



**TRANSPORTATION CABINET**

Frankfort, Kentucky 40622  
www.transportation.ky.gov/

**Steven L. Beshear**  
Governor

**Michael W. Hancock, P.E.**  
Secretary

June 12, 2013

CALL NO. 322  
CONTRACT ID NO. 132957  
ADDENDUM # 2

Subject: Boyd County, FE02 010 0023 B00040N  
Letting June 14, 2013

(1)Added - Railroad Note - Pages 17(a)-17(y) of 39

Proposal revisions are available at <http://transportation.ky.gov/Construction-Procurement/>.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

A handwritten signature in blue ink that reads "Ryan Griffith".

Ryan Griffith  
Acting Director  
Division of Construction Procurement

RG:ks  
Enclosures



An Equal Opportunity Employer M/F/D

## **Special Note for Railroad Involvement**

In addition to all provisions covered under the included *Special Provisions for Protection of Railway Interests*, the Contractor shall also:

1. Submit jacking plans and construction sequence for the truss repairs to Norfolk Southern for review and approval prior to commencing work. This is in addition to the submittal to the Engineer.
2. Any paint containment systems required for the project shall be submitted to Norfolk Southern for review and approval prior to commencing work.

**Due to the urgency of this project, KYTC has coordinated with Norfolk Southern to have all contractor submittal reviews expedited.**



Kentucky Transportation Cabinet  
Division of Right of Way & Utilities

**SUMMARY FOR KYTC PROJECTS THAT INVOLVE A RAILROAD**

**Date:** 6/12/2013 (enter using M/d/yyyy format)

*This project actively involves the below listed railroad company. This Project Summary provides an abbreviated listing of project specific railroad data. The detailed needs of the specified railroad company are included in the Special Notes for Protection of Railroad Interest in the proposal package. By submitting a bid, the contractor attests that they have dutifully considered and accepted the provisions as defined in both documents.*

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**GENERAL ROAD PROJECT INFORMATION** (This section must be provided by KYTC)

**County:** Boyd  
**Federal Number:** \_\_\_\_\_  
**State Number:** FE02 010 023 B00040N  
**Route:** US 23  
**Project Description:** 12<sup>th</sup> Street US 23 over Ohio River Bridge Steel Repairs  
**Item Number:** \_\_\_\_\_ **Highway Milepost:** 0.296

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**GENERAL RAIL INFORMATION** (The below sections must be provided by Railroad Company)

**Rail Company Name:** Norfolk Southern Railway Company  
**AAR-DOT# (if applicable):** 473 423F **Railroad Milepost:** N575.76  
**Train Count (6am to 6pm):** 15 **Train Count (6pm to 6am):** 15 **Train Count (24 hr total):** 30  
**Maximum Train Speed:** 50 mph

*(This information is necessary to acquire the necessary insurances when working with Railroad Right of Way)*

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**INSURANCE REQUIREMENTS**

The named insured, description of the work and designation of the job site to be shown on the Policy are as follows:

- (a) Named Insured: Norfolk Southern Railway Company
- (b) The project description should be as indicated in the General Road Project Information section.
- (c) The designation of the jobsite is the route, Milepost, and AAR-DOT# listed above.

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**FLAGGING INFORMATION**

**Flagging Estimate:**

KYTC will be responsible for all flagging costs.

**Hourly Rate:**

\$430.00 per day based on a 12 hour day effective as of the date of this document.

*Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 ½ times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime pay at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 ½ times the normal rate.*

**Forecasted Rate Increases:**

Rates will increase to \$0.00 per hour based on a 0 hour day effective \_\_\_\_\_ (enter using M/d/yyyy format).



Kentucky Transportation Cabinet  
Division of Right of Way & Utilities

**SUMMARY FOR KYTC PROJECTS THAT INVOLVE A RAILROAD**

**RAILROAD CONTACTS**

(to be provided by Railroad Company)

**General Railroad Contact:**

Shawn Starling  
Engineer Public Improvements  
Norfolk Southern Railway Company  
1200 Peachtree Street, N.E.  
Atlanta, Georgia 30309  
**(Phone)** 404-529-1436  
**(Email)** douglas.starling@nscorp.com

**Regional Representative (Roadmaster):**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
**(Phone)** \_\_\_\_\_  
**(Email)** \_\_\_\_\_

**Insurance contact:**

Risk Management  
Norfolk Southern Railway Company  
\_\_\_\_\_  
Three Commercail Place  
Norfolk, Virginia 23510-2191  
**(Phone)** \_\_\_\_\_  
**(Email)** \_\_\_\_\_

**Railroad Designer Contact:**

Contractor or In-House Employee? Consultant

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
**(Phone)** \_\_\_\_\_  
**(Email)** \_\_\_\_\_

**Railroad Construction Contact:**

Contractor or In-House Employee? Consultant

\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
**(Phone)** \_\_\_\_\_  
**(Email)** \_\_\_\_\_

**KENTUCKY TRANSPORTATION CABINET CONTACTS**

(to be provided by KYTC)

**KYTC Railroad Coordinator:**

Allen Rust, PE  
Div. of Right of Way & Utilities  
Kentucky Transportation Cabinet  
200 Mero Street, 5<sup>th</sup> Floor East  
Frankfort, Kentucky 40622  
**(Phone)** 502-564-3210  
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**KYTC Construction Procurement Director:**

Ryan Griffith, Director  
Div. of Construction Procurement  
Kentucky Transportation Cabinet  
200 Mero Street, 3<sup>rd</sup> Floor West  
Frankfort, Kentucky 40622  
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The project specific information provided herein is valid as of the date indicated. However, the specific information may be subject to change due to the normal business operations of all parties. The terms and conditions defined here, and in the bid proposal in its entirety, are inclusive and constant.

## Norfolk Southern – Special Provisions for Protection of Railway Interest

### 1. AUTHORITY OF RAILROAD ENGINEER AND DEPARTMENT ENGINEER:

The authorized representative of the Railroad Company, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic of his Company including the adequacy of the foundations and structures supporting the Railroad tracks. For Public Projects impacting Norfolk Southern, the Public Projects Engineer will serve as the Railroad Engineer.

The authorized representative of the Department, hereinafter referred to as the Department Engineer, shall have authority over all other matters as prescribed herein and in the Project Specifications.

### 2. NOTICE OF STARTING WORK:

A. Department's Prime contractor shall not commence any work on railroad rights-of-way until he has complied with the following conditions:

1. Given the Railroad written notice in electronic format to the Railroad Engineer, with copy to the Department Engineer who has been designated to be in charge of the work, at least ten days in advance of the date he proposes to begin work on Railroad rights-of-way.
2. Obtained written approval from the Railroad of Railroad Protective Liability Insurance coverage as required by paragraph 14 herein. It should be noted that Railroad Company does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad Company must have the full original countersigned policy. Further, please note that mere receipt of the policy is not the only issue but review for compliance. Due to the number of projects system-wide, it typically takes a minimum of 30-45 days for Railroad Company to review.
3. Obtained Railroad's Flagging Services as required by paragraph 7 herein.
4. Obtained written authorization in electronic format from the Railroad to begin work on Railroad rights-of-way, such authorization to include an outline of specific conditions with which he must comply.
5. Furnished a schedule for all work within the Railroad rights-of-way as required by paragraph 7.B.1.

B. The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

### 3. INTERFERENCE WITH RAILROAD OPERATIONS:

A. The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the

property of the Railroad Company or to poles, wires, and other facilities of tenants on the rights-of-way of the Railroad Company. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service shall be deferred by the Contractor until the flagging service or inspection service required by the Railroad is available at the job site.

- B. Whenever work within Railroad rights-of-way is of such a nature that impediment to Railroad operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.
  - C. Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the Railroad's Division Engineer, such provisions is insufficient, either may require or provide such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Railroad or the Department.
  - D. "One Call" Services do not locate buried railroad utilities. The contractor shall contact the railroad's representative 2 days in advance of work at those places where excavation, pile driving, or heavy loads may damage railroad underground facilities. Upon request from the contractor or agency, railroad forces will locate and paint mark or flag railroad underground facilities. The contractor shall avoid excavation or other disturbances of these facilities. If disturbance or excavation is required near a buried railroad facility, the contractor shall coordinate with the railroad to have the facility potholed manually with careful hand excavation. The facility shall be protected by the contractor during the course of the disturbance under the supervision and direction of the railroad representative.
4. TRACK CLEARANCES:
- A. The minimum track clearances to be maintained by the Contractor during construction are shown on the Project Plans. If temporary clearances are not shown on the project plans, the following criteria shall govern the use of falsework and formwork above or adjacent to operated tracks.
    - 1. A minimum vertical clearance of 22'-0" above top of highest rail shall be maintained at all times.
    - 2. A minimum horizontal clearance of 13'-0" from centerline of tangent track or 14'-0" from centerline of curved track shall be maintained at all times. Additional horizontal clearance may be required in special cases to be safe for operating conditions. This additional clearance will be as determined by the Chief Engineer Bridges & Structures
    - 3. All proposed temporary clearances which are less than those listed above must be submitted to the Chief Engineer Bridges & Structures for approval prior to construction and must also be authorized by the regulatory body of the State if less than the legally prescribed clearances.



4. The temporary clearance requirements noted above shall also apply to all other physical obstructions including, but not limited to: stockpiled materials, parked equipment, placement or driving of piles, and bracing or other construction supports.
- B. Before undertaking any work within Railroad right-of-way, and before placing any obstruction over any track, the Contractor shall:
1. Notify the Railroad's representative at least 72 hours in advance of the work.
  2. Receive assurance from the Railroad's representative that arrangements have been made for flagging service as may be necessary.
  3. Receive permission from the Railroad's representative to proceed with the work.
  4. Ascertain that the Department Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.
5. CONSTRUCTION PROCEDURES:
- A. General:
1. Construction work and operations by the Contractor on Railroad property shall be:
    - a. Subject to the inspection and approval of the Railroad or their designated Construction Engineering Representative.
    - b. In accord with the Railroad's written outline of specific conditions.
    - c. In accord with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
    - d. In accord with these Special Provisions.
  2. Submittal Requirements
    - a. The contractor shall submit all construction related correspondence and submittals electronically to the Railroad Engineer.
    - b. The contractor shall allow for 30 days for the Railroad's review and response.
    - c. All work in the vicinity of the Railroad's property that has the potential to affect the Railroad's train operations or disturb the Railroad's Property must be submitted and approved by the Railroad prior to work being performed.
    - d. All submittals and calculations must be signed and sealed by a registered engineer licensed in the state of the project work.
    - e. All submittals shall first be approved by the Department Engineer and the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

- f. For all construction projects, the following submittals, but not limited to those listed below, shall be provided for review and approval when applicable:
  - i. General Means and Methods
  - ii. Roadway Protection
  - iii. Construction Excavation & Shoring
  - iv. Pipe, Culvert, & Tunnel Installations
  - v. Demolition Procedure
  - vi. Erection & Hoisting Procedure
  - vii. Debris Shielding or Containment
  - viii. Blasting
  - ix. Formwork for the bridge deck, diaphragms, overhang brackets, and protective platforms
  - x. Bent Cap Falsework. A lift plan will be required if the contractor want to move the falsework over the tracks.
  
- g. For Undergrade Bridges (Bridges carrying the Railroad) the following submittals in addition to those listed above shall be provided for review and approval:
  - i. Shop Drawings
  - ii. Bearing Shop Drawings and Material Certifications
  - iii. Concrete Mix Design
  - iv. Structural Steel, Rebar, and/or Strand Certifications
  - v. 28 day Cylinder Test for Concrete Strength
  - vi. Waterproofing Material Certification
  - vii. Test Reports for Fracture Critical Members
  - viii. Foundation Construction Reports

Fabrication may not begin until the Railroad has approved the required shop drawings.

- h. The Contractor shall include in all submissions a detailed narrative indicating the progression of work with the anticipated timeframe to complete each task. Work will not be permitted to commence until the Contractor has provided the Railroad with a satisfactory plan that the project will be undertaken without scheduling, performance or safety related issues. Submission shall also provide a listing of the anticipated equipment to be used, the location of all equipment to be used and insure a contingency plan of action is in place should a primary piece of equipment malfunction.

**B. Roadway Protection**

1. The Contractor shall submit the proposed roadway protection system detailing the specific filter fabric and anchorage system to be used during all construction activities.
2. The roadway protection is to extend 25' beyond the proposed limit of work, be installed at the start of the project and be continuously maintained to prevent all contaminants from entering the ballast section of all tracks for the entire duration of the project.

**C. Excavation:**

1. The subgrade of an operated track shall be maintained with edge of berm at least 10'-0" from centerline of track and not more than 24- inches below top of rail. Contractor

will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.

2. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the Railroad right-of-way.

D. Excavation for Structures and Shoring Protection:

1. The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material.
2. All plans and calculations for shoring shall be prepared and signed by a Registered Professional Engineer, licensed in the state of the proposed project, in accordance with Norfolk Southern's Guidelines for Design of Grade Separation Structures, Section I – Overhead Grade Separation Design Criteria, subsection 4.E Construction Excavation. The Registered Professional Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions.
3. The contractor shall provide a detailed installation and removal plan of the shoring components. Any component that will be installed via the use of a crane or any other lifting device shall be subject to the guidelines outlined in section 5.G.
4. The contractor shall be required to survey the track(s) and railroad embankment and provide a cross section of the proposed excavation in relation to the tracks.
5. Calculations for the proposed shoring should include deflection calculations. The maximum deflection for excavations within 18'-0" of the centerline of the nearest track shall be 3/8". For all other cases, the max deflection shall not exceed 1/2".
6. Additionally, the Railroad will require the installation of an OSHA approved handrail and orange construction safety fencing for all excavations of the Railroad right-of-way.

E. Pipe, Culvert, & Tunnel Installations

- a. Pipe, Culvert, & Tunnel Installations shall be in accordance with the "Specifications for Pipeline Occupancy of Norfolk Southern Corporation Property (NSCE-8)."

F. Demolition Procedure

1. General

- a. Demolition plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-of-way and within a distance of boom length plus 15'-0" from the centerline of track.

- b. Railroad tracks and other railroad property must be protected from damage during the procedure.
- c. A pre-demolition meeting shall be conducted with the Department, the Railroad Engineer or their representative, and the key contractor personnel prior to the start of the demolition procedure.
- d. The Railroad Engineer or his designated representative must be present at the site during the entire demolition procedure period.
- e. Existing, obsolete, bridge piers shall be removed to a sufficient depth below grade to enable restoration of the existing/proposed track ditch, but in no case less than 2'-0" below final grade.

## 2. Submittal Requirements

- a. In addition to the submittal requirements outlined in Section 5.A.2, the contractor shall submit the following for approval by the Railroad Engineer:
  - i. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
  - ii. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
  - iii. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing structure showing complete and sufficient details with supporting data for the demolition of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
  - iv. The contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Department and the Railroad.

- v. A complete demolition procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- vi. Design and supporting calculations for the temporary support of components, including but not limited to the stability of the superstructure during the temporary condition, temporary girder tie-downs and falsework.

3. Overhead Demolition Debris Shield

- a. The demolition debris shield shall be installed prior to the demolition of the bridge deck or other relevant portions of the superstructure over the track area to catch all falling debris.
- b. The demolition debris shield shall provide a minimum vertical clearance as specified in Section 4.A.1 or maintain the existing vertical clearance if the existing clearance is less than that specified in Section 4.A.1.
- c. The Contractor shall include the demolition debris shield installation/removal means and methods as part of the proposed Demolition procedure submission.
- d. The contractor shall submit the demolition debris shield design and supporting calculations for approval by the Railroad Engineer
- e. The demolition debris shield shall have a minimum design load of 50 pounds per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried.
- f. The Contractor shall include the proposed bridge deck removal procedure in its demolition means and methods and shall verify that the size and quantity of the demolition debris generated by the procedure does not exceed the shield design loads.
- g. The contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Railroad Engineer.

4. Vertical Demolition Debris Shield

- a. A vertical demolition debris shield may be required for substructure removals in close proximity to the Railroad's track and other facilities, as determined by the Railroad Engineer.

G. Erection & Hoisting Procedures

1. General

- a. Erection plans are required for all spans over the track(s), for all spans adjacent to the track(s), if located on (or partially on) Railroad right-of-way; and in all situations where cranes will be situated on, over, or adjacent to Railroad right-

of-way and within a distance of boom length plus 15'-0" from the centerline of track.

- b. Railroad tracks and other railroad property must be protected from damage during the erection procedure.
- c. A pre-erection meeting shall be conducted with the Department, the Railroad Engineer or their representative, and the key contractor personnel prior to the start of the erection procedure.
- d. The Railroad Engineer or his designated representative must be present at the site during the entire erection procedure period.
- e. For field splices located over Railroad property, a minimum of 50% of the holes for each connection shall be filled with bolts or pins prior to releasing the crane. A minimum of 50% of the holes filled shall be filled with bolts. All bolts must be appropriately tightened.

## 2. Submittal Requirements

- a. In addition the submittal requirements outlined in Section 5.A.2, the contractor shall submit the following for approval by the Railroad Engineer:
  - i. As-built beam seat elevations - All as-built bridge seats and top of rail elevations shall be furnished to the Railroad Engineer for review and verification at least 30 days in advance of the erection, to ensure that minimum vertical clearances as approved in the plans will be achieved.
  - ii. A plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or staging locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.
  - iii. Rating sheets showing cranes or lifting devices to be adequate for 150% of the actual weight of the pick, including all rigging components. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted. Safety factors that may have been "built-in" to the crane charts are not to be considered when determining the 150% factor of safety.
  - iv. Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the proposed structure showing complete and sufficient details with supporting data for the erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the Registered Professional Engineer submitting the procedure and calculations.
  - v. The contractor shall provide a sketch of all rigging components from the crane's hook block to the beam. Catalog cuts or information sheets of all rigging components with their lifting capacities shall be

provided. All rigging must be adequate for 150% of the actual weight of the pick. Safety factors that may have been "built-in" to the rating charts are not to be considered when determining the 150% factor of safety. All rigging components shall be clearly identified and tagged with their rated lifting capacities. The position of the rigging in the field shall not differ from what is shown on the final plan without prior review from the Department and the Railroad.

- vi. A complete erection procedure, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
- vii. Design and supporting calculations for the temporary support of components, including but not limited to temporary girder tie-downs and falsework.

H. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Department Engineer for use of explosives on or adjacent to Railroad property. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:
  - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.
  - b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.
  - c. No blasting shall be done without the presence of the Railroad Engineer or his authorized representative. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed (see paragraph 5.E.2.B) will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.
  - d. Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If his actions result in delay of trains, the Contractor shall bear the entire cost thereof.
  - e. The blasting contractor shall have a copy of the approved blasting plan on hand while on the site.
  - f. Explosive materials or loaded holes shall not be left unattended at the blast site.
  - g. A seismograph shall be placed on the track shoulder adjacent to each blast which will govern the peak particle velocity of two inches per second.

Measurement shall also be taken on the ground adjacent to structures as designated by a qualified and independent blasting consultant. The Railroad reserves the option to direct the placement of additional seismographs at structures or other locations of concern, without regard to scaled distance.

- h. After each blast, the blasting contractor shall provide a copy of their drill log and blast report, which includes number of holes, depth of holes, number of decks, type and pounds of explosives used per deck.
      - i. The Railroad may require top of rail elevations and track centers taken before, during and after the blasting and excavation operation to check for any track misalignment resulting from the Contractor's activities.
2. The Railroad representative will:
  - a. Determine approximate location of trains and advise the Contractor the appropriate amount of time available for the blasting operation and clean up.
  - b. Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accord with these special provisions.
3. The Contractor must hire, at no expense to the Railroad, a qualified and independent blasting consultant to oversee the use of explosives. The blasting consultant will:
  - a. Review the Contractor's proposed drilling and loading patterns, and with the blasting consultant's personnel and instruments, monitor the blasting operations.
  - b. Confirm that the minimum amounts of explosives are used to remove the rock.
  - c. Be empowered to intercede if he concludes that the Contractor's blasting operations are endangering the Railway.
  - d. Submit a letter acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.
  - e. Furnish copies of all vibration readings to the Railroad representative immediately after each blast. The representative will sign and date the seismograph tapes after each shot to verify the readings are for that specific shot.
  - f. Advise the Railroad representative as to the safety of the operation and notify him of any modifications to the blasting operation as the work progresses.
4. The request for permission to use explosives on the Railroad's Right-of-Way shall include a blasting proposal providing the following details:
  - a. A drawing which shows the proposed blasting area, location of nearest hole and distance to Railway structures, all with reference to the centerline of track.



- b. Hole diameter.
  - c. Hole spacing and pattern.
  - d. Maximum depth of hole.
  - e. Maximum number of decks per hole.
  - f. Maximum pounds of explosives per hole.
  - g. Maximum pounds of explosives per delay.
  - h. Maximum number of holes per detonation.
  - i. Type of detonator and explosives to be used. (Electronic detonating devices will not be permitted). Diameter of explosives if different from hole diameter.
  - j. Approximate dates and time of day when the explosives are to be detonated.
  - k. Type of flyrock protection.
  - l. Type and patterns of audible warning and all clear signals to be used before and after each blast.
  - m. A copy of the blasting license and qualifications of the person directly in charge of the blasting operation, including their name, address and telephone number.
  - n. A copy of the Authority's permit granting permission to blast on the site.
  - o. A letter from the blasting consultant acknowledging that he has been engaged to oversee the entire blasting operation and that he approves of the blasting plan.
  - p. In addition to the insurance requirements outlined in Paragraph 14, A certificate of insurance from the Contractor's insurer stating the amount of coverage for XCU (Explosive Collapse and Underground Hazard) insurance and that XCU Insurance is in force for this project.
  - q. A copy of the borings and Geotechnical information or report.
- I. Track Monitoring
- 1. At the direction of the Railroad Engineer, any activity that has the potential to disturb the Railroad track structure may require the contractor to submit a detailed track monitoring program for approval by the Railroad Engineer.
  - 2. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. Railroad reserves the right to modify the survey locations and monitoring frequency as necessary during the project.

3. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Railroad Engineer for analysis.
  4. If any movement has occurred as determined by the Railroad Engineer, the Railroad will be immediately notified. Railroad, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased and determine what corrective action is required. Any corrective action required by the Railroad or performed by the Railroad including the monitoring of corrective action of the contractor will be at project expense.
- J. Maintenance of Railroad Facilities:
1. The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions which may result from his operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within Railroad rights-of-way and repair any other damage to the property of the Railroad or its tenants.
  2. If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, temporary pipes, ditches or other drainage facilities shall be installed to maintain adequate drainage, as approved by NS. Upon completion of the work, the temporary facilities shall be removed and the permanent facilities restored.
  3. All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.
- K. Storage of Materials and Equipment:
1. Materials and equipment shall not be stored where they will interfere with Railroad operations, nor on the rights-of-way of the Railroad Company without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad Company will not be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.
  2. All grading or construction machinery that is left parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The Contractor shall protect, defend, indemnify and save Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the Contractor's failure to immobilize grading or construction machinery.
- L. Cleanup:
1. Upon completion of the work, the Contractor shall remove from within the limits of the Railroad rights-of-way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said rights-of-way in a neat condition satisfactory to the Chief Engineer of the Railroad or his authorized representative.

6. DAMAGES:

- A. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by Railroad traffic.
- B. Any cost incurred by the Railroad for repairing damages to its property or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Railroad by the Contractor.

7. FLAGGING SERVICES:

A. Requirements:

- 1. Flagging services will not be provided until the contractor's insurance has been reviewed & approved by the Railroad.
- 2. Under the terms of the agreement between the Department and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railroad's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.
- 3. Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) flagmen may be required. However, if the Contractor works within distances that violate instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed.

B. Scheduling and Notification:

- 1. The Contractor's work requiring railroad flagging should be scheduled to limit the presence of a flagman at the site to a maximum of 50 hours per week. The Contractor shall receive Railroad approval of work schedules requiring a flagman's presence in excess of 40 hours per week.
- 2. Not later than the time that approval is initially requested to begin work on Railroad right-of-way, Contractor shall furnish to the Railroad and the Department a schedule for all work required to complete the portion of the project within Railroad right-of-way and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.
- 3. The Contractor will be required to give the Railroad representative at least 10 working days of advance written notice of intent to begin work within Railroad right-of-way in accordance with this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor will be required to give the Railroad representative at least 3 working days of advance notice before

resuming work on Railroad right-of-way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer. If flagging is required, no work shall be undertaken until the flagman, or flagmen are present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days notice before flagging service may be discontinued and responsibility for payment stopped.

4. If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Department or Railroad.

C. Payment:

1. The Department will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction.
2. The estimated cost of flagging is current rate per day based on a 10-hour work day. This cost includes the base pay for the flagman, overhead, and includes a per diem charge for travel expenses, meals and lodging. The charge to the Department by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.
3. Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1 and 1/2 times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2 and 1/2 times the normal rate.
4. Railroad work involved in preparing and handling bills will also be charged to the Department. Charges to the Department by the Railroad shall be in accordance with applicable provisions of Subchapter B, Part 140, Subpart I and Subchapter G, Part 646, Subpart B of the Federal-Aid Policy Guide issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The above estimates of flagging costs are provided for information only and are not binding in any way.

D. Verification:

1. Railroad's flagman will electronically enter flagging time via Railroad's electronic billing system. Any complaints concerning flagging must be resolved in a timely manner. If the need for flagging is questioned, please contact Railroad's System Engineer - Public Improvements. All verbal complaints will be confirmed in writing by the Contractor within 5 working days with a copy to the Department's

Engineer. Address all written correspondence electronically to Railroad's System Engineer - Public Improvements:

2. The Railroad flagman assigned to the project will be responsible for notifying the Department Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Department Engineer will document such notification in the project records. When requested, the Department Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

8. HAUL ACROSS RAILROAD:

- A. Where the plans show or imply that materials of any nature must be hauled across a Railroad, unless the plans clearly show that the Department has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor or Agency will be required to bear all costs incidental to such crossings whether services are performed by his own forces or by Railroad personnel.
- B. No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad Company unless specific authority for its installation, maintenance, necessary watching and flagging thereof and removal, until a temporary private crossing agreement has been executed between the Contractor and Railroad. The approval process for an agreement normally takes 90-days.

9. WORK FOR THE BENEFIT OF THE CONTRACTOR:

- A. All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the Department and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the Department and/or the Railroad.
- B. Should the Contractor desire any changes in addition to the above, then he shall make separate arrangements with the Railroad for same to be accomplished at the Contractor's expense.

10. COOPERATION AND DELAYS:

- A. It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction involving work by the Railroad or tenants of the Railroad. In arranging his schedule he shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.
- B. No charge or claim of the Contractor against either the Department or the Railroad Company will be allowed for hindrance or delay on account of railway traffic; any work done by the Railway Company or other delay incident to or necessary for safe maintenance of railway traffic or for any delays due to compliance with these special provisions.

11. TRAINMAN'S WALKWAYS:

- A. Along the outer side of each exterior track of multiple operated track, and on each side of single operated track, an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 10 feet from centerline of track, shall be maintained. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while Railway's protective service is provided shall be removed before the close of each work day. If there is any excavation near the walkway, a handrail, with 10'-0" minimum clearance from centerline of track, shall be placed and must conform to AREMA and/or FRA standards.

12. GUIDELINES FOR PERSONNEL ON RAILROAD RIGHT-OF-WAY:

- A. The Contractor and/or the Agency's personnel authorized to perform work on Norfolk Southern's property as specified in Section 2 above are not required to complete Norfolk Southern Roadway Worker Protection Training; However the Contractor and the Agency's personnel must be familiar with Norfolk Southern's standard operating rules and guidelines, should conduct themselves accordingly, and may be removed from the property for failure to follow these guidelines.
- B. All persons shall wear hard hats. Appropriate eye and hearing protection must be used. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard-sole, lace-up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Wearing of safety boots is strongly recommended. In the vicinity of at-grade crossings, it is strongly recommended that reflective vests be worn.
- C. No one is allowed within 25' of the centerline of track without specific authorization from the flagman.
- D. All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.
- E. No one is allowed to cross tracks without specific authorization from the flagman.
- F. All welders and cutting torches working within 25' of track must stop when train is passing.
- G. No steel tape or chain will be allowed to cross or touch rails without permission from the Railroad.

13. GUIDELINES FOR EQUIPMENT ON RAILROAD RIGHT-OF-WAY:

- A. No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15' of centerline of track without specific permission from railroad official and flagman.
- B. No crane or boom equipment will be allowed to foul track or lift a load over the track without flag protection and track time.
- C. All employees will stay with their machines when crane or boom equipment is pointed toward track.
- D. All cranes and boom equipment under load will stop work while train is passing (including pile driving).

- E. Swinging loads must be secured to prevent movement while train is passing.
- F. No loads will be suspended above a moving train.
- G. No equipment will be allowed within 25' of centerline of track without specific authorization of the flagman.
- H. Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and flagman. Orange construction fencing may be required as directed.
- I. No equipment or load movement within 25' or above a standing train or railroad equipment without specific authorization of the flagman.
- J. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.
- K. All equipment, loads and cables are prohibited from touching rails.
- L. While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.
- M. No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.
- N. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.
- O. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.
- P. Prior to performing any crane operations, the contractor shall establish a single point of contact for the Railroad flagman to remain in communication with at all times. Person must also be in direct contact with the individual(s) directing the crane operation(s).

14. INSURANCE:

- A. In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to carry insurance of the following kinds and amounts:
  - 1. Commercial General Liability Insurance having a combined single limit of not less than \$2,000,000 per occurrence for all loss, damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include explosion, collapse, and underground hazard (XCU) coverage, shall be endorsed to name Railroad specified in item A.2.c. below both as the certificate holder and as an additional insured, and shall include a severability of interests provision.
  - 2. Railroad Protective Liability Insurance having a combined single limit of not less than \$2,000,000 each occurrence and \$6,000,000 in the aggregate applying separately to each annual period. If the project involves track over which passenger trains operate,

the insurance limits required are not less than a combined single limit of \$5,000,000 each occurrence and \$10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

The standards for the Railroad Protective Liability Insurance are as follows:

- a. The insurer must be rated A- or better by A.M. Best Company, Inc.  
**NOTE: NS does not accept from insurers Chartis (AIG or Affiliated Company including Lexington Insurance Company), Hudson Group or ACE.**

- b. The policy must be written using one of the following combinations of Insurance Services Office ("ISO") Railroad Protective Liability Insurance Form Numbers:

- (1) CG 00 35 01 96 and CG 28 31 10 93; or
- (2) CG 00 35 07 98 and CG 28 31 07 98; or
- (3) CG 00 35 10 01; or
- (4) CG 00 35 12 04; or
- (5) CG 00 35 12 07.

- c. The named insured shall read:

Norfolk Southern Railway Company  
Three Commercial Place  
Norfolk, Virginia 23510-2191  
Attn: S. W. Dickerson Risk Management

**(NOTE: NS does not share coverage on RRPL with any other entity on this policy)**

- d. The description of operations must appear on the Declarations, must match the project description in this agreement, and must include the appropriate Department project and contract identification numbers.
- e. The job location must appear on the Declarations and must include the city, state, and appropriate highway name/number. **NOTE: Do not include any references to milepost, valuation station, or mile marker on the insurance policy.**
- f. The name and address of the prime contractor must appear on the Declarations.
- g. The name and address of the Department must be identified on the Declarations as the "Involved Governmental Authority or Other Contracting Party."
- h. Other endorsements/forms that will be accepted are:

- (1) Broad Form Nuclear Exclusion – Form IL 00 21



- (2) 30-day Advance Notice of Non-renewal or cancellation
- (3) Required State Cancellation Endorsement
- (4) Quick Reference or Index Form CL/IL 240

i. Endorsements/forms that are NOT acceptable are:

- (1) Any Pollution Exclusion Endorsement except CG 28 31
- (2) Any Punitive or Exemplary Damages Exclusion
- (3) Known injury or Damage Exclusion form CG 00 59
- (4) Any Common Policy Conditions form
- (5) Any other endorsement/form not specifically authorized in item no. 2.h above.

- B. If any part of the work is sublet, similar insurance, and evidence thereof as specified in A.1 above, shall be provided by or on behalf of the subcontractor to cover its operations on Railroad's right of way.
- C. Prior to entry on Railroad right-of-way, the original Railroad Protective Liability Insurance Policy shall be submitted by the Prime Contractor to the Department at the address below for its review and transmittal to the Railroad. In addition, certificates of insurance evidencing the Prime Contractor's and any subcontractors' Commercial General Liability Insurance shall be issued to the Railroad and the Department at the addresses below, and forwarded to the Department for its review and transmittal to the Railroad. The certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without (30) days advance written notice to Railroad and the Department. No work will be permitted by Railroad on its right-of-way until it has reviewed and approved the evidence of insurance required herein.

DEPARTMENT:

RAILROAD:

Risk Management  
Norfolk Southern Railway Company  
Three Commercial Place  
Norfolk, Virginia 23510-2191

- D. The insurance required herein shall in no way serve to limit the liability of Department or its Contractors under the terms of this agreement.
- E. Insurance Submission Procedures
  - 1. Norfolk Southern will only accept initial insurance submissions via US Mail or Overnight carrier to the address noted in C above. NS will NOT accept initial insurance submissions via email or faxes.
  - 2. Norfolk Southern requires the following two (2) forms of insurance in the initial insurance submission to be submitted under a cover letter providing details of the project and contact information:
    - a. The full original or certified true countersigned copy of the railroad protective liability insurance policy in its entirety inclusive of all declarations, schedule of forms and endorsements along with the policy forms and endorsements.

- b. The contractor's commercial general, automobile, and workers' compensation liability insurance certificate of liability insurance evidencing a combined single limit of a minimum of \$2M per occurrence of general and \$1M per occurrence of automobile liability insurance naming Norfolk Southern Railway Company, Three Commercial Place, Norfolk, VA 23510 as the certificate holder and as an additional insured on both the general and automobile liability insurance policy.
- 3. Norfolk Southern does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Norfolk Southern must have the full original countersigned policy. Norfolk Southern understands that this can typically take a minimum of 30-45 days to receive for review. Please also note that mere receipt is not the only issue but review for compliance, which Norfolk Southern has 10 business days from receipt to respond.

15. FAILURE TO COMPLY:

- A. In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:
  - 1. The Railroad Engineer may require that the Contractor vacate Railroad property.
  - 2. The Engineer may withhold all monies due the Contractor on monthly statements.
- B. Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

16. PAYMENT FOR COST OF COMPLIANCE:

- A. No separate payment will be made for any extra cost incurred on account of compliance with these special provisions. All such costs shall be included in prices bid for other items of the work as specified in the payment items.

17. PROJECT INFORMATION

- A. Date: \_\_\_\_\_
- B. NS File No.: \_\_\_\_\_
- C. NS Milepost: \_\_\_\_\_
- D. Department's Project No.: \_\_\_\_\_