

CONCRETE AND REINFORCING STEEL NOTES:

- C-1. REINFORCING STEEL SHALL CONFORM TO SECTION 507 AND DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE "CONCRETE REINFORCING STEEL INSTITUTE" (CRSI).
- C-2. WHEN EPOXY COATED REINFORCING IS CUT, THE UNCOATED ENDS SHALL BE REPAIRED WITH MATERIALS AND PROCEDURES APPROVED BY THE COATING MANUFACTURER. FLAME CUTTING OF EPOXY COATED REINFORCING STEEL IS NOT PERMITTED.
- C-3. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT; ANY DOWNWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE ABOVE THE JOINT.
- C-4. REINFORCING PLACEMENT TOLERANCES SHALL BE:
 SPACING +/- 1"
 CLEARANCE +/- 1/4"
- C-5. MINIMUM CLEAR COVER FOR REINFORCING STEEL SHALL BE TWO (2) INCHES ALONG THE BACK FACES OF WALLS AGAINST EARTH AND THREE (3) INCHES ELSEWHERE, UNLESS NOTED OTHERWISE.
- C-6. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1" UNLESS NOTED OTHERWISE.
- C-7. TOP SURFACES OF FLOOR BEAM PEDESTALS SHALL BE LEVEL.
- C-8. THE CONCRETE IN NEW FLOOR BEAM PEDESTALS SHALL BE HIGH PERFORMANCE CONCRETE CLASS B AND PAID UNDER ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B.
- C-9. ALL NEW AND EXISTING EXPOSED CONCRETE SURFACES SHALL BE SEALED AND STAINED. PAYMENT WILL BE MADE UNDER ITEM 900.625, SPECIAL PROVISION (CONCRETE STAINING AND SEALING).

WINTER PROTECTION NOTES:

- WP-1. IF A WINTER SHUTDOWN IS UTILIZED, THE FOLLOWING CONDITIONS MUST BE MET:
 - A. THE BRIDGE SHALL HAVE AN EQUIVALENT WATER TIGHTNESS AND STRUCTURAL CONDITION DURING THE SHUTDOWN TO WHAT IT CURRENTLY HAS.
 - B. ACCESS TO THE BRIDGE SHALL BE RESTRICTED WITH CHAIN LINK FENCE OR EQUIVALENT MEASURES APPROVED BY THE ENGINEER. COST FOR THIS WORK IS CONSIDERED INCIDENTAL TO ITEM 502.10, SHORING SUPERSTRUCTURE.

ENVIRONMENTAL PROTECTION NOTES:

- E-1. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL CONDUCT OPERATIONS IN SUCH A MANNER AS TO PREVENT OR REDUCE TO A MINIMUM ANY DAMAGE TO ANY STREAM FROM POLLUTION BY DEBRIS, SEDIMENT, OR OTHER FOREIGN MATERIAL OR FROM MANIPULATION OF EQUIPMENT AND/OR MATERIALS IN OR NEAR SUCH STREAMS. THE CONTRACTOR SHALL NOT RETURN DIRECTLY TO A STREAM ANY WATER WHICH HAS BEEN USED FOR WASH PURPOSES OR OTHER SIMILAR OPERATIONS WHICH CAUSE THIS WATER TO BECOME POLLUTED WITH SAND, SILT, CEMENT, OIL, OR OTHER IMPURITIES. IF THE CONTRACTOR USES WATER FROM A STREAM, THE CONTRACTOR SHALL CONSTRUCT AN INTAKE OR TEMPORARY DAM REQUIRED TO PROTECT AND SUSTAIN AQUATIC LIFE.
- E-2. CONSTRUCTION ACTIVITIES SHALL ADHERE TO THE PERMIT REQUIREMENTS ISSUED FROM THE AGENCY OF NATURAL RESOURCES.

SUBSTRUCTURE REHABILITATION NOTES:

- SR-1. EXISTING ABUTMENTS, PIERS, AND WINGWALLS SHALL BE INSPECTED FOR DETERIORATED CONCRETE JOINTLY BY THE RESIDENT ENGINEER AND CONTRACTOR. ALL DETERIORATED CONCRETE SHALL BE REMOVED. THE OUTSIDE LIMITS OF REMOVAL SHALL BE SAW CUT TO A 1" MINIMUM DEPTH TO PROVIDE CLEAN REMOVAL LINES. THE EXISTING CONCRETE SHALL BE BLAST CLEANED PRIOR TO PLACING NEW CONCRETE. ALL REMOVAL AND CLEANING SHALL BE AS SPECIFIED IN SECTION 580 AND PAID FOR UNDER ITEM 580.14, REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II.
- SR-2. HOLES DRILLED IN EXISTING CONCRETE SHALL BE DRILLED 1" GREATER IN DIAMETER THAN THE BAR DIAMETER AND GROUTED WITH TYPE IV MORTAR OR OTHER APPROVED MATERIAL. BARS SHALL HAVE A MINIMUM EMBEDMENT LENGTH OF 1'-0" UNLESS NOTED OTHERWISE. ALL COSTS FOR DRILLING AND GROUTING SHALL BE INCLUDED IN ITEM 507.16, DRILLING AND GROUTING OF DOWELS.

LIGHTING PLAN NOTES:

- LP-1. THERE ARE CURRENTLY TWO LIGHT FIXTURES INSTALLED ON THE BRIDGE. THE POWER TO THE LIGHTS IS PROVIDED BY OVERHEAD ELECTRICAL FEED FROM UTILITY POLE ON THE EAST APPROACH.
- LP-2. THE EXISTING LIGHTS, EAST OVERHEAD ELECTRICAL LINE TO THE PORTAL, SUPPORTS AND CONDUITS SHALL BE REMOVED AND PAID UNDER ITEM 529.20. THE UNDERGROUND ELECTRICAL FEED SHALL BE INSTALLED AND PAID UNDER ITEM 900.645, SPECIAL PROVISION (LIGHTING FOR COVERED BRIDGE).
- LP-3. SIXTEEN NEW LIGHT FIXTURES SHALL BE INSTALLED AS SHOWN ON SHEETS 29-30.
- LP-4. THE NEW ELECTRICAL CONDUIT SHALL BE LOCATED ON THE NORTH SIDE OF THE NORTH TRUSS TOP CHORD. CONDUIT TO ROADWAY FIXTURES SHALL BE LOCATED ON THE TOP OF CROSS BEAM AND BRACING MEMBERS, HIDDEN FROM VIEW.
- LP-5. THE CUTTING, NOTCHING OR ALTERING IN ANY WAY BRIDGE MEMBERS DURING INSTALLATION OF THE LIGHTING SYSTEM WILL NOT BE ALLOWED WITHOUT PERMISSION OF THE ENGINEER.
- LP-6. END LIGHTS BETWEEN NODES 0-1 AND 21-22 SHALL BE CONNECTED TO AN ADJUSTABLE PHOTOCCELL MOUNTED ON THE EAST PORTAL.

RECOMMENDED SEQUENCE OF WORK:

- RS-1. INSTALL TEMPORARY TRAFFIC SIGNS AND CLOSE THE EXISTING COVERED BRIDGE TO TRAFFIC.
- RS-2. REMOVE THE EXISTING FLOOR DECKING, STRINGERS, FLOOR BEAMS AND SIDING AS SHOWN IN THE PLANS. PROVIDE TEMPORARY SUPPORT OF THE LOWER AND UPPER CHORDS AND ARCHES AS REQUIRED.
- RS-3. INSTALL TEMPORARY SHORING TO SUPPORT THE EXISTING BRIDGE. FOUR (4) WEEKS PRIOR TO COMMENCEMENT OF THE WORK THE CONTRACTOR SHALL SUBMIT PLANS AND DESIGN CALCULATIONS FOR THE PROPOSED WORK TO THE STRUCTURES ENGINEER IN ACCORDANCE WITH SECTION 105.
- RS-4. THE EXISTING BRIDGE SHALL BE JACKED AND BRACED AS REQUIRED TO STRAIGHTEN, RELEASE STRESSES, PLUMB AND RE-ALIGN THE TRUSSES AND ARCHES. FOUR (4) WEEKS PRIOR TO COMMENCEMENT OF REALIGNMENT OPERATIONS THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD OF WORK TO THE STRUCTURES ENGINEER IN ACCORDANCE WITH SECTION 105. (SEE ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE)).
- RS-5. REPLACE BRIDGE MEMBERS AS DETAILED IN THE CONTRACT DOCUMENTS AND COMPLETE SUBSTRUCTURE WORK.
- RS-6. REMOVE TEMPORARY SHORING TO SUPPORT STRUCTURE. COMPLETE REMAINING WORK ITEMS AS DETAILED IN THE CONTRACT DOCUMENTS AND REOPEN BRIDGE TO TRAFFIC.

WOOD MATERIALS LIST

COMPONENT	EXISTING (ACTUAL SIZE)	PROPOSED (ACTUAL SIZE)	PROPOSED SPECIES & GRADE
BEARING AND HARDWOOD BLOCKS	4" THICK	4" THICK	WHITE OAK NO. 1
CROSS BEAMS	7"x8" & 4"x4"	7"x8" & 4"x4"	DOUGLAS FIR NO. 1
DISTRIBUTION BEAMS	---	6"x12"	P.T. DOUGLAS FIR SEL. STR.
FLOOR BEAMS	6"x10"	6"x10"	P.T. DOUGLAS FIR NO. 1
KNEE BRACES	4"x4"	4"x4"	EASTERN SPRUCE NO. 1 & BTR
LAMINATED ARCHES	2"x5 3/4" & 2 1/4"x5 3/4"	2"x6" & 2 1/4"x6" & 3"x9"	SOUTHERN PINE NO. 1
LOWER LATERAL BRACING	6"x6"	4 1/2"x4 1/2"	P.T. DOUGLAS FIR NO. 1
NAILERS/SIDING SUPPORT MEMBERS	2"x4"	2"x4"	EASTERN SPRUCE NO. 1
NEW HORIZONTAL MEMBERS AT INTERIOR TRUSS	---	4 1/2"x4 1/2"	DOUGLAS FIR SEL. STR.
PORTAL TRIM LUMBER	2"x4"	2"x4"	EASTERN SPRUCE NO. 1
ROOF RAFTERS	4"x4"	4"x4"	DOUGLAS FIR SEL. STR.
ROOF BOARDS	1"x8"	1"x8"	EASTERN HEMLOCK NO. 1 COMMON
SAWN DECKING (BOTTOM LAYER)	3" THICK	3"x7 1/4"	P.T. DOUGLAS FIR
SAWN DECKING (TOP LAYER)	3" THICK	1 1/2"x7 1/4"	WHITE OAK NO. 1
SIDING	1" THICK	1" THICK	EASTERN WHITE PINE COMMON PREMIUM
SLEEPER BEAMS	---	10"x10"	P.T. DOUGLAS FIR NO. 1
SUPPLEMENTAL DIAGONALS	---	2"x10" & 3"x10"	DOUGLAS FIR SEL. STR.
TIMBER RAIL	4"x12"	4"x12"	EASTERN SPRUCE NO. 1
TRUSS BOTTOM CHORD	7"x13" & 6"x12"	7"x14" & 8"x14"	P.T. DOUGLAS FIR SEL. STR.
TRUSS DIAGONALS	4"x10"	4"x10" & 5"x10"	DOUGLAS FIR SEL. STR.
TRUSS TOP CHORD	8 1/2"x10"	8 1/2"x10"	DOUGLAS FIR SEL. STR.
TRUSS VERTICALS	8 1/2"x10"	8 1/2"x10" & 16"	DOUGLAS FIR SEL. STR.
WOOD CURB	---	3 1/2"x5 1/2"	P.T. DOUGLAS FIR NO. 1 & BTR
WOOD CURB BLOCKING	---	5 1/2"x5 1/2"	P.T. DOUGLAS FIR NO. 1 & BTR

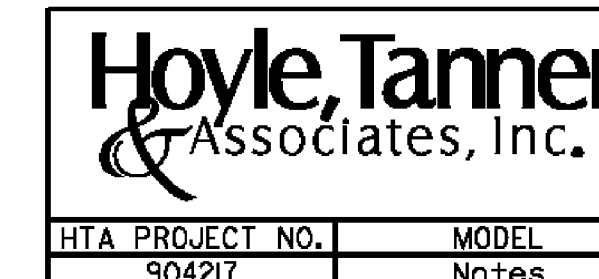
* MATCH EXISTING MEMBER DIMENSIONS

MINIMUM ALLOWABLE WOOD STRESSES

SPECIES	SIZE	GRADE	F _b (PSI)	F _t (PSI)	F _v (PSI)	F _c (PSI)	F _e (PSI)	E (10 ⁶ PSI)
DOUGLAS FIR	2"-4" THICK	NO. 1 & BTR	1200	800	180	1550	625	1.8
DOUGLAS FIR	2"-4" THICK	SEL. STR.	1500	1000	180	1700	625	1.9
DOUGLAS FIR	BEAMS & STRINGERS*	NO. 1	1350	675	170	925	625	1.6
DOUGLAS FIR	BEAMS & STRINGERS*	SEL. STR.	1600	950	170	1100	625	1.6
DOUGLAS FIR	POSTS & TIMBERS**	NO. 1	1200	825	170	1000	625	1.6
DOUGLAS FIR	POSTS & TIMBERS**	SEL. STR.	1500	1000	170	1150	625	1.6
EASTERN SPRUCE	2"-4" THICK	NO. 1	775	350	140	1000	335	1.1
SOUTHERN PINE	5"-6" WIDE	NO. 1	1650	900	175	1750	565	1.7
SOUTHERN PINE	9" WIDE	NO. 1	1500	825	175	1650	565	1.7
WHITE OAK	2"-4" THICK	NO. 1	875	500	220	900	800	1.0

LEGEND:

- P.T. PRESSURE TREATED
- * 5" & THICKER AND MORE THAN 2 IN. GREATER THAN THICKNESS (E.G. 4 1/2 x 8 1/2)
- ** 5" & THICKER AND NOT MORE THAN 2 IN. GREATER THAN THICKNESS (E.G. 8 1/4 x 8)



HTA PROJECT NO. 904217	MODEL Notes
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PROJECT NAME: MIDDLEBURY-WEYBRIDGE	PLOT DATE: 9/20/2011
PROJECT NUMBER: BHO 1445(33)	DRAWN BY: J.B.McQUAID
FILE NAME: z06J086gen2.dgn	CHECKED BY: S.T.JAMES
PROJECT LEADER: M.D.SARGENT	SHEET 26 OF 66
DESIGNED BY: J.BICJA	
PROJECT NOTES SHEET (2 OF 2)	