

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SPECIFICATIONS

Design: Load Factor Design per AASHTO Standard Specifications for Highway Bridges, 17th Edition 2002 and Interim Specifications through March 2005.

DESIGN LOADING

Live LoadH20
Site Specific Load Posting

TRAFFIC DATA

Current (2005) AADT3,470
Future (2025) AADT5,210
DHV - % of AADT12%
Design Hour Volume625
Heavy Trucks (% of AADT)7%
Heavy Trucks (% of DHV)5%
Directional Distribution (% of DHV)50%
18 kip Equivalent P 2.0104
18 kip Equivalent P 2.5100
Design Speed (mph)25

HYDROLOGIC DATA*

Mean Higher High Water (MHHW)6.4 ft
Mean High Water (MHW)5.3 ft
Mean Tide Level (MTL)0.3 ft
Mean Low Water (MLW)-4.7 ft
Mean Lower Low Water (MLLW)-5.1 ft

* Elevations based on NVGD 29.

MATERIALS

Concrete (Using FiberClass LP (Self
Reinforced PolymerConsolidating
Stay-In-Place FormsConcrete)

Concrete (All Other)Class "A"

Epoxy Coated Reinforcing SteelAASHTO M284 (ASTM A775)

UTILITIES

Emera
FairPoint Communications
FHWA Aerodynamics Laboratory
Genex Systems
MaineDOT Bridge Maintenance
MaineDOT Electrical Department
Time Warner Cable

BASIC DESIGN STRESSES

Concrete (Self Consolidating)5,000 PSI
Concrete (All Other)4,350 PSI

MAINTENANCE OF TRAFFIC

Traffic to be maintained during construction. Contractor will not be allowed to place equipment or obstructions on the bridge deck.

LIST OF DRAWINGS

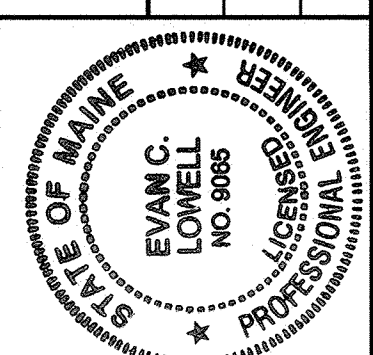
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DEER ISLE-SEDGWICK
HANCOCK COUNTY
DEER ISLE-SEDGWICK BRIDGE
OVER
EGGEMOGGIN REACH
STATE ROUTE 15
PROJECT LENGTH 0.539 mi.
BRIDGE SUBSTRUCTURE REHABILITATION
BRIDGE NO. 3257

AS-BUILTS

PROJECT LOCATION:	Deer Isle-Sedgwick Bridge which carries State Route 15 over Eggemoggin Reach. Lat./Long. 44°17'39" N 68°41'19" W
PROGRAM AREA:	Bridge Program
OUTLINE OF WORK:	Bridge Substructure Rehabilitation

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
	COMMISSIONER: [Signature] CHIEF ENGINEER: [Signature]	3/31/15



[Signature]
SIGNATURE
0065
P.E. NUMBER
3.17.2015
DATE

PROJECT INFORMATION	
PROGRAM	BRIDGE
PROJECT MANAGER	A. LATHE
DESIGNER	E. LOWELL
CONSULTANT	TRANSYSTEMS
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

DEER ISLE-SEDGWICK DEER ISLE-SEDGWICK BRIDGE	TITLE SHEET
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SHEET NUMBER
1
OF 13



Date:3/17/2015

Username: A. LATHE

Division: BRDCE

Filename:\Bridge\Drawings\001_Title.dgn

WIN 20498.00

HP-2049(800)

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
202.1721	PIER METAL STAY-IN-PLACE FORM DEMOLITION (15 T)	1	LS
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	1,179	3,000 LB
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	275	3,000 LB
503.17	MECHANICAL / WELDED SPLICE	28	50 EA
511.07	COFFERDAM - PIER 6	1	LS
511.07	COFFERDAM - PIER 7	0	1 LS
515.20	PROTECTIVE COATING FOR CONCRETE SURFACES	1,490	700 SY
518.50	REPAIR OF UPWARD FACING SURFACES - TO REINFORCING STEEL, < 8 INCHES	171	50 SF
518.52	REPAIR OF UPWARD FACING SURFACES ≥ 8 INCHES	1	5 CY
518.60	REPAIR OF VERTICAL SURFACES < 8 INCHES	646	500 SF
518.61	REPAIR OF VERTICAL SURFACES ≥ 8 INCHES	1	10 CY
518.70	REPAIR OF OVERHEAD SURFACES < 8 INCHES	22	30 SF
518.71	REPAIR OF OVERHEAD SURFACES ≥ 8 INCHES	0.5	5 CY
518.80	CRACK REPAIR	1,103	600 LF
530.341	FIBER REINFORCED POLYMER STAY-IN-PLACE FORM (1,500 SF)	1	LS
531.211	PIER PATCHING	160	150 CF
531.221	PIER STRENGTHENING	549	800 CF
652.35	CONSTRUCTION SIGNS	104	350 SF
652.361	MAINTENANCE OF TRAFFIC (15 CALENDAR DAYS)	1	LS
652.38	FLAGGER	21.5	400 HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	3	2 EA
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

506.142	Field Painting of Structural Steel	1	LS
639.19	Field Office Type B, Modified	1	EA
236.90	Laborer, Hal	5	HR
631.34	Stone Saw Rental (Inc Operator)	6	HR
511.07	Cofferdam Pier 3	1	LS
629.05	Hand Labor, Straight Time	34	HR
629.08	Laborer, Painter, Fine Material	4	HR
631.34	Autopositioning of Operator	5	HR

1. CONSTRUCTION IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS, NOVEMBER 2014 AND "STANDARD DETAILS," NOVEMBER 2014 INCLUDING ALL SUPPLEMENTAL SPECIFICATIONS AND THE SPECIAL PROVISIONS OF THIS CONTRACT.

2. DIMENSIONS, ANGLES, STATIONING AND ELEVATIONS SHOWN ON EXISTING DETAILS ARE TAKEN FROM THE CONSTRUCTION DRAWINGS DATED SEPTEMBER 14, 1937 THROUGH JUNE 24, 1939 SUPPLEMENTED BY LIMITED FIELD MEASUREMENTS AND ARE NOT GUARANTEED TO BE CORRECT. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS, ANGLES, ELEVATIONS AND EXISTING DETAILS NECESSARY FOR THE COMPLETION OF ALL WORK BY FIELD MEASUREMENTS AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY EXISTING FIELD CONDITIONS (I.E. MEMBER SIZES, PLATE SIZES, AND MEMBER CONFIGURATION) BY FIELD MEASUREMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF AND SHALL NOT COMMENCE ANY FABRICATION UNTIL HE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE AND THE SUBMITTED SHOP DRAWINGS HAVE BEEN APPROVED BY THE FABRICATION ENGINEER. SHOP DRAWINGS SHALL STATE THAT THE EXISTING DIMENSIONS, ANGLES, ELEVATIONS AND FIELD CONDITIONS HAVE BEEN FIELD VERIFIED BY THE CONTRACTOR.

3. ELEVATIONS FROM THE ORIGINAL DESIGN DRAWINGS, WHICH SERVE AS THE BASIS FOR ELEVATIONS SHOWN ON THESE CONTRACT PLANS AND SPECIFICATIONS, ARE ASSUMED TO BE REFERENCED TO VERTICAL DATUM NGVD 29.

4. ALL DIRT, RUST, SCALE, SLAG, PAINT, VEGETATION, MARINE GROWTH OR OTHER FOREIGN MATTER SHALL BE REMOVED FROM THE EXISTING STRUCTURE IN THE VICINITY OF ANY REPAIR WORK. THE COST OF ANY CLEANING OR MINOR MODIFICATIONS TO COMPONENTS OF THE EXISTING STRUCTURE SUCH AS GRINDING, WELDING OR DRILLING HOLES WHICH ARE REQUIRED TO ACCOMMODATE THE INSTALLATION OF NEW OR TEMPORARY ELEMENTS, AS DETAILED AND FABRICATED, SHALL BE CONSIDERED INCIDENTAL TO RELATED PAY ITEMS AND NO ADDITIONAL ALLOWANCE WILL BE MADE FOR SUCH WORK. ALL PROPOSED MODIFICATIONS TO EXISTING COMPONENTS WHICH ARE TO REMAIN AS PART OF THE FINISHED STRUCTURE SHALL BE SUBMITTED TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING THE WORK. IF THE CONTRACTOR'S OPERATIONS DAMAGE EXISTING MATERIALS TO REMAIN, REPAIRS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE. IF MAJOR REPAIRS DUE TO DAMAGE ARE REQUIRED, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE TESTING AND ENGINEERING DESIGN OF THOSE REPAIRS AT THE CONTRACTOR'S EXPENSE.

5. THE METAL PORTIONS OF THE EXISTING BRIDGE MAY BE COATED WITH A LEAD BASED PAINT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTAINMENT, PROPER MANAGEMENT, AND DISPOSAL OF ALL LEAD-CONTAMINATED HAZARDOUS WASTE GENERATED BY THE PROCESS OF REHABILITATING THE BRIDGE. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE OSHA MANDATED PERSONAL PROTECTION STANDARDS RELATED TO THIS PROCESS. ONCE AN EXISTING BRIDGE COMPONENT IS REMOVED, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CARE, CUSTODY, AND CONTROL OF THE COMPONENTS OF THE EXISTING BRIDGE AND ANY HAZARDOUS WASTE GENERATED AS A RESULT OF THE STORAGE, RECYCLING, OR DISPOSAL OF THE BRIDGE COMPONENTS, INCLUDING LEAD-COATED STEEL, WROUGHT IRON OR OTHER MATERIALS. THE CONTRACTOR SHALL RECYCLE OR REUSE THE STEEL IN ACCORDANCE WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTIONS'S "MAINE HAZARDOUS WASTE MANAGEMENT REGULATIONS" CHAPTER 850. A COPY OF THIS REGULATION IS AVAILABLE AT MAINE DOT'S OFFICES ON CHILD STREET IN AUGUSTA.

6. THE CONTRACTOR IS NOTIFIED THAT THE EXISTING BRIDGE HAS A POSTED LOAD RESTRICTION "TRUCKS AND BUSES OVER 20,000 LBS. G.V.W. MAINTAIN 500' SPACING." THE CONTRACTOR MUST ADHERE TO THE POSTED LOAD RESTRICTIONS AT ALL TIMES.

7. THE LOCATIONS OF THE EXISTING UTILITIES, BRIDGE WIRING AND WEATHER MONITORING INSTRUMENTS (I.E. "UTILITIES AND SPECIAL EQUIPMENT") SHOWN ON THESE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES AND SPECIAL EQUIPMENT PRIOR TO STARTING WORK. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AND SPECIAL EQUIPMENT DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SUPPORTS WHERE REQUIRED BY HIS OPERATIONS. TEMPORARY SUPPORTS SHALL BE APPROVED BY THE UTILITY OR SPECIAL EQUIPMENT OWNER PRIOR TO THEIR INSTALLATION AND USE. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO RELATED PAY ITEMS.

8. MATERIAL THAT IS SPECIFICALLY CALLED OUT ON THE PLANS AND IS NOT DESIGNATED AS EXISTING SHALL BE NEW MATERIAL.

9. ESTIMATED CONCRETE REPAIR QUANTITIES PROVIDED ON PLAN SHEETS 4 - 10 INCLUDE "IF & WHERE" LOCATIONS TO BE DETERMINED IN THE FIELD BY THE RESIDENT, AS NECESSARY.

10. DETERIORATED CONCRETE AND METAL REMOVED FROM THE BRIDGE BY THE CONTRACTOR SHALL BE CONSIDERED PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS.

11. THE CONTRACTOR WILL NOT BE PERMITTED TO USE THE BRIDGE ROADWAY FOR HIS OPERATIONS.

12. THROUGHOUT CONSTRUCTION, THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO SAFEGUARD HIS WORKERS AGAINST NAVIGATIONAL TRAFFIC AND OTHER HAZARDS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST FOR THE WORK ITEM BEING PERFORMED.

13. THE USE OF FALSEWORK, FORMWORK, RIGGING, SCAFFOLDING AS WELL AS OTHER CONSTRUCTION METHODS AND PROCEDURES SHALL BE SCHEDULED AND PERFORMED IN SUCH A WAY THAT IT SHALL NOT INTERFERE WITH OR CAUSE UNAUTHORIZED INTERRUPTIONS TO NAVIGATION. THE EXTENT AND LIMITS OF ENCROACHMENT, IF ANY, ON THE NAVIGATION CLEARANCES SHALL BE SUBMITTED TO THE USCG FOR APPROVAL. NO ENCROACHMENT SHALL BE CAUSED UNTIL WRITTEN AUTHORIZATION IS RECEIVED FROM THE USCG.

14. BIDDERS AND CONTRACTORS SHALL OBTAIN A COPY OF THE EXISTING BRIDGE PLANS BY CONTACTING THE DEPARTMENT. THE PLANS ARE REPRODUCTIONS OF THE ORIGINAL DRAWINGS AS PREPARED FOR THE CONSTRUCTION OF THE BRIDGE AS WELL AS BRIDGE REHABILITATION PROJECTS. THE EXISTING PLANS ARE CONSIDERED PART OF THE CONTRACT DOCUMENTS FOR THIS PROPOSED PROJECT. EXISTING PLANS MAY BE ACCESSED AT THE FOLLOWING WEB ADDRESS:
<http://www.maine.gov/mdot/comprehensive-list-projects/project-information.php>

15. ANY DAMAGE TO THE SLOPES CAUSED BY THE CONTRACTOR'S EQUIPMENT, PERSONNEL, OR OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT. THE COST OF ALL WORK, EQUIPMENT, AND MATERIALS REQUIRED TO MAKE REPAIRS SHALL NOT BE PAID FOR DIRECTLY. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO RELATED CONTRACT ITEMS. REPAIR WORK, IF NECESSARY, SHALL NOT BE DONE ON A LANE CARRYING TRAFFIC.

16. ALL EXISTING MATERIALS WHICH ARE REMOVED FROM THE WORK AREA SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE RESIDENT. THESE EXISTING MATERIALS INCLUDE, BUT ARE NOT LIMITED TO, CONCRETE, METAL STAY-IN-PLACE FORMS, REINFORCING STEEL, SILT AND OTHER DEBRIS ON OR ATTACHED TO THE STRUCTURE WITHIN THE WORK AREAS. THE COST OF REMOVAL AND DISPOSAL SHALL BE CONSIDERED INCIDENTAL TO RELATED PAY ITEMS.

17. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SEQUENCE IN WRITING TO THE RESIDENT FOR APPROVAL BEFORE STARTING WORK ON THIS PROJECT.

SUGGESTED SEQUENCE OF CONSTRUCTION

THE FOLLOWING CONSTRUCTION SEQUENCE IS INTENDED AS A SUGGESTION OF ONE FEASIBLE METHOD, IN ORDER TO PROVIDE A UNIFORM BASIS FOR BIDDING. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SEQUENCE IN WRITING TO THE RESIDENT FOR APPROVAL BEFORE STARTING WORK ON THIS PROJECT.

PIERS 2, 3, 6 AND 7

1. INSTALL COFFERDAMS AT PIERS 6 AND 7.
2. INSTALL MATS FOR ACCESS TO PIERS 2 AND 3.
3. INSTALL STAGING/SCAFFOLDING AT EACH PIER AS REQUIRED.
4. REMOVE EXISTING METAL STAY-IN-PLACE FORMS.
5. REMOVE EXISTING CONCRETE TO THE LIMITS SHOWN, AND TO REMOVE DETERIORATED CONCRETE.
6. REMOVE AND REPLACE DETERIORATED REINFORCING STEEL.
7. PLACE PATCH MATERIAL TO REPAIR DEEP VOIDS.
8. INSTALL FIBER REINFORCED POLYMER STAY-IN-PLACE FORMS.
9. PLACE SCC CONCRETE REPAIR MATERIAL.
10. PERFORM CONCRETE REPAIRS AND CRACK REPAIRS IN LOCATIONS ABOVE ELEVATION 8.0± AS REQUIRED.
11. PLACE PROTECTIVE COATING FOR CONCRETE SURFACES.
12. REMOVE STAGING/SCAFFOLDING AT EACH PIER.
13. REMOVE MATS INSTALLED FOR ACCESS TO PIERS 2 AND 3.
14. REMOVE COFFERDAMS AT PIERS 6 AND 7.

ABUTMENTS AND ANCHORAGES

1. PERFORM CONCRETE AND CRACK REPAIRS.
2. PLACE PROTECTIVE COATING FOR CONCRETE SURFACES.

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TWH



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

HP-2049(800)

WIN
20498.00

BRIDGE NO. 3257
BRIDGE PLANS

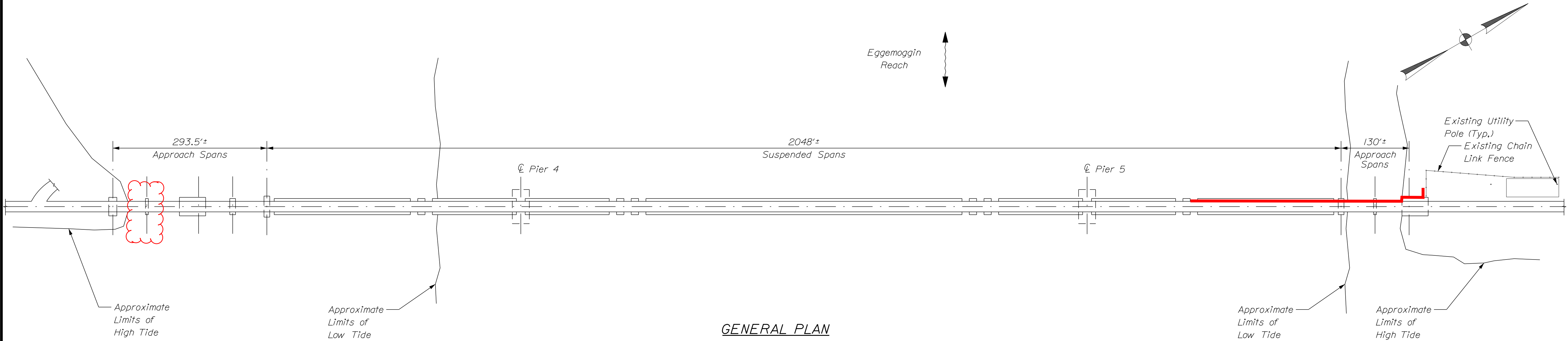
DEER ISLE-SEDGWICK BRIDGE
EGGEMOGGIN REACH
DEER ISLE-SEDGWICK HANCOCK COUNTY

ESTIMATED QUANTITIES
& GENERAL NOTES

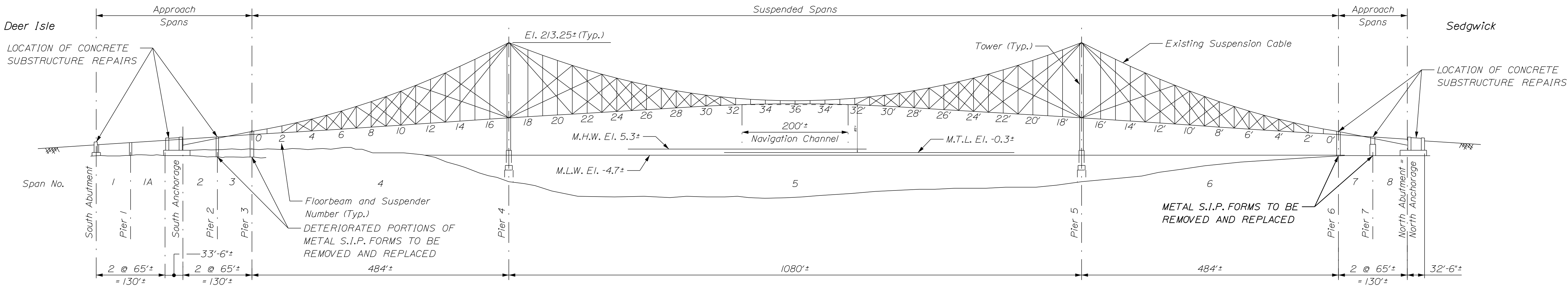
SHEET NUMBER

2

OF 13



GENERAL PLAN



GENERAL ELEVATION

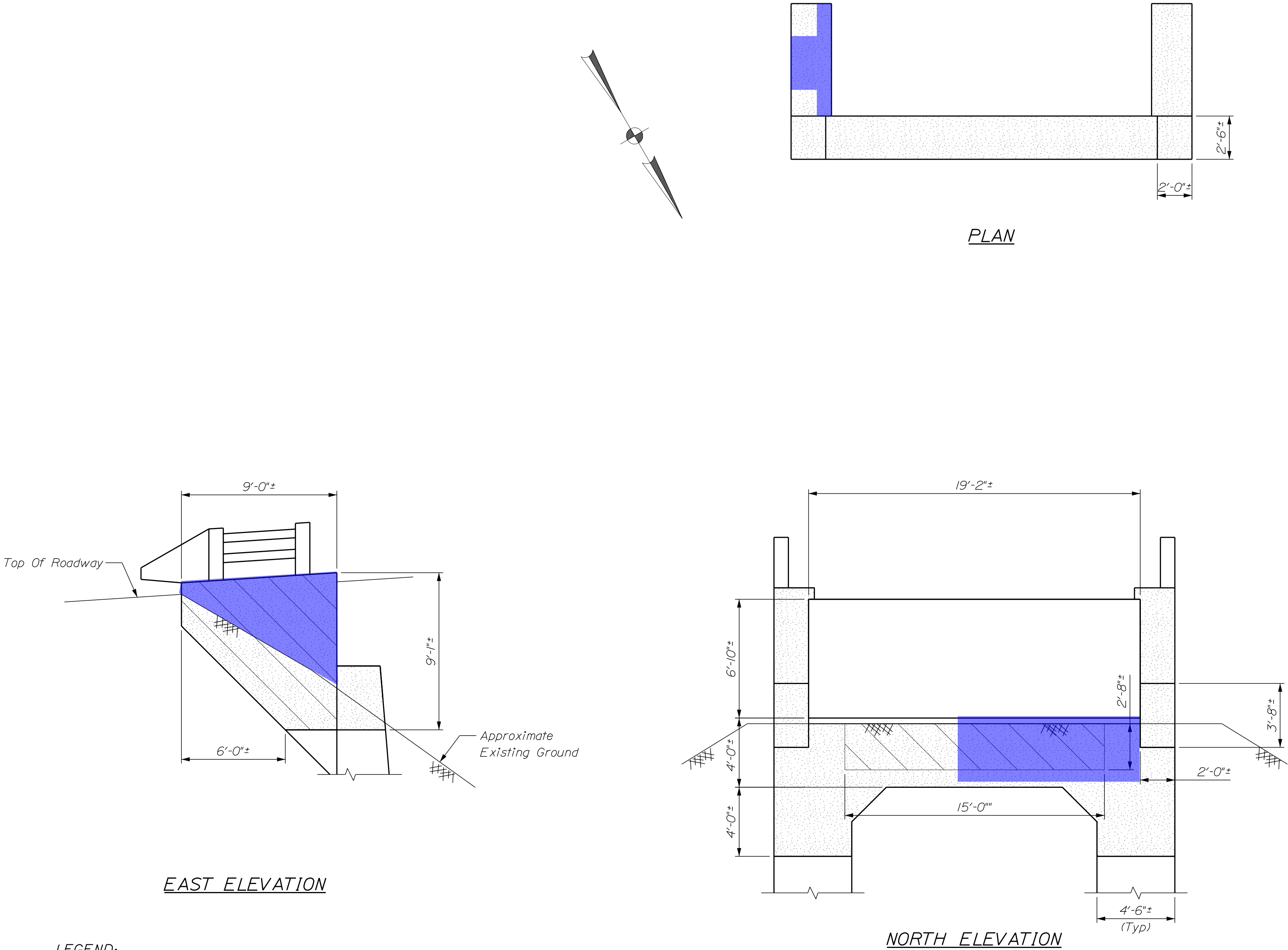
NOTES:

1. FOR GENERAL NOTES SEE SHEET 2.
2. FOR REPAIR QUANTITIES AND LOCATIONS AT EACH SUBSTRUCTURE UNIT SEE SHEETS 4 - 10.

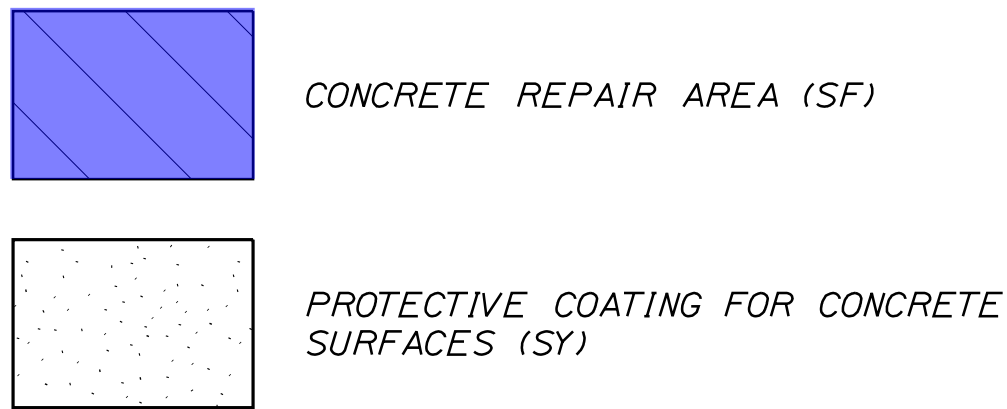
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TWH



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		HP-2049(800)		WIN		BRIDGE NO. 3257		20498.00		BRIDGE PLANS	
DEER ISLE-SEDGWICK BRIDGE		EGGEMOGGIN REACH		DEER ISLE-SEDGWICK HANCOCK COUNTY		GENERAL PLAN & ELEVATION		SHEET NUMBER		3		OF 13	
PROJ. MANAGER		A. LATHE		BY		C. DONOHUE		DATE		02/2015		SIGNATURE	
DESIGNED-DETAILED		E. LOWELL		T. STODOLIS		DATE		02/2015		P.E. NUMBER		DATE	
DESIGNED-DETAILED		K. BEAN		REVISIONS 1		REVISIONS 2		REVISIONS 3		REVISIONS 4		FIELD CHANGES	
DESIGNED-DETAILED		K. BEAN		REVISIONS 1		REVISIONS 2		REVISIONS 3		REVISIONS 4		FIELD CHANGES	

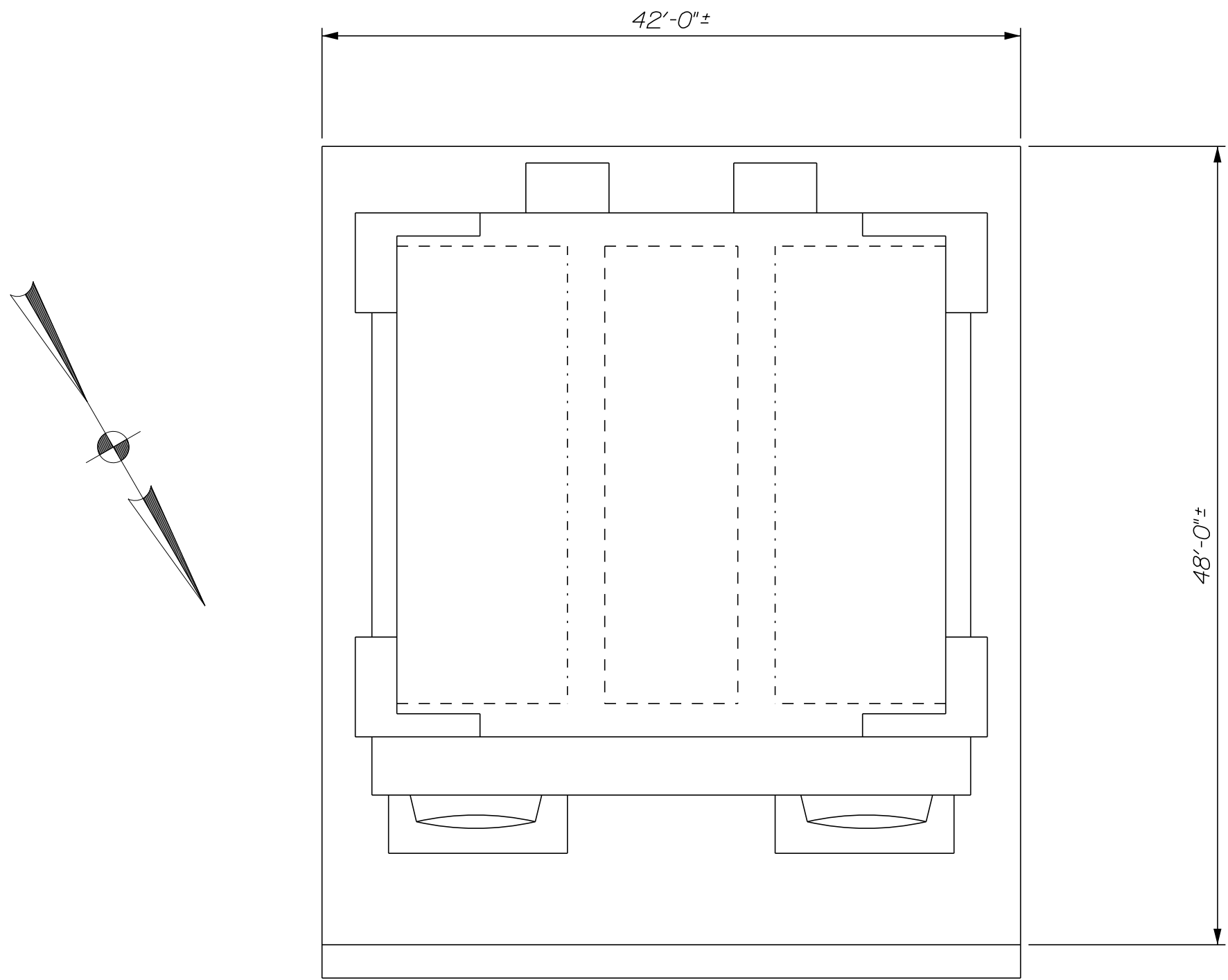


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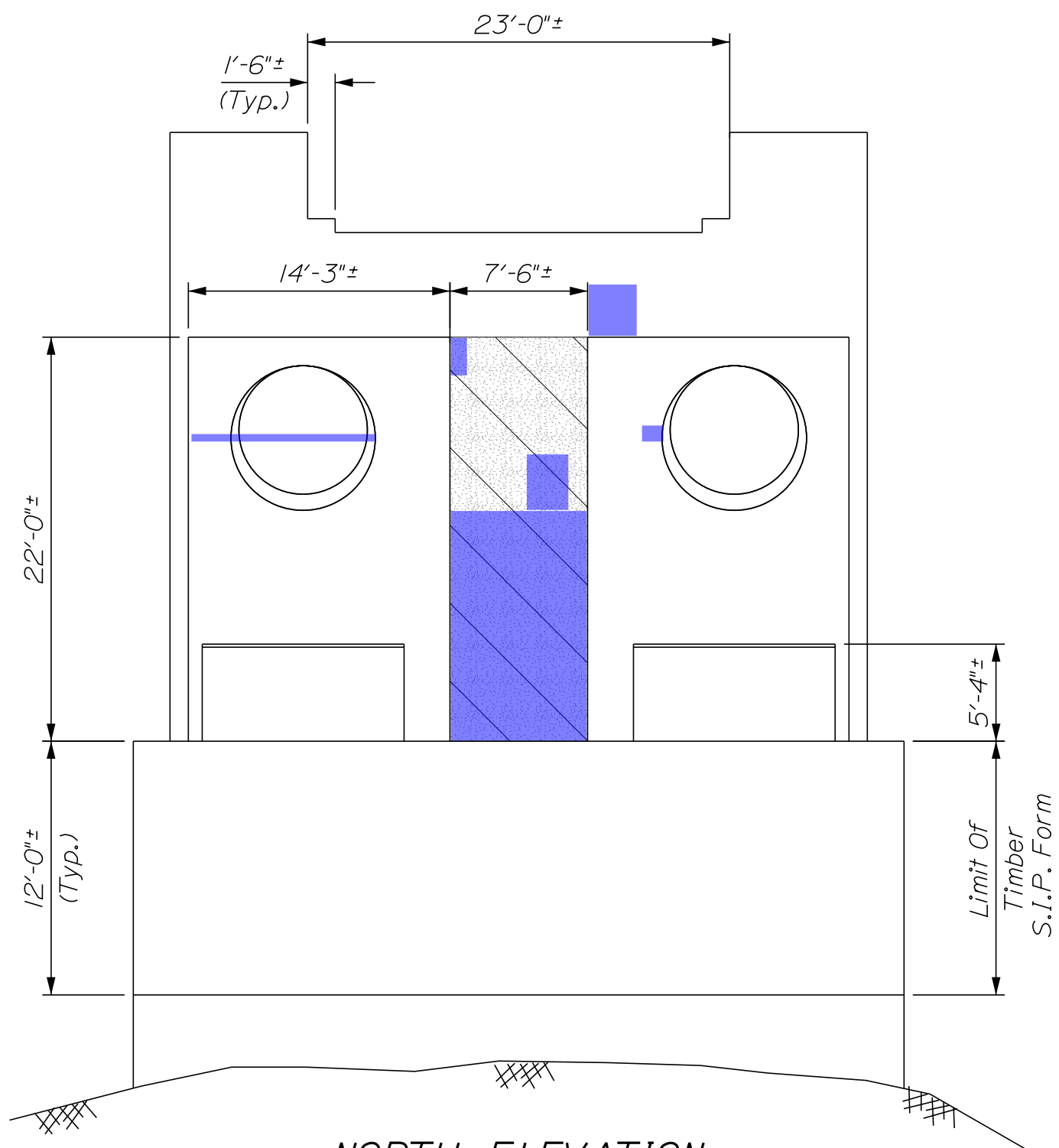


ESTIMATED CONCRETE REPAIR QUANTITIES	
UPWARD FACING SURFACES (ITEM 518.50)	0 SF
VERTICAL SURFACES (ITEM 518.60)	200 SF
OVERHEAD SURFACES (ITEM 518.70)	0 SF
PROTECTIVE COATING FOR CONCRETE SURFACES (515.20)	60 SY

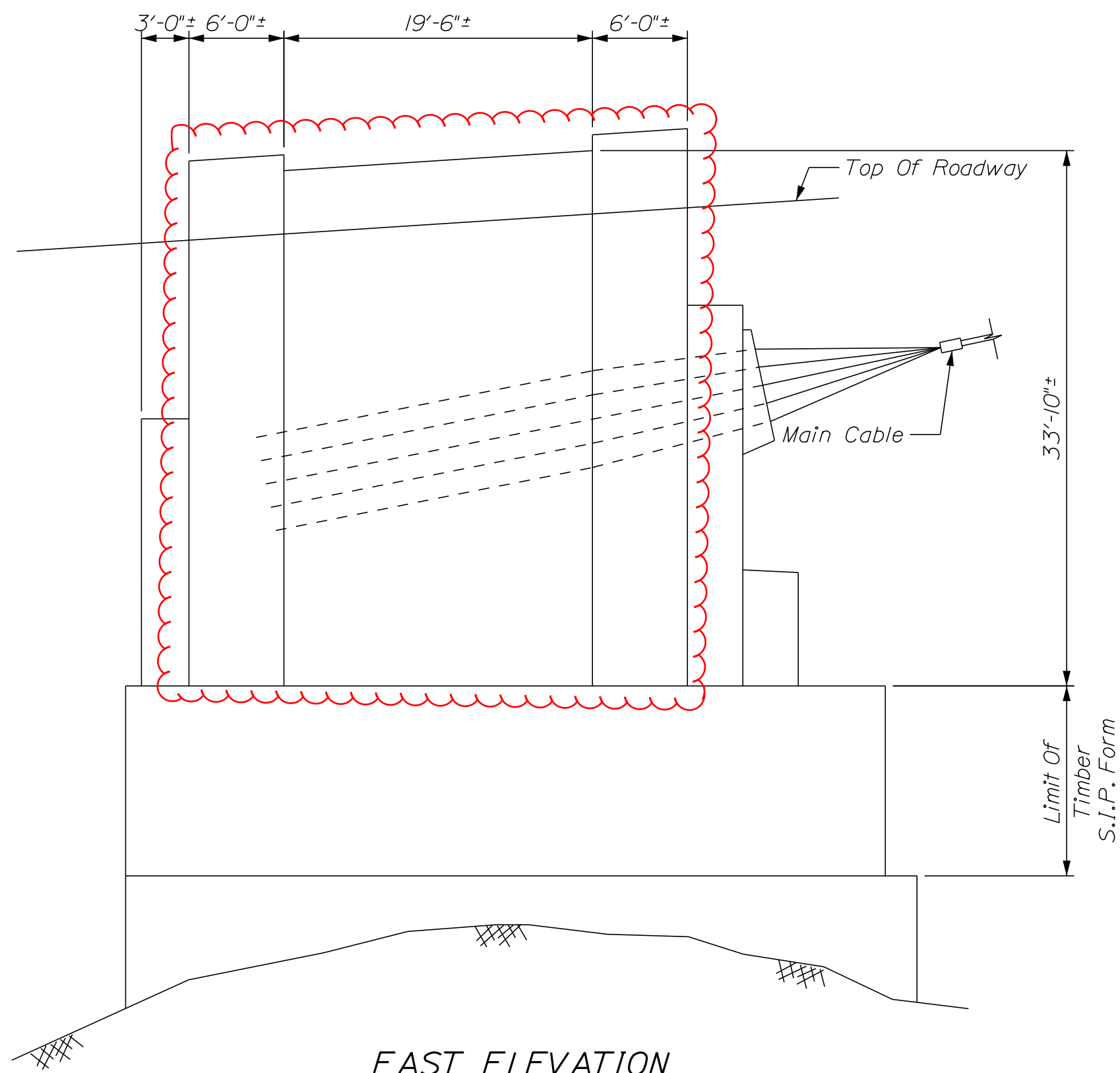
- NOTES:
- FOR GENERAL NOTES SEE SHEET 2.
 - FOR ABUTMENT LOCATION SEE SHEET 3.
 - FOR DEMOLITION AND TYPICAL REPAIR DETAILS SEE SHEET II.
 - ESTIMATED CONCRETE REPAIR QUANTITIES INCLUDE "IF & WHERE" LOCATIONS TO BE REPAIRED AS NECESSARY AS DETERMINED BY THE RESIDENT.



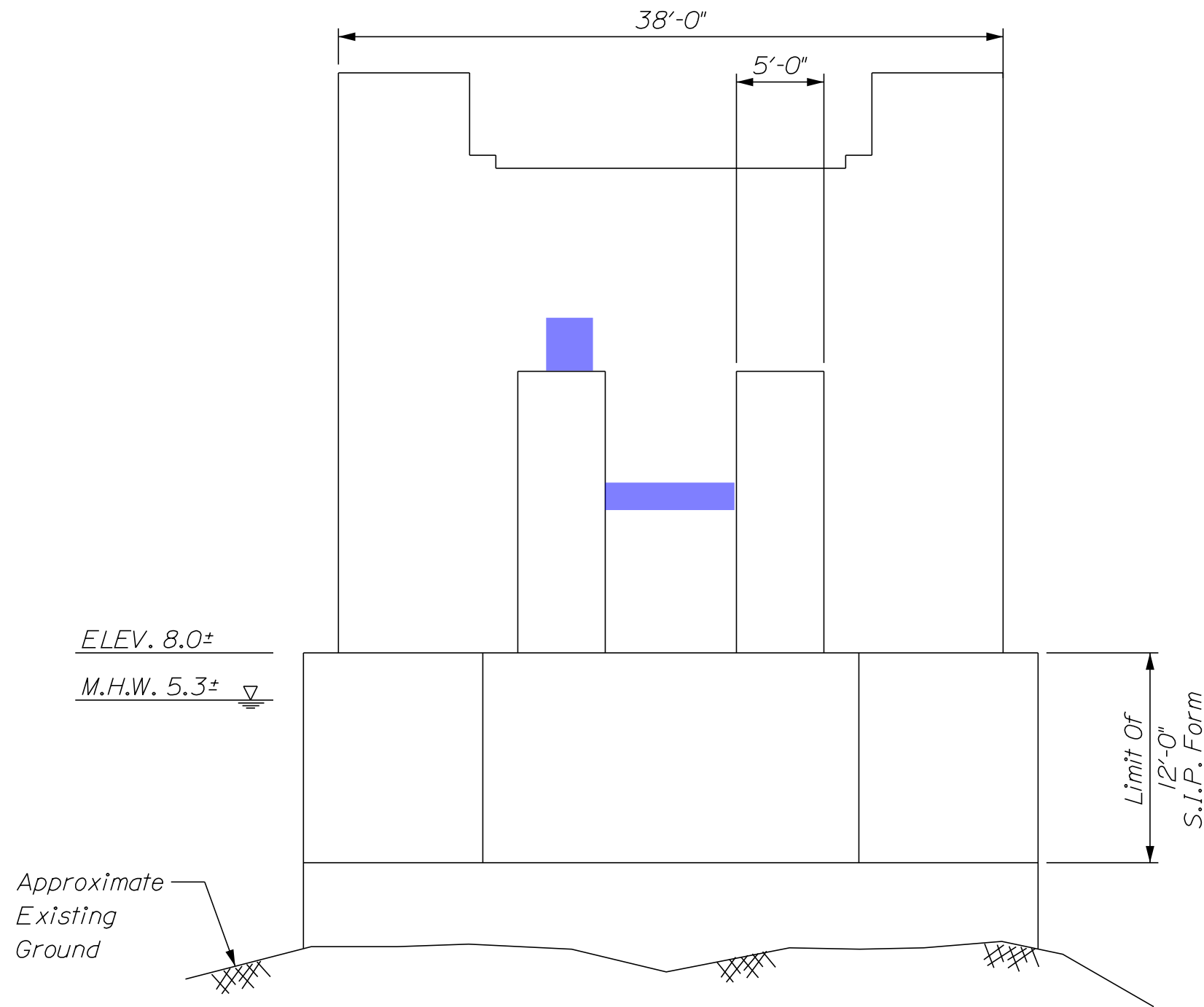
PLAN



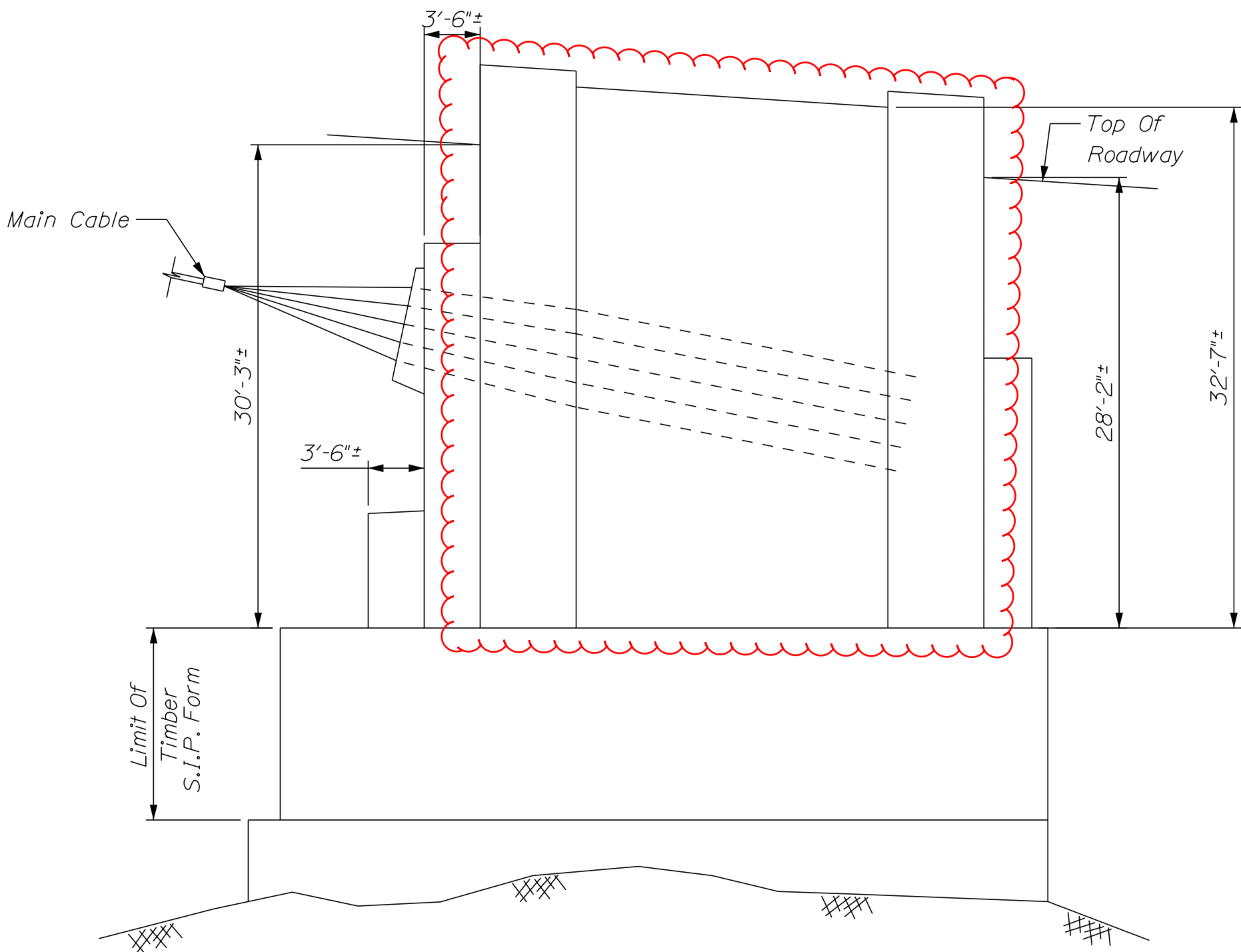
NORTH ELEVATION



EAST ELEVATION

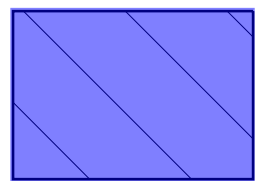


SOUTH ELEVATION

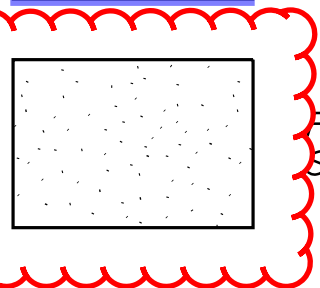


WEST ELEVATION

LEGEND:



CONCRETE REPAIR AREA (SF)



PROTECTIVE COATING FOR CONCRETE SURFACES (SY)

ESTIMATED CONCRETE REPAIR QUANTITIES	
UPWARD FACING SURFACES (ITEM 518.50)	0 SF
VERTICAL SURFACES (ITEM 518.60)	200 SF
OVERHEAD SURFACES (ITEM 518.70)	0 SF
PROTECTIVE COATING FOR CONCRETE SURFACES (515.20)	20 SY

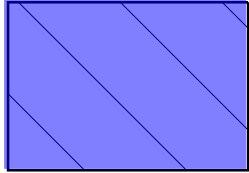
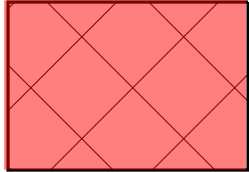
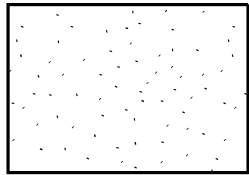
NOTES:

- FOR GENERAL NOTES SEE SHEET 2.
- FOR ABUTMENT LOCATION SEE SHEET 3.
- FOR DEMOLITION AND TYPICAL REPAIR DETAILS SEE SHEET 11.
- ESTIMATED CONCRETE REPAIR QUANTITIES INCLUDE "IF & WHERE" LOCATIONS TO BE REPAIRED AS NECESSARY AS DETERMINED BY THE RESIDENT.

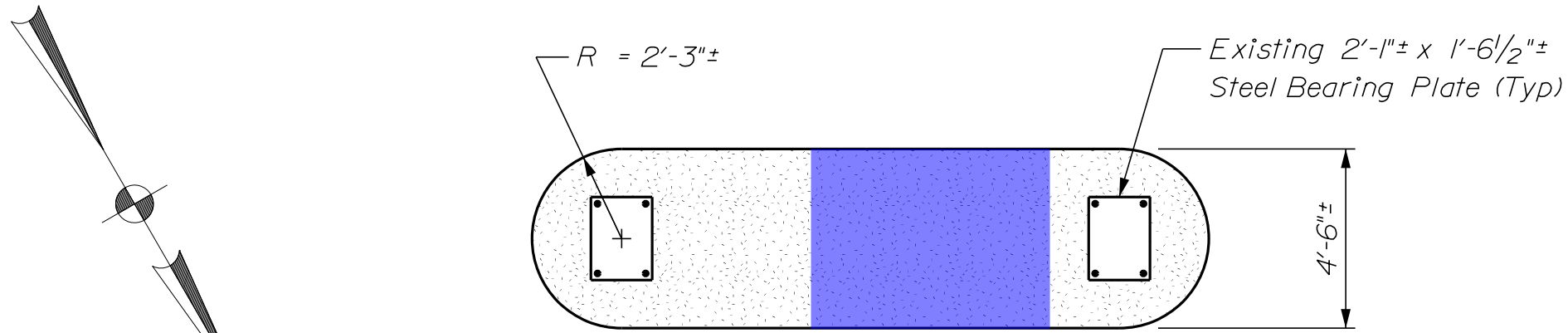
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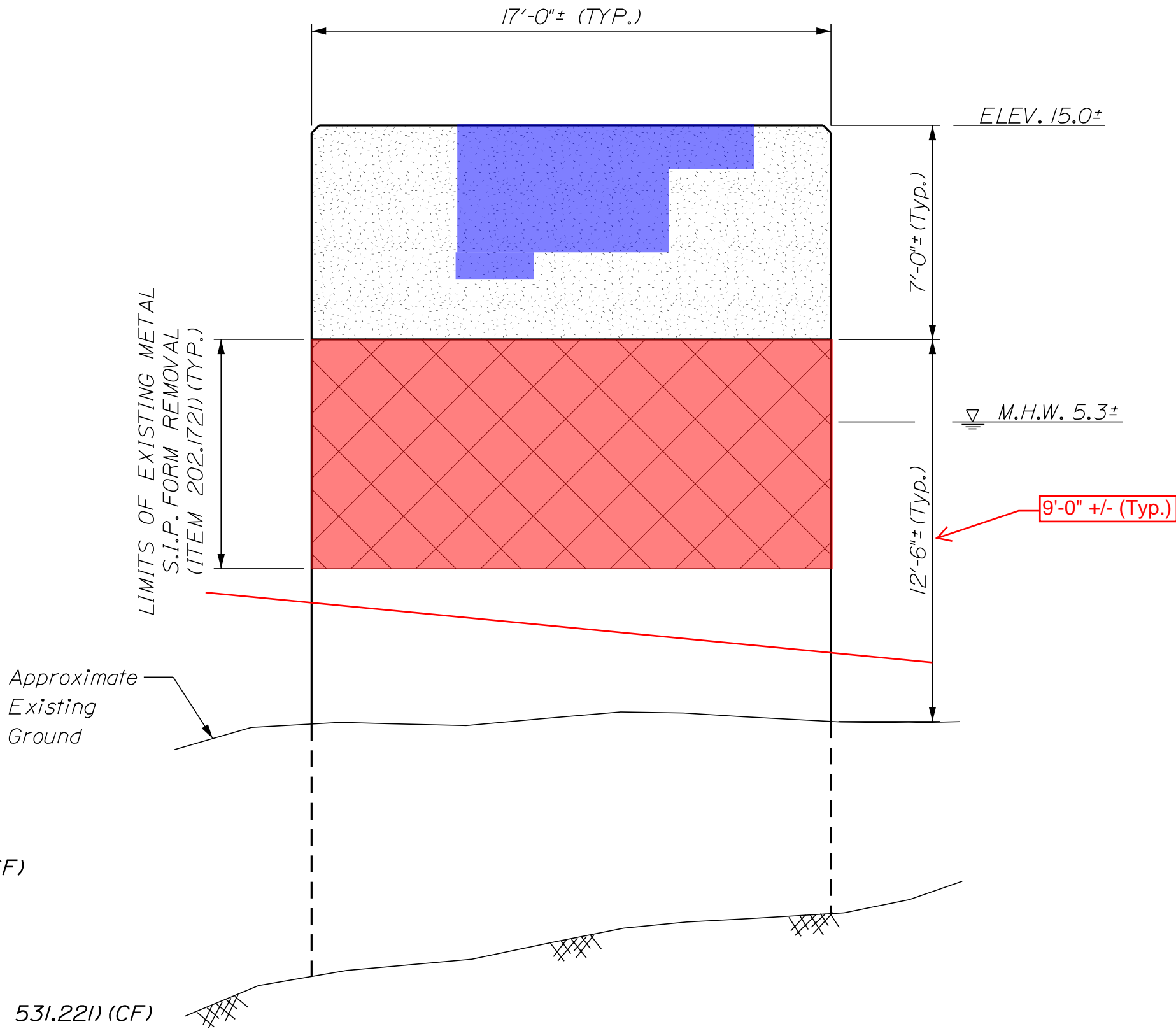
LEGEND:

	CONCRETE REPAIR AREA (SF)
	PIER STRENGTHENING (ITEM 531.221) (CF)
	PROTECTIVE COATING FOR CONCRETE SURFACES (ITEM 515.20) (SY)

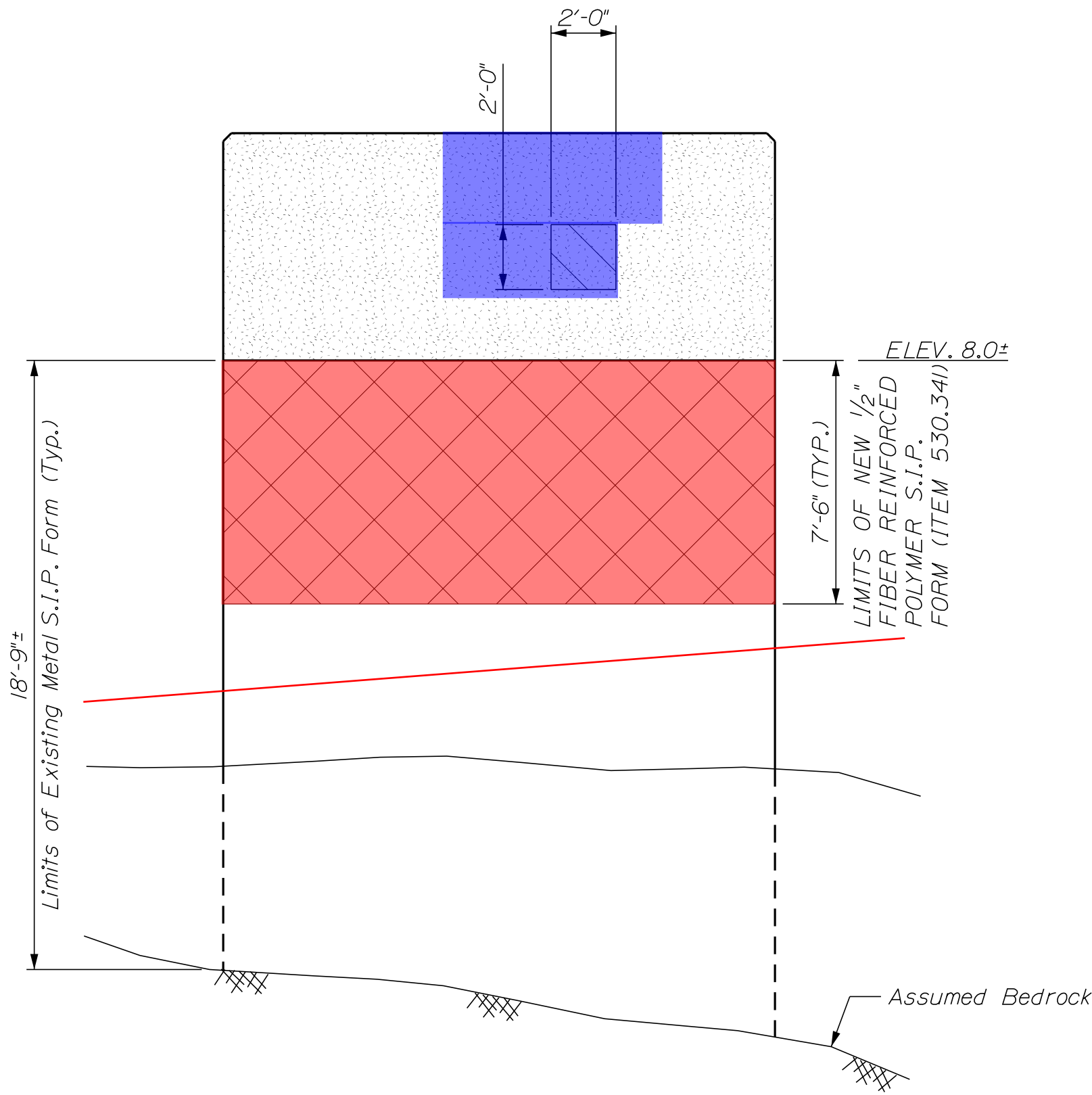
ESTIMATED CONCRETE REPAIR QUANTITIES	
UPWARD FACING SURFACES (ITEM 518.50)	0 SF
VERTICAL SURFACES (ITEM 518.60)	20 SF
OVERHEAD SURFACES (ITEM 518.70)	0 SF
PROTECTIVE COATING FOR CONCRETE SURFACES (515.20)	40 SY
PIER STRENGTHENING (ITEM 531.221)	265 CF



PLAN



NORTH ELEVATION



SOUTH ELEVATION

NOTES:

- FOR GENERAL NOTES SEE SHEET 2.
- FOR PIER LOCATION SEE SHEET 3.
- FOR DEMOLITION & TYPICAL REPAIR DETAILS SEE SHEET 11.
- FOR PIERS 2 & 7 REPAIR DETAILS SEE SHEET 12.
- ESTIMATED CONCRETE REPAIR QUANTITIES INCLUDE "IF & WHERE" LOCATIONS TO BE REPAIRED AS NECESSARY AS DETERMINED BY THE RESIDENT.

REVIS
ED AS-BUILT
TWH



DEER ISLE-SEDGWICK BRIDGE EGGEMOGGIN REACH DEER ISLE-SEDGWICK HANCOCK COUNTY SUBSTRUCTURE REPAIRS - PIER 2	PROJECT MANAGER A. LATHE	BY C. DONOHUE T. STODOLIS	DATE 02/2015 02/2015	SIGNATURE
	DESIGN-DETAILED E. LOWELL	CHECKED-REVIEWED K. BEAN	DESIGNS-DETAILED 	P.E. NUMBER
	REVISIONS 1 	REVISIONS 2 	REVISIONS 3 	DATE
	REVISIONS 4 	FIELD CHANGES 	 	
SHEET NUMBER 6 OF 13		STATE OF MAINE DEPARTMENT OF TRANSPORTATION HP-2049(800) WIN 20498.00 BRIDGE NO. 3257 BRIDGE PLANS		



NOTES:

- REVISED AS-BUILT
TWH**



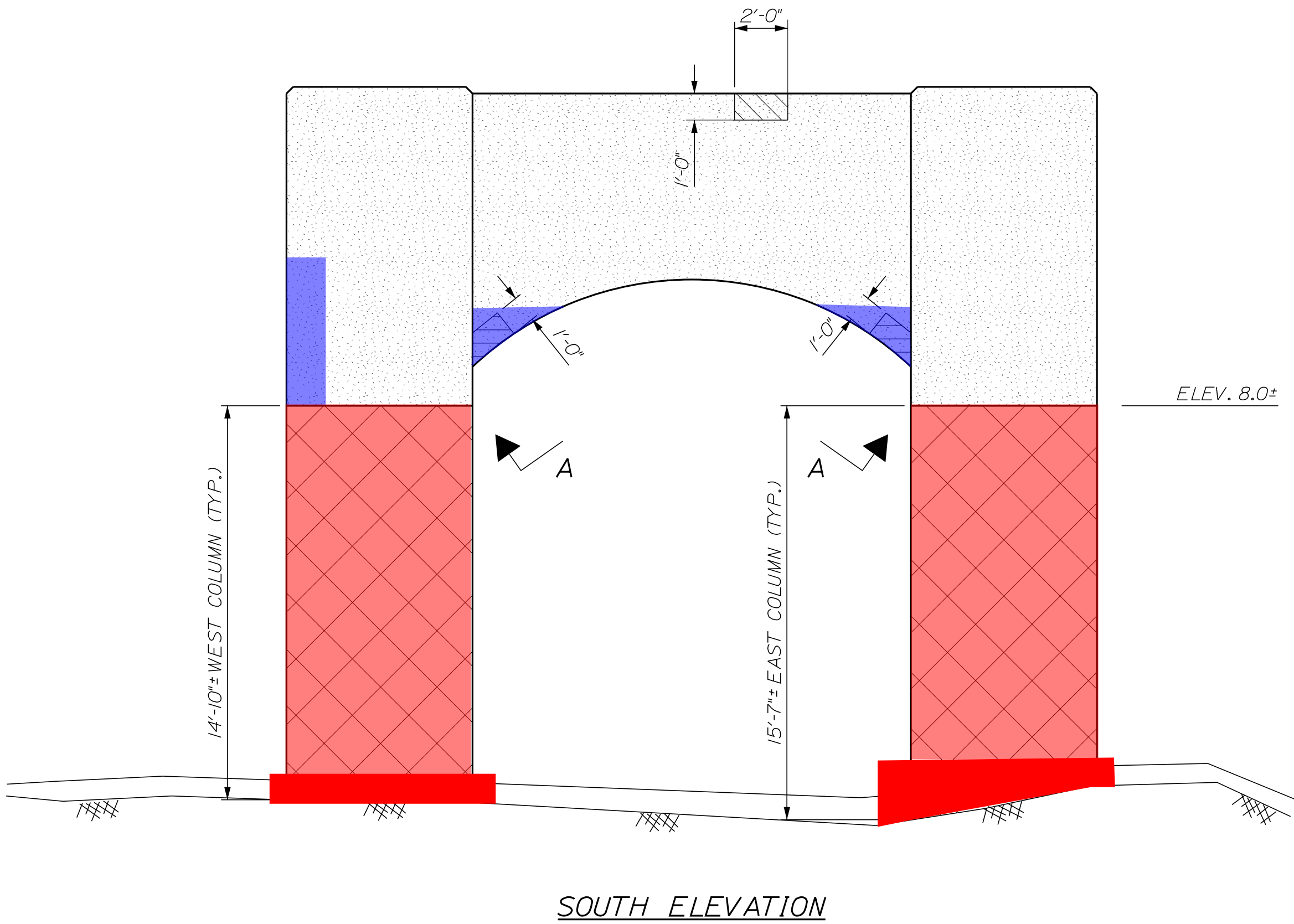
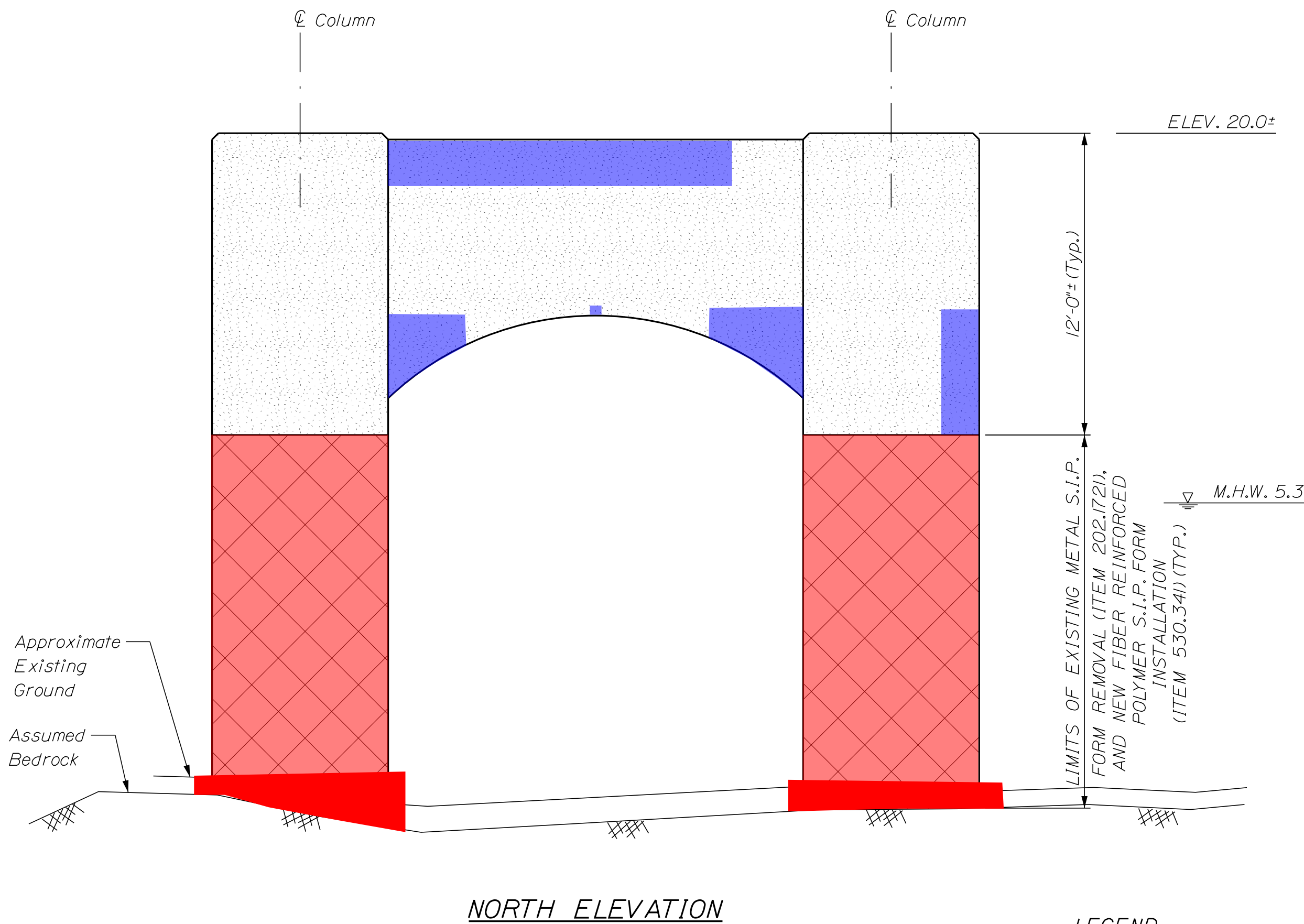
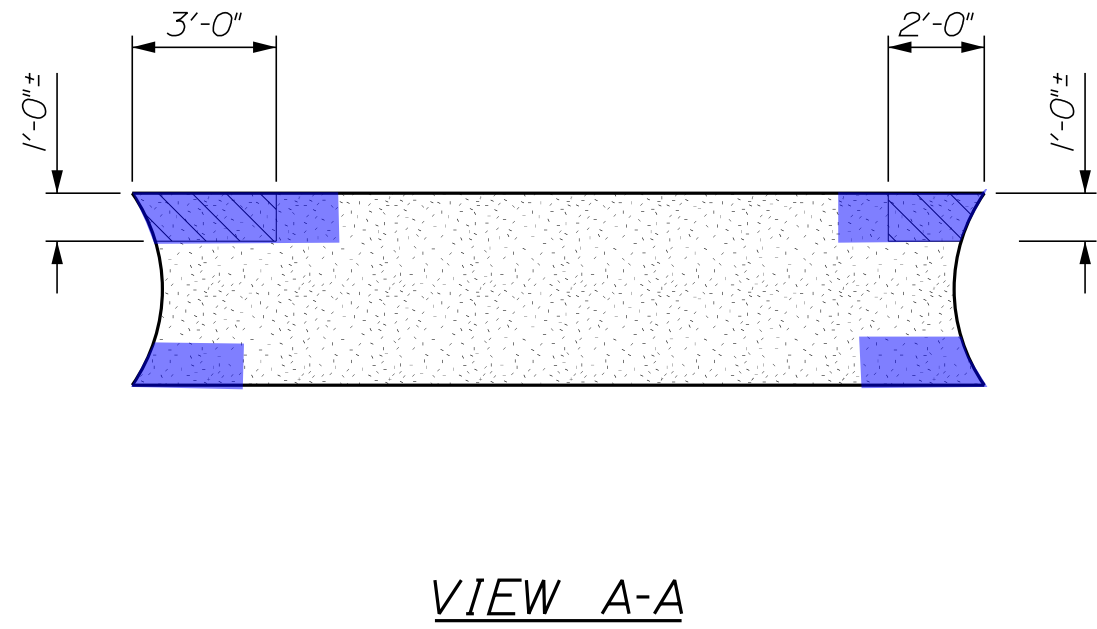
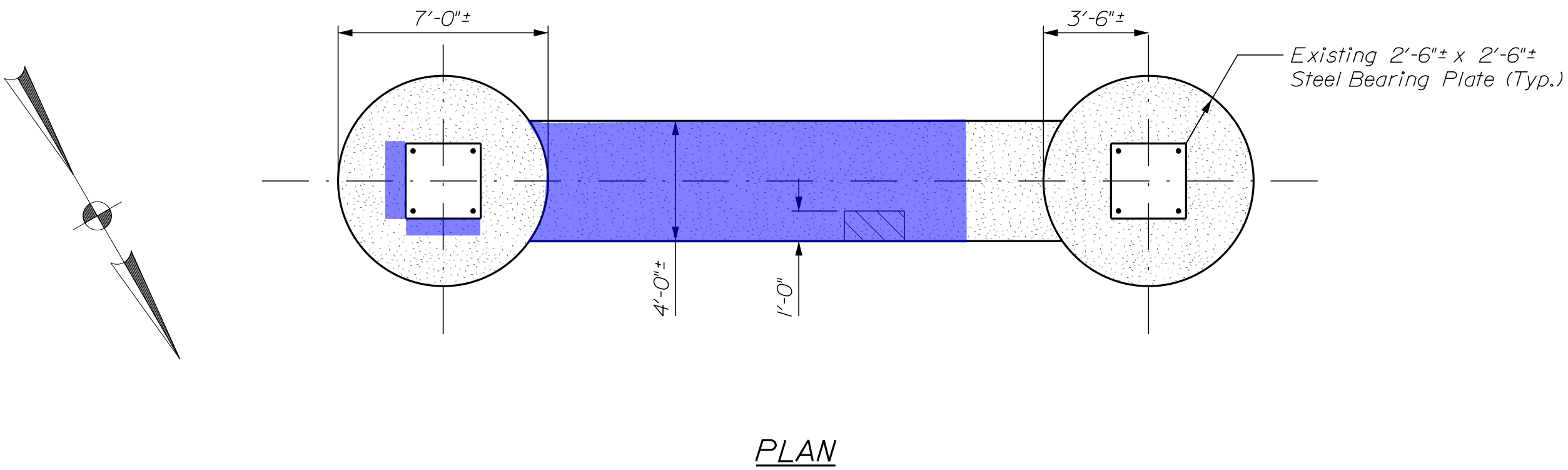
ESTIMATED CONCRETE REPAIR QUANTITIES	
UPWARD FACING SURFACES (ITEM 518.50)	20 SF
VERTICAL SURFACES (ITEM 518.60)	20 SF
OVERHEAD SURFACES (ITEM 518.70)	20 SF
PROTECTIVE COATING FOR CONCRETE SURFACES (515.20)	110 SY
PIER STRENGTHENING (ITEM 531.221)	295 CF

BRIDGE NO. 3257	WIN 20498.00	BRIDGE PLANS
HP-2049(800)		

PROJ. MANAGER	A. LATHE	BY	DATE
DESIGN-DETAILED	E. LOWELL	C. DONOHUE	02/27/05
CHECKED-REVIEWED	K. BEAN	T. STUDDIPS	
DESIGN-DETAILS			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

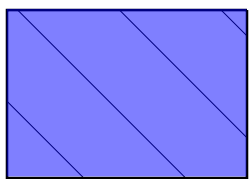
DEER ISLE-SEDGWICK BRIDGE
EGGEMOGGIN REACH
DEER ISLE-SEDGWICK HANCOCK COUNTY
SUBSTRUCTURE REPAIRS - PIER 3

SHEET NUMBER

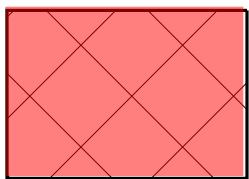


ESTIMATED CONCRETE REPAIR QUANTITIES	
UPWARD FACING SURFACES (ITEM 518.50)	10 SF
VERTICAL SURFACES (ITEM 518.60)	20 SF
OVERHEAD SURFACES (ITEM 518.70)	10 SF
PROTECTIVE COATING FOR CONCRETE SURFACES (515.20)	110 SY
PIER STRENGTHENING (ITEM 531.221)	370 CF

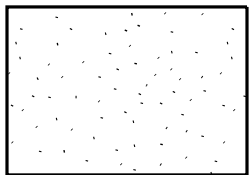
LEGEND:



CONCRETE REPAIR AREA (SF)



PIER STRENGTHENING (ITEM 531.221) (CF)



PROTECTIVE COATING FOR CONCRETE SURFACES (ITEM 515.20) (SY)

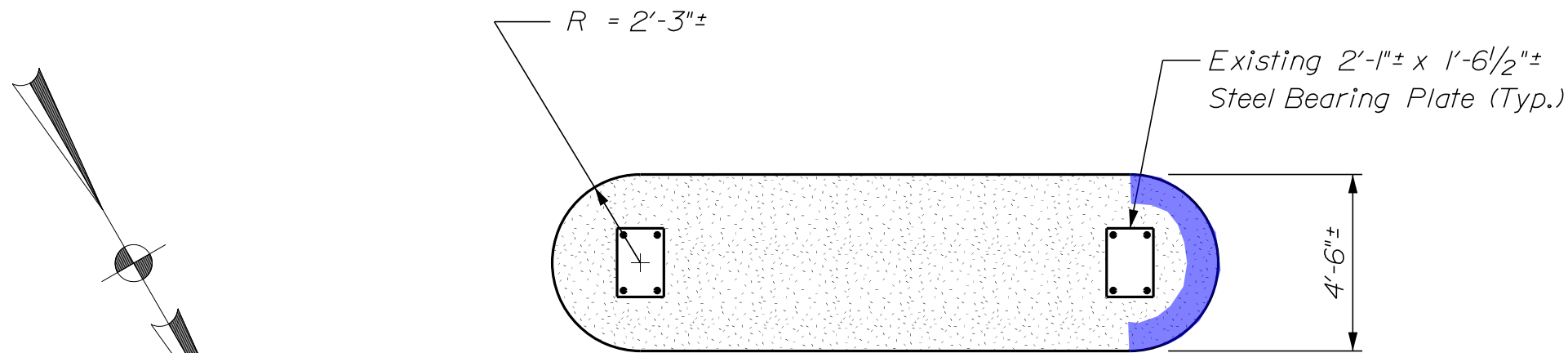
NOTES:

- FOR GENERAL NOTES SEE SHEET 2.
- FOR PIER LOCATION SEE SHEET 3.
- FOR DEMOLITION & TYPICAL REPAIR DETAILS SEE SHEET 11.
- FOR PIERS 3 & 6 REPAIR DETAILS SEE SHEET 13.
- ESTIMATED CONCRETE REPAIR QUANTITIES INCLUDE "IF & WHERE" LOCATIONS TO BE REPAIRED AS NECESSARY AS DETERMINED BY THE RESIDENT.

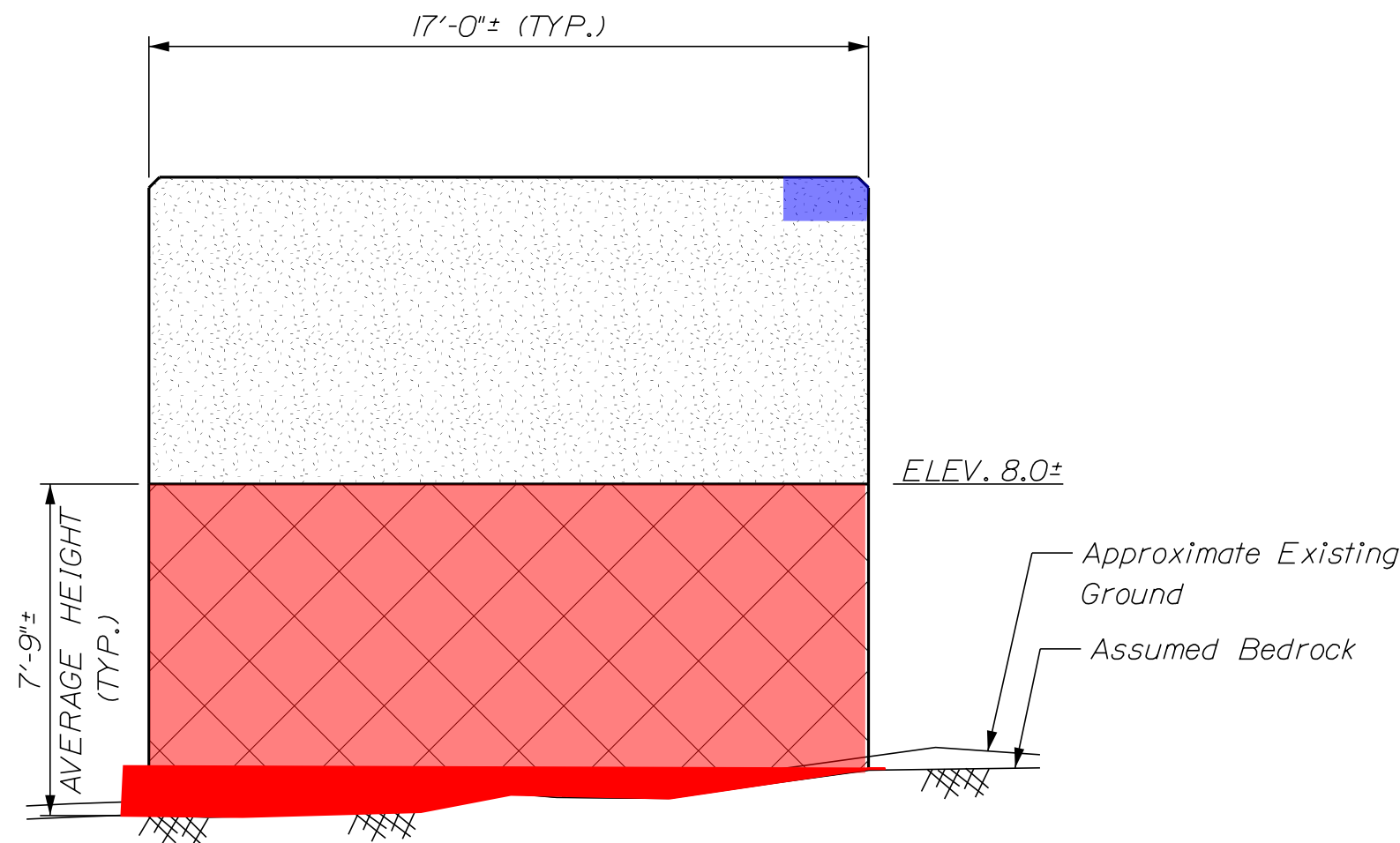
REVISED AS-BUILT
TWH

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STATE OF MAINE		DEPARTMENT OF TRANSPORTATION	
DEER ISLE-SEDGWICK BRIDGE		HP-2049(800)	
EGGEMOGGIN REACH		WIN	
DEER ISLE-SEDGWICK HANCOCK COUNTY		20498.00	
SUBSTRUCTURE REPAIRS -		BRIDGE NO. 3257	
PIER 6		BRIDGE PLANS	
SHEET NUMBER		8	
		OF 13	


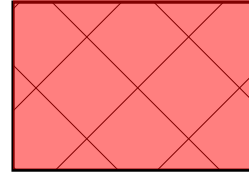
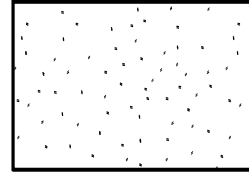


PLAN

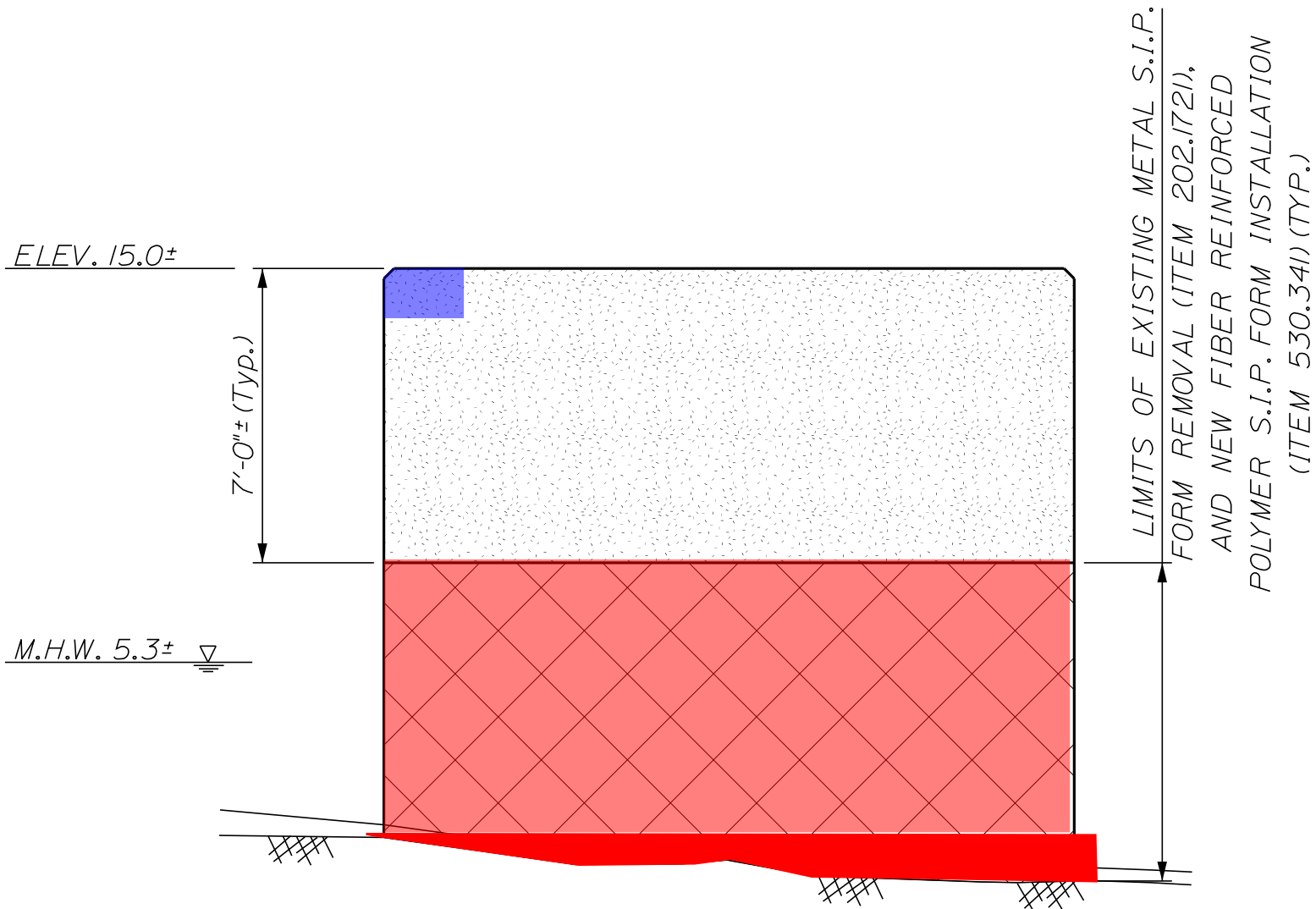


NORTH ELEVATION

LEGEND:

-  CONCRETE REPAIR AREA (SF)
-  PIER STRENGTHENING (ITEM 531.221) (CF)
-  PROTECTIVE COATING FOR CONCRETE SURFACES (ITEM 515.20) (SY)

ESTIMATED CONCRETE REPAIR QUANTITIES	
UPWARD FACING SURFACES (ITEM 518.50)	0 SF
VERTICAL SURFACES (ITEM 518.60)	0 SF
OVERHEAD SURFACES (ITEM 518.70)	0 SF
PROTECTIVE COATING FOR CONCRETE SURFACES (515.20)	40 SY
PIER STRENGTHENING (ITEM 531.221)	170 CF



SOUTH ELEVATION

NOTES:

- FOR GENERAL NOTES SEE SHEET 2.
- FOR PIER LOCATION SEE SHEET 3.
- FOR DEMOLITION & TYPICAL REPAIR DETAILS SEE SHEET 11.
- FOR PIERS 2 & 7 REPAIR DETAILS SEE SHEET 12.
- ESTIMATED CONCRETE REPAIR QUANTITIES INCLUDE "IF & WHERE" LOCATIONS TO BE REPAIRED AS NECESSARY AS DETERMINED BY THE RESIDENT.

REVISED AS-BUILT
TWH

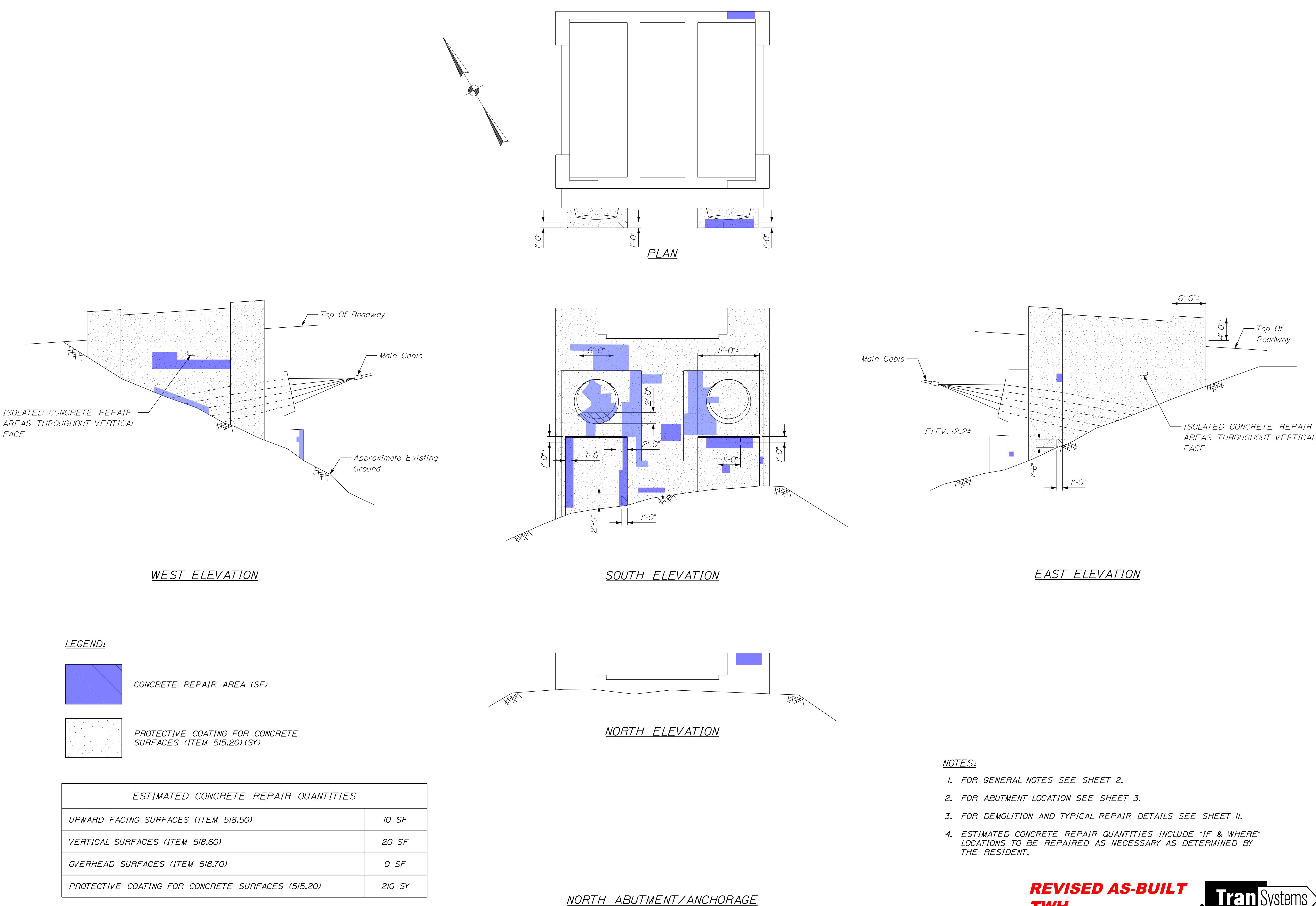


PIER 7

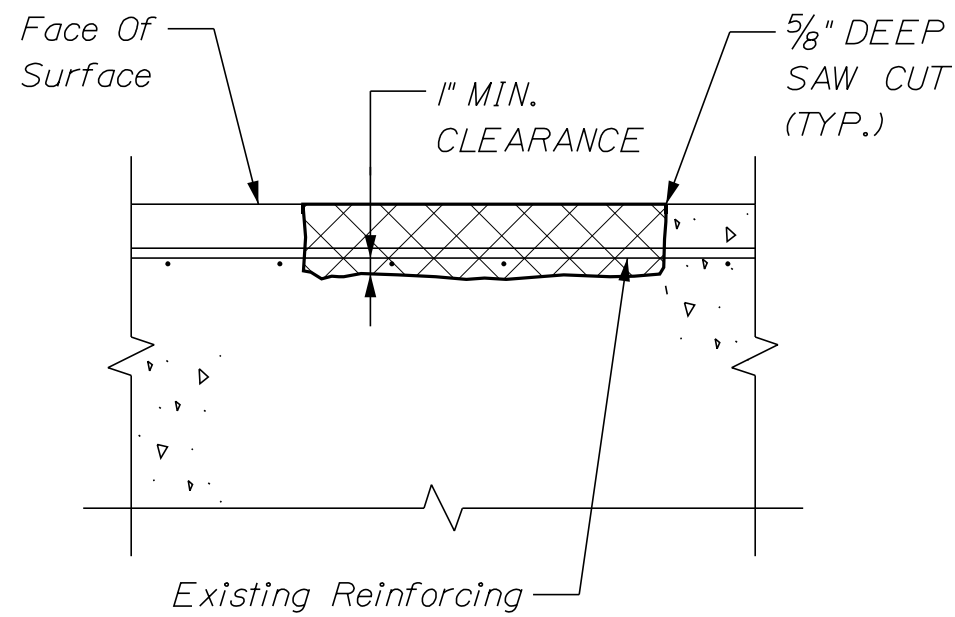
STATE OF MAINE DEPARTMENT OF TRANSPORTATION HP-2049(800)	SIGNATURE P.E. NUMBER DATE	PROJ. MANAGER A. LATHE	BY C. DONOHUE T. STODOLIS	DATE 02/2015 02/2015
		CHECKED-REVIEWED E. LOWELL K. BEAN	DESIGN-DETAILED DESIGNS-DETAILED	REVISIONS 1 REVISIONS 2 REVISIONS 3 REVISIONS 4 FIELD CHANGES
		BRIDGE NO. 3257 WIN 20498.00 BRIDGE PLANS		

DEER ISLE-SEDGWICK BRIDGE
EGGEMOGGIN REACH
DEER ISLE-SEDGWICK HANCOCK COUNTY
SUBSTRUCTURE REPAIRS -
PIER 7

SHEET NUMBER
9
OF 13



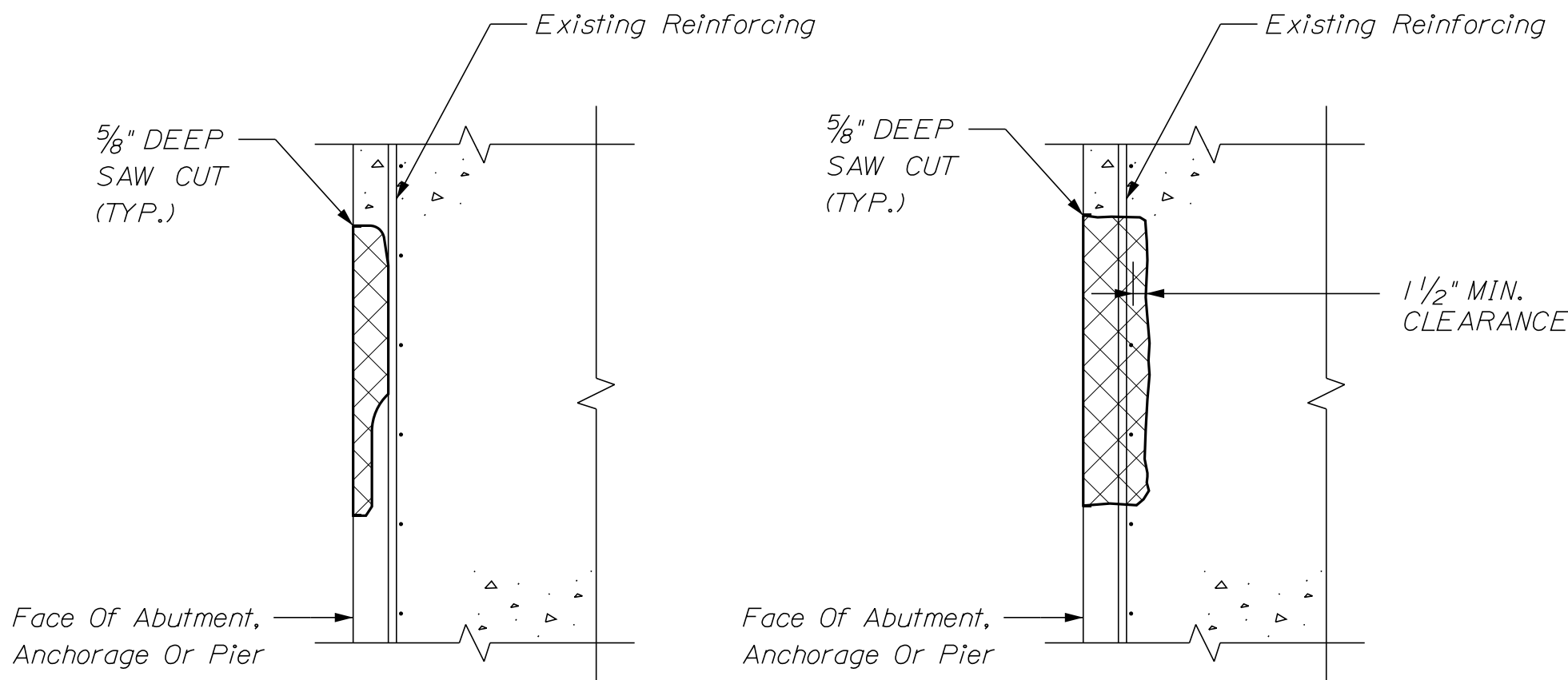
PIER DEMOLITION DETAIL



REPAIR DEPTH
BEYOND REINFORCEMENT

CONCRETE REPAIRS OF UPWARD-FACING SURFACES - BELOW REINFORCING STEEL

(ITEMS 518.50 & 518.52)

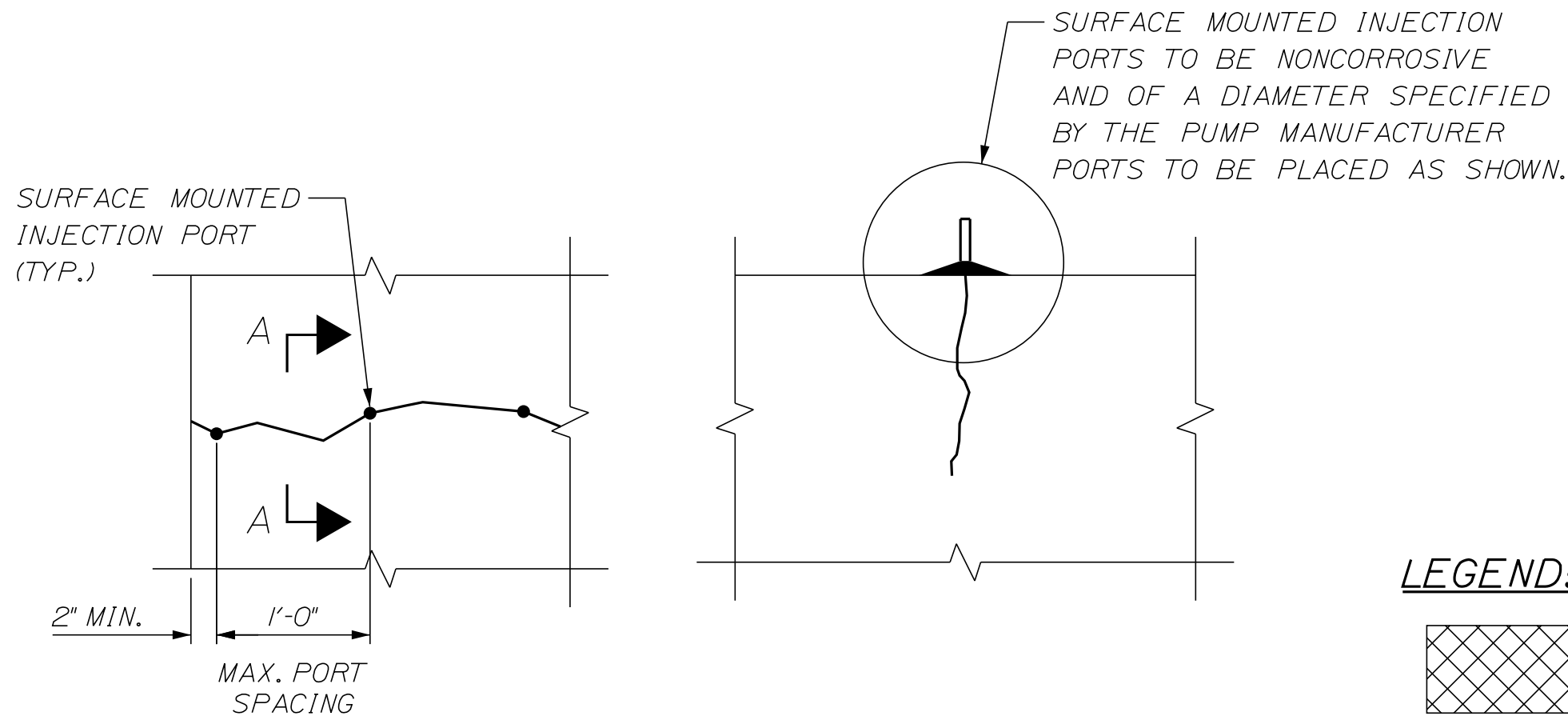


REPAIR DEPTH
TO REINFORCEMENT
< 1/2 BAR EXPOSED

$$\frac{\text{REPAIR DEPTH}}{\text{BEYOND REINFORCEMENT}} \geq \frac{1}{2} \text{ BAR EXPOSED}$$

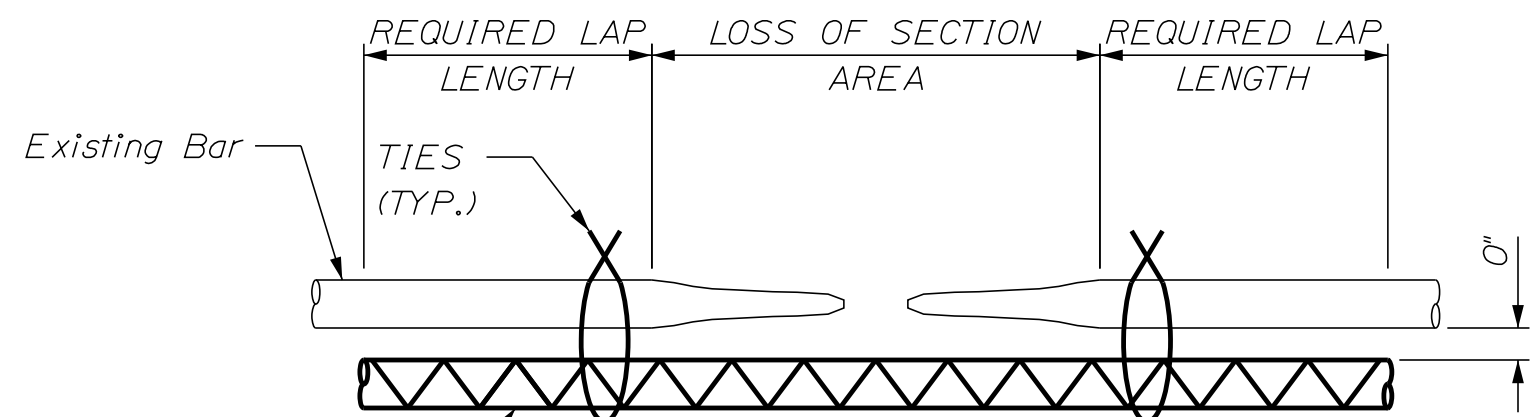
CONCRETE REPAIRS OF VERTICAL SURFACES

(ITEMS 518.60 & 518.61)



CRACK REPAIR DETAIL
(ITEM 518.80)

SECTION A-A



REINFORCING REPAIR PLAN

(INCIDENTAL TO WORK REQUIRED UNDER CONCRETE REPAIR ITEMS)

ABUTMENT AND ANCHORAGE REPAIR NOTES:

(ITEMS 515.20, 518.50, 518.52, 518.60, 518.61, 518.70, AND 518.71):

1. PRIOR TO REMOVING DETERIORATED CONCRETE, CONTRACTOR TO PROVIDE ACCESS TO ALL WORK AREAS, USING THE CONTRACT DRAWINGS AS A GUIDE, THE RESIDENT AND CONTRACTOR SHALL HAMMER SOUND ALL WORK AREAS AND MARK THE LIMITS OF CONCRETE TO BE REMOVED.
2. LIMITS OF CONCRETE REMOVAL TO BE SAW CUT TO A MINIMUM DEPTH OF $\frac{3}{4}$ ".
3. DETERIORATED CONCRETE SHALL BE REMOVED WITHIN THE MARKED LIMITS OF CONCRETE REMOVAL TO SOUND SUBSTRATE.
4. EQUIPMENT USED FOR REMOVAL OF UNSOUND CONCRETE SHALL BE CHIPPING HAMMERS WEIGHING A MAXIMUM OF 35 LBS AND ONLY CHISEL POINT BITS WILL BE ALLOWED.
5. ALL REINFORCING STEEL EXPOSED BY CONCRETE REMOVAL SHALL BE CLEANED OF ALL LOOSE RUST BY A METHOD APPROVED BY THE RESIDENT.
6. EXISTING REINFORCING WHICH HAS BEEN BROKEN OR LOST 25% OR MORE OF THE ORIGINAL CROSS SECTIONAL AREA SHALL BE SUPPLEMENTED WITH REINFORCING STEEL OF THE SAME CROSS SECTIONAL AREA. SUPPLEMENTAL STEEL SHALL BE INSTALLED USING A LAP SPLICE OR MECHANICAL SPLICE AS DIRECTED BY THE RESIDENT AND IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
7. THE SURFACES TO RECEIVE REPAIR SHALL BE CLEANED ACCORDING TO THE SPECIFICATION TO REMOVE FLASH RUST AND MARINE GROWTH NO MORE THAN 72 HOURS PRIOR TO CONCRETE OR GROUT PLACEMENT. DEPENDING ON THE TIME ELAPSED, RE-WASHING MAY BE REQUIRED.
8. CONCRETE REPAIR MATERIAL SHALL BE PLACED ACCORDING TO THE STANDARD SPECIFICATIONS.
9. THE CONCRETE REPAIRS SHALL BE FINISHED TO CONFORM TO THE LINE AND GRADE OF THE ORIGINAL CONCRETE SURFACE.
10. PROTECTIVE COATING FOR CONCRETE SURFACES TO BE APPLIED AT EACH PIER, ABUTMENT OR ANCHORAGE ONLY AFTER COMPLETION AND ACCEPTANCE OF ALL OTHER CONCRETE REPAIR ITEMS.

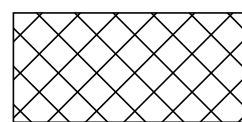
SUGGESTED SEQUENCE OF CONSTRUCTION (ITEM 518.80):

1. CRACKS SHALL BE REPAIRED IN LOCATIONS AS DIRECTED BY THE RESIDENT (SEE CONTRACT SPECIFICATIONS FOR CRACK SEALING COMPOUND AND CRACK FILLER MATERIAL).
2. AREAS TO BE REPAIRED SHALL BE CLEANED WITH A FRESH WATER JET.
3. PLACE SURFACE MOUNTED INJECTION PORTS AND SEAL SURFACE OF CRACK AND PORTS WITH CRACK SEALING COMPOUND A MINIMUM OF 1/16" THICK AND 1" WIDE.
4. AFTER CRACK SEALING COMPOUND HAS CURED, INJECT CRACK FILLER MATERIAL BEGINNING AT LOWEST POINT OF THE CRACK UNDER PRESSURE UNTIL IT IS OBSERVED FLOWING FROM THE FOLLOWING INJECTION PORT. CONTINUE PRESSURE INJECTION ADVANCING UPWARD ONE PORT AT A TIME UNTIL ENTIRE CRACK IS FILLED.
5. AFTER INJECTED CRACK FILLER MATERIAL HAS CURED, CUT PORTS AND GRIND PORTS AND CRACK SEALING COMPOUND FLUSH WITH EXISTING SURFACE.

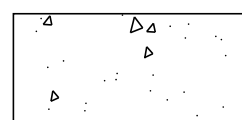
NOTES:

1. FOR GENERAL NOTES SEE SHEET 2.
2. FOR REPAIR LOCATIONS AND ESTIMATED QUANTITIES SEE SHEETS 3 - 10.
3. EXISTING METAL STAY-IN-PLACE FORMS INCLUDE 5" x 1/2" METAL STIFFENING RINGS AT 4'-0" ON CENTER BEGINNING AT ELEVATION 6.0'. METAL STIFFENING RINGS SHALL BE REMOVED WITHIN THE LIMITS OF PIER STRENGTHENING, AND PAID FOR UNDER ITEM 202.1721.

LEGEND:



REMOVED CONCRETE



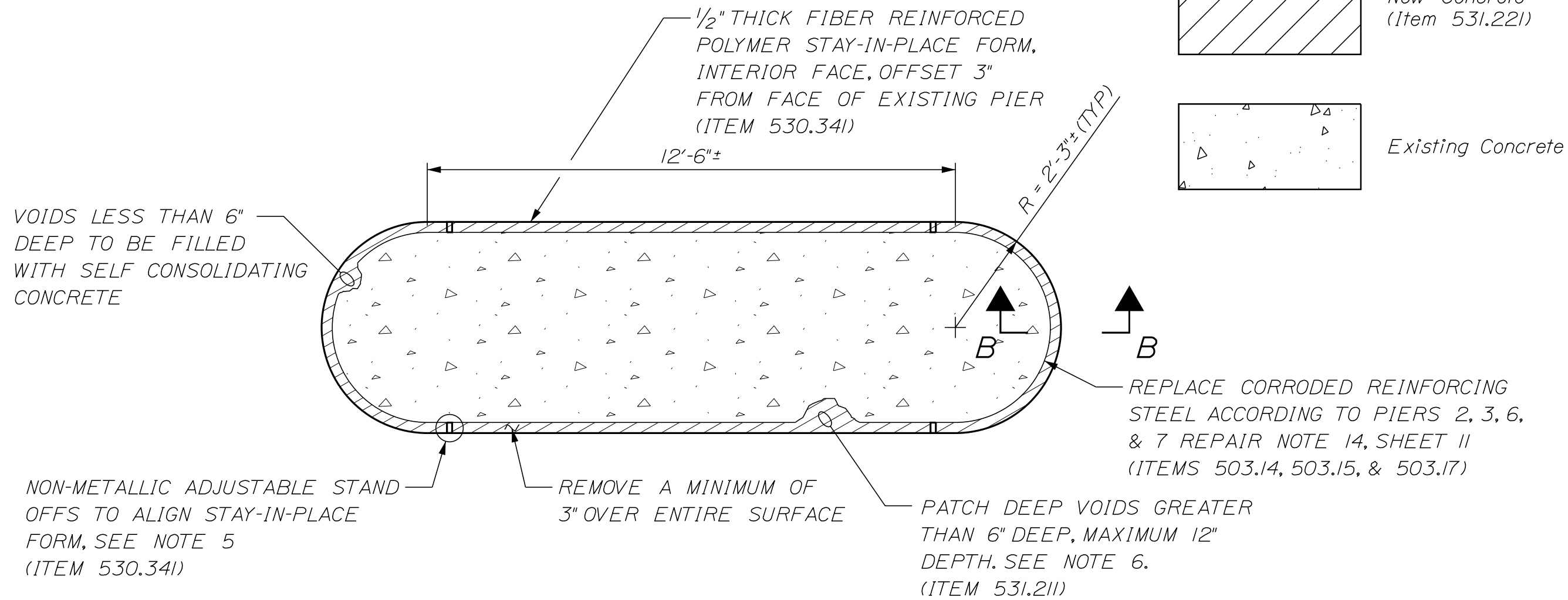
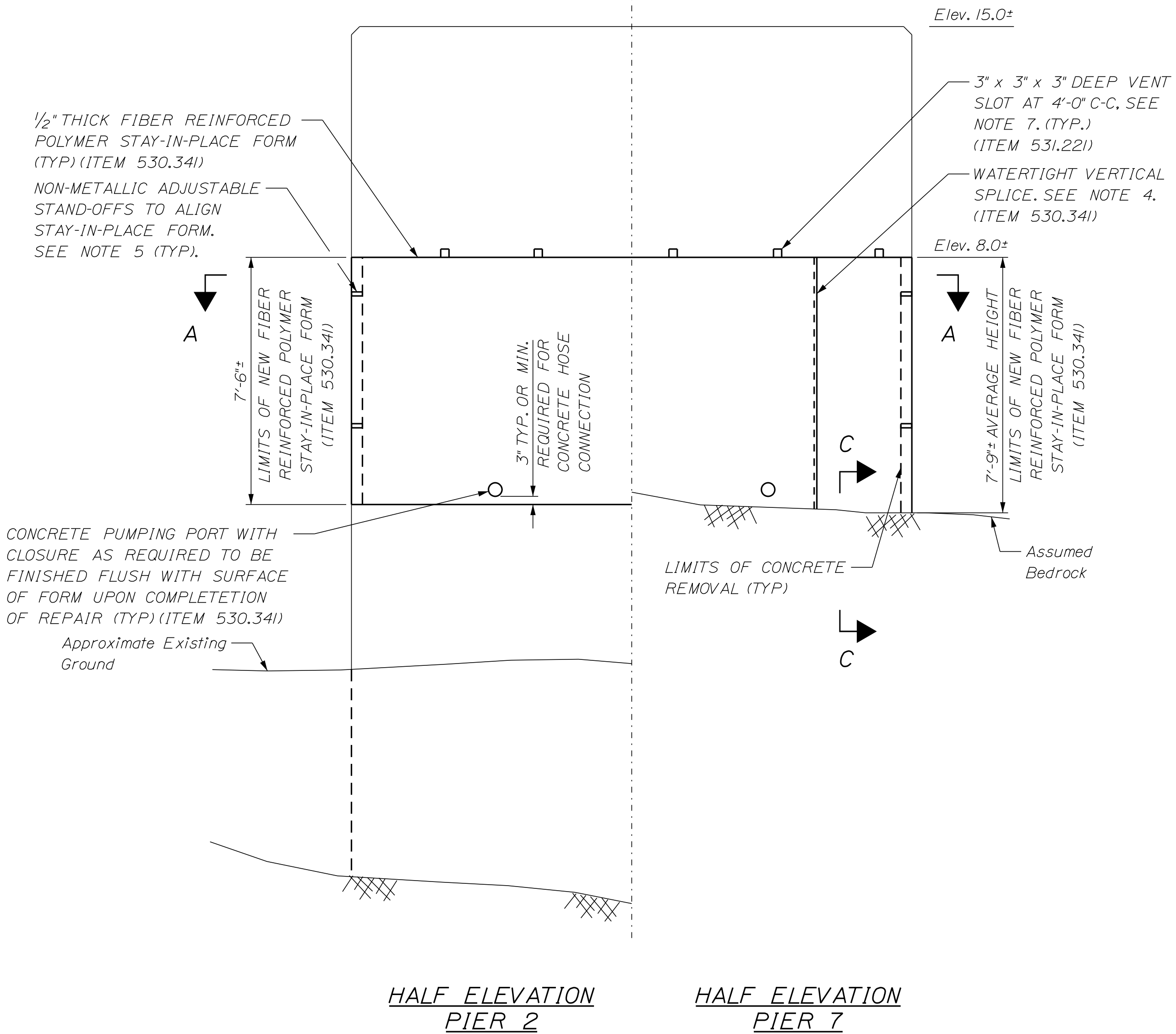
Existing Concrete

**AS-BUILT
TWH**

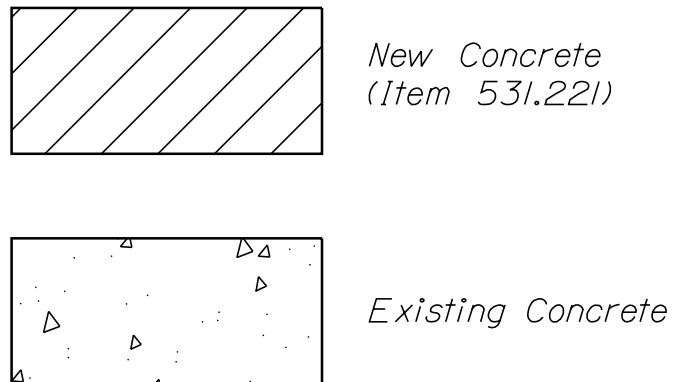


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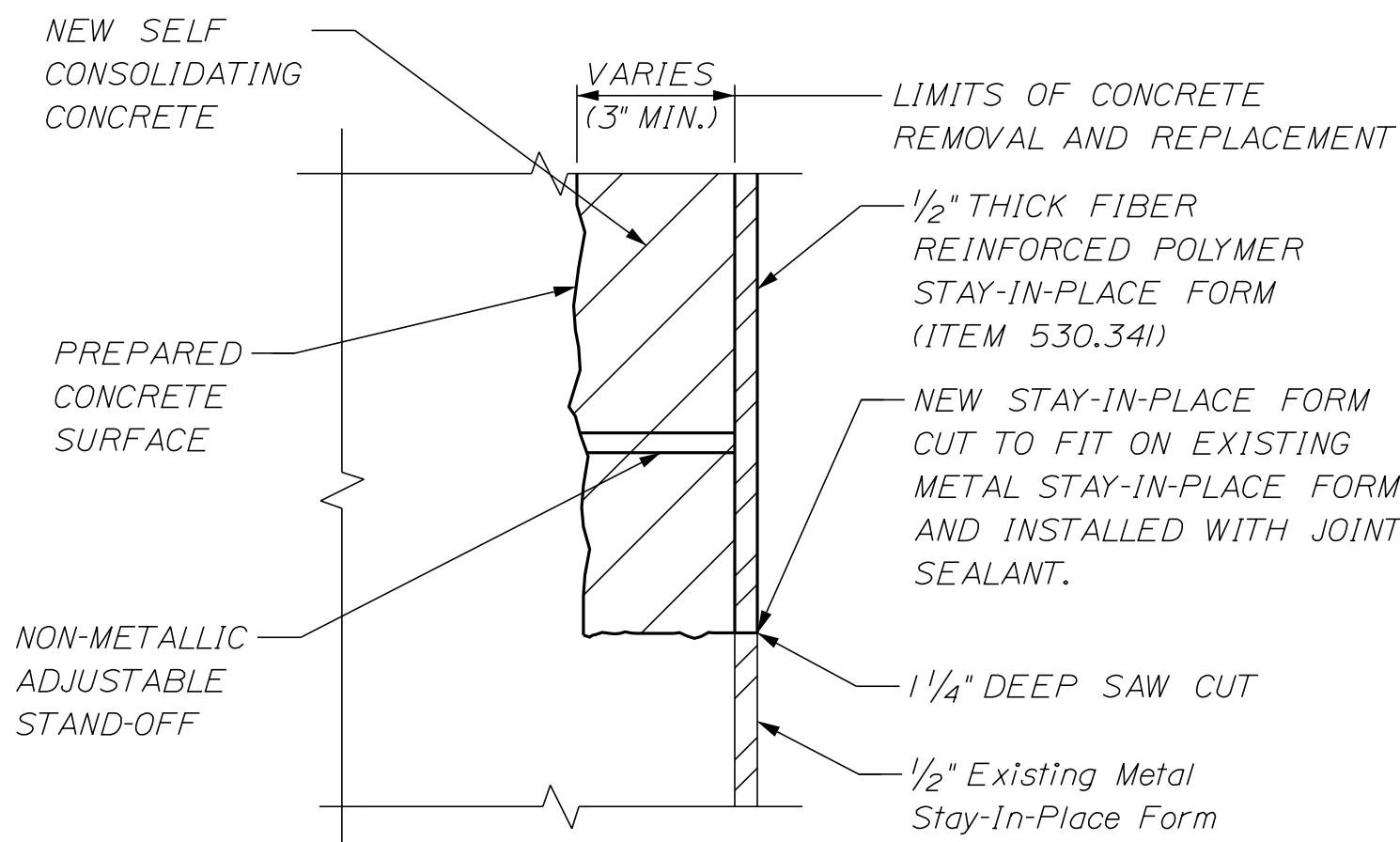
<div> <div>DEER ISLE-SEDGWICK BRIDGE</div> <div>EGGEMOGGIN REACH</div> <div>DEER ISLE-SEDGWICK HANCOCK COUNTY</div> <div>DEMOLITION AND TYPICAL</div> <div>REPAIR DETAILS</div> </div>	PROJ. MANAGER		A. LATHÉ	BY	DATE
	DESIGN-DETAILED		E. LOWELL	C. DONOHUE	02/2015
	CHECKED-REVISED		K. BEAN	T. STUOPIIS	02/2015
	DESIGN2-DETAILED2				
	DESIGN3-DETAILED3				
	REVISIONS 1				P.E. NUMBER
	REVISIONS 2				
	REVISIONS 3				
	REVISIONS 4				DATE
	FIELD CHANGES				
SHEET NUMBER	<div> <div>11</div> <div>OF 13</div> </div>				
<div> <div>DEER ISLE-SEDGWICK BRIDGE</div> <div>DEPARTMENT OF TRANSPORTATION</div> <div>STATE OF MAINE</div> </div>					
<div> <div>HP-2049(800)</div> <div>WIN</div> <div>20498.00</div> </div>					
<div> <div>BRIDGE NO. 3257</div> <div>BRIDGE PLANS</div> </div>					



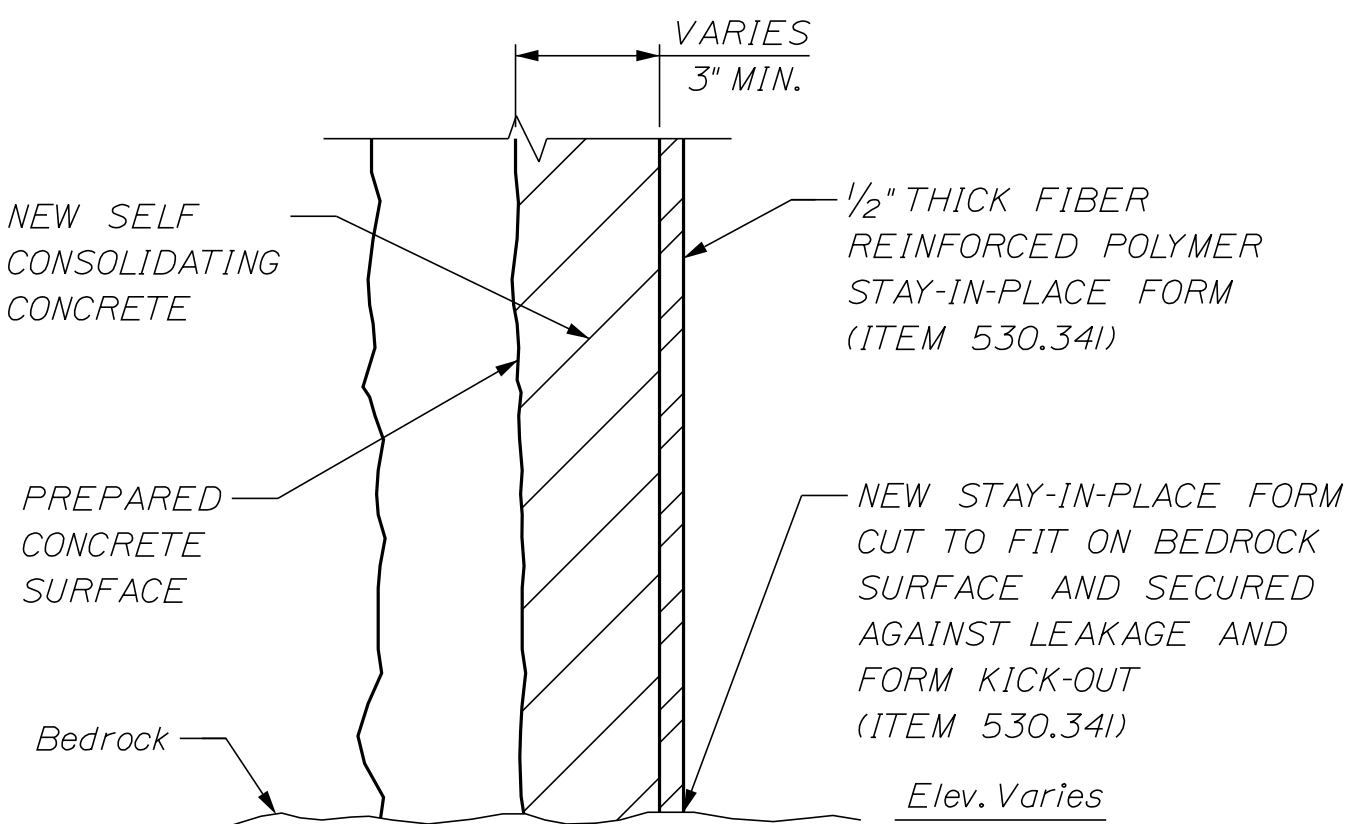
LEGEND:



SECTION A-A



SECTION B-B



SECTION C-C

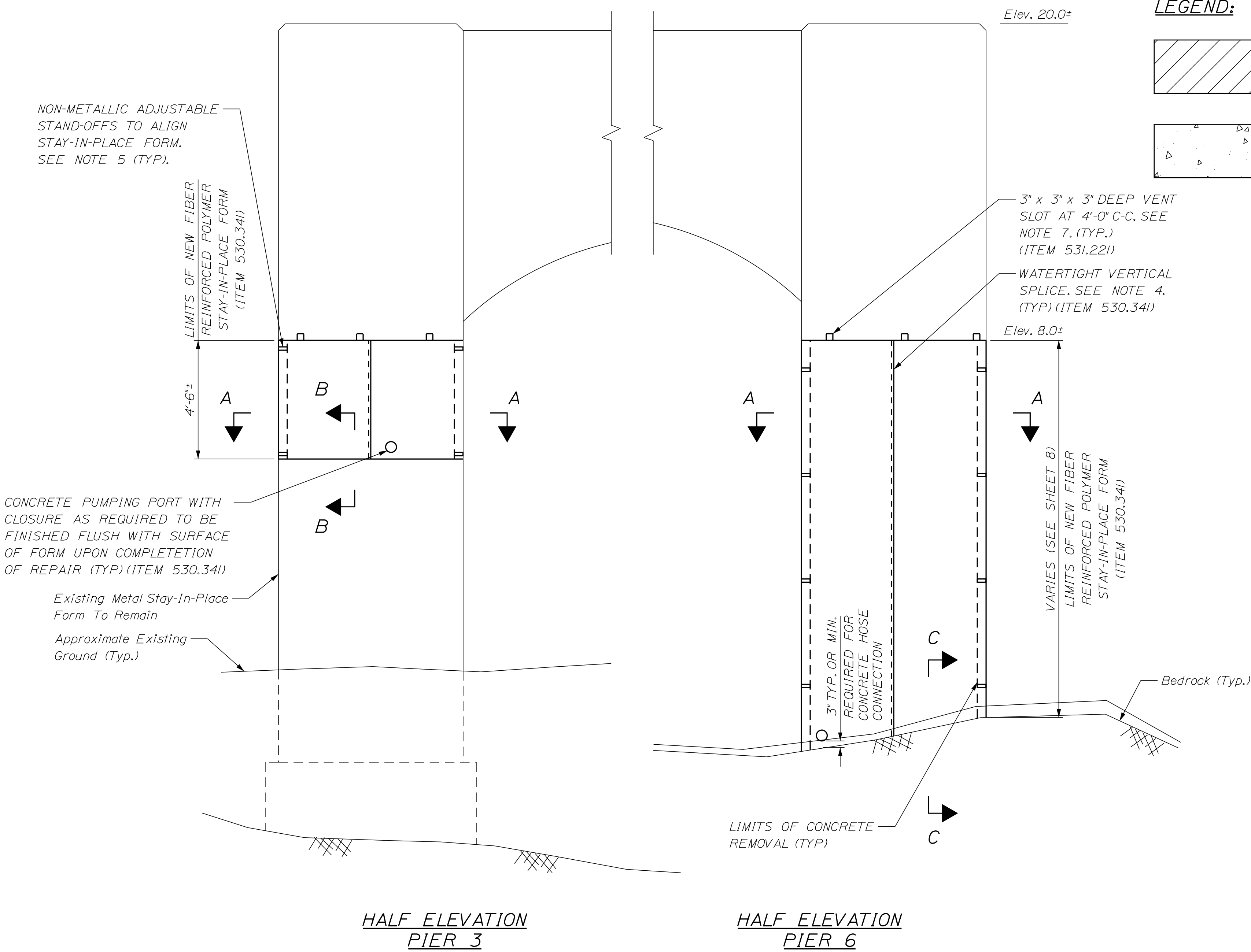
NOTES:

1. FOR GENERAL NOTES SEE SHEET 2.
2. CONCRETE TO BE PLACED IN MAXIMUM LIFTS OF 8'-0".
3. ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM 531.221 PIER STRENGTHENING, UNLESS NOTED OTHERWISE.
4. WATERTIGHT VERTICAL SPLICE TO BE IN ACCORDANCE WITH FIBER REINFORCED POLYMER STAY-IN-PLACE FORM MANUFACTURER'S RECOMMENDED DETAILS. EXTERIOR SURFACE OF STAY-IN-PLACE FORM TO BE FLUSH ACROSS SPLICE. LIMIT OF 4 SPLICES MAXIMUM PER PIER. SPLICES TO BE PAID UNDER ITEM 530.341.
5. NON-METALLIC ADJUSTABLE STAND-OFFS TO BE SPACED IN ACCORDANCE WITH FIBER REINFORCED POLYMER FORM MANUFACTURER'S RECOMMENDATIONS AS REQUIRED TO MAINTAIN POSITION OF FORM. STAND-OFFS TO BE PAID UNDER ITEM 530.341.
6. IF THE TOTAL LENGTH OF VOIDS GREATER THAN 6" DEEP IN A HORIZONTAL PLANE IS LESS THAN 25% OF THE PIER CIRCUMFERENCE, NO PATCHING OF DEEP VOIDS IS REQUIRED, AND THESE VOIDS SHALL BE FILLED WITH SELF CONSOLIDATING CONCRETE.
7. VENT SLOTS TO BE FILLED WITH CONCRETE PATCH MATERIAL UPON COMPLETION OF PIER STRENGTHENING.

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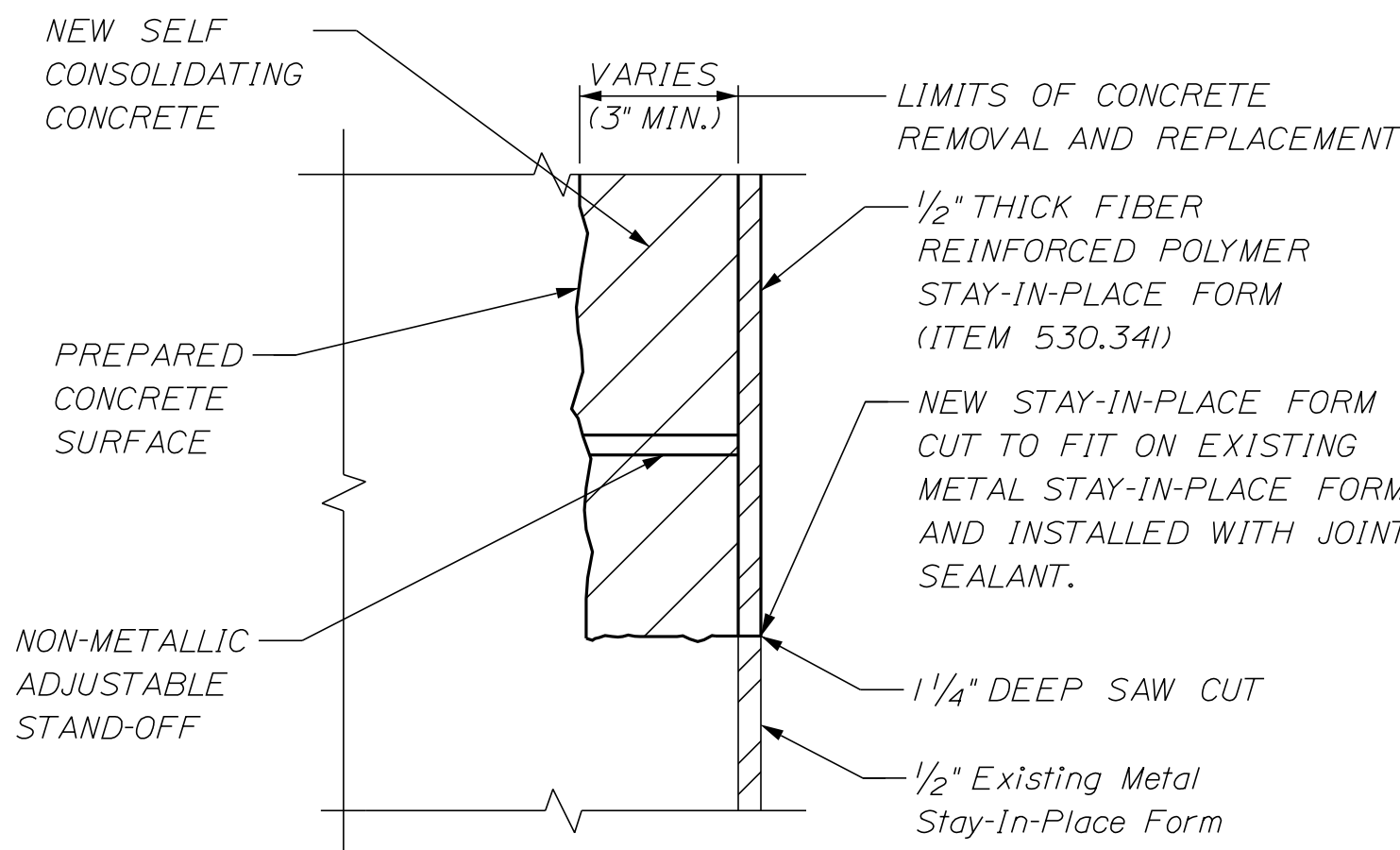
DEER ISLE-SEDGWICK BRIDGE EGGEMOGGIN REACH DEER ISLE-SEDGWICK HANCOCK COUNTY				PROJ. MANAGER	A. LATHÉ	BY	DATE	STATE OF MAINE DEPARTMENT OF TRANSPORTATION	
PIERS 2 & 7 REPAIR DETAILS				DESIGN-Detailed	E. LOWELL	C. DONOHUE	02/2016		
				CHECKED-REVIEWED	K. BEAN	T. STUOPS	02/2016		
				DESIGN2-Detailed02					
				DESIGN3-Detailed03					
				REVISIONS 1				P.E. NUMBER	
				REVISIONS 2					
				REVISIONS 3					
				REVISIONS 4					
				FIELD CHANGES				DATE	
SHEET NUMBER				BRIDGE NO. 3257				WIN 20498.00	BRIDGE PLANS
12									
OF 13									



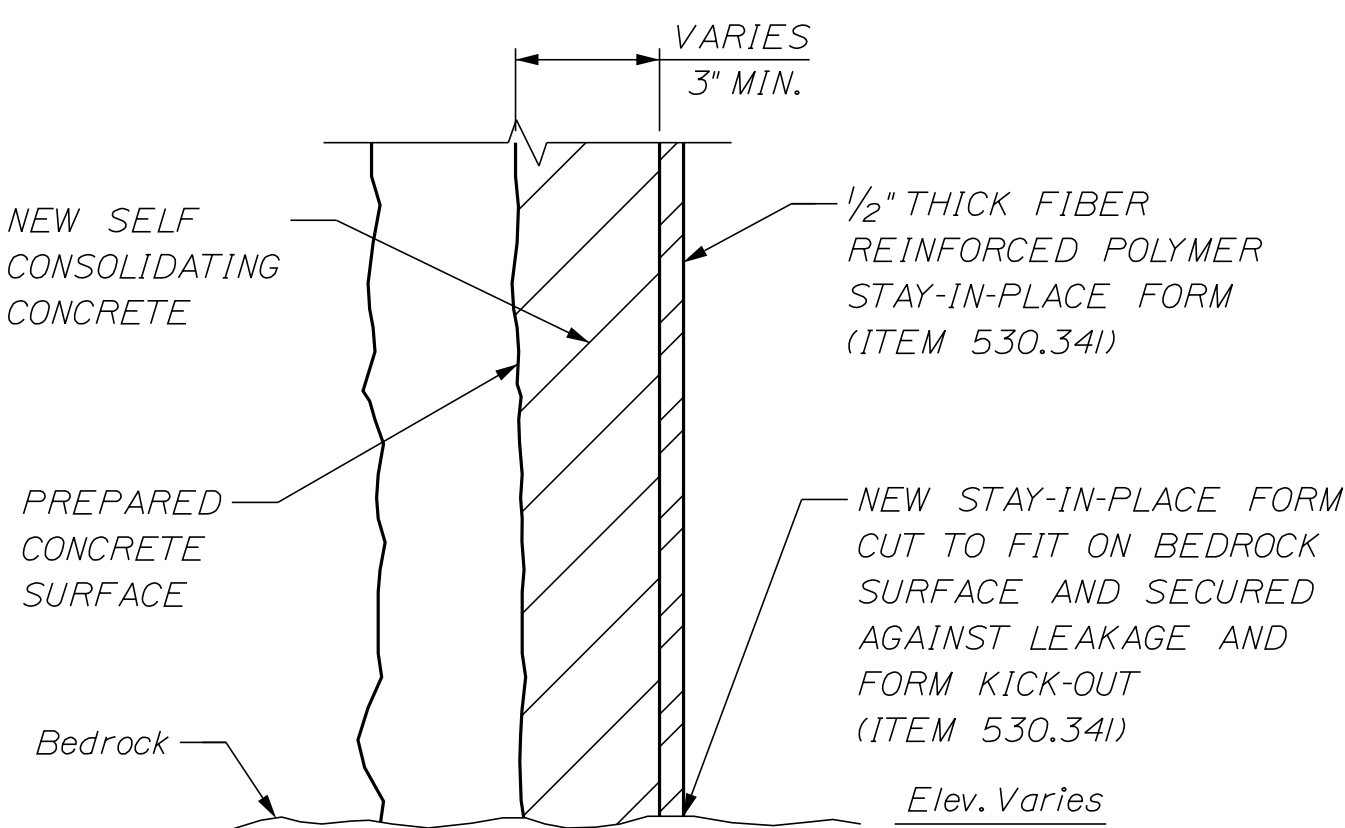
HALF ELEVATION
PIER 3

HALF ELEVATION
PIER 6

SOUTH ELEVATION - PIERS 3 & 6

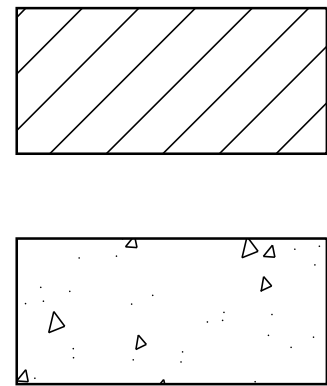


SECTION B-B



SECTION C-C

LEGEND:

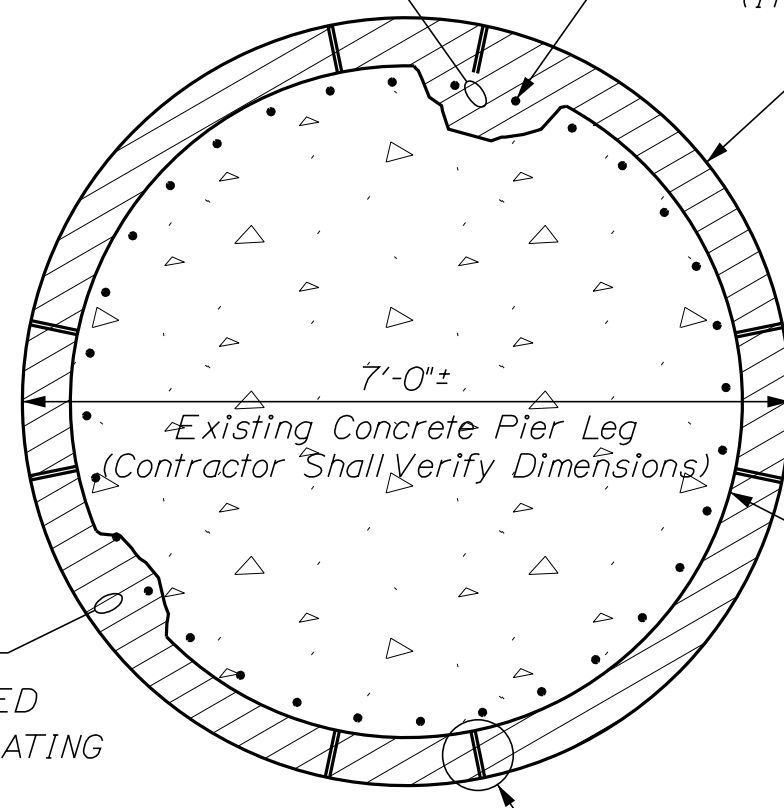


New Concrete
(Item 531.22I)

Existing Concrete

PATCH DEEP VOIDS GREATER THAN 6" DEEP, MAXIMUM 12" DEPTH, SEE NOTE 6. (ITEM 531.2II)

VOIDS LESS THAN 6" DEEP TO BE FILLED WITH SELF CONSOLIDATING CONCRETE



SECTION A-A

NOTES:

1. FOR GENERAL NOTES SEE SHEET 2.
2. CONCRETE TO BE PLACED IN MAXIMUM LIFTS OF 8'-0".
3. ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM 531.22I PIER STRENGTHENING, UNLESS NOTED OTHERWISE.
4. WATERTIGHT VERTICAL SPLICE TO BE IN ACCORDANCE WITH FIBER REINFORCED POLYMER STAY-IN-PLACE FORM MANUFACTURER'S RECOMMENDED DETAILS. EXTERIOR SURFACE OF STAY-IN-PLACE FORM TO BE FLUSH ACROSS SPLICE. LIMIT OF 2 SPLICES MAXIMUM PER PIER LEG. SPLICES TO BE PAID UNDER ITEM 530.34I.
5. NON-METALLIC ADJUSTABLE STAND-OFFS TO BE SPACED IN ACCORDANCE WITH FIBER REINFORCED POLYMER FORM MANUFACTURER'S RECOMMENDATIONS AS REQUIRED TO MAINTAIN POSITION OF FORM. STAND-OFFS TO BE PAID UNDER ITEM 530.34I.
6. IF THE TOTAL LENGTH OF VOIDS GREATER THAN 6" DEEP IN A HORIZONTAL PLANE IS LESS THAN 25% OF THE PIER LEG CIRCUMFERENCE, NO PATCHING OF DEEP VOIDS IS REQUIRED, AND THESE VOIDS SHALL BE FILLED WITH SELF CONSOLIDATING CONCRETE.
7. VENT SLOTS TO BE FILLED WITH CONCRETE PATCH MATERIAL UPON COMPLETION OF PIER STRENGTHENING.

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STATE OF MAINE	BRIDGE PLANS
DEPARTMENT OF TRANSPORTATION	WIN
HP-2049(800)	20498.00
	BRIDGE NO. 3257

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE
DESIGN-DETAILED	02/2015	C. DONOHUE	02/2015	
CHECKED-REVIEWED	02/2015	T. STODOLIS	02/2015	
DESIGN-DETAILED				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

DEER ISLE-SEDGWICK BRIDGE	PIERS 3 & 6
EGGEMOGGIN REACH	REPAIR DETAILS
DEER ISLE-SEDGWICK HANCOCK COUNTY	

SHEET NUMBER
13
OF 13