CITY OF PORTSMOUTH PUBLIC WORKS DEPARTMENT

SAGAMORE BRIDGE REPAIRS

(NH ROUTE 1A / SAGAMORE CREEK) BRIDGE NO. 198/034

PORTSMOUTH, NEW HAMPSHIRE

STATE PROJECT NUMBER: 14493A

CITY OF PORTSMOUTH JOB NUMBER NUMBER: 7144

Prepared for:

CITY OF PORTSMOUTH
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
680 PEVERLY HILL ROAD
PORTSMOUTH, NEW HAMPSHIRE 03801

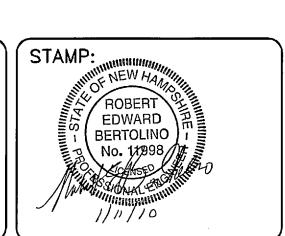
PLANS PREPARED BY:

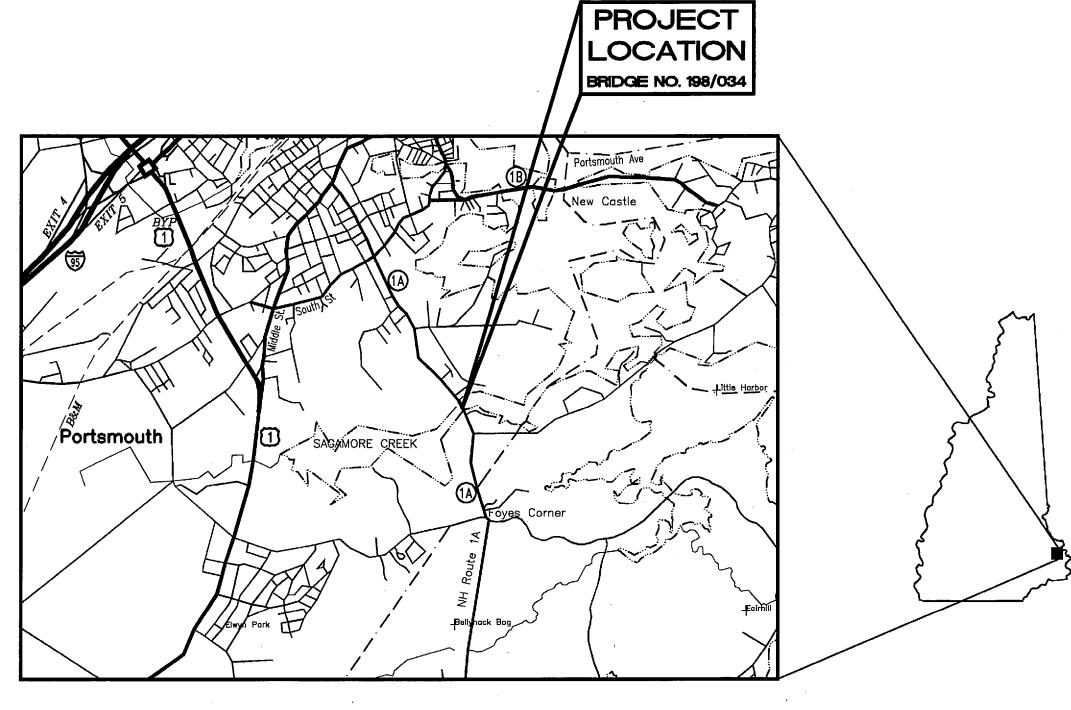
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PREPARED BY: Make & Balan





LOCATION PLAN

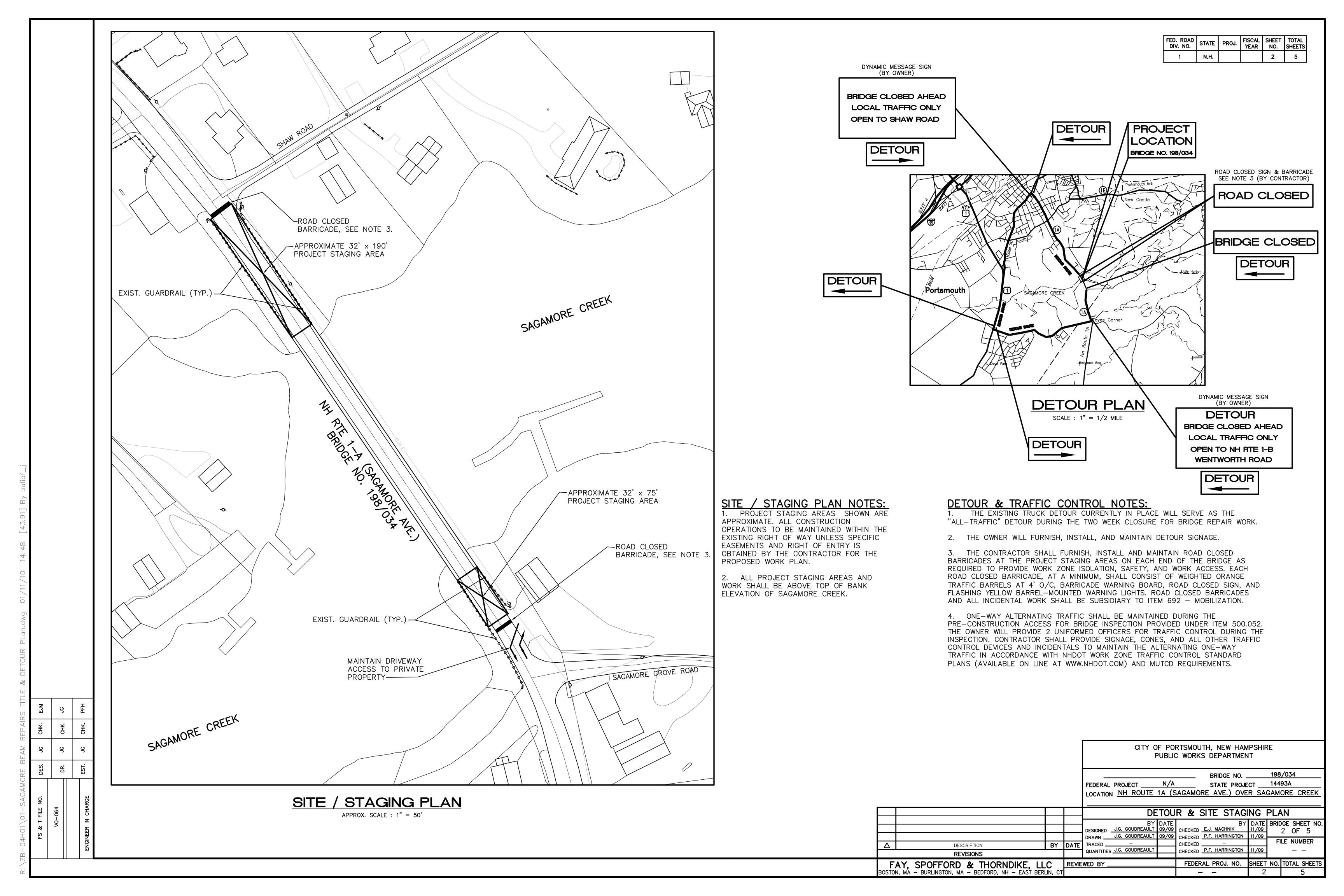
SCALE: 1" = 1/2 MILE

CITY	OF PORTSMOUTH,	NEW HAMPSHIF
	PUBLIC WORKS D	EPARTMENT

FEDERAL PROJECT N/A STATE PROJECT 14493A

LOCATION NH ROUTE 1A (SAGAMORE AVE.) OVER SAGAMORE CREEK

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SCOPE OF WORK

THE WORK UNDER THIS CONTRACT CONSISTS OF FURNISHING ALL NECESSARY MATERIALS, LABOR, TOOLS AND EQUIPMENT REQUIRED FOR STRUCTURAL STEEL REPAIRS AND REINFORCEMENT AS DETAILED AND AS DIRECTED BY THE ENGINEER.

THE WORK INCLUDES, BUT IS NOT LIMITED TO, PERFORMING THE FOLLOWING:

- A. PROVIDE FOR UNDER-BRIDGE INSPECTION ACCESS FOR THE ENIGINEER PRIOR TO PROCUREMENT OF STRUCTURAL STEEL. THE PURPOSE OF THE INSPECTION IS TO VERIFY/IDENTIFY THE REPAIR LOCATION AND QUANTITIES.
- B. FURNISH AND INSTALL SUPPLEMENTARY FLOOR BEAMS AS BRIDGE SUPERSTRUCTURE REINFORCEMENT ADJACENT TO SELECTED DETERIORATED EXISTING FLOORBEAMS AS DIRECTED BY THE ENGINEER.
- C. FURNISH AND INSTALL EXPANSION JOINT COVER PLATE SUPPORT REPAIRS AS DIRECTED BY THE ENGINEER SUBSEQUENT TO CLOSE-UP INSPECTION.
- D. FURNISH AND INSTALL BEAM WEB REINFORCEMENT ON EXISTING W21 FLOOR BEAMS AS DIRECTED BY THE ENGINEER.

PAYMENT WILL BE MADE ONLY FOR ACTUAL WORK PERFORMED AND ACCEPTED. A CHANGE IN REPAIR QUANTITY SHALL NOT CONSTITUTE BASIS FOR CHANGE IN UNIT PRICE.

GENERAL NOTES

1. SPECIFICATIONS:

DESIGN:

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th EDITION, 2002 WITH INTERIMS.

MATERIAL AND CONSTRUCTION:

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17th EDITION, 2002 WITH INTERIMS. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. BY THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, 2006.

- 2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM AVAILABLE EXISTING PLANS AND LIMITED FIELD INVESTIGATIONS AND THEY ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURE AND SHALL BE PREPARED TO MAKE ANY ADJUSTMENTS REQUIRED TO PROPERLY COMPLETE THE WORK PRIOR TO FABRICATION, COMMENCEMENT OF CONSTRUCTION AND/OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK.
- 3. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO INSURE THAT DEBRIS DOES NOT FALL INTO THE WATERWAY BELOW THE EXISTING STRUCTURE. ALL COSTS SHALL BE PAID UNDER ITEM 500.05, ACCESS FOR BRIDGE CONSTRUCTION. SEE SPECIAL PROVISION.
- 4. NO SCAFFOLDING SHALL BE ERECTED OR OPERATIONS CONDUCTED IN THE WATERWAY, UNLESS APPROVED BY THE CONTRACT ADMINISTRATOR.
- 5. NO CLEARING IS ALLOWED ALONG THE BANKS OF THE WATERWAY.
- 6. DURING REMOVAL AND REPAIR OPERATIONS, EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING STRUCTURAL STEEL AND REINFORCING STEEL THAT IS TO REMAIN IN PLACE. ANY DAMAGE SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.
- 7. THE CONTRACTOR SHALL MEET OSHA REQUIREMENTS FOR WORKER PROTECTION FOR WORKING WITH MEMBERS WITH LEAD BASED PAINT.
- 8. THE EXISTING BRIDGE HAS BEEN POSTED FOR A LOAD LIMIT OF 6 TONS BASED ON THE CONDITION OF SOME OF THE EXISTING FLOOR BEAMS. THE CONTRACTOR SHALL VERIFY THE CONDITION OF FLOOR BEAMS THAT WILL BE LOADED BY THE CONSTRUCTION OPERATIONS AND DETERMINE THAT THE PROPOSED CONSTRUCTION LOADING DOES NOT EXCEED THE BEAM CAPACITIES.
- 9. THE CONTRACTOR SHALL NOT PLACE EQUIPMENT OR MATERIALS ON THE EXISTING BRIDGE IN A MANNER THAT COULD OVERLOAD THE EXISTING BRIDGE COMPONENTS (DECK, FLOOR BEAMS, GIRDERS, ETC) AND SHALL CONSIDER THE DETERIORATED CONDITION OF STRUCTURAL ELEMENTS AS NEEDED. IF THE CONTRACTOR'S WORK PLAN INVOLVES PLACEMENT OF EQUIPMENT ON THE BRIDGE, SUCH AS A SMALL CRANE OR OTHER EQUIPMENT TO FACILITATE COMPLETION OF THE WORK. THE CONTRACTOR SHALL PLAN HIS WORK IN ADVANCE AND SHALL PROVIDE LAYOUT DRAWINGS OF PROPOSED EQUIPMENT AND LOAD DISTRIBUTION METHODS WITH STRUCTURAL CALCULATIONS PREPARED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. THE PLAN AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND SHALL BE STAMPED BY THE CONTRACTOR'S PROFESSIONAL ENGINEER.

STRUCTURE NOTES

- 1. ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M 160 / ASTM A 709 GRADE 36 (OR GRADE 50). NEW STEEL SHALL BE SHOP PRIMED. SHOP PAINTING AND FIELD TOUCH-UP PAINTING OF NEW STEEL IS NOT REQUIRED. FIELD PAINTING OF EXISTING STRUCTURAL STEEL IS NOT REQUIRED.
- 2. ALL BOLTED CONNECTIONS SHALL BE MADE WITH MINIMUM $\frac{7}{8}$ " DIAMETER HIGH STRENGTH BOLTS IN 15/16" DIAMETER HOLES UNLESS NOTED OTHERWISE. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS FOR AASHTO M164 (ASTM A325) TYPE 1. ALL BOLTS AND HARDWARE SHALL BE GALVANIZED.
- 3. THE CONTRACTOR SHALL INSTALL TEMPORARY BRACING, SHORING OR SUPPORTS AS NECESSARY TO MAINTAIN THE STRUCTURAL INTEGRITY DURING CONSTRUCTION. ALL COSTS INCLUDED IN ITEM 692 MOBILIZATION.
- 4. ANY FIELD WELDING OF ATTACHMENTS TO ANY PORTION OF THE EXISTING STRUCTURE FOR CONSTRUCTION PURPOSES WILL NOT BE PERMITTED, UNLESS APPROVED BY THE ENGINEER.
- 5. EXISTING STEEL AT PROPOSED CONNECTION LOCATIONS SHALL BE CLEANED OF DIRT, DEBRIS, AND LOOSE OR SCALING PAINT.
- 6. RIVETS SHALL NOT BE REMOVED FOR ANY PURPOSE UNLESS APPROVED BY THE ENGINEER.
- 7. THE ENGINEER WILL INSPECT THE EXISTING FLOOR BEAMS AT THE ONSET OF THE PROJECT TO DETERMINE THE REPAIR QUANTITIES AND LOCATIONS.
- 8. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS REQUIRED FOR FABRICATION OF STRUCTURAL STEEL AND INSTALLATION WORK. REFER TO SPECIAL PROVISION SPECIFICATION SECTION 500.5 - ACCESS FOR BRIDGE CONSTRUCTION FOR ADDITIONAL INFORMATION.

FED. ROAD DIV. NO.	STATE	PROJ.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
1	N.H.			3	5	

SUMMARY OF QUANTITIES									
ITEM NO.	DESCRIPTION	QUANTITY	UNIT						
500.051	ACCESS FOR BRIDGE CONSTRUCTION	1	UNIT						
500.052	ACCESS FOR BRIDGE INSPECTION	2	DAY						
550.1011	STRUCTURAL STEEL REPAIR - TYPE 1: SUPPLEMENTARY FLOOR BEAM	18	EA						
550.1012	STRUCTURAL STEEL REPAIR — TYPE 2: COVER PLATE SUPPORT	4	EA						
550.1013	STRUCTURAL STEEL REPAIR - TYPE 3: BEAM WEB REINFORCEMENT	2	EA						
550.1014	STRUCTURAL STEEL REPAIR — TYPE 4: MISC. STRUCTURAL STEEL REPAIRS	200	LB						
692	MOBILIZATION	1	UNIT						
1008.1	REPAIRS AND REPLACEMENT AS NEEDED	1	\$						

ABBREVIATIONS

ABUT	ABUTMENT	JT	JOINT
ALT	ALTERNATE	LF	LINEAR FEET
k	AND	LONGIT	LONGITUDINAL
APPROX	APPROXIMATE	MAX	MAXIMUM
D	AT	MIN	MINIMUM
3RG	BEARING	MISC	MISCELLANEOUS
BTWN	BETWEEN	NS	NEAR SIDE
	CENTERLINE	OC	ON CENTER
<u>)</u> DL	CLEAR	OD	OUTSIDE DIAMETER
CONC	CONCRETE	PROP	PROPOSED
CONST	CONSTRUCTION	R	RADIUS
8	DIAMETER	RR	RAILROAD
ĒΑ	EACH	REF	REFERENCE, CONTR. VERIFY
F	EACH FACE	REINF	REINFORCED, REINFORCING
EF EL	ELEVATION	SECT	SECTION
EXP	EXPANSION	SST	STAINLESS STEEL
EXIST	EXISTING	SP	SPACES
-S	FAR SIDE	SYM	SYMMETRICAL
-G	FINISHED GRADE	TEMP	TEMPORARY
GALV	GALVANIZED	TYP	TYPICAL
I S	HIGH STRENGTH	VAR	VARIABLE
		WP	WORKING POINT

INDEX TO DRAWINGS

SHEET NO.	<u>TITLE</u>
1	TITLE SHEET & LOCUS PLAN
2	DETOUR & SITE STAGING PLAN
3	GENERAL NOTES, INDEX AND SUMMARY OF QUANTITIES
4	FRAMING PLAN AND SECTIONS
5	STEEL REPAIR DETAILS

	CITY OF PORTSMOUTH, NEW HAMPSHIRE PUBLIC WORKS DEPARTMENT							
SHEET SCALE: AS NOTED	BRIDGE NO. 198/034 FEDERAL PROJECT N/A STATE PROJECT 14493A LOCATION NH ROUTE 1A (SAGAMORE AVE.) OVER SAGAMORE CREEK							
	GENERAL NOTES, INDEX AND SUMMARY OF QUANTITIES							

	SHEET SCALE: AS NOTED												
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				DRAWN		GOUDREAULT				ΓΟΝ 11/		ILE NUN	
	DESCRIPTION	BY	DATE	TRACED QUANTITIES	J.G.	- GOUDREAULT		CHECKED	P.F. HARRING	ΓΟΝ 11 <i>/</i>		—	
F	REVISIONS AY, SPOFFORD & THORNDIKE, LL	С		WED BY_					RAL PROJ. N		ET NO.	TOTAL	SHEET

BOSTON, MA - BURLINGTON, MA - BEDFORD, NH - EAST BERLIN, CT

