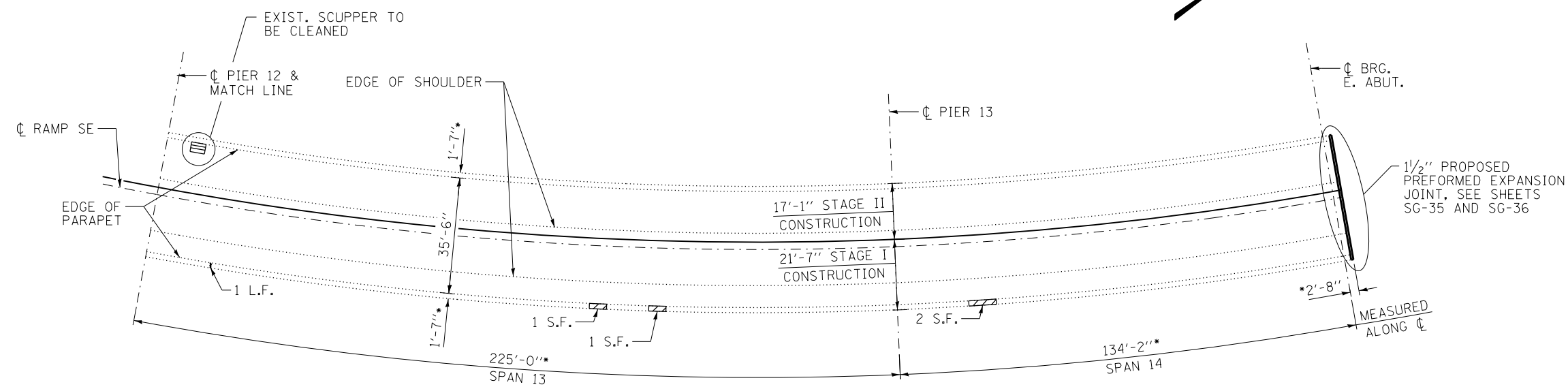
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 TOP OF DECK REPAIRS III

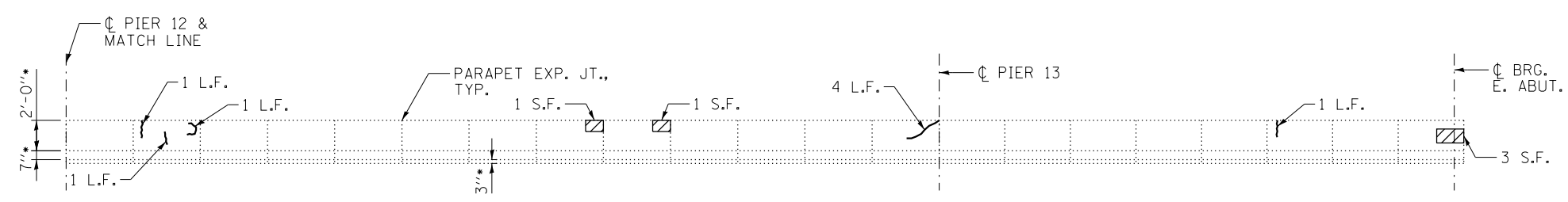
SHT NO. SG-32
 DRAWING NO. 1136 OF 1517



INSIDE FACE OF NORTH PARAPET
(LOOKING NORTH)



TOP DECK PLAN



INSIDE FACE OF SOUTH PARAPET
(LOOKING SOUTH)

NOTES:



CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING PARAPETS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)." SEE SHEET SG-04 FOR TYPICAL DETAIL.

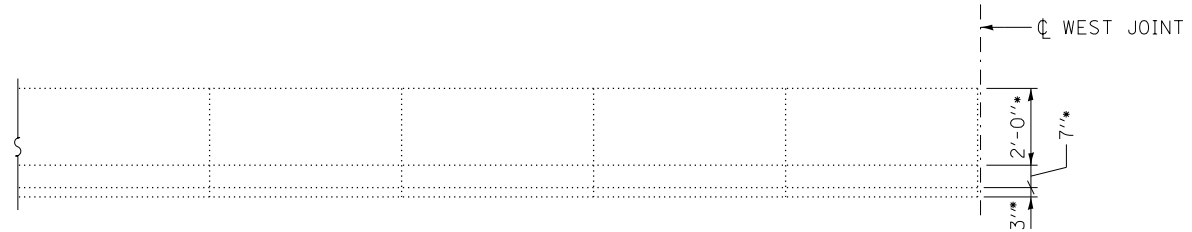
* APPLY CONCRETE SEALANT ON THE PARAPET TRAFFIC FACE AFTER REPAIRS

LEGEND:

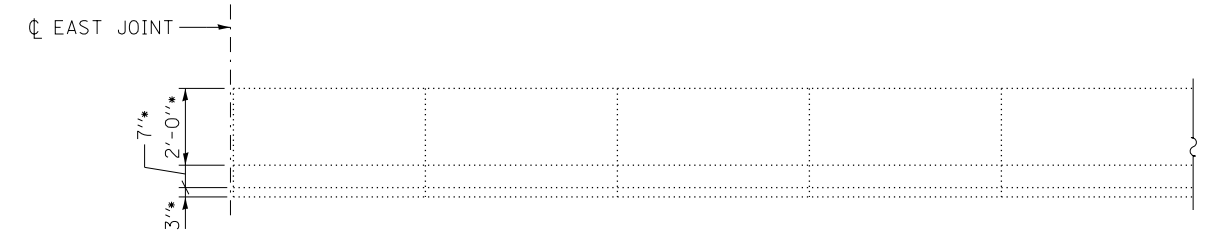
-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  4' → LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

BILL OF MATERIAL

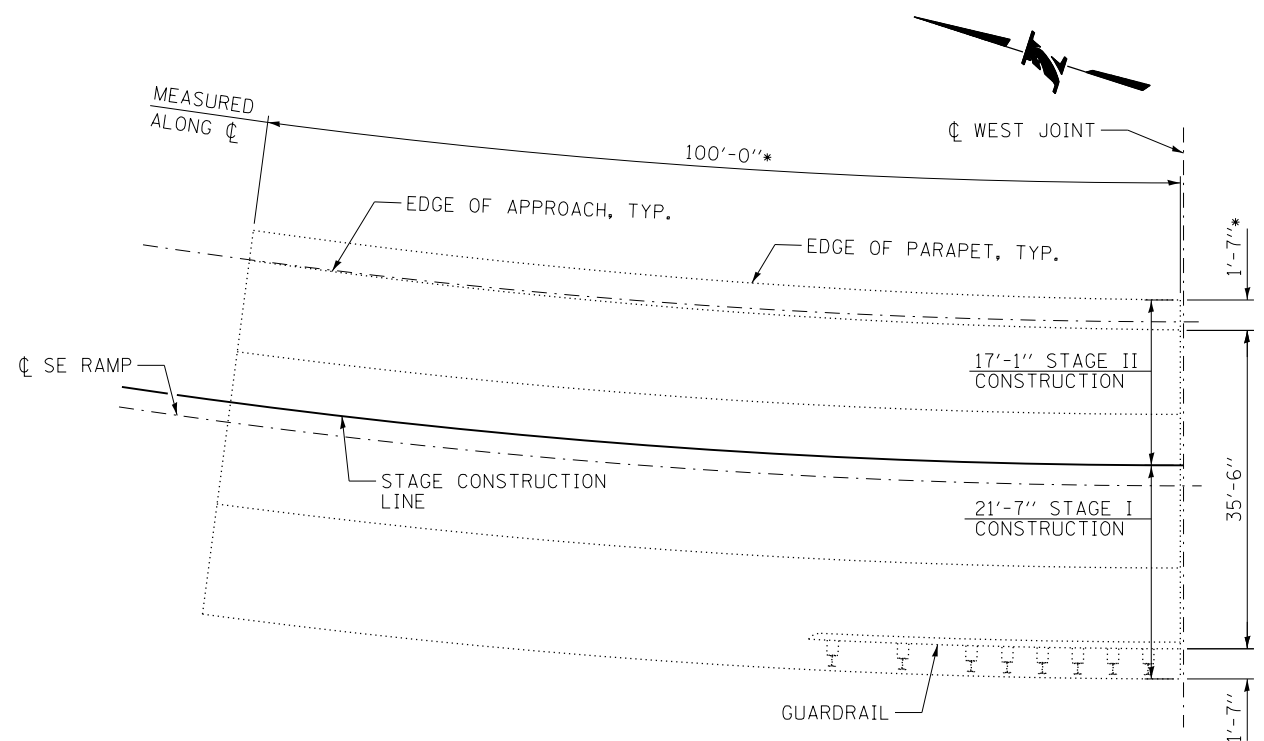
ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	31
ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.	13
LOW PRESSURE EPOXY INJECTION	FOOT	274
APPLY CONCRETE SEALANT	SQ. FT.	15,771
CLEAN EXISTING SCUPPER	EACH	5



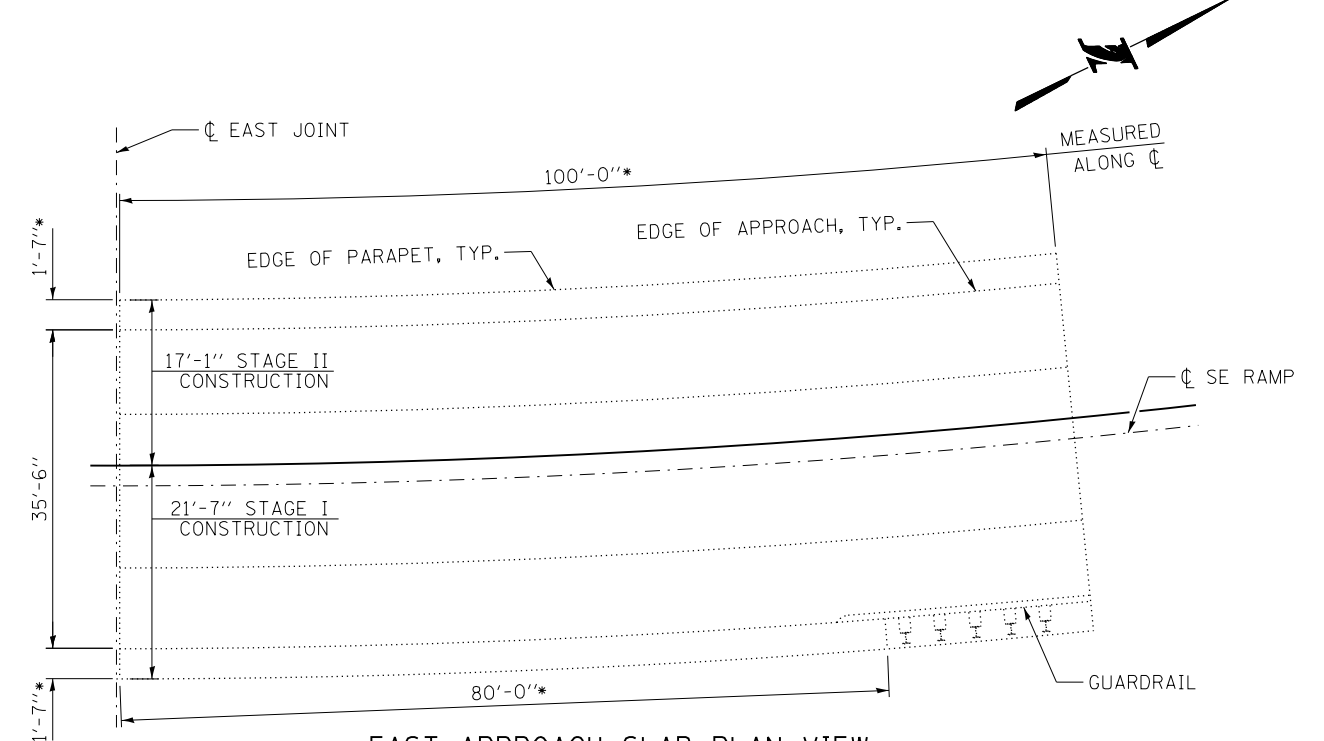
INSIDE FACE OF NORTH PARAPET
(LOOKING NORTH)



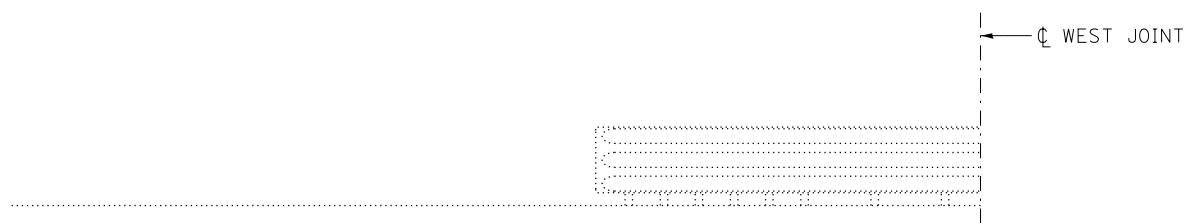
INSIDE FACE OF NORTH PARAPET
(LOOKING NORTH)



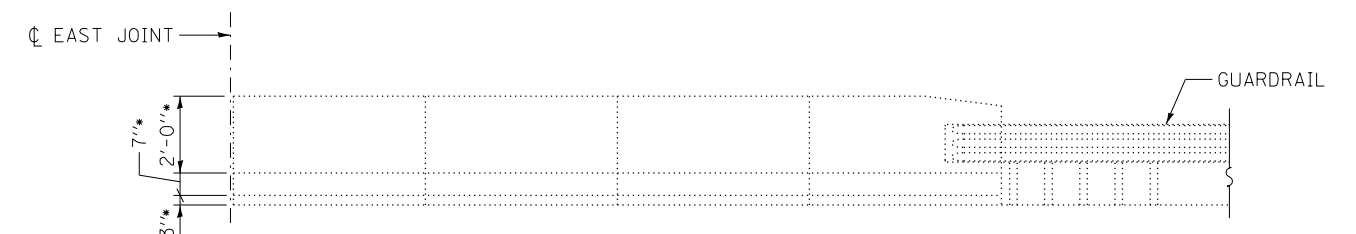
WEST APPROACH SLAB PLAN VIEW



EAST APPROACH SLAB PLAN VIEW



INSIDE FACE OF SOUTH GUARDRAIL
(LOOKING SOUTH)



INSIDE FACE OF SOUTH GUARDRAIL
(LOOKING SOUTH)

NOTE:

*APPLY CONCRETE SEALANT ON THE TRAFFIC FACE OF THE PARAPET.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	1,105

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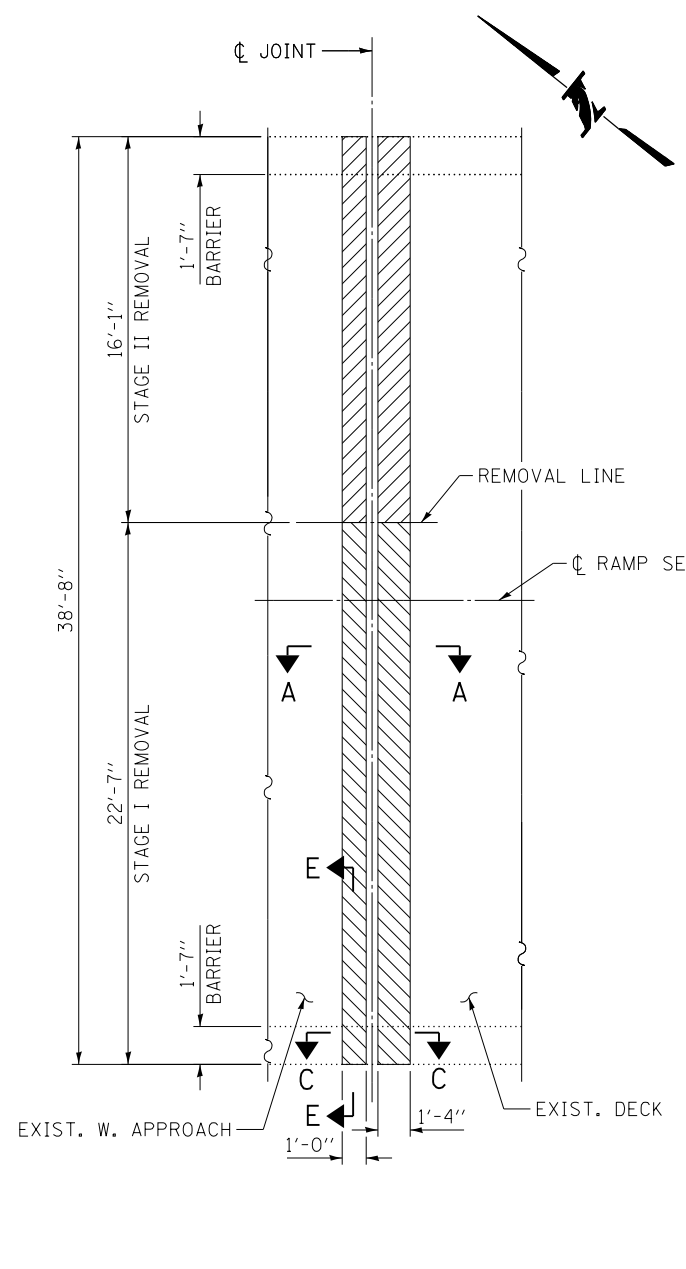
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DOWNERS GROVE,
ILLINOIS 60515

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		DESCRIPTION	

CONTRACT NO. RR-16-4255
BRIDGE 1441 (SE) S.N. 022-9971
APPROACH SLAB REPAIRS

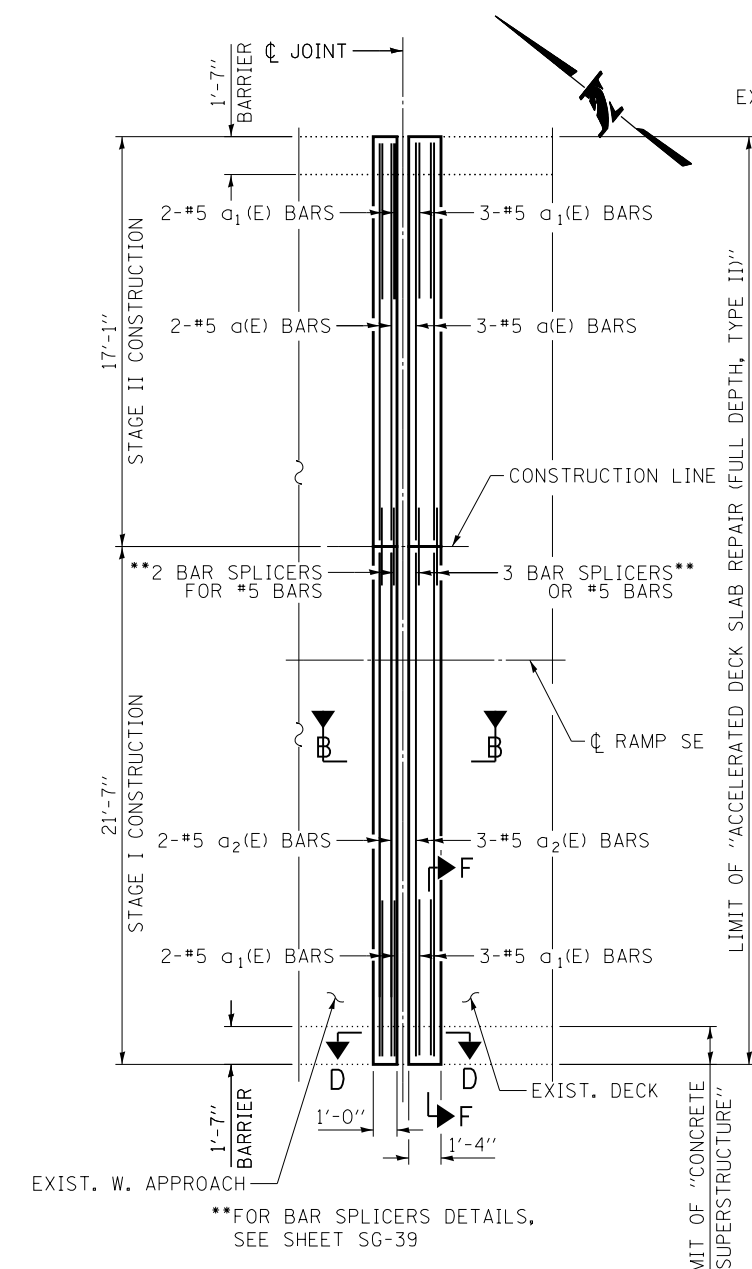
SG-34 OF SG-43
SHT NO. SG-34
DRAWING NO.
1138 OF 1517

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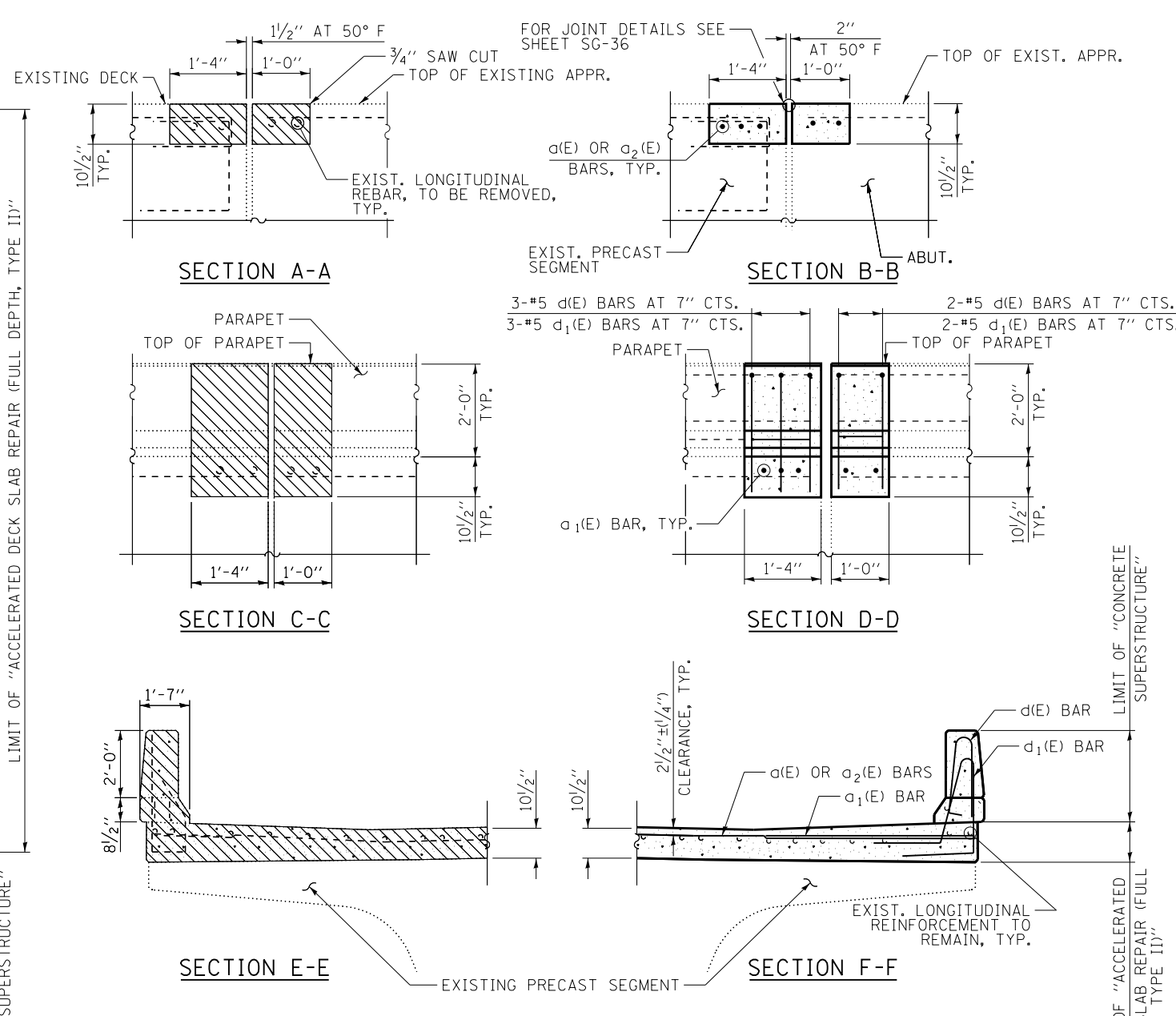
REMOVAL PLAN

WEST ABUTMENT SHOWN,
EAST ABUTMENT SIMILAR BY 180° ROTATION



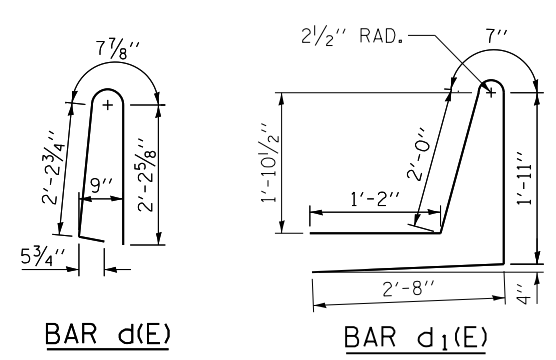
REPLACEMENT PLAN

WEST ABUTMENT SHOWN,
EAST ABUTMENT SIMILAR BY 180° ROTATION



**FOR BAR SPLICERS DETAILS,
SEE SHEET SG-39

- NOTE**
1. THE LONGITUDINAL REINFORCEMENT BARS IN THE AREA OF SLAB, CURB, SIDEWALK AND PARAPET REMOVAL SHOULD REMAIN IN PLACE AND SHOULD BE CLEANED AND INCORPORATED INTO THE NEW CONSTRUCTION.
 2. E.F. DENOTES EACH FACE.



LEGEND

- STAGE I CONCRETE REMOVAL
- STAGE II CONCRETE REMOVAL

REINFORCEMENT BAR LIST				
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	10	#5	16'-7"	—
a1(E)	20	#5	6'-0"	—
a2(E)	10	#5	21'-1"	—
d(E)	20	#5	5'-7"	U
d1(E)	20	#5	8'-4"	U

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
ACCELERATED SLAB REPAIR (FULL DEPTH, TYPE II)	SQ. YD.	21
CONCRETE REMOVAL	CU. YD.	6.9
CONCRETE SUPERSTRUCTURE	CU. YD.	1.1
REINFORCEMENT BARS, EPOXY COATED	POUND	820

SG-35 OF SG-43

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CHECKED BY BWS DATE 3/11/2018

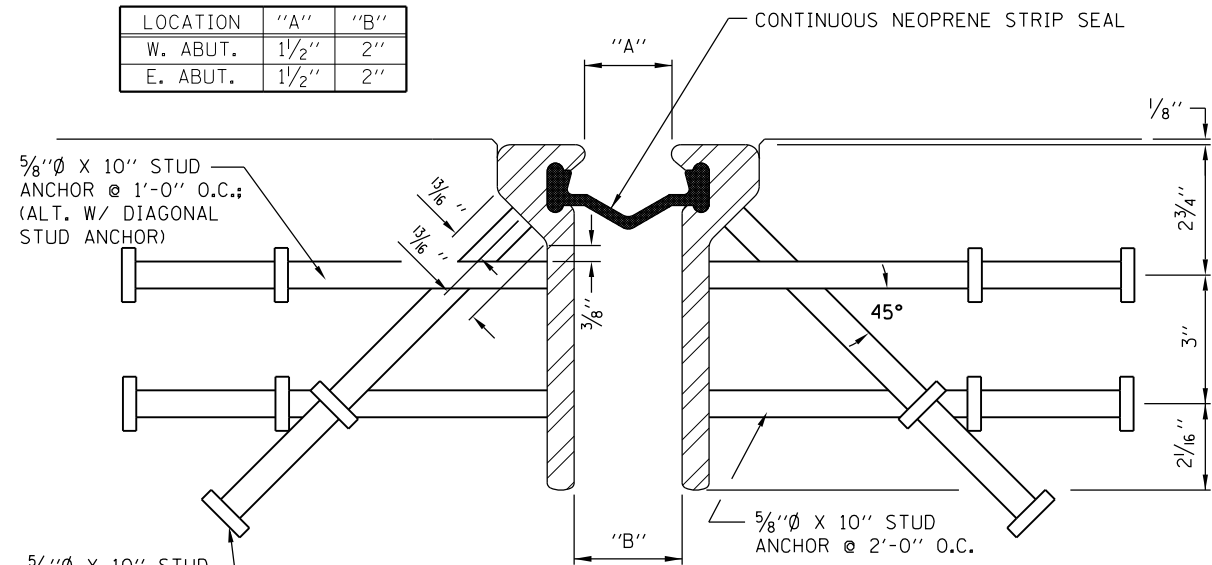


REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1441 (SE) S.N. 022-9971
EXPANSION JOINT REPLACEMENT

SHT NO. SG-35
DRAWING NO. 1139 OF 1517

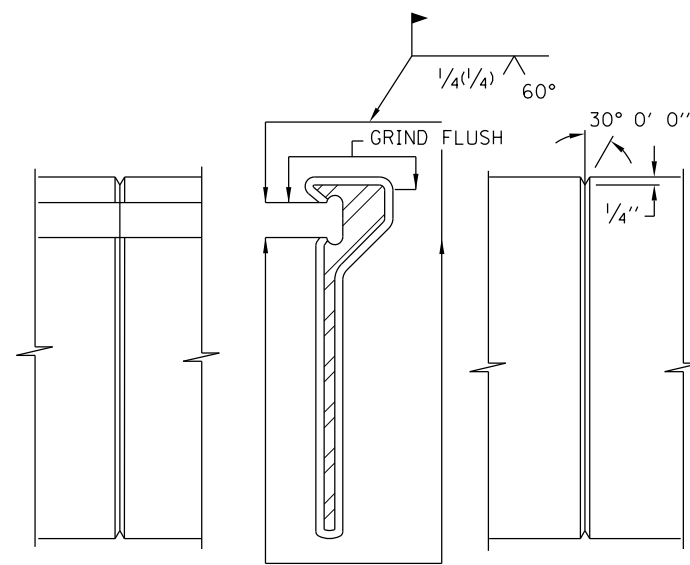
LOCATION	"A"	"B"
W. ABUT.	1 1/2"	2"
E. ABUT.	1 1/2"	2"



SECTION THRU EXPANSION JOINT

NOTE:
DIMENSIONS "A" AND "B" ARE PERPENDICULAR TO THE EXPANSION JOINT

NOTE:
10" STUDS SHALL BE MADE OF (1)-6 3/16" & (1)-4 1/8" (LENGTH BEFORE WELDING) PIGGY-BACKED.

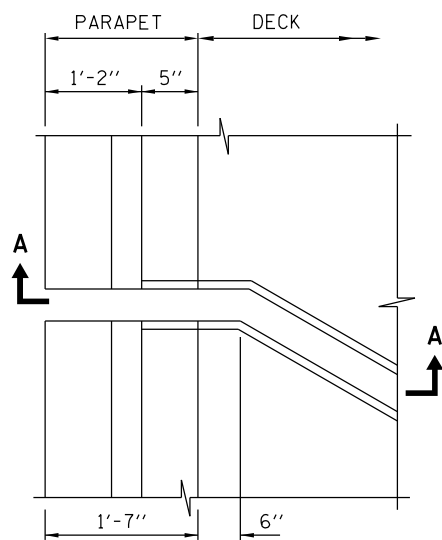


FRAME RAIL SPLICE DETAIL

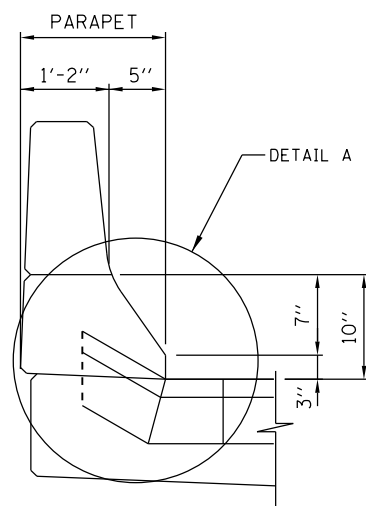
NOTE:
WELD ON FRONT SIDE OF FRAME MAY BE OMITTED AT STAGE CONSTRUCTION LINES

NOTES:

1. WORK THIS DRAWING WITH THE EXPANSION JOINT REPLACEMENT SHEET SG-35.
2. EXPANSION JOINT SHALL FOLLOW ROADWAY GRADE & CROSS SLOPE. EXPANSION JOINT TO BE SET TO GRADE BY ATTACHING FRAME RAILS TO BACKWALL AND BEAMS.
3. FRAME RAILS AND OTHER STEEL SHALL BE AASHTO M270 GRADE 36, (ASTM A36).
4. STUD ANCHORS SHALL BE AASHTO M169 (ASTM A108).
5. EXPANSION ANCHORS SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, SECTION 1211.
6. FRAME RAIL ASSEMBLY SHALL BE FABRICATED IN 20 FT. MAXIMUM LENGTHS. SHOP AND FIELD SPLICES SHALL BE PLACED AT CROWN BREAKS, CONSTRUCTION STAGE LINES, AND TRANSVERSE BREAKS IN DECK.
7. AT SPLICES, A CONTINUOUS GROUND SMOOTH WELD SHALL BE PROVIDED EXCEPT ON SURFACES IN LOCKING CONTACT WITH SEAL WHICH SHALL HAVE NO BURRS.
8. ALL STUD ANCHORS TO BE ELECTRIC ARC END WELDED WITH COMPLETE FUSION.
9. AFTER FABRICATION IS COMPLETE FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123).
10. CORRESPONDING SECTIONS SHALL BE TEMPORARILY SHOP ASSEMBLED, CHECKED FOR FIT, AND MATCH MARKED WITH STENCIL AND BLACK PAINT FOR SHIPMENT.
11. NEOPRENE SEAL SHALL BE CONTINUOUS. FACTORY VULCANIZED HORIZONTAL MITERS SHALL BE REQUIRED FOR ALL SKEWS.
12. NEOPRENE SEAL SHALL BE INSTALLED CONTINUOUS, SPLICING OF SEAL IN THE FIELD IS NOT PERMITTED.
13. NEOPRENE SEAL SHALL BE BONDED TO THE FRAME RAILS WITH AN ADHESIVE MEETING THE REQUIREMENTS OF ASTM D4070.
14. SUPPORT PLATES, NUTS AND WASHERS CONNECTED TO FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 AND M232 (ASTM A123 AND A153).
15. SUPPORT PLATES ON STEEL GIRDERS SHALL BE WELDED IN ACCORDANCE WITH ARTICLES 505.04 (q) & 505.08 (n) OF THE IDOT STANDARD SPECIFICATIONS.
16. FURNISHING AND INSTALLING EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM SHALL BE INCLUDED IN THE COST OF BRIDGE EXPANSION JOINT SYSTEM.
17. JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH THE FIELD ENGINEER'S INSTRUCTIONS.
18. UPON COMPLETION OF FIELD WELDING, THE CONTRACTOR SHALL CLEAN THE WELD AREA AND APPLY A COATING OF ORGANIC ZINC-RICH PAINT IN ACCORDANCE WITH SSPC-PS12.01.

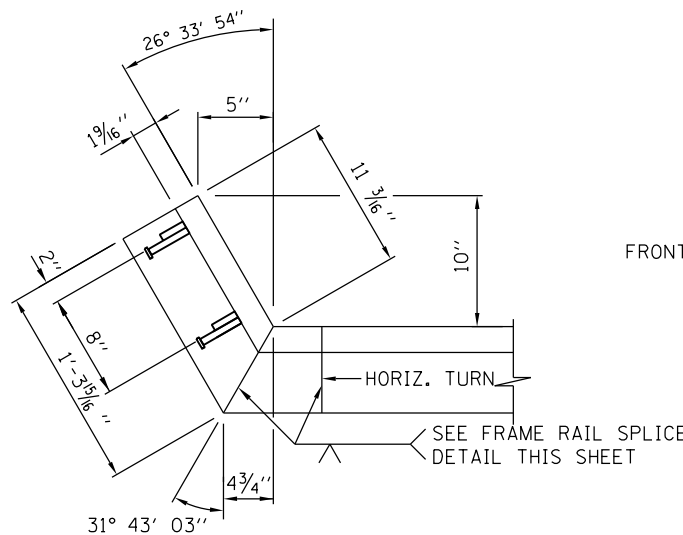


PLAN

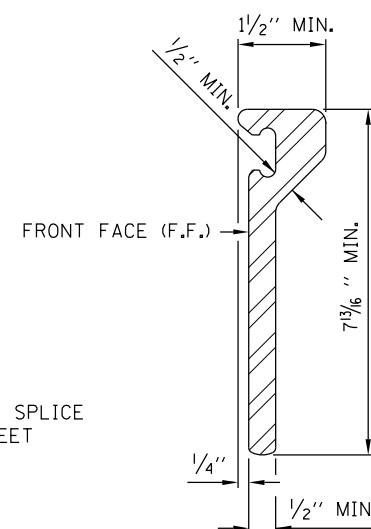


SECTION A-A

UPTURN AT PARAPET



DETAIL A



TYPICAL SECTION THRU FRAME RAIL

BILL OF MATERIAL

ITEM	UNIT	TOTAL
PREFORMED JOINT STRIP SEAL	FOOT	75

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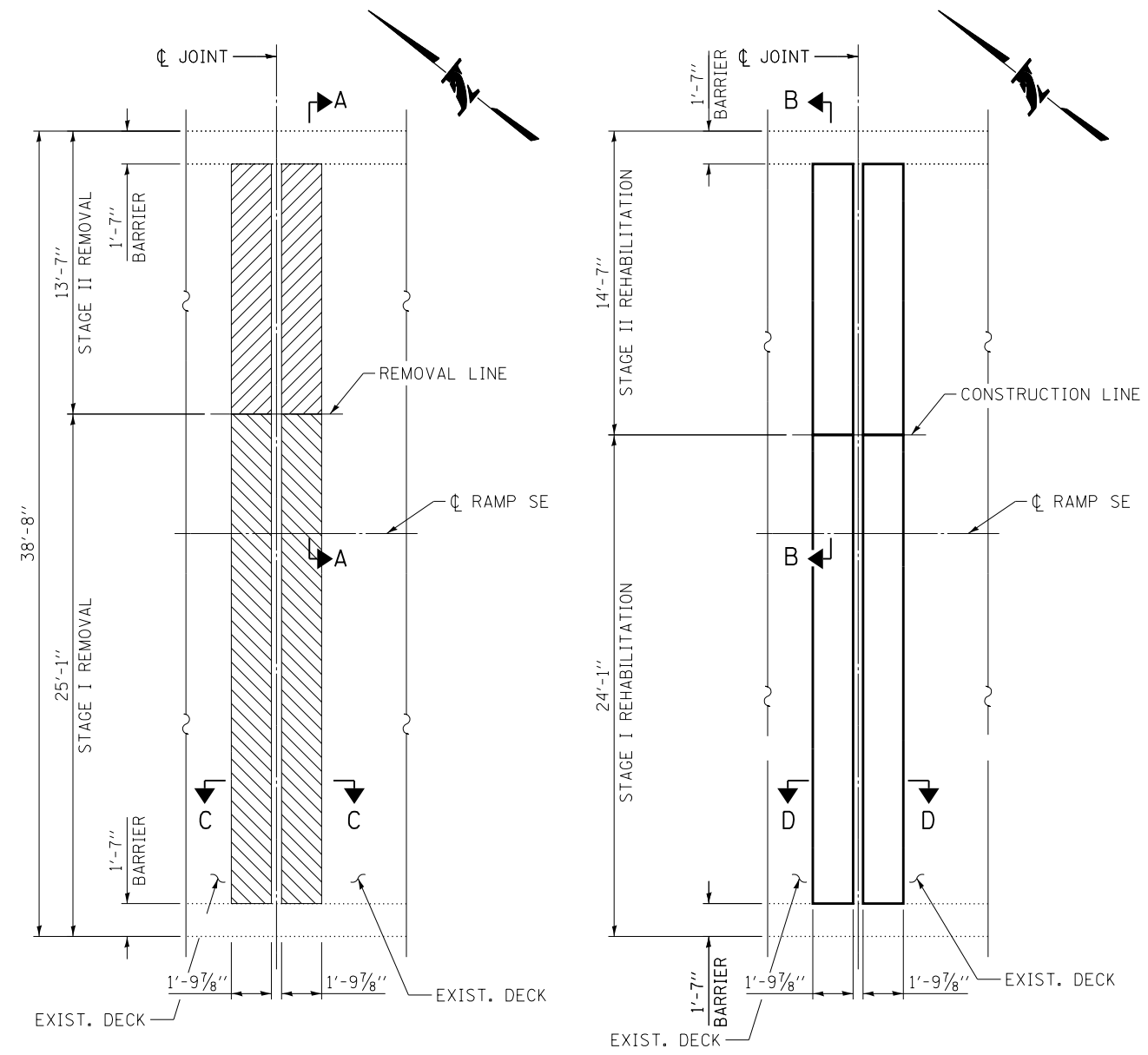


REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1441 (SE) S.N. 022-9971
PREFORMED JOINT STRIP SEAL

SG-36 OF SG-43
SHT NO. SG-36
DRAWING NO. 1140 OF 1517

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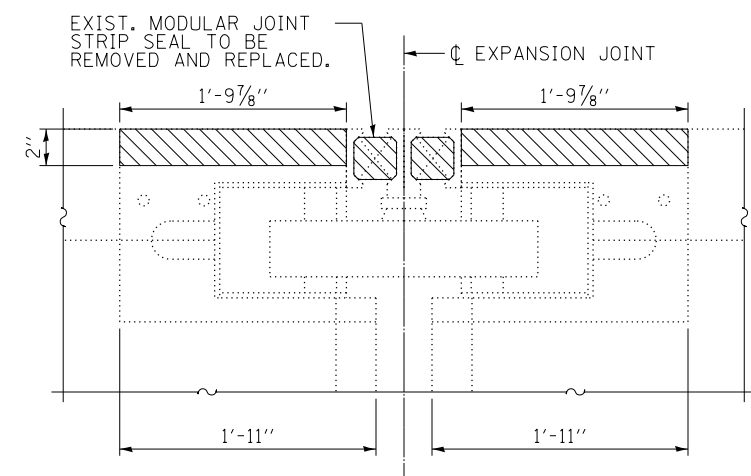


REMOVAL PLAN - PIER 5

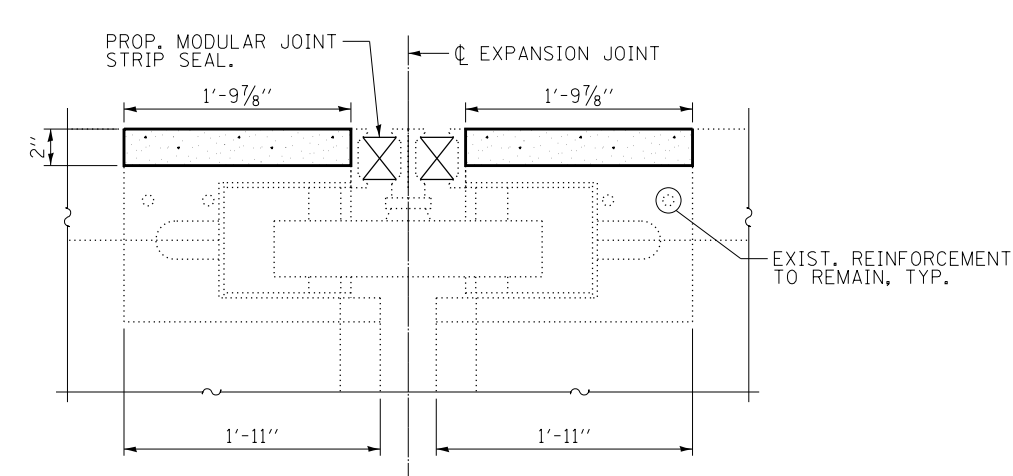
SIMILAR AT PIER 10

REPLACEMENT PLAN - PIER 5

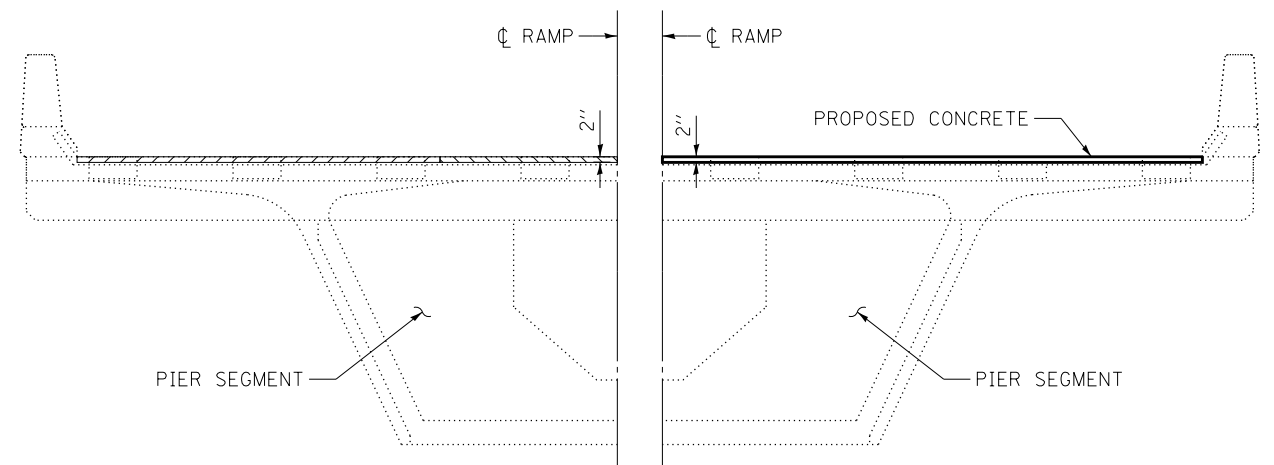
SIMILAR AT PIER 10



SECTION C-C



SECTION D-D



SECTION A-A

SECTION B-B

NOTE
 CARE SHOULD BE TAKEN AS TO NOT TO DAMAGE EXISTING MODULAR JOINT ASSEMBLY DURING REMOVAL PROCESS.

LEGEND:
 [Hatched Box] STAGE I CONCRETE REMOVAL
 [Diagonal Hatched Box] STAGE II CONCRETE REMOVAL

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.	29
CONCRETE REMOVAL	CU. YD.	1.6
MODULAR EXPANSION JOINT STRIP SEAL REPLACEMENT, 6 IN	FOOT	142

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NO.	DATE	DESCRIPTION

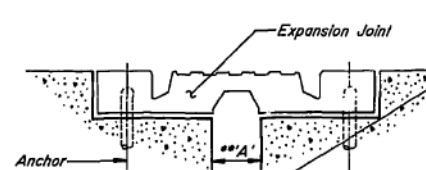
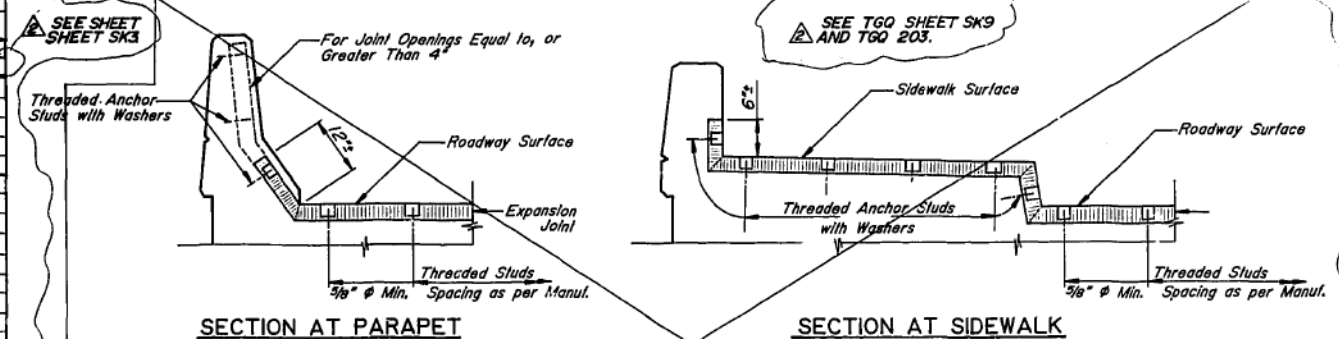
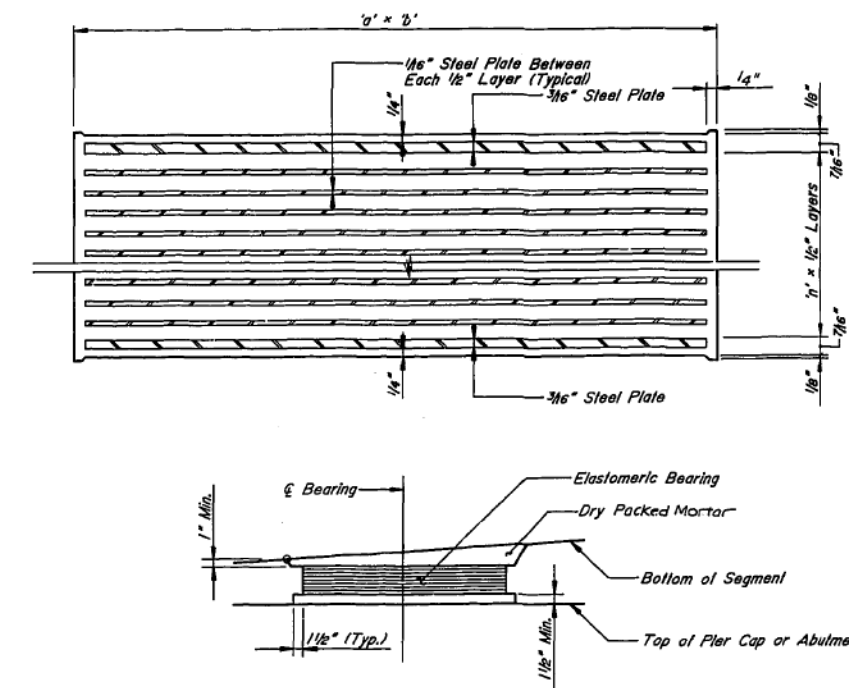
CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 MODULAR JOINT REPAIRS

SHT NO. SG-37
 DRAWING NO. 1141 OF 1517

ELASTOMERIC BEARINGS											
Structure	Location	a' Trans.	b' Long.	n'	No.	Structure	Location	a' x b'	n'	No.	
Ramp SE	Pier 1	2'-6"	2'-6"	8	2	Ramp SW	Pier 1	2'-6" x 2'-6"	8	2	
	Pier 2	2'-6"	2'-6"	4	2		Pier 2	2'-6" x 2'-6"	4	2	
	Pier 3	2'-6"	2'-6"	4	2		Pier 3	2'-6" x 2'-6"	4	2	
	Pier 4	2'-6"	2'-6"	8	2		Pier 4	2'-6" x 2'-6"	8	2	
	Pier 11	2'-6"	2'-6"	12	4		Pier 11	2'-6" x 2'-6"	12	4	
	Pier 12	2'-6"	2'-6"	8	4		Pier 12	2'-6" x 2'-6"	8	4	
	Pier 13	2'-6"	2'-6"	12	4		Pier 13	2'-6" x 2'-6"	12	4	
	Pier 2	2'-6"	2'-6"	8	4		Pier 2	2'-6" x 2'-6"	8	4	
	Pier 3	2'-6"	2'-6"	12	4		Pier 3	2'-6" x 2'-6"	12	4	
	Pier 4 (Ahead Station)	1'-10" x 1'-10"	11	2	Pier 4 (Ahead Station)		1'-10" x 1'-10"	11	2		
	Pier 8 (Back Station)	1'-10" x 1'-10"	11	2	Pier 8 (Back Station)		1'-10" x 1'-10"	11	2		
	Pier 9	2'-6" x 2'-6"	6	2	Pier 9		2'-6" x 2'-6"	6	2		
	Pier 10	2'-6" x 2'-6"	4	2	Pier 10		2'-6" x 2'-6"	4	2		
Pier 11	2'-6" x 2'-6"	4	2	Pier 11	2'-6" x 2'-6"	4	2				
Pier 12	2'-6" x 2'-6"	4	2	Pier 12	2'-6" x 2'-6"	4	2				
Pier 13	2'-6" x 2'-6"	6	2	Pier 13	2'-6" x 2'-6"	6	2				
Ramp EN	South Abutment	1'-8"	1'-8"	10	2	Finley Road	Pier 1	2'-2"	2'-2"	6	2
	Pier 1	2'-6"	2'-6"	8	2		Pier 2	2'-6"	4'-0"	4	2
	Pier 2	2'-6"	2'-6"	6	2		Pier 3	2'-6"	4'-0"	4	2
	Pier 3	2'-6"	2'-6"	4	2		Pier 4	2'-2"	2'-2"	6	2
	Pier 4	2'-6"	2'-6"	4	2		North Abutment	1'-8"	1'-8"	8	2
	Pier 4 (Straddle Bent)	1'-10"	4'-6"	4	2		South Abutment	1'-8"	1'-8"	8	2
Pier 5	2'-6"	2'-6"	6	2							
Pier 6	2'-6"	2'-6"	8	2							
Pier 6 (Straddle Bent)	1'-10"	4'-6"	4	2							
North Abutment	1'-8"	1'-8"	10	2							
South Abutment	1'-8"	1'-8"	8	2							

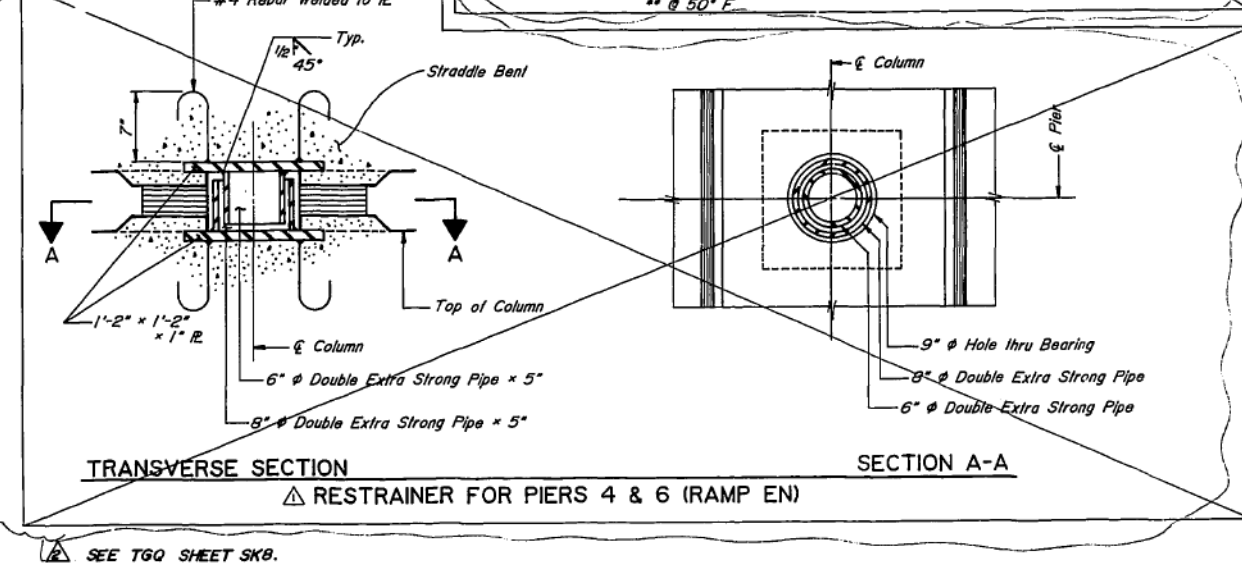
*SLIDING POT BEARINGS					
Structure	Location	Capacity	Long. Move.	Trans. Move.	No.
Ramp SE	West Abutment	450 K	±3"	±1"	2
	Pier 5	500 K	±5"	±2"	4
	Pier 10	550 K	±5"	±2"	4
	East Abutment	550 K	±5"	±1 1/4"	2
Ramp SW	North Abutment	550 K	±4 1/2"	±7/8"	2
	Pier 4 (Back Sta.)	550 K	±6"	±1/2"	2
	Pier 8 (Ahead Sta.)	500 K	±5"	±1/2"	2
	South Abutment	350 K	±3"	±1/2"	2

*WABO-FYFE HIGH LOAD STRUCTURAL BEARING MODEL III or Equivalent.



EXPANSION JOINT MOVEMENTS					
Structure	Location	Total Movements		**Initial Setting 'A'	Temperature Correction
		Trans.	Long.		
Ramp EN	South Abutment	3/8"	4 1/2"	1 1/2"	0.0325" / °F
	North Abutment	3/8"	4 1/2"	1 1/2"	0.0325" / °F
Finley Road	South Abutment	0	3"	1 1/2"	0.0199" / °F
	North Abutment	0	3"	1 1/2"	0.0199" / °F
Ramp SW	North Abutment	1/4"	2 3/4"	1 1/2"	0.0261" / °F
	Pier 4	1/2"	6 1/2"	3"	0.0448" / °F
	Pier 8	1/2"	9"	3"	0.0445" / °F
Ramp SE	South Abutment	1/4"	4 1/2"	1 1/2"	0.0258" / °F
	West Abutment	3/8"	2 1/2"	1 1/2"	0.0231" / °F
	Pier 5	1 1/2"	8 1/2"	3"	0.0451" / °F
	Pier 10	1 1/2"	8 1/2"	3"	0.0488" / °F
	East Abutment	1 1/4"	5"	1 1/2"	0.0269" / °F

** @ 50° F.

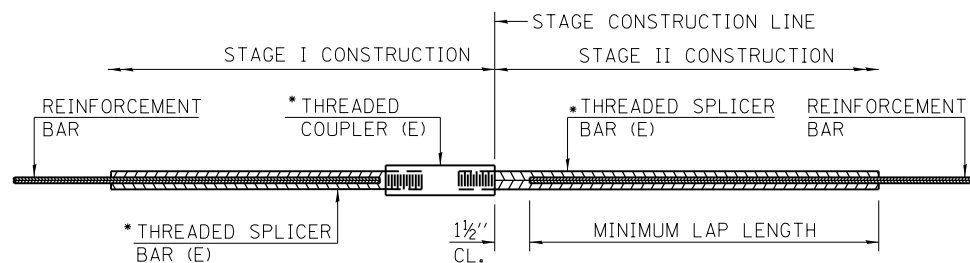


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NO.	DATE	DESCRIPTION																
4-24-87		Added Restrainer Details																
1-15-88		VOIDED DETAILS & BEARING INFO																
3-22-88		See Note																

FOR INFORMATION ONLY

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
CLEANING AND PAINTING BEARINGS	EACH	12

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NO.	DATE	REVISIONS DESCRIPTION									

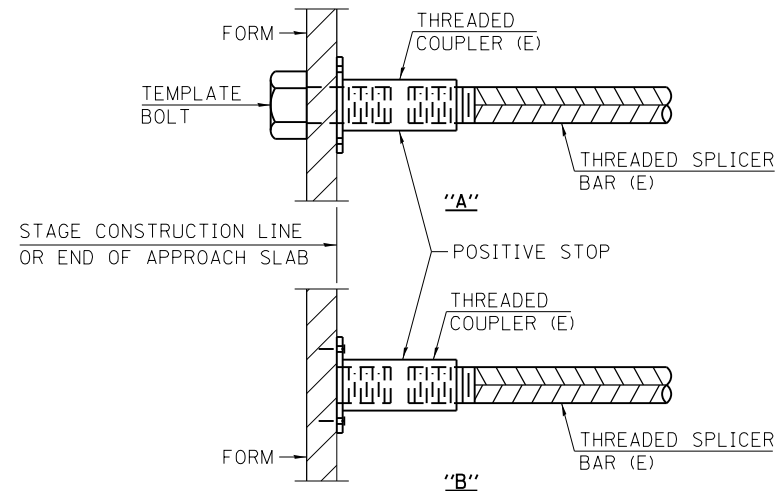


STANDARD BAR SPLICER ASSEMBLY

THREADED SPLICER BAR LENGTH = MIN. LAP LENGTH + 1 1/2" + THREAD LENGTH

* EPOXY NOT REQUIRED ON BAR SPLICER ASSEMBLY COMPONENTS USED IN CONJUNCTION WITH BLACK BARS.

LOCATION	BAR SIZE	NO. ASSEMBLIES REQUIRED	MINIMUM LAP LENGTH
W. ABUT.	#5	5	3'-3"
E. ABUT.	#5	5	3'-3"



INSTALLATION AND SETTING METHODS

"A" : SET BAR SPLICER ASSEMBLY BY MEANS OF A TEMPLATE BOLT.
 "B" : SET BAR SPLICER ASSEMBLY BY NAILING TO WOOD FORMS OR CEMENTING TO STEEL FORMS.
 (E) : INDICATES EPOXY COATING.

NOTES:

SPLICER BARS SHALL BE DEFORMED WITH THREADED ENDS AND HAVE A MINIMUM 60 KSI YIELD STRENGTH.

ALL REINFORCEMENT SHALL BE LAPPED AND TIED TO THE SPLICER BARS. BAR SPLICER ASSEMBLIES SHALL BE EPOXY COATED ACCORDING TO THE REQUIREMENTS FOR REINFORCEMENT BARS. SEE SECTION 508 OF THE STANDARD SPECIFICATIONS.

SEE APPROVED LIST OF BAR SPLICER ASSEMBLIES AND MECHANICAL SPLICERS FOR ALTERNATIVES.

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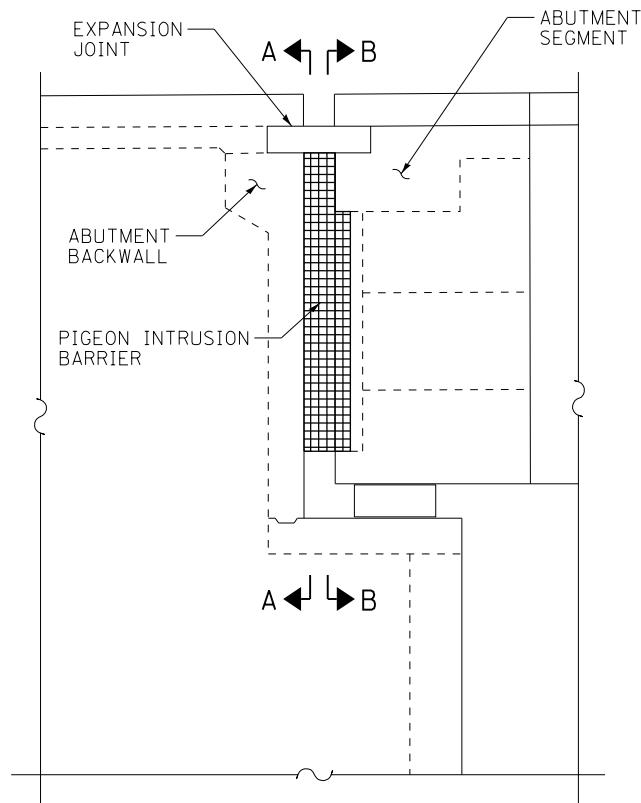
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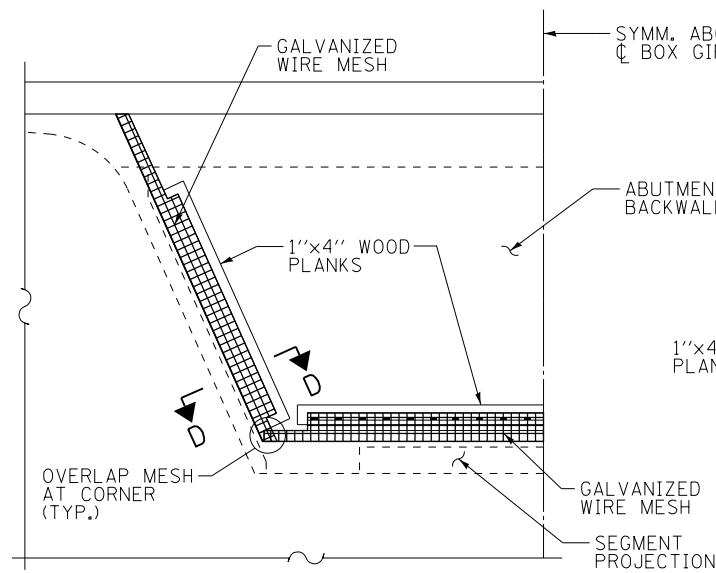
CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 BAR SPLICER ASSEMBLY DETAILS

SG-39 OF SG-43
 SHT NO. SG-39
 DRAWING NO.
 1143 OF 1517

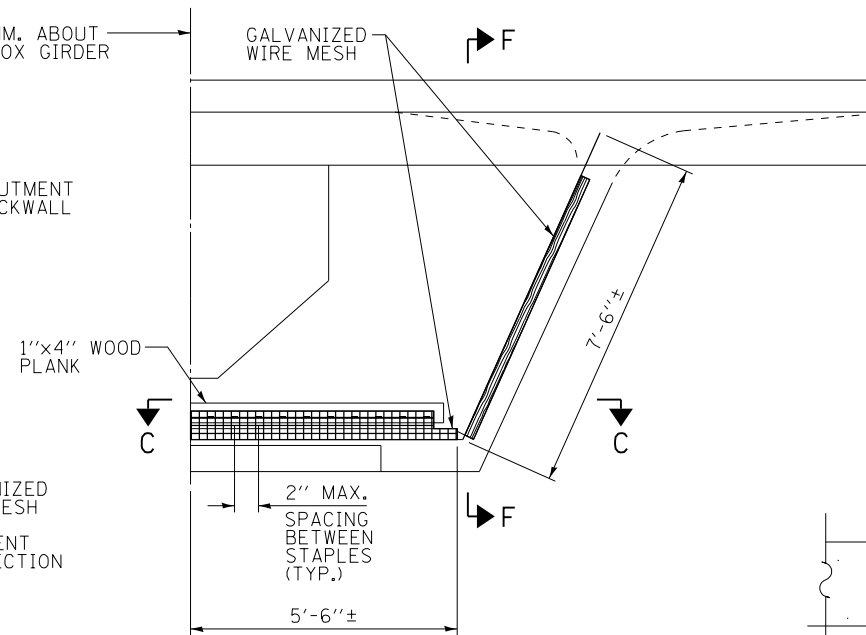
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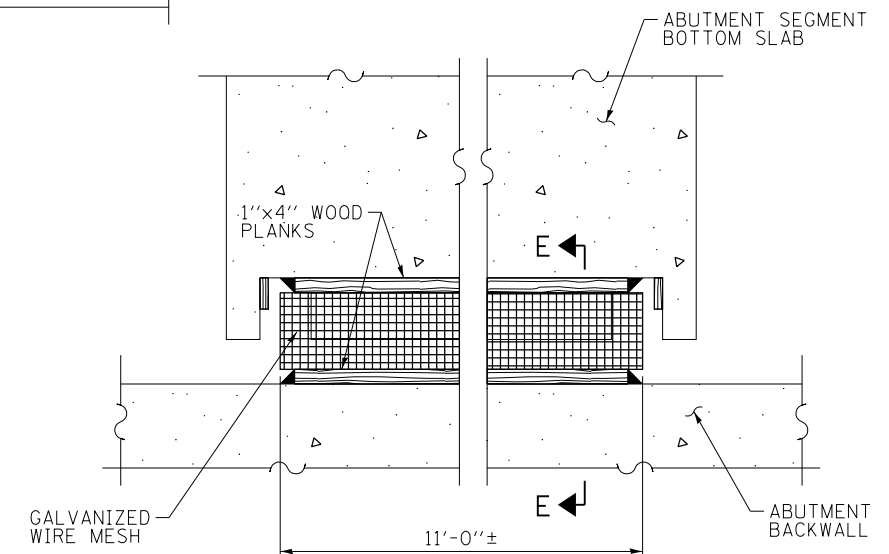
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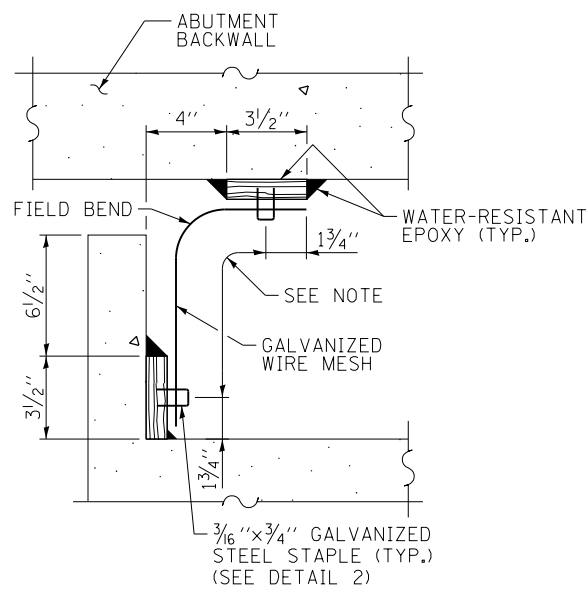
SECTION A-A



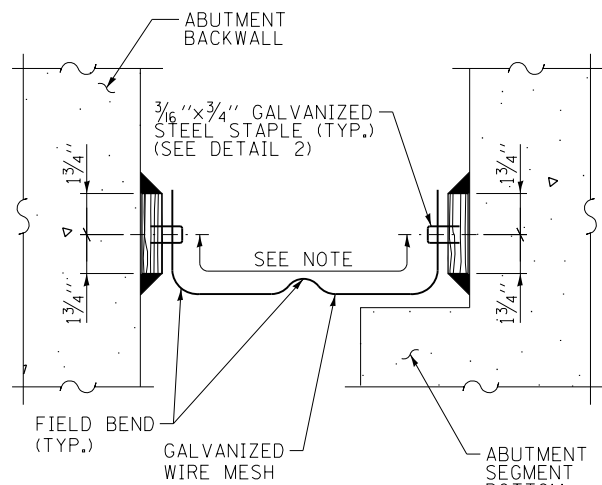
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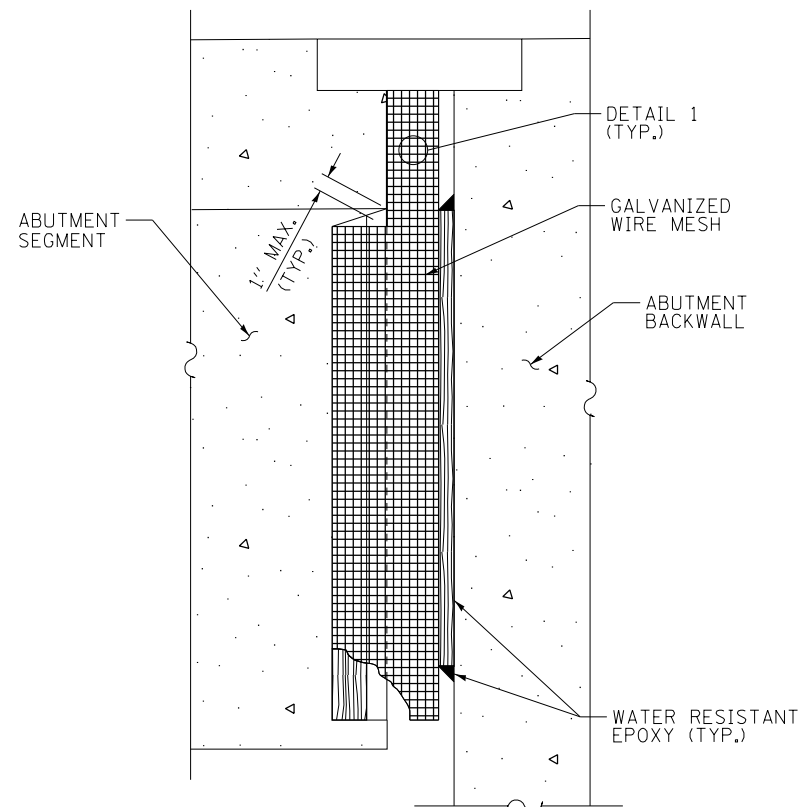
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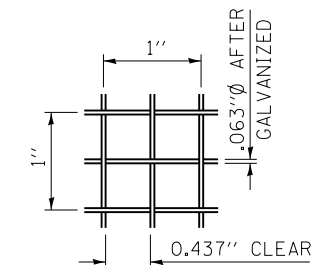
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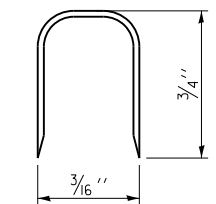
SECTION E-E



SECTION F-F



DETAIL 1



DETAIL 2

NOTE:
 MINIMUM LENGTH OF WIRE MESH OF 16" SHALL BE PROVIDED BETWEEN POINTS OF ATTACHMENTS (SEE SECT. D-D & E-E).

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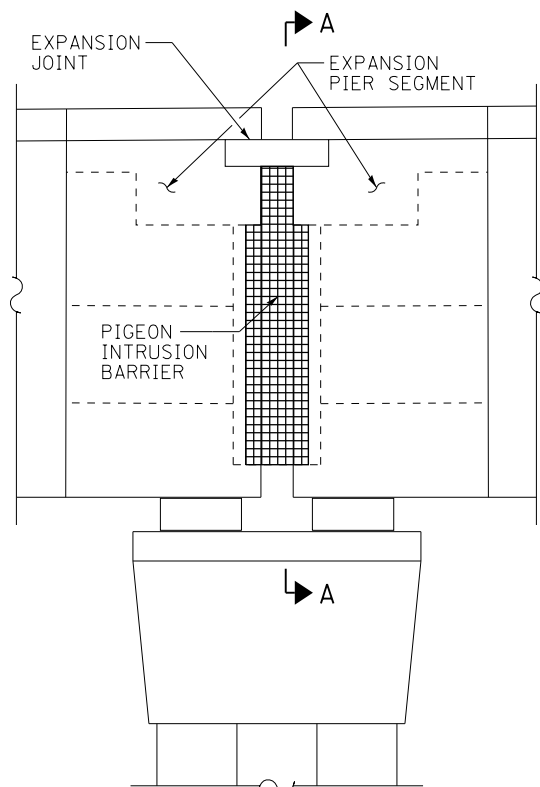


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 ILLINOIS 60515

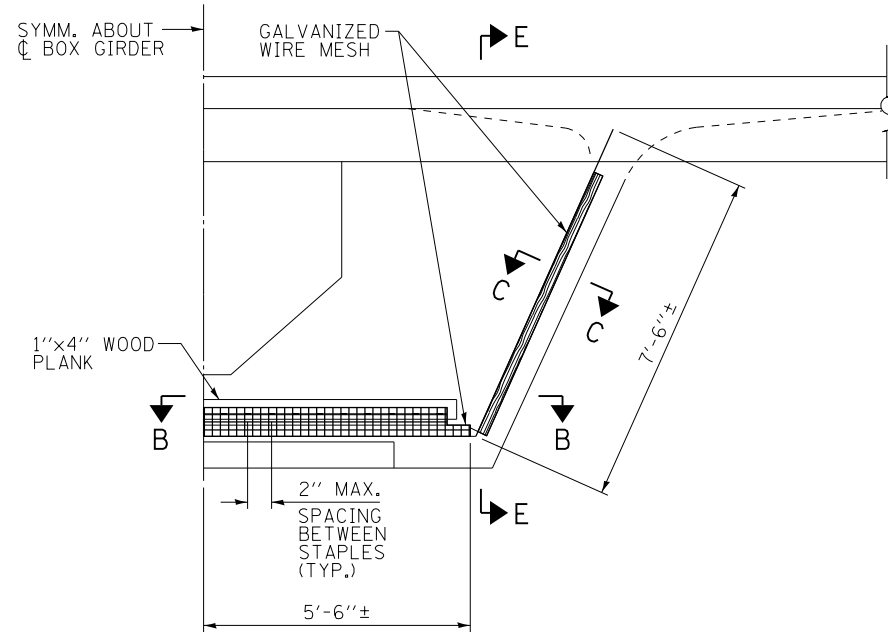
NO.	DATE	REVISIONS	
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CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 PIGEON INTRUSION BARRIERS I

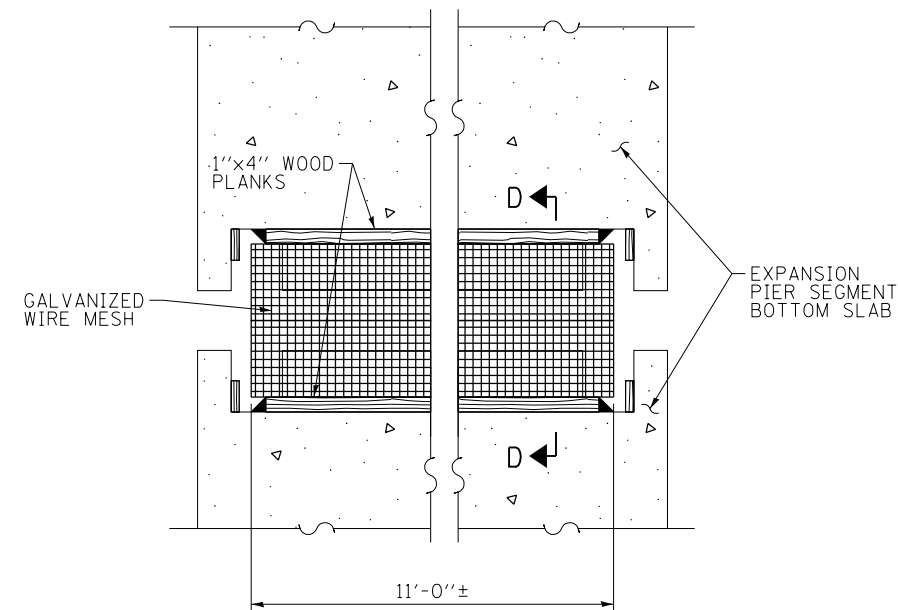
SG-40 OF SG-43
 SHT NO. SG-40
 DRAWING NO.
 1144 OF 1517



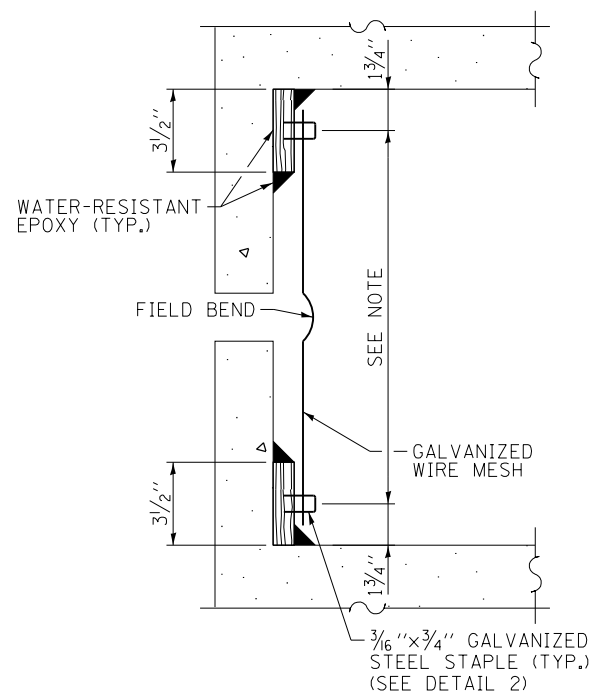
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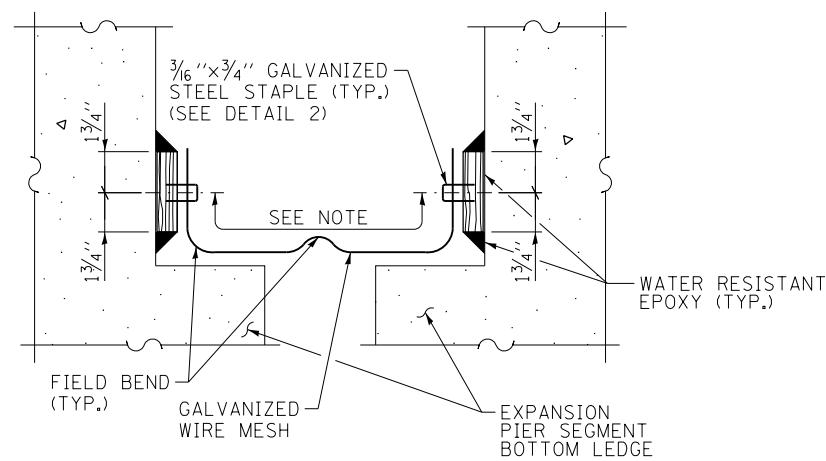
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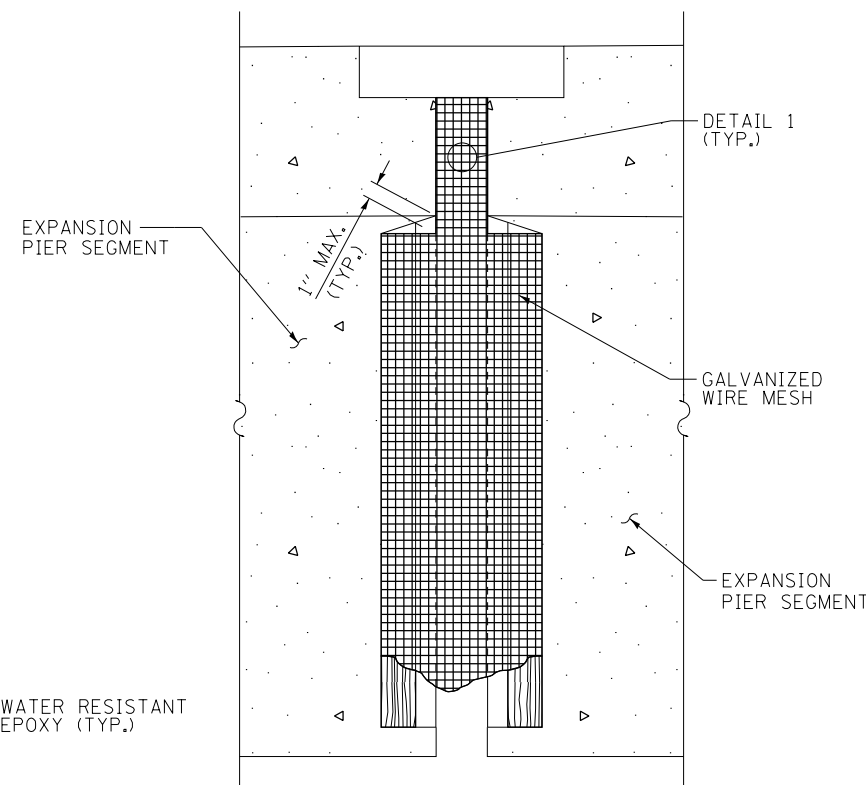
SECTION B-B



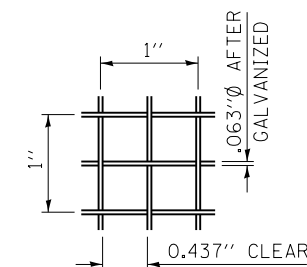
SECTION C-C



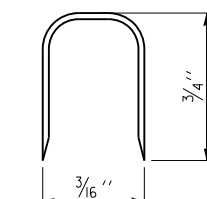
SECTION D-D



SECTION E-E



DETAIL 1



DETAIL 2

NOTE:
MINIMUM LENGTH OF WIRE MESH OF 16" SHALL BE PROVIDED BETWEEN POINTS OF ATTACHMENTS (SEE SECT. B-B & E-E).

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
PIGEON INTRUSION BARRIER	EACH	4

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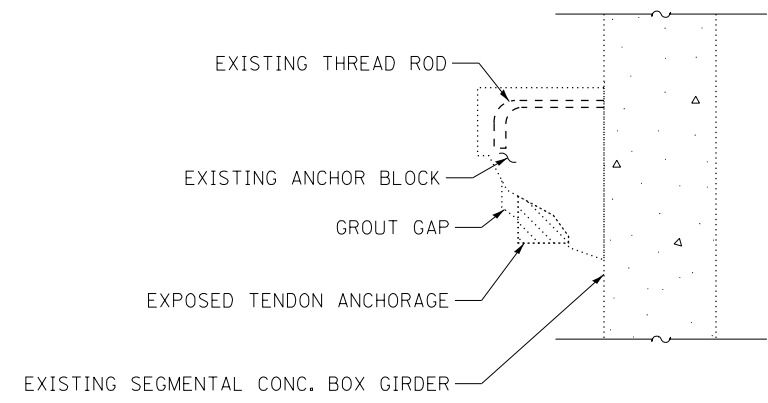
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 ILLINOIS 60515

NO.	DATE	REVISIONS	
		DESCRIPTION	

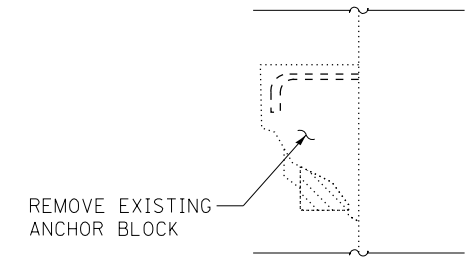
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 BRIDGE 1441 (SE) S.N. 022-9971
 PIGEON INTRUSION BARRIERS II

SG-41 OF SG-43
 SHT NO. SG-41
 DRAWING NO.
 1145 OF 1517

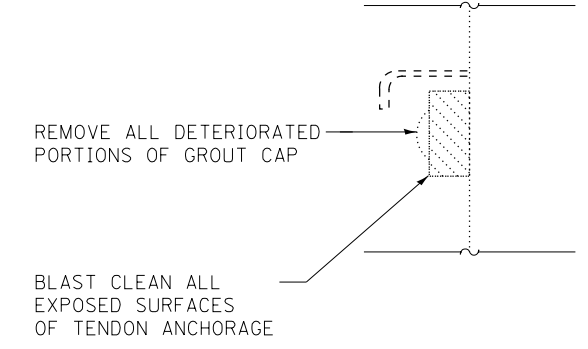
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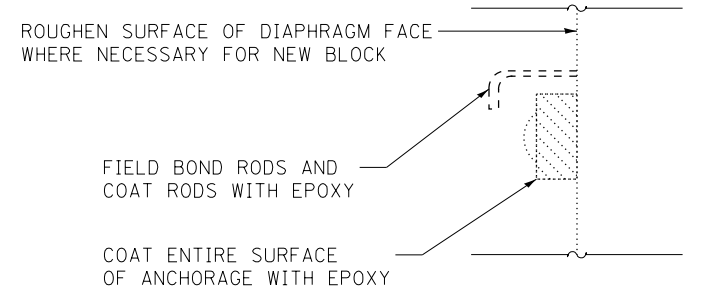
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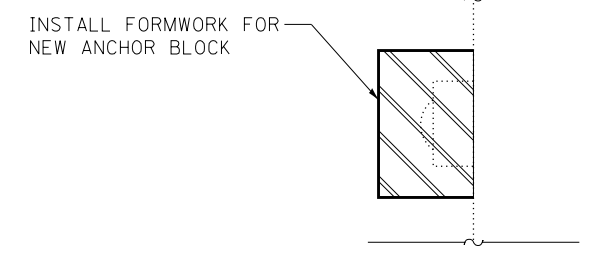
STEP 1



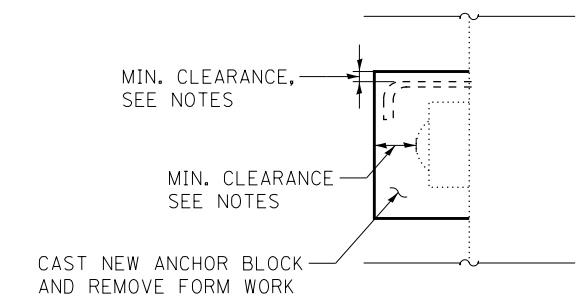
STEP 2



STEP 3



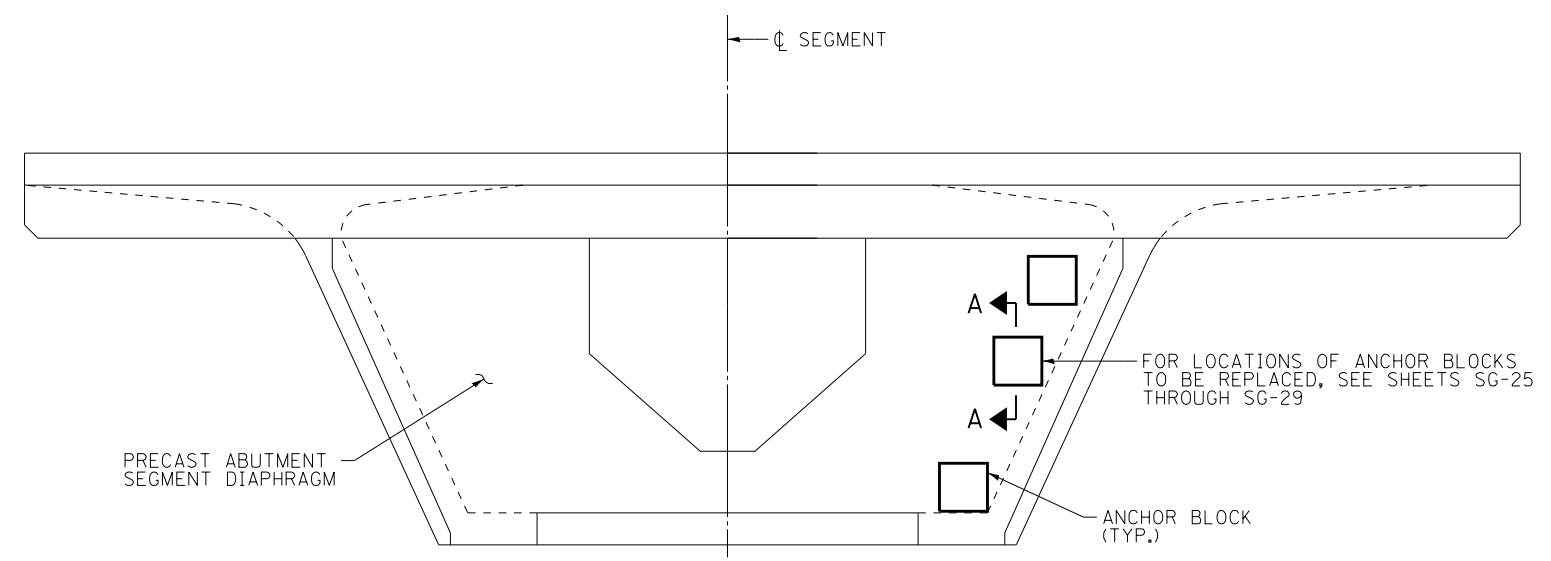
STEP 4



STEP 5



STEP 6



TYPICAL PRECAST ABUTMENT SEGMENT ELEVATION

NOTES:
 MINIMUM CLEARANCE OF 5 INCHES SHALL BE PROVIDED FROM TENDON ANCHORAGE TO ALL SURFACES OF ANCHOR BLOCK. MINIMUM CLEARANCE OF 3 INCHES SHALL BE PROVIDED FROM ALL THREAD RODS TO ALL SURFACES OF ANCHOR BLOCK.
 COST OF ALL WORK IS COVERED UNDER PAY "REPLACEMENT OF ANCHOR BLOCK CONCRETE."
 MAXIMUM ANCHOR BLOCK VOLUME IS 2 CU. FT.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
REPLACEMENT OF ANCHOR BLOCK CONCRETE	EACH	34

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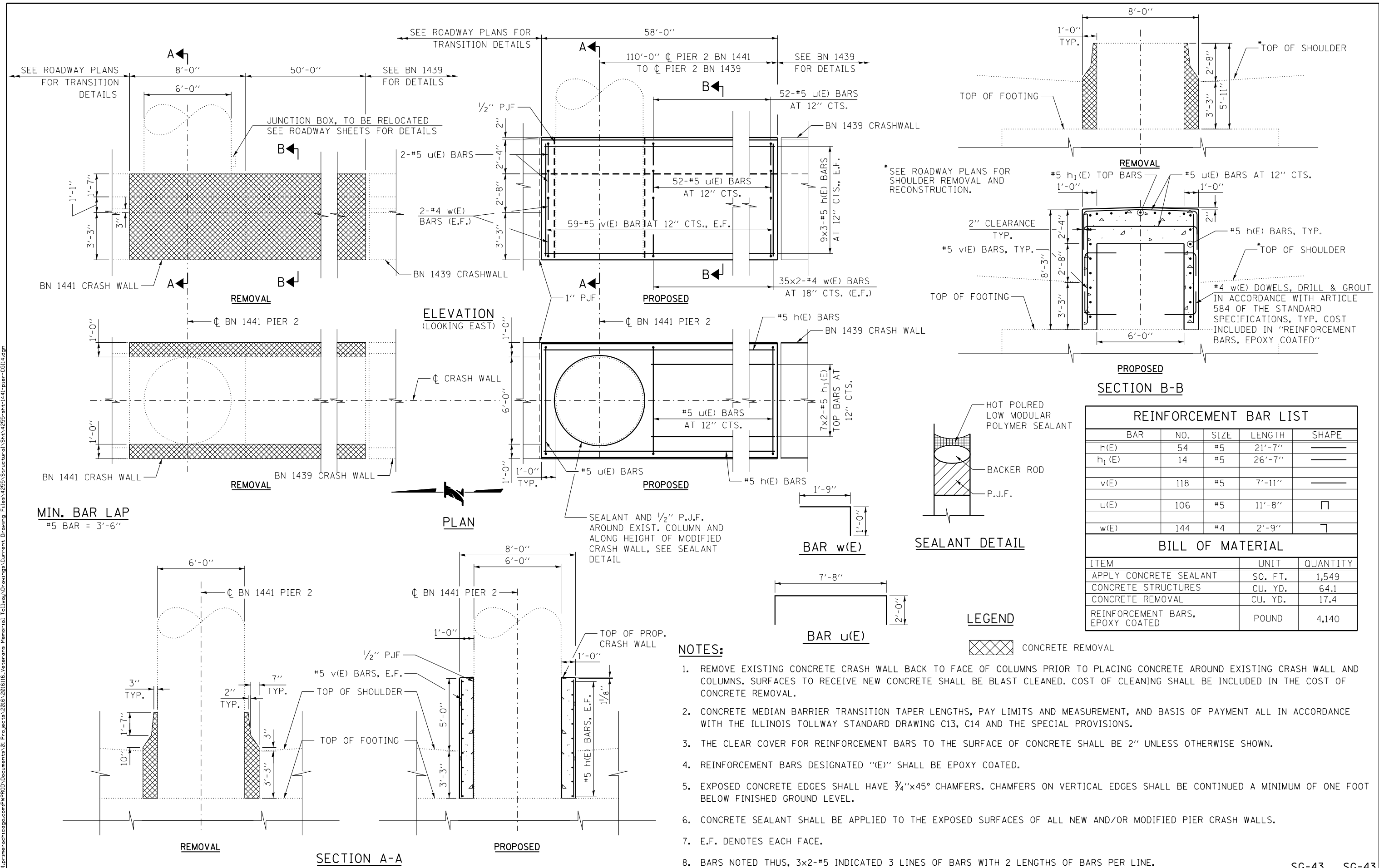
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 Email chicago@ciorba.com

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 ANCHOR BLOCK REPLACEMENT DETAILS

SG-42 OF SG-43
 SHT NO. SG-42
 DRAWING NO.
 1146 OF 1517



REINFORCEMENT BAR LIST				
BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	54	#5	21'-7"	—
h ₁ (E)	14	#5	26'-7"	—
v(E)	118	#5	7'-11"	—
u(E)	106	#5	11'-8"	□
w(E)	144	#4	2'-9"	└

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	1,549
CONCRETE STRUCTURES	CU. YD.	64.1
CONCRETE REMOVAL	CU. YD.	17.4
REINFORCEMENT BARS, EPOXY COATED	POUND	4,140

- NOTES:**
- REMOVE EXISTING CONCRETE CRASH WALL BACK TO FACE OF COLUMNS PRIOR TO PLACING CONCRETE AROUND EXISTING CRASH WALL AND COLUMNS. SURFACES TO RECEIVE NEW CONCRETE SHALL BE BLAST CLEANED. COST OF CLEANING SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL.
 - CONCRETE MEDIAN BARRIER TRANSITION TAPER LENGTHS, PAY LIMITS AND MEASUREMENT, AND BASIS OF PAYMENT ALL IN ACCORDANCE WITH THE ILLINOIS TOLLWAY STANDARD DRAWING C13, C14 AND THE SPECIAL PROVISIONS.
 - THE CLEAR COVER FOR REINFORCEMENT BARS TO THE SURFACE OF CONCRETE SHALL BE 2" UNLESS OTHERWISE SHOWN.
 - REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
 - EXPOSED CONCRETE EDGES SHALL HAVE 3/4"x45° CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
 - CONCRETE SEALANT SHALL BE APPLIED TO THE EXPOSED SURFACES OF ALL NEW AND/OR MODIFIED PIER CRASH WALLS.
 - E.F. DENOTES EACH FACE.
 - BARS NOTED THUS, 3x2-#5 INDICATED 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.

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CONTRACT NO. RR-16-4255
 BRIDGE 1441 (SE) S.N. 022-9971
 CRASH WALL MODIFICATIONS

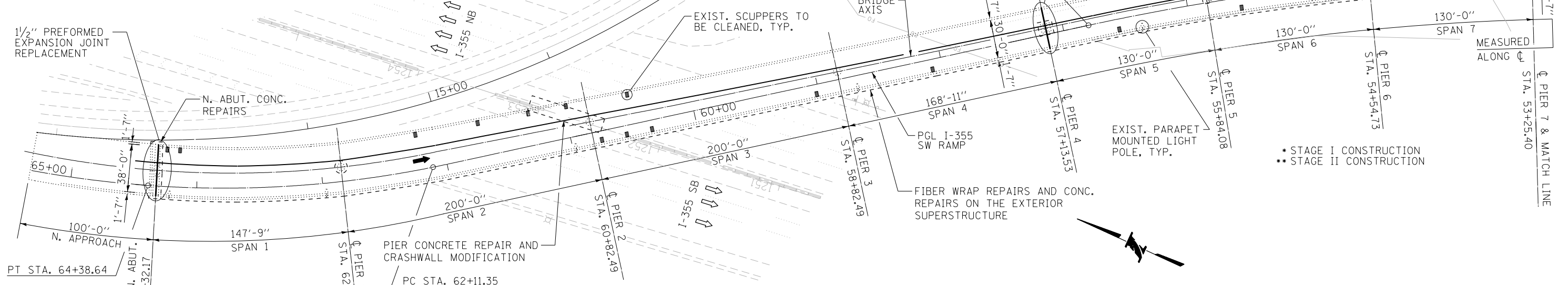
SG-43 OF SG-43
 SHT NO. SG-43
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BENCHMARK

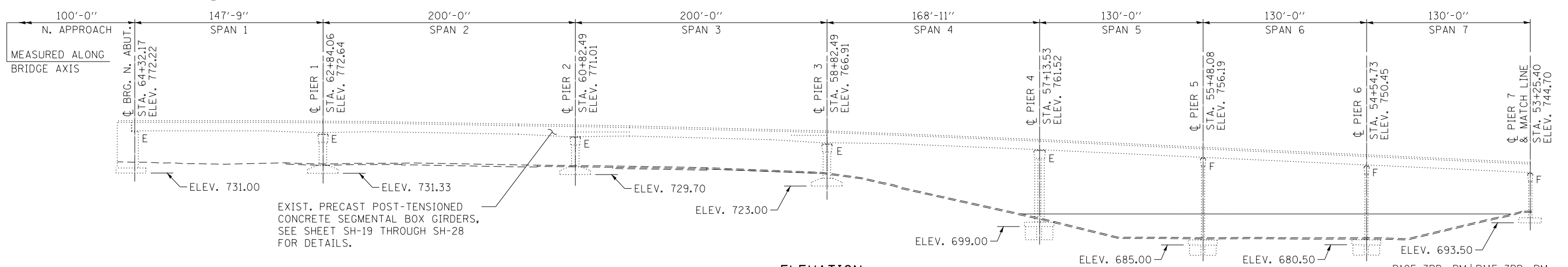
SEE SHEET ALI-19 OF ROADWAY PLANS, CONTROL #77

EXISTING STRUCTURE

BRIDGE NUMBER 1439, IDOT S.N. 022-9970, WAS DESIGNED IN 1987 ON CONTRACT CIP-616. THE BRIDGE IS A RAMP CONNECTING I-355 SOUTHBOUND TO I-88 WESTBOUND.
 SUPERSTRUCTURE: 14 SPANS OF A HORIZONTALLY CURVED, VARIABLE WIDTH, PRECAST, POST-TENSIONED CONCRETE SEGMENTAL BOX GIRDER.
 SUBSTRUCTURE: SOUTH ABUTMENT: CONCRETE STUB ABUTMENT ON STEEL PILES.
 NORTH ABUTMENT: CONCRETE STUB ABUTMENT ON SPREAD FOOTING.
 PIERS 1, 2, 3, 7, 9: SINGLE CONCRETE HAMMERHEAD COLUMN ON SPREAD FOOTING.
 PIERS 4, 8: SINGLE CONCRETE HAMMERHEAD CAP ON A DOUBLE SHAFT COLUMN ON SPREAD FOOTING.
 PIERS 5, 6: SINGLE CONCRETE HAMMERHEAD COLUMN ON DRILLED SHAFTS.
 PIERS 10, 11, 12, 13: SINGLE CONCRETE HAMMERHEAD COLUMN ON CONCRETE PILES.
 WORK ON TOP OF DECK WILL BE PERFORMED UNDER STAGE CONSTRUCTION.



PLAN



ELEVATION
(LOOKING EAST)

PROPOSED SCOPE OF WORK

1. REPAIR SPALLED AND UNSOUND CONCRETE IN THE SUBSTRUCTURE.
2. REPAIR SPALLED AND UNSOUND CONCRETE IN THE SUPERSTRUCTURE.
3. REPAIR SPALLED AND UNSOUND CONCRETE ON THE PARAPET.
4. PATCH BRIDGE DECK OVERLAY DEFECTS.
5. REMOVE AND REPLACE POST-TENSIONING ANCHOR BLOCKS.
6. REMOVE AND REPLACE EXPANSION JOINTS AT ABUTMENTS AND PIER 4.
7. APPLY DECK SEALER ON THE EXISTING OVERLAY AFTER PATCHING DEFECTS.
8. APPLY CONCRETE SEALER ON ABUTMENTS AND PIERS 1 THROUGH 3 AND 7 THROUGH 9.
9. CLEAN EXISTING SCUPPERS.
10. CLEAN AND PAINT ALL HLMR BEARINGS AT THE NORTH AND SOUTH ABUTMENTS AND PIERS 4 AND 8.
11. REMOVE AND REPLACE PIGEON INTRUSION BARRIERS AT THE ABUTMENTS AND EXPANSION PIERS 4 AND 8.
12. CRASHWALL MODIFICATION OF PIER 2.

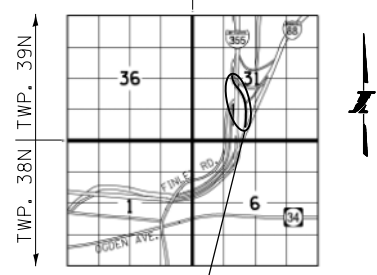
DESIGN STRESSES

EXISTING UNITS
 F'c = 4,000 PSI (FOOTINGS)
 F'c = 4,500 PSI (SUBSTRUCTURE)
 F'c = 5,500 PSI (SUPERSTRUCTURE)

FIELD UNITS
 F'c = 3,500 PSI (CLASS SI - SUBSTRUCTURE REPAIRS)
 F'c = 4,000 PSI (CLASS BS - PARAPET REPAIRS)
 F'c = 4,000 PSI (CLASS AX - SUPERSTRUCTURE)
 Fy = 60,000 PSI (REINFORCEMENT)

CURVE DATA

CURVE SW-1
 P.I. STA. 50+57.40
 Δ = 39° 07' 54"
 D = 3° 00' 56"
 R = 1,900.00'
 T = 675.28'
 L = 1,297.65'
 P.C. STA. = 43+82.12
 P.T. STA. = 56+79.77



LOCATION SKETCH

SH-01 OF SH-42

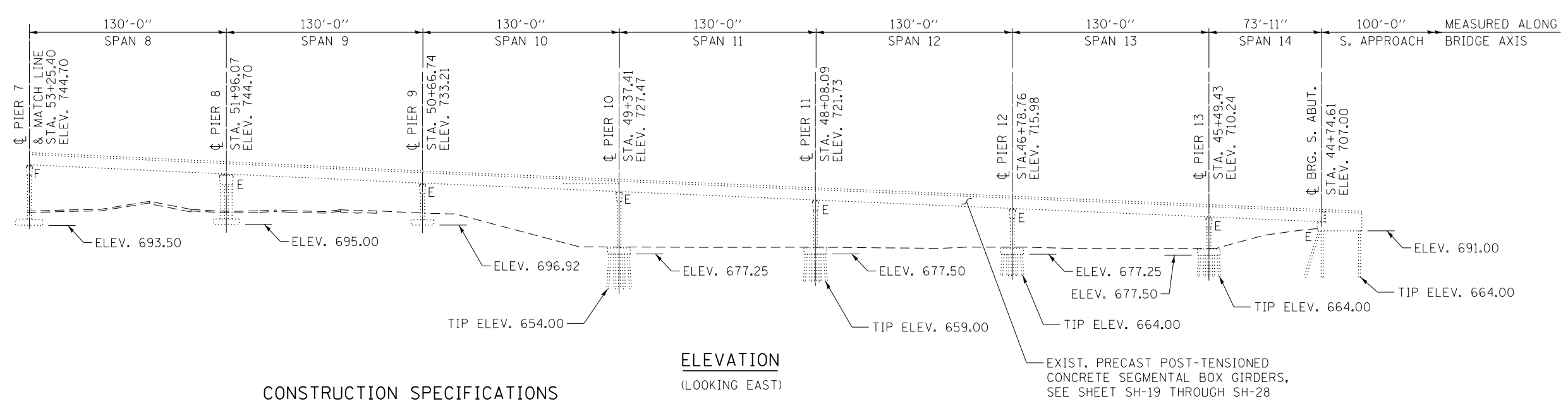
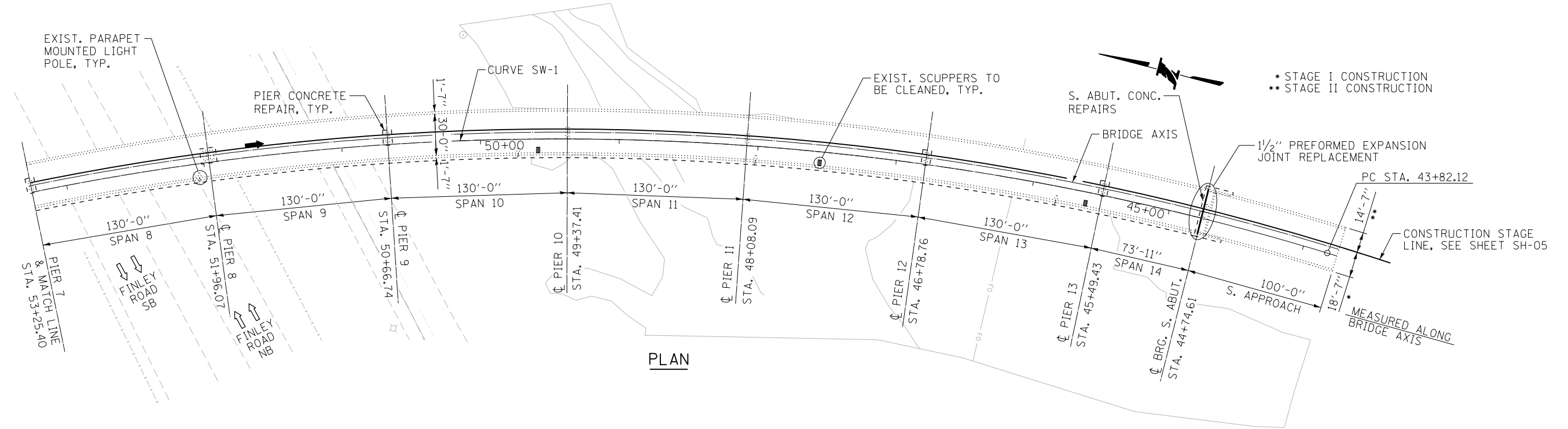
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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 GENERAL PLAN AND ELEVATION I

SHT NO. SH-01
 DRAWING NO. 1148 OF 1517



CONSTRUCTION SPECIFICATIONS

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS (GBSP's)

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATION TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISION ADOPTED JANUARY 1, 2018.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS, 17TH EDITION AND ALL SUBSEQUENT INTERIMS

ILLINOIS STATE TOLLWAY HIGHWAY AUTHORITY STRUCTURAL DESIGN MANUAL ADOPTED MARCH 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL DATED JANUARY 2012

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGN MEMORANDUMS

HIGHWAY CLASSIFICATION

SB I-355 SW RAMP

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL/INTERSTATE

ADT: 13,300 (2015); 8,021 (2041)

ADTT: 0;0

DHV: 1,330

DESIGN SPEED: 55 MPH

POSTED SPEED: 45 MPH

ROUTE UNDER: I-355

ADT: 57,240 (NB, 2016)

ADT: 40,500 (SB, 2016)

ROUTE UNDER: FINLEY RD.

ADT: 20,800 (2018)

DESIGN LOADS

EXISTING STRUCTURE

LIVE LOAD: HS20-44 AND ALTERNATE MILITARY LOADING

DEAD LOAD: 25 PSF FOR FUTURE WEARING SURFACE

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 Project: 2018\20181616_Veterans Memorial Tollway\Drawings\Current Drawings\Files\2018\Structural\Sheet\2018-sh-02-CG001.dgn

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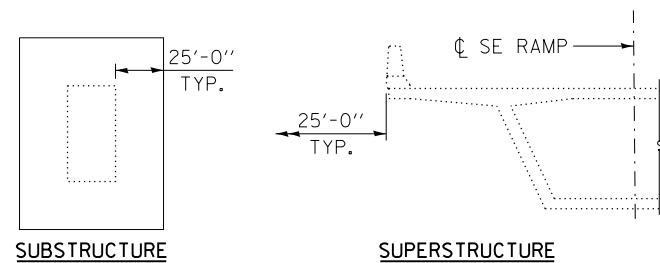
BRIDGE 1439 (SW) S.N. 022-9970

GENERAL PLAN AND ELEVATION II

SH-02 OF SH-42

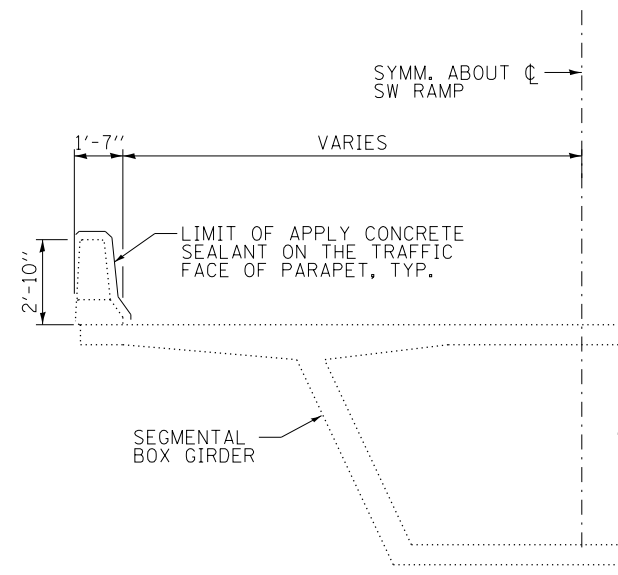
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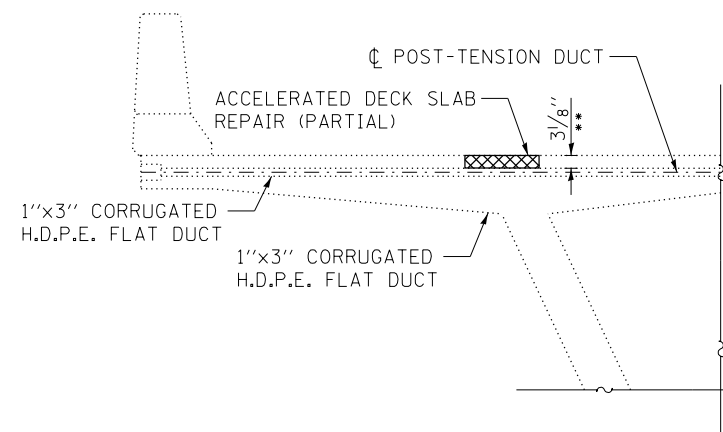
TYPICAL WORK AREA LIMITS

THE ABOVE LIMITS ARE APPROXIMATE. ACTUAL LIMITS SHALL BE COORDINATED WITH ILLINOIS TOLLWAY MAINTENANCE SUPERVISOR.



TYPICAL SECTION
(LOOKING SOUTH)

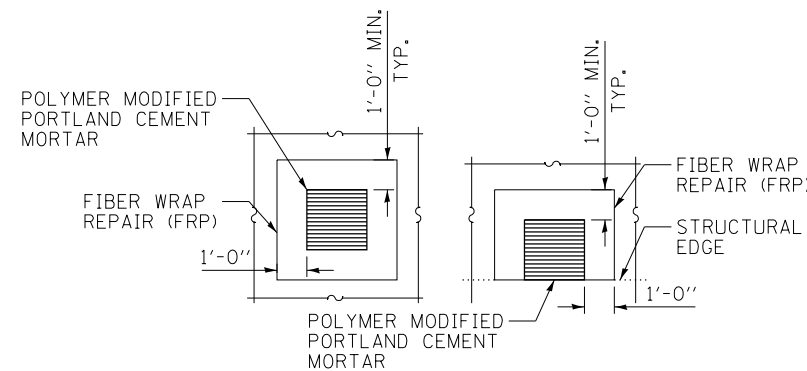
** DIMENSION MIGHT BE DIFFERENT IN THE FIELD. CARE MUST BE TAKEN DURING REMOVAL AND CONSTRUCTION AS TO NOT DAMAGE THE POST-TENSION DUCT.



ACCELERATED DECK SLAB REPAIR (PARTIAL) DETAIL

CONCRETE SEALANT SCHEDULE

LOCATION	UNIT	QUANTITY
SOUTH ABUTMENT	SQ. FT.	466
PIER 1	SQ. FT.	349
PIER 2	SQ. FT.	359
PIER 3	SQ. FT.	415
PIER 4	SQ. FT.	1,395
PIER 7	SQ. FT.	393
PIER 8	SQ. FT.	915
PIER 9	SQ. FT.	217
NORTH ABUTMENT	SQ. FT.	428
EXTERNAL SEGMENTAL GIRDER REPAIRS	SQ. FT.	112
TRAFFIC FACE OF PARAPET	SQ. FT.	16,126
CRASHWALL MODIFICATION	SQ. FT.	1,598



TYPICAL FIBER WRAP APPLICATION DETAIL
USE WHEN APPLYING FIBER WRAP ON THE BRIDGE, U.N.O.

INDEX OF SHEETS:

SH-01	GENERAL PLAN AND ELEVATION I
SH-02	GENERAL PLAN AND ELEVATION II
SH-03	GENERAL NOTES
SH-04	INDEX OF SHEETS & BOM
SH-05	CONSTRUCTION STAGING
SH-06	NORTH ABUTMENT REPAIRS
SH-07	SOUTH ABUTMENT REPAIRS
SH-08	PIER 1 REPAIRS
SH-09	PIER 2 REPAIRS
SH-10	PIER 3 REPAIRS
SH-11	PIER 4 REPAIRS
SH-12	PIER 5 REPAIRS
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SH-16	PIER 9 REPAIRS
SH-17	PIER 12 REPAIRS
SH-18	PIER 13 REPAIRS
SH-19	EXTERIOR SUPERSTRUCTURE REPAIRS I
SH-20	EXTERIOR SUPERSTRUCTURE REPAIRS II
SH-21	EXTERIOR SUPERSTRUCTURE REPAIRS III
SH-22	EXTERIOR SUPERSTRUCTURE REPAIRS IV
SH-23	INTERIOR SUPERSTRUCTURE REPAIRS
SH-24	DIAPHRAGM REPAIRS I
SH-25	DIAPHRAGM REPAIRS II
SH-26	DIAPHRAGM REPAIRS III
SH-27	DIAPHRAGM REPAIRS IV
SH-28	DIAPHRAGM REPAIRS V
SH-29	TOP OF DECK REPAIRS I
SH-30	TOP OF DECK REPAIRS II
SH-31	TOP OF DECK REPAIRS III
SH-32	TOP OF DECK REPAIRS IV
SH-33	APPROACH SLAB REPAIR
SH-34	EXPANSION JOINT REPLACEMENT
SH-35	PREFORMED JOINT STRIP SEAL
SH-36	MODULAR JOINT REPAIRS
SH-37	BEARING PAINTING DETAILS
SH-38	BAR SPLICER ASSEMBLY DETAILS
SH-39	PIGEON INTRUSION BARRIERS I
SH-40	PIGEON INTRUSION BARRIERS II
SH-41	ANCHOR BLOCK REPLACEMENT DETAILS
SH-42	CRASH WALL MODIFICATIONS

TOTAL BILL OF MATERIAL

SPECIAL PROVISION	PAY ITEM	DESCRIPTION	UNIT	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL	RECORD QUANTITY
	50102400	CONCRETE REMOVAL	CU YD	7.6	18.0	25.6	
	50300225	CONCRETE STRUCTURES	CU YD		66.4	66.4	
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	1.2		1.2	
	50800205	REINFORCEMENT REBARS, EPOXY COATED	POUND	820	4,290	5,110	
	50800515	BAR SPLICERS	EACH	11		11	
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	72		72	
*	JS125091	REPLACEMENT OF ANCHOR BLOCK CONCRETE	EACH	34		34	
*	JS120815	CLEAN EXISTING SCUPPER	EACH	18		18	
*	JS121200	LOW PRESSURE EPOXY INJECTION	FOOT		15	15	
*	JT131469	PIGEON INTRUSION BARRIER	EACH	4		4	
*	JT503012	ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ YD	38		38	
*	JT503022	ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	20		20	
*	JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	25	264	289	
*	JT503100	FIBER WRAP REPAIR	SQ FT	552	490	1,052	
	JT524010	APPLY CONCRETE SEALANT	SQ FT	16,238	6,535	22,773	
*	JT525068	MODULAR EXPANSION JOINT STRIP SEAL REPLACEMENT, 6 IN	FOOT	60		60	
GBSP	X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ FT	187	160	347	
**	X0326331	CLEANING AND PAINTING BEARINGS	EACH	8		8	

* ILLINOIS TOLLWAY SPECIAL PROVISION ITEM
** IDOT SPECIAL PROVISION ITEM
GBSP IDOT GUIDE BRIDGE SPECIAL PROVISION ITEM

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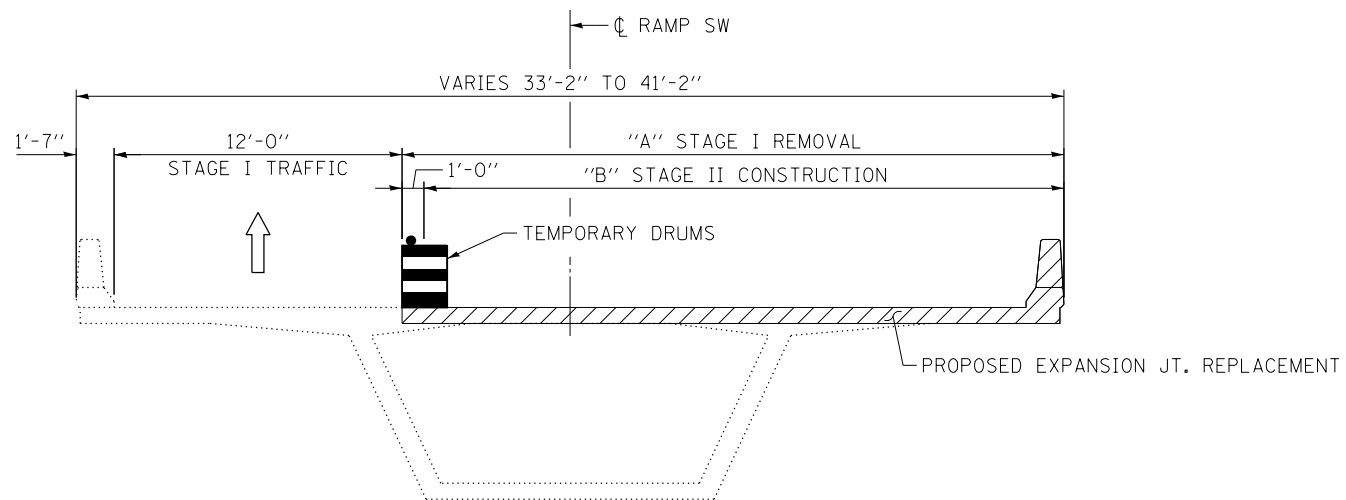
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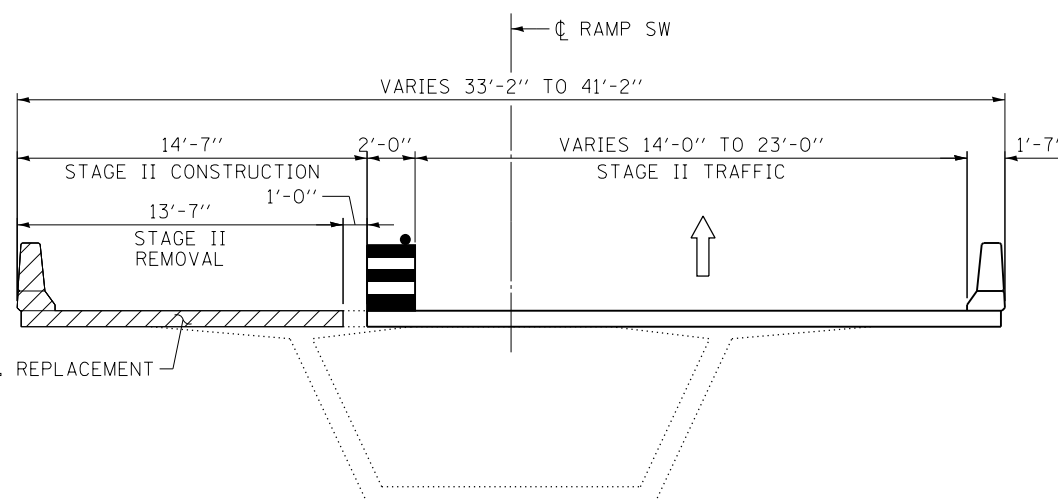
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CONTRACT NO. RR-16-4255
BRIDGE 1439 (SW) S.N. 022-9970
INDEX OF SHEETS & BOM

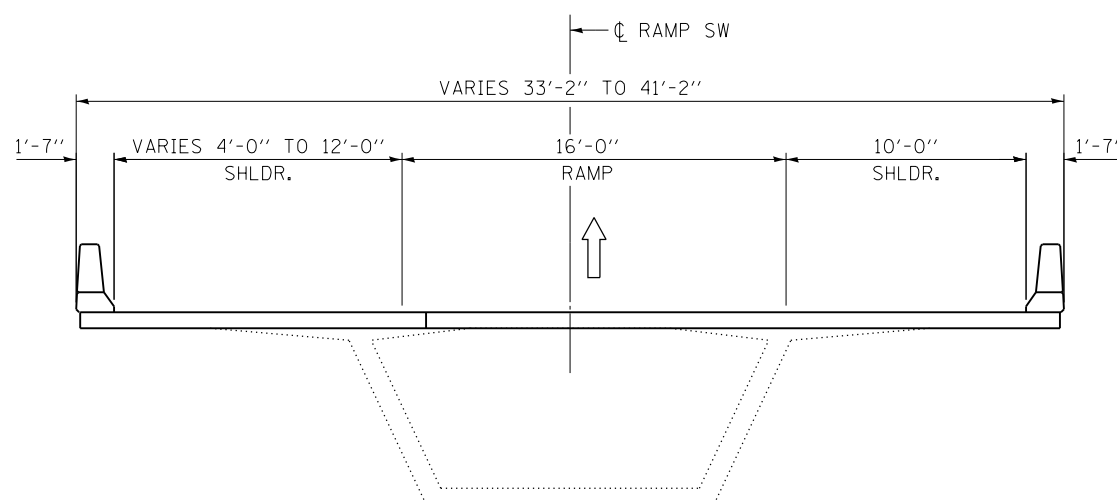
SH-04 OF SH-42
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STAGE I REHABILITATION
(LOOKING SOUTH)



STAGE II REHABILITATION
(LOOKING SOUTH)



TYPICAL SECTION
(LOOKING SOUTH)

DIMENSIONS

STAGING DIMENSIONS		
LOCATION	"A"	"B"
SOUTH ABUTMENT	19'-7"	18'-7"
NORTH ABUTMENT	27'-7"	26'-7"

STAGE CONSTRUCTION NOTES:

THE CONSTRUCTION WIDTH SHOWN IS THE MAXIMUM RANGE FROM THE TEMPORARY TYPE II BARRICADE. THE ACTUAL REHABILITATION WIDTH SHALL BE ADJUSTED IN THE FIELD.

SEE IDOT STANDARD 701601-09 FOR DETAILS OF MAINTENANCE OF TRAFFIC.

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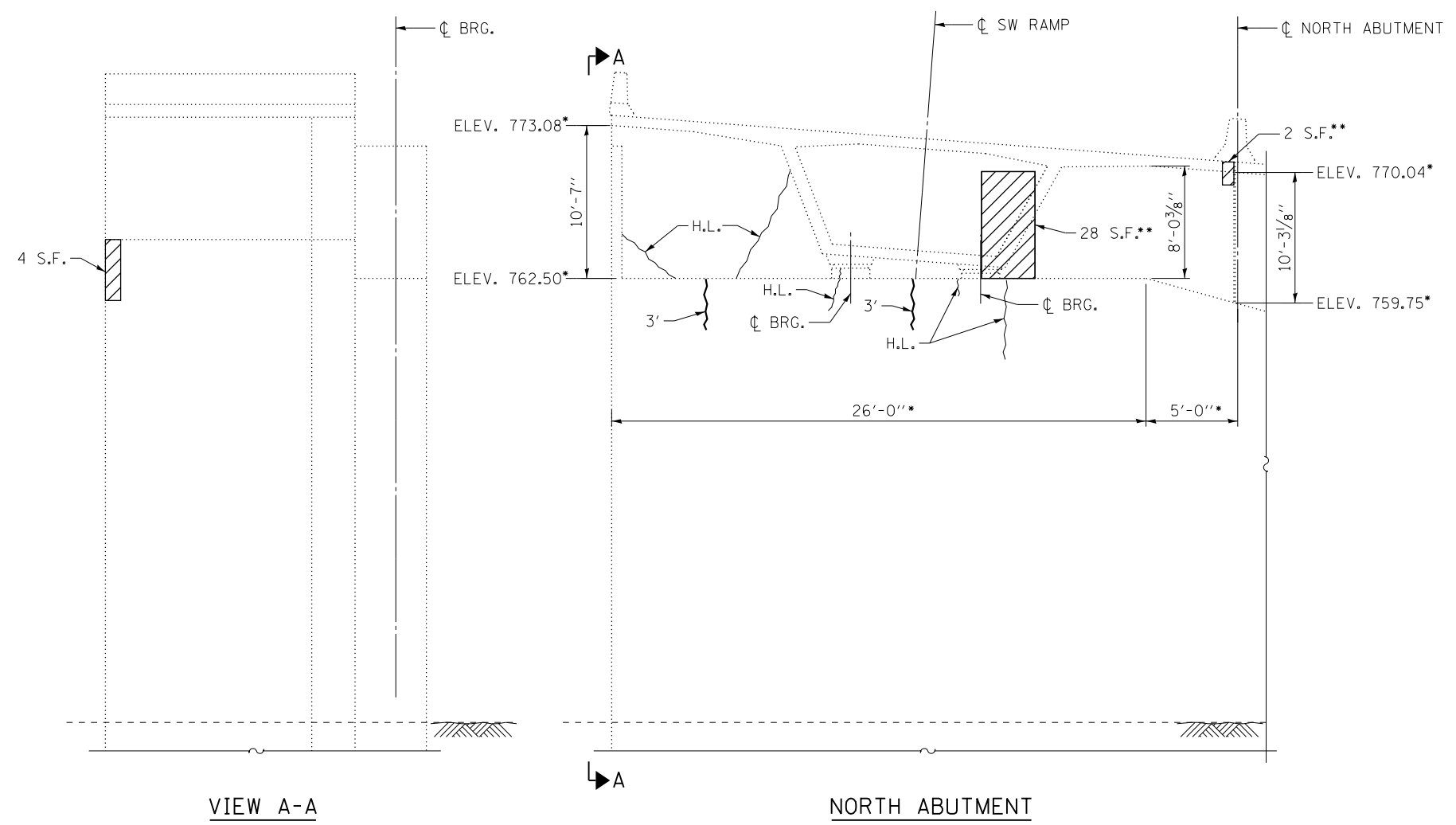
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 BRIDGE 1439 (SW) S.N. 022-9970
 CONSTRUCTION STAGING

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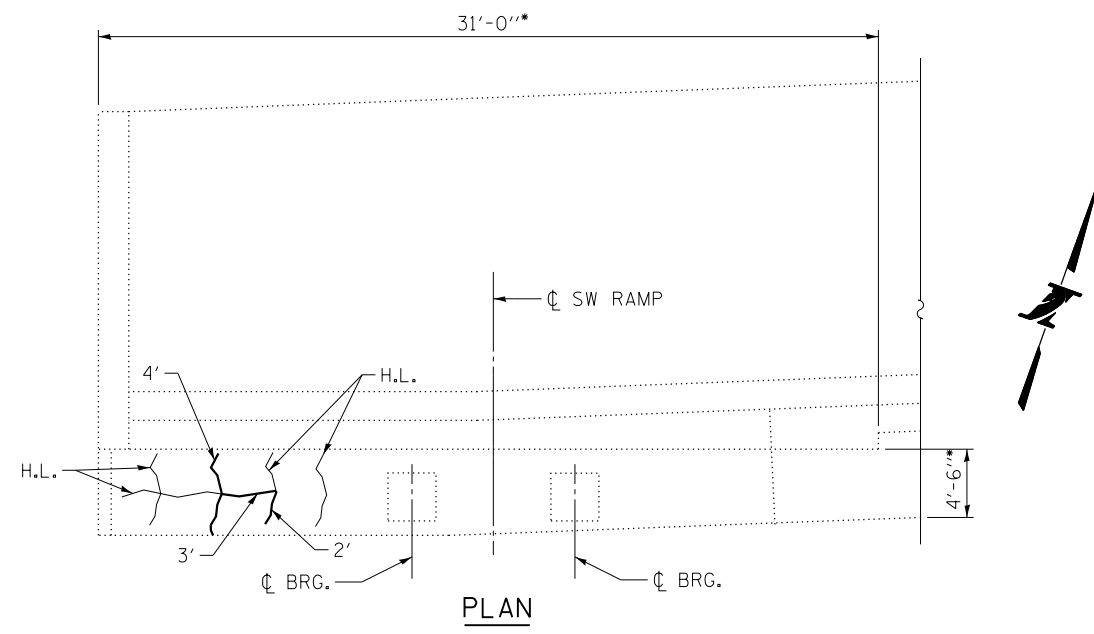


**DEFECTS ARE ON BACKWALL

NOTES:
 CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.
 REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 *APPLY CONCRETE SEALANT ON ABUTMENT SEAT AND ABUTMENT BACKWALL.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SO. FT.	34
LOW PRESSURE EPOXY INJECTION	FOOT	15
APPLY CONCRETE SEALANT	SO. FT.	428



LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- 3' — LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"
- H.L. — HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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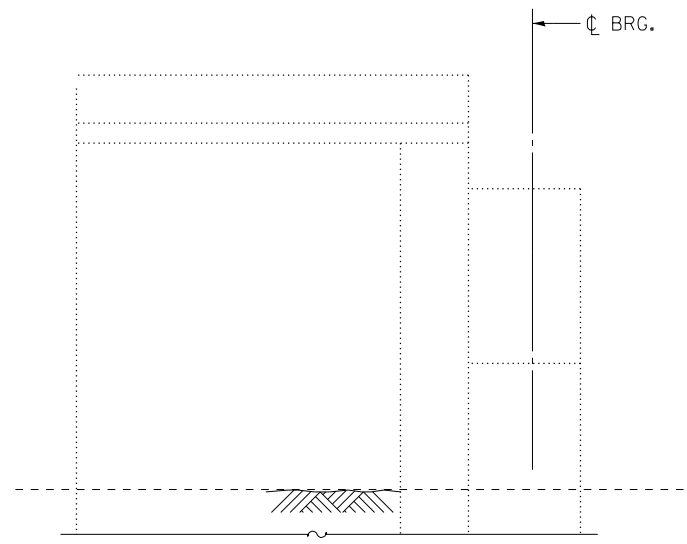
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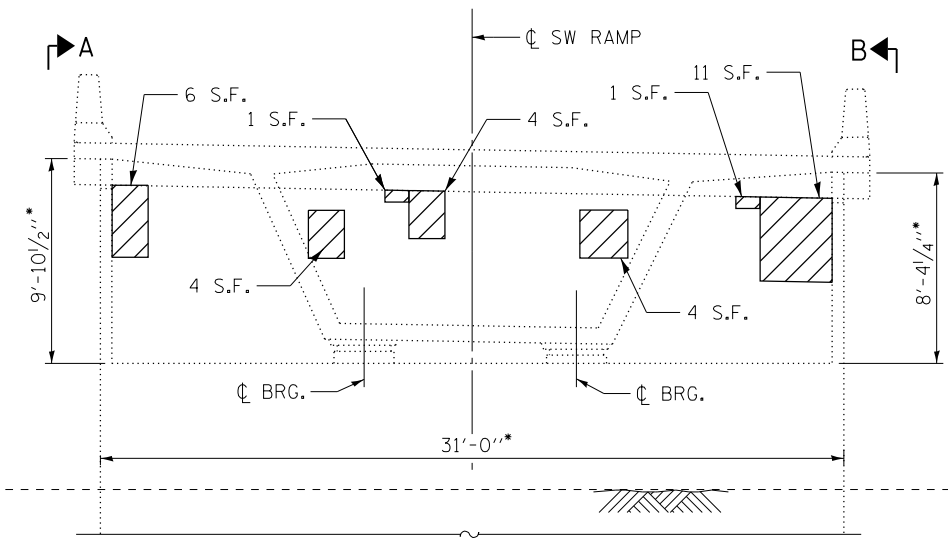
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 BRIDGE 1439 (SW) S.N. 022-9970
 NORTH ABUTMENT REPAIRS

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 1153 OF 1517

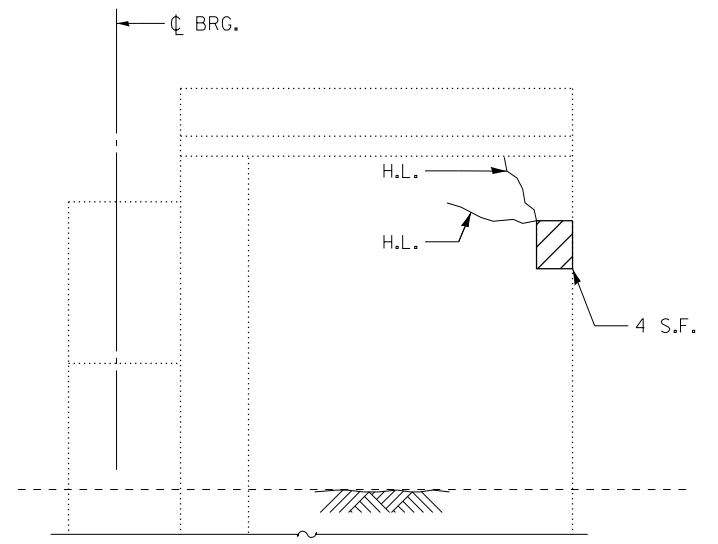
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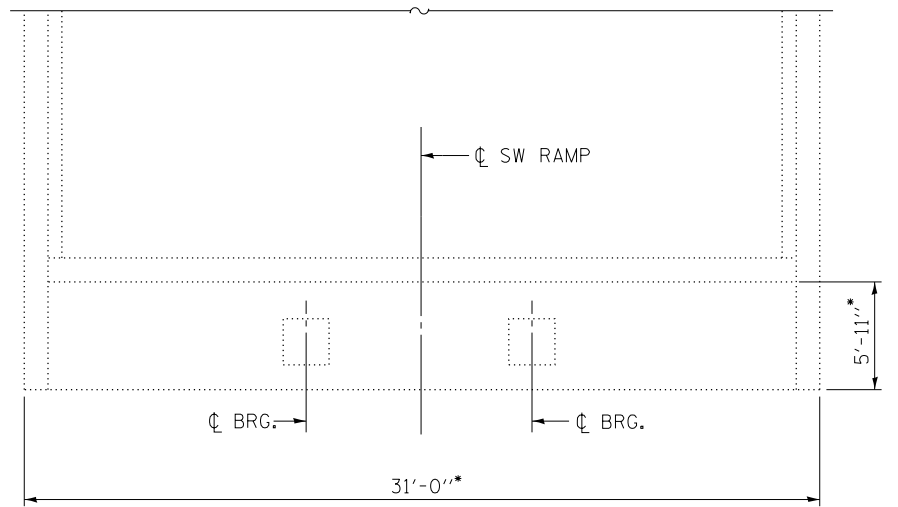
VIEW A-A



SOUTH ABUTMENT



VIEW B-B



PLAN

NOTES:
 CRACKS THAT ARE 1/8"± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.
 REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 *APPLY CONCRETE SEALANT ON ABUTMENT SEAT AND ABUTMENT BACKWALL.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	35
APPLY CONCRETE SEALANT	SQ. FT.	466

LEGEND:
 STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

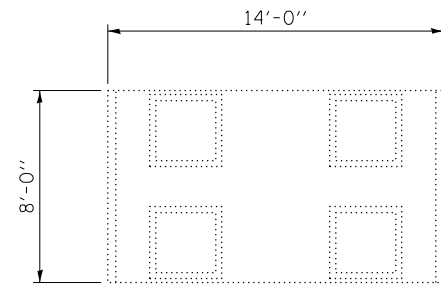
CG Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

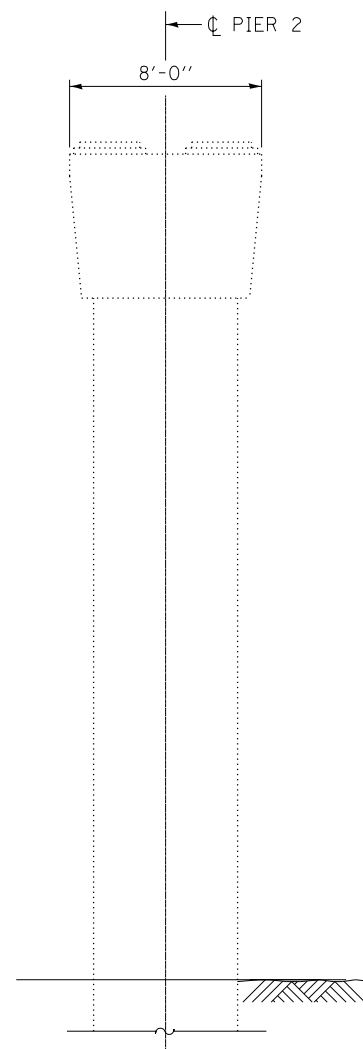
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 SOUTH ABUTMENT REPAIRS

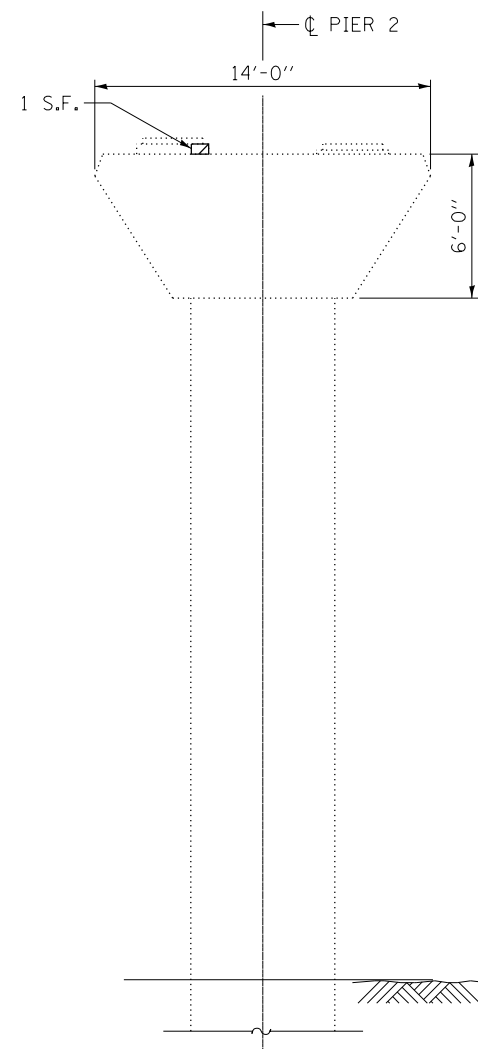
SH-07 OF SH-42
 SHT NO. SH-07
 DRAWING NO.
 1154 OF 1517



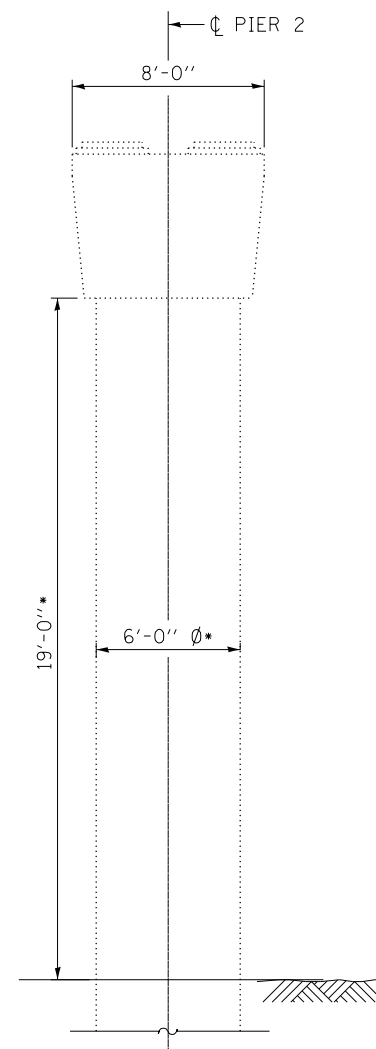
PIER CAP PLAN



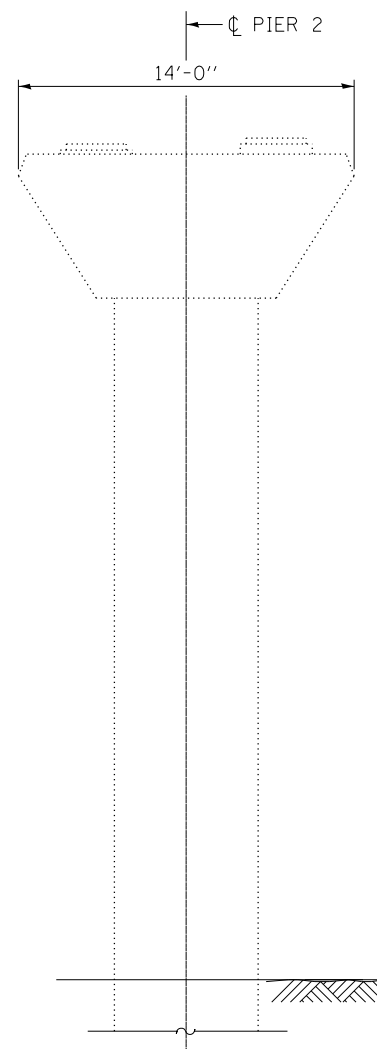
WEST FACE



NORTH FACE



EAST FACE



SOUTH FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 2 COLUMN.

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	1
APPLY CONCRETE SEALANT	SQ. FT.	359

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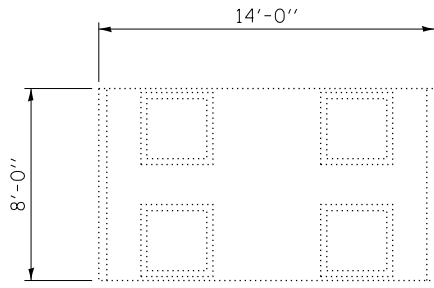
Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

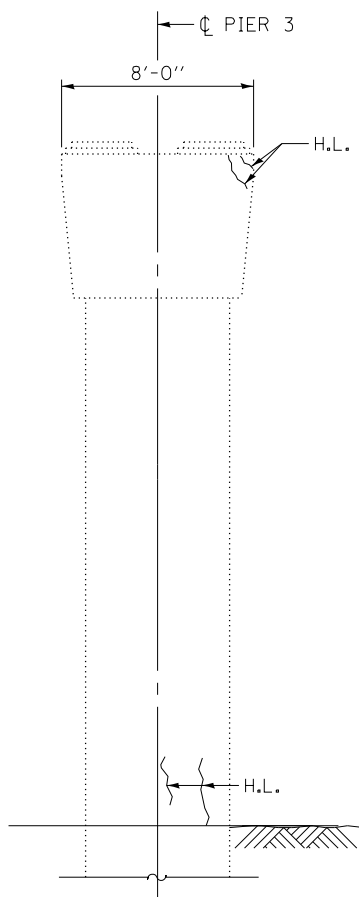
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIER 2 REPAIRS

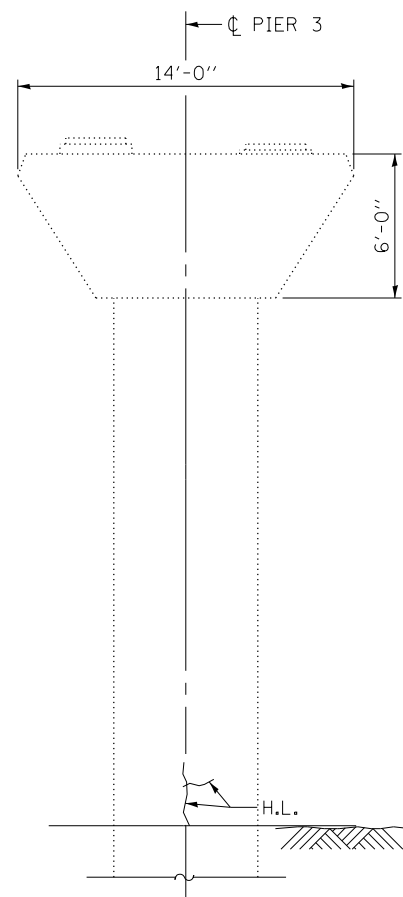
SH-09 OF SH-42
 SHT NO. SH-09
 DRAWING NO.
 1156 OF 1517



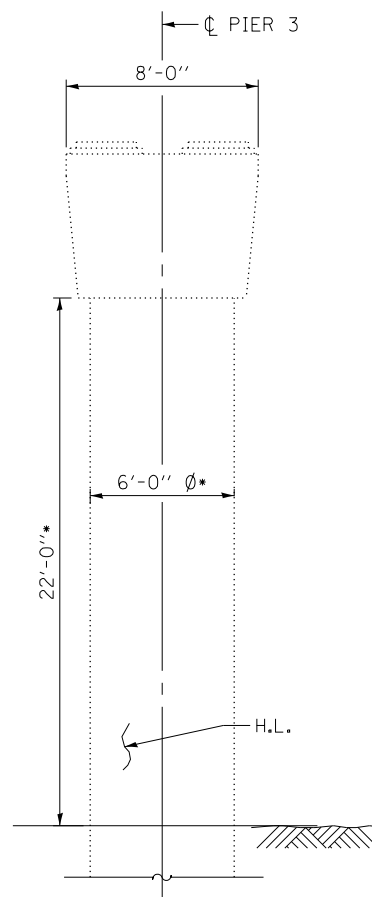
PIER CAP PLAN



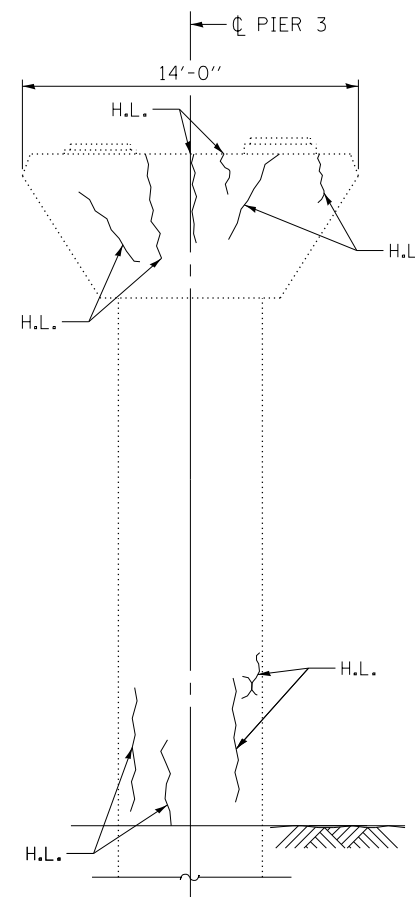
WEST FACE



NORTH FACE



EAST FACE



SOUTH FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

* APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 3 COLUMN.

LEGEND:

H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	415

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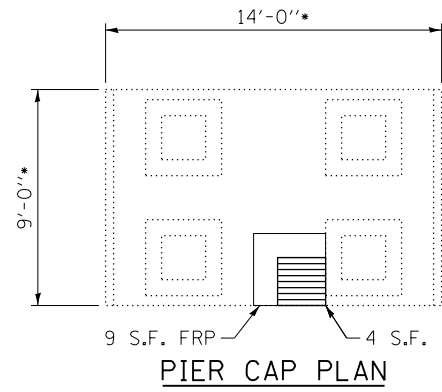
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 Suite 402 Chicago, Illinois 60656
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 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIER 3 REPAIRS

SH-10 OF SH-42
 SHT NO. SH-10
 DRAWING NO.
 1157 OF 1517

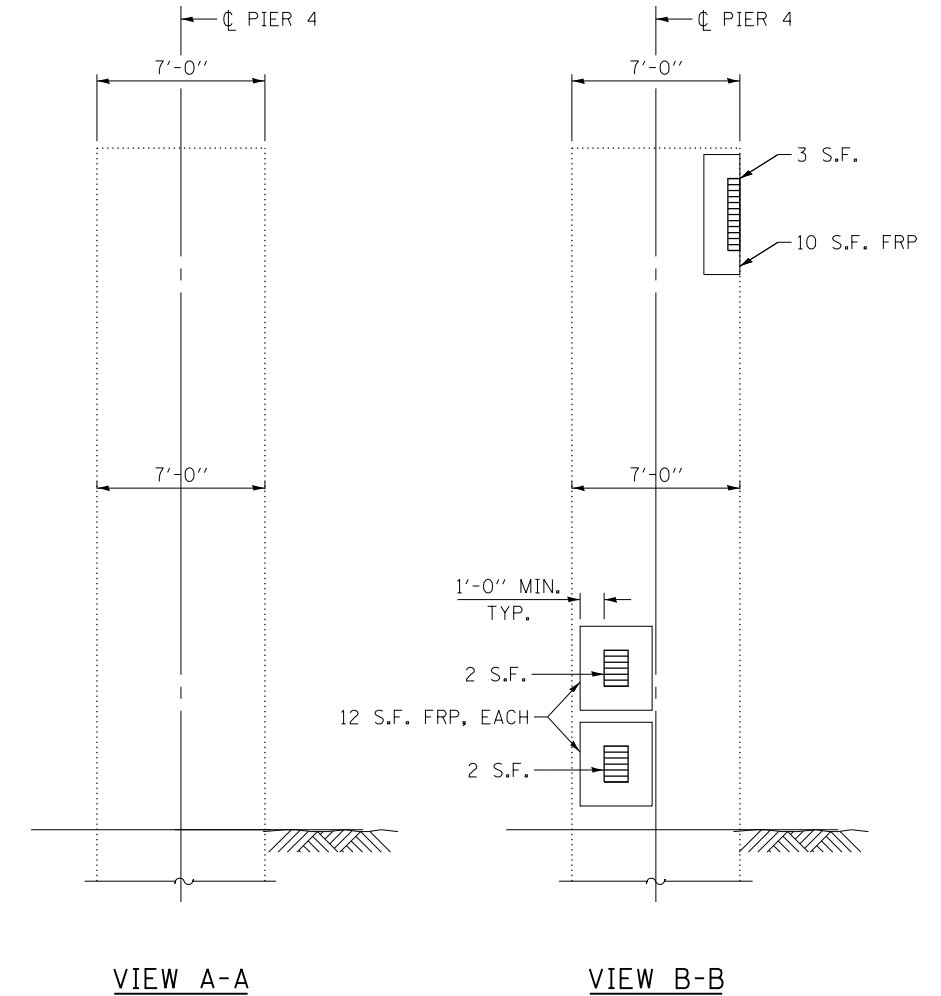
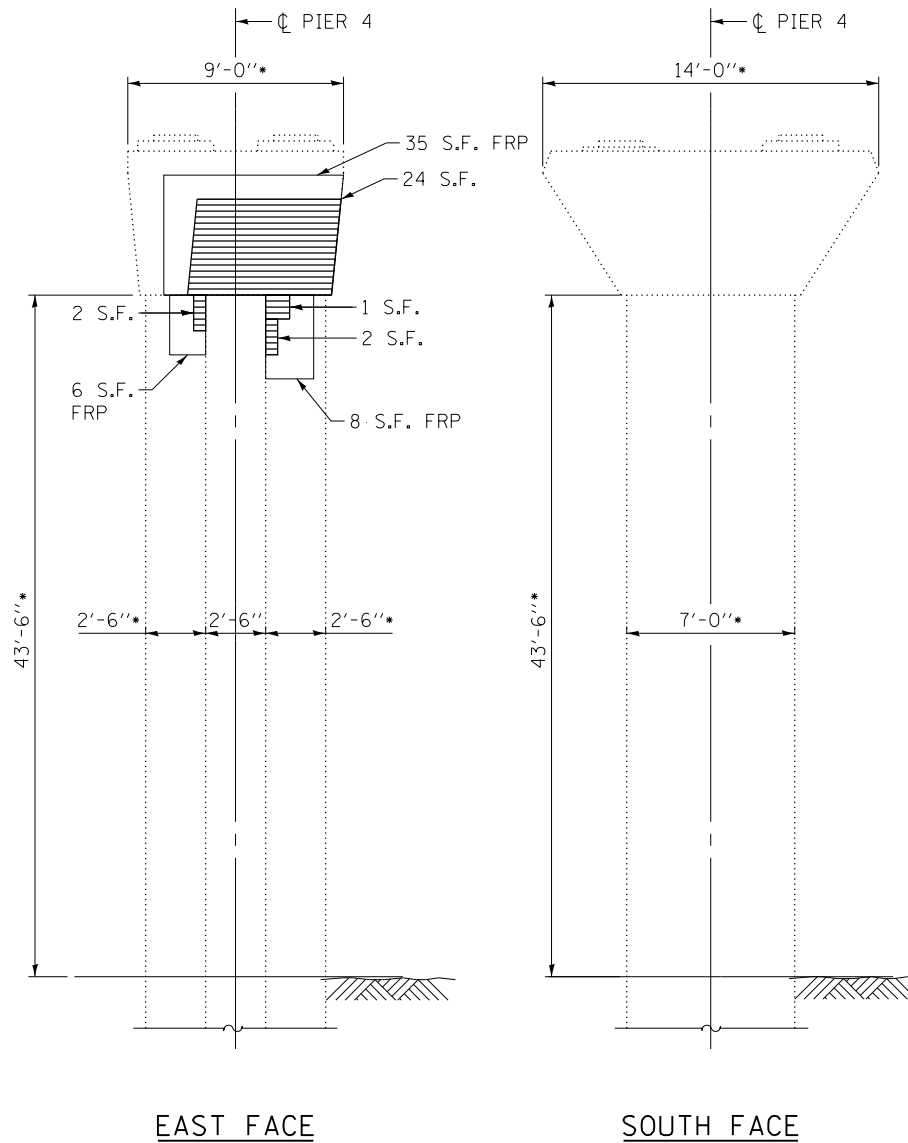
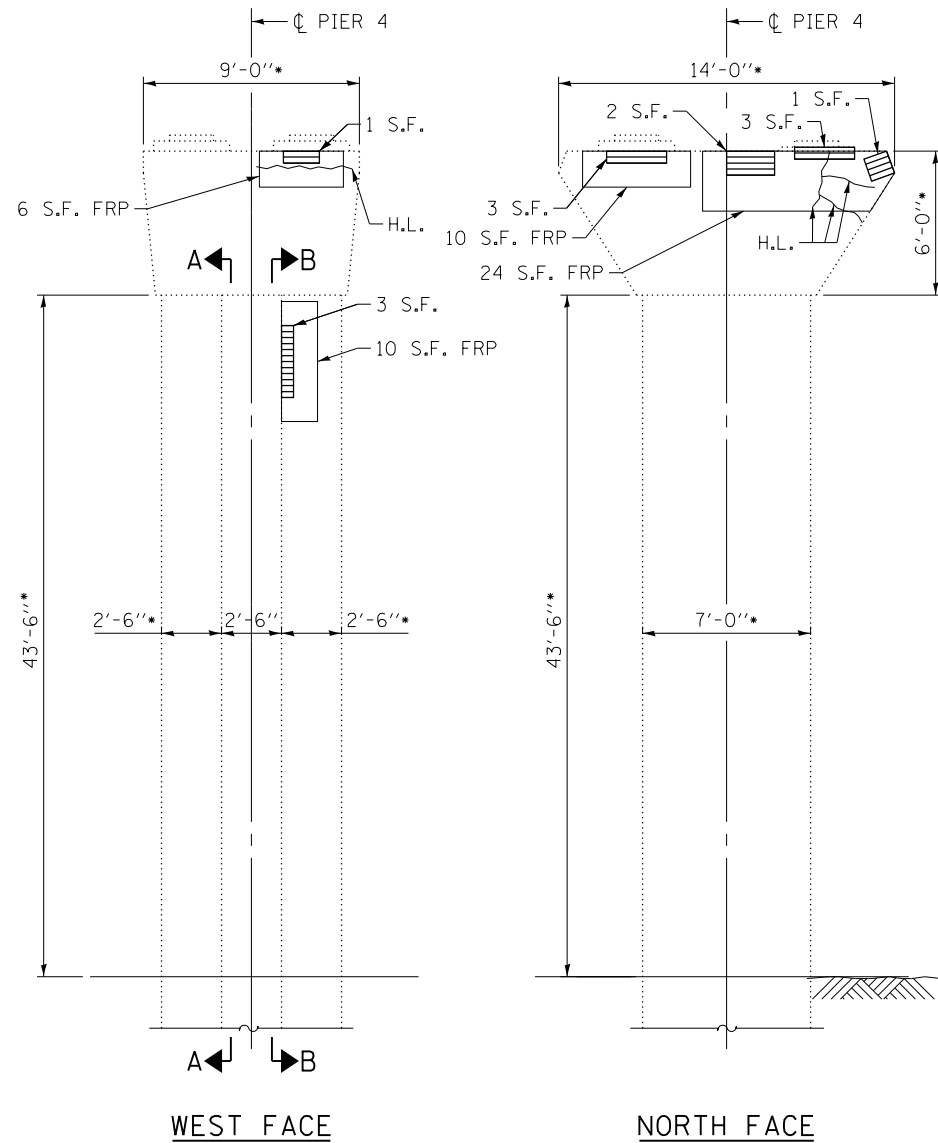


NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF THE INSPECTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 4 COLUMN.

APPLY FIBER WRAP AFTER COMPLETION OF STRUCTURAL REPAIRS. SEE SHEET SH-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.



LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SO. FT.	53
APPLY CONCRETE SEALANT	SO. FT.	1,395
FIBER WRAP REPAIR	SO. FT.	142

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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

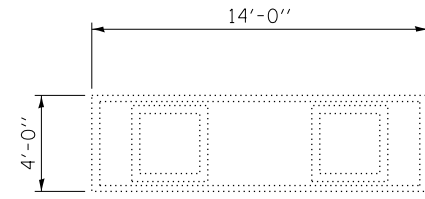
Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4009
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 Email: chicago@ciorba.com

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 DOWNERS GROVE,
 ILLINOIS 60515

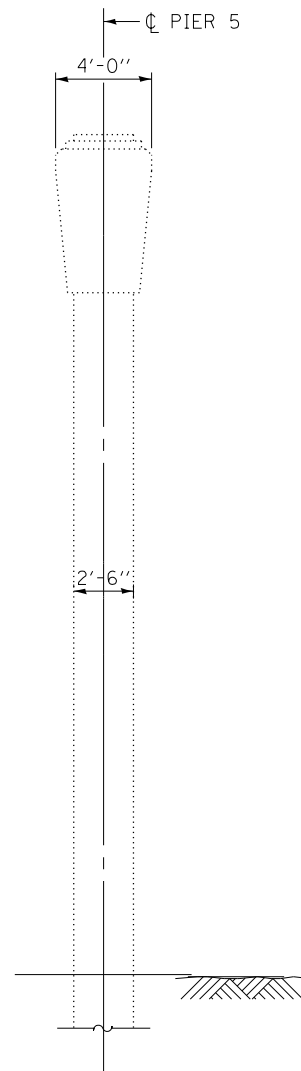
REVISIONS	
NO.	DATE

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIER 4 REPAIRS

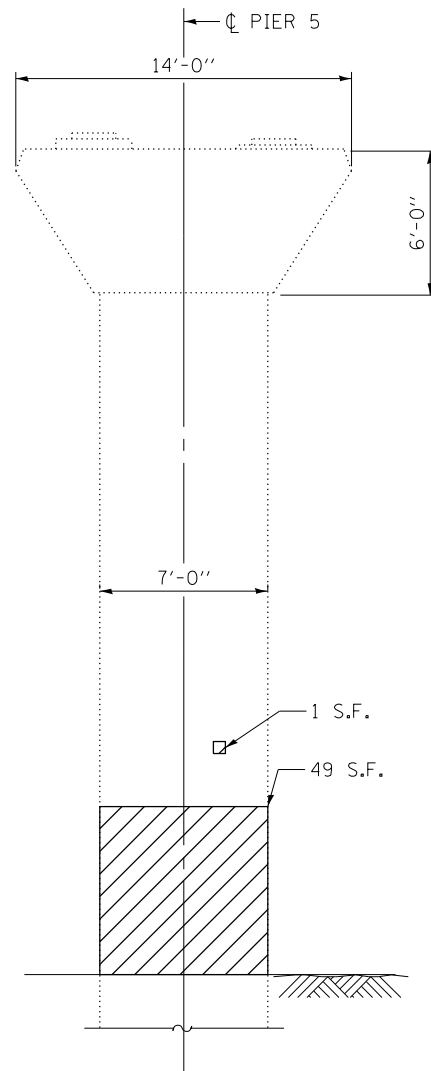
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 SHT NO. SH-11
 DRAWING NO.
 1158 OF 1517



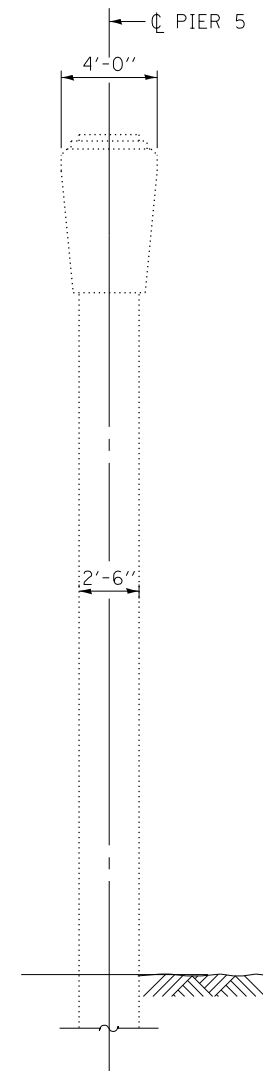
PIER CAP PLAN



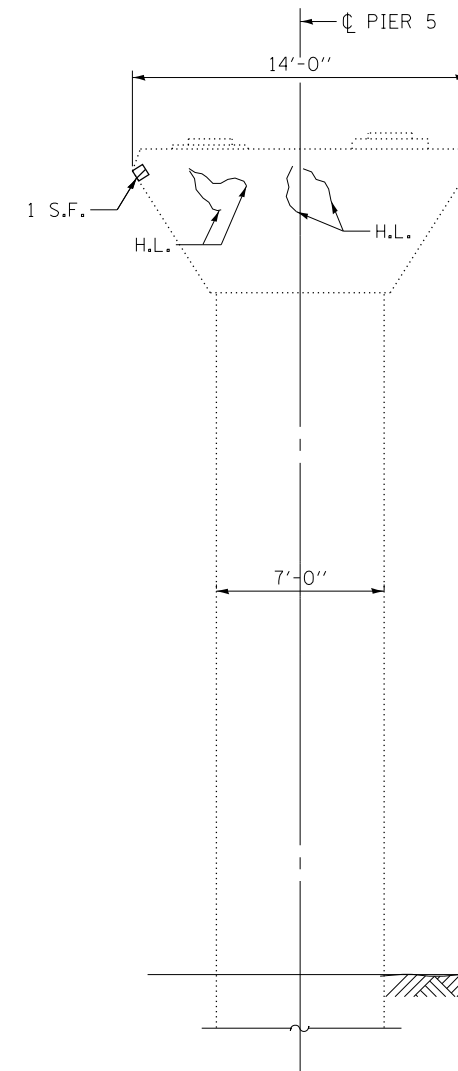
WEST FACE



NORTH FACE



EAST FACE



SOUTH FACE

NOTE:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL OR LESS THAN 5 IN)

HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	51

Projects\2016\20161616 - Veterans Memorial Tollway\Drawings\Current Drawings Files\4255\Structural\Sheet\4255-sh-1439-PIER-CG185.dgn

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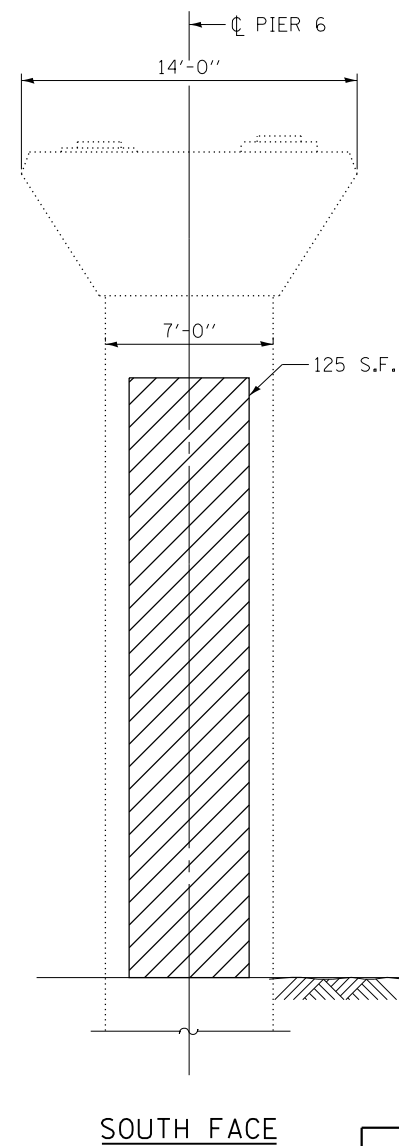
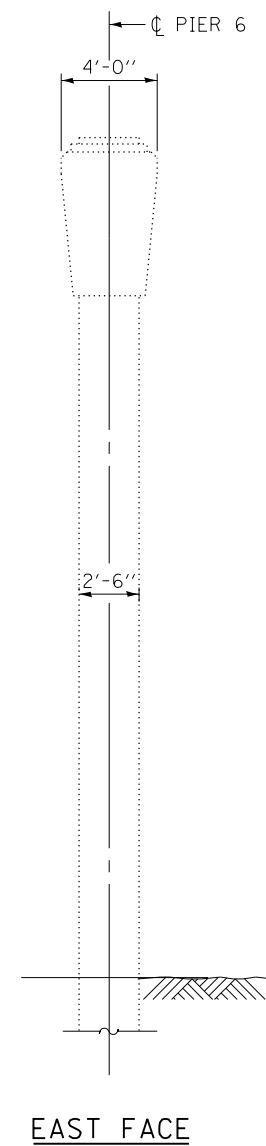
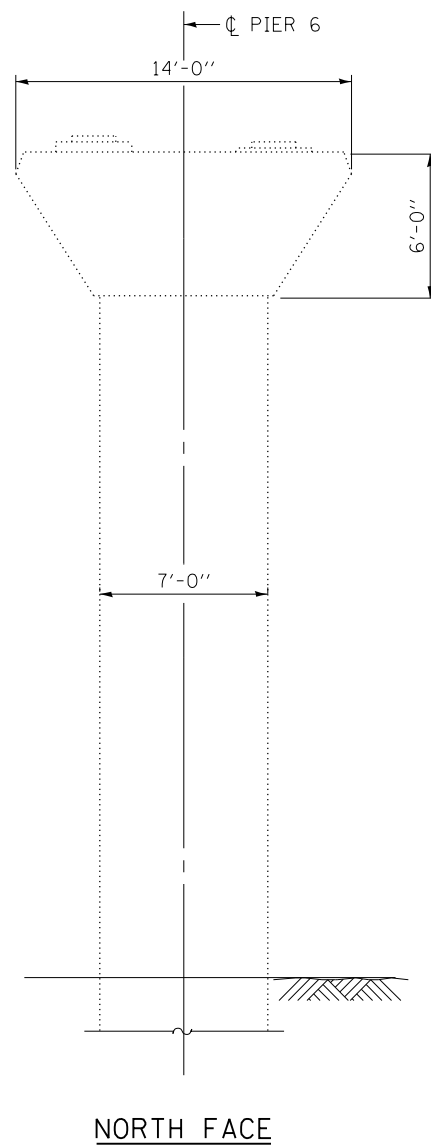
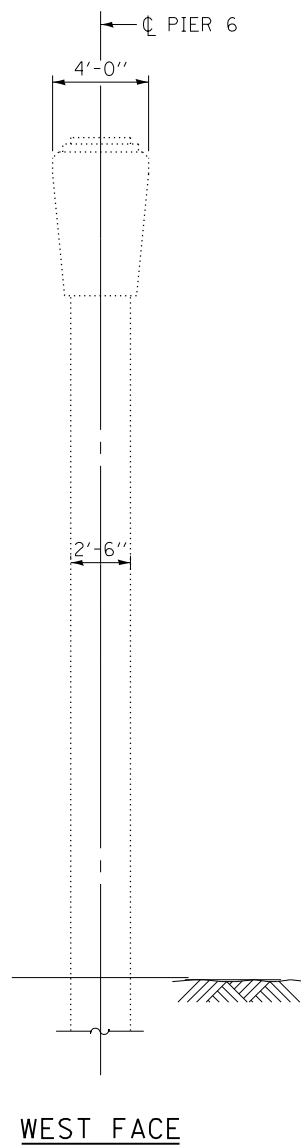
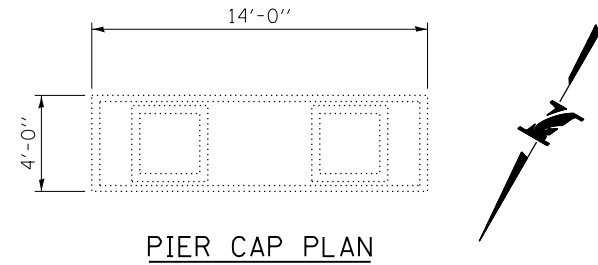
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIER 5 REPAIRS

SH-12 OF SH-42

SHT NO. SH-12
 DRAWING NO.
 1159 OF 1517



NOTE:
 REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

LEGEND:
 STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL OR LESS THAN 5 IN)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	125

Projects\2016\20161616_Veterans Memorial Tollway\Drawings\Current Drawing Files\4255\Structural\Sheet\4255-sh-13-139-1216-CGI06.dgn

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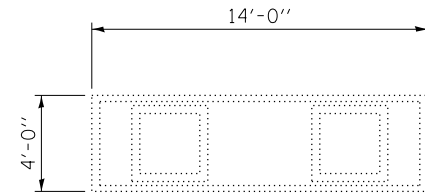
Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
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 Email: chicago@ciorba.com

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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

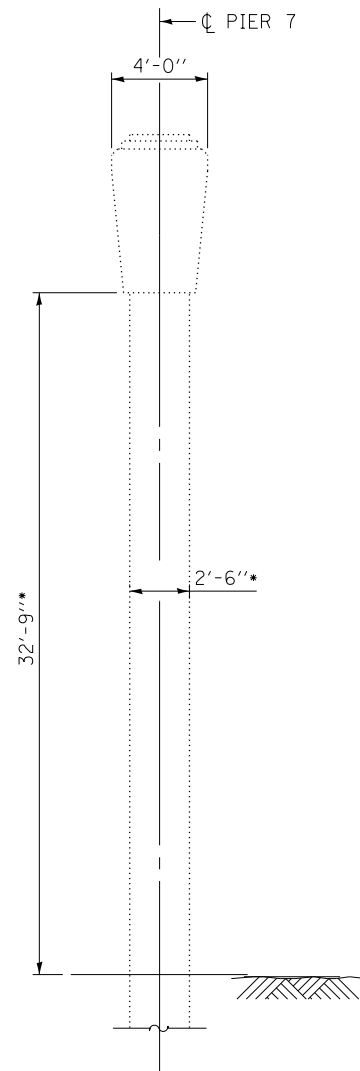
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NO.	DATE	DESCRIPTION

CONTRACT NO. **RR-16-4255**
BRIDGE 1439 (SW) S.N. 022-9970
PIER 6 REPAIRS

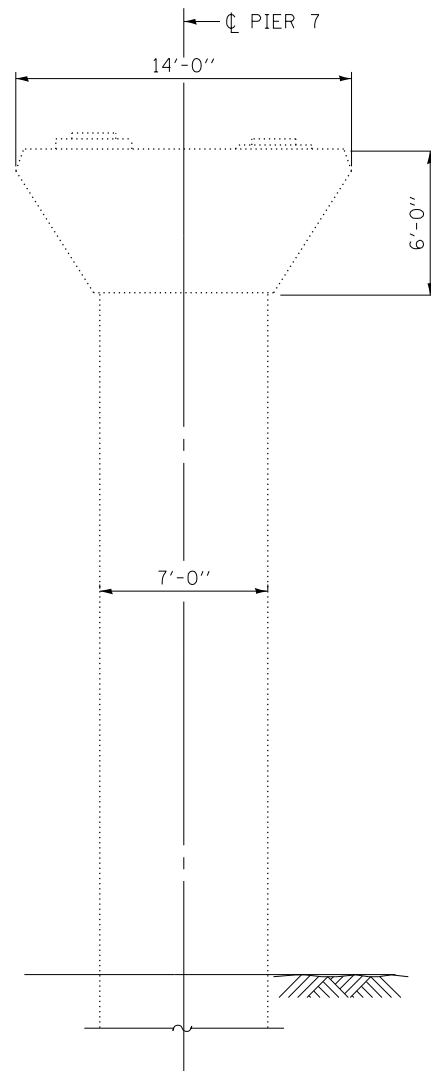
SH-13 OF SH-42
 SHT NO. SH-13
 DRAWING NO.
 1160 OF 1517



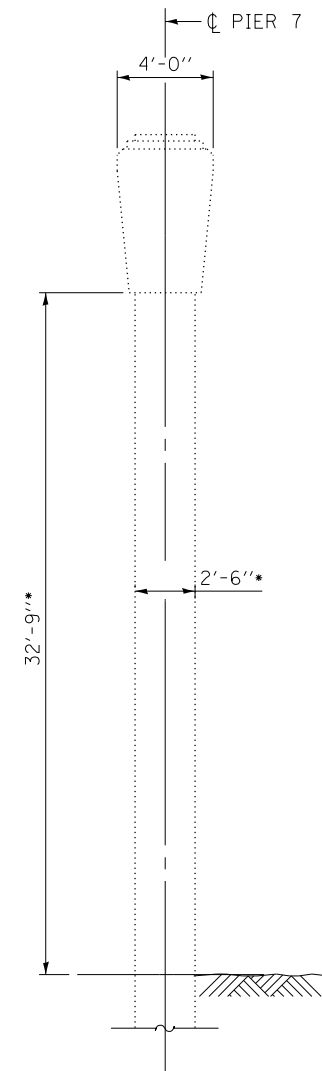
PIER CAP PLAN



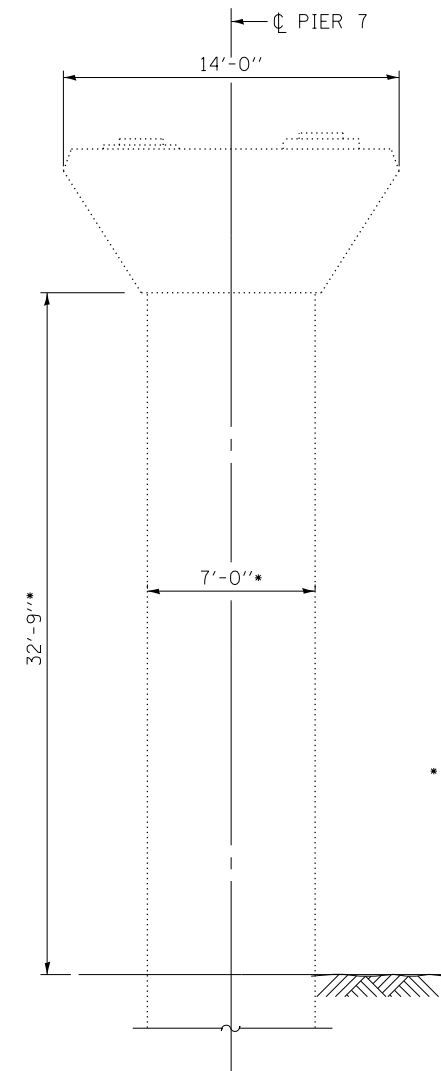
WEST FACE



NORTH FACE



EAST FACE



SOUTH FACE

NOTE:
* APPLY CONCRETE SEALANT ON SOUTH, EAST AND WEST EXPOSED FACES OF PIER 7 COLUMN.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	393

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 CHECKED BY BWS DATE 3/11/2018

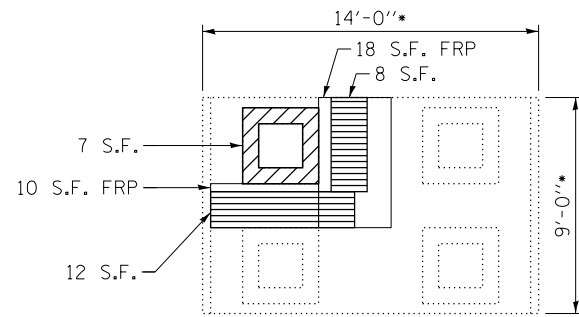

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 2700 OGDEN AVENUE
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 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIER 7 REPAIRS

SH-14 OF SH-42
 SHT NO. SH-14
 DRAWING NO.
 1161 OF 1517



PIER CAP PLAN

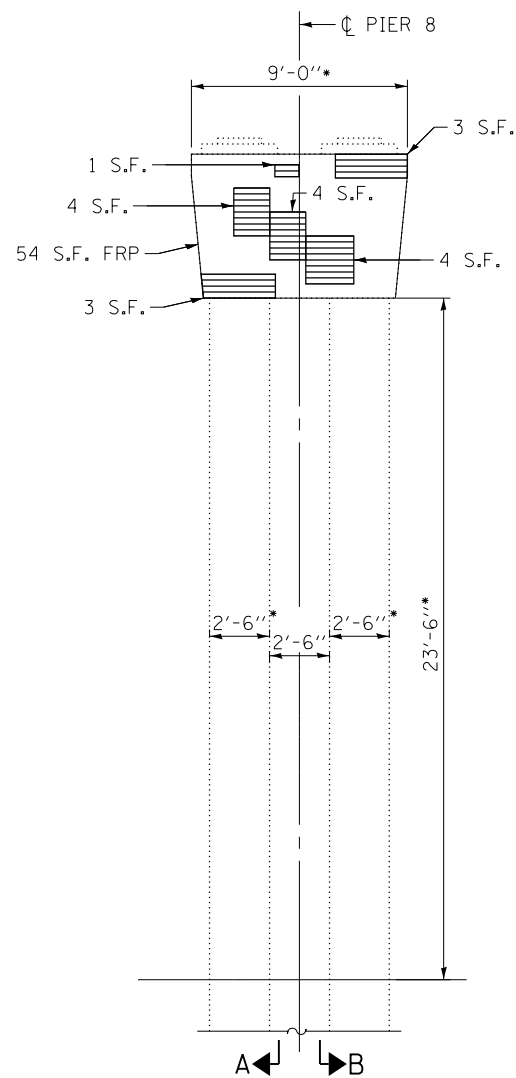


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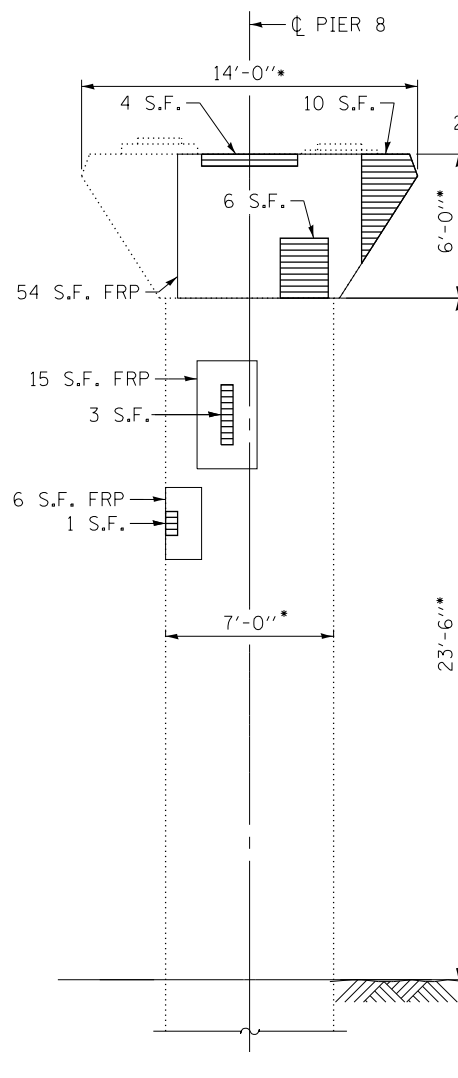
REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 8.

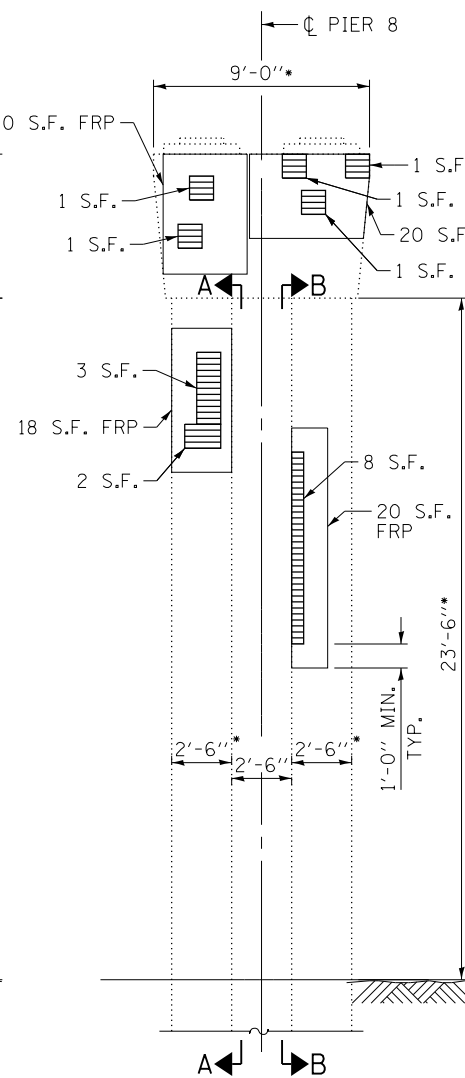
APPLY FIBER WRAP AFTER COMPLETION OF STRUCTURAL REPAIRS. SEE SHEET SH-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.



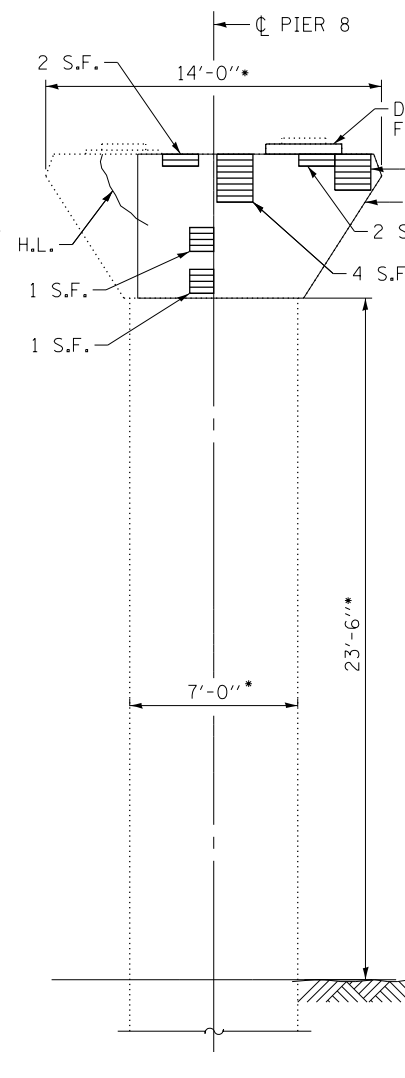
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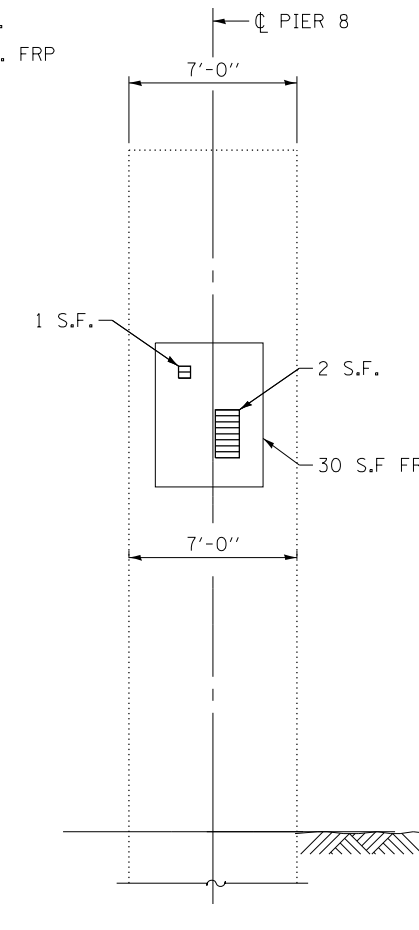
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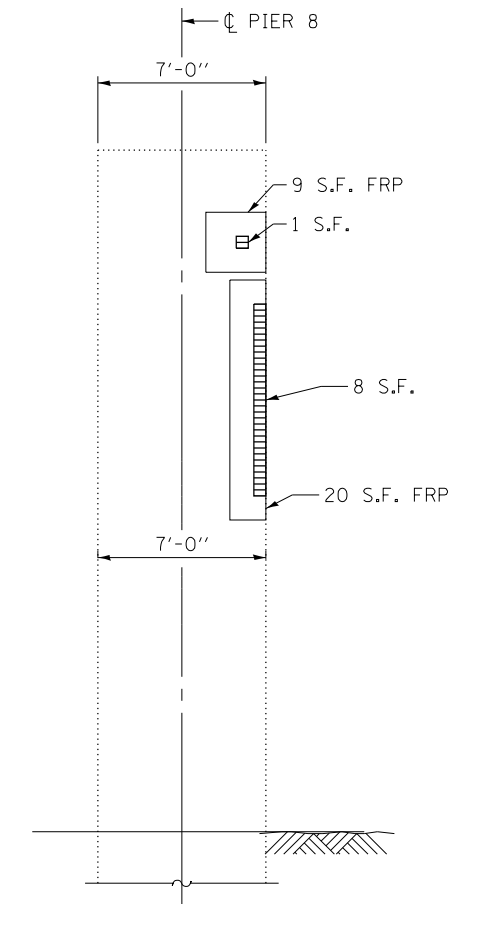
WEST FACE



SOUTH FACE



VIEW A-A



VIEW B-B

LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL OR LESS THAN 5 IN)
- H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	7
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	107
APPLY CONCRETE SEALANT	SQ. FT.	915
FIBER WRAP REPAIR	SQ. FT.	348

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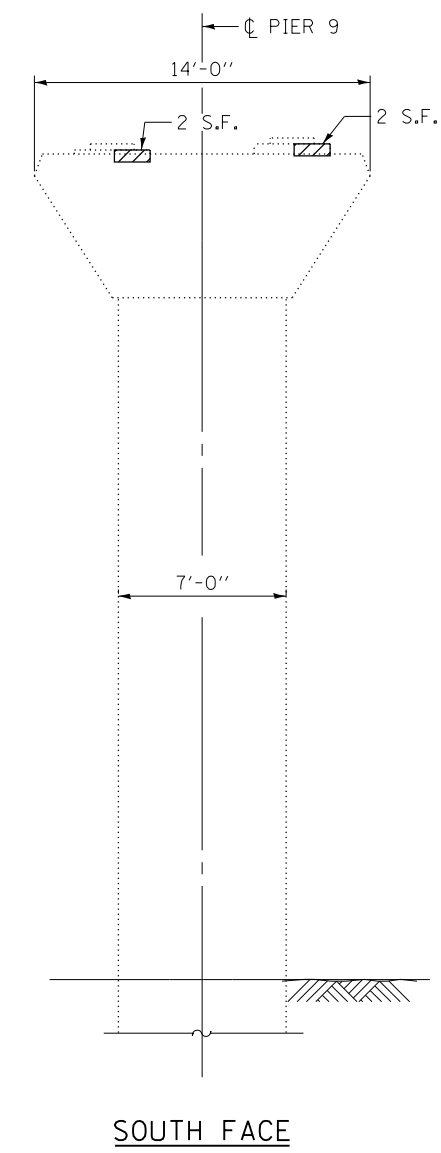
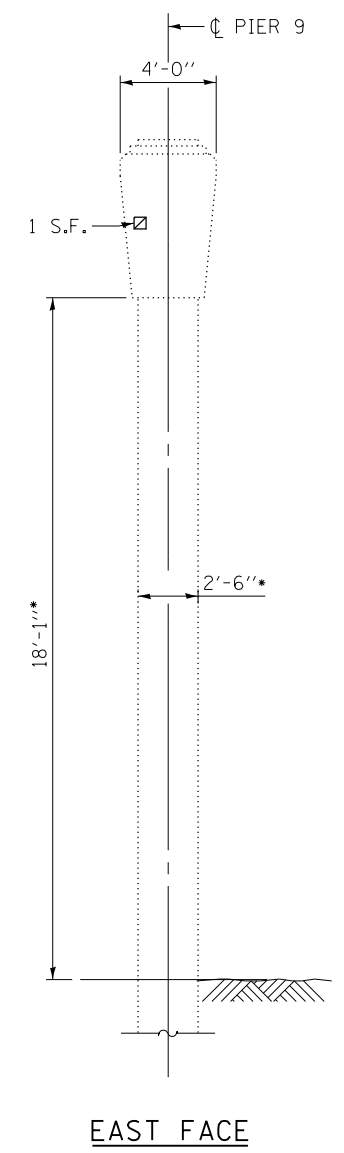
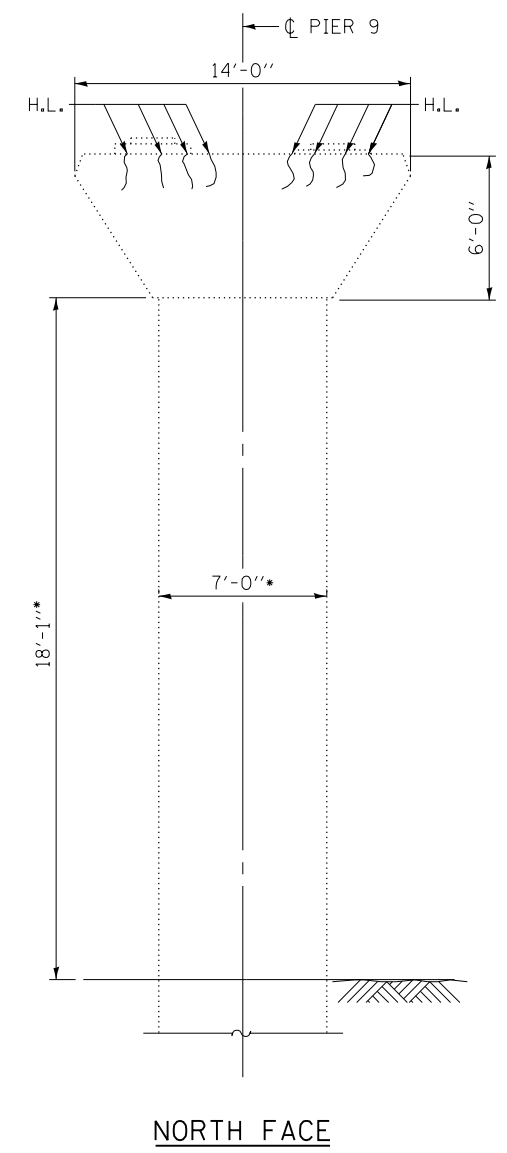
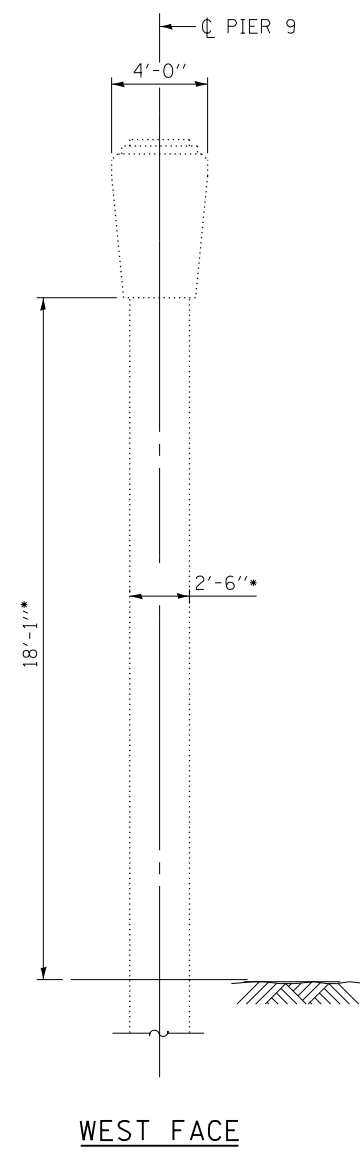
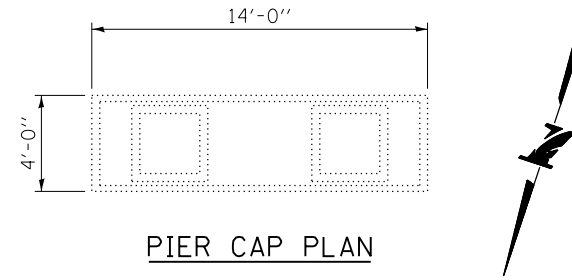
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 Fax 773.775.4014
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 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIER 8 REPAIRS

SH-15 OF SH-42
 SHT NO. SH-15
 DRAWING NO.
 1162 OF 1517



NOTES:
 REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 *APPLY CONCRETE SEALANT ON NORTH, EAST AND WEST EXPOSED FACES OF PIER 9 COLUMN.

LEGEND:
 STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 H.L. — } HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	5
APPLY CONCRETE SEALANT	SQ. FT.	217

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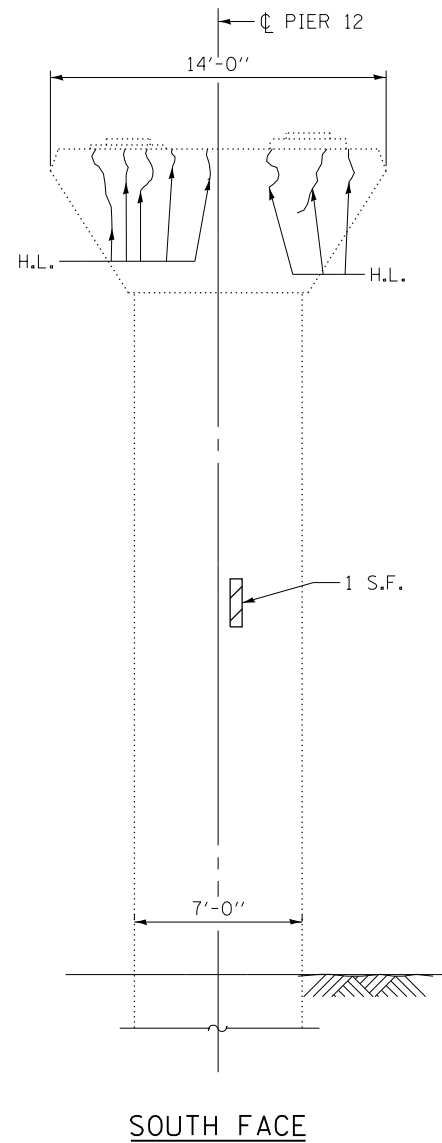
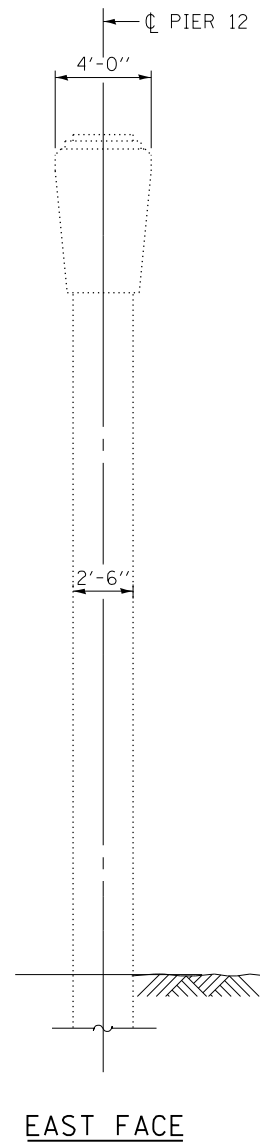
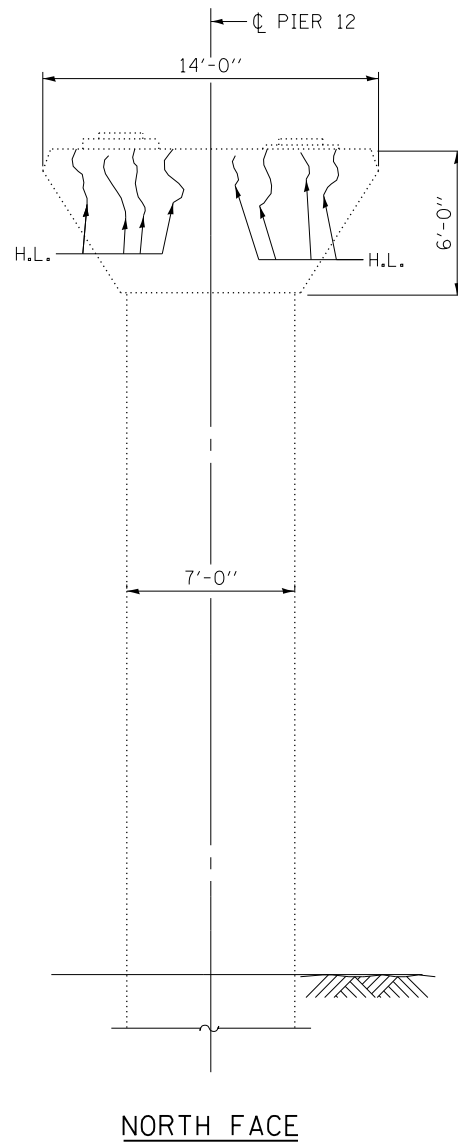
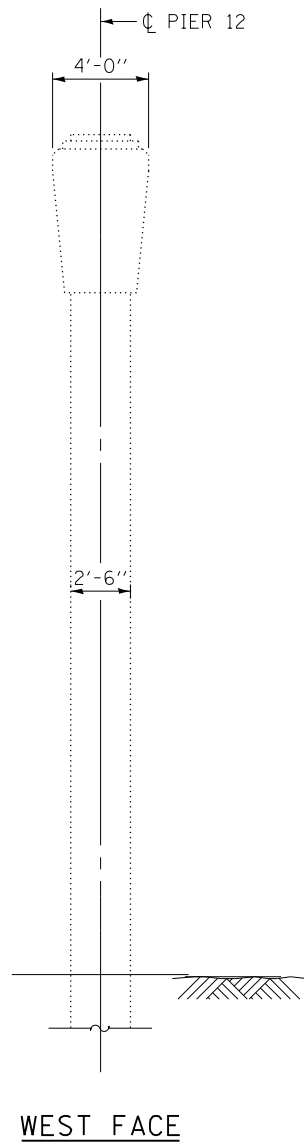
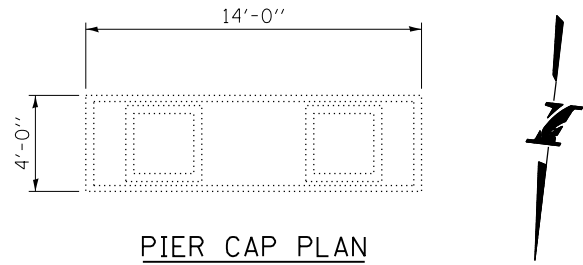
Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

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 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIER 9 REPAIRS

SH-16 OF SH-42
 SHT NO. SH-16
 DRAWING NO.
 1163 OF 1517



NOTE:
 REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL OR LESS THAN 5 IN)

H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	1

Projects\2016\20161616_Veterans Memorial Tollway\Drawings\Current Drawing Files\4255\Structural\Sheet\4255-sh-1439-pier-CG10.dgn

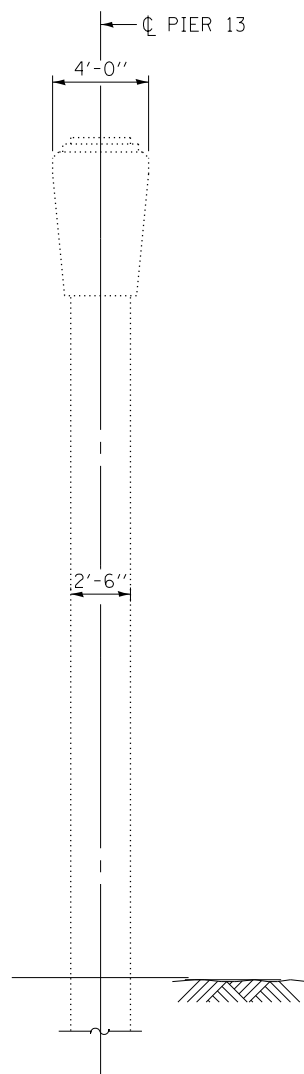
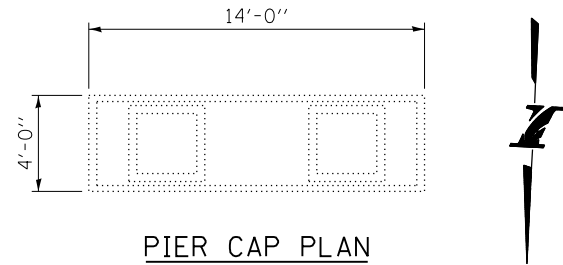
DRAWN BY **SBA** DATE **3/11/2018**
 CHECKED BY **BWS** DATE **3/11/2018**

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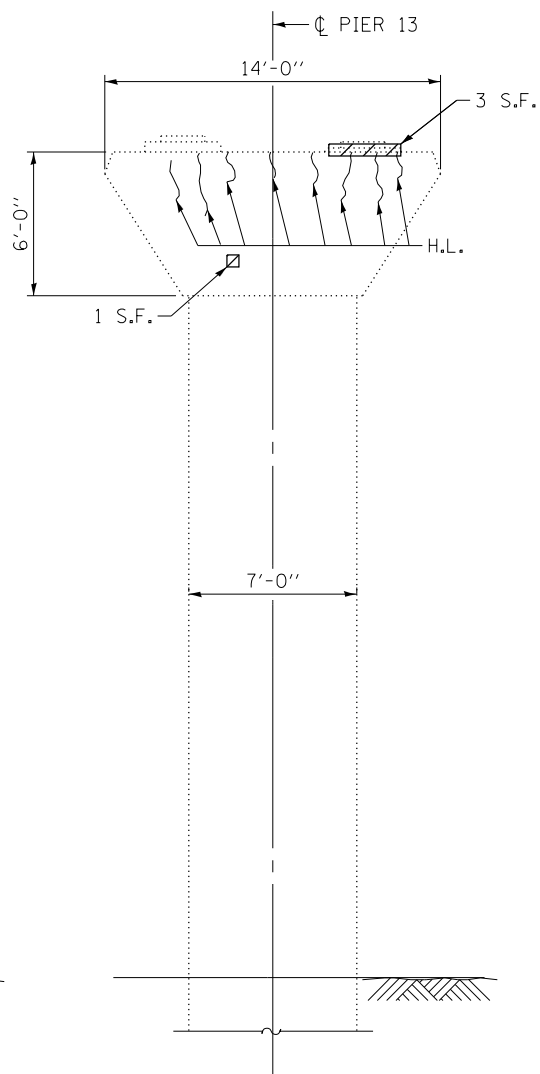
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

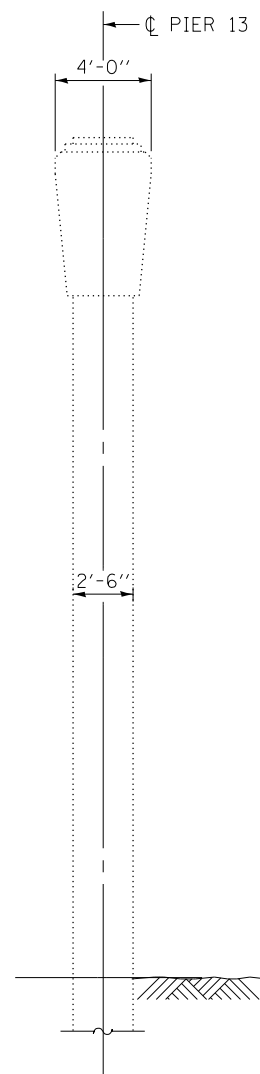
SH-17 OF SH-42
CONTRACT NO. RR-16-4255
BRIDGE 1439 (SW) S.N. 022-9970
PIER 12 REPAIRS
 SHT NO. SH-17
 DRAWING NO.
 1164 OF 1517



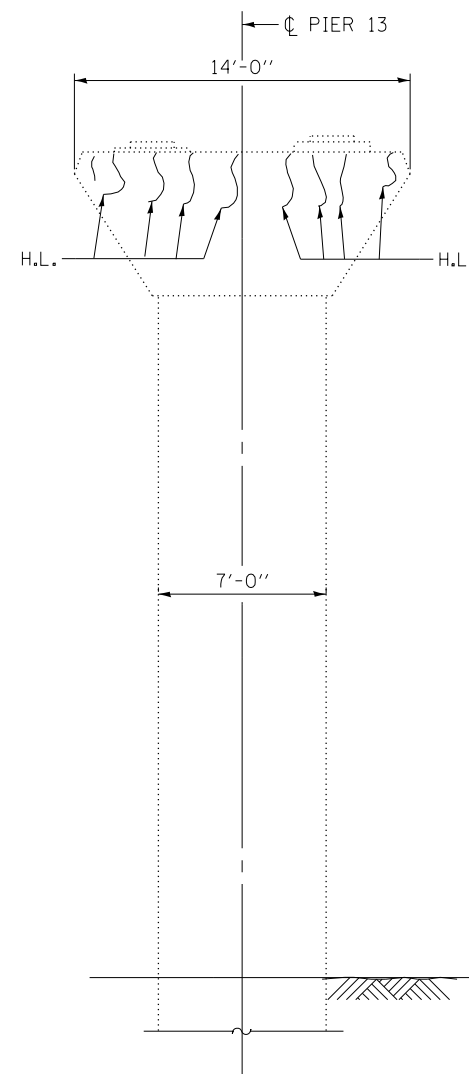
WEST FACE



SOUTH FACE



EAST FACE



NORTH FACE

NOTE:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL OR LESS THAN 5 IN)
- H.A.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	4

Projects\2016\20161616 - Veterans Memorial Tollway\Drawings\Current Drawings Files\2016\Structural\Sheet\2016-1439-RR-16-4255-SHT-18.dgn

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



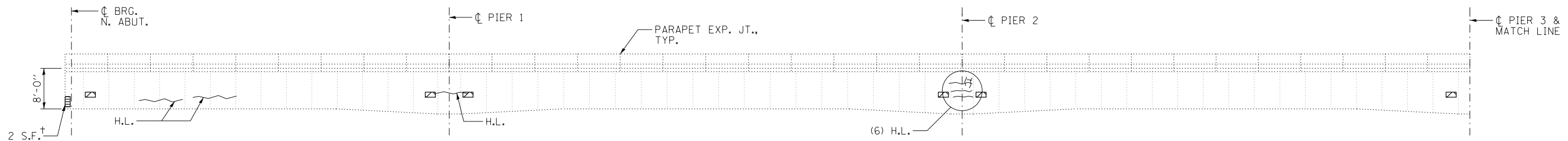
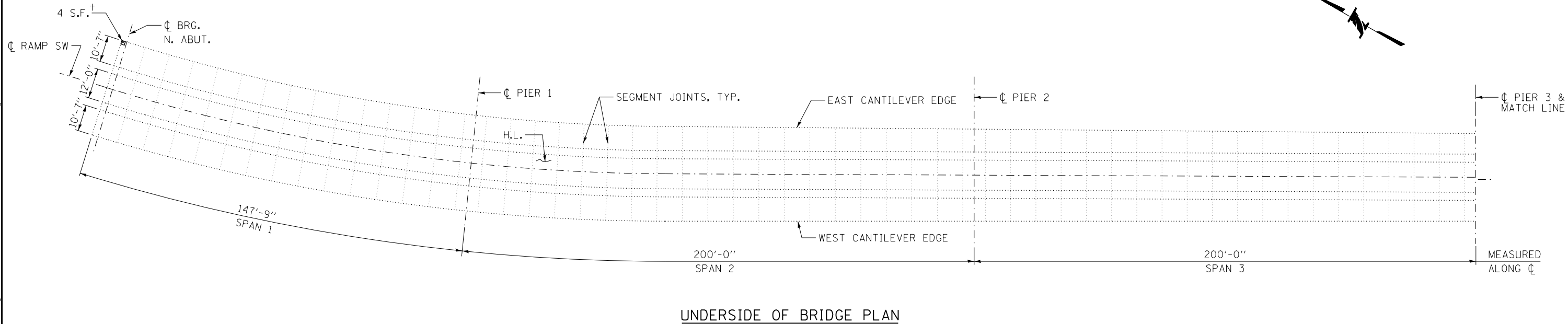
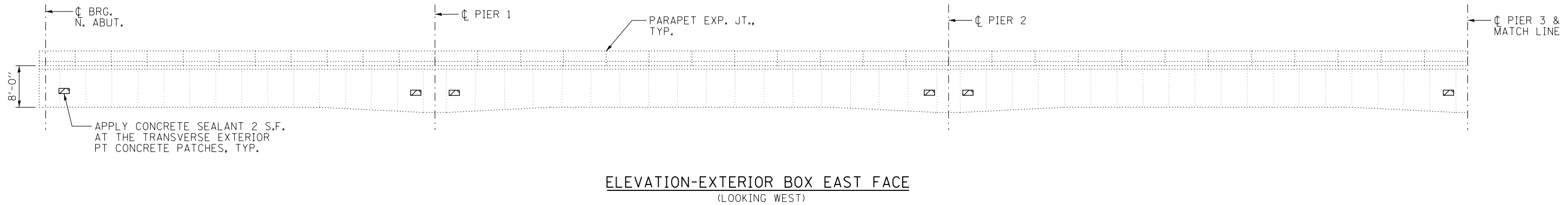
Ciorba Group, Inc.
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIER 13 REPAIRS



NOTES:

REPAIRS OF THE EXISTING EXTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

APPLY FIBER WRAP REPAIRS UPON COMPLETION OF STRUCTURAL REPAIRS.

FOR BILL OF MATERIAL, SEE SHEET SH-22.

† APPLY FIBER WRAP AROUND DEFECTS AT A 1'-0" CLEARANCE EXCEPT AT THE STRUCTURE EDGES, SEE SHEET SH-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.

LEGEND:

	POLYMER MODIFIED PORTLAND CEMENT MORTAR
	APPLY CONCRETE SEALANT
	HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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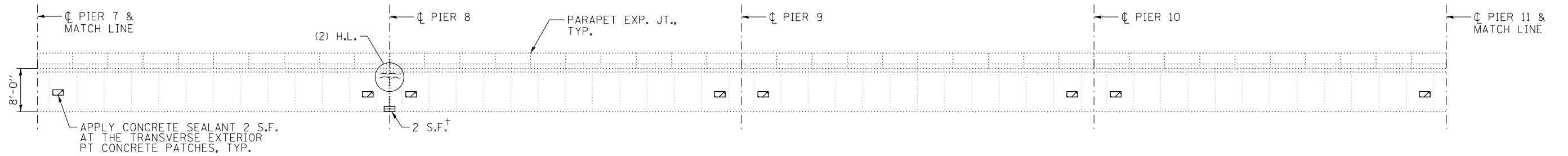
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 EXTERIOR SUPERSTRUCTURE REPAIRS I

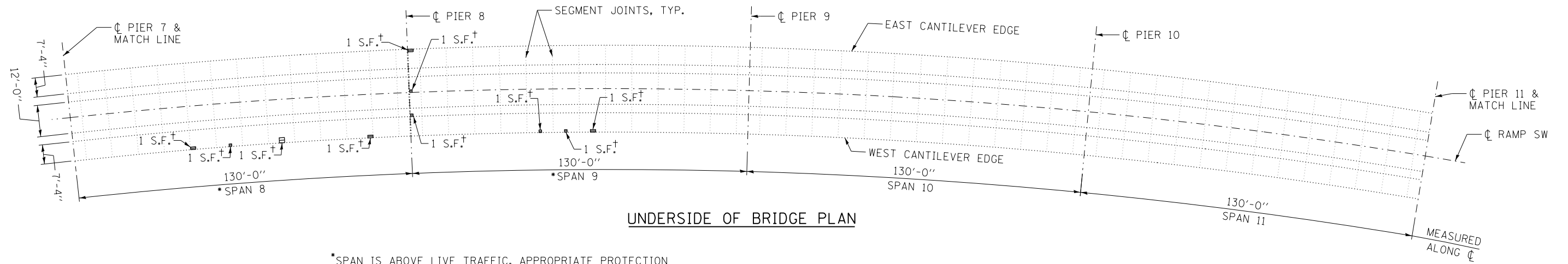
SH-19 OF SH-42
 SHT NO. SH-19
 DRAWING NO.
 1166 OF 1517

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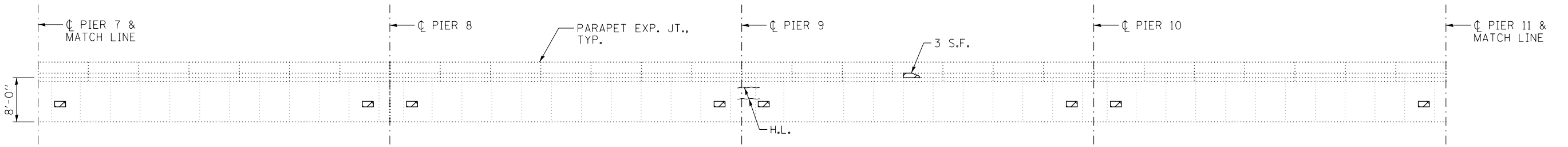


ELEVATION-EXTERIOR BOX EAST FACE
(LOOKING WEST)



UNDERSIDE OF BRIDGE PLAN

*SPAN IS ABOVE LIVE TRAFFIC. APPROPRIATE PROTECTION FOR TRAFFIC BELOW FROM CONCRETE REPAIRS PERFORMED ON THE UNDERSIDE OF BRIDGE AND BOX EXTERIOR IS REQUIRED AN INCLUDED IN COST OF "POLYMER MODIFIED PORTLAND CEMENT MORTAR".



ELEVATION-EXTERIOR BOX WEST FACE
(LOOKING EAST)

NOTES:

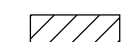


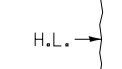
REPAIRS OF THE EXISTING EXTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SH-22.

APPLY FIBER WRAP AFTER COMPLETION OF STRUCTURAL REPAIRS.

†APPLY FIBER WRAP AROUND DEFECTS AT A 1'-0" CLEARANCE EXCEPT AT THE STRUCTURE EDGES, SEE SHEET SH-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.

LEGEND:

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  POLYMER MODIFIED PORTLAND CEMENT MORTAR
-  APPLY CONCRETE SEALANT
-  H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
CHECKED BY BWS DATE 3/11/2018

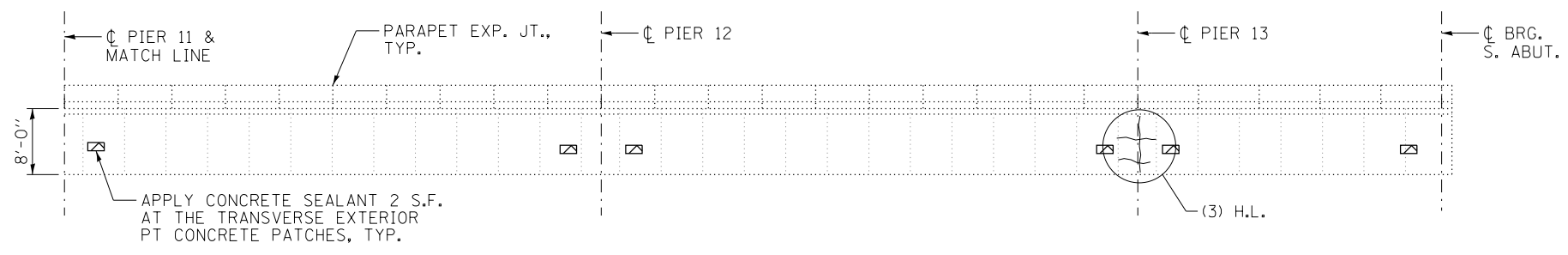
CG Ciorba Group, Inc.
CONSULTING ENGINEERS
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Suite 402 Chicago, Illinois 60656
Tel. 773.775.4008
Fax 773.775.4014
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

NO.	DATE	REVISIONS	
		DESCRIPTION	

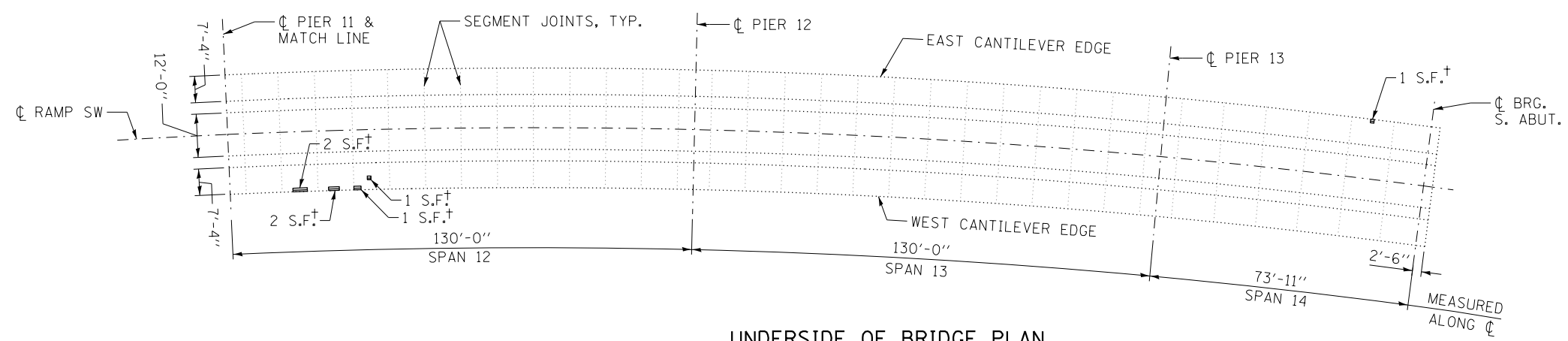
CONTRACT NO. RR-16-4255
BRIDGE 1439 (SW) S.N. 022-9970
EXTERIOR SUPERSTRUCTURE REPAIRS III

SH-21 OF SH-42
SHT NO. SH-21
DRAWING NO.
1168 OF 1517



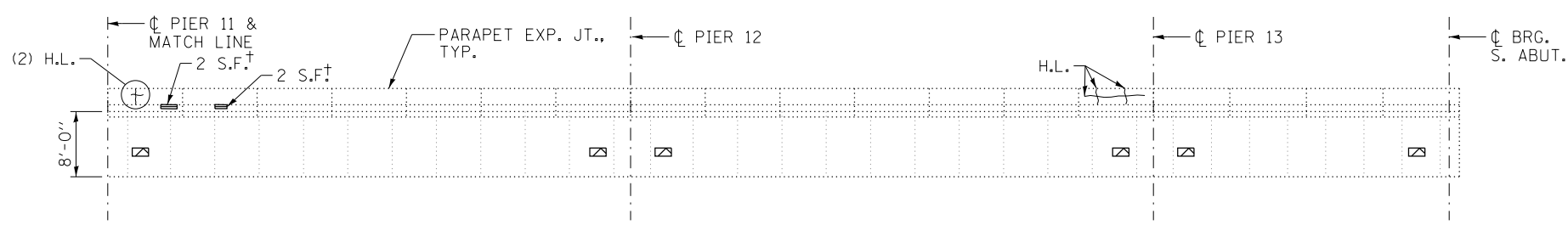
ELEVATION-EXTERIOR BOX EAST FACE
(LOOKING WEST)

NOTES:
 REPAIRS OF THE EXISTING EXTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 APPLY FIBER WRAP AFTER COMPLETION OF STRUCTURAL REPAIRS.
 †APPLY FIBER WRAP AROUND DEFECTS AT A 1'-0" CLEARANCE EXCEPT AT THE STRUCTURE EDGES, SEE SHEET SH-04 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.



UNDERSIDE OF BRIDGE PLAN

- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - POLYMER MODIFIED PORTLAND CEMENT MORTAR
 - APPLY CONCRETE SEALANT
 - H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)



ELEVATION-EXTERIOR BOX WEST FACE
(LOOKING EAST)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	3
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	85
FIBER WRAP REPAIRS	SQ. FT.	246
APPLY CONCRETE SEALANT	SQ. FT.	112

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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.	DATE	REVISIONS	
		DESCRIPTION	

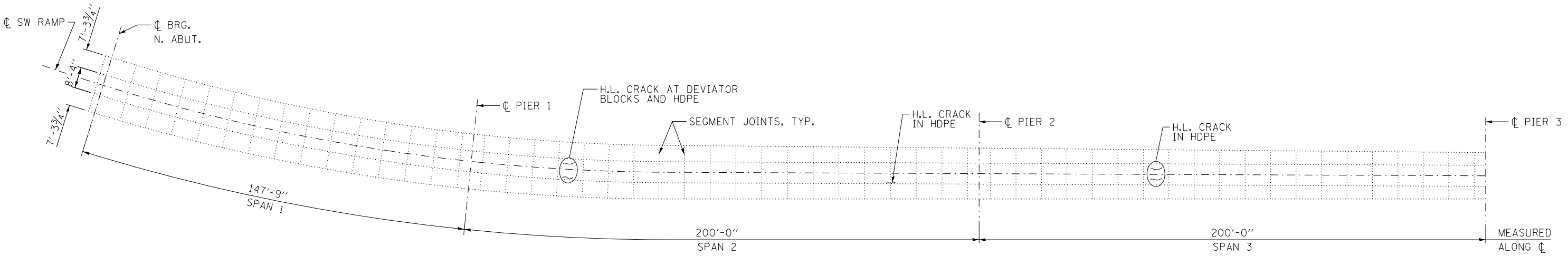
CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 EXTERIOR SUPERSTRUCTURE REPAIRS IV

SH-22 OF SH-42
 SHT NO. SH-22
 DRAWING NO.
 1169 OF 1517

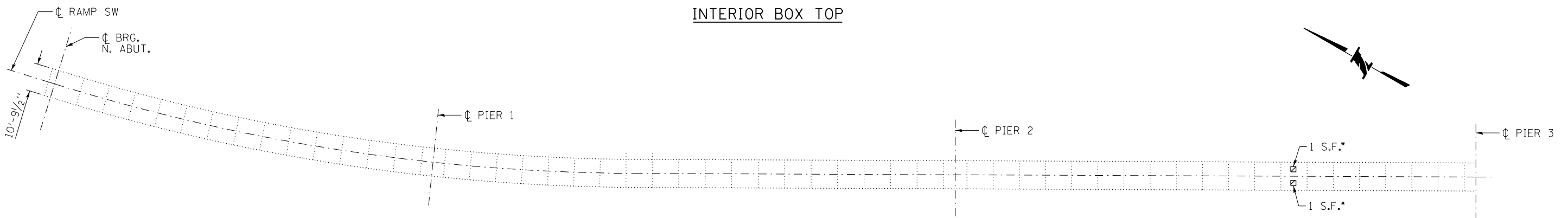
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INTERIOR BOX EAST FACE
(LOOKING EAST)



INTERIOR BOX TOP



INTERIOR BOX BOTTOM



INTERIOR BOX WEST FACE
(LOOKING WEST)

NOTE:
 REPAIRS OF THE EXISTING INTERIOR BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	2

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

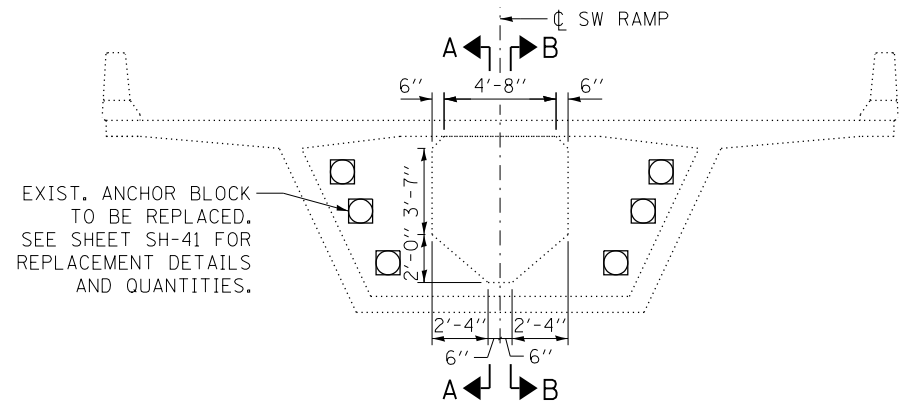


REVISIONS	
NO.	DATE

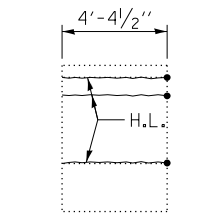
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 BRIDGE 1439 (SW) S.N. 022-9970
 INTERIOR SUPERSTRUCTURE REPAIRS

SHT NO. SH-23
 DRAWING NO.
 1170 OF 1517

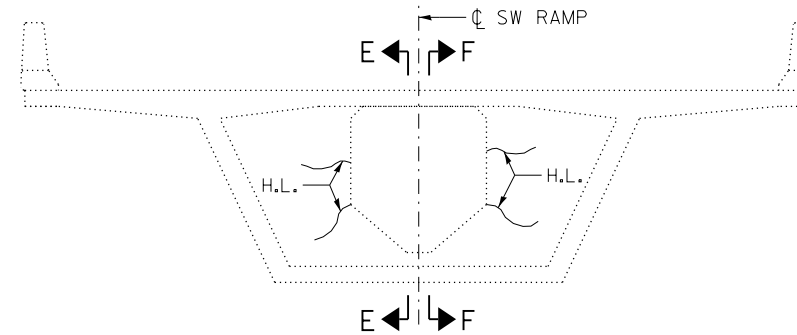
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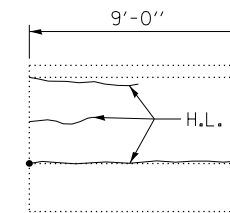
NORTH FACE DIAPHRAGM ELEVATION-NORTH ABUTMENT



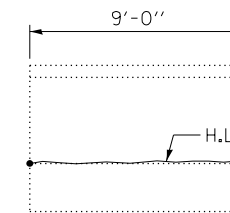
SECTION A-A



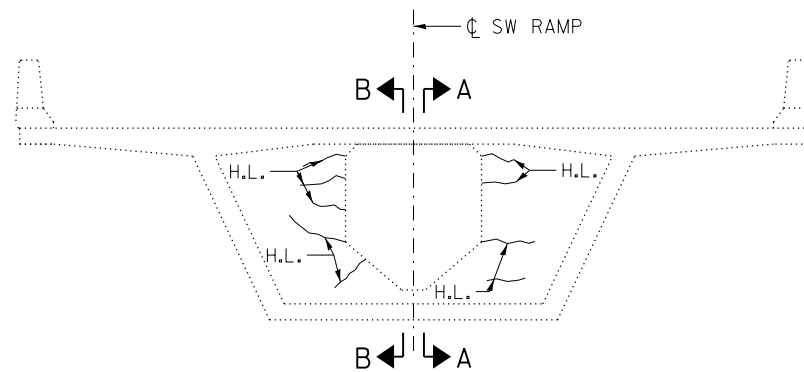
NORTH FACE DIAPHRAGM ELEVATION-PIER 2



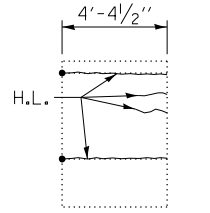
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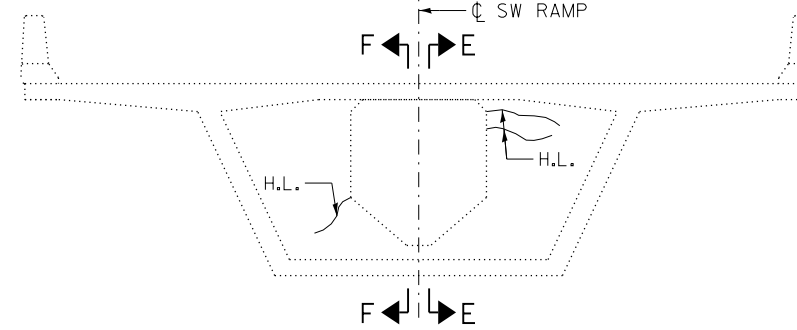
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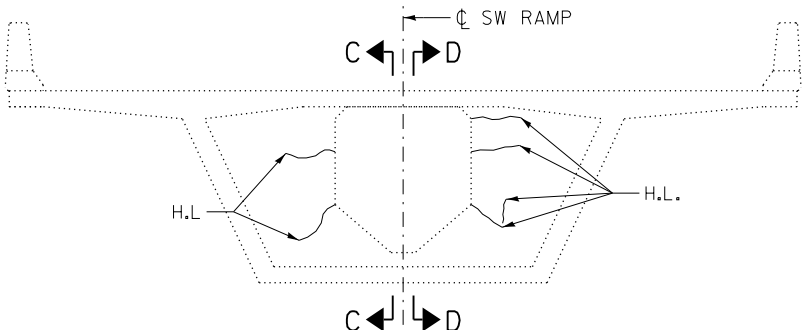
SOUTH FACE DIAPHRAGM ELEVATION-NORTH ABUTMENT



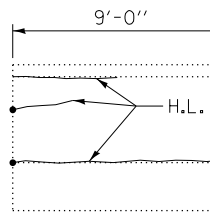
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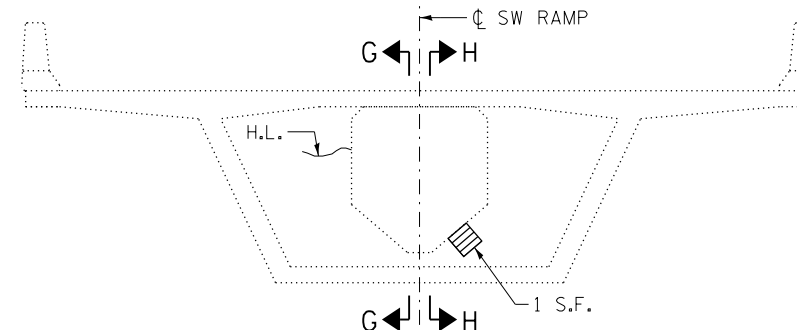
SOUTH FACE DIAPHRAGM ELEVATION-PIER 2



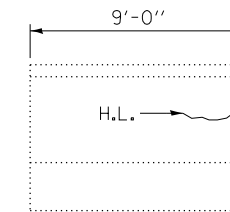
NORTH FACE DIAPHRAGM ELEVATION-PIER 1



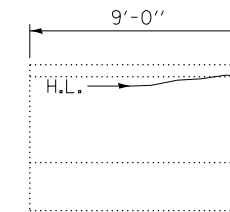
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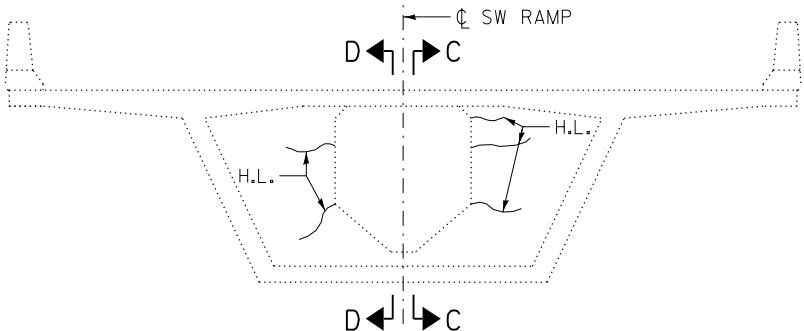
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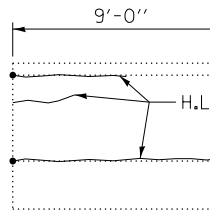
SECTION G-G



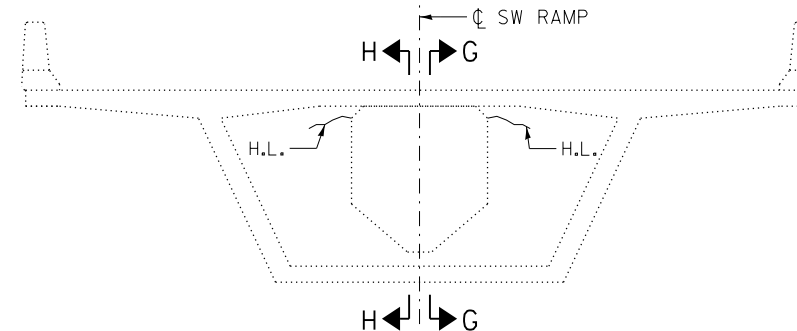
SECTION H-H



SOUTH FACE DIAPHRAGM ELEVATION-PIER 1



SECTION D-D



SOUTH FACE DIAPHRAGM ELEVATION-PIER 3

LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

NOTES:

REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.
 FOR BILL OF MATERIAL AND FIBER WRAP APPLICATION DETAILS, SEE SHEET SH-28.

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

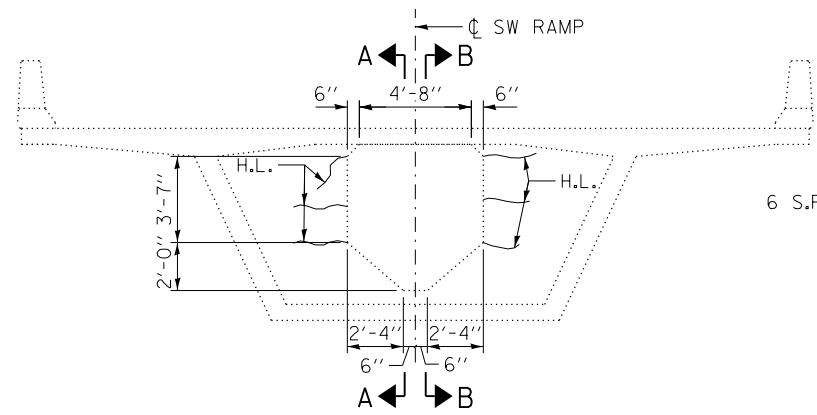
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 CONSULTING ENGINEERS
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 Suite 402 Chicago, Illinois 60656
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 ILLINOIS 60515

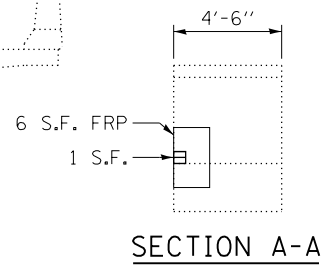
NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 DIAPHRAGM REPAIRS I

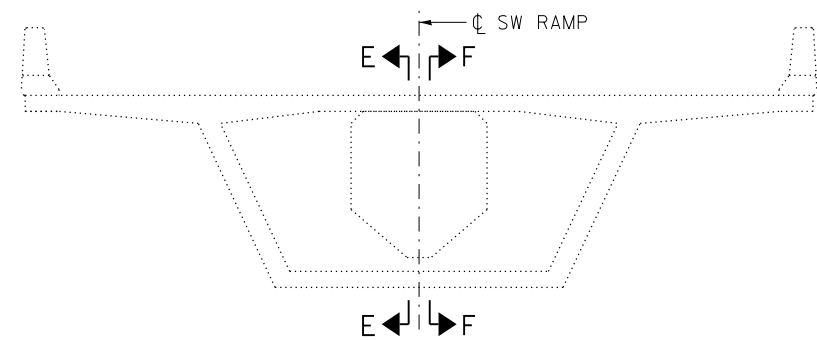
SHT NO. SH-24
 DRAWING NO.
 1171 OF 1517



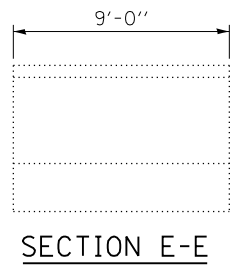
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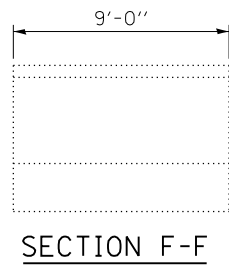
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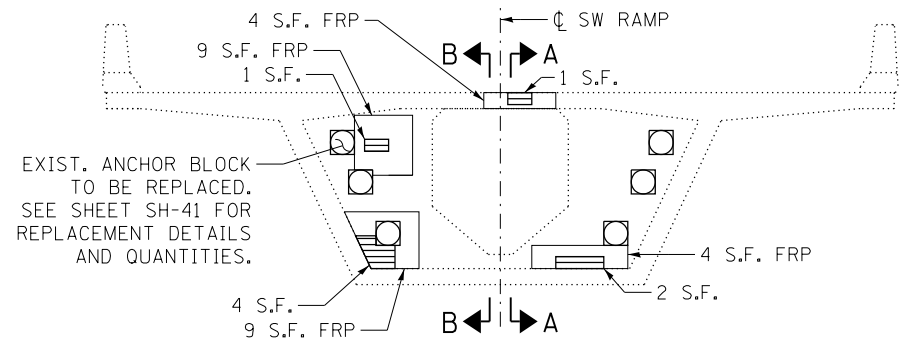
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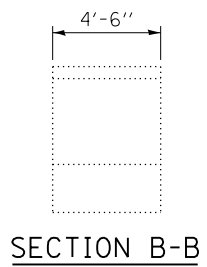
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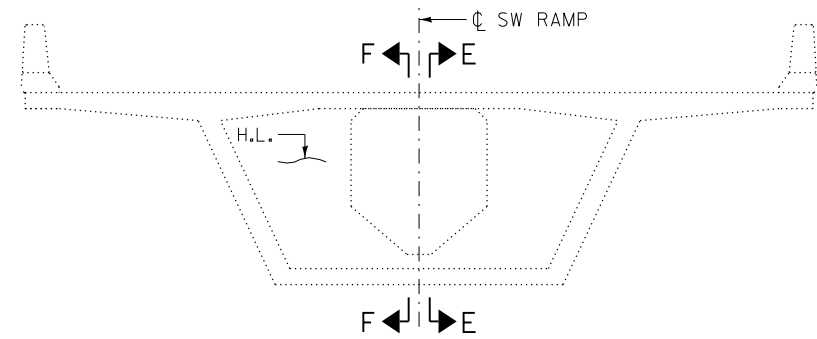
SECTION F-F



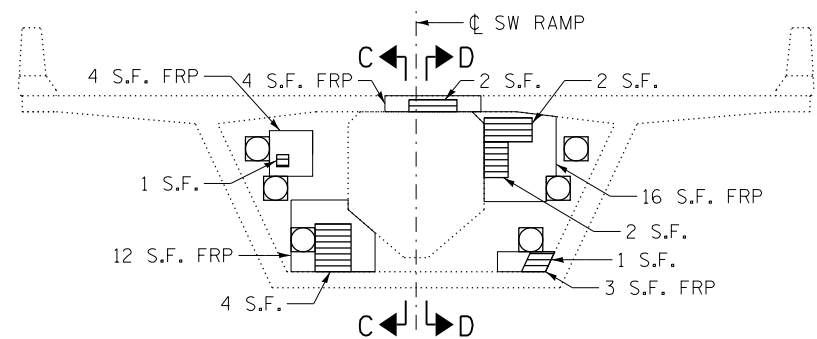
SOUTH FACE DIAPHRAGM ELEVATION-PIER 4A



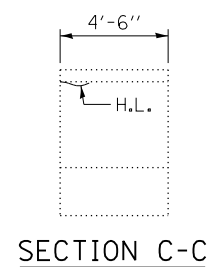
SECTION B-B



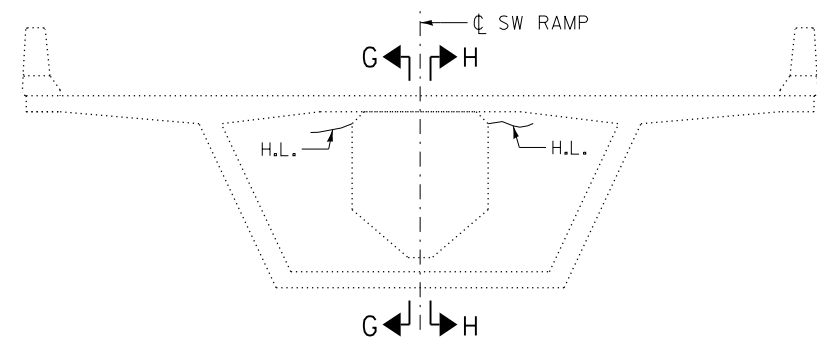
SOUTH FACE DIAPHRAGM ELEVATION-PIER 5



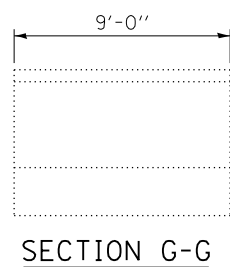
NORTH FACE DIAPHRAGM ELEVATION-PIER 4B



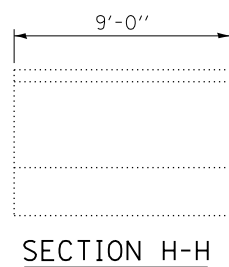
SECTION C-C



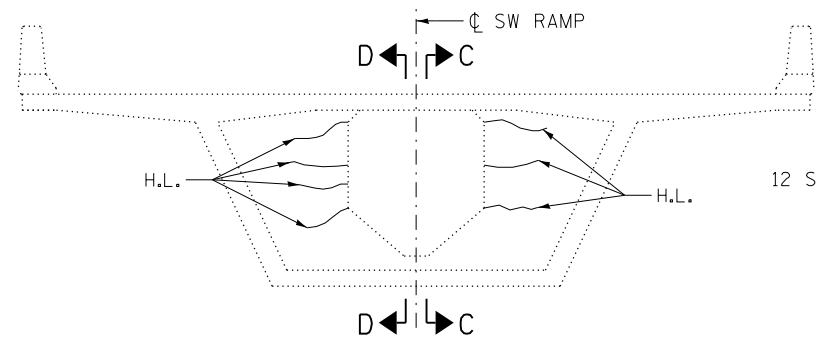
NORTH FACE DIAPHRAGM ELEVATION-PIER 6



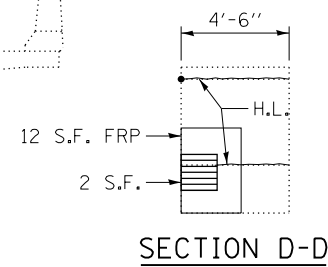
SECTION G-G



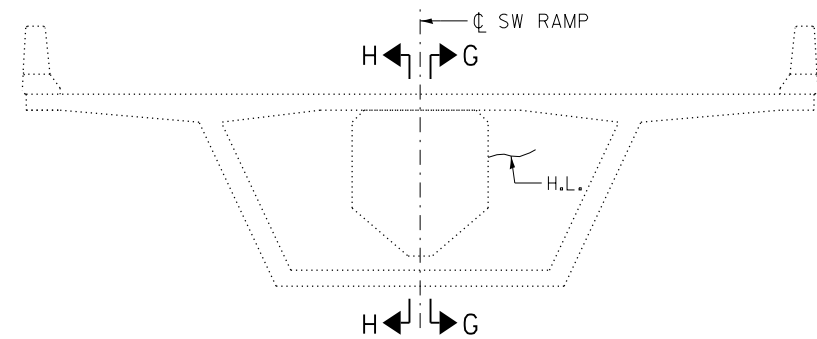
SECTION H-H



SOUTH FACE DIAPHRAGM ELEVATION-PIER 4B



SECTION D-D



SOUTH FACE DIAPHRAGM ELEVATION-PIER 6

NOTES:

REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

FOR BILL OF MATERIAL AND FIBER WRAP APPLICATION DETAILS, SEE SHEET SH-28.

APPLY FIBER WRAP AFTER COMPLETION OF STRUCTURAL REPAIRS.

LEGEND:

POLYMER MODIFIED PORTLAND CEMENT MORTAR

HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

CG Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
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 Email: chicago@ciorba.com

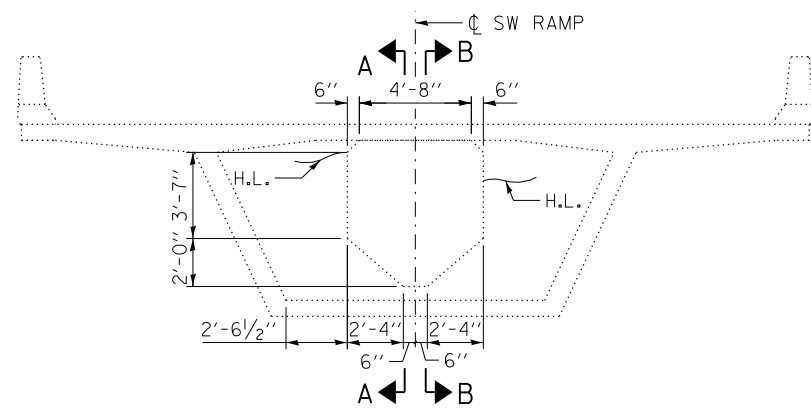
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

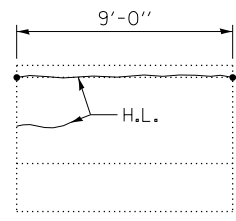
CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 DIAPHRAGM REPAIRS II

SH-25 OF SH-42
 SHT NO. SH-25
 DRAWING NO.
 1172 OF 1517

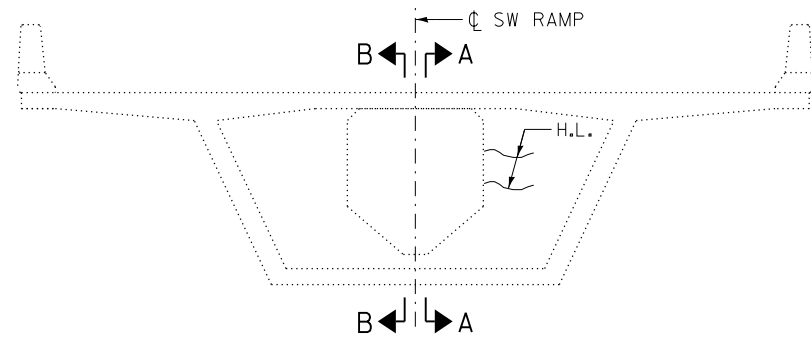
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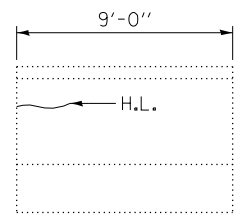
NORTH FACE DIAPHRAGM ELEVATION-PIER 7



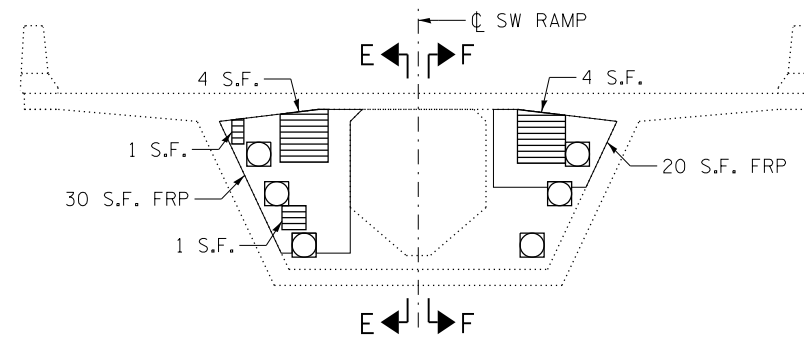
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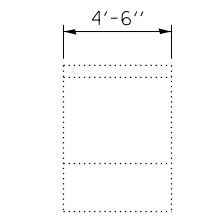
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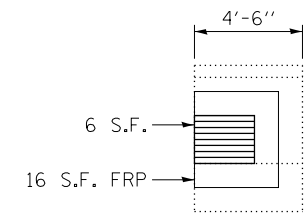
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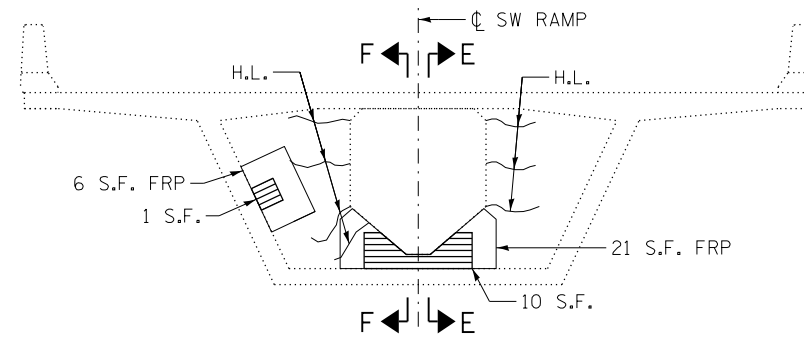
NORTH FACE DIAPHRAGM ELEVATION-PIER 8B



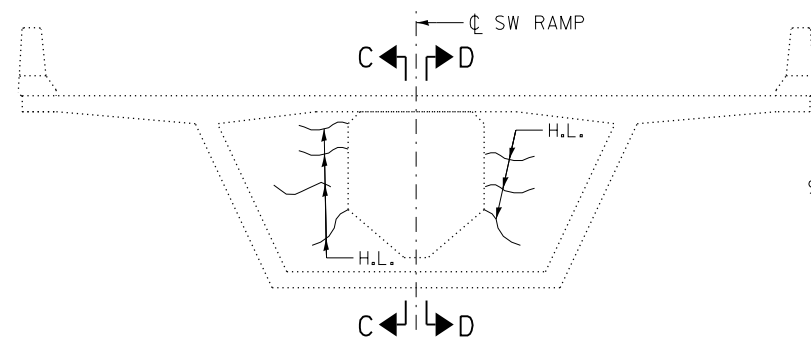
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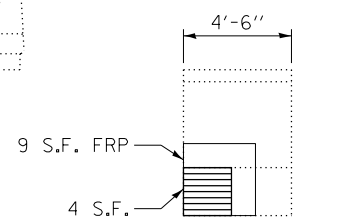
SECTION F-F



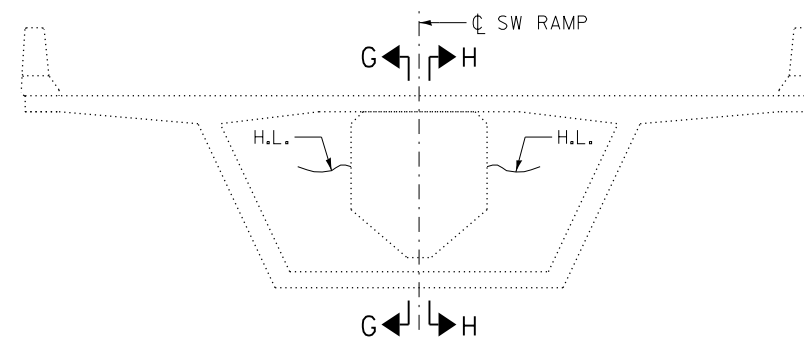
SOUTH FACE DIAPHRAGM ELEVATION-PIER 8B



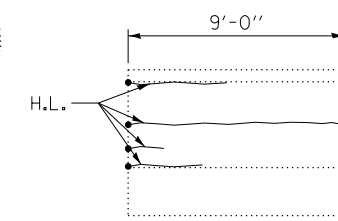
NORTH FACE DIAPHRAGM ELEVATION-PIER 8A



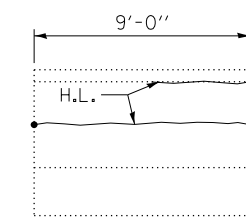
SECTION C-C



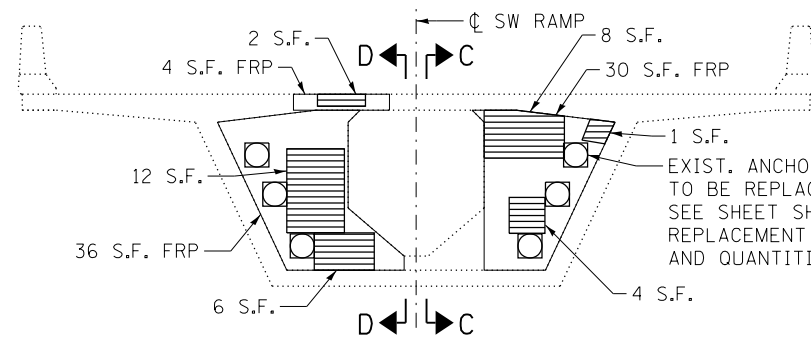
NORTH FACE DIAPHRAGM ELEVATION-PIER 9



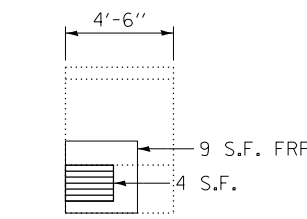
SECTION G-G



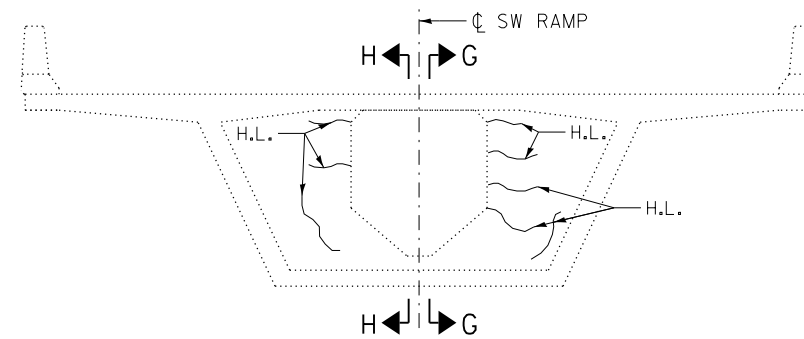
SECTION H-H



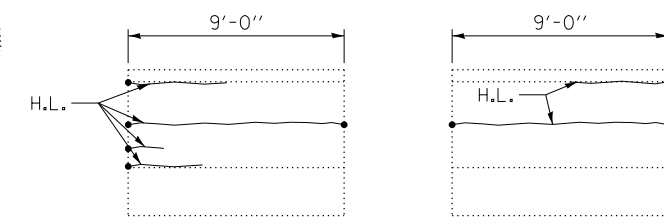
SOUTH FACE DIAPHRAGM ELEVATION-PIER 8A



SECTION D-D



SOUTH FACE DIAPHRAGM ELEVATION-PIER 9



SECTION G-G

SECTION H-H

NOTES:

REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

FOR BILL OF MATERIAL AND FIBER WRAP APPLICATION DETAILS, SEE SHEET SH-28.

APPLY FIBER WRAP AFTER COMPLETION OF STRUCTURAL REPAIRS.

LEGEND:

POLYMER MODIFIED PORTLAND CEMENT MORTAR

HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

CG **Ciorba Group, Inc.**
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

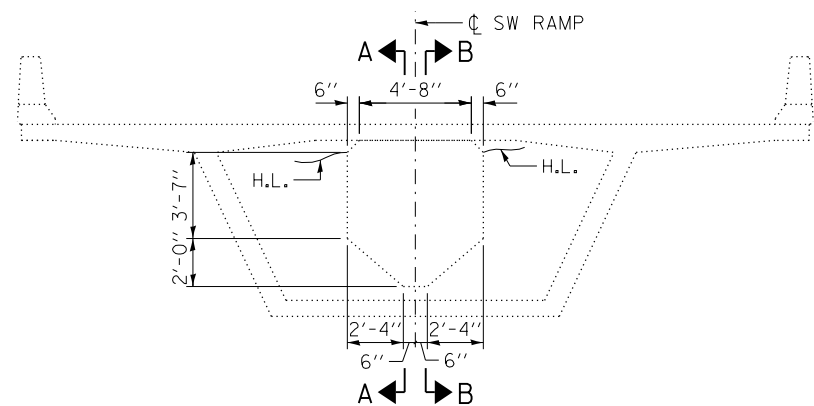
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

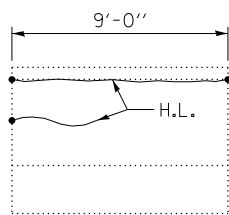
CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 DIAPHRAGM REPAIRS III

SH-26 OF SH-42
 SHT NO. SH-26
 DRAWING NO.
 1173 OF 1517

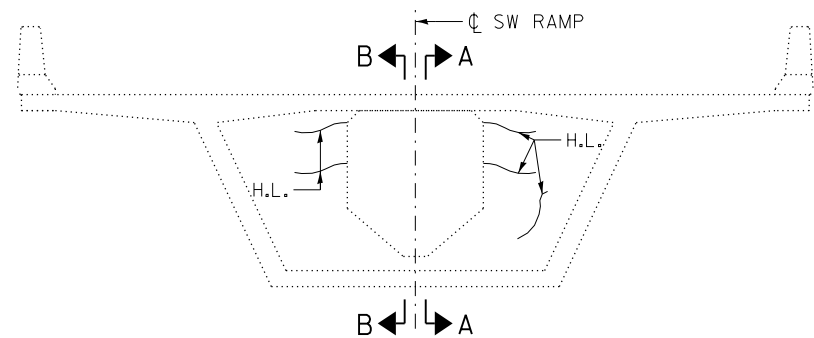
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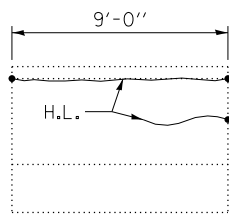
NORTH FACE DIAPHRAGM ELEVATION-PIER 10



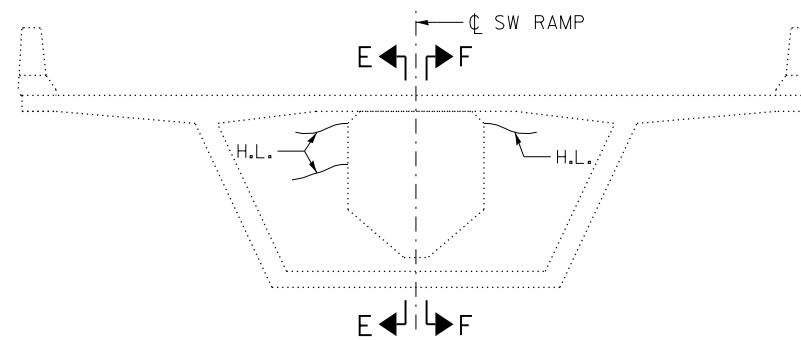
VIEW A-A



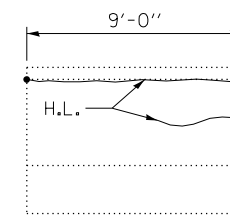
SOUTH FACE DIAPHRAGM ELEVATION-PIER 10



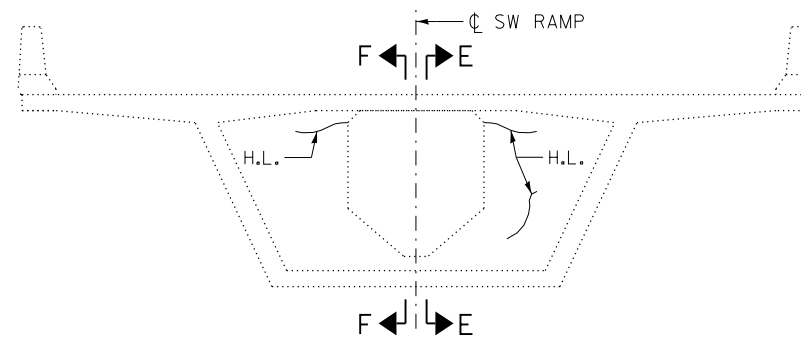
VIEW B-B



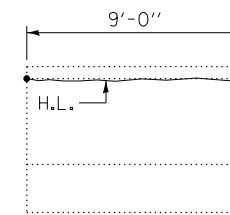
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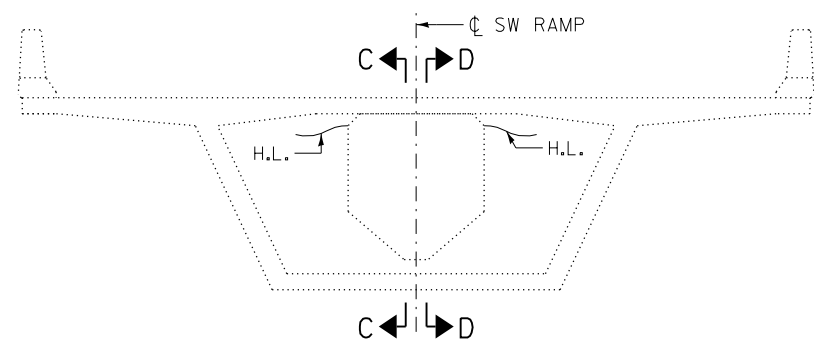
VIEW E-E



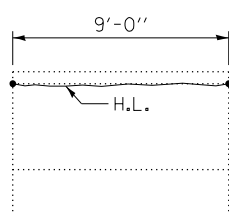
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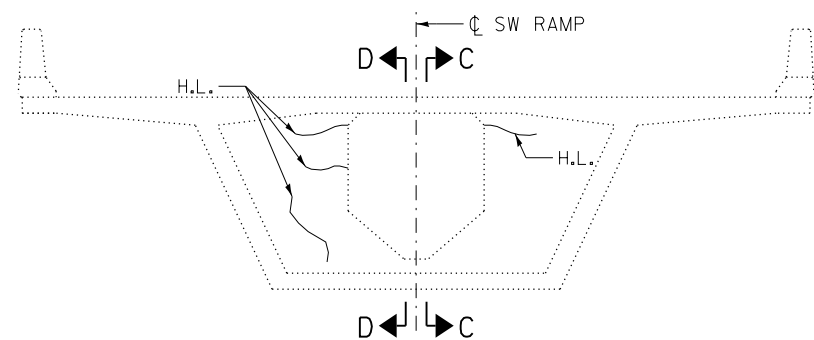
VIEW F-F



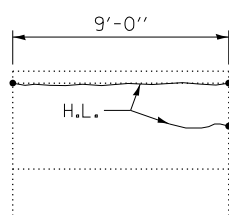
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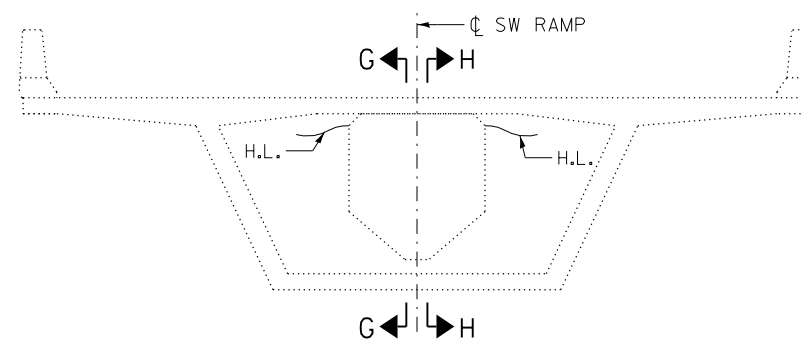
VIEW C-C



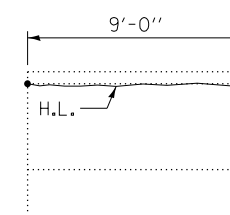
SOUTH FACE DIAPHRAGM ELEVATION-PIER 11



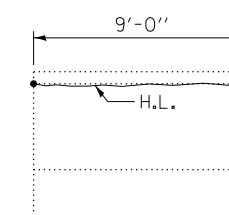
VIEW D-D



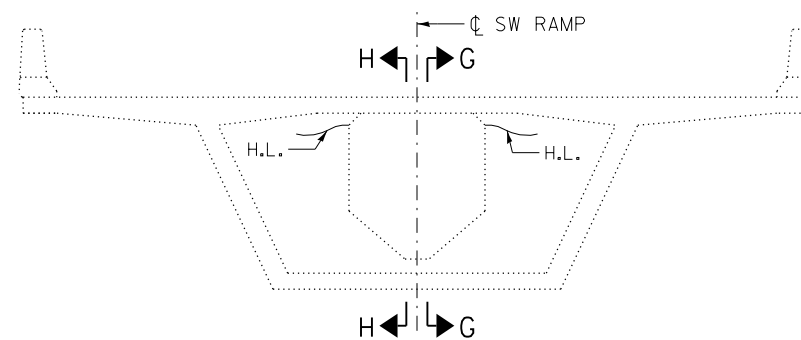
NORTH FACE DIAPHRAGM ELEVATION-PIER 13



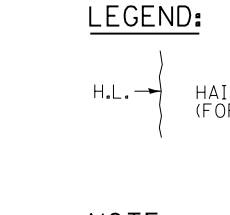
VIEW G-G



VIEW H-H



SOUTH FACE DIAPHRAGM ELEVATION-PIER 13



VIEW I-I

LEGEND:

H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

NOTE:

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

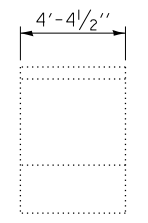
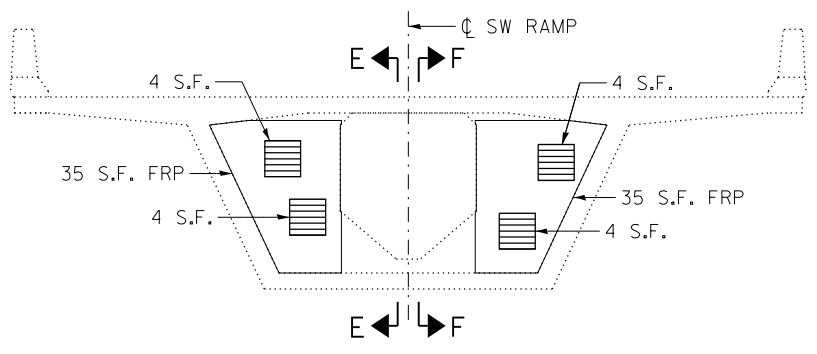
DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



NO.		DATE		REVISIONS DESCRIPTION	

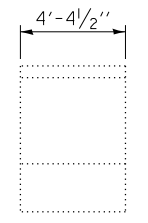
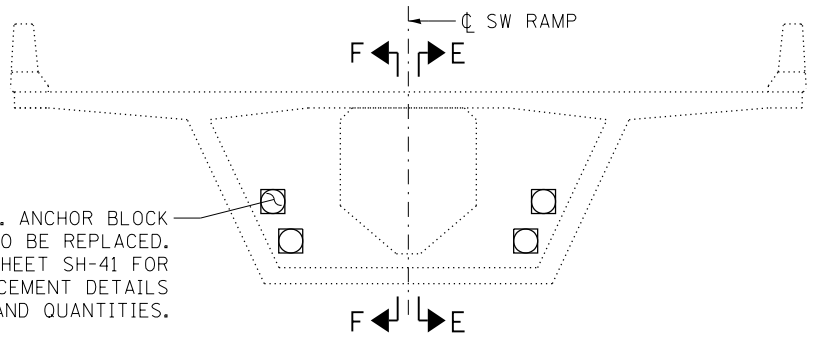
CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 DIAPHRAGM REPAIRS IV

SH-27 OF SH-42
 SHT NO. SH-27
 DRAWING NO. 1174 OF 1517



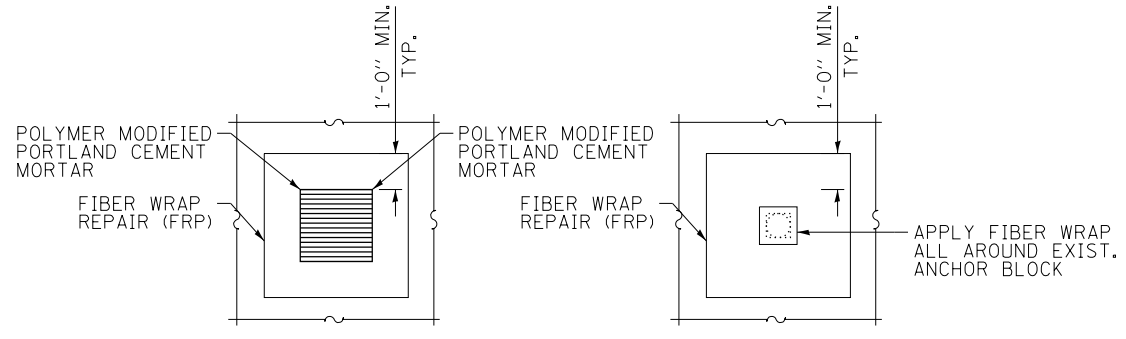
VIEW E-E

NORTH FACE DIAPHRAGM ELEVATION-SOUTH ABUTMENT



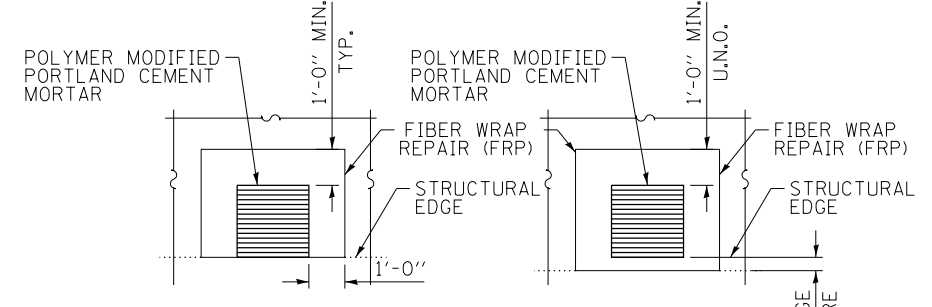
VIEW F-F

SOUTH FACE DIAPHRAGM ELEVATION-SOUTH ABUTMENT



TYPICAL

FRP AROUND EXIST. ANCHOR BLOCK



AT EDGE OF STRUCTURAL ELEMENT

NEAR EDGE OF STRUCTURAL ELEMENT

DIST. TO EDGE OF STRUCTURE

FIBER WRAP APPLICATION DETAIL

USE WHEN APPLY FIBER WRAP ON THE BRIDGE DIAPHRAGMS ONLY, U.N.O.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	108
FIBER WRAP REPAIR	SQ. FT.	326

NOTES:

REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN, THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

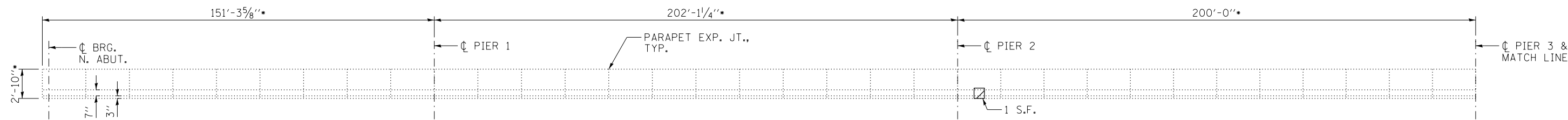
APPLY FIBER WRAP AFTER COMPLETION OF STRUCTURAL REPAIRS.

LEGEND:

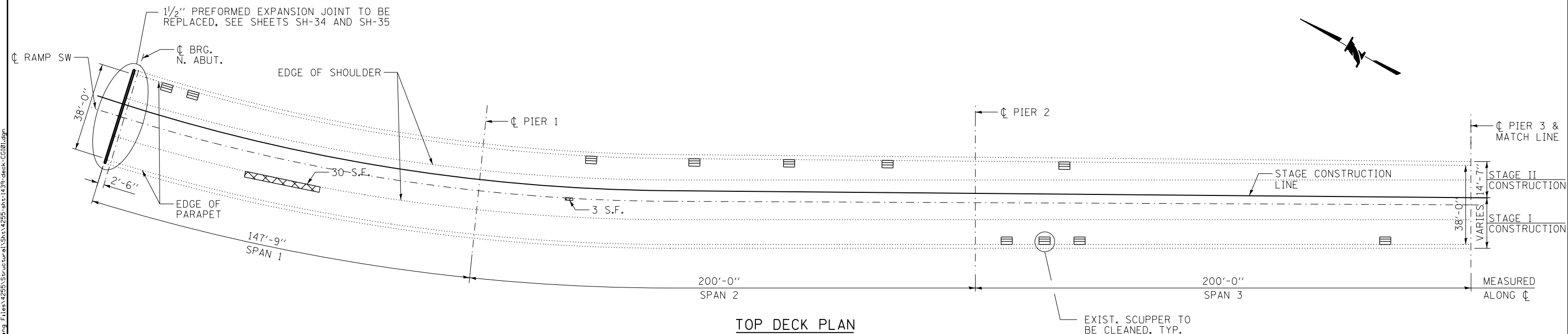
- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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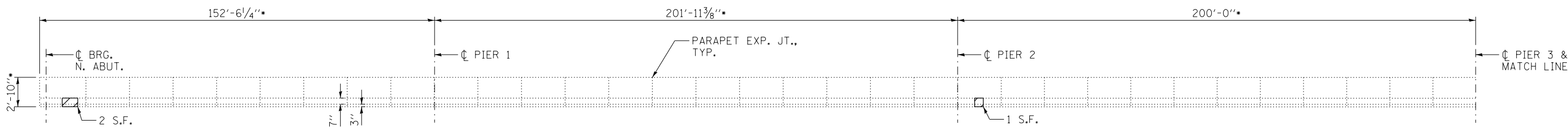
REVISIONS		
NO.	DATE	DESCRIPTION



INSIDE FACE OF EAST PARAPET
(LOOKING EAST)



TOP DECK PLAN



INSIDE FACE OF WEST PARAPET
(LOOKING WEST)

NOTES:

REPAIRS OF THE EXISTING PIERS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE AFTER REPAIRS.

FOR BILL OF MATERIAL, SEE SHEET SH-32.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)". SEE SHEET SH-04 FOR TYPICAL DETAIL.

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- ACCELERATED DECK SLAB REPAIR (PARTIAL)

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4009
 Fax 773.775.4014
 Email: chicago@ciorba.com

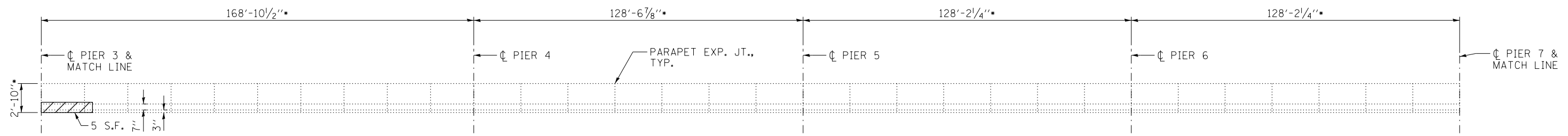
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

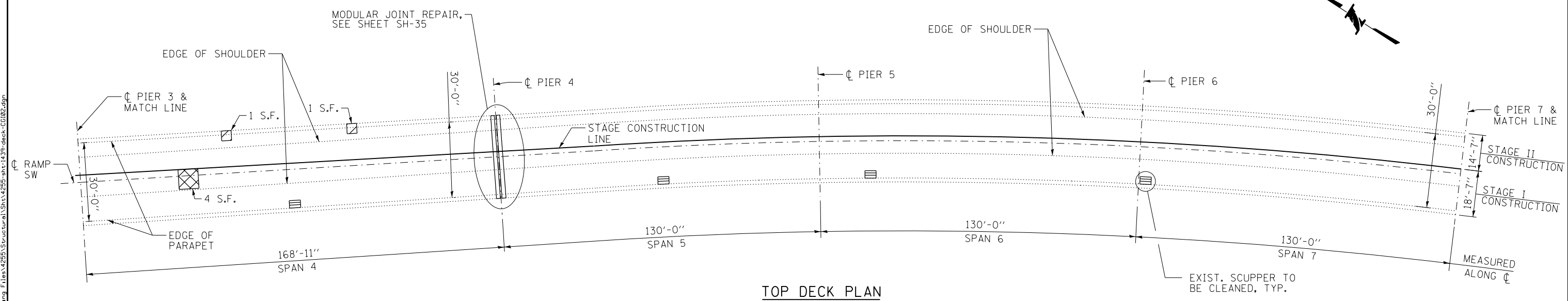
CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 TOP OF DECK REPAIRS I

SH-29 OF SH-42
 SHT NO. SH-29
 DRAWING NO.
 1176 OF 1517

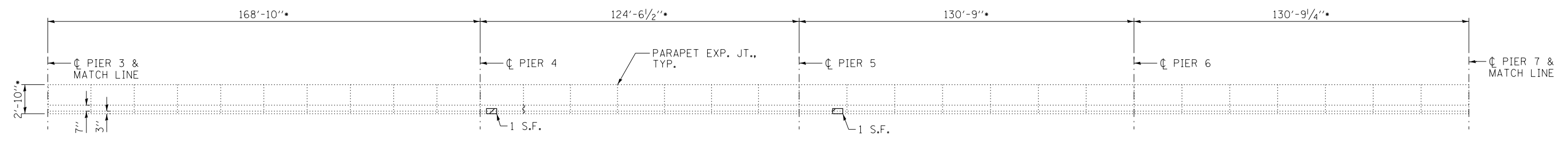
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INSIDE FACE OF EAST PARAPET
(LOOKING EAST)



TOP DECK PLAN



INSIDE FACE OF WEST PARAPET
(LOOKING WEST)

NOTE:




REPAIRS OF THE EXISTING DECKS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE AFTER REPAIRS.

FOR BILL OF MATERIALS, SEE SHEET SH-32.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)". SEE SHEET SH-04 FOR TYPICAL DETAIL.

LEGEND:

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
-  ACCELERATED DECK SLAB REPAIR (PARTIAL)
-  H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

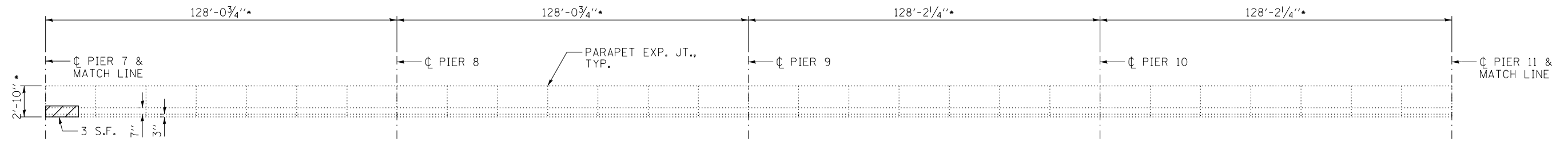
DRAWN BY SBA DATE 3/11/2018
CHECKED BY BWS DATE 3/11/2018



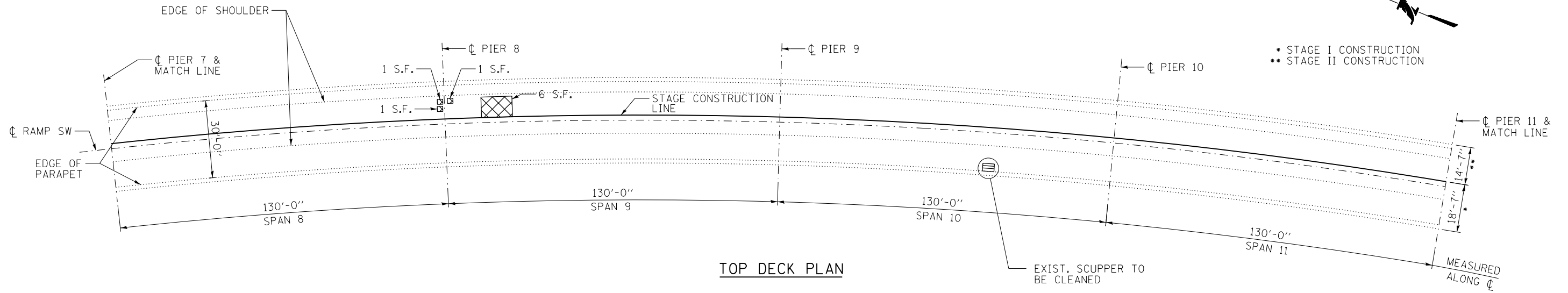
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1439 (SW) S.N. 022-9970
TOP OF DECK REPAIRS II

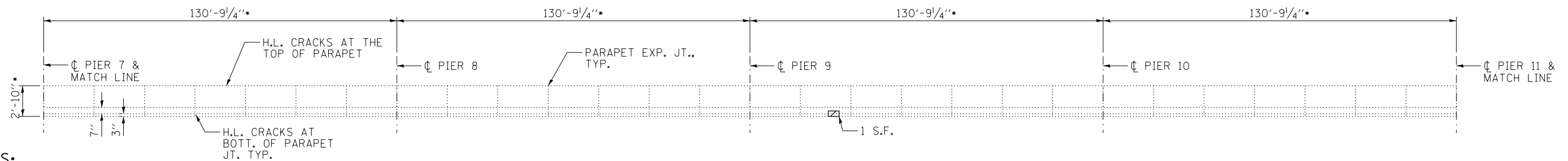
SH-30 OF SH-42
SHT NO. SH-30
DRAWING NO. 1177 OF 1517



INSIDE FACE OF EAST PARAPET
(LOOKING EAST)



TOP DECK PLAN



INSIDE FACE OF WEST PARAPET
(LOOKING WEST)

NOTES:

REPAIRS OF THE EXISTING PIERS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE AFTER REPAIRS.

FOR BILL OF MATERIAL, SEE SHEET SH-32.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)". SEE SHEET SH-04 FOR TYPICAL DETAIL.

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- ACCELERATED DECK SLAB REPAIR (PARTIAL)

DRAWN BY **SBA** DATE **3/11/2018**
CHECKED BY **BWS** DATE **3/11/2018**

Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.775.4008
Fax 773.775.4014
Email: chicago@ciorba.com

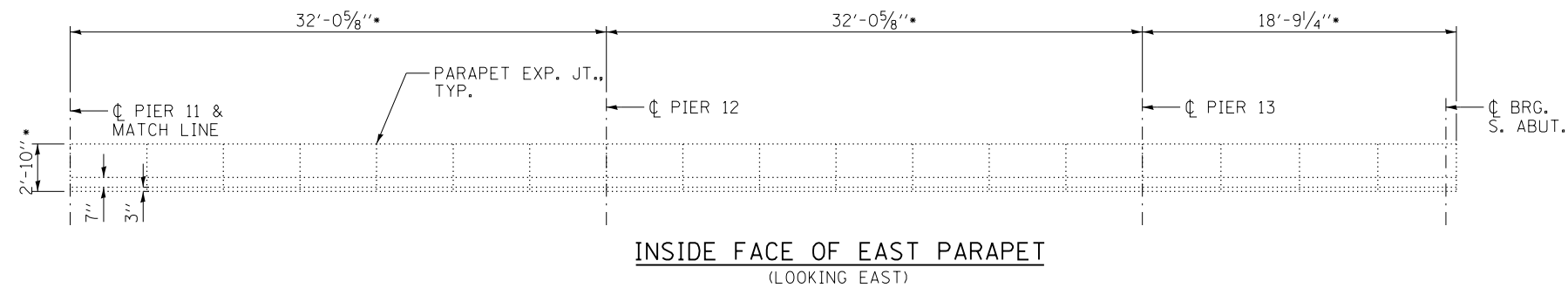
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

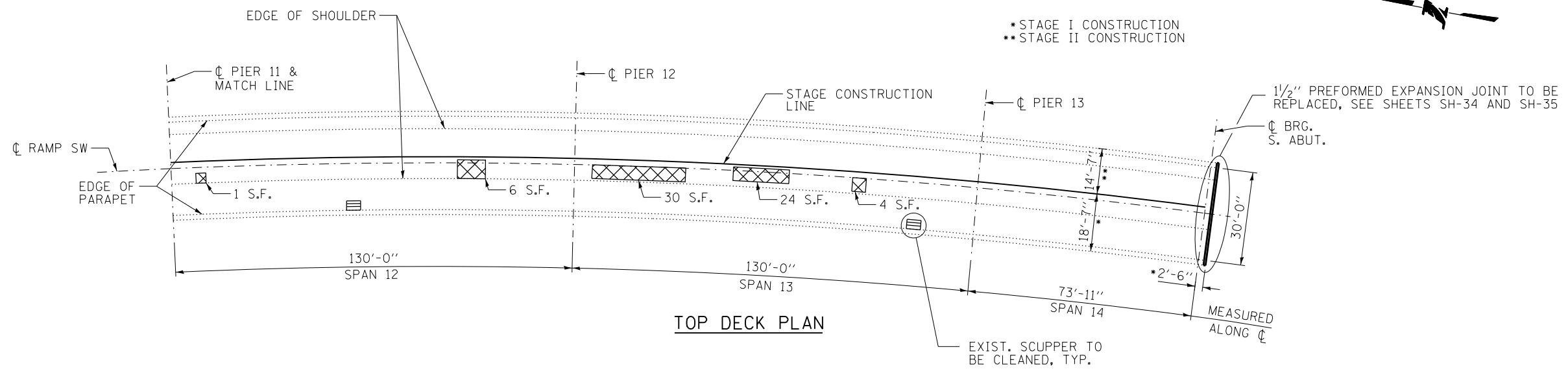
CONTRACT NO. RR-16-4255
BRIDGE 1439 (SW) S.N. 022-9970
TOP OF DECK REPAIRS III

SH-31 OF SH-42
SHT NO. SH-31
DRAWING NO.
1178 OF 1517

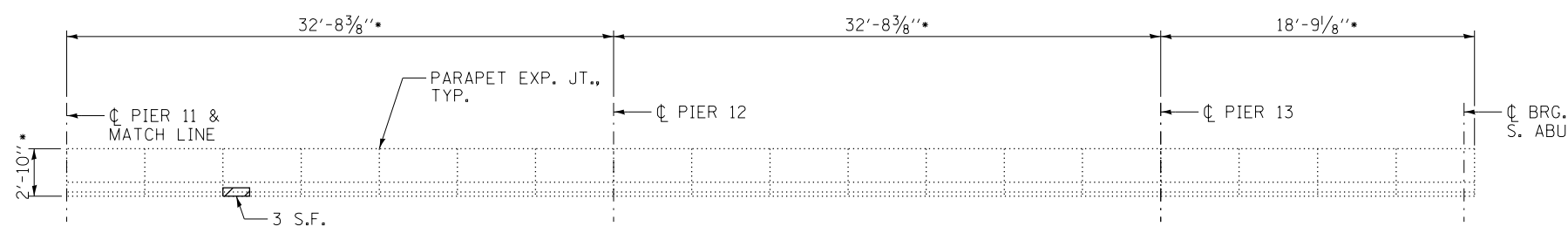
Projects\2016\20161616_Veterans Memorial Tollway\Drawings\Current Drawing Files\4255\Structural\Sheet\4255-sh-31-top-deck-repairs-III.dgn



INSIDE FACE OF EAST PARAPET
(LOOKING EAST)



TOP DECK PLAN



INSIDE FACE OF WEST PARAPET
(LOOKING WEST)

- LEGEND:**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 - ACCELERATED DECK SLAB REPAIR (PARTIAL)
 - H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

NOTES:
 REPAIRS OF THE EXISTING PIERS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 *APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE AFTER REPAIRS.
 CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)". SEE SHEET SH-04 FOR TYPICAL DETAIL.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	20
ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.	13
APPLY CONCRETE SEALANT	SQ. FT.	15,494
CLEAN EXISTING SCUPPER	EACH	18

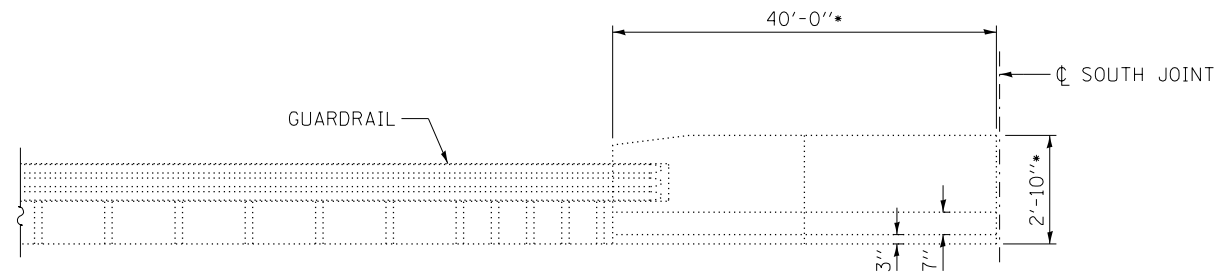
DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



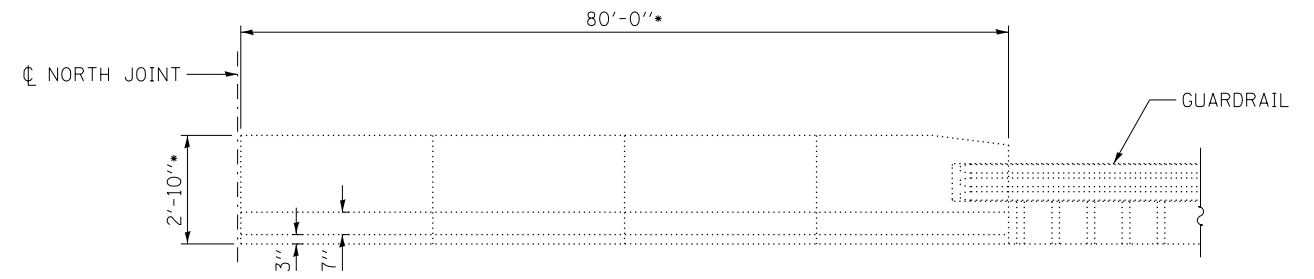
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 TOP OF DECK REPAIRS IV

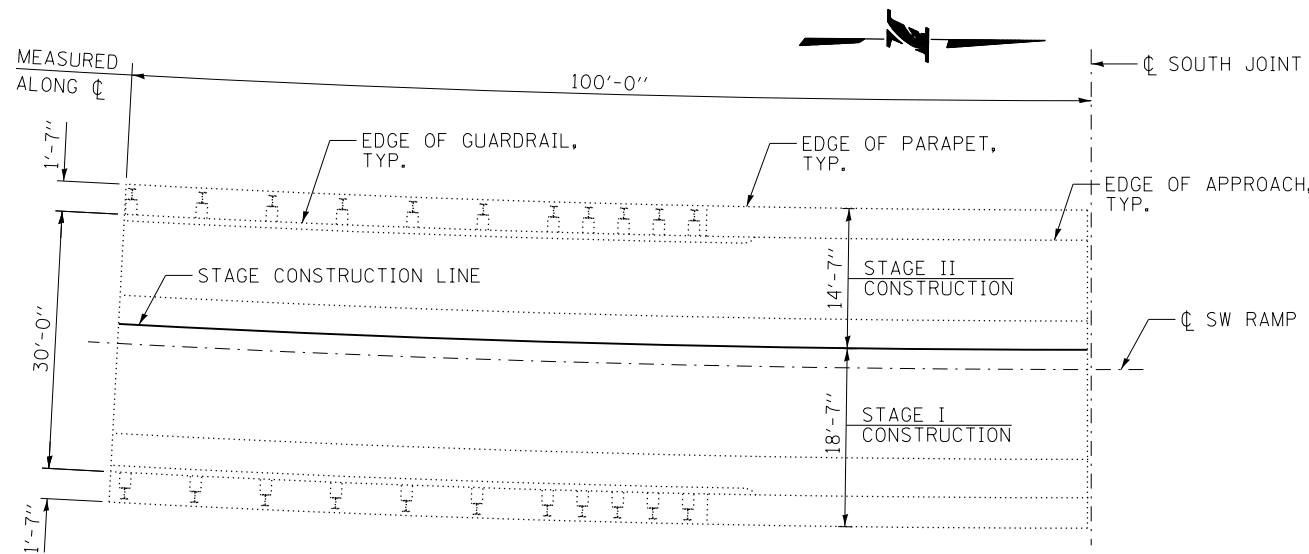
SH-32 OF SH-42
 SHT NO. SH-32
 DRAWING NO. 1179 OF 1517



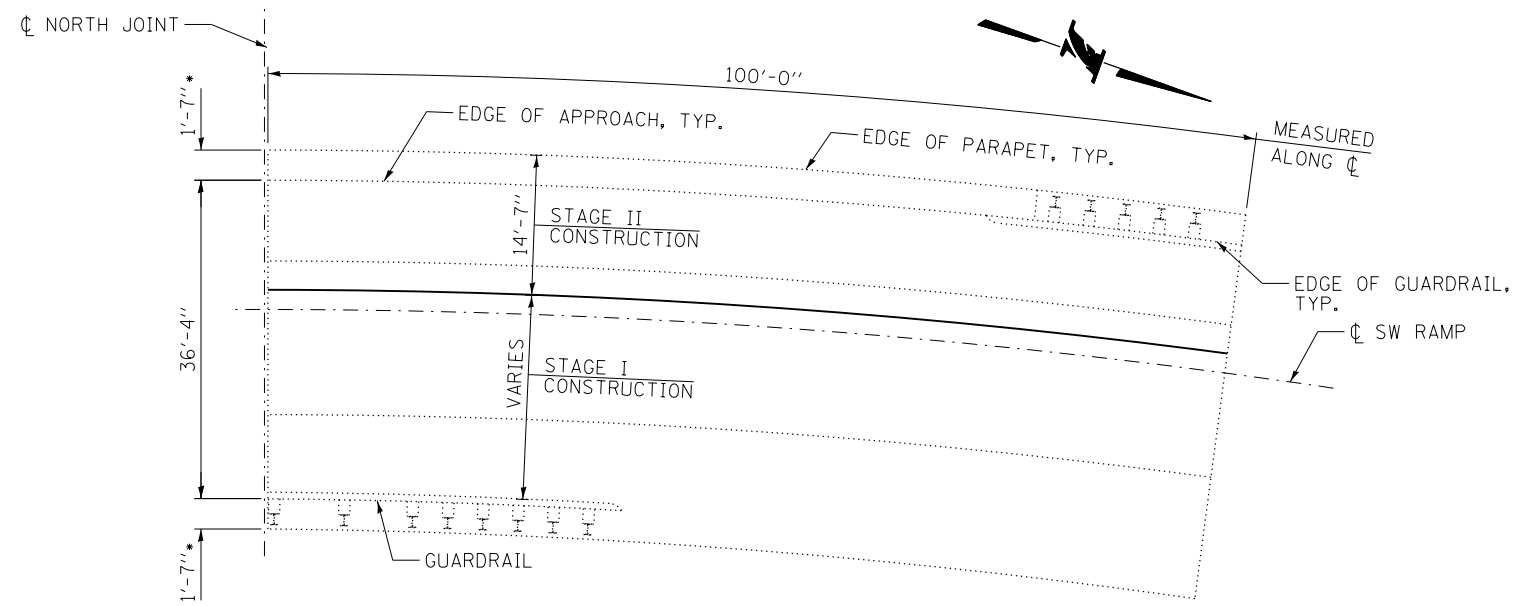
INSIDE FACE OF WEST PARAPET
(LOOKING WEST)



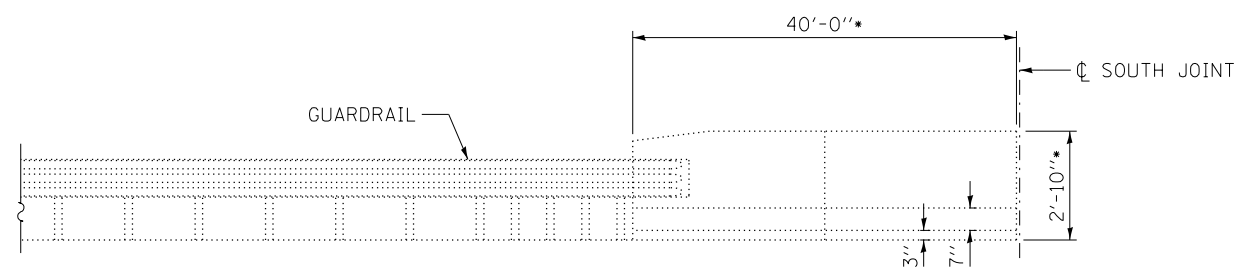
INSIDE FACE OF WEST PARAPET
(LOOKING WEST)



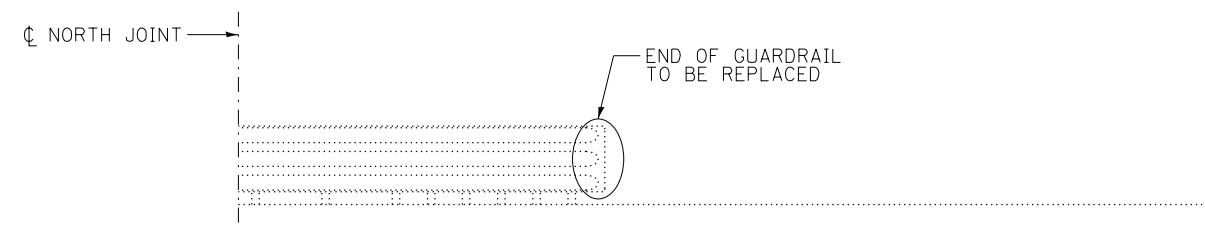
SOUTH APPROACH SLAB PLAN VIEW



NORTH APPROACH SLAB PLAN VIEW



INSIDE FACE OF EAST PARAPET
(LOOKING EAST)



INSIDE FACE OF EAST GUARDRAIL
(LOOKING EAST)

NOTES:

CRACKS THAT ARE 1/8"± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING APPROACH SLAB SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	632

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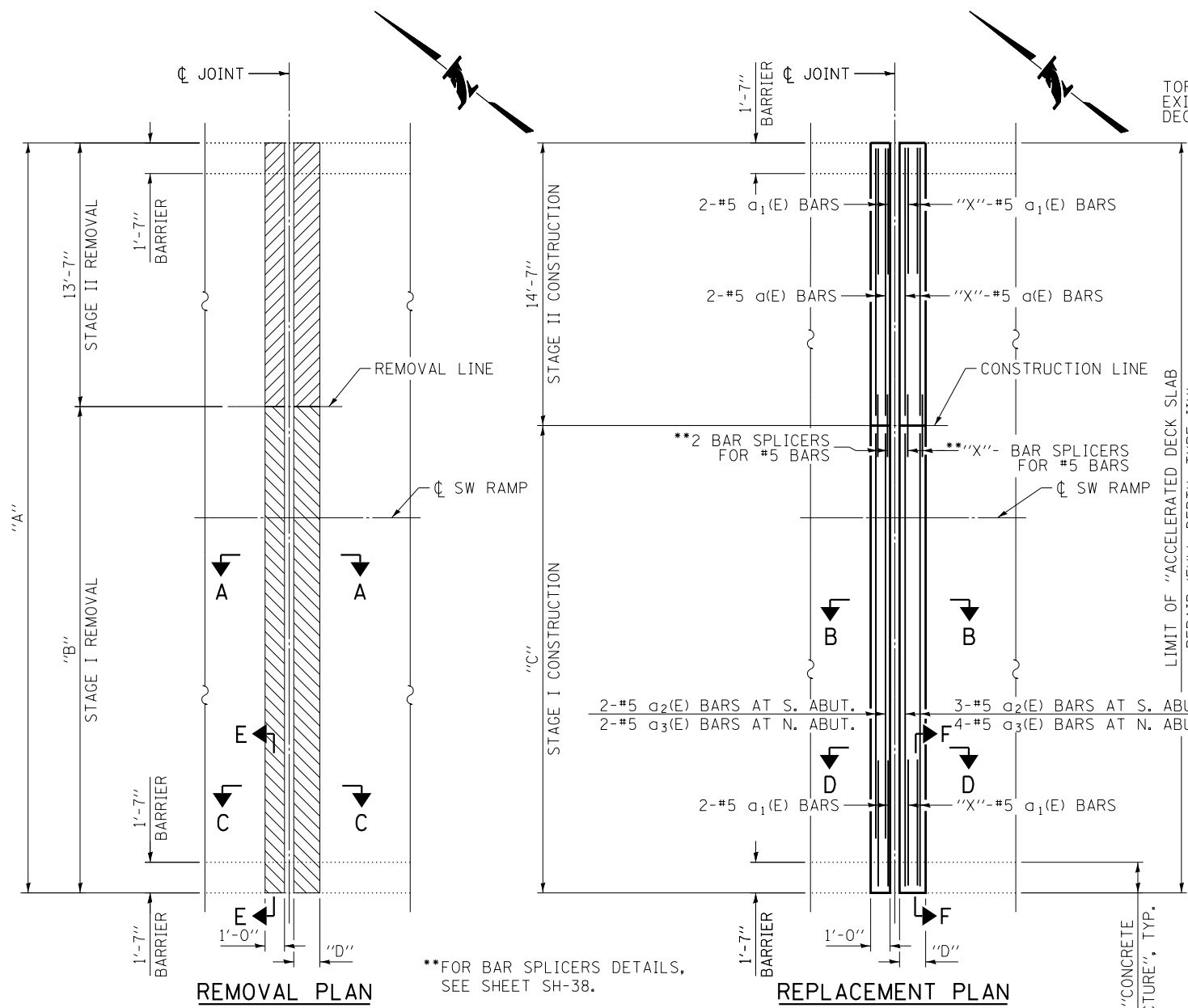
DRAWN BY SBA DATE 3/11/2018
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REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 APPROACH SLAB REPAIRS

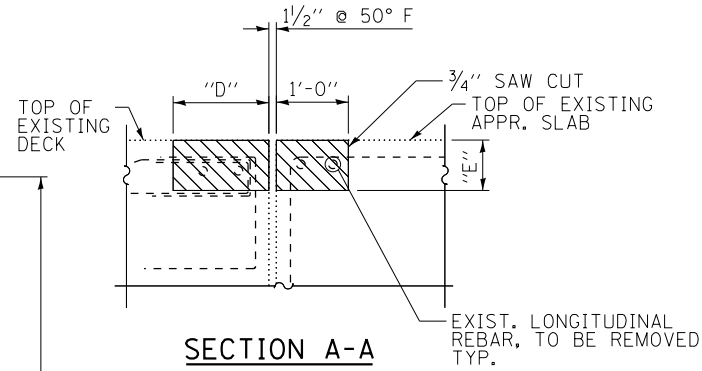
SH-33 OF SH-42
 SHT NO. SH-33
 DRAWING NO.
 1180 OF 1517



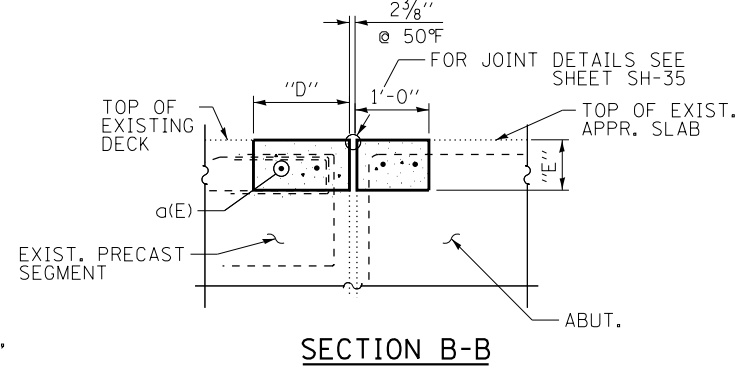
REMOVAL PLAN
NORTH ABUTMENT SHOWN.
SOUTH ABUTMENT SIMILAR BY 180° ROTATION

REPLACEMENT PLAN
NORTH ABUTMENT SHOWN.
SOUTH ABUTMENT SIMILAR BY 180° ROTATION

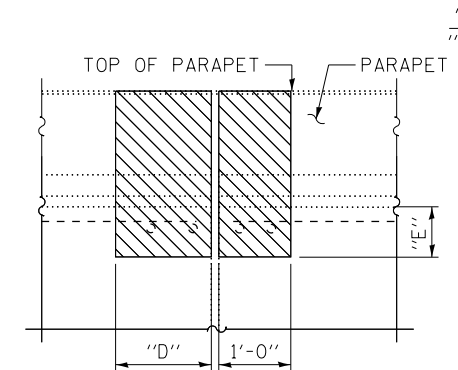
**FOR BAR SPLICERS DETAILS, SEE SHEET SH-38.



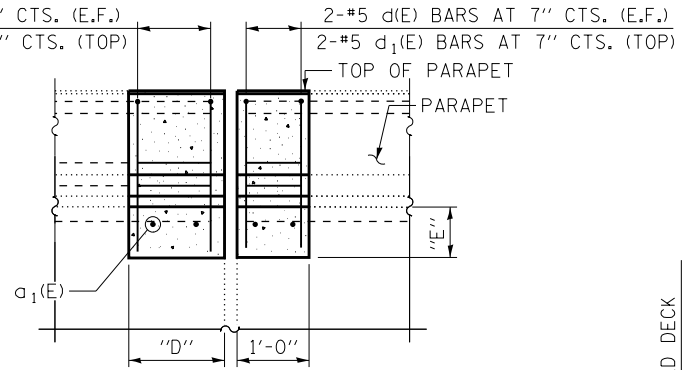
SECTION A-A



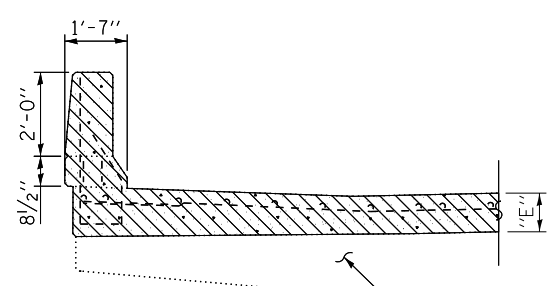
SECTION B-B



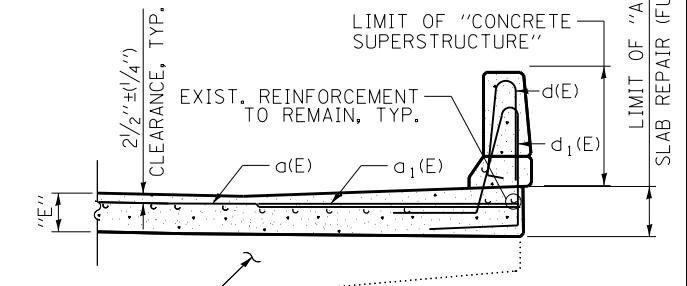
SECTION C-C



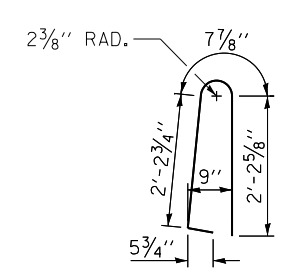
SECTION D-D



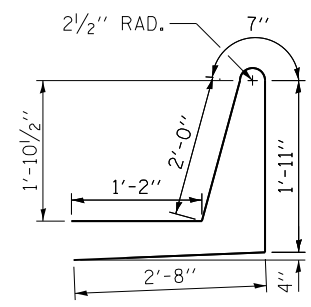
SECTION E-E



SECTION F-F



BAR d(E)



BAR d1(E)

EXPANSION JOINT DIMENSIONS

	EXPANSION JOINT DIMENSIONS					
LOCATION	"A"	"B"	"C"	"D"	"E"	"X"
SOUTH ABUTMENT	33'-2"	19'-7"	18'-7"	1'-4"	10 1/2"	3
NORTH ABUTMENT	41'-2"	27'-7"	26'-7"	1'-11"	8 1/2"	4

NOTES

1. THE LONGITUDINAL REINFORCEMENT BARS IN THE AREA OF SLAB, CURB, SIDEWALK AND PARAPET REMOVAL SHOULD REMAIN IN PLACE AND SHOULD BE CLEANED AND INCORPORATED INTO THE NEW CONSTRUCTION.

2. E.F. DENOTES EACH FACE.

LEGEND:

- STAGE I CONCRETE REMOVAL
- STAGE II CONCRETE REMOVAL

REINFORCEMENT BAR LIST				
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	11	#5	14'-1"	
a1(E)	22	#5	6'-0"	
a2(E)	5	#5	18'-1"	
a3(E)	6	#5	26'-1"	
d(E)	22	#5	5'-7"	
d1(E)	22	#5	8'-4"	

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ. YD.	20
CONCRETE REMOVAL	CU. YD.	6.9
REINFORCEMENT BARS, EPOXY COATED	POUND	820
CONCRETE SUPERSTRUCTURE	CU. YD.	1.2

QUANTITIES INCLUDE BOTH ABUTMENTS.

SH-34 OF SH-42

DRAWN BY SBA DATE 3/11/2018
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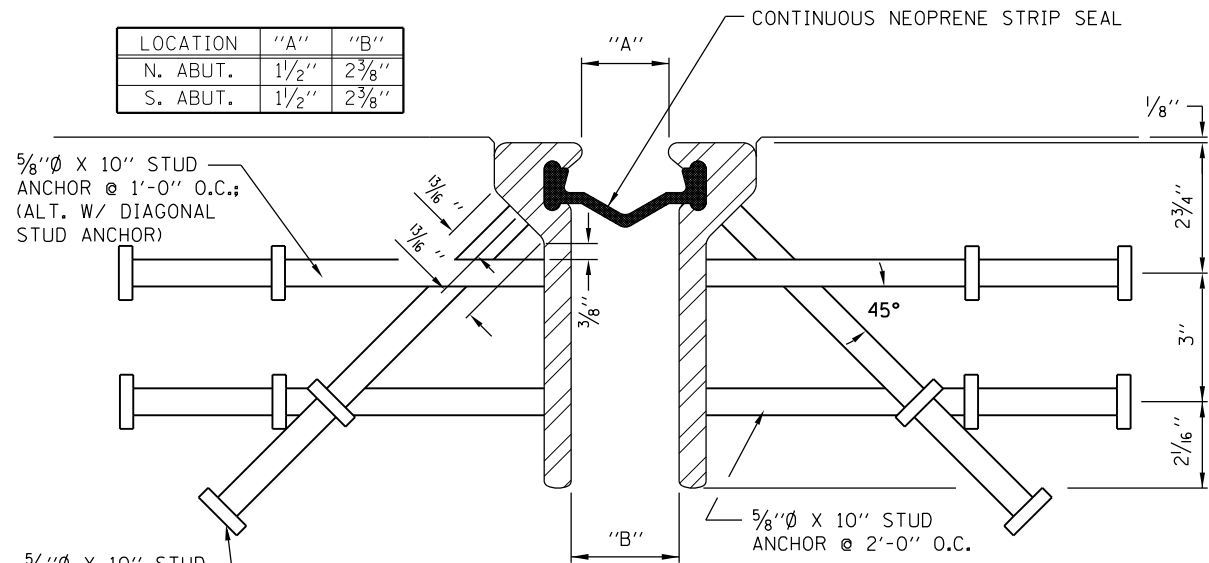


REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1439 (SW) S.N. 022-9970
EXPANSION JOINT REPLACEMENT

SHT NO. SH-34
DRAWING NO. 1181 OF 1517

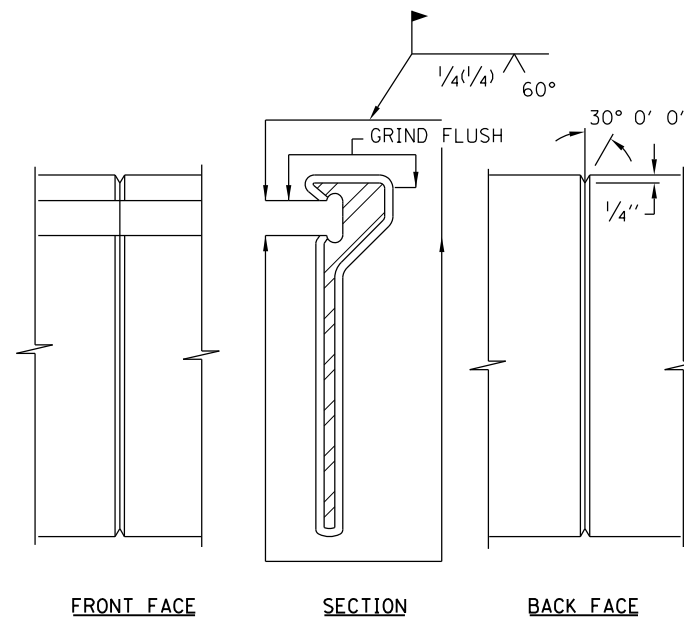
LOCATION	"A"	"B"
N. ABUT.	1 1/2"	2 3/8"
S. ABUT.	1 1/2"	2 3/8"



SECTION THRU EXPANSION JOINT

NOTE:
DIMENSIONS "A" AND "B" ARE PERPENDICULAR TO THE EXPANSION JOINT

NOTE:
10" STUDS SHALL BE MADE OF (1)-6 3/16" & (1)-4 1/8" (LENGTH BEFORE WELDING) PIGGY-BACKED.

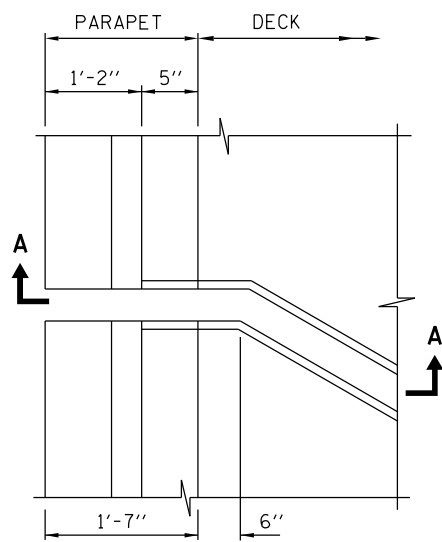


FRAME RAIL SPLICE DETAIL

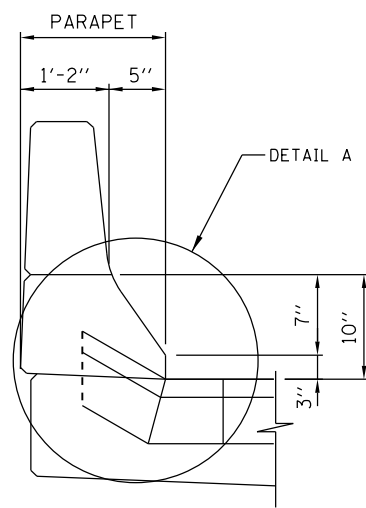
NOTE:
WELD ON FRONT SIDE OF FRAME MAY BE OMITTED AT STAGE CONSTRUCTION LINES

NOTES:

1. WORK THIS DRAWING WITH THE BASE SHEET FOR EXPANSION JOINT REPLACEMENT, SHEET SH-34
2. EXPANSION JOINT SHALL FOLLOW ROADWAY GRADE & CROSS SLOPE. EXPANSION JOINT TO BE SET TO GRADE BY ATTACHING FRAME RAILS TO BACKWALL AND BEAMS.
3. FRAME RAILS AND OTHER STEEL SHALL BE AASHTO M270 GRADE 36, (ASTM A36).
4. STUD ANCHORS SHALL BE AASHTO M169 (ASTM A108).
5. EXPANSION ANCHORS SHALL BE IN ACCORDANCE WITH THE ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATIONS, SECTION 1211.
6. FRAME RAIL ASSEMBLY SHALL BE FABRICATED IN 20 FT. MAXIMUM LENGTHS. SHOP AND FIELD SPLICES SHALL BE PLACED AT CROWN BREAKS, CONSTRUCTION STAGE LINES, AND TRANSVERSE BREAKS IN DECK.
7. AT SPLICES, A CONTINUOUS GROUND SMOOTH WELD SHALL BE PROVIDED EXCEPT ON SURFACES IN LOCKING CONTACT WITH SEAL WHICH SHALL HAVE NO BURRS.
8. ALL STUD ANCHORS TO BE ELECTRIC ARC END WELDED WITH COMPLETE FUSION.
9. AFTER FABRICATION IS COMPLETE FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123).
10. CORRESPONDING SECTIONS SHALL BE TEMPORARILY SHOP ASSEMBLED, CHECKED FOR FIT, AND MATCH MARKED WITH STENCIL AND BLACK PAINT FOR SHIPMENT.
11. NEOPRENE SEAL SHALL BE CONTINUOUS. FACTORY VULCANIZED HORIZONTAL MITERS SHALL BE REQUIRED FOR ALL SKEWS.
12. NEOPRENE SEAL SHALL BE INSTALLED CONTINUOUS, SPLICING OF SEAL IN THE FIELD IS NOT PERMITTED.
13. NEOPRENE SEAL SHALL BE BONDED TO THE FRAME RAILS WITH AN ADHESIVE MEETING THE REQUIREMENTS OF ASTM D4070.
14. SUPPORT PLATES, NUTS AND WASHERS CONNECTED TO FRAME RAILS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111 AND M232 (ASTM A123 AND A153).
15. SUPPORT PLATES ON STEEL GIRDERS SHALL BE WELDED IN ACCORDANCE WITH ARTICLES 505.04 (q) & 505.08 (n) OF THE IDOT STANDARD SPECIFICATIONS.
16. FURNISHING AND INSTALLING EXPANSION JOINT FRAME RAIL SUPPORT SYSTEM SHALL BE INCLUDED IN THE COST OF BRIDGE EXPANSION JOINT SYSTEM.
17. JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH THE FIELD ENGINEER'S INSTRUCTIONS.
18. UPON COMPLETION OF FIELD WELDING, THE CONTRACTOR SHALL CLEAN THE WELD AREA AND APPLY A COATING OF ORGANIC ZINC-RICH PAINT IN ACCORDANCE WITH SSPC-PS12.01.

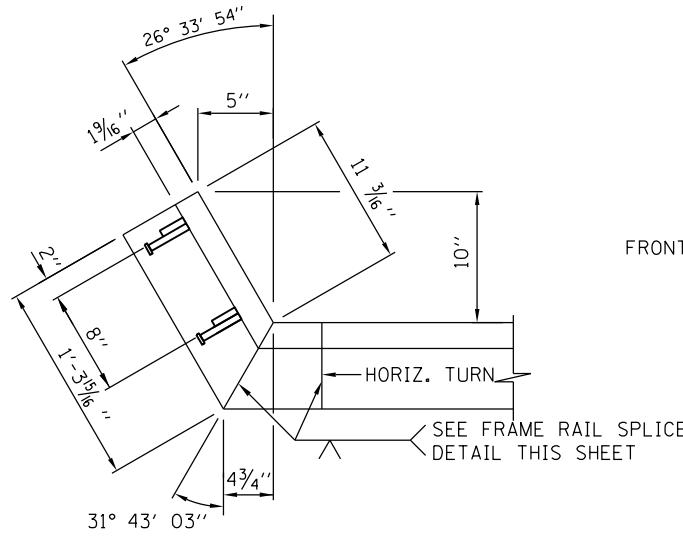


PLAN

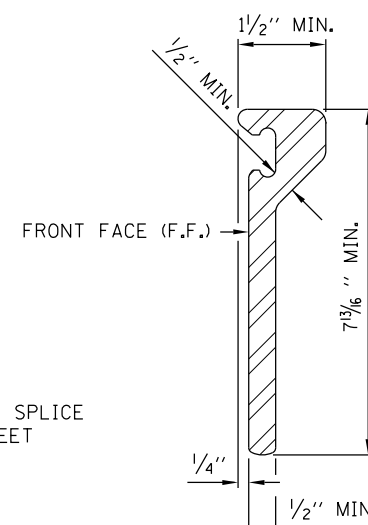


SECTION A-A

UPTURN AT PARAPET



DETAIL A



TYPICAL SECTION THRU FRAME RAIL

BILL OF MATERIAL

ITEM	UNIT	TOTAL
PREFORMED JOINT STRIP SEAL	FOOT	72

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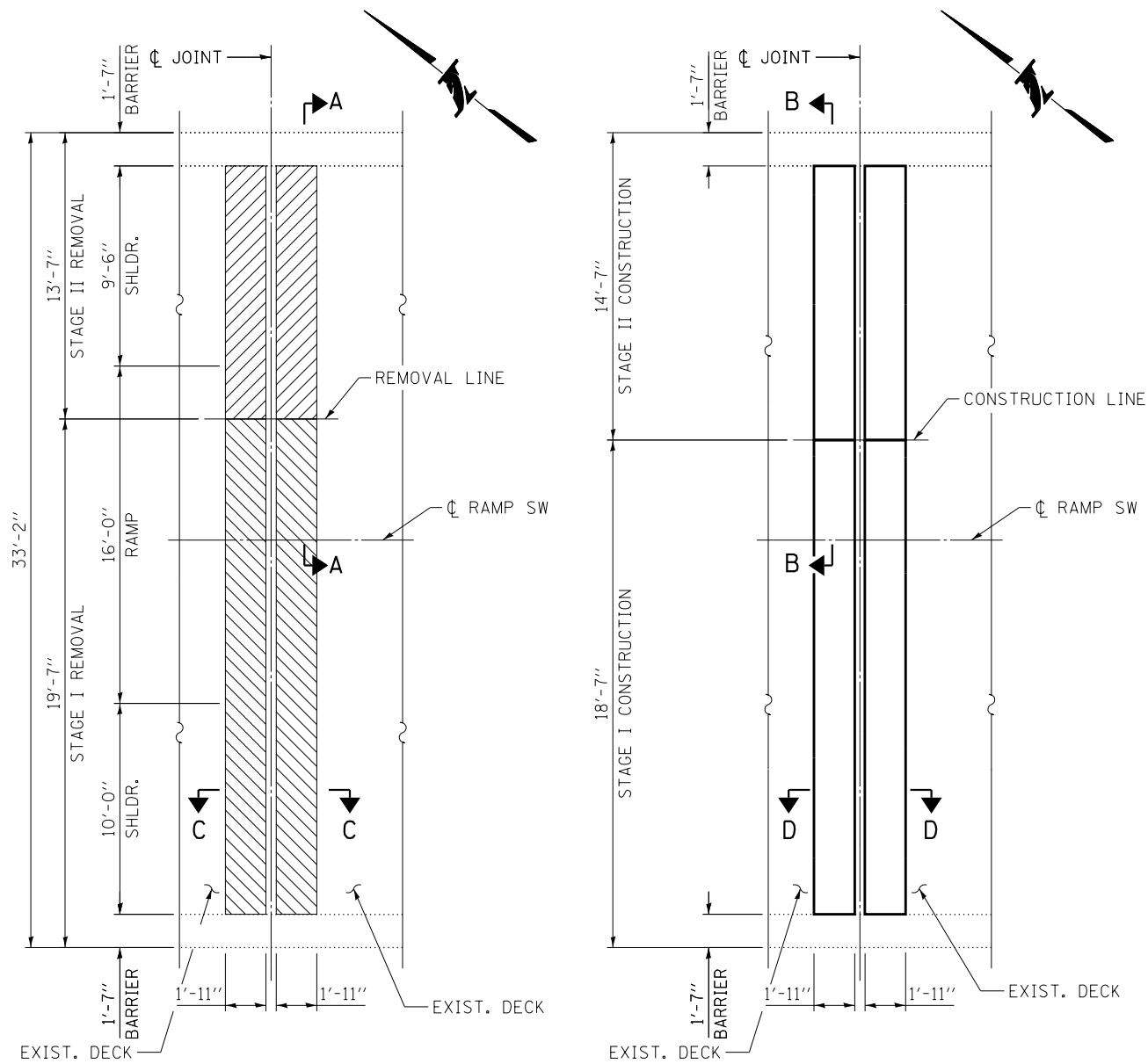


NO.	DATE	REVISIONS	
		DESCRIPTION	

CONTRACT NO. RR-16-4255
BRIDGE 1439 (SW) S.N. 022-9970
PREFORMED JOINT STRIP SEAL

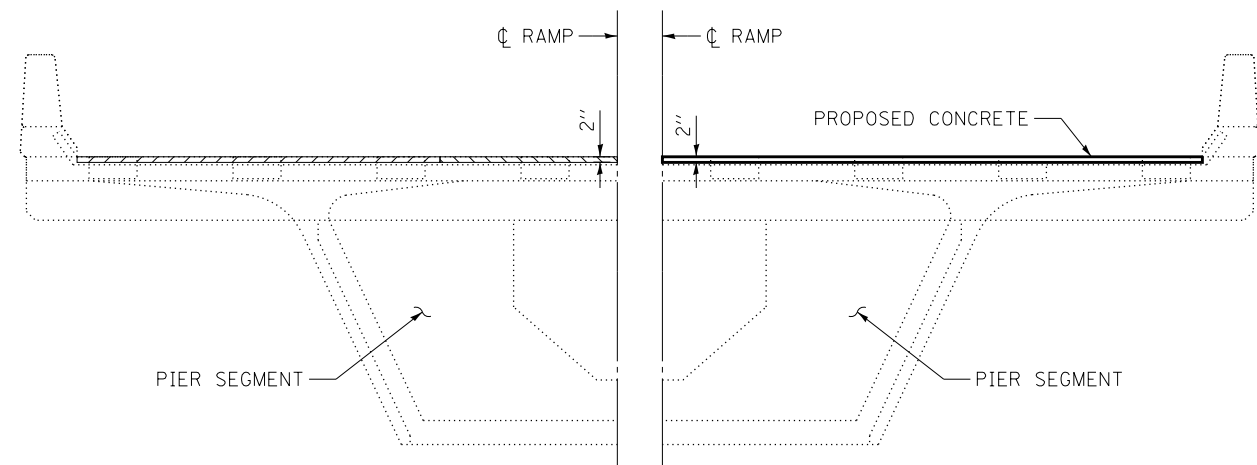
SH-35 OF SH-42
SHT NO. SH-35
DRAWING NO. 1182 OF 1517

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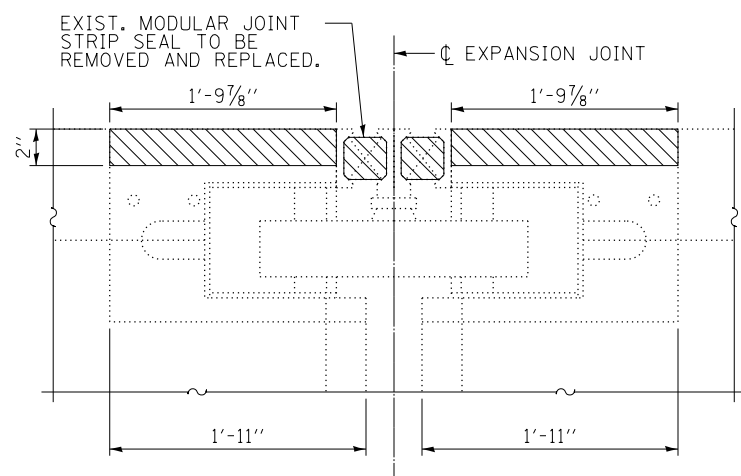
REMOVAL PLAN - PIER 4

REPLACEMENT PLAN - PIER 4

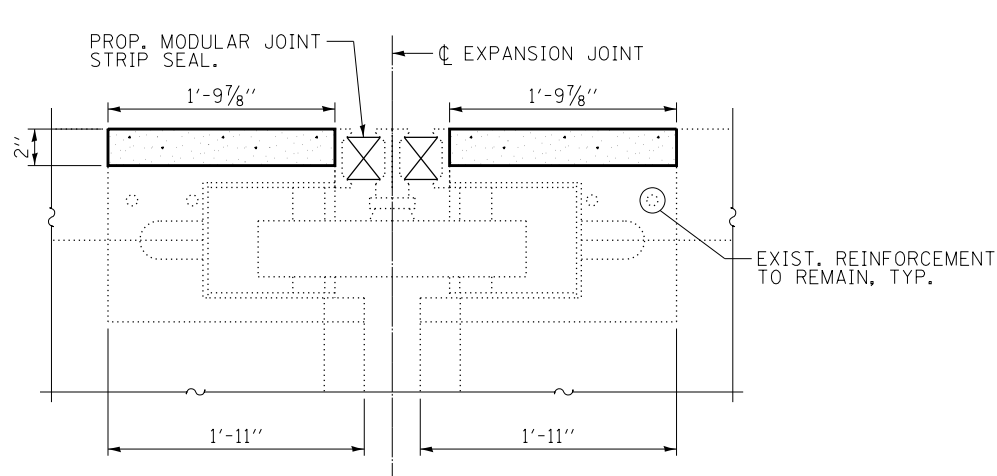


SECTION A-A

SECTION B-B



SECTION C-C



SECTION D-D

LEGEND:

- STAGE I CONCRETE REMOVAL
- STAGE II CONCRETE REMOVAL

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ. YD.	25
CONCRETE REMOVAL	CU. YD.	0.7
MODULAR EXPANSION JOINT STRIP SEAL REPLACEMENT, 6 IN	FOOT	60

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 MODULAR JOINT REPAIRS

SHT NO. SH-36
 DRAWING NO. 1183 OF 1517

ELASTOMERIC BEARINGS

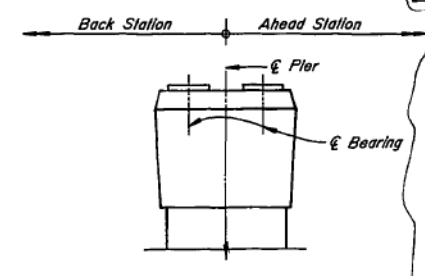
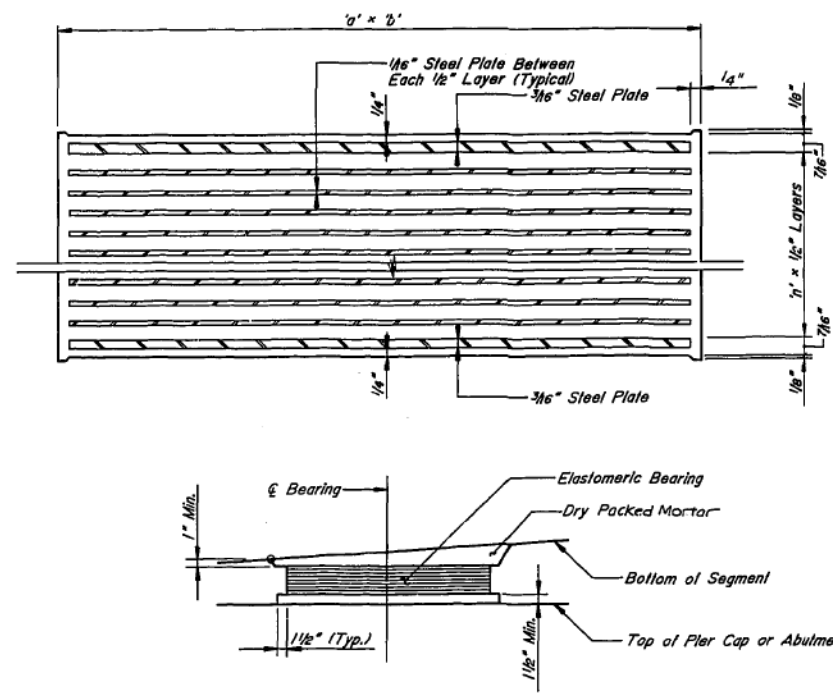
Structure	Location	a' Trans.	b' Long.	n'	No.	
Ramp SE	Pier 1	2'-6"	2'-6"	8	2	
	Pier 2	2'-6"	2'-6"	4	2	
	Pier 3	2'-6"	2'-6"	4	2	
	Pier 4	2'-6"	2'-6"	8	2	
	Pier 11	2'-6"	2'-6"	12	4	
	Pier 12	2'-6"	2'-6"	8	4	
	Pier 13	2'-6"	2'-6"	12	4	
	Ramp SW	Pier 2	2'-6"	2'-6"	8	4
		Pier 3	2'-6"	2'-6"	12	4
		Pier 4 (Ahead Station)	1'-10"	1'-10"	11	2
		Pier 8 (Back Station)	1'-10"	1'-10"	11	2
		Pier 9	2'-6"	2'-6"	6	2
		Pier 10	2'-6"	2'-6"	4	2
Ramp EN	Pier 1	1'-8"	1'-8"	10	2	
	Pier 2	2'-6"	2'-6"	8	2	
	Pier 3	2'-6"	2'-6"	6	2	
	Pier 4	2'-6"	2'-6"	4	2	
	Pier 4 (Straddle Bent)	1'-10"	4'-6"	4	2	
	Pier 5	2'-6"	2'-6"	6	2	
Finley Road	Pier 6	2'-6"	2'-6"	8	2	
	Pier 6 (Straddle Bent)	1'-10"	4'-6"	4	2	
	North Abutment	1'-8"	1'-8"	10	2	
	South Abutment	1'-8"	1'-8"	8	2	

*SLIDING POT BEARINGS

Structure	Location	Capacity	Long. Move.	Trans. Move.	No.
Ramp SE	West Abutment	450 K	±3"	±1"	2
	Pier 5	500 K	±5"	±2"	4
	Pier 10	550 K	±5"	±2"	4
	East Abutment	550 K	±5"	±1 1/4"	2
Ramp SW	North Abutment	550 K	±4 1/2"	±7/8"	2
	Pier 4 (Back Sta.)	550 K	±6"	±1 1/2"	2
	Pier 8 (Ahead Sta.)	500 K	±5"	±1 1/2"	2
	South Abutment	350 K	±3"	±1 1/2"	2

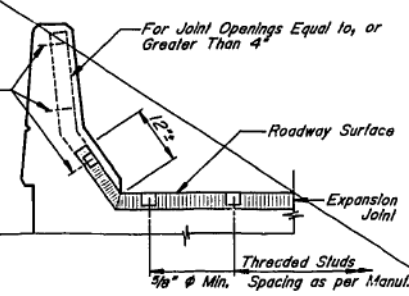
*WABO-FYFE HIGH LOAD STRUCTURAL BEARING MODEL III or Equivalent.

SEE SHEET TGO 204.



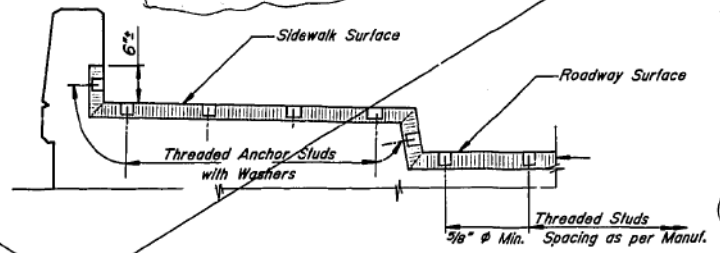
SEE SHEET SHEET SK3

Threaded Anchor Studs with Washers

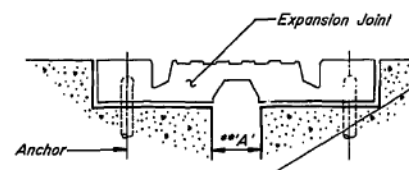


SECTION AT PARAPET

SEE TGO SHEET SK9 AND TGO 203.



SECTION AT SIDEWALK



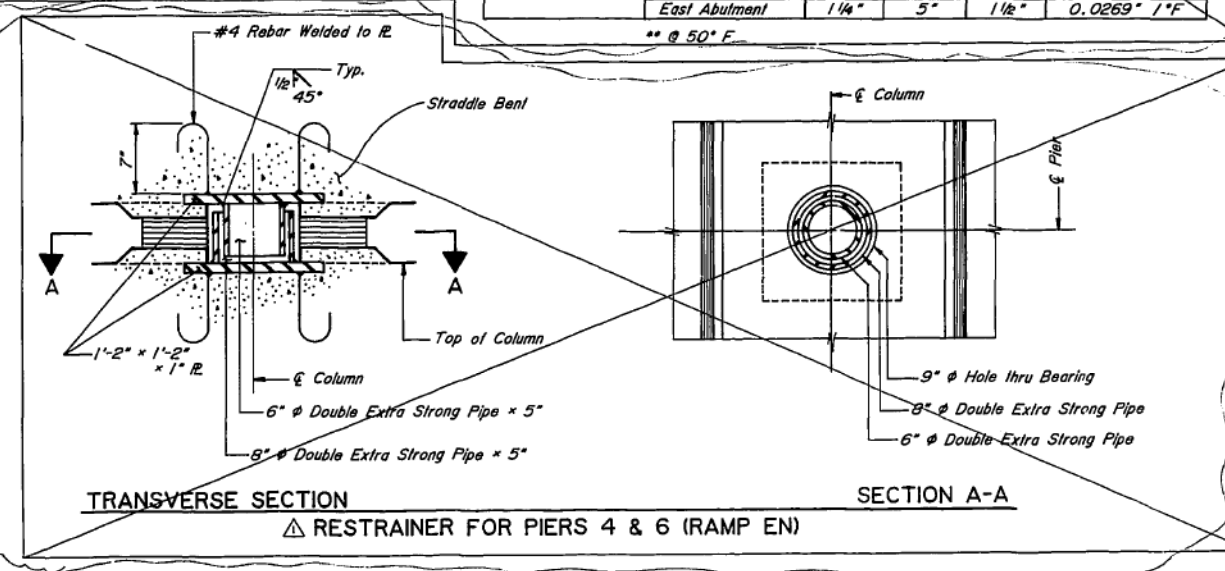
SECTION THRU EXPANSION JOINT

Note: Anchor Requirements and Blockout Dimensions as per Manufacturers' Specifications. WABOFLEX-SR Series or Equivalent.

EXPANSION JOINT MOVEMENTS

Structure	Location	Total Movements		**Initial Setting 'A'	Temperature Correction
		Trans.	Long.		
Ramp EN	South Abutment	3/8"	4 1/2"	1 1/2"	0.0325" / °F
	North Abutment	3/8"	4 1/2"	1 1/2"	0.0325" / °F
Finley Road	South Abutment	0	3"	1 1/2"	0.0199" / °F
	North Abutment	0	3"	1 1/2"	0.0199" / °F
Ramp SW	North Abutment	1/4"	2 3/4"	1 1/2"	0.0261" / °F
	Pier 4	1/2"	6 1/2"	3"	0.0448" / °F
	Pier 8	1/2"	9"	3"	0.0445" / °F
	South Abutment	1/4"	4 1/2"	1 1/2"	0.0258" / °F
Ramp SE	West Abutment	3/8"	2 1/2"	1 1/2"	0.0231" / °F
	Pier 5	1 1/2"	8 1/2"	3"	0.0451" / °F
	Pier 10	1 1/2"	8 1/2"	3"	0.0488" / °F
	East Abutment	1 1/4"	5"	1 1/2"	0.0269" / °F

** @ 50° F.



TRANSVERSE SECTION

SECTION A-A

RESTRAINER FOR PIERS 4 & 6 (RAMP EN)

SEE TGO SHEET SK8.

Note: This Sheet Applies To Ramps S.E., S.W. + EN Only

FM-5

DRAWN..... M.M.M.	DATE..... 1-21-97	Figg and Muller Engineers Inc. TALLAHASSEE - DENVER - ALEXANDRIA - AUSTIN - PARIS	THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY EAST-WEST TOLLWAY AND MIDWEST ROAD OAK BROOK, ILLINOIS 60521	<table border="1"> <tr><th colspan="2">REVISIONS</th></tr> <tr><th>NO.</th><th>DESCRIPTION</th></tr> <tr><td>4-24-87</td><td>Added Restrainer Details</td></tr> <tr><td>1-15-88</td><td>VOIDED DETAILS @ BEARING INFO</td></tr> <tr><td>3-22-88</td><td>See Note</td></tr> </table>	REVISIONS		NO.	DESCRIPTION	4-24-87	Added Restrainer Details	1-15-88	VOIDED DETAILS @ BEARING INFO	3-22-88	See Note	<table border="1"> <tr><th colspan="2">CONTRACT NUMBER CIP-616</th></tr> <tr><td colspan="2">BEARING AND EXPANSION JOINT DETAILS</td></tr> </table>	CONTRACT NUMBER CIP-616		BEARING AND EXPANSION JOINT DETAILS		DRAWING NO. 720 OF 861
REVISIONS																				
NO.	DESCRIPTION																			
4-24-87	Added Restrainer Details																			
1-15-88	VOIDED DETAILS @ BEARING INFO																			
3-22-88	See Note																			
CONTRACT NUMBER CIP-616																				
BEARING AND EXPANSION JOINT DETAILS																				

FOR INFORMATION ONLY

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
CLEANING AND PAINTING BEARINGS	EACH	8

DRAWN BY SBA DATE 3/11/2018
CHECKED BY BWS DATE 3/11/2018

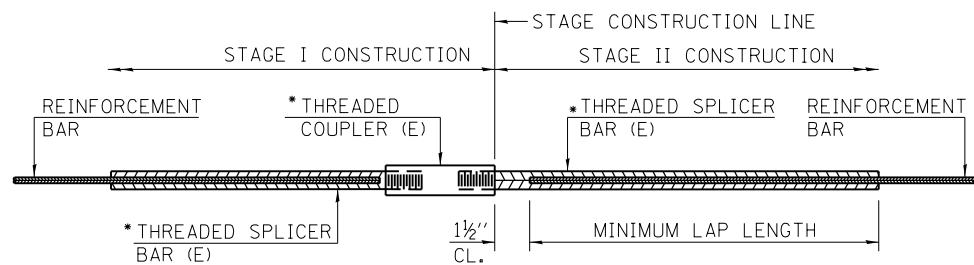
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Email: chicago@ciorba.com

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1439 (SW) S.N. 022-9970
BEARING PAINTING DETAILS

SH-37 OF SH-42
SHT NO. SH-37
DRAWING NO.
1184 OF 1517

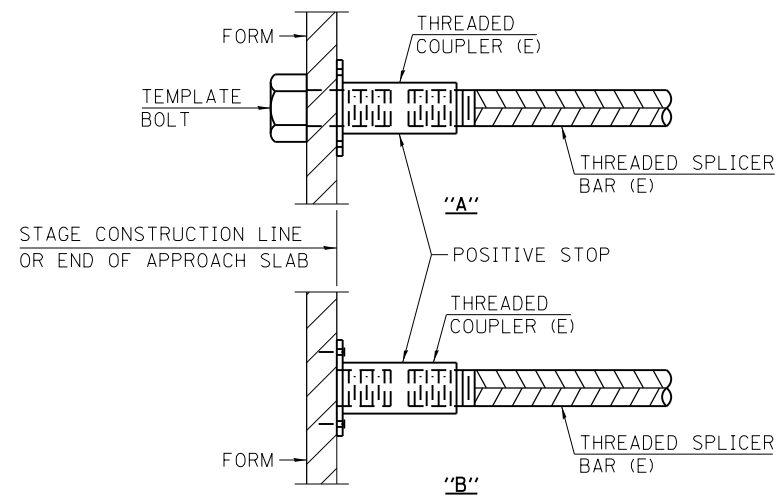


STANDARD BAR SPLICER ASSEMBLY

THREADED SPLICER BAR LENGTH = MIN. LAP LENGTH + 1/2" + THREAD LENGTH

* EPOXY NOT REQUIRED ON BAR SPLICER ASSEMBLY COMPONENTS USED IN CONJUNCTION WITH BLACK BARS.

LOCATION	BAR SIZE	NO. ASSEMBLIES REQUIRED	MINIMUM LAP LENGTH
N. ABUT.	#5	6	3'-3"
S. ABUT.	#5	5	3'-3"



INSTALLATION AND SETTING METHODS

"A" : SET BAR SPLICER ASSEMBLY BY MEANS OF A TEMPLATE BOLT.
 "B" : SET BAR SPLICER ASSEMBLY BY NAILING TO WOOD FORMS OR CEMENTING TO STEEL FORMS.
 (E) : INDICATES EPOXY COATING.

NOTES:

SPLICER BARS SHALL BE DEFORMED WITH THREADED ENDS AND HAVE A MINIMUM 60 KSI YIELD STRENGTH.

ALL REINFORCEMENT SHALL BE LAPPED AND TIED TO THE SPLICER BARS. BAR SPLICER ASSEMBLIES SHALL BE EPOXY COATED ACCORDING TO THE REQUIREMENTS FOR REINFORCEMENT BARS. SEE SECTION 508 OF THE STANDARD SPECIFICATIONS.

SEE APPROVED LIST OF BAR SPLICER ASSEMBLIES AND MECHANICAL SPLICERS FOR ALTERNATIVES.

Projects\2015\20151616-Veterans Memorial Tollway\Drawings\Current Drawings\Files\2015\Structural\Sheet\2015-1439-barsplice-CG101.dgn

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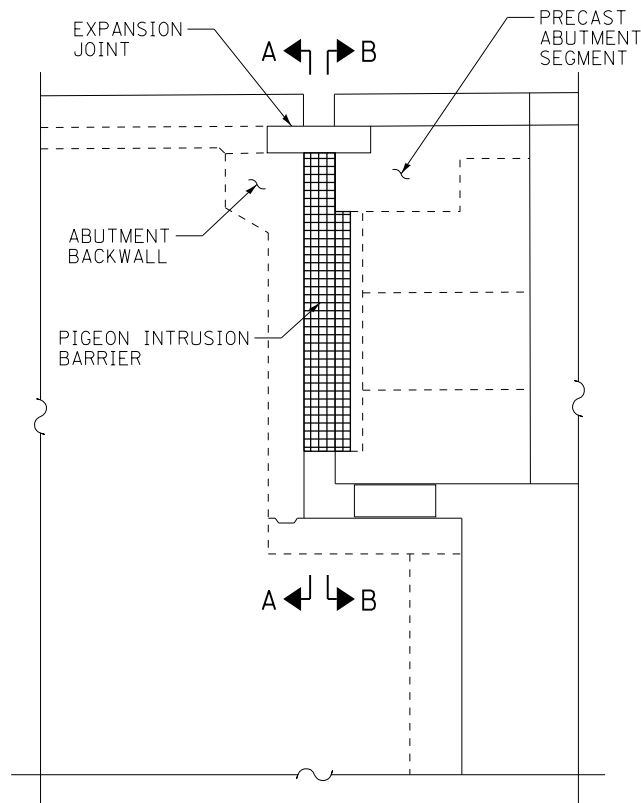
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REVISIONS		
NO.	DATE	DESCRIPTION

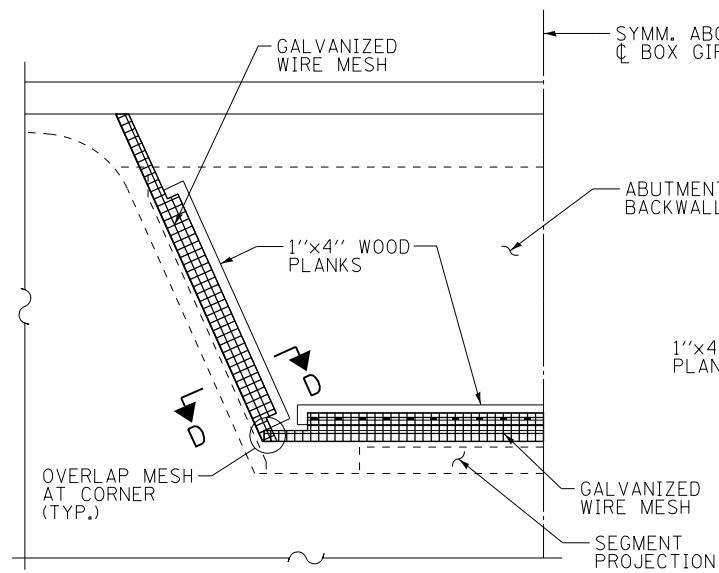
CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 BAR SPLICER ASSEMBLY DETAILS

SH-38 OF SH-42
 SHT NO. SH-38
 DRAWING NO.
 1185 OF 1517

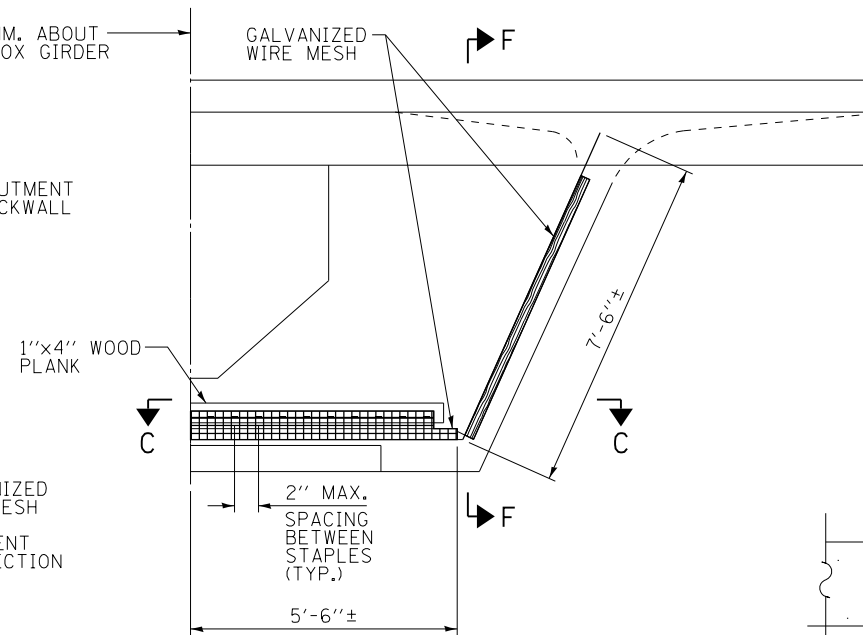
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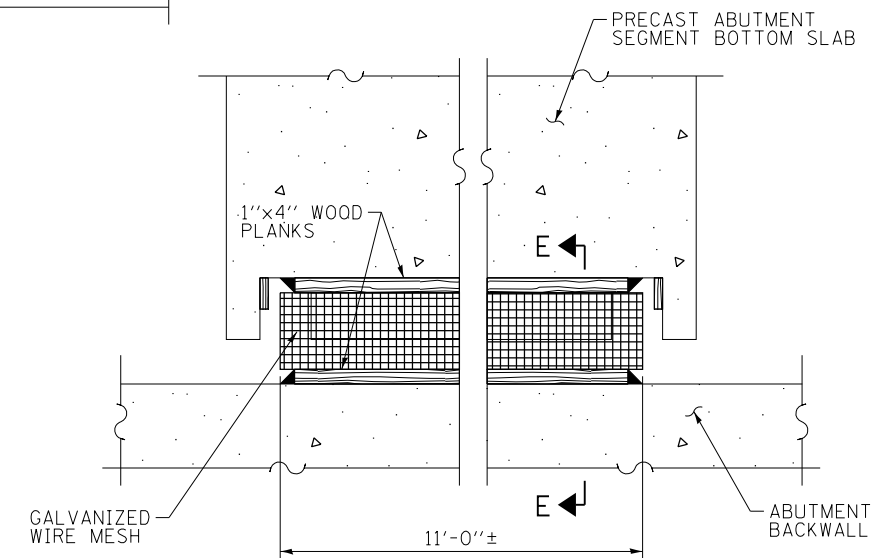
EXPANSION JOINT AT ABUTMENT



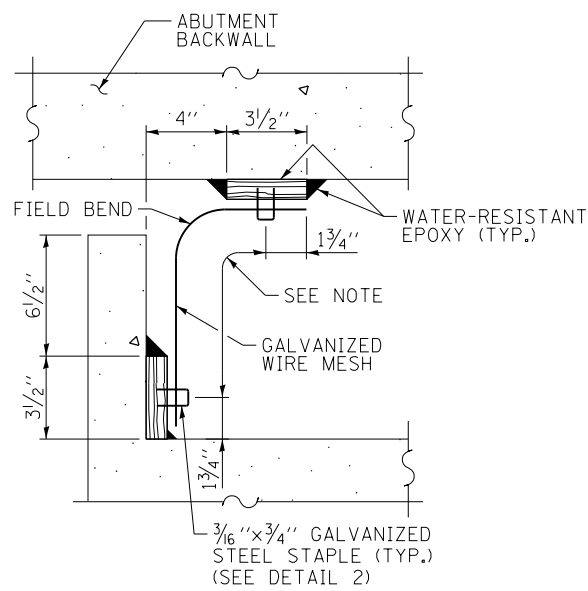
SECTION A-A



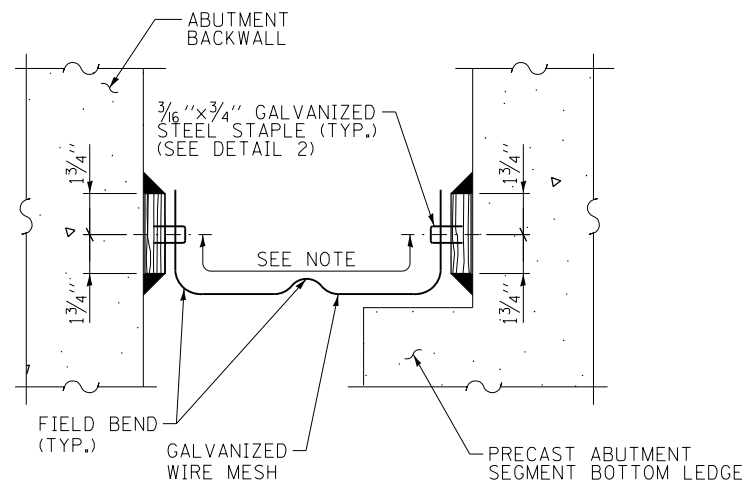
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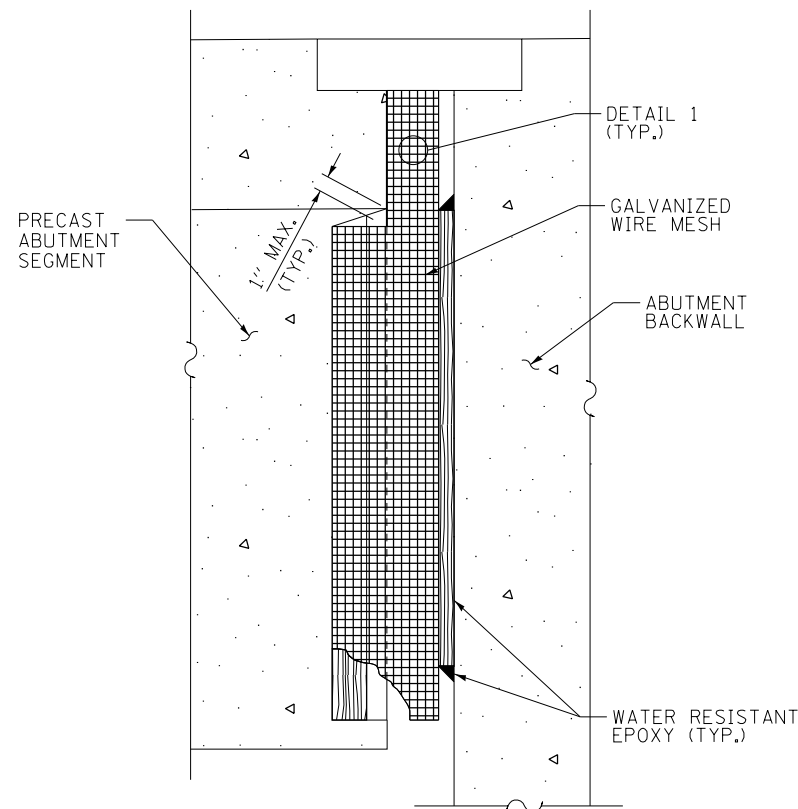
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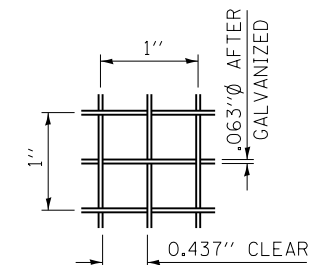
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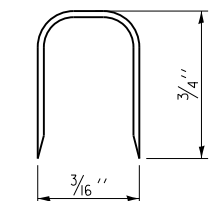
SECTION E-E



SECTION F-F



DETAIL 1



DETAIL 2

NOTE:
 MINIMUM LENGTH OF WIRE MESH OF 16" SHALL BE PROVIDED BETWEEN POINTS OF ATTACHMENTS (SEE SECT. D-D & E-E).

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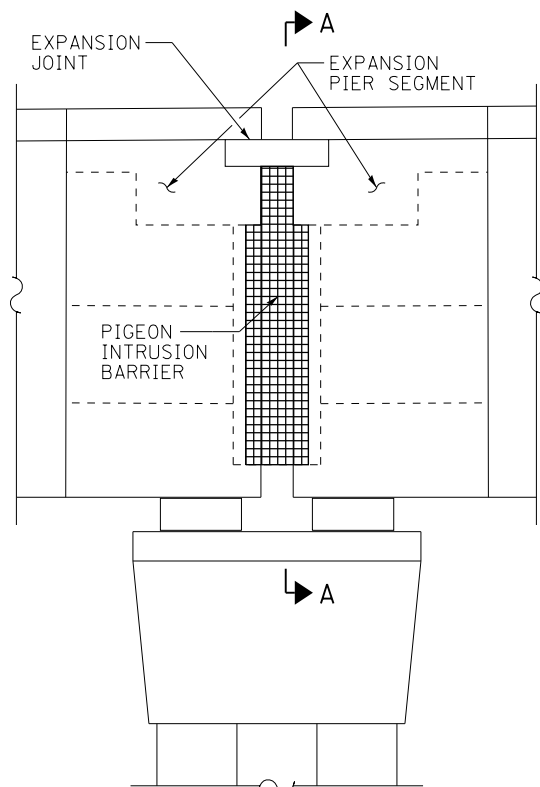
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 DOWNERS GROVE,
 ILLINOIS 60515

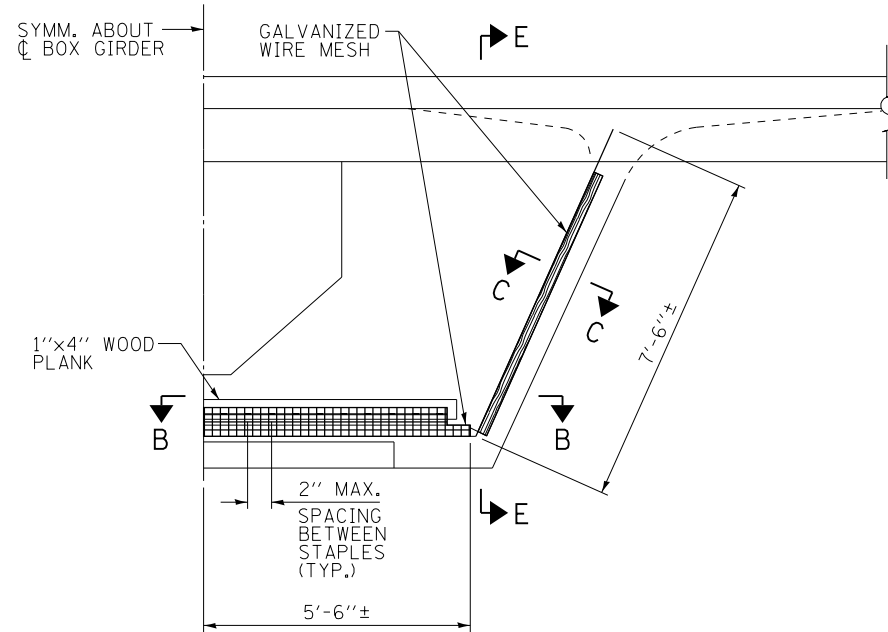
NO.	DATE	REVISIONS	
		DESCRIPTION	

CONTRACT NO. **RR-16-4255**
 BRIDGE 1439 (SW) S.N. 022-9970
 PIGEON INTRUSION BARRIERS I

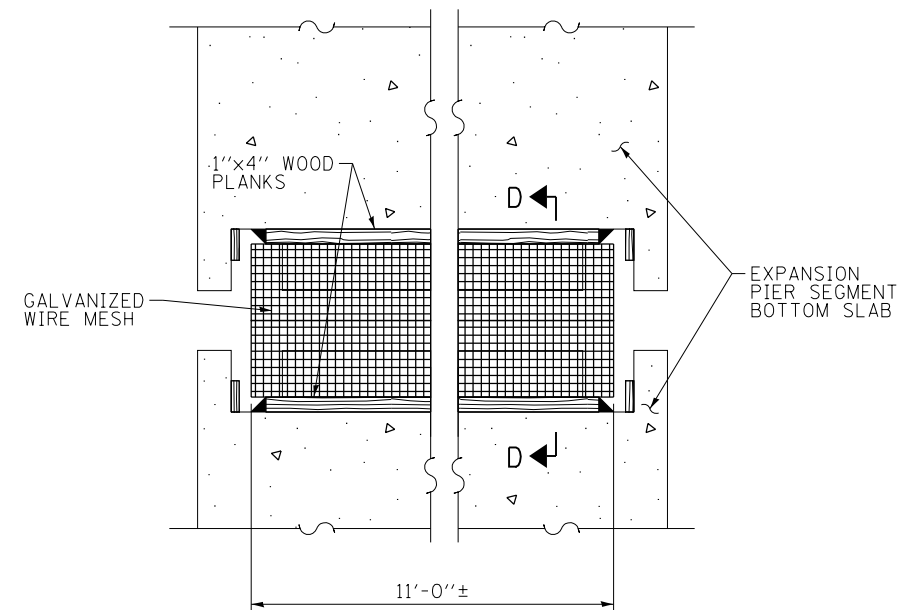
SH-39 OF SH-42
 SHT NO. SH-39
 DRAWING NO.
 1186 OF 1517



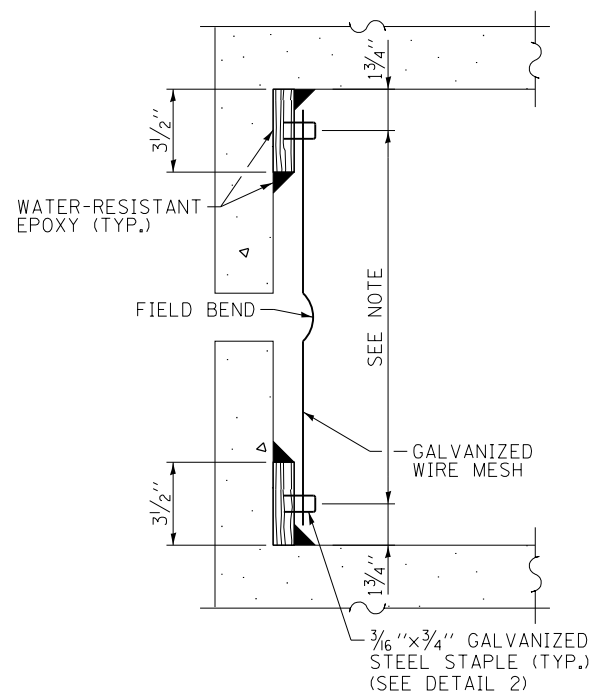
EXPANSION JOINT AT PIERS 4 & 8



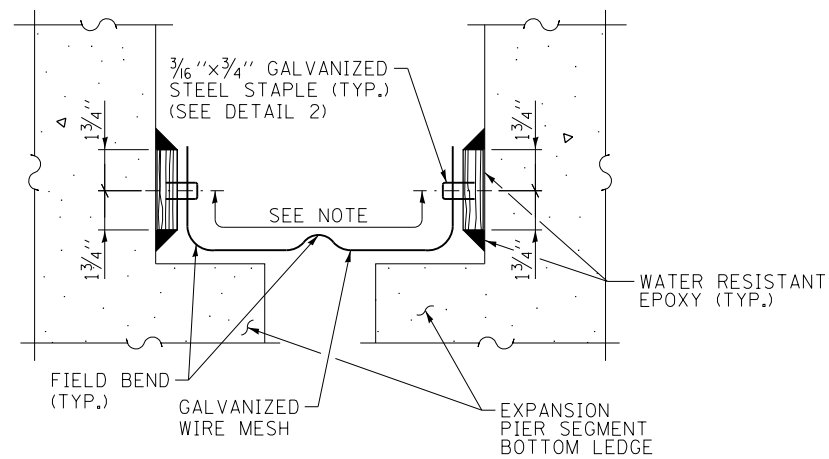
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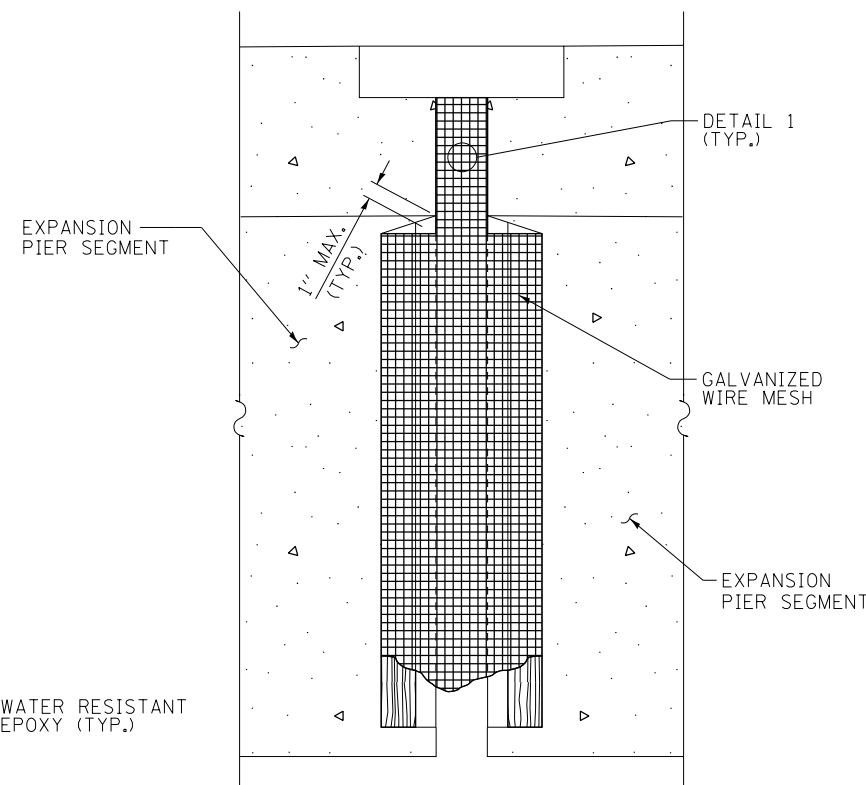
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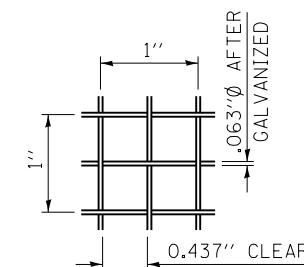
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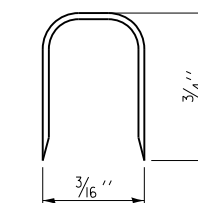
SECTION D-D



SECTION E-E



DETAIL 1



DETAIL 2

NOTE:
MINIMUM LENGTH OF WIRE MESH OF 16" SHALL BE PROVIDED BETWEEN POINTS OF ATTACHMENTS (SEE SECT. B-B & E-E).

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
PIGEON INTRUSION BARRIER	EACH	4

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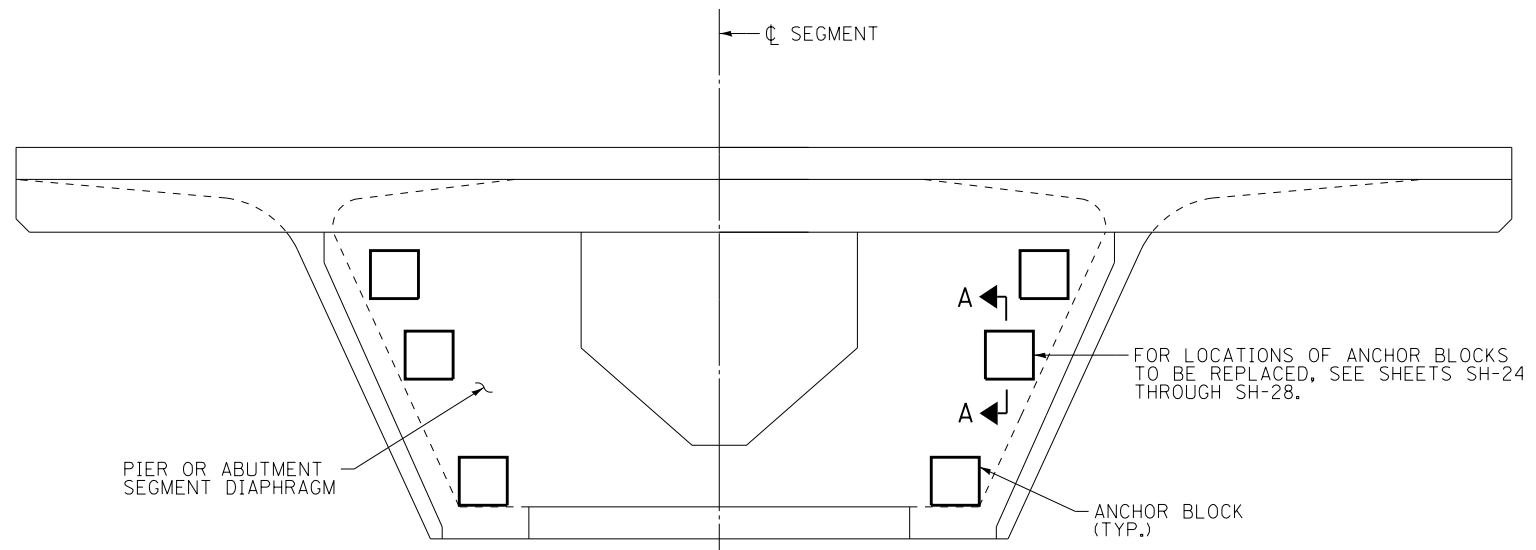
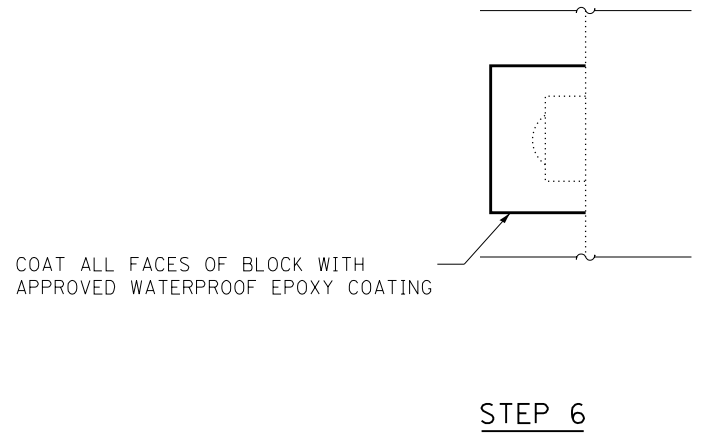
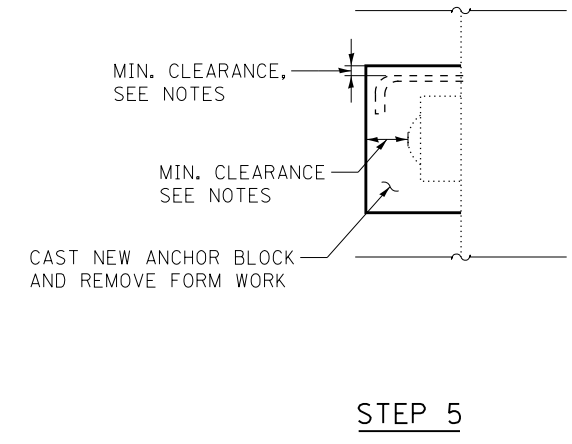
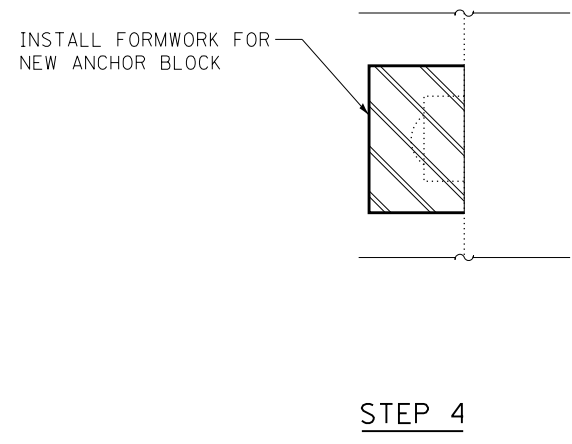
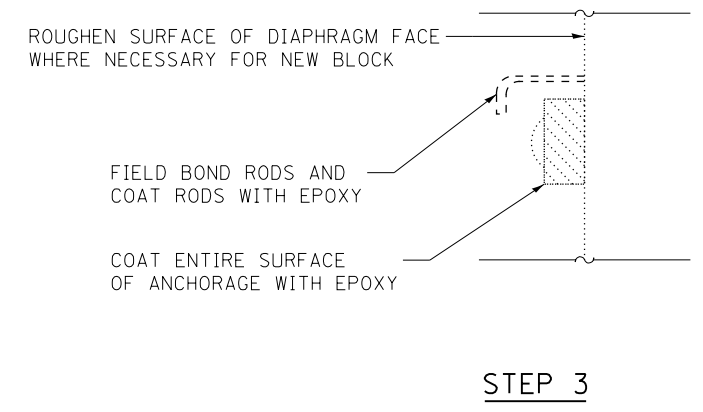
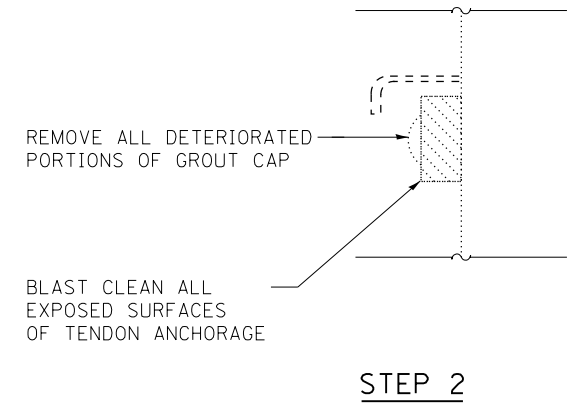
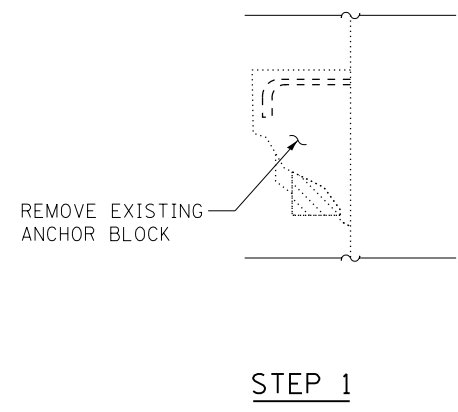
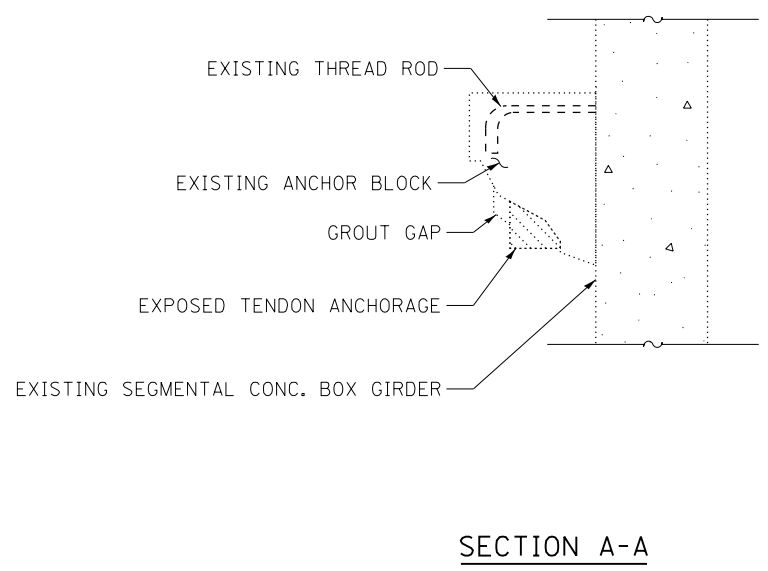
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 DOWNERS GROVE,
 ILLINOIS 60515

NO.	DATE	REVISIONS	
		DESCRIPTION	

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 PIGEON INTRUSION BARRIERS II

SH-40 OF SH-42
 SHT NO. SH-40
 DRAWING NO.
 1187 OF 1517

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NOTES:
 MINIMUM CLEARANCE OF 5 INCHES SHALL BE PROVIDED FROM TENDON ANCHORAGE TO ALL SURFACES OF ANCHOR BLOCK. MINIMUM CLEARANCE OF 3 INCHES SHALL BE PROVIDED FROM ALL THREAD RODS TO ALL SURFACES OF ANCHOR BLOCK.
 COST OF ALL WORK IS COVERED UNDER PAY "REPLACEMENT OF ANCHOR BLOCK CONCRETE."
 MAXIMUM ANCHOR BLOCK VOLUME IS 2 CU. FT.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
REPLACEMENT OF ANCHOR BLOCK CONCRETE	EACH	34

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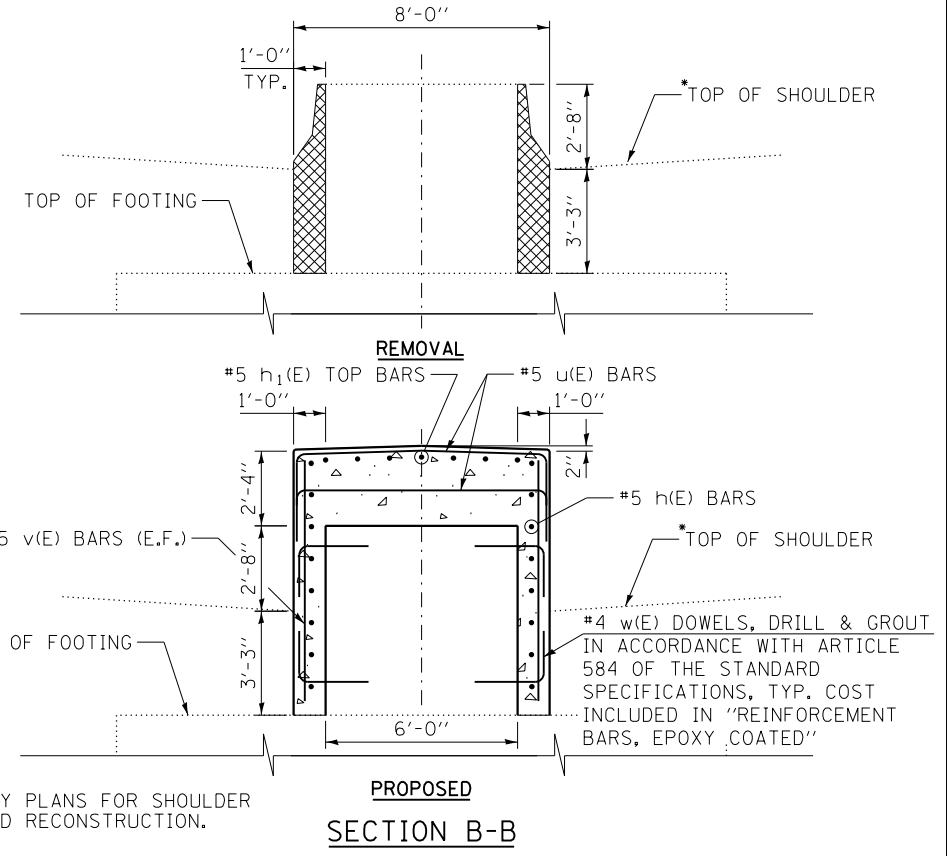
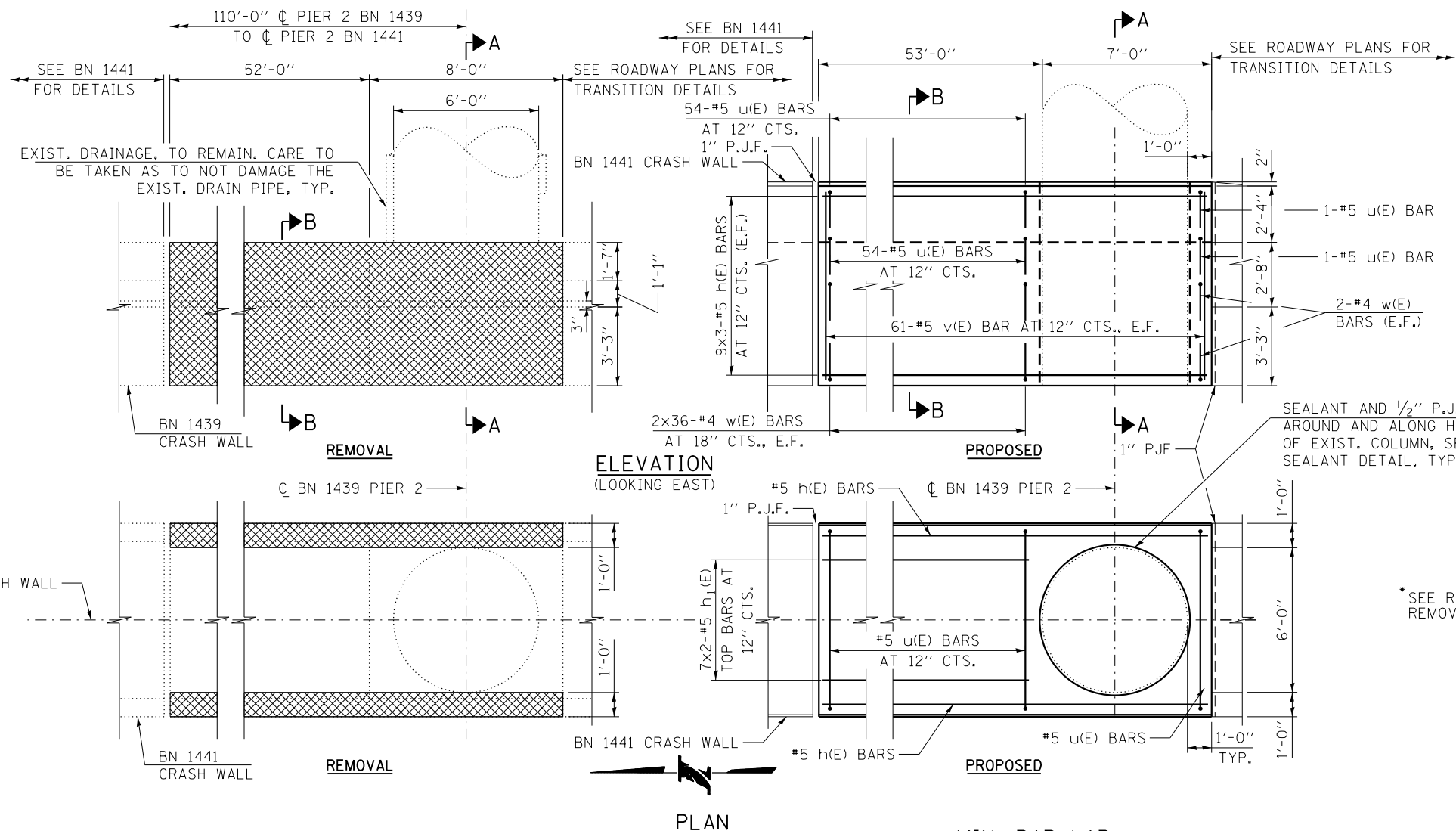
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 ILLINOIS 60515

REVISIONS		DESCRIPTION
NO.	DATE	

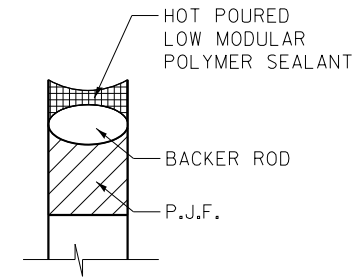
CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 ANCHOR BLOCK REPLACEMENT DETAILS

SH-41 OF SH-42
 SHT NO. SH-41
 DRAWING NO. 1188 OF 1517

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*SEE ROADWAY PLANS FOR SHOULDER REMOVAL AND RECONSTRUCTION.



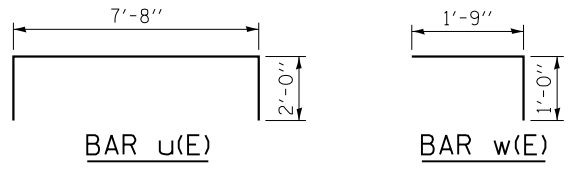
SEALANT DETAIL

REINFORCEMENT BAR LIST				
BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	54	#5	22'-4"	—
h ₁ (E)	14	#5	27'-9"	—
v(E)	122	#5	7'-11"	—
u(E)	110	#5	11'-8"	⊏
w(E)	148	#4	2'-9"	⊏

BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SO. FT.	1,598
CONCRETE STRUCTURES	CU. YD.	66.4
CONCRETE REMOVAL	CU. YD.	18.0
REINFORCEMENT BARS, EPOXY COATED	POUND	4,290

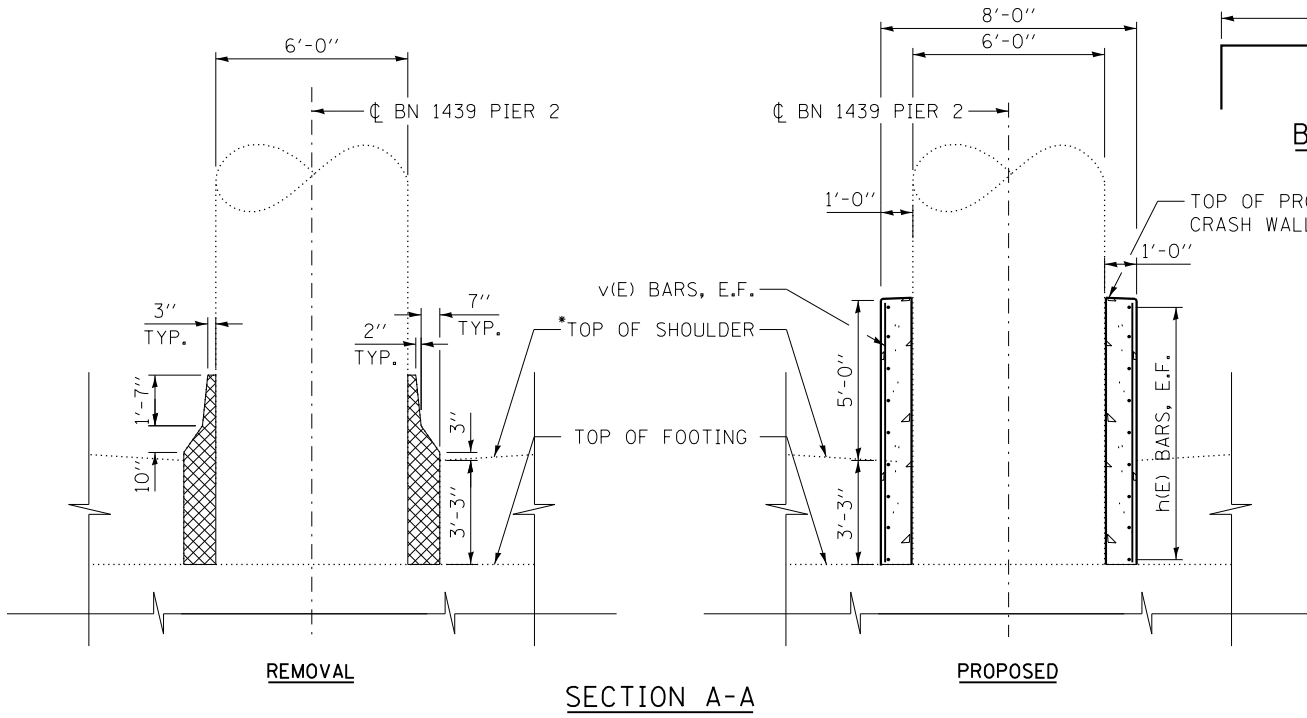
LEGEND
 CONCRETE REMOVAL

MIN. BAR LAP
 #5 BAR = 3'-6"



NOTES:

1. REMOVE EXISTING CONCRETE CRASH WALL BACK TO FACE OF COLUMNS PRIOR TO PLACING CONCRETE AROUND EXISTING CRASH WALL AND COLUMNS. SURFACES TO RECEIVE NEW CONCRETE SHALL BE BLAST CLEANED. COST OF CLEANING SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL.
2. CONCRETE MEDIAN BARRIER TRANSITION TAPER LENGTHS, PAY LIMITS AND MEASUREMENT, AND BASIS OF PAYMENT ALL IN ACCORDANCE WITH THE ILLINOIS TOLLWAY STANDARD DRAWING C13, C14 AND THE SPECIAL PROVISIONS.
3. THE CLEAR COVER FOR REINFORCEMENT BARS TO THE SURFACE OF CONCRETE SHALL BE 2" UNLESS OTHERWISE SHOWN.
4. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
5. EXPOSED CONCRETE EDGES SHALL HAVE 3/4"x45° CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
6. CONCRETE SEALANT SHALL BE APPLIED TO THE EXPOSED SURFACES OF ALL NEW AND/OR MODIFIED PIER CRASH WALLS.
7. E.F. DENOTES EACH FACE.
8. BARS NOTED THUS, 3x2-#5 INDICATED 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.



SECTION A-A

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1439 (SW) S.N. 022-9970
 CRASH WALL MODIFICATIONS

SH-42 OF SH-42
 SHT NO. SH-42
 DRAWING NO. 1189 OF 1517

BENCHMARK

SEE SHEET ALI-19 OF THE ROADWAY PLANS, CONTROL #74

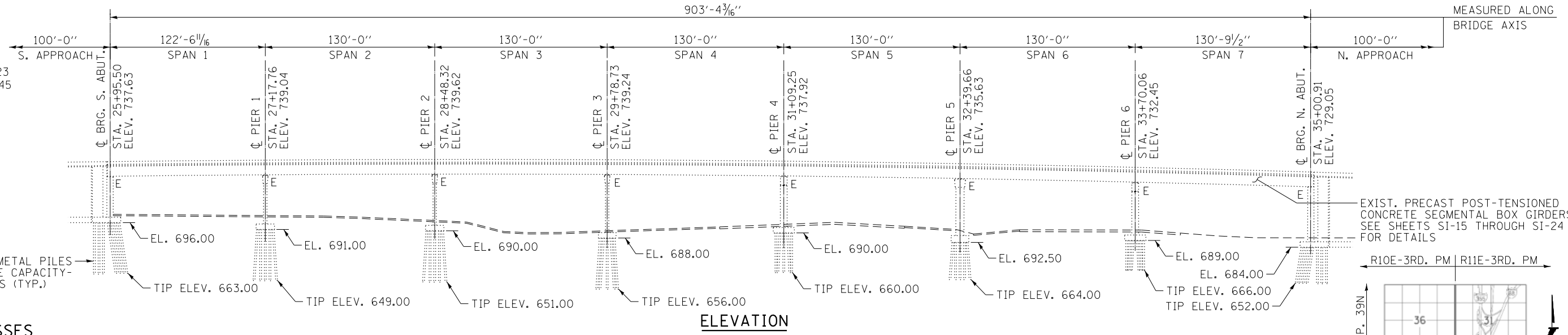
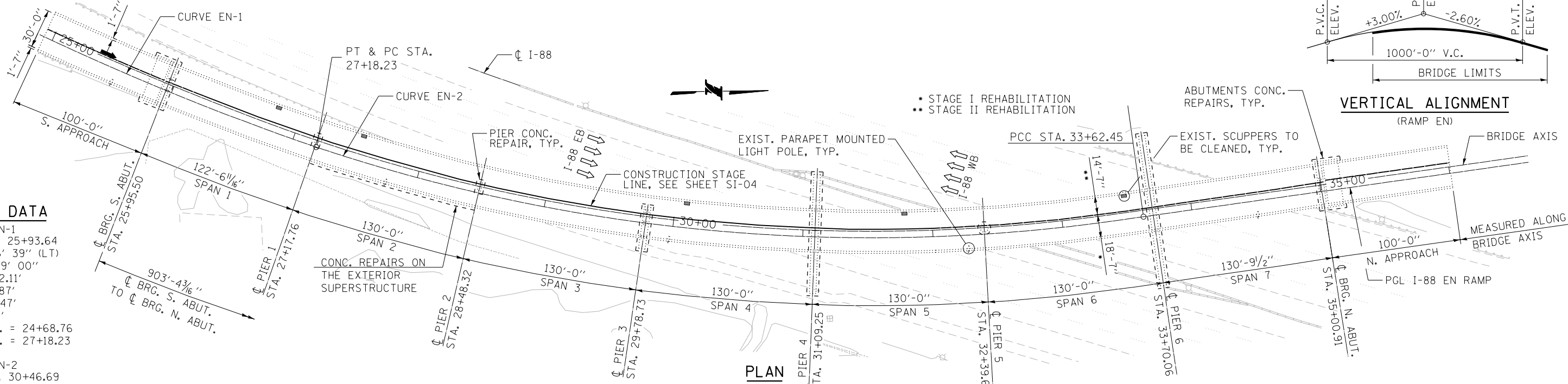
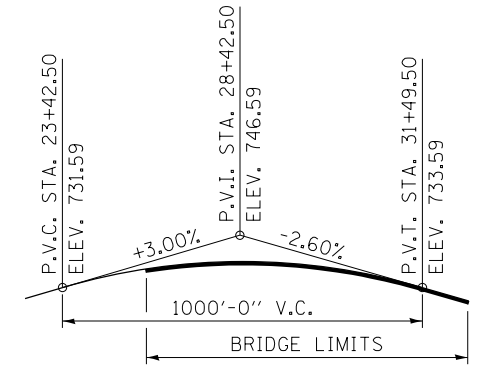
EXISTING STRUCTURES

BRIDGE NUMBER 1437, IDOT SN: 022-9969, WAS DESIGNED IN 1987 ON CONTRACT CIP-616. THE RAMP STATIONING WAS CHANGED IN 2008 ON CONTRACT I-08-5495. THE BRIDGE IS A RAMP FROM I-88 EASTBOUND TO I-355 NORTHBOUND.
 SUPERSTRUCTURE: 7 SPANS OF A HORIZONTALLY CURVED PRECAST POST-TENSIONED SEGMENTAL BOX GIRDER.
 SUBSTRUCTURE: TWO HIGH WALL CONCRETE ABUTMENTS ON STEEL PILES.
 PIERS 1, 2, 5: SINGLE COLUMN CONCRETE HAMMERHEAD PIER ON STEEL PILES.
 PIERS 3: POST-TENSIONED CONCRETE SINGLE COLUMN WITH A CANTILEVERED CAP ON STEEL PILES.
 PIERS 4, 6: STRADDLE BENT CONSISTING OF POST-TENSIONED CONCRETE BEAM BETWEEN TWO CONCRETE COLUMNS ON DRILLED SHAFTS.
 WORK TO BE PERFORMED UNDER STAGE CONSTRUCTION.

CURVE DATA

CURVE EN-1
 P.I. STA. 25+93.64
 $\Delta = 6^{\circ}36'39''$ (LT)
 $D = 2^{\circ}39'00''$
 $R = 2,162.11'$
 $T = 124.87'$
 $L = 249.47'$
 $E = 3.60'$
 P.C. STA. = 24+68.76
 P.T. STA. = 27+18.23

CURVE EN-2
 P.I. STA. 30+46.69
 $\Delta = 27^{\circ}32'59''$ (LT)
 $D = 4^{\circ}16'35''$
 $R = 1,339.80'$
 $T = 328.46'$
 $L = 644.22'$
 $E = 39.68'$
 P.C. STA. = 27+18.23
 P.T. STA. = 33+62.45



DESIGN STRESSES

- EXISTING UNITS**
 $f'_c = 4,000$ PSI (TYPICAL FOOTINGS)
 $f'_c = 4,500$ PSI (SPECIAL FOOTINGS)
 $f'_c = 4,500$ PSI (SUBSTRUCTURE)
 $f'_c = 5,500$ PSI (SPECIAL BENTS)
 $f'_c = 5,500$ PSI (SUPERSTRUCTURE)
- FIELD UNITS**
 $f'_c = 3,500$ PSI (CLASS SI - SUBSTRUCTURE REPAIRS)
 $f'_c = 4,000$ PSI (CLASS BS - PARAPET REPAIRS)
 $f'_c = 4,000$ PSI (CLASS AX - SUPERSTRUCTURE)
 $f_y = 60,000$ PSI (REINFORCEMENT)

DESIGN LOADS

EXISTING STRUCTURE
 LIVE LOAD:
 HS20-44 AND ALTERNATE MILITARY LOADING

DEAD LOAD:
 25 PSF FOR FUTURE WEARING SURFACE

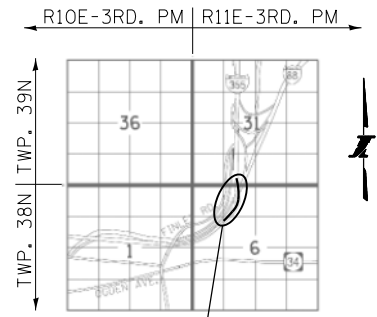
HIGHWAY CLASSIFICATION

NB I-355 EN RAMP
 FUNCTIONAL CLASS: PRINCIPAL ARTERIAL
 ADT: 15,200 (2015); 9,600 (2041)
 ADTT: 0;0
 DHV: 1,520
 DESIGN SPEED: 55 MPH
 POSTED SPEED: 45 MPH

ROUTE UNDER: NB I-88
 ADT: 89,240 (2016)

PROPOSED SCOPE OF WORK

1. REPAIR SPALLED AND UNSOUND CONCRETE IN THE SUBSTRUCTURE.
2. REPAIR SPALLED AND UNSOUND CONCRETE IN THE SUPERSTRUCTURE.
3. REPAIR SPALLED AND UNSOUND CONCRETE ON THE PARAPET.
4. PATCH BRIDGE DECK OVERLAY DEFECTS.
5. REMOVE AND REPLACE POST-TENSIONING ANCHOR BLOCKS.
6. APPLY DECK SEALER ON EXISTING OVERLAY AFTER PATCHING DEFECTS.
7. APPLY CONCRETE SEALANT ON ABUTMENTS, PIERS AND PARAPET TRAFFIC FACE.
8. CLEAN EXISTING SCUPPERS.
9. REMOVE AND REPLACE PIGEON INTRUSION AT ABUTMENTS.



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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 GENERAL PLAN AND ELEVATION

SI-01 OF SI-31
 SHT NO. SI-01
 DRAWING NO.
 1190 OF 1517

GENERAL NOTES

CAST-IN-PLACE CONCRETE

ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS

REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A706), GRADE 60, DEFORMED BARS.

REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.

REINFORCEMENT BAR BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.

REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT-TO-OUT.

BAR NOTED THUS, 3x2-#5 INDICATED 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.

COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

CONSTRUCTION

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER THE CONTRACTOR SHALL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.

CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.

THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COST WILL BE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.

NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E., 800-892-0123.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL FIBER OPTIC UTILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL INITIATE THE LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM FILLED IN ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE.

EXISTING REINFORCEMENT WHICH IS TO BE INCORPORATED INTO THE NEW CONSTRUCTION SHALL BE BLAST CLEANED TO GREY METAL, STRAIGHTENED (WITHOUT HEATING), AND CUT TO FIT. COST OF WHICH SHALL BE INCLUDED WITH "CONCRETE REMOVAL."

WHENEVER ANY MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.

ALL OF THE CONSTRUCTION REPAIR WORK SHOWN FOR THIS BRIDGE WILL BE COMPLETED UTILIZING TEMPORARY LANE CLOSURES IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC SPECIAL PROVISION AND THE PROVIDED DETAILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT BEFORE SUCH TEMPORARY WORK AREAS OPEN FOR TRAFFIC. ALL LOOSE ITEMS ARE REMOVED OR SECURED, AND THE AREAS ARE SAFE FOR OPENING TO TRAFFIC. SEE MAINTENANCE OF TRAFFIC SPECIAL PROVISION FOR MORE INFORMATION.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF PASSING VEHICLES FROM FALLING OBJECTS AND/OR MATERIALS UNTIL COMPLETION OF THE WORK.

CONTRACTOR SHALL NOT CUT CONCRETE REINFORCEMENT (INCLUDING TENDONS) WHILE DRILLING INTO CONCRETE.

CONSTRUCTION (CONTINUED)

NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS WILL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.

A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF ILLINOIS, SHALL PREPARE AND SUBMIT STRUCTURE ASSESSMENT REPORTS (SARS) FOR THE PROPOSED WORK ASSOCIATED WITH REMOVING, MODIFYING OR RECONSTRUCTING EXISTING STRUCTURES OR PORTIONS THEREOF. UNLESS NOTED OTHERWISE, A SAR SHALL BE REQUIRED WHEN THE CONTRACTOR'S MEANS AND METHODS APPLY LOADS TO THE STRUCTURE OR CHANGE ITS STRUCTURAL BEHAVIOR. A SAR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING THE WORK, IN ACCORDANCE WITH THE LATEST IDOT GUIDE BRIDGE SPECIAL PROVISION, "STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS" PRIOR TO BEGINNING THE WORK COVERED BY THAT SAR. SEPARATE PORTIONS OF THE WORK MAY BE COVERED BY SEPARATE SARS WHICH MAY BE SUBMITTED AT DIFFERENT TIMES OR AS DICTATED BY THE CONTRACTOR'S SCHEDULE.

AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP) WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS, AND THE LATEST NATIONAL BRIDGE INSPECTION STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.

SUPPLEMENTAL

CONCRETE SEALANT SHALL BE APPLIED TO THE TOP AND TRAFFIC FACE OF THE BRIDGE DECK BARRIERS AND PARAPETS. SEALANT SHALL ALSO BE APPLIED TO THE SURFACES OF ALL PIERS AND ABUTMENT SEATS, INCLUDING BACKWALLS, LOCATED BELOW ROADWAY EXPANSION JOINTS. SEALER SHALL ALSO BE APPLIED TO ALL EXPOSED SUBSTRUCTURE SURFACES ADJACENT TO THE ROADWAY. EXISTING SURFACES SHALL BE POWER WASHED IN ACCORDANCE WITH APPLICABLE PORTIONS OF SECTION 592 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

FIBER REINFORCED POLYMER (FRP) REPAIRS

SURFACE MUST BE CLEAN, SOUND AND DRY. REMOVE DUST, LAITANCE, GREASE, CURING COMPOUNDS, IMPREGNATIONS, WAXES, FOREIGN ARTICLES, DISINTEGRATED MATERIALS, AND OTHER BOND INHIBITING MATERIALS FROM THE SURFACE. (SEE SPECIAL PROVISIONS FOR COMPLETE DETAILS).

EXISTING UNEVEN SURFACES MUST BE FILLED WITH AN APPROPRIATE REPAIR MORTAR (SEE SPECIAL PROVISION FOR COMPLETE DETAILS).

CRACKS WITH WIDTH GREATER THAN 0.012 INCHES MUST BE STABILIZED USING EPOXY INJECTION METHODS. USE MANUFACTURERS DATA SHEETS FOR INFORMATION ON MIXING EPOXY RESIN.

SYSTEM IS A VAPOR BARRIER. DON'T ENCAPSULATE CONCRETE IF ANY SURFACE MOISTURE IS PRESENT. CARBON FABRIC IS NON-REACTIVE, HOWEVER, CAUTION MUST BE USED WHEN HANDLING, SINCE A FINE "CARBON DUST" MAY BE PRESENT ON THE SURFACE.

GLOVES AND PROTECTIVE FACE MASKS MUST THEREFORE BE WORN TO PROTECT AGAINST ANY RESPIRATORY PROBLEMS AND SKIN IRRITATION. WRAP THE IDENTIFIED PIERS WITH THE SPECIFIED NUMBER OF WRAPS AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

GENERAL INSTALLATION PROCEDURES ARE GIVEN IN THE SPECIAL PROVISION, "FIBER WRAP REPAIR (TOLLWAY)".

IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY PROTRUSIONS IN THE CONCRETE IN THE FIBER WRAP AREA.

CONCRETE EDGES SHALL BE ROUNDED TO AT LEAST 3*4" RADIUS AND SMOOTHED TO A SURFACE FINISH PRIOR TO APPLICATION OF FIBER WRAP.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF PASSING VEHICLES FROM FALLING OBJECTS AND/OR MATERIALS UNTIL COMPLETION OF WORK.

ACRYLIC COATING SHALL BE APPLIED TO ALL SURFACES OF THE FIBER WRAP.

FRP MATERIAL PROPERTY

TENSILE STRENGTH	500 KSI
TENSILE MODULUS	33,000 KSI
ULTIMATE ELONGATION	1.5%

LIST OF ABBREVIATIONS:

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT.	ABUTMENT
BRG.	BEARING
BOM	BILL OF MATERIAL
CL	CENTERLINE
Ø	DIAMETER
E.	EAST
EB	EASTBOUND
ELEV.	ELEVATION
EXIST.	EXISTING
EXP.	EXPANSION
FRP	FIBER REINFORCED POLYMER
JT.	JOINT
MAX.	MAXIMUM
MIN.	MINIMUM
N.	NORTH
P	PLATE
P.G.L.	PROFILE GRADE LINE
PSI	POUNDS PER SQUARE INCH
P.V.C.	POINT OF VERTICAL CURVE
P.V.I.	POINT OF VERTICAL INTERSECTION
P.V.T.	POINT OF VERTICAL TANGENCY
SHLDR.	SHOULDER
S.	SOUTH
SQ. FT.	SQUARE FOOT
SQ. YD.	SQUARE YARD
STA.	STATION
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
W.	WEST
WB	WESTBOUND
W	WIDTH

CONSTRUCTION SPECIFICATIONS

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS (GBSP's).

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATION TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISION ADOPTED JANUARY 1, 2018.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

DESIGN SPECIFICATIONS

2002 AASHTO STANDARD SPECIFICATIONS, 17TH EDITION WITH ALL SUBSEQUENT INTERIMS

ILLINOIS TOLLWAY STRUCTURAL DESIGN MANUAL ADOPTED MARCH 2017

ILLINOIS DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL DATED JANUARY 2012

ILLINOIS DEPARTMENT OF TRANSPORTATION ALL BRIDGE DESIGN MEMORANDUMS

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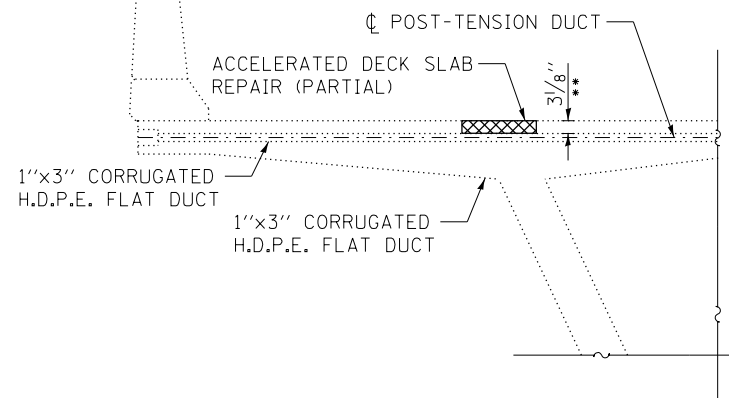
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CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 GENERAL NOTES

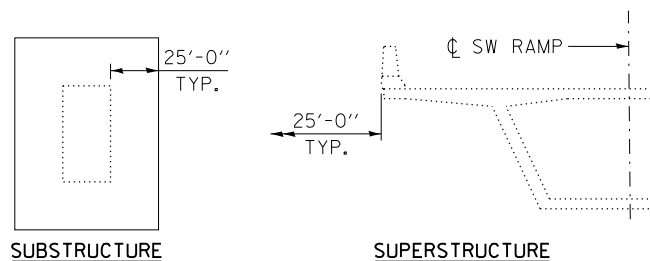
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** DIMENSION MIGHT BE DIFFERENT IN THE FIELD.
CARE MUST BE TAKEN DURING REMOVAL AND CONSTRUCTION
AS TO NOT DAMAGE THE POST-TENSION DUCT.

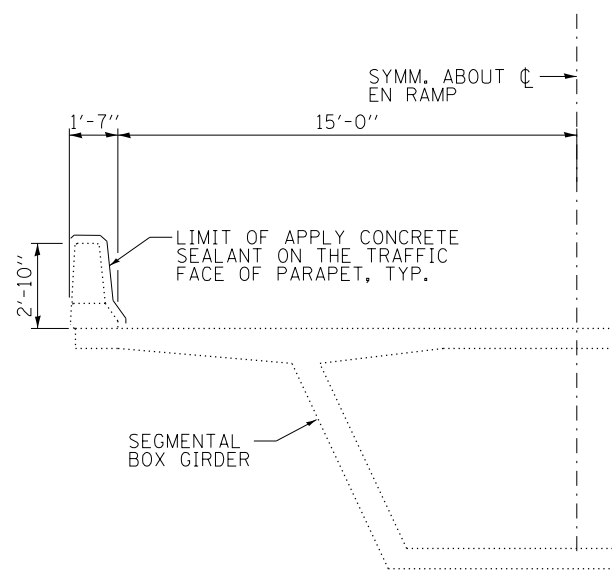


**ACCELERATED DECK SLAB
REPAIR (PARTIAL) DETAIL**

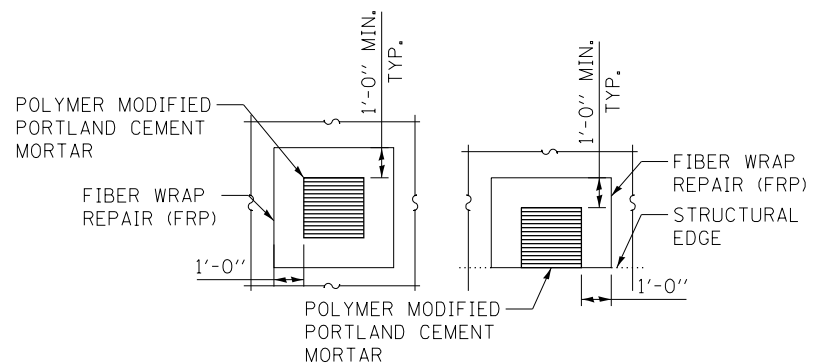


TYPICAL WORK AREA LIMITS

THE ABOVE LIMITS ARE APPROXIMATE. ACTUAL LIMITS SHALL
BE COORDINATED WITH ILLINOIS TOLLWAY MAINTENANCE SUPERVISOR.



**TYPICAL SECTION
(LOOKING SOUTH)**



TYPICAL FIBER WRAP APPLICATION DETAIL

USE WHEN APPLYING FIBER WRAP
ON THE BRIDGE, U.N.O.

CONCRETE SEALANT SCHEDULE

LOCATION	UNIT	QUANTITY
SOUTH ABUTMENT	SQ. FT.	388
PIER 1	SQ. FT.	469
PIER 2	SQ. FT.	494
PIER 3	SQ. FT.	1,591
PIER 4	SQ. FT.	3,499
PIER 5	SQ. FT.	452
PIER 6	SQ. FT.	3,962
NORTH ABUTMENT	SQ. FT.	385
EXTERNAL SEGMENTAL GIRDER REPAIRS	SQ. FT.	56
TRAFFIC FACE OF PARAPET	SQ. FT.	8,246

TOTAL BILL OF MATERIAL

SPECIAL PROVISION	PAY ITEM	DESCRIPTION	UNIT	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL	RECORD QUANTITY
*	J1525091	REPLACEMENT OF ANCHOR BLOCK CONCRETE	EACH	12		12	
*	JS120815	CLEAN EXISTING SCUPPER	EACH	5		5	
*	JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	81	8	89	
*	JS121300	HIGH PRESSURE EPOXY INJECTION	FOOT	4	3	7	
*	JT131469	PIGEON INTRUSION BARRIER	EACH	2		2	
*	JT503012	ACCELERATED DECK SLAB REPAIR (PARTIAL)	SQ YD	1		1	
*	JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	FOOT	127	93	220	
*	JT503041	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN.)	SQ FT		2	2	
*	JT503100	FIBER WRAP REPAIR	SQ FT	21	58	79	
	JT524010	APPLY CONCRETE SEALANT	SQ FT	8,302	11,240	19,542	
GBSP	X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ FT	23	3	26	

* ILLINOIS TOLLWAY SPECIAL PROVISION ITEM
GBSP IDOT GUIDE BRIDGE SPECIAL PROVISION ITEM

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- SI-02 GENERAL NOTES
- SI-03 INDEX OF SHEETS & BOM
- SI-04 CONSTRUCTION STAGING
- SI-05 NORTH ABUTMENT REPAIRS
- SI-06 SOUTH ABUTMENT REPAIRS
- SI-07 PIER 1 REPAIRS
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- SI-09 PIER 3 REPAIRS
- SI-10 PIER 4 SOUTH REPAIRS
- SI-11 PIER 4 NORTH REPAIRS
- SI-12 PIER 5 REPAIRS
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- SI-14 PIER 6 NORTH REPAIRS
- SI-15 EXTERIOR SUPERSTRUCTURE REPAIRS I
- SI-16 EXTERIOR SUPERSTRUCTURE REPAIRS II
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- SI-25 TOP OF DECK REPAIRS I
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- SI-29 APPROACH SLAB REPAIR
- SI-30 PIGEON INTRUSION BARRIER
- SI-31 ANCHOR BLOCK REPLACEMENT DETAILS

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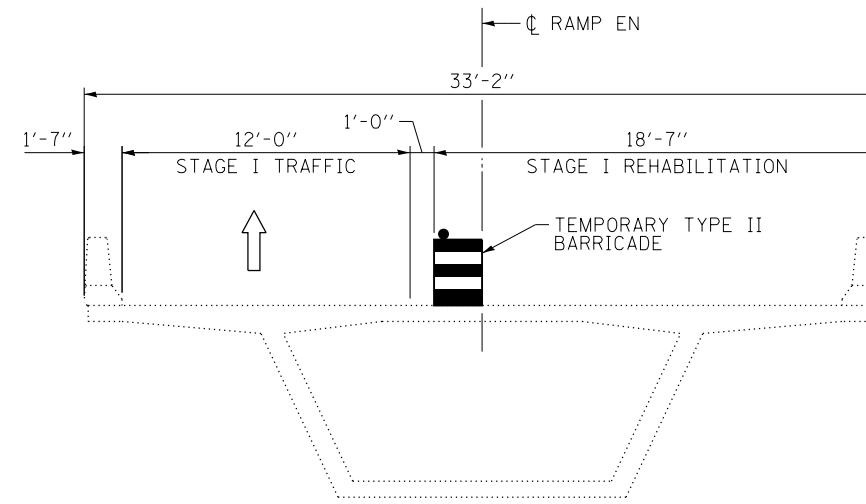
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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

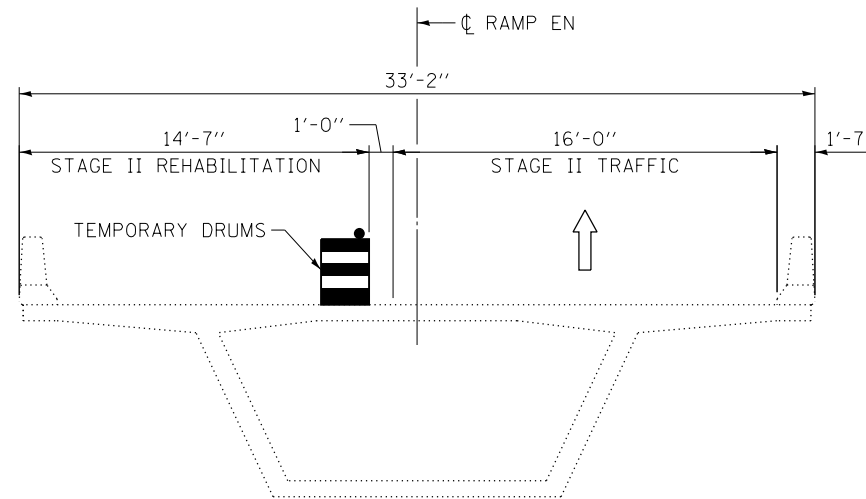
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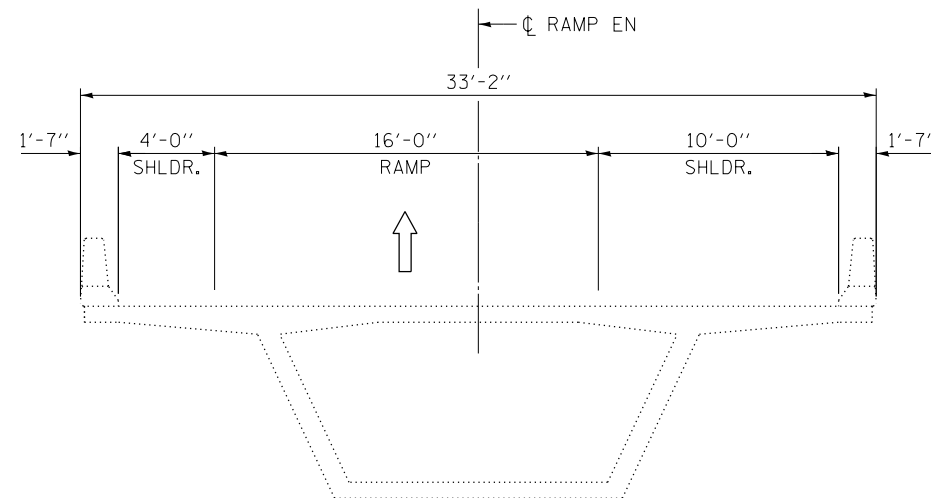
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STAGE I REHABILITATION
(LOOKING NORTH)



STAGE II REHABILITATION
(LOOKING NORTH)



TYPICAL SECTION
(LOOKING NORTH)

STAGE CONSTRUCTION NOTES:

THE CONSTRUCTION WIDTH SHOWN IS THE MAXIMUM RANGE FROM THE TEMPORARY TYPE II BARRICADE. THE ACTUAL REHABILITATION WIDTH SHALL BE ADJUSTED IN THE FIELD.

SEE IDOT STANDARD 701601-09 FOR DETAILS OF MAINTENANCE OF TRAFFIC.

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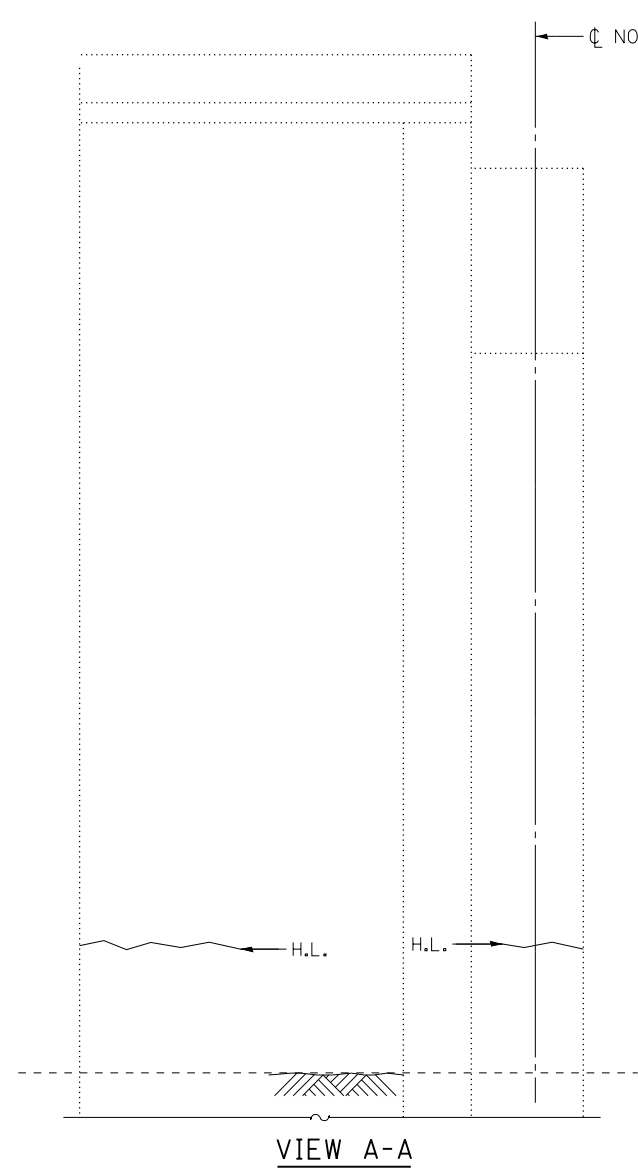
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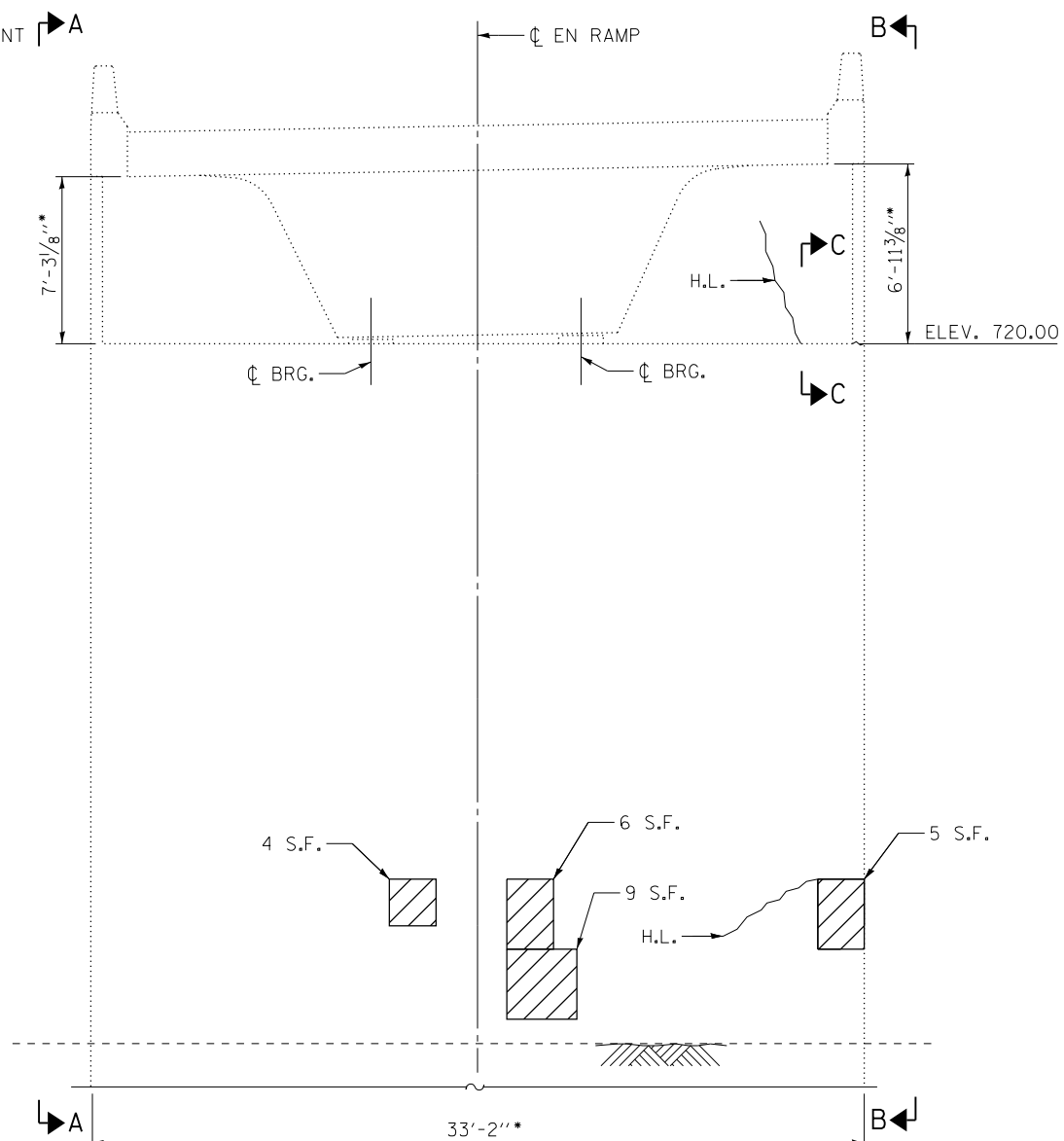
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BRIDGE 1437 (EN) S.N. 022-9969
CONSTRUCTION STAGING

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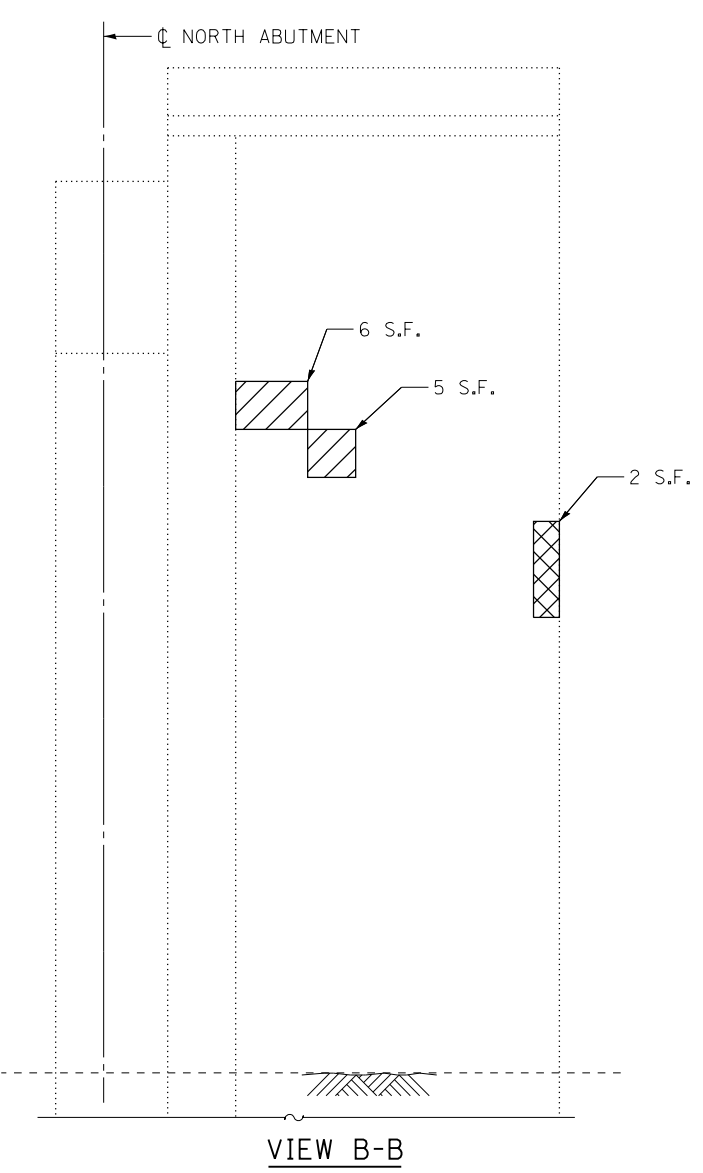
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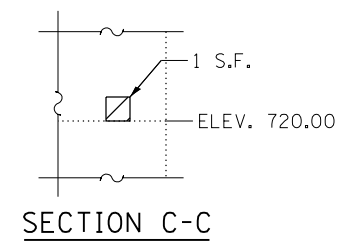
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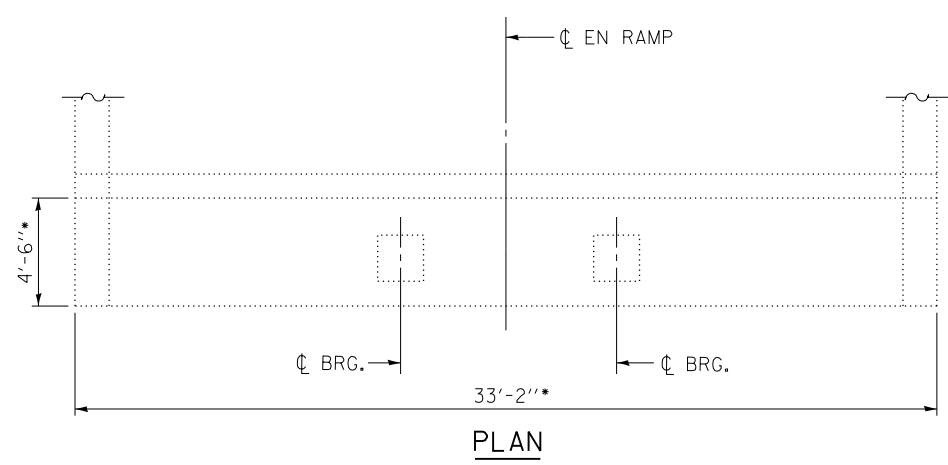
NORTH ABUTMENT



VIEW B-B



SECTION C-C



PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SO. FT.	36
STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN)	SO. FT.	2
APPLY CONCRETE SEALANT	SO. FT.	385

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN)
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

NOTES:

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON THE ABUTMENT SEAT AND ABUTMENT BACKWALL.

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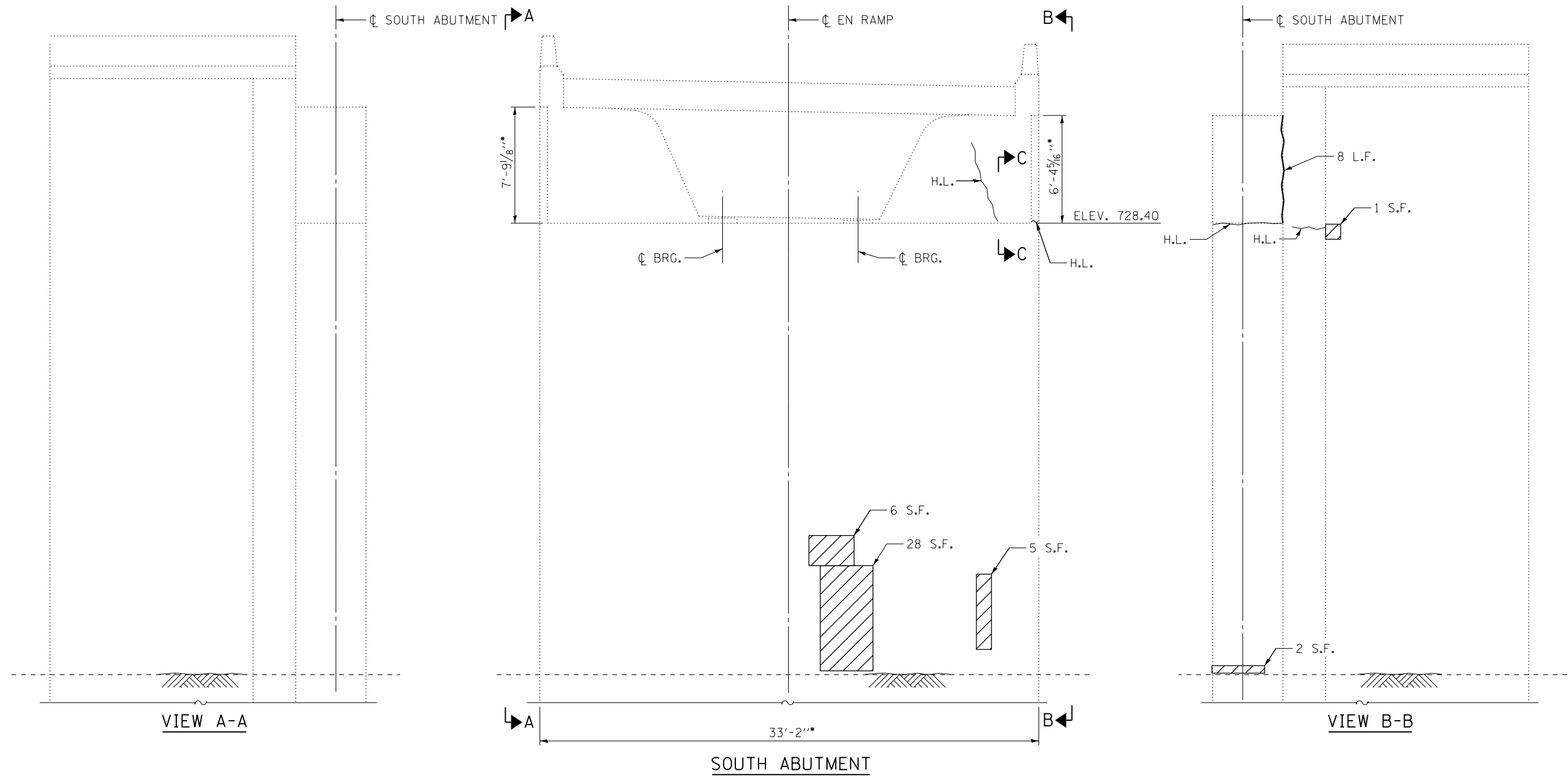
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CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 NORTH ABUTMENT REPAIRS

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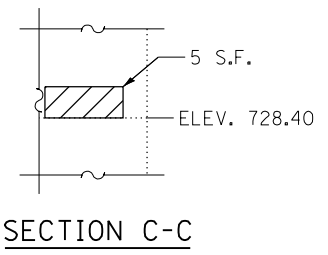
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VIEW A-A

SOUTH ABUTMENT

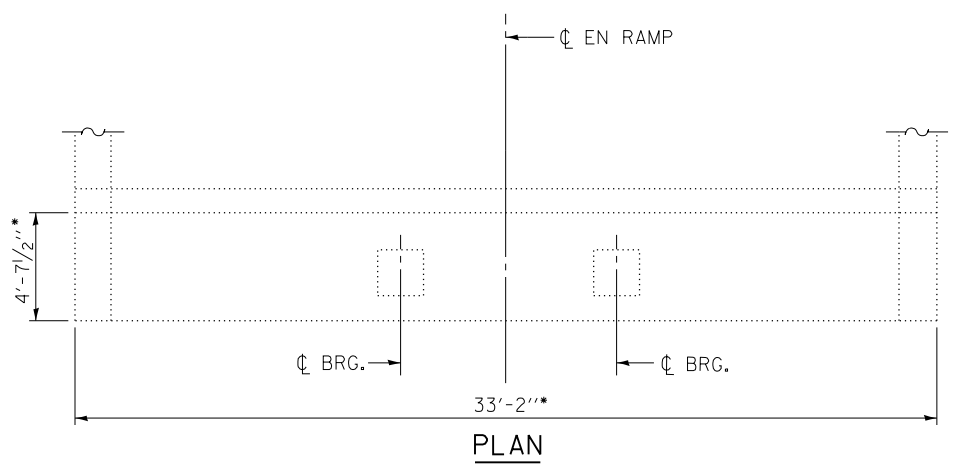
VIEW B-B



SECTION C-C

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.
 REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
 *APPLY CONCRETE SEALANT ON THE ABUTMENT SEAT AND ABUTMENT BACKWALL.



PLAN

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SO. FT.	47
LOW PRESSURE EPOXY INJECTION	FOOT	8
APPLY CONCRETE SEALANT	SO. FT.	388

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- 8 L.F. } LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"
- H.L. } HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

SI-06 OF SI-31

DRAWN BY SBA DATE 3/11/2018
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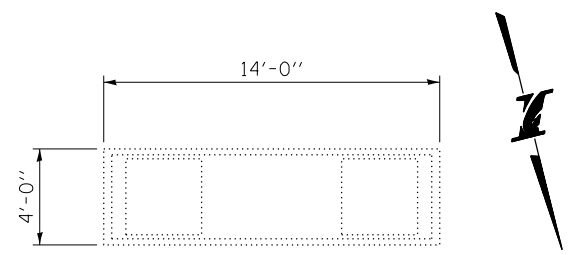
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DATE

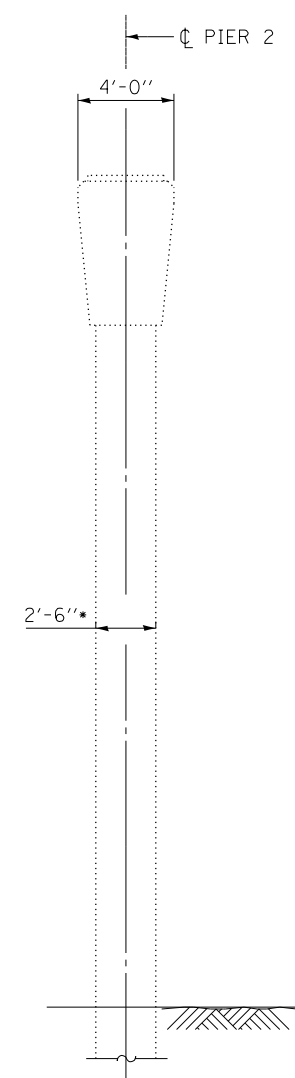
CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 SOUTH ABUTMENT REPAIRS

SHT NO. SI-06
 DRAWING NO.
 1195 OF 1517

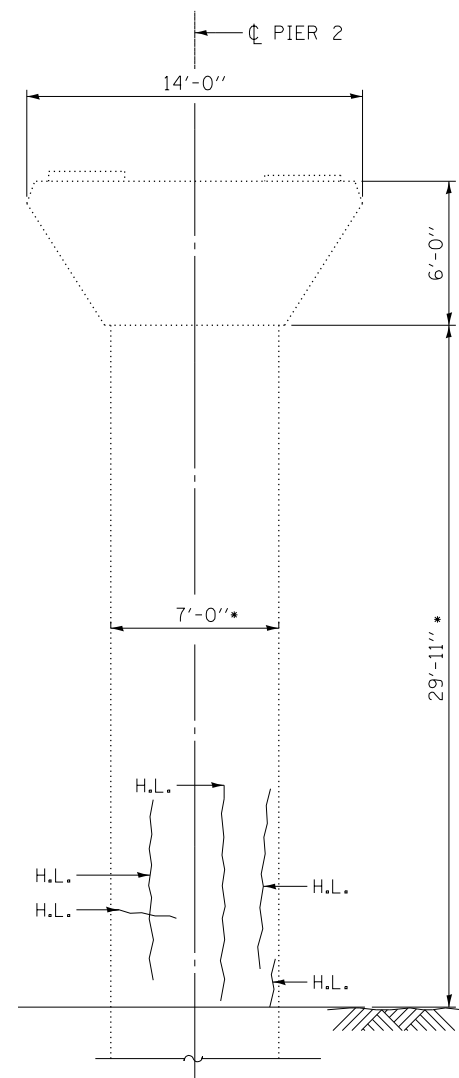
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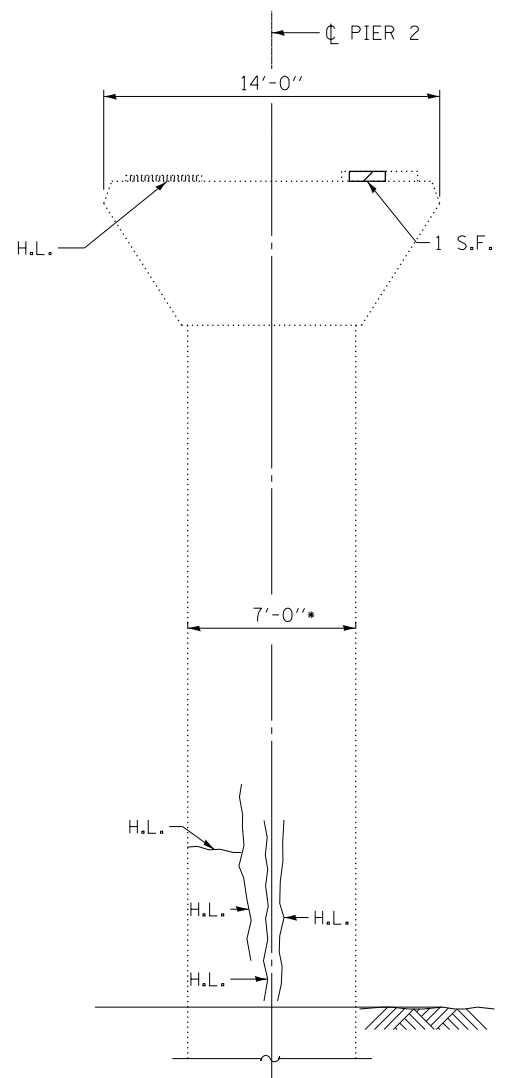
PIER CAP PLAN



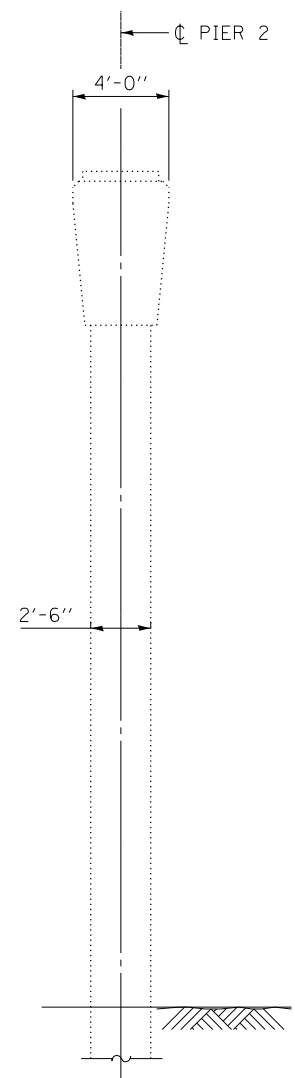
WEST FACE



SOUTH FACE



NORTH FACE



EAST FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON THE NORTH, SOUTH AND WEST FACES OF PIER 2 COLUMN.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	1
APPLY CONCRETE SEALANT	SQ. FT.	494

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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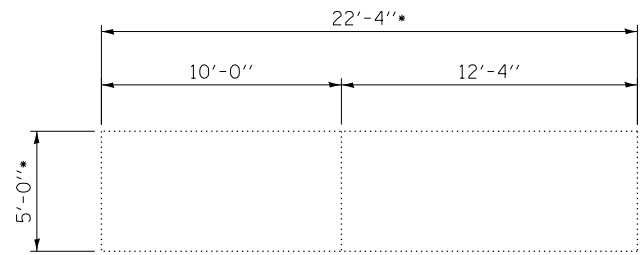
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 Fax 773.775.4014
 Email: chicago@ciorba.com

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 DOWNERS GROVE,
 ILLINOIS 60515

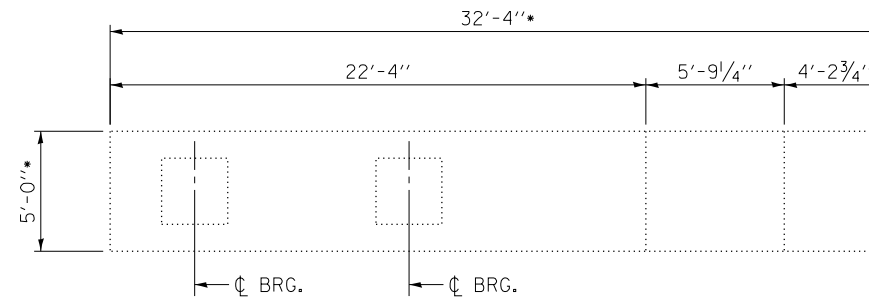
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 PIER 2 REPAIRS

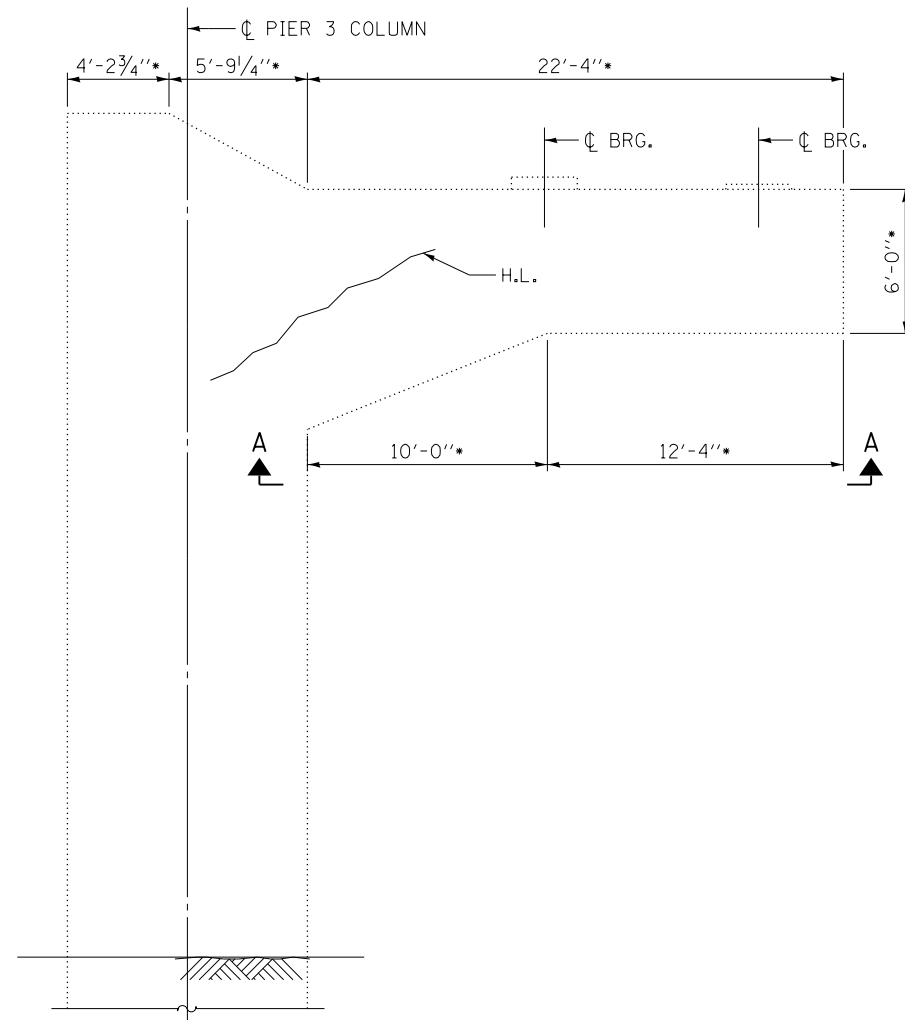
SI-08 OF SI-31
 SHT NO. SI-08
 DRAWING NO.
 1197 OF 1517



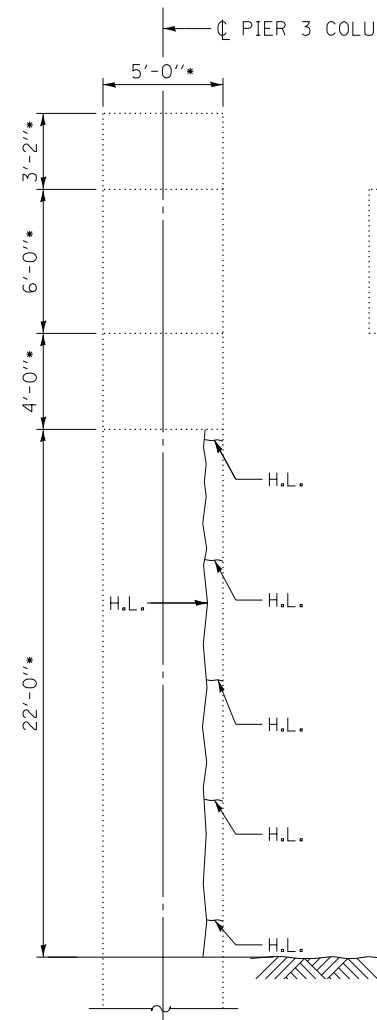
SECTION A-A



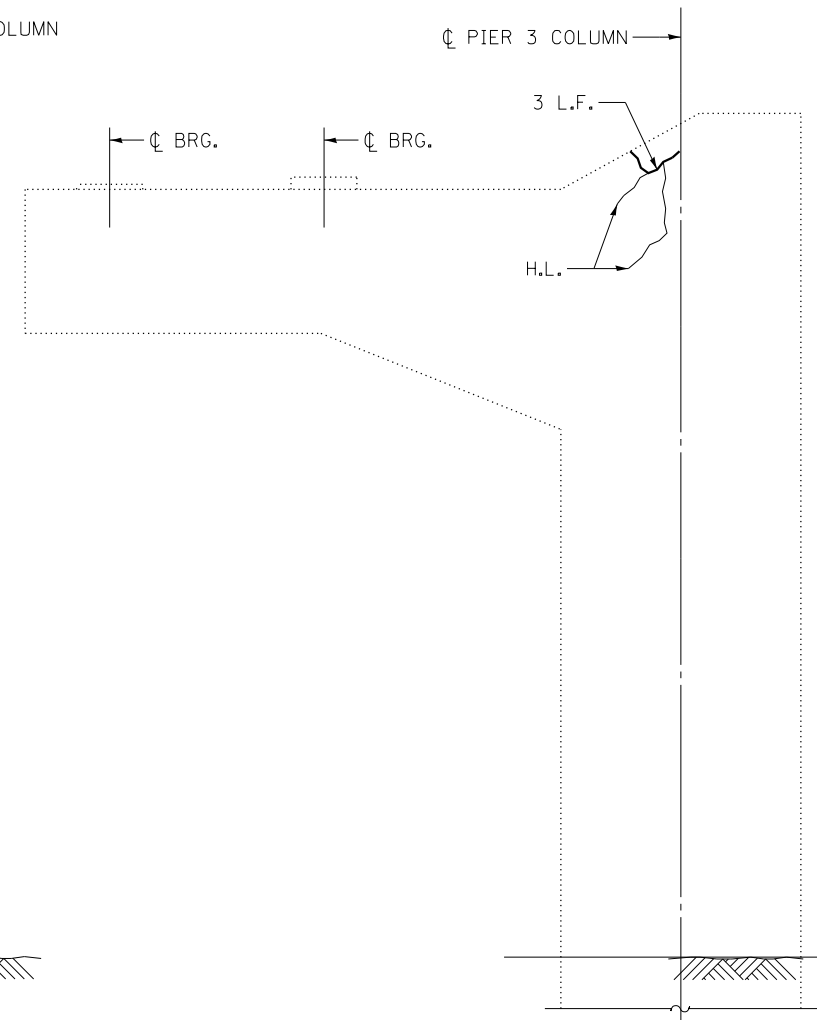
PIER CAP PLAN



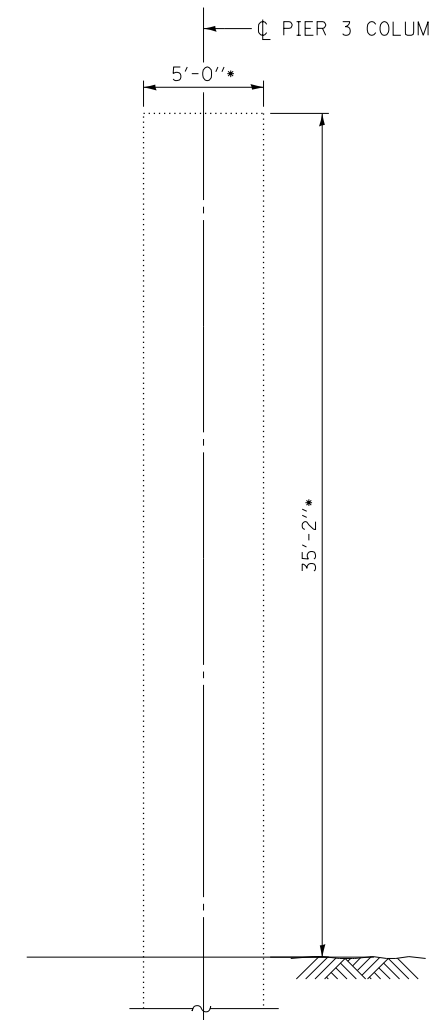
NORTH FACE



WEST FACE



SOUTH FACE



EAST FACE

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 3.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
HIGH PRESSURE EPOXY INJECTION	FOOT	3
APPLY CONCRETE SEALANT	SQ. FT.	1,591

LEGEND:

- H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
- 3' → HIGH PRESSURE EPOXY INJECTION

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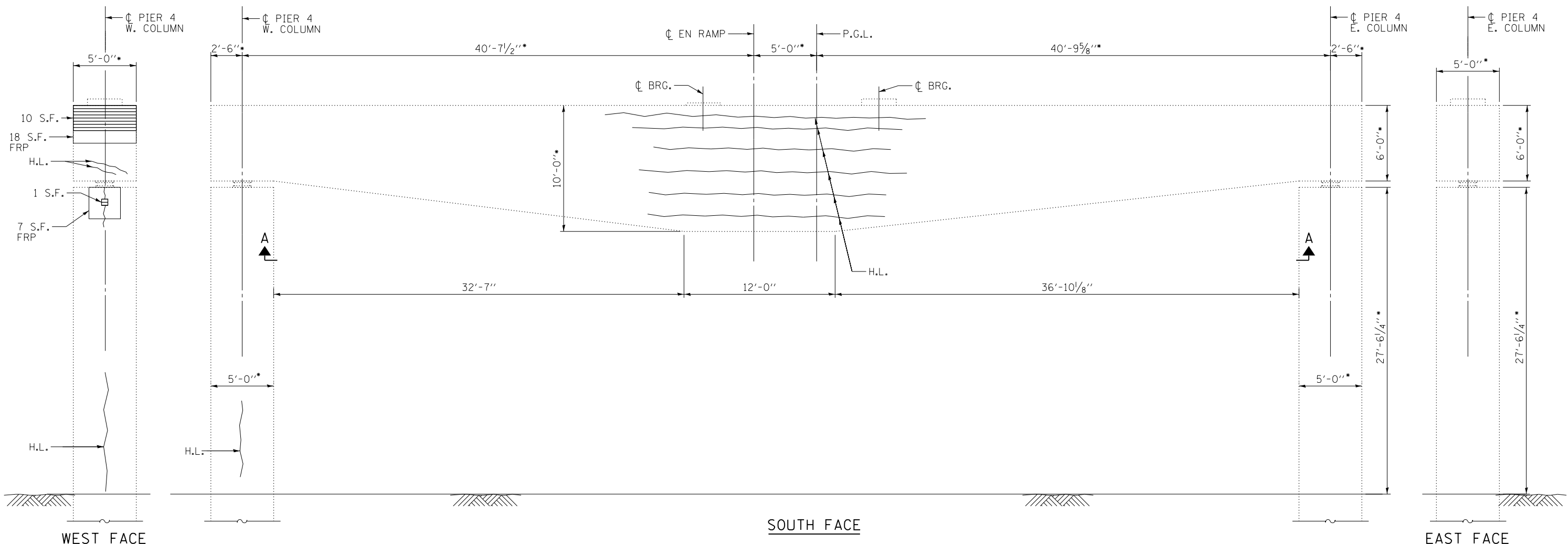
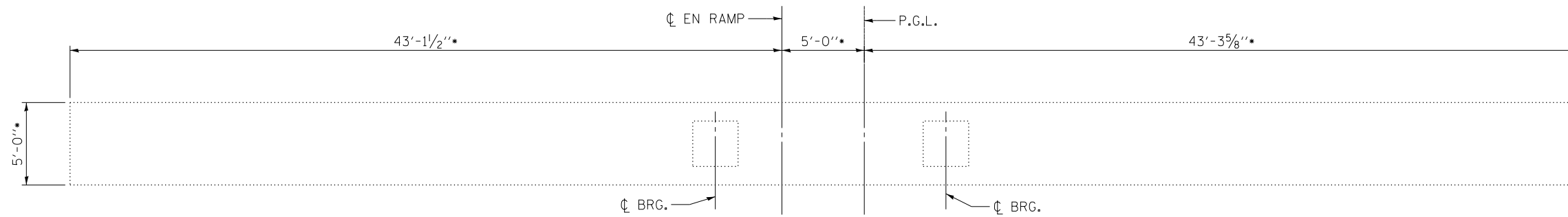
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NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 PIER 3 REPAIRS

SI-09 OF SI-31
 SHT NO. SI-09
 DRAWING NO. 1198 OF 1517



*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 4.

NOTES:

- REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
- FOR BILL OF MATERIAL, SEE SHEET SI-11.
- APPLY FIBER WRAP REPAIRS UPON COMPLETION OF STRUCTURAL REPAIRS, SEE SHEET SI-03.
- CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING STRANDS WHILE PERFORMING "POLYMER MODIFIED PORTLAND CEMENT MORTAR."

LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- H.L. HAIRLINE CRACKS - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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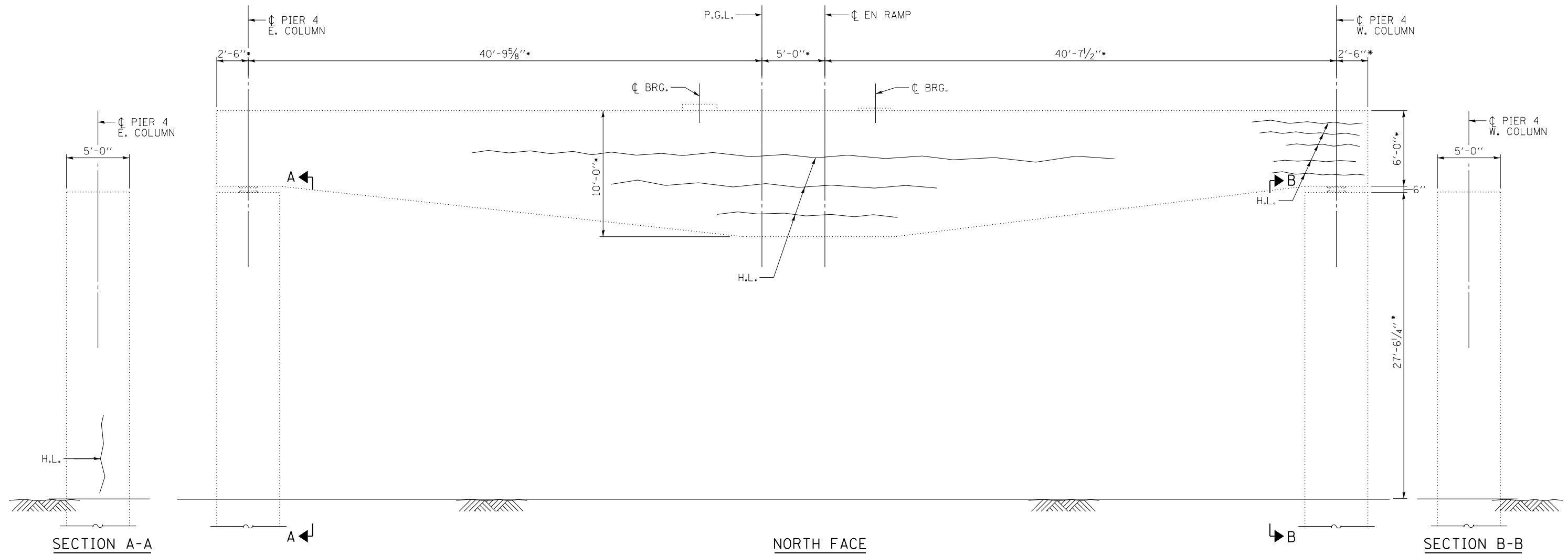
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CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 PIER 4 SOUTH REPAIRS

SI-10 OF SI-31
 SHT NO. SI-10
 DRAWING NO. 1199 OF 1517

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BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	11
APPLY CONCRETE SEALANT	SQ. FT.	3,499
FIBER WRAP REPAIR	SQ. FT.	25

NOTE:
 *APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 4.

LEGEND:
 H.L. ——— } HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
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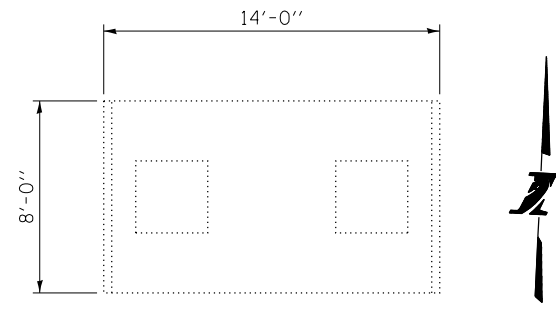

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REVISIONS		
NO.	DATE	DESCRIPTION

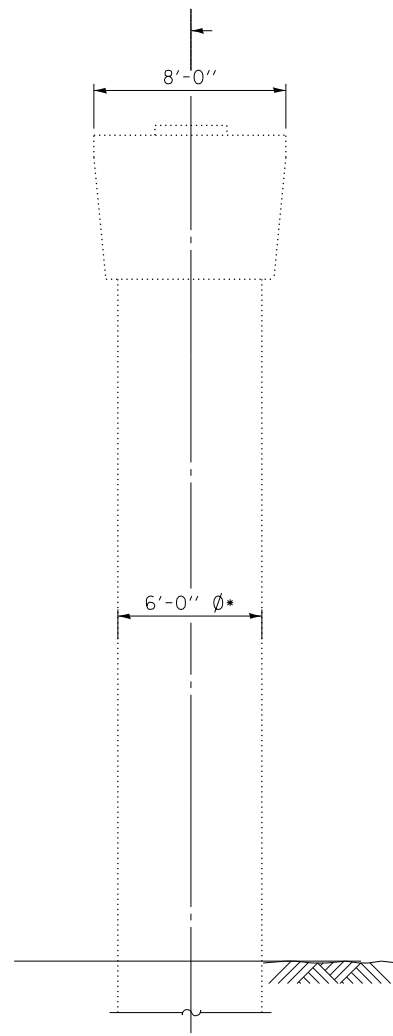
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 BRIDGE 1437 (EN) S.N. 022-9969
 PIER 4 NORTH REPAIRS

SI-11 OF SI-31
 SHT NO. SI-11
 DRAWING NO.
 1200 OF 1517

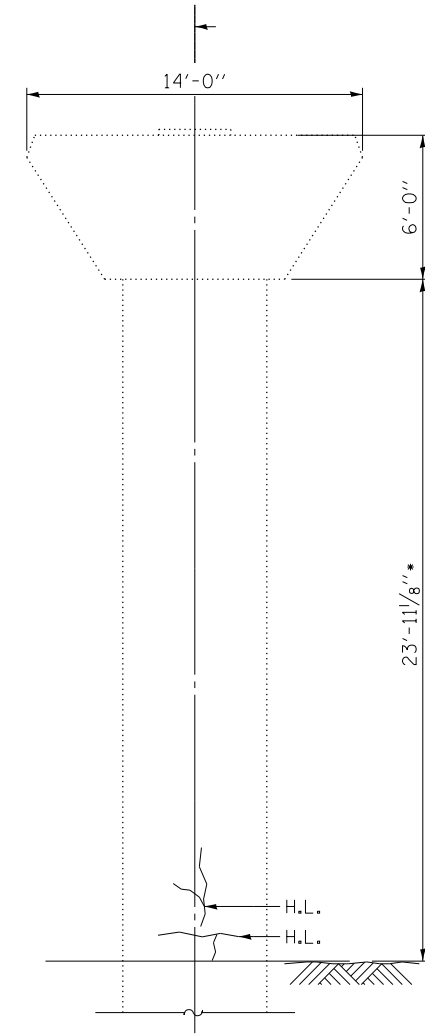
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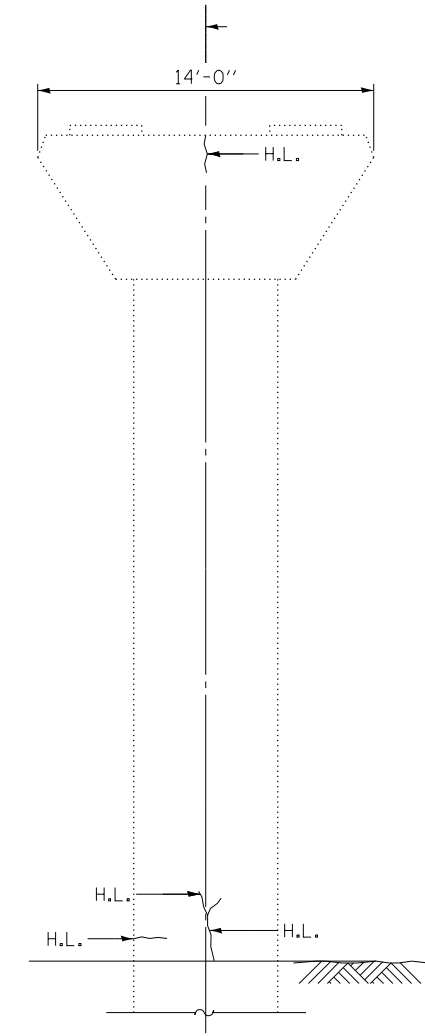
PIER CAP PLAN



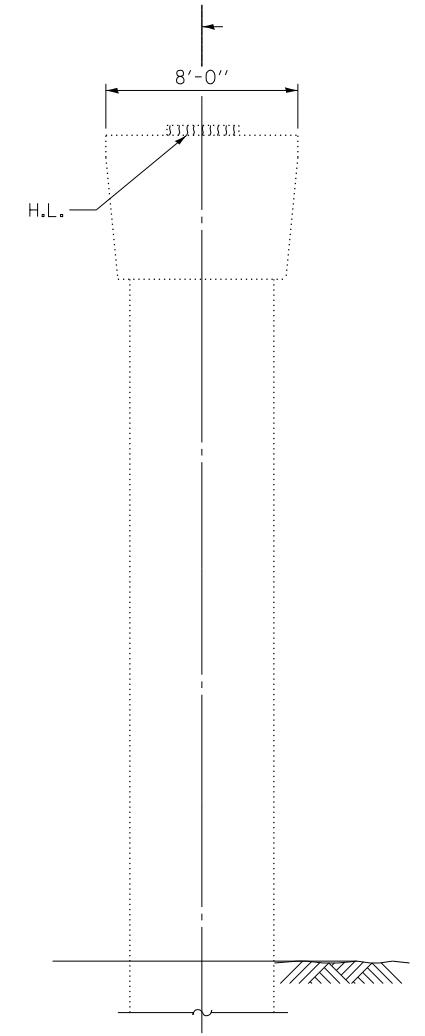
WEST FACE



NORTH FACE



SOUTH FACE



EAST FACE

NOTE:
 *APPLY CONCRETE SEALANT ON THE EXPOSED FACES OF PIER 5 COLUMN.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	452

LEGEND:

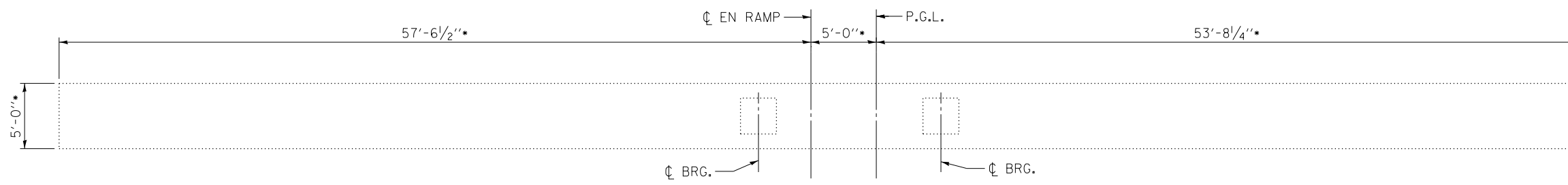
H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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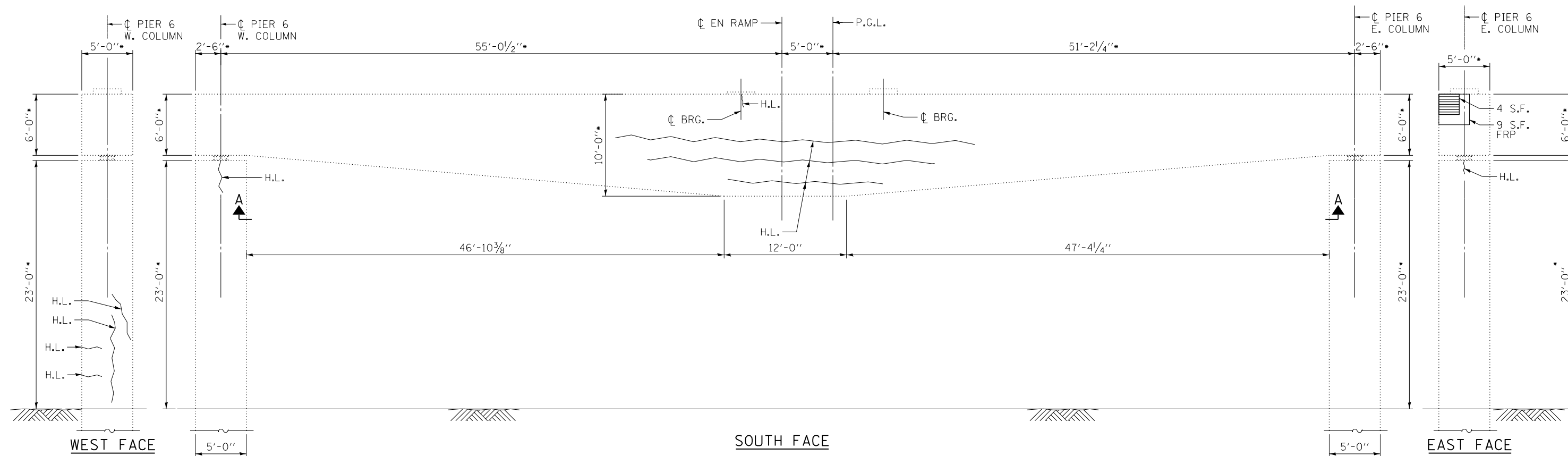
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 PIER 5 REPAIRS

SI-12 OF SI-31
 SHT NO. SI-12
 DRAWING NO.
 1201 OF 1517



PIER CAP PLAN



SOUTH FACE

EAST FACE

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 6.

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SI-14.

APPLY FIBER WRAP REPAIR UPON COMPLETION OF STRUCTURAL REPAIRS, SEE SHEET SI-03.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING STRANDS WHILE PERFORMING "POLYMER MODIFIED PORTLAND CEMENT MORTAR."

SECTION A-A

LEGEND:

POLYMER MODIFIED PORTLAND CEMENT MORTAR

H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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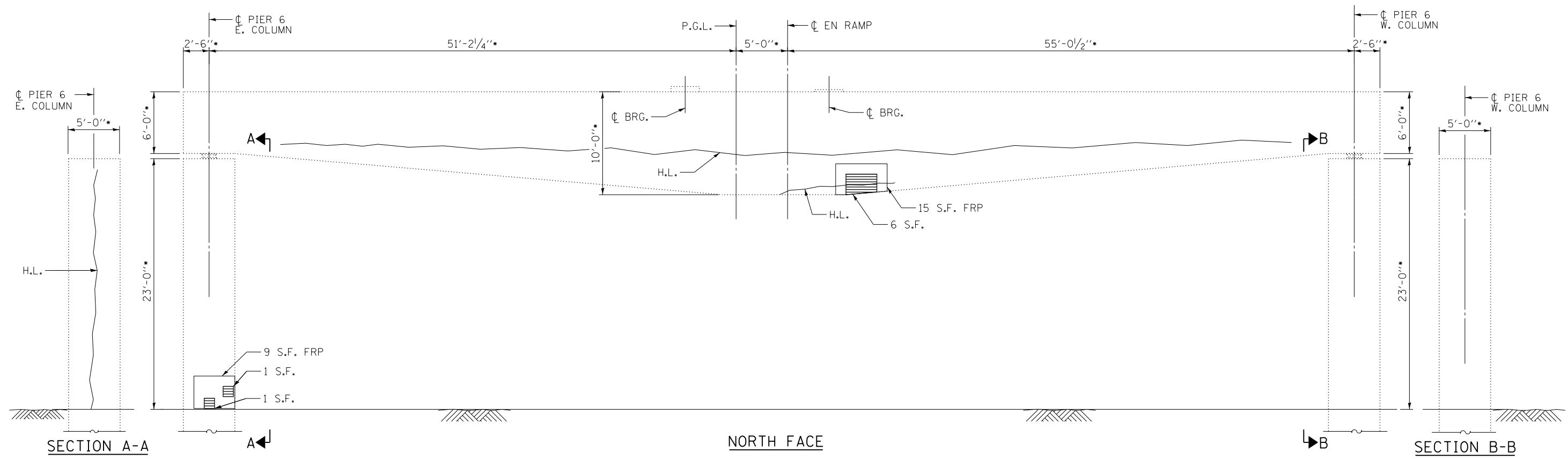
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 PIER 6 SOUTH REPAIRS

SI-13 OF SI-31
 SHT NO. SI-13
 DRAWING NO.
 1202 OF 1517

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*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES.

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

APPLY FIBER WRAP REPAIRS UPON COMPLETION OF STRUCTURAL REPAIRS, SEE SHEET SI-03.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING STRANDS WHILE PERFORMING "POLYMER MODIFIED PORTLAND CEMENT MORTAR."

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	12
APPLY CONCRETE SEALANT	SQ. FT.	3,962
FIBER WRAP REPAIR	SQ. FT.	33

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL OR LESS THAN 5 IN)
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

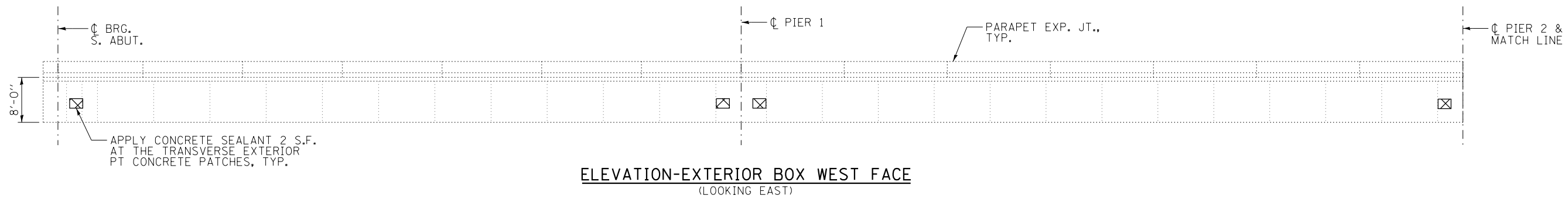
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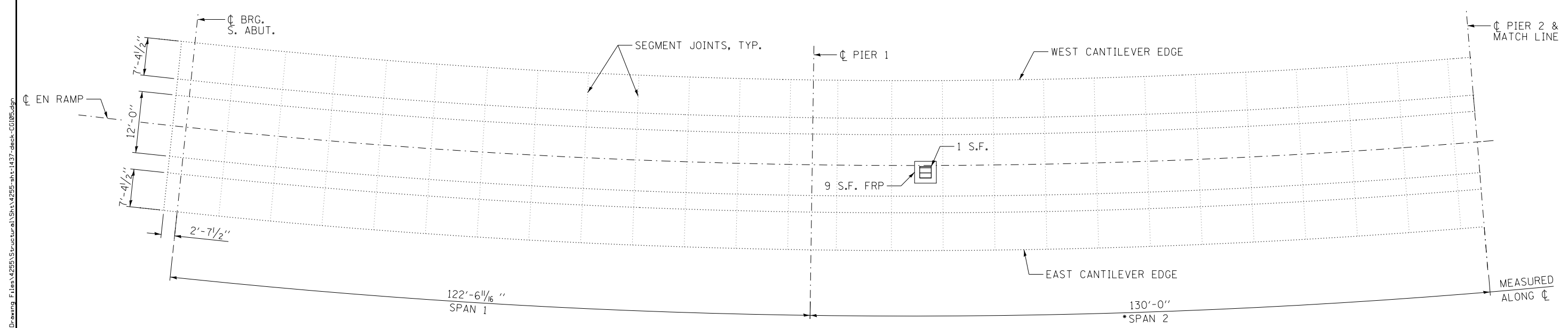
REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 PIER 6 NORTH REPAIRS

SI-14 OF SI-31
 SHT NO. SI-14
 DRAWING NO. 1203 OF 1517

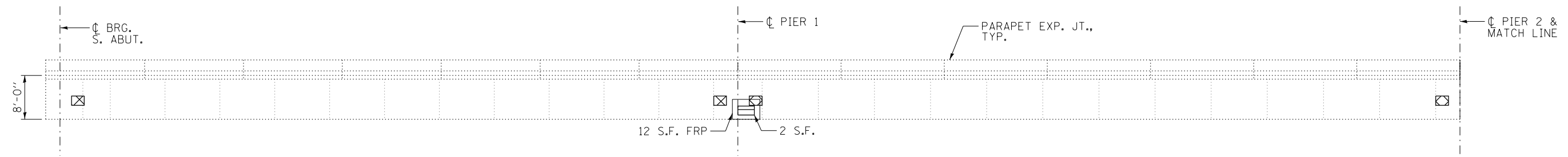


ELEVATION-EXTERIOR BOX WEST FACE
(LOOKING EAST)



UNDERSIDE OF BRIDGE PLAN

* SPAN IS ABOVE LIVE TRAFFIC. APPROPRIATE PROTECTION OF TRAFFIC BELOW FROM CONCRETE REPAIRS PERFORMED ON THE UNDERSIDE OF BRIDGE, BOX EXTERIOR, AND PARAPET EXTERIOR FACE IS REQUIRED AND INCLUDED IN COST OF "POLYMER MODIFIED PORTLAND CEMENT MORTAR".



ELEVATION-EXTERIOR BOX EAST FACE
(LOOKING WEST)

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING SEGMENTAL BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SI-18.

APPLY FIBER WRAP REPAIRS UPON COMPLETION OF STRUCTURAL REPAIRS, SEE SHEET SI-03.

LEGEND:

- POLYMER MODIFIED PORTLAND CEMENT MORTAR
- APPLY CONCRETE SEALANT
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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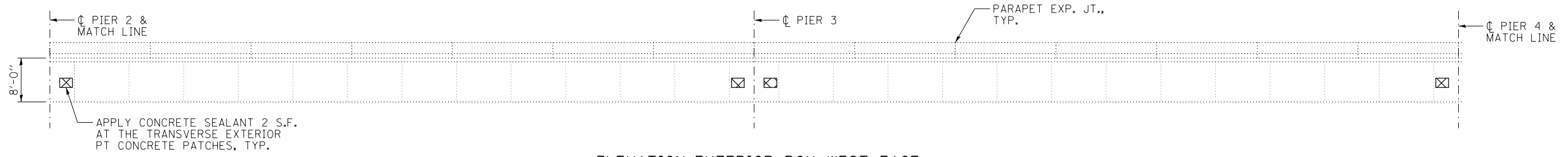
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Suite 402 Chicago, Illinois 60656
Tel. 773.775.4008
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Email: chicago@ciorba.com

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2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

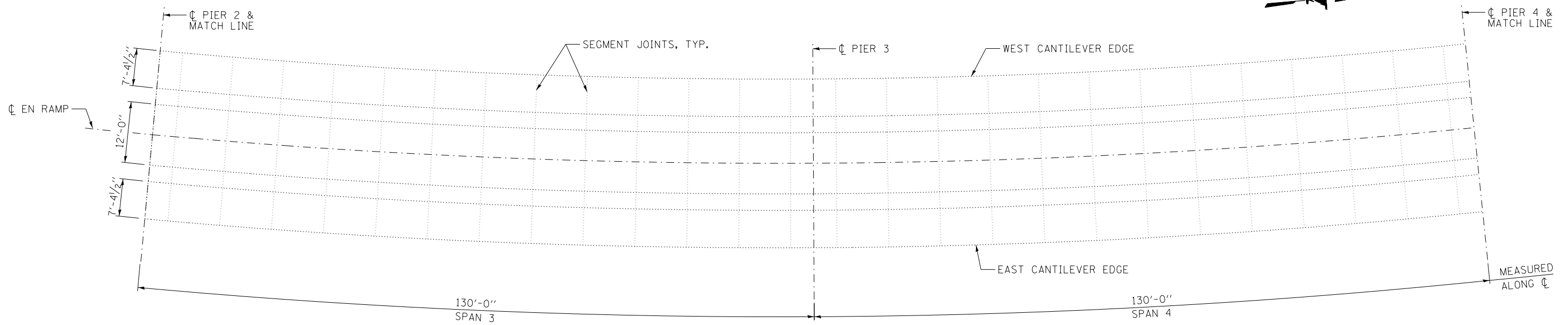
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CONTRACT NO. RR-16-4255
BRIDGE 1437 (EN) S.N. 022-9969
EXTERIOR SUPERSTRUCTURE REPAIRS I

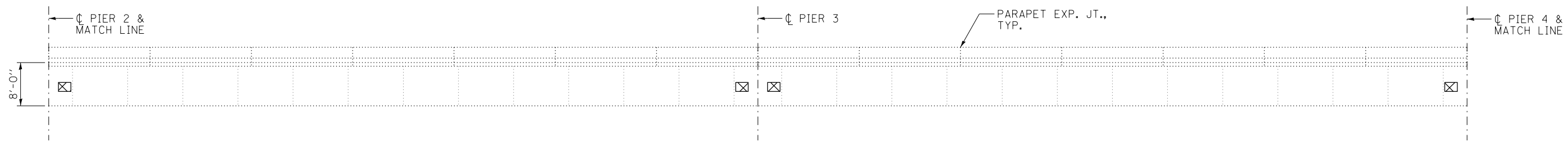
SI-15 OF SI-31
SHT NO. SI-15
DRAWING NO. 1204 OF 1517



ELEVATION-EXTERIOR BOX WEST FACE
(LOOKING EAST)



UNDERSIDE OF BRIDGE PLAN



ELEVATION-EXTERIOR BOX EAST FACE
(LOOKING WEST)

NOTE:
FOR BILL MATERIAL, SEE SHEET SI-18.

LEGEND:
 APPLY CONCRETE SEALANT

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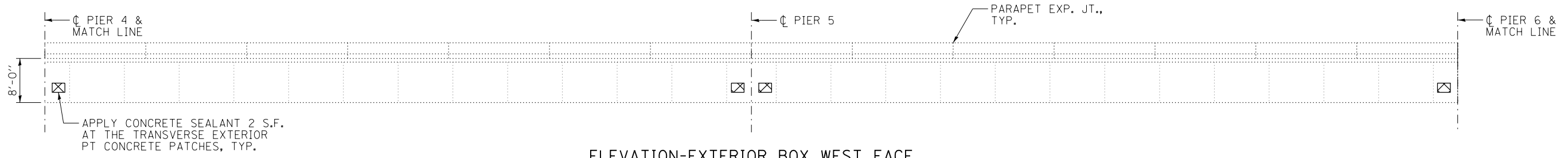
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 Email: chicago@ciorba.com

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 ILLINOIS 60515

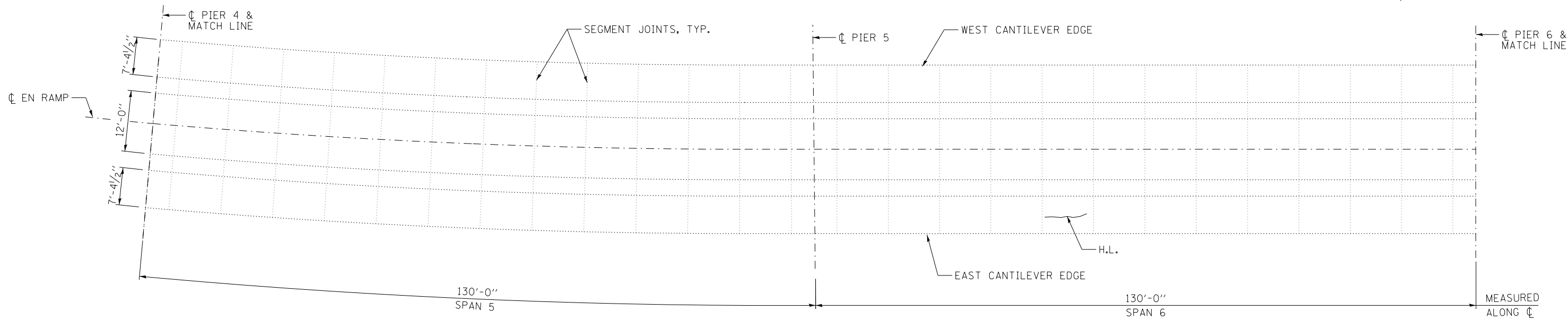
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CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 EXTERIOR SUPERSTRUCTURE REPAIRS II

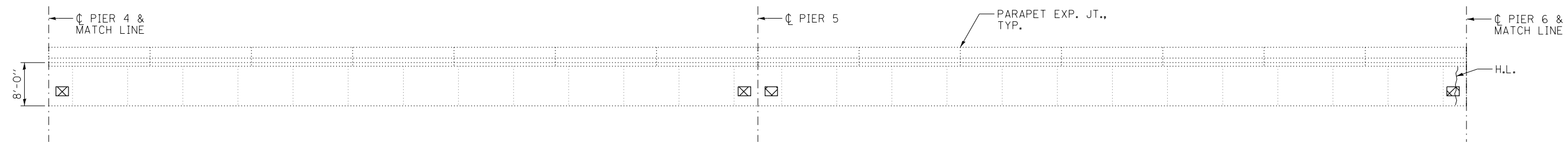
SI-16 OF SI-31
 SHT NO. SI-16
 DRAWING NO.
 1205 OF 1517



ELEVATION-EXTERIOR BOX WEST FACE
(LOOKING EAST)



UNDERSIDE OF BRIDGE PLAN



ELEVATION-EXTERIOR BOX EAST FACE
(LOOKING WEST)

NOTES:
 CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.
 FOR BILL OF MATERIAL, SEE SHEET SI-18.

LEGEND:

APPLY CONCRETE SEALANT

HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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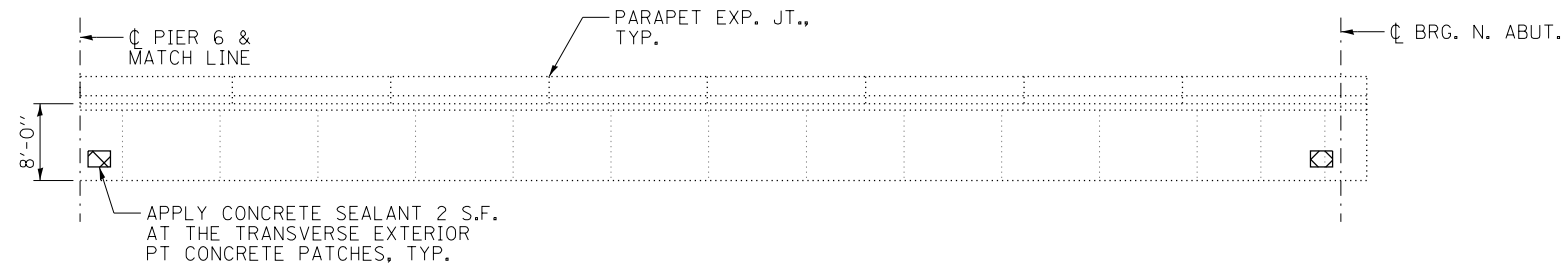
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 DOWNERS GROVE,
 ILLINOIS 60515

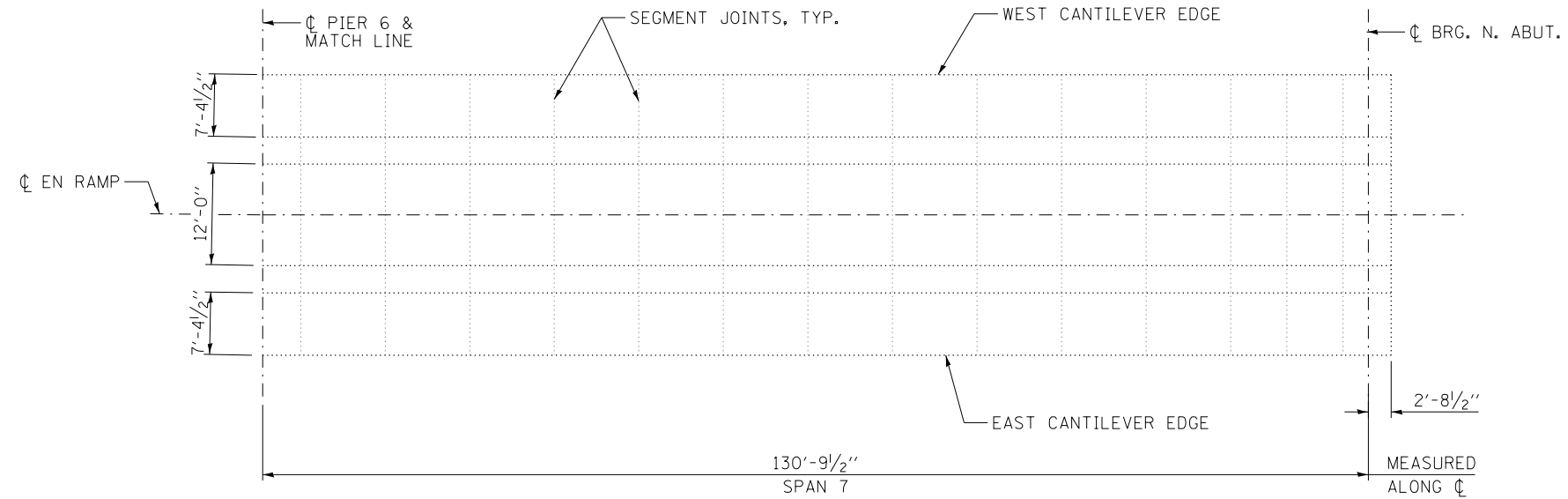
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NO.	DATE	DESCRIPTION	

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 EXTERIOR SUPERSTRUCTURE REPAIRS III

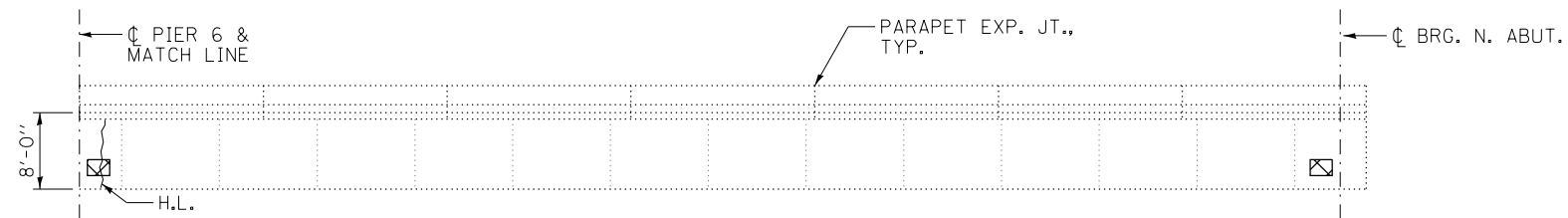
SI-17 OF SI-31
 SHT NO. SI-17
 DRAWING NO.
 1206 OF 1517



ELEVATION-EXTERIOR BOX WEST FACE
(LOOKING EAST)



UNDERSIDE OF BRIDGE PLAN



ELEVATION-EXTERIOR BOX EAST FACE
(LOOKING WEST)

LEGEND:

- APPLY CONCRETE SEALANT
- H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	3
FIBER WRAP REPAIR	SQ. FT.	21
APPLY CONCRETE SEALANT	SQ. FT.	56

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Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

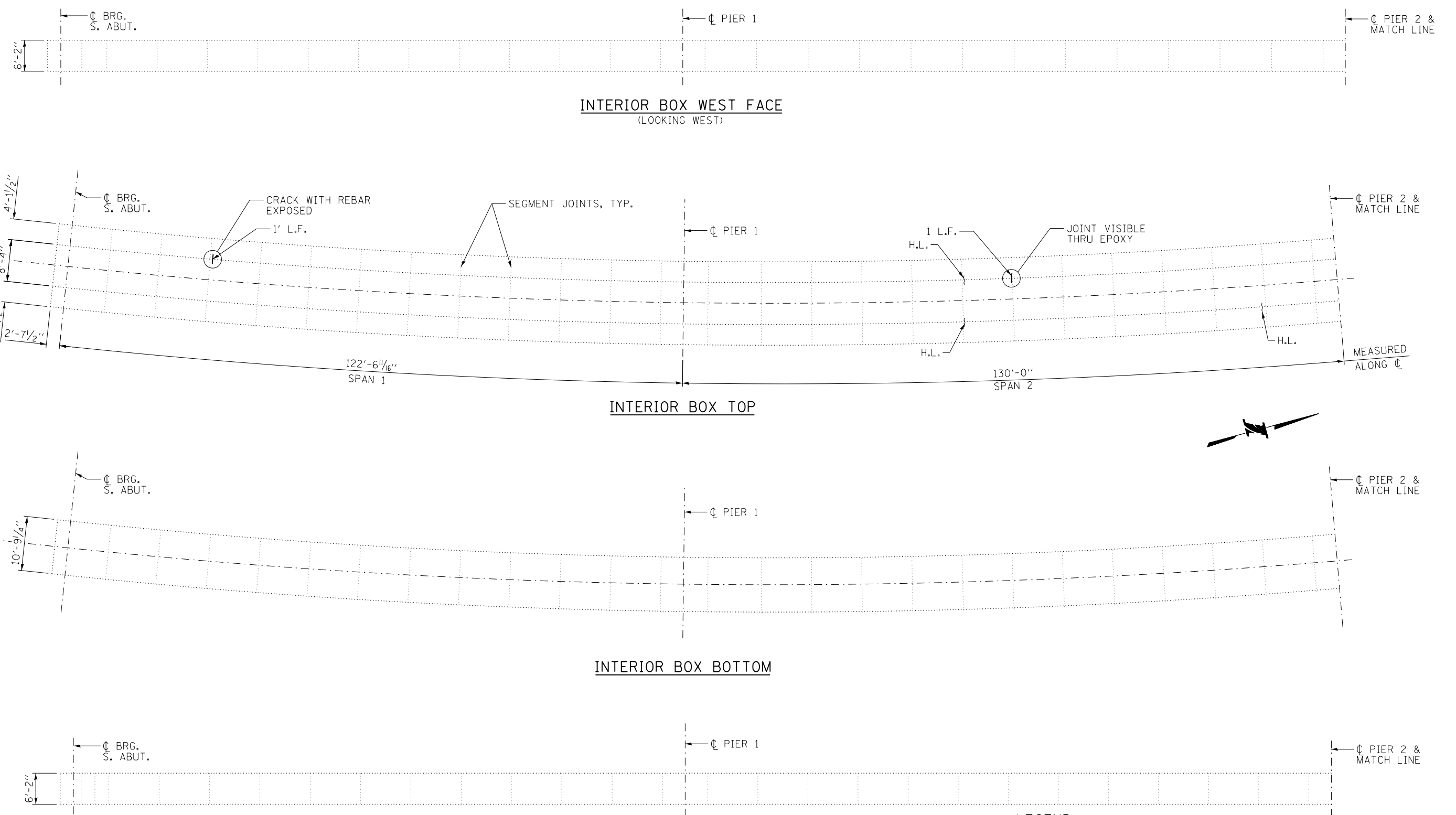
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DATE

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 EXTERIOR SUPERSTRUCTURE REPAIRS IV

SI-18 OF SI-31
 SHT NO. SI-18
 DRAWING NO.
 1207 OF 1517

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NOTES:
 CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.
 FOR BILL OF MATERIAL, SEE SHEET SI-22.

LEGEND:
 H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
 1' → HIGH PRESSURE EPOXY INJECTION

INTERIOR BOX EAST FACE
 (LOOKING EAST)

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

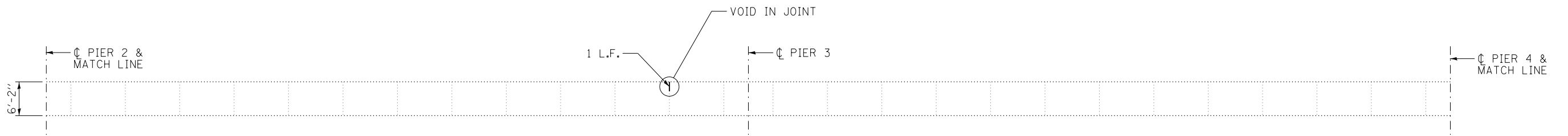
CG Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4009
 Fax 773.775.4014
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 DOWNERS GROVE,
 ILLINOIS 60515

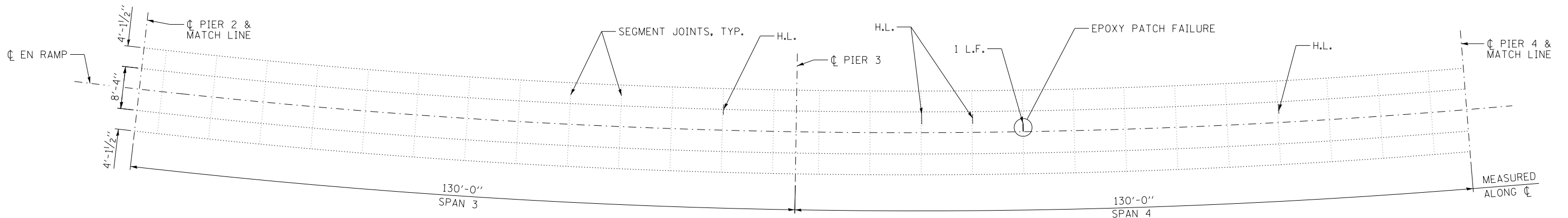
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 BRIDGE 1437 (EN) S.N. 022-9969
 INTERIOR SUPERSTRUCTURE REPAIRS I

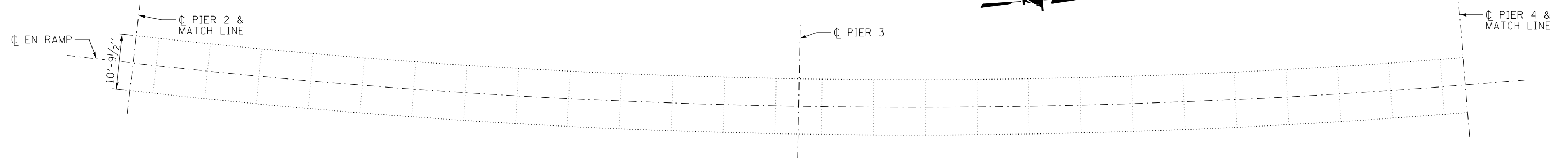
SI-19 OF SI-31
 SHT NO. SI-19
 DRAWING NO.
 1208 OF 1517



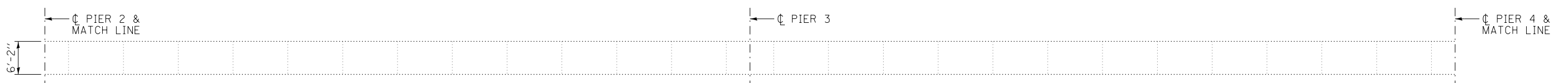
INTERIOR BOX WEST FACE
(LOOKING WEST)



INTERIOR BOX TOP



INTERIOR BOX BOTTOM



INTERIOR BOX EAST FACE
(LOOKING EAST)

NOTES:
 CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.
 FOR BILL OF MATERIAL, SEE SHEET SI-22.

LEGEND:
 H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)
 1' → HIGH PRESSURE EPOXY INJECTION

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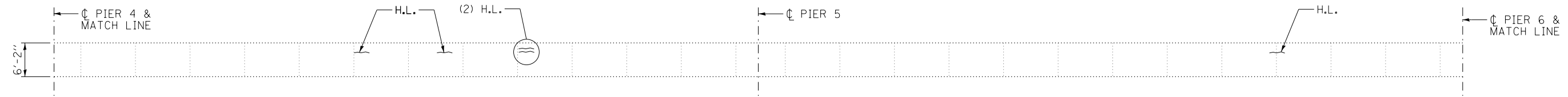
CG Ciorba Group, Inc.
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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

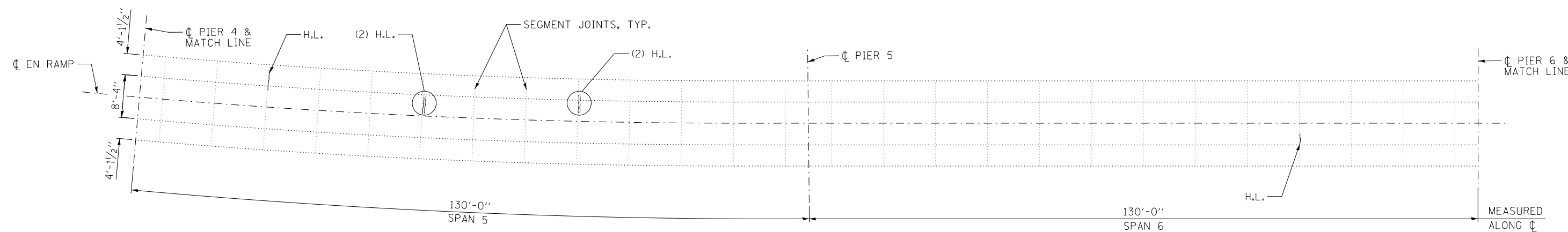
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CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
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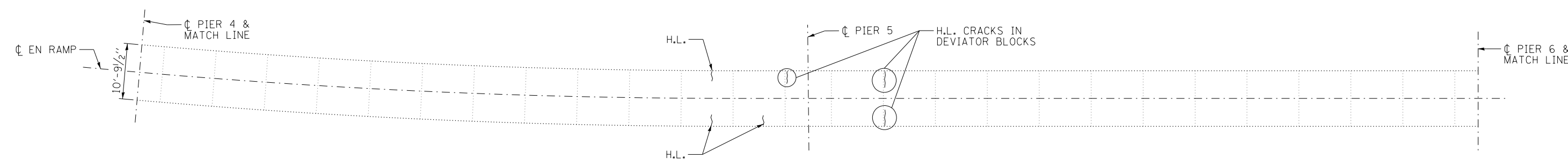
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 SHT NO. SI-20
 DRAWING NO.
 1209 OF 1517



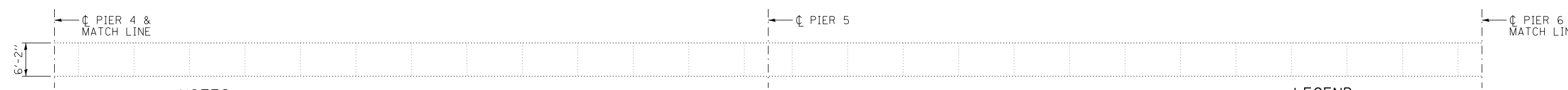
INTERIOR BOX WEST FACE
(LOOKING WEST)



INTERIOR BOX TOP



INTERIOR BOX BOTTOM



INTERIOR BOX EAST FACE
(LOOKING EAST)

NOTES:
CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.
FOR BILL OF MATERIAL, SEE SHEET SI-22.

LEGEND:
H.L. — HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

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 ILLINOIS 60515

REVISIONS	
NO.	DATE

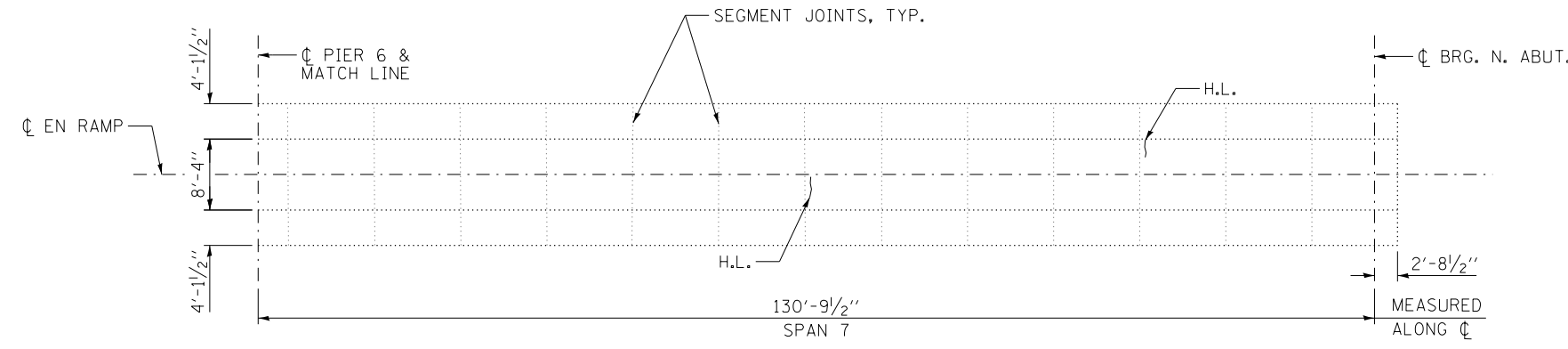
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 BRIDGE 1437 (EN) S.N. 022-9969
 INTERIOR SUPERSTRUCTURE REPAIRS III

SI-21 OF SI-31
 SHT NO. SI-21
 DRAWING NO.
 1210 OF 1517

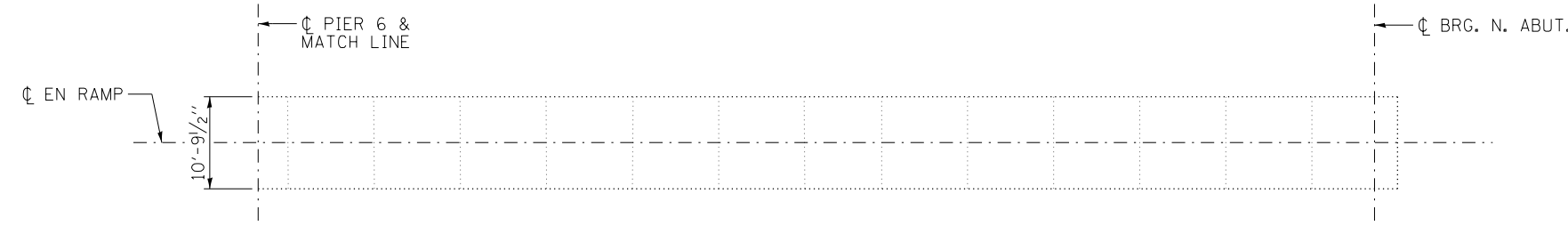
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INTERIOR BOX WEST FACE
(LOOKING WEST)



INTERIOR BOX TOP



INTERIOR BOX BOTTOM

LEGEND:
 H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)



INTERIOR BOX EAST FACE
(LOOKING EAST)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
HIGH PRESSURE EPOXY INJECTION	FOOT	4

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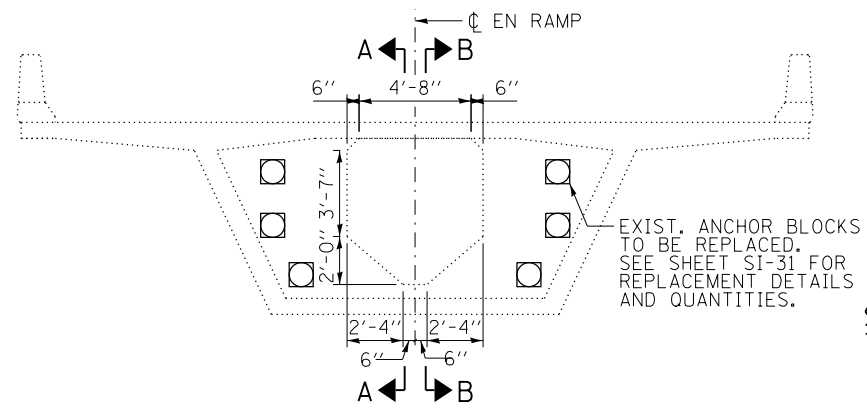


REVISIONS		
NO.	DATE	DESCRIPTION

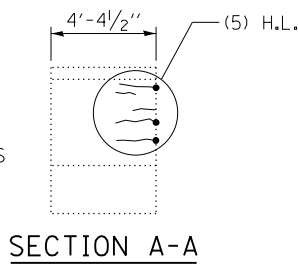
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 BRIDGE 1437 (EN) S.N. 022-9969
 INTERIOR SUPERSTRUCTURE REPAIRS IV

SI-22 OF SI-31
 SHT NO. SI-22
 DRAWING NO. 1211 OF 1517

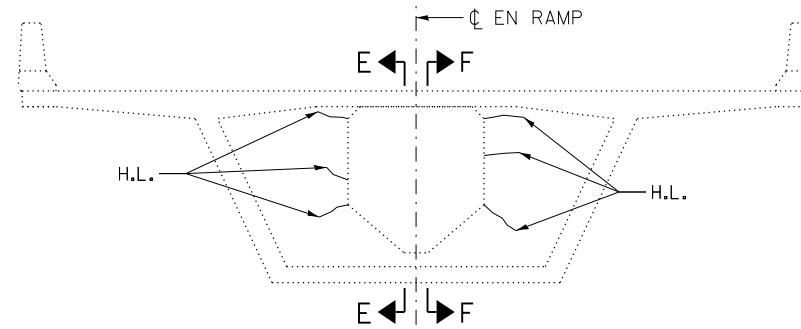
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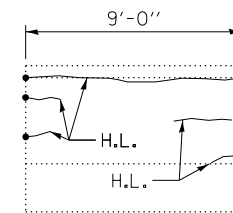
NORTH FACE DIAPHRAGM ELEVATION-NORTH ABUTMENT



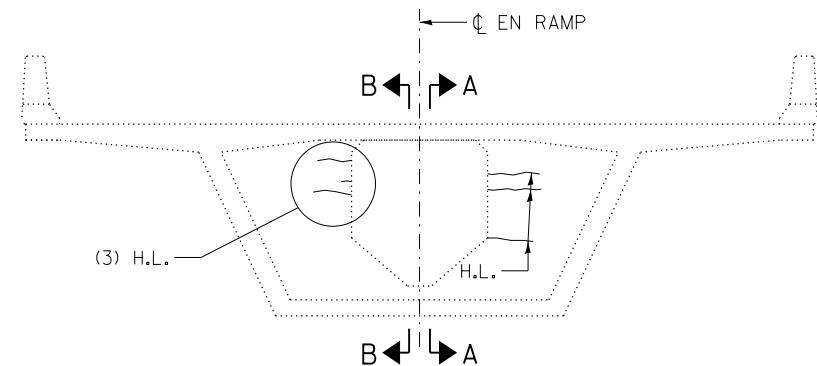
SECTION A-A



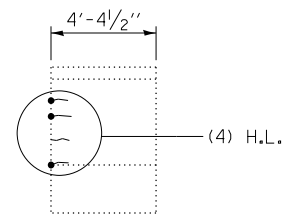
NORTH FACE DIAPHRAGM ELEVATION-PIER 1



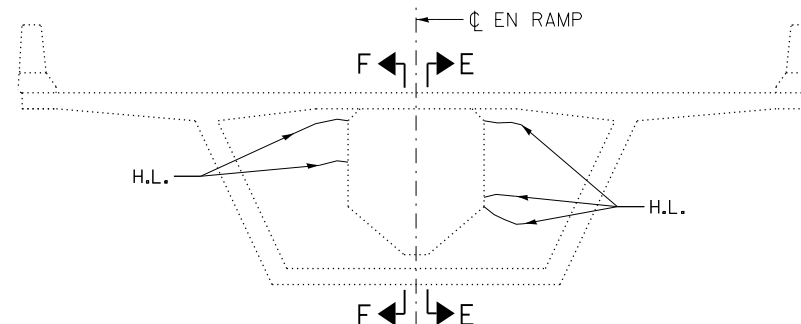
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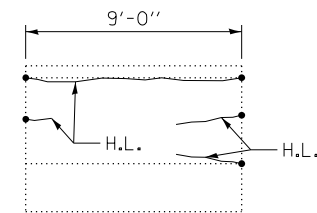
SOUTH FACE DIAPHRAGM ELEVATION-NORTH ABUTMENT



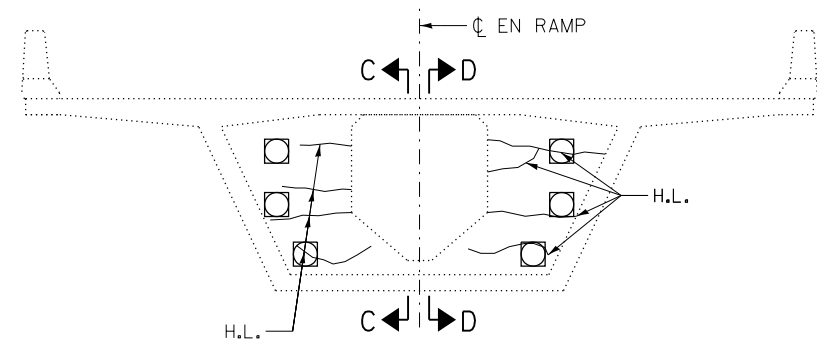
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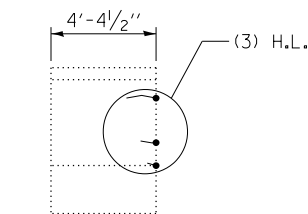
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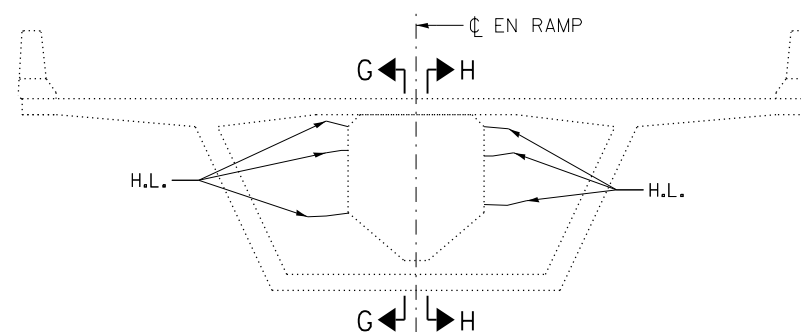
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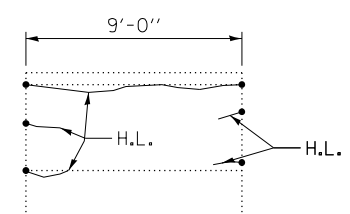
NORTH FACE DIAPHRAGM ELEVATION-SOUTH ABUTMENT



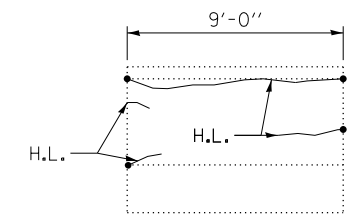
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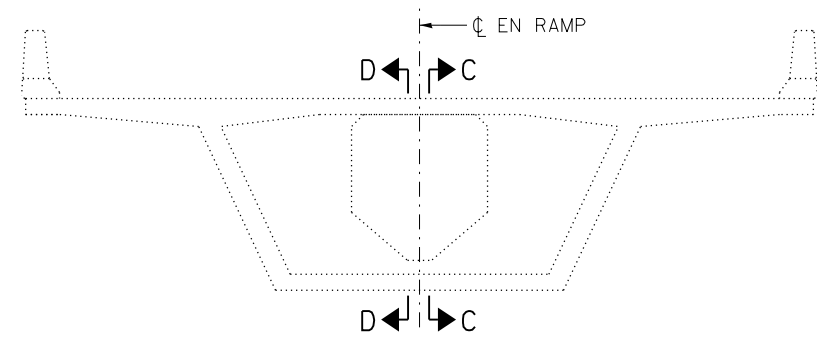
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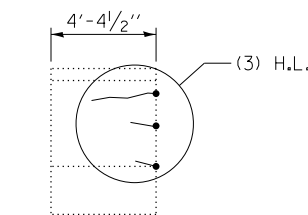
SECTION G-G



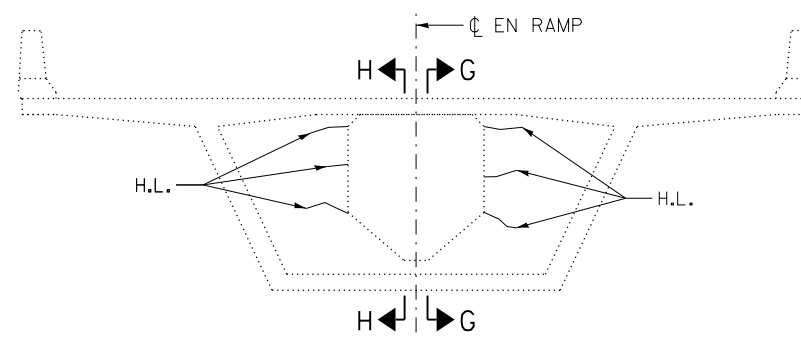
SECTION H-H



SOUTH FACE DIAPHRAGM ELEVATION-SOUTH ABUTMENT



SECTION D-D



SOUTH FACE DIAPHRAGM ELEVATION-PIER 2

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

LEGEND:

H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
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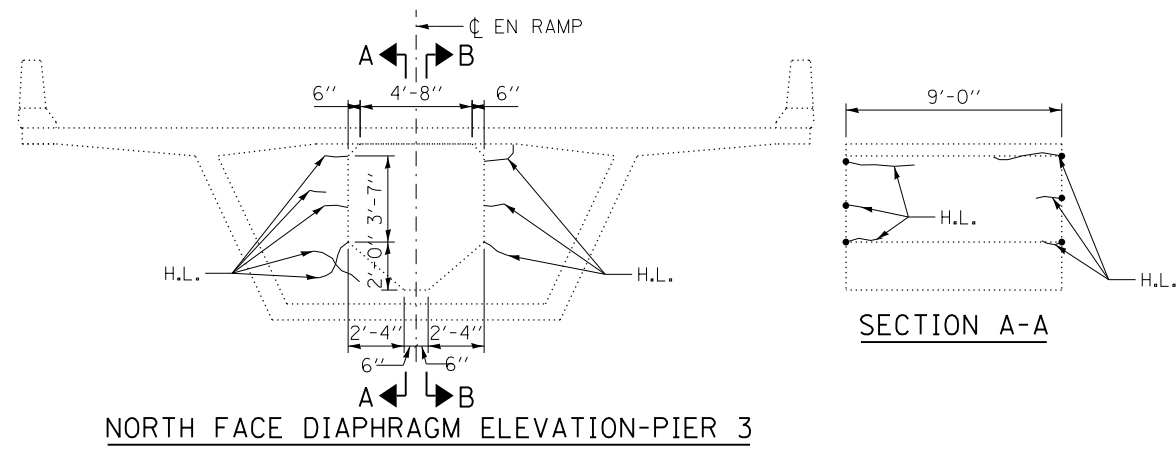


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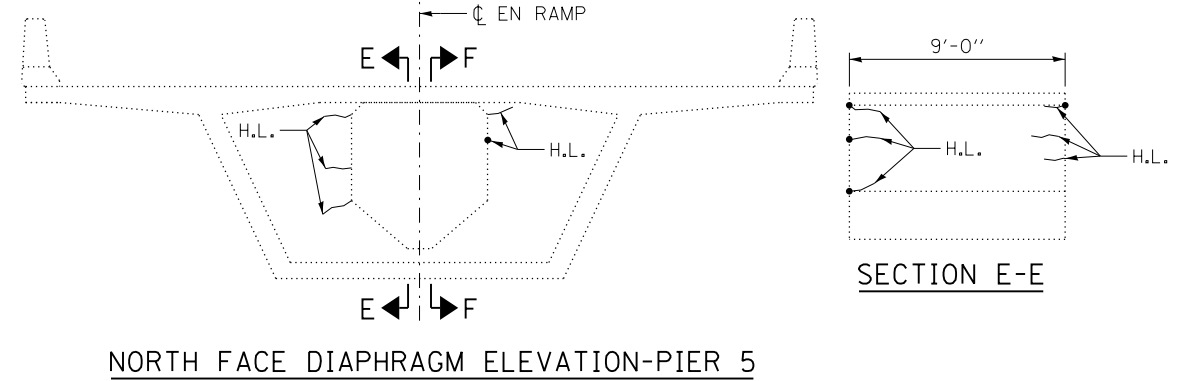
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 BRIDGE 1437 (EN) S.N. 022-9969
 DIAPHRAGM REPAIRS I

SI-23 OF SI-31
 SHT NO. SI-23
 DRAWING NO.
 1212 OF 1517

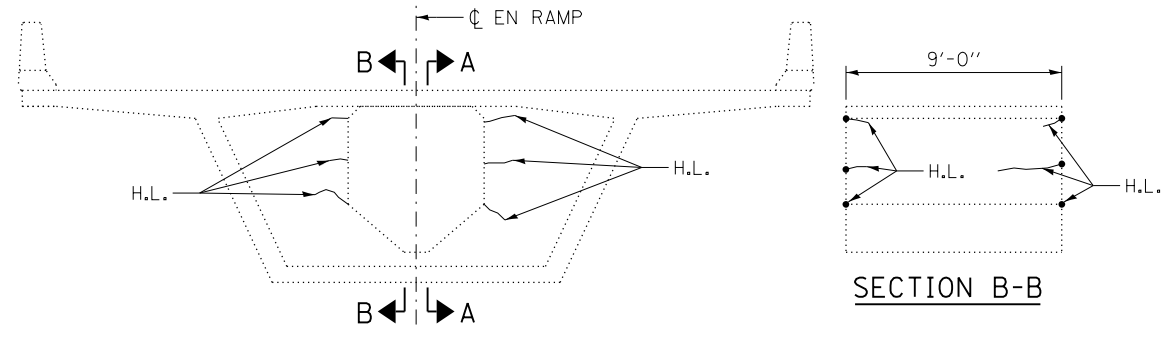
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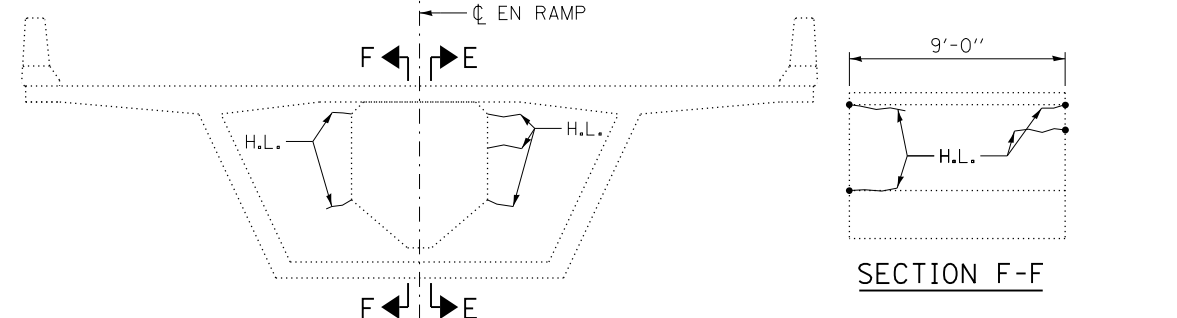
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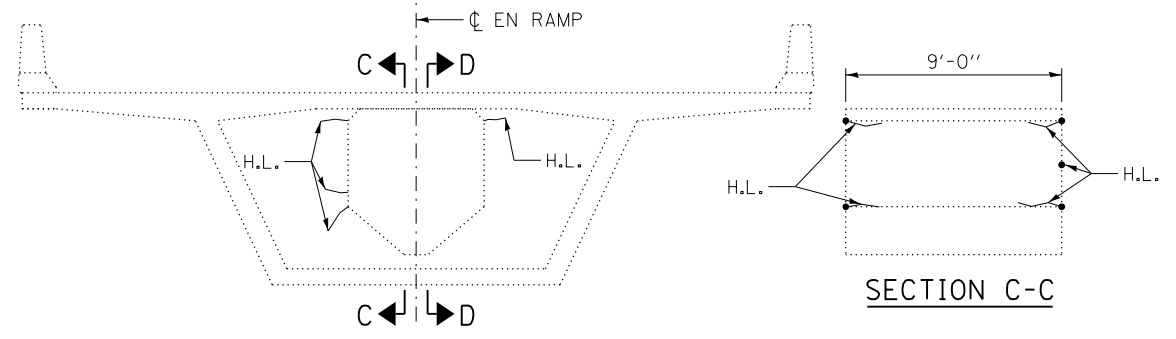
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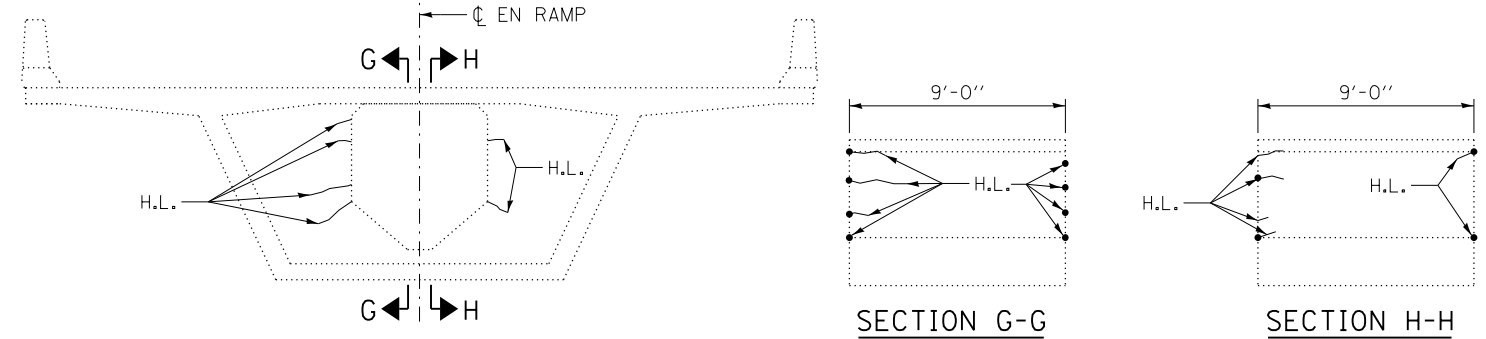
SOUTH FACE DIAPHRAGM ELEVATION-PIER 3



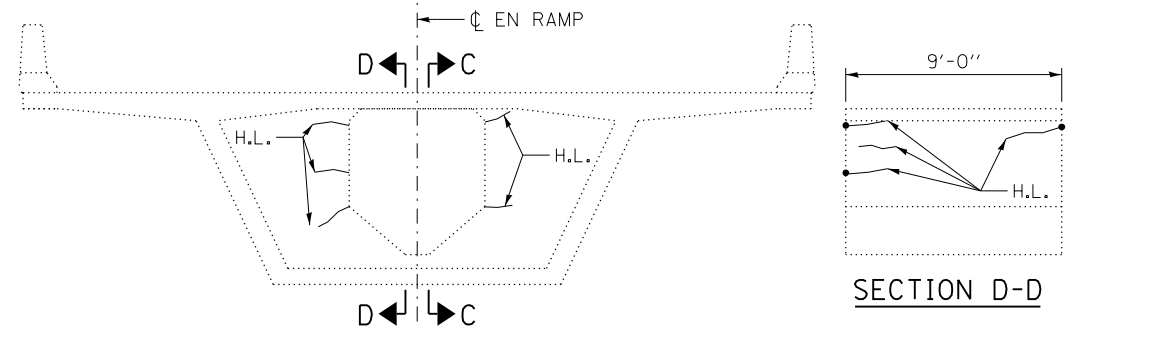
SOUTH FACE DIAPHRAGM ELEVATION-PIER 5



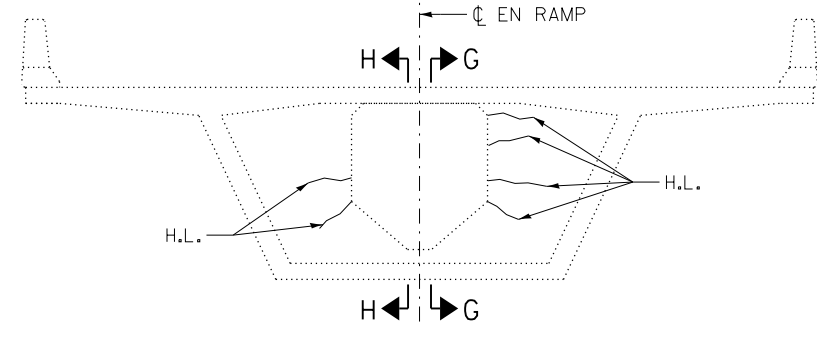
NORTH FACE DIAPHRAGM ELEVATION-PIER 4



NORTH FACE DIAPHRAGM ELEVATION-PIER 6



SOUTH FACE DIAPHRAGM ELEVATION-PIER 4



SOUTH FACE DIAPHRAGM ELEVATION-PIER 6

LEGEND:
 H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

NOTES:
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 ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

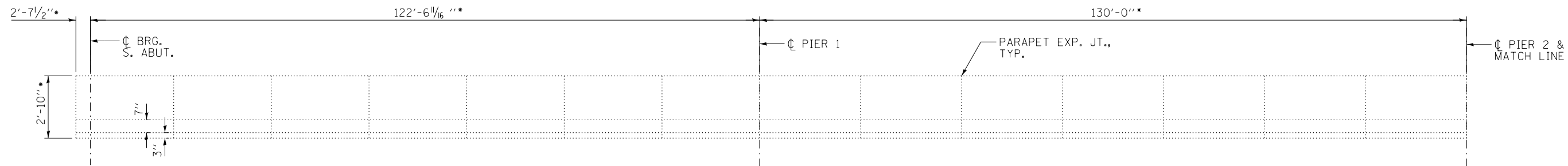
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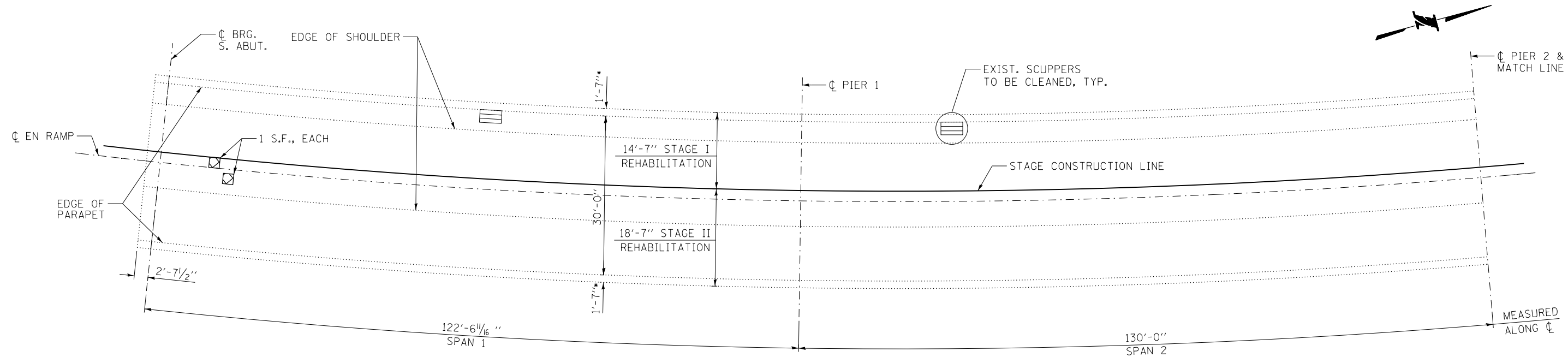
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CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 DIAPHRAGM REPAIRS II

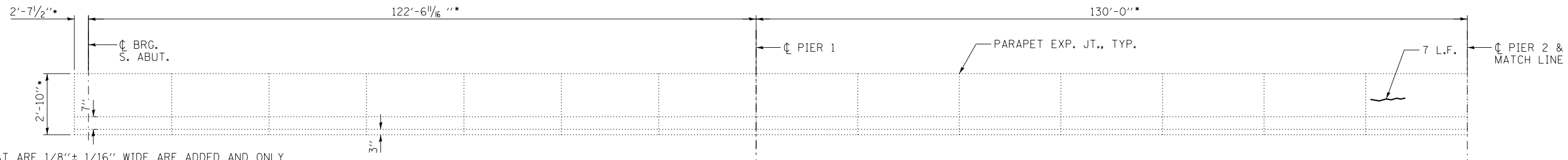
SI-24 OF SI-31
 SHT NO. SI-24
 DRAWING NO. 1213 OF 1517



INSIDE FACE OF WEST PARAPET
(LOOKING WEST)



TOP DECK PLAN



INSIDE FACE OF EAST PARAPET
(LOOKING EAST)

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING TOP OF DECK AND PARAPET SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SI-28.

* APPLY CONCRETE SEALANT ON THE PARAPET TRAFFIC FACE AFTER REPAIRS.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)". SEE SHEET SI-03 FOR TYPICAL DETAIL.

LEGEND:

 ACCELERATED DECK SLAB REPAIR (PARTIAL)

 7' → LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

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DRAWN BY SBA DATE 3/11/2018
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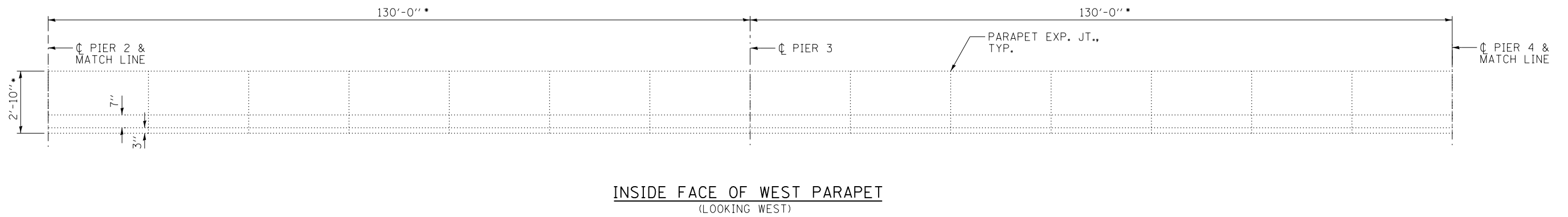
 **Ciorba Group, Inc.**
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
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 Fax 773.775.4014
 Email: chicago@ciorba.com

 **THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY**
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

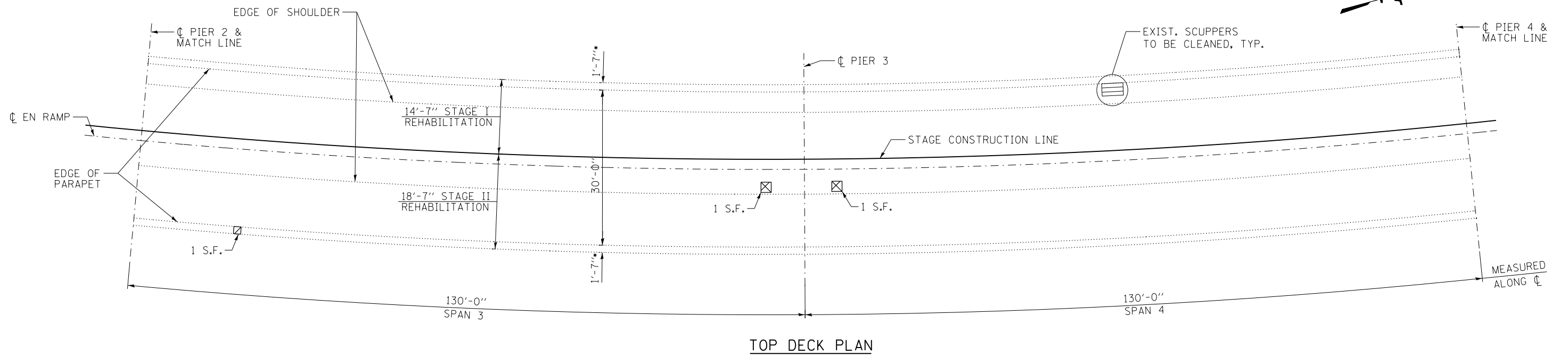
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CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 TOP OF DECK REPAIRS I

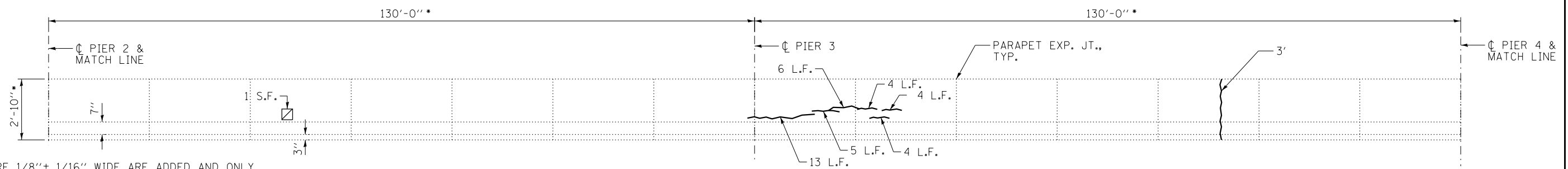
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 1214 OF 1517



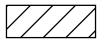
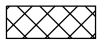

INSIDE FACE OF WEST PARAPET
(LOOKING WEST)



TOP DECK PLAN



INSIDE FACE OF EAST PARAPET
(LOOKING EAST)

- LEGEND:**
-  STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
 -  ACCELERATED DECK SLAB REPAIR (PARTIAL)
 -  4' → LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING TOP OF DECK AND PARAPET SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SI-28.

* APPLY CONCRETE SEALANT ON THE PARAPET TRAFFIC FACE AFTER REPAIRS.

CARE SHOULD BE TAKEN AS TO NOT DAMAGE THE POST-TENSIONING TENDON ASSEMBLY WHILE PERFORMING "ACCELERATED DECK SLAB REPAIR (PARTIAL)". SEE SHEET SI-03 FOR TYPICAL DETAIL.

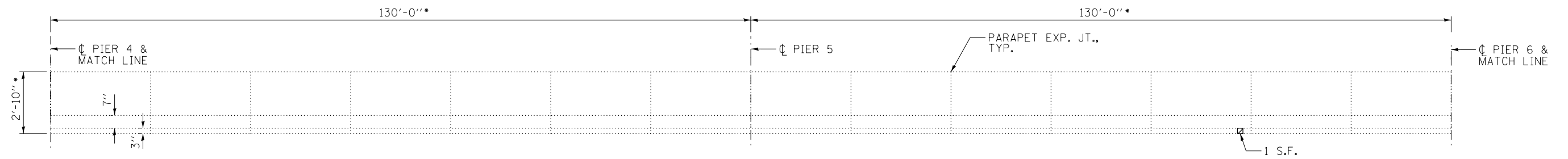
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CHECKED BY BWS DATE 3/11/2018



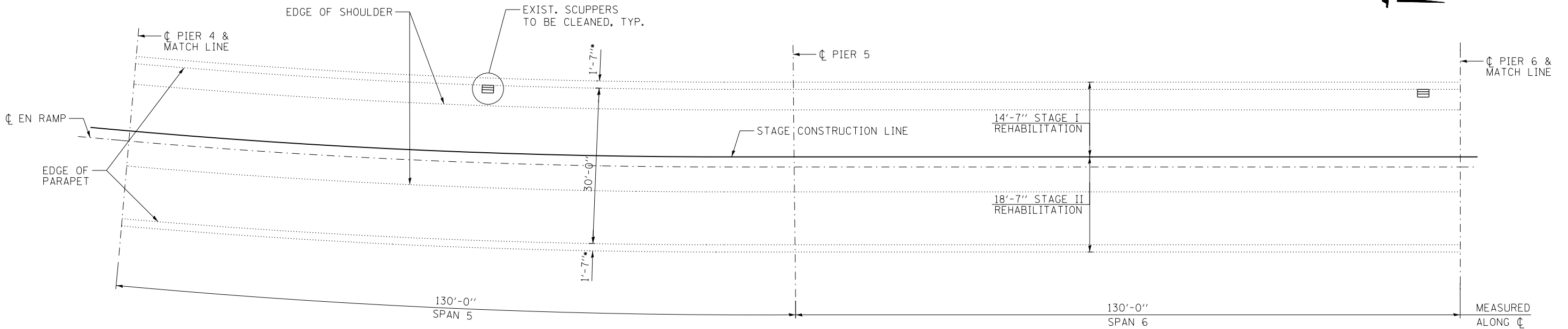
NO.		REVISIONS	
NO.	DATE	DESCRIPTION	

CONTRACT NO. RR-16-4255
BRIDGE 1437 (EN) S.N. 022-9969
TOP OF DECK REPAIRS II

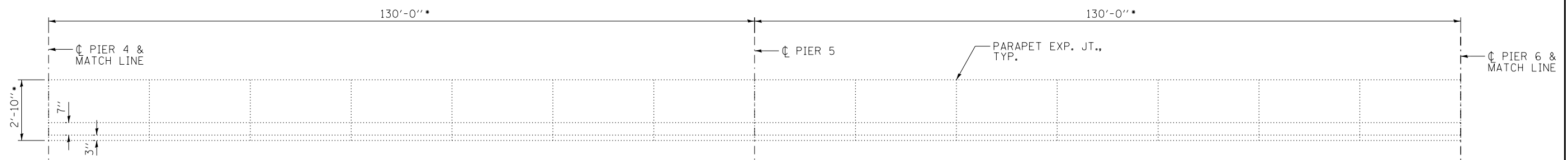
SI-26 OF SI-31
SHT NO. SI-26
DRAWING NO.
1215 OF 1517



INSIDE FACE OF WEST PARAPET
(LOOKING WEST)



TOP DECK PLAN



INSIDE FACE OF EAST PARAPET
(LOOKING EAST)

NOTES:

REPAIRS OF THE EXISTING TOP OF DECK AND PARAPET SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

FOR BILL OF MATERIAL, SEE SHEET SI-28.

*APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE AFTER REPAIRS.

LEGEND:

 STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

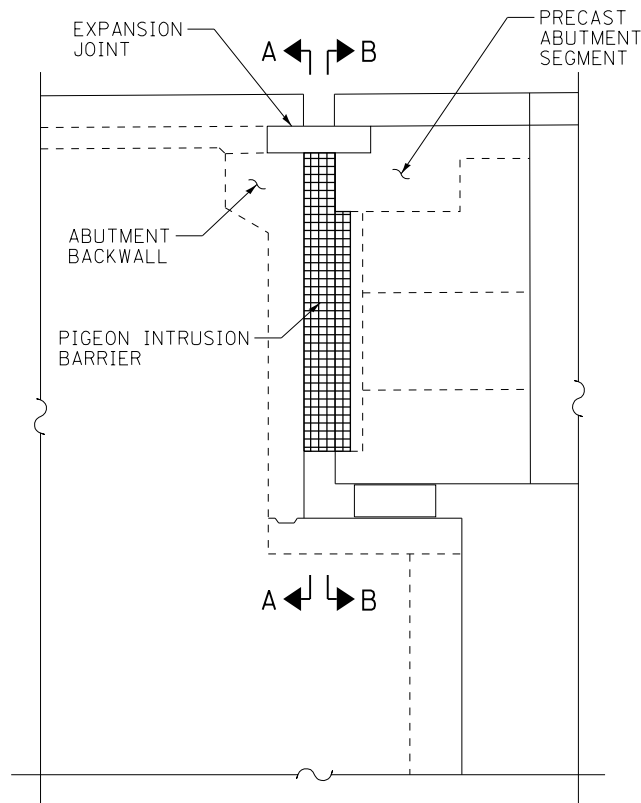


REVISIONS		
NO.	DATE	DESCRIPTION

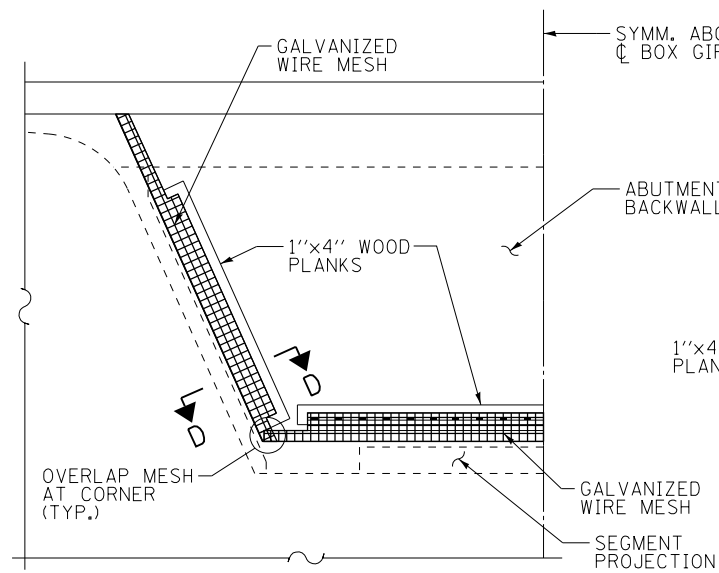
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 BRIDGE 1437 (EN) S.N. 022-9969
 TOP OF DECK REPAIRS III

SI-27 OF SI-31
 SHT NO. SI-27
 DRAWING NO.
 1216 OF 1517

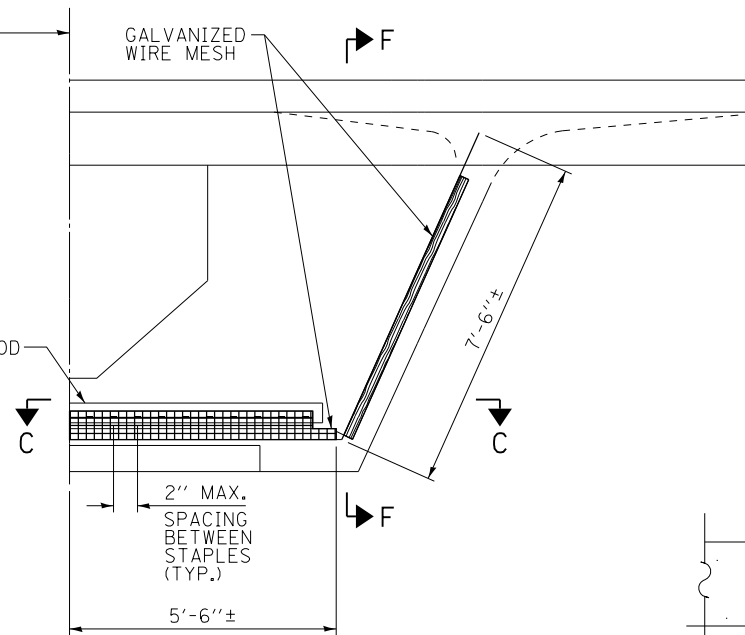
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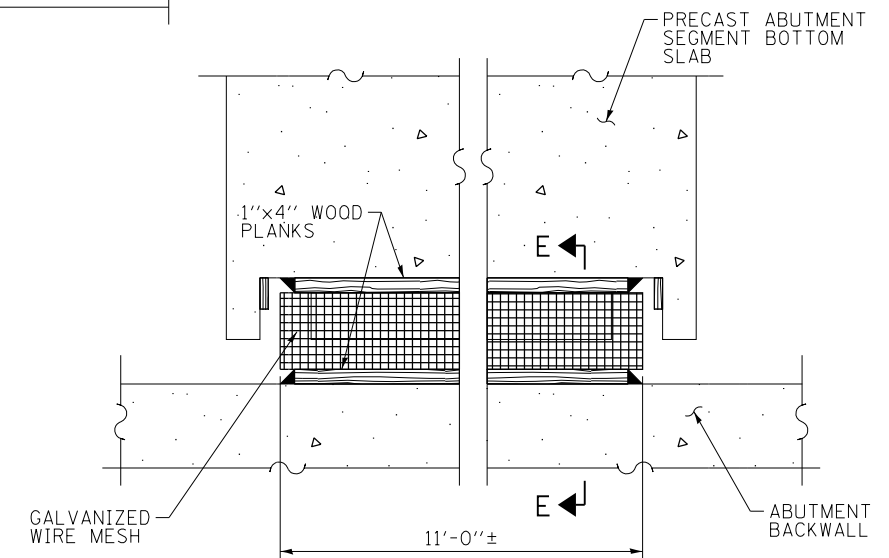
EXPANSION JOINT AT ABUTMENT



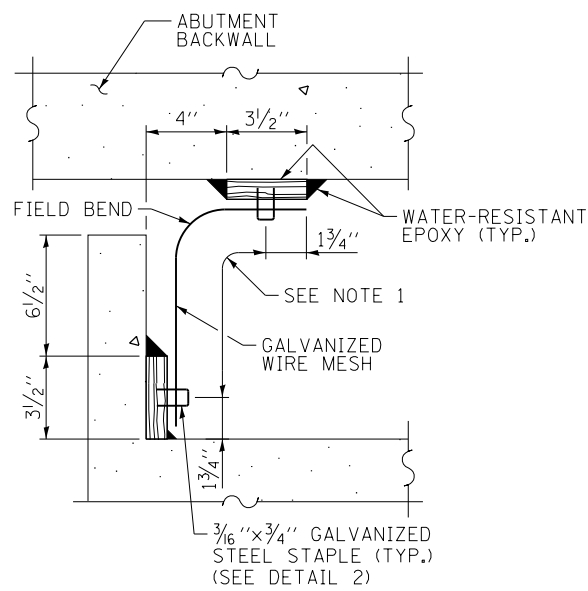
SECTION A-A



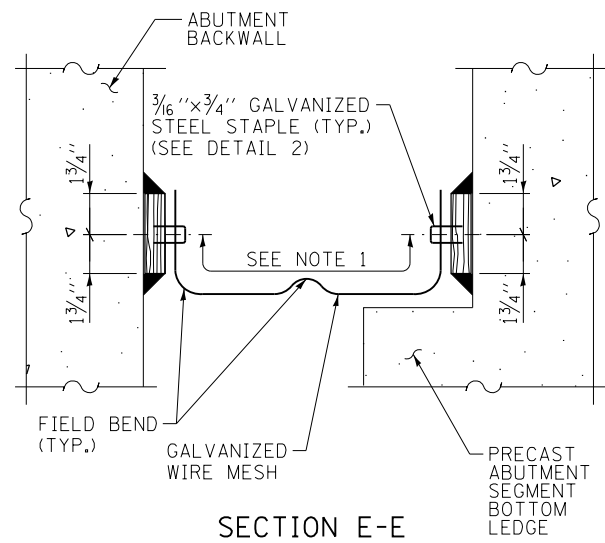
SECTION B-B



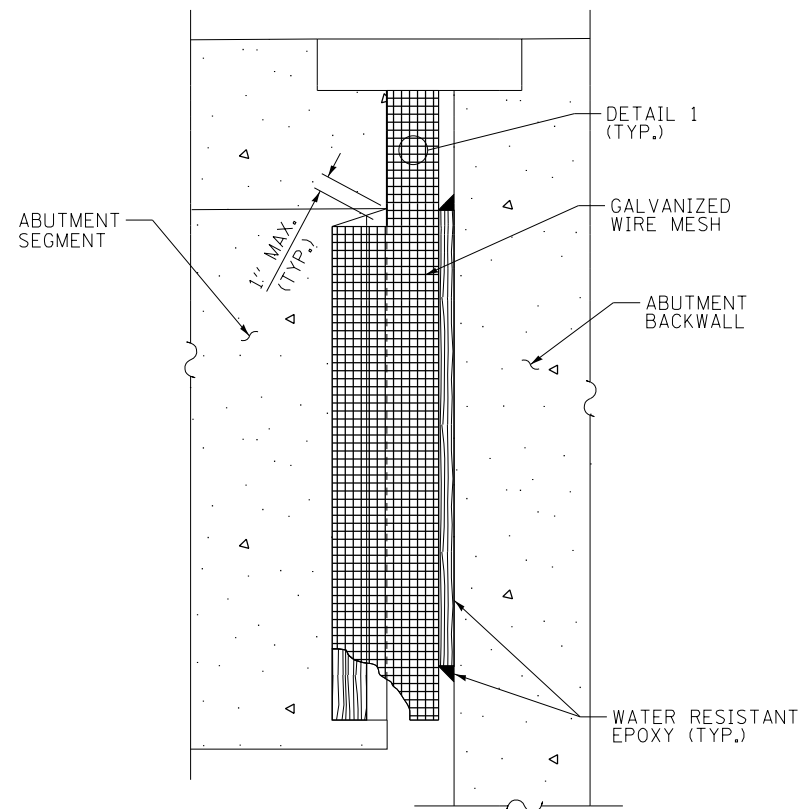
SECTION C-C



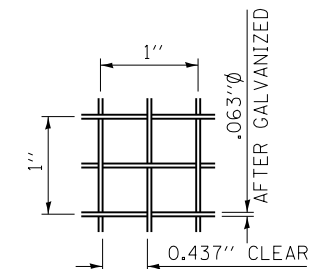
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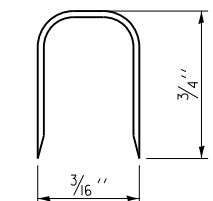
SECTION E-E



SECTION F-F



DETAIL 1



DETAIL 2

NOTE:
 MINIMUM LENGTH OF WIRE MESH OF 16" SHALL BE PROVIDED BETWEEN POINTS OF ATTACHMENTS (SEE SECT. D-D & E-E).

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
PIGEON INTRUSION BARRIER	EACH	2

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018



Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com



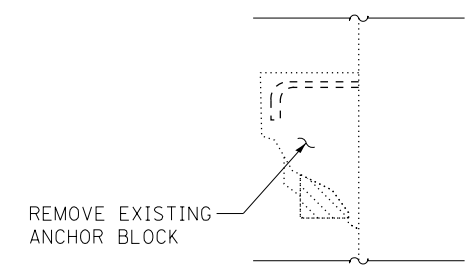
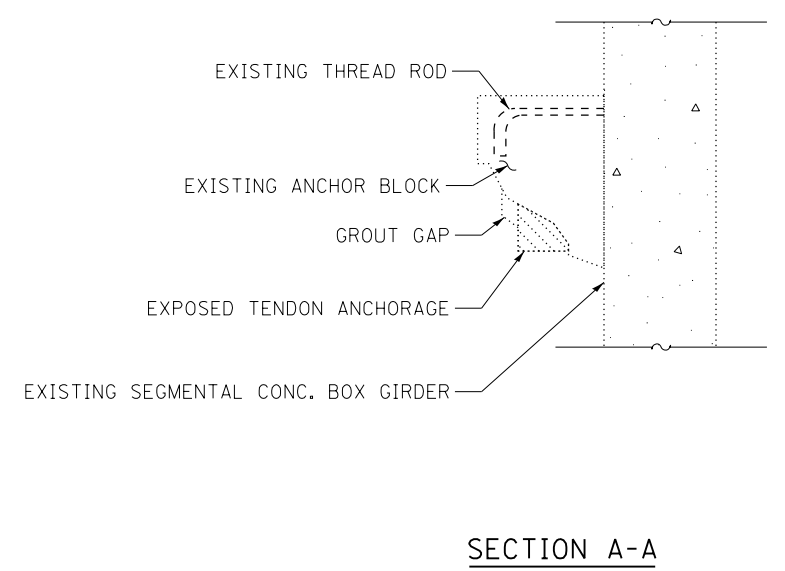
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

NO.	DATE	REVISIONS	
		DESCRIPTION	

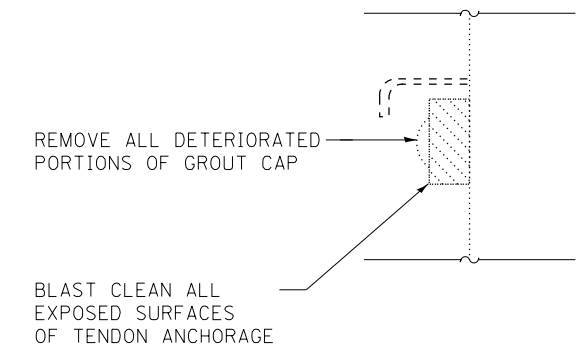
CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 PIGEON INTRUSION BARRIERS

SI-30 OF SI-31
 SHT NO. SI-30
 DRAWING NO.
 1219 OF 1517

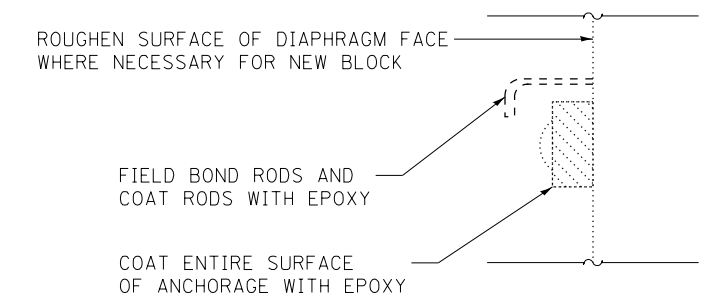
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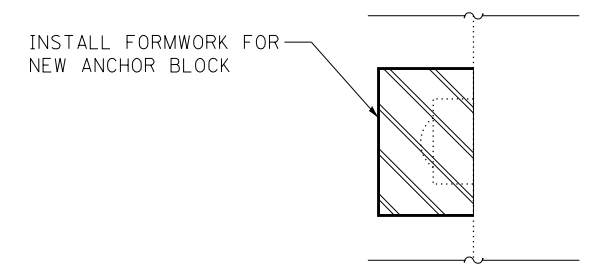
STEP 1



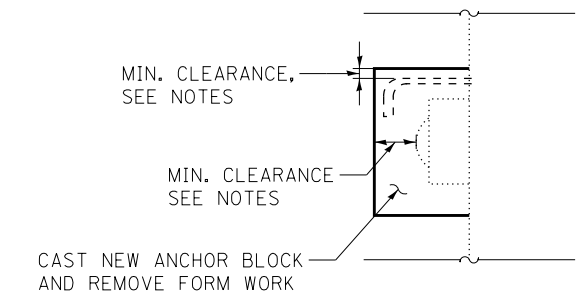
STEP 2



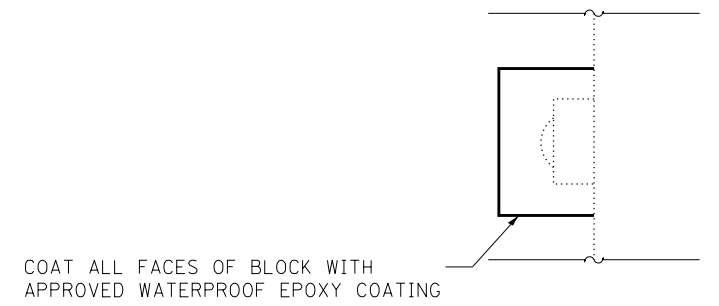
STEP 3



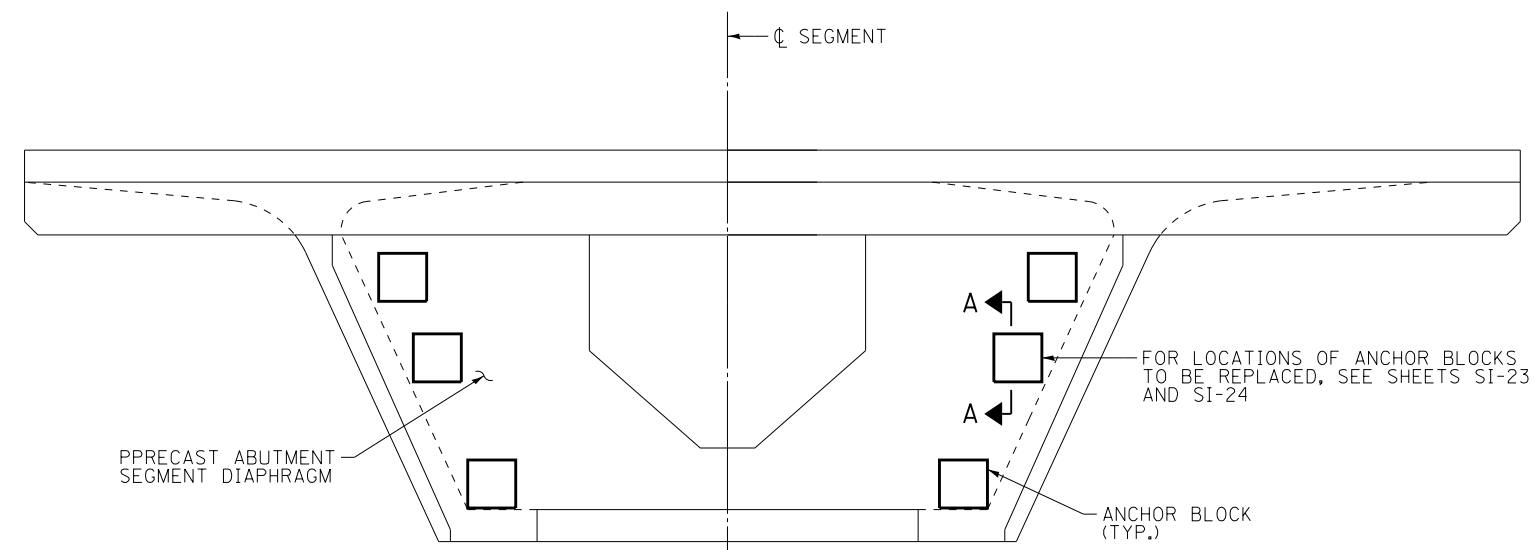
STEP 4



STEP 5



STEP 6



TYPICAL PRECAST ABUTMENT SEGMENT ELEVATION

NOTES:
 MINIMUM CLEARANCE OF 5 INCHES SHALL BE PROVIDED FROM TENDON ANCHORAGE TO ALL SURFACES OF ANCHOR BLOCK. MINIMUM CLEARANCE OF 3 INCHES SHALL BE PROVIDED FROM ALL THREAD RODS TO ALL SURFACES OF ANCHOR BLOCK.
 COST OF ALL WORK IS COVERED UNDER PAY "REPLACEMENT OF ANCHOR BLOCK CONCRETE."
 FOR LOCATIONS OF ANCHOR BLOCKS TO BE REPLACED, SEE SHEETS NO. SI-23 AND SI-24.
 MAXIMUM ANCHOR BLOCK VOLUME IS 2 CU. FT.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
REPLACEMENT OF ANCHOR BLOCK CONCRETE	EACH	12

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

CG Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
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THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1437 (EN) S.N. 022-9969
 ANCHOR BLOCK REPLACEMENT DETAILS

SI-31 OF SI-31
 SHT NO. SI-31
 DRAWING NO.
 1220 OF 1517

BENCHMARK: CHISELED "X" IN TOP OF SINGLE FACE CONCRETE BARRIER WALL WITH 6' CHAIN LINK FENCE ATTACHED. LOCATED WEST OF FINLEY ROAD BRIDGE OVER I-355, EAST OF I-88 OVER I-355 TUNNEL. STATION 1186+33, 64' LT. ELEV. 748.54.

EXISTING STRUCTURE: BRIDGE NO. 1436 (S.N. 022-9988) ORIGINALLY BUILT IN 1996 CONSISTS OF SIX SPAN CONTINUOUS PPC I BEAMS WITH A 7 1/2" THICK CONCRETE DECK, 544'-2 1/2" BK. TO BK. OF ABUTMENTS AND 36'-0" OUT TO OUT. EXISTING ABUTMENTS ARE STUB ABUTMENTS. NORTH ABUTMENT IS SUPPORTED ON A SPREAD FOOTING. SOUTH ABUTMENT IS SUPPORTED ON DRILLED SHAFTS. PIERS 1, 2, 3 AND 4 ARE SUPPORTED ON DRILLED SHAFTS. PIER 5 IS SUPPORTED ON SPREAD FOOTINGS. JOINT REPLACEMENT AND OTHER MINOR REPAIRS WERE COMPLETED IN 2011. THE EAST PIER CAP OF PIER 1 WAS FIBER WRAPPED IN 2015. TRAFFIC TO BE MAINTAINED WITH STAGED CONSTRUCTION.

NO SALVAGE

PROPOSED SCOPE OF WORK

1. REPAIR SUBSTRUCTURE UNITS AND DIAPHRAGMS WITH STRUCTURAL REPAIR OF CONCRETE AND EPOXY INJECTION.
2. SEAL ALL SURFACES OF THE ABUTMENTS AND PIERS WITH CONCRETE SEALANT.
3. REPAIR CRACKS IN PPC I BEAMS WITH EPOXY INJECTION.
4. REPAIR APPROACH SLAB.
5. CLEAN SCUPPERS ON BRIDGE DECK.
6. PAINT BEARINGS.

HIGHWAY CLASSIFICATION

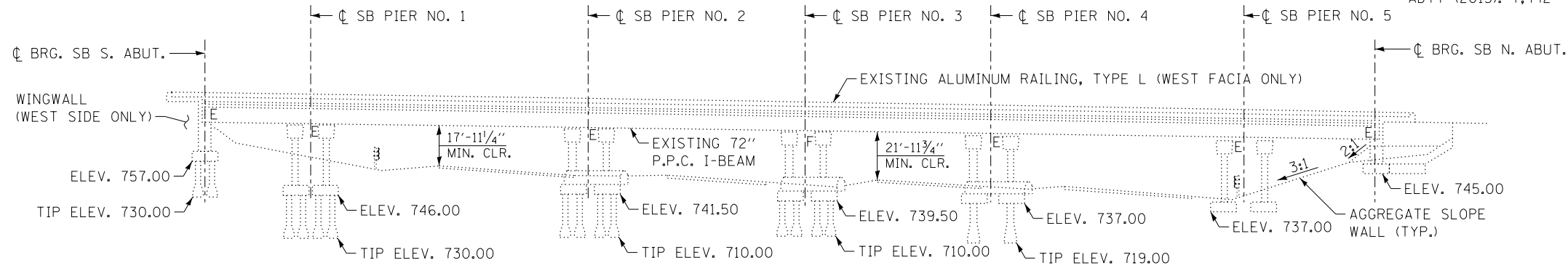
ROUTE OVER: SB FINLEY ROAD
 FUNCTIONAL CLASS: MINOR ARTERIAL
 ADT (2015): 7,400
 ADTT (2015): 148
 DHV: UNKNOWN
 DESIGN SPEED: UNKNOWN
 POSTED SPEED: 45
 ROUTE UNDER: I-88
 ADT (2015): 158,220
 ADTT (2015): 9,493
 ROUTE UNDER: I-355
 ADT (2015): 124,040
 ADTT (2015): 7,442

DESIGN STRESSES

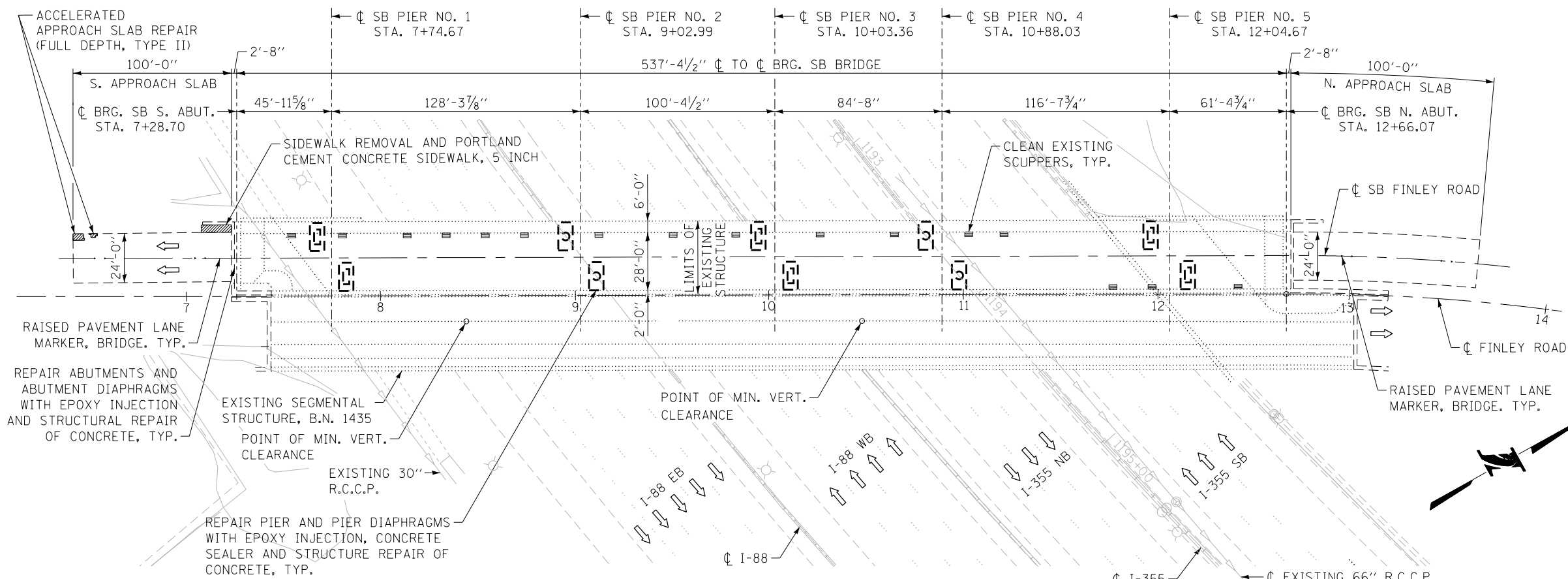
NEW CONSTRUCTION
 f'c = 3,500 PSI (CLASS SI - SUBSTRUCTURE)
 f'c = 4,000 PSI (PERFORMANCE MIX CLASS AX HIGH EARLY STRENGTH - DIAPHRAGMS AND APPROACH)
 fy = 60,000 PSI (REINFORCEMENT)

EXISTING CAST-IN-PLACE CONCRETE
 f'c = 3,500 PSI (SUBSTRUCTURE)
 f'c = 4,000 PSI (SUPERSTRUCTURE)
 fy = 60,000 PSI (REINFORCEMENT)

EXISTING PRECAST PRESTRESSED UNITS
 f'c = 7,000 PSI (SPAN 2)
 f'c = 6,500 PSI (SPAN 1, 3-6)
 f's = 5,200 PSI (ALL SPANS)
 f'ci = 270,000 PSI (1/2" Ø STRANDS ALL SPANS)

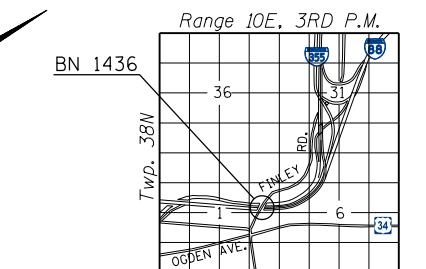


ELEVATION



PLAN

NOTE:
 DIMENSIONS AND STATIONS ARE FROM EXISTING PLANS.



LOCATION SKETCH

CONSTRUCTION SPECIFICATIONS

ILLINOIS TOLLWAY SUPPLEMENTAL SPECIFICATION TO THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED MAY 1, 2017.

ILLINOIS DEPARTMENT OF TRANSPORTATION GUIDE BRIDGE SPECIAL PROVISIONS (GBSP's).

ILLINOIS DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISION ADOPTED JANUARY 1, 2018.

ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016.

DESIGN SPECIFICATIONS

ORIGINAL CONSTRUCTION
 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1992

PROPOSED REHABILITATION
 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION 2002

STRUCTURE DESIGN MANUAL, ILLINOIS STATE TOLL HIGHWAY AUTHORITY, MARCH 2017

BRIDGE MANUAL, ILLINOIS DEPARTMENT OF TRANSPORTATION, JANUARY 2012

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DRAWN BY SVJ DATE 3/11/2018
 CHECKED BY RRD DATE 3/11/2018

SE3
 3041 WOODCREEK DRIVE, SUITE 211 - DOWNERS GROVE, IL 60515
 (630) 641-9900

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB) S.N. 022-9988
 GENERAL PLAN AND ELEVATION

SJ-01 OF SJ-14
 SHT NO. SJ-01
 DRAWING NO. 1221 OF 1517

GENERAL NOTES

CONSTRUCTION

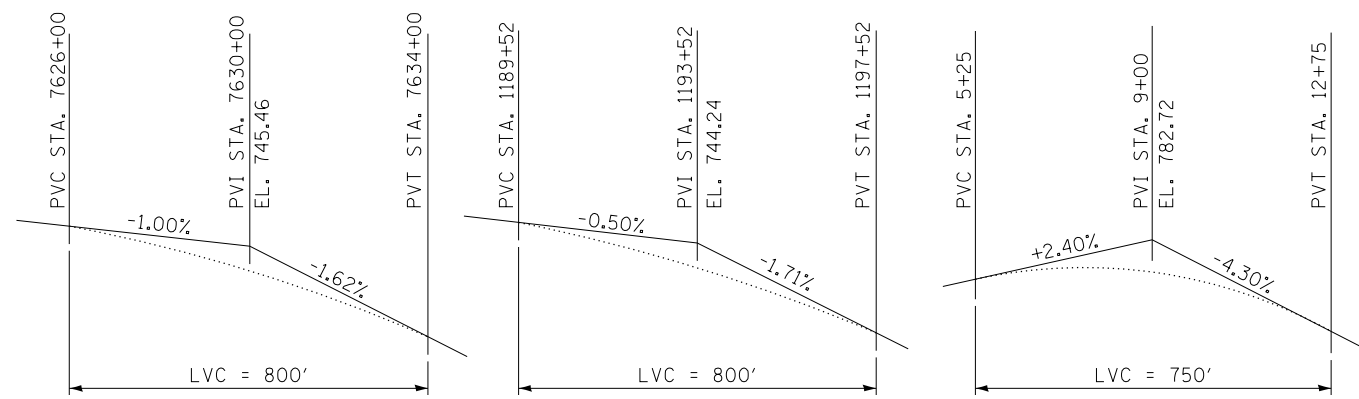
1. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK; HOWEVER, THE CONTRACTOR SHALL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.
2. CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALES SHOWN ARE FOR INFORMATION ONLY.
3. NO CONSTRUCTION JOINTS EXCEPT THOSE SHOWN ON THE PLANS SHALL BE ALLOWED UNLESS APPROVED BY THE ENGINEER.
4. THE CONTRACTOR MAY REQUEST COPIES OF EXISTING CONSTRUCTION PLANS THAT ARE CURRENTLY ON FILE WITH THE ILLINOIS TOLLWAY. THE REQUEST SHALL BE IN WRITING WITH THE UNDERSTANDING THAT ANY REPRODUCTION COST WILL BE AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE ILLINOIS TOLLWAY.
5. NO CONCRETE CUTTING SHALL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
6. REPAIRS SHOWN ARE BASED UPON INSPECTIONS COMPLETED IN 2017 AND ARE FOR BIDDING PURPOSES ONLY. ACTUAL AREA TO BE REPAIRED SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD AT THE TIME OF CONSTRUCTION.

TOTAL BILL OF MATERIAL

S.P.	PAY ITEM NO.	ITEM	UNIT	SUPER	SUB	TOTAL	RECORDED QUANTITY
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	110		110	
	44000600	SIDEWALK REMOVAL	SQ FT	110		110	
*	J1781000	RAISED PAVEMENT LANE MARKER	EACH	8		8	
**	JS120815	CLEAN EXISTING SCUPPER	EACH	7		7	
**	JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	6	136	142	
**	JS121300	HIGH PRESSURE EPOXY INJECTION	FOOT	63		69	
*	JT484010	RAISED PAVEMENT LANE MARKER PATCHING	EACH	8		8	
*	JT503033	ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	2		2	
*	JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	58	29	87	
*	JT503041	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN.)	SQ FT	6		6	
*	JT503050	SHALLOW CONCRETE REPAIR	SQ FT	1		1	
*	JT524010	APPLY CONCRETE SEALANT	SQ FT		4,972	4,972	
*	X0326331	CLEANING AND PAINTING BEARINGS	EACH		40	40	

* INDICATES SPECIAL PROVISION

** INDICATES TOLLWAY SUPPLEMENTAL SPECIFICATION



PROFILE I-88 TOLLWAY
(FROM EXISTING PLANS)

PROFILE I-355 TOLLWAY
(FROM EXISTING PLANS)

PROFILE FINLEY ROAD
(FROM EXISTING PLANS)

CONSTRUCTION (CONT.)

6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO STARTING CONSTRUCTION. CONTACT J.U.L.I.E., 800-892-0123.
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL FIBER OPTIC UTILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL INITIATE THE LOCATION PROCESS FOR THE FIBER OPTIC CABLE BY COMPLETING A "REQUEST ILLINOIS TOLLWAY UTILITIES LOCATE" FORM FILLED IN ONLINE AT THE ILLINOIS TOLLWAY WEBSITE UNDER "DOING BUSINESS" AT LEAST FOUR (4) BUSINESS DAYS PRIOR TO STARTING ANY UNDERGROUND OPERATIONS, EXCAVATIONS OR DIGGING OF ANY TYPE IN THE GENERAL AREA OF THE FIBER OPTIC CABLE."
8. CONCRETE SEALER SHALL BE APPLIED TO THE SURFACES OF ALL PIER AND ABUTMENT SEATS, INCLUDING BACKWALLS LOCATED BELOW ROADWAY EXPANSION JOINTS. SEALER SHALL ALSO BE APPLIED TO ALL EXPOSED SURFACES OF PIERS IN THE MEDIAN OR PIERS, ABUTMENTS AND WINGWALLS THAT ARE ADJACENT TO THE ROADWAY. EXISTING SURFACES SHALL BE POWER WASHED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 592 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
9. WHENEVER ANY MATERIAL IS DEPOSITED INTO A DRAINAGE SYSTEM OR DRAINAGE STRUCTURES, THE DEPOSITED MATERIAL SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE SYSTEMS AND STRUCTURES SHALL BE FREE FROM DIRT AND DEBRIS DEPOSITED DURING THE VARIOUS CONSTRUCTION OPERATIONS.

CAST-IN-PLACE CONCRETE

1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" X 45° CHAMFER, EXCEPT WHERE SHOWN OTHERWISE. CHAMFER ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

REINFORCEMENT BARS

1. REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A706), GRADE 60, DEFORMED BARS.
2. REINFORCEMENT BARS DESIGNATED "(E)" SHALL BE EPOXY COATED.
3. REINFORCEMENT BAR BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315.
4. COVER FROM THE FACE OF CONCRETE TO FACE OR REINFORCEMENT BARS SHALL BE 3" FOR SURFACES FORMED AGAINST EARTH AND 2" FOR ALL OTHER SURFACES UNLESS OTHERWISE SHOWN.

STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS

1. A STRUCTURAL ENGINEER, LICENSED IN THE STATE OF ILLINOIS, SHALL PREPARE AND SUBMIT STRUCTURE ASSESSMENT REPORTS (SARS) FOR THE PROPOSED WORK ASSOCIATED WITH REMOVING, MODIFYING OR RECONSTRUCTING EXISTING STRUCTURES OR PORTIONS THEREOF. UNLESS NOTED OTHERWISE, A SAR SHALL BE REQUIRED WHEN THE CONTRACTOR'S MEANS AND METHODS APPLY LOADS TO THE STRUCTURE OR CHANGE ITS STRUCTURAL BEHAVIOR. A SAR SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO STARTING THE WORK, IN ACCORDANCE WITH THE LATEST IDOT GUIDE BRIDGE SPECIAL PROVISION, "STRUCTURAL ASSESSMENT REPORTS FOR CONTRACTOR'S MEANS AND METHODS" PRIOR TO BEGINNING THE WORK COVERED BY THAT SAR. SEPARATE PORTIONS OF THE WORK MAY BE COVERED BY SEPARATE SARS WHICH MAY BE SUBMITTED AT DIFFERENT TIMES OR AS DICTATED BY THE CONTRACTOR'S SCHEDULE.
2. AN EXISTING STRUCTURE INFORMATION PACKAGE (ESIP) WILL BE PROVIDED BY THE ILLINOIS TOLLWAY TO THE CONTRACTOR UPON REQUEST. THIS PACKAGE WILL TYPICALLY INCLUDE EXISTING OR "AS BUILT" PLANS, AND THE LATEST NATIONAL BRIDGE INSPECTION STANDARDS (NBIS) INSPECTION REPORT. THE AVAILABILITY OF STRUCTURAL INFORMATION FROM THE ILLINOIS TOLLWAY IS SOLELY FOR THE CONVENIENCE AND INFORMATION OF THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THE DUTY TO MAKE, AND THE RISK OF MAKING, EXAMINATIONS AND INVESTIGATIONS AS REQUIRED TO ASSESS CONDITIONS AFFECTING THE WORK. ANY DATA FURNISHED IN THE ESIP IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A PART OF THE CONTRACT. THE ILLINOIS TOLLWAY MAKES NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, AS TO THE INFORMATION CONVEYED OR AS TO ANY INTERPRETATIONS MADE FROM THE DATA.

INDEX OF SHEETS

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SJ-02	GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
SJ-03	CONSTRUCTION STAGING
SJ-04	NORTH ABUTMENT REPAIR DETAILS
SJ-05	SOUTH ABUTMENT REPAIR DETAILS
SJ-06	PIER 1 REPAIR DETAILS
SJ-07	PIER 2 REPAIR DETAILS
SJ-08	PIER 3 REPAIR DETAILS
SJ-09	PIER 4 REPAIR DETAILS
SJ-10	PIER 5 REPAIR DETAILS
SJ-11	BEAM REPAIR DETAILS (1 OF 2)
SJ-12	BEAM REPAIR DETAILS (2 OF 2)
SJ-13	APPROACH SLAB REPAIR DETAILS
SJ-14	EXISTING BEARING DETAIL

IDOT HIGHWAY STANDARDS

701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701801-06	SIDWALK, CORNER OR CROSSWALK CLOSURE

LIST OF ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ABUT.	ABUTMENT
BRG.	BEARING
CL	CENTERLINE
E.	EAST
EB	EASTBOUND
ELEV.	ELEVATION
EXIST.	EXISTING
EXP.	EXPANSION
JT.	JOINT
MIN.	MINIMUM
N.	NORTH
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
SHLDR.	SHOULDER
S.	SOUTH
S.P.	SPECIAL PROVISION
SQ. FT.	SQUARE FOOT
SQ. YD.	SQUARE YARD
STA.	STATION
TYP.	TYPICAL
WB	WESTBOUND

SJ-02 OF SJ-14

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DRAWN BY SVJ DATE 3/11/2018
CHECKED BY RRD DATE 3/11/2018

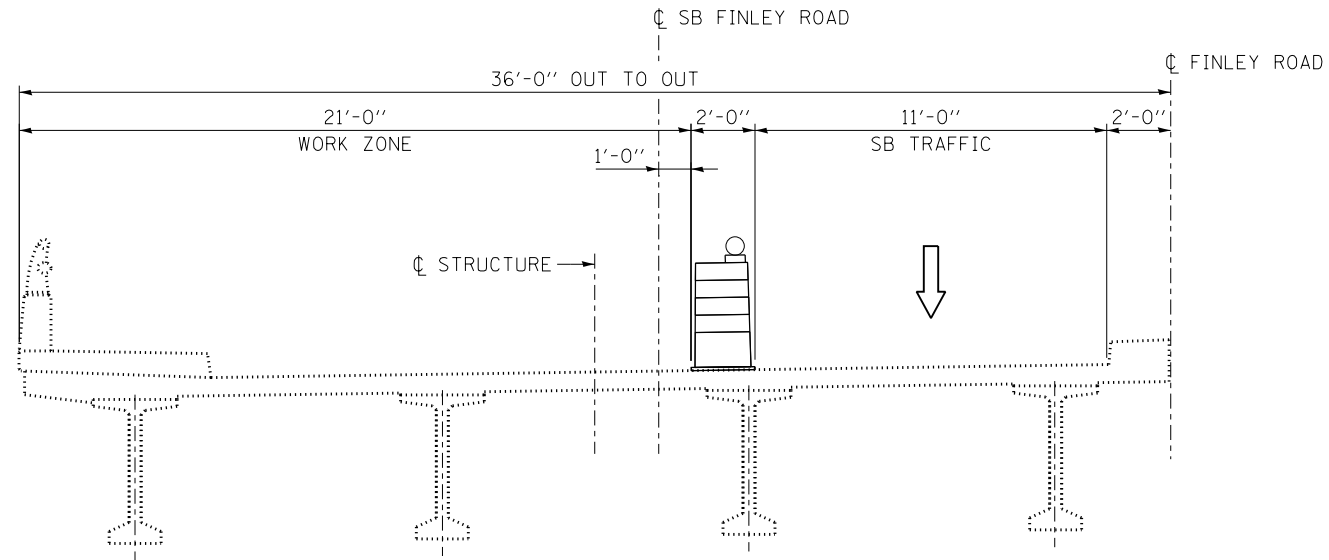
SEA
3041 WOODCREEK DRIVE, SUITE 211 - DOWNERS GROVE, IL 60515
(630) 641-9900

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

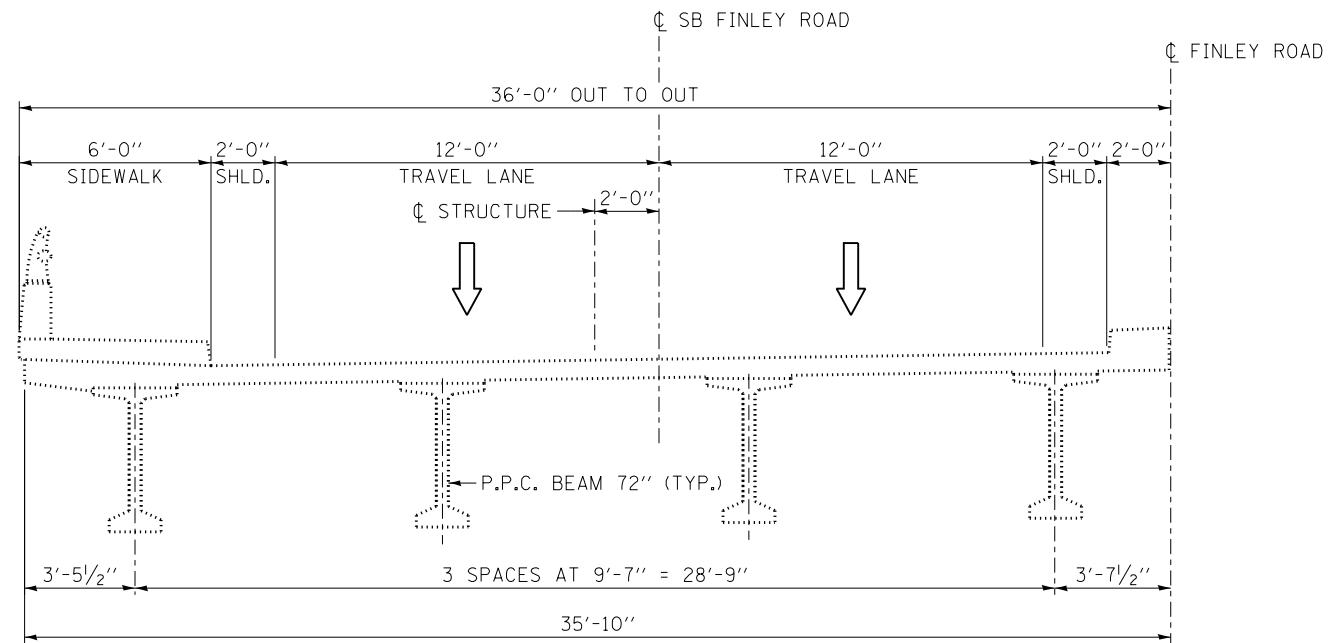
REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. RR-16-4255	SHT NO. SJ-02
BRIDGE NO. 1436 (SB)	DRAWING NO. 1222 OF 1517
GENERAL NOTES, INDEX OF SHEETS & T. B.O.M.	

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STAGE CONSTRUCTION SECTION
(LOOKING NORTH)



TYPICAL SECTION
(LOOKING NORTH)

STAGE CONSTRUCTION NOTES:

THE CONSTRUCTION WIDTH SHOWN IS THE MAXIMUM RANGE FROM THE TEMPORARY TYPE II BARRICADE. THE ACTUAL REHABILITATION WIDTH SHALL BE ADJUSTED IN THE FIELD.

SEE IDOT STANDARD 701601-09 FOR DETAILS OF MAINTENANCE OF TRAFFIC AND IDOT STANDARD 701801-06 FOR DETAILS OF SIDEWALK CLOSURE.

SJ-03 OF SJ-14

DRAWN BY SVJ DATE 3/11/2018
 CHECKED BY RRD DATE 3/11/2018

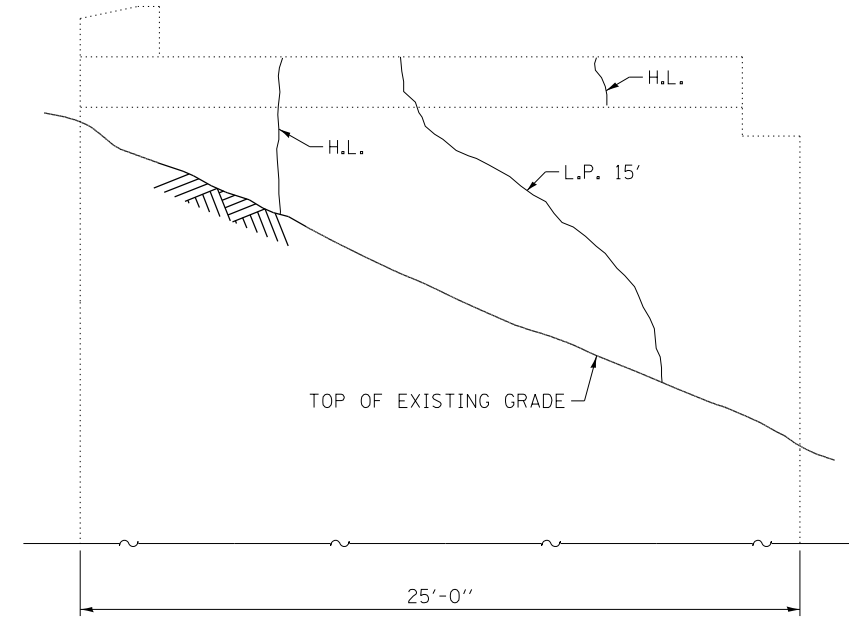
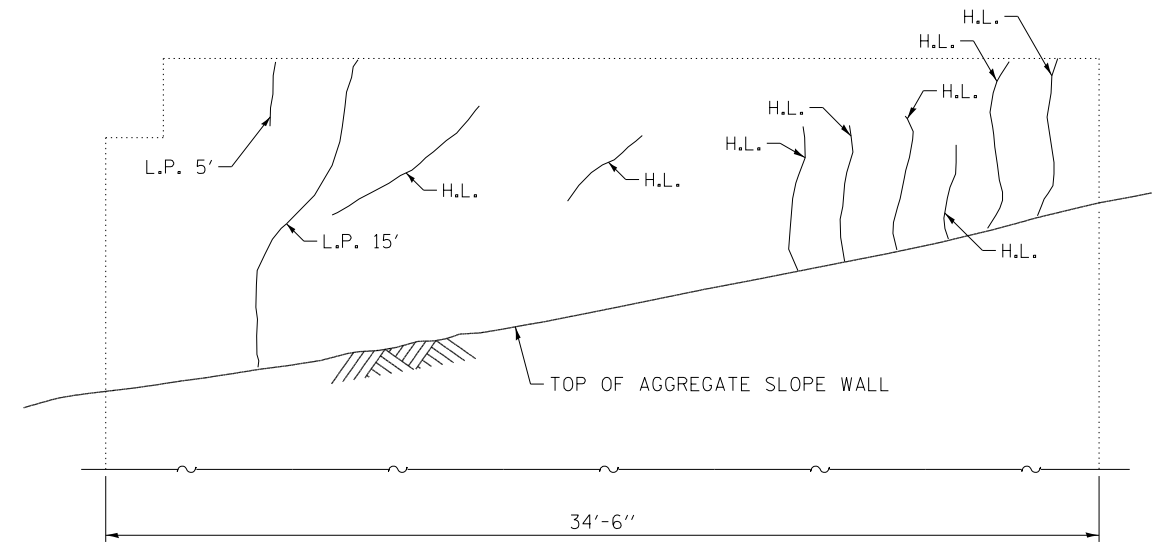
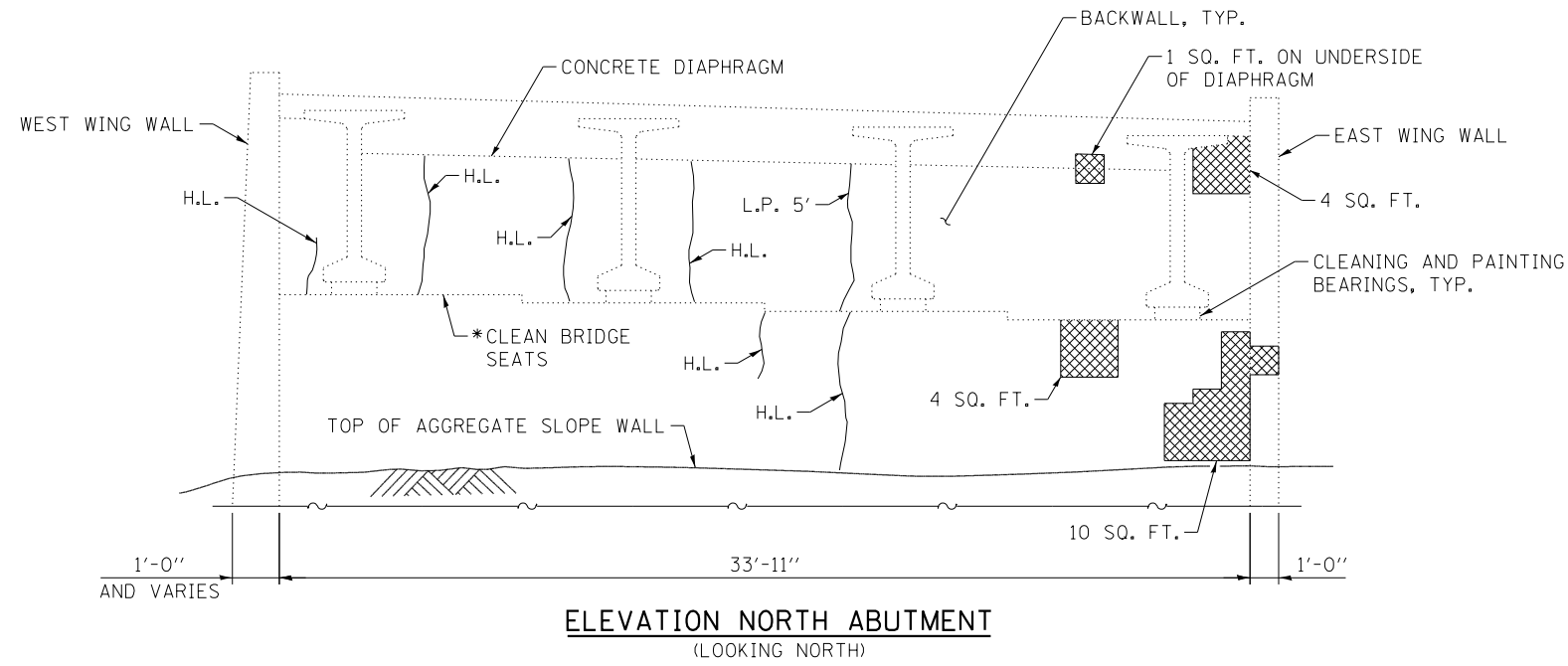


NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 CONSTRUCTION STAGING

SHT NO. SJ-03
 DRAWING NO.
 1223 OF 1517

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LEGEND

- STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")
- HAIRLINE CRACK (FOR INFORMATION ONLY, NOT TO BE SEALED)
- LOW PRESSURE EPOXY INJECTION

NOTE: CRACK WIDTHS ARE 1/8" (±1/16") UNLESS OTHERWISE NOTED.

NOTES

1. REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.
2. CRACK WIDTH 1/16" AND LARGER SHALL BE SEALED WITH LOW PRESSURE EPOXY INJECTION.
3. BRIDGE SEATS SHALL BE CLEANED ACCORDING TO THE CONTRACT SPECIAL PROVISIONS.
4. CONCRETE SEALER SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF THE GIRDER DIAPHRAGMS, BRIDGE SEATS, ABUTMENT BACKWALLS, AND TOP 2' OF ABUTMENT FACE.

* COST INCLUDED IN APPLY CONCRETE SEALANT

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	40
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	19
JT524010	APPLY CONCRETE SEALANT	SQ FT	703
X0326331	CLEANING AND PAINTING BEARINGS	EACH	4

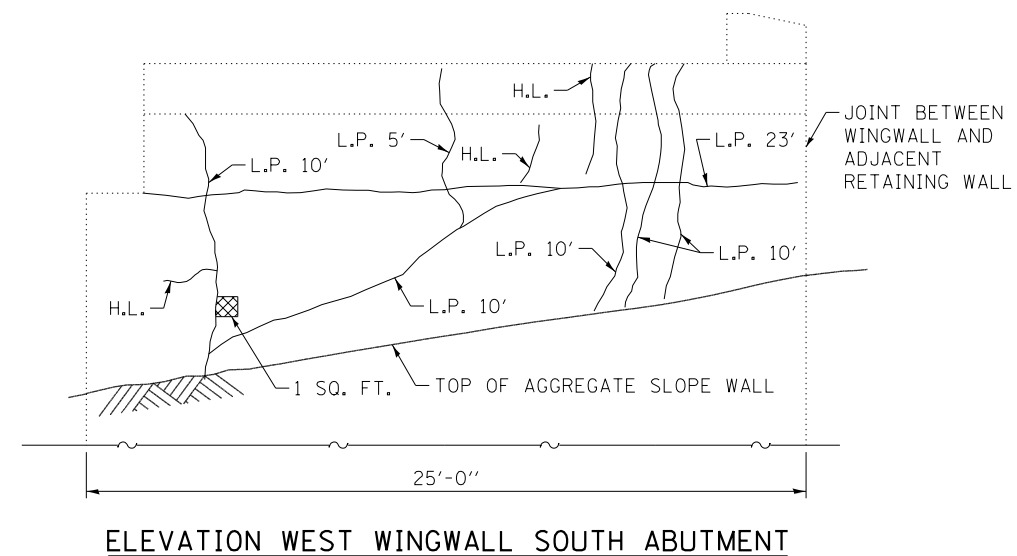
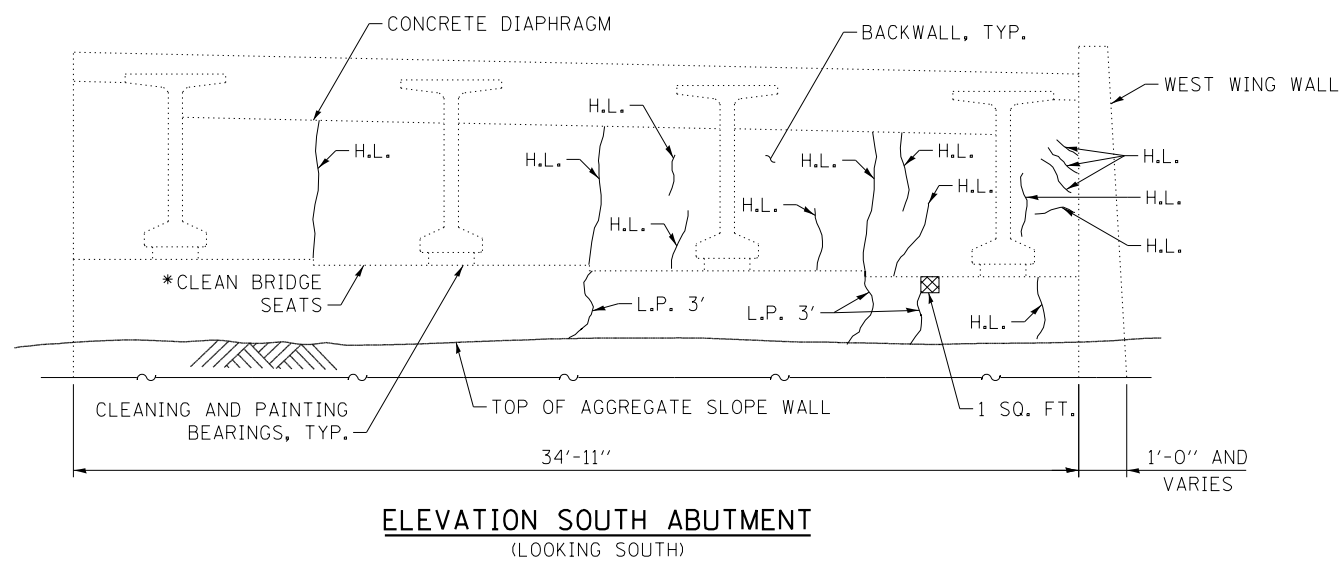
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 CHECKED BY RRD DATE 3/11/2018



REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 NORTH ABUTMENT REPAIR DETAILS

SJ-04 OF SJ-14
 SHT NO. SJ-04
 DRAWING NO. 1224 OF 1517



LEGEND

- STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")
- H.L. HAIRLINE CRACK (FOR INFORMATION ONLY, NOT TO BE SEALED)
- L.P. LOW PRESSURE EPOXY INJECTION

NOTE: CRACK WIDTHS ARE 1/8" (±1/16") UNLESS OTHERWISE NOTED.

NOTES

1. REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.
2. CRACK WIDTH 1/16" AND LARGER SHALL BE SEALED WITH LOW PRESSURE EPOXY INJECTION.
3. BRIDGE SEATS SHALL BE CLEANED ACCORDING TO THE CONTRACT SPECIAL PROVISIONS.
4. CONCRETE SEALER SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF THE GIRDER DIAPHRAGMS, BRIDGE SEATS, ABUTMENT BACKWALLS, AND TOP 2' OF ABUTMENT FACE.

* COST INCLUDED IN APPLY CONCRETE SEALANT

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	87
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	2
JT524010	APPLY CONCRETE SEALANT	SQ FT	592
X0326331	CLEANING AND PAINTING BEARINGS	EACH	4

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 CHECKED BY RRD DATE 3/11/2018

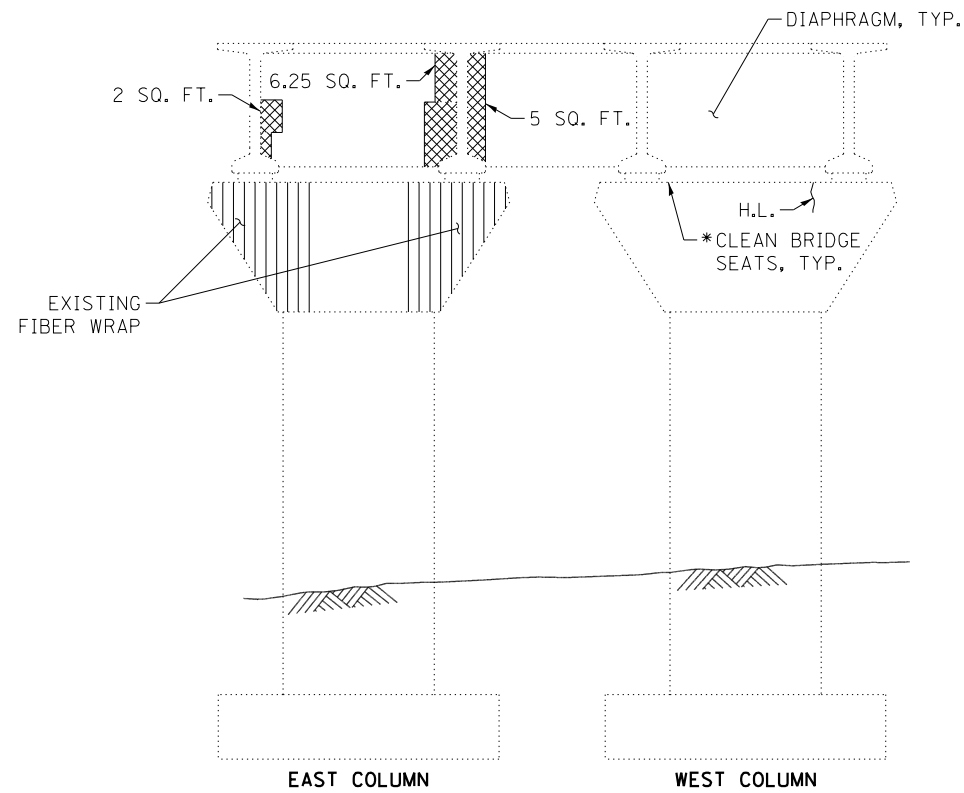


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NO.	DATE

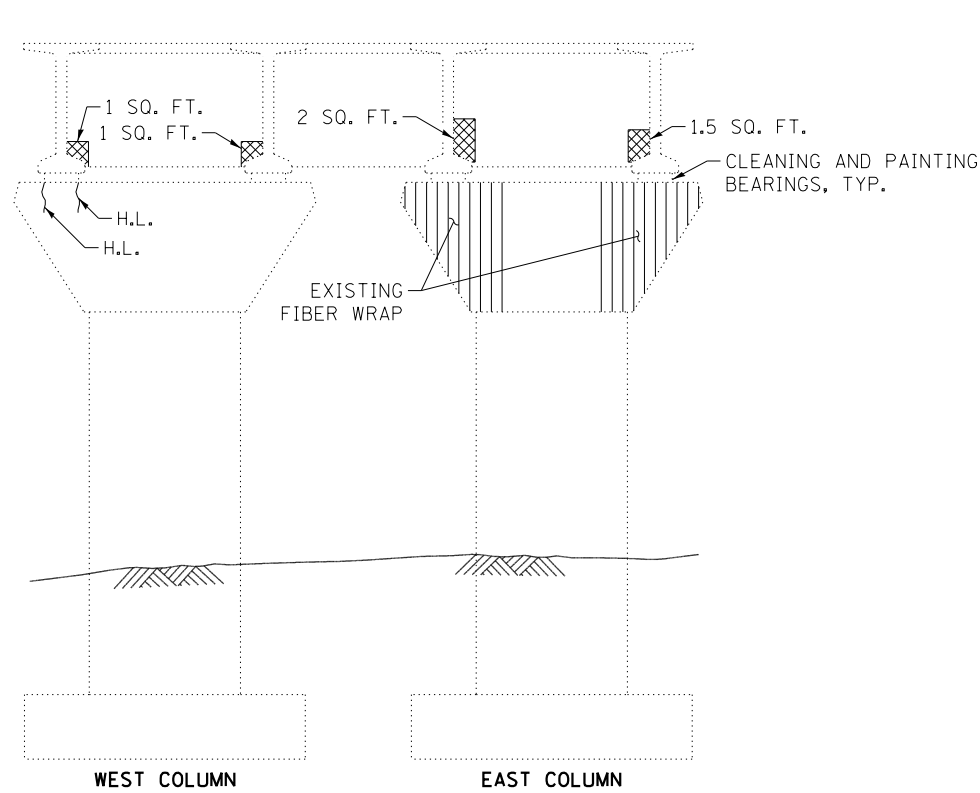
CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 SOUTH ABUTMENT REPAIR DETAILS

SJ-05 OF SJ-14
 SHT NO. SJ-05
 DRAWING NO. 1225 OF 1517

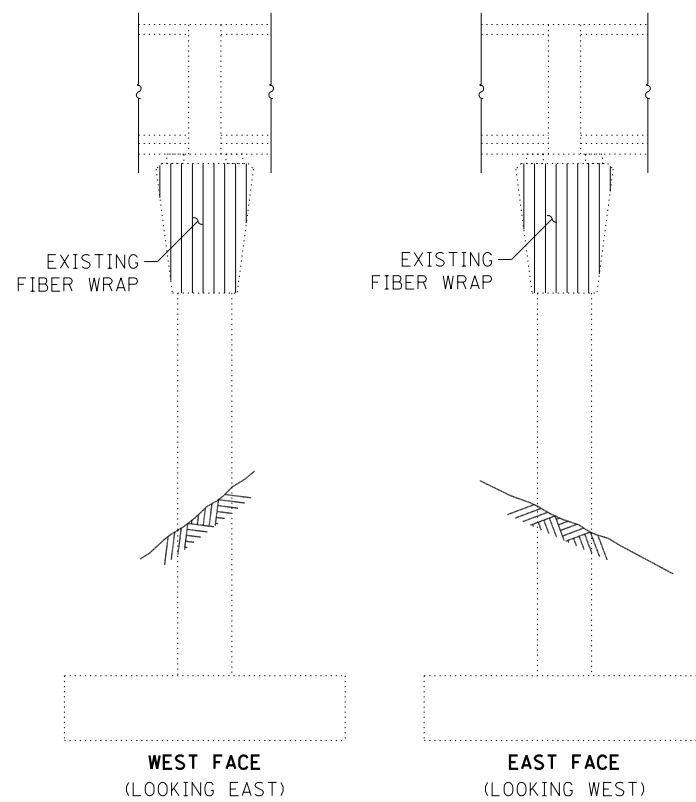
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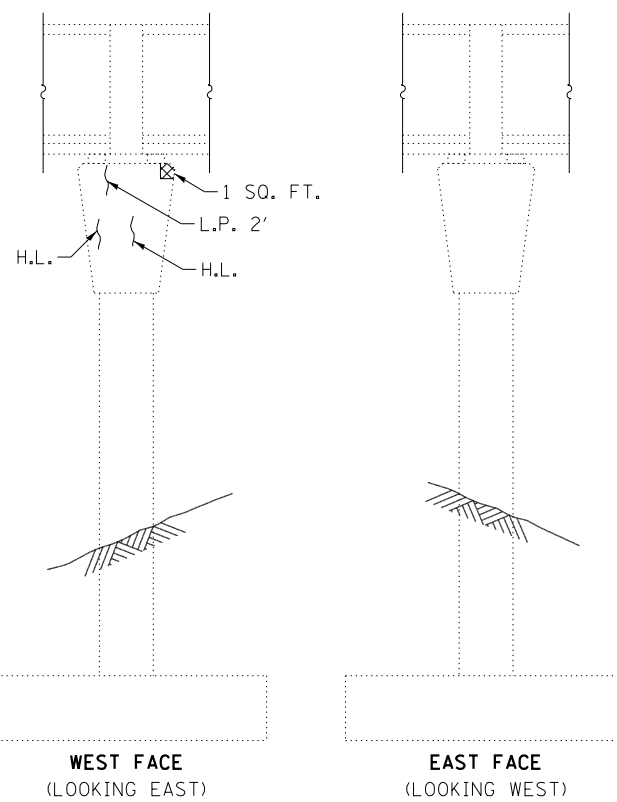
PIER 1 NORTH FACE
(LOOKING SOUTH)



PIER 1 SOUTH FACE
(LOOKING NORTH)



EAST COLUMN



WEST COLUMN

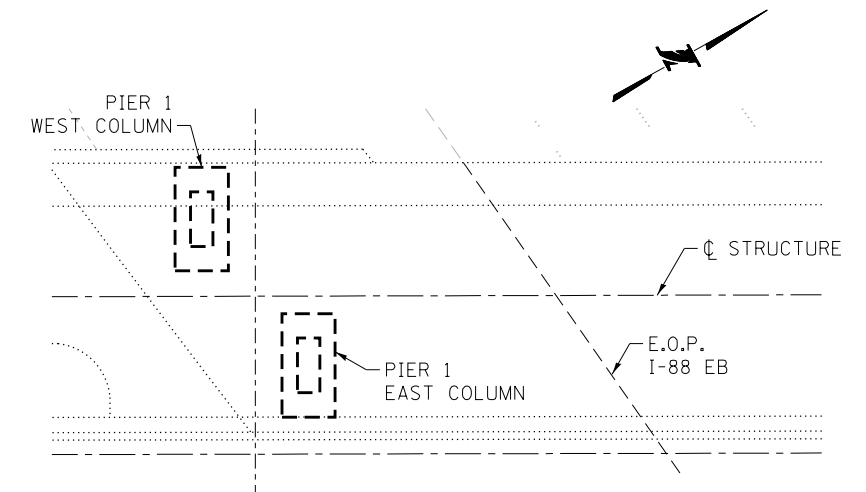
NOTES

- REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.
 - CRACK WIDTH $\frac{1}{16}$ " AND LARGER SHALL BE SEALED WITH LOW PRESSURE EPOXY INJECTION.
 - BRIDGE SEATS SHALL BE CLEANED ACCORDING TO THE CONTRACT SPECIAL PROVISIONS.
 - CONCRETE SEALER SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF THE PIER.
- * COST INCLUDED IN APPLY CONCRETE SEALANT

LEGEND

- STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")
- STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5")
- H.L. HAIRLINE CRACK (FOR INFORMATION ONLY, NOT TO BE SEALED)
- L.P. LOW PRESSURE EPOXY INJECTION

NOTE: CRACK WIDTHS ARE $\frac{1}{8}$ " ($\pm \frac{1}{16}$ ") UNLESS OTHERWISE NOTED.



BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	2
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	20
JT524010	APPLY CONCRETE SEALANT	SQ FT	569
X0326331	CLEANING AND PAINTING BEARINGS	EACH	8

DRAWN BY SVJ DATE 3/11/2018
 CHECKED BY RRD DATE 3/11/2018

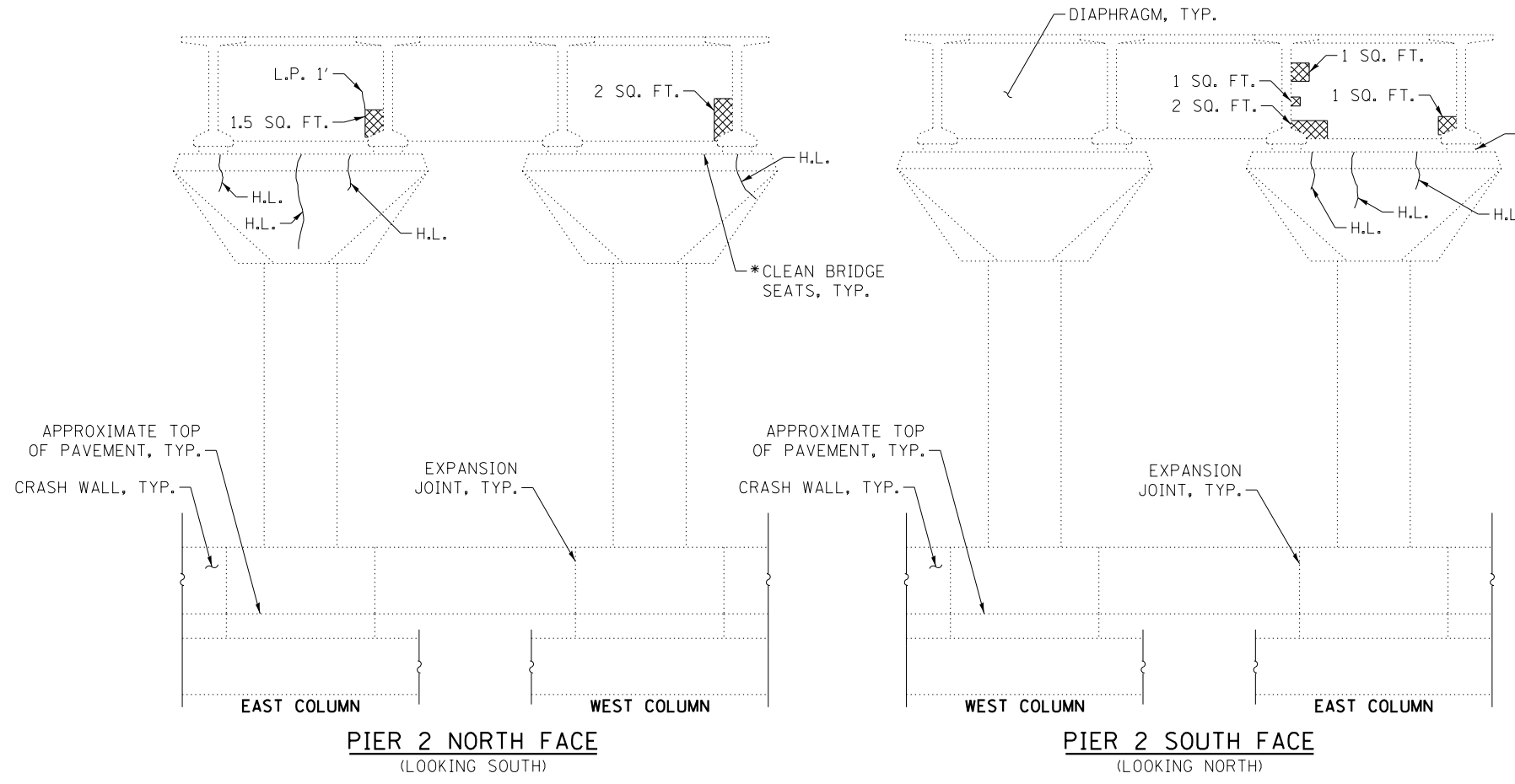


REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 PIER 1 REPAIR DETAILS

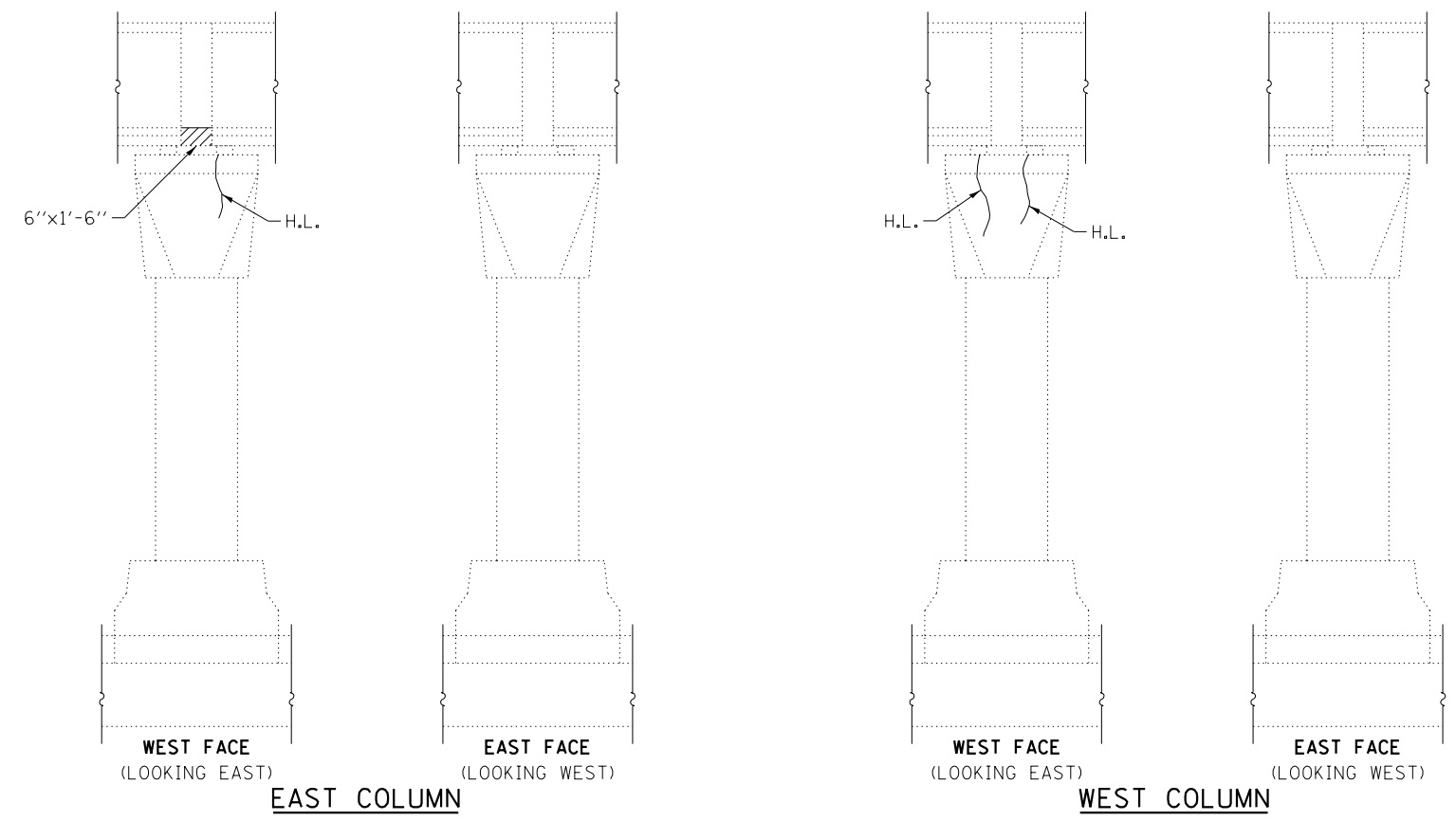
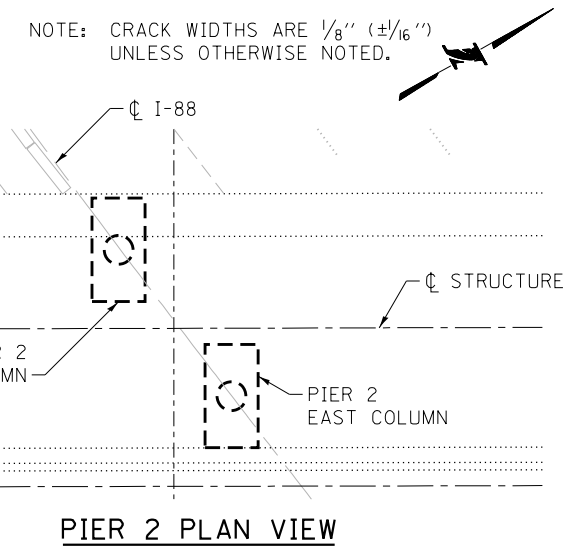
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 SHT NO. SJ-06
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- NOTES**
- REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.
 - CRACK WIDTH $\frac{1}{16}$ " AND LARGER SHALL BE SEALED WITH LOW PRESSURE EPOXY INJECTION.
 - BRIDGE SEATS SHALL BE CLEANED ACCORDING TO THE CONTRACT SPECIAL PROVISIONS.
 - CONCRETE SEALER SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF THE PIER.
 - SEE SHEET SK-26 THRU SK-28 FOR CRASH WALL MODIFICATION DETAILS.
- * COST INCLUDED IN APPLY CONCRETE SEALANT

- LEGEND**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")
 - STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5")
 - H.L. HAIRLINE CRACK (FOR INFORMATION ONLY, NOT TO BE SEALED)
 - L.P. LOW PRESSURE EPOXY INJECTION



BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	1
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	9
JT503041	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN.)	SQ FT	1
JT524010	APPLY CONCRETE SEALANT	SQ FT	681
X0326331	CLEANING AND PAINTING BEARINGS	EACH	8

DRAWN BY SVJ DATE 3/11/2018
 CHECKED BY RRD DATE 3/11/2018



REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 PIER 2 REPAIR DETAILS

SJ-07 OF SJ-14
 SHT NO. SJ-07
 DRAWING NO. 1227 OF 1517





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NOTES

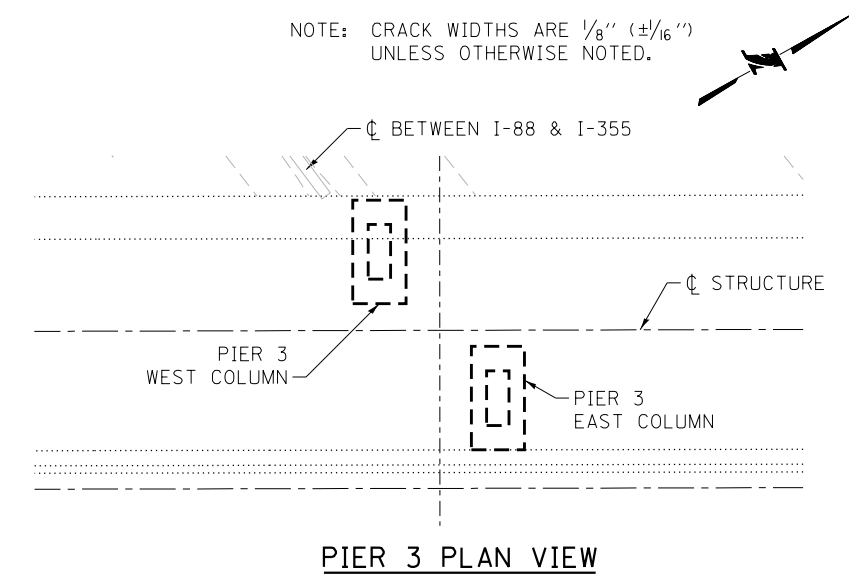
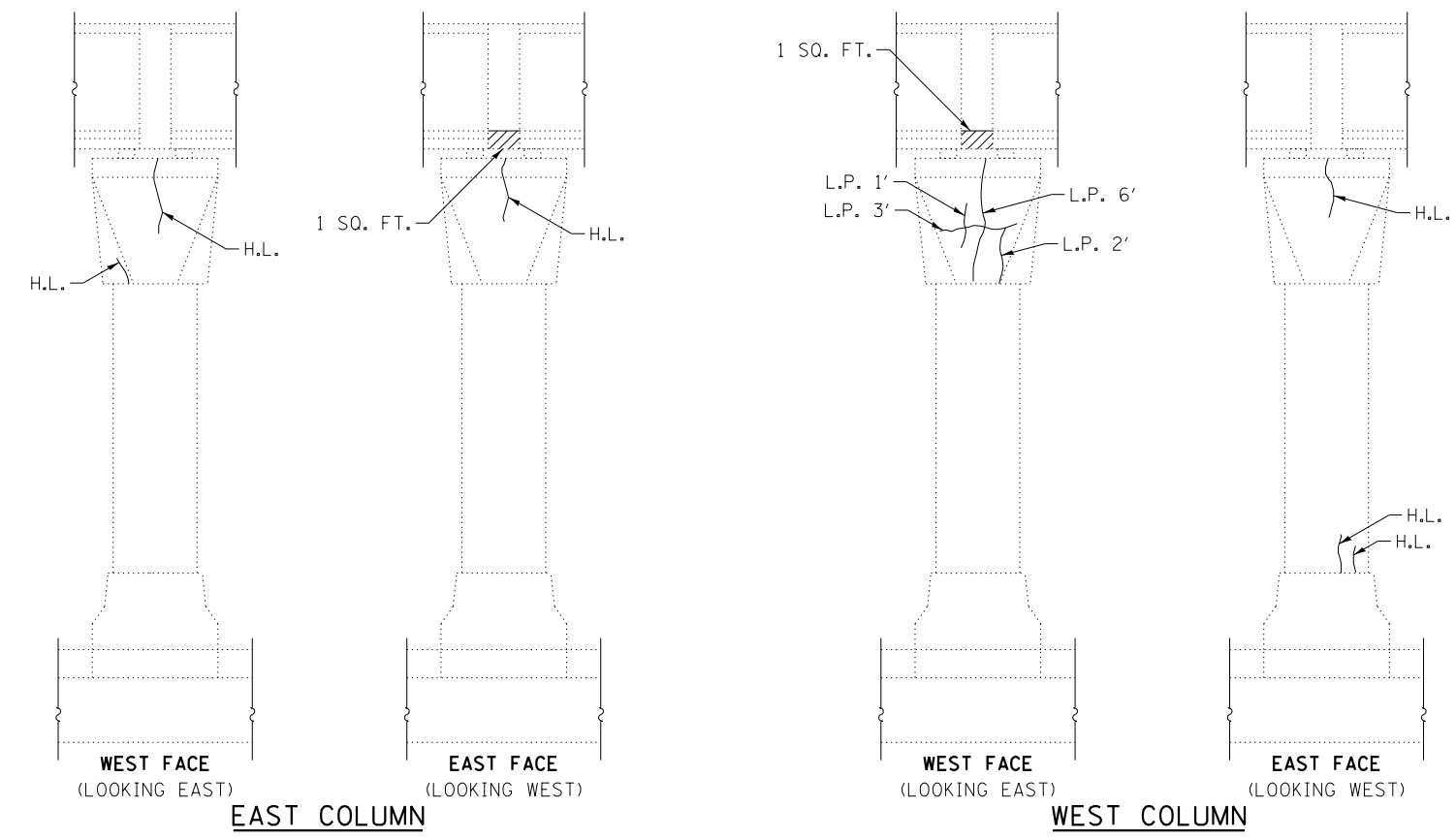
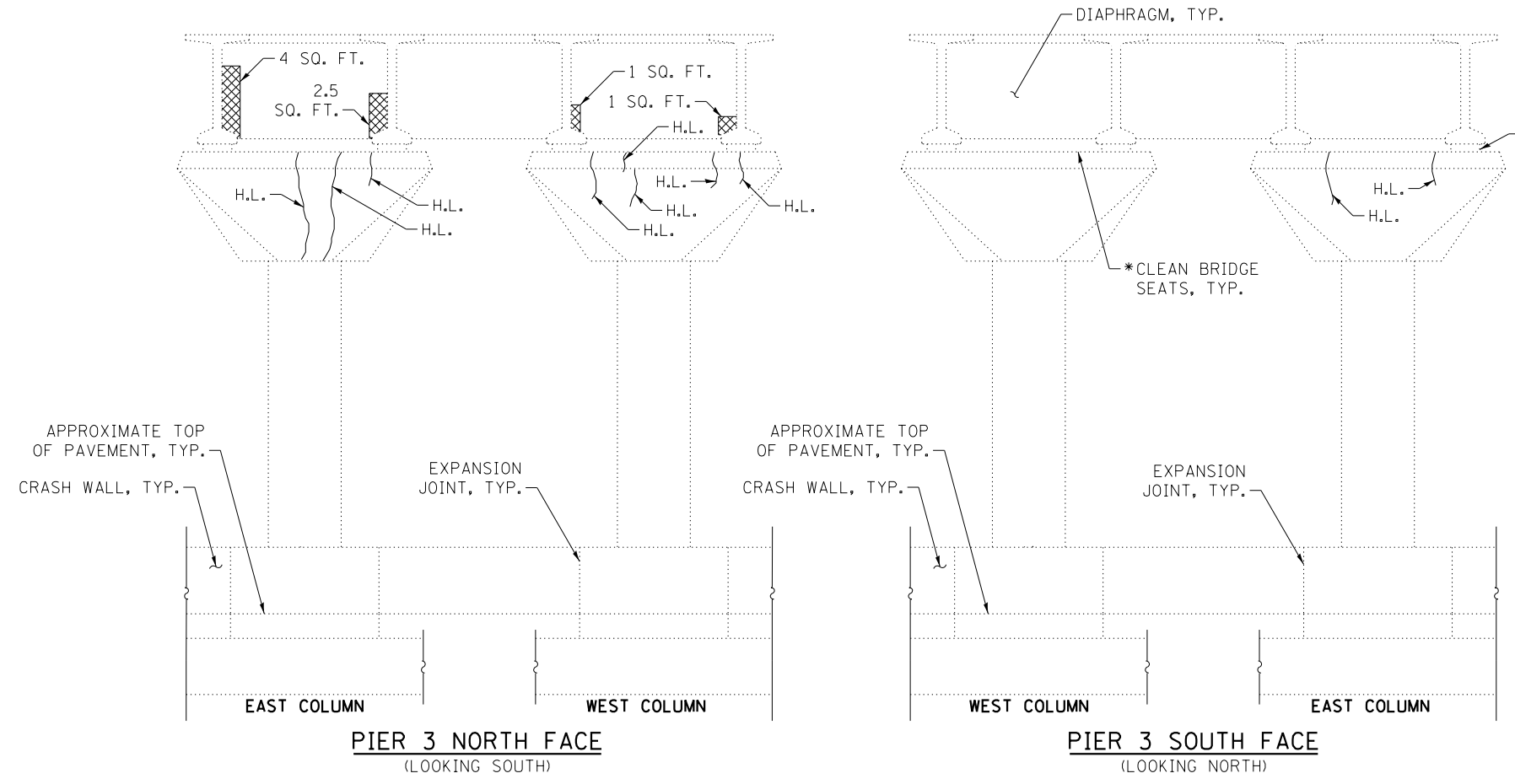
- REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.
- CRACK WIDTH $\frac{1}{16}$ " AND LARGER SHALL BE SEALED WITH LOW PRESSURE EPOXY INJECTION.
- BRIDGE SEATS SHALL BE CLEANED ACCORDING TO THE CONTRACT SPECIAL PROVISIONS.
- CONCRETE SEALER SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF THE PIER.
- SEE SHEET SK-26 THRU SK-28 FOR CRASH WALL MODIFICATION DETAILS.

* COST INCLUDED IN APPLY CONCRETE SEALANT

LEGEND

-  STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")
-  STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5")
- H.L.  HAIRLINE CRACK (FOR INFORMATION ONLY, NOT TO BE SEALED)
- L.P.  LOW PRESSURE EPOXY INJECTION

NOTE: CRACK WIDTHS ARE $\frac{1}{8}$ " ($\pm\frac{1}{16}$ ") UNLESS OTHERWISE NOTED.



BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	12
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	9
JT503041	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN.)	SQ FT	2
JT524010	APPLY CONCRETE SEALANT	SQ FT	724

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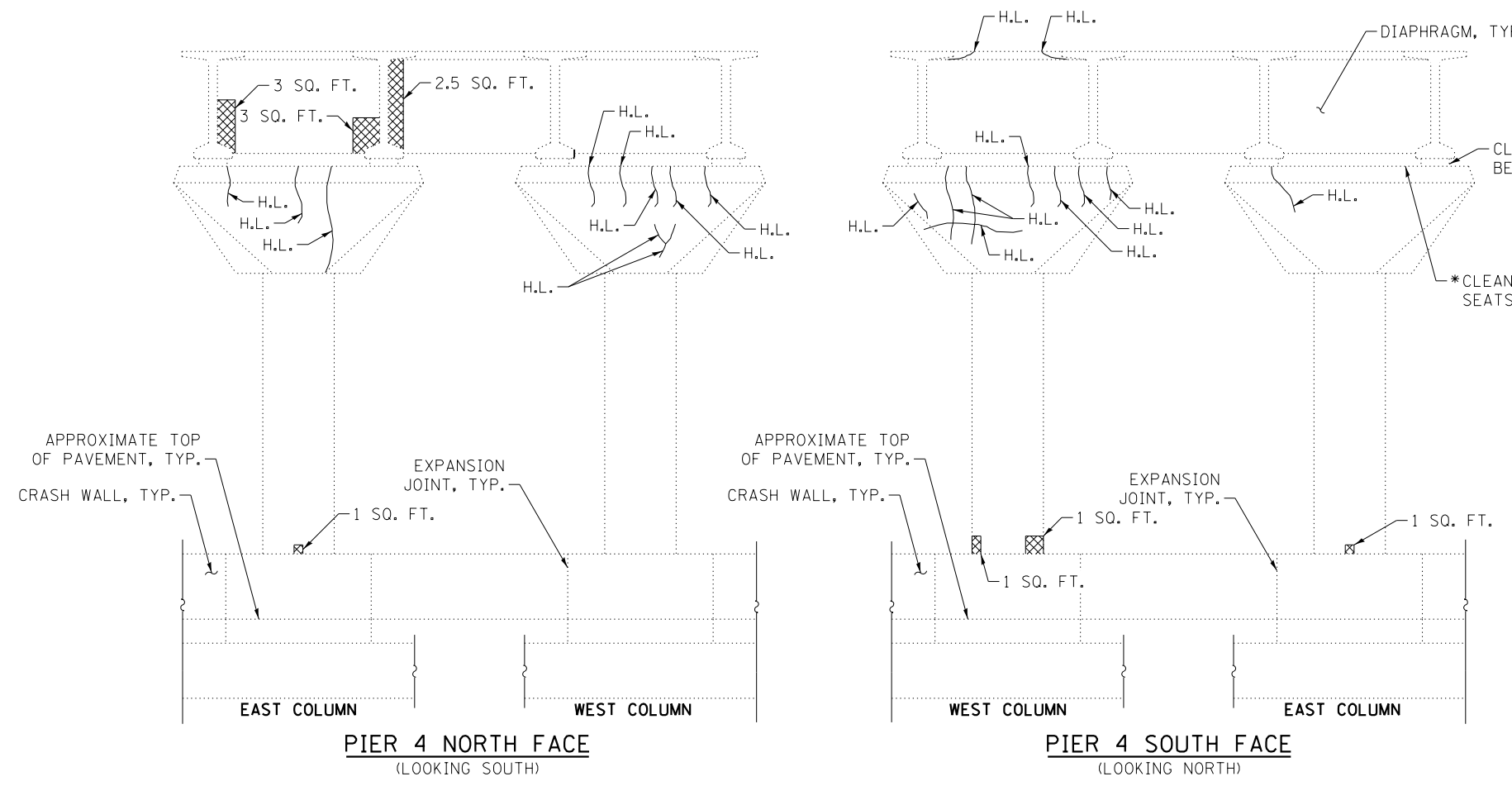


REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 PIER 3 REPAIR DETAILS

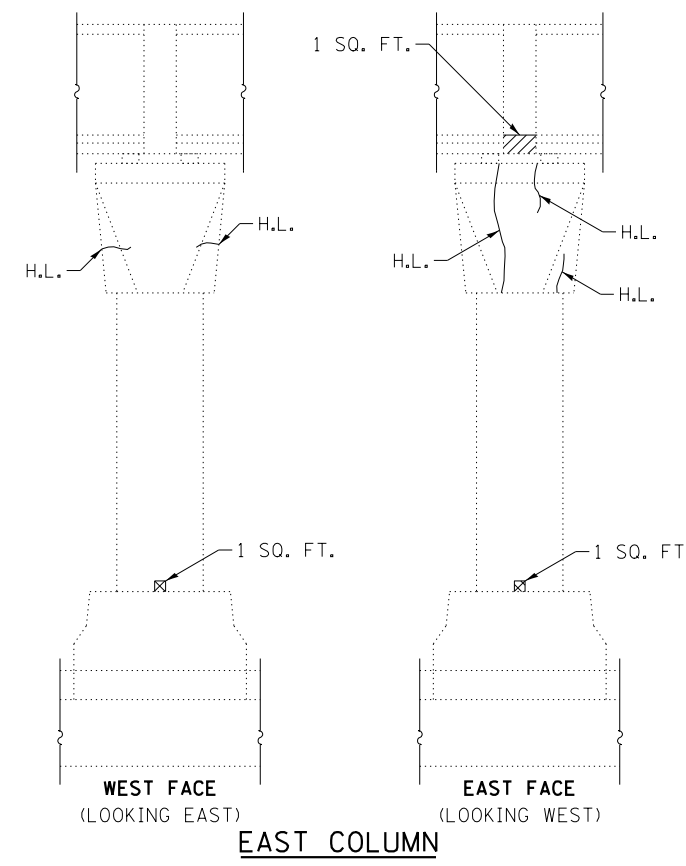
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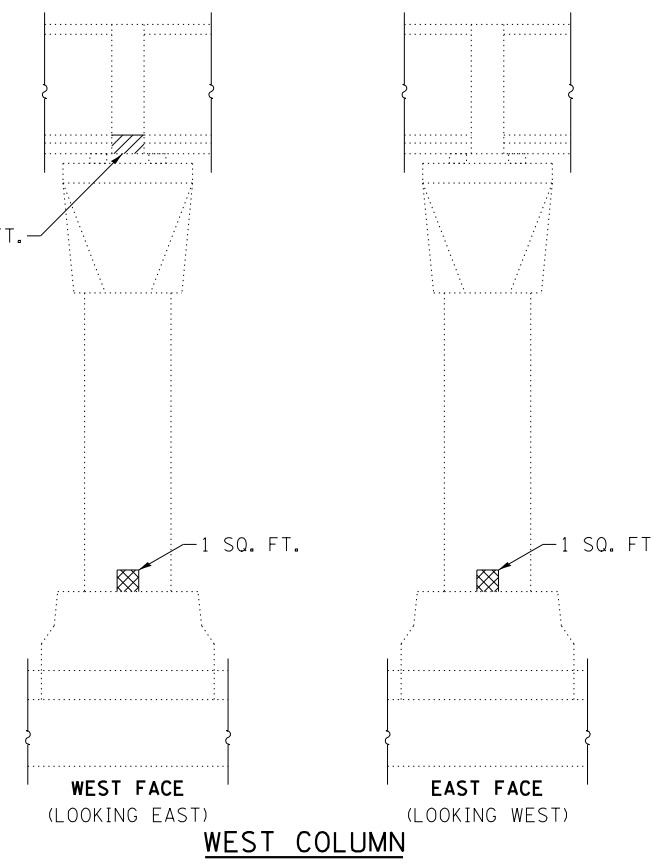


PIER 4 NORTH FACE
(LOOKING SOUTH)

PIER 4 SOUTH FACE
(LOOKING NORTH)



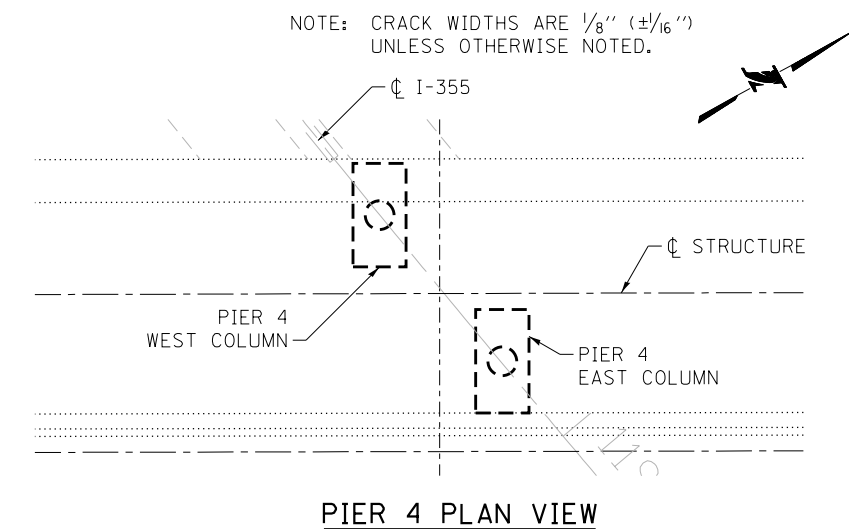
EAST COLUMN



WEST COLUMN

- NOTES**
- REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.
 - CRACK WIDTH $\frac{1}{16}$ " AND LARGER SHALL BE SEALED WITH LOW PRESSURE EPOXY INJECTION.
 - BRIDGE SEATS SHALL BE CLEANED ACCORDING TO THE CONTRACT SPECIAL PROVISIONS.
 - CONCRETE SEALER SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF THE PIER.
- * COST INCLUDED IN APPLY CONCRETE SEALANT

- LEGEND**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")
 - STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5")
 - H.L. HAIRLINE CRACK (FOR INFORMATION ONLY, NOT TO BE SEALED)
 - L.P. LOW PRESSURE EPOXY INJECTION



BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	18
JT503041	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN.)	SQ FT	2
JT524010	APPLY CONCRETE SEALANT	SQ FT	740
X0326331	CLEANING AND PAINTING BEARINGS	EACH	8

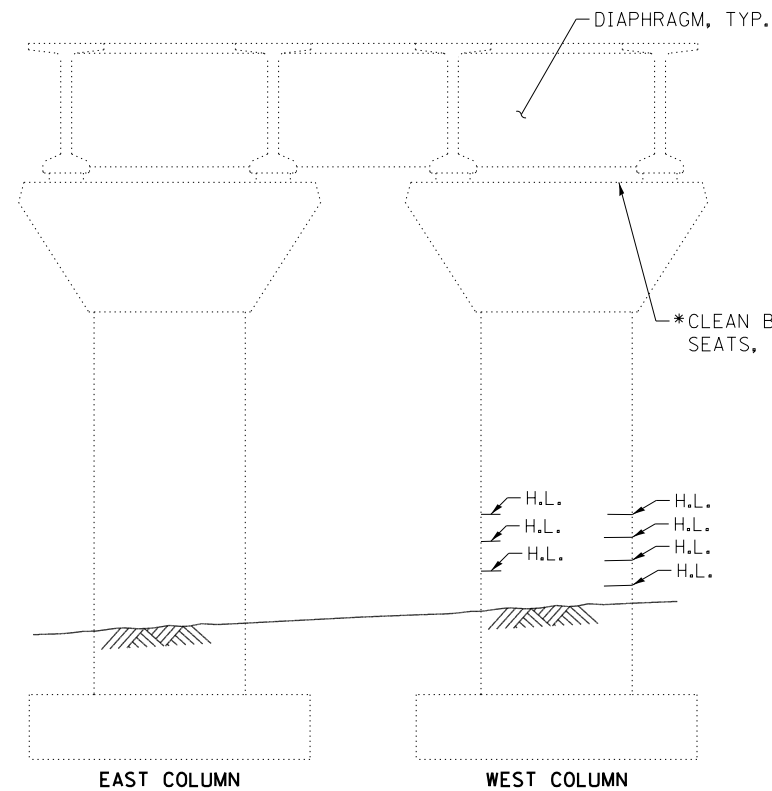
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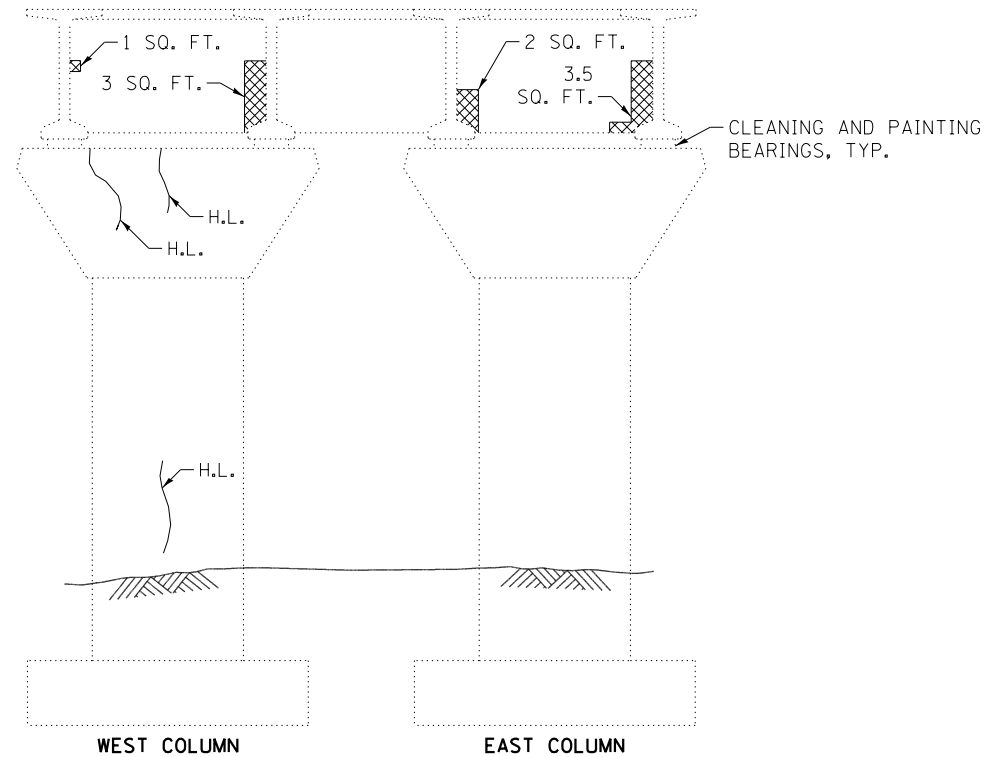
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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 PIER 4 REPAIR DETAILS

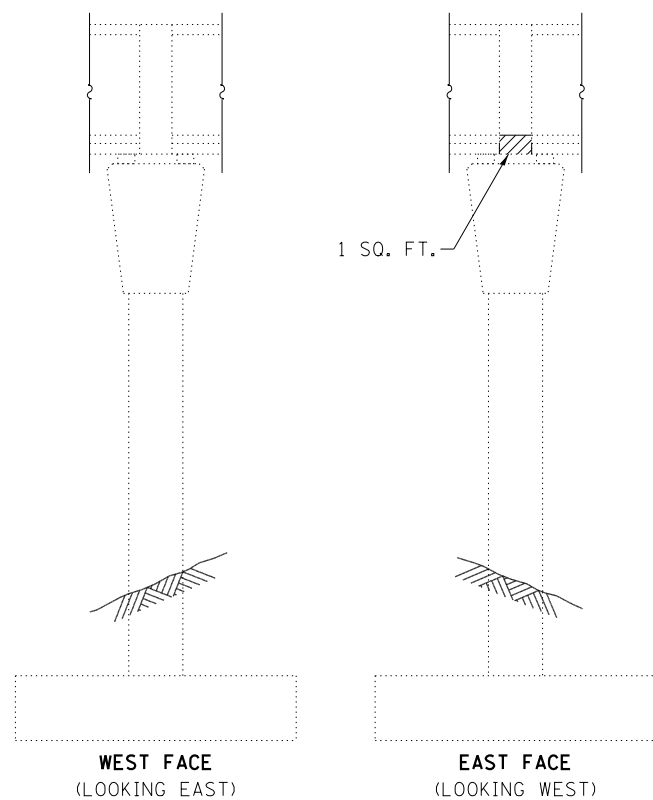
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 SHT NO. SJ-09
 DRAWING NO. 1229 OF 1517



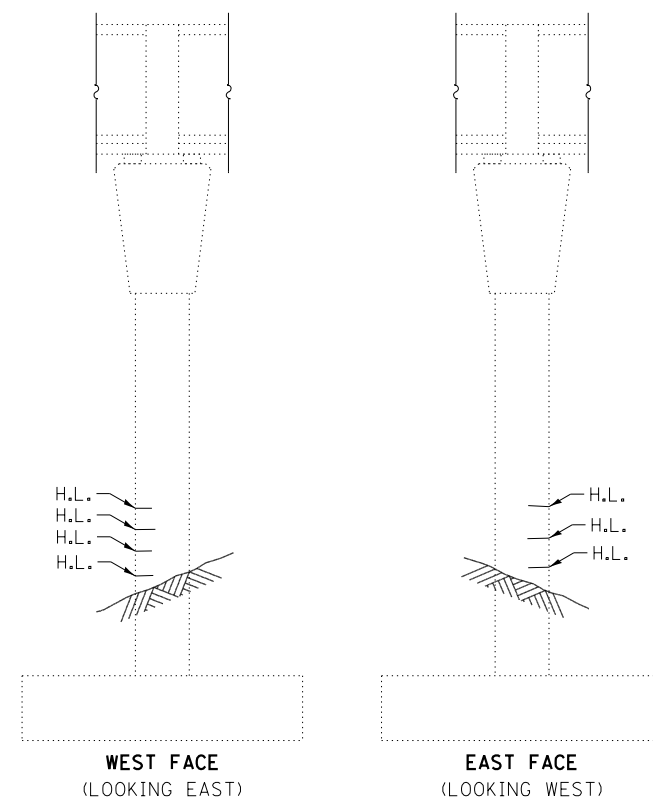
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(LOOKING SOUTH)



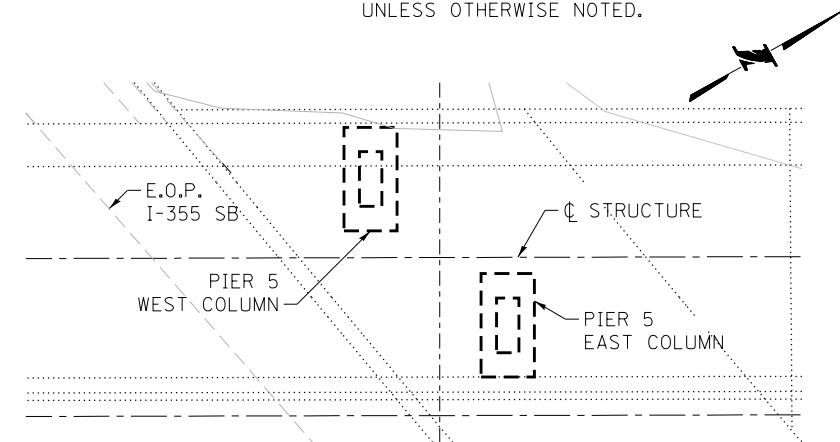
PIER 5 SOUTH FACE
(LOOKING NORTH)



EAST COLUMN



WEST COLUMN



PIER 5 PLAN VIEW

- NOTES**
- REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.
 - CRACK WIDTH $\frac{1}{16}$ " AND LARGER SHALL BE SEALED WITH LOW PRESSURE EPOXY INJECTION.
 - BRIDGE SEATS SHALL BE CLEANED ACCORDING TO THE CONTRACT SPECIAL PROVISIONS.
 - CONCRETE SEALER SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACE OF THE PIER.
- * COST INCLUDED IN APPLY CONCRETE SEALANT

- LEGEND**
- STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")
 - STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5")
 - H.L. HAIRLINE CRACK (FOR INFORMATION ONLY, NOT TO BE SEALED)
 - L.P. LOW PRESSURE EPOXY INJECTION

NOTE: CRACK WIDTHS ARE $\frac{1}{8}$ " ($\pm\frac{1}{16}$ ") UNLESS OTHERWISE NOTED.

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	10
JT503041	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 IN.)	SQ FT	1
JT524010	APPLY CONCRETE SEALANT	SQ FT	963
X0326331	CLEANING AND PAINTING BEARINGS	EACH	8

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CHECKED BY RRD DATE 3/11/2018

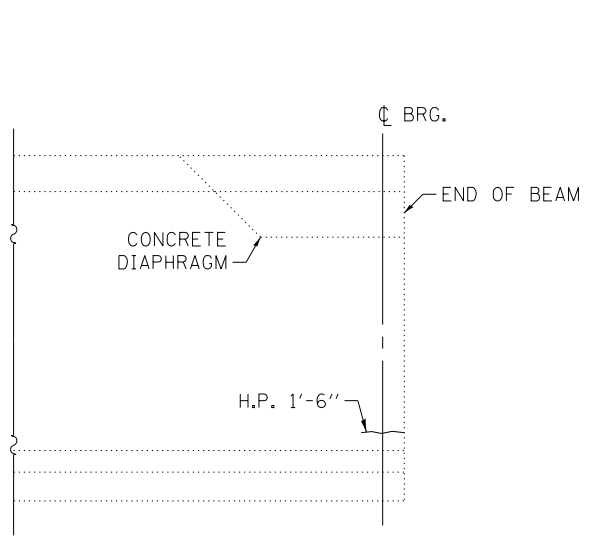
SE3
3041 WOODCREEK DRIVE, SUITE 211 - DOWNERS GROVE, IL 60515
(630) 641-9900

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

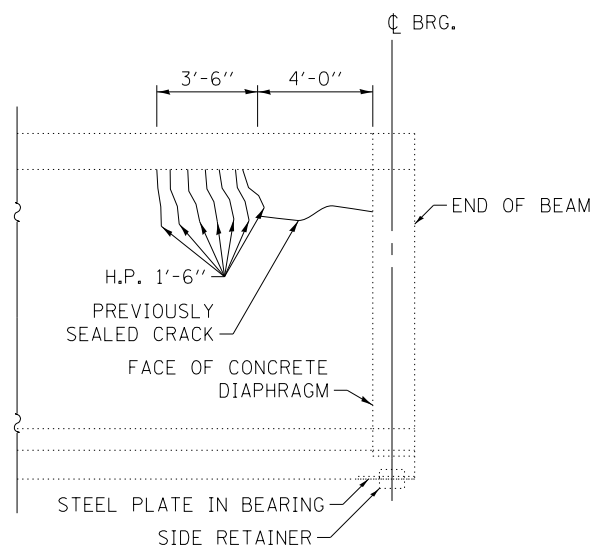
REVISIONS	
NO.	DATE DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1436 (SB)
PIER 5 REPAIR DETAILS

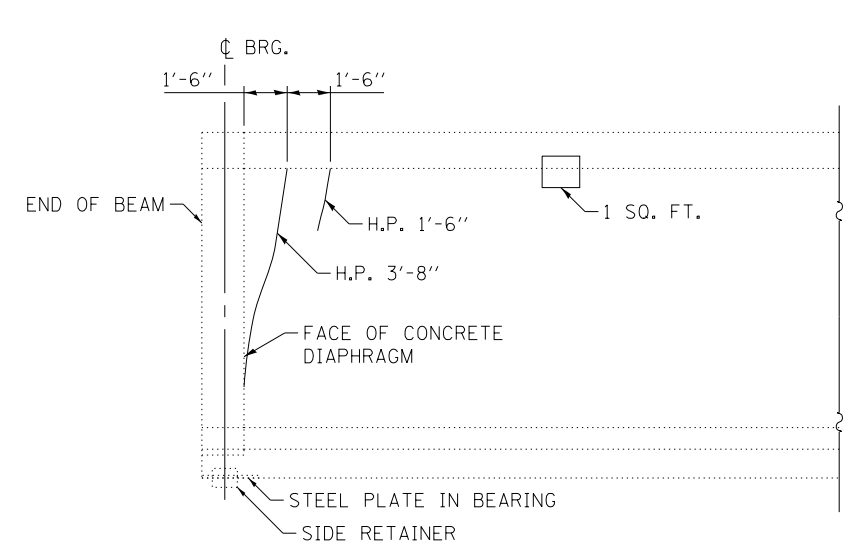
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SHT NO. SJ-10
DRAWING NO. 1230 OF 1517



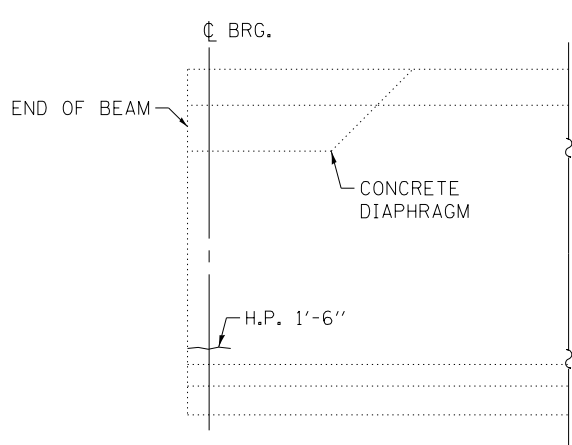
SPAN 1 - BEAM 4 - WEST FACE



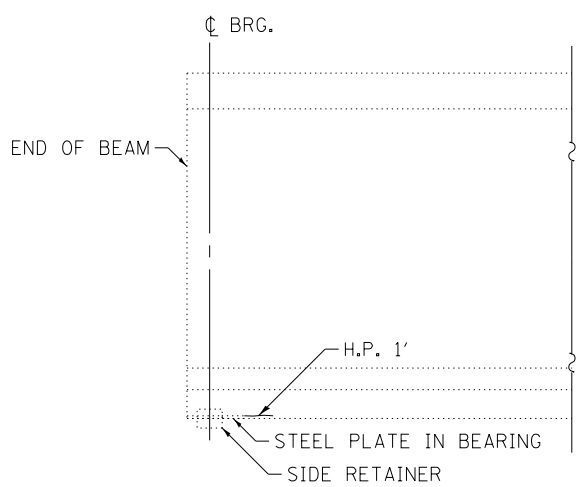
SPAN 2 - BEAM 3 - EAST FACE



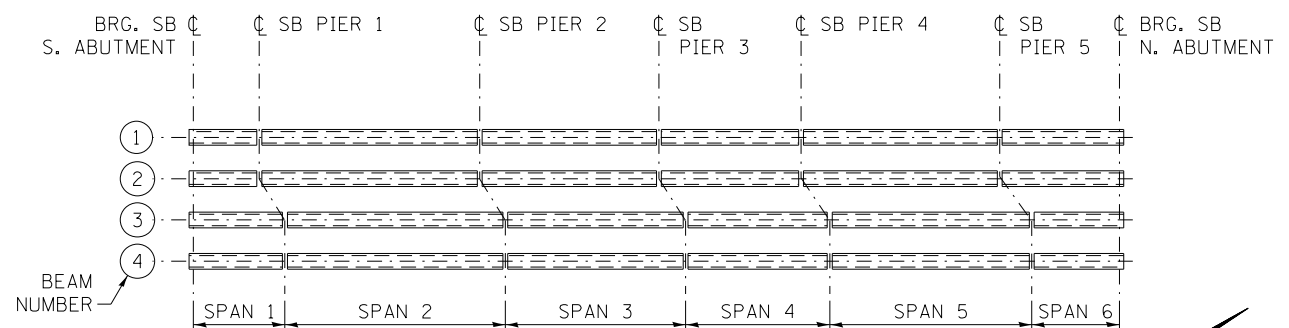
SPAN 4 - BEAM 1 - EAST FACE



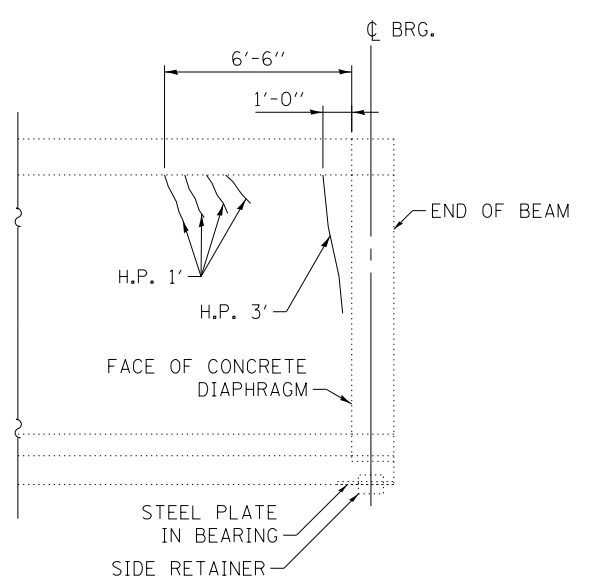
SPAN 1 - BEAM 4 - EAST FACE



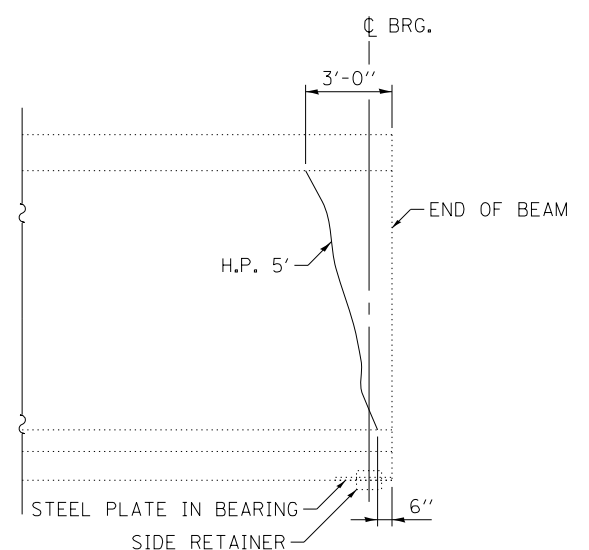
SPAN 4 - BEAM 1 - WEST FACE



FRAMING PLAN



SPAN 2 - BEAM 1 - EAST FACE



SPAN 4 - BEAM 1 - WEST FACE

LEGEND

- H.P. — HIGH PRESSURE EPOXY INJECTION
- SHALLOW CONCRETE REPAIR

NOTES

1. REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.
2. SEE SHEET SJ-11 FOR BILL OF MATERIAL.

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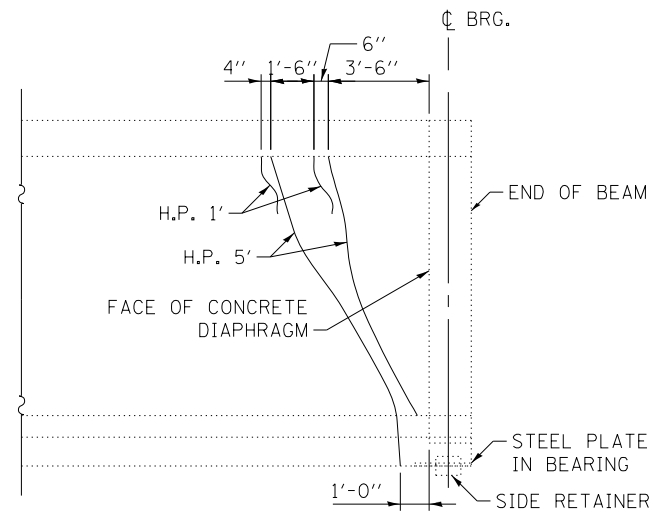
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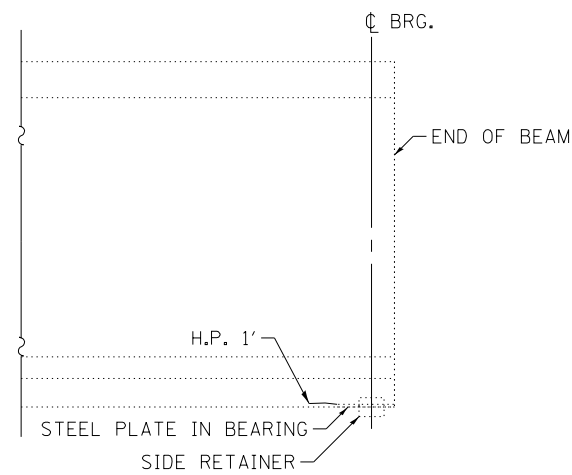
REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 BEAM REPAIR DETAILS (1 OF 2)

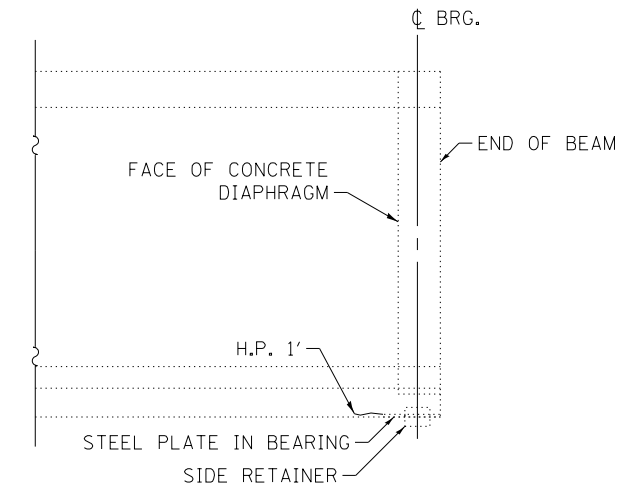
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 SHT NO. SJ-11
 DRAWING NO. 1231 OF 1517



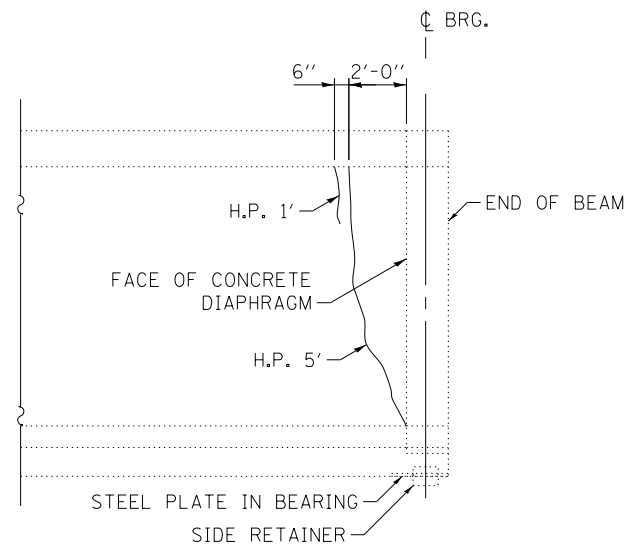
SPAN 4 - BEAM 2 - WEST FACE



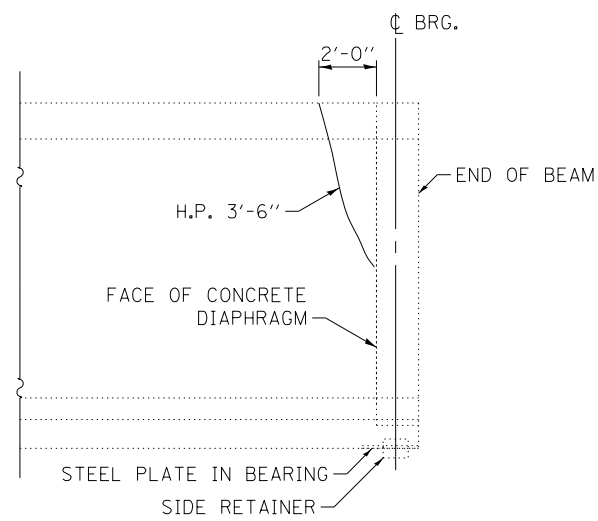
SPAN 5 - BEAM 1 - WEST FACE



SPAN 5 - BEAM 4 - EAST FACE



SPAN 4 - BEAM 4 - WEST FACE



SPAN 5 - BEAM 1 - EAST FACE

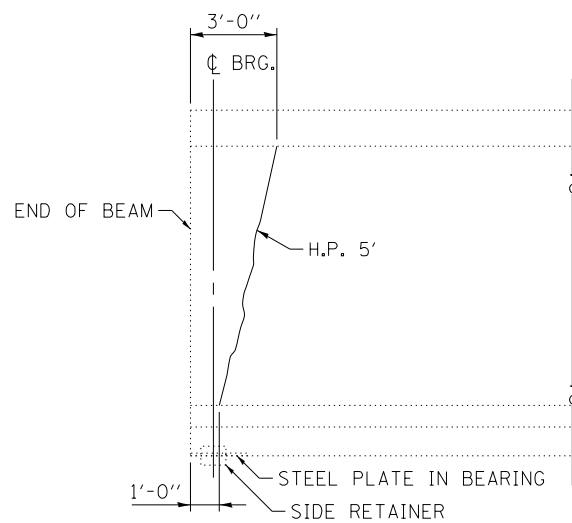
- LEGEND**
- H.P. — HIGH PRESSURE EPOXY INJECTION
 - SHALLOW CONCRETE REPAIR

NOTE

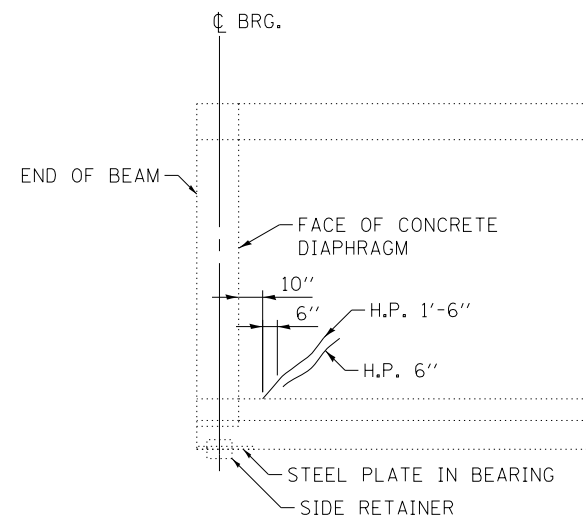
1. REPAIRS SHOWN ARE BASED UPON OBSERVATIONS PERFORMED IN 2016 AND ARE FOR BIDDING PURPOSES ONLY.

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
JS121300	HIGH PRESSURE EPOXY INJECTION	FOOT	63
JT503050	SHALLOW CONCRETE REPAIR	SQ FT	1



SPAN 4 - BEAM 4 - EAST FACE



SPAN 5 - BEAM 2 - WEST FACE

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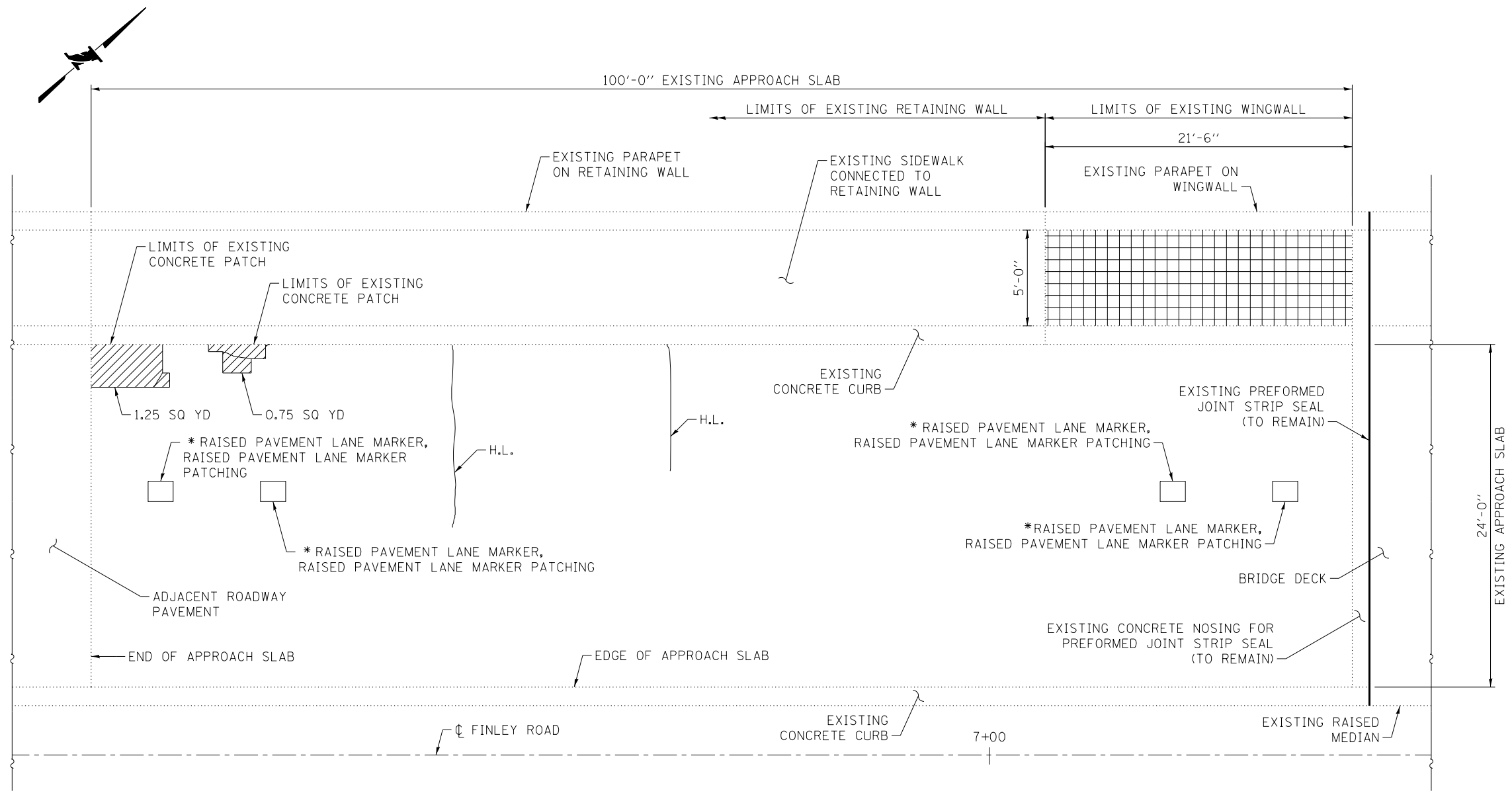
DRAWN BY SVJ DATE 3/11/2018
 CHECKED BY RRD DATE 3/11/2018



REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE NO. 1436 (SB)
 BEAM REPAIR DETAILS (2 OF 2)

SJ-12 OF SJ-14
 SHT NO. SJ-12
 DRAWING NO.
 1232 OF 1517



SOUTH APPROACH SLAB PLAN

* SOUTH APPROACH SHOWN
NORTH APPROACH SIMILAR
MATCH EXISTING LOCATION

BILL OF MATERIAL

PAY ITEM NO.	ITEM	UNIT	QUANTITY
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	110
44000600	SIDEWALK REMOVAL	SQ FT	110
J1781000	RAISED PAVEMENT LANE MARKER	EACH	8
JT484010	RAISED PAVEMENT LANE MARKER PATCHING	EACH	8
JT503033	ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	2

LEGEND

- PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH SIDEWALK REMOVAL
- ACCELERATED APPROACH SLAB REPAIR (FULL DEPTH, TYPE II)

H.L. H.L. CRACK (FOR INFORMATION ONLY, NOT TO BE SEALED)

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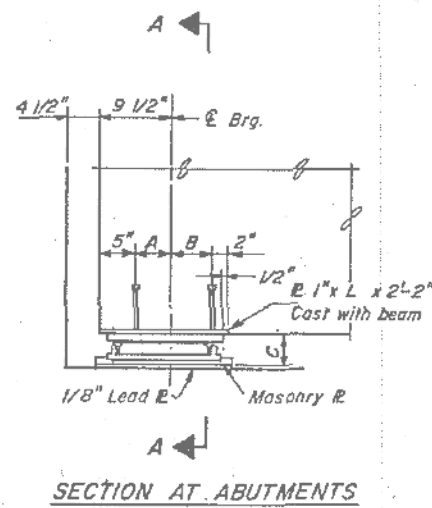
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CHECKED BY RRD DATE 3/11/2018



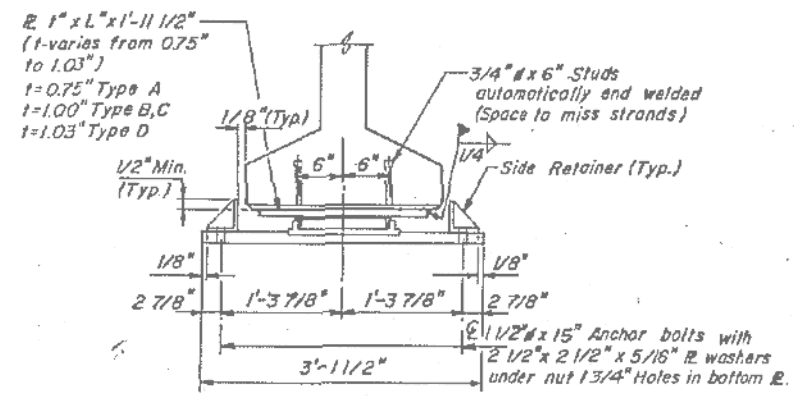
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BRIDGE NO. 1436 (SB)
APPROACH SLAB REPAIR DETAILS

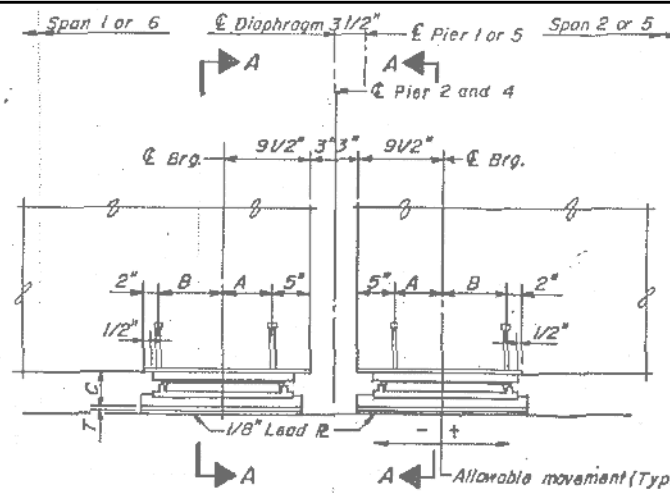
SJ-13 OF SJ-14
SHT NO. SJ-13
DRAWING NO. 1233 OF 1517



SECTION AT ABUTMENTS

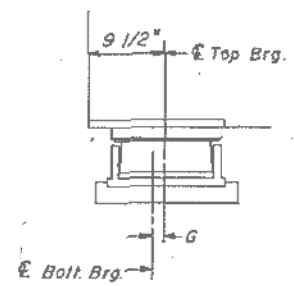


SECTION A-A



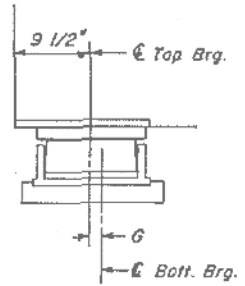
SECTION AT EXPANSION PIERS

SHIM PLATE THICKNESS, T				
GIRDER	1	2	3	4
S.A.	0	0	0	0
1S	3/8	2 3/4	3/8	2 3/4
1N	0	2 3/8	0	2 3/8
2S	0	2 3/8	0	2 3/8
2N	1/4	2 5/8	1/4	2 5/8
4S	1 5/8	5	1/8	3 3/8
4N	1 1/2	4 7/8	0	3
5S	3/4	2	1/4	0
5N	1 5/8	1 7/8	2 1/8	7/8
N.A.	0	0	0	0



BELOW 50° F

(Move bott. brg. away from fixed brg.)

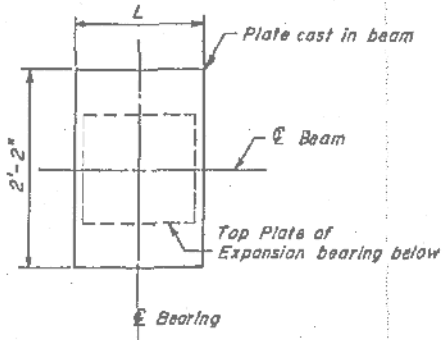


ABOVE 50° F

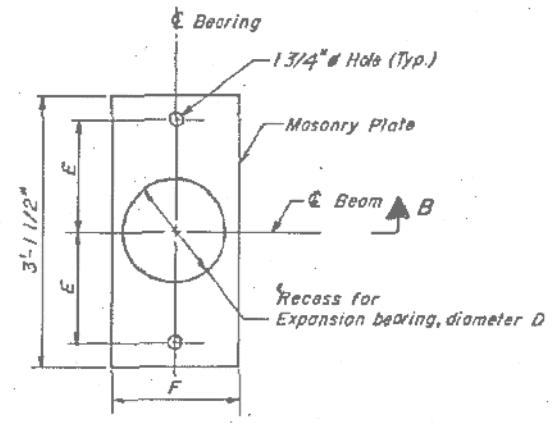
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

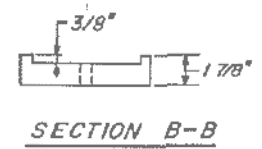
G = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



TOP PLAN



BOTTOM PLAN



SECTION B-B

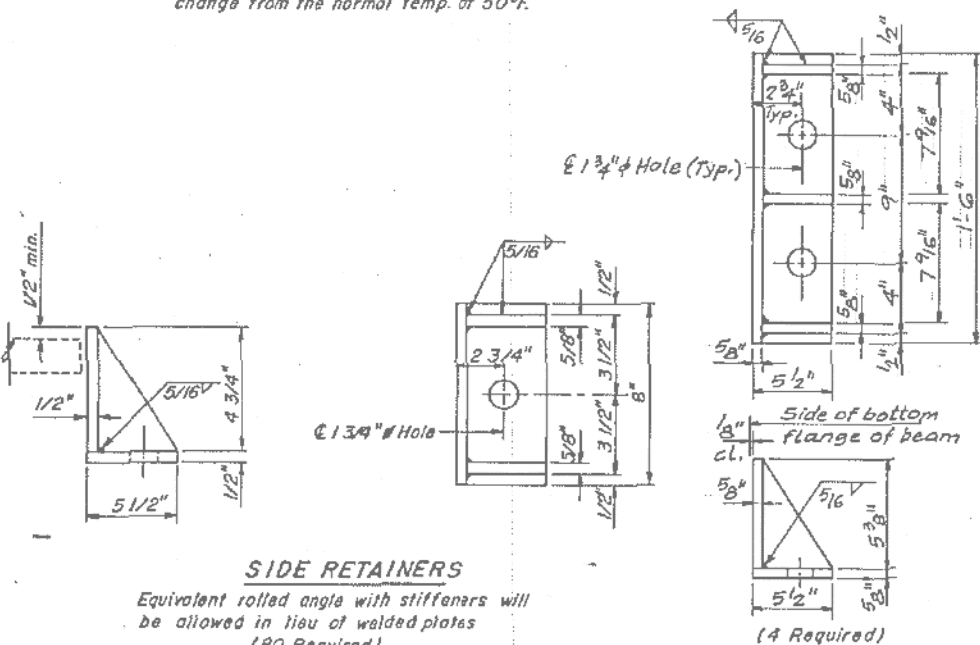
BEARING INFORMATION

DIMEN.	S.A.	PIER										N.A.	
		1S	1N	2S	2N	3S	3N	4S	4N	5S	5N		
A	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	—	—	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2
B	4 1/2	4 1/2	6	6	5 1/2	—	—	5	5 1/2	5 1/2	4 1/2	4 1/2	4 1/2
C	4 9/16	4 9/16	5 1/4	5 1/4	5	—	—	4 15/16	5	5	4 9/16	4 9/16	4 9/16
D	10 5/8	10 5/8	14	14	13 1/8	—	—	12	13 1/8	13 1/8	10 5/8	10 5/8	10 5/8
E	1-3 7/8	1-3 7/8	1-3 7/8	1-3 7/8	1-3 7/8	—	—	1-3 7/8	1-3 7/8	1-3 7/8	1-3 7/8	1-3 7/8	1-3 7/8
F	1-2	1-2	1-5	1-5	1-5	—	—	1-3	1-5	1-5	1-2	1-2	1-2
L	1-4	1-4	1-5 1/2	1-5 1/2	1-5	—	—	1-4 1/2	1-5	1-5	1-4	1-4	1-4
T	0	SEE SHIM THICKNESS TABLE										0	
* VERT. LOAD(K)	150	150	300	300	250	—	—	200	250	250	150	150	150
* HORIZ. LOAD(K)	15	15	30	30	25	—	—	20	25	25	15	15	15
* ROTATION	0.015	0.015	0.015	—	—	—	—	0.015	0.015	0.015	0.015	0.015	0.015
* MOVEMENT	12	12	12	—	—	—	—	12	12	12	±2	±2	±2
TYPE	A	A	D	D	C	—	—	B	C	C	A	A	A

* Required Bearing Capacity

BILL OF MATERIAL			
No.	Item	Unit	Quantity
540A	Pot Bearing, Type A	Each	16
540B	Pot Bearing, Type B	Each	4
540C	Pot Bearing, Type C	Each	12
540D	Pot Bearing, Type D	Each	8

NOTES: All dimensions are in feet and inches
Pot bearings shall be as manufactured by Tobi Engineering, Inc. or approved equivalent.



SIDE RETAINERS

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates (80 Required)

FOR INFORMATION ONLY

DRAWING S25 OF S48

DU PAGE COUNTY HIGHWAY DEPARTMENT
BEARING DETAILS
CH 2 (FINLEY ROAD)
OVER
I-88/I-355
SECTION 89-00170-00-BR
STA. 11+05.97

REVISIONS	
NAME	DATE

SJ-14 OF SJ-14

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DRAWN BY SVJ DATE 3/11/2018
CHECKED BY RRD DATE 3/11/2018

SE3
3041 WOODCREEK DRIVE, SUITE 211 - DOWNERS GROVE, IL 60515
(630) 641-9900

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE NO. 1436 (SB)
EXISTING BEARING DETAIL

SHT NO. SJ-14
DRAWING NO. 1234 OF 1517

BENCHMARK

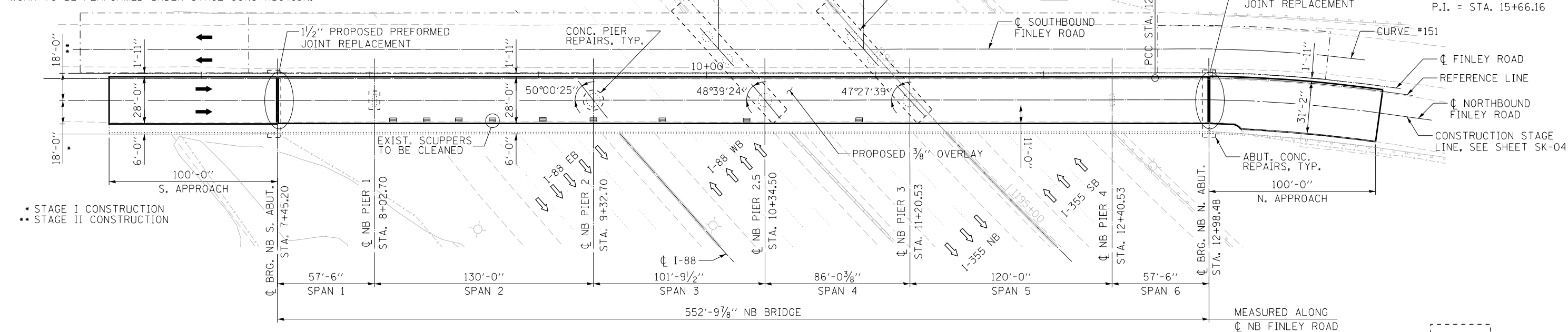
CUT "□" WITH CUT "X" IN TOP OF SINGLE FACE CONCRETE BARRIER WALL WITH 6' CHAIN LINK ATTACHED, LOCATED WEST OF FINLEY ROAD BRIDGE OVER I-355, EAST OF I-88 OVER I-355 TUNNEL, STA. 1186+33, 64' LT, ELEV. 748.54.

EXISTING STRUCTURE

BRIDGE NUMBER 1435 (NB), IDOT S.N. 022-9968, WAS DESIGNED IN 1987 ON CONTRACT CIP-616. THE BRIDGE RUNS ACROSS I-88 AND I-355 IN BOTH DIRECTIONS.
 SUPERSTRUCTURE: 6 SPANS OF A PRECAST POST-TENSIONED CONCRETE SEGMENTAL BOX GIRDER.
 SUBSTRUCTURE:
 SOUTH ABUTMENT: CONCRETE WALL ABUTMENT ON SPREAD FOOTING
 NORTH ABUTMENT: CONCRETE WALL ABUTMENT ON SPREAD FOOTING
 PIERS 1, 3, 4: SINGLE CONCRETE HAMMERHEAD COLUMN ON SPREAD FOOTING
 PIERS 2, 2.5: SINGLE CONCRETE HAMMERHEAD COLUMN ON DRILLED SHAFTS
 WORK TO BE PERFORMED UNDER STAGE CONSTRUCTION.

CURVE DATA

CURVE #151
 Δ = 29°-20'-58.5"
 D = 5°-00'-00"
 T = 300.09'
 L = 586.99'
 E = 38.64'
 R = 1145.92'
 SE = 0.056 FT/ft
 P.C. = STA. 12+66.07
 P.T. = STA. 18+53.06
 P.I. = STA. 15+66.16



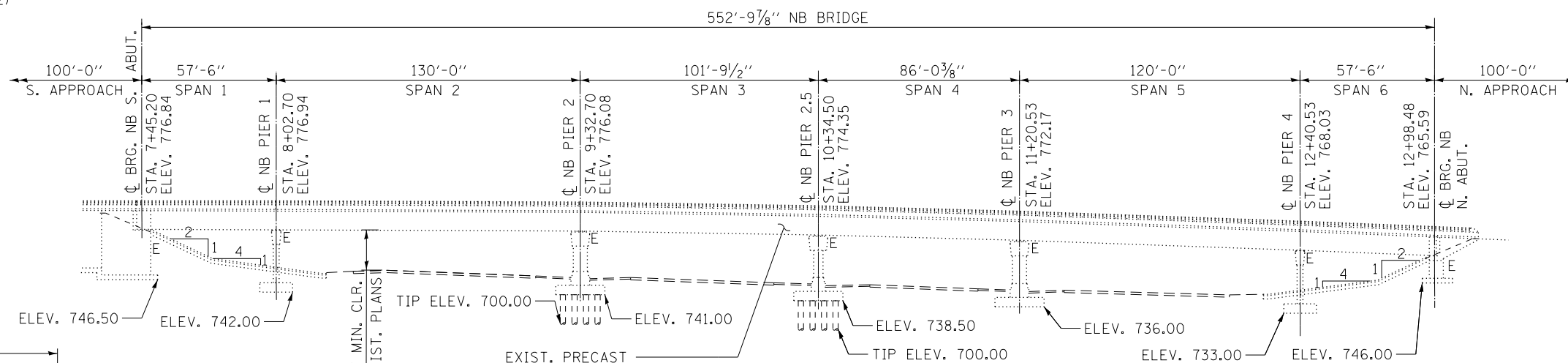
PLAN

HIGHWAY CLASSIFICATION

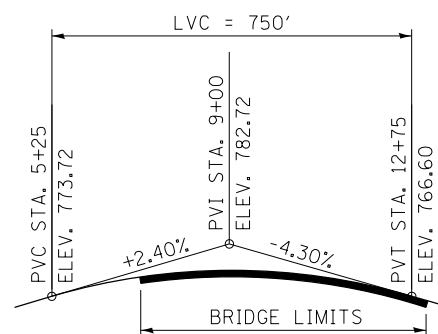
NB FINLEY ROAD
 FUNCTIONAL CLASS: MINOR ARTERIAL
 ADT: 10,400 (2016); 4,289 (2032)
 ADTT: 312 (2016); 129 (2032)
 DHV: 1,040
 DESIGN SPEED: 50 MPH
 POSTED SPEED: 45 MPH

ROUTE UNDER: I-355
 ADT: 46,610 (NB, 2016)
 ADT: 59,720 (SB, 2016)

ROUTE UNDER: I-88
 ADT: 71,340 (WB, 2016)
 ADT: 89,240 (EB, 2016)



ELEVATION
 (LOOKING WEST)



VERTICAL ALIGNMENT
 (FINLEY ROAD)

DESIGN STRESSES

EXISTING UNITS
 f'c = 4,000 PSI (FOOTINGS)
 f'c = 4,500 PSI (SUBSTRUCTURE)
 f'c = 5,500 PSI (SUPERSTRUCTURE)

FIELD UNITS
 f'c = 3,500 PSI (CLASS SI - SUBSTRUCTURES REPAIRS)
 f'c = 4,000 PSI (CLASS BS - PARAPETS AND BARRIERS)
 f'c = 4,000 PSI (CLASS AX - SUPERSTRUCTURE)
 fy = 60,000 PSI (REINFORCEMENT)

DESIGN LOADS

EXISTING STRUCTURE
 LIVE LOAD:
 HS20-44 AND ALTERNATE
 MILITARY LOADING

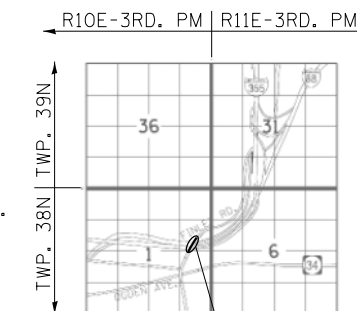
DEAD LOAD:
 25 PSF FOR FUTURE
 WEARING SURFACE

PROPOSED SCOPE OF WORK

1. REPAIR SPALLED AND UNSOUND CONCRETE IN THE SUBSTRUCTURE.
2. REPAIR SPALLED AND UNSOUND CONCRETE IN THE SUPERSTRUCTURE.
3. REMOVE AND REPLACE POST-TENSIONING ANCHOR BLOCKS.
4. REMOVE AND REPLACE EXPANSION JOINTS AT ABUTMENTS.
5. REMOVE EXISTING DECK AND APPROACH OVERLAY.
6. APPLY 3/8" THIN CONCRETE DECK AND APPROACH OVERLAY.
7. APPLY CONCRETE SEALANT ON PARAPET TRAFFIC FACE, TOP OF SIDEWALK, MEDIAN, AND SUBSTRUCTURE.
8. CLEAN EXISTING SCUPPERS.
9. REMOVE AND REPLACE PIGEON INTRUSION BARRIERS AT ABUTMENTS.
10. MODIFY THE CRASH WALL AT PIERS 2.5 AND 3 OF BN 1435 AND BN 1436.

TYPICAL WORK AREA LIMITS

THE ABOVE LIMITS ARE APPROXIMATE. ACTUAL LIMITS SHALL BE COOPERATED WITH ISTHA MAINTENANCE SUPERVISOR



LOCATION SKETCH
 STRUCTURE NB-1435

SK-01 OF SK-28

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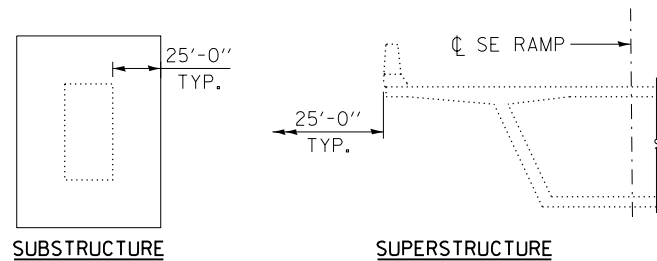
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 CHECKED BY **BWS** DATE **3/11/2018**



REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 GENERAL PLAN AND ELEVATION

SHT NO. SK-01
 DRAWING NO.
 1235 OF 1517



TYPICAL WORK AREA LIMITS

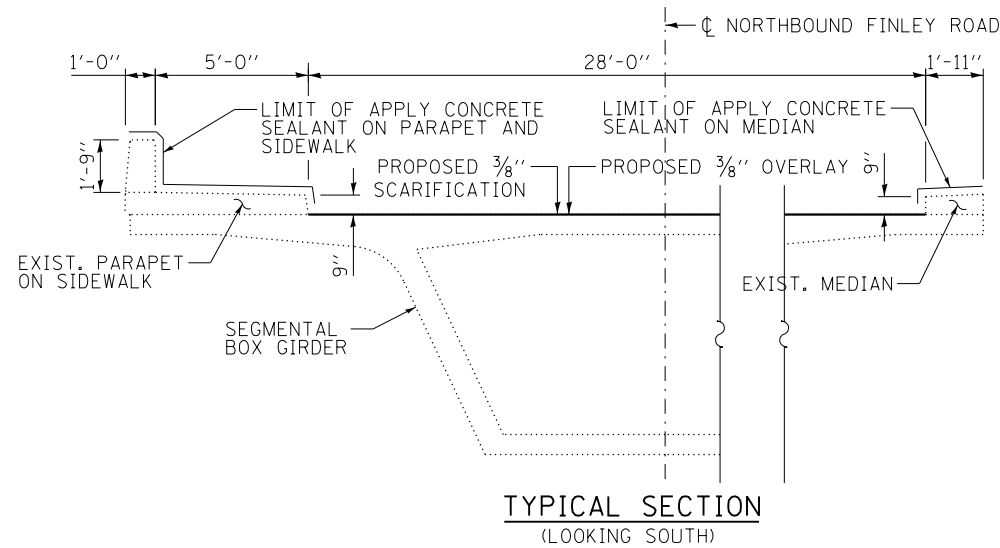
THE ABOVE LIMITS ARE APPROXIMATE. ACTUAL LIMITS SHALL BE COORDINATED WITH ILLINOIS TOLLWAY MAINTENANCE SUPERVISOR.

CONCRETE SEALANT SCHEDULE

LOCATION	UNIT	QUANTITY
SOUTH ABUTMENT	SQ. FT.	464
PIER 1	SQ. FT.	138
PIER 2	SQ. FT.	194
PIER 2.5	SQ. FT.	157
PIER 3	SQ. FT.	235
PIER 4	SQ. FT.	133
NORTH ABUTMENT	SQ. FT.	448
EXTERNAL PT CONC. PATCHES	SQ. FT.	48
TOP OF SIDEWALK, MEDIAN, AND INSIDE TRAFFIC OF PARAPET	SQ. FT.	7,744
CRASH WALL MODIFICATION	SQ. FT.	2,000

INDEX OF SHEETS:

- SK-01 GENERAL PLAN AND ELEVATION
- SK-02 GENERAL NOTES
- SK-03 INDEX OF SHEETS & BOM
- SK-04 CONSTRUCTION STAGING
- SK-05 NORTH ABUTMENT REPAIRS
- SK-06 SOUTH ABUTMENT REPAIRS
- SK-07 PIER 1 REPAIRS
- SK-08 PIER 2 REPAIRS
- SK-09 PIER 2.5 REPAIRS
- SK-10 PIER 3 REPAIRS
- SK-11 PIER 4 REPAIRS
- SK-12 EXTERIOR SUPERSTRUCTURE REPAIRS I
- SK-13 EXTERIOR SUPERSTRUCTURE REPAIRS II
- SK-14 INTERIOR SUPERSTRUCTURE REPAIRS
- SK-15 DIAPHRAGM REPAIRS I
- SK-16 DIAPHRAGM REPAIRS II
- SK-17 TOP OF DECK REPAIRS I
- SK-18 TOP OF DECK REPAIRS II
- SK-19 APPROACH SLAB REPAIRS
- SK-20 EXPANSION JOINT REPLACEMENT
- SK-21 PREFORMED JOINT STRIP SEAL I
- SK-22 PREFORMED JOINT STRIP SEAL II
- SK-23 BAR SPLICER ASSEMBLY DETAILS
- SK-24 PIGEON INTRUSION BARRIERS
- SK-25 ANCHOR BLOCK REPLACEMENT DETAILS
- SK-26 PIER 2.5 CRASH WALL MODIFICATION
- SK-27 PIER 3 CRASH WALL MODIFICATION
- SK-28 CRASH WALL MODIFICATION DETAILS

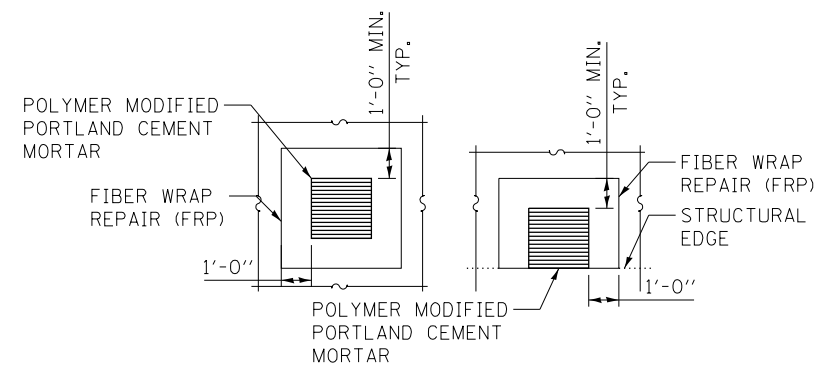


TYPICAL SECTION
(LOOKING SOUTH)

TOTAL BILL OF MATERIAL

SPECIAL PROVISIONS	PAY ITEM	DESCRIPTION	UNIT	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL	RECORD QUANTITY
	50102400	CONCRETE REMOVAL	CU YD	36.8		36.8	
	50300225	CONCRETE STRUCTURES	CU YD	145.8		145.8	
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	2.4		2.4	
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	8,400		8,400	
	50800515	BAR SPLICERS	EACH	10		10	
	52000110	PREFORMED JOINT STRIP SEAL	FOOT	75		75	
	JT781000	RAISED PAVEMENT LANE MARKER	EACH	5		5	
	JS120815	CLEAN EXISTING SCUPPER	EACH	9		9	
	JS121200	LOW PRESSURE EPOXY INJECTION	FOOT	8		8	
*	JT131469	PIGEON INTRUSION BARRIER	EACH	2		2	
*	JT503022	ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	19		19	
*	JT503040	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN.)	SQ FT	7	46	53	
*	JT503100	FIBER WRAP REPAIR	SQ FT	75		75	
*	JT524010	APPLY CONCRETE SEALANT	SQ FT	7,792	3,769	11,561	
*	JT783007	RAISED PAVEMENT LANE MARKER REMOVAL	EACH	5		5	
*	J1503050	CONCRETE BRIDGE DECK SCARIFICATION 3/8	SQ YD	2,355		2,355	
*	Z0012193	BRIDGE DECK THIN POLYMER OVERLAY 3/8	SQ YD	2,355		2,355	
*	J1525091	REPLACEMENT OF ANCHOR BLOCK CONCRETE	EACH	12		12	
GBSP	X0322194	POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ FT	25		25	

* ILLINOIS TOLLWAY SPECIAL PROVISION ITEM
GBSP IDOT GUIDE BRIDGE SPECIAL PROVISION ITEM



TYPICAL FIBER WRAP APPLICATION DETAIL

USE WHEN APPLYING FIBER WRAP ON THE BRIDGE, U.N.O.

DRAWN BY SBA DATE 3/11/2018
CHECKED BY BWS DATE 3/11/2018

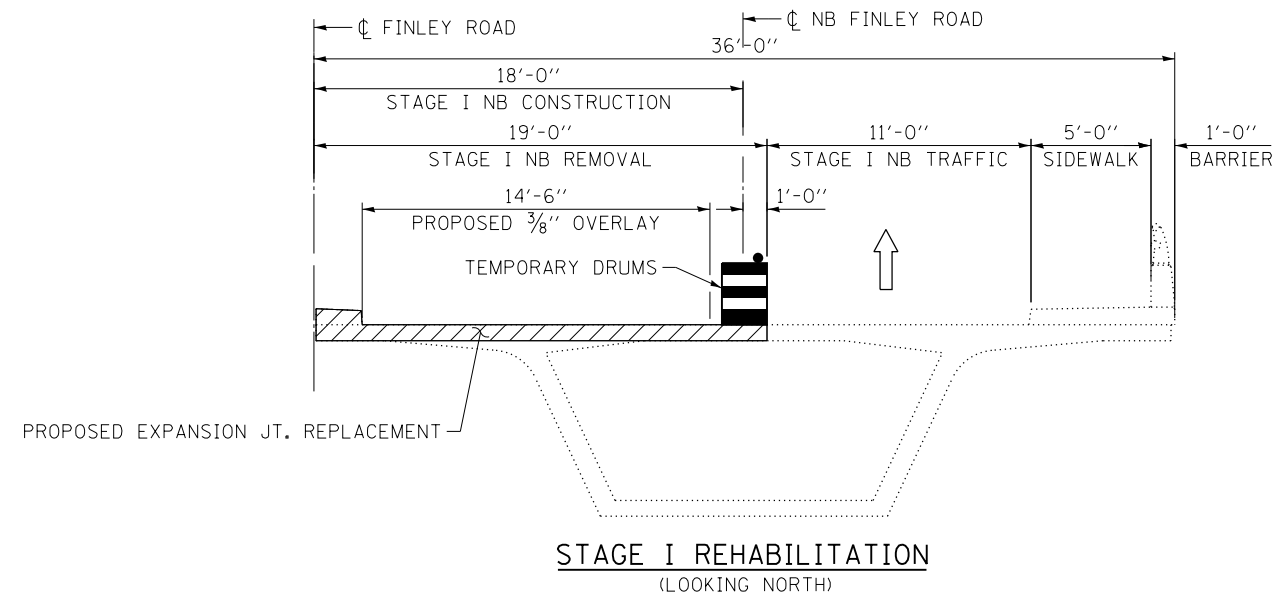


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NO.	DATE	DESCRIPTION

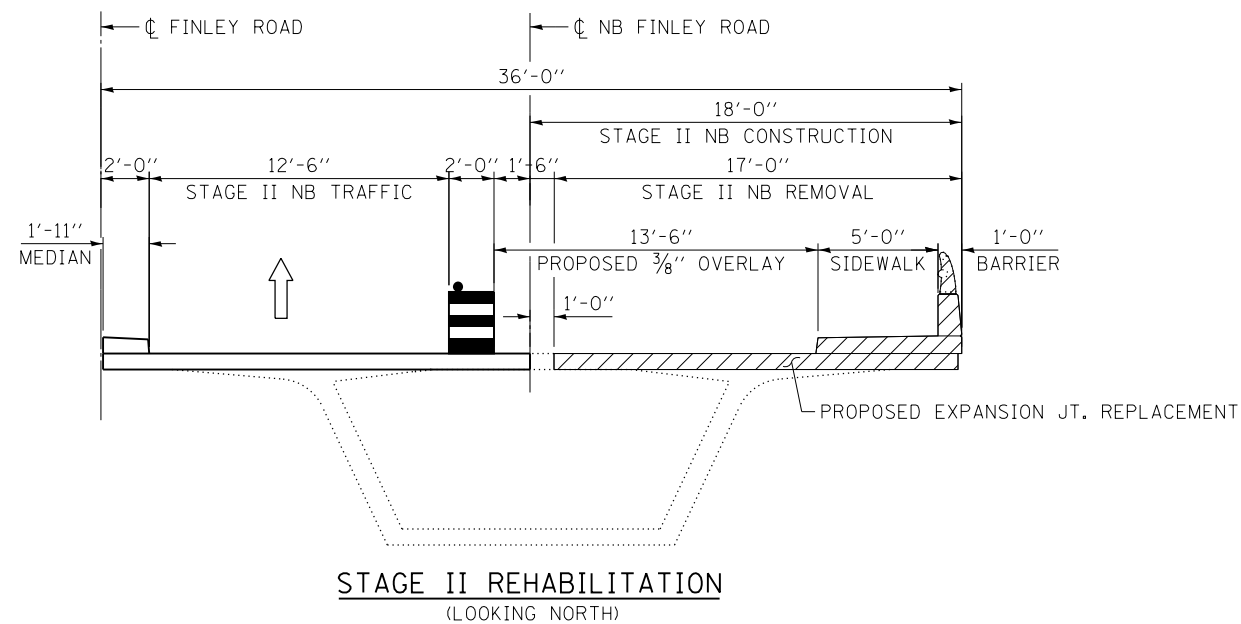
CONTRACT NO. RR-16-4255
BRIDGE 1435 (NB FINLEY) S.N. 022-9968
INDEX OF SHEETS & BOM

SK-03 OF SK-28
SHT NO. SK-03
DRAWING NO. 1237 OF 1517

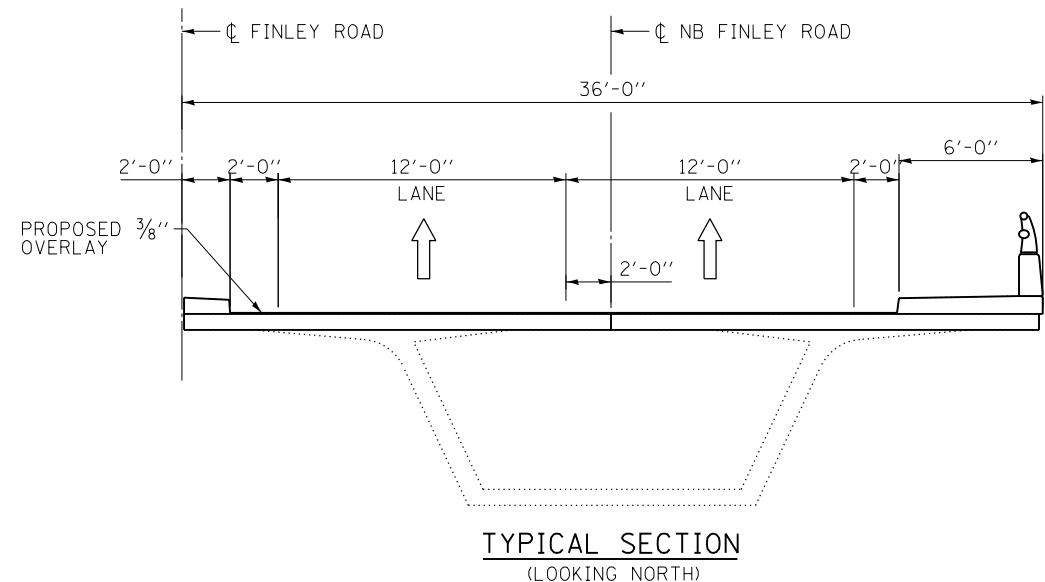
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STAGE I REHABILITATION
(LOOKING NORTH)



STAGE II REHABILITATION
(LOOKING NORTH)



TYPICAL SECTION
(LOOKING NORTH)

STAGE CONSTRUCTION NOTES:

THE CONSTRUCTION WIDTH SHOWN IS THE MAXIMUM RANGE FROM THE TEMPORARY TYPE II BARRICADE. THE ACTUAL REHABILITATION WIDTH SHALL BE ADJUSTED IN THE FIELD.

SEE IDOT STANDARD 701601-09 FOR DETAILS OF MAINTENANCE OF TRAFFIC AND IDOT STANDARD 701801-06 FOR DETAILS OF SIDEWALK CLOSURE.

DRAWN BY SBA DATE 3/11/2018
CHECKED BY BWS DATE 3/11/2018

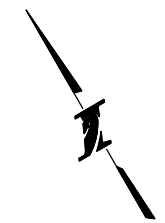
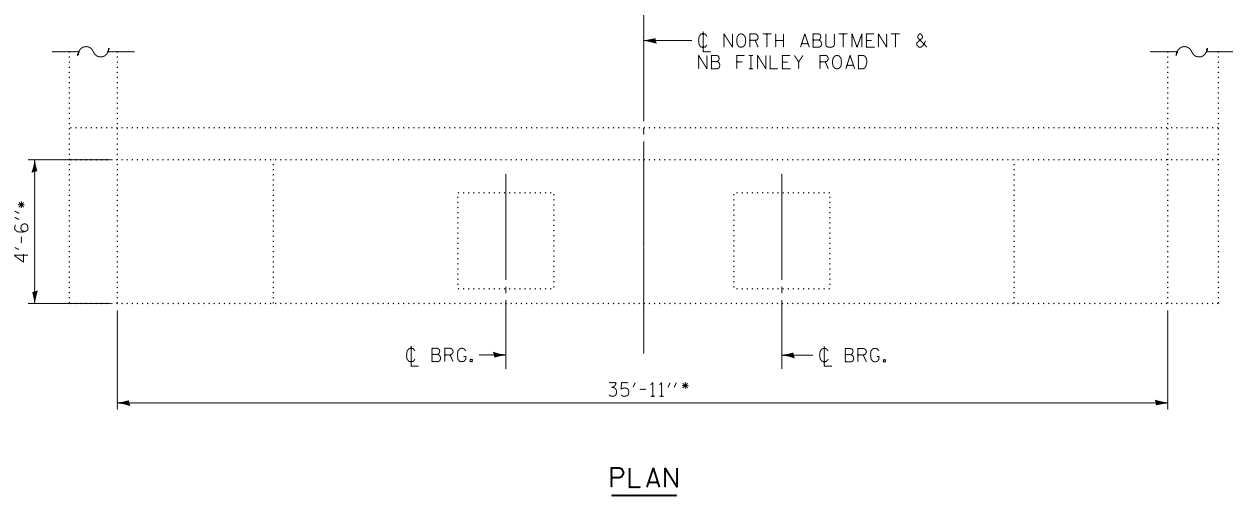
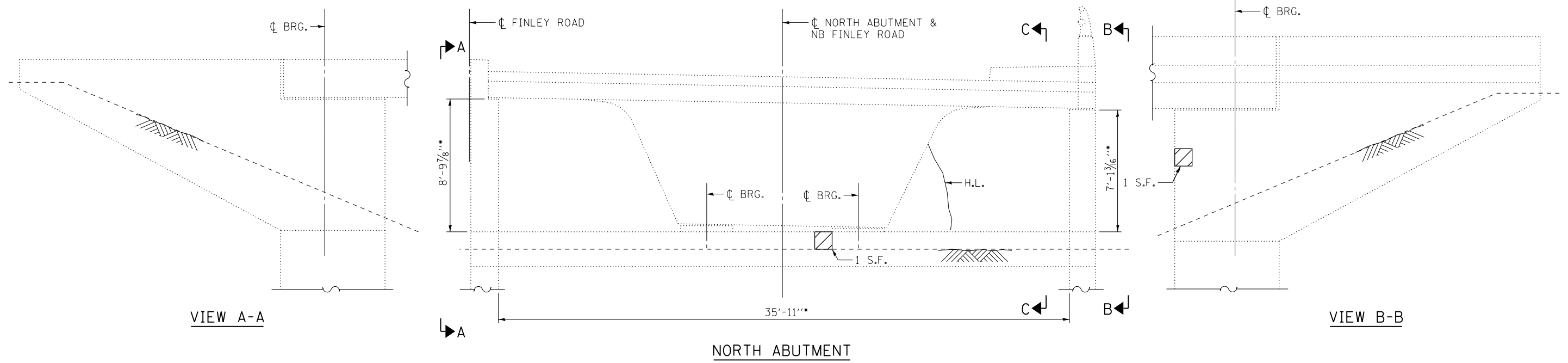


NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1435 (NB FINLEY) S.N. 022-9968
CONSTRUCTION STAGING

SK-04 OF SK-28
SHT NO. SK-04
DRAWING NO. 1238 OF 1517

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NOTES:

REPAIRS OF THE EXISTING ABUTMENT SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

* APPLY CONCRETE SEALANT ON THE ABUTMENT SEAT AND ABUTMENT BACKWALL.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	2
APPLY CONCRETE SEALANT	SQ. FT.	448

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

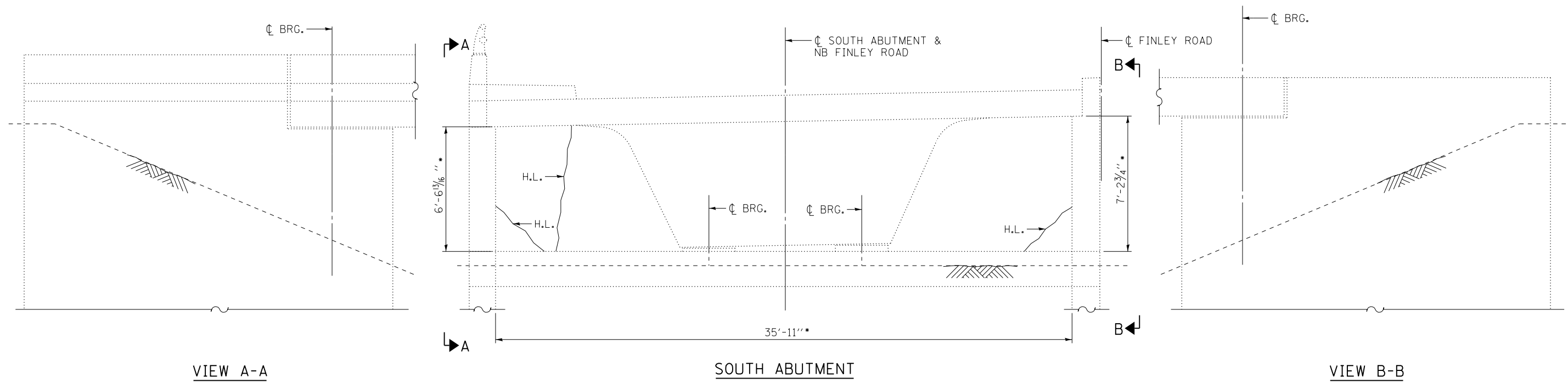


REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 NORTH ABUTMENT REPAIRS

SK-05 OF SK-28
 SHT NO. SK-05
 DRAWING NO. 1239 OF 1517

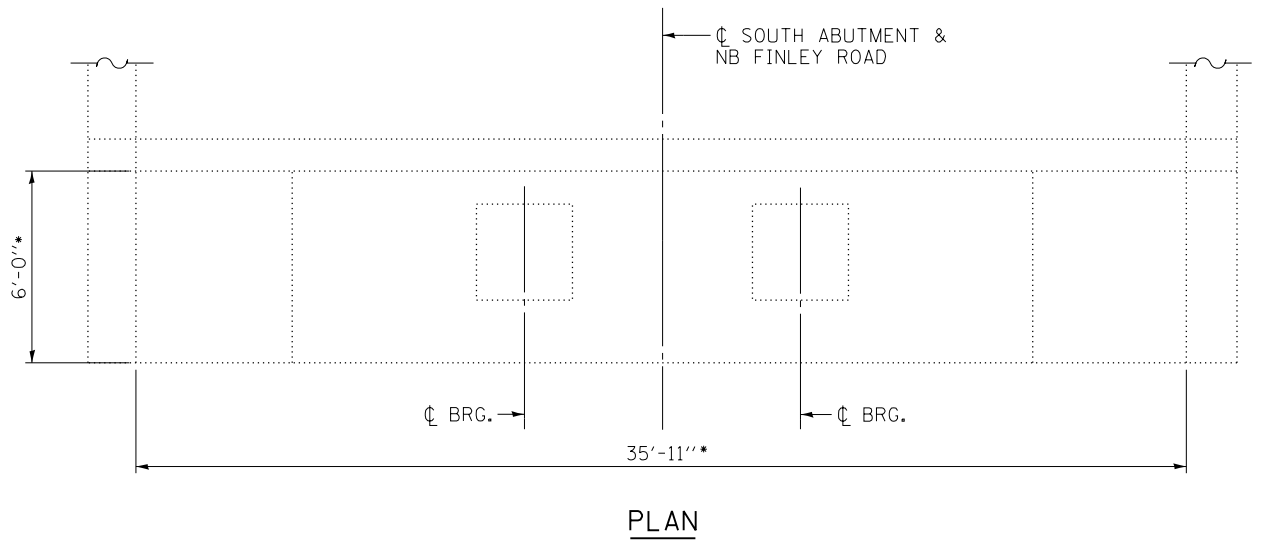
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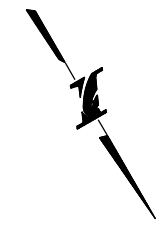
VIEW A-A

SOUTH ABUTMENT

VIEW B-B



PLAN



NOTE:
 *APPLY CONCRETE SEALANT ON THE TOP OF ABUTMENT SEAT AND ABUTMENT BACKWALL.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
APPLY CONCRETE SEALANT	SQ. FT.	464

LEGEND:

H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY **SBA** DATE **3/11/2018**
 CHECKED BY **BWS** DATE **3/11/2018**

CG **Ciorba Group, Inc.**
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
 Suite 402 Chicago, Illinois 60656
 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

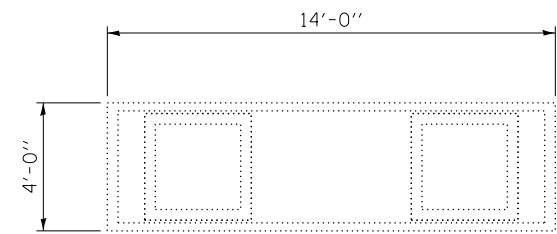
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

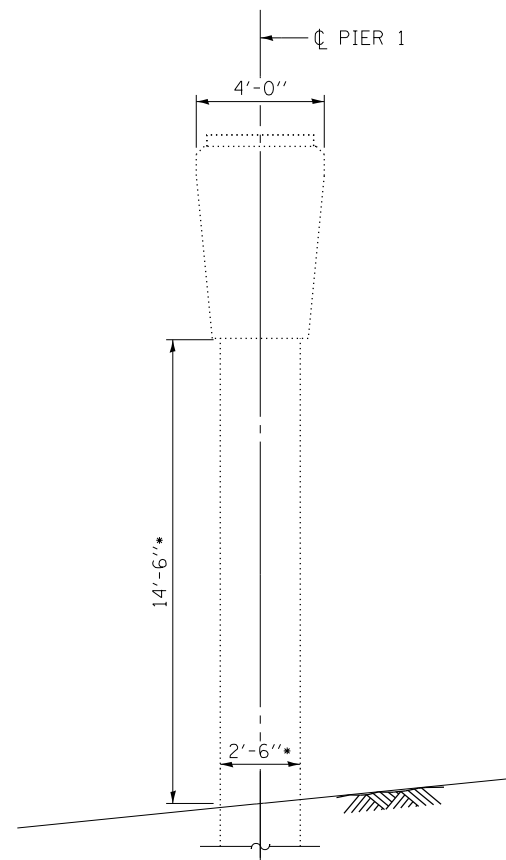
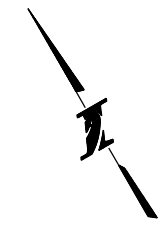
CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 SOUTH ABUTMENT REPAIRS

SK-06 OF SK-28
 SHT NO. SK-06
 DRAWING NO.
 1240 OF 1517

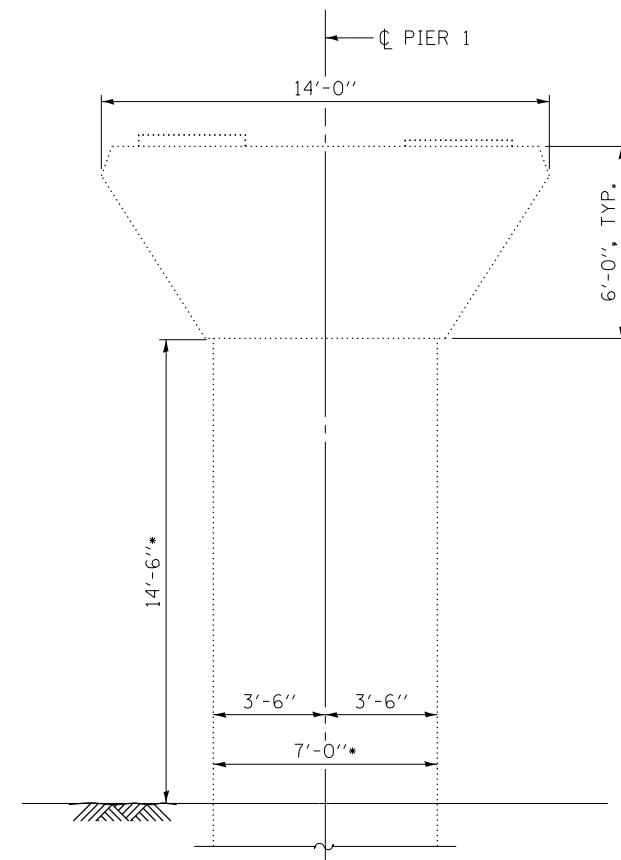
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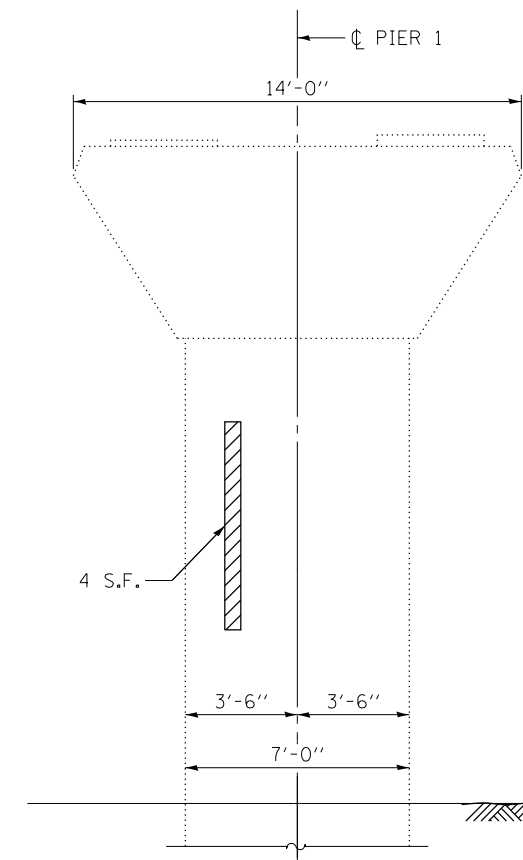
PIER CAP PLAN



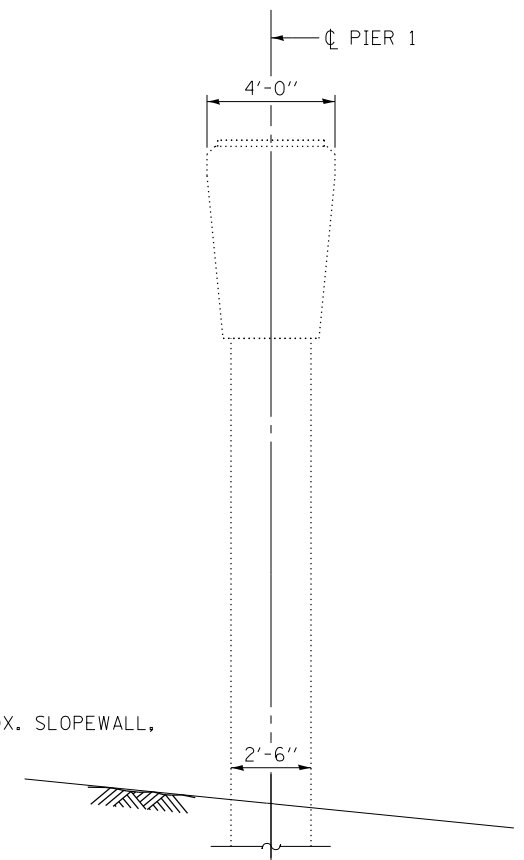
WEST FACE



NORTH FACE



SOUTH FACE



EAST FACE

NOTES:

REPAIRS OF THE EXISTING PIERS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON THE NORTH FACE AND WEST FACE OF PIER 1 COLUMN.

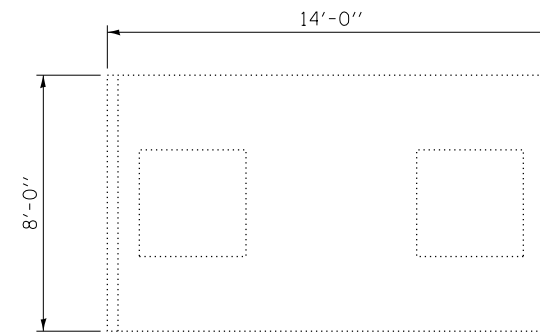
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	4
APPLY CONCRETE SEALANT	SQ. FT.	138

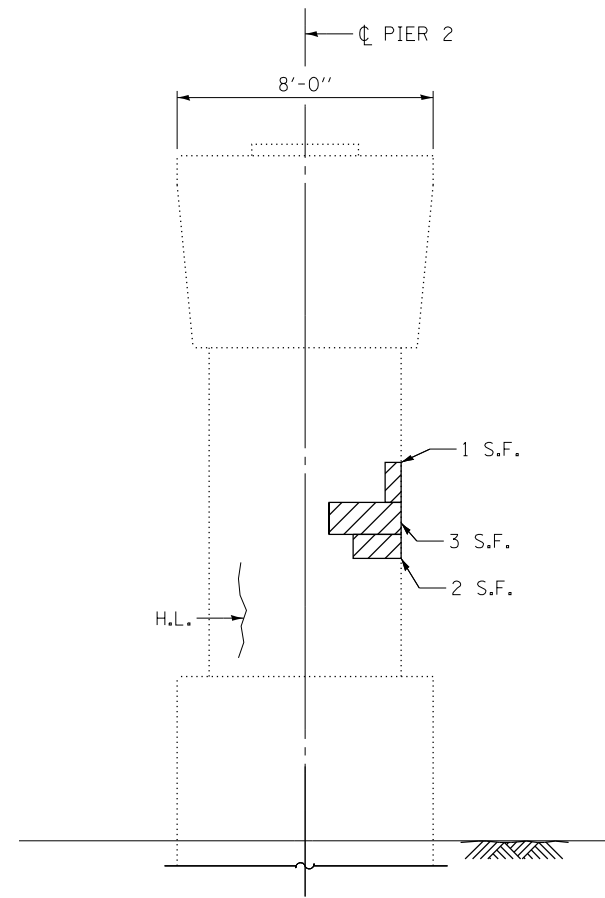
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STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

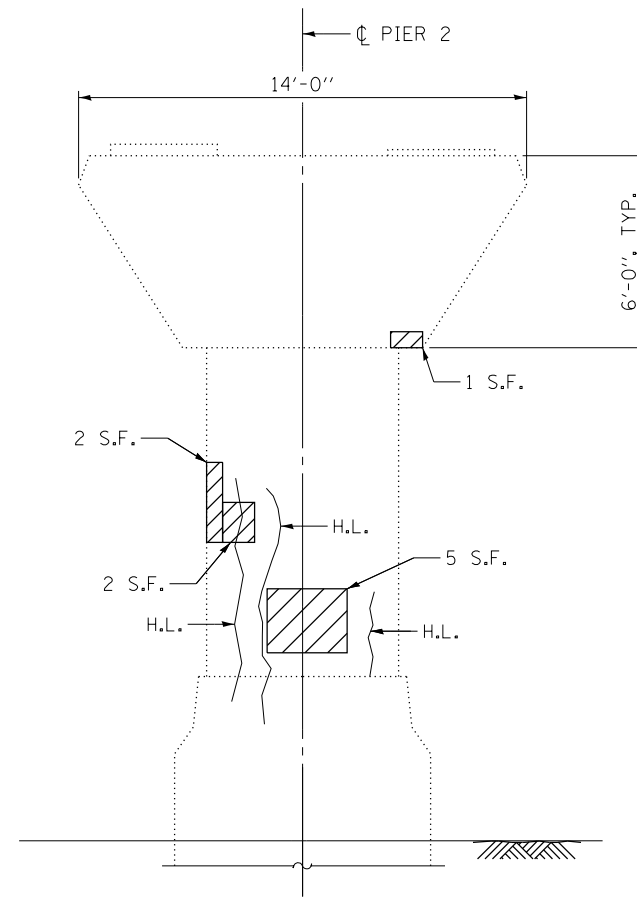
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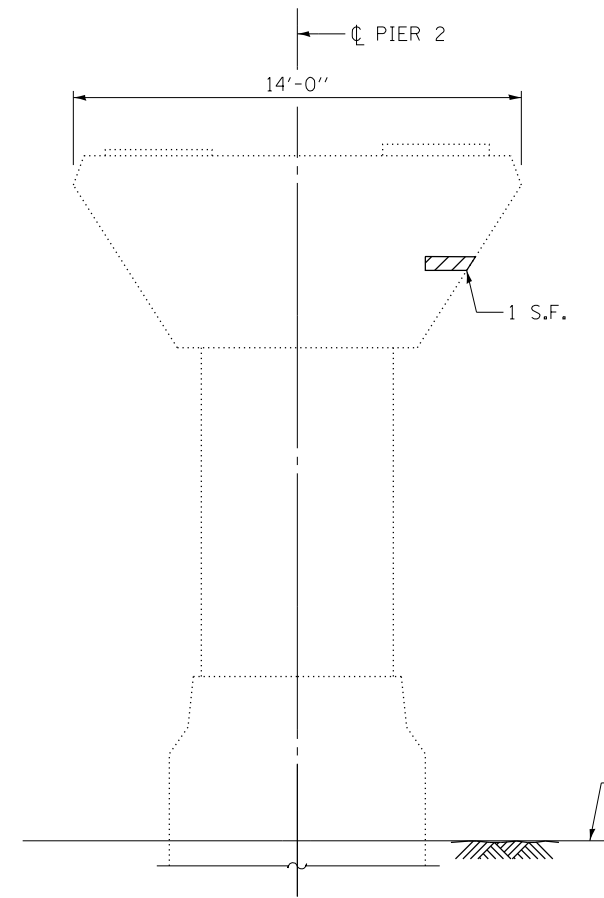
PIER CAP PLAN



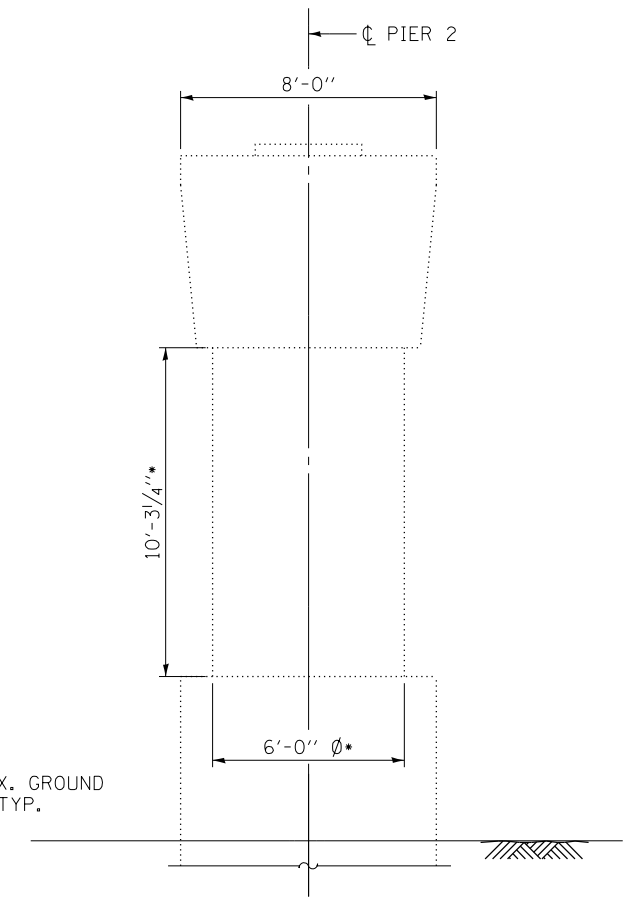
WEST FACE



NORTH FACE



SOUTH FACE



EAST FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 2 COLUMN.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	17
APPLY CONCRETE SEALANT	SQ. FT.	194

LEGEND:

- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

CG Ciorba Group, Inc.
 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
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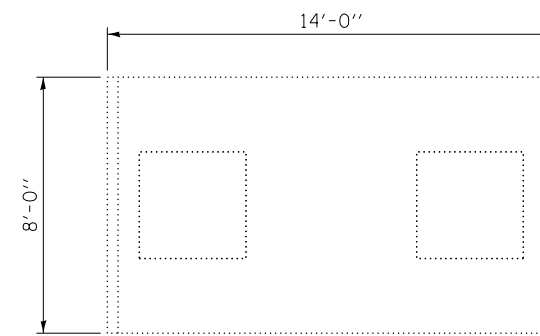
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

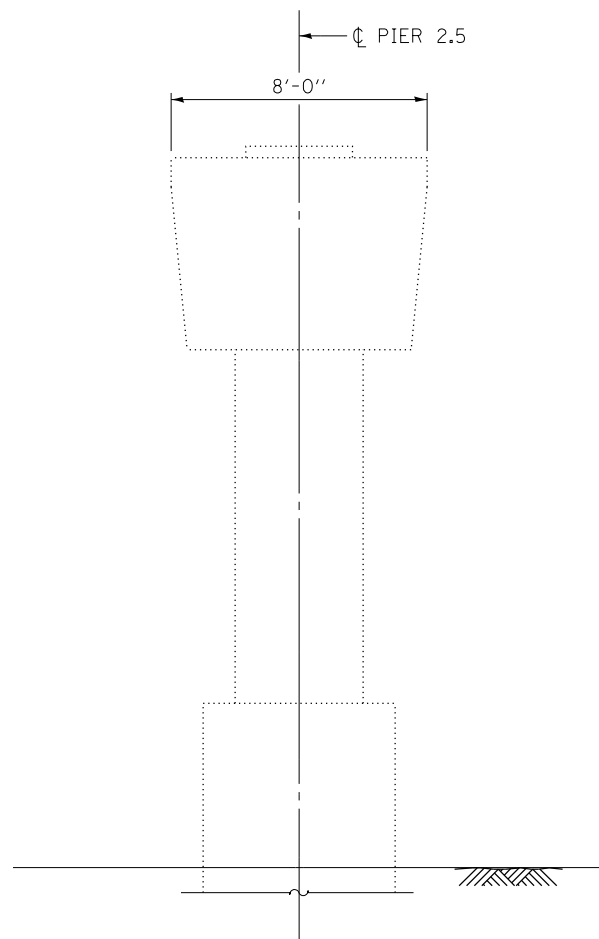
CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 PIER 2 REPAIRS

SK-08 OF SK-28
 SHT NO. SK-08
 DRAWING NO.
 1242 OF 1517

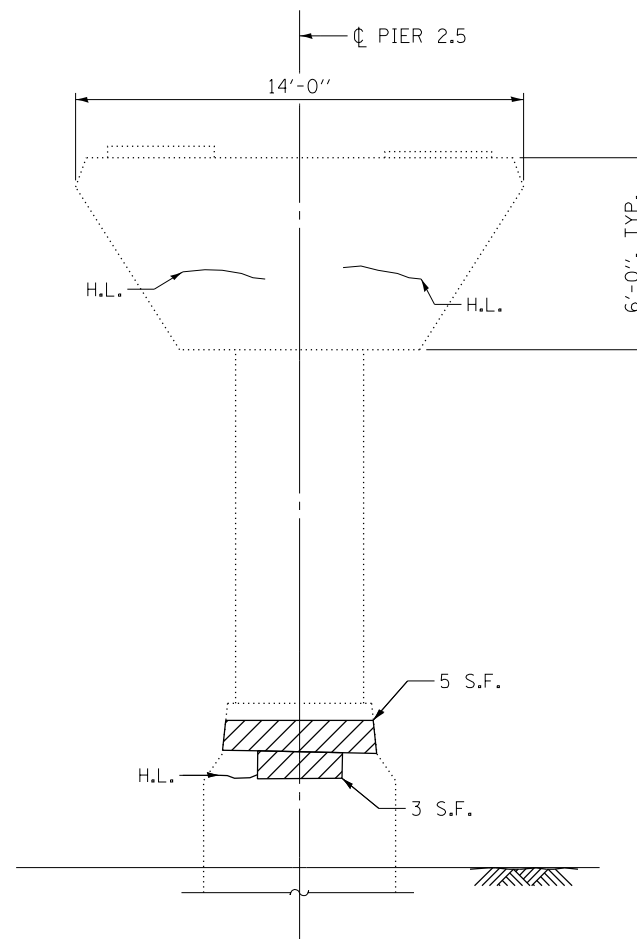
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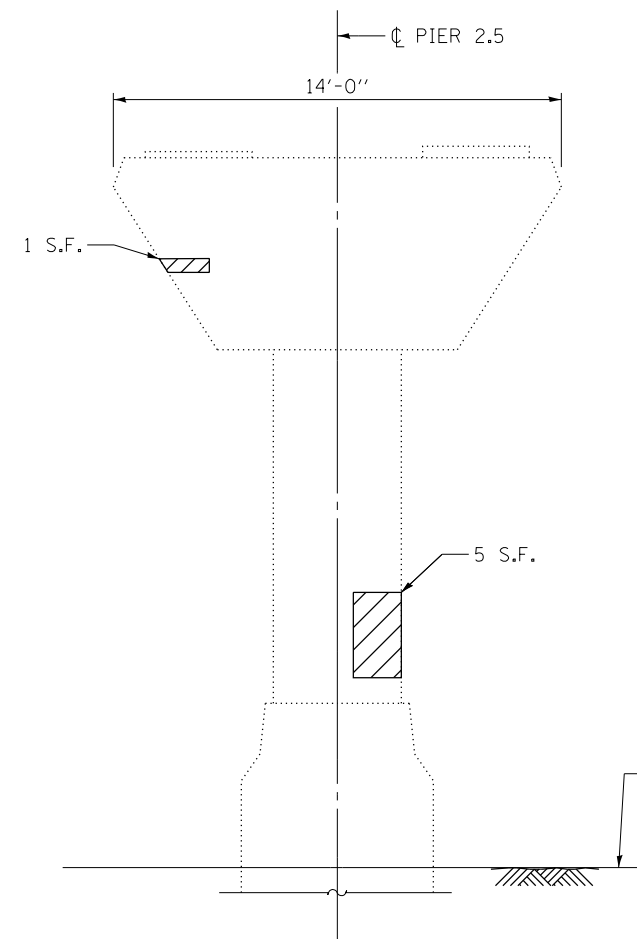
PIER CAP PLAN



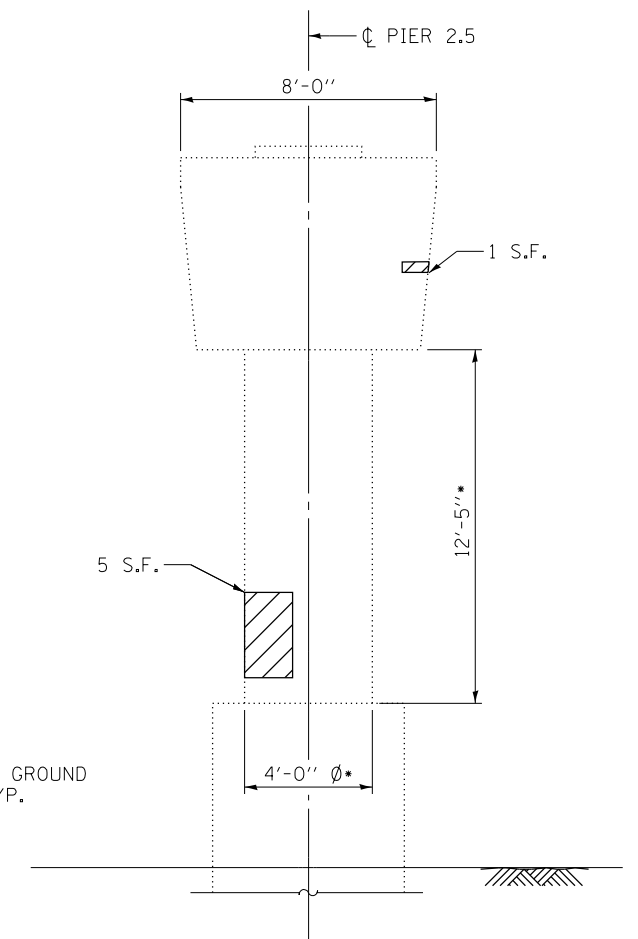
WEST FACE



NORTH FACE



SOUTH FACE



EAST FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE SEALANT ON ALL EXPOSED FACES OF PIER 2.5 COLUMN.

BILL OF MATERIAL

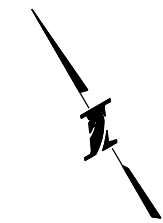
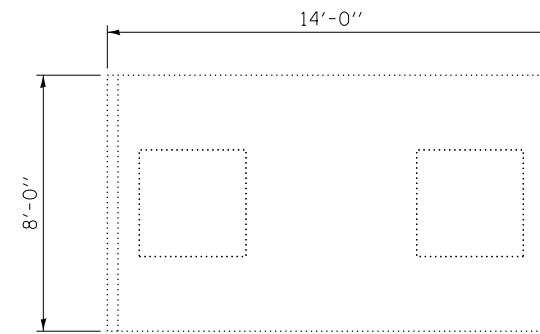
ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	20
APPLY CONCRETE SEALANT	SQ. FT.	157

LEGEND:

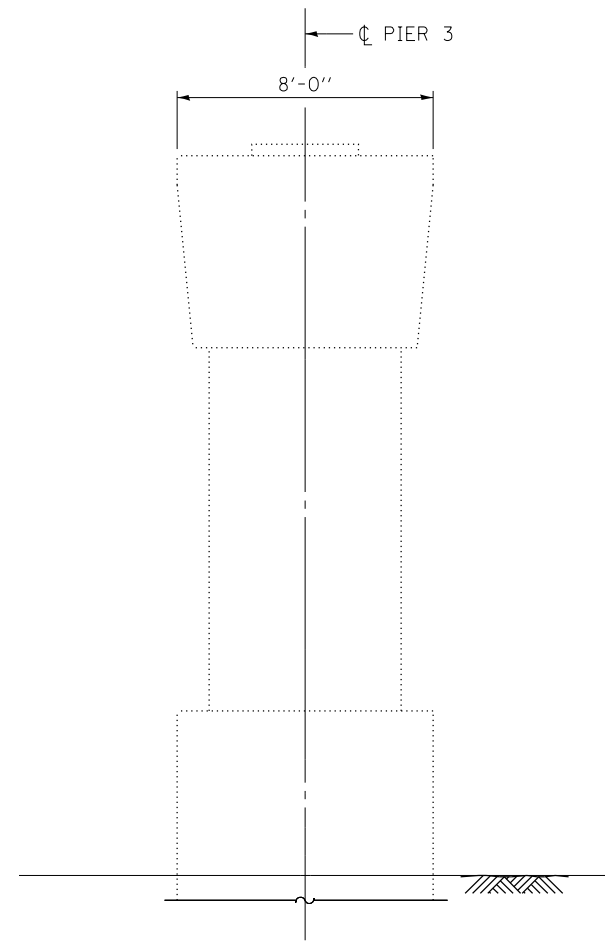
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- H.L. HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

REVISIONS		DESCRIPTION
NO.	DATE	

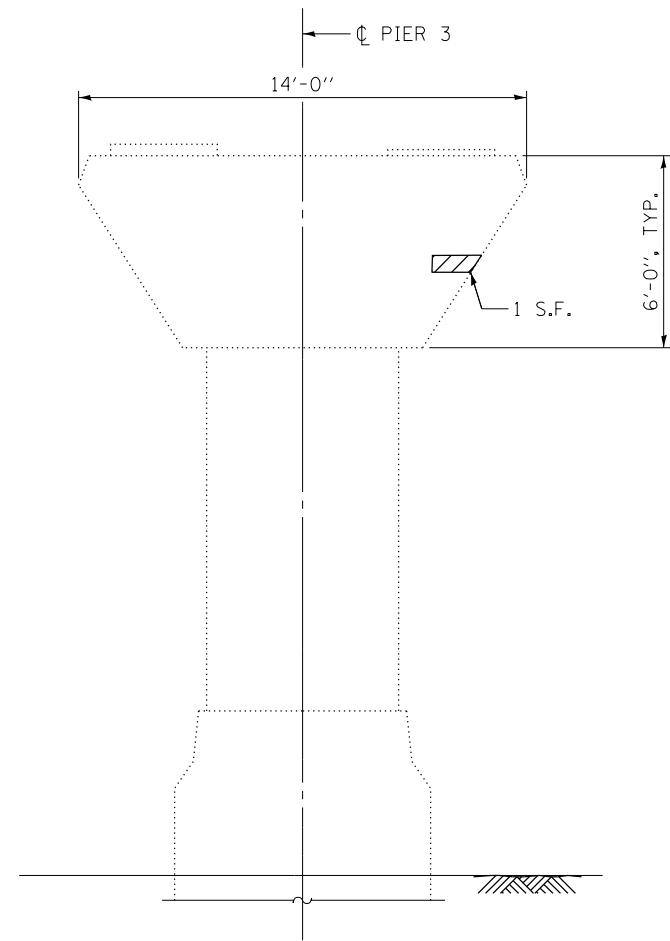
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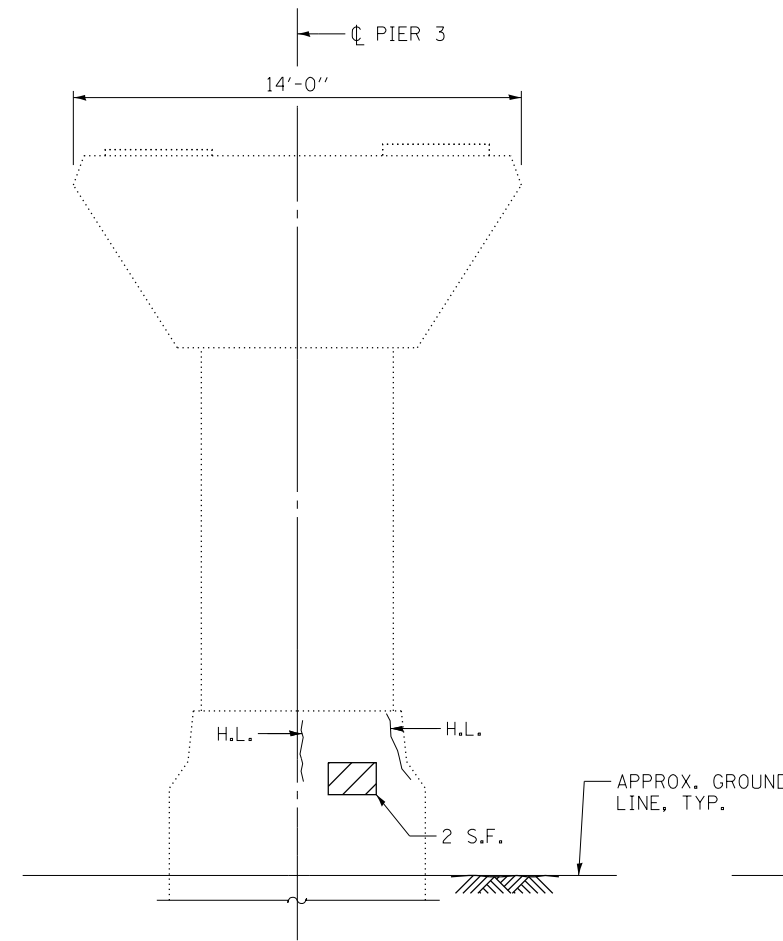
PIER CAP PLAN



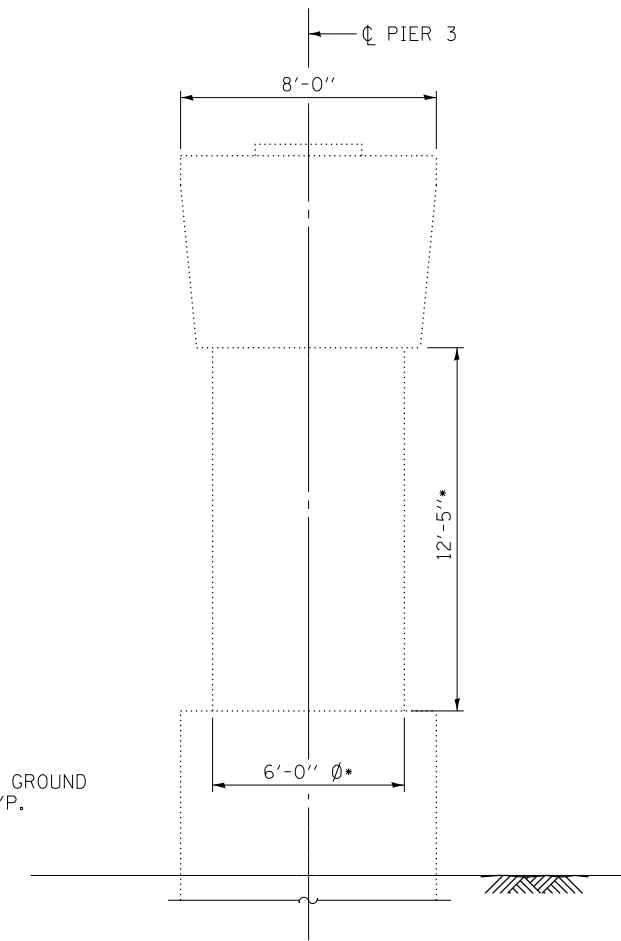
WEST FACE



NORTH FACE



SOUTH FACE



EAST FACE

NOTES:

REPAIRS OF THE EXISTING PIER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

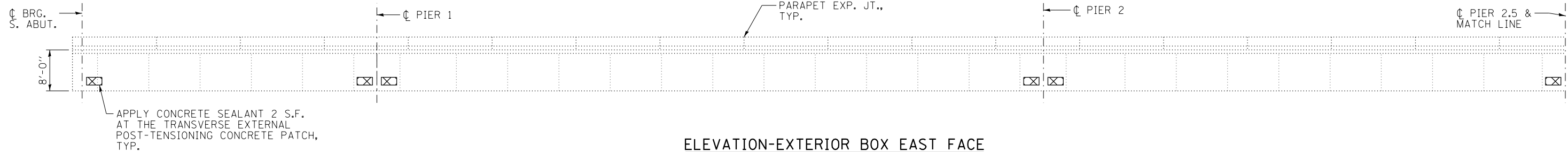
* APPLY CONCRETE SEALANT ALL EXPOSED FACES OF PIER 3 COLUMN.

BILL OF MATERIAL

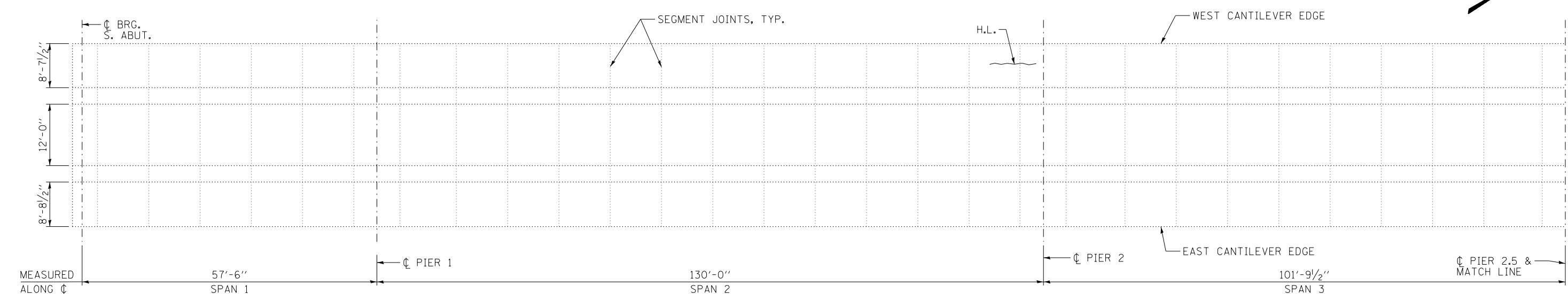
ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	3
APPLY CONCRETE SEALANT	SQ. FT.	235

LEGEND:

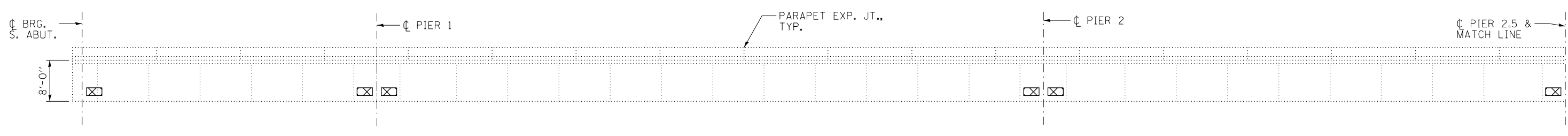
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)



ELEVATION-EXTERIOR BOX EAST FACE



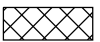
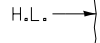
UNDERSIDE OF BRIDGE PLAN



ELEVATION-EXTERIOR BOX WEST FACE

NOTE:
FOR BILL OF MATERIAL, SEE SHEET SK-13.

LEGEND:

-  APPLY CONCRETE SEALANT
-  HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

DRAWN BY SBA DATE 3/11/2018
CHECKED BY BWS DATE 3/11/2018

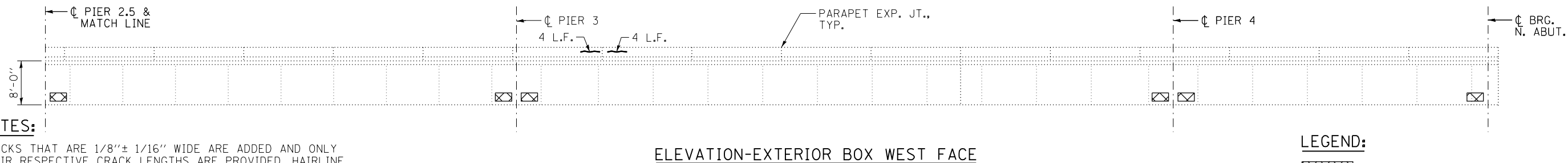
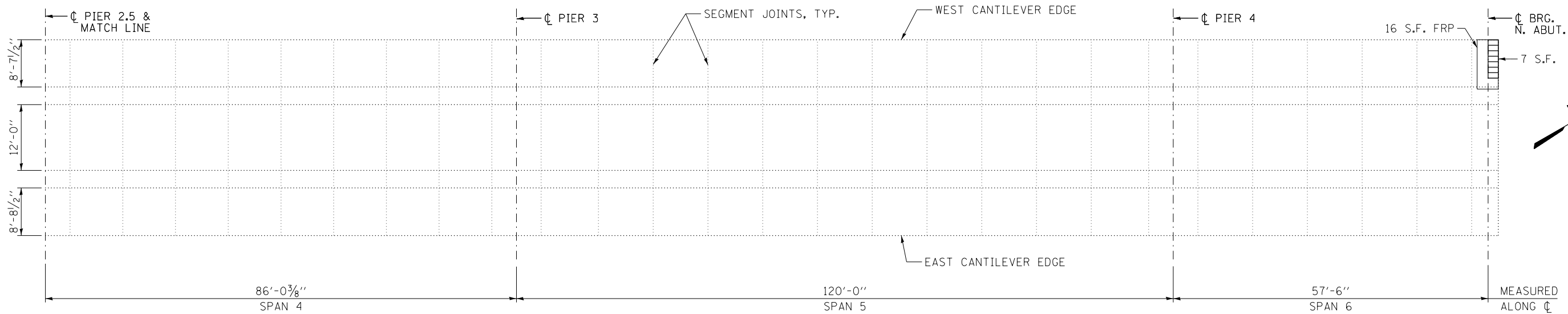
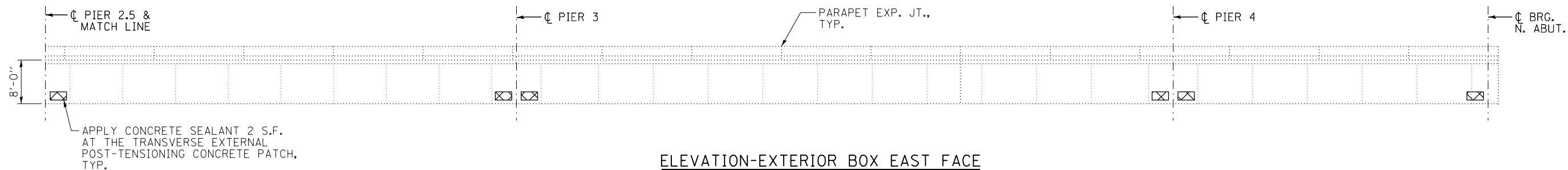
CG Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.775.4008
Fax 773.775.4014
Email: chicago@ciorba.com

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1435 (NB FINLEY) S.N. 022-9968
EXTERIOR SUPERSTRUCTURE REPAIRS I

SK-12 OF SK-28
SHT NO. SK-12
DRAWING NO. 1246 OF 1517



NOTES:
 CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING SEGMENTAL BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

APPLY FIBER WRAP REPAIRS UPON COMPLETION OF STRUCTURAL REPAIRS. SEE SHEET SK-03 FOR TYPICAL FIBER WRAP APPLICATION DETAILS.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	7
LOW PRESSURE EPOXY INJECTION	FOOT	8
APPLY CONCRETE SEALANT	SQ. FT.	48
FIBER WRAP REPAIR	SQ. FT.	16

LEGEND:

APPLY CONCRETE SEALANT

POLYMER MODIFIED PORTLAND CEMENT MORTAR

4' LOW PRESSURE EPOXY INJECTION, CRACKS > 1/16"

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

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 CONSULTING ENGINEERS
 5507 North Cumberland Avenue
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 Tel. 773.775.4008
 Fax 773.775.4014
 Email: chicago@ciorba.com

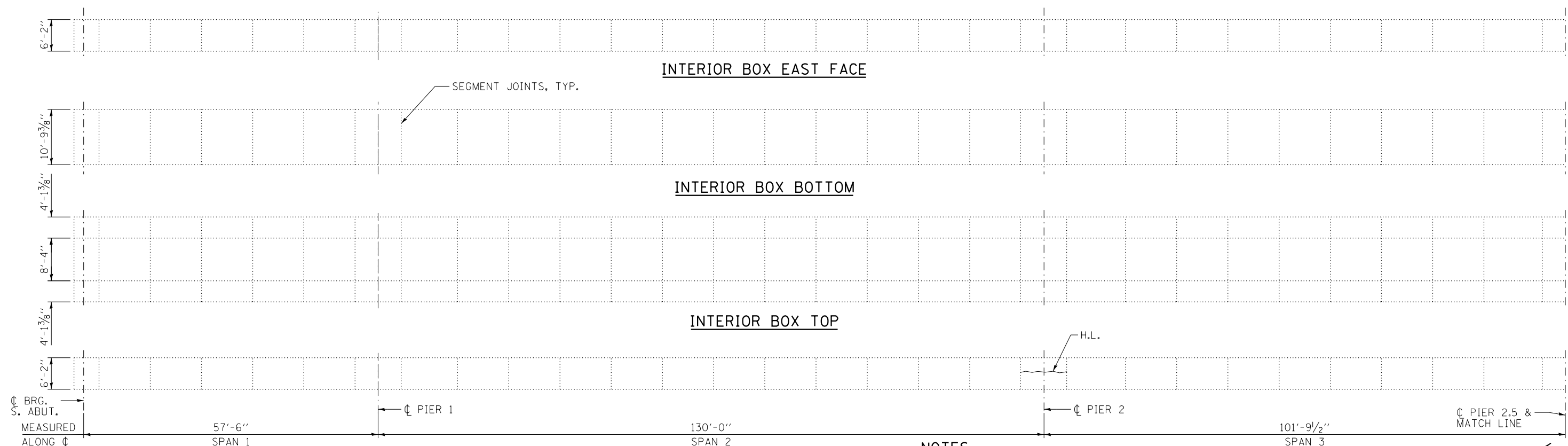
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		
NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 EXTERIOR SUPERSTRUCTURE REPAIRS II

SK-13 OF SK-28
 SHT NO. SK-13
 DRAWING NO. 1247 OF 1517

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BILL OF MATERIAL

ITEM	UNIT	QUANTITY
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SO. FT.	2

LEGEND:

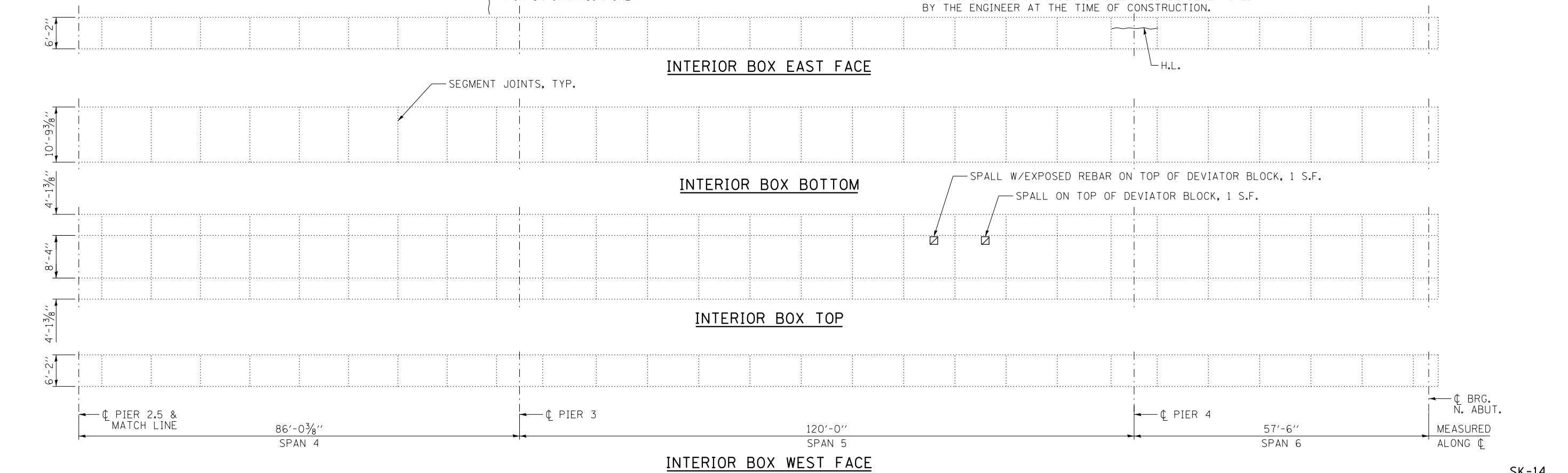
- STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)
- HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

INTERIOR BOX WEST FACE

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING SEGMENTAL BOX GIRDER SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.



INTERIOR BOX WEST FACE

DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

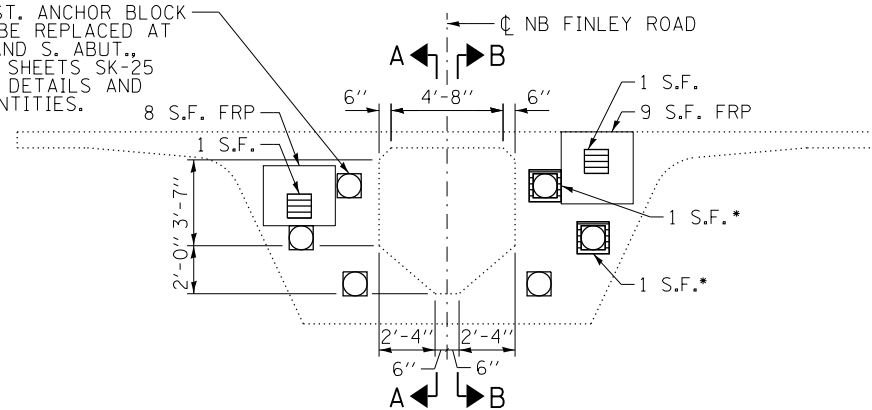


NO.		DATE	REVISIONS DESCRIPTION

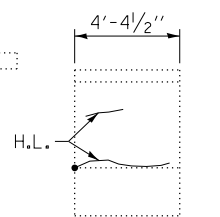
CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 INTERIOR SUPERSTRUCTURE REPAIRS

SK-14 OF SK-28
 SHT NO. SK-14
 DRAWING NO. 1248 OF 1517

EXIST. ANCHOR BLOCK TO BE REPLACED AT N. AND S. ABUT. SEE SHEETS SK-25 FOR DETAILS AND QUANTITIES.

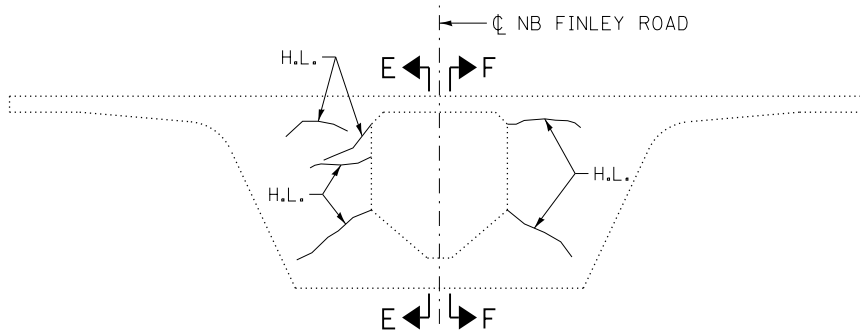


NORTH FACE DIAPHRAGM ELEVATION-NORTH ABUTMENT

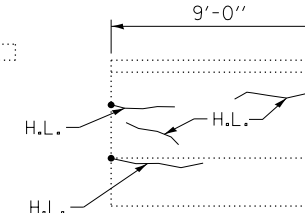


SECTION A-A

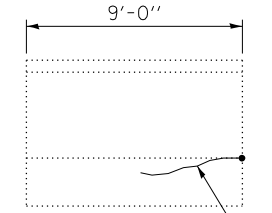
*DELAMINATED AREA IS SURROUNDING THE ANCHOR BLOCK. CONTRACTOR TO COORDINATE WITH ANCHOR BLOCK TO BE REPLACED.



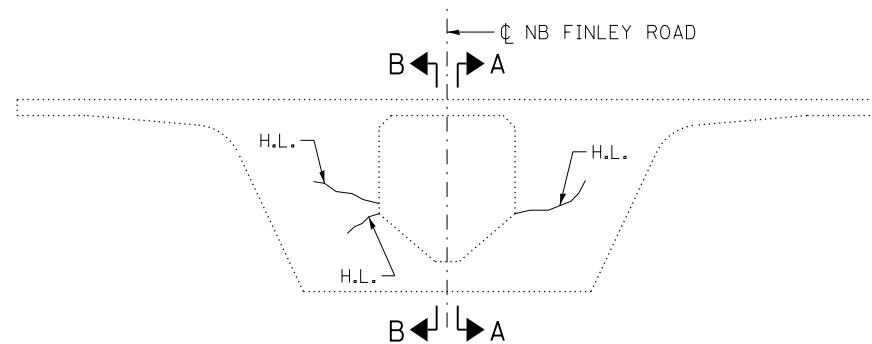
NORTH FACE DIAPHRAGM ELEVATION-PIER 1



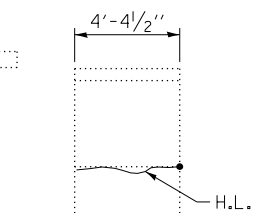
SECTION E-E



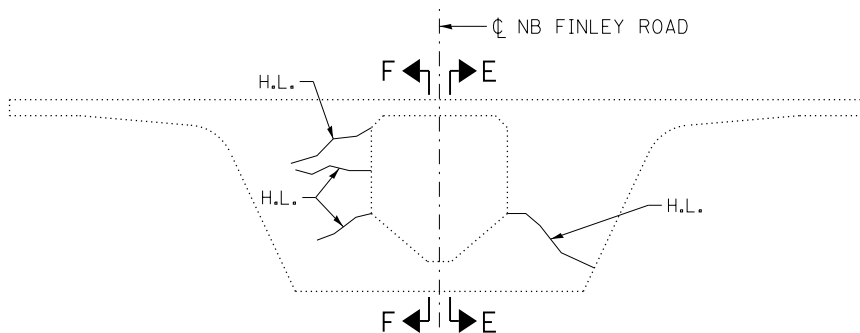
SECTION F-F



SOUTH FACE DIAPHRAGM ELEVATION-NORTH ABUTMENT



SECTION B-B

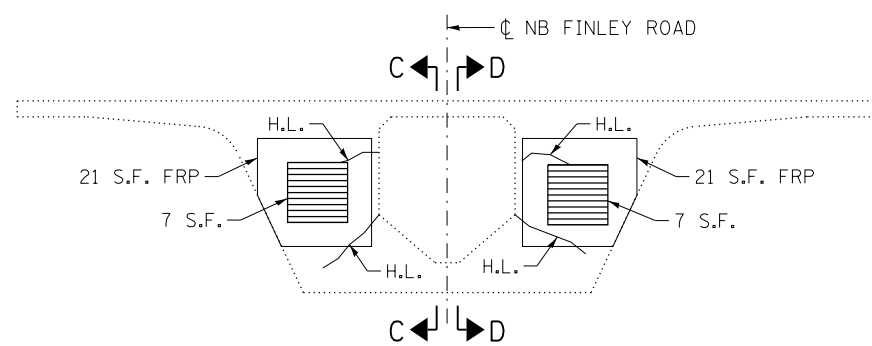


SOUTH FACE DIAPHRAGM ELEVATION-PIER 1

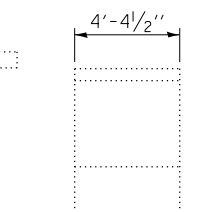
LEGEND:

POLYMER MODIFIED PORTLAND CEMENT MORTAR

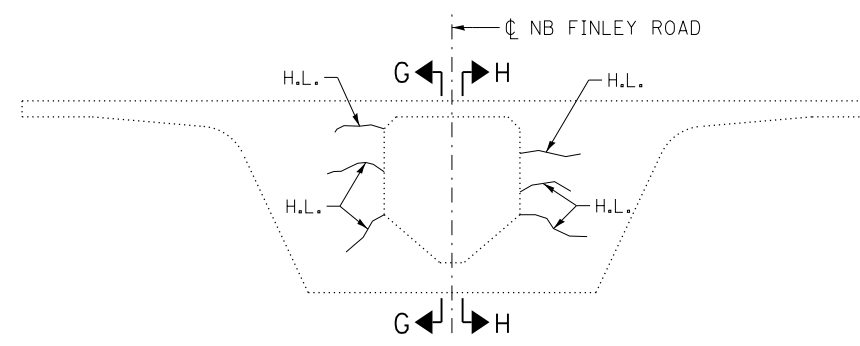
HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)



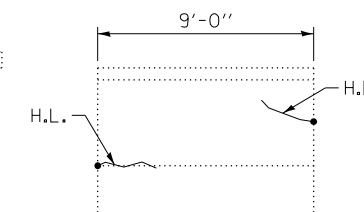
NORTH FACE DIAPHRAGM ELEVATION-SOUTH ABUTMENT



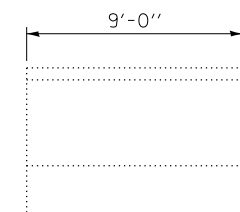
SECTION C-C



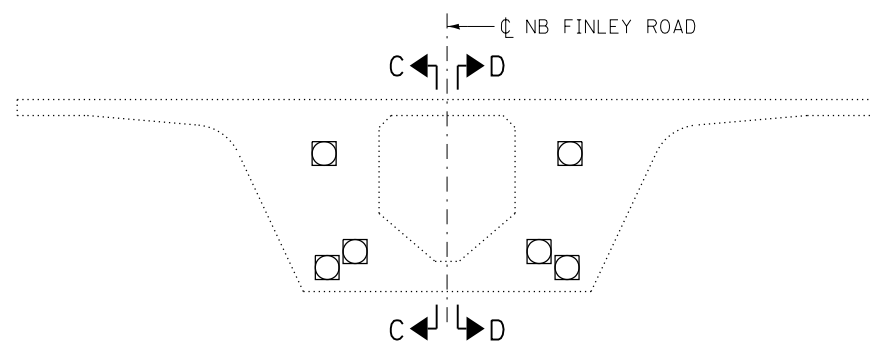
NORTH FACE DIAPHRAGM ELEVATION-PIER 2



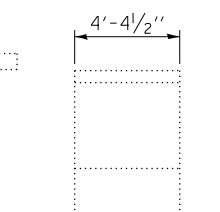
SECTION G-G



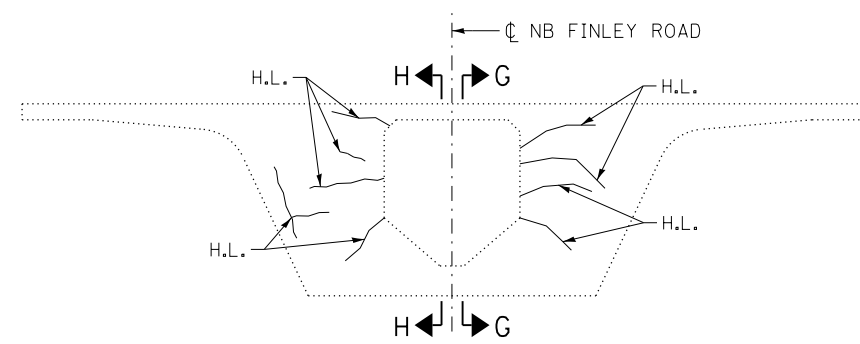
SECTION H-H



SOUTH FACE DIAPHRAGM ELEVATION-SOUTH ABUTMENT



SECTION D-D



SOUTH FACE DIAPHRAGM ELEVATION-PIER 2

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING DIAPHRAGMS SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

ALL CROSS-SECTION DIMENSIONS ARE TYPICAL.

EXISTING ANCHOR BLOCKS AT THE SOUTH AND NORTH ABUTMENTS ARE TO BE REPLACED, SEE SHEET SK-25 FOR QUANTITIES AND REPLACEMENT DETAILS.

FOR BILL OF MATERIAL AND FIBER WRAP APPLICATION, SEE SHEET SK-16.

APPLY FIBER WRAP REPAIRS UPON COMPLETION OF STRUCTURAL REPAIRS.

DRAWN BY SBA DATE 3/11/2018
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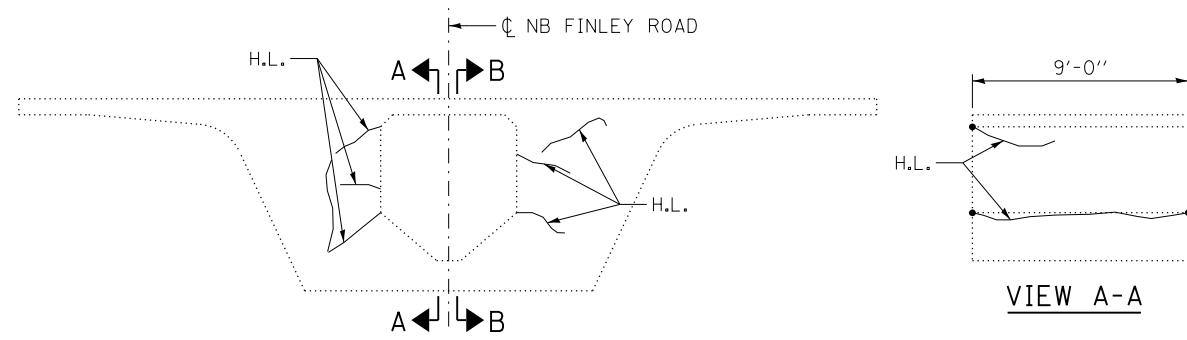
Ciorba Group, Inc.
CONSULTING ENGINEERS
5507 North Cumberland Avenue
Suite 402 Chicago, Illinois 60656
Tel. 773.775.4008
Fax 773.775.4014
Email: chicago@ciorba.com

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2700 OGDEN AVENUE
DOWNERS GROVE,
ILLINOIS 60515

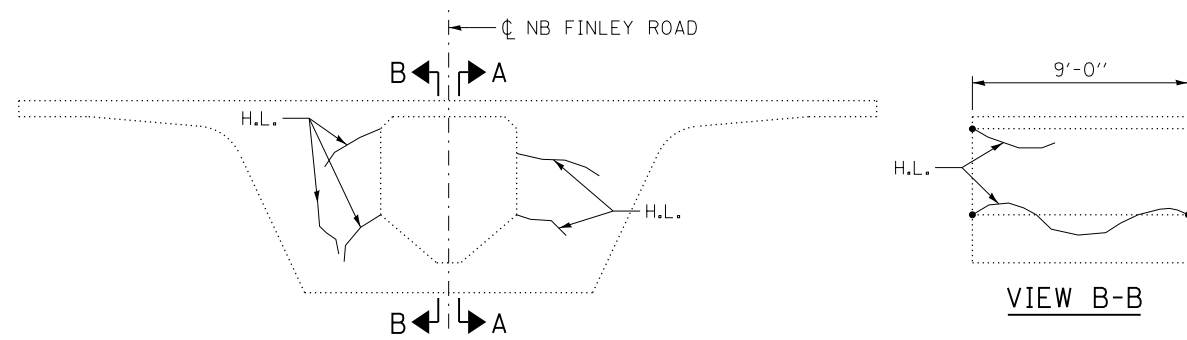
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NO.	DATE	DESCRIPTION	

CONTRACT NO. RR-16-4255
BRIDGE 1435 (NB FINLEY) S.N. 022-9968
DIAPHRAGM REPAIRS I

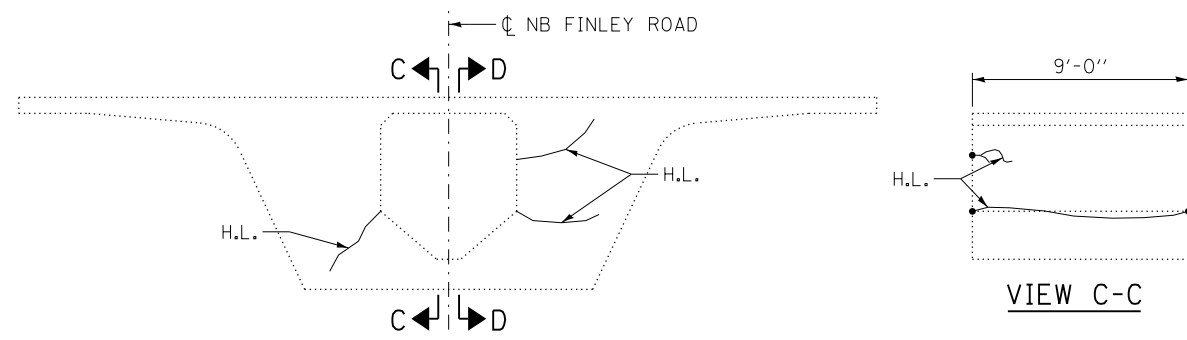
SK-15 OF SK-28
SHT NO. SK-15
DRAWING NO. 1249 OF 1517



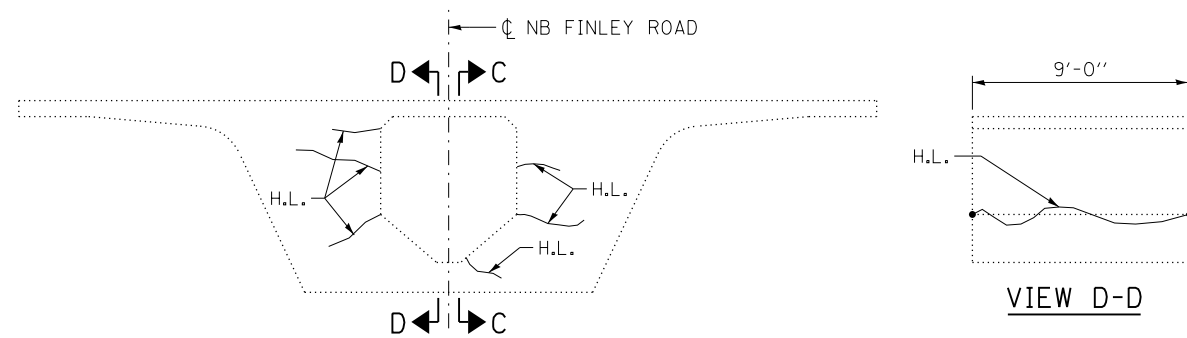
NORTH FACE DIAPHRAGM ELEVATION-PIER 2.5



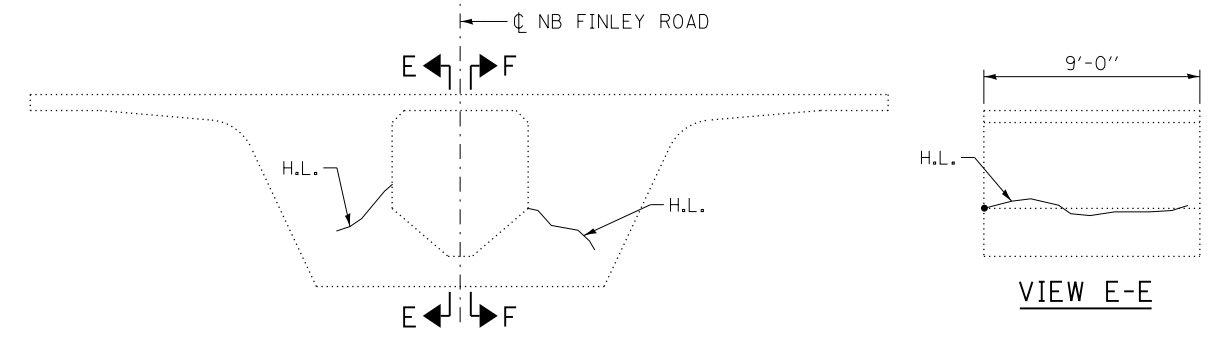
SOUTH FACE DIAPHRAGM ELEVATION-PIER 2.5



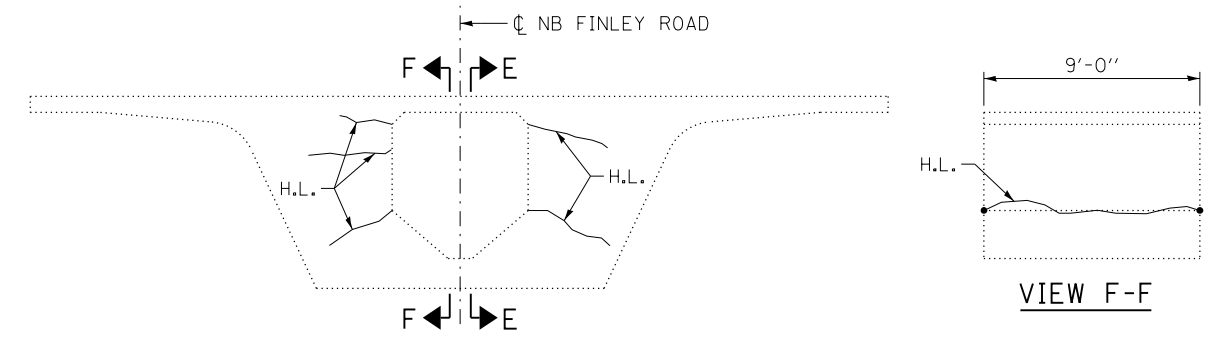
NORTH FACE DIAPHRAGM ELEVATION-PIER 3



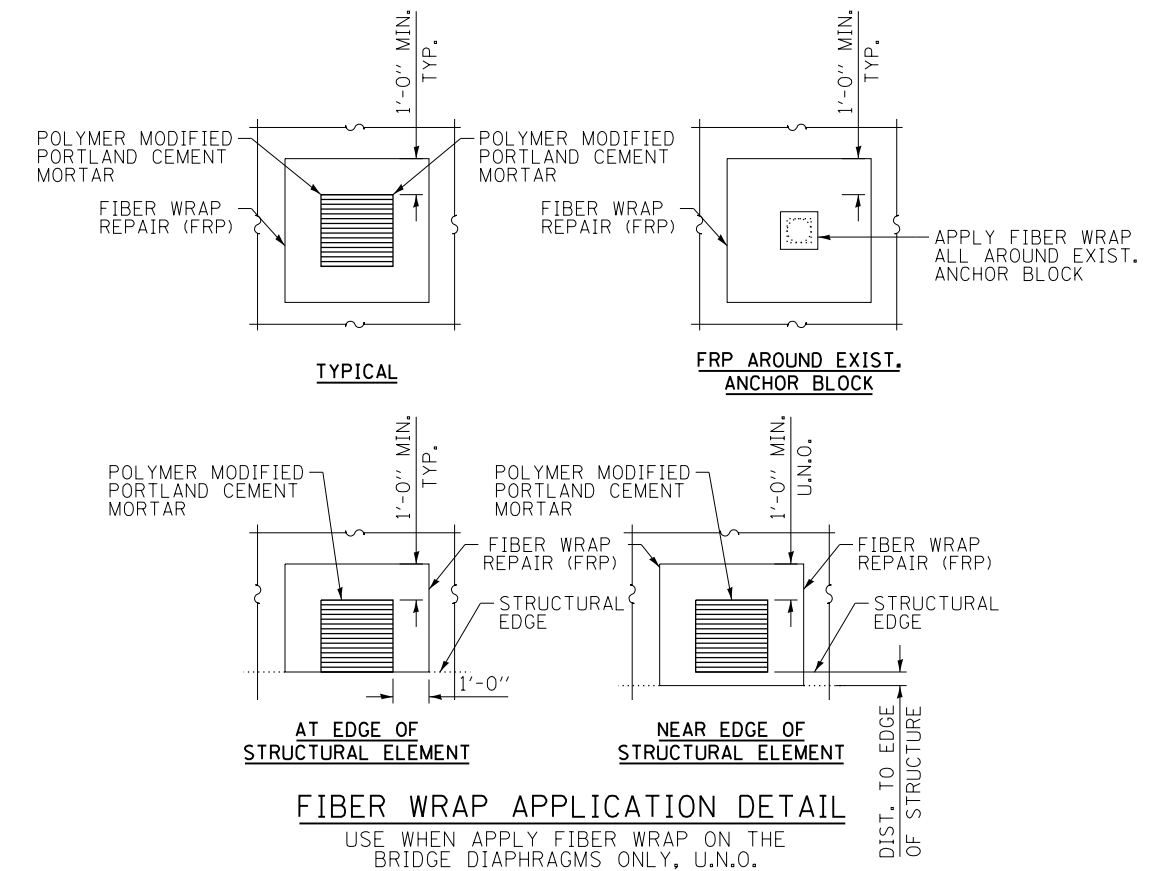
SOUTH FACE DIAPHRAGM ELEVATION-PIER 3



NORTH FACE DIAPHRAGM ELEVATION-PIER 4



SOUTH FACE DIAPHRAGM ELEVATION-PIER 4



FIBER WRAP APPLICATION DETAIL

USE WHEN APPLY FIBER WRAP ON THE BRIDGE DIAPHRAGMS ONLY, U.N.O.

LEGEND:

H.L. → HAIRLINE CRACK - NOT TO BE REPAIRED (FOR INFORMATION ONLY)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
POLYMER MODIFIED PORTLAND CEMENT MORTAR	SQ. FT.	18
FIBER WRAP REPAIR	SQ. FT.	59

SK-16 OF SK-28

DRAWN BY SBA DATE 3/11/2018
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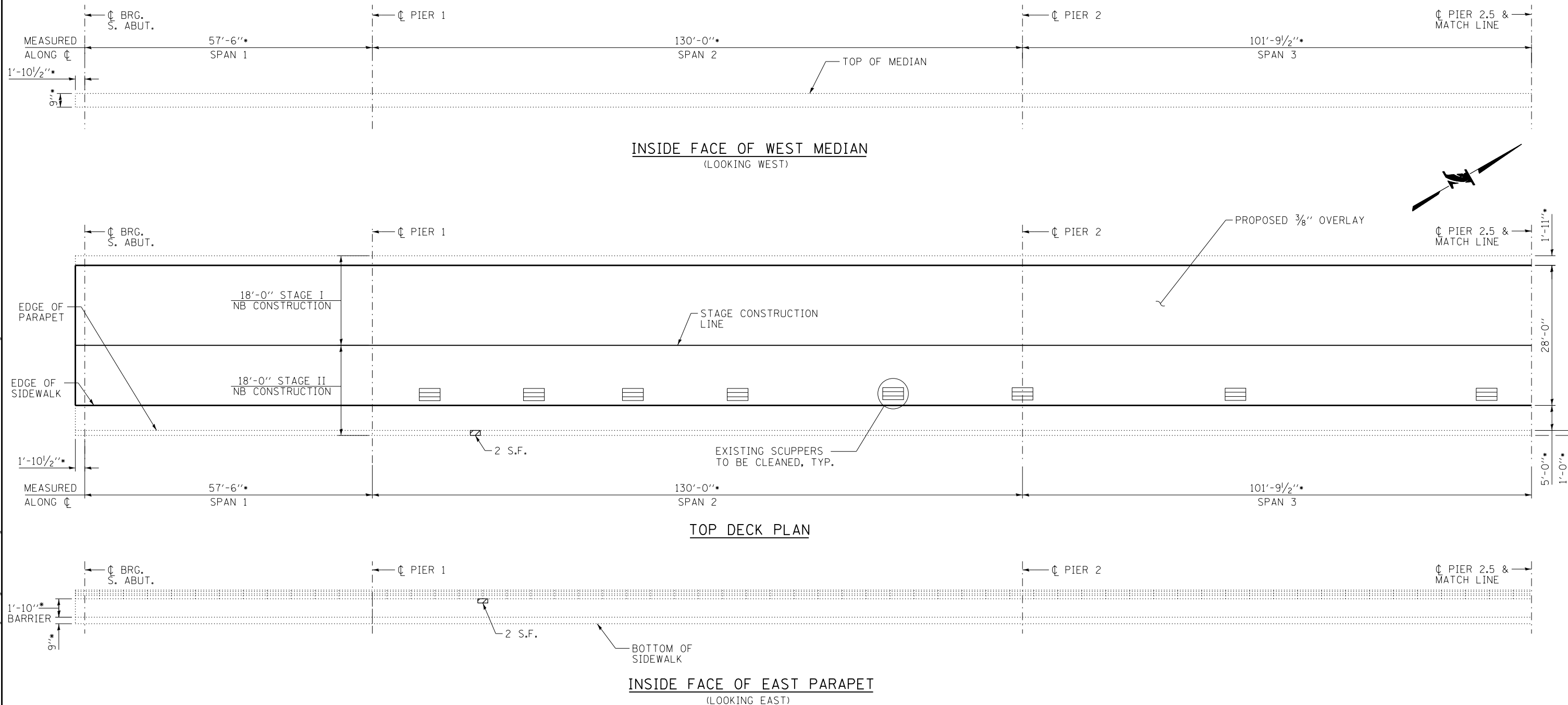


REVISIONS	
NO.	DATE

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 DIAPHRAGM REPAIRS II

SHT NO. SK-16
 DRAWING NO. 1250 OF 1517

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NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING PARAPET, SIDEWALK AND MEDIAN SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

*APPLY CONCRETE CRACK SEALANT ON PARAPET TRAFFIC FACE, TOP OF SIDEWALK AND TOP OF MEDIAN.

FOR BILL OF MATERIAL, SEE SHEET SK-18.

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

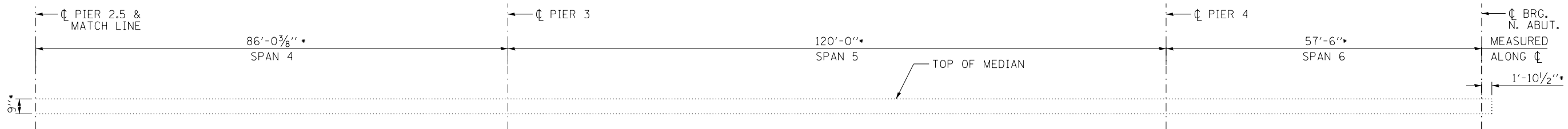
DRAWN BY SBA DATE 3/11/2018
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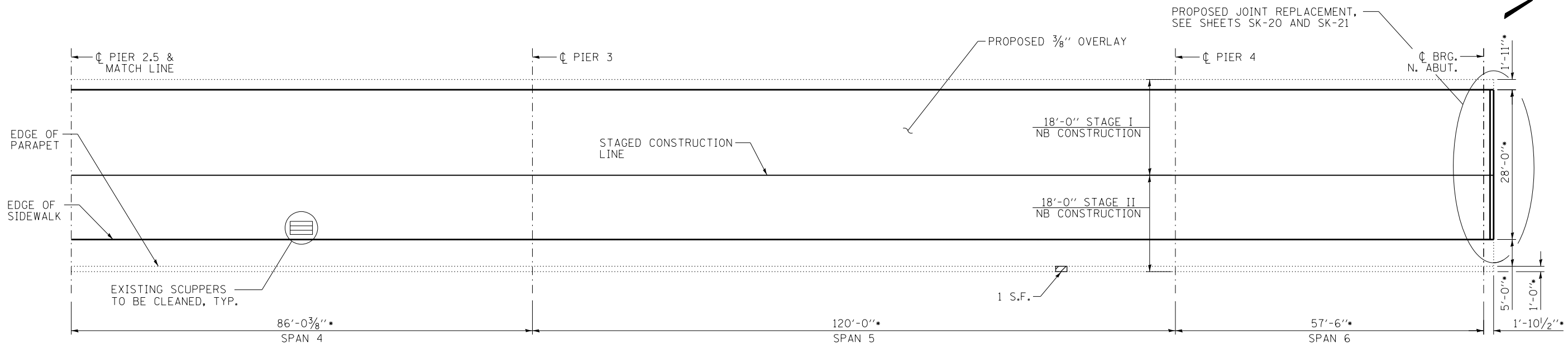
NO.		DATE	REVISIONS DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 TOP OF DECK REPAIRS I

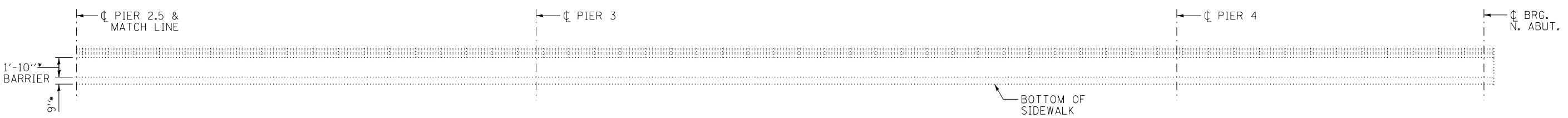
SHT NO. SK-17
 DRAWING NO. 1251 OF 1517



INSIDE FACE OF WEST MEDIAN
(LOOKING WEST)



TOP DECK PLAN



INSIDE FACE OF EAST PARAPET
(LOOKING EAST)

NOTES:

CRACKS THAT ARE 1/8" ± 1/16" WIDE ARE ADDED AND ONLY THEIR RESPECTIVE CRACK LENGTHS ARE PROVIDED. HAIRLINE CRACKS ARE IDENTIFIED AS H.L. AND NO LENGTHS ARE GIVEN.

REPAIRS OF THE EXISTING PARAPET, SIDEWALK AND MEDIAN SHALL INCLUDE BUT MAY NOT BE LIMITED TO THE AREAS SHOWN. THE ACTUAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

* APPLY CONCRETE CRACK SEALANT ON PARAPET TRAFFIC FACE, TOP OF SIDEWALK AND TOP OF MEDIAN.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
BRIDGE DECK THIN POLYMER OVERLAY 3/8"	SQ. YD.	1,732
CONCRETE BRIDGE DECK SCARIFICATION 3/8"	SQ. YD.	1,732
APPLY CONCRETE SEALANT	SQ. FT.	6,273
CLEAN EXISTING SCUPPER	EACH	9
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ. FT.	5

LEGEND:

STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)

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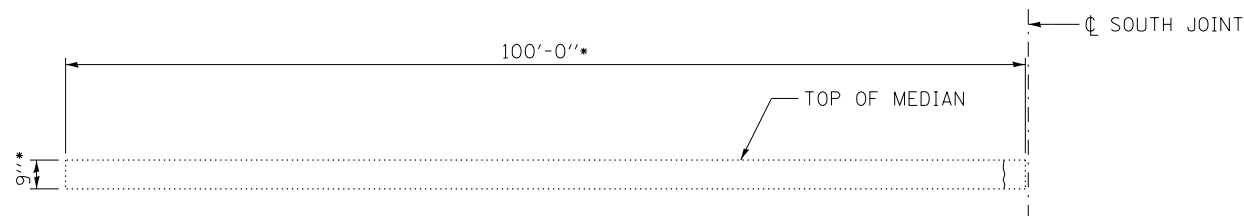
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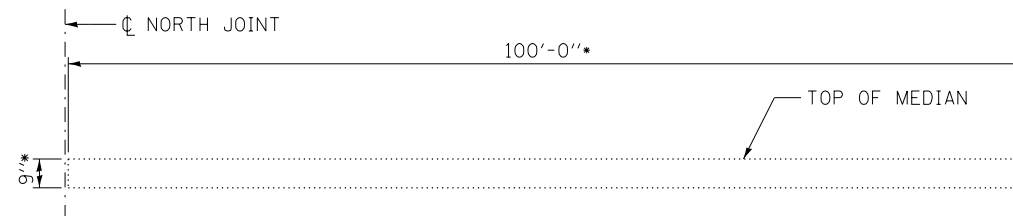
REVISIONS		DESCRIPTION
NO.	DATE	

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 TOP OF DECK REPAIRS II

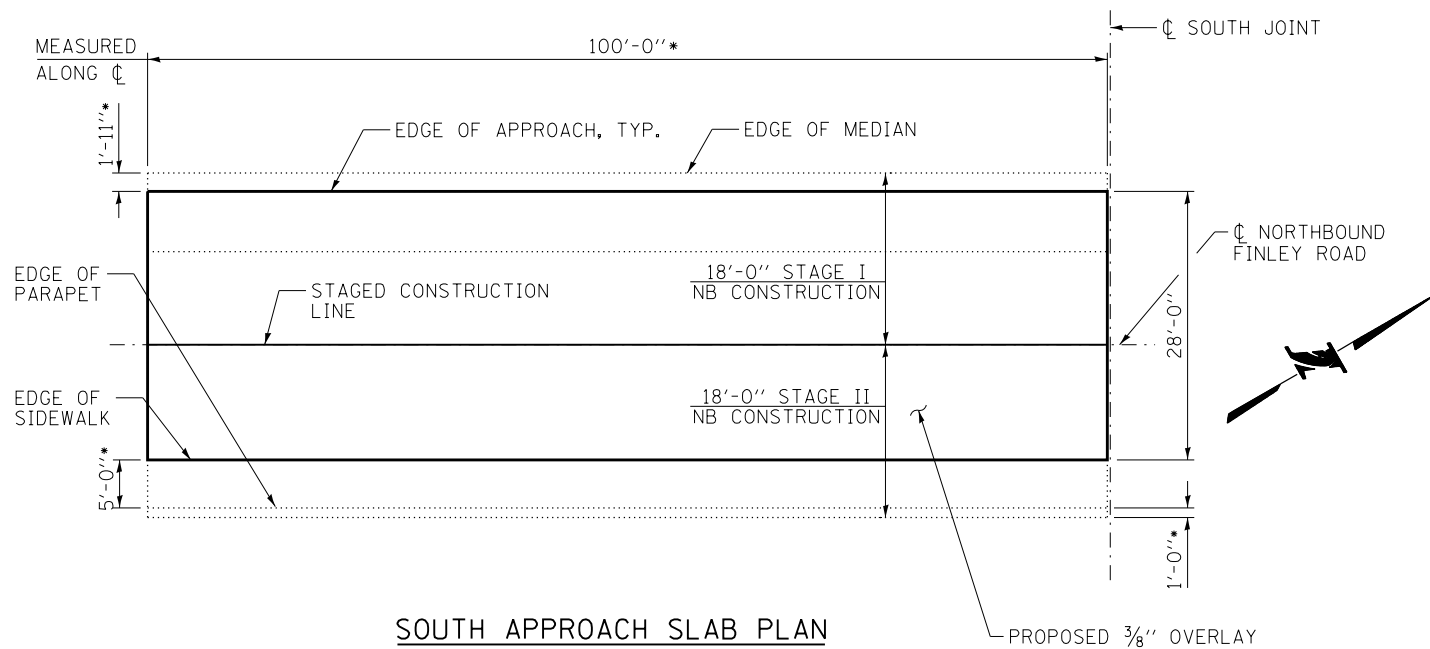
SK-18 OF SK-28
 SHT NO. SK-18
 DRAWING NO. 1252 OF 1517



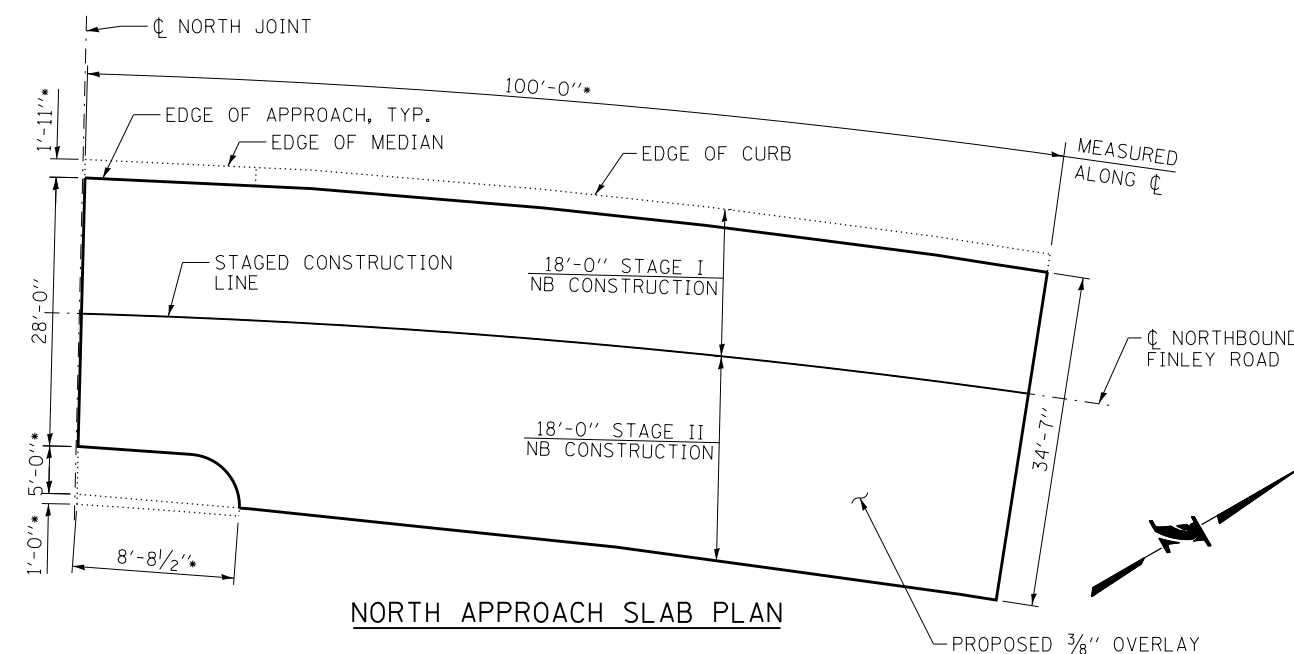
INSIDE FACE OF WEST MEDIAN
(LOOKING WEST)



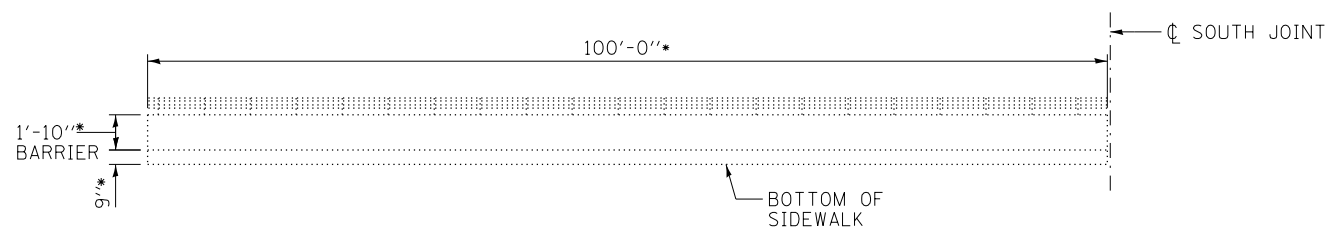
INSIDE FACE OF WEST MEDIAN
(LOOKING WEST)



SOUTH APPROACH SLAB PLAN



NORTH APPROACH SLAB PLAN



INSIDE FACE OF EAST SIDEWALK & BARRIER
(LOOKING EAST)



INSIDE FACE OF EAST SIDEWALK & BARRIER
(LOOKING EAST)

NOTES:

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*APPLY CONCRETE CRACK SEALANT ON PARAPET TRAFFIC FACE, TOP OF SIDEWALK AND TOP OF MEDIAN.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
BRIDGE DECK THIN POLYMER OVERLAY 3/8"	SQ. YD.	623
CONCRETE BRIDGE DECK SCARIFICATION 3/8"	SQ. YD.	623
RAISED PAVEMENT LANE MARKER REMOVAL	EACH	5
RAISED PAVEMENT LANE MARKER	EACH	5
APPLY CONCRETE SEALANT	SQ. FT.	1,471

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DRAWN BY SBA DATE 3/11/2018
 CHECKED BY BWS DATE 3/11/2018

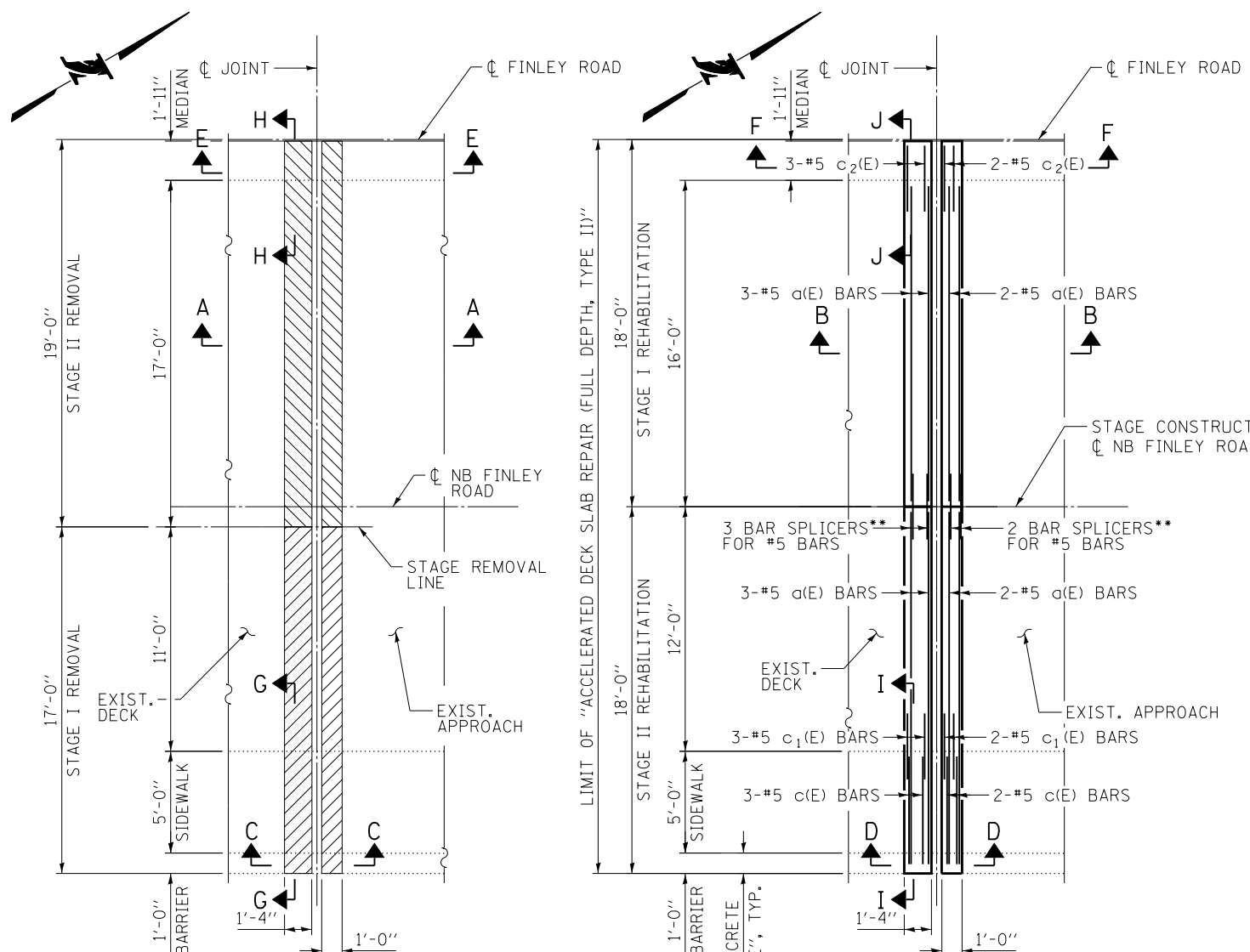


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NO.	DATE	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 APPROACH SLAB REPAIRS

SK-19 OF SK-28
 SHT NO. SK-19
 DRAWING NO.
 1253 OF 1517

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REMOVAL PLAN

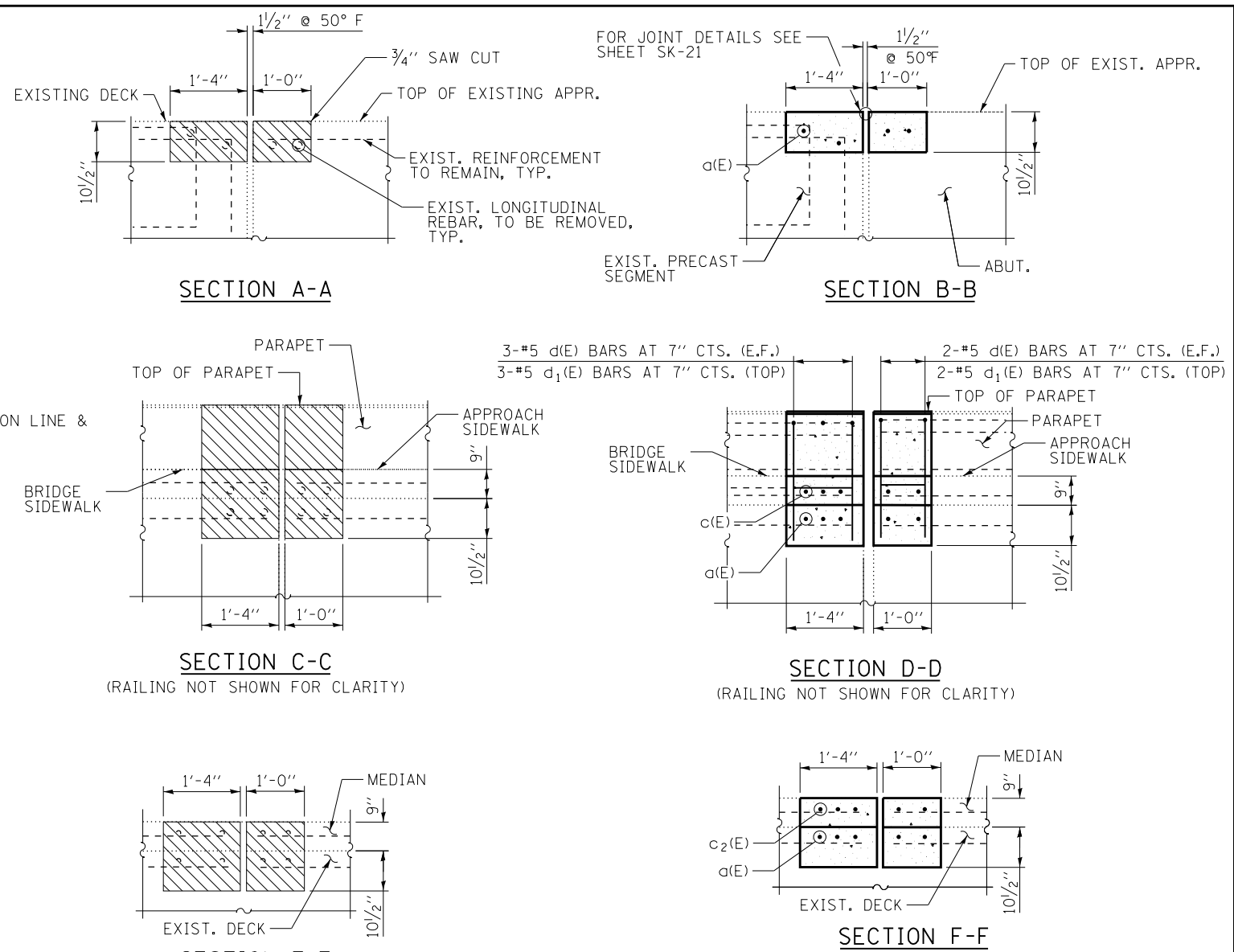
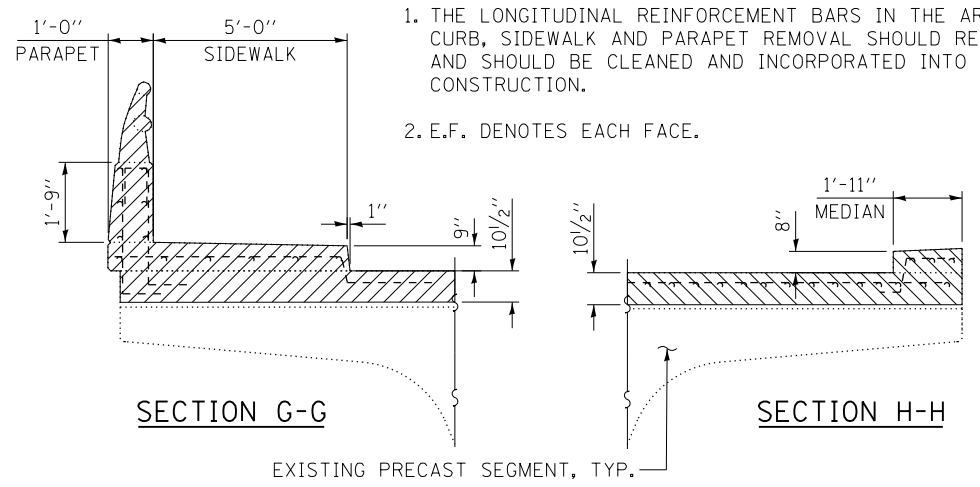
NORTH ABUTMENT SHOWN.
S. ABUT. SIMILAR BY 180° ROTATION.

REPLACEMENT PLAN

NORTH ABUTMENT SHOWN.
S. ABUT. SIMILAR BY 180° ROTATION.
**FOR BAR SPLICERS DETAILS, SEE SHEET SK-23

NOTES

1. THE LONGITUDINAL REINFORCEMENT BARS IN THE AREA OF SLAB, CURB, SIDEWALK AND PARAPET REMOVAL SHOULD REMAIN IN PLACE AND SHOULD BE CLEANED AND INCORPORATED INTO THE NEW CONSTRUCTION.
2. E.F. DENOTES EACH FACE.



LEGEND

- [Hatched Box] STAGE I CONCRETE REMOVAL
- [Hatched Box] STAGE II CONCRETE REMOVAL

REINFORCEMENT BAR LIST

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	20	#5	17'-8"	—
c(E)	10	#5	5'-7"	—
c1(E)	10	#5	3'-4"	⌋
c2(E)	10	#5	4'-7"	⌋
d(E)	20	#5	4'-9"	L
d1(E)	10	#5	1'-10"	⌋

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
ACCELERATED DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SO. YD.	19
CONCRETE REMOVAL	CU. YD.	10.9
REINFORCEMENT BARS, EPOXY COATED	POUND	630
CONCRETE SUPERSTRUCTURE	CU. YD.	2.4

QUANTITIES INCLUDE BOTH ABUTMENTS.

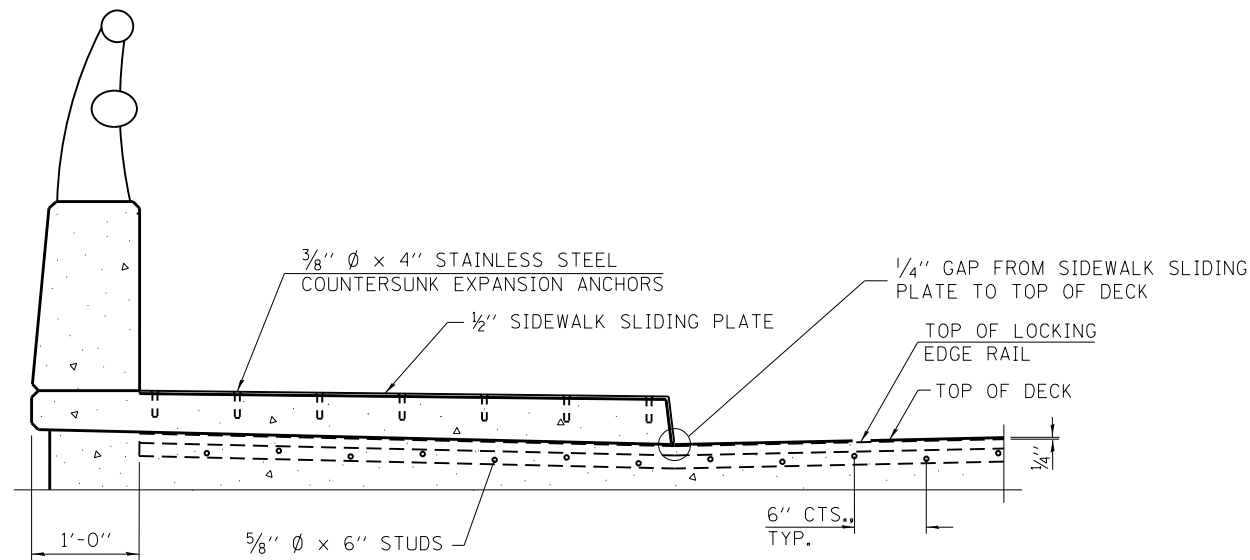
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CHECKED BY BWS DATE 3/11/2018



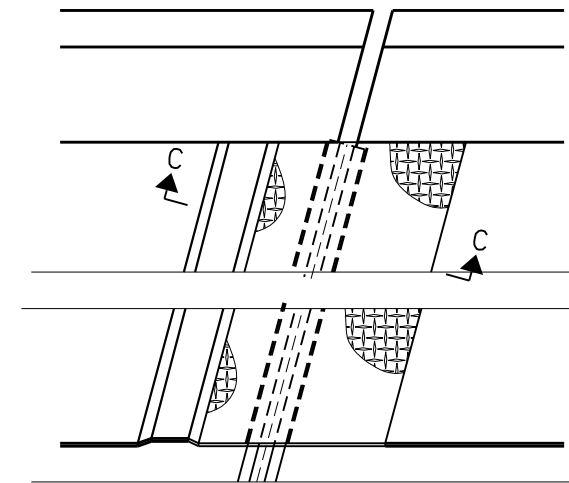
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NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
BRIDGE 1435 (NB FINLEY) S.N. 022-9968
EXPANSION JOINT REPLACEMENT

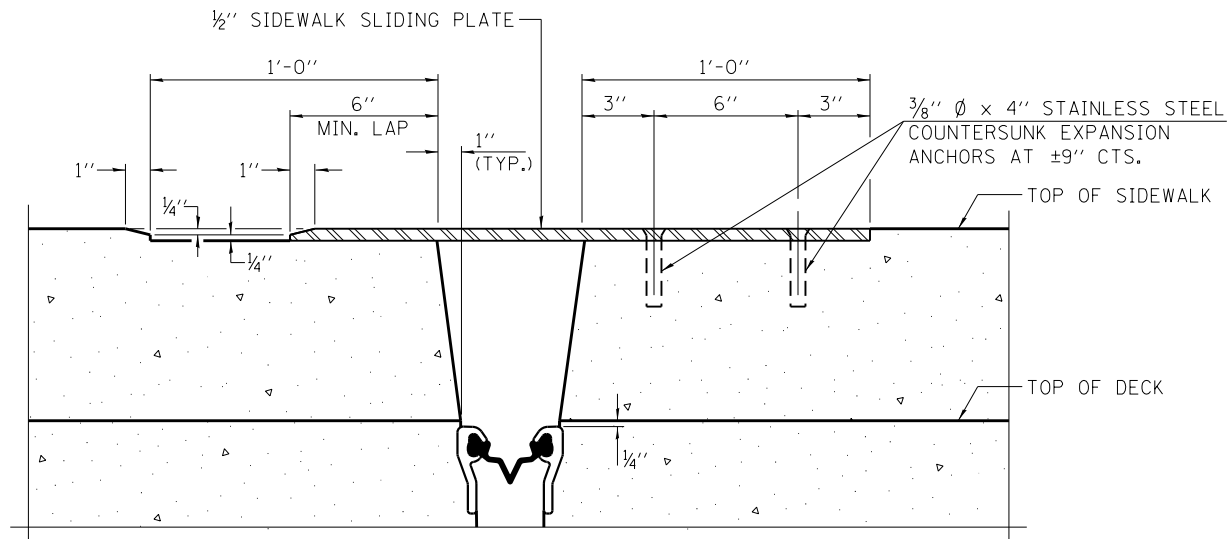
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SHT NO. SK-20
DRAWING NO. 1254 OF 1517



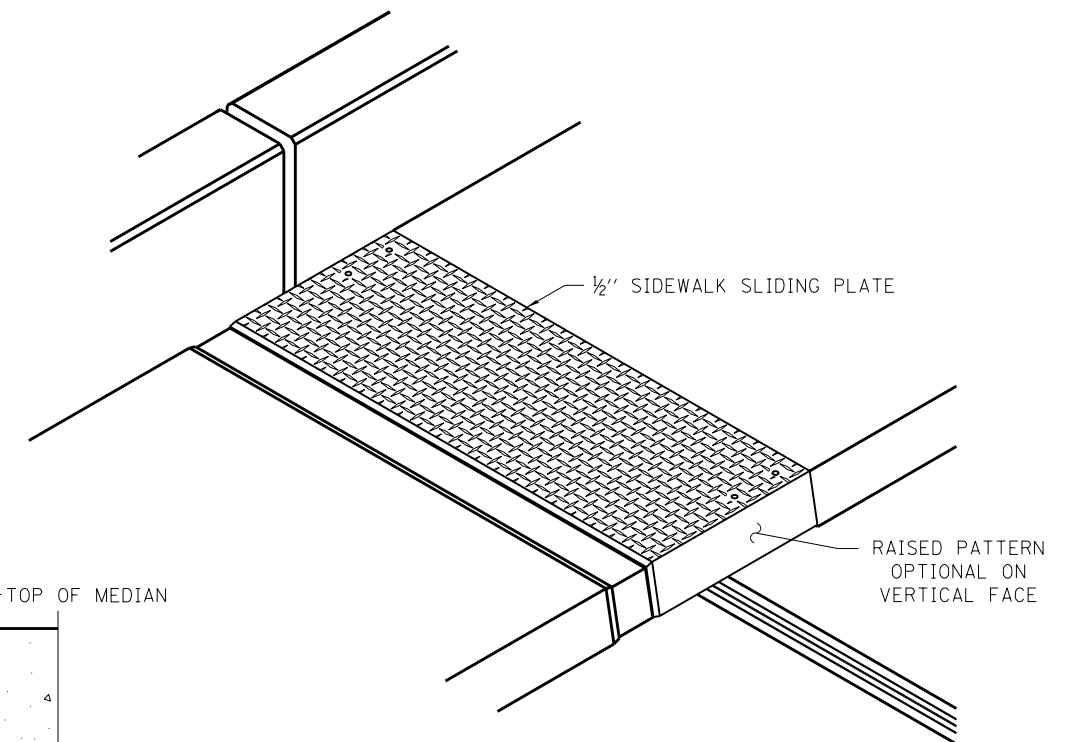
ELEVATION AT RAISED SIDEWALK



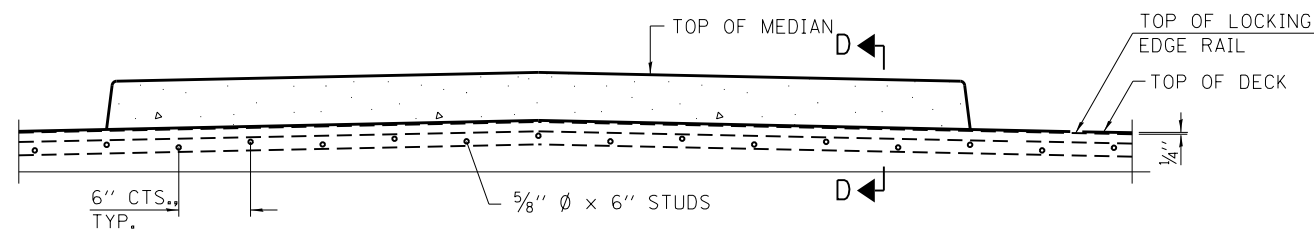
PLAN AT RAISED SIDEWALK



SECTION C-C

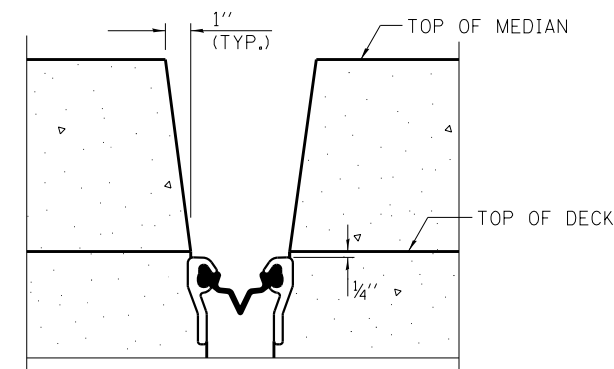


TRIMETRIC VIEW



ELEVATION AT MEDIAN

FOR SKEWS > 30°, CHAMFER ACUTE CORNERS 2" SIMILAR TO SIDEWALK.



SECTION D-D

(AT RT. □'S)

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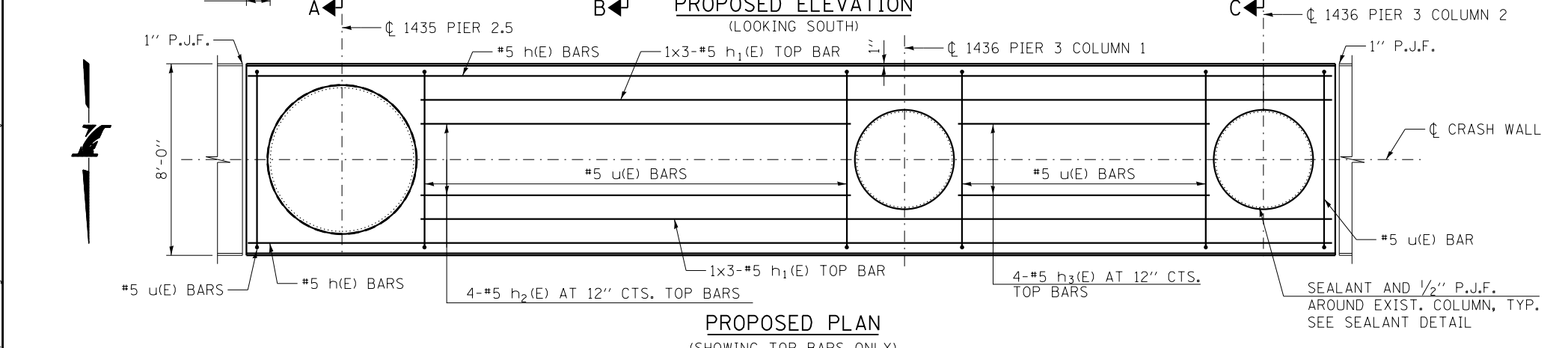
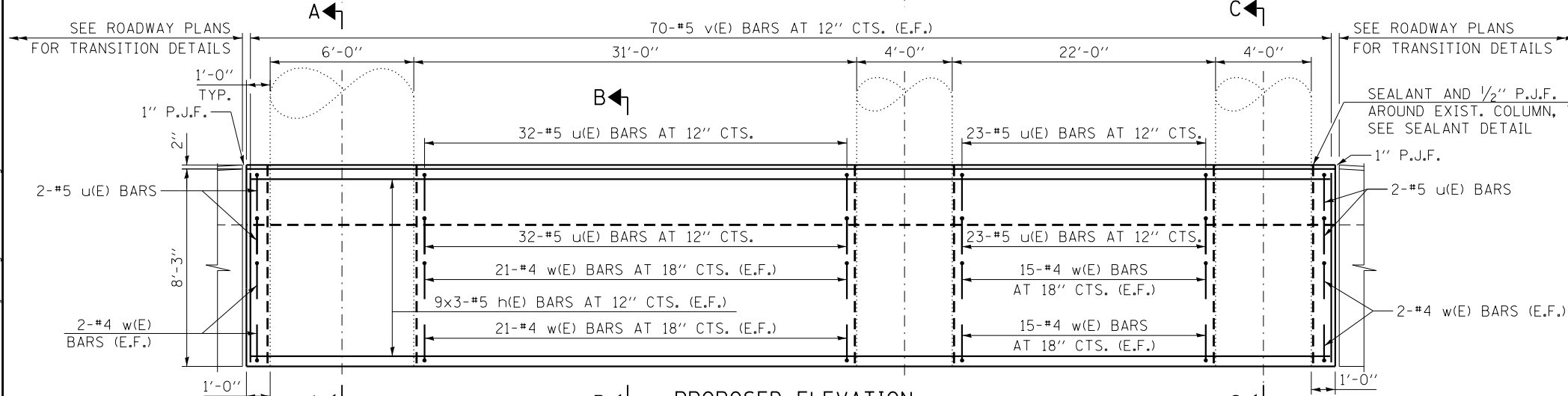
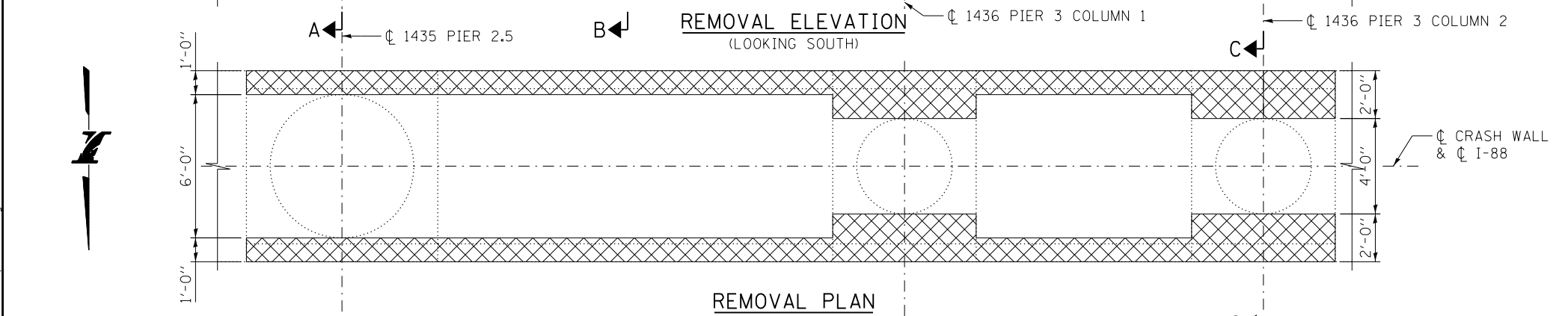
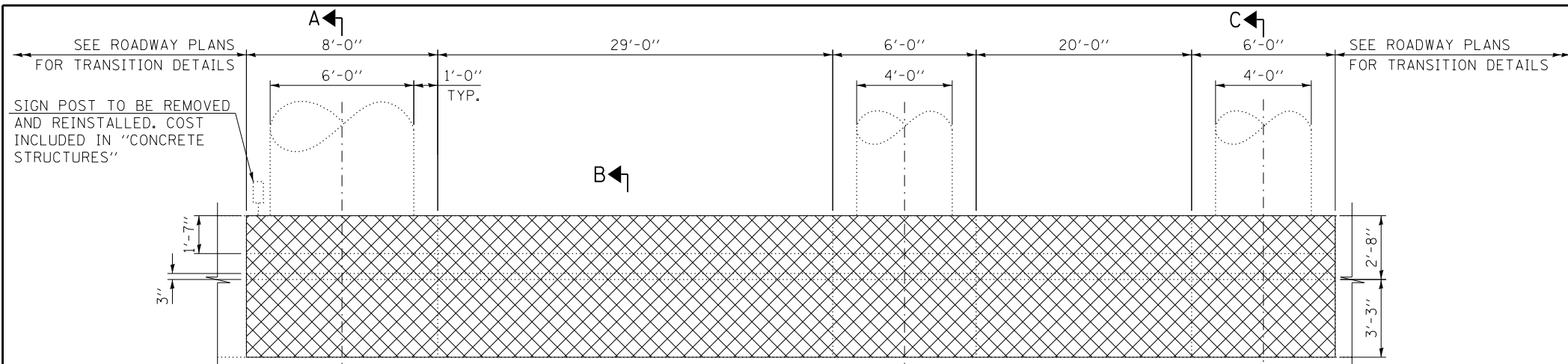
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 Fax 773.775.4014
 Email: chicago@ciorba.com

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 2700 OGDEN AVENUE
 DOWNERS GROVE,
 ILLINOIS 60515

REVISIONS		DESCRIPTION
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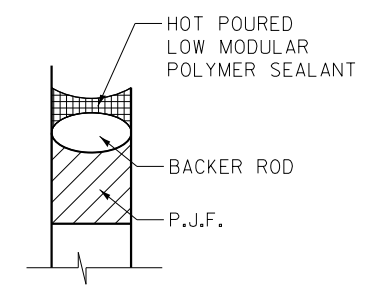
CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 PREFORMED JOINT STRIP SEAL II

SK-22 OF SK-28
 SHT NO. SK-22
 DRAWING NO.
 1256 OF 1517



NOTES:

1. REMOVE EXISTING CONCRETE CRASH WALL BACK TO FACE OF COLUMNS PRIOR TO PLACING CONCRETE AROUND EXISTING CRASH WALL AND COLUMNS. SURFACES TO RECEIVE NEW CONCRETE SHALL BE BLAST CLEANED. COST OF CLEANING SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL.
2. CONCRETE MEDIAN BARRIER TRANSITION TAPER LENGTHS, PAY LIMITS AND MEASUREMENT, AND BASIS OF PAYMENT ALL IN ACCORDANCE WITH THE ILLINOIS TOLLWAY STANDARD DRAWING C13, C14 AND THE SPECIAL PROVISIONS.
3. THE CLEAR COVER FOR REINFORCEMENT BARS TO THE SURFACE OF CONCRETE SHALL BE 2" UNLESS OTHERWISE SHOWN.
4. REINFORCEMENT BARS DESIGNATED "E" SHALL BE EPOXY COATED.
5. EXPOSED CONCRETE EDGES SHALL HAVE 3/4"x45° CHAMFERS. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
6. CONCRETE SEALANT SHALL BE APPLIED TO THE EXPOSED SURFACES OF ALL NEW AND/OR MODIFIED PIER CRASH WALLS.
7. E.F. DENOTES EACH FACE.
8. SEE SHEET SK-27 FOR BILL OF MATERIAL AND BAR BENDING DIAGRAM.
9. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET SK-28.
10. BARS NOTED THUS, 3x2-#5 INDICATED 3 LINES OF BARS WITH 2 LENGTHS OF BARS PER LINE.



SEALANT DETAIL

MIN. BAR LAP
#5 BAR = 3'-6"

LEGEND



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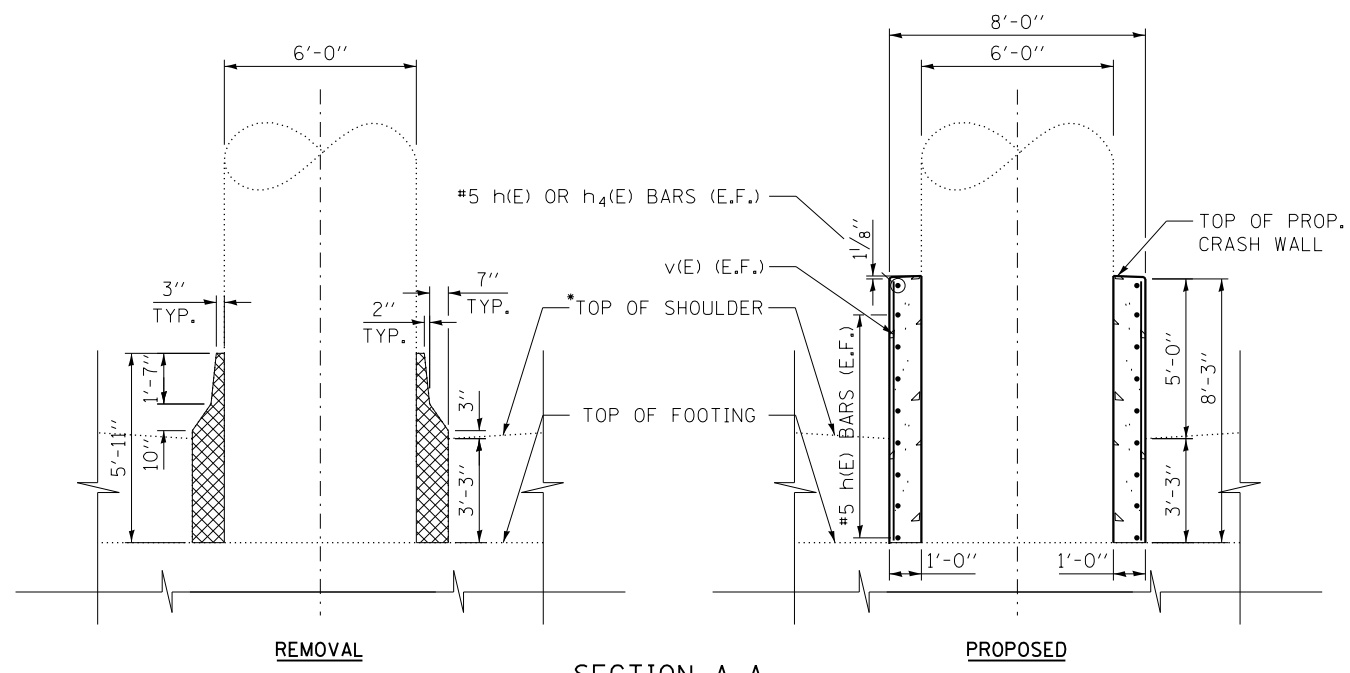
THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
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 DOWNERS GROVE,
 ILLINOIS 60515

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NO.	DATE	DESCRIPTION	

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 PIER 2.5 CRASH WALL MODIFICATION

SK-26 OF SK-28
 SHT NO. SK-26
 DRAWING NO.
 1260 OF 1517

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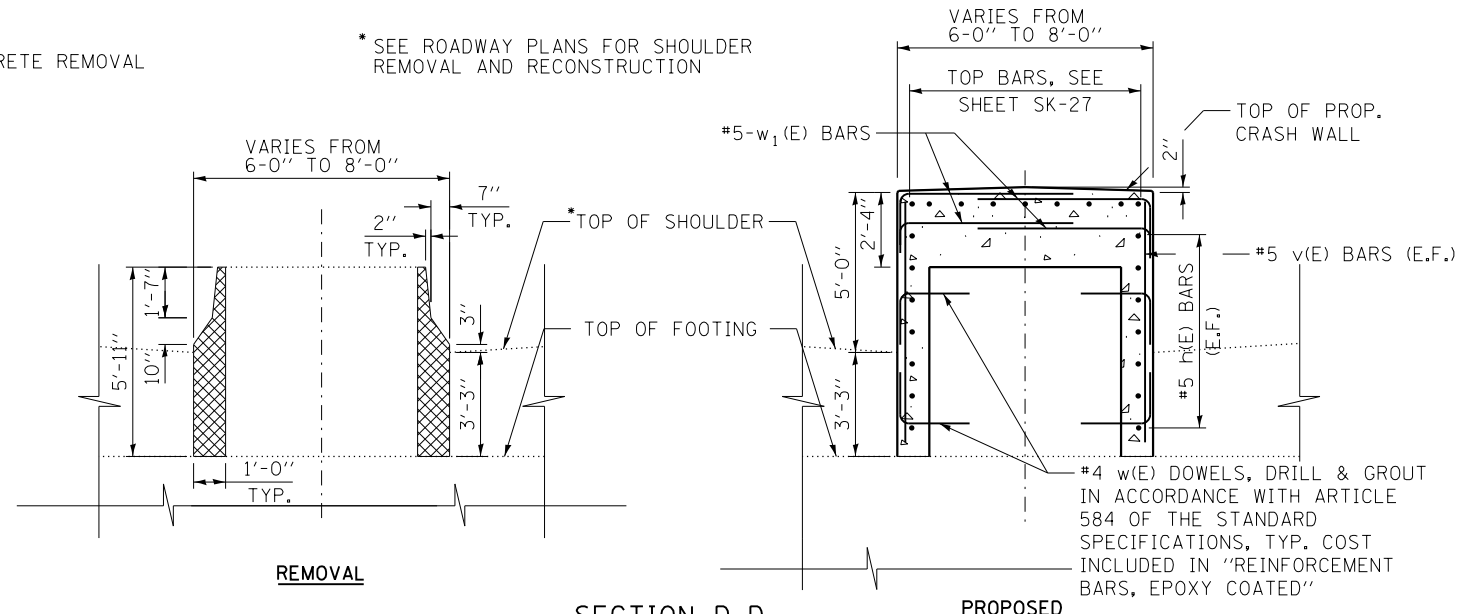


SECTION A-A

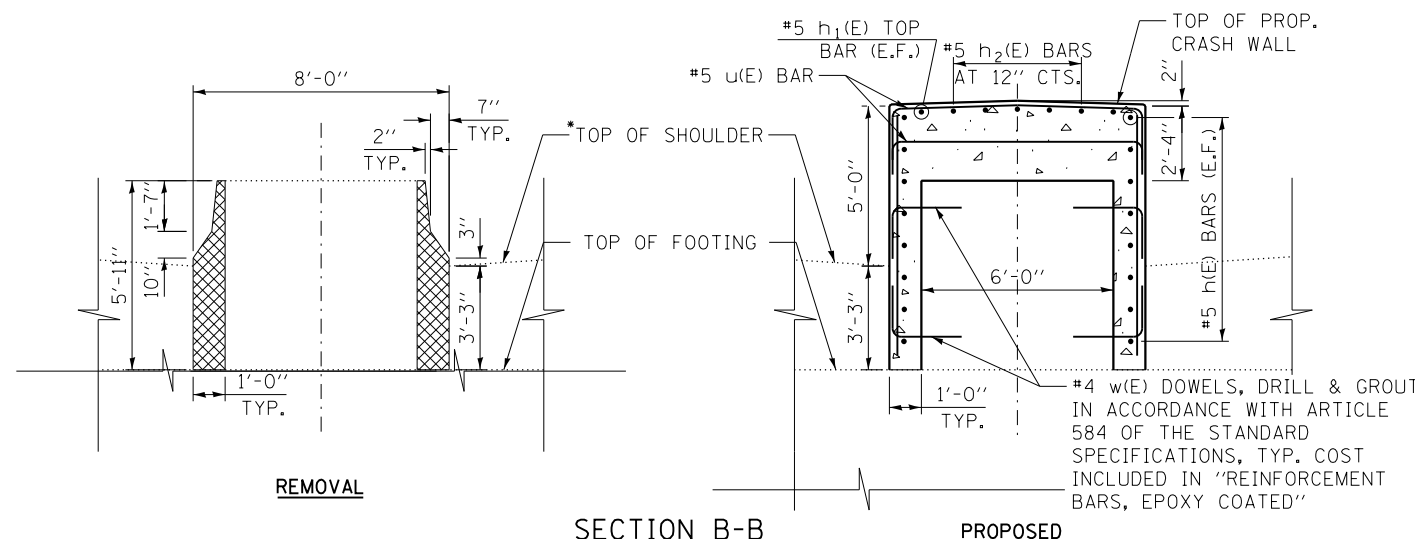
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☒ CONCRETE REMOVAL

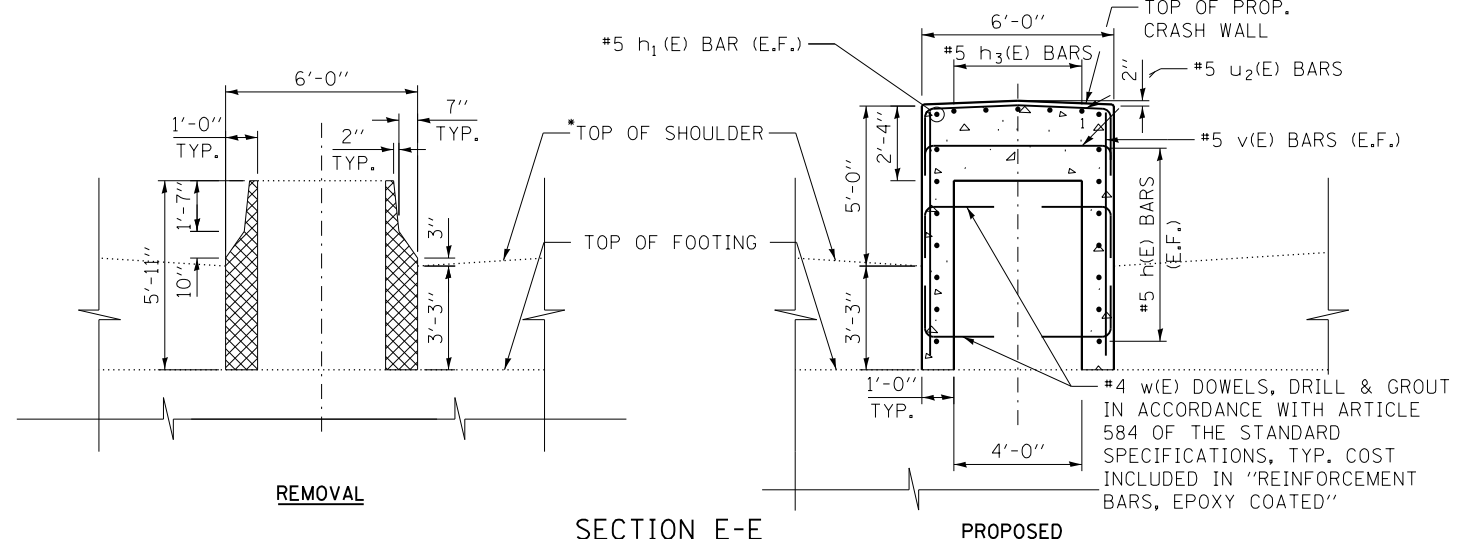
* SEE ROADWAY PLANS FOR SHOULDER REMOVAL AND RECONSTRUCTION



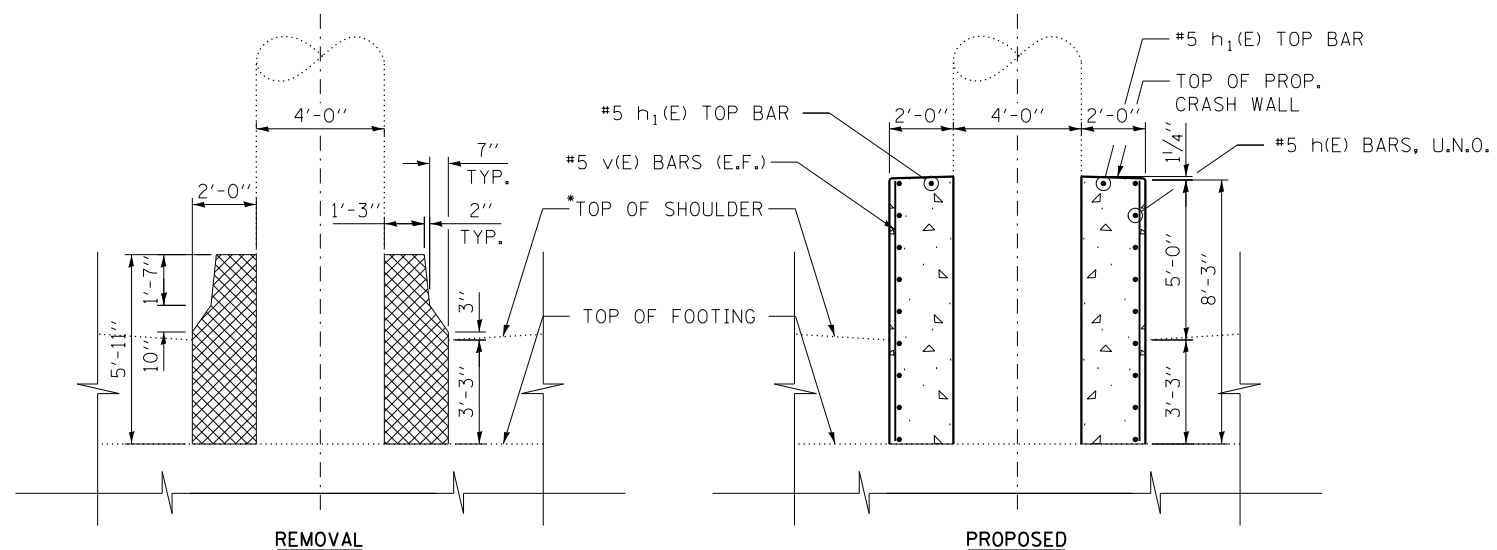
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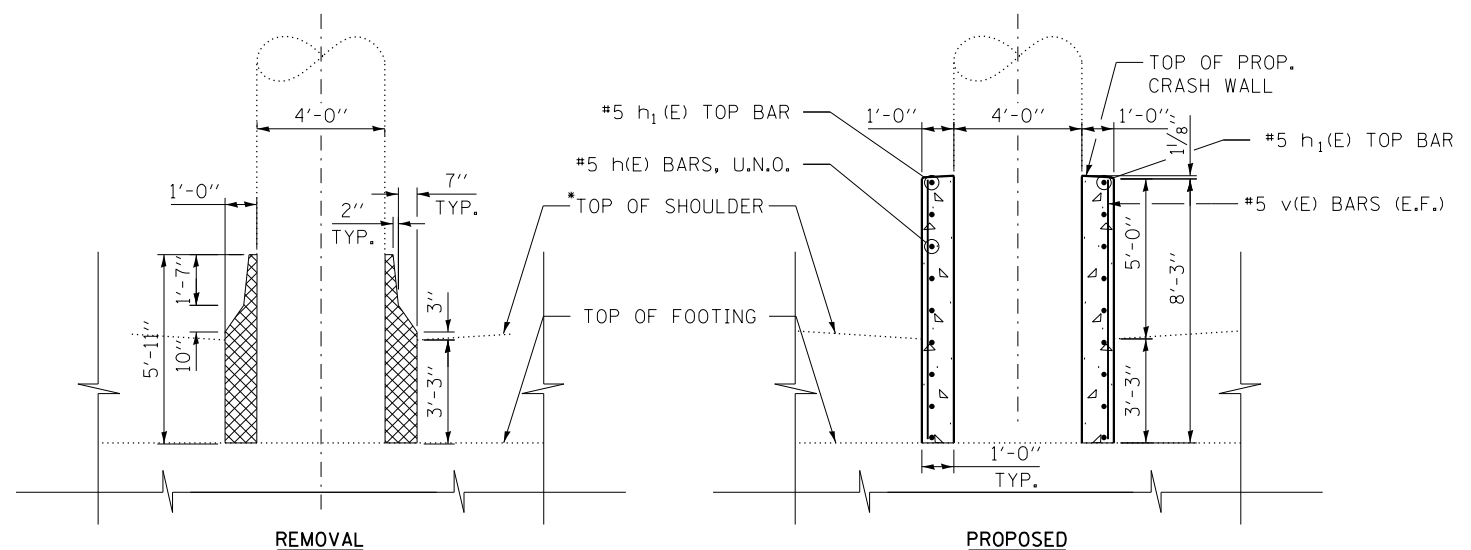
SECTION B-B



SECTION E-E



SECTION C-C



SECTION F-F

DRAWN BY SBA DATE 3/11/2018
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REVISIONS	
NO.	DESCRIPTION

CONTRACT NO. RR-16-4255
 BRIDGE 1435 (NB FINLEY) S.N. 022-9968
 CRASH WALL MODIFICATION DETAILS

SK-28 OF SK-28
 SHT NO. SK-28
 DRAWING NO. 1262 OF 1517