

BRIDGE REPAIR PROJECT

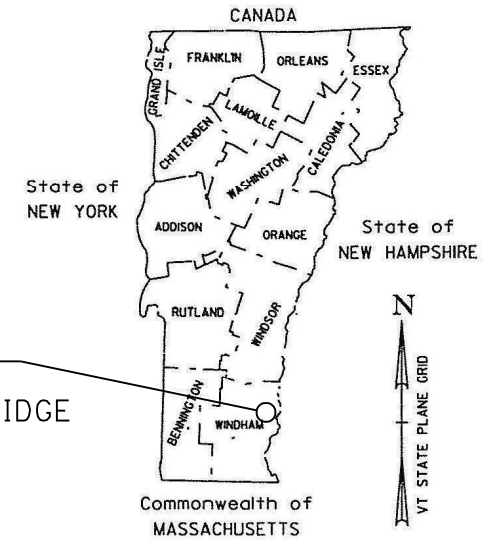
TOWN OF ROCKINGHAM COUNTY OF WINDHAM

WILLIAMS ROAD OVER WILLIAMS RIVER - WORRALL COVERED BRIDGE

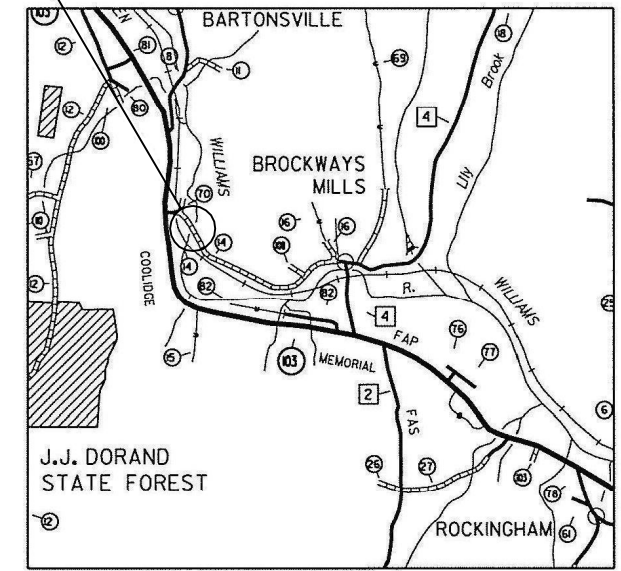
PROJECT LOCATION: BEGINNING AT A POINT ON TH 14 (WILLIAMS ROAD) IN THE TOWN OF ROCKINGHAM LOCATED APPROXIMATELY 0.18 MILES EASTERLY FROM ITS INTERSECTION WITH VT 103 AND EXTENDING EASTERLY 0.02 MILES ON TH 14.

PROJECT DESCRIPTION: REHABILITATION OF THE WORRALL COVERED BRIDGE CONSISTS OF INSTALLING SISTER LATTICE AND REPLACING MISSING AND/OR DAMAGED SIDING.

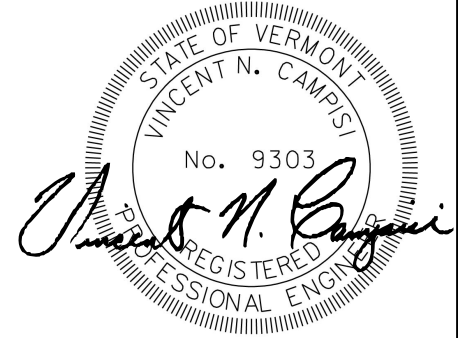
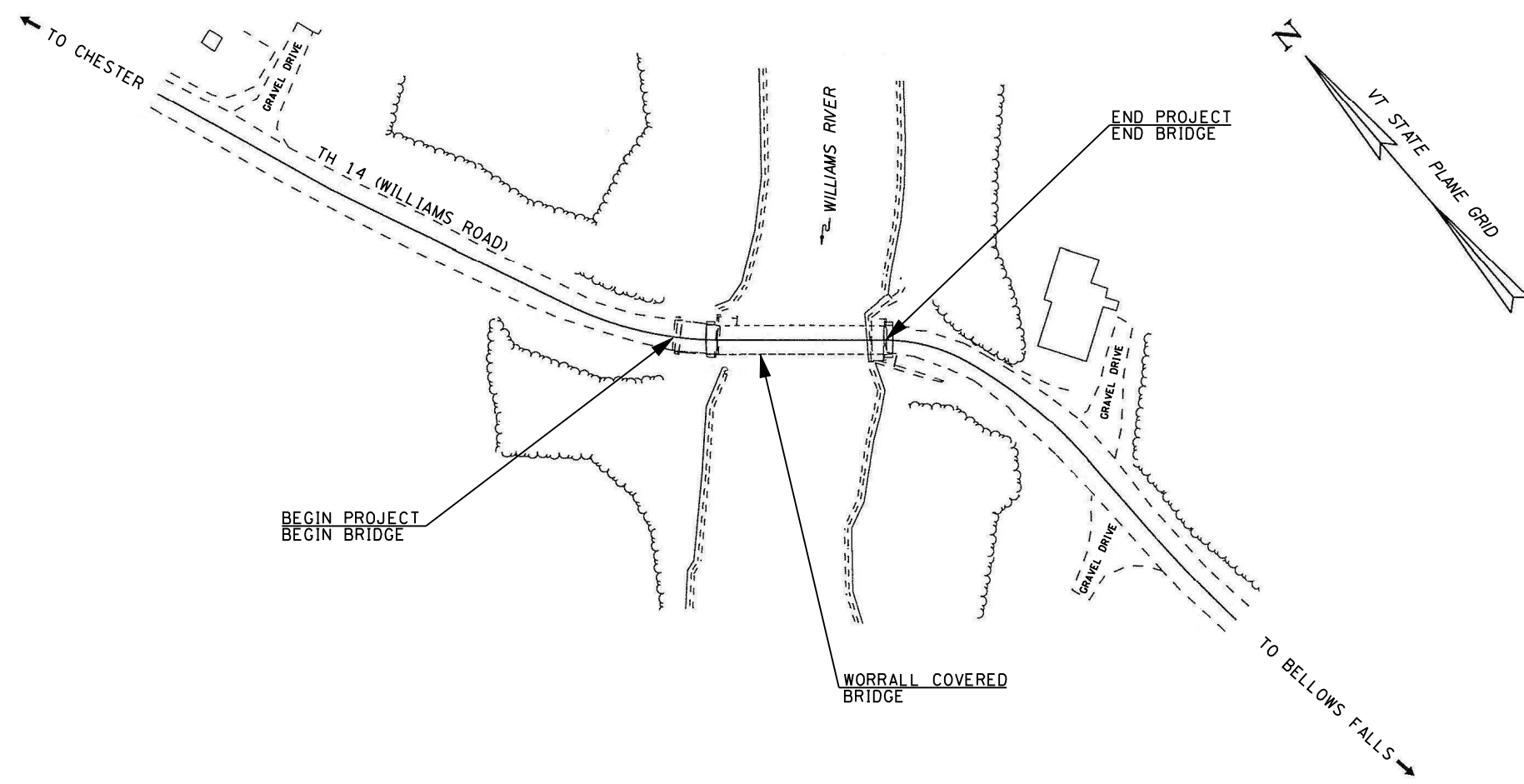
LENGTH OF STRUCTURE: 103.2 FEET = 0.02 MILES
 LENGTH OF ROADWAY: 0.0 FEET = 0.00 MILES
 LENGTH OF PROJECT: 103.2 FEET = 0.02 MILES



PROJECT LOCATION
 ROCKINGHAM
 WORRALL COVERED BRIDGE



LOCATION MAP



PROJECT NAME: TOWN OF ROCKINGHAM, VERMONT WORRALL COVERED BRIDGE WILLIAMS ROAD OVER WILLIAMS RIVER	
FILE NAME:	PLOT DATE: JAN. 2012
PROJECT LEADER: PHIL PIERCE	DRAWN BY: JASON HARVIE
DESIGNED BY: PHIL PIERCE	CHECKED BY: PHIL PIERCE
IPARM FILE:	SHEET 1 OF 4

FILE NAME = V:\P\2012\11\17\2012\11\17\2012\CADD\1\23391\CADD\MSTN\23391_SHEET_01.dgn
 DATE/TIME = 1/17/2012 10:58:53 AM
 USER = JHARVIE

WORRALL COVERED BRIDGE

GENERAL NOTES:

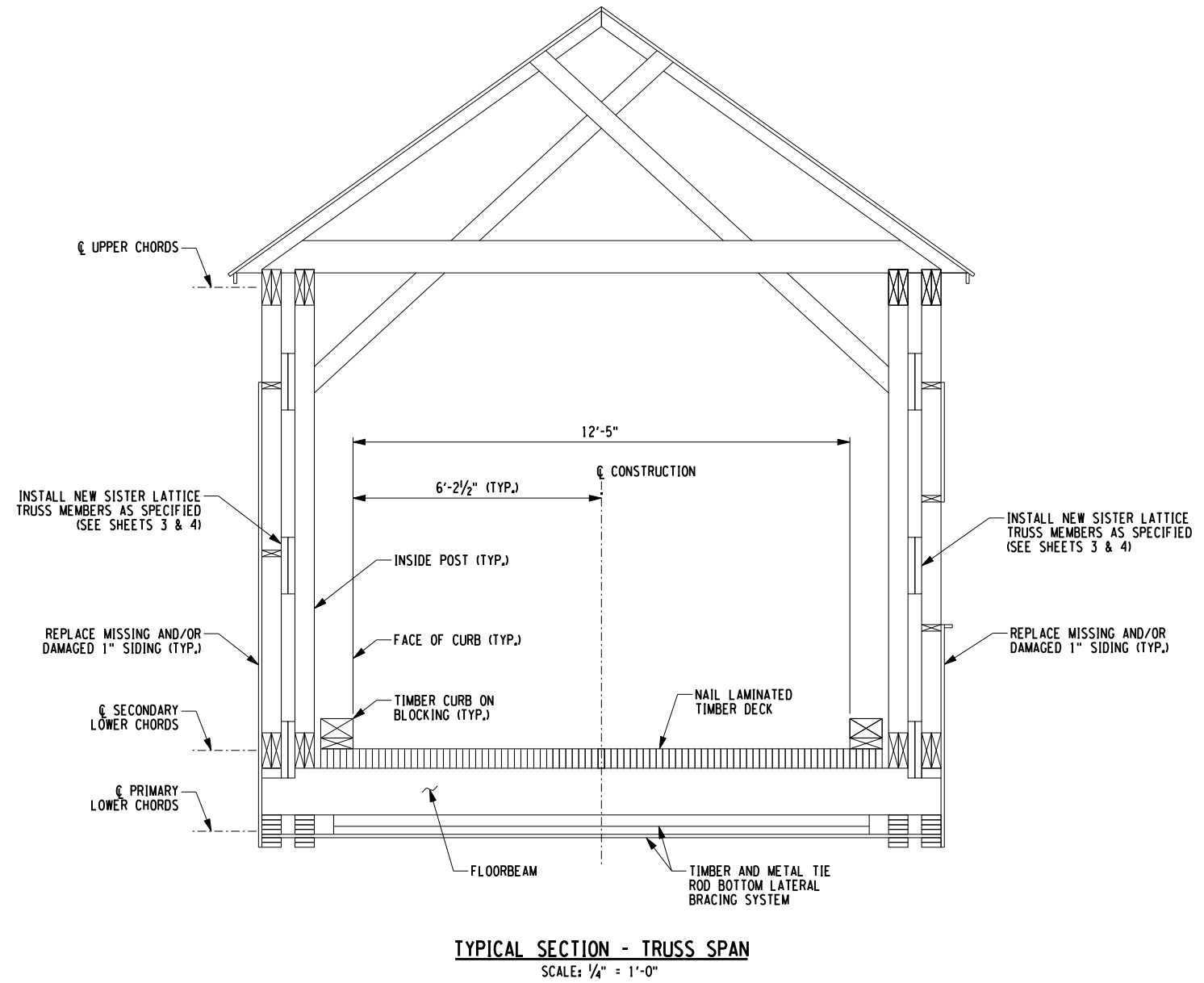
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATION FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.
2. DIMENSIONS, ANGLES AND ELEVATIONS OF THE EXISTING BRIDGE SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND LIMITED FIELD INVESTIGATION AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING STRUCTURE COMPONENTS IMPACTED BY THE NEW WORK TO ASSURE CONSISTENCY WITH THE PROPOSED MODIFICATIONS. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE DIMENSIONS AND DETAILS OF EXISTING BRIDGE FEATURES AND COMPONENTS PRIOR TO THE FABRICATION OF NEW BRIDGE COMPONENTS.
3. THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PRECAUTION TO ENSURE THAT NO DEBRIS FALLS INTO THE WILLIAMS RIVER DURING CONSTRUCTION. ALL MATERIAL FALLING IN THE AREA BELOW AND ADJACENT TO THE BRIDGE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, AT THE CONTRACTORS' EXPENSE TO THE SATISFACTION OF THE ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A SUITABLE STAGING AREA, INCLUDING OBTAINING NECESSARY PERMITS AND CLEARANCE.

TRAFFIC CONTROL NOTES:

1. THE WORRALL COVERED BRIDGE SHALL REMAIN CLOSED TO ALL PEDESTRIAN AND VEHICULAR TRAFFIC DURING RECONSTRUCTION.

SUPERSTRUCTURE NOTES:

1. ALL TIMBER CONSTRUCTION SHALL COMPLY WITH THE LATEST AASHTO SPECIFICATIONS, THE NATIONAL DESIGN SPECIFICATION AND SUPPLEMENT FOR WOOD CONSTRUCTION, AND THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION SPECIFICATION.
2. THE CONTRACTOR SHALL AVOID UNNECESSARY DISASSEMBLY OF THE TOWN LATTICE TRUSSES. IT IS ANTICIPATED THAT THE SISTER ELEMENTS CAN BE SLID INTO POSITION FROM BELOW WITHOUT THE NEED TO FORCE THE EXISTING ELEMENTS APART.
3. NEW SIDING SHALL BE INSTALLED TO REPLACE DAMAGED AND/OR MISSING SIDING AT THE DIRECTION OF THE ENGINEER. NEW SIDING SHALL MATCH REMAINING SIDING IN THICKNESS, WIDTH, AND DETAIL, TO THE EXTENT PRACTICAL. COST FOR NEW SIDING SHALL BE INCLUDED IN ITEM 522.30.
4. NAILS USED FOR ATTACHING SIDING SHALL CONFORM TO ASTM F1667 AND BE DOUBLE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232.
5. ALL NEW AND EXISTING TRUNNELS ARE TIMBER CONNECTORS. ALL NEW WOOD TRUNNELS SHALL BE MADE OF WHITE OAK. NEW HOLES FOR TRUNNELS SHALL BE BORED WITH A BIT THE SAME DIAMETER AS THE TRUNNEL TO PROVIDE A FRICTION FIT. TRUNNELS SHALL BE DRIVEN IN A MANNER WHICH AVOIDS SPLITTING THE TRUNNELS OR THE MEMBER CONNECTED BY THESE. TRUNNELS SHALL BE DIPPED IN BOILED LINSEED OIL, MINERAL OIL OR AN APPROVED WAX PRIOR TO DRIVING.
6. EXCEPT AS OTHERWISE STATED WITHIN THE CONTRACT DOCUMENTS, PAYMENT FOR STRUCTURAL LUMBER AND TIMBER AND NONSTRUCTURAL LUMBER QUANTITIES SHALL ALSO BE FULL COMPENSATION FOR DETAILING, FURNISHING, TRANSPORTING, HANDLING, PLACING, AND INSTALLING NEW TIMBER CONNECTORS WHICH ARE USED TO CONNECT NEW LUMBER AND TIMBER MEMBERS WITH EXISTING LUMBER AND TIMBER MEMBERS.
7. NEW HOLES DRILLED INTO EXISTING MEMBERS THAT ARE OVERSIZED OR DISTORTED SHALL BE PLUGGED WITH AN APPROVED WOOD EPOXY AND REDRILLED AS APPROVED BY THE ENGINEER. COST FOR SUCH REPAIR SHALL BE BORNE SOLELY BY THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.
8. THE LOWER ENDS OF SPLIT LATTICE MEMBERS, IDENTIFIED BY THE ENGINEER FOR REPAIR, SHALL BE REPAIRED WITH AN APPROVED WOOD EPOXY TO ACHIEVE FULL STRENGTH OF THE REPAIRED MEMBER. THE REPAIR SHALL CONSIST OF INJECTING EPOXY WITHIN THE FULL LIMITS OF THE SPLIT, AND COUNTERSINKING TWO ONE-HALF INCH DIAMETER LAG SCREWS. COST SHALL BE INCLUDED IN ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS).



TYPICAL SECTION - TRUSS SPAN
SCALE: 1/4" = 1'-0"

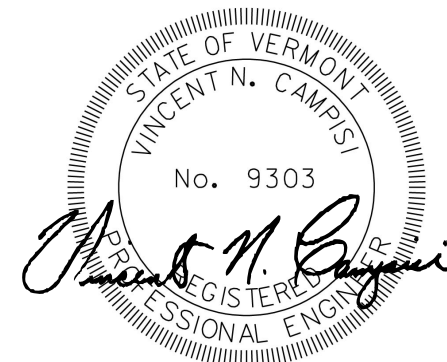
WORRALL COVERED BRIDGE - ESTIMATED REPAIR QUANTITIES:

ITEM NUMBER	DESCRIPTION	SIZE (INCHES)	APPROX. LENGTH (FT)	IDENTIFIED NUMBER OF PIECES	UNIT QUANTITY (MFBM)	SPECIES	GRADE
522.25	LATTICE SISTER ELEMENTS - SIS (WIDE)	1.875 X 11	10	18	0.31	SOUTHERN PINE OR DOUGLAS FIR	SELECT STRUCTURAL
522.30	SIDING BOARDS (SEE NOTE 1)	1 X 10	12	30	0.30	HEMLOCK	NO. 1 COMMON

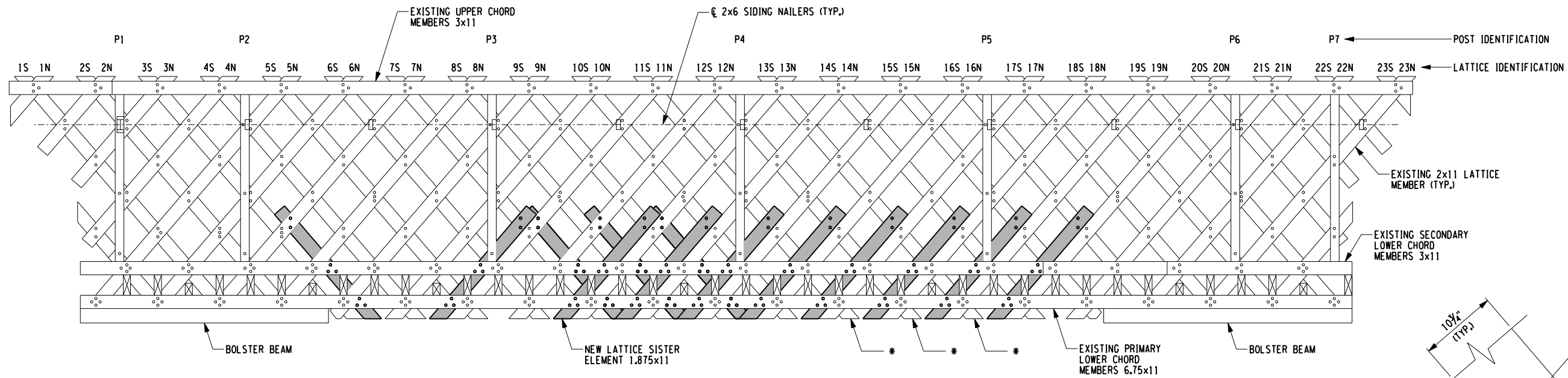
NOTES:

1. AVERAGE WIDTH OF SIDING BOARDS PROVIDED FOR QUANTITY PURPOSES. ACTUAL WIDTH OF SIDING TO VARY AND MATCH EXISTING SIDING.
2. NEW SIDING AND LATTICE TO BE FULL-SIZE, ROUGH FINISHED, UNLESS NOTED OTHERWISE.

ITEM NUMBER	DESCRIPTION	UNIT	ESTIMATED QUANTITY
900.62	SPECIAL PROVISION (WOOD EPOXY REPAIR)	EACH	5



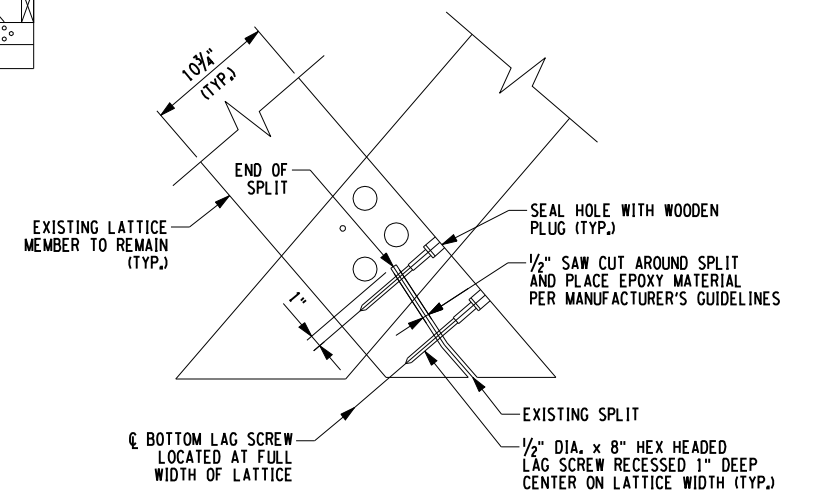
PROJECT NAME: TOWN OF ROCKINGHAM, VERMONT WORRALL COVERED BRIDGE WILLIAMS ROAD OVER WILLIAMS RIVER
FILE NAME: PLOT DATE: JAN. 2012
PROJECT LEADER: PHIL PIERCE DRAWN BY: JASON HARVIE
DESIGNED BY: PHIL PIERCE CHECKED BY: PHIL PIERCE
IPARM FILE: SHEET 2 OF 4



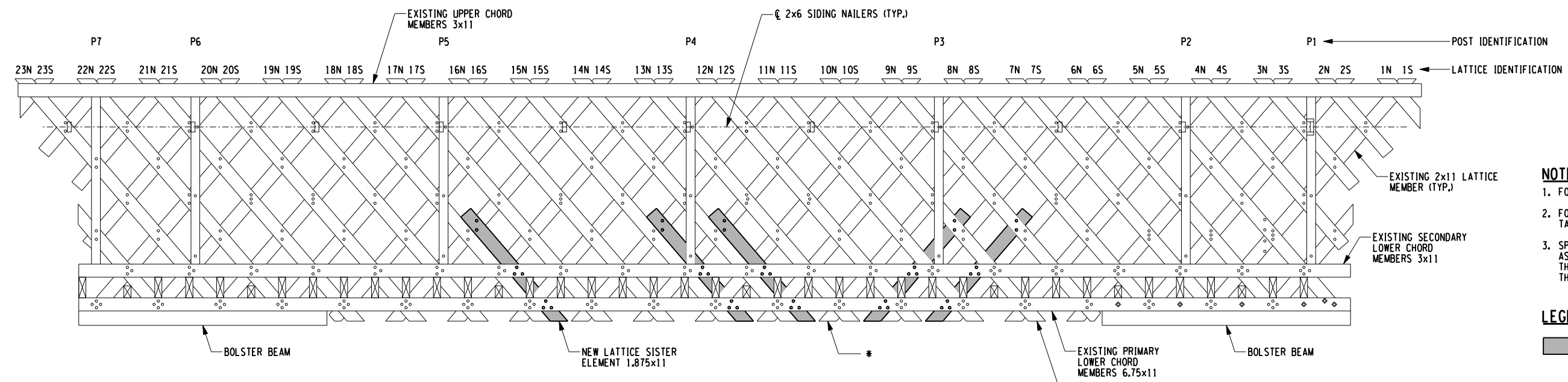
EAST TRUSS INTERIOR ELEVATION
(INSIDE LOOKING OUT)
SCALE: N.T.S.

NOTE: BOTTOM LATERAL BRACING, CEILING FRAMING AND SIDING NOT SHOWN FOR CLARITY.

* END OF LATTICE MEMBER TO BE REPAIRED, SEE LATTICE SPLIT REPAIR DETAIL THIS SHEET.



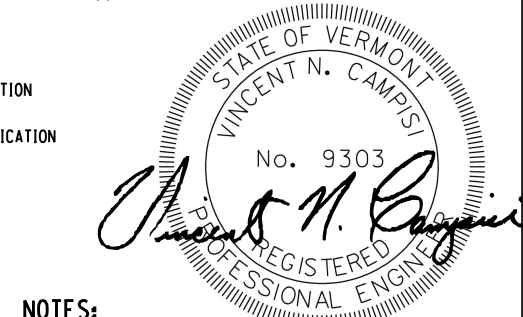
LATTICE SPLIT REPAIR DETAIL
SCALE: 3/4" = 1'-0"



WEST TRUSS INTERIOR ELEVATION
(INSIDE LOOKING OUT)
SCALE: N.T.S.

NOTE: BOTTOM LATERAL BRACING, CEILING FRAMING AND SIDING NOT SHOWN FOR CLARITY.

* END OF LATTICE MEMBER TO BE REPAIRED, SEE LATTICE SPLIT REPAIR DETAIL THIS SHEET.

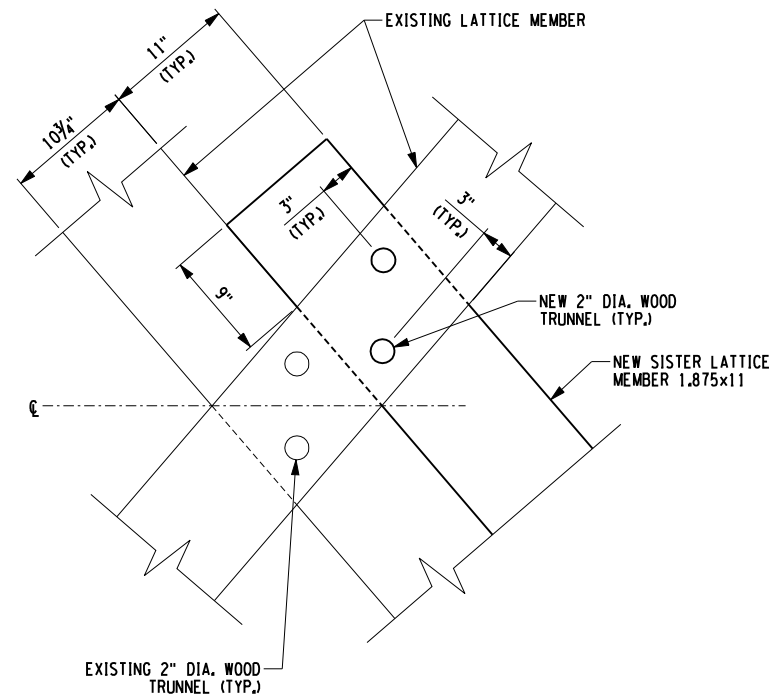


- NOTES:**
1. FOR GENERAL NOTES, SEE SHEET 2.
 2. FOR SIZES AND LENGTHS OF NEW MEMBERS, SEE TIMBER TABLE ON SHEET 2.
 3. SPLIT ENDS OF EXISTING LATTICE SHALL BE REPAIRED AS SHOWN ON THIS SHEET AT LOCATIONS IDENTIFIED ON THIS SHEET WITH AN * SYMBOL AND AS CONFIRMED BY THE ENGINEER.

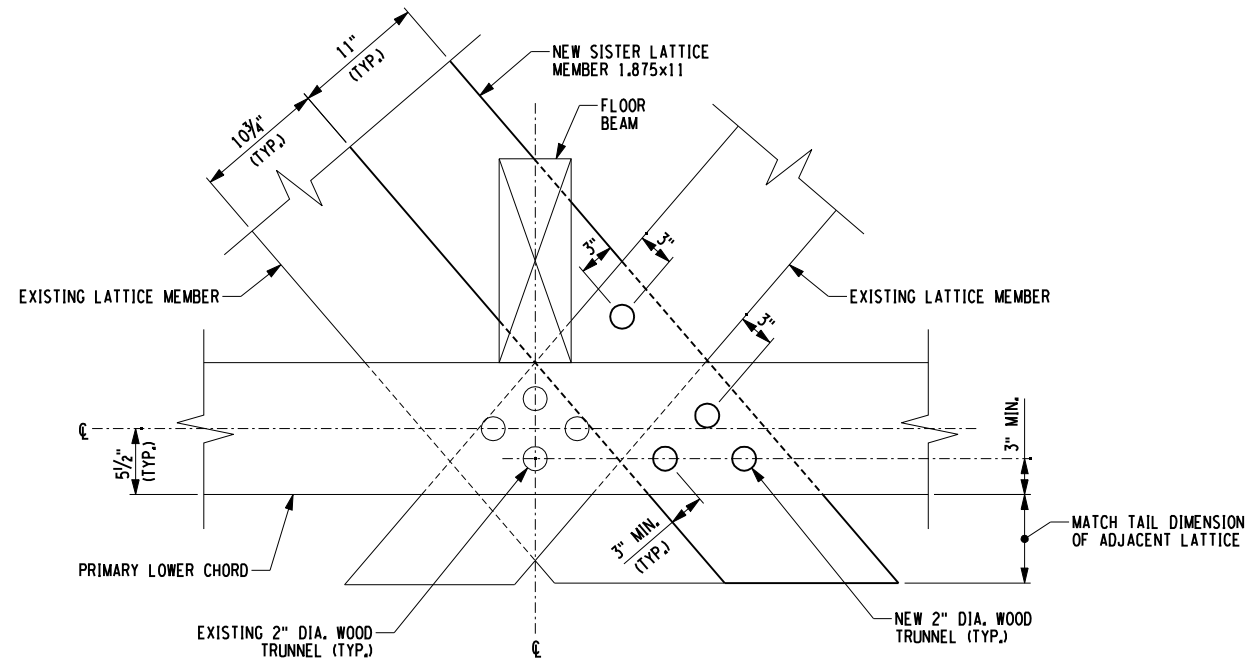
LEGEND:
[Shaded Box] NEW BRIDGE ELEMENTS

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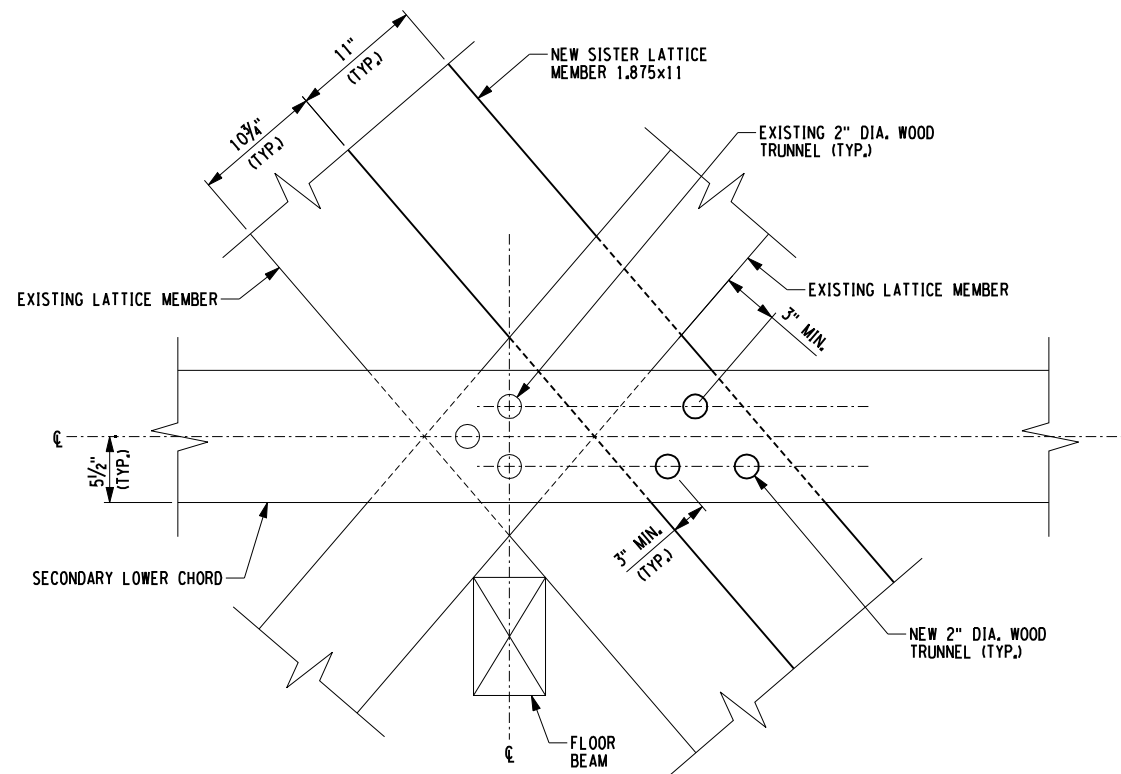
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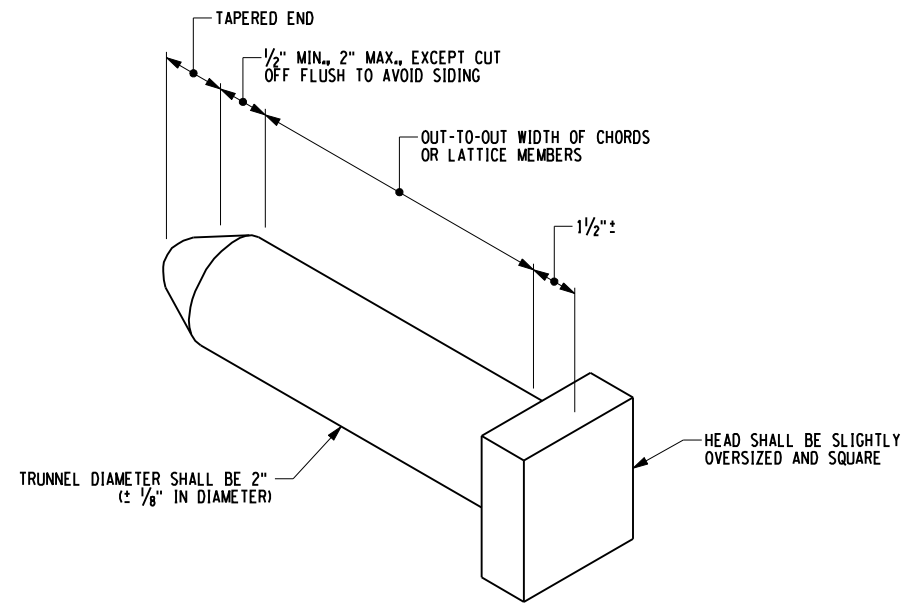
LATTICE JOINT
SCALE: 3/4" = 1'-0"



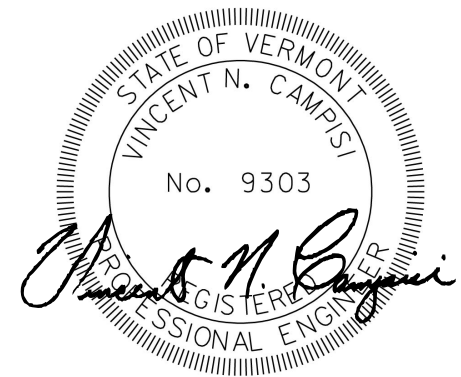
LATTICE CONNECTION TO PRIMARY LOWER CHORD
SCALE: 3/4" = 1'-0"



LATTICE CONNECTION TO SECONDARY LOWER CHORD
SCALE: 3/4" = 1'-0"



NEW TRUNNEL DETAIL
SCALE: N.T.S.



NOTES:
1. FOR GENERAL NOTES, SEE SHEET 2.

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DATE/TIME = 1/17/2012 10:58:11 AM
USER = JHP

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