

SCOPE OF WORK

MISCELLANEOUS BRIDGE REHABILITATION PROGRAM

FOR THE

Coos Bay Rail Link

Prepared By



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CEPC Project No. 11023

1.0 Scope of Work

1.1.1 Intent of the Project Documents, Specifications

It is the intent of the Project Documents and Specifications herein to describe the complete work to be performed under the contract. Except as otherwise provided, the Contractor will furnish all materials, supplies, tools, equipment, labor, and supervision necessary for the proper execution and completion of the work. Only the materials furnished by the Contractor will be reimbursed. The Contractor is expected to furnish all parts, materials, labor, fasteners, tools, and supervision related to items incidental to construction, whether listed in the scope of Work or not.

1.1.2 Punch List and Contract Close-out: The Railroad Representative will conduct a final walk-through at the end of the project with the Contractor, and will develop a punch list of items to be completed or repaired. The Contractor will guarantee its workmanship and materials furnished for a period of one year from the date of final project acceptance. The Contractor will repair any damage or defective work caused by the Contractor or its suppliers or subcontractors relating to bridge materials, track materials, slopes, ditches, erosion control, rip rap, stands of grass, etc. as needed within the warranty period.

1.1.3 The Contractor is responsible for the payment of all state and local sales taxes. The Contractor may either have vendors include the cost of sales taxes in their cost to purchase materials, or the Contractor may pay sales taxes on materials purchased and installed directly to the Oregon Department of Revenue. The Contractor will be responsible for including the cost of sales taxes in the bid prices. The Railroad will not make separate reimbursements for sales taxes unless there is a separate bid item for sales taxes.

1.1.4 Released Materials: All released bridge materials and timber crossties will become the property of the Contractor, and will be removed from the right-of-way, and disposed of in a proper and legal manner, off of the railroad right-of-way, within the time limits of the project.

The project will not be considered 100% complete until all released materials have been removed from the right-of-way.

1.1.5 Final clean up

Upon completion of the project, and before acceptance and final payment is made, the Contractor will clean the right-of-way, and all ground occupied by the Contractor in connection with the work of all rubbish, debris, materials, and equipment. All work areas will be left in a neat and presentable condition. If areas of the right-of-way are disturbed by the Contractor, the Contractor will restore said areas to proper grade, including ditch lines, and will seed and mulch the areas to provide a permanent stand of grass. The project will not be considered 100% complete until final clean up is performed.

1.1.6 The Contractor will furnish the following materials or perform the following work, quantity as per Bid Sheet:

GENERAL

- Furnish the Railroad Representative with a construction schedule in Gantt Chart format, or CPM format, and list of equipment to be used on the project. Provide the Railroad Representative with the contact information for the Contractor's Superintendent or Foreman;
- The Scope of Work is listed by bridge location on the Bid Sheet, and is further defined herein, as follows, and will be adjusted on the final cost schedule (which will be set based on the bid prices and available funds). Any changes in the Scope of Work, quantities, work locations, or other aspects of the project must be approved by the Railroad Representative before making changes. Change orders must be approved by the Railroad Representative;
- Furnish a working cell phone, and have the foreman or superintendent on site keep the working cell phone on hand at all times for communication with the Railroad, satisfying the Railroad's requirements for communication between the Railroad and Contractor;
- Maintain a daily log of weather conditions, equipment in use, working limits, material installed and other relevant data and submit daily log forms, stone tickets, seeding supply tickets, and other delivery forms to the Railroad Representative on a weekly basis;
- Complete safety training and/or safety orientation required by the Railroad; conform to the Railroad safety rules; and conform to FRA bridge and track worker safety regulations;
- Provide access to the work site;
- Perform all construction staking and layout work required for the project;
- The Contractor is responsible for purchasing, transporting, unloading, and distributing all material required for completion of the project, cutting the material to the proper length, treating timber cuts, protecting it from damage, and proper installation with all fasteners provided by the Contractor. The Contractor is responsible for any damage to furnished material, and will replace any material damaged in the process of sorting, cutting, loading or unloading, transporting, or installation;
- The Contractor will verify the dimensions of replacement members prior to ordering and installing materials. Timber materials may not be cut to size in the field;
- Where the bents are being rebuilt or posts replaced, track surface and line will be restored to uniform surface and line, and the bents will be realigned and plumbed as much as possible using the means and methods determined by the Contractor. It is recommended that this may be accomplished by disconnecting the existing bracing, jacking the bent into the best possible alignment and re-bracing the bent with new bolts. Reuse the existing bracing to the greatest extent possible;

- All connections will be as per plan details or as per Chapter 7 of the AREMA Manual for Railway Engineering. All connections are subject to approval by the Railroad Representative. Reuse existing connections for timber bracing if the existing connectors are in good condition. Otherwise, the Contractor will furnish and install new connectors for existing bracing;
- Clean the project site of all existing and project related debris, released materials and rubbish, and perform grading, dressing, and seeding with mulch to provide a permanent stand of grass on all disturbed areas;
- Maintain close contact with the Railroad Representative, and Railroad as necessary, regarding work to be performed each day, working limits, safety briefings, and permission for track time;
- Keep in contact with the Railroad Representative on a weekly basis regarding schedule and work in progress;
- Work in such a manner to protect the existing tracks, roadbed, bridges, culverts, streets, driveways, right-of-way, and private property, and other structures and appurtenances from any type of damage during the construction or demolition process, and repair any damage resulting from the Contractor's actions or inactions at the Contractor's expense.

Specific Tasks Include, but are not Limited to:

The Contractor is responsible for measuring, checking, and verifying all dimensions prior to ordering, cutting or installing any materials for this project. Notify the Railroad Representative immediately of any discrepancies.

MP 661.28

- Bent 2: Furnish and Install 1 @ 10', minimum 12" diameter, treated timber post to replace pile 2. Reuse the existing timber bracing.
- Bent 3: Furnish and Install 1 @ 10', minimum 12" diameter, treated timber post to replace pile 2. Reuse the existing timber bracing.
- Bent 4: Furnish and Install 2 @ 10', minimum 12" diameter, treated timber posts to replace piles 2 & 5. Reuse the existing timber bracing.
- Furnish and install new, treated timber 12" x 10" x 10'-0" deck ties to replace existing poor deck ties on the through plate girder span. Contractor will use all new fasteners for installing deck ties.

MP 664.62

- Bent 7: Furnish and Install 2 @ 10', minimum 12" diameter, treated timber posts to replace piles 2 & 3. Reuse the existing timber bracing.
- Bent 14: Furnish and Install 2" treated timber shim at top of pile 3.

MP 665.49

- Furnish and install 6" x 8" x 30'-0" treated timber bracing, to replace poor longitudinal girts. Contractor will use all new fasteners.

MP 667.28

- Furnish and install 6" x 8" x 20'-0" treated timber bracing, to replace poor cross bracing on Bents 2 thru 5. Contractor will use all new fasteners.
- Furnish and install 4" x 8" x 20'-0" treated timber bracing, to replace poor sash bracing on Bents 2 thru 5. Contractor will use all new fasteners.

MP 667.40

- Contractor shall replace the existing corroded top laterals and gusset plates in spans 1 thru 4 with minimum new 3/8" thick steel, min. A36, painted. Minimum 7/8" diam. A325 bolts with lock washers, flat washers, and nuts (taps) will be installed and fully tensioned using a calibrated wrench. All areas where new steel will be installed against old steel shall be treated with a rust inhibitor prior to installing new material. Contractor shall match at a minimum the existing plate and lateral sizes.

MP 668.50

- Furnish and install new, treated timber 16" x 10" x 10'-0" deck ties to replace existing poor deck ties on the steel deck plate girder spans. Contractor will use all new fasteners for installing deck ties.
- Furnish and install new, treated timber 7½" x 8" x 9'-0" deck ties to replace existing poor deck ties on the timber trestle approach spans. Contractor will use all new fasteners for installing deck ties.
- Furnish and install new, 4" x 8" x 16'-0" treated guard timber to replace existing poor guard timber on the timber trestle approach spans. Contractor will use all new fasteners for installing guard timber.

MP 674.03

- Furnish and install new, treated timber 7½" x 8" x 9'-0" deck ties to replace existing poor deck ties on west end of bridge. Contractor will use all new fasteners for installing deck ties.
- Furnish and install new, 4" x 8" x 16'-0" treated guard timber to replace existing poor guard timber. Contractor will use all new fasteners for installing guard timber.

MP 678.43

- The Contractor will furnish and install 11 treated timber stringers, 8" x 17 ¾" x 30'-0", with new fasteners to replace all existing poor timber stringers.

MP 687.03

- The Contractor will furnish and install 5 treated timber stringers, 8" x 17 ½" x 28'-0", with new fasteners to replace existing stringers 1 & 8 in spans 1 thru 5.
- Bent 1: Furnish and Install 2 @ 8', minimum 12" diameter, treated timber post to replace piles 3 & 5. Reuse the existing timber bracing.

MP 690.85

- Furnish and install new, treated timber 11 ½" x 10 ½" x 10'-0" deck ties to replace existing poor deck ties on the through plate girder spans. Contractor will use all new fasteners for installing deck ties.
- Furnish and install new, treated timber 11" x 9 ½" x 10'-0" deck ties to replace existing poor deck ties on the thru truss span. Contractor will use all new fasteners for installing deck ties.
- Furnish and install new, 4" x 8" x 16'-0" treated guard timber to replace existing poor guard timber. Contractor will use all new fasteners for installing guard timber.

MP 691.05

- The Contractor will furnish and install 2 treated timber stringers, 8" x 17 ½" x 30'-0", with new fasteners to replace existing stringers 6 & 8 in span 3.

MP 694.32

- Contractor shall replace all existing corroded and broken stringer lateral braces, floor beam braces and gusset plates in the existing steel truss span with minimum new 3/8" thick steel, min. A36, painted. Minimum 7/8" diam. A325 bolts with lock washers, flat washers, and nuts (taps) will be installed and fully tensioned using a calibrated wrench. All areas where new steel will be installed against old steel shall be treated with a rust inhibitor prior to installing new material. Contractor shall match at a minimum the existing bracing and plate sizes.
- Contractor will replace missing steel shoes at floor beam #3 on the truss span that hold I-beam over panel 3 laterally in place on the low chord pin. At a minimum, the existing material size should be matched.

MP 694.78

- The Contractor shall reset rocker bearings at east end abutment of first deck plate girder.

MP 696.66

- Furnish and install new, treated timber 11 ½" x 10 ½" x 10'-0" deck ties to replace existing poor deck ties on the truss span. Contractor will use all new fasteners for installing deck ties.

MP 710.20

- Bent 2: Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 14'-0", new treated timber sill 14" x 14" x 18'-0" and new treated timber bracing with all new fasteners.
- Bent 8: Furnish and Install 2 @ 5', minimum 14" square, treated timber post to replace posts 2 & 3. Reuse the existing timber bracing.

MP 711.67

- Bent 1: Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 6'-0", new treated timber sill 14" x 14" x 16'-0" and new treated timber bracing with all new fasteners.

MP 716.40

- Bent 12: Furnish and Install 2 @ 20', minimum 14" square, treated timber post to replace posts 1 & 3. Reuse the existing timber bracing.
- Bent 13: Furnish and Install 2 @ 20', minimum 14" square, treated timber post to replace posts 2 & 3. Reuse the existing timber bracing.
- Bent 15: Furnish and Install 2 @ 20', minimum 14" square, treated timber post to replace posts 3 & 5. Reuse the existing timber bracing.
- Bent 28: Furnish and Install 2 @ 20', minimum 14" square, treated timber post to replace posts 1 & 5. Reuse the existing timber bracing.
- Bent 116: Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 20'-0", new treated timber sill 14" x 14" x 20'-0" and new treated timber bracing with all new fasteners.
- Bent 139: Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 20'-0", new treated timber sill 14" x 14" x 20'-0" and new treated timber bracing with all new fasteners.

MP 719.21

- The Contractor will furnish and install 3 treated timber stringers, 8" x 17 ½" x 30'-0", with new fasteners to replace existing stringers 5, 7 & 8 in span 14.
- Furnish and install new, treated timber 7½" x 7½" x 9'-0" deck ties to replace existing poor deck ties. Contractor will use all new fasteners for installing deck ties.

MP 726.31

- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 3, 4, 5 & 6 in spans 20 & 21.
- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 5 & 8 in spans 28 & 29.
- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 5 & 7 in span 30.
- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 5 & 7 in span 51.
- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 3 & 5 in span 53.
- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 5, 6 & 7 in span 54.

- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 4, 6 & 8 in span 55.
- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 6 & 8 in span 56.
- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 6 & 7 in span 57.
- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 1 & 3 in span 60.

MP 729.04

- The Contractor will furnish and install treated timber stringers, 8" x 17" x 30'-0", with new fasteners to replace existing stringers 1, 2, 4, 8 & 10 in span 20.

MP 736.51

- Bent 1 - The Contractor will furnish and install 12 "x 14" x 12'-0", new treated timber caps with all new fasteners to replace existing timber cap.

MP 739.43

- Bent 5: Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 15'-0", new treated timber sill 14" x 14" x 18'-0" and new treated timber bracing with all new fasteners.

MP 739.63

- Furnish and install new, treated timber 7½" x 10½" x 10'-0" deck ties to replace existing poor deck ties in west approach. Contractor will use all new fasteners for installing deck ties.
- Bent 3 (West Approach): Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 14'-0", new treated timber sill 14" x 14" x 18'-0" and new treated timber bracing with all new fasteners.
- Bent 1 (East Approach): Furnish and Install 2 @ 6', minimum 14" square, treated timber post to replace posts 2 & 5. Reuse the existing timber bracing.

MP 741.36

- Bent 5: Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 5'-0", new treated timber sill 14" x 14" x 16'-0" and new treated timber bracing with all new fasteners.

MP 741.74

- Furnish and install new, treated timber 7 ½" x 10" x 10'-0" deck ties to replace all the existing deck ties on the bridge. Contractor will use all new fasteners for installing deck ties.
- Furnish and install new, 4" x 8" x 22'-0" treated guard timber to replace existing guard timber. Contractor will use all new fasteners for installing guard timber.
- Bent 1: Furnish and Install 2 @ 6', minimum 14" square, treated timber post to replace posts 3 & 4. Reuse the existing timber bracing.

MP 742.72

- Furnish and install new, treated timber 7 ¾" x 7 ½" x 9'-0" deck ties to replace poor deck ties under joint at Bent 9. Contractor will use all new fasteners for installing deck ties.

MP 743.86

- The Contractor will furnish and install 1 treated timber stringer, 8" x 18" x 30'-0", with new fasteners to replace existing stringer 6 in span 5.
- Bent 1: Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 5'-0", new treated timber sill 14" x 14" x 18'-0" and new treated timber bracing with all new fasteners.
- Bent 2: Furnish and Install 2 @ 10', minimum 14" square, treated timber post to replace posts 1 & 3. Reuse the existing timber bracing.

MP 743.97

- Bent 1: Contractor shall frame out bent with 5 all new treated timber posts 14" x 14" x 5'-0", new treated timber sill 14" x 14" x 18'-0" and new treated timber bracing with all new fasteners.
- Bent 2: Furnish and Install 2 @ 10', minimum 14" square, treated timber post to replace posts 1 & 5. Reuse the existing timber bracing.

MP 751.02

- The Contractor will furnish and install treated timber stringers, 8" x 17 ½" x 30'-0", with new fasteners to replace existing stringers 2, 5, 7 & 8 in span 1.
- The Contractor will furnish and install treated timber stringers, 8" x 17 ½" x 30'-0", with new fasteners to replace existing stringers 2, 4, 5, 6 & 7 in span 4.
- The Contractor will furnish and install treated timber stringers, 8" x 17 ½" x 30'-0", with new fasteners to replace existing stringers 1, 3, 4, 5, 6 & 8 in span 19.

MP 763.55

- Bent 28 - The Contractor will furnish and install 14"x 14" x 16'-0", new treated timber cap with all new fasteners to replace existing timber cap.
- Bent 29 - The Contractor will furnish and install 14 "x 14" x 16'-0", new treated timber caps with all new fasteners to replace existing timber cap.
- Bent 29: Furnish and Install 2 @ 12', minimum 14" square, treated timber post to replace posts 2 & 3. Reuse the existing timber bracing.

1.2 Control of Work

1.2.1 The work will be done in accordance with the Project Documents, including, but not limited to the Scope of Work, Specifications, special provisions, final cost schedule, and addenda as approved by the Railroad Representative. The Railroad Representative will decide all questions that may arise as to the quality or acceptability of materials furnished and work performed; the interpretation of the Project Documents, Specifications, special provisions and addenda; and the acceptable fulfillment of the contract on the part of the Contractor.

1.2.2 Cooperation of Contractor

The Contractor will give the work his constant attention to facilitate the progress thereof and will cooperate with the Railroad Representative in every possible way. The Contractor will, at all times, have a competent superintendent on the project site who is authorized to receive orders and act for the Contractor, regardless of how much of the work is subcontracted.

1.2.3 Construction Staking

The Contractor is responsible for all measuring, layout work, and construction staking required for the completion of the project, including flagging the existing right-of-way, setting slope stakes for grading, setting offset stakes, reestablishing survey control points, staking centerline and grades for culverts, roads, and roadbeds, and any other staking that may be necessary. No construction staking will be provided by the Railroad or Engineer.

1.2.4 Site Visits by the Railroad Representative

The Railroad Representative will make periodic site visits to ascertain the progress of work, and to review work completed in connection with the approval of Contractor invoices. The Contractor will furnish the Railroad Representative with every reasonable facility for ascertaining whether or not the work as performed is in accordance with the requirements and intent of the contract.

1.3 Control of Materials Furnished by Contractor

The Contractor is responsible for the safety, security, and protection of all materials to be furnished and used in the project. The Contractor will not be paid for any stolen or damaged materials, excess materials, or materials delivered to the project site but not installed as a part of the project. The Contractor is responsible for the safety, security and protection of all materials released to the Contractor as a part of this project.

1.4 Materials Furnished by Others

The Railroad will not furnish any materials or equipment for this project.

1.5 Contractor's Responsibilities

1.5.1 General Conditions

1.5.1.1 Specifications apply to all work performed by the Contractor for the Coos Bay Rail Link.

1.5.1.2 Periodic site visits and final acceptance of the work will be made by the Railroad Representative.

1.5.1.3 The Contractor will be required to maintain a complete set of Project Documents, including the Scope of Work and Specifications on site at all times.

1.5.1.4 The project will not be considered complete until all excess materials, released materials, and rubbish have been removed from the site. During the course of the project, the Contractor will, on a daily basis, maintain the project site free from litter.

1.5.1.5 Care must be taken not to encroach upon adjacent property owners. It is the responsibility of the Contractor to insure that its personnel do not park vehicles or equipment, perform work, or store materials off of the right-of-way without written permission from adjacent landowners. A copy of said written permission must be provided to the Railroad Representative prior to the start of work off of the right-of-way.

1.5.1.6 Once the Contractor moves in to work, the Contractor must maintain sufficient supervision, labor, tools, materials and equipment on site to complete the project and will fully complete the project.

1.5.2 Special Requirements

1.5.2.1 The operations performed under this contract will be conducted in such a manner and sequence as to cause the least practical interference with the traveling public, fire protection, or other private or public services. It is the Contractor's responsibility to maintain traffic on public and private roads and grade crossings.

1.5.2.2 The Contractor is responsible for checking plan quantities prior to bidding and will notify the Railroad Representative of any discrepancies immediately. The Contractor is responsible for regulating the amount of materials placed, and will immediately notify the Railroad Representative of any discrepancies in Plan quantities. No quantities will be changed by the Contractor without written approval in the form of a change order, approved by the Railroad Representative.

1.5.2.3 The Contractor will maintain a daily log of the work performed, the working limits, the materials installed, the labor and equipment on site and whether the equipment is in use or not, the type of work being performed, and the weather conditions. The log form must be signed by the Contractor's representative that day.

The daily log form to be used is attached. The daily logs will be completed by the Contractor daily and must be submitted to the Engineer on a weekly basis.

1.5.2.4 The Contractor is required to telephone the Railroad Representative on a weekly basis during the course of the contract to report the week's Planned activities, whether work is scheduled or not.

1.5.2.5 The Contractor will conform to all insurance requirements including Railroad Protective Insurance for bodily injury and property damage, two million dollars per occurrence and six million dollars aggregate as per the Specifications herein. If the Contractor has general liability insurance that does not exclude work on or near railroads or railroad property, then the Railroad Protective Insurance requirement will be waived.

1.5.2.6 The Contractor is responsible for train delays caused by the Contractor's work. If the Contractor does not clear trains at the time set by the Railroad in its permission to the Contractor for track time, then the Contractor is subject to penalty equal to the resulting cost of train crew labor, additives and overtime, locomotive operating expenses, per diem and car hire expenses, and other reasonable cost incurred by the Railroad as a result of the Contractor's delay whether caused by any action or inaction by the Contractor.

1.5.2.7 The Contractor will retain all released bridge and crosstie material from this project. Consumer Information Sheets have been provided herein for the released treated timber materials. If the Contractor sells any released treated timber materials to a third party, then the Contractor must provide a copy of the Bill of Sale to the Railroad Representative, and must also provide a copy of the Consumer Information Sheets to the third party.

The value of any released materials, and any cost relating to the removal of or disposal of released materials off of the right-of-way, are to be included in the cost of other items.

1.5.3 Environmental Compliance and Responsibilities

1.5.3.1 The Contractor will comply with all permit requirements, regulations and guidelines of the U.S. Environmental Protection Agency and the State of Oregon.

1.5.3.2 The Scope of Work does not call for or require any alterations to aquatic resources or waters of the State. It is not intended that the Contractor occupy the channel of any stream with any equipment.

1.5.3.3 If the Contractor intends to make any alterations to a blueline stream (waters of the State) or have any equipment in any stream, it will be the responsibility of the Contractor to comply with all State and Federal rules and regulations, and to attain any necessary permits for the Contractor's work.

1.5.3.4 There will be no excavation within the limits of stream channels on this project.

1.5.3.5 Erosion control measures are required for this project, to conform to the Specifications. If a permit is required for the Contractor's work, it will be the

responsibility of the Contractor to apply for and obtain the permit, and the Contractor will be responsible for complying with all permit requirements.

1.5.3.6 The Contractor will not change the oil on any piece of machinery, or perform other similar maintenance work on its machinery on railroad right-of-way.

1.5.3.7 No trash, litter, rubbish, waste oil, filters, or machine parts will be disposed of on railroad right-of-way.

1.5.3.8 All released materials and debris will be removed from the site and legally and properly disposed of off of the railroad right-of-way.

1.5.3.9 The Contractor will not burn any material without proper permit from the local Authority.

1.5.3.10 All demolition materials must be removed from the project site and disposed of off of the railroad right-of-way.

1.5.3.11 All treated timber materials that are released from this project will be reused for some other purpose, sold for material to be reused, or disposed of in a proper and legal manner. If materials are sold, the Contractor will immediately furnish a copy of the bill of sale to the Railroad Representative and Authority, and will furnish a copy of the Consumer Information Sheets for treated timber materials to the buyer.

1.5.3.12 The Contractor will not allow any released materials to float or drift downstream, and shall immediately retrieve any materials moving downstream.

1.5.4 Safety

1.5.4.1 Trains will not be cleared by the Contractor to cross tracks unless the Contractor's foreman has deemed the track is safe.

1.5.4.2 Where track has been disturbed by surfacing or tie renewal, trains should not exceed 10 mph until sufficient tonnage has crossed the area to stabilize the track.

1.5.4.3 The Contractor will maintain close contact with the Railroad Office and on a daily basis, will report to the Railroad as to the activities planned for that day. Permission for all track time must be obtained from the Railroad. Daily contact with the Railroad will be maintained whether the Contractor is working or not.

1.5.4.4 The Contractor will be solely responsible for daily supervision and worker and site safety, and will obey all safety and operating rules, and regulations of the Railroad.

1.5.4.5 The Contractor will hold harmless the Railroad for any liability and/or damages resulting from the Contractor's action or inaction or negligence.

1.5.4.6 The Contractor will conform to all OSHA, Federal Railroad Administration (FRA), and Railroad Rules where applicable. When performing work on bridges, the Contractor must conform to the most recent FRA regulations for bridge worker safety. At a minimum, hard hats will be worn when danger of falling materials is possible, and safety glasses will be used in all repair work where metal to metal contact can occur. It is the responsibility of the Contractor to check the condition of all equipment, and be familiar with and enforce all FRA safety regulations.

1.5.4.7 Faulty equipment must not be placed in service. Any fall protection gear in use during a fall must be disposed of and may not be reused.

1.5.4.8 The Contractor will be responsible for reimbursing the Railroad for any fines levied against the Railroad due to violation of regulations committed by the Contractor or through negligence of the Contractor.

1.5.4.9 The existing bridge structures may not be used in any way to brace, shore, or support any new construction.

1.5.4.10 The cost of providing safety equipment and conforming to all rules and regulations herein will be included in the cost of other items.

1.5.4.11 The track will not be occupied or fouled without permission from the Railroad.

1.5.4.12 The Contractor will obtain a copy of the Railroad's Safety Manual or whatever means they use for posting and enforcing preferred safety rules and must abide by these rules while performing work under this contract. The Contractor must be aware that these rules may change from Railroad to Railroad and may be additional to FRA or other governing agency rules.

1.6 Contract Closeout

The following items must be completed in order to close the contract:

1. The Contractor must complete all work outlined in the Scope of Work and Specifications, and as provided for in the contract and final cost schedule, including approved change orders.
2. The Contractor must remove all released bridge materials, released crossties and deck ties, excess materials, project related trash and debris.
3. The Contractor must dispose of all released materials in a proper and legal manner, according to the Project Documents.
4. The Contractor must submit a notarized release of liens to the Railroad Representative.

1.7 Project Forms

The Contractor will be responsible for using and completing the following forms during the course of the project.

- a. Daily Log Form, attached. The Contractor will maintain a daily log, form attached, of the weather conditions that day, high and low temperatures, equipment on site and which equipment was working, materials installed, working limits, work accomplished and material released at each specific location. The daily logs must be signed and submitted on a weekly basis to the Railroad Representative.

SECTION 5 – STRUCTURES

- 5.1. Introduction
 - 5.1.1. References
 - 5.1.2. Submittals
 - 5.1.3. Delivery, Storage, and Handling of Materials
 - 5.1.4. Qualifications
 - 5.1.5. Site Conditions
- 5.2. Timber Structures
 - 5.2.1. Description
 - 5.2.2. Materials
 - 5.2.3. Equipment
 - 5.2.4. Mud Blocking
 - 5.2.5. Sills
 - 5.2.6. Cap
 - 5.2.7. Posts for Bents
 - 5.2.8. Framed Bents
 - 5.2.9. Stringers
 - 5.2.10. Bracing
 - 5.2.11. Deck Boards – N/A
 - 5.2.12. Ballast Guard – N/A
 - 5.2.13. Measurement and Payment
- 5.3. Steel Structures
 - 5.3.1. Description
 - 5.3.2. Materials
 - 5.3.3. Equipment
 - 5.3.4. Shop Inspection
 - 5.3.5. Reamed, Drilled or Punched Holes
 - 5.3.6. Shop Assembling
 - 5.3.7. Welds – N/A
 - 5.3.8. Shear Studs – N/A
 - 5.3.9. Structural Bolts and Nuts
 - 5.3.10. Welded Girders – N/A
 - 5.3.11. Rolled Beams – N/A
 - 5.3.12. Cap - N/A
 - 5.3.13. Bracing
 - 5.3.14. Headwalls and Wingwalls – N/A
 - 5.3.15. Measurement and Payment
- 5.4. Painting – N/A
- 5.5. Concrete Structures – N/A
- 5.6. Waterproofing – N/A
- 5.7. Piling – N/A

SECTION 5 – Structures

5.1 Introduction

This section includes Specifications for bridge rehabilitation and construction.

The Contractor is required to conform to the Project Documents for this project, including the Scope of Work and Specifications. The Contractor will supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Project Documents.

The Contractor will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor will be responsible to see that the finished work complies accurately with the Project Documents and , including the Scope of Work and Specifications herein.

5.1.1. References

The publications listed below form a part of the Specifications to the extent referenced. The publications are referred to in the text by basic designation only.

NOTE: The American Railway Engineering and Maintenance of Way Association (AREMA) was formerly The American Railway Engineering Association (AREMA). AREMA and AREMA when used as references will be considered to reference The American Railway Engineering And Maintenance Of Way Association.

AREMA MRE - Manual for Railway Engineering, (2002)

AMERICAN INSTITUTE FOR STEEL CONSTRUCTION (AISC)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

AMERICAN WELDING SOCIETY (AWS)

AWS131.1 (1994) Structural Welding code- Steel

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWS)

AWPA M2 (1995) Standard for Inspection of Treated Timber Products

AWPA M6 (1995) Brands Used on Forest Products

AWPA P2 (1995) Standard for Creosote Solutions

ACI STANDARD 318-95 AND 318R-95 or most recent revision for concrete design and construction

5.1.2. Submittals

Submittals having a "GA" designation must have the Engineer's approval.

Submittals having an "FIO" designation are for information only, but must be submitted to the engineer for record and to assure proper payment.

All materials and equipment furnished by the Contractor for the project will be new and of good quality, except as may be otherwise provided in the Project Documents. All material and equipment will be applied, installed, connected, cleaned, and conditioned in accordance with the instructions of the applicable supplier, except as may be otherwise provided in the Project Documents.

A. Steel Components; GA

Certification must include the name of the steel supplier, strength, grade, size and type and other data provided by the mill certificates.

B. Precast, Prestressed Concrete Girders; GA

Certification must include the name of the supplier, ACI and PCI membership status, shop drawings, the mix design, and references of similar work with respect to the size and type of girders proposed for this particular project.

C. Portland Cement Concrete; GA

Certification must include the name of the supplier, ACI membership status, and the mix designs.

D. Grout; GA

Certification must include the name of supplier, curing strengths with respect to time and temperature, and other data provided by the manufacturer's technical data sheets.

E. Timber; GA

Certification must include the name of the timber supplier, type and method of treatment, size, type of timber, grade, and other data provided by the mill certificates.

F. Elastomeric Bearing Pads; GA

Certification must include the name of supplier, type of material, compressive and tensile strength, durometer number, and other data provided by the mill certificates.

G. Pile Driving; FIO

Pile driving logs must be submitted to the engineer for any piling driven on this project. Logs shall include as a minimum the date, time, weather, operator, type and

Specifications of the hammer, pile size, pile type, location in structure, depth of penetration, total length, # of splices, location of splices, type of splice, length of cut-off, # of blows per inch at termination, resulting load capacity, and sample calculations specific to the hammer for determining load capacity.

H. Miscellaneous Bridge Materials; FIO

Manufacturer's data for all bridge materials to be furnished.

5.1.3. Delivery, Storage, and Handling of Materials

Materials and Samples

The Contractor is responsible for notifying the Railroad Representative when materials are delivered to the project site, or to a fabricating facility, if applicable. If any fabrication of materials occurs offsite, the Contractor will notify the Railroad Representative prior to fabrication, and will furnish shop drawings for approval prior to fabrication of materials.

The Railroad Representative will notify the Contractor as to the status of materials approved or disapproved. Disapproved materials that have already been delivered to the project site will be promptly segregated from the approved materials and removed from the premises. If materials are disapproved, acceptable replacement materials will be provided at no additional cost to the Railroad.

Initial approval by the Railroad Representative will not prevent the removal and replacement of materials that are materially defective or materials not meeting this specification that are discovered during construction and/or routine quality control/quality assurance operations.

The Contractor is solely responsible for the security and protection of all materials delivered to the project site. The Contractor is responsible for replacing lost, stolen or damaged materials at no additional cost to the Railroad.

All structural materials will be handled in such a manner as to protect such materials from being damaged, and will be stored in such a manner as to be protected from vandalism. Materials damaged during unloading, handling, or installation will be replaced by the Contractor at the Contractor's cost.

5.1.4. Qualifications

A. Bridge Construction

Bridge construction will be performed under the direction of qualified and competent supervisory personnel experienced in railroad bridge construction.

B. Welding

Welding will be performed under the direct supervision of a certified welding supervisor or foreman.

C. Jacking/ Rigging

Jacking and moving of heavy structures will be performed under the direction of qualified and competent supervisory personnel experienced in rigging operations. The Contractor will be responsible for any damages occurring as a result of negligence or improper handling.

5.1.5. Site Conditions

During construction, the Contractor will restore the bridge and track to a condition both safe and suitable for service as needed by the Railroad for its regular train operations.

Track time must be scheduled with the Railroad, and the track restored and/or cleared for service by the designated time. The Contractor is responsible for train delays. Any penalty for delays will be outlined in the liquidated damages section of the project Documents, and/or in the general conditions.

Drainage will be maintained through the project site during the full term of the project. Accumulation of water that might be detrimental to, or affect the stability of the roadbed will not be permitted. Ditches will be maintained in good working condition, and no debris will be allowed to block ditches or culverts.

END OF SECTION

5.2 Timber Structures

5.2.1. Description

This work will consist of rehabilitating structures or parts of structures composed of treated timber.

Parts of timber structures to be rehabilitated with materials other than timber, such as concrete, steel, etc., will be constructed in accordance with the requirements of the Sections pertaining to the respective types of member or structure.

The Contractor will be responsible for purchasing, cutting, loading, transporting, distributing, and installing all timber required to complete the work indicated as so designated within the Scope of Work and Specifications.

5.2.2. Materials

Lumber, including structural lumber, is the product of the saw and planing mill not further than by sawing, resawing, passing lengthwise through a standard planing machine, cross cutting to length and working. After the lumber is produced, it is necessary to inspect each piece individually to determine its grade. Lumber that is so graded that working stresses can be assigned is called stress-graded or structural lumber. Existing grading rules for structural lumber issued by the industry's regional agencies are in conformity generally with the recommendations of ASTM D 2555 and ASTM D 245 and the range of grades available is adequate for railway purposes.

Timber material will be new, dense graded southern pine, or approved equal, in accordance with paragraph 423 of the Southern Pine Inspection Bureau's Grading Rules, 1987 Edition, effective 3-15-77, except to be free of wane, and will meet all other AREMA guidelines and Specifications for material and treatment.

All timber material will be thoroughly air seasoned or properly conditioned for preservative treatment, and pressure treated as per AREMA MRE Chapter 3, with an appropriate creosote-coal tar preserving process.

It is recommended that structural lumber be purchased in accordance with the grading rules of the industry's agency publishing rules for the species.

When ordering structural lumber an inquiry or purchase order should clearly stipulate: quantity in board feet or number of pieces; thickness, width and length; whether rough or surfaced and extent of surfacing; stress-grade; species of wood; the name and date of the rule book and the name of the organization issuing it; any exceptions to or modifications of the grading rules such as:

- Lumber to be free of wane;
- Seasoned, stating the method and acceptable moisture content (Note that mills do not ordinarily season beam and stringer or post and timber sizes.);
- Special heartwood requirements;
- Special shear grades;
- Special provisions to make joist and plank or beam and stringer grades suitable for continuous spans;
- Special provisions to make joist and plank or beam and stringer grades suitable as columns or tension members;
- Special inspection provisions; and, provisions for treatment.

All exposed untreated timber such as where timber is cut, will be coated using an approved timber preservative, at time of cutting.

All timber construction will conform to Chapter 7 of the AREMA Manual of Railway Engineering. All connections and workmanship are subject to approval by the Engineer.

Steel hardware for timber connections will be A307 or better.

All bolts must be accompanied by a matching nut and washer. Bolts for connecting structural timber will have washers conforming to AREMA standards.

Holes for timber connections will be bored at the same diameter as the bolt, and 1/8" less than the nominal diameter of lag screws in timber.

5.2.3. Equipment

All equipment necessary for the satisfactory performance of this construction will be on the project and approved by the Railroad Representative before work will be permitted to begin.

5.2.4. Mud Blocking

Mud blocks will be firmly and evenly bedded to a solid bearing, and tamped in place. Blocking will conform to size as noted on the Bid Sheet and Scope of Work, or as measured in the field approved by the Railroad Representative.

5.2.5. Sills

Nominal size of sills will be 14 1/2" x 15" x (12', 14', 16', 18' or 20'), as noted on the Bid Sheet and Scope of Work.

Sills are to be installed at various locations as noted in the Scope of Work or as directed by the Railroad Representative. Top of sill elevations will be such that a

level or constant top of rail grade is achieved across the entire bridge. If necessary, the Contractor will cut the tops of existing piling or posts to provide a uniform bearing across the tops of all piling or posts in each bent.

Sills will be placed while the piles are held in correct position. Where drift bolts (pins) are used for making the connection, the ends of piles will be bored the same diameter as the drift bolt to a depth of 9 inches into the piling. Drift pins for connecting sills to piling will be 24-inch button head drift pins.

Osmoweld, or approved equal epoxy filler and sealant, will be used at the interface of all timber posts and sills.

5.2.6. Caps

Nominal size of caps will be 14 1/2" x 15" x (12', 14', 16', 18' or 20'), as noted on the Bid Sheet and Scope of Work.

Caps are to be installed at various locations as noted on the in the Scope of Work or as directed by the Railroad Representative. Top of cap elevations will be such that a level or constant top of rail grade is achieved across the entire bridge. If necessary, the Contractor will cut the tops of existing piling or posts to provide a uniform bearing across the tops of all piling or posts in each bent.

Caps will be placed while the piles are held in correct position. Where drift bolts (pins) are used for making the connection, the ends of piles will be bored the same diameter as the drift bolt to a depth of 9 inches into the piling. Drift pins for connecting caps to piling will be 24-inch button head drift pins.

Osmoweld, or approved equal epoxy filler and sealant, will be used at the interface of all timber posts and caps.

5.2.7. Posts for Bents

Posts will be fastened to sills and pedestals with dowels of not less than 3/4" diameter extending into posts and sills.

Osmoweld, or approved equal epoxy filler and sealant, will be used at the interface of all timber posts and caps and/or sills.

Where bents are being rebuilt or posts replaced, track surface and line will be restored to uniform surface and line, and the bents will be realigned and plumbed as much as possible using the means and methods determined by the Contractor.

5.2.8. Framed Bents

Bent timbers will be cut and framed to a close fit in such a manner that they will have an even bearing over the entire contact surface of the joint. No blocking or shimming will be allowed in making joint, nor will open joints be permitted.

Osmoweld, or approved equal epoxy filler and sealant, will be used at the interface of all timber posts and caps and/or sills.

Where bents are being rebuilt or posts replaced, track surface and line will be restored to uniform surface and line, and the bents will be realigned and plumbed as much as possible using the means and methods determined by the Contractor.

Contractor will use all new 3" x 10" treated timber bracing, unless noted otherwise, with all new fasteners to make the connections as per the Plan details or as per Chapter 7 of the AREMA Manual for Railway Engineering.

5.2.9. Stringers

All stringers will be set or placed to required elevations as to give decking an even bearing at all contacts or intersections. The dimensions will conform to the Scope of Work and Bid Sheet, but shall be verified by the Contractor prior to ordering.

Unless otherwise specified, outside stringers will have butt joints, but interior stringers will be framed to bear over the full width of cap at each end of the stringer.

Connections will be made as per the Plan details or as per Chapter 7 of the AREMA Manual for Railway Engineering.

All exposed untreated timber such as where timber is cut, will be coated using an approved timber preservative, at time of cutting.

5.2.10. Bracing

Contractor will use all new 3" x 10" treated timber bracing, with all new fasteners to make the connections as per the Plan details or as per Chapter 7 of the AREMA Manual for Railway Engineering.

All exposed untreated timber such as where timber is cut, will be coated using an approved timber preservative, at time of cutting.

5.2.11. Deck Boards – N/A

5.2.12. Ballast Guard - N/A

5.2.13. Measurement and Payment

For all treated timber products used, including hardware, and for all labor, equipment and tools, and any work or materials incidental to the work, payment will be included in the unit bid price.

The Contractor will not exceed contract quantities without proper change order, approved by the Railroad Representative.

Payment will not be made for any treated timber in excess of the specified quantity without proper approved change order.

The accepted quantity of treated timber will be paid for at the contract unit price bid as listed in the Bid Sheet, and as per the final cost schedule. Such payment will be full compensation for furnishing and installing treated timber under the Contract.

END OF SECTION

5.3. Steel Structures

5.3.1. Description

The Contractor will be responsible for purchasing, fabricating, loading, transporting, distributing, and installing all structural steel components required to complete the work indicated in the Scope of Work and Specifications or as so designated within the Scope of Work.

All steel materials and workmanship associated with this project will conform to the AREMA Manual for Railway Engineering.

5.3.2. Materials

All rolled plates, shapes and bars for structural use will conform to ASTM A 36, unless otherwise specified.

Bolts for structural steel connections will be A325 type 3 (weathering) with matching A563 nut and F436 washer, unless otherwise noted.

All steel components will conform to the sizes and dimensions shown on the listed in the Scope of Work and Specifications.

The steel supplier will conform to AREMA guidelines and AISC standard Specifications, and will provide a certification letter for all steel components used on this project indicating compliance with the Specifications.

5.3.3. Equipment

All equipment necessary for the satisfactory performance of this construction will be on the project and approved by the Railroad Representative before work will be permitted to begin.

5.3.4. Shop Inspection

The Contractor will notify in writing the Railroad Representative as to the location and schedule of the fabrication of structural steel, so the Railroad Representative may make arrangements for quality assurance shop inspection. This notification will be at the earliest possible date after the Notice to Proceed.

Fabricators of welded plate girders will be certified under the AISC Quality Certification, Category III, Major Steel Bridges.

Fabricators of rolled beams, bracing, stringers and base plates will be certified under the AISC Quality Certification, Category I, Conventional Steel Structures.

Contractor will submit shop drawings for approval of the Railroad Representative prior to any steel fabrication.

5.3.5. Reamed, Drilled or Punched Holes

Each steel template will have hardened steel bushings accurately positioned with respect to connection centerlines inscribed on the template.

Reaming or drilling of full size field connections through templates will be done only after the templates have been positioned with the utmost care, and firmly clamped or bolted. Templates used for the reaming of matching members, or of the opposite faces of one member, will be exact duplicates. Templates for connections, which duplicate will be so accurately positioned that like members are duplicates and require no match marking.

Reaming, or drilling full size, of assembled parts will be done only after the parts are firmly clamped together with the surfaces in close contact. If necessary, parts will be separated before riveting or bolting for removal of shavings.

Parts assembled in the shop for reaming or drilling holes for field connectors will be match marked before disassembly. Diagrams showing match marks will be furnished to the Engineer.

In the shop, holes will be punched whenever possible.

Under no circumstances or conditions will holes be cut with a torch unless approved in writing by the Railroad Representative.

All hole dimensions will comply with the Specifications.

5.3.6. Shop Assembling

All steel superstructures will be drilled, assembled and match marked in the shop to assure proper fit and ease of construction.

5.3.7. Welds – N/A

5.3.8. Shear Studs – N/A

5.3.9. Structural Bolts and Nuts

All bolted construction will conform to the requirements of Chapter 15, Section 3.2 of the AREMA Manual for Railway Engineering.

Structural bolts will conform to the sizes and dimensions shown on the listed in the Specifications.

In general, bolts for structural steel connections will be 7/8" diameter A325 type 3 (weathering) with matching A563 nut and F436 washer, unless otherwise noted. Lengths will be as required for each specific connection.

Bolt threads must extend at least 1/8" beyond the outer edge of the nut when the nut is tightened.

Anchor bolts will be cast in place and be either swedged or have a leg sufficient to prevent twisting. The Contractor is responsible for using the base plates as a template for setting anchor bolts.

Anchor bolt nuts will be double nutted and with the bottom nut being finger tight and the top nut being finger tight plus 1/4 turn with a wrench.

The washer installed with the anchor bolt must be a lock washer large enough to completely cover the hole in the base plate whether the hole is slotted or round, to prevent water ponding.

5.3.10. Welded Girders – N/A

5.3.11. Rolled Beams – N/A

5.3.12. Cap – N/A

5.3.13. Bracing

Contractor will use all new bracing that conforms to the sizes and dimensions as noted in the Scope of Work, with all new fasteners to make the connections as per the Plan details or as per Chapter 15 of the AREMA Manual for Railway Engineering.

5.3.14. Headwalls/ Wingwalls – N/A

5.3.15. Measurement and Payment

For all structural steel used, including hardware, and for all labor, equipment and tools, payment will be included in the unit bid price.

The Contractor will not exceed contract quantities without proper change order, approved by the Railroad Representative.

Payment will not be made for any structural steel in excess of the specified quantity without proper approved change order. The accepted quantity of structural steel will be paid for at the contract unit price bid as listed in the Bid Sheet, and as per the final cost schedule. Such payment will be full compensation for furnishing and installing structural steel under the Contract.

END OF SECTION

ATTACHMENTS

- **Consumer Information Sheets for Treated Timber**

**Consumer Information Sheets
for Treated Timber**

Consumer Information Sheet

INORGANIC ARSENICAL PRESSURE-TREATED WOOD

Including: CCA, ACA, and ACZA)

CONSUMER INFORMATION

This wood has been preserved by pressure treatment with an EPA-registered pesticide containing inorganic arsenic to protect it from insect attack and decay; Wood treated with inorganic arsenic should be used only where such protection is important.

Inorganic arsenic penetrates deeply into and remains in the pressure-treated wood for a long time. Exposure to inorganic arsenic may present certain hazards. Therefore, the following precautions should be taken both when handling the treated wood and in determining where to use or dispose of the treated wood.

USE SITE PRECAUTIONS

Wood pressure-treated with waterborne arsenical preservatives may be used inside residences as long as all sawdust and construction debris are cleaned up and disposed of after construction.

Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Examples of such sites would be structures or containers for storing silage or food.

Do not use treated wood for cutting-boards or countertops.

Only treated wood that is visibly clean and free of surface residue should be used for patios, decks and walkways.

Do not use treated wood for construction of those portions of beehives, which may come into contact with the honey.

Treated wood should not be used where it may come into direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges.

HANDLING PRECAUTIONS

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers in accordance with state and Federal regulations.

Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood.

When power-sawing and machining, wear goggles to protect eyes from flying particles.

After working with the wood, and before eating, drinking, and use of tobacco products, wash exposed areas thoroughly.

If preservatives or sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing.

Approved by the U.S. Environmental Protection Agency 9/85.

Consumer Information Sheet

PENTACHLOROPHENOL PRESSURE-TREATED WOOD

CONSUMER INFORMATION

This wood has been preserved by pressure-treatment with an EPA-registered pesticide containing pentachlorophenol to protect it from insect attack and decay. Wood treated with pentachlorophenol should be used only where such protection is important.

Pentachlorophenol penetrates deeply into and remains in the pressure-treated wood for a long time. Exposure to pentachlorophenol may present certain hazards. Therefore, the following precautions should be taken both when handling the treated wood and in determining where to use and dispose of the treated wood.

USE SITE PRECAUTIONS

Logs treated with pentachlorophenol should not be used for log homes.

Wood treated with pentachlorophenol should not be used where it will be in frequent or prolonged contact with bare skin (for example, chairs and other outdoor furniture), unless an effective sealer has been applied.

Pentachlorophenol-treated wood should not be used in residential, industrial, or commercial interiors except for laminated beams or for building components which are in ground contact and are subject to decay or insect infestation and where two coats of an appropriate sealer are applied. Sealers may be applied at the installation site.

Wood treated with pentachlorophenol should not be used in the interiors of farm buildings where there may be direct contact with domestic animals or livestock, which may crib (bite) or lick the wood.

In interiors of farm buildings where domestic animals or livestock are unlikely to crib (bite) or lick the wood, pentachlorophenol-treated wood may be used for building components that are in ground contact and are subject to decay or insect infestation and where two coats of an appropriate sealer are applied. Sealers may be applied at the installation site.

Do not use pentachlorophenol-treated wood for furrowing or brooding facilities.

Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Examples of such sites would be structures or containers for storing silage or food.

Do not use treated wood for cutting-boards or countertops.

Approved by the U.S. Environmental Protection Agency

Only treated wood that is visibly clean and free of surface residue should be used for patios, decks and walkways.

Do not use treated wood for construction of those portions of beehives which may come into contact with the honey.

Pentachlorophenol-treated wood should not be used where it may come into direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges.

Do not use pentachlorophenol-treated wood where it may come into direct or indirect contact with drinking water for domestic animals or livestock, except for uses involving incidental contact such as docks and bridges.

HANDLING PRECAUTIONS

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers rated at 20 million BTU/hour or greater heat input or its equivalent in accordance with state and Federal regulations.

Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood.

Avoid frequent or prolonged skin contact with pentachlorophenol-treated wood; when handling the treated wood, wear long sleeved shirts and long pants and use gloves impervious to the chemicals (for example, gloves that are vinyl-coated).

When power sawing and machining, wear goggles to protect eyes from flying particles.

After working with the wood, and before eating, drinking, and use of tobacco products, wash exposed areas thoroughly.

If oily preservatives or sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing.

Urethane, shellac, latex epoxy enamel and varnish are acceptable sealers for pentachlorophenol-treated wood.

Consumer Information Sheet

CREOSOTE PRESSURE-TREATED WOOD

CONSUMER INFORMATION

This wood has been preserved by pressure-treatment with an EPA-registered pesticide containing creosote to protect it from insect attack and decay. Wood treated with creosote should be used only where such protection is important.

Creosote may present certain hazards. Therefore, the following precautions should be taken both when handling the treated wood and in determining where to use the treated wood.

USE SITE PRECAUTIONS

Wood treated with creosote should not be used where it will be in frequent or prolonged contact with bare skin (for example, chairs and other outdoor furniture) unless an effective sealer has been applied.

Creosote-treated wood should not be used in residential interiors. Creosote-treated wood in interiors of industrial buildings should be used only for industrial building components, which are in ground contact and are subject to decay or insect infestation and wood block flooring. For such uses, two coats of an appropriate sealer must be applied. Sealers may be applied at the installation site.

Wood treated with creosote should not be used in the interiors of farm buildings where there may be direct contact with domestic animals or livestock, which may crib (bite) or lick the wood.

In interiors of farm buildings where domestic animals or livestock are unlikely to crib (bite) or lick the wood, creosote-treated wood may be used for building components which are in ground contact and are subject to decay or insect infestation if two coats of an effective sealer are applied. Sealers may be applied at the installation site.

Do not use creosote-treated wood for furrowing or brooding facilities.

Do not use treated wood under circumstances where the preservative may become a component of food or animal feed. Examples of such use would be structures or containers for storing silage or food.

Do not use treated wood for putting boards or countertops.

Only treated wood that is visibly clean and free of surface residues should be used for patios, decks and walkways.

Do not use treated wood for construction of those portions of beehives, which may come into contact with the honey.

Creosote-treated wood should not be used where it may come into direct or indirect contact with public drinking water, except for uses involving incidental contact such as docks and bridges.

Do not use creosote-treated wood where it may come into direct or indirect contact with drinking water for domestic animals or livestock, except for uses involving incidental contact such as docks and bridges.

HANDLING PRECAUTIONS

Dispose of treated wood by ordinary trash collection or burial. Treated wood should not be burned in open fires or in stoves, fireplaces, or residential boilers because toxic chemicals may be produced as part of the smoke and ashes. Treated wood from commercial or industrial use (e.g., construction sites) may be burned only in commercial or industrial incinerators or boilers in accordance with state and Federal regulations.

Avoid frequent or prolonged inhalation of sawdust from treated wood. When sawing and machining treated wood, wear a dust mask. Whenever possible, these operations should be performed outdoors to avoid indoor accumulations of airborne sawdust from treated wood.

Avoid frequent or prolonged skin contact with creosote-treated wood; when handling the treated wood, wear long sleeved shirts and long pants and use gloves impervious to the chemicals (for example, gloves that are vinyl-coated).

When power-sawing and machining, wear goggles to protect eyes from flying particles.

After working with the wood, and before eating, drinking, and use of tobacco products, wash exposed areas thoroughly. If oily preservatives or sawdust accumulate on clothes, launder before reuse. Wash work clothes separately from other household clothing. Coal tar pitch and coal tar pitch emulsion are effective sealers for creosote-treated wood-block flooring.

Urethane, epoxy, and shellac are acceptable sealers for all creosote treated wood.

CONSULTING ENGINEERS: CROUCH ENGINEERING, P.C.

PROPOSED MISCELLANEOUS BRIDGE REHABILITATION

COOS BAY RAIL LINK

SCOPE OF WORK

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
	BRIDGE 661.28				
1	FURNISH & INSTALL 12" X 10" X 10'-0" DECK TIES WITH FASTENERS	14	EA		
2	BENT 2 - FURNISH & INSTALL 1 @ 10' TIMBER POSTS, 12" DIAM.	10	LF		
3	BENT 3 - FURNISH & INSTALL 1 @ 10' TIMBER POSTS, 12" DIAM.	10	LF		
4	BENT 4 - FURNISH & INSTALL 2 @ 10' TIMBER POSTS, 12" DIAM.	20	LF		
	BRIDGE 664.62				
5	BENT 7 - FURNISH & INSTALL 2 @ 10' TIMBER POSTS, 12" DIAM.	28	LF		
6	BENT 14 - FURNISH & INSTALL 2" TREATED TIMBER SHIM	1	EA		
	BRIDGE 665.49				
7	FURNISH & INSTALL 6" X 8" X 30'-0" TREATED TIMBER GIRT BRACING	60	LF		
	BRIDGE 667.28				
8	FURNISH & INSTALL 4" X 8" X 20'-0" TREATED TIMBER CROSS BRACING	160	LF		
9	FURNISH & INSTALL 6" X 8" X 20'-0" TREATED TIMBER SASH BRACING	80	LF		
	BRIDGE 667.40				
10	MISCELLANEOUS STEEL REPAIRS, STEEL MIN. A36	1	LS		
	BRIDGE 668.50				
11	FURNISH & INSTALL 16" X 10" X 10'-0" DECK TIES WITH FASTENERS	26	EA		
12	FURNISH & INSTALL 7 1/2" X 8" X 9'-0" DECK TIES WITH FASTENERS	30	EA		
13	FURNISH & INSTALL 4" X 8" X 16'-0" GUARD TIMBER	240	LF		
	BRIDGE 674.03				
14	FURNISH & INSTALL 7 1/2" X 8" X 9'-0" DECK TIES WITH FASTENERS	12	EA		
15	FURNISH & INSTALL 4" X 8" X 16'-0" GUARD TIMBER	32	LF		
	BRIDGE 678.43				
16	FURNISH & INSTALL 8" X 17 3/4" X 30'-0" TREATED TIMBER STRINGERS	11	EA		
	BRIDGE 687.03				
17	FURNISH & INSTALL 8" X 17 1/2" X 28'-0" TREATED TIMBER STRINGERS	5	EA		
18	BENT 1 - FURNISH & INSTALL 2 @ 8' TIMBER POSTS, 12" DIAM.	16	LF		
	BRIDGE 690.85				
19	FURNISH & INSTALL 11 1/2" X 10 1/2" X 10'-0" DECK TIES WITH FASTENERS	115	EA		
20	FURNISH & INSTALL 11" X 9 1/2" X 10'-0" DECK TIES WITH FASTENERS	84	EA		
21	FURNISH & INSTALL 4" X 8" X 24'-0" GUARD TIMBER	144	LF		
	BRIDGE 691.05				
22	FURNISH & INSTALL 8" X 17 1/2" X 30'-0" TREATED TIMBER STRINGERS	2	EA		
	BRIDGE 694.32				
23	MISCELLANEOUS STEEL REPAIRS, STEEL MIN. A36	1	LS		

	BRIDGE 694.78			
24	RESET ROCKER BEARINGS	1	LS	
	BRIDGE 696.66			
25	FURNISH & INSTALL 11 1/2" X 10 1/2" X 10'-0" DECK TIES WITH FASTENERS	38	EA	
	BRIDGE 710.20			
26	BENT 2 - FRAME OUT BENT	1	LS	
27	BENT 8 - FURNISH & INSTALL 2 @ 6' TIMBER POSTS, 14" X 14"	10	LF	
	BRIDGE 711.67			
28	BENT 1 - FRAME OUT BENT	1	LS	
	BRIDGE 716.40			
29	BENT 12 - FURNISH & INSTALL 2 @ 20' TIMBER POSTS, 14" X 14"	40	LF	
30	BENT 13 - FURNISH & INSTALL 2 @ 20' TIMBER POSTS, 14" X 14"	40	LF	
31	BENT 15 - FURNISH & INSTALL 2 @ 20' TIMBER POSTS, 14" X 14"	40	LF	
32	BENT 28 - FURNISH & INSTALL 2 @ 20' TIMBER POSTS, 14" X 14"	40	LF	
33	BENT 116 - FRAME OUT BENT	1	LS	
34	BENT 139 - FRAME OUT BENT	1	LS	
	BRIDGE 719.21			
35	FURNISH & INSTALL 7 1/2" X 7 1/2" X 9'-0" DECK TIES WITH FASTENERS	24	EA	
36	FURNISH & INSTALL 8" X 17 1/2" X 30'-0" TREATED TIMBER STRINGERS	3	EA	
	BRIDGE 726.31			
37	FURNISH & INSTALL 8" X 17 " X 30'-0" TREATED TIMBER STRINGERS	30	EA	
	BRIDGE 729.04			
38	FURNISH & INSTALL 8" X 17 " X 30'-0" TREATED TIMBER STRINGERS	5	EA	
	BRIDGE 736.51			
39	BENT 1 - FURNISH & INSTALL 12" X 14" X 12'-0" TREATED TIMBER CAP	1	EA	
	BRIDGE 739.43			
40	BENT 5 - FRAME OUT BENT	1	LS	
	BRIDGE 739.63			
41	FURNISH & INSTALL 7 1/2" X 10 1/2" X 10'-0" DECK TIES WITH FASTENERS	119	EA	
42	BENT 1 - FURNISH & INSTALL 2 @ 6' TIMBER POSTS, 14" X 14"	12	LF	
43	BENT 3 - FRAME OUT BENT	1	LS	
	BRIDGE 741.36			
44	BENT 5 - FRAME OUT BENT	1	LS	

	BRIDGE 741.36				
45	FURNISH & INSTALL 7 1/2" X 10" X 10'-0" DECK TIES WITH FASTENERS	46	EA		
46	FURNISH & INSTALL 4" X 8" X 22'-0" GUARD TIMBER	88	LF		
47	BENT 1 - FURNISH & INSTALL 2 @ 6' TIMBER POSTS, 14" X 14"	12	LF		
	BRIDGE 742.72				
48	FURNISH & INSTALL 7 3/4" X 7 1/2" X 9'-0" DECK TIES WITH FASTENERS	5	EA		
	BRIDGE 743.86				
49	FURNISH & INSTALL 8" X 18" X 30'-0" TREATED TIMBER STRINGERS	1	EA		
50	BENT 1 - FRAME OUT BENT	1	LS		
51	BENT 2 - FURNISH & INSTALL 2 @ 10' TIMBER POSTS, 14" X 14"	20	LF		
	BRIDGE 743.97				
52	BENT 1 - FRAME OUT BENT	1	LS		
53	BENT 2 - FURNISH & INSTALL 2 @ 10' TIMBER POSTS, 14" X 14"	20	LF		
	BRIDGE 751.02				
54	FURNISH & INSTALL 8" X 17 1/2" X 30'-0" TREATED TIMBER STRINGERS	15	EA		
	BRIDGE 763.55				
55	BENT 28 - FURNISH & INSTALL 14" X 14" X 16'-0" TREATED TIMBER CAP	1	EA		
56	BENT 29 - FURNISH & INSTALL 14" X 14" X 16'-0" TREATED TIMBER CAP	1	EA		
57	BENT 29 - FURNISH & INSTALL 2 @ 12' TIMBER POSTS, 14" X 14"	24	LF		