

GENERAL

- G-1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2011, AND ITS LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, DATED 2002, AND ITS LATEST REVISIONS.
- G-2. THE CONTRACTOR SHALL TAKE SPECIAL CARE AND PRECAUTION TO ENSURE THAT NO DEBRIS FALLS INTO THE WEST 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 NO COST TO THE STATE.
- G-3. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING R.O.W LIMITS SHOWN IN THESE PLANS. THE RIGHT-OF-WAY SHOWN IS ASSUMED TO BE APPROXIMATELY CENTERED ABOUT THE CENTERLINE OF THE BRIDGE. NO PROVISIONS HAVE BEEN MADE FOR WORK OR ACTIVITIES BEYOND THE RIGHT-OF-WAY LIMITS. SHOULD THE CONTRACTOR REQUIRE ANY ADDITIONAL RIGHT-OF-WAY IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL EASEMENTS, AND BEAR THE COSTS OF SUCH EASEMENTS WITHOUT FURTHER COMPENSATION FROM THE STATE.
- G-4. THESE CONTRACT DOCUMENTS HAVE BEEN PREPARED BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE CHECKED BY THE CONTRACTOR IN THE FIELD PRIOR TO COMMENCING THE 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. ACTUAL WORK SHALL MATCH FIELD CONDITIONS UNLESS NOTED OTHERWISE. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G-5. BRIDGE NO. 45 IS CLOSED TO ALL TRAFFIC AND SHALL REMAIN CLOSED FOR THE DURATION OF CONSTRUCTION.
- G-6. EXCEPT AS NOTED OTHERWISE, ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE SHALL INCLUDE ANY REMOVAL WORK NECESSARY TO FACILITATE AND ACCOMPLISH THE SCOPE OF PROJECT WORK AS INDICATED BY THE CONTRACT DOCUMENTS AND DIRECTED BY THE ENGINEER INCLUDING: REMOVING AND DISPOSING SUPERSTRUCTURE MEMBERS AND PORTIONS OF MEMBERS; AS WELL AS REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR RE-USE, INCLUDING REMOVING AND STOCKPILING MEMBERS AND PORTIONS OF MEMBERS FOR THE CONTRACTOR'S METHODS OF REHABILITATION.
- G-7. NO BURNING OF REMOVED MATERIALS AT THE PROJECT SITE WILL BE ALLOWED. THE EXISTING COVERED BRIDGE TIMBERS AND LUMBER MAY CONTAIN HAZARDOUS WOOD PRESERVATIVES. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS AND EMPLOYEES HARMLESS REGARDING THE CONTRACTOR'S HANDLING OF THESE MATERIALS AND SUBSEQUENT USE, RE-USE, OR DISPOSAL OF THESE MATERIALS.
- G-8. SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGE TO MEMBERS THAT ARE TO REMAIN AND TO AVOID MOVEMENT OF THE TRUSS THAT COULD RESULT IN DISTORTION OR MISALIGNMENT OF THE TRUSS AND ITS JOINTS. MEMBERS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AS DIRECTED BY THE ENGINEER AT CONTRACTOR'S EXPENSE.
- G-9. ALL JOINTS IN REPLACED MEMBERS SHALL MATCH THE EXISTING JOINT, INCLUDING ALL NAILS, BOLTS, TRUNNELS OR SCREWS REQUIRED UNLESS NOTED OTHERWISE.
- G-10. ALL EXISTING MEMBERS SHOWN TO BE REPLACED ARE TO BE REPLACED "IN-KIND" WITH NEW MEMBERS IDENTICAL IN DIMENSIONS AND CONFIGURATIONS AS THE MEMBERS ORIGINALLY USED IN THE COVERED BRIDGE (INCLUDING MORTISES, TENONS, NOTCHES, HOLES, ETC.) UNLESS NOTED OTHERWISE IN THESE PLANS. SEE SHEET 11 FOR WOOD MATERIALS LIST.
- G-11. THE CONTRACTOR'S COVERED BRIDGE SHORING SYSTEM FOR ITEM 502.10, SHORING SUPERSTRUCTURE, SHALL NOT SIGNIFICANTLY RESTRICT THE EXISTING WATERWAY OPENING OF THE WEST RIVER.
- G-12. A THIRD PARTY SHALL HAVE ACCESS TO THE SALVAGED TIMBER FOR UP TO THIRTY DAYS FROM REMOVAL. MOST OF THE MATERIAL WILL BE AVAILABLE AS SALVAGE AS THE THIRD PARTY WILL CUT A MAXIMUM OF 6" ONLY FROM ONE END OF THE TIMBER. THIS IS A STUDY TO DETERMINE TREE RING DATA.
- G-13. THE CONTRACTOR'S COVERED BRIDGE SHORING SYSTEM FOR ITEM 502.10, SHORING SUPERSTRUCTURE, SHALL BE COMPLETE AND IN PLACE FOR THE TOWN LATTICE SPANS BETWEEN PIERS 2 AND 3 AND PIER 3 AND ABUTMENT NO. 2 PRIOR TO JANUARY 15, 2016.

TIMBER CONNECTORS

- TC-1. EXCEPT AS SPECIFIED IN THE STRUCTURAL STEEL NOTES, PAYMENT FOR STRUCTURAL LUMBER AND TIMBER AND NON-STRUCTURAL LUMBER QUANTITIES WILL INCLUDE FULL COMPENSATION FOR DETAILING, FURNISHING, TRANSPORTING, HANDLING, PLACING AND INSTALLING NEW TIMBER CONNECTORS WHICH ARE USED TO CONNECT NEW LUMBER AND TIMBER MEMBERS WITH NEW AND EXISTING LUMBER AND TIMBER MEMBERS.

- TC-2. EXCEPT AS SPECIFIED IN THE STRUCTURAL STEEL NOTES, DETAILING, FURNISHING, TRANSPORTING, HANDLING, AND INSTALLING NEW AND REUSED TIMBER CONNECTORS WHICH ARE USED TO CONNECT EXISTING LUMBER AND TIMBER MEMBERS WILL BE INCLUDED UNDER PAY ITEM 900.645 SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).

WOOD

- W-1. ALL WOOD CONSTRUCTION SHALL COMPLY WITH THE LATEST AASHTO SPECIFICATIONS, THE NATIONAL DESIGN SPECIFICATION (NDS) AND SUPPLEMENT FOR WOOD CONSTRUCTION, AND THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) SPECIFICATION, 6TH EDITION.
- W-2. THE MAXIMUM IN PLACE MOISTURE CONTENT OF THE WOOD USED SHALL BE AS FOLLOWS:
- | | |
|-------------------------------|-----|
| MEMBERS LESS THAN 5" THICK | 16% |
| MEMBERS GREATER THAN 5" THICK | 19% |
| TRUNNELS | 10% |
- ALL HARDWOOD 2.5" AND THICKER AND BLACK LOCUST MAY BE GREEN
- W-3. ALL NEW WOOD TRUNNELS SHALL BE MADE OF WHITE OAK. TRUNNELS SHALL BE DRIVEN IN A MANNER WHICH AVOIDS SPLITTING THE TRUNNELS OR THE MEMBER CONNECTED BY THEM. HOLES SHALL BE SIZED 1/16" IN DIAMETER SMALLER THAN THE TRUNNEL TO PROVIDE A FRICTION FIT. TRUNNELS SHALL BE DIPPED IN BOILED LINSEED OIL, MINERAL OIL OR AN APPROVED WAX PRIOR TO DRIVING. ALL NEW OR EXISTING WOOD TRUNNELS IN SOUND CONDITION THAT ARE TO BE RE-USED WITH PERMISSION OF THE RESIDENT ENGINEER FOR CONNECTING NEW OR REPLACED MEMBERS ARE CONSIDERED INCIDENTAL TO ITEM 522.20, STRUCTURAL LUMBER AND TIMBER, UNTREATED.
- W-4. THE REPAIR OF APPROXIMATELY 99 SPLITS AND CHECKS IN EXISTING LATTICE AND 13 REPAIRS IN CHORD MEMBERS OF THE NORTH AND SOUTH TRUSSES SHALL BE MADE WITH AN APPROVED WOOD EPOXY TO ACHIEVE FULL STRENGTH OF THE REPAIRED MEMBER (PAY ITEM 900.620, SPECIAL PROVISION (WOOD EPOXY REPAIRS)). AN ADDITIONAL 13 ROTTED MEMBER REPAIRS (AS SHOWN ON "EPOXY REPAIR DETAIL" ON SHEET 45) ARE INCLUDED FOR BIDDING PURPOSES. SEE THE RECOMMENDED REPAIR SEQUENCE NOTES ON SHEET 42 AND SHEET 45 FOR MORE DETAILS AND INFORMATION.
- W-5. EACH PIECE OF NEW LUMBER AND TIMBER SHALL BE GRADED, BY A RECOGNIZED LUMBER GRADING AGENCY. INDIVIDUAL PIECES SHALL BE STAMPED WITH A GRADE STAMP AT THE END GRAIN OF THE MEMBERS. MATERIAL CERTIFICATIONS SHALL BE SUBMITTED FOR ALL WOOD (EXCEPT BLACK LOCUST) IN ACCORDANCE WITH SECTION 709.
- W-6. THE QUANTITY OF ITEM 522.30, NONSTRUCTURAL LUMBER, UNTREATED ASSUMES REPLACEMENT OF ALL UPSTREAM AND DOWNSTREAM SIDING AND 20% OF EXISTING ROOF BOARDS. THE CONTRACTOR AND RESIDENT ENGINEER SHALL JOINTLY INSPECT ALL ROOF BOARDS AFTER THE REMOVAL OF THE EXISTING METAL ROOF TO IDENTIFY ADDITIONAL MEMBERS TO BE REPLACED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LUMBER DIMENSIONS AND SIZES REQUIRED FOR CONSTRUCTION.
- W-7. THE QUANTITY OF ITEM 522.20, STRUCTURAL LUMBER AND TIMBER, UNTREATED ASSUMES REPLACEMENT OF 10 ADDITIONAL ROOF RAFTERS (5 FOR THE KING POST SPAN AND 5 FOR THE TOWN LATTICE SPAN), 5 KING POST STRINGERS, 5 TOWN LATTICE FLOOR BEAMS, 5 ADDITIONAL LATTICE MEMBERS AND 200 LF OF ADDITIONAL TOWN LATTICE CHORD (70 LF FOR CHORD 1 AND 130 LF FOR CHORDS 3 AND 4) FOR BIDDING PURPOSES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL LUMBER DIMENSIONS AND SIZES REQUIRED FOR CONSTRUCTION.
- W-8. ITEM 900.645, SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE) SHALL INCLUDE ALL COSTS ASSOCIATED WITH RE-INSTALLING STOCKPILED COMPONENTS (FROM ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE) ON THE SUPERSTRUCTURE; ALTERATIONS TO IN-PLACE MEMBERS REQUIRED FOR RE-USE/REHABILITATION OF THE SUPERSTRUCTURE; TEMPORARY BRACING AND BLOCKING; ALL LABOR, MATERIALS AND SUBMITTALS REQUIRED FOR THE REHABILITATION WORK (EXCEPT AS SPECIFIED BY OTHER CONTRACT ITEMS); STRAIGHTENING, PLUMBING, AND REALIGNING THE TRUSSES; CAMBER RESTORATION; AND FURNISHING, AND INSTALLING NEW TRUNNELS AND THROUGH BOLTS WHERE NONE EXIST OR AS IDENTIFIED IN THE PLANS, AND PLUGGING BOLT HOLES IN CHORD MEMBERS AS IDENTIFIED IN THE PLANS AND AS DIRECTED BY THE ENGINEER.
- W-9. ALL NUTS, BOLTS, WASHERS, AND SCREWS SHALL CONFORM TO ASTM A307, ALL NAILS AND SPIKES SHALL CONFORM TO ASTM F1667 AND BE DOUBLE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232. STAINLESS STEEL NAILS ARE REQUIRED FOR THE SIDING.
- W-10. ALL STRUCTURAL LUMBER AND TIMBER NOT SHOWN ON THE WOOD MATERIALS LIST TABLE ON SHEET 11 SHALL BE DOUGLAS FIR NO.1 OR BETTER. LIKEWISE, ALL HARDWOOD SHALL BE WHITE OAK NO.1 OR BETTER OR BLACK LOCUST WHERE THE SPECIES IS NOT NOTED.
- W-11. ALL FIELD CUTS AND BORINGS OF TREATED WOOD SHALL BE TREATED WITH TWO COATS OF COPPER NAPHTHENATE LIBERALLY APPLIED PER SECTION 522.
- W-12. EXISTING TRUSS, ROOF RAFTER, KNEE BRACING, CROSS BEAMS, UPPER LATERAL BRACING, AND LOWER LATERAL BRACING JOINTS SHALL BE REPLICATED ON ALL STRUCTURE MEMBERS TO BE REPLACED UNLESS NOTED OTHERWISE IN THE CONTRACT DRAWINGS.

- W-13. ALL LAG BOLTS AND NUTS FOR THROUGH BOLTS SHALL BE TIGHTENED SNUGLY BUT NOT SO TIGHTLY AS TO CAUSE CRUSHING OF THE WOOD UNDER THE WASHER OR PLATE.
- W-14. DIMENSIONS OF ALL LUMBER AND TIMBER MEMBERS SHOWN IN THESE PLANS ARE THE ACTUAL SIZES AFTER SEASONING UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.
- W-15. ALL WOOD MEMBERS WITHIN 5 FT OF THE WINDOW OPENINGS SHALL BE COATED WITH TWO COATS OF THOMPSON WATERSEAL ADVANCED WOOD PROTECTOR BY THOMPSON'S COMPANY OR WOLMAN RAINCOAT CLEAR WATER REPELLENT BY RUSTOLEUM OR WATER REPELLENT CLEAR SEALER BY RECOCHEN INC. OR APPROVED EQUAL. PRIOR TO THE APPLICATION, ALL WOOD SURFACE SHALL BE FREE OF DIRT, MILDEW AND CONTAMINANTS. A TRIAL TEST SHALL BE DONE PRIOR TO APPLICATION FOR APPROVAL BY THE RESIDENT ENGINEER. ALL COST IS CONSIDERED SUBSIDIARY TO ITEM 900.645 SPECIAL PROVISION (REHABILITATING COVERED BRIDGE SUPERSTRUCTURE).
- W-16. PRESERVATIVE TREATMENT FOR ITEM 522.25, STRUCTURAL LUMBER AND TIMBER, TREATED SHALL COMPLY WITH SUBSECTION 726.01 FOR TYPE III PENTACHLOROPHENOL TYPE C.

STRUCTURAL STEEL

- S-1. EXCEPT AS NOTED OTHERWISE IN THE CONTRACT PLANS, ITEM 506.75, STRUCTURAL STEEL SHALL INCLUDE THE FOLLOWING:
- 4 KING POST ARCH HANGER RODS (ESTIMATED).
 - CARRIAGE BOLTS INCLUDING OGEE WASHERS AND HEAVY SQUARE NUTS FOR KING POST AND TOWN LATTICE SPAN UPPER LATERAL BRACING AND KING POST AND TOWN LATTICE SPAN LOWER LATERAL BRACING.
 - KING POST SPAN RODS AT TRUSS CONNECTION TO BOTTOM CHORD.
 - KING POST BOLTS AT BOTTOM CHORD SPLICES AT ALL NEW AND EXISTING SPLICES.
 - TOWN LATTICE SPAN LOWER LATERAL BRACING TIE RODS.
 - TIE PLATES FOR THE KING POST SPAN INTERMEDIATE CROSS BEAMS.
 - TOWN LATTICE AND KING POST KNEE BRACE CONNECTION HARDWARE.
 - KING POST RAFTER SUPPORT BEAM BEARING DETAIL THREADED RODS.
 - ANGLES AND BOLTS AT ABUTMENT NO. 1 POSTS.
- FABRICATION DRAWINGS AND ERECTION PLAN SUBMITTALS ARE NOT REQUIRED FOR ITEM 506.75, STRUCTURAL STEEL.
- S-2. ALL NEW STRUCTURAL STEEL SHOWN IN THE PLANS INCLUDING PLATES, BOLTS, LAG BOLTS, TURNBUCKLES, NUTS, WASHERS, RODS, ANGLES AND MISCELLANEOUS STEEL, SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M 232M/M 232 EXCEPT FOR PLATES WHICH SHALL BE GALVANIZED PER AASHTO M 111M/ M 111. ALL STEEL PLATES AND RODS SHALL BE ASTM A36.
- S-3. EXPOSED ENDS OF ALL NEW STRUCTURAL STEEL AND HARDWARE SHALL BE COATED WITH 2 COATS OF A-H COAL TAR EPOXY 210 BY ANTI-HYDRO COMPANY, BITUMASTIC 300-M BY CARBOLINE, RUST-OLEUM C957 SYSTEM COAL TAR EPOXY OR OTHER EQUIVALENT APPROVED EQUAL COAL TAR EPOXY. ALL COST FOR THIS WORK IS CONSIDERED INCIDENTAL TO ITEM 506.75, STRUCTURAL STEEL.

TRAFFIC CONTROL

- T-1. THE SOUTHBOUND LANE OF VT ROUTE 30 MAY BE TEMPORARILY CLOSED TO PROVIDE ADDITIONAL WORK AREA FOR THE CONTRACTOR AS REQUIRED. THE CONTRACTOR SHALL PROVIDE THE ENGINEER 48 HOURS ADVANCE NOTICE OF ANY TEMPORARY LANE CLOSURES. THE CONTRACTOR SHALL MAINTAIN ONE WAY ALTERNATING TRAFFIC THROUGH THE USE OF UNIFORMED TRAFFIC OFFICERS DURING THE NECESSARY WORK PERIOD (I.E. PAVEMENT OPERATIONS) AND RESTORE TWO LANES, TWO WAYS OF TRAFFIC AT ALL TIMES WHEN NO WORK IS BEING CONDUCTED.
- T-2. CONSTRUCTION APPROACH SIGNING SHALL BE PER STANDARD T-10 AS SHOWN ON THE "TYPICAL APPROACH SIGNING" PLAN.
- T-3. TRAFFIC SHALL BE CONTROLLED BY UNIFORMED OFFICERS DURING THE TEMPORARY LANE CLOSURE PER STANDARD E-119 AS SHOWN FOR THE "TWO LANE ROAD REQUIRING LANE CLOSURE (TA-10)" PLAN. ONLY W20-7a SHALL BE USED ON THIS STANDARD. ALL OTHER SIGNS SHALL BE AS NOTED IN NOTE T-2. A TRUCK MOUNTED ATTENUATOR IS NOT REQUIRED. IN ADDITION TO W20-7a SIGNS PROVIDE DRUMS CHANNELIZING DEVICES AS INDICATED IN THIS STANDARD.
- T-4. ALL COST FOR PROVIDING, INSTALLING, MAINTAINING AND REMOVING ALL TRAFFIC CONTROL DEVICES AS INDICATED ABOVE SHALL BE PAID UNDER ITEM 641.10, TRAFFIC CONTROL.

Hoyle, Tanner & Associates, Inc.

HTA PROJECT	MODEL
904225	904225No+esi

PROJECT NAME: TOWNSHEND

PROJECT NUMBER: STP SCTT(I)

FILE NAME: 904225No+esi.dgn

PROJECT LEADER: M.D.SARGENT

DESIGNED BY: J.C.RIPLEY

PROJECT NOTES (1 OF 2)

PLOT DATE: 8/13/2015

DRAWN BY: T.A.GELINAS

CHECKED BY: S.T.JAMES

SHEET 7 OF 60