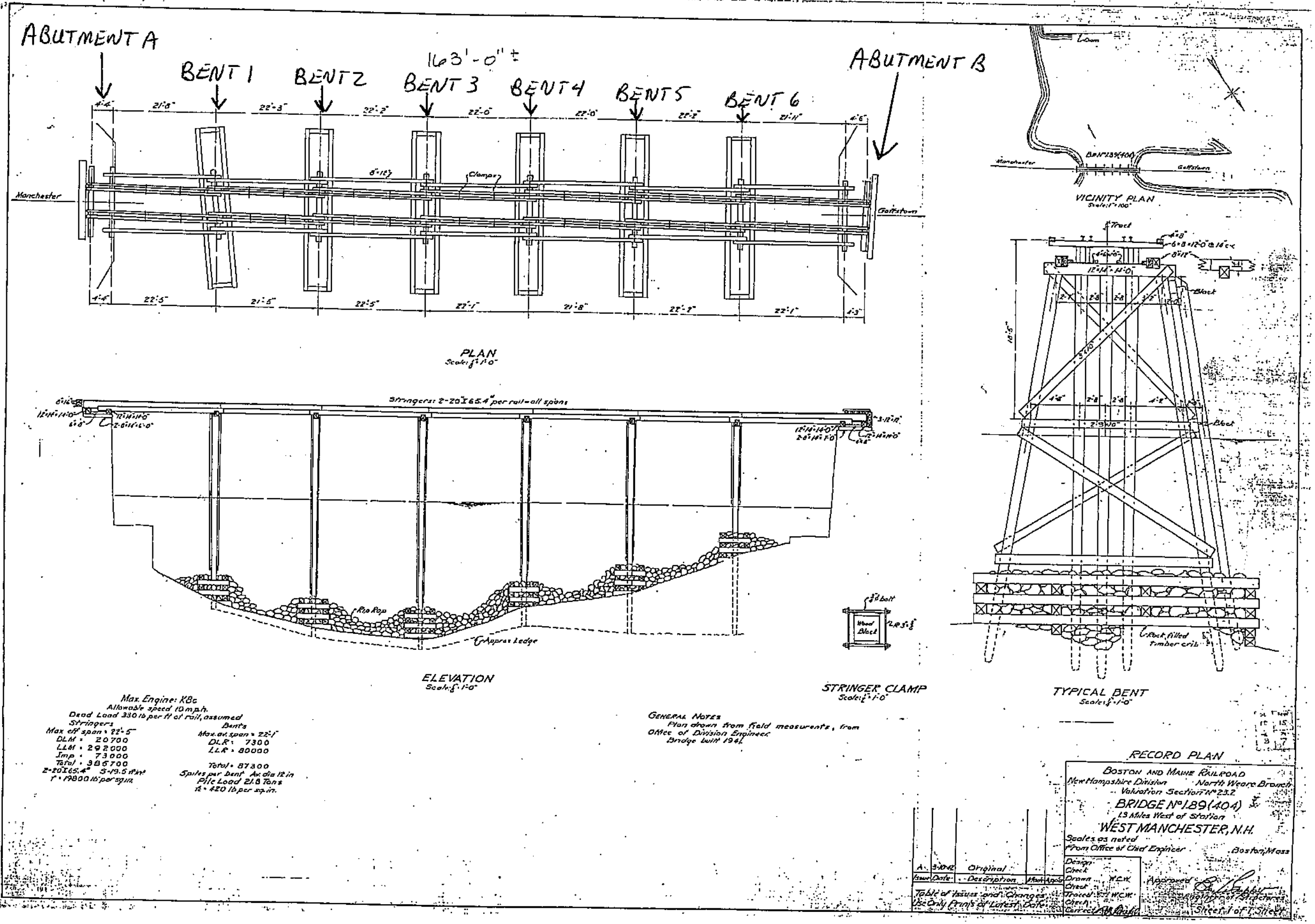
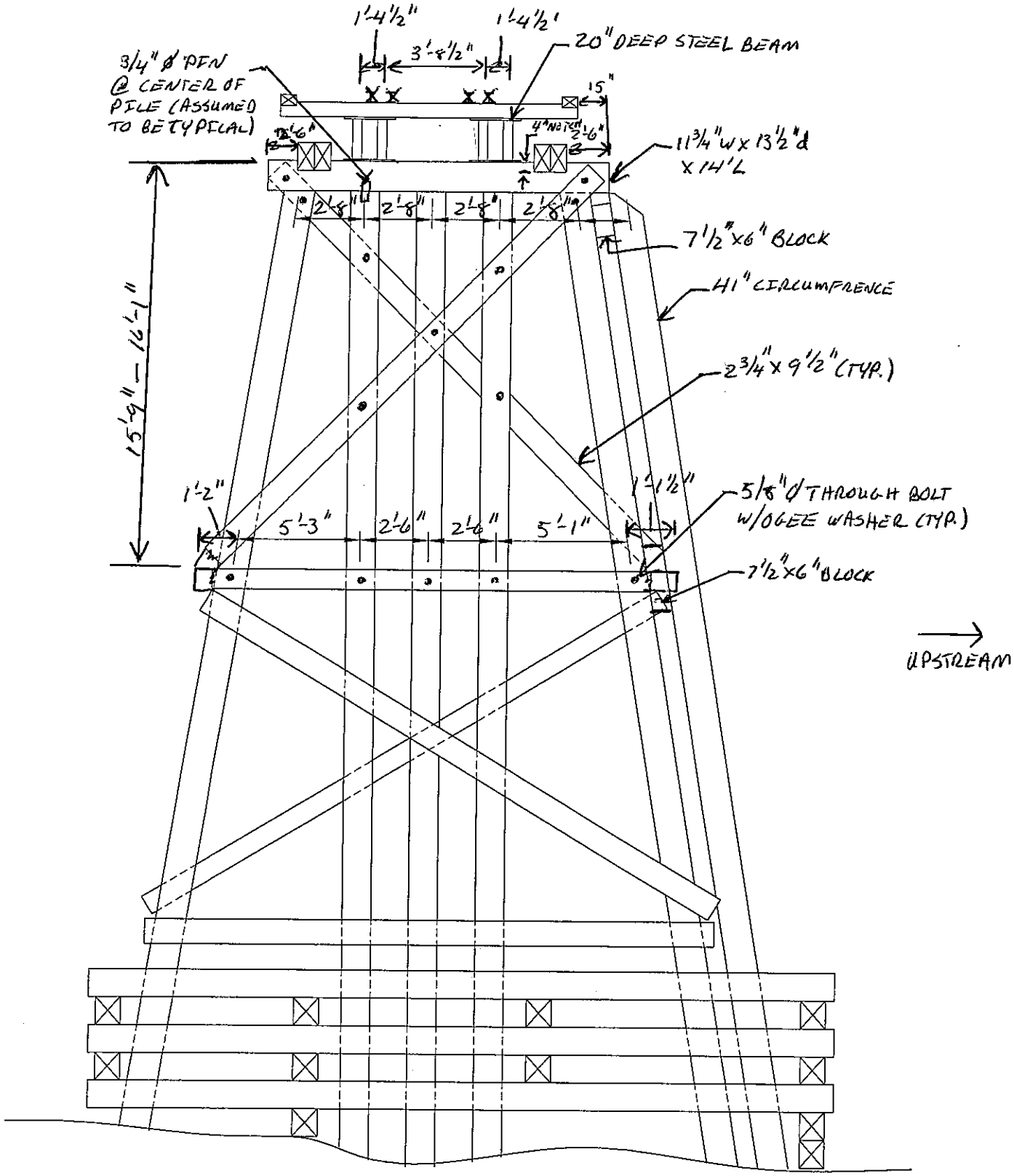
APPENDIX A

Existing Trestle Bridge Plan and Member Condition Notes


ABUTMENT A
BENT 1
BENT 2
BENT 3
BENT 4
BENT 5
BENT 6
ABUTMENT B
163'-0" ±
Manchester
Goffstown
Clamps
PLAN
Stringers: 2-20" I 65.4# per rail - all spans
Rip Rap
Approx. Ledge
ELEVATION
STRINGER CLAMP
TYPICAL BENT
VICINITY PLAN
Track
Block
Rock filled timber crib
Max. Engine: K8c
Allowable speed 10 m.p.h.
Dead Load 330 lb per ft of rail, assumed
Stringers
Max eff span = 22'-5"
DLM = 20700
LLM = 292000
Imp = 73000
Total = 385700
2-20 I 65.4# S = 19.5 #/in³
f = 19800 lb per sq. in.
Bents
Max. av. span = 22'-1"
DLR = 7300
LLR = 80000
Total = 87300
Spiles per bent: Av. dia 12 in
Pile Load 21.8 Tons
f = 420 lb per sq. in.
GENERAL NOTES
Plan drawn from field measurements, from Office of Division Engineer.
Bridge built 1941.
RECORD PLAN
BOSTON AND MAINE RAILROAD
New Hampshire Division North Weare Branch
Valuation Section No. 23.2
BRIDGE No. 1.89 (404)
1.3 Miles West of Station
WEST MANCHESTER, N.H.
Scales as noted
From Office of Chief Engineer Boston, Mass.
A. 3-10-42 Original
Issue Date Description
Table of Issues and Changes
Use Only Prints of Latest Date
Sheet 1 of 1 Sheet



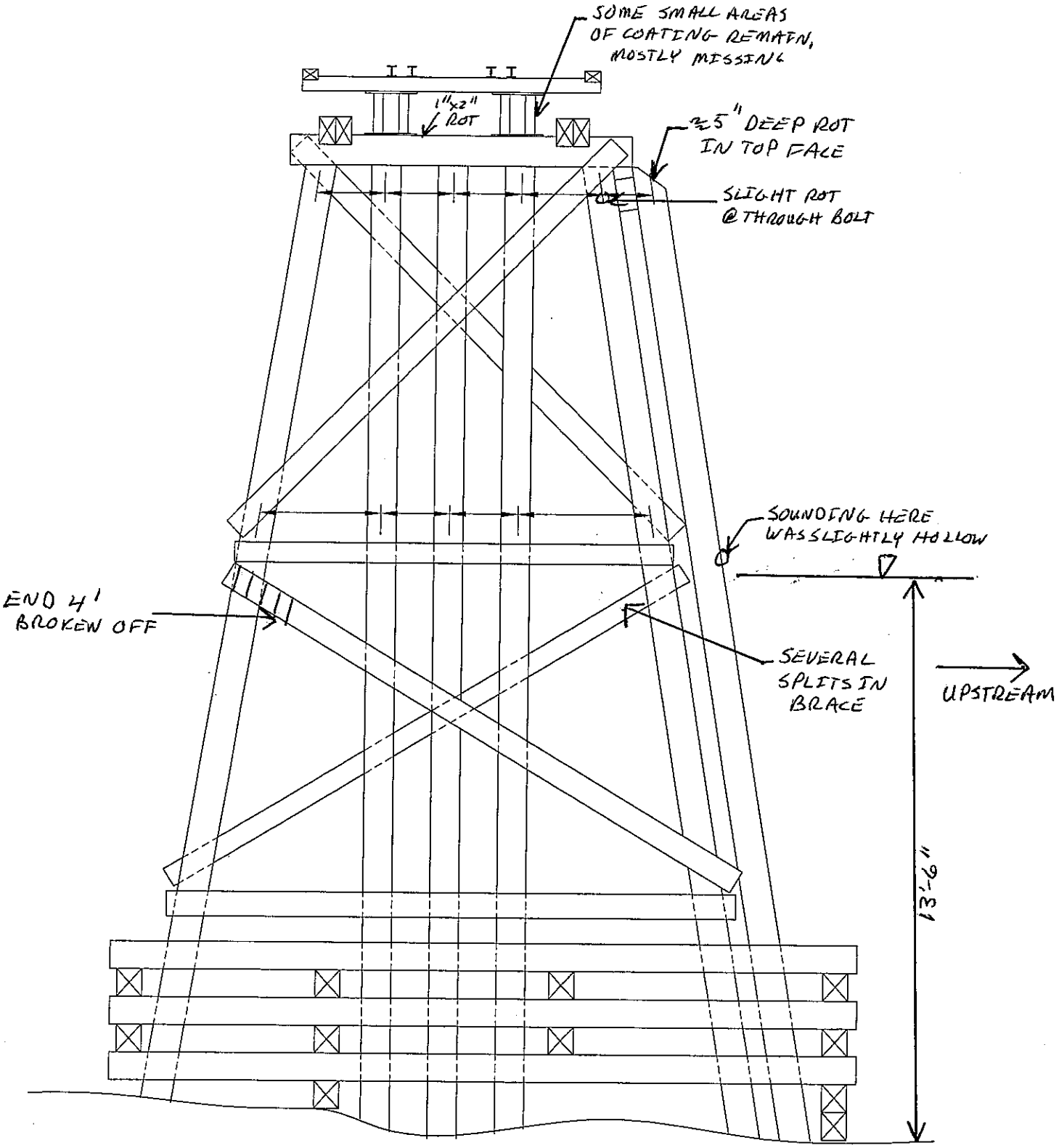
Hoyle, Tanner & Associates, Inc.
150 Dow Street
Manchester, New Hampshire 03101
603-669-5555
603-669-4168 fax
www.hoyletanner.com

BENT # (TYPICAL)

AVERAGE BENT GEOMETRY

* DIMENSIONS VARY WIDELY, ABOVE NUMBERS PROVIDED FOR RELATIVE SCALE ONLY

NAME STJ/JB
DATE 10/28/10
PROJECT 093143



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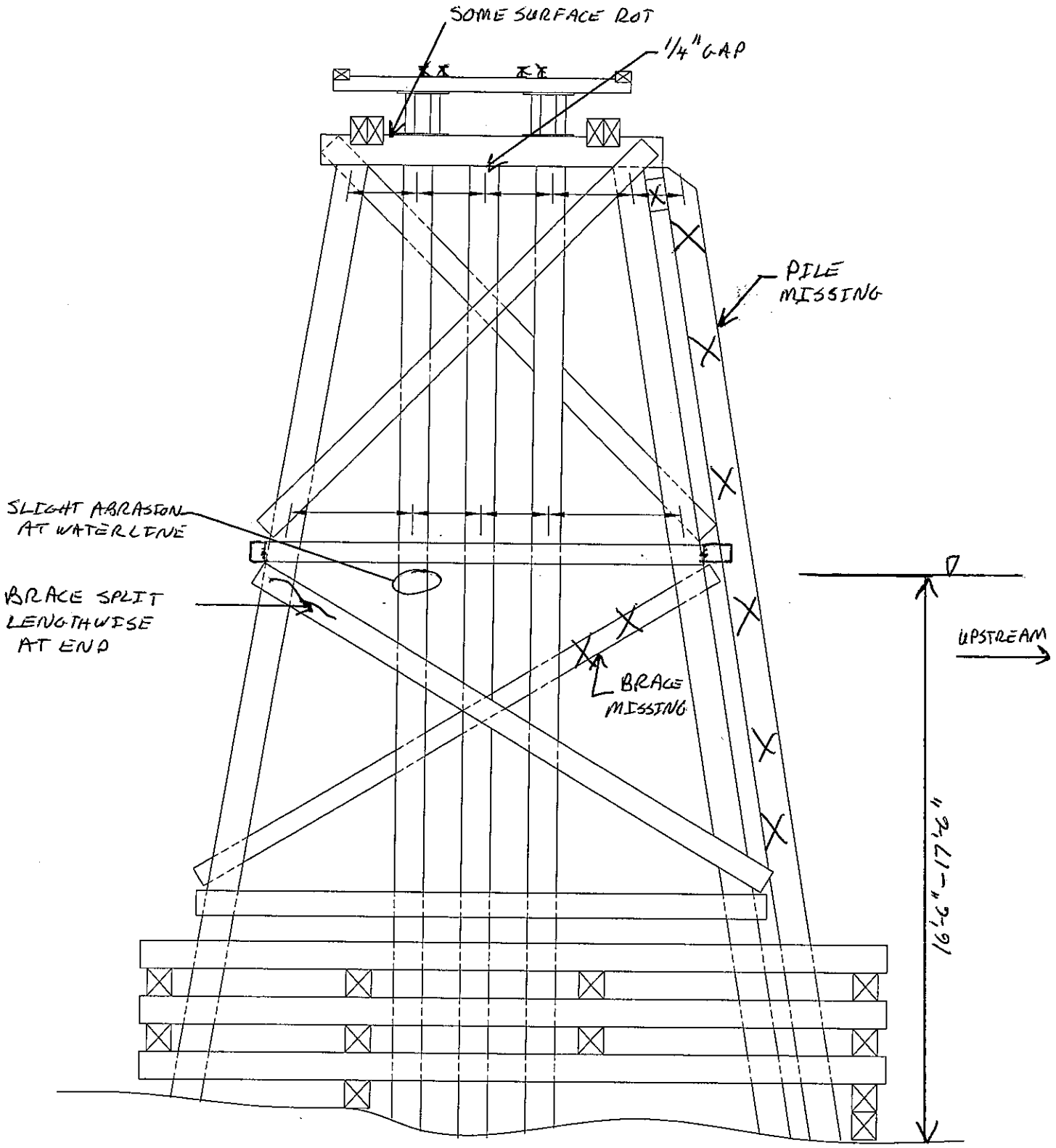
BENT # 1 - LOOKING NORTH

MEMBER CONDITION NOTES

NAME STJ / JB
DATE 10/28/10
PROJECT 093143



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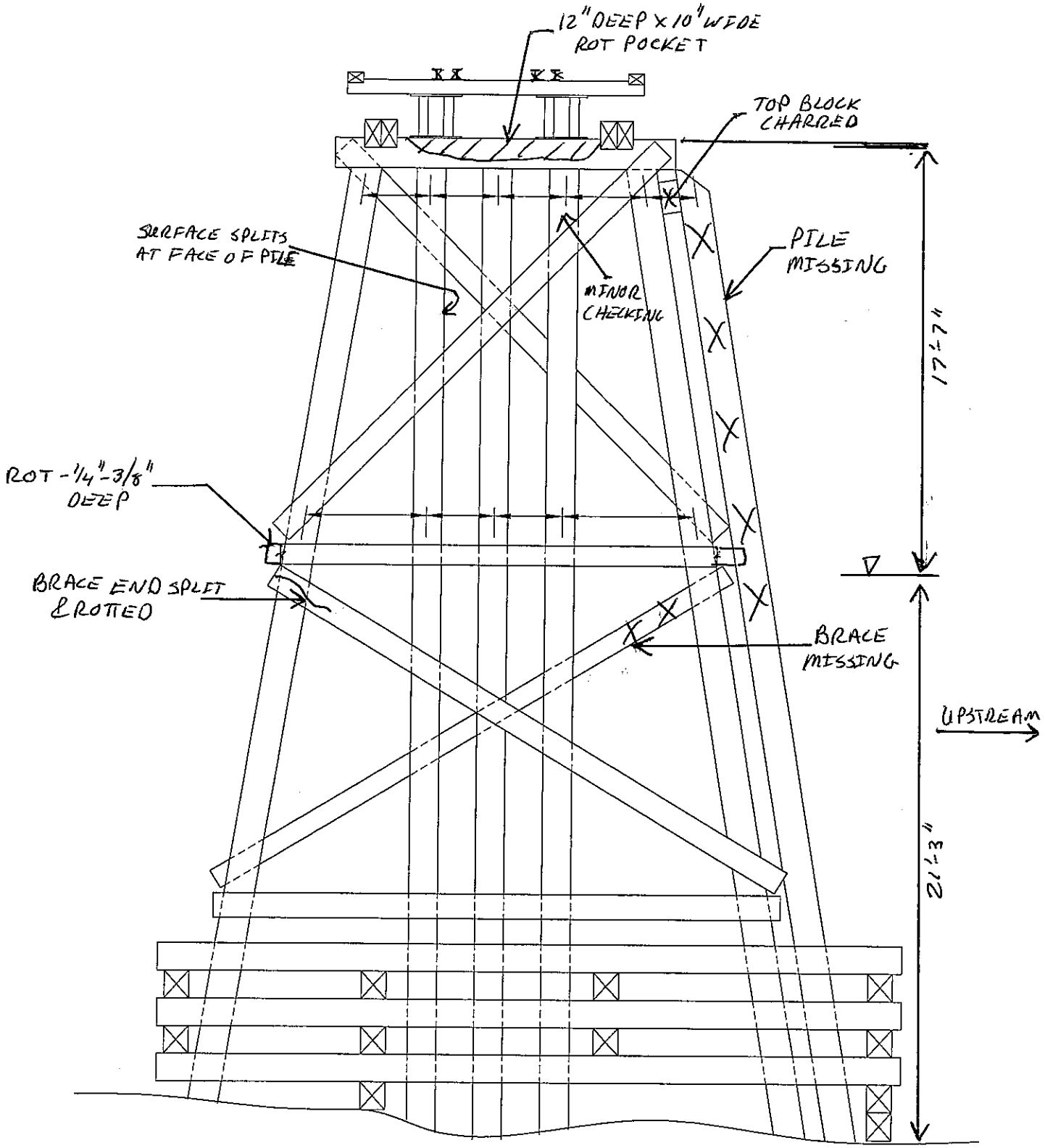
BENT # 2 - LOOKING NORTH

MEMBER CONDITION NOTES

NAME STJ/JB
DATE 10/25/10
PROJECT 093143



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603-669-4168 fax
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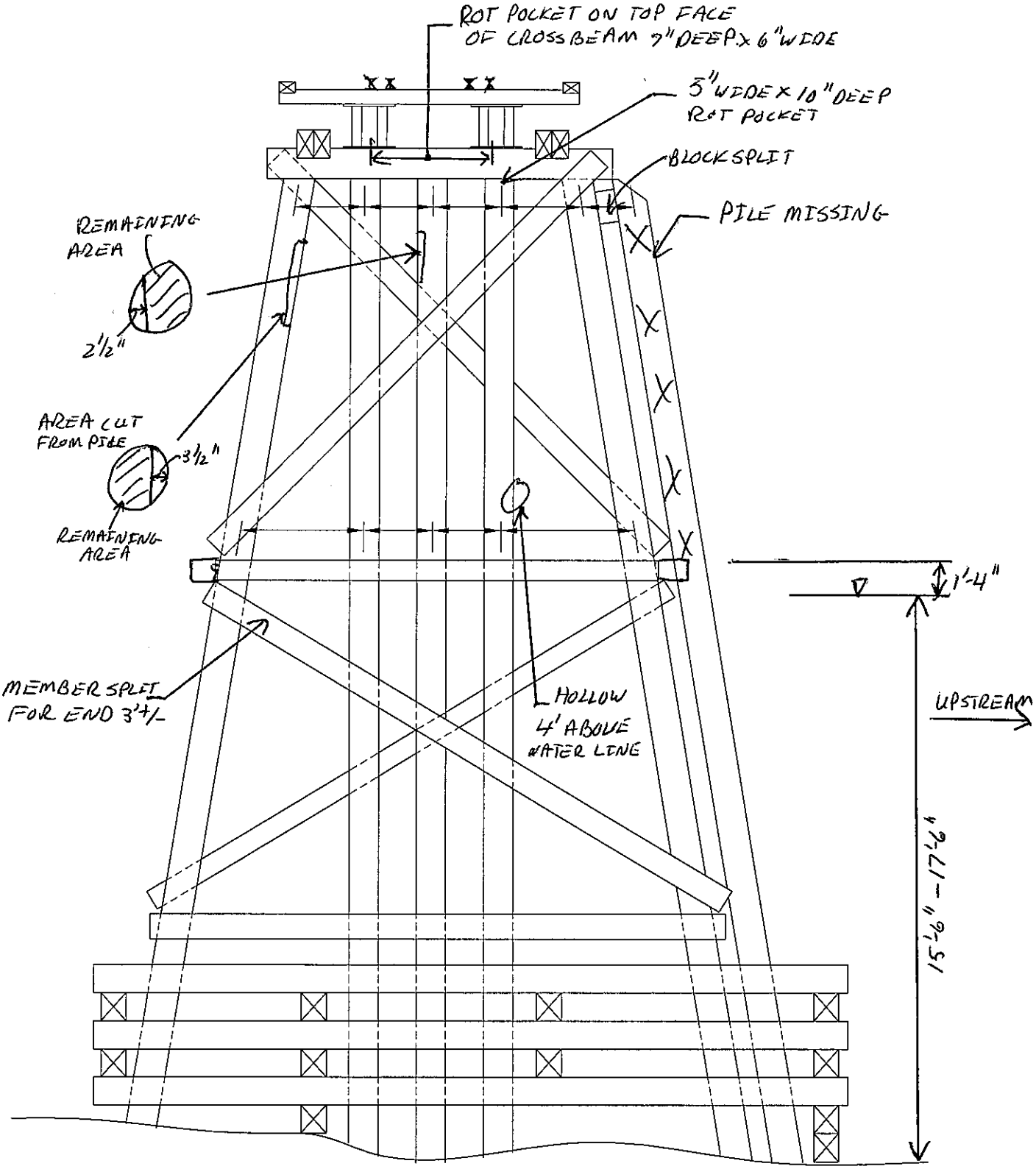
BENT # 3 - LOOKING NORTH

MEMBER CONDITION NOTES

NAME STJ/JB
DATE 10/28/10
PROJECT 093143



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Manchester, New Hampshire 03101
603-669-5555
603-669-4168 fax
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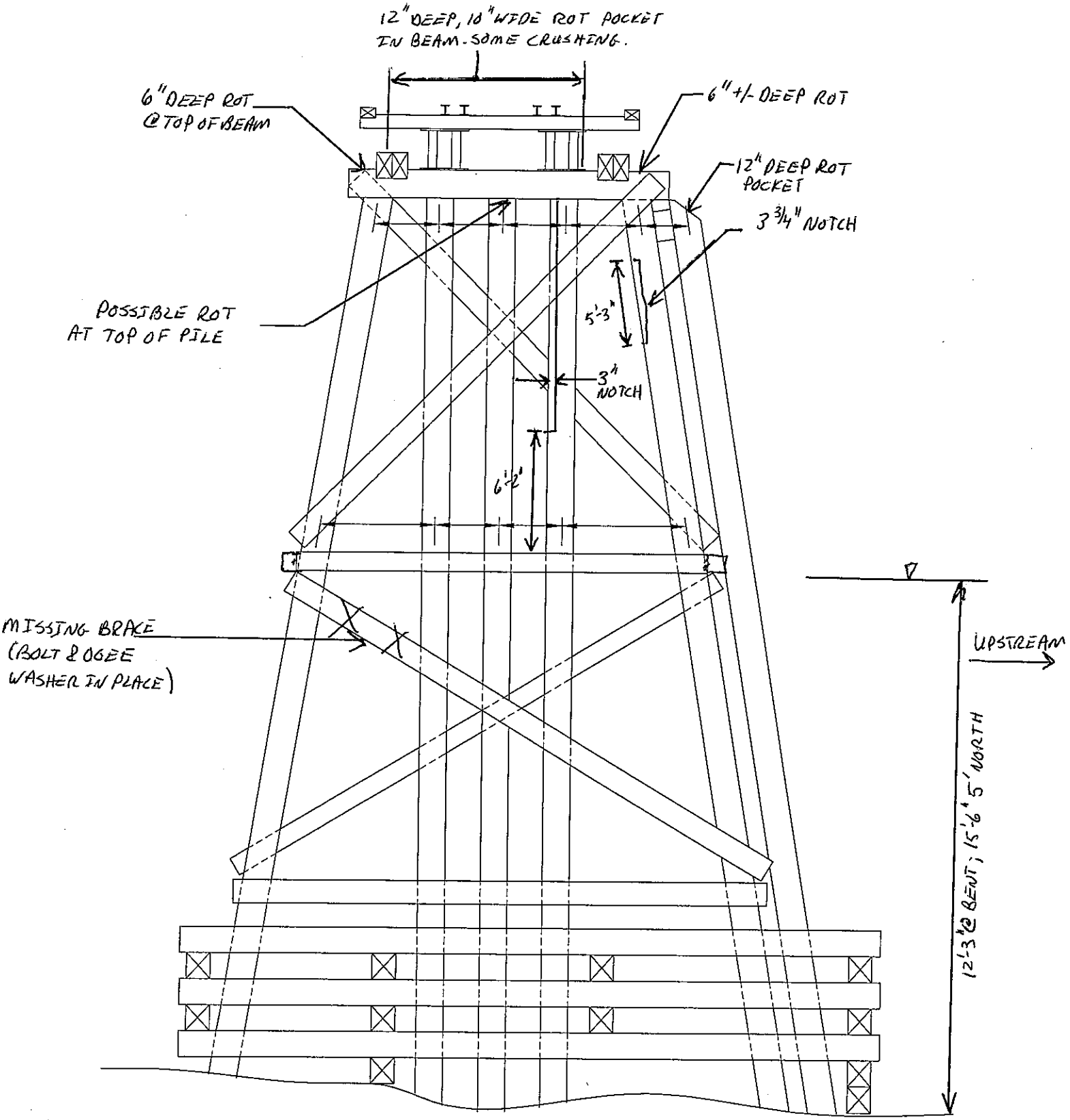
BENT # 4 - LOOKING NORTH

MEMBER CONDITION NOTES

NAME STJ/JB
DATE 10/28/10
PROJECT 093143

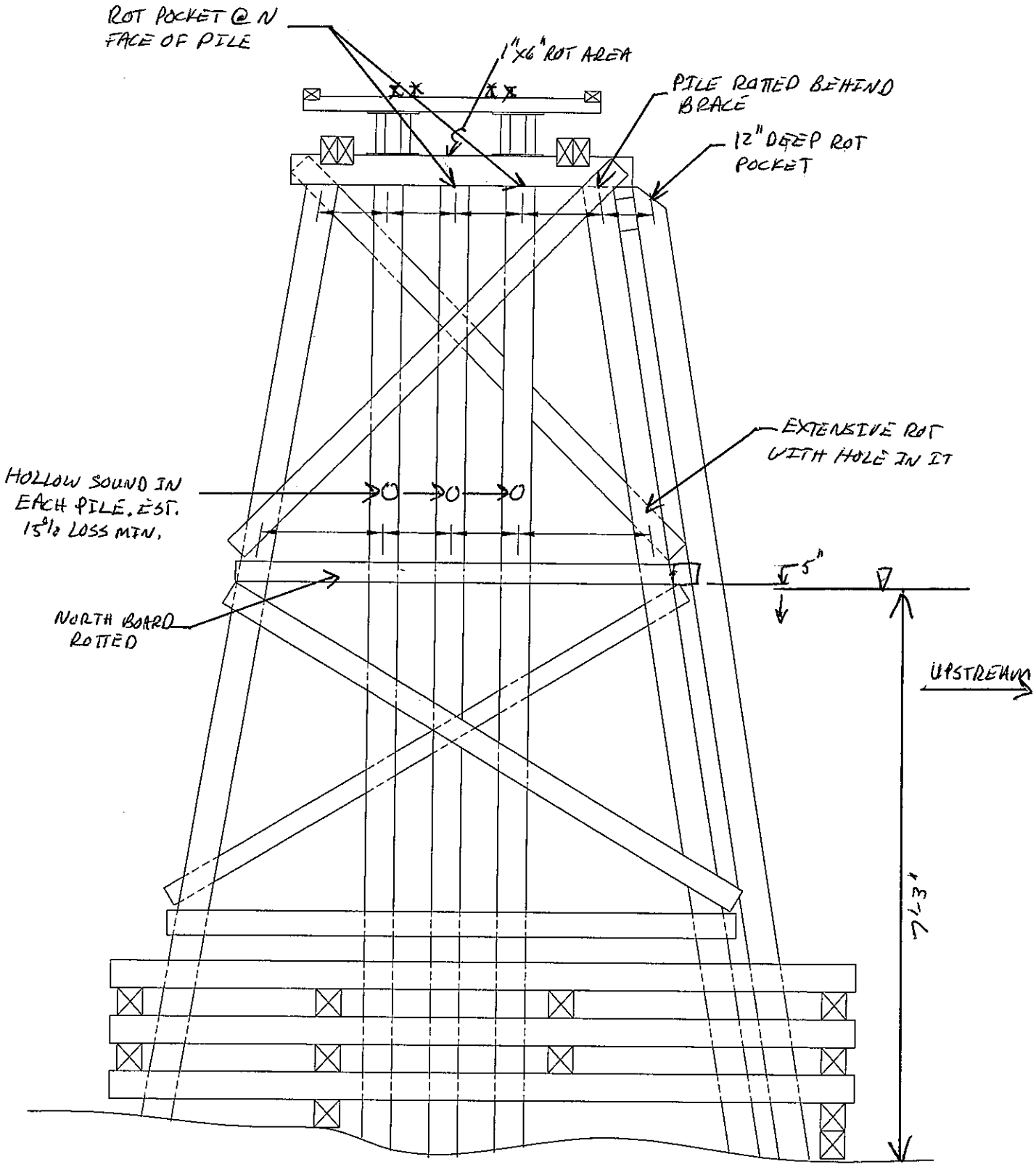


Hoyle, Tanner & Associates, Inc.
150 Dow Street
Manchester, New Hampshire 03101
603-669-5555
603-669-4168 fax
www.hoyletanner.com

BENT # 5 - LOOKING NORTH

MEMBER CONDITION NOTES

NAME STJ/JB
DATE 10/28/10
PROJECT 093143



Hoyle, Tanner & Associates, Inc.
150 Dow Street
Manchester, New Hampshire 03101
603-669-5555
603-669-4168 fax
www.hoyletanner.com

BENT # 6 - LOOKING NORTH

MEMBER CONDITION NOTES

NAME STJ/JB
DATE 10/28/10
PROJECT 093143

APPENDIX B

Environmental/Historical Resource Agency Coordination

BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: February 16, 2011
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Brian Wilmot
Carol Niewola
Christine Perron
Jim Kirouac
Joe Patusky
John Robinson
John Sargent
Jon Evans
Kevin Nyhan
Margarete Baldwin
Matt Urban
Mike Pouliot
Steve Johnson
Steve Kjellander
Tom Jameson
Tony Weatherbee

Army Corps of Engineers
Rich Roach

EPA
Mark Kern

NHDES
Gino Infascelli
Lori Sommer

NH Fish and Game
Carol Henderson

NH Natural Heritage Bureau
Melissa Coppola

City of Manchester
Jessica Fleming

Town of Randolph
Ted Wier

City of Concord
Martha Drukker

Hoyle, Tanner
Matt Low
Sean James
Steve Goddard

Maguire Group
Tony Ciolfi

HEB Engineers
Jay Poulin

Oak Hill Environmental
Daniel Geiger

McFarland Johnson
Jed Merrow

The Smart Associates
Glenn Smart
Jenn Riordan

FST
Tracey Tufts

Jacobs Engineering
John Gorham

New England Central Railroad
Jonathan Sturges
Ron Bocash

Atlas Construction
Craig Krause

Mount Washington Regional Airport
Edward Stevens

(When viewing these minutes online, click on an attendee to send an e-mail)

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:
(minutes on subsequent pages)

Finalization of January 19, 2011 Meeting Minutes....3
Manchester, X-A000(352), 14412....3
Lisbon, X-A001(172), 16184....4
Littleton-Waterford, A001(041), 15926....6
Pinkham's Grant, 16022 (non-Federal)....7
Rye, 99405Z (non-Federal)....8
Lebanon, X-A000(235), 13558A....9
Randolph, 16098 (non-Federal)....10
NECRR Track 1 Upgrade (no project numbers)....11
Mt. Washington Regional Airport, SBG 17-05-2010....12
Concord Airport EA, SBG 04-05-2010....14

(When viewing these minutes online, click on a project to zoom to the minutes for that project)

NOTES ON CONFERENCE:

Finalization of January 19, 2011 Meeting Minutes

The January 19, 2011 meeting minutes were finalized.

Manchester, X-A000(352), 14412

Sean James of Hoyle, Tanner & Associates presented the proposed project. City of Manchester Project Manager Jessica Fleming and NHDOT Project Manager Tom Jamison were also in attendance. The Piscataquog River Trail Phase IV is a continuation of previously improved sections of the former Goffstown Branch Railroad. This project includes regrading and paving a portion of an abandoned rail bed from Electric Street in Manchester to the Goffstown Town Line. It also includes possible rehabilitation, modification or replacement of a timber trestle bridge over the Piscataquog River.

The trail portion of the project will include the addition of gravel to the top of the rail bed, a 10' paved section with wood railing in some portions. This will complete the final phase of this project within the City of Manchester limits. It is anticipated that all work will be within the existing disturbed area of the rail bed and the only proposed excavation will occur behind the existing bridge abutments. There is some erosion of the existing rail bed behind the south abutment that will be reestablished and protected. The area around the south abutment and the bridge are the only anticipated wetlands impacts. The Natural Heritage Bureau was checked for sensitive, threatened or endangered species and the response provided to Hoyle, Tanner indicated that while there were known species in the area, they were not expected to be impacted by the proposed project.

The existing timber trestle was constructed by the Boston and Maine Railroad shortly after the previous bridge in this location, a timber covered bridge, was lost to fire. The bridge consists of six timber bents that support longitudinal steel beams and cross ties above. Dry laid stone abutments, approximately 160 feet apart, support the ends of the trestle.

Three options are being investigated for the bridge portion of the project. The first option would rehabilitate the existing trestle and install a new deck and railing. The second option would be similar to Option 1 but would remove one or two of the existing bents. The bents are being considered for removal due to the large amount of debris that is caught between them each spring. Removal of this debris is an added maintenance cost to the City and can also be dangerous depending upon the water flow at time of removal. The third and final option being considered is removal of the timber trestle and replacement with a new steel truss bridge supported on the existing abutments. The project was presented to the NHDOT Cultural Resource Committee on January 13, 2011.

Gino Infascelli noted that the proposed project would add impervious surface and that a Comprehensive Shoreland Protection Act Permit would be required. S. James responded that he was aware of this and that the Piscataquog River is a designated river. Kevin Nyhan said that the

chair of the Piscataquog River Local Advisory Committee was notified of this meeting but was not in attendance.

Carol Henderson inquired why the trail was being paved. Jessica Fleming responded that this is the treatment for the previously completed portions of the trail. The trail is intended for use by pedestrians as well as bicyclists and this is the recommended treatment for these uses.

C. Henderson noted that this was the initial review for the project and asked if it would be presented again. Rich Roach indicated that it would qualify for a SPGP and he did not feel an additional presentation would be necessary. It was then agreed that additional review by this group would not be required.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Lisbon, X-A001(172), 16184

This project involves the reconstruction of an unstable slope on the south side of US Route 302 near the intersection of Catterall Road. As a result of the slope failure, the roadway was open to alternating one-way traffic until Class B stone could be placed to stabilize the sloughed area and the road could be shifted away from the slope. The subject project will affect a more permanent solution and proposes to stabilize 1,000 feet of roadway slope. Drainage improvements will also be constructed.

Christine Perron started the discussion by explaining that the project was following up on the temporary fix that District 1 completed under an Emergency Authorization from the DES Wetlands Bureau. She also stated that no records were reported by the Natural Heritage Bureau. Maggie Baldwin gave an overview of the project. This is a slope stabilization project located on US Route 302 approximately 5 miles west of I-93 Exit 42. A section of slope on the south side of the roadway failed after heavy rains in fall 2010. The road was constructed in the 1930s on a concrete slab and the slope washed out right to the edge of that concrete slab. Additional areas along the slope started sloughing but did not result in complete failure. Water from north of the roadway drains toward the road and through the base courses, resulting in a saturated roadway slope on the south side of the road. The slope failure in October resulted in the closure of the southbound lane and District forces set up signals to maintain one-way alternating traffic. This, however, would have been difficult for winter maintenance, so District forces temporarily shifted the roadway to the north to allow for two lanes of traffic. The sloughed area was also filled with stone fill as a temporary stabilization measure, the existing guardrail was repaired, and some minor drainage adjustments were made.

The subject project involves 1,000 feet of slope reconstruction to address the unstable slope on the south side of US Route 302. The existing slope that will be addressed is 1½:1. The Department's Bureau of Materials & Research recommends reconstructing a stone-lined 2:1 slope. A slope that is any steeper would run into issues with bedrock and keying in at the toe of the slope. The project proposes Class C stone for the top of the slope to armor against drainage running through the roadway base courses, and Class B stone for the bottom of the slope. The existing cable guardrail

BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: Monthly SHPO-FHWA-ACOE-NHDOT Cultural Resources Meeting
DATE OF CONFERENCES: January 6 and 13, 2011
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Jill Edelmann
Jon Evans
Cathy Goodmen
Doug Gosling
Bob Hudson
Tom Jameson
Steve Johnson
Larry Keniston
Nancy Mayville
Joyce McKay
Jerry Moore
Kevin Nyhan
Christine Perron
John Robinson
John Sargent
Matt Urban
Alex Vogt
Tony Weatherbee

Federal Highway Administration
Jamie Sikora

NHDHR
Laura Black
Edna Feighner
Peter Michaud
Linda Wilson

Atlas RR Construction
Craig Krause

Town of Bedford
Jeff Foote

Town of Brentwood
Daniel Musso

CLD
Shannon Beaumont
John Byatt

Consultants
Harriet Cady
Donald Wilson

Town of Dublin
Sterling Abram

Dubois-King
Bob Durfee

HEB
Jason Ross

Hoyle Tanner
Sean James

Town of Hudson
Bernie Manor
Gary Webster

City of Manchester
Jessica Fleming
Bruce Thomas

McFarland-Johnson
Vicki Chase
Jim Hall
Jed Merrow
Jennifer Zorn

NECR
Ron Bocash
Jonathan Sturges

Stantec
Mike Leach
Andre Betit

Town of Salem
Robert Puff

Warren Street
Jonathan Halle

(When viewing these minutes online, click on an attendee to send an e-mail)

PROJECTS/PRESENTATIONS REVIEWED THIS MONTH:
(minutes on subsequent pages)

January 6, 2011 2
Wentworth, A-001(030), 15908 2
Pelham, 99409Z 3
Salem (no project number): 3
Piermont 16193 (no federal number) 6
Manchester 15401 (no federal number): 7
Manchester. X-A001(207), 20004 7
Bedford (no project numbers) 8
Brentwood, X-A000(918), 15277 9
Londonderry (no project numbers): 9
January 13, 2011 12
Lebanon, X-A000(141), 13951 12
Hudson, X-A000(348), 14408 13

New England Central Railroad, Track 1, Vernon-St. Albans, VT Upgrade 14
Dublin 15684 (no federal number) 15
Rumney (no project number) 16
Manchester, X-A000(907), 14412A 17
Sandwich, 16014 (no federal number) 18

(When viewing these minutes online, click on a project to zoom to the minutes for that project)

January 6, 2011

Wentworth, A-001(030), 15908
Participants: Christine Perron and John Sargent

John Sargent provided an overview of the project. The project originally involved the rehabilitation of one bridge carrying NH Routes 25 & 118 over the Baker River. Two additional bridges on the same routes have recently been added to the project. There is also now a paving project planned for this section of NH25 & NH 118 (Wentworth-Rumney 16221) and the two projects will likely be combined and completed under one contract. (Separate project numbers will mostly likely be retained.)

Bridge #1 is a 94'6"-foot long 1937 Thru Plate Girder over the Baker River located near the Village of Wentworth. The project will consist of full or partial depth deck repairs and painting.

Bridge #2 is a 3-span 1960 I-Beam, concrete deck bridge over the Baker River. The bridge had an open grid deck on the shoulders, which has been filled. It was determined that it would be more cost effective to replace the superstructure steel rather than paint and repair the existing steel. In addition, the project will include replacement of the deck and expansion joints, installation of riprap for scour protection, and repair of concrete. The rail will be replaced with standard bridge rail, which will have a slightly different configuration than the existing rail. A dry hydrant will also be installed for the town and will be located within the area of riprap. Substructure repairs will be in-kind and will not visually affect the bridge; the substructure will remain the same. The underside of the bridge will be accessed through the northeast quadrant. All work will be within the existing right-of-way and within previously disturbed areas.

Bridge #3 is a 1978 I-Beam Concrete deck bridge over the South Branch of the Baker River. Repairs will consist of full or partial depth deck repairs.

Edna Feighner stated that she had no archaeological concerns with the project.

Laura Black stated that the project seemed fine to her, but questioned how to write the no adverse effect memo without knowing if the two bridges are eligible for the National Register. Joyce McKay said that in these cases she has been writing in the memo that the bridge is potentially eligible and will be examined as part of the bridge inventory. L. Black concurred with this approach as long as there was agreement that the character defining features of the bridge would be retained. No additional concerns were raised.

E. Feighner asked what the town wanted. Christine Perron explained that the Chair of the Rumney Planning Board contacted her and wanted to learn more about the project. She also called the President of the Rumney Historical Society and explained the project to him. He did not have any concerns with the type of rail that would be installed. Bridge Maintenance typically does not hold public informational meetings for proposed work, but D. Gosling commented that his Bridge Superintendents normally discuss the project impacts with abutters and others in town. He added that Bridge Maintenance would not want to do something if the town is opposed to it, and E. Feighner said that DHR would also like to see the Town get what they want.

Linda Wilson said that the concrete rail on this bridge is a character defining feature and it is how you know that the bridge is older. D. Gosling commented that the concrete rail is not often seen on this newer IB-C type of bridge structure.

L. Wilson asked for information on the Department's washing and oiling program. D. Gosling explained that the Bureau of Bridge Maintenance washes its bridges annually and ideally oils the bridges every other year; however, it often ends up being done every three years. The good condition of the rail on the Rumney bridge is likely due to frequent oiling, and also to the limited amount of salt on this rural roadway, less than on busier roads. Linseed oil has been used over the last 30 years but is now being replaced with a similar performing product, siloxane, which is VOC compliant with the new lower VOC regulations. L. Wilson commented that the washing and oiling program is something that DHR has always advocated.

L. Black reiterated that Bridge Maintenance needs to find out what the town wants. If the town wants concrete rail, this option will be fully explored. If concrete rail is chosen for the project, then no NH Individual Inventory Form will be necessary for the bridge. If the town prefers the aluminum rail option, then an Inventory Form will need to be prepared. L. Wilson added that new concrete rail would result in No Adverse Effect. D. Gosling said that he would have someone from his Bureau talk with the town officials to discuss the project plans and solicit their input. The project would be discussed at a future meeting once a course of action is determined.

Manchester, X-A000(907), 14412A
Participants: Sean James, Hoyle Tanner (sjames@hoyletanner.com); Jessica Fleming, City of Manchester; Tom Jameson, NHDOT

S. James, P.E., SECB from Hoyle, Tanner presented this TE-funded project that is the fourth and final phase of converting an abandoned rail line to a paved multi-use trail in the City of Manchester. The project extends from the terminus of the Phase 3 trail section at Electric Street over the Piscataquog River and continues to the Goffstown Town line. The typical trail section will include a 10' wide paved section with 2' shoulders bordered by a wood rail. The rail section will be built up from the existing ground, and it is anticipated that very little to no excavation of the trail bed will be required. Provided that the trail section is within the existing disturbed area and the excavation in minimal, there were no archaeological concerns raised.

Three bridge options at the Piscataquog River crossing are being evaluated; each of which retains the existing abutments and wing walls. Option 1 includes rehabilitation of the existing rail trestle with the addition of a wood or concrete deck and railing. Option 2 is similar to option 1 except

that one or more of the existing bents would be removed to reduce the amount of debris stopped by the trestle. This option would also include new steel members spanning over removed bents. Option 3 includes a complete removal of the timber trestle and installation of a new, single span metal truss bridge. The exact bridge railing to be used has not been selected but it is not anticipated that it will include tall 'cyclone' fence.

J. Flemming, E.I.T., LEED AP from the City of Manchester explained that Options 2 and 3 are being considered due to the cost required by the City to remove debris from the trestle that collects in the spring or after flooding. Depending upon the amount of debris, the removal can include over 30 City employees from Public Works and the fire department.

Each option includes stairs at the southeast quadrant of the bridge to provide access to boat-launch parking area. There was some discussion of how this would be viewed in terms of ADA compliance. There is another paved route that could be taken from the boat launch parking lot to the bridge as well as another parking area near the ice arena, which leads to the bridge so close-by alternate routes are available.

S. James described the available documentation for the trestle bridge. Only a single drawing of the bridge is known to exist. A determination of eligibility (DOE) report was completed for the rail corridor and three remaining bridges in 1995. The conclusion of the report was that the corridor and bridges were not eligible for National Register. L Black explained that NHDHR typically prefers to review DOEs if they are over 10 years old and in this case it is likely that the trestle bridge over the Piscataquog would be found eligible.

It was generally agreed that no additional documentation would be required for Option 1 provided that the work retains the trestle to the best extent practicable. If Options 2 or 3 are pursued an Individual Inventory Form would then be required. Depending on the treatment, Option 2 could be no adverse effect. In addition to the inventory form, Option 3 would require mitigation of the adverse impacts and the preparation and execution of a MOA. E. Feighner added that there would be not be archaeologically sensitive areas if the project is staying within previously excavated areas.

Sandwich, 16014 (no federal number)
Participants: Bob Durfee, Dubois-King (rdurfee@dubois-king.com)

Bob Durfee provided an overview. The scope of the project is to rehabilitate Bridge No. 203/138 on Quaker Whiteface Road. The bridge superstructure (I-beams/concrete deck) was constructed in 1953; the substructure (concrete abutments and wing walls) is estimated to have been constructed in the 1930's.

Rehabilitation will include replacing the existing superstructure (18 feet wide curb to curb) with a new (and wider) steel stringer/pre-cast concrete deck panel superstructure (22 feet wide curb to curb). The existing substructure will be repaired and reused. Riprap will be placed in the river in front of the abutments to address scour. Roadway approaches on each end of the bridge will be reconstructed and paved for 100 feet.

APPENDIX C

Environmental Documentation

To: Sean James, Hoyle, Tanner & Associates
150 Dow Street
Manchester, NH 03101

From: NH Natural Heritage Bureau

Date: 1/14/2011 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau of request submitted 1/13/2011

NHB File ID: NHB11-0089 **Applicant:** Ms. Jessica Flemming

Location: Manchester, Goffstown
Trail bed from Electric Street in Manchester to Goffstown Town Line

Project Description: This project include rehabiliation and paving of an abandoned trail bed for recreational use. It also include rehabilitation or replacement of an existing trestle bridge.

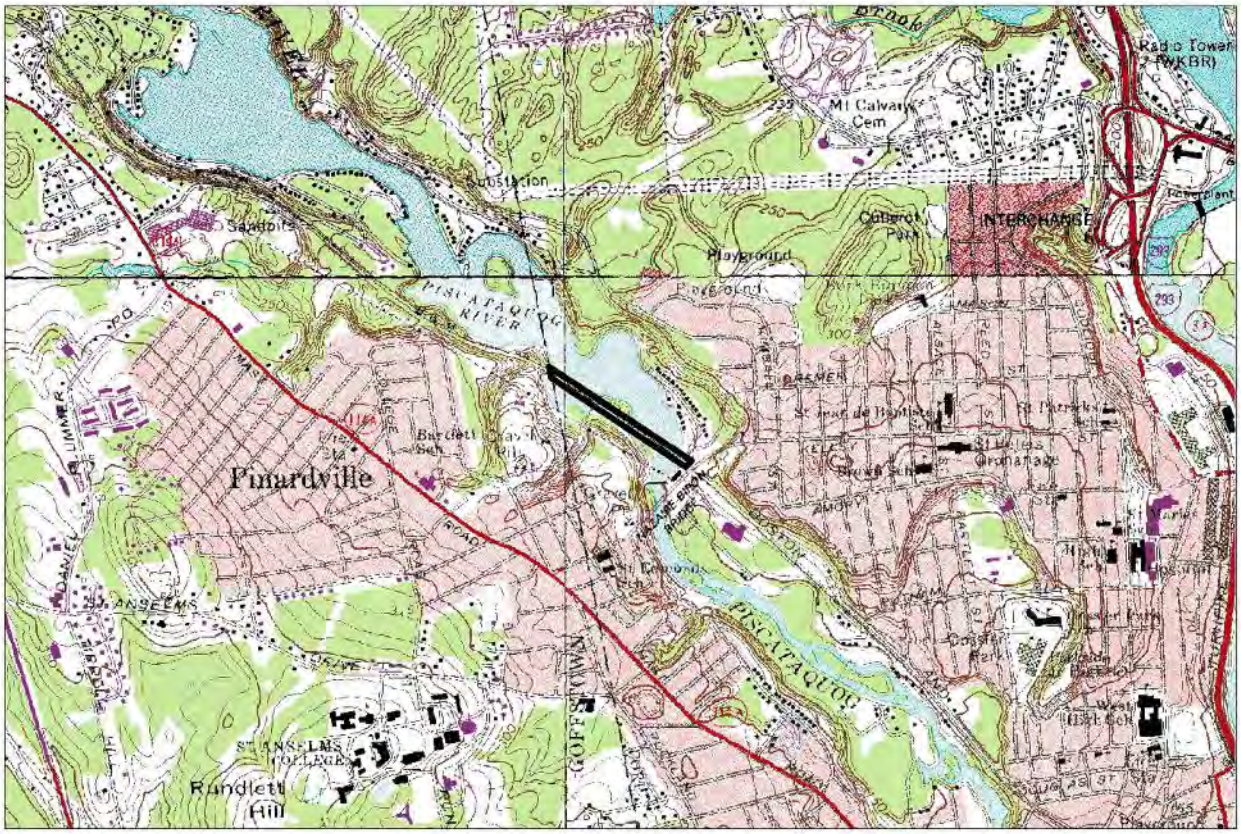
The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 1/13/2011, and can not be used for any other project.

MAP OF PROJECT BOUNDARIES FOR: **NHB11-0089**

NHB11-0089

NH Natural Heritage Bureau



Valid for one year from this date: 14 Jan 2011

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
PO Box 1856
Concord NH 03302-1856

APPENDIX D

Project Photos

Piscataquog River Trail Phase IV, Manchester, NH
NHDOT Project No. 14412
Federal Project No. X-A000(416)

Project Photos

Electric Street Entrance

South Approach to Trestle

Hoyle, Tanner & Associates, Inc.

Piscataquog River Trail Phase IV, Manchester, NH
NHDOT Project No. 14412
Federal Project No. X-A000(416)

Project Photos

Upstream Trestle Elevation

Top of Trestle (Looking North)

Piscataquog River Trail Phase IV, Manchester, NH
NHDOT Project No. 14412
Federal Project No. X-A000(416)

Project Photos

Looking Downstream at Dam and Kelly Street Bridge

East of Trestle at Boat Launch

Hoyle, Tanner & Associates, Inc.

Piscataquog River Trail Phase IV, Manchester, NH
NHDOT Project No. 14412
Federal Project No. X-A000(416)

Project Photos

East Shore Beyond Boat Launch

Looking North (Upstream)

Hoyle, Tanner & Associates, Inc.

Piscataquog River Trail Phase IV, Manchester, NH
NHDOT Project No. 14412
Federal Project No. X-A000(416)

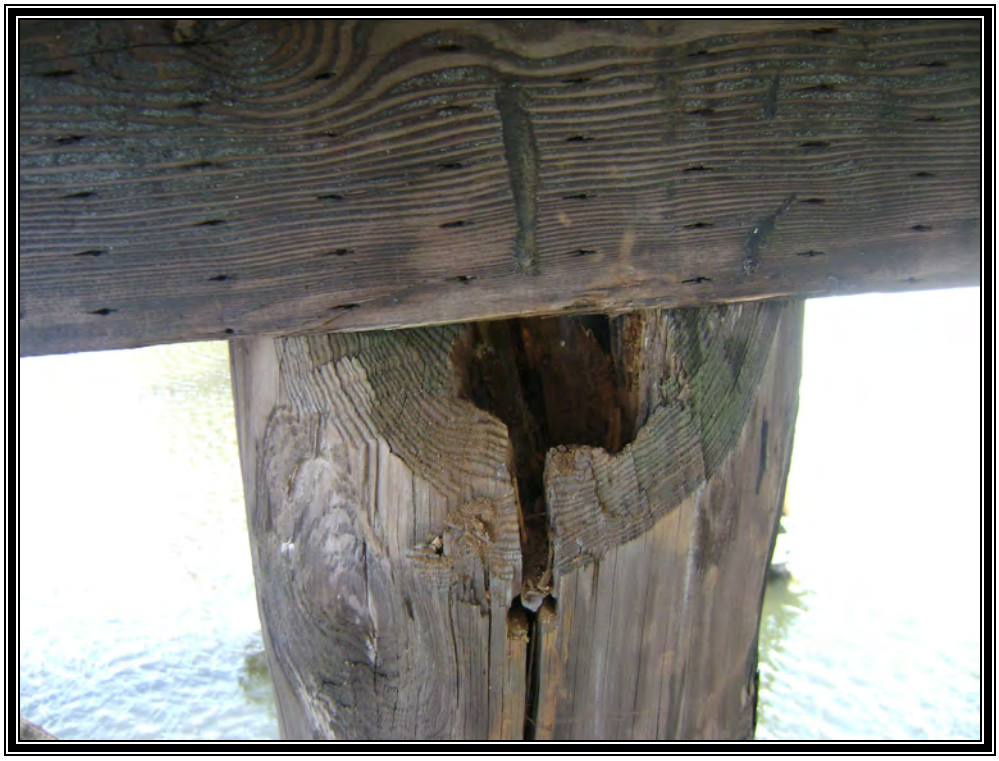
Project Photos

South Trestle Bearings

Trestle End Section

Hoyle, Tanner & Associates, Inc.

Rot in Trestle Cap Beam (Beam is 11¾" Wide by 13½" Deep)



Rot in Trestle Pile

Piscataquog River Trail Phase IV, Manchester, NH
NHDOT Project No. 14412
Federal Project No. X-A000(416)

Project Photos

Typical Trail Section North of Trestle

Typical Section – Phase III

Hoyle, Tanner & Associates, Inc.