

**CUYAHOGA COUNTY
CUY-480-7.14 WB Part 2, PID 108482
Keystone Division, Chicago Line
MP CD-190.66, AARDOT #941974F**

NS File No. BR0029220

SPECIAL CLAUSES IN THE PROPOSAL

The bidder, if awarded the contract for this improvement agrees:

1. To cooperate at all times with the local officials of the railroad company.
2. To use all reasonable care and diligence in the work in order to avoid accidents, damage or unnecessary delay to, or interference with the trains and other property of the railroad company.
3. To conduct his work in a manner satisfactory to the Chief Engineer of the railroad company or his authorized representative, to perform his work in such manner and at such time as not to unnecessarily interfere with the movements of trains or railroad traffic, and to hold his work at all times open to inspection of railroad company inspectors.
4. To cooperate with a public utility, railroad or other organizations having occasion to do work on or in connection with the improvement.
5. To avoid unnecessary use of railroad property without written permission of the railroad company and to leave railroad roadbed and property in a condition acceptable to the Chief Engineer of the railroad company.
6. To execute a bond conditioned according to Section 5525.16 of the Revised Code of Ohio, in favor of the State of Ohio, and further to carry insurance of the kinds and amounts as delineated on pgs. 18-21 in the railroad's 'Special Provisions for Protection of Railway Interest' (attached).

The number of trains operating at the indicated location is estimated to be:

4 Passenger trains per day @ a maximum authorized operating speed of 79 miles per hour.

45 Freight trains per day @ a maximum authorized operating speed of 60 miles per hour.

- Norfolk Southern accepts electronic submissions of insurance policies at:

NSRisk3@nscorp.com

Required documentation and other requirements are outlined in the attached Norfolk Southern ‘Special Provisions for Protection of Railway Interest’ under subsection 14 - Insurance. Contractors should email their insurance documentation to Norfolk Southern a min. of 30 days prior to their anticipated start date.

- Allow a min. of **30 days** from the day that Norfolk Southern receives your submission until approval or denial is received back from NS - Resubmission of missing or revised information may take an additional 30 days for NS to review and approve.
- Including the NS file number (at the top of pg. SC-1) on the cover page of the insurance transmittal will aid in quickly identifying the project for which the submission has been made. However, do not include milepost data or DOT #'s in the actual policy.
- **No work can begin on NS ROW until the Contractor’s insurance has been submitted and approved in writing by NS.**
- **The Contractor will not be paid for RR insurance coverage until evidence of insurance acceptance by Norfolk Southern is provided to the ODOT District Area Engineer or his/her designee.**

(a) **General Insurance Requirements**

The insurance hereinbefore specified shall be with an acceptable insurance company authorized to do business in the State of Ohio, and shall be taken out before execution of the Contract by the Director and kept in effect until all work required to be performed under the terms of the contract is satisfactorily completed as evidenced by the formal acceptance by the State. Such policies shall include thirty (30) days canceling notice. The cost of insurance hereinbefore specified in subsection (a) will be a specific bid item.

7. The Railroad company will assign, at the sole cost and expense of the Department, railroad flaggers or other protective services and devices as necessary to insure the safety and continuity of the work to be performed as a part of this contract. Said services and devices will be provided when necessary, as determined by the railroad company, because of any of the Contractor's operations over, under or adjacent to tracks over which trains are operating. The provision of such protective personnel and devices does not relieve the Contractor from the liability of payment for damage caused by his operations.

The Contractor shall notify the following named individual for each railroad company at least 30 days, or as directed by the authorized representative of the Railroad, in advance of starting any work which might require protection:

E.W. Chambers
Senior Engineer Public Improvements
Norfolk Southern Corporation
650 West Peachtree Street, NW., Box 45
Atlanta, GA 30308
Telephone: (470-463-6307)
eldridge.chambers@nscorp.com

All email correspondence should include (at a minimum) either the ODOT Project Identification (PID) Number, and/or the NS File Number in the Subject line for ease of reference.

The Contractor shall notify the railroad at least 5 working days in advance of suspending or ceasing operations that require a flagger, and must provide the Project Name, PID number, railroad line and milepost information and/or AARDOT# as shown at the top of pg. SC-1.

The Contractor will be responsible for protective services provided at his request and not utilized due, in the opinion of the Engineer, to a change in the Contractor's construction schedule or if it is determined by the Engineer that the requested services were not necessary. The actual costs for such protective services so assessed to the Contractor will be deducted from the Contract.

The decision of the Director of Transportation shall be final in the event of controversy as to the necessity for any protection services provided and not utilized by the Contractor as described in the preceding paragraph.

8. To pay the railroad or owning company for any changes, requested for his convenience, to railroad property, facilities, wire, fiber optic and/or pipelines other than shown on the plans for the project.
9. If at any time the contractor desires a temporary crossing (or the drawings show a temporary crossing is necessary) of the railroad's tracks, he shall make a request for a temporary crossing from the railroad.

Contractor shall complete and execute railroad's regular form of private grade crossing agreement covering the crossing desired, paying any fees directly to the railroad necessary for construction, maintenance, removal, protection and other costs associated with the temporary crossing – See attached NS 'Private Road Crossing Application' (at the end of the attached Norfolk Southern 'Special Provisions'), or go to:

<http://www.nscorp.com/content/nscorp/en/real-estate/norfolk-southern-services/private-crossings.html>

Contractor should be aware that submittal, review and approval of a temporary crossing application may take anywhere from 8-12 weeks after submittal of the application to the railroad, and Contractor should account for this in his construction schedule.

10. Methods and procedures for performing work on property of Norfolk Southern Railway Company, including temporary crossing applications, must be approved by:

E.W. Chambers
Senior Engineer Public Improvements
Norfolk Southern Corporation
650 West Peachtree Street, NW., Box 45
Atlanta, GA 30308
Telephone: (470-463-6307)
eldridge.chambers@nscorp.com

AUTHORITY OF RAILROAD ENGINEER AND STATE ENGINEER

The authorized representative of the Railroad company, hereinafter referred to as the 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.

NOTICE OF STARTING WORK

- A. The Contractor shall not commence any work on Railroad right of way until he has complied with the following conditions:
1. Give the Railroad Engineer at least ten working day advance written notice, with copy to the Engineer, of the date he proposes to begin work on railroad right of way. Said notice shall be sent to Mr. D.A. Becker, Chief Engineer, Design & Construction, Norfolk Southern Corporation, 650 West Peachtree Street, N.W. Box 45, Atlanta, Georgia 30308 – Attn. EW Chambers
 2. Obtained written authorization from the Railroad Engineer to begin work on Railroad right of way.
 3. Obtained written approval from the Railroad of the Railroad Protective Liability Policy of Insurance.
- B. The Railroad Engineer's written authorization to proceed shall include the names, addresses, and telephone numbers of the railroad's local representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility shall be specified.

FLAGGING SERVICE

A. WHEN REQUIRED

Under the terms of the Agreement between the Department and the Railroad, the Railroad has the sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such flagging services will be whenever the Contractor's men or equipment are, or are likely to be, working on the Railroad's right of way and is across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad track structure, railroad roadbed or the track surface and alignment of any track to such an extent that the movement of trains must be controlled. Normally the Railroad will assign one flagger to a project; but in some cases, more than one may be necessary. However, if the contractor works within distances that violate instructions given by the Railroad's local representative, or performs work that has not been scheduled with the Railroad's local representative, additional flaggers may be required full time until the project has been completed. See pgs. E10 in the railroad's 'Special Provisions for Protection of Railway Interest' (attached).

For Projects exceeding 30 days of construction, Contractor shall provide the flagmen a small work area with a desk/counter and chair within the field/site trailer, including the use of bathroom facilities, where the flagman can check in/out with the Project, as well as to the flagman's home terminal. The work area should provide access to two (2) electrical outlets for recharging radio(s), and a laptop computer; and have the ability to print off needed documentation and orders as needed at the field/site trailer. This should aid in maximizing the flagman's time and efficiency on the Project,

B: SCHEDULING AND NOTIFICATION

The Contractor shall furnish to the Railroad's local representative and the Engineer a schedule for all work required to complete the portion of the project within the Railroad right of way and arrange for a job site meeting between the Contractor, Engineer and the Railroad's local representative. Flagging services may not be provided until such meeting has been conducted and the contractor's work scheduled.

The Contractor shall give the Railroad's local representative, copy to the Engineer, at least 10 working days of advance written notice of work to be performed within railroad right of way. Such notices shall include sufficient details of the proposed work to enable the Railroad's local representative to determine if flagging will be required. If flagging is required no work shall be undertaken until the flaggers are present at the job site. Railroad labor agreements usually require flaggers to be assigned to a project on a continual basis and therefore cannot be called for on a spot basis.

If flagging service becomes unnecessary and is suspended it may take up to thirty days to again obtain service from the Railroad. The Contractor shall give five working days notice to cease flagging service.

C: EMERGENCIES

If emergencies arise which require the flagger's presence elsewhere, the Contractor shall delay his work until such time as the flaggers are again available.

D: SUSPENSION OF WORK

If work is suspended the Contractor shall give the Railroad's local representative at least three working days notice before resumption of said work.

E. VERIFICATION

The Railroad flagman assigned to the project will be responsible for notifying the State or Contractor's on-site project representative or Contractor Superintendent 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 State or Contractor's on-site project representative will document such notification in the project records. When requested, the State or Contractor's on-site project representative will also sign the flagman's diary, timesheet or flagging report showing daily time spent and activity at the project site.

F. CONTRACTOR RIGHT-OF-ENTRY

Before the Contractor starts any work on Norfolk Southern property, the Contractor is required to complete and submit the attached NS Right-of-Entry (ROE) Application (at the end of the following NS 'Special Provisions' section). Contractor is to allow 10-14 days from the time the application is submitted until the ROE is received back approved by NS. No fee is required to be submitted by the Contractor.

Email the completed ROE Application to:

E.W. Chambers
Senior Engineer Public Improvements
Norfolk Southern Corporation
650 West Peachtree Street, NW., Box 45
Atlanta, GA 30308
Telephone: (470-463-6307)
eldridge.chambers@nscorp.com

End of Special Clauses

SC-6

Rev.011922

E. Norfolk Southern – Special Provisions for Protection of Railway Interests

1. AUTHORITY OF RAILROAD ENGINEER AND SPONSOR ENGINEER:

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

The authorized representative of the Project Sponsor (“Sponsor”), hereinafter referred to as the “Sponsor’s Engineer”, shall have authority over all other matters as prescribed herein and in the Project Specifications.

The Sponsor’s Prime Contractor, hereinafter referred to as “Contractor” shall be responsible for completing any and all work in accordance with the terms prescribed herein and in the Project Specifications. These terms and conditions are subject to change without notice at the sole discretion of the Railroad. The Contractor must request the latest version of these provisions from the Railroad prior to commencing work and must follow the requirements outlined therein.

2. NOTICE OF STARTING WORK:

A. The Contractor shall not commence any work on railroad rights-of-way until he has complied with the following conditions:

1. Signed and received a fully executed copy of the required Norfolk Southern Contractor Right of Entry Agreement. Contractor Right of Entry Agreements to be submitted via email to the Public Improvements Engineer.
2. Given the Railroad written notice in electronic format to the Railroad Engineer, with copy to the Sponsor’s 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.
3. Obtained written approval from the Railroad of Railroad Protective Liability Insurance coverage as required by paragraph 14 herein. It should be noted that the Railroad does not accept notation of Railroad Protective insurance on a certificate of liability insurance form or Binders as Railroad 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 the Railroad to review.
4. Obtained Railroad’s Flagging Services as required by paragraph 7 herein.
5. Obtained written authorization from the Railroad to begin work on Railroad’s rights-of-way, such authorization to include an outline of specific conditions with which the Contractor must comply. Written Authorization will be issued by the Railroad once all items on the NS Construction Checklist (refer to Appendix I) have been completed
6. Furnished a schedule for all work within the Railroad’s rights-of-way as required by paragraph 7.B.1.

- A. 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.
- A. C All project -related utility work that is to occur on, over, or under Railroad's right-of-way must be coordinated with the North Southern Pipe and Wire Program. The Contractor must receive approval from the North Southern Pipe and Wire Program prior to commencing any utility work.
3. INTERFERENCE WITH RAILROAD OPERATIONS:
- A. A The Contractor shall so arrange and conduct his work that there will be no interference with Railroad's operations, including train, signal, telephone and telegraphic services, or damage to the property of the Railroad or to poles, wires, and other facilities of tenants on the rights-of-way of the Railroad. 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.
- A. B Whenever work within Railroad's rights-of-way is of such a nature that impediment to Railroad's 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.
- A. 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 Sponsor.
- A. 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 the Railroad's underground facilities. Upon request from the Contractor or Sponsor, Railroad forces will locate and paint mark or flag the Railroad's 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's representative.
4. TRACK CLEARANCES:
- A. 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 Railroad Engineer.
 3. All proposed temporary clearances which are less than those listed above must be submitted to Railroad Engineer 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.
- A. 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 Sponsor's Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

5. CONSTRUCTION PROCEDURES:

1. General:

1. Construction work and operations by the Contractor on Railroad property shall be:
 - a. Subject to the inspection and approval of the Railroad Engineer or their designated Construction Engineering Representative.
 - b. In accordance with the Railroad's written outline of specific conditions.
 - c. In accordance with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.
 - d. In accordance 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 should anticipate a minimum of 45 days for NS and their GEC to complete the review of all construction submittals. Time frames for reviews can vary significantly depending upon on the complexity of the project and the quality of submittals. Submittals requiring input from other departments may require additional time.
- 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 Sponsor's Engineer prior to the submission to the Railroad Engineer for review. Submittals are reviewed by the Railroad for impacts to Railroad operations only; therefore, approval from the Railroad Engineer 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:
 - (1) General Means and Methods
 - (2) Ballast Protection
 - (3) Construction Excavation & Shoring
 - (4) Pipe, Culvert, & Tunnel Installations
 - (5) Demolition Procedure
 - (6) Erection & Hoisting Procedure
 - (7) Debris Shielding or Containment
 - (8) Blasting
 - (9) Formwork for the bridge deck, diaphragms, overhang brackets, and protective platforms
 - (10) 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:
 - (1) Girder Shop Drawings including welding/fabrication procedures
 - (2) Bearing Shop Drawings and Material Certifications
 - (3) Shop Drawings for drainage, handrails/fencing, and expansion dams
 - (4) Concrete Mix Design
 - (5) Structural Steel, Rebar, and/or Strand Certifications
 - (6) 28-day Cylinder Test for Concrete Strength
 - (7) Waterproofing Material Certification
 - (8) Dampproofing materials
 - (9) Test Reports for all steel
 - (10) Foundation Construction Reports

Other submittals may be required upon request from the Railroad. Fabrication may not begin until the Railroad has approved the required shopdrawings.

- 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, plan and profile views showing the location of all equipment to be used relative to the track centerline(s) shown, and a contingency plan of action covering the event that a primary piece of equipment malfunction
2. Ballast Protection
 1. The Contractor shall submit the proposed ballast protection system detailing the specific filter fabric and anchorage system to be used during all construction activities.
 2. The ballast 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.
3. 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.
4. 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. The use of shoring systems utilizing tiebacks shall not be permitted without written approval from the Railroad Engineer.
 3. Shoring systems utilizing trench boxes shall be permitted within the Theoretical Railroad Embankment (Zones 1, 2 or 3) as shown on NS Typical Drawing No. 4 – Shoring requirements without written approval from the Railroad Engineer.
 4. All plans and calculations for shoring shall be prepared, signed, and sealed by a Registered Professional Engineer licensed in the state of the proposed project, in accordance with Norfolk Southern's Overhead Grade Separation Design Criteria, subsection H.1.6.E - Construction Excavation (Refer to Norfolk Southern Public Projects Manual Appendix H). 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.

5. 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 of these provisions.
 6. 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.
 7. 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".
 8. 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.
 9. The front face of shoring located to the closest NS track for all shoring set-ups located in Zone 2 (shown on NS Typical Drawing No. 4 – Shoring Requirements (Appendix I) shall remain in place and be cut off 2'-0" below the final ground elevation. The remaining shoring in Zone 2 and all shoring in Zone 1 may be removed and all voids must be backfilled with flowable fill.
5. Pipe, Culvert, & Tunnel Installations
1. Pipe, Culvert, & Tunnel Installations shall be in accordance with the appropriate Norfolk Southern Design Specification as noted below:
 - a. For Open Cut Method refer to Norfolk Southern Public Projects Manual Appendix H.4.6.
 - b. For Jack and Bore Method refer to Norfolk Southern Public Projects Manual Appendix H.4.7.
 - c. For Tunneling Method refer to Norfolk Southern Public Projects Manual Appendix H.4.8.
 2. The installation methods provided are for pipes carrying storm water or open flow runoff. All other closed pipeline systems shall be installed in accordance Norfolk Southern's Pipe and Wire Program and the NSCE-8
6. Demolition Procedures
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 the 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 Sponsor, the Railroad Engineer or their representative, and the key Contractor's 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. Demolition of existing bridge decks in spans over the Railroad shall be performed in a controlled manner (i.e. saw cutting). No impact equipment (track mounted hoe-ram, jackhammers, etc.) may be used over the Railroad without approval by the Railroad Engineer.
- f. 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 of these provisions, the Contractor shall submit the following for approval by the Railroad Engineer:
 - (1) A plan showing the location of cranes, horizontally and vertically, with proposed boom lengths, operating radii, counterweights, and 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.
 - (2) 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.
 - (3) 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.
 - (4) The Contractor shall provide a sketch of all rigging components from the crane's hook block to the object being hoisted. 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 Sponsor and the Railroad.

- (5) 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.
- (6) 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 of these provisions 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.

7. 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 the boom length plus 15'-0" from the centerline of track.
- b. Neither crane handoffs nor "walking" of cranes with suspended load will be permitted for erection on or over Railroad right-of-way.
- c. Railroad tracks and other Railroad property must be protected from damage during the erection procedure.
- d. A pre-erection meeting shall be conducted with the Sponsor, the Railroad Engineer or their representative, and the key Contractor's personnel prior to the start of the erection procedure.
- e. The Railroad Engineer or his designated representative must be present at the site during the entire erection procedure period.
- f. 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. Any changes to previously approved field splice locations must be submitted to the Railroad for review and approval. Refer to Norfolk Southern's Overhead Grade Separation Design Criteria for additional splice details (Norfolk Southern Public Projects Manual Appendix H.1, Section 4.A.3.).

2. Submittal Requirements

- a. In addition the submittal requirements outlined in Section 5.A.2 of these provisions, the Contractor shall submit the following for approval by the Railroad Engineer:
 - (1) 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.
 - (2) A plan showing the location of cranes, horizontally and vertically, with proposed boom length, operating radii, counterweights, and 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.
 - (3) 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.

- (4) 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.
- (5) The Contractor shall provide a sketch of all rigging components from the crane’s hook block to the object being hoisted. 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 Sponsor and the Railroad.
- (6) 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.
- (7) Design and supporting calculations for the temporary support of components, including but not limited to temporary girder tie-downs and falsework.

8. Blasting:

1. The Contractor shall obtain advance approval of the Railroad Engineer and the Sponsor 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 the Railroad Engineer authorized representative. At least 72 hours advance notice to the person designated in the Railroad’s notice of authorization to proceed (see paragraph 2.B) will be required to arrange for the presence of an authorized Railroad representative and such Railroad Protective Services 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 the Contractor's expense any track misalignment or other damage to Railroad property resulting from the blasting as directed by the Railway's authorized representative. If the Contractor's 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 cleanup.
 - b. Have the authority to order discontinuance of blasting if, in the Railroad representative's 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 the blasting consultant concludes that the Contractor's blasting operations are endangering the Railway.
 - d. Submit a letter acknowledging that the blasting consultant has been engaged to oversee the entire blasting operation and that the blasting consultant 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 the blasting consultant has been engaged to oversee the entire blasting operation and that the blasting consultant approves of the blasting plan.
 - p. In addition to the insurance requirements outlined in Paragraph 14 of these Provisions, 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.

9. 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.

10. 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 Contractor's 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 the Railroad Engineer. 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.

11. 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 without first having obtained permission from the Railroad Engineer, and such permission will be with the understanding that the Railroad 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.

12. 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 Railroad Engineer or his authorized representative.

6. DAMAGES:

1. The Contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by Railroad traffic.
2. 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. RAILROAD PROTECTIVE SERVICES:

1. Requirements:

1. Railroad Protective 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 Sponsor and the Railroad, the Railroad has sole authority to determine the need for Railroad Protective Services 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 Railroad Protective Services.
3. Normally, the Railroad will assign one Railroad Protective Services personnel to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) Railroad Protective Services personnel 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, Railroad Protective Services personnel may be required full time until the project has been completed.
4. For Projects exceeding 30 days of construction, Contractor shall provide the Railroad Protective Services personnel a small work area with a desk/counter and chair within the field/site trailer, including the use of bathroom facilities, where the Railroad Protective Services personnel can check in/out with the Project, as well as to the Railroad Protective Services home terminal. The work area should provide access to two (2) electrical outlets for recharging radio(s), and a laptop computer; and

have the ability to print off needed documentation and orders as needed at the field/site trailer. This should aid in maximizing the Railroad Protective Services personnel's time and efficiency on the Project.

2. Scheduling and Notification:

1. The Contractor's work requiring Railroad Protective Services should be scheduled to limit the presence of such personnel at the site. Railroad approval will be required for any Railroad Protective Services requests in excess of 40 hours per week, and in such cases, should be limited to a maximum of 50 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 Sponsor 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 Sponsor, and the Railroad's authorized representative. Railroad Protective Services personnel; may not be provided until the job site meeting has been conducted and the Contractor's work has been 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, and must receive written or verbal confirmation of this request from the Railroad representative. 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 10 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 Railroad Protective Services 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 Railroad Protective Services are required, no work shall be undertaken until the Railroad Protective Services personnel are present at the job site. It may take up to 30 days to obtain Railroad Protective Services initially from the Railroad. When Railroad Protective Services begins, the Railroad Protective Services personnel 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 Railroad Protective Services becomes unnecessary and are suspended, it may take 30 days or longer to again obtain Railroad Protective Services from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days notice before Railroad Protective Services may be discontinued and responsibility for payment stopped.
4. If, after the Railroad Protective Services personnel is assigned to the project site, an emergency arises that requires the personnel presence elsewhere, then the Contractor shall delay work on Railroad right-of-way until such time as the personnel is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Sponsor or Railroad.

3. Payment:

1. The Sponsor 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 Railroad Protective Services is the current rate per day based on a 12-hour work day. This cost includes the base pay for the Railroad Protective Services personnel, overhead, and includes a per diem charge for travel expenses, meals and lodging. The charge to the Sponsor by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for Railroad Protective Services at the time the service is required.
 3. Work by Railroad Protective Services 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 Railroad Protective Services 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 Sponsor. Charges to the Sponsor 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. Railroad Protective Services cost are subject to change. The above estimates of flagging costs are provided for information only and are not binding in any way.
4. Verification:
1. The Railroad's Protective Services personnel will electronically enter Railroad Protective Services time via Railroad's electronic billing system. Any complaints concerning Railroad Protective Services must be resolved in a timely manner. If the need for Railroad Protective Services is questioned, please contact the Railroad Engineer. All verbal complaints will be confirmed in writing by the Contractor within 5 working days with a copy to the Sponsor's Engineer. Address all written correspondence electronically to Railroad Engineer.
 2. The Railroad Protective Services personnel assigned to the project will be responsible for notifying the Sponsor Representative upon arrival at the job site on the first day (or as soon thereafter as possible) that Railroad Protective Services services begin and on the last day that the Railroad Protective Services personnel performs such services for each separate period that services are provided. The Sponsor's Engineer will document such notification in the project records. When requested, the Sponsor's Engineer will also sign the Railroad Protective Services personnel's document(s) showing daily time spent and activity at the project site.
8. HAUL ACROSS RAILROAD TRACK:
1. Where the plans show or imply that materials of any nature must be hauled across Railroad's track, unless the plans clearly show that the Sponsor 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's track. The Contractor or Sponsor will be required to bear all costs incidental to such crossings whether services are performed by his own forces or by Railroad personnel.
 2. No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Railroad 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:

1. 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 Sponsor and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the Sponsor and/or the Railroad.
2. 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:

1. 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 the Contractor's schedule, the Contractor shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore.
2. No charge or claim of the Contractor against either the Sponsor or the Railroad will be allowed for hindrance or delay on account of railroad traffic; any work done by the Railroad or other delay incident to or necessary for safe maintenance of railroad traffic or for any delays due to compliance with these special provisions.

11. TRAINMAN'S WALKWAYS:

1. 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 Railroad'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:

1. The Contractor and/or the Sponsor's personnel authorized to perform work on Railroad's property as specified in Section 2 above are not required to complete Norfolk Southern Roadway Worker Protection Training; However the Contractor and the Sponsor'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.
2. 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 and reflective vest are required.

3. No one is allowed within 25' of the centerline of track without specific authorization from the Railroad
4. All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.
5. No one is allowed to cross tracks without specific authorization from the Railroad.
6. All welders and cutting torches working within 25' of track must stop when train is passing.
7. 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:

1. 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 Railroad Protective Services personnel.
2. No crane or boom equipment will be allowed to foul track or lift a load over the track without and Railroad Protective Services personnel authorized to obtain track time
3. All employees will stay with their machines when crane or boom equipment is pointed toward track.
4. All cranes and boom equipment under load will stop work while train is passing (including pile driving).
5. Swinging loads must be secured to prevent movement while train is passing.
6. No loads will be suspended above a moving train.
7. No equipment will be allowed within 25' of centerline of track without specific authorization of the Railroad Protective Services personnel
8. Trucks, tractors or any equipment will not touch ballast line without specific permission from Railroad official and Railroad Protective Services personnel At the beginning of each project that involves the Contractor working within 25' of the centerline of any track, orange construction fencing must be established. Orange construction fencing shall be established in accordance with the minimum temporary horizontal clearances contained in Section 4.A.2 and shall be maintained for the duration of construction.
9. No equipment or load movement is permitted within 25' or above a standing train or Railroad equipment without specific authorization of the Railroad Protective Services personnel
10. All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the Railroad Protective Services personnel if said personnel views the operation to be dangerous to the passing train.
11. All equipment, loads and cables are prohibited from touching rails.

12. While clearing and grubbing, no vegetation will be removed from Railroad embankment with heavy equipment without specific permission from the Railroad Engineer and Railroad Protective Services personnel
13. No equipment or materials will be parked or stored on Railroad's property unless specific authorization is granted from the Railroad Engineer.
14. All unattended equipment that is left parked on Railroad property shall be effectively immobilized so that it cannot be moved by unauthorized persons.
15. All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.
16. Prior to performing any crane operations, the Contractor shall establish a single point of contact for the Railroad Protective Services personnel 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:

1. 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. A Commercial General Liability ("CGL") policy containing products and completed operations, bodily injury, property damage and contractual liability coverage, with a combined single limit of not less than \$5,000,000 for each occurrence with a general aggregate limit of not less than \$5,000,000. Any portion of this requirement may be satisfied by a combination of General Liability and/or Excess/Umbrella Liability Coverage. The CLL policy shall provide additional insured coverage equivalent to at least as broad as ISO CG 20 20 11/85
 2. Automobile Liability Insurance with a current ISO occurrence form policy (or equivalent) and apply on an "any auto" (Symbol 1) basis, including coverage for all vehicles leased used in connection the Work or Services on the leased property, providing annual limits of at least \$1,000,000 per occurrence for bodily injury and property damage combined including uninsured and underinsured motorist coverage, medical payment protection, and loading and unloading. This policy shall be endorsed to include Transportation Pollution Liability Broadened Coverage ISO CA 99 48 03 06 or MCS-90 if vehicles are subject to Federal jurisdiction. If this coverage is on a claims-made form, the Retro Active Date must be prior to the date of this Agreement and the policy endorsement must be maintained for not less than seven (7) years.
 3. Workers' Compensation Insurance to meet fully the requirement of any compensation act, plan, or legislative enactment applicable in connection with the death, disability or injury of Licensee's officers, agents, servants, or employees arising directly or indirectly out of the performance of the work.
 4. Employers' Liability Insurance with limits of not less than \$1,000,000 each accident, \$1,000,000 policy limit for disease, and \$1,000,000 each employee for disease.

5. All insurance required in Section 14.A (excluding any Workers' Compensation policy) shall name Norfolk Southern Railway and its parent, subsidiary, and affiliated companies as additional insureds with an appropriate endorsement to each policy.
 6. All policies secured by Contractor, whether primary, excess, umbrella or otherwise, and providing coverage to the Railway as an additional insured (i) are intended to take priority in responding and to pay before any insurance policies Railway may have secured for itself must respond or pay and (ii) may not seek contribution from any policies the Railway may have secured for itself
 7. No cross-liability exclusions are permitted that would apply to the additional insureds, and there may not be any restrictions in any policy that limits coverage for a claim brought by an additional insured against a named insured.
 8. To the fullest extent permitted by law, all insurance furnished by Contractor in compliance with Section 14.A shall include a waiver of subrogation in favor of Railway with an appropriate endorsement to each policy.
 9. All policies required in Section 14.A shall not be subject to cancellation, termination, modification, changed, or non-renewed except upon thirty (30) days' prior written notice to the insureds.
 10. The insurance coverages maintained by Contractor shall not limit any indemnity obligations or other liabilities. The insurance available to Norfolk Southern Railway and its parent, subsidiary and affiliated companies as additional insureds shall not be limited by these requirements should Licensee maintain higher coverage limits.
 11. Any deductibles or retentions in excess of \$50,000 maintained on any insurances required in 14.A shall be disclosed and approved by Norfolk Southern Railway with a request made for approval to NSRISK3@nscorp.com.
 12. Anyone subcontractor providing work on this project must extend CG 20 38 (or broader coverage) additional insured endorsement to provide coverage for up stream parties.
 13. Contractor shall require all subcontractors who are not covered by the insurance carried by Contractor to obtain commercially reasonable insurance coverage, but not less than the requirements of 14.A
- B. In addition to the insurances required in Section 14.A, the Contractor shall also procure on behalf of the Railroad for the entirety of this project:
1. Railroad Protective Liability Insurance having a combined single limit of not less than \$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.

- b. The policy must be written using one of the following combinations of Insurance Services Office (“ISO”) RPL FormNumbers:
- (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; or
 - (6) CG 00 35 04 13.

- c. The named insured shall read:

Norfolk Southern Corporation and its subsidiaries and affiliates
650 West Peachtree Street NW – Box 46
Atlanta, GA 30308
Attn: Risk Manager

(NOTE: Railroad 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 Sponsor 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 Sponsor must be identified on the Declarations as the “Involved Governmental Authority or Other Contracting Party.”
- h. Endorsements/forms that are **required** are:
- (1) Physical Damage to Property Amendment
 - (2) Terrorism Risk Insurance Act (TRIA) coverage must be included
- i. 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
- j. Endorsements/forms that are NOT acceptable are:
- (1) Any Pollution Exclusion Endorsement except CG 28 31
 - (2) Any Punitive or Exemplary Damages Exclusion

and endorsements along with the policy forms and endorsements as required in Section 14.B.

- b. A certificate of insurance from the Contractor evidencing the Contractor’s Insurance in Section 14.A (i.e. the Contractor’s commercial general, automobile, and workers’ compensation liability insurance, etc.) The certificate must show Norfolk Southern Railroad and its subsidiaries and affiliated companies as an additional insured on the General Liability and Auto policies. The certificate should also include that the Workers’ Compensation policy waives subrogation against Norfolk Southern Corporation and its subsidiaries. See Appendix J for a Sample Certificate of Insurance

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 Sponsor’s Engineer may withhold all monies due the Contractor on monthly statements.

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. Sponsor’s Project No.: _____

End of Norfolk Southern
Special Provisions for Protection of Railway Interests

CONTRACTOR WORKING ON BEHALF OF PROJECT SPONSOR
COSTS REIMBURSED BY PROJECT SPONSOR'S CONTRACTOR

NS File: _____
NS Billing Number _____

NORFOLK SOUTHERN
CONTRACTOR RIGHT OF ENTRY AGREEMENT

WHEREAS, _____
("Principal") has requested that Norfolk Southern Railway Company ("Company") permit Principal to be on or
about Company's premises and/or facilities in the vicinity of Company milepost _____

(the "Premises") for the sole purpose of _____

, on behalf of _____
(the "Project Sponsor") during the period _____, 20____, to _____, 20____ (the
"Right of Entry").

WHEREAS, Company is willing to grant the Right of Entry subject to the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt
and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the parties hereby
agree as follows.

Company hereby grants Principal the Right of Entry. The Right of Entry shall extend to Principal and to
subcontractors and other entities affiliated with Principal who are specifically approved for entry by authorized
representatives of Company in writing, as well as to the officers and employees of the foregoing (collectively
"Licensees"). The Right of Entry shall apply to those portions of the Premises, and to such equipment,
machinery, rolling stock and other personal property and fixtures belonging to Company or otherwise located
on the Premises, only to the extent specifically designated and approved in writing by authorized
representatives of Company (collectively, "Designated Property").

Principal agrees:

- (i) that Licensees' access to the Premises shall be limited to the Designated Property and that Principal shall be liable and fully responsible for all actions of Licensees while on the Premises pursuant to the Right of Entry;
- (ii) that Licensees shall (a) be subject to Company's direction when upon the Premises, and (b) be subject to Company's removal from the Premises, in Company's sole discretion, due to negligence, misconduct, unsafe actions, breach of this agreement or the failure to act respectfully, responsibly, professionally, and/or in a manner consistent with Company's desire to minimize risk and maintain its property with maximum security and minimum distractions or disruptions or for any other lawful reason;
- (iii) that Licensees shall perform all work with such care, diligence and cooperation with Company personnel as to reasonably avoid accidents, damage or harm to persons or property and delays or interference with the operations of any Company's facilities and in accordance with Company's "Special Provisions for Protection of Railway Interest", attached and incorporated herein.
- (iv) to give Company's officer signing this agreement, or his or her authorized representative, advance notification of the presence of Licensees on Designated Property in accordance with Company's "Special Provisions for Protection of Railway Interest";
- (v) to indemnify and save harmless Company, its officers, agents and employees from and against any and all claims, demands, losses, suits, judgments, costs, expenses (including without limitation reasonable attorney's fees) and liability resulting from (a) injury to or death of any person, including without limitation the Licensees, and damage to or loss of any property, including without limitation that belonging to or in the custody of Licensees

(the "Licensee Property"), arising or in any manner growing out of the presence of either the Licensees or the Licensee Property, or both, on or about the Premises, regardless of whether negligence on the part of Company, its officers, agents or employees caused or contributed to said loss of life, personal injury or property loss or damage in whole or in part; (b) any alleged violation of any law, statute, code, ordinance or regulation of the United States or of any state, county or municipal government (including, without limitation, those relating to air, water, noise, solid waste and other forms of environmental protection, contamination or pollution or to discrimination on any basis) that results in whole or in part, directly or indirectly, from the activities of Licensees related in any way to their presence on the Premises or from any other act or omission of Licensees contributing to such violation, regardless of whether such activities, acts or omissions are intentional or negligent, and regardless of any specification by Company without actual knowledge that it might violate any such law, statute, code, ordinance or regulation; (c) any allegation that Company is an employer or joint employer of a Licensee or is liable for related employment benefits or tax withholdings; or (d) any decision by Company to bar or exclude a Licensee from the Premises pursuant to subsection (ii)(b) above;

- (vi) to have and keep in effect the appropriate kinds of insurance as listed in the Company's "Special Provisions for Protection of Railway Interest, with insurance companies satisfactory to Company, during the entire time Licensees or Licensee Property, or both, is on the Premises: and to provide certificates of insurance showing the foregoing coverage, as well as any endorsements or other proper documentation showing and any change or cancellations in the coverage to the Company officer signing this agreement or to his or her authorized representative;
- (vii) to reimburse Company for any costs not covered under the existing project agreement between the Company and the Project Sponsor, including but not limited to, material, labor, construction submittal review, supervisory and protective services costs, and related taxes and overhead expenses required or deemed necessary by Company because of the presence of either Licensees or Licensee Property on the Premises.
- (viii) to exercise special care and precautions to protect the Premises and equipment, machinery, rolling stock and other personal property and fixtures belonging to Company or otherwise located on the Premises (whether or not constituting Designated Property) and to avoid interference with Company's operations;
- (ix) to not create and not allow drainage conditions which would be adverse to the Premises or any surrounding areas;
- (x) to refrain from the disposal or release of any trash, waste, and hazardous, dangerous or toxic waste, materials or substances on or adjacent to the Premises and to clean up or to pay Company for the cleanup of any such released trash, waste, materials or substances; and
- (xi) to restore the Premises and surrounding areas to its original condition or to a condition satisfactory to the Company officer signing this agreement or to his or her authorized representative (ordinary wear and tear to rolling stock and equipment excepted) upon termination of Licensees' presence on the Premises.

As a part of the consideration hereof, Principal further hereby agrees that Company shall mean not only Norfolk Southern Railway Company but also Norfolk Southern Corporation and any and all subsidiaries and affiliates of Norfolk Southern Railway Company or Norfolk Southern Corporation, and that all of Principal's indemnity commitments in this agreement in favor of Company also shall extend to and indemnify Norfolk Southern Corporation and any subsidiaries and affiliated companies of Norfolk Southern Railway Company or Norfolk Southern Corporation and its and/or their directors, officers, agents and employees.

It is expressly understood that the indemnification obligations set forth herein cover claims by Principal's employees, agents, independent contractors and other representatives, and Principal expressly waives any defense to or immunity from such indemnification obligations and/or any subrogation rights available

under any applicable state constitutional provision, laws, rules or regulations, including, without limitation, the workers' compensation laws of any state. Specifically, (i) in the event that all or a portion of the Premises is located in the State of Ohio, the following provision shall be applicable: "Principal, with respect to the indemnification provisions contained herein, hereby expressly waives any defense or immunity granted or afforded it pursuant to Section 35, Article II of the Ohio Constitution and Section 4123.74 of the Ohio Revised Code"; and (ii) in the event that all or a portion of the Premises is located in the Commonwealth of Pennsylvania, the following provision shall be applicable: "Principal, with respect to the indemnification provisions contained herein, hereby expressly waives any defense or immunity granted or afforded it pursuant to the Pennsylvania Workers' Compensation Act, 77 P.S. 481".

This agreement shall be governed by the internal laws of the Commonwealth of Virginia, without regard to otherwise applicable principles of conflicts of laws. If any of the foregoing provisions is held for any reason to be unlawful or unenforceable, the parties intend that only the specific words found to be unlawful or unenforceable be severed and deleted from this agreement and that the balance of this agreement remain a binding enforceable agreement to the fullest extent permitted by law.

This agreement may be amended only in a writing signed by authorized representatives of the parties.

Name of Principal: _____

By: _____

Print Name: _____

Title _____

Date _____, 20____

NORFOLK SOUTHERN RAILWAY COMPANY

By _____

Print Name: D.A. Becker _____

Title: Chief Engineer Design & Construction _____

Date _____, 20____

Private Road Crossing Application

Application Fee: \$500.00 (non-refundable)

Instructions:

Following are the instructions, and forms for applying for a private road crossing on Norfolk Southern property. Please complete the trailing **Private Road Crossing Application** and **required attachments**. Once complete please **email** the entire application package to privatexing@nscorp.com. Each application should contain the following documents:

1. **Private Road Crossing Application:** Complete and sign the attached Private Road Crossing Application. Please be sure to provide the requesting party's complete legal name, a detailed description of the proposed use of the crossing and your signature on the application. A digital signature for this application is acceptable.

2. **Copy of application check:** All applications must be accompanied by an application check per referenced fee above. Please make your checks payable to Norfolk Southern Corporation. Add a scanned copy of the check to the application packages. Send the original check to the following address:

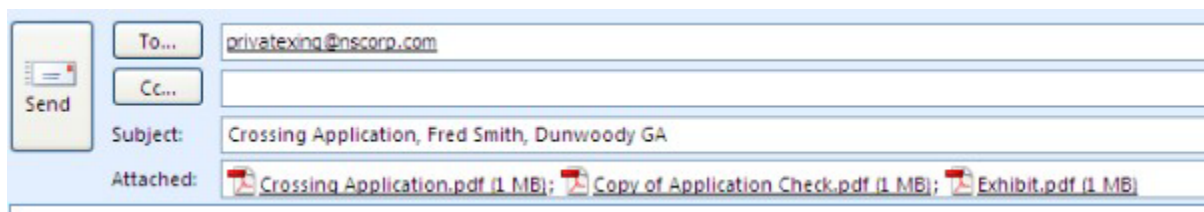
Norfolk Southern Corporation
Real Estate Department
Attn: Private Crossing Application
1200 Peachtree Street, NE, 12th Floor
Atlanta, Georgia 30309

3. **Exhibit:** We need to know where the crossing is located. Include in your application a completed exhibit highlighting the crossing (i.e. aerial image). Save the exhibit in any standard format (PDF, JPEG) and attach to the email.

If available, applications with the following information are processed more efficiently:

- Property address or closest property address of crossing
- GPS coordinates of the crossing, latitude and longitude
- Railroad Milepost

Example of Email format:



Processing of your application requires NS Transportation review and approval and may also involve several departments at NS. The private road crossing may not be used prior to the execution of a separate formal agreement with NS and verification that all insurance requirements have been met. Please be advised that the application fee of \$500.00 is non-refundable and does not guarantee approval. If private road crossing requires multiple locations additional fees may apply.

Insurance:

Each tenant/licensee shall be required to obtain, at its sole cost and expense, various types of insurance coverage with various limits. These insurance coverage's must be of a form and underwritten by insurance companies that meet with the NS' approval. In certain instances the licensee may be required to pay NS a risk-financing fee. The types of insurance typically required by NS include:

- Commercial General Liability Insurance
- Automobile Liability Insurance
- Worker's Compensation Insurance
- Railroad Protective Liability Insurance (during construction or maintenance only)

Norfolk Southern generally requires a policy of Commercial General Liability Insurance with a combined single limit of not less than \$2,000,000 per occurrence for injury to or death of persons and damage to or loss or destruction of property. Individual and Residential private crossings will be required to have a policy of Personal Liability Insurance with a combined single limit of not less than \$1,000,000 per occurrence of injury to death of persons and damage to or loss or destruction of property. Specific insurance requirements will be provided to you in the agreement covering your request when it is approved by the Railroad.



PRIVATE ROAD CROSSING APPLICATION FORM

APPLICANT INFORMATION: Application fee of \$500 is enclosed along with this form (Mail in completed application to: Norfolk Southern Real Estate Department, 1200 Peachtree Street, NE, 12th Floor, Atlanta, GA 30309)

Legal Name of Applicant (party to agreement) _____ Tax ID _____

Mailing Address

Street _____

City _____

State _____ Zip _____

Billing Address

Street _____

City _____

State _____ Zip _____

Name of Contact _____

Billing Contact _____

Title _____

Title _____

Phone # (____) _____ Fax # (____) _____

Phone # (____) _____ Fax # (____) _____

E-Mail Address _____

E-Mail Address _____

Applicant is a (Provide state of formation for Corporation and Partnerships, and name of owner for Sole Proprietorship)

- Corporation - State, Non-Profit, Limited Partnership - State, Individual, Limited Liability Company - State, Other (specify), Sole Proprietorship / Owner - State, Government Entity - State

CROSSING INFORMATION:

Location of Crossing:

Nearest Town _____ County _____ State _____

Railroad Milepost Reference _____ ft

- North, South, East, West checkboxes

Nearest Street _____ Lat/Long (if known) _____

Crossing:

- to be constructed, already exists DOT No.

If already existing: Are other parties presently using the crossing Yes No

If yes, specify: _____

Are there any agreements covering the crossing Yes No Do not know

If yes, identify and attach copies: _____

Do improvements have to be made at the crossing? Yes No

If yes, explain: _____

Crossing to be: Temporary Permanent

If temporary, when is it to expire? _____

For what purpose is the crossing to be used? _____

Type of Crossing: Commercial Residential Farm

Norfolk Southern Railway Company

PRIVATE ROAD CROSSING APPLICATION FORM FOR

Legal Name of Applicant (Tenant): _____ Date: _____

Crossing to be used by: Pedestrians Vehicles Both

If crossing is to be used by vehicles:

List type of vehicles: _____

What is the expected volume of vehicular traffic? ___ vehicles per Day Month

What will be the width of the roadway at the crossing? _____ ft.

Will the crossing be open to the public? Yes No

Will the crossing involve an: Overpass Yes No

Underpass Yes No

Parallel Roadway Yes No

List any additional provisions or conditions not mentioned above: _____

I/We understand that submission of this application does not authorize use of the private road crossing and that all road crossing agreements are contingent upon Transportation approvals. Fees, charges and other requirements will be forwarded to Applicant after the application has been reviewed and approved by Norfolk Southern.

Signed: _____ **Date** _____

For Railroad use only

Milepost: _____

Division: _____

DOT/AAR: _____

Date Received _____

Date Forwarded _____