

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



LIST OF DRAWINGS

Title Sheet.....	1
Estimated Quantities & General Notes.....	2
Plan.....	3
Profile.....	4
Substructure Repair.....	5-6
Superstructure Repair.....	7
Bridge Drain.....	8
Reinforcing Schedule.....	9
Bridge Repairs.....	10-11
Maintenance of Traffic.....	12
Right of Way Map.....	13

SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Sixth Edition 2012.

DESIGN LOADING

Live Load MaineDOT Legal Loads

TRAFFIC DATA

Current (2012) AADT.....	2470
Future (2032) AADT.....	2960
DHV - % of AADT.....	12
Design Hour Volume.....	355
Heavy Trucks (% of AADT).....	10
Heavy Trucks (% of DHV).....	8
Directional Distribution (% of DHV).....	60
18 kip Equivalent P 2.0.....	209
18 kip Equivalent P 2.5.....	199
Design Speed (mph).....	45

HYDROLOGIC DATA

Drainage Area.....	444.1 sq mi
Design Discharge (Q50).....	11,500 cfs
Check Discharge (Q100).....	13,000 cfs
Headwater Elevation (Q50).....	291.15 ft
Headwater Elevation (Q100).....	291.78 ft
Discharge Velocity (Q50).....	12.28 fps
Discharge Velocity (Q100).....	13.03 fps
Headwater Elevation (Q2).....	288.87 ft
Discharge Velocity (Q2).....	8.08 fps
Headwater Elevation (Q25).....	290.47 ft

MATERIALS

Concrete:.....	Class "A"
Reinforcing Steel.....	ASTM A 615/A 615M, Grade 60
Post Tensioning Bars.....	ASTM A722, Type II

BASIC DESIGN STRESSES

Concrete.....	f'c = 4350 psi
Reinforcing Steel.....	f'y = 60,000 psi

CORNISH, YORK COUNTY HIRAM, OXFORD COUNTY WARREN BRIDGE OVER OSSIPPEE RIVER SOUTH HIRAM ROAD WIN 018240.00 PROJECT NO. BH-1824(000)X PROJECT LENGTH 0.020 mi. BRIDGE #5088

UTILITIES

TIME WARNER CABLE,
FAIRPOINT COMMUNICATIONS,
CENTRAL MAINE POWER CO.

MAINTENANCE OF TRAFFIC

SIGNED DETOUR

PROJECT LOCATION:	SOUTH HIRAM ROAD OVER THE OSSIPPEE RIVER. LOCATED 0.6 MILES NORTHERLY OF ROUTE 25 Latitude: 43° - 48' - 25" N Longitude: 70° - 49' - 35" W
PROGRAM AREA:	BRIDGE PROGRAM
OUTLINE OF WORK:	BRIDGE REHABILITATION TO CONCRETE TEE-BEAMS AND PIER

WIN 018240.00

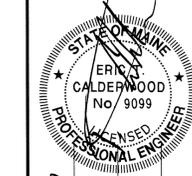
BH-1824(000)X

CORNISH/HIRAM
WARREN BRIDGE

TITLE SHEET

SHEET NUMBER

1



SIGNATURE: *[Signature]*
P.E. NUMBER: _____
DATE: _____

PROGRAM	BRIDGE PROGRAM
PROJECT MANAGER	L. TIMBERLAKE
DESIGNER	GM
CONSULTANT	CALDERWOOD ENGINEERING
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

STATE OF MAINE	DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
		<i>[Signature]</i>	2/4/14
		COMMISSIONER: <i>[Signature]</i>	2-4-14
		CHIEF ENGINEER: <i>[Signature]</i>	

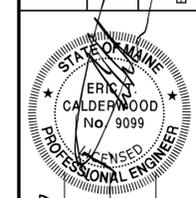
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Division: BRIDGE
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ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
502.23	STRUCTURAL CONCRETE PIERS	20	CY
502.70	STEEL BRIDGE DRAINS (GALVANIZED)	2	EA
503.12	REINFORCING STEEL, FAB & DEL	1400	LB
503.13	REINFORCING STEEL, PLACING	1400	LB
503.17.2	WELDED REINFORCEMENT REPAIR	10	EA
515.20	PROTECTIVE COATING FOR CONCRETE SURFACES	100	SY
518.60	REPAIR OF VERTICAL SURFACES < 7.9 IN	250	SF
518.70	REPAIR OF OVERHEAD SURFACES < 7.9 IN	55	SF
524.30I	TEMPORARY STRUCTURAL SUPPORT	1	LS
526.30I	TEMPORARY CONCRETE BARRIER (60 LF)	1	LS
535.64	POST TENSIONING SYSTEM	1	LS
639.19	FIELD OFFICE TYPE B	1	EA
652.31.2	TYPE III BARRICADES	6	EA
652.33	DRUM	15	EA
652.34	CONE	15	EA
652.35	CONSTRUCTION SIGNS	255.5	SF
652.36I	MAINTENANCE OF TRAFFIC CONTROL DEVICES (200 CD)	1	LS
652.38	FLAGGER	400	HR
655.5II	EMBEDDED GALVANIC ANODE	35	EA
656.75	TEMP. SOIL EROSION AND WATER POLL. CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL CONSTRUCTION NOTES

- All Utility Facilities shall be adjusted by the respective Utilities unless otherwise noted.
- For Easements, Construction Limits, and Right-Of-Way lines, refer to Right of Way Map.
- Protective Coating for Concrete Surfaces shall be applied to the following areas:
Concrete Deck ~ New C.I.P Portion (Around Proposed Drains),
Curb and Bridge Rail,
Fascia from top of Curb to Bottom of Exterior Beam
- Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:
 - If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
 - If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
 - If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation.
- The Contractor shall submit a Temporary Support Plan to the Resident at least 30 business days prior to the start of the rehabilitation work. The plan shall outline the methods and equipment to be used to support the bridge during both the pier and beam repair and dispose of all material cleaned off of the bridge. No work related to the rehabilitation of the bridge shall be undertaken by the Contractor until MaineDOT has reviewed the Temporary Support Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting, and finalizing, the Temporary Support Plan will be considered incidental to the Temporary Support pay item.
- The existing bridge shall be supported and rehabilitated to the limits indicated in the plans. Once the rehabilitation work is complete the Contractor is responsible for removing and appropriate disposal of components not re-used in the completed work.
- The Contractor shall submit a Rehabilitation Plan to the Resident at least 30 business days prior to the start of the rehabilitation work. The plan shall outline the methods and equipment to be used for removal, forming and casting rehabilitation to the existing structure. It shall also include containment methods, sequence and schedule specific to rehab items. No work related to the rehabilitation of the existing structure shall be undertaken by the Contractor until MaineDOT has reviewed the Rehabilitation Plan for appropriateness and completeness. Payment for all work necessary for developing, submitting, and finalizing, the Rehabilitation Plan will be considered incidental to related items.
- During construction the road will be closed to traffic for a time period specified in the Special Provisions.
- Repair areas indicated in plans are anticipated areas based on site inspection. Areas and locations are subject to change based on actual field conditions and the results of the concrete removal process, as determined by the Resident. Prior to the rehabilitation work the Resident and the Contractor shall go over and agree on all areas that will receive repair.
- All dimensions, elevations and other information shown on the contract plans to define the structure are based upon the original construction drawings and are not guaranteed to represent as-built conditions. The contractor shall verify all conditions and dimensions as required for the completion of the work under the contract. The contractor shall be responsible for the accuracy and for the correct fit of all construction.
- All work is to be performed with care so that materials which are to remain in place are not damaged. Areas not agreed upon between the Resident and the Contractor for rehabilitation that are damaged shall be repaired at no additional cost to the Department.
- Reinforcement shown in the reinforcement schedule shall be paid for under items 503.12 and 503.13. All other reinforcement required for the repair of the beams and the piers, including stirrups, shall be considered incidental to related repair items.
- Galvanic anodes shall be placed at a maximum spacing of 30 inches in the pier locations and 24 inches in the beam locations.
- Contractor shall restore all areas disturbed by construction activities to neat limits and shall place loam, mulch and seed as required to restore areas and as directed by the Resident. Payment for restoring disturbed areas will be considered incidental to related construction activities.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SIGNATURE: [Signature]
P.E. NUMBER: 9099
DATE: 7/2013

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	GMM	GMM	OCT. 2013
CHECKED-REVIEWED	ETC	ETC	FEB. 2014
DESIGNS-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

WARREN BRIDGE
OVER OSSISPEE RIVER
CORNISH, YORK CTY. HIRAM, OXFORD CTY.

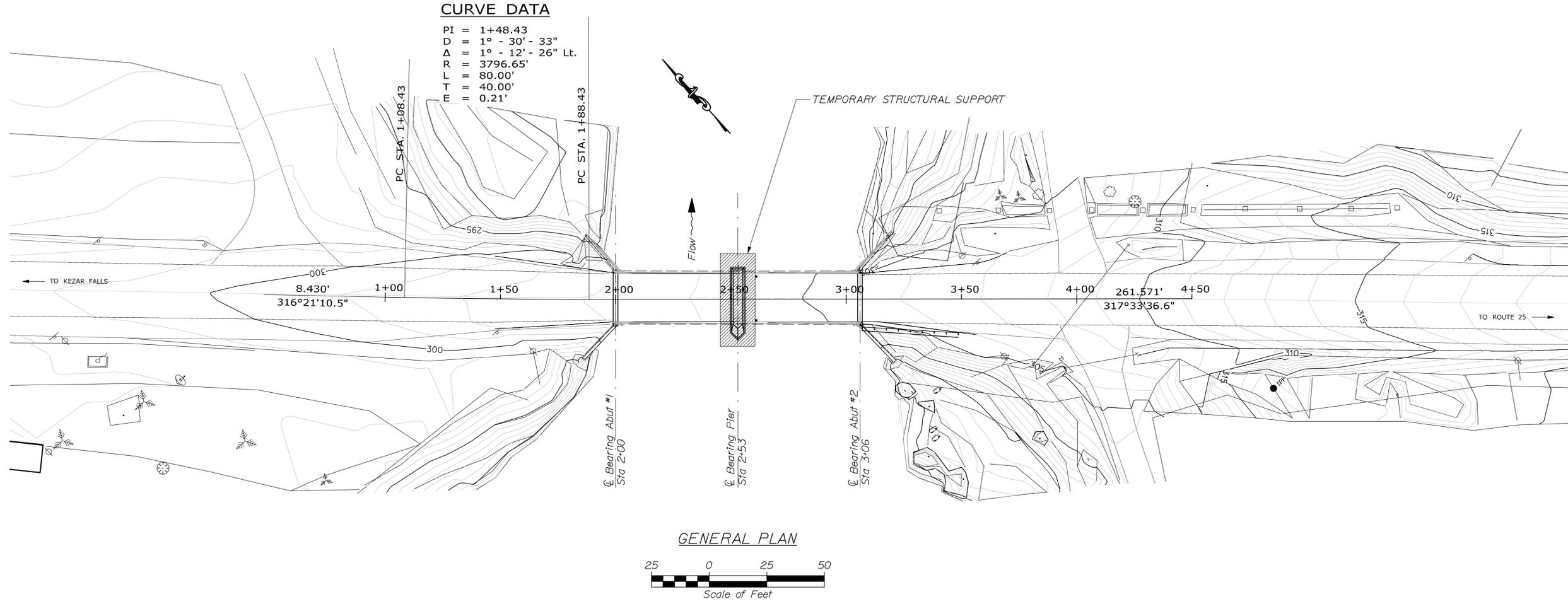
ESTIMATED QUANTITIES

SHEET NUMBER

2



BRIDGE NO. 5088
WIN
18240.00
BRIDGE PLANS



WARREN BRIDGE OVER OSSIPPEE RIVER CORNISH, YORK CTY. HIRAM, OXFORD CTY.		PROJ. MANAGER L. TIMBERLAKE	BY GNM	DATE OCT 2013
GENERAL PLAN		CHECKED-REVIEWED ETC	ETC	SIGNATURE
		DESIGNS-DETAILED		P.E. NUMBER
		REVISIONS 1		DATE
		REVISIONS 2		
SHEET NUMBER		BRIDGE NO. 5088	WIN	BRIDGE PLANS
3		018240.00	18240.00	

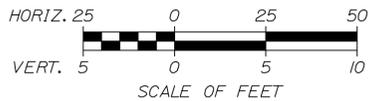
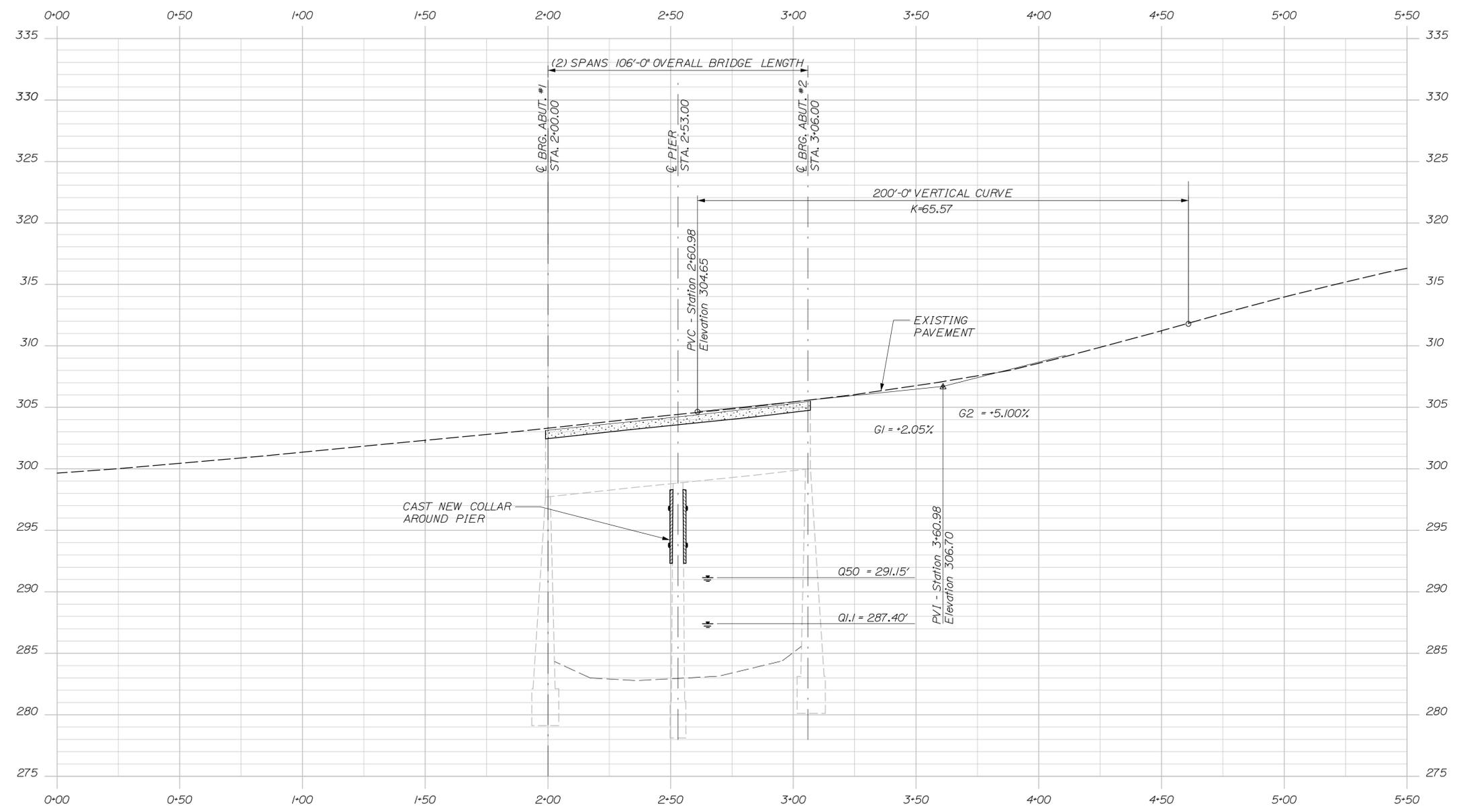
STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 018240.00
 WIN
 18240.00
 BRIDGE NO. 5088
 BRIDGE PLANS

Date: 2/14/2014

Username: common

Division: BRIDGE

Filename: ... \Final\004_Profile.dgn



PROFILE

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 018240.00
 PIN 18240.00
 BRIDGE NO. 5088
 BRIDGE PLANS

ERIC J. CALDERWOOD
 No. 9099
 REGISTERED PROFESSIONAL ENGINEER
 SIGNATURE
 P.E. NUMBER
 DATE 2013

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	GJM	GJM	OCT. 2013
CHECKED-REVIEWED	ETC	ETC	FEB. 2014
DESIGN-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

WARREN BRIDGE
 OVER OSSIPPEE RIVER
 CORNISH, YORK CTY. HIRAM, OXFORD CTY.
 PROFILE

SHEET NUMBER

4

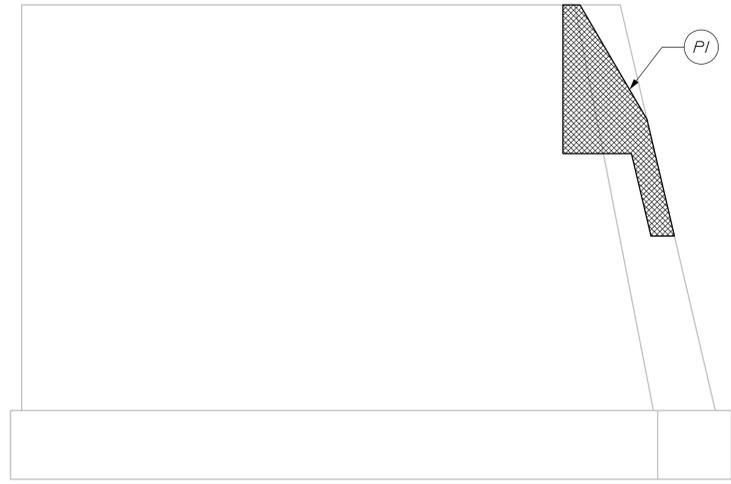


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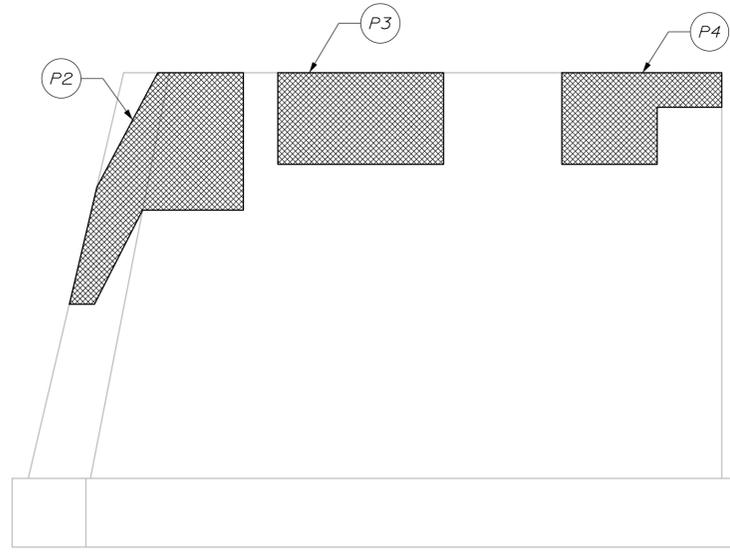
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Division: BRIDGE

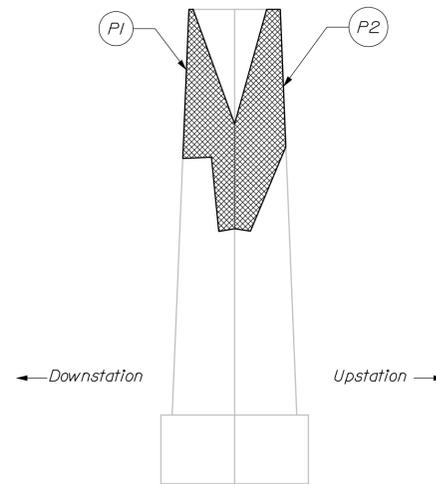
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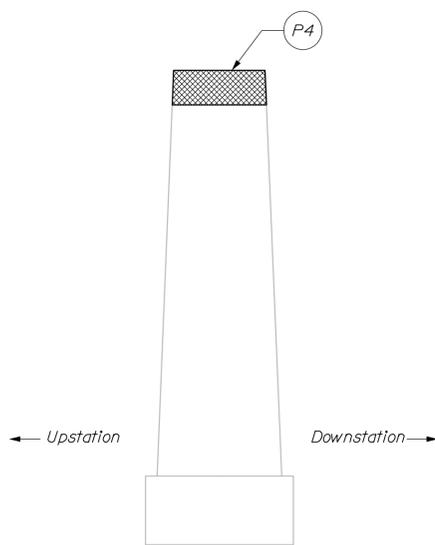
Pier ~ Looking Upstation
1/4"=1'-0"



Pier ~ Looking Downstation
1/4"=1'-0"



Pier ~ Looking Downstream
1/4"=1'-0"



Pier ~ Looking Upstream
1/4"=1'-0"

PIER REMOVAL NOTES

- Contractor shall set up a temporary structural support for the existing beams on each side of the pier prior to the removal of any pier concrete. Temporary structural support shall be designed and stamped by a Professional Engineer, licensed to practice in the State of Maine.
- Set up an appropriate contamination/debris collection system.
- Areas listed are approximations of unsound concrete. The total area of estimated removal is 157 SF, including an additional 25% for undetermined locations.
- Saw cut 5/8" deep around designated areas to prevent excess removal. Indicated areas are the approximate anticipated removal limits and are subject to change in the field as agreed upon by Contractor and Resident.
- Maximum Jackhammer weight shall be 30lbs
- After the removal of the concrete the surface area should be cleaned of loose debris using high pressure water or air. If air is used, care shall be used to prevent airborne oil contamination.
- Install sacrificial galvanic anodes along all exposed rebar locations at a maximum of 30 inches O.C.

DESIGNATION	PIER	SIDE	AREA
P1	1	Downstation/Upstream	25 SF
P2	1	Upstation/Upstream	44 SF
P3	1	Upstation	29 SF
P4	1	Upstation	27 SF

TOTAL AREA OF PIER REMOVAL OF 157 SF. TOTAL QUANTITY INCLUDES AN ADDITIONAL 25% FOR UNDETERMINED LOCATIONS

STATE OF MAINE DEPARTMENT OF TRANSPORTATION 018240.00	BRIDGE NO. 5088 WIN 18240.00 BRIDGE PLANS
	SIGNATURE: _____ P.E. NUMBER: _____ DATE: _____
PROJ. MANAGER: _____ L. TIMBERLAKE GNM ETC	BY: _____ GNM ETC
DESIGN-DETAILED: _____ CHECKED-REVIEWED: _____ DESIGNED-DETAILED: _____ REVISIONS: 1 _____ REVISIONS: 2 _____ REVISIONS: 3 _____ REVISIONS: 4 _____ FIELD CHANGES: _____	DATE: _____ OCT. 2013 FEB. 2014
WARREN BRIDGE OVER OSSIPPEE RIVER CORNISH, YORK CTY. HIRAM, OXFORD CTY.	SUBSTRUCTURE REPAIR
SHEET NUMBER 5	

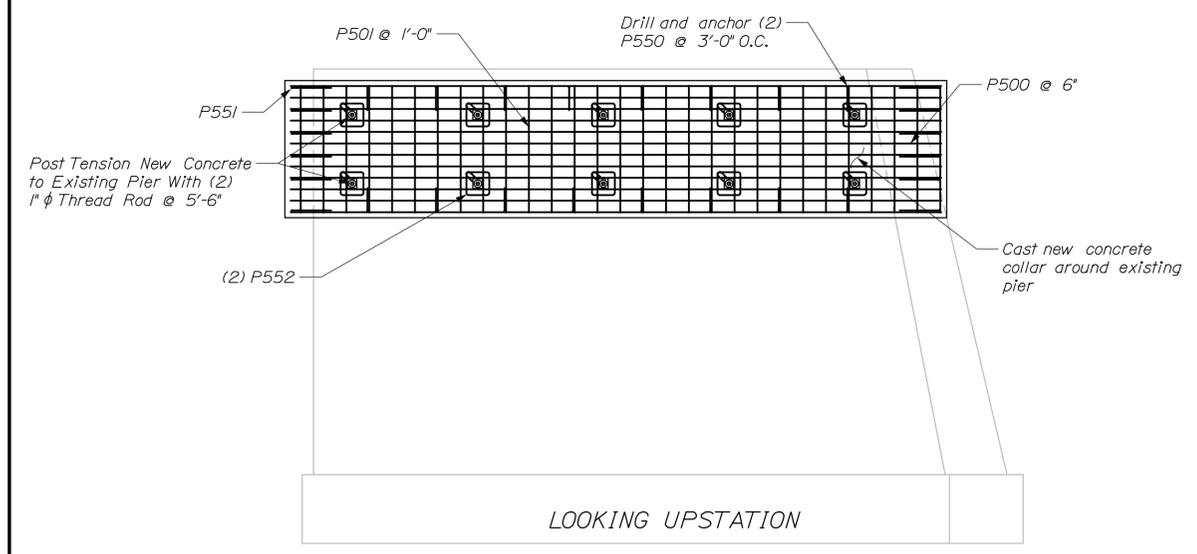


Date: 2/14/2014

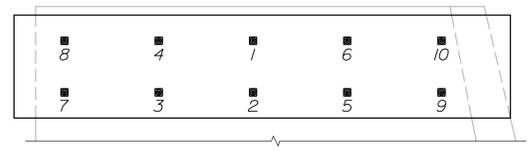
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Division: BRIDGE

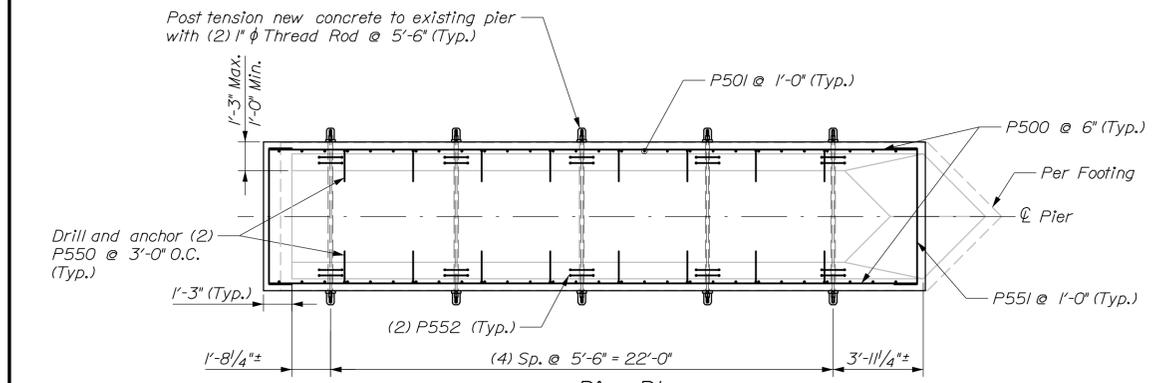
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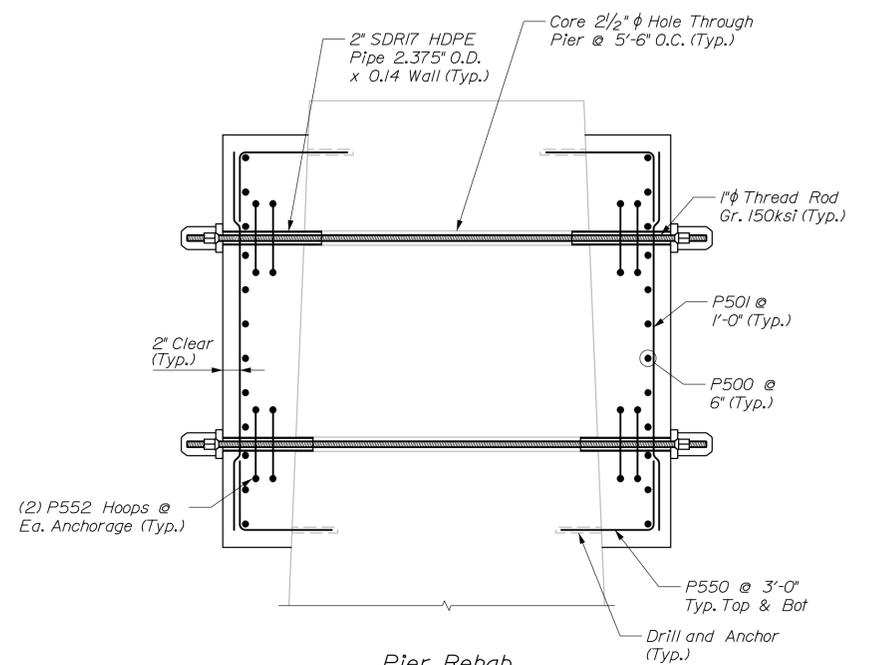
Pier Elevation
1/4"=1'-0"



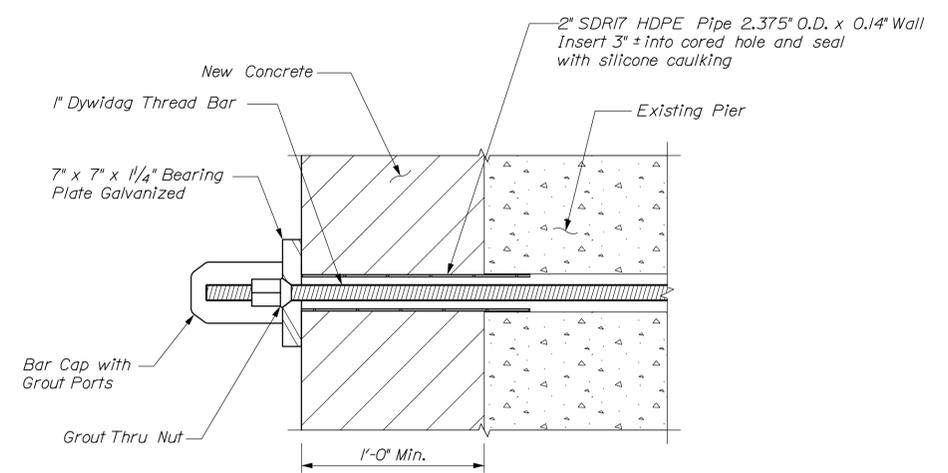
Thread Rod Tensioning Sequence
3/16"=1'-0"



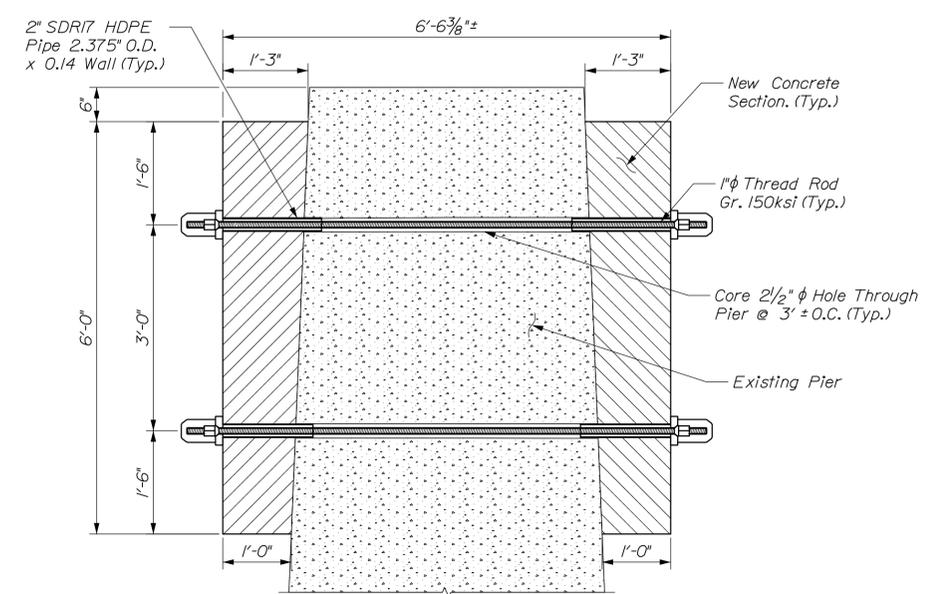
Pier Plan
1/4"=1'-0"



Pier Rehab
3/4"=1'-0"



Anchorage Detail
2" = 1'-0"



Pier Rehab Section
3/4"=1'-0"

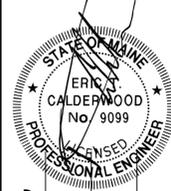
PIER REPAIR NOTES

1. Payment for the removal and replacement of unsound concrete shall be made under pay item 518.60.
2. Payment for the placement of new pier collar concrete outside the parameters of the existing pier concrete shall be made under pay item 502.23.
3. The contractor shall provide an acceptable means of access at the pier to allow the Resident to safely perform an inspection of all repair work to the concrete. Payment for access shall be considered incidental to related items.
4. Chamfer all exposed edges 3/4" unless noted otherwise.
5. All unsound concrete shall be removed prior to the placement of concrete.
6. All post tensioning bars are to be 1" φ, Grade 150ksi, and conform to the requirements of ASTM A722, Type II, or approved equal.
7. Thread rods shall be tensioned and locked off at 89k.
8. All anchor plates shall conform to ASTM A709, Grade 50ksi and shall be galvanized in accordance with ASTM A123.
9. All cable grout shall conform to one of the following:
SikaGrout 300PT
Master Flow 816
Five Star Special Grout 400
Approved Equal
10. Concrete shall reach a compressive strength of 4350psi before bars may be tensioned.

PIER REPAIR PROCEDURE

1. Set up an appropriate contamination/debris collection system.
2. Saw cut 5/8" deep around designated areas to prevent excess removal and to prevent feathered edges of repair. Indicated areas are the approximate anticipated removal limits and are subject to change.
3. After the removal of the concrete the surface area should be cleaned of loose debris using high pressure water or air.
4. Exposed rebar shall be cleaned of foreign material and loose scaly rust. If it is determined by the Resident that the rust is tight and bonded than the cleaning may be omitted.
5. Core 2 1/2" φ Holes as shown for post tensioning. Insert 2" HDPE duct.
6. Drill and Anchor #5 Bars at 3'-0" O.C. as indicated. Bars shall be embedded and anchored per manufacturer's recommendations. Grout shall be from MaineDOT approved materials list.
7. Once all new anchored rebar and ducts are in place the surface shall be cleaned of loose debris prior to the placement of any new concrete.
8. Install all new additional reinforcement.
9. Construct and place forms and block outs. Install thread bar or similar bar shape through duct to act as mandrel to help maintain alignment.
10. Place new concrete. Formwork shall be placed in a manner to allow the concrete to be vibrated and reach all locations. Formwork shall be inspected and approved by the Resident prior to the placement of concrete.
11. Allow concrete to cure to 4350 psi.
12. Install anchor assembly and thread bars.
13. Tension bars in order (i.e. Bar 1, then Bar 2, then Bar 3 etc.) to 5,000 lbs each bar.
14. Tension bars in order (i.e. Bar 1, then Bar 2, then Bar 3 etc.) to 89,000 lbs each bar, lock off.
15. Grout duct using an approved cable grout. Grout from one end only. Only grout one bar at a time. Remove nipple after the grout has hardened and insert plug.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		018240.00		BRIDGE NO. 5088		WIN 18240.00		BRIDGE PLANS	
WARREN BRIDGE OVER OSSISPEE RIVER HIRAM, OXFORD CTY. CORNISH, YORK CTY.		SUBSTRUCTURE REPAIR		DATE		P.E. NUMBER		SIGNATURE	
PROJ. MANAGER	L. TIMBERLAKE	BY	G.M.	DATE	OCT 2013	DESIGN-DETAILED	G.M.	DATE	OCT 2013
CHECKED-REVIEWED	ETC	DESIGN-REVIEWED	ETC	DATE	FEB 2014	DESIGN-DETAILED	ETC	DATE	FEB 2014
REVISIONS 1		REVISIONS 2		REVISIONS 3		REVISIONS 4		FIELD CHANGES	



SHEET NUMBER

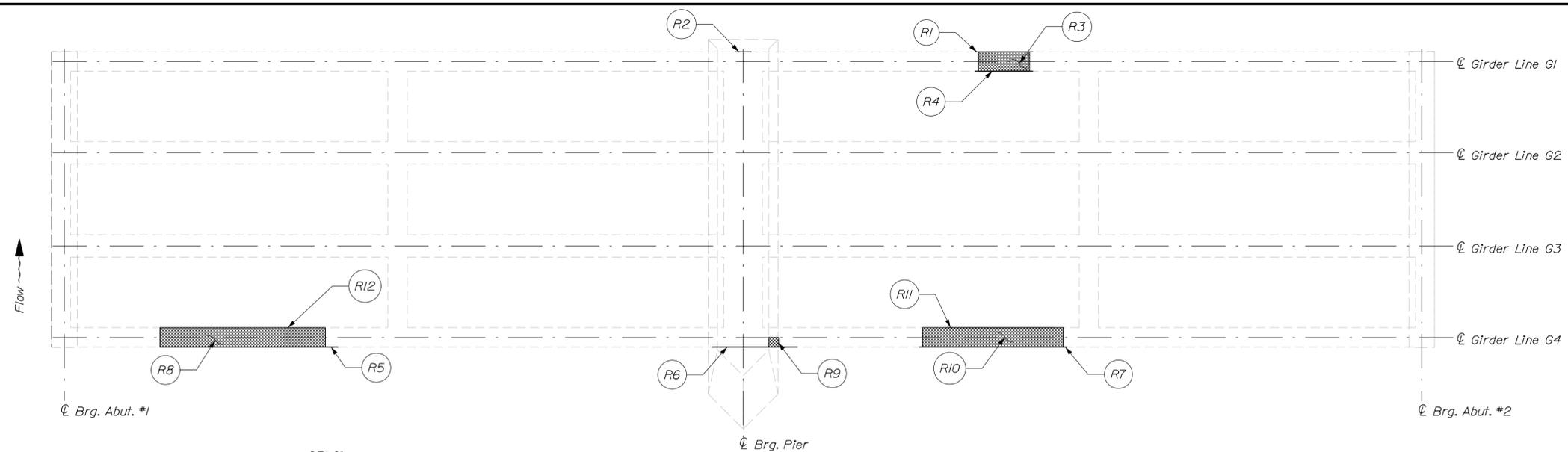
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Date: 2/14/2014

Username: common

Division: BRIDGE

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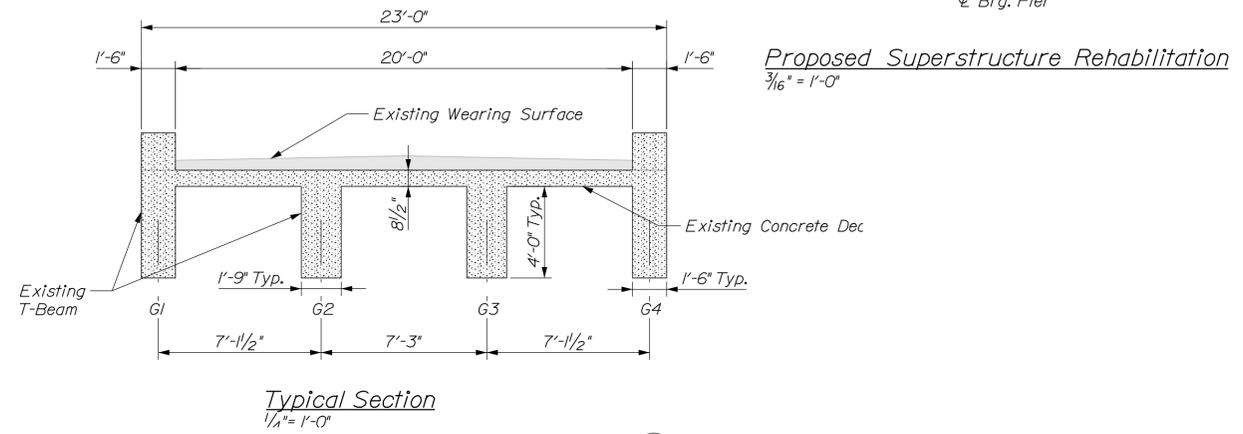


DESIGNATION	SPAN	BEAM LINE	SIDE	AREA SF
R1	2	G1	Downstream	4
R2	1-2	G1	Downstream	5
R3	2	G1	Bottom	6
R4	2	G1	Upstream	4
R5	1	G4	Upstream	12
R6	1-2	G4	Upstream	14
R7	2	G4	Upstream	12
R8	1	G4	Bottom	20
R9	2	G4	Bottom	1
R10	2	G4	Bottom	17
R11	2	G4	Downstream	9
R12	1	G4	Downstream	11

Approximate total beam repair areas are as follows:

Vertical < 7.9 inch: 90 sf
Overhead < 7.9 inch: 55 sf

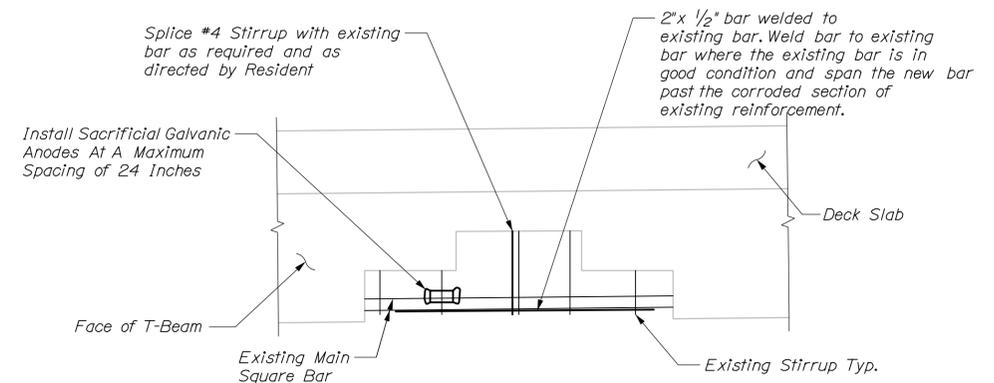
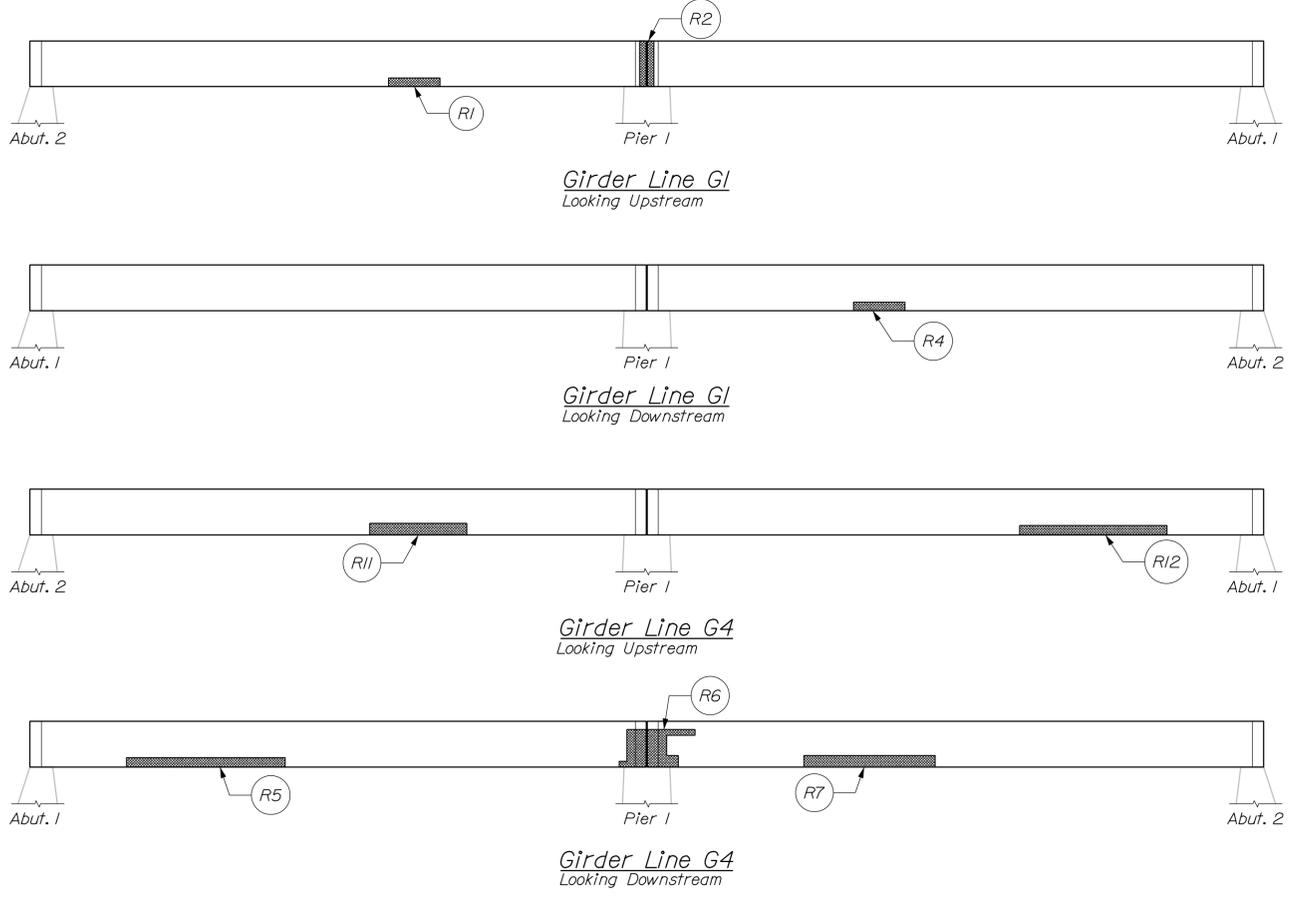
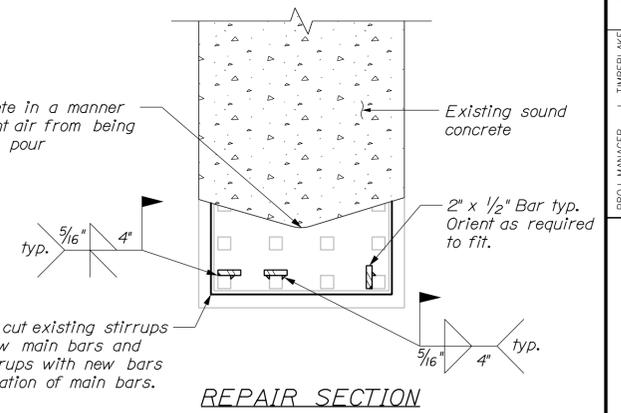
Total quantities include an additional 25% to account for undetermined locations.



Proposed Superstructure Rehabilitation
3/16" = 1'-0"

SUPERSTRUCTURE NOTES

1. Beam shall be temporarily supported prior to the removal of concrete.
2. At every repair section the main reinforcing bars must be repaired if the individual bar has greater than 25% section loss, 75% remaining; or if the group of bars has greater than 15% section loss, 85% remaining. Supplemental bars sufficient to increase the area of the group of reinforcing bars beyond 85% of the initial area remaining are not required.
3. All repair areas shall be cleaned of loose debris. Reinforcing steel shall be cleaned of all rust.
4. Removal and replacement of concrete shall be done in a similar fashion as that outlined in the substructure repair plan sheet and the special provisions.
5. Stirrups exposed in repair areas that have less than 25% loss in section may remain unsupplemented. Stirrups with greater than 25% loss in section area shall be supplemented with a new #4 rebar stirrup. Vertical legs of the supplemented stirrup shall be drilled and anchored or shall be lapped with the existing stirrup for a minimum of 12". 12" shall be measured along each leg where section loss in the existing bar is less than 50%. Payment shall be considered incidental to the repair of the overhead concrete surface.
6. Install sacrificial galvanic anodes at a maximum spacing of 24 inches.



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
018240-00
WIN 18240.00
BRIDGE NO. 5088
BRIDGE PLANS

STATE OF MAINE
ERIC CALDERWOOD
No. 9099
LICENSED PROFESSIONAL ENGINEER

WARREN BRIDGE
OVER OSSISPEE RIVER
CORNISH, YORK CTY. HIRAM, OXFORD CTY.
SUPERSTRUCTURE REPAIR

SHEET NUMBER 2

PROJ. MANAGER: L. TIMBERLAKE
DESIGN-DETAILED: GJM
CHECKED-REVIEWED: ETC
DESIGN-DETAILED: GJM
DESIGN-DETAILED: ETC
REVISIONS: 1
REVISIONS: 2
REVISIONS: 3
REVISIONS: 4
FIELD CHANGES

DATE: OCT 2013
DATE: FEB 2014

BY: GJM
BY: ETC

SIGNATURE: _____
P.E. NUMBER: _____
DATE: _____

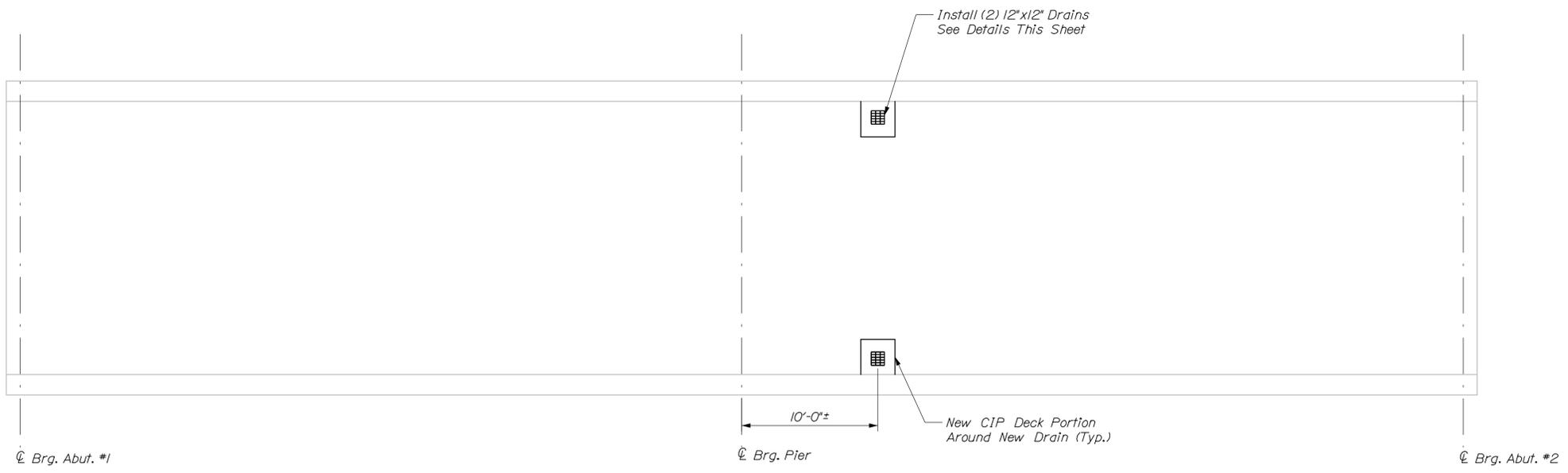


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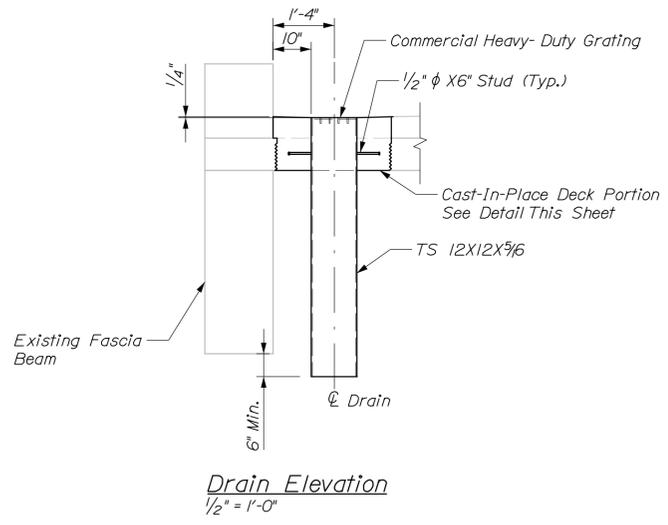
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Division: BRIDGE

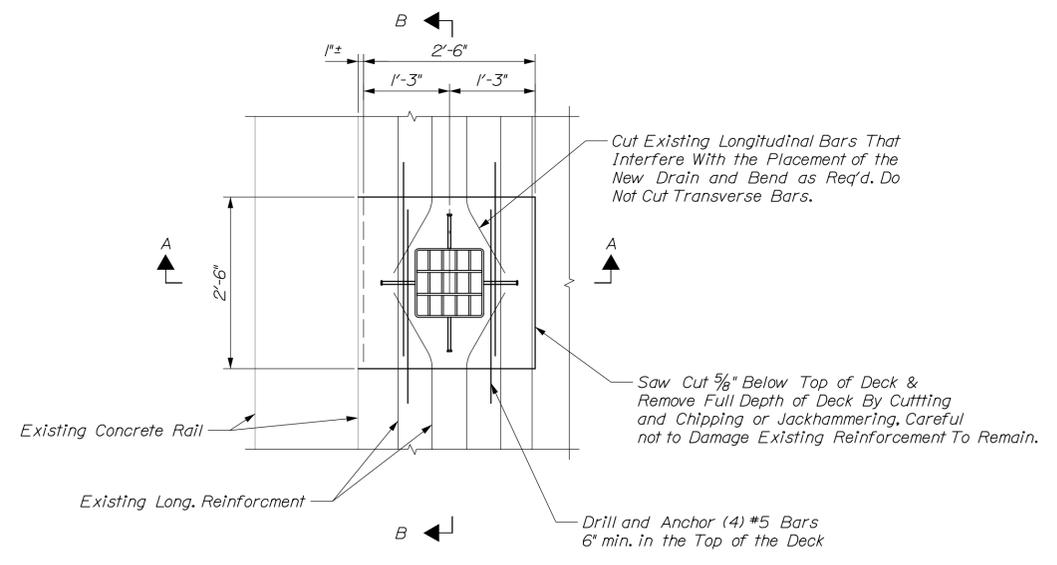
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Superstructure Plan View ~ Drain Locations
 $\frac{3}{16}'' = 1'-0''$



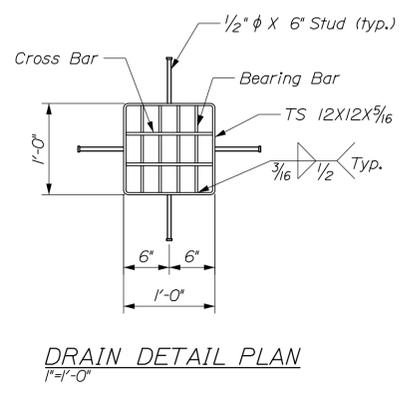
Drain Elevation
 $\frac{1}{2}'' = 1'-0''$



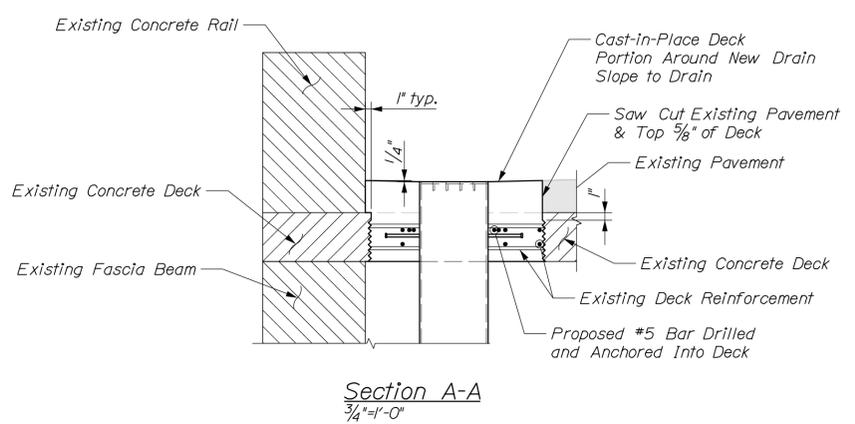
Bridge Drain Plan View
 $\frac{3}{4}'' = 1'-0''$
 Note: Existing Transverse Reinforcement Not Shown For Clarity

BRIDGE DRAIN NOTES

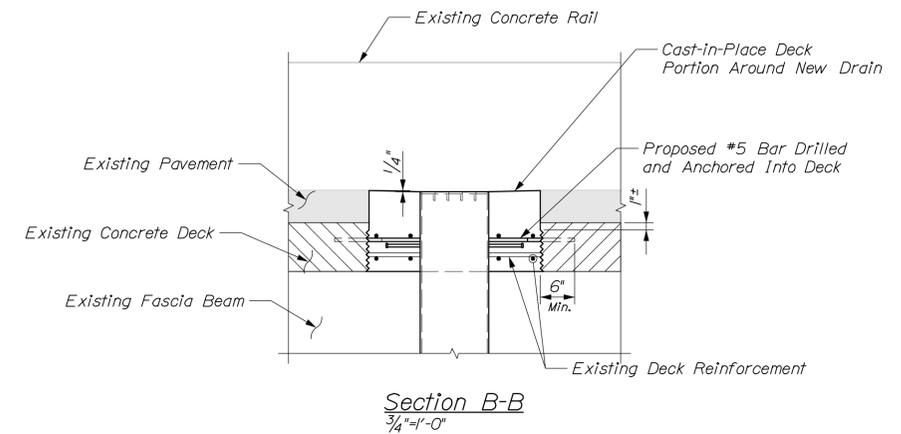
1. The grating shall be commercial heavy-duty grating with $\frac{1}{2}'' \times \frac{5}{16}''$ bearing bars at $2\frac{3}{8}''$ and $\frac{3}{8}'' \phi$ cross bars spaced at 4". The grating shall be centered in the drain top.
2. TS 12x12x $\frac{5}{16}$ shall be ASTM A 500, Grade B
3. Drains shall be galvanized in accordance with ASTM A123
4. Deck concrete shall have a 28 day compressive strength $f'c = 4,350psi$. Concrete may be poured in (2) stages at contractors option.
5. Reinforcing steel shall have a minimum yield strength $Fy = 60ksi$ and shall have a plain finish
6. Reinforcing Steel shall have a minimum cover of 2" unless otherwise noted.
7. After the removal of the concrete the surface area should be cleaned of loose debris using high pressure water or air of loose debris. Existing reinforcing steel shall be cleaned of all rust.
8. Formwork shall be placed in a manner to allow the concrete to be vibrated and reach all locations. Formwork shall be inspected and approved by the Resident prior to the placement of concrete.



DRAIN DETAIL PLAN
 $1'' = 1'-0''$



Section A-A
 $\frac{3}{4}'' = 1'-0''$



Section B-B
 $\frac{3}{4}'' = 1'-0''$

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		018240.00		BRIDGE NO. 5088		BRIDGE PLANS	
		SIGNATURE		P.E. NUMBER		DATE	
DATE	BY	PROJ. MANAGER	L. TIMBERLAKE	DESIGN-DETAILED	GM	CHECKED-REVIEWED	ETC
OCT. 2013	GM			DESIGN-DETAILED	ETC		
FEB. 2014	ETC			REVISIONS 1		REVISIONS 2	
				REVISIONS 3		REVISIONS 4	
				FIELD CHANGES			
WARREN BRIDGE OVER OSSIPPEE RIVER HIRAM, OXFORD CTY.				BRIDGE DRAIN			
CORNISH, YORK CTY.				SHEET NUMBER			
				8			



Date: 2/14/2014

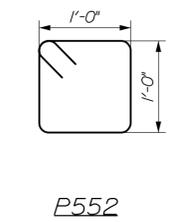
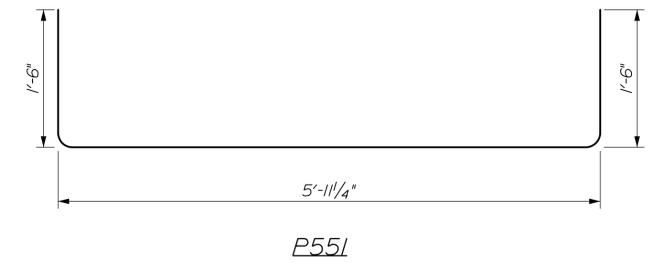
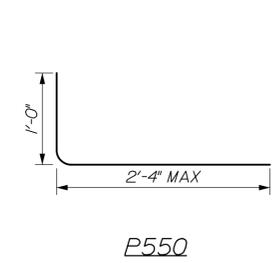
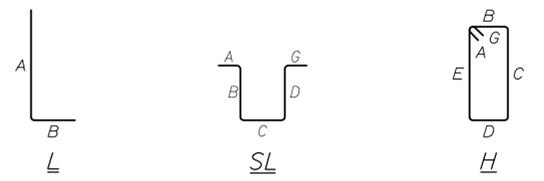
Username: common

Division: BRIDGE

Filename: ... \Final\009_Rebar.dgn

STRAIGHT BARS								BENT BARS															
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION	
<i>Pier Collar</i>								<i>Pier Collar</i>															
P500	24	28'-7 ⁵ / ₈ "	Horizontal Pier Collar					P550	32	3'-3 ¹ / ₄ "	L	1'-0"	2'-4"										Pier Collar L-Bar
P501	58	5'-8"	Vertical Pier Collar					P551	12	8'-9 ⁵ / ₈ "	SL		1'-6"	5'-11 ¹ / ₄ "	1'-6"								Pier Collar - End Stirrup
								P552	40	4'-9 ¹ / ₄ "	H	3 ³ / ₄ "	1'-0"	1'-0"	1'-0"	1'-0"		3 ³ / ₄ "					Pier Collar - Tension Bar Stirrup
MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	LOCATION	MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION	

TYPE - BENDING DIAGRAMS



REINFORCING NOTES

1. Rebar dimensions and quantities shown are estimations. Contractor shall field verify pier dimensions prior to ordering reinforcement.
2. P550 L-Bar shown is with a maximum 2'-4" leg. This L-Bar will need to be modified for each location depending on the amount of existing concrete removed and the required depth of anchorage per grout manufacturers recommendation.
3. Contractor may field measure and verify exact lengths required or field cut bars as required.

All dimensions are out-to-out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A 615/A 615M, Grade 60

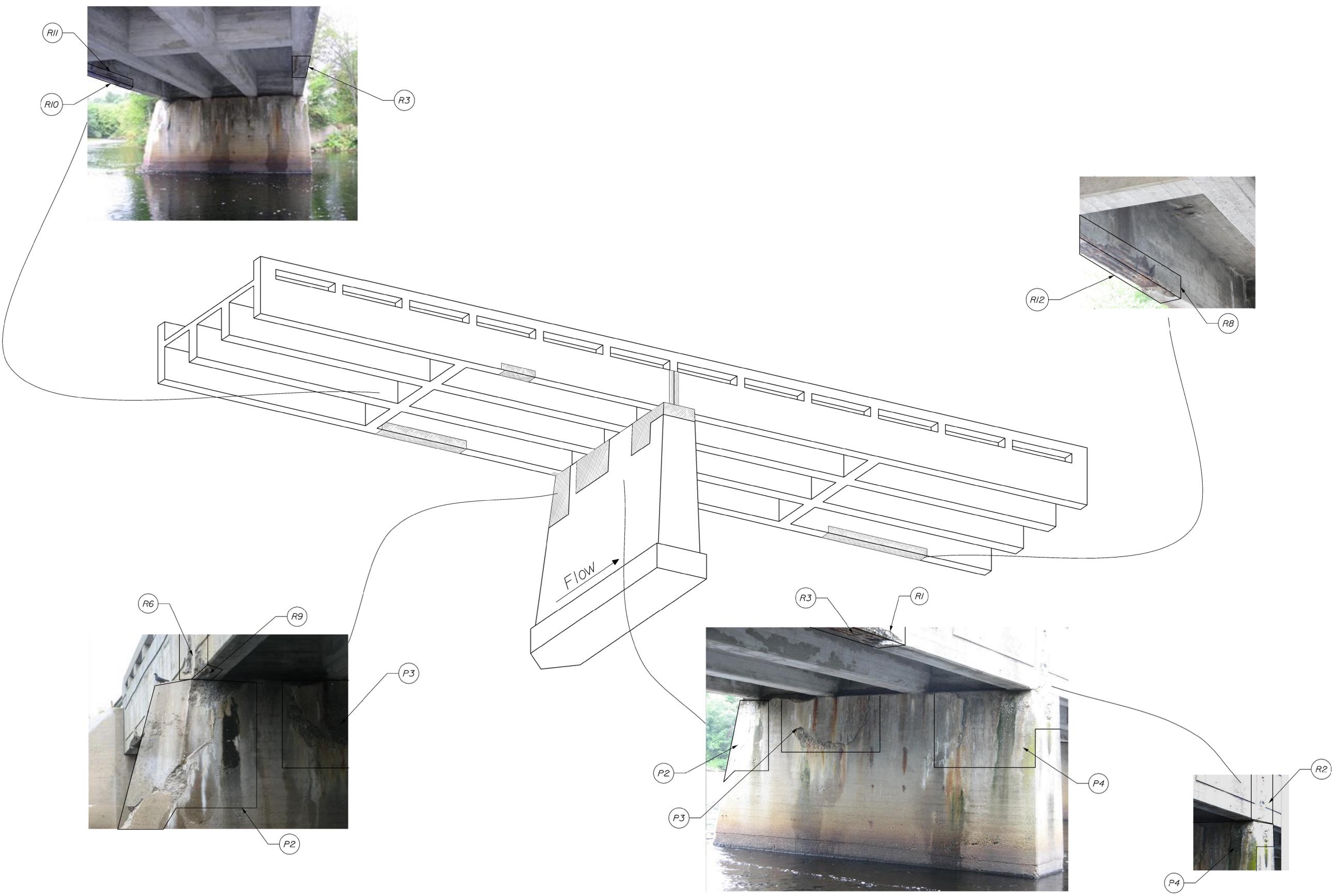
GENERAL NOTES

1. The first two digits following the letter(s) of the mark indicate the size of the bar:

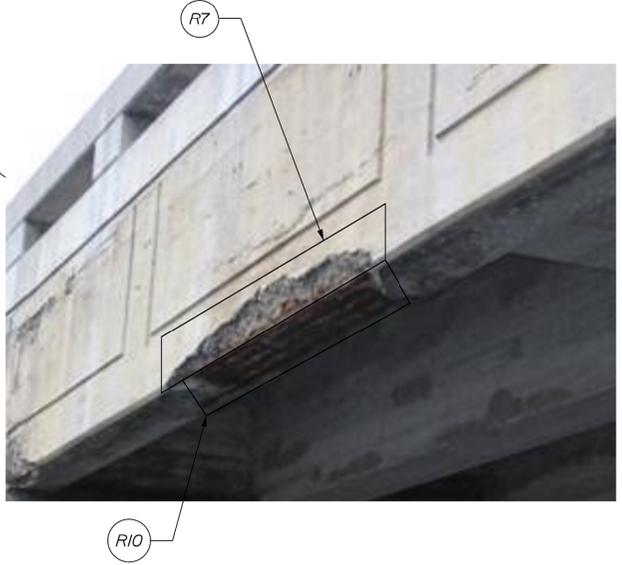
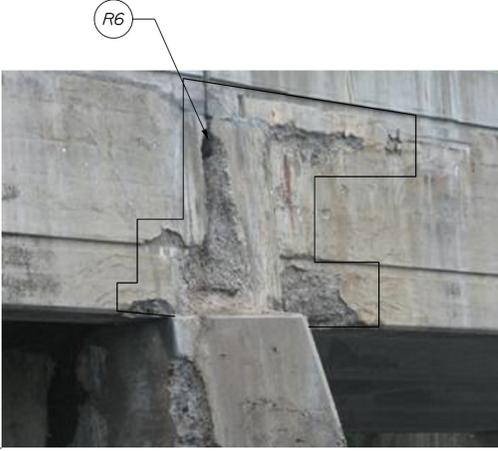
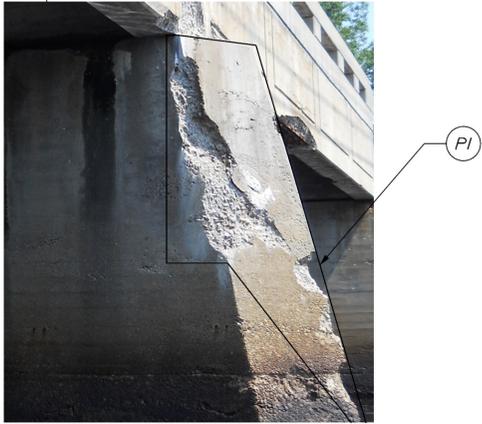
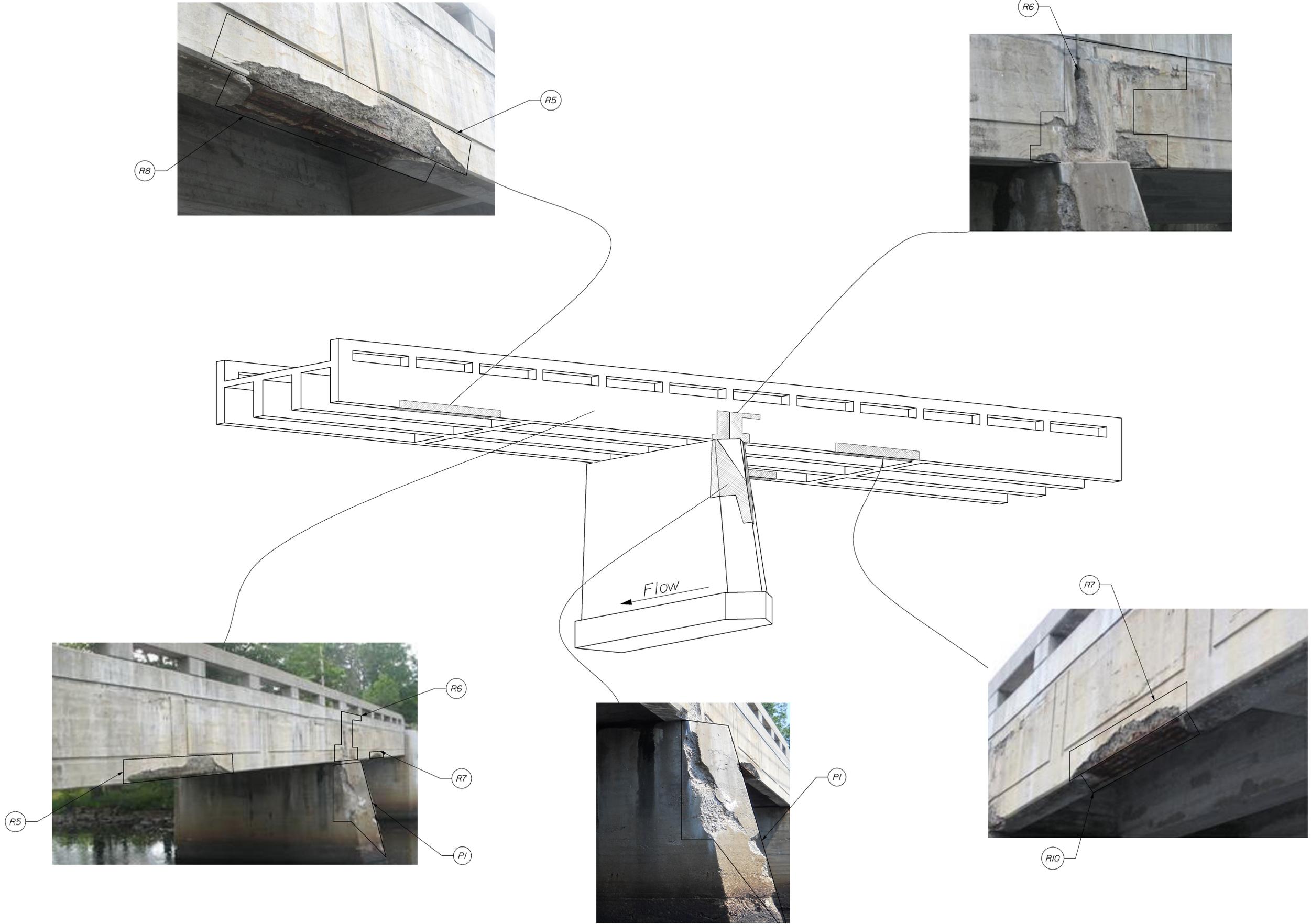
Mark "A502" = bar size #5
 Mark "P805" = bar size #8
 Mark "S650" = bar size #6

STATE OF MAINE DEPARTMENT OF TRANSPORTATION 018240.00 WIN 18240.00 BRIDGE NO. 5088 BRIDGE PLANS	WARREN BRIDGE OVER OSSIPPEE RIVER CORNISH, YORK CTY. HIRAM, OXFORD CTY. REBAR SCHEDULE	SHEET NUMBER <h1 style="font-size: 2em;">9</h1>
PROJ. MANAGER: L. TIMBERLAKE DESIGN-DETAILED: GNM CHECKED-REVIEWED: ETC DESIGNS-DETAILED: ETC REVISIONS: 1 REVISIONS: 2 REVISIONS: 3 REVISIONS: 4 FIELD CHANGES	DATE: OCT 2013 DATE: FEB 2014 BY: GNM BY: ETC	SIGNATURE P.E. NUMBER DATE





STATE OF MAINE DEPARTMENT OF TRANSPORTATION		018240.00		BRIDGE NO. 5088		WIN 18240.00		BRIDGE PLANS			
WARREN BRIDGE OVER OSSISPEE RIVER HIRAM, OXFORD CTY. CORNISH, YORK CTY.		BRIDGE REPAIR		SHEET NUMBER		10		CIDERWOOD ENGINEERING			
PROJ. MANAGER	L. TIMBERLAKE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE					
DESIGN-DETAILED	G.M.	BY	OCT 2013				DESIGN-REVIEWED	ETC	FEB 2014		
CHECKED-REVIEWED	ETC	BY					REVISIONS 1			REVISIONS 2	
DESIGN-DETAILED		BY					REVISIONS 3			REVISIONS 4	
		BY					FIELD CHANGES				



SHEET NUMBER

11

WARREN BRIDGE
 OVER OSSISPEE RIVER
 CORNISH, YORK CTY. HIRAM, OXFORD CTY.
 BRIDGE REPAIR

PROJ. MANAGER	L. TIMBERLAKE	BY	DATE
DESIGN-DETAILED	GMM	GMM	OCT, 2013
CHECKED-REVIEWED	ETC	ETC	NOV, 2013
DESIGNS-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE
 P.E. NUMBER
 DATE

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 018240.00
 WIN
 18240.00
 BRIDGE NO. 5088
 BRIDGE PLANS

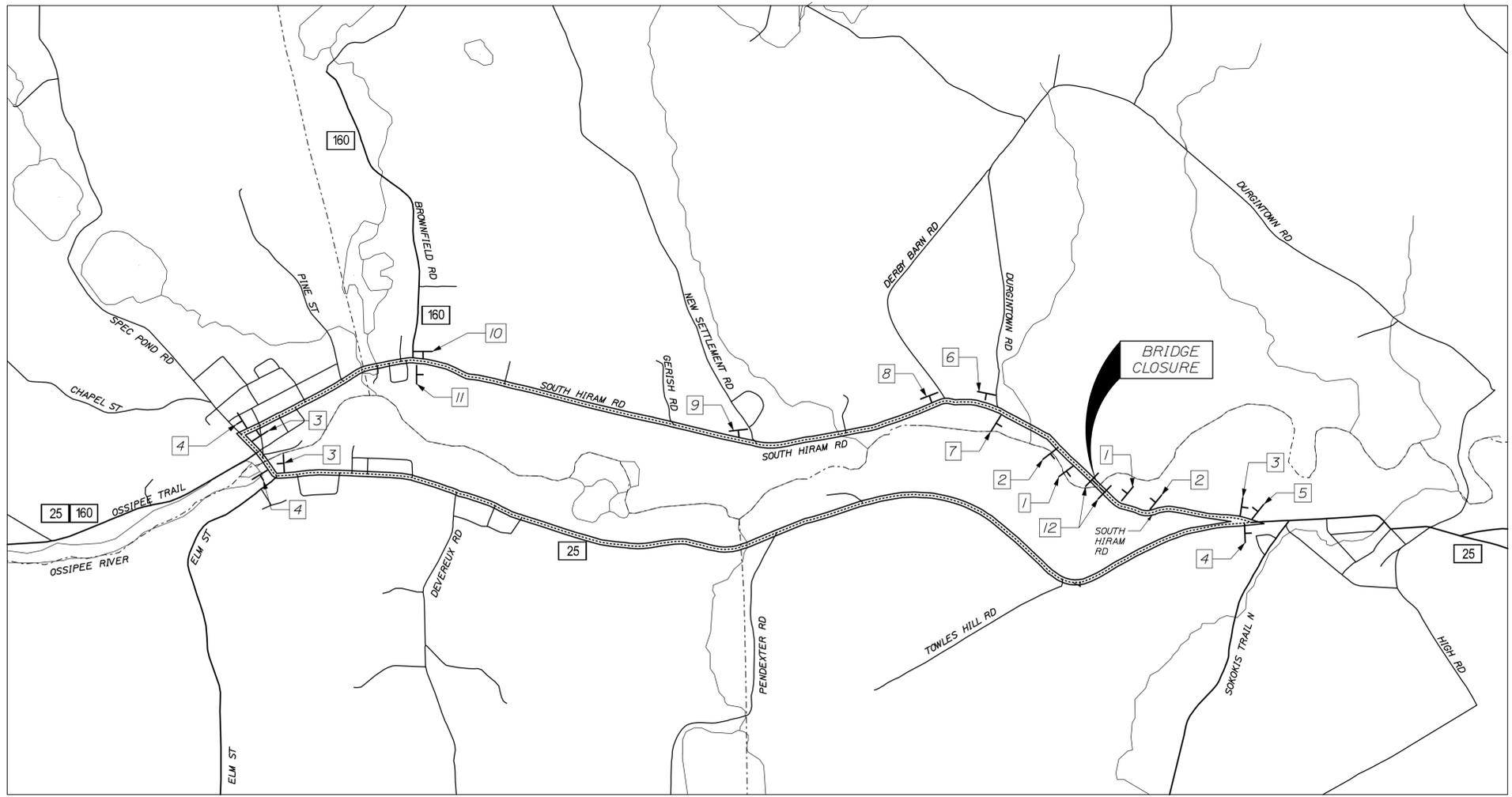
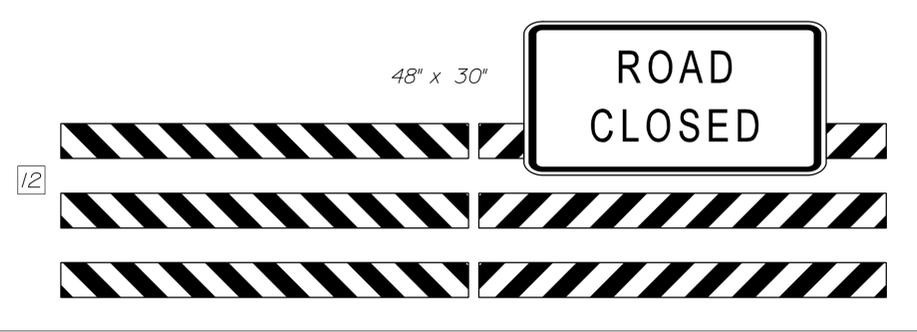


Date: 2/14/2014

Username: common

Division: BRIDGE

Filename: ... \Final\012_Detour.dgn



DETOUR NOTES

1. During the period of road closure the contractor shall block the road off with 30ft of temporary concrete barrier located behind the Type III Barricades (#12)
2. Road shall only be closed while school is not in session, as specified in the Special Provisions

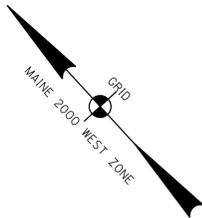
STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		BRIDGE PLANS	
018240.00		PIN		18240.00	
SIGNATURE		P.E. NUMBER		DATE	
OCT. 2013		9099		8/2013	
BY		DATE		FIELD CHANGES	
L. TIMBERLAKE		OCT. 2013			
G.M.		FEB. 2014			
E.T.C.					
DESIGN-Detailed		DESIGN-Detailed		DESIGN-Detailed	
CHECKED-Reviewed		CHECKED-Reviewed		CHECKED-Reviewed	
DESIGNED-Detailed		DESIGNED-Detailed		DESIGNED-Detailed	
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Date: 2/26/2014

Username: guy.ladd

Division: ROW

Filename: ... \00\ROW\MSTA013_RWP\PLAN1.dgn



CARROLL A. LEAVITT
DORIS E. LEAVITT
HIRAM TAX MAP/LOT - R2/7A
O.C.R.D. BOOK/PAGE - 198/313
POR NO. - 5

CURVE DATA

PI = 1+48.43
D = 1° - 30' - 33"
Δ = 1° - 12' - 26" Lt.
R = 3796.65'
L = 80.00'
T = 40.00'
E = 0.21'

GARY WITHEY
NANCE C. WITHEY
CORNISH TAX MAP/LOT - R1/20
Y.C.R.D. BOOK/PAGE - 3250/343
POR NO. - 3

NANCY E. HARRIS
HIRAM TAX MAP/LOT - R2/9
O.C.R.D. BOOK/PAGE - 481/582
POR NO. - 6

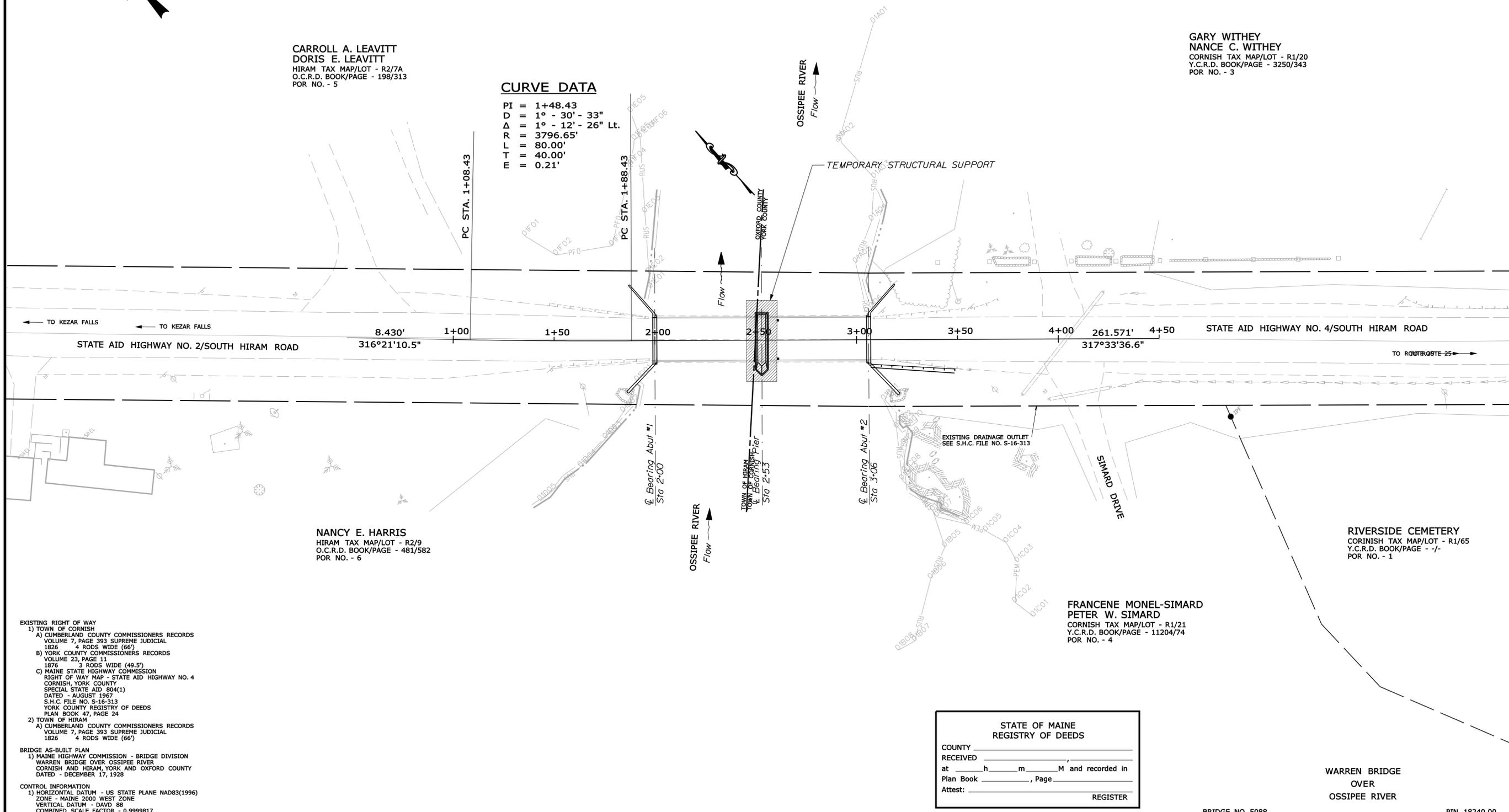
FRANCENE MONEL-SIMARD
PETER W. SIMARD
CORNISH TAX MAP/LOT - R1/21
Y.C.R.D. BOOK/PAGE - 11204/74
POR NO. - 4

RIVERSIDE CEMETERY
CORNISH TAX MAP/LOT - R1/65
Y.C.R.D. BOOK/PAGE - -/
POR NO. - 1

EXISTING RIGHT OF WAY
1) TOWN OF CORNISH
A) CUMBERLAND COUNTY COMMISSIONERS RECORDS
VOLUME 7, PAGE 393 SUPREME JUDICIAL
1826 4 RODS WIDE (66')
B) YORK COUNTY COMMISSIONERS RECORDS
VOLUME 23, PAGE 11
1876 3 RODS WIDE (49.5')
C) MAINE STATE HIGHWAY COMMISSION
RIGHT OF WAY MAP - STATE AID HIGHWAY NO. 4
CORNISH, YORK COUNTY
SPECIAL STATE AID 804(1)
DATED - AUGUST 1967
S.H.C. FILE NO. S-16-313
YORK COUNTY REGISTRY OF DEEDS
PLAN BOOK 47, PAGE 24
2) TOWN OF HIRAM
A) CUMBERLAND COUNTY COMMISSIONERS RECORDS
VOLUME 7, PAGE 393 SUPREME JUDICIAL
1826 4 RODS WIDE (66')

BRIDGE AS-BUILT PLAN
1) MAINE HIGHWAY COMMISSION - BRIDGE DIVISION
WARREN BRIDGE OVER OSSISPEE RIVER
CORNISH AND HIRAM, YORK AND OXFORD COUNTY
DATED - DECEMBER 17, 1928

CONTROL INFORMATION
1) HORIZONTAL DATUM - US STATE PLANE NAD83(1996)
ZONE - MAINE 2000 WEST ZONE
VERTICAL DATUM - DAVD 88
COMBINED SCALE FACTOR - 0.9999817



STATE OF MAINE
REGISTRY OF DEEDS
COUNTY _____
RECEIVED _____
at _____ h _____ m _____ M and recorded in
Plan Book _____, Page _____
Attest: _____ REGISTER

BRIDGE NO. 5088 PIN 18240.00

NO.	DATE	REVISIONS			PLAN FILED IN	PLAN BOOK	PAGE	COUNTY RECORD	DAVID BERNHARDT COMMISSIONER
		DESCRIPTION	BY						

To the best of my knowledge and belief the Highway Right of Way lines depicted hereon are based upon a survey conforming to the Standards of Practice promulgated by the Maine Board of Licensure for Professional Land Surveyors 02-360 CMR, Chapter 90; Exceptions: (1) No separate survey report, (2) Monumentation only as shown on plan. See sheet X of this plan set for coordinates. (3) Other boundary lines, including lines between abutters are approximate and for general reference purposes only.

JOYCE NOEL TAYLOR
CHIEF ENGINEER

DATE _____

STATE AID HIGHWAY NO. 4 & 2
SOUTH HIRAM ROAD
CORNISH HIRAM YORK COUNTY
FEDERAL AID PROJECT NO. BH-1824(000)X
FEBRUARY 2014 RIGHT-OF-WAY MAP D.O.T. FILE NO. 16-TBD
SCALE 1" = 25' SHEET 1 OF 1 D.O.T. FILE NO. 9-TBD

SHEET NUMBER
13
OF 13

SYMBOLS

PI or PIP (IRON PIPE or PIN FOUND)	WELL
ST. (SEPTIC TANK)	(WELL)
ABM (TRAVERSE POINT)	CONSTRUCTION LIMIT LINE
W- WATER LINE	PROPERTY LINE
G- GAS LINE	LIMITS OF TROUGHT PORTION (L.O.W.P.)
E- ELECTRIC LINE	EXISTING RIGHT OF WAY
T- TELEPHONE LINE	NEW RIGHT OF WAY
S- SEWER LINE	NEW ROW WITHIN EXIST. ROW
	CONTROL OF ACCESS

ITEM	TECH	CHECKED
BASE MAP		
EXIST. R/W	G.L.L.	C.W.K.
PROP. LINES	G.L.L.	
AREAS		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016
CORNISH / HIRAM
RIGHT OF WAY MAP