

**DEPARTMENT OF TRANSPORTATION**  
DIVISION OF ENGINEERING SERVICES  
OFFICE ENGINEER, MS 43  
1727 30<sup>TH</sup> STREET  
P.O. BOX 168041  
SACRAMENTO, CA 95816-8041  
FAX (916) 227-6214  
TTY 711



*Flex your power!  
Be energy efficient!*

August 28, 2009

08-SBd-210,215-34.6/36.0,14.4/18.8  
08-4440U4

Addendum No. 3

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN SAN BERNARDINO COUNTY IN SAN BERNARDINO ON ROUTE 210 FROM 0.9 KM WEST TO 0.5 KM EAST OF ROUTE 210/215 SEPARATION AND ON ROUTE 215 FROM 0.2 KM SOUTH OF MASSACHUSSETTS AVENUE OVERCROSSING TO UNIVERSITY PARKWAY UNDERCROSSING.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on Thursday, September 24, 2009. The original bid opening date was previously postponed indefinitely under Addendum No. 2 dated August 18, 2009.

This addendum is being issued to set a new bid opening date as shown herein and revise the Project Plans, the Notice to Bidders and Special Provisions, and the Bid book.

Project Plan Sheets 14, 34, 35, 36, 37, 182, 183, 184, 185, 234, 235, 236, 237, 544, 545, 546, 569, 578, 584, 585, 886, and 887 are revised. Copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 59A and 60A are added. Copies of the added sheets are attached for addition to the project plans.

In the Notice to Bidders, the eighth paragraph is revised as follows:

"The DVBE Contract goal is 1 percent."

In the Special Provisions, Section 5-1.16, "BIOLOGICAL MONITOR," subsection "Summary," the first paragraph is revised as follows:

"You shall retain, and have on the project site, an authorized biologist for all activities identified in "RELATIONS WITH CALIFORNIA DEPARTMENT OF FISH AND GAME", "RELATIONS WITH CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD", "RELATIONS WITH UNITED STATES ARMY CORPS OF ENGINEERS", "BIRD PROTECTION", and "ENVIRONMENTALLY SENSITIVE AREA" of these special provisions."

Addendum No. 3  
Page 2  
August 28, 2009

08-SBd-210,215-34.6/36.0,14.4/18.8  
08-4440U4

In the Special Provisions, Section 10-1.41, "MATERIAL CONTAINING AERIALY DEPOSITED LEAD," the following sentence is added after the first sentence of the fourth paragraph:

"Type Y-2 material exists from Station 143+85 to Station 151+90 on northbound and southbound I-215 from a depth of 0 meter to 0.3 meter below existing grade, as shown on the plans."

In the Special Provisions, Section 10-1.68, "SOUND WALL," subsection "SOUND WALL (MASONRY BLOCK)," the second sentence of the seventh paragraph is revised as follows:

"The color shall be federal color #304050 Angelus Block Color #207 (Hazel)."

In the Special Provisions, Section 10-3.52, "PAYMENT," the following paragraph is added after the twelfth paragraph:

"The contract lump sum price paid for modify communication system shall include full compensation for furnishing all labor, materials (except items covered by other bid items), tools, equipment, and incidentals, and for doing all the work involved in modify communication system, complete in place, including fiber optic cable terminations, fiber distribution unit, interconnect and termination unit, asynchronous fiber optic modem and fiber optic testing, as shown on the plans, as specified in the Standard specifications and these special provisions, and as directed by the Engineer."

In the Special Provisions, Section 13, "RAILROAD RELATIONS AND INSURANCE - CAJON BOULEVARD OH," is replaced with Section 13, "RAILROAD RELATIONS AND INSURANCE," as attached.

In the Bid book, in the Bid Item List, Items 66, 108, 111, 140, 237, and 257 are revised, Items 321, 322, and 323 are added and Item 320 is deleted as attached.

To Bid book holders:

Replace pages 6, 8, 9, 14, 15, and 18 of the "Bid Item List" in the Bid book with the attached revised pages 6, 8, 9, 14, 15, 18 and 18A is added of the Bid Item List. The revised Bid Item List is to be used in the bid.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the Notice to Bidders section of the Notice to Bidders and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the Bid book.

Submit bids in the Bid book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This addendum, attachments and the modified wage rates are available for the Contractors' download on the Web site:

**[http://www.dot.ca.gov/hq/esc/oe/project\\_ads\\_addenda/08/08-4440U4](http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/08/08-4440U4)**

If you are not a Bid book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL  
Chief, Office of Plans, Specifications & Estimates  
Office Engineer  
Division of Engineering Services  
Attachments

## **SECTION 13. RAILROAD RELATIONS AND INSURANCE**

### **13-1 CAJON BOULEVARD CONNECTOR OVERHEADS**

#### **1.01 General**

1.01.01 The Contractor must cooperate with BNSF RAILWAY COMPANY, hereinafter referred to as "BNSF" where work is over or under on or adjacent to BNSF property and/or right-of-way, hereafter referred to as "BNSF Property", during the construction of the Cajon Boulevard Connector Overheads.

1.01.02 The Contractor must execute and deliver to the BNSF duplicate copies of the Exhibit "C-1" Agreement, in the form attached hereto, obligating the Contractor to provide and maintain in full force and effect the insurance called for under Section 3 of said Exhibit "C-1". Questions regarding procurement of the Railroad Protective Liability Insurance should be directed to Rosa Martinez at Marsh, USA, 214-303-8519.

1.01.03 The Contractor must plan, schedule and conduct all work activities so as not to interfere with the movement of any trains on BNSF Property.

1.01.04 The Contractor's right to enter BNSF's Property is subject to the absolute right of BNSF to cause the Contractor's work on BNSF's Property to cease if, in the opinion of BNSF, Contractor's activities create a hazard to BNSF's Property, employees, and/or operations. BNSF will have the right to stop construction work on the Project if any of the following events take place: (i) Contractor (or any of its subcontractors) performs the Project work in a manner contrary to the plans and specifications approved by BNSF; (ii) Contractor (or any of its subcontractors), in BNSF's opinion, prosecutes the Project work in a manner which is hazardous to BNSF property, facilities or the safe and expeditious movement of railroad traffic; (iii) the insurance described in the attached Exhibit C-1 is canceled during the course of the Project; or (iv) STATE OF CALIFORNIA acting through the Department of Transportation, hereinafter referred to as ("STATE") fails to pay BNSF for the Temporary Construction License or the Easement pursuant to Article II, Section 1 of this Agreement. The work stoppage will continue until all necessary actions are taken by Contractor or its subcontractor to rectify the situation to the satisfaction of BNSF's Division Engineer or until additional insurance has been delivered to and accepted by BNSF. In the event of a breach of (i) this Agreement, (ii) the Temporary Construction License, or (iii) the Easement, BNSF may immediately terminate the Temporary Construction License or the Easement. Any such work stoppage under this provision will not give rise to any liability on the part of BNSF. BNSF's right to stop the work is in addition to any other rights BNSF may have including, but not limited to, actions or suits for damages or lost profits. In the event that BNSF desires to stop construction work on the Project, BNSF agrees to immediately notify the following individual in writing:

**STATE's Resident Engineer  
850 S. Via Lata, Suite 100-A  
Colton, CA 92324**

1.01.05 The Contractor is responsible for determining and complying with all Federal, State and Local Governmental laws and regulations, including, but not limited to environmental laws and regulations (including but not limited to the Resource Conservation and Recovery Act, as amended; the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, CERCLA), and health and safety laws and regulations. The Contractor hereby indemnifies, defends and holds harmless BNSF for, from and against all fines or penalties imposed or assessed by Federal, State and Local Governmental Agencies against the BNSF which arise out of Contractor's work under this Agreement.

1.01.06 The Contractor must notify the STATE's Resident Engineer at, Fax No. (909) 825-1634 Telephone (951) 830-6864 and BNSF's Manager Public Projects, telephone number (909)-386-4472 at least thirty (30) calendar days before commencing any work on BNSF Property. Contractor's notification to BNSF, must refer to Railroad's file No. 027860A.

1.01.07 For any bridge demolition and/or falsework above any tracks or any excavations located with any part of the excavations located within, whichever is greater, twenty-five (25) feet of the nearest track or intersecting a slope from the plane of the top of rail on a 2 horizontal to 1 vertical slope beginning at eleven (11) feet from centerline of the nearest track, both measured perpendicular to center line of track, the Contractor must furnish the BNSF five sets of working drawings showing details of construction affecting BNSF Property and tracks. The working drawing must include the proposed method of installation and removal of falsework, shoring or cribbing, not included in the contract plans and two sets of structural calculations of any falsework, shoring or cribbing. For all excavation and shoring submittal plans, the current "BNSF-UPRR Guidelines for Temporary Shoring" must be used for determining the design loading conditions to be used in shoring design, and all calculations and submittals must be in accordance with the current "BNSF-UPRR Guidelines for Temporary Shoring". All submittal drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. All calculations must take into consideration railway surcharge loading and must be designed to meet American Railway Engineering and Maintenance-of-Way Association (previously known as American Railway Engineering Association) Coopers E-80 live loading standard. All drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. The Contractor must not begin work until notified by the BNSF that plans have been approved. The Contractor will be required to use lifting devices such as, cranes and/or winches to place or to remove any falsework over BNSF's tracks. In no case will the Contractor be relieved of responsibility for results obtained by the implementation of said approved plans.

1.01.08 Subject to the movement of BNSF's trains, BNSF will cooperate with the Contractor such that the work may be handled and performed in an efficient manner. The Contractor will have no claim whatsoever for any type of damages or for extra or additional compensation in the event his work is delayed by the BNSF.

## **1.02 Contractor Safety Orientation**

1.02.01 No employee of the Contractor, its subcontractors, agents or invitees may enter BNSF Property without first having completed BNSF's Engineering Contractor Safety Orientation, found on the web site . The Contractor must ensure that each of its employees, subcontractors, agents or invitees completes BNSF's Engineering Contractor Safety Orientation through internet sessions before any work is performed on the Project. Additionally, the Contractor must ensure that each and every one of its employees, subcontractors, agents or invitees possesses a card certifying completion of the BNSF Contractor Safety Orientation before entering BNSF Property. The Contractor is responsible for the cost of the BNSF Contractor Safety Orientation. The Contractor must renew the BNSF Contractor Safety Orientation annually. Further clarification can be found on the web site or from the BNSF's Representative.

## **1.03 BNSF Requirements**

1.03.01 The Contractor must take protective measures as are necessary to keep railway facilities, including track ballast, free of sand, debris, and other foreign objects and materials resulting from his operations. Any damage to railway facilities resulting from Contractor's operations will be repaired or replaced by BNSF and the cost of such repairs or replacement must be paid for by STATE.

1.03.02 Blasting shall not be allowed on or adjacent to BNSF property and/or right of way unless approved by the BNSF.

1.03.03 The Contractor must abide by the following temporary clearances during construction:

15'-0"	Horizontally from centerline of nearest track
21'-6"	Vertically above top of rail
27'-0"	Vertically above top of rail for electric wires carrying less than 750 volts
28'-0"	Vertically above top of rail for electric wires carrying 750 volts to 15,000 volts
30'-0"	Vertically above top of rail for electric wires carrying 15,000 volts to 20,000 volts
34'-0"	Vertically above top of rail for electric wires carrying more than 20,000 volts

1.03.04 Upon completion of construction, the following clearances shall be maintained:

- 29.4' Horizontally from centerline of nearest track for Cajon Blvd previously constructed.
- 29.5" Horizontally from centerline of nearest track for Connector Bridge Structures.
- 23.9' Vertically above top of rail for Cajon Blvd previously constructed.
- 27.0' Vertically above top of rail for Connector Bridge Structures.

1.03.05 Any infringement within State statutory clearances due to the Contractor's operations must be submitted to the BNSF and to STATE and must not be undertaken until approved in writing by the BNSF, and until STATE has obtained any necessary authorization from the State Regulatory Authority for the infringement. No extra compensation will be allowed in the event the Contractor's work is delayed pending BNSF approval, and/or the State Regulatory Authority's approval.

1.03.06 In the case of impaired vertical clearance above top of rail, BNSF will have the option of installing tell-tales or other protective devices BNSF deems necessary for protection of BNSF operations. The cost of tell-tales or protective devices will be borne by STATE.

1.03.07 The details of construction affecting the BNSF's Property and tracks not included in the contract plans must be submitted to the BNSF by STATE for approval before work is undertaken and this work must not be undertaken until approved by the BNSF.

1.03.08 At other than public road crossings, the Contractor must not move any equipment or materials across BNSF's tracks until permission has been obtained from the BNSF. The Contractor must obtain a "Temporary Construction Crossing Agreement" from the BNSF prior to moving his equipment or materials across BNSF's tracks. The temporary crossing must be gated and locked at all times when not required for use by the Contractor. The temporary crossing for use of the Contractor will be constructed and at the completion of the project, removed at the expense of the Contractor.

1.03.09 Discharge, release or spill on BNSF Property of any hazardous substances, oil, petroleum, constituents, pollutants, contaminants, or any hazardous waste is prohibited and Contractor must immediately notify the BNSF's Resource Operations Center at (800) 832-5452, of any discharge, release or spills in excess of a reportable quantity. Contractor must not allow BNSF Property to become a treatment, storage or transfer facility as those terms are defined in the Resource Conservation and Recovery Act or any state analogue.

1.03.10 The Contractor upon completion of the work covered by this contract, must promptly remove from the BNSF's Property all of Contractor's tools, equipment, implements and other materials, whether brought upon said property by said Contractor or any Subcontractor, employee or agent of Contractor or of any Subcontractor, and must cause BNSF's Property to be left in a condition acceptable to the BNSF's representative.

#### **1.04 Contractor Roadway Worker on Track Safety Program and Safety Action Plan**

1.04.01 Each Contractor that will perform work within 25 feet of the centerline of a track must develop and implement a Roadway Worker Protection/On Track Safety Program and work with BNSF Project Representative to develop an on track safety strategy as described in the guidelines listed in the on track safety portion of the Safety Orientation. This Program must provide Roadway Worker protection/on track training for all employees of the Contractor, its subcontractors, agents or invitees. This training is reinforced at the job site through job safety briefings. Additionally, each Contractor must develop and implement the Safety Action Plan, as provided for on the web site , which will be made available to BNSF prior to commencement of any work on BNSF Property. During the performance of work, the Contractor must audit its work activities. The Contractor must designate an on-site Project Supervisor who will serve as the contact person for the BNSF and who will maintain a copy of the Safety Action Plan, safety audits, and Material Safety Datasheets (MSDS), at the job site.

1.04.02 Contractor shall have a background investigation performed on all of its employees, subcontractors and agents who will be performing any services on railroad property under this Agreement.

The background screening shall at a minimum meet the criteria defined by the e-RAILSAFE program outlined at in addition to any other applicable regulatory requirements. The e-RAILSAFE program uses rail industry background screening standards.

Contractor shall obtain consent from all employees screened in compliance with the e-RAILSAFE program criteria to release completed background information to BNSF. Contractor shall be subject to periodic audit to ensure compliance.

Contractor shall not permit any of its employees, subcontractors or agents to perform services on property hereunder who are not approved under e-RAILSAFE program standards. Railroad shall have the right to deny entry onto its premises to any of Contractor's employees, subcontractors or agents who do not display the authorized identification badge issued by a background screening service meeting the standards set forth for the e-RAILSAFE program or who pose a threat, in Railroad's reasonable opinion, to the safety or security of Railroad's operations. Contractors shall ensure its employees, subcontractors and agents are United States citizens or legally working in this country under a work VISA.

### **1.05 Facilities and BNSF Flagger Services:**

1.05.01 The Contractor must give BNSF's Roadmaster (telephone 909 386 4061) a minimum of thirty (30) calendar days advance notice when flagging services will be required so that the Roadmaster can make appropriate arrangements (i.e., bulletin the flagger's position). If flagging services are scheduled in advance by the Contractor and it is subsequently determined by the parties hereto that such services are no longer necessary, the Contractor must give the Roadmaster five (5) working days advance notice so that appropriate arrangements can be made to abolish the position pursuant to union requirements.

1.05.02 Unless determined otherwise by BNSF's Project Representative, BNSF flagger will be required and furnished when Contractor's work activities are located over, under and/or within twenty-five (25) feet measured horizontally from centerline of the nearest track and when cranes or similar equipment positioned beyond 25-feet from the track centerline could foul the track in the event of tip over or other catastrophic occurrence, but not limited thereto for the following conditions:

1.05.02a When upon inspection by BNSF's Representative, other conditions warrant.

1.05.02b When any excavation is performed below the bottom of tie elevation, if, in the opinion of BNSF's representative, track or other BNSF facilities may be subject to movement or settlement.

1.05.02c When work in any way interferes with the safe operation of trains at timetable speeds.

1.05.02d When any hazard is presented to BNSF track, communications, signal, electrical, or other facilities either due to persons, material, equipment or blasting in the vicinity.

1.05.02e Special permission must be obtained from the BNSF before moving heavy or cumbersome objects or equipment which might result in making the track impassable.

1.05.03 Flagging services will be performed by qualified BNSF flaggers.

1.05.03a Flagging crew generally consists of one employee. However, additional personnel may be required to protect BNSF Property and operations, if deemed necessary by the BNSF's Representative.

1.05.03b Each time a flagger is called, the minimum period for billing will be the eight (8) hour basic day.

1.05.03c The cost of flagger services provided by the BNSF will be borne by STATE. The estimated cost for one (1) flagger is approximately between \$800.00 - \$1600.00 for an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays. The estimated cost for each flagger includes vacation allowance, paid holidays, Railway and unemployment insurance, public liability and property damage insurance, health and welfare benefits, vehicle transportation, meals, lodging, radio equipment, supervision and other costs incidental to performing flagging services. Negotiations for BNSF labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase actual or estimated flagging rates. The flagging rate in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of flagging pursuant to this paragraph.

1.05.03d The average train traffic on this route is 79 freight trains and 2 passenger trains per 24-hour period. Train timetable speeds are:

Westward: 50 MPH Passenger, 35 MPH Freight

Eastward: 60 MPH Passenger, 55 MPH Freight

## **1.06 Contractor General Safety Requirements**

1.06.01 Work in the proximity of railway track(s) is potentially hazardous where movement of trains and equipment can occur at any time and in any direction. All work performed by contractors within 25 feet of any track must be in compliance with FRA Roadway Worker Protection Regulations.

1.06.02 Before beginning any task on BNSF Property, a thorough job safety briefing must be conducted with all personnel involved with the task and repeated when the personnel or task changes. If the task is within 25 feet of any track, the job briefing must include the BNSF's flagger, as applicable, and include the procedures the Contractor will use to protect its employees, subcontractors, agents or invitees from moving any equipment adjacent to or across any BNSF track(s).

1.06.03 Workers must not work within 25 feet of the centerline of any track without an on track safety strategy approved by the BNSF's Project Representative. When authority is provided, every contractor employee must know: (1) who the BNSF flagger is, and how to contact the flagger, (2) limits of the authority, (3) the method of communication to stop and resume work, and (4) location of the designated places of safety. Persons or equipment entering flag/work limits that were not previously job briefed, must notify the flagger immediately, and be given a job briefing when working within 25 feet of the center line of track.

1.06.04 When Contractor employees are required to work on the BNSF Property after normal working hours or on weekends, the Railroad's representative in charge of the project must be notified. A minimum of two employees must be present at all times.

1.06.05 Any employees, agents or invitees of Contractor or its subcontractors under suspicion of being under the influence of drugs or alcohol, or in the possession of same, will be removed from the BNSF's Property and subsequently released to the custody of a representative of Contractor management. Future access to the BNSF's Property by that employee will be denied.

1.06.06 Any damage to BNSF Property, or any hazard noticed on passing trains must be reported immediately to the BNSF's representative in charge of the project. Any vehicle or machine which may come in contact with track, signal equipment, or structure (bridge) and could result in a train derailment must be reported immediately to the BNSF representative in charge of the project and to the BNSF's Resource Operations Center at (800) 832-5452. Local emergency numbers are to be obtained from the BNSF representative in charge of the project prior to the start of any work and must be posted at the job site.

1.06.07 For safety reasons, all persons are prohibited from having pocket knives, firearms or other deadly weapons in their possession while working on BNSF's Property.

1.06.08 All personnel protective equipment (PPE) used on BNSF Property must meet applicable OSHA and ANSI specifications. Current BNSF personnel protective equipment requirements are listed on the web site, however, a partial list of the requirements include: a) safety glasses with permanently affixed side shields (no yellow lenses); b) hard hats c) safety shoe with: hardened toes, above-the-ankle lace-up and a defined heel; and d) high visibility retro-reflective work wear. The Railroad's representative in charge of the project is to be contacted regarding local specifications for meeting requirements relating to hi-visibility work wear. Hearing protection, fall protection, gloves, and respirators must be worn as required by State and Federal regulations. (NOTE – Should there be a discrepancy between the information contained on the web site and the information in this paragraph, the web site will govern.)

1.06.09 The Contractor must not pile or store any materials, machinery or equipment closer than 25'-0" to the center line of the nearest Railway track. Materials, machinery or equipment must not be stored or left within 250 feet of any highway/rail at-grade crossings OR TEMPORARY CONSTRUCTION CROSSING, where storage of the same will obstruct the view of a train approaching the crossing. Prior to beginning work, the Contractor must establish a storage area with concurrence of the Railroad's representative.

1.06.10 Machines or vehicles must not be left unattended with the engine running. Parked machines or equipment must be in gear with brakes set and if equipped with blade, pan or bucket, they must be lowered to the ground. All machinery and equipment left unattended on BNSF's Property must be left inoperable and secured against movement. (See internet Engineering Contractor Safety Orientation program for more detailed specifications)

1.06.11 Workers must not create and leave any conditions at the work site that would interfere with water drainage. Any work performed over water must meet all Federal, State and Local regulations.

1.06.12 All power line wires must be considered dangerous and of high voltage unless informed to the contrary by proper authority. For all power lines the minimum clearance between the lines and any part of the equipment or load must be; 200 KV or below - 15 feet; 200 to 350 KV - 20 feet; 350 to 500 KV - 25 feet; 500 to 750 KV - 35 feet; and 750 to 1000 KV - 45 feet. If capacity of the line is not known, a minimum clearance of 45 feet must be maintained. A person must be designated to observe clearance of the equipment and give a timely warning for all operations where it is difficult for an operator to maintain the desired clearance by visual means.

### **1.07 Excavation**

1.07.01 Before excavating, the Contractor must determine whether any underground pipe lines, electric wires, or cables, including fiber optic cable systems are present and located within the Project work area. The Contractor must determine whether excavation on BNSF's Property could cause damage to buried cables resulting in delay to BNSF traffic and disruption of service to users. Delays and disruptions to service may cause business interruptions involving loss of revenue and profits. Before commencing excavation, the Contractor must contact BNSF's Field Engineering Representative (909 386 4079). All underground and overhead wires will be considered HIGH VOLTAGE and dangerous until verified with the company having ownership of the line. It is the Contractor's responsibility to notify any other companies that have underground utilities in the area and arrange for the location of all underground utilities before excavating.

1.07.02 The Contractor must cease all work and notify the BNSF immediately before continuing excavation in the area if obstructions are encountered which do not appear on drawings. If the obstruction is a utility and the owner of the utility can be identified, then the Contractor must also notify the owner immediately. If there is any doubt about the location of underground cables or lines of any kind, no work must be performed until the exact location has been determined. There will be no exceptions to these instructions.

1.07.03 All excavations must be conducted in compliance with applicable OSHA regulations and, regardless of depth, must be shored where there is any danger to tracks, structures or personnel.

1.07.04 Any excavations, holes or trenches on the BNSF's Property must be covered, guarded and/or protected when not being worked on. When leaving work site areas at night and over weekends, the areas must be secured and left in a condition that will ensure that BNSF employees and other personnel who may be working or passing through the area are protected from all hazards. All excavations must be back filled as soon as possible.

### **1.08 Hazardous Waste, Substances and Material Reporting**

1.08.01 If Contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to BNSF's Property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this Agreement, Contractor must immediately: (a) notify the BNSF's Resource Operations Center at (800) 832-5452, of such discovery; (b) take safeguards necessary to protect its employees, subcontractors, agents and/or third parties; and (c) exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release.

### **1.09 Personal Injury Reporting**

1.09.01 The BNSF is required to report certain injuries as a part of compliance with Federal Railroad Administration (FRA) reporting requirements. Any personal injury sustained by an employee of the Contractor, subcontractor or Contractor's invitees while on the BNSF's Property must be reported immediately (by phone mail if unable to contact in person) to the BNSF's representative in charge of the project. The Non-Employee Personal Injury Data Collection Form contained herein is to be completed and sent by Fax to the BNSF at (817) 352-7595 and to the BNSF's Project Representative no later than the close of shift on the date of the injury.

NON-EMPLOYEE PERSONAL INJURY DATA COLLECTION

INFORMATION REQUIRED TO BE COLLECTED PURSUANT TO FEDERAL REGULATION. IT SHOULD BE USED FOR COMPLIANCE WITH FEDERAL REGULATIONS ONLY AND IS NOT INTENDED TO PRESUME ACCEPTANCE OF RESPONSIBILITY OR LIABILITY.

1. Accident City/St \_\_\_\_\_ 2. Date: \_\_\_\_\_ Time: \_\_\_\_\_  
County: \_\_\_\_\_ 3. Temperature: \_\_\_\_\_ 4. Weather \_\_\_\_\_  
(if non-Railway location)

5. Social Security #

6. Name (last, first, mi)

7. Address: Street: \_\_\_\_\_ City: \_\_\_\_\_ St. \_\_\_ Zip: \_\_\_\_\_

8. Date of Birth: \_\_\_\_\_ and/or Age \_\_\_\_\_ Gender: \_\_\_\_\_  
(if available)

9. (a) Injury: \_\_\_\_\_ (b) Body Part: \_\_\_\_\_  
(i.e. (a) Laceration (b) Hand)

11. Description of Accident (To include location, action, result, etc.):

12. Treatment:  
? First Aid Only  
? Required Medical Treatment  
? Other Medical Treatment

13. Dr. Name \_\_\_\_\_ 30. Date: \_\_\_\_\_

14. Dr. Address: \_\_\_\_\_  
Street: \_\_\_\_\_ City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_

15. Hospital Name:

16. Hospital Address: \_\_\_\_\_  
Street: \_\_\_\_\_ City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_

17. Diagnosis:

FAX TO  
RAILWAY AT (817) 352-7595  
AND COPY TO  
BNSF ROADMASTER FAX 909-386-4843

**OVERHEAD EXHIBIT "C -1"**

**Agreement  
Between  
BNSF RAILWAY COMPANY  
and the  
CONTRACTOR**

BNSF RAILWAY COMPANY  
Attention: Manager Public Projects

Railway File: 027860A  
Agency Project: Cajon Boulevard. Overhead Connectors

Gentlemen:

The undersigned (hereinafter called, the "Contractor"), has entered into a contract (the "Contract") dated \_\_\_\_\_, 200\_, with STATE OF CALIFORNIA, acting through the Department of Transportation, hereinafter referred to as ("STATE") for the performance of certain work in connection with the following project: construct the Cajon Boulevard Overhead Connectors, in San Bernardino, CA. Performance of such work will necessarily require contractor to enter BNSF RAILWAY COMPANY ("Railway") right of way and property ("Railway Property"). The Contract provides that no work will be commenced within Railway Property until the Contractor employed in connection with said work for STATE (i) executes and delivers to Railway an Agreement in the form hereof, and (ii) provides insurance of the coverage and limits specified in such Agreement and Section 3 herein. If this Agreement is executed by a party who is not the Owner, General Partner, President or Vice President of Contractor, Contractor must furnish evidence to Railway certifying that the signatory is empowered to execute this Agreement on behalf of Contractor.

Accordingly, in consideration of Railway granting permission to Contractor to enter upon Railway Property and as an inducement for such entry, Contractor, effective on the date of the Contract, has agreed and does hereby agree with Railway as follows:

**Section 1. RELEASE OF LIABILITY AND INDEMNITY**

Contractor hereby waives, releases, indemnifies, defends and holds harmless Railway for all judgments, awards, claims, demands, and expenses (including attorneys' fees), for injury or death to all persons, including Railway's and Contractor's officers and employees, and for loss and damage to property belonging to any person, arising in any manner from Contractor's or any of Contractor's subcontractors' acts or omissions or any work performed on or about Railway's property or right-of-way. **THE LIABILITY ASSUMED BY CONTRACTOR WILL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DESTRUCTION, DAMAGE, DEATH, OR INJURY WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF RAILWAY, ITS AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE, UNLESS SUCH CLAIMS ARE PROXIMATELY CAUSED BY THE WILLFUL MISCONDUCT OR SOLE NEGLIGENCE OF RAILWAY.**

**THE INDEMNIFICATION OBLIGATION ASSUMED BY CONTRACTOR INCLUDES ANY CLAIMS, SUITS OR JUDGMENTS BROUGHT AGAINST RAILWAY UNDER THE FEDERAL EMPLOYEE'S LIABILITY ACT, INCLUDING CLAIMS FOR STRICT LIABILITY UNDER THE SAFETY APPLIANCE ACT OR THE LOCOMOTIVE INSPECTION ACT, WHENEVER SO CLAIMED.**

Contractor further agrees, at its expense, in the name and on behalf of Railway, that it will adjust and settle all claims made against Railway, and will, at Railway's discretion, appear and defend any suits or actions of law or in equity brought against Railway on any claim or cause of action arising or growing out of or in any manner connected with any liability assumed by Contractor under this Agreement for which Railway is liable or is alleged to be liable. Railway will give notice to Contractor, in writing, of the receipt or dependency of such claims and thereupon Contractor must proceed to adjust and handle to a conclusion such claims, and in the event of a suit being brought against Railway, Railway may forward summons and complaint or other process in connection therewith to Contractor, and Contractor, at Railway's discretion, must defend, adjust, or settle such suits and protect, indemnify, and save harmless Railway from and against all damages, judgments, decrees, attorney's fees, costs, and expenses growing out of or resulting from or incident to any such claims or suits.

In addition to any other provision of this Agreement, in the event that all or any portion of this Article shall be deemed to be inapplicable for any reason, including without limitation as a result of a decision of an applicable court, legislative enactment or regulatory order, the parties agree that this Article shall be interpreted as requiring Contractor to indemnify Railroad to the fullest extent permitted by applicable law. THROUGH THIS AGREEMENT THE PARTIES EXPRESSLY INTEND FOR CONTRACTOR TO INDEMNIFY RAILROAD FOR RAILROAD'S ACTS OF NEGLIGENCE.

It is mutually understood and agreed that the assumption of liabilities and indemnification provided for in this Agreement survive any termination of this Agreement.

## **Section 2. TERM**

This Agreement is effective from the date of the Contract until (i) the completion of the project set forth herein, and (ii) full and complete payment to Railway of any and all sums or other amounts owing and due hereunder.

## **Section 3. INSURANCE**

Contractor must, at its sole cost and expense, procure and maintain during the life of this Agreement the following insurance coverage:

- A. Commercial General Liability insurance. This insurance must contain broad form contractual liability with a combined single limit of a minimum of \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000. Coverage must be purchased on a post 1998 ISO occurrence form or equivalent and include coverage for, but not limit to the following:
  - Bodily Injury and Property Damage
  - Personal Injury and Advertising Injury
  - Fire legal liability
  - Products and completed operations

This policy must also contain the following endorsements, which must be indicated on the certificate of insurance:

It is agreed that any workers' compensation exclusion does not apply to Railroad payments related to the Federal Employers Liability Act or a Railroad Wage Continuation Program or similar programs and any payments made are deemed not to be either payments made or obligations assumed under any Workers Compensation, disability benefits, or unemployment compensation law or similar law.

The definition of insured contract must be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.

Any exclusions related to the explosion, collapse and underground hazards must be removed.

No other endorsements limiting coverage as respects obligations under this Agreement may be included on the policy.

- B. Business Automobile Insurance. This insurance must contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:
  - Bodily injury and property damage
  - Any and all vehicles owned, used or hired

- C. Workers Compensation and Employers Liability insurance including coverage for, but not limited to:  
California's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.  
Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.
- D. Railroad Protective Liability insurance naming only the Railroad as the Insured with coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The policy Must be issued on a standard ISO form CG 00 35 10 93 and include the following:  
Endorsed to include the Pollution Exclusion Amendment (ISO form CG 28 31 10 93)  
Endorsed to include the Limited Seepage and Pollution Endorsement.  
Endorsed to remove any exclusion for punitive damages.  
No other endorsements restricting coverage may be added.  
The original policy must be provided to the Railroad prior to performing any work or services under this Agreement

**Other Requirements:**

All policies (applying to coverage listed above) must not contain an exclusion for punitive damages and certificates of insurance must reflect that no exclusion exists.

Contractor agrees to waive its right of recovery against Railroad for all claims and suits against Railroad. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against Railroad for all claims and suits. The certificate of insurance must reflect the waiver of subrogation endorsement. Contractor further waives its right of recovery, and its insurers also waive their right of subrogation against Railroad for loss of its owned or leased property or property under contractor's care, custody or control.

Contractor's insurance policies through policy endorsement, must include wording which states that the policy is primary and non-contributing with respect to any insurance carried by Railroad. The certificate of insurance must reflect that the above wording is included in evidenced policies.

All policy(ies) required above (excluding Workers Compensation and if applicable, Railroad Protective) must include a severability of interest endorsement and Railroad must be named as an additional insured with respect to work performed under this agreement. Severability of interest and naming Railroad as additional insured must be indicated on the certificate of insurance.

Contractor is not allowed to self-insure without the prior written consent of Railroad. If granted by Railroad, any deductible, self-insured retention or other financial responsibility for claims must be covered directly by contractor in lieu of insurance. Any and all Railroad liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by contractor's insurance will be covered as if contractor elected not to include a deductible, self-insured retention or other financial responsibility for claims.

Prior to commencing the Work, contractor must furnish to Railroad an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments and referencing the contract audit/folder number if available. The policy(ies) must contain a provision that obligates the insurance company(ies) issuing such policy(ies) to notify Railroad in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration. This cancellation provision must be indicated on the certificate of insurance. Upon request from Railroad, a certified duplicate original of any required policy must be furnished. Contractor should send the certificate(s) to the following address:

**EBIX BPO**  
**PO Box 12010-BN**  
**Hemet, CA 92546-8010**  
**Fax number: 951-766-2299**  
**Email:**

Any insurance policy must be written by a reputable insurance company acceptable to Railroad or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provide.

Contractor represents that this Agreement has been thoroughly reviewed by contractor's insurance agent(s)/broker(s), who have been instructed by contractor to procure the insurance coverage required by this Agreement. Allocated Loss Expense must be in addition to all policy limits for coverages referenced above.

Not more frequently than once every five years, Railroad may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

If any portion of the operation is to be subcontracted by contractor, contractor must require that the subcontractor provide and maintain the insurance coverages set forth herein, naming Railroad as an additional insured, and requiring that the subcontractor release, defend and indemnify Railroad to the same extent and under the same terms and conditions as contractor is required to release, defend and indemnify Railroad herein.

Failure to provide evidence as required by this section will entitle, but not require, Railroad to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section will not operate as a waiver of contractor's obligations hereunder.

The fact that insurance (including, without limitation, self-insurance) is obtained by contractor will not be deemed to release or diminish the liability of contractor including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad will not be limited by the amount of the required insurance coverage.

For purposes of this section, Railroad means "Burlington Northern Santa Fe Corporation", "BNSF RAILWAY COMPANY" and the subsidiaries, successors, assigns and affiliates of each.

#### **Section 4. EXHIBIT "C" CONTRACTOR REQUIREMENTS**

The Contractor must observe and comply with the provisions, obligations, requirements and limitations contained in the Contract and the Contractor Requirements set forth on Exhibit "C" attached to the Contract and this Agreement, including, but not be limited to, payment of all costs incurred for any damages to Railway roadbed, tracks, and/or appurtenances thereto, resulting from use, occupancy, or presence of its employees, representatives, or agents or subcontractors on or about the construction site.

#### **Section 5. TRAIN DELAY**

Contractor is responsible for and hereby indemnifies and holds harmless Railway (including its affiliated railway companies, and its tenants) for, from and against all damages arising from any unscheduled delay to a freight or passenger train which affects Railway's ability to fully utilize its equipment and to meet customer service and contract obligations. Contractor will be billed, as further provided below, for the economic losses arising from loss of use of equipment, contractual loss of incentive pay and bonuses and contractual penalties resulting from train delays, whether caused by Contractor, or subcontractors, or by the Railway performing work under this Agreement. Railway agrees that it will not perform any act to unnecessarily cause train delay.

For loss of use of equipment, Contractor will be billed the current freight train hour rate per train as determined from Railway's records. Any disruption to train traffic may cause delays to multiple trains at the same time for the same period.

Additionally, the parties acknowledge that passenger, U.S. mail trains and certain other grain, intermodal, coal and freight trains operate under incentive/penalty contracts between Railway and its customer(s). Under these arrangements, if Railway does not meet its contract service commitments, Railway may suffer loss of performance or incentive pay and/or be subject to penalty payments. Contractor is responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway which are attributable to a train delay caused by Contractor or its subcontractors.

The contractual relationship between Railway and its customers is proprietary and confidential. In the event of a train delay covered by this Agreement, Railway will share information relevant to any train delay to the extent consistent with Railway confidentiality obligations. Damages for train delay for certain trains may be \$382.20 per hour per incident. The rate then in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of train delay pursuant to this agreement.

Contractor and its subcontractors must give Railway's representative 909 386 4079 eight (8) weeks advance notice of the times and dates for proposed work windows. Railway and Contractor will establish mutually agreeable work windows for the project. Railway has the right at any time to revise or change the work windows due to train operations or service obligations. Railway will not be responsible for any additional costs or expenses resulting from a change in work windows. Additional costs or expenses resulting from a change in work windows shall be accounted for in Contractor's expenses for the project.

Contractor and subcontractors must plan, schedule, coordinate and conduct all Contractor's work so as to not cause any delays to any trains.

Kindly acknowledge receipt of this letter by signing and returning to the Railway two original copies of this letter, which, upon execution by Railway, will constitute an Agreement between us.

\_\_\_\_\_  
(Contractor) BNSF Railway Company

By: \_\_\_\_\_  
Printed Name: \_\_\_\_\_  
Title: \_\_\_\_\_

By: \_\_\_\_\_  
Name: Melvin Thomas  
Manager Public Projects

Contact Person: \_\_\_\_\_ Accepted and effective this \_\_\_\_ day of 20\_\_.  
Address \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_ Zip: \_\_\_\_  
Fax: \_\_\_\_\_  
Phone: \_\_\_\_\_  
E-mail: \_\_\_\_\_

### Exhibit F

#### BNSF Bridge Requirements

##### BRIDGE DESIGN, PLANS & SPECIFICATIONS:

Except for the design of temporary falsework and shoring, BNSF review of the Structure plans will be limited to the vertical and horizontal clearances, sight distance for existing train signals, foundation dimensions and drainage characteristics as they relate to existing and future tracks. BNSF will not review structural design calculations for the permanent Structure unless a member or members are influenced by railroad live loads.

Temporary falsework and shoring plans and calculations must be reviewed and approved by BNSF prior to beginning construction. STATE shall perform an independent review of the design calculations for temporary falsework and shoring prior to submitting them to BNSF for approval. Temporary construction clearances must be no less than 15 feet measured horizontally from the centerline of the nearest track and 21 feet-6 inches measured vertically from the top of rail of the most elevated track to the bottom of lowest temporary falsework member. State regulatory agencies may have more restrictive requirements for temporary railroad clearances.

For the permanent Structure, STATE will submit plans showing the least horizontal distance from the centerline of existing and future tracks to the face of the nearest member of the proposed Structure. The location of the least horizontal distance must be accurately described such that BNSF can determine where it will occur in both the horizontal and vertical plane. The general policy of the BNSF with regard to bridge and related crash wall construction is to follow the current recommendations of the American Railway Engineering and Maintenance-of-Way Association (AREMA) Current AREMA recommended practice in Manual for Railway Engineering Chapter 8 (Art. 2.1.5.1). Crash Walls will not be required for the construction of the Cajon Boulevard Connectors Overpass Project, U.S. D.O.T. No. 027860A, as provided for in Article I of this Agreement.

For the permanent Structure, STATE will submit plans showing the least vertical clearance from top of the most elevated rail of existing and future tracks to the lowest point of the proposed Structure. Prior to beginning construction of the permanent Structure, the top of rail elevations should be checked and verified that they have not changed from the assumed elevations utilized for the design of the bridge.

Prior to issuing any invitation to bid on construction of the Structure, STATE should conduct a pre-bid meeting where prospective Contractors have the opportunity to communicate with BNSF personnel regarding site specific train speeds, train density, and general safety requirements for men and equipment working near live tracks. Any invitation to bid and specifications for the Structure must be submitted to BNSF for review and approval prior to letting of bids for the Project.

#### **BRIDGE CONSTRUCTION:**

After awarding the bid, but prior to the Contractor entering BNSF's railroad corridor or property, STATE should conduct a pre-construction meeting with BNSF personnel in attendance to reiterate the safety requirements of construction activity adjacent to live tracks.

During construction, BNSF may require an independent engineering inspector to be present during certain critical activities of the Project, including but not limited to: driving foundation piles, erecting falsework, construction of shoring and retaining walls, placing concrete, placing soil backfill and compaction processes. STATE shall reimburse BNSF for all costs of supplemental inspection services.

Within 90 days of the conclusion of the Project and final acceptance by BNSF, STATE will provide BNSF with a complete electronic set of the bridge plans. BNSF will also accept a marked up paper copy of the bridge plans labeled "As Built". The marked up paper copy of the plans will reflect any and all deviations from the original plans that occurred during construction. The electronic set of the bridge plans will be submitted in Micro Station \*.dgn electronic format (preferred) or AutoCAD \*.dwg format. Electronic plans are to be submitted in the original format used for CAD plan preparation and not converted to another format prior to submission. The "As Built" plans shall show actual measured "as constructed" clearances shall be shown as well as depth, size and location of all foundation components. The plans shall show dimensioned locations of existing and relocated utilities. It is understood that BNSF prefers to receive the "As Built" plans in an electronic format.

#### **BRIDGE MAINTENANCE:**

STATE will be responsible for maintenance and repair of the Structure including the earth retention components, embankment slopes, erosion control, surface drainage, fencing, deck drains, landscaping, paint, walkways, handrails, lighting, and other improvements associated with the Project.

Fencing and other pedestrian access controls within BNSF's rail corridor and incorporated into the Project shall be designed and maintained by STATE through construction. Trespasser control shall be the responsibility of STATE through construction. Graffiti removal will be the responsibility of STATE.

#### **BRIDGE INSPECTION:**

STATE will conduct annual routine structural inspections. In the event of an earthquake, fire, flood, damage from vehicular impacts or other emergent situations, STATE will provide an immediate inspection by qualified personnel and notify BNSF of damage that may affect safe passage of trains. If necessary STATE will embargo weights or provide lane closures or other such measures to protect the structural integrity of the Structure such that there can be continuous safe passage of trains until repairs are made.

## **BRIDGE ALTERATIONS:**

Except as provided otherwise by this Agreement, there will be no alterations made to the Structure that will alter the railroad vertical or horizontal clearances provided by the original design

It is expressly understood by STATE that the right to install utilities is restricted to the placement of underground utilities beneath BNSF's tracks located a minimum of fifty (50) feet from abutments, piers, piles, or footings. Under no circumstances will utilities be allowed to hang from the Structure, unless approved by BNSF. All utility crossings within the limits of BNSF's Rail Corridor will be covered by separate agreements between BNSF and each of the owners of the utilities.

### **13-2 HIGHLAND AVENUE OVERHEAD**

#### **1.01 General**

- 1.01.01 The Contractor must cooperate with BNSF RAILWAY COMPANY, hereinafter referred to as "BNSF" where work is over or under on or adjacent to BNSF property and/or right-of-way, hereafter referred to as "BNSF Property", during the construction of the Highland Avenue Overhead.
- 1.01.02 The Contractor must execute and deliver to the BNSF duplicate copies of the Exhibit "C-1" Agreement, in the form attached hereto, obligating the Contractor to provide and maintain in full force and effect the insurance called for under Section 3 of said Exhibit "C-1". Questions regarding procurement of the Railroad Protective Liability Insurance should be directed to Rosa Martinez at Marsh, USA, 214-303-8519.
- 1.01.03 The Contractor must plan, schedule and conduct all work activities so as not to interfere with the movement of any trains on BNSF Property.
- 1.01.04 The Contractor's right to enter BNSF's Property is subject to the absolute right of BNSF to cause the Contractor's work on BNSF's Property to cease if, in the opinion of BNSF, Contractor's activities create a hazard to BNSF's Property, employees, and/or operations. BNSF will have the right to stop construction work on the Project if any of the following events take place: (i) Contractor (or any of its subcontractors) performs the Project work in a manner contrary to the plans and specifications approved by BNSF; (ii) Contractor (or any of its subcontractors), in BNSF's opinion, prosecutes the Project work in a manner which is hazardous to BNSF property, facilities or the safe and expeditious movement of railroad traffic; (iii) the insurance described in the attached Exhibit C-1 is canceled during the course of the Project; or (iv) STATE OF CALIFORNIA acting through the Department of Transportation, hereinafter referred to as ("STATE") fails to pay BNSF for the Temporary Construction License or the Easement pursuant to Article II, Section 1 of this Agreement. The work stoppage will continue until all necessary actions are taken by Contractor or its subcontractor to rectify the situation to the satisfaction of BNSF's Division Engineer or until additional insurance has been delivered to and accepted by BNSF. In the event of a breach of (i) this Agreement, (ii) the Temporary Construction License, or (iii) the Easement, BNSF may immediately terminate the Temporary Construction License or the Easement. Any such work stoppage under this provision will not give rise to any liability on the part of BNSF. BNSF's right to stop the work is in addition to any other rights BNSF may have including, but not limited to, actions or suits for damages or lost profits. In the event that BNSF desires to stop construction work on the Project, BNSF agrees to immediately notify the following individual in writing:

**STATE's Resident Engineer  
850 S. Via Lata, Suite 100-A  
Colton, CA 92324**

- 1.01.05 The Contractor is responsible for determining and complying with all Federal, State and Local Governmental laws and regulations, including, but not limited to environmental laws and regulations (including but not limited to the Resource Conservation and Recovery Act, as amended; the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, CERCLA), and health and safety laws and regulations. The Contractor hereby indemnifies, defends and holds harmless BNSF for, from and against all fines or penalties imposed or assessed by Federal, State and Local Governmental Agencies against the BNSF which arise out of Contractor's work under this Agreement.

1.01.06 The Contractor must notify the STATE's Resident Engineer at, Fax No. (909) 825 1634 Telephone (951) 830-6864 and BNSF's Manager Public Projects, telephone number (909)-386-4472 at least thirty (30) calendar days before commencing any work on BNSF Property. Contractor's notification to BNSF, must refer to Railroad's file No. 026108J.

1.01.07 For any bridge demolition and/or falsework above any tracks or any excavations located with any part of the excavations located within, whichever is greater, twenty-five (25) feet of the nearest track or intersecting a slope from the plane of the top of rail on a 2 horizontal to 1 vertical slope beginning at eleven (11) feet from centerline of the nearest track, both measured perpendicular to center line of track, the Contractor must furnish the BNSF five sets of working drawings showing details of construction affecting BNSF Property and tracks. The working drawing must include the proposed method of installation and removal of falsework, shoring or cribbing, not included in the contract plans and two sets of structural calculations of any falsework, shoring or cribbing. For all excavation and shoring submittal plans, the current "BNSF-UPRR Guidelines for Temporary Shoring" must be used for determining the design loading conditions to be used in shoring design, and all calculations and submittals must be in accordance with the current "BNSF-UPRR Guidelines for Temporary Shoring". All submittal drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. All calculations must take into consideration railway surcharge loading and must be designed to meet American Railway Engineering and Maintenance-of-Way Association (previously known as American Railway Engineering Association) Coopers E-80 live loading standard. All drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. The Contractor must not begin work until notified by the BNSF that plans have been approved. The Contractor will be required to use lifting devices such as, cranes and/or winches to place or to remove any falsework over BNSF's tracks. In no case will the Contractor be relieved of responsibility for results obtained by the implementation of said approved plans.

1.01.08 Subject to the movement of BNSF's trains, BNSF will cooperate with the Contractor such that the work may be handled and performed in an efficient manner. The Contractor will have no claim whatsoever for any type of damages or for extra or additional compensation in the event his work is delayed by the BNSF.

## **1.02 Contractor Safety Orientation**

1.02.01 No employee of the Contractor, its subcontractors, agents or invitees may enter BNSF Property without first having completed BNSF's Engineering Contractor Safety Orientation, found on the web site . The Contractor must ensure that each of its employees, subcontractors, agents or invitees completes BNSF's Engineering Contractor Safety Orientation through internet sessions before any work is performed on the Project. Additionally, the Contractor must ensure that each and every one of its employees, subcontractors, agents or invitees possesses a card certifying completion of the BNSF Contractor Safety Orientation before entering BNSF Property. The Contractor is responsible for the cost of the BNSF Contractor Safety Orientation. The Contractor must renew the BNSF Contractor Safety Orientation annually. Further clarification can be found on the web site or from the BNSF's Representative.

## **1.03 BNSF Requirements**

1.03.01 The Contractor must take protective measures as are necessary to keep railway facilities, including track ballast, free of sand, debris, and other foreign objects and materials resulting from his operations. Any damage to railway facilities resulting from Contractor's operations will be repaired or replaced by BNSF and the cost of such repairs or replacement must be paid for by STATE.

1.03.02 Blasting shall not be allowed on or adjacent to BNSF property and/or right of way unless approved by the BNSF.

1.03.03 The Contractor must abide by the following temporary clearances during construction:

15'-0"	Horizontally from centerline of nearest track
21'-6"	Vertically above top of rail
27'-0"	Vertically above top of rail for electric wires carrying less than 750 volts
28'-0"	Vertically above top of rail for electric wires carrying 750 volts to 15,000 volts
30'-0"	Vertically above top of rail for electric wires carrying 15,000 volts to 20,000 volts
34'-0"	Vertically above top of rail for electric wires carrying more than 20,000 volts

1.03.04 Upon completion of construction, the following clearances shall be maintained:

10'-1"	Horizontally from centerline of nearest track
27'-10"	Vertically above top of rail

1.03.05 Any infringement within State statutory clearances due to the Contractor's operations must be submitted to the BNSF and to STATE and must not be undertaken until approved in writing by the BNSF, and until STATE has obtained any necessary authorization from the State Regulatory Authority for the infringement. No extra compensation will be allowed in the event the Contractor's work is delayed pending BNSF approval, and/or the State Regulatory Authority's approval.

1.03.06 In the case of impaired vertical clearance above top of rail, BNSF will have the option of installing tell-tales or other protective devices BNSF deems necessary for protection of BNSF operations. The cost of tell-tales or protective devices will be borne by STATE.

1.03.07 The details of construction affecting the BNSF's Property and tracks not included in the contract plans must be submitted to the BNSF by STATE for approval before work is undertaken and this work must not be undertaken until approved by the BNSF.

1.03.08 At other than public road crossings, the Contractor must not move any equipment or materials across BNSF's tracks until permission has been obtained from the BNSF. The Contractor must obtain a "Temporary Construction Crossing Agreement" from the BNSF prior to moving his equipment or materials across BNSF's tracks. The temporary crossing must be gated and locked at all times when not required for use by the Contractor. The temporary crossing for use of the Contractor will be constructed and at the completion of the project, removed at the expense of the Contractor.

1.03.09 Discharge, release or spill on BNSF Property of any hazardous substances, oil, petroleum, constituents, pollutants, contaminants, or any hazardous waste is prohibited and Contractor must immediately notify the BNSF's Resource Operations Center at (800) 832-5452, of any discharge, release or spills in excess of a reportable quantity. Contractor must not allow BNSF Property to become a treatment, storage or transfer facility as those terms are defined in the Resource Conservation and Recovery Act or any state analogue.

1.03.10 The Contractor upon completion of the work covered by this contract, must promptly remove from the BNSF's Property all of Contractor's tools, equipment, implements and other materials, whether brought upon said property by said Contractor or any Subcontractor, employee or agent of Contractor or of any Subcontractor, and must cause BNSF's Property to be left in a condition acceptable to the BNSF's representative.

#### **1.04 Contractor Roadway Worker on Track Safety Program and Safety Action Plan**

1.04.01 Each Contractor that will perform work within 25 feet of the centerline of a track must develop and implement a Roadway Worker Protection/On Track Safety Program and work with BNSF Project Representative to develop an on track safety strategy as described in the guidelines listed in the on track safety portion of the Safety Orientation. This Program must provide Roadway Worker protection/on track training for all employees of the Contractor, its subcontractors, agents or invitees. This training is reinforced at the job site through job safety briefings. Additionally, each Contractor must develop and implement the Safety Action Plan, as provided for on the web site, which will be made available to BNSF prior to commencement of any work on BNSF Property. During the performance of work, the Contractor must audit its work activities. The Contractor must designate an on-site Project Supervisor who will serve as the contact person for the BNSF and who will maintain a copy of the Safety Action Plan, safety audits, and Material Safety Datasheets (MSDS), at the job site.

1.04.02 Contractor shall have a background investigation performed on all of its employees, subcontractors and agents who will be performing any services on railroad property under this Agreement. The background screening shall at a minimum meet the criteria defined by the e-RAILSAFE program outlined in addition to any other applicable regulatory requirements. The e-RAILSAFE program uses rail industry background screening standards. Contractor shall obtain consent from all employees screened in compliance with the e-RAILSAFE program criteria to release completed background information to BNSF. Contractor shall be subject to periodic audit to ensure compliance.

Contractor shall not permit any of its employees, subcontractors or agents to perform services on property hereunder who are not approved under e-RAILSAFE program standards. Railroad shall have the right to deny entry onto its premises to any of Contractor's employees, subcontractors or agents who do not display the authorized identification badge issued by a background screening service meeting the standards set forth for the e-RAILSAFE program or who pose a threat, in Railroad's reasonable opinion, to the safety or security of Railroad's operations. Contractors shall ensure its employees, subcontractors and agents are United States citizens or legally working in this country under a work VISA.

### **1.05 Facilities and BNSF Flagger Services:**

- 1.05.01 The Contractor must give BNSF's Roadmaster (telephone 909 386 4061) a minimum of thirty (30) calendar days advance notice when flagging services will be required so that the Roadmaster can make appropriate arrangements (i.e., bulletin the flagger's position). If flagging services are scheduled in advance by the Contractor and it is subsequently determined by the parties hereto that such services are no longer necessary, the Contractor must give the Roadmaster five (5) working days advance notice so that appropriate arrangements can be made to abolish the position pursuant to union requirements.
- 1.05.02 Unless determined otherwise by BNSF's Project Representative, BNSF flagger will be required and furnished when Contractor's work activities are located over, under and/or within twenty-five (25) feet measured horizontally from centerline of the nearest track and when cranes or similar equipment positioned beyond 25-feet from the track centerline could foul the track in the event of tip over or other catastrophic occurrence, but not limited thereto for the following conditions:
- 1.05.02a When upon inspection by BNSF's Representative, other conditions warrant.
- 1.05.02b When any excavation is performed below the bottom of tie elevation, if, in the opinion of BNSF's representative, track or other BNSF facilities may be subject to movement or settlement.
- 1.05.02c When work in any way interferes with the safe operation of trains at timetable speeds.
- 1.05.02d When any hazard is presented to BNSF track, communications, signal, electrical, or other facilities either due to persons, material, equipment or blasting in the vicinity.
- 1.05.02e Special permission must be obtained from the BNSF before moving heavy or cumbersome objects or equipment which might result in making the track impassable.
- 1.05.03 Flagging services will be performed by qualified BNSF flaggers.
- 1.05.03a Flagging crew generally consists of one employee. However, additional personnel may be required to protect BNSF Property and operations, if deemed necessary by the BNSF's Representative.
- 1.05.03b Each time a flagger is called, the minimum period for billing will be the eight (8) hour basic day.
- 1.05.03c The cost of flagger services provided by the BNSF will be borne by STATE. The estimated cost for one (1) flagger is approximately between \$800.00 - \$1600.00 for an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays. The estimated cost for each flagger includes vacation allowance, paid holidays, Railway and unemployment insurance, public liability and property damage insurance, health and welfare benefits, vehicle transportation, meals, lodging, radio equipment, supervision and other costs incidental to performing flagging services. Negotiations for BNSF labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase actual or estimated flagging rates. The flagging rate in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of flagging pursuant to this paragraph.
- 1.05.03d The average train traffic on this route is 79 freight trains and 2 passenger trains per 24-hour period. Train timetable speeds are:  
Westward: 50 MPH Passenger, 35 MPH Freight  
Eastward: 60 MPH Passenger, 55 MPH Freight

## 1.06 Contractor General Safety Requirements

- 1.06.01 Work in the proximity of railway track(s) is potentially hazardous where movement of trains and equipment can occur at any time and in any direction. All work performed by contractors within 25 feet of any track must be in compliance with FRA Roadway Worker Protection Regulations.
- 1.06.02 Before beginning any task on BNSF Property, a thorough job safety briefing must be conducted with all personnel involved with the task and repeated when the personnel or task changes. If the task is within 25 feet of any track, the job briefing must include the BNSF's flagger, as applicable, and include the procedures the Contractor will use to protect its employees, subcontractors, agents or invitees from moving any equipment adjacent to or across any BNSF track(s).
- 1.06.03 Workers must not work within 25 feet of the centerline of any track without an on track safety strategy approved by the BNSF's Project Representative. When authority is provided, every contractor employee must know: (1) who the BNSF flagger is, and how to contact the flagger, (2) limits of the authority, (3) the method of communication to stop and resume work, and (4) location of the designated places of safety. Persons or equipment entering flag/work limits that were not previously job briefed, must notify the flagger immediately, and be given a job briefing when working within 25 feet of the center line of track.
- 1.06.04 When Contractor employees are required to work on the BNSF Property after normal working hours or on weekends, the Railroad's representative in charge of the project must be notified. A minimum of two employees must be present at all times.
- 1.06.05 Any employees, agents or invitees of Contractor or its subcontractors under suspicion of being under the influence of drugs or alcohol, or in the possession of same, will be removed from the BNSF's Property and subsequently released to the custody of a representative of Contractor management. Future access to the BNSF's Property by that employee will be denied.
- 1.06.06 Any damage to BNSF Property, or any hazard noticed on passing trains must be reported immediately to the BNSF's representative in charge of the project. Any vehicle or machine which may come in contact with track, signal equipment, or structure (bridge) and could result in a train derailment must be reported immediately to the BNSF representative in charge of the project and to the BNSF's Resource Operations Center at (800) 832-5452. Local emergency numbers are to be obtained from the BNSF representative in charge of the project prior to the start of any work and must be posted at the job site.
- 1.06.07 For safety reasons, all persons are prohibited from having pocket knives, firearms or other deadly weapons in their possession while working on BNSF's Property.
- 1.06.08 All personnel protective equipment (PPE) used on BNSF Property must meet applicable OSHA and ANSI specifications. Current BNSF personnel protective equipment requirements are listed on the web site, however, a partial list of the requirements include: a) safety glasses with permanently affixed side shields (no yellow lenses); b) hard hats c) safety shoe with: hardened toes, above-the-ankle lace-up and a defined heel; and d) high visibility retro-reflective work wear. The Railroad's representative in charge of the project is to be contacted regarding local specifications for meeting requirements relating to hi-visibility work wear. Hearing protection, fall protection, gloves, and respirators must be worn as required by State and Federal regulations. (NOTE – Should there be a discrepancy between the information contained on the web site and the information in this paragraph, the web site will govern.)
- 1.06.09 The Contractor must not pile or store any materials, machinery or equipment closer than 25'-0" to the center line of the nearest Railway track. Materials, machinery or equipment must not be stored or left within 250 feet of any highway/rail at-grade crossings OR TEMPORARY CONSTRUCTION CROSSING, where storage of the same will obstruct the view of a train approaching the crossing. Prior to beginning work, the Contractor must establish a storage area with concurrence of the Railroad's representative.
- 1.06.10 Machines or vehicles must not be left unattended with the engine running. Parked machines or equipment must be in gear with brakes set and if equipped with blade, pan or bucket, they must be lowered to the ground. All machinery and equipment left unattended on BNSF's Property must be left inoperable and secured against movement. (See internet Engineering Contractor Safety Orientation program for more detailed specifications)

1.06.11 Workers must not create and leave any conditions at the work site that would interfere with water drainage. Any work performed over water must meet all Federal, State and Local regulations.

1.06.12 All power line wires must be considered dangerous and of high voltage unless informed to the contrary by proper authority. For all power lines the minimum clearance between the lines and any part of the equipment or load must be; 200 KV or below - 15 feet; 200 to 350 KV - 20 feet; 350 to 500 KV - 25 feet; 500 to 750 KV - 35 feet; and 750 to 1000 KV - 45 feet. If capacity of the line is not known, a minimum clearance of 45 feet must be maintained. A person must be designated to observe clearance of the equipment and give a timely warning for all operations where it is difficult for an operator to maintain the desired clearance by visual means.

### **1.07 Excavation**

1.07.01 Before excavating, the Contractor must determine whether any underground pipe lines, electric wires, or cables, including fiber optic cable systems are present and located within the Project work area. The Contractor must determine whether excavation on BNSF's Property could cause damage to buried cables resulting in delay to BNSF traffic and disruption of service to users. Delays and disruptions to service may cause business interruptions involving loss of revenue and profits. Before commencing excavation, the Contractor must contact BNSF's Field Engineering Representative (909 386 4079). All underground and overhead wires will be considered HIGH VOLTAGE and dangerous until verified with the company having ownership of the line. It is the Contractor's responsibility to notify any other companies that have underground utilities in the area and arrange for the location of all underground utilities before excavating.

1.07.02 The Contractor must cease all work and notify the BNSF immediately before continuing excavation in the area if obstructions are encountered which do not appear on drawings. If the obstruction is a utility and the owner of the utility can be identified, then the Contractor must also notify the owner immediately. If there is any doubt about the location of underground cables or lines of any kind, no work must be performed until the exact location has been determined. There will be no exceptions to these instructions.

1.07.03 All excavations must be conducted in compliance with applicable OSHA regulations and, regardless of depth, must be shored where there is any danger to tracks, structures or personnel.

1.07.04 Any excavations, holes or trenches on the BNSF's Property must be covered, guarded and/or protected when not being worked on. When leaving work site areas at night and over weekends, the areas must be secured and left in a condition that will ensure that BNSF employees and other personnel who may be working or passing through the area are protected from all hazards. All excavations must be back filled as soon as possible.

### **1.08 Hazardous Waste, Substances and Material Reporting**

1.08.01 If Contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to BNSF's Property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this Agreement, Contractor must immediately: (a) notify the BNSF's Resource Operations Center at (800) 832-5452, of such discovery; (b) take safeguards necessary to protect its employees, subcontractors, agents and/or third parties; and (c) exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release.

### **1.09 Personal Injury Reporting**

1.09.01 The BNSF is required to report certain injuries as a part of compliance with Federal Railroad Administration (FRA) reporting requirements. Any personal injury sustained by an employee of the Contractor, subcontractor or Contractor's invitees while on the BNSF's Property must be reported immediately (by phone mail if unable to contact in person) to the BNSF's representative in charge of the project. The Non-Employee Personal Injury Data Collection Form contained herein is to be completed and sent by Fax to the BNSF at (817) 352-7595 and to the BNSF's Project Representative no later than the close of shift on the date of the injury.

**NON-EMPLOYEE PERSONAL INJURY DATA COLLECTION**

INFORMATION REQUIRED TO BE COLLECTED PURSUANT TO FEDERAL REGULATION. IT SHOULD BE USED FOR COMPLIANCE WITH FEDERAL REGULATIONS ONLY AND IS NOT INTENDED TO PRESUME ACCEPTANCE OF RESPONSIBILITY OR LIABILITY.

1. Accident City/St  
County:  
(if non-Railway location)
2. Date:  
3. Temperature:
- Time:  
4. Weather
5. Social Security #
6. Name (last, first, mi)
7. Address: Street: City: St. Zip:
8. Date of Birth: and/or Age Gender:  
(if available)
9. (a) Injury: (b) Body Part:  
(i.e. (a) Laceration (b) Hand)
11. Description of Accident (To include location, action, result, etc.):

12. Treatment:  
? First Aid Only  
? Required Medical Treatment  
? Other Medical Treatment

13. Dr. Name 30. Date:
14. Dr. Address: Street: City: St. Zip:
15. Hospital Name:
16. Hospital Address: Street: City: St. Zip:
17. Diagnosis:

FAX TO  
RAILWAY AT (817) 352-7595  
AND COPY TO  
BNSF ROADMASTER FAX 909-386-4843

**OVERHEAD EXHIBIT "C -1"**

**Agreement  
Between  
BNSF RAILWAY COMPANY  
and the  
CONTRACTOR**

**BNSF RAILWAY COMPANY**

**Attention: Manager Public Projects**

**Railway File: 026108J**

**Agency Project: Highland Avenue Overhead**

Gentlemen:

The undersigned (hereinafter called, the "Contractor"), has entered into a contract (the "Contract") dated \_\_\_\_\_, 200\_, with STATE OF CALIFORNIA, acting through the Department of Transportation, hereinafter referred to as ("STATE") for the performance of certain work in connection with the following project: construct the Highland Avenue Overhead Connectors, in San Bernardino, CA. Performance of such work will necessarily require contractor to enter BNSF RAILWAY COMPANY ("Railway") right of way and property ("Railway Property"). The Contract provides that no work will be commenced within Railway Property until the Contractor employed in connection with said work for STATE (i) executes and delivers to Railway an Agreement in the form hereof, and (ii) provides insurance of the coverage and limits specified in such Agreement and Section 3 herein. If this Agreement is executed by a party who is not the Owner, General Partner, President or Vice President of Contractor, Contractor must furnish evidence to Railway certifying that the signatory is empowered to execute this Agreement on behalf of Contractor.

Accordingly, in consideration of Railway granting permission to Contractor to enter upon Railway Property and as an inducement for such entry, Contractor, effective on the date of the Contract, has agreed and does hereby agree with Railway as follows:

**Section 1. RELEASE OF LIABILITY AND INDEMNITY**

Contractor hereby waives, releases, indemnifies, defends and holds harmless Railway for all judgments, awards, claims, demands, and expenses (including attorneys' fees), for injury or death to all persons, including Railway's and Contractor's officers and employees, and for loss and damage to property belonging to any person, arising in any manner from Contractor's or any of Contractor's subcontractors' acts or omissions or any work performed on or about Railway's property or right-of-way. THE LIABILITY ASSUMED BY CONTRACTOR WILL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DESTRUCTION, DAMAGE, DEATH, OR INJURY WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF RAILWAY, ITS AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE, UNLESS SUCH CLAIMS ARE PROXIMATELY CAUSED BY THE WILLFUL MISCONDUCT OR SOLE NEGLIGENCE OF RAILWAY.

THE INDEMNIFICATION OBLIGATION ASSUMED BY CONTRACTOR INCLUDES ANY CLAIMS, SUITS OR JUDGMENTS BROUGHT AGAINST RAILWAY UNDER THE FEDERAL EMPLOYEE'S LIABILITY ACT, INCLUDING CLAIMS FOR STRICT LIABILITY UNDER THE SAFETY APPLIANCE ACT OR THE LOCOMOTIVE INSPECTION ACT, WHENEVER SO CLAIMED.

Contractor further agrees, at its expense, in the name and on behalf of Railway, that it will adjust and settle all claims made against Railway, and will, at Railway's discretion, appear and defend any suits or actions of law or in equity brought against Railway on any claim or cause of action arising or growing out of or in any manner connected with any liability assumed by Contractor under this Agreement for which Railway is liable or is alleged to be liable. Railway will give notice to Contractor, in writing, of the receipt or dependency of such claims and thereupon Contractor must proceed to adjust and handle to a conclusion such claims, and in the event of a suit being brought against Railway, Railway may forward summons and complaint or other process in connection therewith to Contractor, and Contractor, at Railway's discretion, must defend, adjust, or settle such suits and protect, indemnify, and save harmless Railway from and against all damages, judgments, decrees, attorney's fees, costs, and expenses growing out of or resulting from or incident to any such claims or suits.

In addition to any other provision of this Agreement, in the event that all or any portion of this Article shall be deemed to be inapplicable for any reason, including without limitation as a result of a decision of an applicable court, legislative enactment or regulatory order, the parties agree that this Article shall be interpreted as requiring Contractor to indemnify Railroad to the fullest extent permitted by applicable law. THROUGH THIS AGREEMENT THE PARTIES EXPRESSLY INTEND FOR CONTRACTOR TO INDEMNIFY RAILROAD FOR RAILROAD'S ACTS OF NEGLIGENCE.

It is mutually understood and agreed that the assumption of liabilities and indemnification provided for in this Agreement survive any termination of this Agreement.

## **Section 2. TERM**

This Agreement is effective from the date of the Contract until (i) the completion of the project set forth herein, and (ii) full and complete payment to Railway of any and all sums or other amounts owing and due hereunder.

## **Section 3. INSURANCE**

Contractor must, at its sole cost and expense, procure and maintain during the life of this Agreement the following insurance coverage:

A. Commercial General Liability insurance. This insurance must contain broad form contractual liability with a combined single limit of a minimum of \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000. Coverage must be purchased on a post 1998 ISO occurrence form or equivalent and include coverage for, but not limit to the following:

- Bodily Injury and Property Damage
- Personal Injury and Advertising Injury
- Fire legal liability
- Products and completed operations

This policy must also contain the following endorsements, which must be indicated on the certificate of insurance:

It is agreed that any workers' compensation exclusion does not apply to Railroad payments related to the Federal Employers Liability Act or a Railroad Wage Continuation Program or similar programs and any payments made are deemed not to be either payments made or obligations assumed under any Workers Compensation, disability benefits, or unemployment compensation law or similar law.

The definition of insured contract must be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.

Any exclusions related to the explosion, collapse and underground hazards must be removed.

No other endorsements limiting coverage as respects obligations under this Agreement may be included on the policy.

B. Business Automobile Insurance. This insurance must contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:

- Bodily injury and property damage
- Any and all vehicles owned, used or hired

C. Workers Compensation and Employers Liability insurance including coverage for, but not limited to: California's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.

Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

D. Railroad Protective Liability insurance naming only the Railroad as the Insured with coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The policy Must be issued on a standard ISO form CG 00 35 10 93 and include the following:

Endorsed to include the Pollution Exclusion Amendment (ISO form CG 28 31 10 93)

Endorsed to include the Limited Seepage and Pollution Endorsement.

Endorsed to remove any exclusion for punitive damages.

No other endorsements restricting coverage may be added.

The original policy must be provided to the Railroad prior to performing any work or services under this Agreement

#### **Other Requirements:**

All policies (applying to coverage listed above) must not contain an exclusion for punitive damages and certificates of insurance must reflect that no exclusion exists.

Contractor agrees to waive its right of recovery against Railroad for all claims and suits against Railroad. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against Railroad for all claims and suits. The certificate of insurance must reflect the waiver of subrogation endorsement. Contractor further waives its right of recovery, and its insurers also waive their right of subrogation against Railroad for loss of its owned or leased property or property under contractor's care, custody or control.

Contractor's insurance policies through policy endorsement, must include wording which states that the policy is primary and non-contributing with respect to any insurance carried by Railroad. The certificate of insurance must reflect that the above wording is included in evidenced policies.

All policy(ies) required above (excluding Workers Compensation and if applicable, Railroad Protective) must include a severability of interest endorsement and Railroad must be named as an additional insured with respect to work performed under this agreement. Severability of interest and naming Railroad as additional insured must be indicated on the certificate of insurance.

Contractor is not allowed to self-insure without the prior written consent of Railroad. If granted by Railroad, any deductible, self-insured retention or other financial responsibility for claims must be covered directly by contractor in lieu of insurance. Any and all Railroad liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by contractor's insurance will be covered as if contractor elected not to include a deductible, self-insured retention or other financial responsibility for claims.

Prior to commencing the Work, contractor must furnish to Railroad an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments and referencing the contract audit/folder number if available. The policy(ies) must contain a provision that obligates the insurance company(ies) issuing such policy(ies) to notify Railroad in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration. This cancellation provision must be indicated on the certificate of insurance. Upon request from Railroad, a certified duplicate original of any required policy must be furnished. Contractor should send the certificate(s) to the following address:

**EBIX BPO**  
**PO Box 12010-BN**  
**Hemet, CA 92546-8010**  
**Fax number: 951-766-2299**  
**Email:**

Any insurance policy must be written by a reputable insurance company acceptable to Railroad or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provide.

Contractor represents that this Agreement has been thoroughly reviewed by contractor's insurance agent(s)/broker(s), who have been instructed by contractor to procure the insurance coverage required by this Agreement. Allocated Loss Expense must be in addition to all policy limits for coverages referenced above.

Not more frequently than once every five years, Railroad may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

If any portion of the operation is to be subcontracted by contractor, contractor must require that the subcontractor provide and maintain the insurance coverages set forth herein, naming Railroad as an additional insured, and requiring that the subcontractor release, defend and indemnify Railroad to the same extent and under the same terms and conditions as contractor is required to release, defend and indemnify Railroad herein.

Failure to provide evidence as required by this section will entitle, but not require, Railroad to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section will not operate as a waiver of contractor's obligations hereunder.

The fact that insurance (including, without limitation, self-insurance) is obtained by contractor will not be deemed to release or diminish the liability of contractor including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad will not be limited by the amount of the required insurance coverage.

For purposes of this section, Railroad means "Burlington Northern Santa Fe Corporation", "BNSF RAILWAY COMPANY" and the subsidiaries, successors, assigns and affiliates of each.

#### **Section 4. EXHIBIT "C" CONTRACTOR REQUIREMENTS**

The Contractor must observe and comply with the provisions, obligations, requirements and limitations contained in the Contract and the Contractor Requirements set forth on Exhibit "C" attached to the Contract and this Agreement, including, but not be limited to, payment of all costs incurred for any damages to Railway roadbed, tracks, and/or appurtenances thereto, resulting from use, occupancy, or presence of its employees, representatives, or agents or subcontractors on or about the construction site.

#### **Section 5. TRAIN DELAY**

Contractor is responsible for and hereby indemnifies and holds harmless Railway (including its affiliated railway companies, and its tenants) for, from and against all damages arising from any unscheduled delay to a freight or passenger train which affects Railway's ability to fully utilize its equipment and to meet customer service and contract obligations. Contractor will be billed, as further provided below, for the economic losses arising from loss of use of equipment, contractual loss of incentive pay and bonuses and contractual penalties resulting from train delays, whether caused by Contractor, or subcontractors, or by the Railway performing work under this Agreement. Railway agrees that it will not perform any act to unnecessarily cause train delay.

For loss of use of equipment, Contractor will be billed the current freight train hour rate per train as determined from Railway's records. Any disruption to train traffic may cause delays to multiple trains at the same time for the same period.

Additionally, the parties acknowledge that passenger, U.S. mail trains and certain other grain, intermodal, coal and freight trains operate under incentive/penalty contracts between Railway and its customer(s). Under these arrangements, if Railway does not meet its contract service commitments, Railway may suffer loss of performance or incentive pay and/or be subject to penalty payments. Contractor is responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway which are attributable to a train delay caused by Contractor or its subcontractors.

The contractual relationship between Railway and its customers is proprietary and confidential. In the event of a train delay covered by this Agreement, Railway will share information relevant to any train delay to the extent consistent with Railway confidentiality obligations. Damages for train delay for certain trains may be \$382.20 per hour per incident. The rate then in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of train delay pursuant to this agreement.

Contractor and its subcontractors must give Railway's representative 909 386 4079 eight (8) weeks advance notice of the times and dates for proposed work windows. Railway and Contractor will establish mutually agreeable work windows for the project. Railway has the right at any time to revise or change the work windows due to train operations or service obligations. Railway will not be responsible for any additional costs or expenses resulting from a change in work windows. Additional costs or expenses resulting from a change in work windows shall be accounted for in Contractor's expenses for the project.

Contractor and subcontractors must plan, schedule, coordinate and conduct all Contractor's work so as to not cause any delays to any trains.

Kindly acknowledge receipt of this letter by signing and returning to the Railway two original copies of this letter, which, upon execution by Railway, will constitute an Agreement between us.

\_\_\_\_\_  
(Contractor) BNSF Railway Company

By: \_\_\_\_\_ By: \_\_\_\_\_  
Printed Name: \_\_\_\_\_ Name: Melvin Thomas  
Title: \_\_\_\_\_ Manager Public Projects

Contact Person: \_\_\_\_\_ Accepted and effective this \_\_\_\_ day of 20\_\_.  
Address \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_ Zip: \_\_\_\_  
Fax:  
Phone:  
E-mail:

**Exhibit F**

**BNSF Bridge Requirements**

**BRIDGE DESIGN, PLANS & SPECIFICATIONS:**

Except for the design of temporary falsework and shoring, BNSF review of the Structure plans will be limited to the vertical and horizontal clearances, sight distance for existing train signals, foundation dimensions and drainage characteristics as they relate to existing and future tracks. BNSF will not review structural design calculations for the permanent Structure unless a member or members are influenced by railroad live loads.

Temporary falsework and shoring plans and calculations must be reviewed and approved by BNSF prior to beginning construction. STATE shall perform an independent review of the design calculations for temporary falsework and shoring prior to submitting them to BNSF for approval. Temporary construction clearances must be no less than 15 feet measured horizontally from the centerline of the nearest track and 21 feet-6 inches measured vertically from the top of rail of the most elevated track to the bottom of lowest temporary falsework member. State regulatory agencies may have more restrictive requirements for temporary railroad clearances.

For the permanent Structure, STATE will submit plans showing the least horizontal distance from the centerline of existing and future tracks to the face of the nearest member of the proposed Structure. The location of the least horizontal distance must be accurately described such that BNSF can determine where it will occur in both the horizontal and vertical plane. If the permanent member is within 25 feet of the nearest track (or future track), collision walls shall be incorporated into the permanent Structure design according to American Railway Engineering and Maintenance Association Manual of Recommended Practice - Chapter 8 - Article 2.1.5.

For the permanent Structure, STATE will submit plans showing the least vertical clearance from top of the most elevated rail of existing and future tracks to the lowest point of the proposed Structure. Prior to beginning construction of the permanent Structure, the top of rail elevations should be checked and verified that they have not changed from the assumed elevations utilized for the design of the bridge.

Prior to issuing any invitation to bid on construction of the Structure, STATE should conduct a pre-bid meeting where prospective Contractors have the opportunity to communicate with BNSF personnel regarding site specific train speeds, train density, and general safety requirements for men and equipment working near live tracks. Any invitation to bid and specifications for the Structure must be submitted to BNSF for review and approval prior to letting of bids for the Project.

**BRIDGE CONSTRUCTION:**

After awarding the bid, but prior to the Contractor entering BNSF's railroad corridor or property, STATE should conduct a pre-construction meeting with BNSF personnel in attendance to reiterate the safety requirements of construction activity adjacent to live tracks.

During construction, BNSF may require an independent engineering inspector to be present during certain critical activities of the Project, including but not limited to: driving foundation piles, erecting falsework, construction of shoring and retaining walls, placing concrete, placing soil backfill and compaction processes. STATE shall reimburse BNSF for all costs of supplemental inspection services.

Within 90 days of the conclusion of the Project and final acceptance by BNSF, STATE will provide BNSF with a complete electronic set of the bridge plans. BNSF will also accept a marked up paper copy of the bridge plans labeled "As Built". The marked up paper copy of the plans will reflect any and all deviations from the original plans that occurred during construction. The electronic set of the bridge plans will be submitted in Micro Station \*.dgn electronic format (preferred) or AutoCAD \*.dwg format. Electronic plans are to be submitted in the original format used for CAD plan preparation and not converted to another format prior to submission. The "As Built" plans shall show actual measured "as constructed" clearances shall be shown as well as depth, size and location of all foundation components. The plans shall show dimensioned locations of existing and relocated utilities. It is understood that BNSF prefers to receive the "As Built" plans in an electronic format.

**BRIDGE MAINTENANCE:**

STATE will be responsible for maintenance and repair of the Structure including the earth retention components, embankment slopes, erosion control, surface drainage, fencing, deck drains, landscaping, paint, walkways, handrails, lighting, and other improvements associated with the Project.

Fencing and other pedestrian access controls within BNSF's rail corridor and incorporated into the Project shall be designed and maintained by STATE through construction. Trespasser control shall be the responsibility of STATE through construction. Graffiti removal will be the responsibility of STATE.

**BRIDGE INSPECTION:**

STATE will conduct annual routine structural inspections. In the event of an earthquake, fire, flood, damage from vehicular impacts or other emergent situations, STATE will provide an immediate inspection by qualified personnel and notify BNSF of damage that may affect safe passage of trains. If necessary STATE will embargo weights or provide lane closures or other such measures to protect the structural integrity of the Structure such that there can be continuous safe passage of trains until repairs are made.

**BRIDGE ALTERATIONS:**

Except as provided otherwise by this Agreement, there will be no alterations made to the Structure that will alter the railroad vertical or horizontal clearances provided by the original design

It is expressly understood by STATE that the right to install utilities is restricted to the placement of underground utilities beneath BNSF's tracks located a minimum of fifty (50) feet from abutments, piers, piles, or footings. Under no circumstances will utilities be allowed to hang from the Structure, unless approved by BNSF. All utility crossings within the limits of BNSF's Rail Corridor will be covered by separate agreements between BNSF and each of the owners of the utilities.

### 13-3 MASSACHUSETTS AVENUE OVERHEAD

#### 1.01 General

- 1.01.01 The Contractor must cooperate with BNSF RAILWAY COMPANY, hereinafter referred to as "BNSF" where work is over or under on or adjacent to BNSF property and/or right-of-way, hereafter referred to as "BNSF Property", during the construction of the Massachusetts Avenue Overhead.
- 1.01.02 The Contractor must execute and deliver to the BNSF duplicate copies of the Exhibit "C-1" Agreement, in the form attached hereto, obligating the Contractor to provide and maintain in full force and effect the insurance called for under Section 3 of said Exhibit "C-1". Questions regarding procurement of the Railroad Protective Liability Insurance should be directed to Rosa Martinez at Marsh, USA, 214-303-8519.
- 1.01.03 The Contractor must plan, schedule and conduct all work activities so as not to interfere with the movement of any trains on BNSF Property.
- 1.01.04 The Contractor's right to enter BNSF's Property is subject to the absolute right of BNSF to cause the Contractor's work on BNSF's Property to cease if, in the opinion of BNSF, Contractor's activities create a hazard to BNSF's Property, employees, and/or operations. BNSF will have the right to stop construction work on the Project if any of the following events take place: (i) Contractor (or any of its subcontractors) performs the Project work in a manner contrary to the plans and specifications approved by BNSF; (ii) Contractor (or any of its subcontractors), in BNSF's opinion, prosecutes the Project work in a manner which is hazardous to BNSF property, facilities or the safe and expeditious movement of railroad traffic; (iii) the insurance described in the attached Exhibit C-1 is canceled during the course of the Project; or (iv) STATE OF CALIFORNIA acting through the Department of Transportation, hereinafter referred to as ("STATE") fails to pay BNSF for the Temporary Construction License or the Easement pursuant to Article II, Section 1 of this Agreement. The work stoppage will continue until all necessary actions are taken by Contractor or its subcontractor to rectify the situation to the satisfaction of BNSF's Division Engineer or until additional insurance has been delivered to and accepted by BNSF. In the event of a breach of (i) this Agreement, (ii) the Temporary Construction License, or (iii) the Easement, BNSF may immediately terminate the Temporary Construction License or the Easement. Any such work stoppage under this provision will not give rise to any liability on the part of BNSF. BNSF's right to stop the work is in addition to any other rights BNSF may have including, but not limited to, actions or suits for damages or lost profits. In the event that BNSF desires to stop construction work on the Project, BNSF agrees to immediately notify the following individual in writing:

**STATE's Resident Engineer**  
**850 S. Via Lata, Suite 100-A**  
**Colton, CA 92324**

- 1.01.05 The Contractor is responsible for determining and complying with all Federal, State and Local Governmental laws and regulations, including, but not limited to environmental laws and regulations (including but not limited to the Resource Conservation and Recovery Act, as amended; the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, CERCLA), and health and safety laws and regulations. The Contractor hereby indemnifies, defends and holds harmless BNSF for, from and against all fines or penalties imposed or assessed by Federal, State and Local Governmental Agencies against the BNSF which arise out of Contractor's work under this Agreement.
- 1.01.06 The Contractor must notify the STATE's Resident Engineer at, Fax No. (909) 825 1634 Telephone (951) 830-6864 and BNSF's Manager Public Projects, telephone number (909)-386-4472 at least thirty (30) calendar days before commencing any work on BNSF Property. Contractor's notification to BNSF, must refer to Railroad's file No. 026109R.

1.01.07 For any bridge demolition and/or falsework above any tracks or any excavations located with any part of the excavations located within, whichever is greater, twenty-five (25) feet of the nearest track or intersecting a slope from the plane of the top of rail on a 2 horizontal to 1 vertical slope beginning at eleven (11) feet from centerline of the nearest track, both measured perpendicular to center line of track, the Contractor must furnish the BNSF five sets of working drawings showing details of construction affecting BNSF Property and tracks. The working drawing must include the proposed method of installation and removal of falsework, shoring or cribbing, not included in the contract plans and two sets of structural calculations of any falsework, shoring or cribbing. For all excavation and shoring submittal plans, the current "BNSF-UPRR Guidelines for Temporary Shoring" must be used for determining the design loading conditions to be used in shoring design, and all calculations and submittals must be in accordance with the current "BNSF-UPRR Guidelines for Temporary Shoring". All submittal drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. All calculations must take into consideration railway surcharge loading and must be designed to meet American Railway Engineering and Maintenance-of-Way Association (previously known as American Railway Engineering Association) Coopers E-80 live loading standard. All drawings and calculations must be stamped by a registered professional engineer licensed to practice in the state the project is located. The Contractor must not begin work until notified by the BNSF that plans have been approved. The Contractor will be required to use lifting devices such as, cranes and/or winches to place or to remove any falsework over BNSF's tracks. In no case will the Contractor be relieved of responsibility for results obtained by the implementation of said approved plans.

1.01.08 Subject to the movement of BNSF's trains, BNSF will cooperate with the Contractor such that the work may be handled and performed in an efficient manner. The Contractor will have no claim whatsoever for any type of damages or for extra or additional compensation in the event his work is delayed by the BNSF.

## **1.02 Contractor Safety Orientation**

1.02.01 No employee of the Contractor, its subcontractors, agents or invitees may enter BNSF Property without first having completed BNSF's Engineering Contractor Safety Orientation, found on the web site . The Contractor must ensure that each of its employees, subcontractors, agents or invitees completes BNSF's Engineering Contractor Safety Orientation through internet sessions before any work is performed on the Project. Additionally, the Contractor must ensure that each and every one of its employees, subcontractors, agents or invitees possesses a card certifying completion of the BNSF Contractor Safety Orientation before entering BNSF Property. The Contractor is responsible for the cost of the BNSF Contractor Safety Orientation. The Contractor must renew the BNSF Contractor Safety Orientation annually. Further clarification can be found on the web site or from the BNSF's Representative.

## **1.03 BNSF Requirements**

1.03.01 The Contractor must take protective measures as are necessary to keep railway facilities, including track ballast, free of sand, debris, and other foreign objects and materials resulting from his operations. Any damage to railway facilities resulting from Contractor's operations will be repaired or replaced by BNSF and the cost of such repairs or replacement must be paid for by STATE.

1.03.02 Blasting shall not be allowed on or adjacent to BNSF property and/or right of way unless approved by the BNSF.

1.03.03 The Contractor must abide by the following temporary clearances during construction:

15'-0"	Horizontally from centerline of nearest track
21'-6"	Vertically above top of rail
27'-0"	Vertically above top of rail for electric wires carrying less than 750 volts
28'-0"	Vertically above top of rail for electric wires carrying 750 volts to 15,000 volts
30'-0"	Vertically above top of rail for electric wires carrying 15,000 volts to 20,000 volts
34'-0"	Vertically above top of rail for electric wires carrying more than 20,000 volts

1.03.04 Upon completion of construction, the following clearances shall be maintained:

16'-4.5"	Horizontally from centerline of nearest track
26'-0"	Vertically above top of rail

- 1.03.05 Any infringement within State statutory clearances due to the Contractor's operations must be submitted to the BNSF and to STATE and must not be undertaken until approved in writing by the BNSF, and until STATE has obtained any necessary authorization from the State Regulatory Authority for the infringement. No extra compensation will be allowed in the event the Contractor's work is delayed pending BNSF approval, and/or the State Regulatory Authority's approval.
- 1.03.06 In the case of impaired vertical clearance above top of rail, BNSF will have the option of installing tell-tales or other protective devices BNSF deems necessary for protection of BNSF operations. The cost of tell-tales or protective devices will be borne by STATE.
- 1.03.07 The details of construction affecting the BNSF's Property and tracks not included in the contract plans must be submitted to the BNSF by STATE for approval before work is undertaken and this work must not be undertaken until approved by the BNSF.
- 1.03.08 At other than public road crossings, the Contractor must not move any equipment or materials across BNSF's tracks until permission has been obtained from the BNSF. The Contractor must obtain a "Temporary Construction Crossing Agreement" from the BNSF prior to moving his equipment or materials across BNSF's tracks. The temporary crossing must be gated and locked at all times when not required for use by the Contractor. The temporary crossing for use of the Contractor will be constructed and at the completion of the project, removed at the expense of the Contractor.
- 1.03.09 Discharge, release or spill on BNSF Property of any hazardous substances, oil, petroleum, constituents, pollutants, contaminants, or any hazardous waste is prohibited and Contractor must immediately notify the BNSF's Resource Operations Center at (800) 832-5452, of any discharge, release or spills in excess of a reportable quantity. Contractor must not allow BNSF Property to become a treatment, storage or transfer facility as those terms are defined in the Resource Conservation and Recovery Act or any state analogue.
- 1.03.10 The Contractor upon completion of the work covered by this contract, must promptly remove from the BNSF's Property all of Contractor's tools, equipment, implements and other materials, whether brought upon said property by said Contractor or any Subcontractor, employee or agent of Contractor or of any Subcontractor, and must cause BNSF's Property to be left in a condition acceptable to the BNSF's representative.

#### **1.04 Contractor Roadway Worker on Track Safety Program and Safety Action Plan**

- 1.04.01 Each Contractor that will perform work within 25 feet of the centerline of a track must develop and implement a Roadway Worker Protection/On Track Safety Program and work with BNSF Project Representative to develop an on track safety strategy as described in the guidelines listed in the on track safety portion of the Safety Orientation. This Program must provide Roadway Worker protection/on track training for all employees of the Contractor, its subcontractors, agents or invitees. This training is reinforced at the job site through job safety briefings. Additionally, each Contractor must develop and implement the Safety Action Plan, as provided for on the web site, which will be made available to BNSF prior to commencement of any work on BNSF Property. During the performance of work, the Contractor must audit its work activities. The Contractor must designate an on-site Project Supervisor who will serve as the contact person for the BNSF and who will maintain a copy of the Safety Action Plan, safety audits, and Material Safety Datasheets (MSDS), at the job site.
- 1.04.02 Contractor shall have a background investigation performed on all of its employees, subcontractors and agents who will be performing any services on railroad property under this Agreement. The background screening shall at a minimum meet the criteria defined by the e-RAILSAFE program outlined in addition to any other applicable regulatory requirements. The e-RAILSAFE program uses rail industry background screening standards. Contractor shall obtain consent from all employees screened in compliance with the e-RAILSAFE program criteria to release completed background information to BNSF. Contractor shall be subject to periodic audit to ensure compliance. Contractor shall not permit any of its employees, subcontractors or agents to perform services on property hereunder who are not approved under e-RAILSAFE program standards. Railroad shall have the right to deny entry onto its premises to any of Contractor's employees, subcontractors or agents who do not display the authorized identification badge issued by a background screening service meeting the standards set forth for the e-RAILSAFE program or who pose a threat, in Railroad's reasonable opinion, to the safety or security of Railroad's operations.

Contractors shall ensure its employees, subcontractors and agents are United States citizens or legally working in this country under a work VISA.

#### **1.05 Facilities and BNSF Flagger Services:**

- 1.05.01 The Contractor must give BNSF's Roadmaster (telephone 909 386 4061) a minimum of thirty (30) calendar days advance notice when flagging services will be required so that the Roadmaster can make appropriate arrangements (i.e., bulletin the flagger's position). If flagging services are scheduled in advance by the Contractor and it is subsequently determined by the parties hereto that such services are no longer necessary, the Contractor must give the Roadmaster five (5) working days advance notice so that appropriate arrangements can be made to abolish the position pursuant to union requirements.
- 1.05.02 Unless determined otherwise by BNSF's Project Representative, BNSF flagger will be required and furnished when Contractor's work activities are located over, under and/or within twenty-five (25) feet measured horizontally from centerline of the nearest track and when cranes or similar equipment positioned beyond 25-feet from the track centerline could foul the track in the event of tip over or other catastrophic occurrence, but not limited thereto for the following conditions:
- 1.05.02a When upon inspection by BNSF's Representative, other conditions warrant.
- 1.05.02b When any excavation is performed below the bottom of tie elevation, if, in the opinion of BNSF's representative, track or other BNSF facilities may be subject to movement or settlement.
- 1.05.02c When work in any way interferes with the safe operation of trains at timetable speeds.
- 1.05.02d When any hazard is presented to BNSF track, communications, signal, electrical, or other facilities either due to persons, material, equipment or blasting in the vicinity.
- 1.05.02e Special permission must be obtained from the BNSF before moving heavy or cumbersome objects or equipment which might result in making the track impassable.
- 1.05.03 Flagging services will be performed by qualified BNSF flaggers.
- 1.05.03a Flagging crew generally consists of one employee. However, additional personnel may be required to protect BNSF Property and operations, if deemed necessary by the BNSF's Representative.
- 1.05.03b Each time a flagger is called, the minimum period for billing will be the eight (8) hour basic day.
- 1.05.03c The cost of flagger services provided by the BNSF will be borne by STATE. The estimated cost for one (1) flagger is approximately between \$800.00 - \$1600.00 for an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays. The estimated cost for each flagger includes vacation allowance, paid holidays, Railway and unemployment insurance, public liability and property damage insurance, health and welfare benefits, vehicle transportation, meals, lodging, radio equipment, supervision and other costs incidental to performing flagging services. Negotiations for BNSF labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase actual or estimated flagging rates. The flagging rate in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of flagging pursuant to this paragraph.
- 1.05.03d The average train traffic on this route is 79 freight trains and 2 passenger trains per 24-hour period. Train timetable speeds are:  
Westward: 50 MPH Passenger, 35 MPH Freight  
Eastward: 60 MPH Passenger, 55 MPH Freight

#### **1.06 Contractor General Safety Requirements**

- 1.06.01 Work in the proximity of railway track(s) is potentially hazardous where movement of trains and equipment can occur at any time and in any direction. All work performed by contractors within 25 feet of any track must be in compliance with FRA Roadway Worker Protection Regulations.

- 1.06.02 Before beginning any task on BNSF Property, a thorough job safety briefing must be conducted with all personnel involved with the task and repeated when the personnel or task changes. If the task is within 25 feet of any track, the job briefing must include the BNSF's flagger, as applicable, and include the procedures the Contractor will use to protect its employees, subcontractors, agents or invitees from moving any equipment adjacent to or across any BNSF track(s).
- 1.06.03 Workers must not work within 25 feet of the centerline of any track without an on track safety strategy approved by the BNSF's Project Representative. When authority is provided, every contractor employee must know: (1) who the BNSF flagger is, and how to contact the flagger, (2) limits of the authority, (3) the method of communication to stop and resume work, and (4) location of the designated places of safety. Persons or equipment entering flag/work limits that were not previously job briefed, must notify the flagger immediately, and be given a job briefing when working within 25 feet of the center line of track.
- 1.06.04 When Contractor employees are required to work on the BNSF Property after normal working hours or on weekends, the Railroad's representative in charge of the project must be notified. A minimum of two employees must be present at all times.
- 1.06.05 Any employees, agents or invitees of Contractor or its subcontractors under suspicion of being under the influence of drugs or alcohol, or in the possession of same, will be removed from the BNSF's Property and subsequently released to the custody of a representative of Contractor management. Future access to the BNSF's Property by that employee will be denied.
- 1.06.06 Any damage to BNSF Property, or any hazard noticed on passing trains must be reported immediately to the BNSF's representative in charge of the project. Any vehicle or machine which may come in contact with track, signal equipment, or structure (bridge) and could result in a train derailment must be reported immediately to the BNSF representative in charge of the project and to the BNSF's Resource Operations Center at (800) 832-5452. Local emergency numbers are to be obtained from the BNSF representative in charge of the project prior to the start of any work and must be posted at the job site.
- 1.06.07 For safety reasons, all persons are prohibited from having pocket knives, firearms or other deadly weapons in their possession while working on BNSF's Property.
- 1.06.08 All personnel protective equipment (PPE) used on BNSF Property must meet applicable OSHA and ANSI specifications. Current BNSF personnel protective equipment requirements are listed on the web site, , however, a partial list of the requirements include: a) safety glasses with permanently affixed side shields (no yellow lenses); b) hard hats c) safety shoe with: hardened toes, above-the-ankle lace-up and a defined heel; and d) high visibility retro-reflective work wear. The Railroad's representative in charge of the project is to be contacted regarding local specifications for meeting requirements relating to hi-visibility work wear. Hearing protection, fall protection, gloves, and respirators must be worn as required by State and Federal regulations. (NOTE – Should there be a discrepancy between the information contained on the web site and the information in this paragraph, the web site will govern.)
- 1.06.09 The Contractor must not pile or store any materials, machinery or equipment closer than 25'-0" to the center line of the nearest Railway track. Materials, machinery or equipment must not be stored or left within 250 feet of any highway/rail at-grade crossings OR TEMPORARY CONSTRUCTION CROSSING, where storage of the same will obstruct the view of a train approaching the crossing. Prior to beginning work, the Contractor must establish a storage area with concurrence of the Railroad's representative.
- 1.06.10 Machines or vehicles must not be left unattended with the engine running. Parked machines or equipment must be in gear with brakes set and if equipped with blade, pan or bucket, they must be lowered to the ground. All machinery and equipment left unattended on BNSF's Property must be left inoperable and secured against movement. (See internet Engineering Contractor Safety Orientation program for more detailed specifications)
- 1.06.11 Workers must not create and leave any conditions at the work site that would interfere with water drainage. Any work performed over water must meet all Federal, State and Local regulations.

1.06.12 All power line wires must be considered dangerous and of high voltage unless informed to the contrary by proper authority. For all power lines the minimum clearance between the lines and any part of the equipment or load must be; 200 KV or below - 15 feet; 200 to 350 KV - 20 feet; 350 to 500 KV - 25 feet; 500 to 750 KV - 35 feet; and 750 to 1000 KV - 45 feet. If capacity of the line is not known, a minimum clearance of 45 feet must be maintained. A person must be designated to observe clearance of the equipment and give a timely warning for all operations where it is difficult for an operator to maintain the desired clearance by visual means.

### **1.07 Excavation**

1.07.01 Before excavating, the Contractor must determine whether any underground pipe lines, electric wires, or cables, including fiber optic cable systems are present and located within the Project work area. The Contractor must determine whether excavation on BNSF's Property could cause damage to buried cables resulting in delay to BNSF traffic and disruption of service to users. Delays and disruptions to service may cause business interruptions involving loss of revenue and profits. Before commencing excavation, the Contractor must contact BNSF's Field Engineering Representative (909 386 4079). All underground and overhead wires will be considered HIGH VOLTAGE and dangerous until verified with the company having ownership of the line. It is the Contractor's responsibility to notify any other companies that have underground utilities in the area and arrange for the location of all underground utilities before excavating.

1.07.02 The Contractor must cease all work and notify the BNSF immediately before continuing excavation in the area if obstructions are encountered which do not appear on drawings. If the obstruction is a utility and the owner of the utility can be identified, then the Contractor must also notify the owner immediately. If there is any doubt about the location of underground cables or lines of any kind, no work must be performed until the exact location has been determined. There will be no exceptions to these instructions.

1.07.03 All excavations must be conducted in compliance with applicable OSHA regulations and, regardless of depth, must be shored where there is any danger to tracks, structures or personnel.

1.07.04 Any excavations, holes or trenches on the BNSF's Property must be covered, guarded and/or protected when not being worked on. When leaving work site areas at night and over weekends, the areas must be secured and left in a condition that will ensure that BNSF employees and other personnel who may be working or passing through the area are protected from all hazards. All excavations must be back filled as soon as possible.

### **1.08 Hazardous Waste, Substances and Material Reporting**

1.08.01 If Contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to BNSF's Property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this Agreement, Contractor must immediately: (a) notify the BNSF's Resource Operations Center at (800) 832-5452, of such discovery; (b) take safeguards necessary to protect its employees, subcontractors, agents and/or third parties; and (c) exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release.

### **1.09 Personal Injury Reporting**

1.09.01 The BNSF is required to report certain injuries as a part of compliance with Federal Railroad Administration (FRA) reporting requirements. Any personal injury sustained by an employee of the Contractor, subcontractor or Contractor's invitees while on the BNSF's Property must be reported immediately (by phone mail if unable to contact in person) to the BNSF's representative in charge of the project. The Non-Employee Personal Injury Data Collection Form contained herein is to be completed and sent by Fax to the BNSF at (817) 352-7595 and to the BNSF's Project Representative no later than the close of shift on the date of the injury.



**OVERHEAD EXHIBIT "C -1"**

**Agreement  
Between  
BNSF RAILWAY COMPANY  
and the  
CONTRACTOR**

**BNSF RAILWAY COMPANY**

**Attention: Manager Public Projects**

**Railway File: 026109R**

**Agency Project: Massachusetts Avenue Overhead**

Gentlemen:

The undersigned (hereinafter called, the "Contractor"), has entered into a contract (the "Contract") dated \_\_\_\_\_, 200\_, with STATE OF CALIFORNIA, acting through the Department of Transportation, hereinafter referred to as ("STATE") for the performance of certain work in connection with the following project: construct the Massachusetts Avenue Overhead Connectors, in San Bernardino, CA. Performance of such work will necessarily require contractor to enter BNSF RAILWAY COMPANY ("Railway") right of way and property ("Railway Property"). The Contract provides that no work will be commenced within Railway Property until the Contractor employed in connection with said work for STATE (i) executes and delivers to Railway an Agreement in the form hereof, and (ii) provides insurance of the coverage and limits specified in such Agreement and Section 3 herein. If this Agreement is executed by a party who is not the Owner, General Partner, President or Vice President of Contractor, Contractor must furnish evidence to Railway certifying that the signatory is empowered to execute this Agreement on behalf of Contractor.

Accordingly, in consideration of Railway granting permission to Contractor to enter upon Railway Property and as an inducement for such entry, Contractor, effective on the date of the Contract, has agreed and does hereby agree with Railway as follows:

**Section 1. RELEASE OF LIABILITY AND INDEMNITY**

Contractor hereby waives, releases, indemnifies, defends and holds harmless Railway for all judgments, awards, claims, demands, and expenses (including attorneys' fees), for injury or death to all persons, including Railway's and Contractor's officers and employees, and for loss and damage to property belonging to any person, arising in any manner from Contractor's or any of Contractor's subcontractors' acts or omissions or any work performed on or about Railway's property or right-of-way. THE LIABILITY ASSUMED BY CONTRACTOR WILL NOT BE AFFECTED BY THE FACT, IF IT IS A FACT, THAT THE DESTRUCTION, DAMAGE, DEATH, OR INJURY WAS OCCASIONED BY OR CONTRIBUTED TO BY THE NEGLIGENCE OF RAILWAY, ITS AGENTS, SERVANTS, EMPLOYEES OR OTHERWISE, UNLESS SUCH CLAIMS ARE PROXIMATELY CAUSED BY THE WILLFUL MISCONDUCT OR SOLE NEGLIGENCE OF RAILWAY.

THE INDEMNIFICATION OBLIGATION ASSUMED BY CONTRACTOR INCLUDES ANY CLAIMS, SUITS OR JUDGMENTS BROUGHT AGAINST RAILWAY UNDER THE FEDERAL EMPLOYEE'S LIABILITY ACT, INCLUDING CLAIMS FOR STRICT LIABILITY UNDER THE SAFETY APPLIANCE ACT OR THE LOCOMOTIVE INSPECTION ACT, WHENEVER SO CLAIMED.

Contractor further agrees, at its expense, in the name and on behalf of Railway, that it will adjust and settle all claims made against Railway, and will, at Railway's discretion, appear and defend any suits or actions of law or in equity brought against Railway on any claim or cause of action arising or growing out of or in any manner connected with any liability assumed by Contractor under this Agreement for which Railway is liable or is alleged to be liable. Railway will give notice to Contractor, in writing, of the receipt or dependency of such claims and thereupon Contractor must proceed to adjust and handle to a conclusion such claims, and in the event of a suit being brought against Railway, Railway may forward summons and complaint or other process in connection therewith to Contractor, and Contractor, at Railway's discretion, must defend, adjust, or settle such suits and protect, indemnify, and save harmless Railway from and against all damages, judgments, decrees, attorney's fees, costs, and expenses growing out of or resulting from or incident to any such claims or suits.

In addition to any other provision of this Agreement, in the event that all or any portion of this Article shall be deemed to be inapplicable for any reason, including without limitation as a result of a decision of an applicable court, legislative enactment or regulatory order, the parties agree that this Article shall be interpreted as requiring Contractor to indemnify Railroad to the fullest extent permitted by applicable law. THROUGH THIS AGREEMENT THE PARTIES EXPRESSLY INTEND FOR CONTRACTOR TO INDEMNIFY RAILROAD FOR RAILROAD'S ACTS OF NEGLIGENCE.

It is mutually understood and agreed that the assumption of liabilities and indemnification provided for in this Agreement survive any termination of this Agreement.

## **Section 2. TERM**

This Agreement is effective from the date of the Contract until (i) the completion of the project set forth herein, and (ii) full and complete payment to Railway of any and all sums or other amounts owing and due hereunder.

## **Section 3. INSURANCE**

Contractor must, at its sole cost and expense, procure and maintain during the life of this Agreement the following insurance coverage:

- A. Commercial General Liability insurance. This insurance must contain broad form contractual liability with a combined single limit of a minimum of \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000. Coverage must be purchased on a post 1998 ISO occurrence form or equivalent and include coverage for, but not limit to the following:
- Bodily Injury and Property Damage
  - Personal Injury and Advertising Injury
  - Fire legal liability
  - Products and completed operations

This policy must also contain the following endorsements, which must be indicated on the certificate of insurance:

It is agreed that any workers' compensation exclusion does not apply to Railroad payments related to the Federal Employers Liability Act or a Railroad Wage Continuation Program or similar programs and any payments made are deemed not to be either payments made or obligations assumed under any Workers Compensation, disability benefits, or unemployment compensation law or similar law.

The definition of insured contract must be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.

Any exclusions related to the explosion, collapse and underground hazards must be removed.

No other endorsements limiting coverage as respects obligations under this Agreement may be included on the policy.

- B. Business Automobile Insurance. This insurance must contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:
- Bodily injury and property damage
  - Any and all vehicles owned, used or hired
- C. Workers Compensation and Employers Liability insurance including coverage for, but not limited to:
- California's statutory liability under the worker's compensation laws of the state(s) in which the work is to be performed. If optional under State law, the insurance must cover all employees anyway.
  - Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

- D. Railroad Protective Liability insurance naming only the Railroad as the Insured with coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The policy Must be issued on a standard ISO form CG 00 35 10 93 and include the following:
- Endorsed to include the Pollution Exclusion Amendment (ISO form CG 28 31 10 93)
  - Endorsed to include the Limited Seepage and Pollution Endorsement.
  - Endorsed to remove any exclusion for punitive damages.
  - No other endorsements restricting coverage may be added.
  - The original policy must be provided to the Railroad prior to performing any work or services under this Agreement

**Other Requirements:**

All policies (applying to coverage listed above) must not contain an exclusion for punitive damages and certificates of insurance must reflect that no exclusion exists.

Contractor agrees to waive its right of recovery against Railroad for all claims and suits against Railroad. In addition, its insurers, through the terms of the policy or policy endorsement, waive their right of subrogation against Railroad for all claims and suits. The certificate of insurance must reflect the waiver of subrogation endorsement. Contractor further waives its right of recovery, and its insurers also waive their right of subrogation against Railroad for loss of its owned or leased property or property under contractor's care, custody or control.

Contractor's insurance policies through policy endorsement, must include wording which states that the policy is primary and non-contributing with respect to any insurance carried by Railroad. The certificate of insurance must reflect that the above wording is included in evidenced policies.

All policy(ies) required above (excluding Workers Compensation and if applicable, Railroad Protective) must include a severability of interest endorsement and Railroad must be named as an additional insured with respect to work performed under this agreement. Severability of interest and naming Railroad as additional insured must be indicated on the certificate of insurance.

Contractor is not allowed to self-insure without the prior written consent of Railroad. If granted by Railroad, any deductible, self-insured retention or other financial responsibility for claims must be covered directly by contractor in lieu of insurance. Any and all Railroad liabilities that would otherwise, in accordance with the provisions of this Agreement, be covered by contractor's insurance will be covered as if contractor elected not to include a deductible, self-insured retention or other financial responsibility for claims.

Prior to commencing the Work, contractor must furnish to Railroad an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments and referencing the contract audit/folder number if available. The policy(ies) must contain a provision that obligates the insurance company(ies) issuing such policy(ies) to notify Railroad in writing at least 30 days prior to any cancellation, non-renewal, substitution or material alteration. This cancellation provision must be indicated on the certificate of insurance. Upon request from Railroad, a certified duplicate original of any required policy must be furnished. Contractor should send the certificate(s) to the following address:

**EBIX BPO**  
**PO Box 12010-BN**  
**Hemet, CA 92546-8010**  
**Fax number: 951-766-2299**  
**Email:**

Any insurance policy must be written by a reputable insurance company acceptable to Railroad or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provide.

Contractor represents that this Agreement has been thoroughly reviewed by contractor's insurance agent(s)/broker(s), who have been instructed by contractor to procure the insurance coverage required by this Agreement. Allocated Loss Expense must be in addition to all policy limits for coverages referenced above.

Not more frequently than once every five years, Railroad may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.

If any portion of the operation is to be subcontracted by contractor, contractor must require that the subcontractor provide and maintain the insurance coverages set forth herein, naming Railroad as an additional insured, and requiring that the subcontractor release, defend and indemnify Railroad to the same extent and under the same terms and conditions as contractor is required to release, defend and indemnify Railroad herein.

Failure to provide evidence as required by this section will entitle, but not require, Railroad to terminate this Agreement immediately. Acceptance of a certificate that does not comply with this section will not operate as a waiver of contractor's obligations hereunder.

The fact that insurance (including, without limitation, self-insurance) is obtained by contractor will not be deemed to release or diminish the liability of contractor including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad will not be limited by the amount of the required insurance coverage.

For purposes of this section, Railroad means "Burlington Northern Santa Fe Corporation", "BNSF RAILWAY COMPANY" and the subsidiaries, successors, assigns and affiliates of each.

#### **Section 4. EXHIBIT "C" CONTRACTOR REQUIREMENTS**

The Contractor must observe and comply with the provisions, obligations, requirements and limitations contained in the Contract and the Contractor Requirements set forth on Exhibit "C" attached to the Contract and this Agreement, including, but not be limited to, payment of all costs incurred for any damages to Railway roadbed, tracks, and/or appurtenances thereto, resulting from use, occupancy, or presence of its employees, representatives, or agents or subcontractors on or about the construction site.

#### **Section 5. TRAIN DELAY**

Contractor is responsible for and hereby indemnifies and holds harmless Railway (including its affiliated railway companies, and its tenants) for, from and against all damages arising from any unscheduled delay to a freight or passenger train which affects Railway's ability to fully utilize its equipment and to meet customer service and contract obligations. Contractor will be billed, as further provided below, for the economic losses arising from loss of use of equipment, contractual loss of incentive pay and bonuses and contractual penalties resulting from train delays, whether caused by Contractor, or subcontractors, or by the Railway performing work under this Agreement. Railway agrees that it will not perform any act to unnecessarily cause train delay.

For loss of use of equipment, Contractor will be billed the current freight train hour rate per train as determined from Railway's records. Any disruption to train traffic may cause delays to multiple trains at the same time for the same period.

Additionally, the parties acknowledge that passenger, U.S. mail trains and certain other grain, intermodal, coal and freight trains operate under incentive/penalty contracts between Railway and its customer(s). Under these arrangements, if Railway does not meet its contract service commitments, Railway may suffer loss of performance or incentive pay and/or be subject to penalty payments. Contractor is responsible for any train performance and incentive penalties or other contractual economic losses actually incurred by Railway which are attributable to a train delay caused by Contractor or its subcontractors.

The contractual relationship between Railway and its customers is proprietary and confidential. In the event of a train delay covered by this Agreement, Railway will share information relevant to any train delay to the extent consistent with Railway confidentiality obligations. Damages for train delay for certain trains may be \$382.20 per hour per incident. The rate then in effect at the time of performance by the Contractor hereunder will be used to calculate the actual costs of train delay pursuant to this agreement.

Contractor and its subcontractors must give Railway's representative 909 386 4079 eight (8) weeks advance notice of the times and dates for proposed work windows. Railway and Contractor will establish mutually agreeable work windows for the project. Railway has the right at any time to revise or change the work windows due to train operations or service obligations. Railway will not be responsible for any additional costs or expenses resulting from a change in work windows. Additional costs or expenses resulting from a change in work windows shall be accounted for in Contractor's expenses for the project.

Contractor and subcontractors must plan, schedule, coordinate and conduct all Contractor's work so as to not cause any delays to any trains.

Kindly acknowledge receipt of this letter by signing and returning to the Railway two original copies of this letter, which, upon execution by Railway, will constitute an Agreement between us.

\_\_\_\_\_  
(Contractor) BNSF Railway Company

By: \_\_\_\_\_ By: \_\_\_\_\_  
Printed Name: \_\_\_\_\_ Name: Melvin Thomas  
Title: \_\_\_\_\_ Manager Public Projects

Contact Person: \_\_\_\_\_ Accepted and effective this \_\_\_\_ day of 20\_\_.  
Address \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_ Zip: \_\_\_\_  
Fax:  
Phone:  
E-mail:

**Exhibit F**

**BNSF Bridge Requirements**

**BRIDGE DESIGN, PLANS & SPECIFICATIONS:**

Except for the design of temporary falsework and shoring, BNSF review of the Structure plans will be limited to the vertical and horizontal clearances, sight distance for existing train signals, foundation dimensions and drainage characteristics as they relate to existing and future tracks. BNSF will not review structural design calculations for the permanent Structure unless a member or members are influenced by railroad live loads.

Temporary falsework and shoring plans and calculations must be reviewed and approved by BNSF prior to beginning construction. STATE shall perform an independent review of the design calculations for temporary falsework and shoring prior to submitting them to BNSF for approval. Temporary construction clearances must be no less than 15 feet measured horizontally from the centerline of the nearest track and 21 feet-6 inches measured vertically from the top of rail of the most elevated track to the bottom of lowest temporary falsework member. State regulatory agencies may have more restrictive requirements for temporary railroad clearances.

For the permanent Structure, STATE will submit plans showing the least horizontal distance from the centerline of existing and future tracks to the face of the nearest member of the proposed Structure. The location of the least horizontal distance must be accurately described such that BNSF can determine where it will occur in both the horizontal and vertical plane. If the permanent member is within 25 feet of the nearest track (or future track), collision walls shall be incorporated into the permanent Structure design according to American Railway Engineering and Maintenance Association Manual of Recommended Practice - Chapter 8 - Article 2.1.5.

For the permanent Structure, STATE will submit plans showing the least vertical clearance from top of the most elevated rail of existing and future tracks to the lowest point of the proposed Structure. Prior to beginning construction of the permanent Structure, the top of rail elevations should be checked and verified that they have not changed from the assumed elevations utilized for the design of the bridge.

Prior to issuing any invitation to bid on construction of the Structure, STATE should conduct a pre-bid meeting where prospective Contractors have the opportunity to communicate with BNSF personnel regarding site specific train speeds, train density, and general safety requirements for men and equipment working near live tracks. Any invitation to bid and specifications for the Structure must be submitted to BNSF for review and approval prior to letting of bids for the Project.

**BRIDGE CONSTRUCTION:**

After awarding the bid, but prior to the Contractor entering BNSF's railroad corridor or property, STATE should conduct a pre-construction meeting with BNSF personnel in attendance to reiterate the safety requirements of construction activity adjacent to live tracks.

During construction, BNSF may require an independent engineering inspector to be present during certain critical activities of the Project, including but not limited to: driving foundation piles, erecting falsework, construction of shoring and retaining walls, placing concrete, placing soil backfill and compaction processes. STATE shall reimburse BNSF for all costs of supplemental inspection services.

Within 90 days of the conclusion of the Project and final acceptance by BNSF, STATE will provide BNSF with a complete electronic set of the bridge plans. BNSF will also accept a marked up paper copy of the bridge plans labeled "As Built". The marked up paper copy of the plans will reflect any and all deviations from the original plans that occurred during construction. The electronic set of the bridge plans will be submitted in Micro Station \*.dgn electronic format (preferred) or AutoCAD \*.dwg format. Electronic plans are to be submitted in the original format used for CAD plan preparation and not converted to another format prior to submission. The "As Built" plans shall show actual measured "as constructed" clearances shall be shown as well as depth, size and location of all foundation components. The plans shall show dimensioned locations of existing and relocated utilities. It is understood that BNSF prefers to receive the "As Built" plans in an electronic format.

**BRIDGE MAINTENANCE:**

STATE will be responsible for maintenance and repair of the Structure including the earth retention components, embankment slopes, erosion control, surface drainage, fencing, deck drains, landscaping, paint, walkways, handrails, lighting, and other improvements associated with the Project.

Fencing and other pedestrian access controls within BNSF's rail corridor and incorporated into the Project shall be designed and maintained by STATE through construction. Trespasser control shall be the responsibility of STATE through construction. Graffiti removal will be the responsibility of STATE.

**BRIDGE INSPECTION:**

STATE will conduct annual routine structural inspections. In the event of an earthquake, fire, flood, damage from vehicular impacts or other emergent situations, STATE will provide an immediate inspection by qualified personnel and notify BNSF of damage that may affect safe passage of trains. If necessary STATE will embargo weights or provide lane closures or other such measures to protect the structural integrity of the Structure such that there can be continuous safe passage of trains until repairs are made.

**BRIDGE ALTERATIONS:**

Except as provided otherwise by this Agreement, there will be no alterations made to the Structure that will alter the railroad vertical or horizontal clearances provided by the original design

It is expressly understood by STATE that the right to install utilities is restricted to the placement of underground utilities beneath BNSF's tracks located a minimum of fifty (50) feet from abutments, piers, piles, or footings. Under no circumstances will utilities be allowed to hang from the Structure, unless approved by BNSF. All utility crossings within the limits of BNSF's Rail Corridor will be covered by separate agreements between BNSF and each of the owners of the utilities.

## EXHIBIT G

### INSTRUCTIONS FOR PREPARATION OF DEMOLITION PLANS FOR STRUCTURES OVER THE BNSF RAILWAY

#### SECTION I. GENERAL

A. The Contractor will abide by and adhere to the requirements of the Exhibit C. Should there be a discrepancy between the requirements contained in the Exhibit C and this Exhibit G, the Exhibit C will govern.

B. The Contractor's work shall in no way impede train operations.

1. The term "Overhead" refers to the structure to be demolished.
2. The words "demolition" and "removal" will be used interchangeably in this Exhibit G.
3. The term "Railroad" refers to the Railroad's Engineer or designated representative.

C. Safety takes precedence over productivity. The Contractor shall be responsible for planning and executing all procedures necessary to remove the Overhead in a safe, predictable manner. All employees of the Contractor and Subcontractors must be Safety Trained. Refer to <http://>.

D. The Contractor shall develop a Demolition Plan ONLY AFTER CONSULTING WITH THE RAILROAD TO GET AN ESTIMATE OF THE RANGE OF WORK WINDOWS THAT MIGHT NORMALLY BE AVAILABLE FOR THE JOB SITE.

1. A Work Window is the elapsed time between approaching trains.
2. An estimate of the availability of Work Windows can be used by the Contractor to design a Demolition Plan. The estimated Work Window is a guideline and not to be considered as a guarantee for available working time.
3. Work Windows will vary significantly, depending on the location. Low speed - low train density tracks have predictable Work Windows. The opposite is true for high density- high speed main tracks. The Railroad shall, at its sole discretion, furnish a range of Work Windows that might be expected at a specific location under normal train traffic conditions.
4. The Contractor shall plan the demolition procedures based upon the smallest ESTIMATED Work Window. Do not assume the longest Work Window will be available on any given day. Do not assume the same Work Windows will be available from one day to the next.
5. The Contractor will give BNSF's Project Engineer at telephone number 909-386-4079, eight (8) weeks advance notice of the proposed times and dates for Work Windows. BNSF and the contractor will establish mutually agreeable Work Windows for the Project. Any request for Work Windows with less than eight (8) weeks advance notice will have a reduced probability of approval. BNSF has the right at any time to revise or change the Work Windows, due to train operations or service obligations. BNSF will not be responsible for any additional costs and expenses resulting from a change in Work Windows. Additional costs and expenses resulting from a change in Work Windows shall be accounted for in the contractor's expenses for the Project.

E. The Railroad's tracks and property shall be protected at all times.

1. Removal procedures shall take into account SEVERE WEATHER CONDITIONS, including high winds, heavy rains and snowfall accumulation.
2. The contractor shall ensure that all areas adjacent to active tracks shall remain free from hazards.
  - a) Trainmen must have an unobstructed walkway available parallel to all active tracks pursuant to the California Public Utilities Commission General Order 118.
  - b) All open excavations shall be protected with fencing.
  - c) Do not store materials or equipment within 25 feet of the centerline of an active track.

3. Protect the project area from vandalism.
  - a) Do not leave debris where vandals could place it on the tracks or drop it onto the tracks from the Overhead.
  - b) Secure all heavy equipment from potential movement by vandals.
  - c) Do not store flammable materials on railroad right of way. Remove combustible waste materials daily. Do not store fuel or other flammable liquids on railroad right of way.

F. All demolition materials and scrap shall be disposed of outside the Railroad right-of-way at no expense to the Railroad. At the conclusion of the project, the area must be left in a clean and graded condition to the exclusive satisfaction of the Railroad.

G. No work is allowed within 25 feet of the nearest track unless protected by a Railroad Flagger. Refer to Exhibit C Section 1.05, Protection of Railway Facilities and Railway Flagger Services for additional flagging requirements.

H. The staged demolition of any portion of the Overhead over or adjacent to operational tracks will not jeopardize the stability of other parts of the Overhead awaiting demolition.

1. Where multiple tracks are involved, the Demolition Plan should be engineered as much as practical such that no more than one track is rendered impassable at any given moment.

I. No blasting will be permitted on Railroad's right-of-way.

## SECTION II. DEMOLITION PLAN

A. The Contractor shall submit a detailed Demolition Plan to the Railroad. The Demolition Plan shall encompass the following:

1. Provide a scale drawing showing the plan view, elevation and location of the Overhead and locations of any access roads needed on railroad right of way to access the job site. The as-built drawings may be used for the submittal provided the removal steps are clearly marked and legible.
2. Indicate the position of all railroad tracks below the bridge. Identify each track as mainline, siding, spur, etc. Identify locations where temporary crossings will be installed to cross equipment over each track.
3. List in sequential order, all procedures necessary to remove the bridge in a safe and controlled manner. Include step by step details of each sequence and the elapsed time required to execute the sequence. The Demolition Plan must specify which, if any, sequences will render a track impassable to trains during execution of the sequence. If more than one track is adjacent to the work area, specify which tracks will be impassable during execution of each sequence.
4. Include text, drawings or photos to communicate the types of equipment that will be utilized. Include diagrams showing the position of the equipment in relation to the tracks. Where cranes are to be used, furnish the lifting capacities of the crane at the anticipated radius and the weights of components to be removed.
5. For every sequence, specify the minimum horizontal clearance from centerline of track and the minimum vertical clearance above top of rail for equipment, falsework, rubble shields and temporary supports. If a crane is to be utilized, include clearances for the backswing radius of the crane counterweight and the position of the outriggers. Refer to the Frame Protection Details drawings, three sheets, attached hereto and made a part hereof, for the minimum allowable vertical and horizontal clearances.
6. If the Demolition Plan includes concrete demolition, include the details of rubble control such as maximum anticipated size of rubble, drop distance, shield size and shield position.
7. The Demolition Plan will indicate locations and types of temporary supports, shoring, cables or bracing required.
  - a) Excavations and shoring design shall be according to the attached "GENERAL SHORING REQUIREMENTS" drawings, two pages, attached hereto and made a part hereof.
  - b) Falsework shall be designed according to the State of California, Department of Transportation FALSEWORK MANUAL available at this Web Site:
  - c) Plans shall conform to the appropriate Federal, State and local regulations and building codes.

8. If any temporary supports interfere with the natural drainage along the Railroad right-of-way, a temporary drainage diversion plan shall be included in the Demolition Plan. The drainage plan shall route all surface water away from the railroad tracks.
  - a) Do not block drainage in side ditches with debris.
  - b) Do not place footing blocks in drainage ditches.
  - c) Surface runoff must be diverted away from the footing block excavations to avoid saturation of the underlying supporting soils.
9. The Demolition Plan shall include details, limits, and locations of protective shields or other measures designed to protect the rails, ties and ballast from falling debris. Include details of catchment apparatus necessary to protect the tracks from rolling debris that may fall onto side slopes. Include the design load for the shields for both the maximum static load and the maximum anticipated impact loads from falling debris. Specify the type of equipment that will be utilized to remove the debris and shields from operational tracks.
10. Protection of the track ballast section must be provided to avoid contamination of the rock with fine dust and mud produced during demolition activities. Filter fabric or some other effective means to prevent ballast contamination should be incorporated into the Demolition Plan.
11. All overhead and underground utilities in the area affected by removal of the bridge shall be located on the drawings, including any fiber optic, railroad signal, and communication lines.
12. Indicate the limits of demolition of substructures, including depths and dimensions of excavations that might be necessary to demolish buried footings.
13. The Demolition Plan should include details of planned on-site fire suppression.

B. The Contractor shall submit to the Railroad: three (3) complete sets of the Demolition Plan to BNSF's Assistant Director Structural Engineering for review and comments. The Demolition Plan should be sent in PDF format for files up to (2) megabytes by email attachment to: . Should the Demolition Plan exceed a two (2) megabyte PDF file, a CD of the plans and specifications should be sent via overnight mail service to mailing address , 4515 Kansas Avenue, Kansas City, KS 66106.

1. The Plan shall be sealed by a Civil or Structural Engineer registered in the state where the proposed demolition will take place.
2. A minimum of four (4) weeks shall be expected for the Railroad's review after the complete submittal is received.
3. No removal operations will be permitted over the Railroad right of way until the submitted material has been reviewed and approved.

C. Approval and/or comments furnished by the Railroad in the course of review of the Contractor's Demolition Plan will not relieve the Contractor of the ultimate responsibility for the safe and secure demolition of the Overhead.

### SECTION III. PROCEDURE

A. The Demolition Plan must be executed such that stability is continuously maintained for the standing portions of the Overhead over all tracks.

1. All members of the Overhead being demolished must be continuously supported to resist high winds, including wind buffets and suction forces generated by high speed trains.

B. Prior to proceeding with bridge removal, the sealing Civil or Structural Engineer, or his authorized representative, shall inspect all components of the temporary support shoring, including temporary bracing and protective coverings, insuring conformity with the working drawings.

1. The sealing Engineer shall certify in writing to the Railroad that the work is in conformance with the drawings and that the materials and workmanship are satisfactory.

2. A copy of this certification shall be available at the job site at all times.

C. All substructures shall be removed to at least six (6) feet below the final finished grade or at least six (6) feet below base of rail whichever is lower, unless otherwise specified by the Railroad.

D. All debris and refuse shall be removed from the railroad right of way by the Contractor. The premises shall be left in a neat and presentable condition to the exclusive satisfaction of the Railroad. Soils contaminated by fuel spills, hydraulic oil leaks, etc. will be removed from railroad right of way and replaced to the exclusive satisfaction of the Railroad.

E. If any hazardous materials are discovered, provide material protection as specified in local hazardous material codes and immediately contact the Railroad

1. If Contractor discovers any hazardous waste, hazardous substance, petroleum or other deleterious material, including but not limited to any non-containerized commodity or material, on or adjacent to Railway's Property, in or near any surface water, swamp, wetlands or waterways, while performing any work under this Agreement, Contractor must immediately: (a) notify the Railway's Resource Operations Center at 1(800) 832-5452, of such discovery: (b) take safeguards necessary to protect its employees, subcontractors, agents and/or third parties: and (c) exercise due care with respect to the release, including the taking of any appropriate measure to minimize the impact of such release.
2. If pipelines are attached to the Overhead, pipes must be purged of flammable or hazardous materials prior to beginning demolition.
3. Fuel spills, hydraulic fluid releases, equipment oil leaks or any other release of contaminants must be reported to the Railroad. Contaminated soils must be removed and replaced to the satisfaction of the Railroad and local regulatory agencies.

F. The work progress shall be reviewed and logged by the Contractor's Engineer. Should an unplanned event occur, the Contractor shall inform the Railroad and submit a procedure to correct or remedy the occurrence.

G. Beam removal and all other demolition procedures shall take place as much as practicable with equipment positioned adjacent to and clear of all live tracks or positioned on the Overhead structure above the track. In the rare case that beams require removal with equipment positioned fouling a live track or from below the Overhead, the following steps shall be taken before beams are allowed to straddle the tracks:

1. Certain territories with high density train traffic, especially where multiple main tracks are affected, may not grant Work Windows on all tracks simultaneously. Beam removal from the underside of Overheads may not be possible unless the procedure can be accomplished in very short Work Windows or be engineered such that only one track is affected.
2. The work shall be scheduled well in advance but no later than the requirements in Section 1, paragraph 5 of this Exhibit G. The Work windows are subject to the Railroad's operational requirements for continuous train operations. The beam removal plan must be engineered to minimize the Work Window time.
3. The rails, ties and ballast shall be protected. No equipment will be crossed over or placed on the tracks unless pre-approved by the Railroad.
4. The beams shall be blocked to prevent the beams from coming into contact with the rails. Blocking shall not be placed on the rails or ties.
5. Upon approach of a train, the beams and all personnel and equipment will be moved a position to provide a minimum of 15 feet horizontal clearance and 21 ft. 6 in. vertical clearance from the nearest rail. Care must be exercised to insure that crane booms are rotated to a position parallel with the track.

#### SECTION IV. TRACK PROTECTION

A. The track protective cover shall be constructed before beginning bridge removal work and will be supported by falsework or members of the existing Overhead. The following are examples of protective covers that may be acceptable:

1. A decking supported by the bridge or a suspended cover from the bridge above the track clearance envelope.
2. A track shield cover over the tracks per the attached detail.
3. A framed cover outside the track clearance envelope.
4. A catcher box or loader bucket under decking and parapets overhanging the exterior girders.
5. Protection of the track ballast section must be provided to avoid contamination of the rock with fine dust and mud produced during demolition activities. Filter fabric or some other effective means to prevent ballast contamination should be incorporated into the Demolition Plan.

B. Construction equipment shall not be crossed over or placed on the tracks unless the rails, ties and ballast are protected against damage.

1. Track protection is required for all equipment including rubber tired equipment.
2. A list of equipment to be crossed over or positioned on the tracks along with the intended method of protection shall be submitted to the railroad for approval prior to use at the job site.

C. Temporary haul road crossings shall be either timbers or precast concrete panels. The type of crossing shall be determined by the Railroad.

1. Solid timbers or ballast with timber headers shall be used between multiple tracks.
2. If the job site is accessible to the public, all temporary haul road crossings shall be protected with barricades or locked gates when the Contractor is not actively working at the site.
3. Installation and removal of temporary track crossings for equipment shall be scheduled well in advance with the Railroad but no later than the requirements in Section 1, paragraph 5 of this Exhibit G.

#### SECTION V. CRANES

A. When cranes are operated over or adjacent to the tracks the following is required:

1. The Contractor shall verify that the foundations, soil conditions, and buried utility lines under the crane and crane outriggers can support the loads induced by the crane under an assumed maximum capacity lift. The size and material type of crane mats shall be rigid and of sufficient capacity to safely distribute the crane loads.
2. Front end loaders and backhoes cannot be used in place of a crane to lift materials over the tracks. These types of equipment do not have the necessary safety features built into the machines to circumvent overloading and tipping. Only cranes with the rated capacity to handle the loads may be used.
3. Additional track protection may be required for a crane when crossing over the track. The protection methods shall be submitted to the Railroad for review and comment well in advance of intended use.
4. Cranes and other equipment utilizing outriggers shall not place outriggers on the tracks or ballast.
5. Cranes or crane booms shall not be positioned within the track clearance envelope without Railroad Flagman protection. Cranes operating from a position farther than 25 ft. from the nearest track will need a Railroad Flagman present if the boom length is such that it could fall onto a track.
6. Upon approach of a train, the crane body shall be rotated to position the boom in a line parallel with the track. Any suspended load shall be made stationary by lowering it until contact is made with the ground. During passage of the train, the Crane Operator must stop all movements. Crane Operators shall remain in the cab with motor at idle with the load lines, boom, rotation and travel controls locked and stationary until the full length of the train has passed the job site.
7. Cranes will not be utilized during high winds.

## SECTION VI. CUTTING TORCHES

A. When a cutting torch or welding equipment is used in the demolition process, the following steps shall be taken:

1. Fire suppression equipment is required on-site.
2. Do not use a torch over, between, or adjacent to the tracks unless a steel plate protective cover is used to shield against sparks and slag coming into contact with timber ties. Care shall be taken to make certain the use of a steel plate does not come in contact with the rails. See "Track Shield Details" for other requirements. Details of the shield shall be submitted to the Railroad for approval.
3. Wet the ties below the steel plate and wet other timbers and flammable demolition debris located near cutting areas.
4. Monitor the work site for at least three hours after cutting has ceased to detect a smoldering fire.

B. Extensive overhead cutting may require more robust fire suppression equipment and precautions than what would normally be required for routine cuts.

1. On days when extensive torch cutting is planned, the Contractor shall have a larger water supply on hand or take other measures as needed to effectively suppress fires.
2. Overhead torch cutting and welding must cease upon approach and passage of a train.
3. Extensive torch cutting shall not take place during high winds.
4. Contractor will clear vegetation and other combustible debris from the surrounding work areas prior to engaging in extensive torch cutting.

## SECTION VII. UTILITIES

A. The demolition operations shall be planned such that overhead and underground utility lines are operating safely at all times. The utility lines shall be protected if affected by demolition operations. Underground utility lines shall be protected from concentrated soil loads under crane outriggers and heavy rubber tired front loaders or similar equipment. All the work associated with utility lines should be coordinated by the contractor with the respective utility companies.

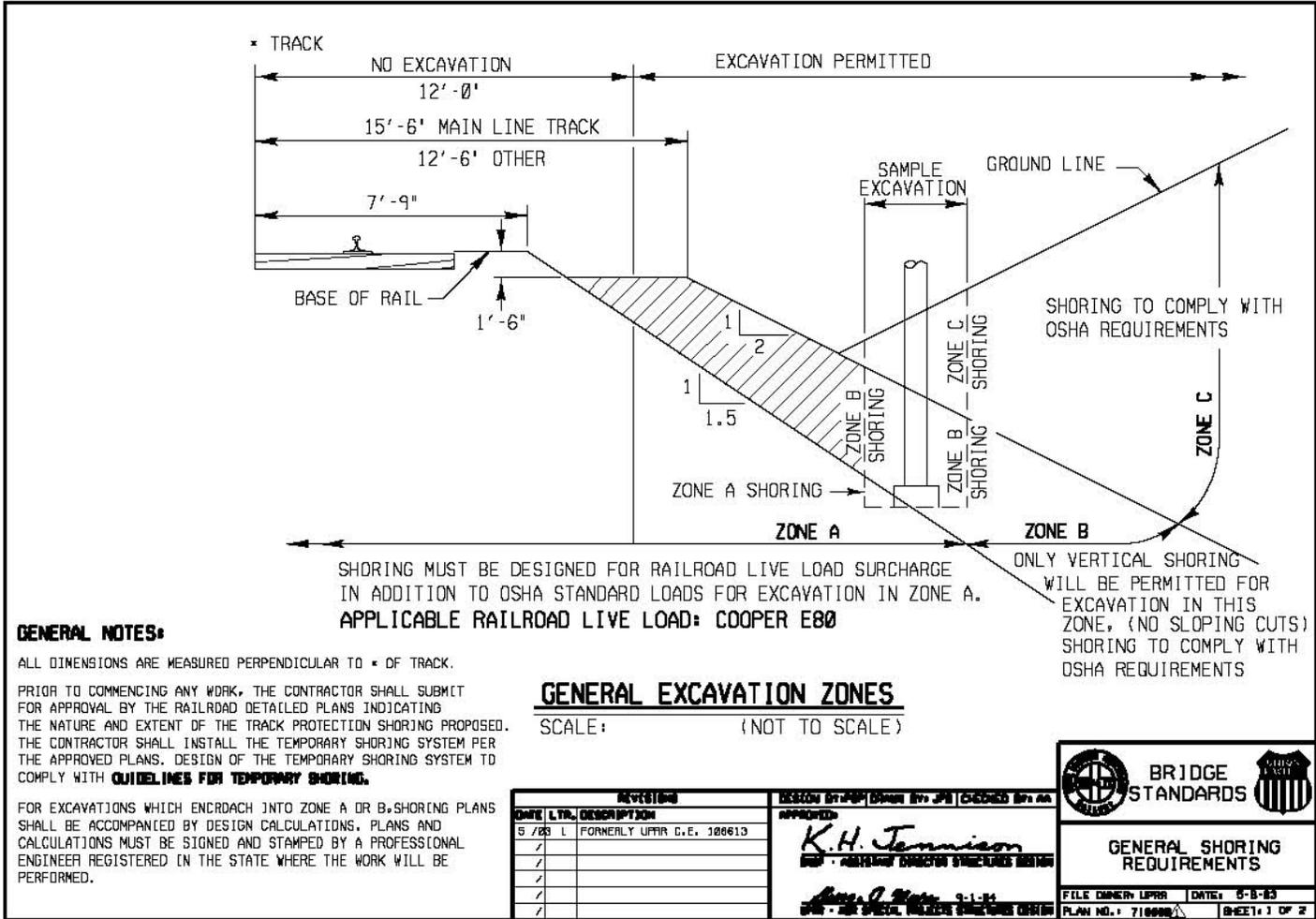
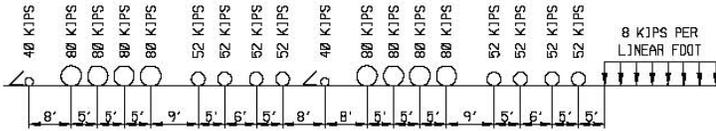


FIGURE 1

CONTRACT NO. 08-4440U4  
REPLACED PER ADDENDUM NO. 3 DATED AUGUST 28, 2009



**COOPER E80 LOAD**  
SCALE: (NOT TO SCALE)

VERTICAL PRESSURE Q SHALL BE BASED ON A DISTRIBUTION WIDTH LD.  
LD IS THE LENGTH OF TIE PLUS H<sub>1</sub>.  
H<sub>1</sub> IS THE HEIGHT FROM THE BOTTOM OF TIE TO THE TOP OF SHORING.  
H<sub>2</sub> IS THE DEPTH OF POINT BEING EVALUATED WITH THE BOUSSINESQ EQUATION.  
S IS A DISTANCE PERPENDICULAR FROM CENTERLINE OF TRACK TO THE FACE OF SHORING.  
D IS FROM TOP OF SHORING TO ONE FOOT BELOW DREDGE LINE.  
ZP IS THE MINIMUM EMBEDMENT DEPTH.  
LENGTH OF TIE IS 9 FEET  
Q IS THE INTENSITY OF STRIP LOAD DUE TO E80 RAILROAD LIVE LOAD  
AND SHALL BE CALCULATED AS FOLLOWS:

FOR H<sub>1</sub> < LD = LENGTH OF TIE; THEREFORE,  $Q = \frac{80,000 \text{ LB}}{(5 \text{ FEET})(9 \text{ FEET})} = 1,778 \text{ PSF}$

FOR H<sub>1</sub> > LD = LENGTH OF TIE + H<sub>1</sub>; THEREFORE,  $Q = \frac{80,000 \text{ LB}}{(5 \text{ FEET})(LD)}$

CASE 1: LATERAL LIVE LOAD PRESSURE PS, DUE TO E80 LOADING FOR TRACK PARALLEL TO SHORING SYSTEM IS CALCULATED USING THE BOUSSINESQ STRIP LOAD EQUATION.

$PS = \frac{2Q}{\pi} (\beta + \sin \beta \sin^2 \alpha - \sin \beta \cos^2 \alpha)$

THE ABOVE EQUATION CAN BE SIMPLIFIED INTO THE FOLLOWING EQUIVALENT FORM:

$PS = \frac{2Q}{\pi} [\beta - \sin \beta \cos(2\alpha)]$

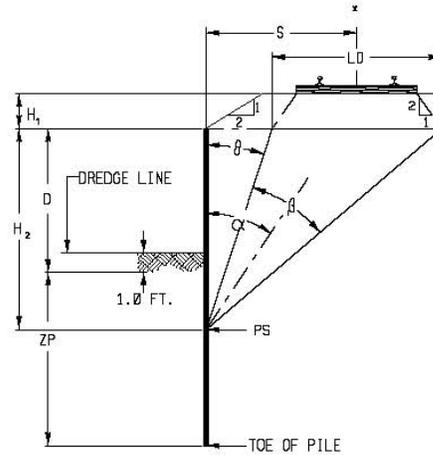
AND  $\alpha$  AND  $\beta$  ARE ANGLES MEASURED IN RADIAN;  $\alpha = \beta + \frac{\beta}{2}$

CASE 2: LIVE LOAD PRESSURE DUE TO E80 LOADING FOR TRACK AT A RIGHT ANGLE TO THE SHORING SYSTEM CAN BE CALCULATED USING THE FOLLOWING EQUATION.

$PS = K_1 Q$

WHERE  $K_1 = \tan^2(45 - \frac{\phi}{2})$

$\phi$  IS THE ANGLE OF INTERNAL FRICTION IN DEGREES



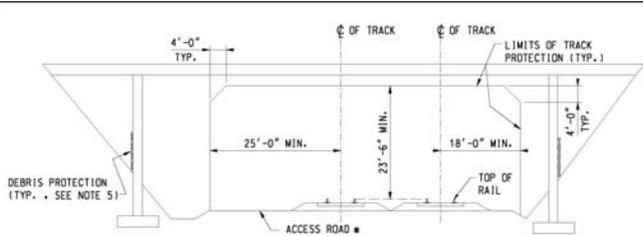
**PLAN**  
SCALE: (NOT TO SCALE)

DATE	REV.	DESCRIPTION

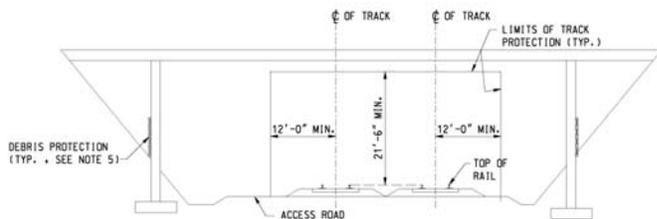
DESIGNED BY: P.M. (SIGNED BY: P.M.) CHECKED BY: A.H.  
APPROVED:  
*K.H. Jannison*  
SENIOR ASSISTANT MATERIALS SUPERVISOR DESIGN  
*James J. ...*  
SENIOR ASSISTANT MATERIALS SUPERVISOR DESIGN

	<b>BRIDGE SHORING STANDARDS</b>	
	<b>GENERAL SHORING REQUIREMENTS</b>	
FILE NUMBER: LPRR PLAN NO.: 710001	DATE: SHEET: 2 OF 2	

FIGURE 2



**BRIDGE ELEVATIONS**  
**STANDARD LIMITS OF PROTECTION FOR FRAME PROTECTION**



**BRIDGE ELEVATION**  
**MINIMUM LIMITS OF PROTECTION FOR FRAME PROTECTION**  
 (SPECIAL PERMISSION REQUIRED, SEE NOTE 1)

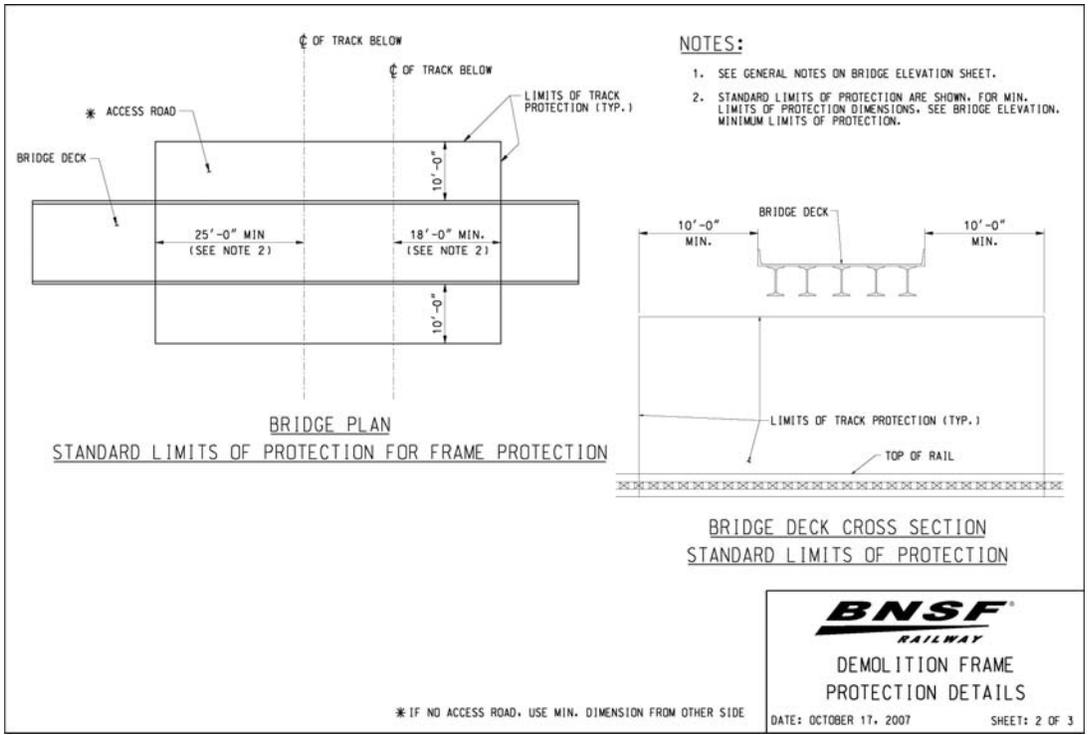
1. THE STANDARD LIMITS OF PROTECTION NOTED ARE THE MIN. CLEARANCES ALLOWED WITHOUT SPECIAL PERMISSION FROM THE RAILROAD. THE REDUCED CLEARANCES NOTED MAY BE ALLOWED BY THE RAILROAD. SPECIAL PERMISSION FOR THE REDUCED CLEARANCES IS REQUIRED FROM THE RAILROAD AND PUBLIC AGENCY.
  2. THE PROTECTION FRAME SHALL AS A MINIMUM MATCH THE DEMOLITION LIMITS SHOWN AND EXTEND PAST THE BRIDGE WIDTH AS SHOWN ON THE ATTACHED DEMOLITION PLAN SHEET.
  3. FOR ADDITIONAL CLEARANCE AND PROTECTION INFORMATION REFER TO CONTRACT EXHIBITS.
  4. THE PROTECTION FRAME SHALL PREVENT DEMOLITION DEBRIS, DUST AND FINE MATERIAL FROM FALLING INTO THE RAILROAD TRACKS, ACCESS ROAD OR TRAINS. THE FRAME SHALL BE DESIGNED BY THE CONTRACTOR TO SUPPORT THE ANTICIPATED DEMOLITION LOADS, AND IN ACCORDANCE WITH CALTRANS FALSEWORK MANUAL FOR STRUCTURES OVER THE RAILROAD.
  5. DEBRIS PROTECTION IS REQUIRED NEAR THE BASE OF THE SIDE SLOPES AND ADJACENT TO ROADS USED BY DEMOLITION EQUIPMENT TO PREVENT DEBRIS FROM ROLLING ONTO TRACK, ACCESS ROAD OR DITCH. USE TIMBERS AS REQUIRED TO STOP LARGE PIECES OF ROLLING DEBRIS.
  6. ANY ACTIVITY WITHIN 25 FEET OF THE NEAREST RAIL OF A TRACK REQUIRES A FLAGMAN.
- IF NO ACCESS ROAD USE MIN. DIMENSION FROM OTHER SIDE OF DETAIL



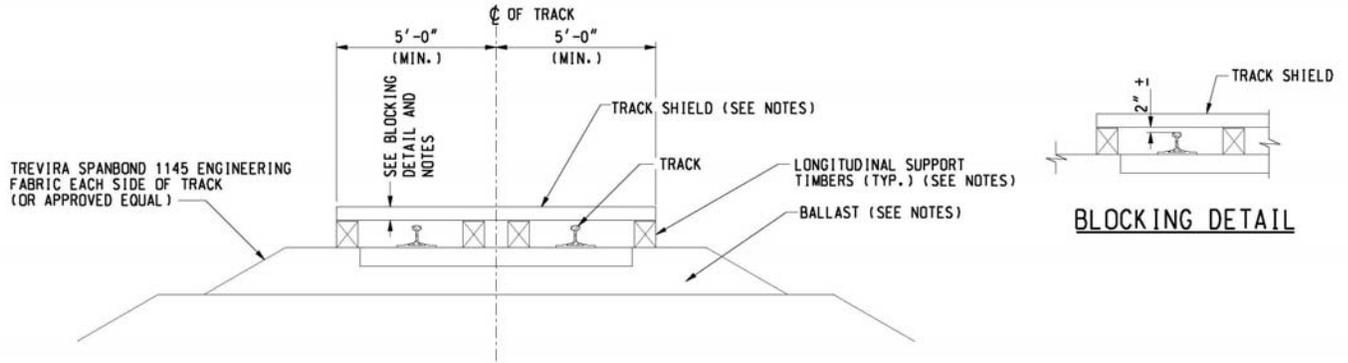
DEMOLITION FRAME PROTECTION DETAILS

DATE: OCTOBER 17, 2007

SHEET: 1 OF 3



CONTRACT NO. 08-4440U4  
 REPLACED PER ADDENDUM NO. 3 DATED AUGUST 28, 2009



**TRACK SHIELD DETAIL  
FOR DEBRIS FALLING FROM BRIDGE DECK REMOVAL  
(WHEN TRACK TIME WINDOW IS AVAILABLE)**

**NOTES:**

1. A FLAG MAN IS REQUIRED AT ALL TIMES DURING THE USE OF A TRACK SHIELD.
2. THE TRACK SHIELD SHALL BE DESIGNED BY THE CONTRACTOR AND SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT THE ANTICIPATED LOADS, INCLUDING IMPACT AND PUNCTURE. THE SHIELD SHALL PREVENT MATERIALS AND EQUIPMENT OR DEBRIS FROM FALLING ONTO THE RAILROAD TRACK. ADDITIONAL LAYERS OF MATERIALS SHALL BE FURNISHED AS NECESSARY TO PREVENT FINE MATERIALS OR DEBRIS FROM SIFTING DOWN UPON THE TRACK.
3. THE SHIELD SHALL BE PREFABRICATED AND FURNISHED WITH LIFTING HOOKS TO SIMPLIFY REMOVAL.
4. THE SHIELD SHALL BE OF SUFFICIENT STRENGTH TO SPAN BETWEEN IT'S SUPPORTS WITHOUT BEARING UPON THE RAILS AND TO WITHSTAND DROPPING RUBBLE.
5. BEFORE REMOVAL THE SHIELD SHALL BE CLEANED OF ALL DEBRIS AND FINE MATERIAL. GEOFABRIC SHALL LINE THE BALLAST SECTION TO PREVENT CONTAMINATION.
6. THE TRACK SHIELD SHALL EXTEND AT LEAST 20 FEET BEYOND THE LIMITS OF DEMOLITION TRANSVERSE TO THE EDGE OF THE BRIDGE.
7. LONGITUDINAL SUPPORT TIMBERS FOR THE SHIELD SHALL NOT EXTEND ABOVE THE TOP OF RAIL WHEN THE SHIELD IS REMOVED. BLOCKING FROM THE TOP OF RAIL TO THE BOTTOM OF THE SHIELD MAY BE ATTACHED TO THE SHIELD. REMAINING TIMBERS SHALL BE ANCHORED.
8. FOR TRAIN PASSAGE, THE RUBBLE SHALL BE REMOVED TO A MINIMUM OF 8'-6" FROM THE NEAREST RAIL AND TO AN ELEVATION NO HIGHER THAN THE TOP OF RAIL.
9. AT THE END OF THE DAY, THE RUBBLE SHALL BE REMOVED COMPLETELY TO A MINIMUM OF 10'-0" FROM THE NEAREST RAIL AND DOWN TO ORIGINAL GRADE. GEOFABRIC BARRIER SHALL BE USED TO PREVENT BALLAST CONTAMINATION BY FINE MATERIALS.
10. CARE SHALL BE TAKEN TO NOT PLACE METAL ACROSS THE TRACK RAILS. RAILROAD COMMUNICATION ARE SENT THROUGH THE RAILS AND WILL BE DISRUPTED BY A SHORT BETWEEN RAILS.
11. DETAILS SHOWN APPLY FOR TIMBER TIES. SPECIAL DETAILS ARE REQUIRED FOR CONCRETE TIES.

**BNSF<sup>®</sup>**  
RAILWAY

**DEMOLITION TRACK SHIELD DETAIL**

DATE: OCTOBER 17, 2007 SHEET: 3 OF 3

**BID ITEM LIST**  
**08-4440U4**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
61	153215	REMOVE CONCRETE (CURB AND GUTTER)	M	1640		
62	153218	REMOVE CONCRETE SIDEWALK	M	1360		
63	153220	REMOVE CONCRETE (CHANNEL)	M3	32		
64	153229	REMOVE CONCRETE BARRIER (TYPE K)	M	1630		
65	153239	REMOVE CONCRETE (CURB, GUTTER, AND SIDEWALK)	M3	450		
66	153246	REMOVE CONCRETE (MISCELLANEOUS)	M2	340		
67	016596	REMOVE CONCRETE (WALKWAY)	M3	18		
68	155003	CAP INLET	EA	2		
69	156535	REMOVE BOX CULVERT	M	15		
70	156576	REMOVE METAL RAILING	M	530		
71	156585	REMOVE CRASH CUSHION	EA	5		
72	157551	BRIDGE REMOVAL, LOCATION A	LS	LUMP SUM	LUMP SUM	
73	157552	BRIDGE REMOVAL, LOCATION B	LS	LUMP SUM	LUMP SUM	
74	157553	BRIDGE REMOVAL, LOCATION C	LS	LUMP SUM	LUMP SUM	
75	160101	CLEARING AND GRUBBING	LS	LUMP SUM	LUMP SUM	
76	170101	DEVELOP WATER SUPPLY	LS	LUMP SUM	LUMP SUM	
77	190101	ROADWAY EXCAVATION	M3	190 000		
78	190107	ROADWAY EXCAVATION (TYPE Y-1) (AERIALY DEPOSITED LEAD)	M3	20 600		
79	190108	ROADWAY EXCAVATION (TYPE Y-2) (AERIALY DEPOSITED LEAD)	M3	12 100		
80	190110	LEAD COMPLIANCE PLAN	LS	LUMP SUM	LUMP SUM	

**BID ITEM LIST**  
**08-4440U4**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
101	208744	300 MM CORRUGATED STEEL PIPE CONDUIT (1.63 MM THICK)	M	620		
102	208800	300 MM WELDED STEEL PIPE CONDUIT (6.35 MM THICK)	M	230		
103	260201	CLASS 2 AGGREGATE BASE	M3	20 900		
104	280000	LEAN CONCRETE BASE	M3	15 800		
105	016600	HOT MIX ASPHALT (TYPE A, BOND BREAKER)	TONN	7460		
106	390131	HOT MIX ASPHALT	TONN	50 000		
107	394060	DATA CORE	LS	LUMP SUM	LUMP SUM	
108	394074	PLACE HOT MIX ASPHALT DIKE (TYPE C)	M	430		
109	394075	PLACE HOT MIX ASPHALT DIKE (TYPE D)	M	1710		
110	394076	PLACE HOT MIX ASPHALT DIKE (TYPE E)	M	710		
111	394077	PLACE HOT MIX ASPHALT DIKE (TYPE F)	M	910		
112	394090	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	M2	43		
113	397005	TACK COAT	TONN	29		
114	401000	CONCRETE PAVEMENT	M3	28 200		
115	401066	CONCRETE PAVEMENT (RAMP TERMINI)	M3	820		
116	404092	SEAL PAVEMENT JOINT	M	53 500		
117	404094	SEAL LONGITUDINAL ISOLATION JOINT	M	510		
118	490505	FURNISH STEEL PILING (HP 250 X 62)	M	1658		
119	490506	DRIVE STEEL PILE (HP 250 X 62)	EA	136		
120	490511	FURNISH STEEL PILING (HP 250 X 85)	M	1891		

**BID ITEM LIST**  
**08-4440U4**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
121	490512	DRIVE STEEL PILE (HP 250 X 85)	EA	161		
122	041982	FURNISH STEEL PILING (HP 310 X 110)	M	1357		
123	041983	DRIVE STEEL PILE (HP 310 X 110)	EA	90		
124	490566	FURNISH STEEL PILING (HP 360 X 132)	M	10 532		
125	490567	DRIVE STEEL PILE (HP 360 X 132)	EA	781		
126	490657	600 MM CAST-IN-DRILLED-HOLE CONCRETE PILING	M	483		
127	490669	2.1 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	91		
128	490671	2.4 M CAST-IN-DRILLED-HOLE CONCRETE PILING	M	450		
129	498027	400 MM CAST-IN-DRILLED-HOLE CONCRETE PILING (SOUND WALL)	M	1080		
130	500001	PRESTRESSING CAST-IN-PLACE CONCRETE	LS	LUMP SUM	LUMP SUM	
131 (F)	041984	BALLAST	M3	122		
132 (F)	510051	STRUCTURAL CONCRETE, BRIDGE FOOTING	M3	1782		
133 (F)	510053	STRUCTURAL CONCRETE, BRIDGE	M3	17 628		
134 (F)	510060	STRUCTURAL CONCRETE, RETAINING WALL	M3	5784		
135 (F)	510086	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE N)	M3	577		
136 (F)	510413	CLASS 1 CONCRETE (BOX CULVERT)	M3	96		
137 (F)	016601	CLASS 1 CONCRETE (HEADWALLS)	M3	7		
138 (F)	510502	MINOR CONCRETE (MINOR STRUCTURE)	M3	335		
139 (F)	510524	MINOR CONCRETE (SOUND WALL)	M3	10		
140 (F)	511064	FRACTURED RIB TEXTURE	M2	5514		

**BID ITEM LIST**  
**08-4440U4**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
221	731517	MINOR CONCRETE (GUTTER)	M3	9		
222	731519	MINOR CONCRETE (STAMPED CONCRETE)	M3	87		
223	731521	MINOR CONCRETE (SIDEWALK)	M3	270		
224	731623	MINOR CONCRETE (CURB RAMP)	M3	21		
225 (F)	016604	MISCELLANEOUS METAL (WATER QUALITY OUTLET RISER)	KG	180		
226 (F)	750001	MISCELLANEOUS IRON AND STEEL	KG	23 300		
227 (F)	750041	ISOLATION CASING	KG	21 805		
228 (F)	750498	MISCELLANEOUS METAL (RESTRAINER - CABLE TYPE)	KG	5750		
229 (F)	750501	MISCELLANEOUS METAL (BRIDGE)	KG	1840		
230 (F)	750505	BRIDGE DECK DRAINAGE SYSTEM	KG	5872		
231	016605	WROUGHT IRON FENCE	M	100		
232	800391	CHAIN LINK FENCE (TYPE CL-1.8)	M	2020		
233	802671	4.3 M CHAIN LINK GATE (TYPE CL-1.8)	EA	4		
234	802675	6.1 M CHAIN LINK GATE (TYPE CL-1.8)	EA	1		
235	810110	SURVEY MONUMENT	EA	10		
236	820107	DELINEATOR (CLASS 1)	EA	160		
237	832003	METAL BEAM GUARD RAILING (WOOD POST)	M	2480		
238 (F)	041990	CHAIN LINK RAILING (TYPE 3 MODIFIED)	M	288		
239 (F)	833032	CHAIN LINK RAILING (TYPE 7)	M	503		
240 (F)	041991	CHAIN LINK RAILING (TYPE 6 MODIFIED)	M	511		

**BID ITEM LIST**  
**08-4440U4**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
241	016606	PORTABLE CONCRETE BARRIER (TYPE 60K)	M	400		
242	833085	PIPE HANDRAILING	M	610		
243 (F)	833088	TUBULAR HANDRAILING	M	208		
244	833140	CONCRETE BARRIER (TYPE 26)	M	250		
245	833141	CONCRETE BARRIER (TYPE 26A)	M	28		
246 (F)	833142	CONCRETE BARRIER (TYPE 26 MODIFIED)	M	937		
247 (F)	833143	CONCRETE BARRIER (TYPE 26A MODIFIED)	M	136		
248 (F)	041992	CONCRETE BARRIER (TYPE 60R)	M	145		
249	839311	DOUBLE THRIE BEAM BARRIER (WOOD POST)	M	360		
250	839521	CABLE RAILING	M	130		
251	839541	TRANSITION RAILING (TYPE WB)	EA	20		
252	839542	TRANSITION RAILING (TYPE DTB)	EA	2		
253	839566	TERMINAL SYSTEM (TYPE CAT)	EA	1		
254	839567	TERMINAL SYSTEM (TYPE CAT) BACKUP	EA	1		
255	839581	END ANCHOR ASSEMBLY (TYPE SFT)	EA	23		
256	839584	ALTERNATIVE IN-LINE TERMINAL SYSTEM	EA	7		
257	839585	ALTERNATIVE FLARED TERMINAL SYSTEM	EA	28		
258	839601	CRASH CUSHION (TYPE CAT)	EA	1		
259	839602	CRASH CUSHION (TYPE CAT) BACKUP	EA	1		
260	839701	CONCRETE BARRIER (TYPE 60)	M	2800		

**BID ITEM LIST**  
**08-4440U4**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
301	016615	CLOSED CIRCUIT TELEVISION SYSTEM (LOCATION 4)	LS	LUMP SUM	LUMP SUM	
302	016616	CLOSED CIRCUIT TELEVISION SYSTEM (LOCATION 5)	LS	LUMP SUM	LUMP SUM	
303	016617	CLOSED CIRCUIT TELEVISION SYSTEM (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
304	016618	CLOSED CIRCUIT TELEVISION SYSTEM (LOCATION 6)	LS	LUMP SUM	LUMP SUM	
305	861101	RAMP METERING SYSTEM (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
306	861102	RAMP METERING SYSTEM (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
307	861103	RAMP METERING SYSTEM (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
308	861104	RAMP METERING SYSTEM (LOCATION 4)	LS	LUMP SUM	LUMP SUM	
309	861349	REMOVE EXISTING SIGNAL SYSTEM	LS	LUMP SUM	LUMP SUM	
310	016619	MODIFY COMMUNICATION SYSTEM	LS	LUMP SUM	LUMP SUM	
311	867014	12 SINGLEMODE FIBER OPTIC CABLE	M	870		
312	867017	48 SINGLEMODE FIBER OPTIC CABLE	M	4580		
313	016620	144 SINGLE MODE FIBER OPTIC CABLE	M	4580		
314	867130	FIBER OPTIC SPLICE CLOSURE	EA	10		
315	016621	MODIFY EXISTING COMMUNICATION HUB ASSEMBLY	LS	LUMP SUM	LUMP SUM	
316	016622	MODIFY TRANSPORTATION MANAGEMENT CENTER	LS	LUMP SUM	LUMP SUM	
317	869047	SPLICE VAULT	EA	10		
318	869075	SYSTEM TESTING AND DOCUMENTATION	LS	LUMP SUM	LUMP SUM	
319	869080	TRAINING	LS	LUMP SUM	LUMP SUM	
320	BLANK					

**BID ITEM LIST**  
**08-4440U4**

321	017379	FORMED RELIEF TEXTURE (MOUNTAIN RIDGE RELIEF)	M2	585		
322	017380	FRACTURED RIB ARROWHEAD CLUSTER TEXTURE	M2	215		
323	99990	MOBILIZATION	LS	LUMPSUM	LUMPSUM	

**TOTAL BID:** \_\_\_\_\_