STATE OF RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

BRIDGE GROUP 46_R

REPAIRS TO LAFAYETTE RR BRIDGE NO. 243

TOWN OF NORTH KINGSTOWN
WASHINGTON COUNTY

RHODE ISLAND CONTRACT NO. 2024-CB-018
FEDERAL-AID PROJECT NUMBER BHO-BG46(001)

GENERAL PROVISIONS – CONTRACT SPECIFIC

200 MAIN ST
PAWTUCKET, RI 02860
401.726.4084

March 14, 2024

INDEX
GENERAL PROVISIONS - CONTRACT SPECIFIC

INDEX
GENERAL PROVISIONS - CONTRACT SPECIFIC

1. BRIEF SCOPE OF WORK

Rhode Island Contract No. 2024-CB-018, Federal Aid Project No. BHO-BG46(001) is for Bridge Group 46_R, Repairs to Lafayette RR Bridge No. 243 in North Kingstown. This work involves repairing and painting ends of steel girders, replacing steel bearings, replacing deteriorated concrete pedestals, making concrete repairs to abutments, and maintenance and protection of traffic, complete and accepted.

2. LIST OF CONTRACT DOCUMENTS

Contract Documents

Contract Specifications
RI Department of Administration Division of Purchases Procurement Regulations
Standard Specifications for Road & Bridge Construction (Amended March 2018)
Compilation of Approved Specifications (through February 2021)
Required Contract Provisions/Federal-Aid Construction Contracts
Rhode Island Standard Details
Bridge Standard Details
General Provisions
General Provisions – Contract Specific
Specifications – Job Specific
Distribution of Quantities
Federal Wage Rates

Plans – There is one volume of Plans that comprises the Contract Drawings for this Contract. The volume of plans is as follows:

BRIDGE GROUP 46_R, Repairs to Lafayette RR Bridge No. 243, North Kingstown

Additional Information Documents

The following documents are included but shall not be considered part of the Contract Documents. These documents are included for informational purposes only. The Contractor shall be responsible for verifying the information shown in these documents.

- Original Construction and Rehabilitation Plans for Bridge No. 243

3. UTILITY AND MUNICIPAL NOTIFICATION AND COORDINATION

Existing utilities have been shown on the Plans using the best available information. The Contractor shall check and verify the location of all existing utilities both underground and overhead in accordance with the "Dig Safe Program Law" enacted by the Rhode Island Legislation Bill No. 79S-291, which became effective July 1, 1979. The Contractor should be aware that not all utility companies subscribe to the Dig Safe Program. It is the Contractor's

responsibility to ensure that all utility companies have been notified and all utilities have been marked prior to commencing their work. Any damage to existing utilities shall be replaced or repaired to the satisfaction of the Engineer at no additional cost to the State.

The Contractor shall schedule his construction so as to allow for a coordinated highway and utility effort. Upon award, the Contractor shall notify the lead utility relative to his anticipated highway construction start date. Immediately following the Pre-construction Conference, the Contractor shall initiate survey layout required for utilities.

It is required that the Contractor notify each utility company no less than two (2) weeks in advance of any work near the existing utility facilities to remain.
The applicable utility/municipality representatives are as follows:

Utility/Municipality	Contact	Phone Number
Rhode Island Energy Electric	Patrick A.T. Ventre	732-672-3359
Rhode Island Energy Gas	James Paulette	401-465-8580
Verizon	Peter DeCosta	508-884-4950
Cox Communications	Shawn Murphy	401-430-5599

During the progress of the work, the Contractor shall cooperate with the Owners of the utilities and permit their representative's access to the work to determine if their utilities are being endangered in any way.

The following municipality representatives shall be contacted two weeks prior to closing road:

AGENCY	CONTACT PERSON	TEL. NO.
North Kingstown Public Works	Adam White Director	(401) 268-1500x600
North Kingstown Police Dept.	Patrick Flanagan Police Chief	(401) 294-3316x8202
North Kingtown Fire Dept.	Scott Ketelle Fire Chief	(401) 294-3346x7200

4. COORDINATION WITH AMTRAK

Contact:
Paul Dubuque
Manager Capital Construction
(401)-413-9681
dubuqup@amtrak.com,
Kevin Claeson
Senior Manager Capital Construction
claesok@amtrak.com
(917)-270-9561

Inherent to the contract work on this Project is the requirement to coordinate, schedule, and provide protection to workers and equipment in and over AMTRAK's Electrified Corridor. A thorough review of AMTRAK's requirements contained in the appendix of these CS-Pages is imperative. All work, schedule, shop drawing submittals (as indicated in the Contract Submittal List), safety and protection of railroad traffic and property, and operations must reflect these requirements. The Contractor shall satisfy all AMTRAK requirements as described on the drawings and/or in the Appendix. The cost of implementing all of AMTRAK's requirements shall be included as part of the various items for which they are required.

It is anticipated that all Contractor construction activities to be conducted on, over, under, within or adjacent to, the AMTRAK's Right-of-Way will be required to be carried out during periods of night-time track outage except as noted on the plans. The Contractor shall be responsible for coordination with AMTRAK the schedule of track outage required for the applicable construction activities.

The Contractor shall be responsible to coordinate with AMTRAK for scheduling work. The costs associated with AMTRAK Railroad Protection (Inspection, Track Foreman, Flagman, Signalman, Electric Traction Lineman, Class A employer or other Railroad employee necessary by AMTRAK) will be RIDOT's responsibility.

The Contractor shall submit all AMTRAK required entry and work permit submission within 60 days in advance of performing the work.

Night-time track outage is typically scheduled between hours of 12:01 AM and 4:00 AM. As this track outage is subject to change, the Contractor is responsible to confirm each outage with AMTRAK. However, in development of the construction work schedule and time

sequences, the Contractor shall assume work will be conducted allowing for 10 nonconsecutive hours of work a week unless otherwise noted. The Contractor is required to incorporate these construction operation constraints into the various items for which they are required.

It should be expressly understood that:

- Actual length of time for any track outage is contingent upon operating schedule at time of construction.
- Programed AMTRAK construction and maintenance work requiring track outage within the same operating block will have priority, therefore contract work requiring track outage, if scheduled within the same time frame, must be coordinated with such work; and:
- The potential times for track outage are not guaranteed and are for normal operating conditions.

Contractors will be required to submit a three week look ahead schedule to coordinate work outages with other projects. Outages are subject to availability based on Train operations and other AMTRAK projects. If Overhead Catenary System (OCS) outages are required, the available time will be reduced by 1 hour on each end to obtain /release the OCS clearance. AMTRAK cannot guarantee the availability of any outage at a particular time.

- Contractor is strongly encouraged to develop the means and methods to perform contract work with minimum needs for AMTRAK ET services.

5. SEQUENCE OF CONSTRUCTION

a. General

All work shall be completed in accordance with the Traffic-Related Work Restrictions indicated in the Transportation Management Plan.

The Contractor shall immediately establish all temporary erosion and sedimentation controls including temporary sedimentation basins and construction accesses.

b. Special Requirements

Work shall maintain traffic in accordance with the Maintenance and Protection of Traffic Plans and the TMP.

Traffic shall conform to plans during period when girders are being jacked or welded.

The Contractor shall develop an orderly sequence of construction and time schedule for all work to be performed under this contract in accordance with Section 108.03 of the RI Standard Specifications for Road and Bridge Construction.

The schedule level requirements for this project shall be Level B.

If the contract is extended beyond the specified completion date, a similar work schedule will be established by the Engineer.

All erosion controls shall be in-place and accepted by the Engineer prior to commencing work. Locations of surface features and utilities shown on the plans are approximate. The Contractor shall check and verify the exact location of all existing utilities, both underground and overhead, with Dig Safe. Any damage to existing utilities shall be the Contractor's responsibility in addition to providing vehicle and pedestrian access to abutting residential, commercial, and/or recreational establishments.

The Contractor shall be responsible for maintaining all roadways free from debris resulting from vehicles entering and exiting the construction site. The Contractor shall clean and sweep the roadways, at intervals as required, and/or as determined by the Engineer to maintain the roadway in an acceptable condition. The cost associated with complying with this provision shall be considered incidental to the contract.

The cost of the work zone lighting required for nighttime operations shall be incidental to the contract in accordance with Section 944 Lighting for Night Work Operations of the Standard Specifications. No separate payment will be made for lighting of the work zone during any nighttime operation.

The Contractor shall be responsible for providing GPS locations of all installed directional, regulatory, warning, parking, and street signs. The submission shall be made electronically in Microsoft Excel format to the RIDOT-GIS Section (contact person TBD by Engineer) in the following format:

Sign #	MUTCD Code	Easting	Northing
1	R1-1	277311	323478

The cost for completing the GPS work shall be incidental to the cost of the signing items.

6. SPECIAL REQUIREMENTS FOR TRAFFIC PROTECTION

In addition to the requirements of the RI Standard Specifications and the special requirements of other sections of these Contract Documents, the following requirements shall be undertaken by the Contractor:

a. The Contractor is advised that the signs and other traffic control devices shown on the Maintenance and Protection of Traffic Plans are minimum requirements, and it is the Contractor's responsibility to supplement these as directed by the Engineer if necessary to ensure public safety. All maintenance and protection of traffic devices must be in place and approved by the Engineer before any construction may commence. All maintenance and protection of traffic shall conform to the latest edition and revisions of the Manual on Uniform Traffic Control Devices (MUTCD).

b. The Contractor shall be responsible for maintaining appropriate construction related signing at all times. All temporary construction signs not appropriate for the construction activity taking place shall be removed, covered, or otherwise concealed to the satisfaction of the Engineer. This includes the period between erecting the signs and the start of construction, as well as when a construction phase is completed or suspended.

c. R.I. Std. 26.1.0 cones shall be used when traffic control set-up is utilized only during working hours and is subsequently removed at the end of the workday. R.I. Std. 26.2.0 shall be used when a traffic control set-up will remain beyond working hours when no workers are present.

d. Construction operations of this project must be coordinated with the local community public safety officials. In case of any emergency, the Contractor will be required to move equipment and allow the passage of emergency vehicles. Public safety must be considered at all times.

e. The Contractor is hereby notified that work zone time and lane restrictions are listed in the Transportation Management Plans. Failure to comply with these requirements will result in the fines listed under Job Specification 937.1000.

7. POLICE COMPENSATION

It will be the responsibility of the Resident Engineer to retain the service of the State and local police with cruiser for traffic control and protection for this project. The Contractor will not be required to bid on, or compensate for, the service of the State and local police.

8. SHOP DRAWINGS AND SUBMITTALS

The following list of work for which shop drawings and/or other submittals are required is provided for the convenience of the contractor. This list includes only major items of work; it does not itemize all submittals required by the contract documents. All submittals shall be in accordance with Section 105.02 of the Specifications. The contractor is responsible for timely submission of all shop drawings and other documents required by the contract. No extra payment will be made, nor will any extension be made to the contract completion date for making required submittals.

a. Demolition; Shielding, Equipment and Detailed Sequence of Work
b. Jacking and Shoring Procedures and Materials
c. Structural Steel
d. Painting
e. Concrete Repairs
f. Concrete; Mix Designs, Placing & Pouring Sequence, Methods and Equipment, Curing Plan including Methods, Personnel Resources
g. Cementitous Materials
h. Reinforcing Steel, Splicers, Grouted Splice Sleeves, and Inserts
i. Embedded Galvanic Anodes
j. Erection Procedures; Type/Size, Placement and Support of Equipment, Detailed Sequence of Work
k. Welding Procedures

9. CONTRACT SUBMITTALS LIST (CSL)

Critical to the commencement of construction is the requirement to make all of the necessary submittals as required by the contract documents.

The following Illustrative CSL is provided as a basis of format for the Contractor's CSL. The Illustrative CSL shall not be interpreted by the Contractor as an all-inclusive list of required Submittals. The Contractor's CSL shall provide the required information on all Submittals. The Contractor should also note The Master Schedule for testing to ensure all necessary items are included.

The Contractor shall prepare the CSL, utilizing the column headings and submittal numbering convention provided in the Illustrative CSL, identifying all Submittals (shop drawings, certifications, catalog cuts, material certifications, material samples, etc.) required under the Contract Documents, Plans, and Specifications. The Department's Project Schedule for Sampling, Testing, and Certification of Materials shall also be referred to as a guide in obtaining all typical material submittal requirements.

Each submittal shall be uniquely identified on the Contractor's Preliminary Project Schedule and Project Schedule Baseline as set forth in Section 108.03, Prosecution and Progress. At a minimum, each submittal fragmentary network shall include activities for submittal preparation, submittal review period, fabrication/manufacturing, and delivery.

ILLUSTRATIVE CONTRACT SUMITTALS LIST (CSL)

SUBMITTAL #	SPECIFICATION/ REFERENCE	DESCRIPTION	SUBMITTAL DATE	COMMENTS	DISPOSITION/ REVIEW PERIOD
RCPFA-?	SP, RCPFA, CDSRM, Note 4	Certification regarding debarment, suspension and other responsibility matter for primary covered transactions must be submitted	Annually every Jan. 1	Certification form provided in Contract Document	E / 30c
601-?	SS, 601.03.1b	Concrete Mix Design	60c prior to concrete production	Provided on Department form. Notify Engineer 48 hours in advance of trial runs for witness of test procedures. Time also allowed for 28 day compressive strength testing.	E / 28c
937-?	SS, 937.03.2	Home and Cell telephone numbers of at least three (3) personnel who will be available on a 24-hour basis for the duration of the Contract.	At the Preconstruction Conference		E

List of Abbreviations

c	Calendar Days
CDSRM	Certification Regarding Debarment, Suspension & Other Responsibility Matters – Primary Covered Transactions
E	Engineer
GPC	General Provisions / Construction
RCPFA	Required Contract Provisions Federal-Aid Construction Contracts
SP	Special Provisions
SPC	Special Provisions / Construction
SS	RIDOT Standard Specifications for Road and Bridge Construction, 2004 Edition

10. COVERING EXISTING SIGNS

The Contractor shall not be allowed to cover existing directional, regulatory, warning or guide signs by bolting plywood to the sign face or by any other means that would damage the existing sign face or structure. Instead, existing signs shall be covered with an opaque tarp cover with grommets for the purpose of receiving a cord or rope in order to secure the tarp cover to the existing sign face. Tarp cover dimensions shall be at least equal to the existing sign dimensions. This tarp cover is solely for the purpose of covering the existing sign; at no time shall sign messages appear on the face of tarp covers, nor shall covers be secured by taping or stapling to the existing sign face. The Contractor shall be responsible to maintain the tarp cover in good repair. This will include making periodic inspections of the tarp, grommets, rope or cord and making repairs or replacements as required. The cost of covering existing signs as described above shall be included in the Contract price for Code 937.0200 "Maintenance and Movement of Traffic Protection Devices," as listed in the Proposal.

11. INCIDENT MANAGEMENT

In the event of an accident, or other unforeseen incident, the Contractor shall positively cooperate with local authorities by providing traffic control devices, personnel, equipment, and materials as required, both on and off site. The Contractor shall assist in whatever way possible to clear debris from the roadway and maintain traffic flow. Payment for this work shall be on a force account basis. If the personnel are not available on site, they shall be "on call" and able to respond to the site within one hour of notification to the Contractor's appointed representative by phone or in person to the Department of Transportation.

12. CONTRACTOR'S RESPONSIBILITY FOR DAMAGED UTILITY FACILITIES

The Contractor shall use care when working in the vicinity of existing utilities. Any utility pipe, equipment, conduit, wire, cable or appurtenances damaged while carrying out any work on this contract shall be the Contractor's responsibility. Any utility pipe, equipment, conduit, wire, cable or related appurtenance damaged by the Contractor while carrying out this Contract shall be replaced or repaired by the Contractor to the satisfaction of the Engineer at no additional cost to the state.

13. CONTRACTOR'S RESPONSIBILITY FOR MAINTAINING ROADWAYS

The Contractor shall be responsible for maintaining all roadways free from debris resulting from vehicles entering and exiting the construction site. The Contractor shall clean and sweep the roadways, at intervals as required, and/or as determined by the Engineer to maintain the roadway in an acceptable condition. The cost associated with complying with this provision shall be considered incidental to the Contract.

14. INSPECTION ACCESS

The Contractor shall provide the Engineer and/or his representative(s) full access to all the work sites, as may be required, for the purpose of inspection and/or construction monitoring. This shall include the means to access the sites, as well as all necessary safety equipment such as safety harnesses and life vests. No separate payment shall be made for these services. The cost of these items of work shall be included under the item of work for which they are required.

15. COORDINATION WITH OTHER PROJECTS

The Contractor shall be aware of other construction projects ongoing or commencing during the construction period of this contract. It shall be the Contractor's responsibility to coordinate his contractual work with other contracts that may be adjacent to this project. The Engineer, at

all times, shall be made aware of any delays due to such work conflict. The Contractor may be required to attend periodic coordination meetings with representatives of the Towns and State to discuss and resolve potential conflicts. Projects to be coordinated include but are not limited to:

RICN 2024-CH-021 PTSID 2608F - Route 4 Resurfacing (Lafayette Rd. to RI-403).

16. UNIT BID ITEM AND LUMP SUM BID ITEM PAYMENTS

For requirements and work described in the Contract Documents but not expressly identified to be measured separately for payment, the costs thereof shall be included in the contract bid prices of the items of work to which they pertain as listed in the Proposal.

17. LANE CLOSURES

All full closures, splits, or shifts unless approved by the Administrator of Project Management or his designee shall be scheduled to begin on Friday or Saturday night as determined by the TMP to allow motoring public time to adjust to new travel patterns while allowing RIDOT the opportunity to evaluate its success. Construction work can commence on the Monday following the evaluation period. TMP modifications or revisions may be required in advance to allow for weekend work.

All full closures, splits, or lane shifts unless approved by the Administrator of Project Management or his designee shall not be installed or remain in place during the winter shutdown period.

The Contractor shall notify the Department in writing at least twenty-one (21) days in advance of the road/lane closure so that adequate public notice can be given. Upon the Engineer's approval, the Contractor shall coordinate the required traffic control.

18. COORDINATION MEETINGS

The Contractor shall utilize a virtual meeting for all project coordination meetings when possible. If a field meeting or in person meeting is required, all personnel shall have the appropriate personal protective equipment (PPE) devices.

19. TRANSPORTATION MANAGEMENT PLAN

The Transportation Management Plan (TMP) for this project is included as an appendix to these Contract Specific General Provisions. The TMP lays out the set of coordinated transportation management strategies that will be used to manage the work zone safety and mobility impacts of this project. In the event of a discrepancy between information in the TMP and information elsewhere in the Contract Documents, the former shall govern.

The Contractor's attention is called to the Standard Specifications for Road & Bridge Construction, **SECTION 103.02 – POST-QUALIFICATION REQUIREMENTS AND AWARD OF CONTRACT**, which describes the requirements for the Contractor's designation of a TMP Implementation Manager for the Contract.

The Contractor's attention is called to the Standard Specifications for Road & Bridge Construction, **SECTION – 104.08 MAINTENANCE OF TRAFFIC**, which describes the requirements for the training of all Contractor and Subcontractor personnel involved in work zone design, implementation, operation, inspection, management, and/or enforcement.

The Department's latest *Training Guidelines for Personnel Responsible for Work Zone Safety & Mobility* is available under the "Work Zone Safety & Mobility" section at:

http://www.dot.ri.gov/business/contractorsandconsultants.php

APPENDIX A

Transportation Management Plan

LEVEL 3 TRANSPORTATION MANAGEMENT PLAN

Project Name:	BRIDGE GROUP 46_R REPAIRS TO LAFAYETTE RR BRIDGE NO. 243
RI Design Contract No(s):	2023-EB-023A
RI Construction Contract No(s):	2024-CB-018
PTSID #	2606K
Submission:	ADV
Date:	2/9/2024

PROJECT INFORMATION

Brief Project Description: This project includes rehabililtation work for the Lafayette Railroad Bridge, Bridge No. 024301, which carries Route 4 (Colonel Rodman Highway) over AMTRAK Railroad high-speed rail service lines in North Kingstown.

General Work Limits: Work will take place on Route 4 northbound and southbound in the vicinity of Route 102, to the south. Work will take place in the lanes and shoulders and beyond the roadway, near piers and abutments, and underneath.

WORK ZONE LOCATIONS

ROADWAY NAME or INTERSECTION	FROM	TO	APPROX. LENGTH
Route 4 northbound and southbound	Lafayette Road	Hatchery Road	-

General Project Schedule*: The work is expected to begin in Summer 2024 and be complete in the Fall of 2025.

*The information in this section is not intended to and shall not supersede the approved schedule and milestone/completion dates for the project.

TRAFFIC-RELATED WORK RESTRICTIONS

General Restrictions:	**See "Attachment 1 to Level 3 TMP."**

TRAFFIC-RELATED WORK RESTRICTIONS (CONTINUED)

Holiday Restrictions:	**New Year's Day (if on weekend, the Holiday is recognized the Monday after) -- No lane closures on 13:00 New Year's Eve Day through 0:00 day after New Year's (or the Monday if on a weekend)** **Martin Luther King Day - No lane closures on the Holiday.** **Presidents Day - No lane closures on the Holiday.** **Easter Day - No lane closures on the Holiday.** **Memorial Day - No lane closures from 13:00 Friday Before to 00:00 Tuesday after the Holiday.** **Juneteenth National Freedom Day - No lane closures on the Holiday (if the Holiday falls on the weekend the holiday is recognized on the Monday following the Holiday.)** **Independence Day - No lane closures from 13:00 day before until 00:00 the day after the holiday.** **Victory Day - No lane closures on the Holiday.** **Labor Day - No lane closures from 13:00 day before until 00:00 the day after the holiday** **Columbus Day - No lane closures on the holiday.** **Veteran's Day - No lane closures on the holiday.** **Election Day (If its an Observed RI State Holiday) - No lane closures on the holiday.** **Thanksgiving Day - No lane closures shall be performed by the contractor on Wednesday through Sunday of Thanksgiving Week. Work can resume at 00:00 on Monday after the Holiday weekend.** **Christmas Day (if on weekend, the Holiday is recognized the Monday after) - No lane closures from 13:00 on Christmas Eve through 0:00 day after Christmas.**

TEMPORARY TRAFFIC CONTROL PLANS

These RIDOT- and/or Designer-Developed TTC Plans will be used during the work on this project

RIDOT TYPICAL TTC PLANS	Included in: TMP	Included in: Plan Set
☐ Mobile Operation		
☐ Work Beyond the Shoulder		
☐ Shoulder Closure - Two Lane Road		
☐ Shoulder Closure - Limited Access		
☐ 1-Side Lane Shift - Two Lane Road		
☐ 2-Side Lane Shift - Two Lane Road		
☐ Lane Shift - Limited Access		
☐ Lane Closure - Two Lane Road		
☐ Lane Closure - Four Lane Road		
☐ Lane Closure - Limited Access		
☐ Double Lane Closure - Limited Access		

DESIGNER-DEVELOPED TTC PLANS	Included in: TMP	Included in: Plan Set
Maintenance and Protection of Traffic Plans		X

PUBLIC INFORMATION PLAN

These strategies will be used to provide information concerning the project to road users and the community

SELECTED STRATEGIES	RESPONSIBILITIES / REQUIREMENTS / SPECIAL CONSIDERATIONS
RIDOT travel advisories news releases	RIDOT TMP Imp. Mngr. to send RIDOT notification form to Communications min. 48 hrs. in advance of restrictions.
RIDOT travel advisories web site	RIDOT TMP Imp. Mngr. to send RIDOT notification form to Communications min. 48 hrs. in advance of restrictions.
RIDOT 511 traveler information system	RIDOT TMP Imp. Mngr. to send RIDOT notification form to RIDOT TMC min. 48 hrs. in advance of restrictions.

TRANSPORTATION OPERATIONS PLAN

These strategies will be used to provide improved transportation operations/safety within project work zones

SELECTED STRATEGIES	RESPONSIBILITIES / REQUIREMENTS / SPECIAL CONSIDERATIONS

PERFORMANCE MONITORING, CHANGES TO TMP, & CONTINGENCIES

The Contractor's TMP Implementation Manager is responsible for keeping the portion of the project being used by public traffic in a condition that (1) safely and adequately accommodates such traffic and (2) is in accordance with the Traffic-Related Work Restrictions, the Temporary Traffic Control Plans, and where appropriate, the other transportation management strategies identified above.

The RIDOT TMP Implementation Manager or his/her responsible designee should (1) inspect the project work zones for conformance with the Temporary Traffic Control Plans, the ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features, and where applicable, the other transportation management strategies identified above and (2) document all work zone-related feedback and complaints that are received from the public.

If at any time (1) a deviation from any of the strategies included in the TMP (e.g., the use of an alternate construction sequence) is desired by one or more members of the project implementation team, (2) field observations and/or data suggest that impacts to road users are or will be unacceptable, or (3) one or more performance requirements established in the TMP are not being met in the field, the RIDOT TMP Implementation Manager and/or Project Manager shall report the situation to his/her supervisor. The Project Manager will coordinate with the Design Consultant of record and present the changes to the State Traffic Safety Engineer, Administrator of Project Management, the Chief Engineer of Infrastructure, and/or other interested parties as appropriate and/or necessary to consider and determine whether revised alternate strategies should be implemented in an effort to lessen the adverse safety and mobility impacts of the project. If any changes should be implemented, the changes shall be documented in a revised version of the TMP. Any changes implemented can be removed at any time, at RIDOTs discretion, if unexpected adverse impacts to traffic occur.

If a deviation from any of the strategies included in the TMP is requested by the Contractor, the Contractor is responsible for preparing and submitting to the RIDOT TMP Implementation Manager appropriate documentation (e.g., design calculations, analysis reports, Temporary Traffic Control Plans, etc.) showing that the requested change(s) are (1) feasible and (2) expected to result in safety and mobility impacts that are no more adverse than the impacts resulting from the strategies already included in the latest approved TMP. RIDOT will review and consider the submittal(s) as described in the preceding paragraph and will determine whether the changes should be implemented. The Contractor shall prepare and submit to the RIDOT TMP Implementation Manager a revised version of the latest approved TMP in both printed and electronic (Microsoft® Excel) format that documents all of the proposed changes. Work to implement the changes shall not begin until the revised TMP is approved.

When unexpected events (e.g., crashes, inclement weather, unforeseen traffic demands, etc.) occur in a project work zone where one or more lanes are closed, the RIDOT TMP Implementation Manager or his/her responsible designee should (1) determine whether or not the lane closure(s) can/should be removed in order to improve traffic operations and/or minimize delays and (2) if deemed appropriate, take action to remove the lane closure(s).

Other Requirements:

TMP APPROVALS

All approvals must be obtained prior to start of work

DIRECTOR, DIVISION OF PROJECT MANAGEMENT	STATE TRAFFIC SAFETY ENGINEER	CHIEF ENGINEER OF INFRASTRUCTURE
Signature: Lori A. Fisette	Signature: Steve Pristawa, P.E.	Signature: For Robert Rocchio, P.E.
Date: 2-23-24	Date 2-22-24	Date: 2/23/2024

Revision #	Initials	Date

Revision #	Initials	Date

Revision #	Initials	Date

TMP IMPLEMENTATION MANAGERS

RIDOT Construction Manager	
Name:	
Title:	
Unit:	
Office Phone:	
Mobile Phone:	
E-Mail:	

CONTRACTOR	
Name:	
Title:	
Company/Unit:	
Office Phone:	
Mobile Phone:	
E-Mail:	

Attachment 1 to Level 3 TMP:
TRAFFIC RELATED WORK RESTRICTIONS/General Restrictions:

	MINIMUM NUMBER OF LANES & SHOULDERS TO REMAIN OPEN TO TRAFFIC[1,2,3,4]								
	Time of Day		Day of Week						
Location	From	To	SUN	MON	TUES	WED	THURS	FRI	SAT
Route 4 Northbound	0:00	6:00	2L	1L	1L	1L	1L	1L	2L
	6:00	9:00	2L	2L	2L	2L	2L	2L	2L
	9:00	15:00	2L	2L	2L	2L	2L	2L	2L
	15:00	22:00	2L	2L	2L	2L	2L	2L	2L
	22:00	24:00	1L	1L	1L	1L	1L	2L	2L
Route 4 Southbound	0:00	6:00	2L	1L	1L	1L	1L	1L	2L
	6:00	9:00	2L	2L	2L	2L	2L	2L	2L
	9:00	15:00	2L	2L	2L	2L	2L	2L	2L
	15:00	20:00	2L	2L	2L	2L	2L	2L	2L
	20:00	24:00	1L	1L	1L	1L	1L	2L	2L

LEGEND

ALL	All travel lanes and shoulders shall remain open to traffic.
1L	A minimum of one 12-foot wide travel lane in each direction shall remain open to traffic.
2L	A minimum of two 11-foot wide travel lanes in each direction shall remain open to traffic.

NOTES

1 The set-up and break-down of temporary traffic control devices within a traveled way shall be construed as a closure of that traveled way.

2 The provisions noted herein shall not free the Contractor from his responsibility to conduct all work in such a manner that assures the least possible obstruction to traffic.

3 Access to and egress from all ramps within the Project work zones shall be maintained at all times unless otherwise noted or shown on the plans.

4 Access to and egress from all businesses within the Project work zones shall be maintained at all times unless otherwise noted or shown on the plans.

State of Rhode Island Department of Transportation

Volume by Hour by Day for 8/1/2023 - 8/31/2023
Criteria: Location ID = 230008

District : North Kingstown **County :** Washington **Community :** North Kingstown **Collection Type :** RVD

Roadbed : ML **Location :** RI-4 **Route :**

Location ID : 230008_NB **Lane Direction :** NB TOTAL

	8/2023																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
12-1A	139	146	176	225	295	392	204	150	129	163	170	371	418	220	153	122	140	173	309	421	146	130	139	136	175	188	360	126	109	89	155	6,269
1-2A	90	104	86	124	217	289	100	92	92	74	90	235	252	106	83	65	95	106	214	219	88	67	75	90	84	169	212	74	72	56	94	3,814
2-3A	56	56	58	84	131	136	52	48	57	61	67	121	146	66	48	55	61	65	103	120	55	66	53	59	52	97	125	51	34	48	46	2,277
3-4A	60	77	101	83	102	92	92	86	87	97	97	110	98	91	84	81	82	80	82	89	84	76	71	56	55	68	103	77	71	48	88	2,568
4-5A	267	199	198	203	135	145	273	218	222	202	184	132	126	231	196	203	220	169	126	122	219	194	167	170	152	109	136	199	173	158	168	5,616
5-6A	515	521	514	444	247	220	580	496	498	526	467	227	158	431	500	477	477	395	238	194	538	505	508	461	399	198	174	536	510	452	469	12,875
6-7A	1,324	1,205	1,252	1,074	505	338	1,219	1,217	1,229	1,256	1,022	445	302	897	1,157	1,200	1,152	1,059	506	366	1,265	1,236	1,234	1,212	1,018	449	322	1,397	1,376	1,326	1,381	30,941
7-8A	2,098	2,103	2,063	1,735	831	707	2,055	2,075	2,062	1,967	1,731	882	592	1,494	2,028	2,003	1,894	1,655	900	629	2,026	2,158	2,137	2,087	1,763	816	676	2,198	2,293	2,137	1,710	51,505
8-9A	2,391	2,266	2,269	1,995	1,190	975	2,297	2,211	2,233	2,220	1,895	1,300	991	1,696	2,115	2,165	2,107	1,797	1,262	1,006	2,151	2,198	2,193	2,166	1,677	1,155	1,037	1,858	2,119	2,104	2,151	57,190
9-10A	1,984	1,844	2,070	2,053	1,665	1,467	2,108	1,319	1,919	1,995	1,886	1,627	1,495	1,742	1,951	1,853	1,937	1,029	1,707	1,427	1,907	1,928	1,863	1,930	1,931	1,562	1,574	1,852	1,933	1,748	2,058	55,364
10-11A	1,757	1,733	1,819	2,025	1,839	1,737	2,044	1,438	1,809	1,927	1,951	2,015	2,035	1,798	1,894	1,998	1,865	1,862	1,868	1,876	1,894	1,869	1,779	1,856	1,955	1,910	1,851	1,850	1,838	1,809	1,901	57,802
11-12A	1,860	1,931	1,886	2,114	1,922	2,063	2,056	1,962	1,812	1,871	1,936	1,809	2,171	1,919	1,937	1,977	1,909	2,005	1,829	1,974	1,971	1,823	1,873	1,934	2,066	1,971	2,136	1,879	1,940	1,856	2,029	60,421
12-1P	2,001	1,855	2,026	2,082	1,954	2,013	1,980	1,883	1,849	2,060	2,062	2,059	2,061	1,897	1,983	1,831	1,992	1,981	1,949	2,092	1,861	1,817	1,796	1,967	2,048	1,937	2,132	1,822	1,902	1,824	2,000	60,716
1-2P	2,031	2,142	2,251	2,135	2,095	2,322	2,103	1,835	2,132	2,167	2,353	2,041	2,135	2,121	1,953	1,985	2,177	1,937	1,953	2,407	2,039	1,956	2,038	2,212	2,002	1,835	1,992	1,987	1,818	1,907	2,212	64,273
2-3P	2,512	2,423	2,436	2,345	2,447	2,435	2,125	2,182	2,560	2,386	2,411	2,440	2,156	2,392	2,034	2,136	2,378	2,105	2,196	2,450	2,397	2,421	2,539	2,502	2,121	1,840	2,056	2,184	2,223	2,211	2,535	71,578
3-4P	2,654	2,612	2,576	2,456	2,417	2,613	2,390	2,295	2,639	2,526	2,490	2,478	2,189	2,517	2,293	2,408	2,564	2,193	2,380	2,559	2,637	2,574	2,603	2,606	2,093	1,828	2,130	2,067	2,270	2,481	2,625	75,163
4-5P	2,600	2,681	2,624	2,311	2,521	2,569	2,504	2,480	2,630	2,501	2,543	2,470	2,528	2,601	2,488	2,608	2,643	2,189	2,390	2,727	2,676	2,658	2,617	2,662	2,247	1,796	2,285	2,635	2,446	2,456	2,633	77,719
5-6P	2,302	2,571	2,534	2,132	2,525	2,587	2,003	2,216	2,254	2,275	2,591	2,653	2,331	2,528	2,100	2,263	2,346	1,920	2,545	2,672	2,432	2,468	2,568	2,455	1,836	1,732	1,876	2,161	2,137	2,074	2,402	71,489
6-7P	1,794	1,851	2,009	1,782	2,541	2,657	1,372	1,375	1,943	1,567	2,200	2,070	2,253	2,015	1,389	1,680	1,652	1,604	2,108	2,675	1,707	1,730	1,979	1,643	1,329	1,706	1,966	1,520	1,389	1,376	1,723	56,605
7-8P	1,258	1,434	1,514	1,503	2,516	2,578	1,031	1,050	1,574	1,002	1,795	1,941	2,101	1,833	934	1,123	1,187	1,278	1,846	2,625	1,399	1,299	1,511	1,277	891	1,750	1,928	1,218	998	1,209	1,423	47,026
8-9P	1,302	1,528	1,476	1,477	2,475	2,526	822	1,084	1,579	830	1,859	2,284	2,225	1,568	854	1,084	1,095	1,403	2,058	2,512	1,252	1,305	1,469	1,120	736	1,800	1,497	942	744	1,131	1,218	45,255
9-10P	1,130	1,213	1,178	1,239	2,371	2,055	607	745	939	722	1,388	1,691	1,320	878	612	709	882	1,026	1,405	1,304	699	809	907	820	678	1,427	848	659	551	701	862	32,375
10-11P	642	724	770	903	1,602	899	410	444	583	550	980	1,344	656	528	425	516	591	849	1,105	632	440	496	543	559	624	1,036	463	426	396	492	580	21,208
11-12P	320	369	423	578	961	424	251	322	371	301	682	798	383	289	308	340	393	660	748	336	268	304	318	338	441	715	253	240	239	307	387	13,067
Total:	33087	33588	34309	33102	35504	34239	30678	29223	33202	31246	34850	33543	31122	31858	29519	30882	31839	29540	31827	33434	32151	32087	32980	32318	28373	28094	28132	29958	29581	30000	32850	983,116

State of Rhode Island Department of Transportation

Volume by Hour by Day for 8/1/2023 - 8/31/2023
Criteria: Location ID = 230008

District : North Kingstown **County :** Washington **Community :** North Kingstown **Collection Type :** RVD

Roadbed : ML **Location :** RI-4 **Route :**

Location ID : 230008_SB **Lane Direction :** SB TOTAL

8/2023																																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
12-1A	125	204	137	167	226	233	115	114	131	153	161	220	194	164	96	113	149	179	259	234	79	110	147	135	292	229	296	112	109	107	125	5,115
1-2A	88	114	79	123	119	148	68	48	59	65	97	142	136	90	63	67	85	81	136	124	82	48	58	78	103	125	146	68	55	47	55	2,797
2-3A	48	58	45	53	89	103	47	41	43	44	69	102	90	70	39	57	49	57	83	112	48	39	37	54	35	64	80	39	49	52	41	1,837
3-4A	87	92	100	94	86	136	90	65	82	90	90	101	83	77	84	79	80	83	96	110	68	71	65	91	67	75	99	77	68	55	57	2,598
4-5A	242	235	211	194	238	196	230	198	198	221	210	231	143	209	155	205	189	160	249	174	225	209	211	248	156	179	216	280	232	178	222	6,444
5-6A	692	630	685	593	368	314	600	608	660	629	611	380	191	584	515	609	611	515	380	319	614	624	631	644	488	262	308	635	618	631	608	16,557
6-7A	1,889	1,927	1,959	1,693	987	756	1,738	1,704	1,893	1,891	1,834	984	637	1,583	1,561	1,774	1,811	1,486	923	684	1,754	1,775	1,667	1,830	1,386	700	626	1,731	1,827	1,729	1,850	46,589
7-8A	2,570	2,531	2,615	2,369	1,672	1,362	2,262	2,306	2,595	2,565	2,537	1,720	1,191	2,140	2,192	2,375	2,469	1,980	1,519	1,365	2,391	2,402	2,586	2,468	1,917	1,084	904	2,372	2,658	2,312	2,391	65,820
8-9A	2,456	2,562	2,639	2,258	2,604	2,379	2,106	2,149	2,674	2,418	2,675	2,652	1,309	2,335	2,196	2,257	2,484	1,818	2,051	2,340	2,449	2,299	2,525	2,421	1,848	1,421	1,403	2,228	2,244	2,259	2,203	69,662
9-10A	2,246	2,244	2,364	2,184	2,575	2,610	1,818	1,384	2,475	2,108	2,615	2,470	1,649	2,375	1,801	1,968	2,024	934	2,556	2,723	2,127	2,296	2,442	2,079	1,579	1,682	1,702	1,829	1,684	1,760	2,074	64,377
10-11A	2,175	2,395	2,351	2,172	2,495	2,472	1,665	1,518	2,401	1,992	2,528	2,404	2,127	2,396	1,697	1,807	2,142	1,663	2,461	2,511	2,195	2,005	2,345	2,133	1,572	1,946	1,939	1,780	1,648	1,622	2,129	64,686
11-12A	2,194	2,317	2,338	2,313	2,516	2,437	1,760	1,720	2,372	2,052	2,454	2,456	2,496	2,388	1,667	1,856	2,218	2,021	2,494	2,417	2,194	2,102	2,392	2,182	1,843	2,254	2,168	1,839	1,677	1,725	2,206	67,068
12-1P	2,080	2,263	2,269	2,261	2,539	2,486	1,821	1,892	2,273	2,160	2,425	2,430	2,530	2,190	1,663	1,998	2,071	2,244	2,462	2,459	2,176	2,123	2,263	2,147	1,838	2,366	2,089	1,900	1,715	1,689	2,139	66,961
1-2P	1,958	2,028	2,185	2,285	2,488	2,500	1,721	1,896	1,901	1,992	2,427	2,532	2,435	2,050	1,741	1,862	2,056	2,447	2,505	2,499	1,910	1,962	2,127	2,024	1,872	2,369	2,094	1,843	1,728	1,741	1,812	64,990
2-3P	2,147	2,228	2,322	2,420	2,543	2,398	1,920	2,110	2,163	2,266	2,492	2,589	2,349	2,104	2,053	2,094	2,220	2,546	2,559	2,397	2,168	2,150	2,209	2,101	2,200	2,506	2,039	2,083	2,036	2,176	2,455	70,043
3-4P	2,363	2,357	2,469	2,392	2,470	2,178	2,144	2,211	1,785	2,407	2,562	2,457	2,305	2,093	2,260	2,291	2,465	2,581	2,369	2,277	2,180	2,385	2,177	2,288	2,358	2,501	1,919	2,265	2,157	2,361	2,548	71,575
4-5P	2,462	2,527	2,578	2,522	2,293	1,889	2,322	2,384	2,364	2,355	2,575	2,065	1,871	1,970	2,379	2,389	2,515	2,566	2,171	1,921	2,286	2,506	2,571	2,413	2,563	2,361	1,686	2,300	2,277	2,511	2,586	72,178
5-6P	2,397	2,429	2,541	2,469	2,101	1,676	2,151	2,407	2,425	2,339	2,575	1,872	1,597	1,904	2,240	2,222	2,397	2,593	1,785	1,505	2,197	2,349	2,355	2,323	2,277	1,947	1,445	2,194	2,264	2,353	2,501	67,830
6-7P	1,701	1,770	1,946	1,967	1,601	1,326	1,417	1,596	1,708	1,599	1,880	1,454	1,252	1,351	1,510	1,490	1,697	1,857	1,359	1,186	1,516	1,578	1,588	1,756	1,655	1,477	1,116	1,435	1,501	1,717	1,980	48,986
7-8P	1,212	1,179	1,336	1,332	1,123	935	996	1,005	1,201	1,176	1,378	1,088	851	1,031	978	1,196	1,193	1,332	1,104	893	980	1,072	1,160	1,228	1,124	1,083	899	1,009	1,058	1,152	1,332	34,636
8-9P	958	931	1,113	1,096	922	774	753	893	990	842	1,060	864	753	846	819	932	923	1,008	895	676	756	892	963	960	892	933	673	748	901	986	1,092	27,844
9-10P	672	694	829	825	723	632	584	589	681	729	850	773	522	659	582	647	715	773	738	496	515	574	637	660	673	688	492	487	566	608	696	20,309
10-11P	454	455	483	561	590	366	402	391	476	540	577	537	374	363	420	466	499	568	619	362	368	385	408	472	547	534	353	344	338	403	473	14,128
11-12P	253	282	339	387	393	229	224	274	276	356	404	338	233	165	219	241	313	368	417	209	213	228	241	365	346	393	175	188	192	226	309	8,796
Total:	33469	34452	35933	34730	33761	30535	28954	29503	33826	32989	37086	32861	27318	31137	28930	30995	33375	31860	32190	29993	31491	32184	33805	33100	29631	29179	24867	29786	29602	30400	33884	981,826

State of Rhode Island Department of Transportation

Volume By Hour By Week for 9/11/2023 - 9/17/2023
Criteria: Location ID = 230008

District : North Kingstown **Location ID :** 230008 **County :** Washington **SF Group :** OR

Located On : RI-4 **Functional Class :** Other Principal Arterial **Area Type :** Rural

YEAR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AADT																				57983

Start Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Avg	Avg Volume Graph	Pct. of Total
	9/11/2023	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023			
12:00 AM	238	180	219	240	305	500	483	309		0.5%
1:00 AM	117	115	126	109	189	301	287	178		0.3%
2:00 AM	83	75	73	76	93	215	204	117		0.2%
3:00 AM	145	140	115	133	143	142	148	138		0.2%
4:00 AM	450	419	399	402	395	230	230	361		0.6%
5:00 AM	1172	1160	1125	1218	1066	381	408	933		1.6%
6:00 AM	3396	3594	3428	3592	3172	930	826	2,705		4.6%
7:00 AM	4898	5146	5097	4993	4709	1548	1481	3,982		6.8%
8:00 AM	4298	4551	4579	4804	4319	2229	2137	3,845		6.6%
9:00 AM	3606	3693	3611	3760	3895	2745	3179	3,498		6.0%
10:00 AM	3286	3417	3381	3659	3900	3281	3924	3,550		6.1%
11:00 AM	3190	3343	3274	3857	4163	3711	4396	3,705		6.3%
12:00 PM	3235	3420	3022	3937	4284	3925	4583	3,772		6.4%
1:00 PM	3332	3521	3336	4016	4418	3803	4643	3,867		6.6%
2:00 PM	4154	4316	2870	4709	4944	4013	4386	4,199		7.2%
3:00 PM	4592	4741	4172	5216	5164	3992	4400	4,611		7.9%
4:00 PM	4582	4943	4615	5129	5247	3656	4301	4,639		7.9%
5:00 PM	3931	4229	4169	4819	4844	3372	3956	4,189		7.1%
6:00 PM	2684	3365	2640	3691	3832	2694	3282	3,170		5.4%
7:00 PM	1801	2341	1974	2937	2620	2258	2764	2,385		4.1%
8:00 PM	1290	1746	1454	2156	1945	1817	1809	1,745		3.0%
9:00 PM	772	1087	967	1374	1755	1454	1134	1,220		2.1%
10:00 PM	597	747	769	975	1336	1203	718	906		1.5%
11:00 PM	330	442	433	588	836	874	489	570		1.0%
Total	56179	60731	55848	66390	67574	49274	54168	Avg		
AM Pk Hr	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	11:00 AM	11:00 AM			
AM Peak	4898	5146	5097	4993	4709	3711	4396	4707		
PM Pk Hr	3:00 PM	4:00 PM	4:00 PM	3:00 PM	4:00 PM	2:00 PM	1:00 PM			
PM Peak	4592	4943	4615	5216	5247	4013	4643	4753		
Peak %	8.72%	8.47%	9.13%	7.86%	7.76%	8.14%	8.57%	8.38%		

Count Start:	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Start	9/11/2023	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023
End	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023	9/18/2023
24h Total	56179	60731	55848	66390	67574	49274	54168

State of Rhode Island Department of Transportation

Volume By Hour By Week for 9/11/2023 - 9/17/2023
Criteria: Location ID = 230008

District : North Kingstown **Location ID :** 230008_NB **County :** Washington **SF Group :** OR

Located On : RI-4 **Functional Class :** Other Principal Arterial **Area Type :** Rural

YEAR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AADT																				28864

Start Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Avg	Avg Volume Graph	Pct. of Total
	9/11/2023	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023			
12:00 AM	132	81	102	106	149	255	267	156		0.5%
1:00 AM	52	49	69	57	97	159	175	94		0.3%
2:00 AM	34	41	45	34	60	118	110	63		0.2%
3:00 AM	69	73	50	65	69	79	81	69		0.2%
4:00 AM	232	219	182	205	215	115	103	182		0.6%
5:00 AM	546	502	492	529	466	167	164	409		1.4%
6:00 AM	1503	1531	1445	1518	1302	396	360	1,151		4.0%
7:00 AM	2312	2384	2449	2297	2050	732	722	1,849		6.4%
8:00 AM	2096	2150	2185	2210	1940	1047	1036	1,809		6.2%
9:00 AM	1814	1891	1805	1566	1764	1337	1438	1,659		5.7%
10:00 AM	1688	1740	1755	1554	1822	1579	1797	1,705		5.9%
11:00 AM	1640	1731	1701	1753	1961	1802	1983	1,796		6.2%
12:00 PM	1695	1754	1597	1873	2063	1888	1980	1,836		6.3%
1:00 PM	1760	1785	1791	1991	2222	1782	2113	1,921		6.6%
2:00 PM	2222	2279	1281	2431	2482	1792	2247	2,105		7.3%
3:00 PM	2502	2561	2357	2663	2614	1876	2397	2,424		8.4%
4:00 PM	2435	2565	2331	2718	2599	1808	2586	2,435		8.4%
5:00 PM	1937	2274	2028	2376	2400	1666	2406	2,155		7.4%
6:00 PM	1332	1531	1335	1847	1994	1429	2088	1,651		5.7%
7:00 PM	908	1167	1022	1649	1387	1257	1695	1,298		4.5%
8:00 PM	561	859	647	1171	1059	939	1024	894		3.1%
9:00 PM	324	543	454	704	916	752	620	616		2.1%
10:00 PM	264	329	329	450	680	654	353	437		1.5%
11:00 PM	161	213	220	298	491	504	250	305		1.1%
Total	28219	30252	27672	32065	32802	24133	27995	Avg		
AM Pk Hr	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	11:00 AM	11:00 AM			
AM Peak	2312	2384	2449	2297	2050	1802	1983	2182		
PM Pk Hr	3:00 PM	4:00 PM	3:00 PM	4:00 PM	3:00 PM	12:00 PM	4:00 PM			
PM Peak	2502	2565	2357	2718	2614	1888	2586	2461		
Peak %	8.87%	8.48%	8.85%	8.48%	7.97%	7.82%	9.24%	8.53%		

Count Start:	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Start	9/11/2023	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023
End	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023	9/18/2023
24h Total	28219	30252	27672	32065	32802	24133	27995

State of Rhode Island Department of Transportation

Volume By Hour By Week for 9/11/2023 - 9/17/2023
Criteria: Location ID = 230008

District : North Kingstown **Location ID :** 230008_SB **County :** Washington **SF Group :** OR

Located On : RI-4 **Functional Class :** Other Principal Arterial **Area Type :** Rural

YEAR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AADT																				29118

Start Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Avg	Avg Volume Graph	Pct. of Total
	9/11/2023	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023			
12:00 AM	106	99	117	134	156	245	216	153		0.5%
1:00 AM	65	66	57	52	92	142	112	84		0.3%
2:00 AM	49	34	28	42	33	97	94	54		0.2%
3:00 AM	76	67	65	68	74	63	67	69		0.2%
4:00 AM	218	200	217	197	180	115	127	179		0.6%
5:00 AM	626	658	633	689	600	214	244	523		1.8%
6:00 AM	1893	2063	1983	2074	1870	534	466	1,555		5.3%
7:00 AM	2586	2762	2648	2696	2659	816	759	2,132		7.2%
8:00 AM	2202	2401	2394	2594	2379	1182	1101	2,036		6.9%
9:00 AM	1792	1802	1806	2194	2131	1408	1741	1,839		6.2%
10:00 AM	1598	1677	1626	2105	2078	1702	2127	1,845		6.2%
11:00 AM	1550	1612	1573	2104	2202	1909	2413	1,909		6.5%
12:00 PM	1540	1666	1425	2064	2221	2037	2603	1,937		6.5%
1:00 PM	1572	1736	1545	2025	2196	2021	2530	1,946		6.6%
2:00 PM	1932	2037	1589	2278	2462	2221	2139	2,094		7.1%
3:00 PM	2090	2180	1815	2553	2550	2116	2003	2,187		7.4%
4:00 PM	2147	2378	2284	2411	2648	1848	1715	2,204		7.5%
5:00 PM	1994	1955	2141	2443	2444	1706	1550	2,033		6.9%
6:00 PM	1352	1834	1305	1844	1838	1265	1194	1,519		5.1%
7:00 PM	893	1174	952	1288	1233	1001	1069	1,087		3.7%
8:00 PM	729	887	807	985	886	878	785	851		2.9%
9:00 PM	448	544	513	670	839	702	514	604		2.0%
10:00 PM	333	418	440	525	656	549	365	469		1.6%
11:00 PM	169	229	213	290	345	370	239	265		0.9%
Total	**27960**	**30479**	**28176**	**34325**	**34772**	**25141**	**26173**	**Avg**		
AM Pk Hr	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	11:00 AM	11:00 AM			
AM Peak	2586	2762	2648	2696	2659	1909	2413	2525		
PM Pk Hr	4:00 PM	4:00 PM	4:00 PM	3:00 PM	4:00 PM	2:00 PM	12:00 PM			
PM Peak	2147	2378	2284	2553	2648	2221	2603	2405		
Peak %	9.25%	9.06%	9.40%	7.85%	7.65%	8.83%	9.95%	8.86%		

Count Start:	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00	00:00:00
Start	9/11/2023	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023
End	9/12/2023	9/13/2023	9/14/2023	9/15/2023	9/16/2023	9/17/2023	9/18/2023
24h Total	27960	30479	28176	34325	34772	25141	26173

APPENDIX B

SMALL-SITE
Stormwater Pollution prevention Plan (SWPPP)

SMALL-SITE
Stormwater Pollution Prevention Plan

For:

Lafayette Railroad Bridge No. 024301 Rehabilitation
Bridge Group 46_R, PTSID: 2606K)

State Route 4 over Amtrak NEC

North Kingstown, Rhode Island

Owner:	**RI DEPARTMENT OF TRANSPORTATION** Alisa Diaz Richardson 2 Capitol Hill Providence, RI 02903 401-222-2468

Operator:

TO BE DETERMINED UPON CONTRACT AWARD

Estimated Project Dates:	Start Date: To be determined Completion Date: To be determined
SWPPP Prepared By:	**GM2 Associates, Inc.** Kevin M. Nagle, P.E. 200 Main Street, Suite 300 Pawtucket, RI 02860 (401) 726-4084
SWPPP Preparation Date:	2/7/2024

OWNER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

2/23/24

Owner Signature: Date

Owner Name: Alisa Diaz Richardson, PE

Owner Title: Administrator, Environmental Division

Company Name: Rhode Island Department of Transportation

Table of Contents

This Table of Contents is structured to be automatically populated by Microsoft Word. Upon completion of this template, "right-click" anywhere in the Table of Contents, select "Update Field", and then "Update entire table". Page numbers will automatically be synced with the changed document.

INTRODUCTION

This Small-Site Storm Water Pollution Prevention Plan (SWPPP) has been prepared for the State of Rhode Island Department of Transportation (RIDOT) for a construction project that has less than one (1) acre of soil disturbance. This document provides general guidance for the installation and maintenance of erosion and sediment controls on small projects.

The purpose of erosion and sedimentation best management practices (BMPs) is to prevent pollutants from leaving the construction site and entering waterways or environmentally sensitive areas during and after construction. This SWPPP has been prepared prior to the initiation of construction activities to address anticipated worksite conditions. The best management practices (BMPs) depicted on the site plan and described in this narrative should be considered the minimum measures required to control erosion, sedimentation, and stormwater runoff at the site. Since construction is a dynamic process with changing site conditions, it is the operator's responsibility to manage the site during the construction phases to prevent pollutants from leaving the site. This may require the operator to revise and amend the SWPPP during construction to address varying site and/or weather conditions, such as by adding or realigning erosion or sediment controls.

It is the responsibility of the RIDOT Construction Manager to maintain the SWPPP, including all attachments, amendments, and inspection records, at the project field office and to make all records available for inspection by RIDEM during construction.

The RIDOT Construction Manager and designated Certified SWPPP Inspector are required to review the SWPPP and sign the Party Certification pages (Section 8). The prime contractor and all subcontractors involved in earthwork or exterior construction activities are also required to review the SWPPP and sign the certification pages before construction begins.

Any questions regarding the SWPPP, BMPs, inspection requirements, or any other facet of this document may be addressed to the RIDOT Environmental Division at 401-734-4892.

Please note: Even if practices are correctly installed on a site according to the approved plan, the site is only in compliance when erosion and sedimentation are effectively controlled throughout the entire site.

SECTION 1: SITE DESCRIPTION

1.1 Project/Site Information

The Rhode Island of Transportation (RIDOT) will be undertaking a program of repairs and rehabilitation of various elements Lafayette Railroad Bridge (No. 024301), which carries State Route 4 (Colonel Rodman Highway) over the Amtrak Northeast Rail Corridor in the Town of North Kingstown, Rhode Island. The location of the existing crossing within the surrounding environment is depicted on the General Location Map provided as an attachment to this SWPPP.

1.2 Nature and Sequence of Construction Activity

Bridge elements to be rehabilitated under this contract include the superstructure (painting and repairs to steel beams, replacement of bearings) and substructure (structural concrete masonry repairs at each abutment face). Ground disturbance is limited to the toe-in of temporary shoring column footings along each abutment, areas which following completion of repairs will be restored to original grade. Rehabilitation measures will be sequenced in a manner that avoids project disruption to highway and rail operations.

Estimated Project Start Date:	(to be determined upon contract award)
Estimated Project Completion Date:	(to be determined upon contract award)
Estimated Number of Months:	2-3 months

1.3 Construction Site Estimates

The following are estimates of the construction site:

Total Project Area	0.2 acres
Construction Site Area to be disturbed	0.01 acres
Percentage impervious area before construction	95 %
Percentage impervious area after construction	95 %

1.4 Potential Discharges

Indicate where the stormwater from the active site may discharge to:

Environmentally Sensitive Areas	Construction Site Discharges to: (Yes / No)	List discharge points & indicate how determination was made
Waters of the State	Yes	The project is located within the watershed of Belleville Upper Pond Inlet (RI0007027R-02), which flows east southeast across the rail corridor approximately 350 feet north of the subject bridge. *(RIGIS/RIDEM data)*
Wetlands (Coastal or Upland)	Yes	Freshwater wetlands flank the Belleville Upper Pond Inlet watercourse where in crosses the rail corridor. *(RIGIS/RIDEM data)*
Separate Storm Sewer System	No	The segment of Route 4 spanning the bridge is served by existing closed drainage, no work will occur at the level of the deck/roadway. *(RIDOT record plans, Stormwater Database)*
303(d) Impaired Waters	No	Belleville Upper Pond Inlet is not on the current 303(d) List of Impaired Waters. *(RIGIS/RIDEM data, 2022 IWQMA Report)*
TMDL Waters	Yes	EPA-approved TMDLs have been effected for Total Phosphorus and bacteria (Enterococcus). *(RIGIS/RIDEM data, 2022 IWQMA Report)*
Special Resource Protection Waters (SRPWs)	No	*(RIGIS/RIDEM data)*
Cold Water Fisheries	Yes	*(RIGIS/RIDEM data)*
Natural Heritage Areas	Yes	Bridge is within the spatial extent of an NHA (No. 145) in the current (2023) dataset. *(RIGIS/RIDEM data)*

Historic/Cultural Areas	No	The Lafayette Village Historic District is approximately 1,500 feet northeast of the bridge crossing. The bridge itself is not historic, eligible, or potentially eligible. *(RIGIS/RIDEM data)*
Permanent Stormwater Structures (swales, outfalls, treatment units, etc.)	No	None in vicinity of bridge. *(RIDOT record plans, Stormwater Database)*

1.5 Allowable Non-Storm Water Discharges

RIPDES Construction General Permit – IV.E.1.g

Are there allowable non-stormwater discharges on or near the project area?

☐ Yes ☒ No

List of allowable non-stormwater discharges:

- N/A

Are there any known or contaminated discharges, including dewatering operations, on or near the project area?

☐ Yes ☒ No

If yes, list the discharges and the RIPDES individual permit number(s) or RIPDES Remediation General Permit Authorization number(s) associated with these discharges.

- RIPDES individual permit number: N/A
- RIPDES Remediation General Permit Authorization number: N/A

1.6 Potential Sources of Pollution

Check the potential pollution sources that may reasonably be expected to affect the quality of storm water discharges from the site

Anticipated on this Project (Y/N)	Operation/ Location	Stormwater Pollutants
Y	Clearing, grading, excavating, and unstabilized areas	Sediment; Trash/Debris
Y	Construction Entrance	Sediment
Y	Soil Stockpiles	Sediment
N	Paving operations	Sediment; Trash/Debris
Y	Concrete washout and waste	Heavy metals; pH; Trash/Debris
Y	Structure construction/ painting/ cleaning	Nutrients; pH; Trash/Debris; Toxic chemicals
N	Demolition and debris disposal	Sediment; Trash/Debris
N	Dewatering operations	Sediment; Nutrients
N	Drilling and blasting operations	Sediment; pH; Trash/Debris
Y	Material delivery and storage	Sediment; Nutrients; Heavy metals; pH; Pesticides/Herbicides; Oil/Grease; Trash/Debris; Toxic chemicals
Y	Material use during building process	Nutrients; heavy metals; pH; pesticides/herbicides; oil/grease; trash/debris; toxic chemicals
Y	Solid waste/ trash/ debris	trash/debris; toxic chemicals
N	Hazardous waste	heavy metals; pH; pesticides/herbicides; oil/grease; toxic chemicals
N	Contaminated spills	Nutrients; heavy metals; pH; pesticides/herbicides; oil/grease; toxic chemicals
Y	Sanitary/septic waste (porta potty?)	Nutrients; pH; Bacteria/Viruses; toxic chemicals
N	Vehicle/equipment fueling and maintenance	Oil/Grease; Toxic chemicals; fuel
Y	Vehicle/equipment use and storage	Oil/Grease; Toxic chemicals
N	Landscaping operations	Sediment; Nutrients; Trash/Debris
N	Off-site LUHPPL run-on	Industrial toxins; oil/grease; heavy metals; fuel; salt; hazardous materials
N	Other:	

1.7 Site Plans

TITLE & DATE OF PLAN SET(S):

State of Rhode Island, Department of Transportation
Bridge Group 46_R: Bridge Repairs of Lafayette Bridge No. 243

(_____ Sheets, Date: _____)

** Date of approved Advertising Plan Set to be added above. See Section 6 (Amendments) and Section 7 (Recordkeeping).*

- ☐ Total area of development
- ☐ Total area of soil disturbance
- ☐ Areas that will not be disturbed
- ☐ The location of all erosion and sediment controls
- ☐ Locations of storm drain inlets and outfalls
- ☐The location and name of the receiving waters or separate storm sewer system and the ultimate receiving waters
- ☐Location and name of all waters of the State, including wetlands
- ☐Location of environmentally sensitive features/areas to be protected (Section 1.4)
- ☐ Constraint locations of material storage areas, equipment storage areas, concrete washouts, dumpsters, stockpiles, fueling locations etc.
  (i.e. locations where these activities will not occur)

SECTION 2: EROSION AND SEDIMENTATION CONTROLS

What is a BMP?

Erosion and Sedimentation controls are Best Management Practice (BMP) devices, practices, or methods for preventing storm water pollutants from leaving the construction site and reaching environmentally sensitive areas. The most common BMPs are compost filter socks, straw bales, and silt fence, but a BMP can also be a policy or procedure like construction sequencing and street sweeping. The objectives of erosion and sediment controls are to minimize the potential for erosion and sedimentation during construction activities.

If BMPs are not depicted on the approved plan set, but erosion or sedimentation is occurring, appropriate BMPs must be installed as directed by the RIDOT Construction Manager.

For this construction project, please check any BMPs that will be utilized on-site. This section may be amended at any time during the project.

☒ *2.1 Minimize Disturbed Area and Protect Natural Features*

Limiting the disturbed areas as much as possible leaves natural vegetation to serve as the erosion control. Preservation of topsoil is also important – layers underneath topsoil are much more prone to erosion and have less absorption capacity.

As far as is practicable, existing vegetation will be protected and left in place, in accordance with the clearing limits shown on the approved Plans. Prior to any land disturbance activities commencing on the site, the Contractor will physically mark limits of disturbance (LOD) on the site and any areas to be protected within the site, so that workers can see the areas to be protected. Topsoil will be preserved where possible, in accordance with stock pile management specifications

☒ 2.2 Phase Construction Activity

Proper sequencing of construction activities is essential to maximize the effectiveness of erosion and sediment control measures.

At a minimum, construction sequencing and timing of construction activities will include:

1. Before any earthwork begins, erosion and sediment controls will be installed as depicted on the Approved Plans, and in accordance with all applicable sections of the RIDOT Standard Specifications. Upon acceptable completion of site preparation and installation of erosion and sediment controls, site construction activities may commence.

2. While earthwork is being done, routine inspection and maintenance and/or modification of erosion and sediment controls will be performed.

3. Final stabilization of any disturbed areas after earthwork has been completed.

☒ 2.3 Control Stormwater Flowing Onto & Through Project

Stormwater flow protection is necessary to prevent concentrated stormwater flows from coming on to the project site &/or moving through the project site.

Structural BMPs will be used to divert flows from exposed soils, retain or detain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site.

BMPs will be installed as depicted on the approved plan set and in accordance with applicable RIDOT Standard Specifications.

Control measures that may be used, upon approval, include straw bales/silt fencing, compost filter socks, fiber rolls, gravel bag berms, slope drains, check dams, and riprap.

☒ 2.4 Stabilizing Soils

Phased Clearing & Grubbing:

Only areas that can be reasonably expected to have active construction work being performed within 21-days of disturbance will be cleared/grubbed at any one time. It is NOT acceptable to clear and grub the entire construction site if disturbed portions will not be active within the 21-day time-frame.

Clearing/Grubbing will not take place during a rain event if erosion is likely to occur; nor will it occur if a rain event is forecasted and appropriate erosion controls cannot be installed prior to the storm and in accordance with section 201, 206 through 211 of the RIDOT standard specifications.

No undisturbed areas will be cleared of existing vegetation after October 15th of any calendar year or during any period of full or limited winter shutdown. All disturbed soils exposed prior to October 15 of any calendar year will be seeded or protected by that date. Any such areas that do not have adequate vegetative stabilization, as determined by the Construction Manager or environmental inspector, by November 15 of any calendar year, must be stabilized by erosion control matting or mulch, in accordance with specifications contained within the RI Soil Erosion and Sediment Control Handbook (as amended). If work continues within any of these areas during the period from October 15 through April 15, care must be taken to ensure that only the area required for that Day's work is exposed, and all erodible soil must be restabilized within 5 working days.

As per RIDOT Standard Specification 201.03.1 – Clearing and Grubbing: After clearing, and by the end of each day's grubbing operation, the Contractor will install erosion control measures that are indicated on the Plans or as directed by the Construction Manager. Such erosion control measures will be installed in strict accordance with the requirements of **SECTIONS 206, 207,** and **208** of these Specifications, **PERIMETER EROSION CONTROLS, CHECK DAMS**, and **TEMPORARY DEWATERING BASINS**, respectively.

Initiating Stabilization Practices

Upon completion and acceptance of site preparation and initial installation of erosion and sediment controls the operator will initiate appropriate stabilization practices during all phases of construction on all disturbed areas as soon as possible but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased, unless the activity is to resume within twenty-one (21) days.

Any disturbed areas that will not have active construction activity occurring within twenty-one (21) days must be stabilized using the BMPs depicted on the approved plan set and in accordance with RIDOT Standard Specifications Section L.02 – Seeding, Section L.05 - Seed Stabilizers and Section M.18 – Landscape Materials (M.18.08 – Mulch and M.18.09 – Seed Stabilizer Materials).

Maintaining Stabilization

Controls and methods that may be used to maintain soil stabilization include the placement of geotextiles, erosion control blankets/mats, and temporary seeding. If the stabilization BMPs fail and erosion occurs, then alternative control measures &/or methods may need to be substituted.

☐ 2.5 Protect Slopes *(N/A, no project slope disturbance)*

Slope protection is necessary to prevent concentrated stormwater flow from eroding the slope.

Structural BMPs will be used to temporarily conduct concentrated stormwater runoff safely down the face of a cut or fill slope without causing erosion on or below the slope.

BMPs will be installed as depicted on the approved plan set and in accordance with applicable RIDOT Standard Specifications.

Control measures that may be used, upon approval, include temporary slope drains, compost filter socks, fiber rolls, gravel bag berms, erosion control mats/blankets, and temporary vegetative cover.

☐ 2.6 Protect Storm Drain Inlets *(N/A, no inlets / no deck level work)*

Inlet protection is necessary to prevent sediment and debris from entering the storm drain system.

Structural BMPs will be used to protect ALL stormwater inlets &/or catch basins that may receive sediment-laden stormwater flow.

BMPs will be installed as depicted on the approved plan set and in accordance with applicable RIDOT Standard Specifications.

Control measures that may be used, upon approval, include catch basin inserts, compost filter socks, fiber rolls, and gravel bag berms.

☐ 2.7 Protect Storm Drain Outfalls *(N/A, no outfalls in/near work area)*

Outfall protection is necessary to prevent scour or severe erosion at discharge points. Outfalls often have high velocity, high volume flows, and require strong materials that will withstand the forces of the water. The function of these BMPs is to protect the soil surface, reduce velocity, and promote infiltration. Storm drain outlet BMPs also offer a last line of protection against sediment entering environmentally sensitive areas.

Structural BMPs will be used to protect ALL stormwater outfalls that may discharge sediment-laden stormwater flow.

BMPs will be installed as depicted on the approved plan set and in accordance with applicable RIDOT Standard Specifications.

Control measures that may be used, upon approval, include compost filter socks, fiber rolls, gravel bag berms, and rip-rap.

☒ 2.8 Establish Perimeter Controls and Sediment Barriers

Perimeter controls and sediment barriers are necessary to prevent sediment and debris from leaving the construction site.

Structural BMPs will be used to establish perimeter barriers that will stop sediment-laden stormwater flow from leaving the construction site.

BMPs will be installed as depicted on the approved plan set and in accordance with applicable RIDOT Standard Specifications.

Control measures that may be used, upon approval, include baled straw &/or silt fence, compost filter socks, fiber rolls, and gravel bag berms.

☒ *2.9 Retain Sediment On-Site and Control Dewatering Practices*

Sediment traps, basins, and barriers are used to retain sediment on the site to protect streams, lakes, drainage systems, and adjacent property. These devices are used at the outlets of channels, diversions, and other runoff conveyance measures to allow sediment-filled water to pool and sediment to settle. These measures are often used as the last line of defense to stop sediment from leaving the site.

The dewatering of non-contaminated non-stormwater (i.e. groundwater) or accumulated precipitation discharge of sediment-laden water into storm drains, streams, lakes or wetlands prior to sediment removal is prohibited.

The dewatering of contaminated non-stormwater cannot be discharged without prior notice and approval from either the Rhode Island Department of Environmental Management (RIDEM) or the Coastal Resources Management Council (CRMC). Should dewatering of contaminated water be occurring on this construction project, appropriate permits will have been obtained, and will be included as part of the Contract Documents.

Describe controls, including design specifications and details, to be used to retain sediments on-site. Describe dewatering practices that will be implemented if water must be removed from an area so that construction activity can continue.

- None of the proposed rehabilitation measures require dewatering.

☒ *2.10 Monitoring Weather Conditions*

Care will be taken to avoid having unstabilized areas exposed during precipitation events. Weather forecasts will be routinely checked, and in the case of an expected precipitation event of over 0.25-inches over a 24-hour period, all BMPs will be inspected, and maintained as necessary, prior to the weather event.

In the case of an extreme weather forecast (greater than one-inch of rain over a 24-hour period), additional erosion/sediment controls will be installed where appropriate.

List the weather gauge station that will be utilized to monitor weather conditions on the construction site. See www.wunderground.com or www.weather.gov for available stations.

- Quonset State Airport (KOQU) - 41.55 °N, 71.47 °W
  https://www.wunderground.com/weather/KOQU

SECTION 3: GOOD HOUSEKEEPING BMPS

The purpose of good housekeeping is to prevent daily construction operations and activities from causing pollution.

For this construction project, please check any BMPs that will be utilized on-site. This section may be amended at any time during the project.

☒ 3.1 Off-site Tracking of Sediments

Any construction site access point must employ the BMPs depicted on the approved plan set and in accordance with RIDOT Standard Specifications Section 211 – Construction Accesses, or any method approved of by the RIDOT Construction Manager and the RIDOT Environmental Division. Construction accesses will be used in conjunction with the stabilization of construction roads to reduce the amount of mud picked up by construction vehicles. All RI STD 9.9.0 Construction Access roads will be constructed prior to any roadway accepting construction traffic

If a Construction Access BMP is not designated on the plans, it is still the responsibility of the Operator to ensure that no sediment is tracked off the construction site by any vehicles leaving the site. Additional control measures that may be used, upon approval, include a vehicle washing station and/or daily street sweeping.

The Operator will remain responsible for the clean-up of any mud or dirt that is tracked onto streets or paved areas, even with the installation of gravel construction entrances. Inspect access for excessive sediment build up. Remove sediment and rebuild the exit as necessary to retain effectiveness and prevent off-site tracking. Additional street cleaning may be required if unable to retain sediment on site.

☒ 3.2 Waste Disposal

Building materials and other construction site wastes will be properly managed and disposed of to prevent the discharge of solid materials from wind and precipitation. All types of waste generated at the site will be disposed of in a manner consistent with State Law and/or regulations.

- The waste collection area will not be within any of the constraint areas located on the “Constraint Map” (Section 1.7) and will be approved by the RIDOT Construction Manager.
- All waste containers will be covered to avoid contact with wind and precipitation.
- Waste collection will be scheduled frequently enough to prevent containers from overfilling.
- All construction site wastes will be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.
- Equipment and containers will be checked for leaks, corrosion, support or foundation failure, or other signs of deterioration. Those that are found to be defective will be immediately repaired or replaced.

☒ 3.3 Spill Prevention and Control Plan

Spills and leaks will be avoided through frequent inspection of equipment and material storage areas. Heavy equipment and other vehicles will be routinely inspected for leaks and repaired as necessary. Material storage areas will be routinely inspected for leaky containers, open containers, or improper storage techniques that may lead to spills or leaks. Appropriate cleanup procedures and supplies will be available on-site.

Spills will be cleaned up immediately and following proper response procedures and in accordance with any applicable regulatory requirements. At no time will spills be cleaned and flushed down storm drains or in to any environmentally sensitive area (i.e. stream, pond, wetland).

Equipment/vehicle fueling and repair/maintenance operations or hazardous material storage will not take place within any of the constraint areas located on the "Constraint Map" (Section 1.7) and will be approved by the RIDOT Construction Manager.

☒ 3.4 Control of Allowable Non-Storm Water Discharges

Non-storm water discharges will be controlled to reduce the likelihood of contamination. Allowable discharges will be kept separate from stormwater flow with BMPs.

For contaminated non-stormwater discharge(s), the requirements and regulations of the associated RIPDES individual permit or RIPDES Remediation General Permit will be adhered to at all times.

☒ 3.5 Establish Proper Building Material Staging Areas

Stock pile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or water courses.

Stock piles will not be located within any of the constraint areas located on the "Constraint Map" (Section 1.7) and will be approved by the RIDOT Construction Manager. They will have side slopes no greater than 30% and stockpiles of erodible material will be seeded and ringed with RI STD 9.1.0 to stabilize (or RIDOT approved equivalent: berms, dikes, fiber rolls, compost socks, sandbag, gravel bags).

If soil stockpiles are not stabilized with vegetation, then they will be securely covered at the end of each workday.

All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. Designated areas will not be located within any of the constraint areas located on the "Constraint Map" (Section 1.12) and will be approved by the RIDOT Construction Manager.

☒ 3.6 Designate Washout Areas

Concrete mixer trucks and chutes will be washed in a designated area or concrete wastes will be properly disposed of off-site. Washout areas for concrete, paint or any other material will not be within any of the constraint areas located on the "Constraint Map" (Section 1.12) and will be approved by the RIDOT Construction Manager.

Temporary concrete washout areas must be constructed and maintained to contain all water and concrete waste generated by washout operations. A sign should be placed at the washout site to inform concrete equipment operators of the facility location. Facilities must be cleaned or replaced when they reach 75% capacity.

At no time will any material (concrete, paint, chemicals) be washed into storm drains, open ditches, streets, streams, wetlands, or any environmentally sensitive area. The site operator must ensure that construction waste is properly and legally disposed of, to avoid exposure to precipitation, at the end of each working day. Designated areas will not be located within any of the constraint areas located on the "Constraint Map" (Section 1.12) and will be approved by the RIDOT Construction Manager.

☒ 3.7 Establish proper equipment/vehicle fueling & maintenance practices

Vehicle fueling, maintenance and/or washing will occur off-site, or in designated areas. Designated areas will not be located within any of the constraint areas located on the "Constraint Map" (Section 1.7) and will be approved by the RIDOT Construction Manager.

Areas will be clearly designated, and berms, sandbags, or other barriers will be used around the perimeter of the maintenance area to prevent storm water contamination.

Construction vehicles will be inspected frequently for leaks. Repairs will take place immediately. Disposal of all used oil, antifreeze, solvents and other automotive-related chemicals will be according to applicable regulations; at no time will any material be washed down the storm drain or in to any environmentally sensitive area.

☒ 3.8 Dust Control

Dust control procedures and practices will be used to suppress dust on a construction site during the construction process, as applicable. Precipitation, temperature, humidity, wind velocity and direction will determine amount and frequency of applications. However, the best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of bare soil exposed at one time. RIDOT Standard Specifications Section 907 – Dust Control – will be followed.

Dust Control methods may include watering, surface roughening, wind barriers, walls, and covers.

☒ 3.9 Sweeping

Sweeping of streets, roads, highways, and parking lots that have accumulated significant amounts of pollutants (construction site sediment, trash, debris) will be done as necessary, or as directed by the RIDOT Construction Manager. When construction exits are not keeping construction site sediment from the roadway, sweeping will be done daily. Disposal of collected sweeping material will follow RIDOT Standard Specifications Section 931 – Cleaning and Sweeping Pavement.

SECTION 4: POST-CONSTRUCTION BMPs

Post-Construction Best Management Practices are BMPs that are installed during the Construction Phase of a project to manage storm water flow after the construction is completed.

Measures must be used during the construction project to protect permanent or long term BMPs as they are installed so that they will function properly when they are brought online at the end of the construction phase.

Such long-term BMPs may include: infiltration basins, open vegetated swales and natural depressions, vegetated buffer strips, and detention/ retention structures. Controls may also be needed to prevent or minimize erosion at outfall locations or along the length of vegetated channels to reduce velocity flow from the structure to the receiving waters.

Control measures that may need to be implemented during the construction phase typically include measures to ensure proper installation and/or long term functioning of the long-term BMPs. Examples include: ensuring proper material staging areas and equipment routing to avoid compaction of soil in areas meant for permanent BMPs, and final cleaning of structural BMPs before construction finalization.

4.1 Post-Construction BMPs

For each permanent BMP, identify measures that are required to protect the BMP during the construction phase of the project to ensure that they will function appropriately once they are brought online.

Location	Post-Construction BMP	Protective Measures
None within scope of bridge rehabilitation project		

SECTION 5: MAINTENANCE and INSPECTIONS

RIPDES Construction General Permit – Section IV.E.2.d

5.1 Maintenance

Maintenance procedures for erosion and sedimentation controls and stormwater management structures/facilities are described on the approved plan set and in Section 212 of the RHODE ISLAND DEPARTMENT OF TRANSPORTATION Standard Specifications for Road and Bridge Construction August 2023 EDITION (and Amendments).

The Contractor will maintain erosion and pollution controls to the satisfaction of the Construction Manager. Erosion and pollution controls must be able to prevent, under normal weather conditions, both the movement of soil materials and the intrusion of sediment-laden discharges into environmentally sensitive areas.

Construction will not commence or continue until all specified erosion and pollution controls are in place, properly installed and accepted by the Construction Manager.

Erosion and pollution controls will be cleaned when sediment deposits reach the heights indicated in the table provided in Section 212.03.1 of the RIDOT Standard Specifications, after a rainstorm as necessary; and/or when directed by the RIDOT Construction Manager.

Erosion control structures will remain in place until all disturbed earth has been securely stabilized and accepted by RIDOT. Before final removal, all accumulated sediment on the upstream side will be removed and legally disposed of. After removal of structures, disturbed areas will be regraded and stabilized as necessary.

BMPs will be maintained in effective operating condition by appropriate means. Upon identification of BMPs that are not operating effectively, maintenance and/or appropriate means will be performed as soon as practicable.

Timely maintenance of the control measures identified in this SWPPP will be ensured by weekly and post-storm event site inspections. These site inspections are a condition and requirement of the RIDOT Stormwater Management Program Plan.

Please Note: The contractor is required to have a full-time, on-site designated contact person responsible for working with the RIDOT Construction Manager and the SWPPP Inspector to resolve SWPPP-related issues.

5.2 Inspections

Minimum Monitoring and Reporting Requirements

The construction site must be inspected at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event which generates at least 0.25-inches of precipitation per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt. An appropriate rain gauge (as may be found on www.wunderground.com or www.nws.noaa.gov (or similar sites)) must be identified and utilized for the determination of the storm events.

General Notes

- The Certified SWPPP Inspector (Inspector) will prepare a separate inspection report for each inspection.
- The Inspection Reference Number will be a combination of the Construction Contract Number - consecutively numbered inspections.
  ex. Inspection reference number for the **4**th inspection of a project would be:
  2011-AA-BBB-**4**
- Each report will be signed and dated by the SWPPP Inspector and forwarded to the Construction Manager within 24 hours of the inspection.
- Each report will be signed and dated by the Construction Manager and forwarded to the Contractor's designated representative.
- Each report will be signed and dated by the Contractor upon receipt.
- If Corrective Actions are required, the Contractor will initiate appropriate measures within 24 hours of receiving of the inspection report.
- It is the responsibility of the RIDOT Construction Manager to maintain a copy of the SWPPP, copies of all completed inspection reports, and amendments as part of the SWPPP documentation at the project field office during construction.

ATTACHMENT A: Inspection Report Instructions and Template

5.3 Corrective Actions

If, in the opinion of the Inspector or Construction Manager, corrective action is required, the Inspector or Construction Manager will note it on the inspection report and will notify and direct the Contractor to take corrective action and make all necessary repairs whenever maintenance of the erosion and pollution controls is required.

In accordance with Section 212 of the RIDOT Standard Specifications, the Contractor will commence with the requisite cleaning and maintenance measures no later than the next consecutive calendar day after receiving such a directive from the Construction Manager, and will aggressively and expeditiously perform such cleaning and maintenance work until the original problem is remedied to the complete satisfaction of the Construction Manager.

If the Construction Manager decides on any given day that those erosion and pollution controls specified in the Contract are not in place or have not been adequately maintained as specified in this Section, the daily charge set forth in Special Provision Code 212.1000 will be deducted from monies due the Contractor as a charge for failure to comply with this Specification. Moreover, the stated daily charge will continue each consecutive calendar day thereafter until the deficiencies noted have been corrected to the complete satisfaction of the Construction Manager.

ATTACHMENT A: Inspection Report Instructions and Template including Corrective Action Log

SECTION 6: Amendments

This SWPPP is intended to be a working document.

It is expected that amendments will be required throughout the construction of the project.

Even if practices are installed on a site per the approved plan, the site is only in compliance when erosion and sedimentation are effectively controlled throughout the entire site.

The SWPPP will be amended whenever there is a change in design, construction, operation, maintenance, or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SWPPP proves to be ineffective in achieving its objectives (i.e. the selected BMPs are not effective in controlling erosion or sedimentation).

All revisions must be recorded in the Record of Amendments Log Sheet within the SWPPP, and dated red-line drawings and/or a detailed written description must be appended to the SWPPP. Inspection Forms must be revised to reflect all amendments. Update the Revision Date and the Version # in the footer of the Report to reflect amendments made.

All SWPPP Amendments, except minor non-technical revisions, must be approved by the Construction Manager.

SECTION 7: Recordkeeping

7.1 Requirements

It is the RIDOT Construction Manager's responsibility to have the following documents at the Field Office and immediately available for review upon request:

- A copy of the fully signed and dated SWPPP
- Copies of all signed and dated Inspection Reports
- Corrective Action Log
- Amendment Log
- Any Regulatory permits obtained as part of the Project

SECTION 8: Party Certifications

All parties working for the Rhode Island Department of Transportation are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that is performed on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. Contractors and Sub-Contractors are encouraged to advise all employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the RIDOT Field Office, or may be obtained from the RIDOT Environmental Division by calling (401) 734-4892.

The prime contractor and each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement.

I acknowledge that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

RIDOT Construction Manager:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date

Contractor's Certified SWPPP Inspector:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date & certification w/#

Contractor SWPPP Contact:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date

Subcontractor SWPPP Contact:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date

Insert more contact/signature lines as necessary

Amendment Log

ALL AMENDMENTS MUST BE APPROVED BY RIDOT CONSTRUCTION MANAGER

Describe amendment to be made to SWPPP, the date, and the person/title making the amendment. The RIDOT Construction Manager must approve ALL amendments.

	Date	Description of Amendment	R.E. initials
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Add more lines/pages as necessary

SWPPP APPENDICES

Attachment A

Small-Site SWPPP Inspection Report with Instructions

Small-Site SWPPP Corrective Action Log

Attachment B

Location Map

Department of Transportation
Two Capitol Hill
Providence, RI 02903

Office 401-222-2450
Fax 401-222-3905

Small-Site SWPPP Inspection Report with Instructions

For all projects with **less than one (1) acre of soil disturbance**, RIDOT is required to develop and enforce a site-specific **Storm Water Pollution Prevention Plan** (**SWPPP**) to remain in compliance with RIDOT's Stormwater Management Program Plan (SWMPP). As part of the SWPPP, a site-specific inspection report must be created and utilized.

Preparing the Inspection Report

This inspection report template has been provided by RIDOT for the development of the site-specific SWPPP Inspection Report. It must be customized for each individual Project to meet the requirements of the RIPDES Construction General Permit and our SWMPP.

It is expected that this Inspection Report will be prepared as part of the preparation of the site-specific SWPPP. This inspection report template is designed to be customized according to the SWPPP document (initially) and then customized based on conditions at the site.

Review the site-specific SWPPP and the Plans to develop the inspection report. ***On a copy of the site plan, number all stormwater BMPs and areas of the site that will be inspected.*** Include both structural (basins, outlet protection, swales, etc) and non-structural (construction entrances, perimeter barriers, trash areas, etc) BMPs and areas that will be inspected. Also, identify all point source outfalls, areas of highly erodible soils, and the priority natural resource areas (i.e. streams, wetlands, mature trees, etc). **List each BMP or area to be inspected separately in the site-specific BMP section of the inspection report**.

An appropriate rain gauge must be identified and utilized for the determination of the storm events. Rain gauges may be found on www.wunderground.com, www.nws.noaa.gov (or similar sites).

Small-Site SWPPP Inspection Report Instructions for:

RIDOT ENVIRONMENTAL DIVISION

- The RIDOT Administrator of the Environmental Division must review the SWPPP and sign the Certification Statement as the site OWNER on p. iii of the SWPPP.

RIDOT CONSTRUCTION MANAGER

- The RIDOT Construction Manager (CM) must review the SWPPP and sign the Certification Statement for RIDOT Construction Manager in Section 8. If the CM has any questions, contact the RIDOT Environmental Division (ED) at 401-734-4892.
- After an inspection has been performed, the CM must sign the 'acknowledgement' certification on Page 1 of the Inspection Report **at time of receipt from the Inspector.**
- The CM must review the Inspection Report within 24-hours of receipt.
    - If the CM agrees with the Inspection report, the CM must:
        - Fill out the "NOTICE TO CONTRACTOR" box on the last page of the Report
        - Have the Contractor sign the 'acknowledgement' certification on Page 1
        - Make a copy of the Inspection Report with all 3 signatures for the Contractor's use
    - If the CM disagrees with a corrective action item, the CM must:
        - Document objection with each item and provide justifiable reason in the inspection report. The contractor will not responsible for initiating corrective actions for such items. RIDOT's ED will review such items if warranted.
        - Fill out the "NOTICE TO CONTRACTOR" box on the last page of the Report
        - Have the Contractor sign the 'acknowledgement' certification on Page 1
        - Make a copy of the Inspection Report with all 3 signatures for the Contractor's use
- It is the responsibility of the RIDOT Construction Manager to maintain a copy of the SWPPP, copies of all completed inspection reports, and amendments as part of the SWPPP documentation at the project field office during construction.
- **The Inspection Report serves as the RIDOT directive to the Contractor to proceed with corrective actions.**
- **The CM is responsible for verifying Corrective Actions performed by the Contractor (sign/date on Corrective Action Log).**

- On a monthly basis, the Construction Manager must electronically submit a PDF of the Inspection Reports to the Project Manager (PM) and the Environmental Division (ED). Please submit ED reports to: dot.swppp@dot.ri.gov .

Monthly submission:

  - must include each completed, dated, and signed inspection report, including any associated photos.
  - must be submitted no later than the 10th of the month following the end of the reporting period.
  - must include a copy of the daily rainfall summary data for the month as reported by the selected rain gauge (ex/ the monthly calendar from www.wunderground.com).
  - may have the report content, frequency, &/or submission format changed with approval from the ED.

CONTRACTOR'S CERTIFIED SWPPP INSPECTOR

- The Contractor may be the Inspector if they are qualified, or the Contractor may designate another qualified person as the Inspector (see current Section 212 of RIDOT Specifications). The designated inspector must review the SWPP Plan and sign the Certification Statement for SWPPP Inspector in Section 8 of the SWPPP.
- **It is the responsibility of the Contractor's Inspector to start the SWPPP Inspections BEFORE EARTHWORK BEGINS.** Earthwork is NOT allowed to proceed until a SWPPP Inspection of the site has been completed.
- A separate inspection report will be prepared for each inspection.
- Complete any items that will remain constant, such as the project information and BMP locations and descriptions. Then print out multiple copies (double-sided!) of this customized inspection report to use during the inspections *or save the file for future use on a computer*. **The Inspector must also include their Certification/Qualification number on each inspection report.**
- The Inspection Reference Number shall be a combination of the Construction Contract Number - consecutively numbered inspections.
  ex. Inspection reference number for the **4**th inspection of a project would be:
  2006-AA-BBB-**4**
- Check the rain gauge for past & future weather data prior to inspection.
- Minimum Monitoring and Reporting Requirements

  "…the site must be inspected at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event which generates at least 0.25-inches of precipitation per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt." (per RIPDES CGP)

- When conducting the inspection, walk the site by following the site map and numbered BMPs locations for inspection. Also, note whether the overall site issues have been addressed.
- Take photos to document issues, completed required maintenance/corrective actions – each photo should be dated and have a unique identification # and written description indicating where it is located within the project area. If a close-up photo is required, it should be preceded with a photo including both the detail area and some type of visible fixed reference point. Photos should be annotated with Station numbers and other identifying information where needed.
- For each inspection, the Inspector must determine if the Construction site is in compliance with the SWPPP, or not. The Inspector must check the appropriate check-box on Page 1 of the inspection report.
- Each report must be signed and dated by the Inspector and forwarded to the RIDOT Construction Manager within 24-hours of the inspection.

CONTRACTOR

- The Contractor must review the SWPPP and sign the Certification Statement for Contractor in Section 8 of the SWPPP.
- After an Inspection has been performed, the Contractor must sign the 'acknowledgement' certification on Page 1 of the inspection form at time of receipt from the Construction Manager.
- The CM will provide a copy of the signed Inspection Report to the Contractor.
- **The Inspection Report serves as your RIDOT directive to proceed with corrective actions.**
- In accordance with the SWPPP and Section 212 of the RIDOT Standard Specifications, the **Contractor will commence with the requisite cleaning and maintenance measures no later than the next consecutive calendar day after receiving such a directive from the Construction Manager, and will aggressively and expeditiously perform such cleaning and maintenance work until the original problem is remedied to the complete satisfaction of the Construction Manager**.
- The **CONTRACTOR** is responsible for maintaining the CORRECTIVE ACTION LOG for each inspection report. The log is a running total. Do not create a new one for each inspection.

Small-Site SWPPP Inspection Report Instructions for:

INSPECTOR, CONSTRUCTION MANAGER, & CONTRACTOR

Amendments

The SWPPP shall be amended whenever there is a change in design, construction, operation, maintenance, or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SWPPP proves to be ineffective in achieving its objectives.

SWPPP Amendments may be recommended by any party, but all amendments must be approved by the Construction Manager. The revision must be recorded in the Record of Amendments Log Sheet within the SWPPP and dated red-line drawings and/or a detailed written description must be appended to the SWPPP. Inspection Forms must be revised to reflect all amendments by the Inspector.

Questions

RIDOT Environmental Division
360 Lincoln Ave
Warwick, RI 02888
401-734-4892

dot.swppp@dot.ri.gov

RIC # INSPECTION #

RIDOT Small-Site SWPPP Inspection Report

Project Information			
Name/RIC/PTSID			
RIDOT Project Mgr		**RIDOT Construction Mgr**	
Contractor		**Contractor's Project Superintendent**	
E&S Sub-Contractor Contact		**Certified SWPPP Inspector's Cert. & Cert. #**	

Inspection Information			
Contractor's SWPPP Inspector Info	**Name**	**Phone**	**Email**
Inspection Date	Click or tap to enter a date.	**Start/End Time**	

Inspection Type
☐ **Weekly** ☐ **Pre-storm event** ☐ **During storm event** ☐ **Post-storm event** ☐ **Violation**

Weather Information

Rain Gauge:

Last Rain Event
Date Click or tap to enter a date.: Duration (hrs): Approximate Rainfall (in):

Current Weather at time of this inspection:

Weather Forecast at time of this inspection: (And: When is next precipitation or wind event anticipated?)

Certification Statements

Inspector: (check one)
☐ I, as the designated Inspector, certify that this site has been inspected and is in compliance with the site-specific SWPPP.

☐ I, as the designated Inspector, certify that this site has been inspected and I have made the determination that the site requires corrective actions before it will be compliant with the site-specific SWPPP. The required corrective actions are noted within this inspection report.

Print Name:	Signature:	Date: Click or tap to enter a date.

Construction Manager:
I, the RIDOT Construction Manager, acknowledge the receipt of this SWPPP inspection report, and understand the requirements set forth in the RIDOT Standard Specifications and the Contract Documents regarding the implementation and maintenance of erosion and sedimentation controls.

Print Name:	Signature:	Date: Click or tap to enter a date.

Contractor:
I, the designated Contractor representative, acknowledge the receipt of this SWPPP inspection report, and understand the requirements set forth in the RIDOT Standard Specifications and the Contract Documents regarding the implementation and maintenance of erosion and sedimentation controls.

Print Name:	Signature:	Date: Click or tap to enter a date.

RIC # INSPECTION #

EROSION AND SEDIMENTATION BMP INSPECTION		"No" means needs attention	Assoc. Photo #	If "No", what is the CORRECTIVE ACTION to bring into compliance?
2.1	Are **Limits of Disturbance** clearly marked at the site?	☐Yes ☐No		
2.1	Are **natural resource areas** (e.g., streams, wetlands, trees, etc.) protected with sediment barriers or similar BMPs?	☐Yes ☐No ☐None on/adjacent to site		
2.2	Is **construction sequencing** being followed?	☐Yes ☐No ☐N/A		
2.3	Are **structural BMPs** properly installed to divert stormwater flow from entering the construction site?	☐Yes ☐No ☐None needed		
2.4	Is **clearing/grubbing** only occurring in areas that will have active work within 21-days?	☐Yes ☐No		
2.4	Is **clearing/grubbing** taking place inside the Apr 15 - Oct 15 window?	☐Yes ☐No		
2.4	Do **disturbed/unstabilized areas** have appropriate erosion/ sedimentation controls in place?	☐Yes ☐No ☐All areas stabilized		
2.5	Are all **slopes** protected from concentrated stormwater flow?	☐Yes ☐No ☐No slopes		
2.6	Are **ALL** storm drain **inlets &/or catch basins** properly protected with silt sacks or other appropriate BMPs?	☐Yes ☐No		
2.7	Are **ALL** storm drain **outfalls** properly protected from scour/erosion?	☐Yes ☐No ☐No outfalls		
2.8	Are **perimeter and sediment controls** adequately installed & maintained to prevent sediment from leaving the site (including entering drainage system)?	☐Yes ☐No		
2.9	If dewatering, are discharge points protected & **receiving waters** free of sediment deposits?	☐Yes ☐No ☐No dewatering		
2.10	Is **weather** forecast being checked regularly?	☐Yes ☐No		
Notes on Erosion and Sediment Controls:				

RIC # INSPECTION #

GOOD HOUSEKEEPING BMP INSPECTION		"No" means needs attention	Assoc. Photo #	If "No", what is CORRECTIVE ACTION to bring into compliance?
3.1	Are BMPs effectively limiting **sediment** from being tracked into the street?	☐Yes ☐No		
3.2	Is **trash/litter** from work areas collected & placed in covered containers regularly?	☐Yes ☐No		
3.3	Are **equipment**, vehicles, containers, & storage areas free from leaks?	☐Yes ☐No		
3.3	Are **materials** that are potential stormwater contaminants covered or stored inside?	☐Yes ☐No		
3.4	Are **non-storm water discharges** (i.e. dust control H_2O) free from contamination?	☐Yes ☐No		
3.5	Are **stockpiles** covered (either with temporary vegetation or tarps), ringed with barrier BMPs, & located at least 50 feet away from natural resources & storm drains?	☐Yes ☐No ☐No stockpiles		
3.6	Are **washout facilities** (e.g. paint, grout, concrete) available, clearly marked, and **maintained** & located at least 50-feet away from natural resources and storm drains?	☐Yes ☐No ☐No concrete use at this time		
3.7	Are **vehicle** & **equipment** fueling, cleaning, & maintenance areas free from leaks & located at least 50-feet away from natural resources & storm drains?	☐Yes ☐No ☐No fueling areas		
3.8	Is **dust** being controlled on-site?	☐Yes ☐No		
3.9	Is **sweeping** being used to keep sediment off roads & parking lots?	☐Yes ☐No		
PROCEDURAL BMP INSPECTION		**"No" means needs attention**	**Assoc. Photo #**	**If "No", what is CORRECTIVE ACTION to bring into compliance?**
4.1	Are **permanent stormwater STUs** (i.e. infiltration basins, swales, permeable pavement areas) being protected from compaction? (*No stockpiling or vehicles in these areas*!)	☐Yes ☐No ☐No permanent STUs		
5.1	Are all **erosion & pollution controls** being maintained in accordance with RIDOT Standard Spec Section 212?	☐Yes ☐No		
5.2	Are **inspections** taking place at least every 7 days & after storm events?	☐Yes ☐No		
5.3	Has the Contractor initiated & completed previous **Corrective Actions** (CA)?	☐Yes ☐No ☐No previous CA		
6.0	Are SWPPP **Amendments** being logged?	☐Yes ☐No ☐None		
7.0	Are SWPPP & ALL **inspection reports** being kept at RIDOT Field Office?	☐Yes ☐No		

RIC # INSPECTION #

TO BE FILLED OUT BY RIDOT CONSTRUCTION MANAGER

OUTSTANDING CORRECTIVE ACTIONS

Were **CORRECTIVE ACTIONS** reported in the previous inspection report?

☐ **NO**	No Corrective Actions were issued in previous inspection report.
☐ **YES** and…	☐ All Corrective Actions have been addressed
	Date work began: Click or tap to enter a date. / Date work completed: Click or tap to enter a date.
	☐ Corrective Actions remain and are noted in this inspection report. **WHY did they not get addressed w/in 7-days?**

NOTICE TO CONTRACTOR

This SWPPP Inspection Report, completed by a qualified inspector, indicates that this construction site is:

☐ **COMPLIANT**	☐ No immediate actions are required. Keep up the good work! ☐ **Work is required to maintain site compliance. Contractor to complete the noted corrective actions within 24 hours to stay in compliance. Site moves into non-compliant category after 24 hours if not completed. Charges may be assessed.**
☐ **NON-COMPLIANT**	**This document serves as your RIDOT directive to proceed with the CORRECTIVE ACTIONS that have been outlined above.** The SWPPP, Construction Contract documents, and Section 212 of the RIDOT Standard Specifications state that the **Contractor** will commence with the requisite cleaning and maintenance measures **no later than the next consecutive calendar day** after receiving such a directive from the Construction Manager **and will aggressively and expeditiously perform such cleaning and maintenance work until the original problem is remedied to the complete satisfaction of the Construction Manager**.
	Date work to begin: Click or tap to enter a date.
	Date work to be completed: Click or tap to enter a date.

R.E. initials: _____ R.E. Comments:

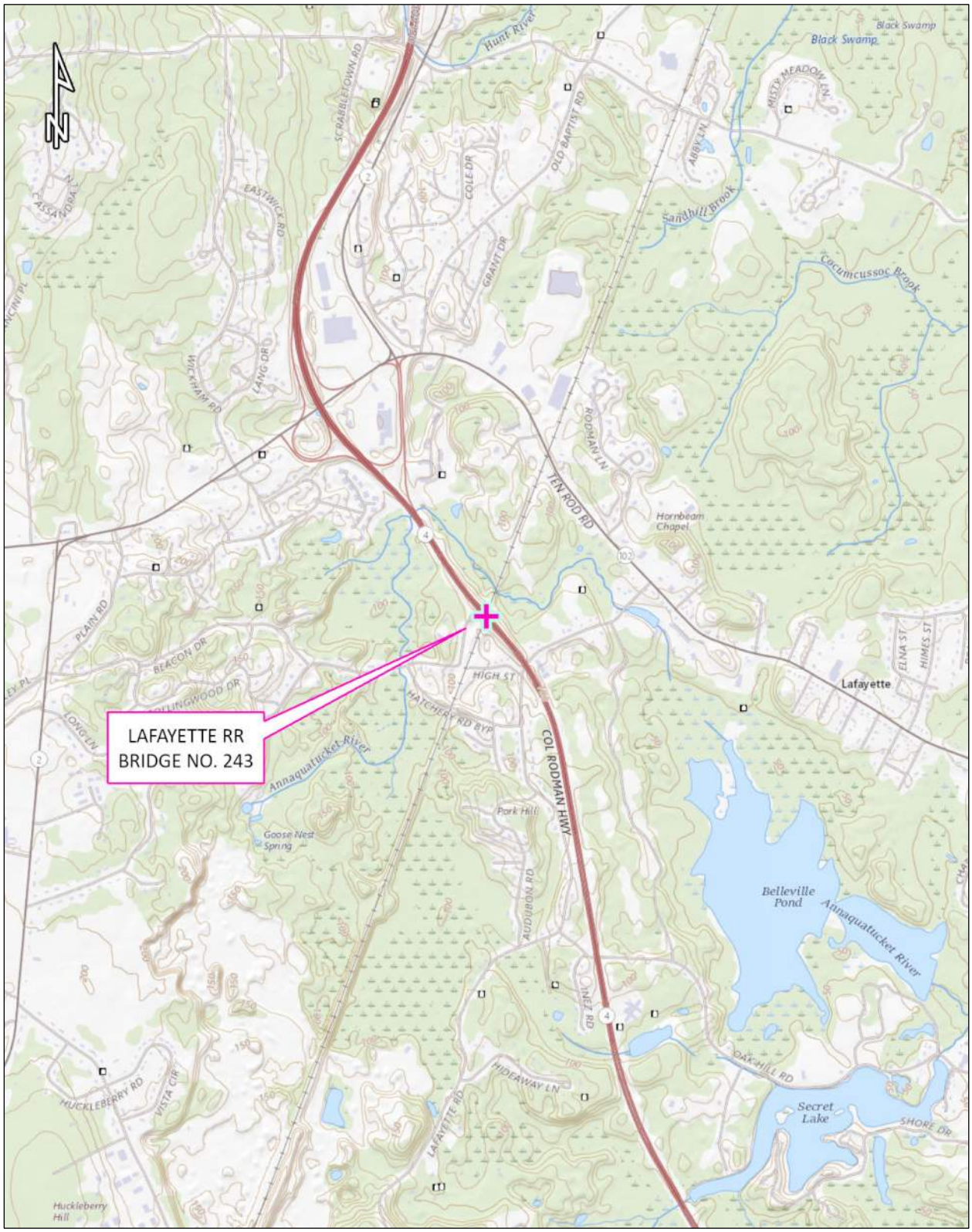
Date: Click or tap to enter a date.

RIC # INSPECTION #

Corrective Action Log

THIS FORM TO BE FILLED OUT BY SITE CONTRACTOR FOR EVERY INSPECTION

Location/ Station	Corrective Action	Date Notified	Date Completed	RIDOT Initial
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
		Click or tap to	Click or tap to enter a	
Operator Signature:		**Date:**	Click or tap to enter a date.	



General Location Map

Sources: RIGIS, USGS National Map • Approximate Scale: 1" = 2,000'

APPENDIX C

Migratory Birds

PROTECTION UNDER THE MIGRATROY BIRD TREATY ACT

Clearing and Grubbing, Tree Removal, and Land Disturbing Activities

A variety of bird species nest in trees, shrubs and grass areas within the highway ROW. Under the Migratory Bird Treaty Act (MBTA), it is unlawful to intentionally or unintentionally take, capture or kill any migratory bird unless a Migratory Bird Permit is first obtained from the U.S. Fish and Wildlife Service.

There are few bird species that are not protected under the MBTA; they are Rock Doves (domestic pigeons), English Sparrows, European Starlings and Monk Parakeets. Although these species are not protected, they should be treated in a humane manner. The Contractor is encouraged to relocate active nests of unprotected species into nearby trees or the Contractor should consider contacting the RIDOT Natural Resources Unit (401-479-1327).

Bird species that are protected under the MBTA include all waterfowl, herons, eagles, hawks, falcons, owls and songbirds (including swallows, eastern phoebes and American robins). Nests typically may be found with eggs or unfledged chicks from March 1st to August 31st in trees, brush and open fields. Raptors (Hawks, falcon, owls, and eagles) nest as early as January 22nd through August 31st in or on trees, on telephone poles and in open fields.

If clearing and grubbing, tree removal, staging areas or other land disturbing activities will occur during the migratory bird breeding season (March 1st- August 31st), the Contractor shall avoid any active bird nests. During the breeding season, the Contractor should inspect the affected right-of-way for bird nests before commencing work. The Contractor shall not disturb any active nests (completed or partially completed nests that contain eggs or nestlings). If any active nest is discovered and the nest cannot be avoided, work shall stop and the RIDOT Natural Resources Unit shall be contacted to evaluate the potential for disturbance of nests. The project will avoid the removal and destruction of active bird nests except through federal or state approved options.

At no time should large nests of hawks, falcons or eagles be destroyed, as these species return to the same nest site year after year and reuse the same nest. If a raptor nest must be removed for work to take place, it can be moved in cooperation with the USFWS.

All questions relating to migratory birds and nesting should be directed to the RIDOT Natural Resources Unit (401-479-1327).

Birds Nesting On or Under Bridges

A variety of bird species nest on or under bridges. State and Federal laws protect some of these bird species (and their nests, eggs and young). Under the Migratory Bird Treaty Act (MBTA), it is unlawful to intentionally or unintentionally take, capture or kill any migratory bird unless a Migratory Bird Permit is first obtained from the U.S. Fish and Wildlife Service.

Migratory bird species that are protected under the MBTA include all waterfowl, herons, eagles, hawks, falcons, owls and songbirds (including swallows, eastern phoebes and American robins).

There are few bird species that are not protected under the MBTA; they are Rock Doves (domestic pigeons), English Sparrows, European Starlings and Monk Parakeets. Although these species are not protected, they should be treated in a humane manner. The Contractor is encouraged to relocate active nests of unprotected species into nearby trees or the Contractor should consider contacting the RIDOT Natural Resources Unit (401-479-1327).

Before commencing any bridge-related construction activities during the breeding season (February 1st-August 31st), the Contractor shall inspect the bridge(s) for bird nests. If any active nest is discovered, work shall stop and the RIDOT Natural Resources Unit shall be contacted. The project will avoid the removal and destruction of active bird nests except through federal or state approved options.

At no time should large nests of hawks, falcons or eagles be destroyed, as these species return to the same nest site year after year and reuse the same nest. If a raptor nest must be removed for work to take place, it can be moved in cooperation with the USFWS.

All questions relating to migratory birds and nesting should be directed to the RIDOT Natural Resources Unit (401-479-1327).

Taking of a Migratory Bird

The taking of a migratory bird shall be reported to the Resident Engineer. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.

All questions relating to migratory birds and nesting should be directed to the RIDOT Natural Resources Unit (401-479-1327).

No extra payment or time extension will be granted for adherence to the requirements specified herein.

APPENDIX D

Amtrak Standard Specifications

Amtrak Requirements

All underground utilities, cable, and facilities must be located and protected before any excavating, drilling, boring/directional drilling, ground penetrating activities, or construction takes place. This includes railroad and commercial utilities, cables, duct lines, and facilities. These activities will not be performed in close proximity to the railroad duct lines unless monitored by on-site Amtrak communications and signal (C&S) department personnel. Hand digging may be required, as directed by Amtrak through the on-site Amtrak C&S support personnel. Amtrak maintains the right to access all existing cables and conduits throughout construction. Amtrak also reserves the right to upgrade and install new cables and conduits in the affected area. The call before you dig 811 “one-call” process must be followed. Be aware that Amtrak is not part of the one-call process; contact Amtrak engineering to have all railroad underground utilities and assets located. If requested by Amtrak, existing depths of utilities being crossed must be verified through test pits performed by the contractor as directed by and under the direct supervision of Amtrak C&S support personnel. Precautions must be taken to prevent any interruption to railroad operation

Amtrak C&S personnel must field-verify that there is no signal equipment in the way of the project and that signal preview is not being obstructed.

The Amtrak C&S department must maintain access on the railroad right-of-way and have existing gate access to remote locations to perform maintenance.

All signal equipment to be relocated must be reviewed by the division engineer. The division will contact Andrew Biber, Sr. Manager Engineering, Signal Design and Standards for support in the design phase.

If work shall be done on Amtrak property that involves heavy trucks, equipment, or machinery along the right of way, duct lines and pull boxes shall be inspected to insure they can withhold the appropriate weight. Refer to tier table document.

Any damage to pull boxes, hand holes, junction boxes, or other appurtenances in the course of this work shall be repaired by Amtrak C&S, and the cost of the contractor.

Rails must be protected against debris. Rust, sand, metal shavings or other material can interfere with the proper shunting sensitivity of the track circuit.

Any work to be performed within 15 feet of the overhead wires must be done under the protection of an Amtrak Class "A" employee.

Whenever work is performed in the vicinity of electrified tracks and/or high voltage wires, particular care must be exercised, and railroad's requirements regarding clearance to be maintained between equipment and tracks and/or energized wires. The contractors must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any overhead wire per Amtrak spec 16064. This document has been attached in **Section D1**.

All track and catenary outages to be coordinated with Amtrak New England Division forces.

The contractor shall provide a temporary solid protective barrier/shield (min. 6'-6" high) in any location where the Amtrak catenary will be exposed to the demolition/construction above, or in any location where debris, construction material, or workers will have potential to be within the direct vicinity of the energized catenary per Amtrak Standard ET-1447-D. This document has been attached in **Section D2**. If the shield is metallic, the shield must be grounded and provide enough clearance to the catenary per the standard (9" for steel, 11" for timber). The shield ground wire will be tied into the existing bridge grounding configuration (to be confirmed in the field). In certain instances, the existing permanent bridge barrier may be sufficient. The bridge will remain grounded until fully removed.

Should the work involve any protective barriers/coverings, a full diagram needs to be submitted that shows any intrusion into the clearance envelope per Amtrak Standard Plan "Minimum Roadway Clearance 70050.001.08". This document has been attached in **Section D3**.

Construction-related debris that falls onto Amtrak property, fouls track ballast or damages Amtrak's track or infrastructure shall be immediately reported to Amtrak. Right-of-way clean-up, ballast cleaning, track repair or other repair will be performed by Amtrak forces at the Contractor's expense.

A protection shield must be designed and constructed in conformance with Amtrak's EP 3014 Section 01520 "Requirements for Temporary Protection Shields for Demolition and Construction of Overhead Bridges and Other Structures". This document has been attached in **Section D4**.

Amtrak Engineering Practice EP3014 "Maintenance and Protection of Railroad Traffic During Contractor Operations", shall be adhered to, which applies to all contractor work on Amtrak right-of-way and adjacent to Amtrak tracks. This document has been attached in **Section D5**.

D1

Amtrak

Amtrak Spec. 16064

NATIONAL RAILROAD PASSENGER CORPORATION

ELECTRIFIED TERRITORY

Specification No. 16064

Issued December 28, 2012

Philadelphia, PA

SPECIFICATION FOR EQUIPMENT AND VEHICLE GROUNDING NEAR ENERGIZED OVERHEAD WIRES

CONTENTS

SECTION **PAGE NO.**

NATIONAL RAILROAD PASSENGER CORPORATION

SPECIFICATION FOR EQUIPMENT AND VEHICLE GROUNDING NEAR ENERGIZED OVERHEAD WIRES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including National Railroad Passenger Corporation (Amtrak) "General Provisions for Construction Contracts" (General Provisions) and Supplementary General Provisions and other Division 1 Specification Sections, apply to this Section.

B. Amtrak Electric Traction Standard Operating Instructions/Procedures/Drawings
   1. AMT-2, Electrical Operating Instructions
   2. Standard Operating Instruction 11 - Electrical Clearance Procedures
   3. Standard Operating Instruction 12 - Approved Temporary Ground Clamps for Use In Electrified Territory
   4. Amtrak employees will utilize two different documents:
      a. For Amtrak Electric Traction employees: Standard Operating Instruction 213 - Roadway Machinery and Construction Equipment Grounding in Electrified Territory.
      b. For all other Amtrak employees: Engineering Practice Specification for Roadway Machinery and Construction Equipment Grounding in Electrified Territory.
      c. Both of these documents shall be used interchangeably within this document.
   5. Amtrak Vehicle Grounding Drawings; AET-1001 through AET – 1010.

C. Appendices which are included for issue to contractors and vendors:
   1. Annual Vehicle and Equipment Safety Grounding Evaluation Form.
   2. Amtrak Vehicle Grounding Drawings; AET-1001 through AET – 1010.

1.2 SUMMARY

A. In general, Vehicle and Equipment Grounding and Bonding (G&B) systems are intended to ensure safety and to protect all personnel, overhead wires and the associated equipment in the event of accidental contact with energized overhead lines. The grounding and bonding system shall be comprised of bare or insulated (600V class) cables and associated grounding clamps and connectors that create a complete low-resistance path to ground, as required and specified on the related drawings. The resistance of the path between the potential contact area of the vehicle and return circuit shall not exceed 10 ohms.

NATIONAL RAILROAD PASSENGER CORPORATION

SPECIFICATION FOR EQUIPMENT AND VEHICLE GROUNDING NEAR ENERGIZED OVERHEAD WIRES

B. The purpose of this document is to specify the grounding and bonding requirements and related safety requirements for Construction Machines, Mobile Vehicles and Construction Equipment utilized for maintenance and construction work near overhead energized wires.
   1. This specification shall apply to any vehicle or equipment which can extend into close proximity to energized overhead electric lines.
   2. G&B components shall be permanently installed on vehicle components which can be contacted by operators and others while operating within the vicinity of energized overhead electric lines. Sections which are beyond the reach of operators and others (e.g. farthest boom sections of cranes) need not be bonded.

C. This specification is intended to serve three functions related to vehicle and equipment Grounding and Bonding (G&B) in the vicinity of energized overhead wires:
   1. Provide requirements and guidance to contractors working on Amtrak projects:
      a. Temporary G&B connections between the equipment and the return rail (system ground when working outside electrified territory) when working in the proximity of overhead energized lines.
      b. Permanently installed G&B measures on contractor equipment. All contractor equipment and vehicles shall be properly equipped with bonds, cables and connections as noted herein and within reference documents.
   2. Provide requirements and guidance to Amtrak employees related to:
      a. Maintenance and periodic testing requirements for G&B components that are permanently installed on vehicles and equipment.
      b. Temporary G&B connections between the equipment and the return rail (system ground when working outside electrified territory) when working in the proximity of overhead energized lines.
      c. Permanently installed G&B measures on contractor equipment. All contractor equipment and vehicles shall be properly equipped with bonds, cables and connections as noted herein and within reference documents.
   3. Provide requirements and guidance to vendors supplying equipment and vehicles to Amtrak:
      a. Vendors shall install and test G&B components, as specified herein, on all new and rental vehicles and equipment.

D. Contractor shall follow Amtrak safety rules and policies at all times.

E. All employees, Amtrak and contractor, shall participate in the daily safety briefing and the Contractor shall ensure the following:
   1. Contractor employees participate in Amtrak Contractor Safety Training Class and wear badge while onsite.
   2. Contractor employees participate in an Employee Job briefing in association with Amtrak's authorized personnel.

3. All worksite personnel are equipped with and wear Amtrak approved personal protective equipment (PPE).
4. Worksite personnel shall not foul any track unless they have permission from the Authorized Amtrak employee in charge at the job site.
5. Appropriate ET protection is in place for work in the vicinity of overhead conductors. High voltage conductors and equipment shall always be considered energized until protective grounds are installed by Amtrak authorized representative.
6. For work which is within the vicinity of overhead lines that are not owned by Amtrak, contractors or Amtrak employees (where applicable) shall contract the local utility (or owner) and comply with local “Proximity Act” rules and requirements.
7. Approved barriers shall be provided when the work requires the placement of material or equipment within the restricted zone.
8. All employees are informed of hazards and associated protective measures.

F. In the event a vehicle (equipment) comes into contact with an energized overhead wire, the equipment shall be taken out of service until a visual and resistance measurement tests are performed and performance requirements satisfied.

1.3 SUBMITTALS

A. Shop Drawings: Submit shop drawings prepared by or under the supervision of a professional engineer for equipment and vehicle grounding systems.
1. The Contractor/Vendor shall submit details of all the grounding and bonding materials and associated components indicating their specific intent.
2. The submittals shall also include sketches on each equipment/machine grounding and bonding detail.
3. Written approval shall not relieve the Contractor of its complete responsibility for the adequacy and safety of the operations.
4. Equipment suppliers shall provide cut sheets for all installed G&B materials as well as test results.
5. Contractors, whose employees will be working in the vicinity of overhead energized lines, will provide test results for all equipment and vehicles.

PART 2 - PRODUCTS

2.1 AMTRAK OWNED AND RENTED EQUIPMENT AND VEHICLES

A. This section details requirements for vendors providing rental or purchased vehicles and equipment to Amtrak.

B. Suppliers shall provide equipment or vehicles with permanent bonds, connectors, clamps and all other materials (shown on typical drawings and related documents) sufficient to demonstrate a measured resistance path of 10 ohms or less from all components ten feet above the highest platform an operator can reach to the connection point for the grounding cable

C. Amtrak fleet maintenance personnel shall maintain equipment and vehicle bonds, connectors, clamps and all other materials sufficiently to maintain a maximum resistance of 10 ohms across all bonded components to the return (or ground connection).

D. Amtrak fleet maintenance personnel shall provide all labels and safety warnings for installation by vehicle and equipment suppliers.

E. Hardware
   1. All materials and components shall be provided in accordance with Amtrak Standard Operating Instruction No.12, Approved Temporary Ground Clamps for use in electrified territory, and Standard Operating Instruction 213 - Roadway Machinery and Construction Equipment Grounding in Electrified Territory.
   2. Grounding and bonding conductors shall be of 4/0 AWG, 600V flexible copper cable (welding cable), unless otherwise indicated on the drawings. Cable assemblies shall meet ASTM F-855 –"Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment." or an Amtrak Approved equal.
   3. Grounding clamps, ferrules, threaded stud type terminals, nuts and washers shall be of copper or silicon bronze to suit the cable size and specific requirement of the equipment and ground connections. The grounding clamps shall comply with ASTM F-855.
   4. Size and type of exothermic welds, where required, shall be per manufacturer's recommendations.

F. Warning Placards
   1. Refer to Section 3.4 for all information regarding warning labels and placards.

2.2 CONTRACTOR OWNED EQUIPMENT AND VEHICLES

A. Contractor owned vehicles equipment shall comply with all hardware requirements of Articles 2.1.A & 2.1.B of this specification and related documents.

B. Contractor personnel shall maintain a maximum 10 ohm path across all bonded components to the return or ground connection.

C. Refer to Section 3.4 for all information regarding warning labels and placards.

PART 3 - EXECUTION

3.1 GENERAL

A. It shall be the responsibility of the equipment operator to ensure equipment is properly grounded and perform a visual inspection of all grounding equipment, bonds and connections prior to operating in the vicinity of overhead lines.

B. The Contractors and Sub-Contractors and their personnel, shall adhere to the same Amtrak Safety requirements as the Amtrak employees when working at site.

C. No employees or equipment shall be permitted to work within minimum approach distance of Amtrak owned overhead wires of electrified tracks except when protected by a Class “A” employee of the Railroad.

D. Employees shall not work within the vicinity of overhead lines which are not owned by Amtrak without contacting the Owner (typically a utility) and working in compliance with local “Proximity Act” requirements.

E. It is the intent of this specification section and the associated drawings to provide general guidelines to enable qualified workers a means to install appropriate bonding for most situations. In the event conditions are not clear and or uncertainty develops, employees must contact appropriate engineering or ET personnel for clarification.

3.2 INSTALLATION GUIDELINES

A. General Guidelines for permanently mounted grounding equipment

1. When mobile cranes, crawler cranes, power shovels, pile drivers, dump trucks, boom trucks, bucket trucks, articulated light standards, digger derricks and similar machines are used in proximity of the overhead electrification wires or equipment, the aerial devices and the support frame of the machine shall be properly grounded as follows: (Note that hot-line work is not permitted on Amtrak’s overhead electrical equipment.)
    a. Boom sections (within reach of operator and others in the vicinity) and the supporting frame shall be bonded together with a 600V insulated 4/0 AWG copper cable with suitable grounding clamps or threaded stud type terminals. The surfaces used for clamping and connections shall be cleaned thoroughly of any dirt or paint. The bonding cable shall have sufficient slack to permit necessary movement of the boom as required. The wire shall be attached to the boom with suitable clips to avoid damaging the cables.
    b. Rail car frame and the car axle journal boxes shall also be bonded together with 600V insulated 4/0 AWG copper cables with suitable grounding

clamps or bolted connections at either ends. Alternatively 4/0 AWG equivalent size tinned copper flexible braids with compressed end ferrules may be used for axle journal bonding to the car frame.

2. Any vehicle or equipment which comes into contact with an energized overhead wire shall be removed from service until a visual inspection and resistance measurement test has confirmed that an appropriate low resistance path is still intact.
3. Perform daily visual inspections on all equipment or vehicles which will be utilized in the proximity of energized overhead lines.
4. Perform annual resistance measurements of the G&B path for all vehicles and equipment used in the vicinity of overhead lines.
5. For all permanent mechanical grounding connections, an oxide inhibiting joint compound, such as Penetrox or an approved equivalent, should be used to produce low initial surface contact resistance and prevent oxidation or corrosion due to air and moisture.

B. Guidelines for Field connections

1. Grounding cables shall be continuous and splicing shall not be permitted.
2. When applying grounds, attachment shall be made to the vehicle or equipment ground point first, then to the worksite ground to prevent arcing near the vehicle or equipment. Ground points shall be cleaned with a stiff wire brush before applying grounds.
3. In the event the construction equipment has to be carried on flat bed rail car, the equipment base shall be bonded to the flat car frame with a 600V insulated 4/0 AWG copper cable with suitable end plate at either end for connections.
4. Multiple vehicles situated in a manner that allows a worker to contact two of them simultaneously shall be bonded together with 600V insulated 4/0 AWG copper cable.
5. Rubber tired vehicles or construction vehicles not carried on flat bed rail car, used at construction sites in electrified territory shall be grounded to the nearest steel catenary pole, bridge structure or a non-signaled track rail in the same manner as described above.
6. Ground cables on reels or looped on the vehicles shall be completely unwound to allow thorough inspection of the cable and laid down on the ground before use to minimize or eliminate destructive forces resulting from induction in the event of a fault at the worksite. Under no circumstances shall an installed ground cable be coiled.
7. The rail car frame connection shall complete the return circuit through the wheels to running track connection. If rail car is to be stationary for an extended period a bonding conductor shall be bonded to the nearest steel catenary pole, bridge structure or a non- signaled track rail as applicable with a 600V insulated 4/0 AWG copper cable with suitable grounding clamps at either end. Provide sufficient slack and adjust length of the grounding cable to suit the site requirements to allow movement of the flat car within the construction area.

8. For work in switchyards and substations having ground mats, all mobile equipment and vehicles involved at worksite within the facility shall be grounded (bonded) to the (substation or switchyard) ground mat at a visible connection point. Amtrak or utility personnel should be contacted if contractor is uncertain of connection.
9. Cranes located inside the substation/switchyard (on top of the ground grid) shall not make picks outside the perimeter fence, (off the ground mat) without being properly connected to the ground grid. Likewise, Cranes off the ground perimeter (outside the substation/ switchyard) shall not make picks in the facility or deliver material into the facility without being connected to the ground grid. Hazardous transferred touch potentials may develop at the crane hook or frame during an accidental electrical fault for these situations.

3.3 TESTING

A. The continuity of the grounding between the equipment construction machines boom and the grounded rail structure (catenary pole, bridge or non- signaled rail or ground mat) shall be established by resistance measurements using an ohmmeter. **The measured resistance value shall be less than 10 ohms**. In the event the measured resistance is greater than 10 ohms, check bonding connections for contact and cleanliness and inspect cabling for continuity or breaks. Add additional bonds if necessary. The test form is shown on Attachment 1: Annual Vehicle and Equipment Safety Grounding Evaluation Form.

B. Resistance measurements shall be conducted on all vehicles at Amtrak discretion. Additionally, contractors shall perform annual tests to ensure appropriate resistance values are achieved.

C. In the event a vehicle (equipment) comes into contact with an energized overhead wire, the equipment shall be taken out of service until a visual and resistance measurement tests are performed.

3.4 WARNING LABELS AND PLACARDS

A. Equipment and vehicles shall have warning placards as defined on reference documents.

B. Amtrak vehicles and equipment
   1. Amtrak will provide labels to suppliers for rental equipment and new vehicle and equipment purchases. Vendors will install according to Attachment 2: Drawing AET.1010.
   2. Amtrak Employees will inspect warning labels annually and replace as needed.

C. Contractor vehicles and equipment

1. Contractor owned equipment and vehicles shall have adequate signage to warn operators and others of potential hazards due to energized overhead lines in accordance with OSHA requirements.
2. Contractor shall comply with article 3.4.B.1 above, but ANSI approved warning labels/placards may be installed.

3.5 GROUNDING AND BONDING DETAILS

A. Typical arrangements of the grounding and bonding details for construction equipment at site are shown in Attachment 2: Drawings AET-1001 through AET-1009 for guidance.

3.6 PROXIMITY

A. Minimum approach distance should be maintained to all energized lines at all times. When it becomes necessary to operate equipment within minimum approach distance of energized overhead conductors, whether on rail or roadway, grounding cable shall be attached to the rail and grounding pad of the equipment or machine before operating the boom.

B. Amtrak Employees shall refer to AMT-2 for minimum approach distance guidelines and related information and direction.

C. When contractors are operating equipment outside of minimum approach distance, grounding, in accordance with this specification, is required if the failure of a single component of the equipment or vehicle, could compromise the noted clearances. Typical components which could affect these clearances include bolts, booms, cables or footing(s). Amtrak shall have authority to require these grounds as they see fit.

NATIONAL RAILROAD PASSENGER CORPORATION

SPECIFICATION FOR EQUIPMENT AND VEHICLE GROUNDING NEAR ENERGIZED OVERHEAD WIRES

APPROVALS

PREPARED: _____
C. B. Suelau
Engineer OCS Design- Electric Traction

REVIEWED: _____
R. Verrelle, Jr.
Director- Design & Standards- Electric Traction

REVIEWED: _____
G. J. Nangle
Director of Operations, Maintenance, and Compliance- Electric Traction

APPROVED: _____
R. J. Verrelle
Deputy Chief Engineer- Electric Traction

ATTACHMENT #1

ANNUAL VEHICLE EQUIPMENT SAFETY GROUNDING
EVALUATION FORM DATE: _____

EQUIPMENT : _____		**AMTRAK ID:**	
		LOCATION:	
REFERENCE DRAWING:		**INSPECTOR:**	

INSTRUCTIONS:

1)VERIFY INSTALLATION OF ALL BONDS SHOWN ON REFERENCE DRAWING.
2) INSPECT AND INVENTORY ALL ON BOARD GROUNDING EQUIPMENT
3) VISUAL INSPECTION OF ALL BONDS AND DEVICES. RECORD ALL OBSERVATIONS BELOW.
4) ZERO RESISTANCE (CONTINUITY) METER AND RECORD ANY IMPEDANCE (LEAD LENGTH.)
5) MEASURE AND RECORD IMPEDANCE OF ALL BONDS
6) VERIFY METER ZERO.

ON-BOARD EQUIPMENT:		LOCATION	CONDITION
	GROUNDING CABLE		
	RUNNING RAIL CLAMP		
	STRUCTURE CLAMP		
	BALL SOCKET GROUND CLAMP		

BOND IMPEDANCE MEASUREMENTS:

INITIAL METER ZERO:		OHMS	

TEST POINT (TP)	to	TP	RESISTANCE (OHMS)		COMMENTS
			GROSS	NET *	
1		2			
1		3			
1		4			
1		5			
1		6			
1		7			

* NET VALUE EQUALS GROSS (MEASURED) VALUE MINUS INITIAL METER ZERO READING

APPROVED BY:	

VISUAL INSPECTION SHALL BE PERFORMED DAILY.
RESISTANCE NEASUREMENTS SHALL BE PERFORMED ANNUALLY.
IN THE EVENT OF CONTACT WITH AN ENERGIZED OVERHEAD LINE, REMOVE VEHICLE FROM SERVICE UNTIL A VISUAL INSPECTION AND RESISTANCE MEASUREMENT TESTS PROVIDE SATISFACTORY RESULTS.

NRPC _____

ATTACHMENT #2

NOTES:

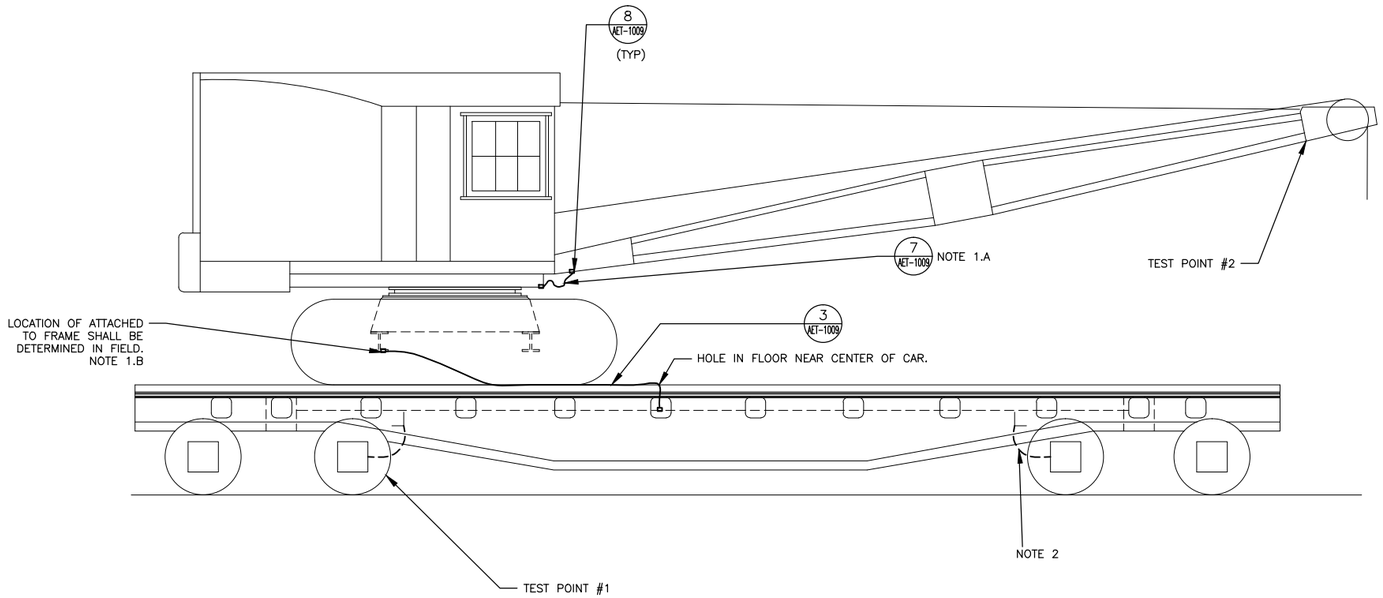
1. WHEN MOBILE CRANES, CRAWLER CRANES, POWER SHOVELS, PILE DRIVERS, AND SIMILAR ROADWAY MACHINES ARE USED IN PROXIMITY TO OVERHEAD ELECTRIFICATION WIRES OR ELECTRICAL APPARATUS, THE BOOM AND SUPPORTING FRAME OF THE ROADWAY MACHINE MUST BE PROPERLY GROUNDED. FOR GROUNDING PURPOSES THE FOLLOWING PROCEDURE SHALL APPLY:

   ALL BONDING SHALL BE IN PLACE PRIOR RAISING BOOM FROM TRAVEL POSITION.

   A. ATTACH BOND TO BOOM AND TO SUPPORTING FRAME. CABLE SHALL HAVE ENOUGH SLACK TO PERMIT NECESSARY MOVEMENT OF BOOM.

   B. ATTACH ONE END OF BONDING CABLE TO MAIN SUPPORTING FRAME.

2. JOURNAL BEARING ENCLOSURES ARE BONDED TO CAR FRAME.



1 / – ELECTRICAL TERRITORY, GROUNDING ARRANGEMENT FOR CRAWLER CRANE MOUNTED ON FLAT CAR
SCALE: NONE

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

ROADWAY MACHINE MAINTENANCE

Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

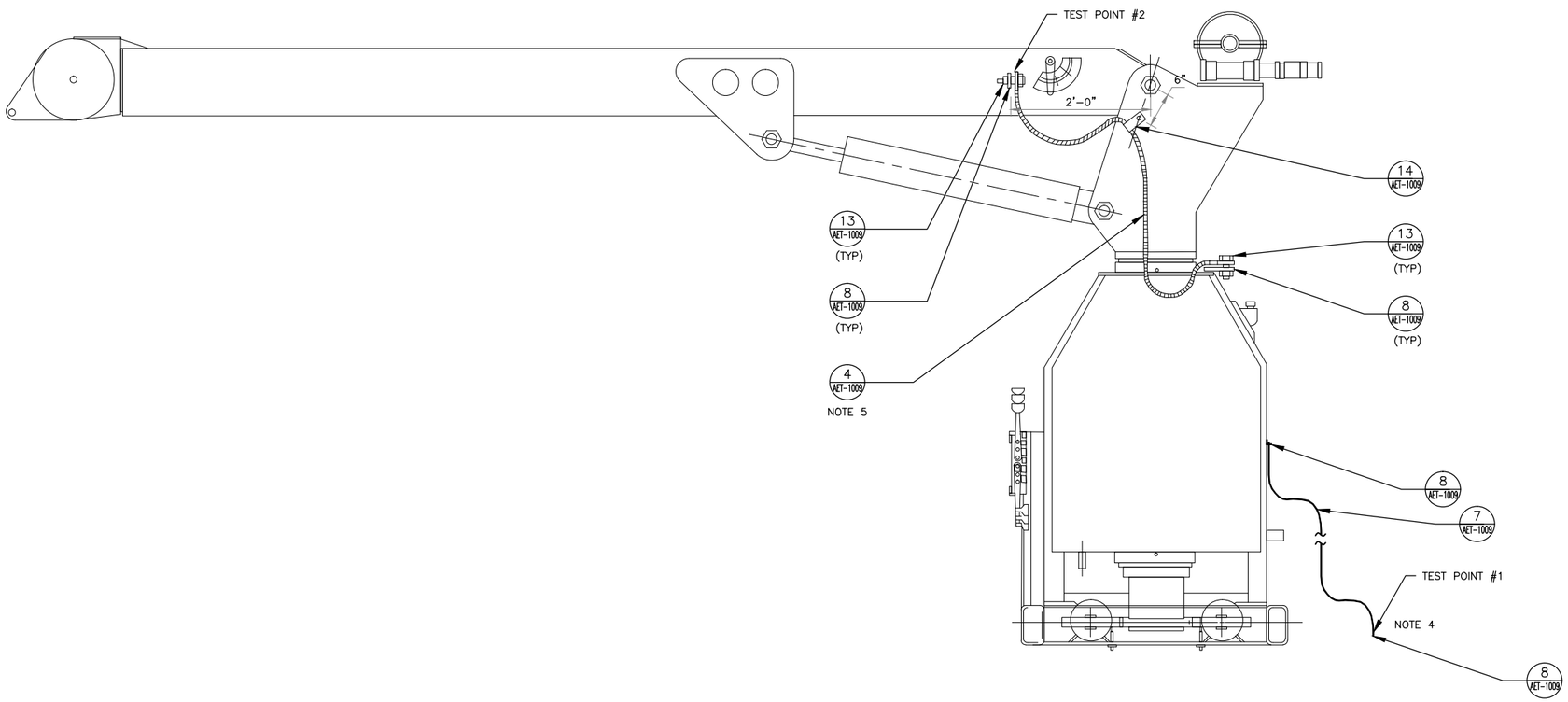
File No:	
Design No:	
Sheet No.	
Dwg. No.	AET–1001

NOTES:

1. ALL BONDS MUST ALLOW FOR FULL EXTENSION OF EQUIPMENT AND SHALL NOT PINCH OR OTHERWISE INTERFERE.
2. BONDS REQUIRED FOR ALL EXTENSIONS CAPABLE OF HEIGHTS OF 12' OR MORE.
3. GROUNDING CONDUCTOR SHALL BE ATTACHED TO FRAME.
4. CABLE SHALL BE BONDED TO TRUCK BODY WITH A WELDED ANGLE.
5. CABLE SHALL HAVE ENOUGH SLACK TO PERMIT NECESSARY MOVEMENT OF BOOM.

PROCEDURE:

1. WHEN WORKING IN PROXIMITY TO ENERGIZED CONDUCTORS, WHETHER ON RAIL OR ROADWAY, GROUNDING CABLE MUST BE ATTACHED TO RAIL AND GROUNDING PAD OF TRUCK BEFORE OPERATING BOOM.
2. THREE FOOT CLEARANCE TO ENERGIZED CATENARY AND SIGNAL POWER AND FIFTEEN FOOT CLEARANCE TO TRANSMISSION MUST BE MAINTAINED AT ALL TIMES.



1 / – TYPICAL BOOM GROUNDING DETAIL
SCALE: NONE

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

GROUNDING ARRANGEMENT FOR BOOM TRUCKS

Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

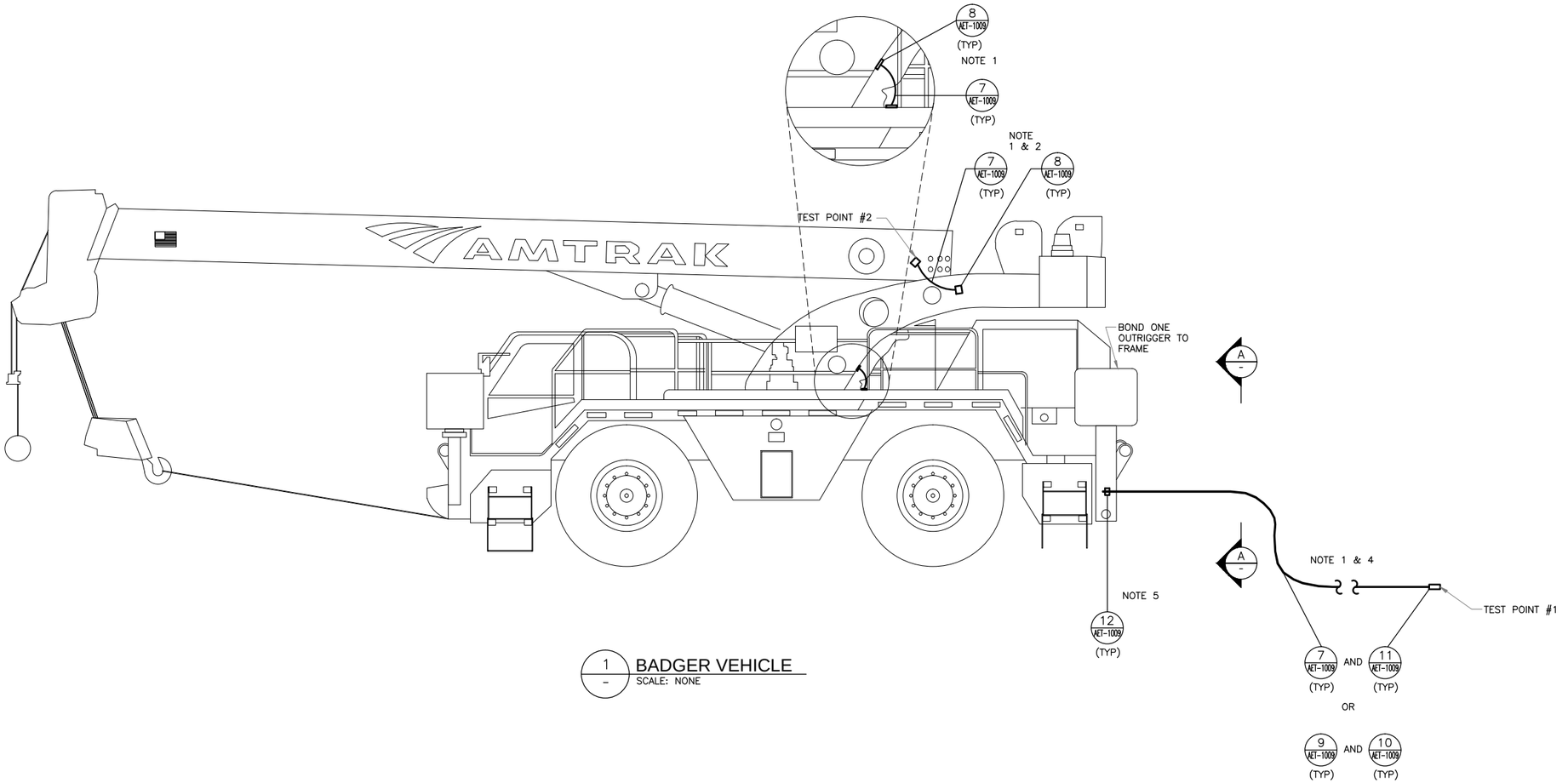
File No:	
Design No:	
Sheet No.	
Dwg. No.	AET–1002

NOTES:

1. ALL BONDS MUST ALLOW FOR FULL EXTENSION OF EQUIPMENT AND SHALL NOT PINCH OR OTHERWISE INTERFERE.
2. BONDS REQUIRED FOR ALL EXTENSIONS CAPABLE OF HEIGHTS OF 12' OR MORE.
3. GROUNDING CONDUCTOR SHALL BE ATTACHED TO FRAME.
4. THE GROUNDING CABLE USED DEPENDS ON WHETHER IT IS CLAMPED TO THE RAIL OR A STRUCTURE.
5. IF CONNECTION NOT POSSIBLE, USE WELDED ANGLE CONNECTION (DETAIL #8, AET-1009.)

PROCEDURE:

1. WHEN WORKING IN PROXIMITY TO ENERGIZED CONDUCTORS, WHETHER ON RAIL OR ROADWAY, GROUNDING CABLE MUST BE ATTACHED TO RAIL AND GROUNDING PAD OF TRUCK BEFORE OPERATING BOOM.
2. THREE FOOT CLEARANCE TO ENERGIZED CATENARY AND SIGNAL POWER AND FIFTEEN FOOT CLEARANCE TO TRANSMISSION MUST BE MAINTAINED AT ALL TIMES.



1 – BADGER VEHICLE
SCALE: NONE

A – SECTION A-A
SCALE: NONE

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

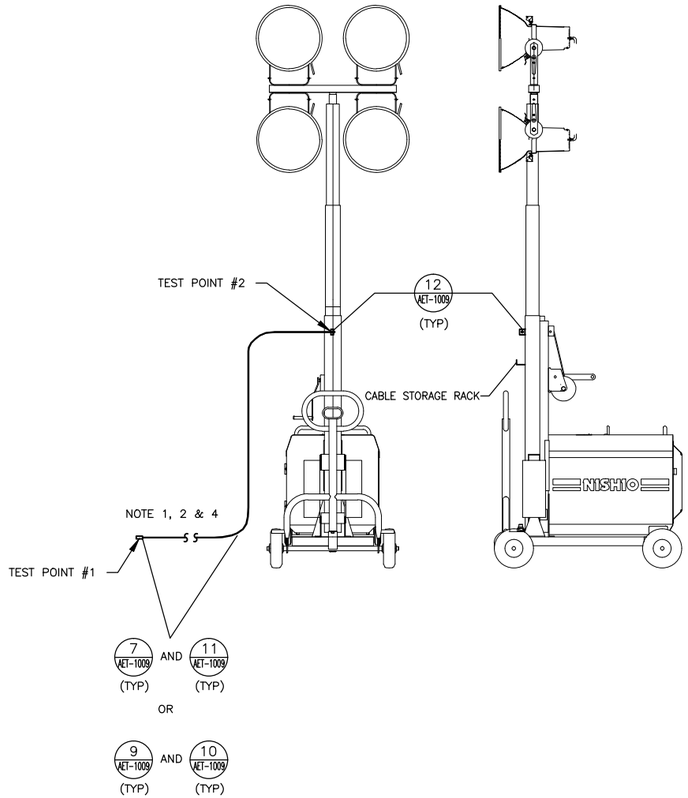
ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

VEHICLE GROUNDING
BADGER VEHICLE

Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

File No:	
Design No:	
Sheet No.	
Dwg. No.	AET-1003



1 / – TYPICAL PORTABLE LIGHT
SCALE: NONE

NOTES:

1. ALL BONDS MUST ALLOW FOR FULL EXTENSION OF EQUIPMENT AND SHALL NOT PINCH OR OTHERWISE INTERFERE.
2. BONDS REQUIRED FOR ALL EXTENSIONS CAPABLE OF HEIGHTS OF 12' OR MORE.
3. GROUNDING CONDUCTOR SHALL BE ATTACHED TO FRAME.
4. THE GROUNDING CABLE USED DEPENDS ON WHETHER IT IS CLAMPED TO THE RAIL OR A STRUCTURE.

PROCEDURE:

1. WHEN WORKING IN PROXIMITY TO ENERGIZED CONDUCTORS, WHETHER ON RAIL OR ROADWAY, GROUNDING CABLE MUST BE ATTACHED TO RAIL AND GROUNDING PAD OF TRUCK BEFORE OPERATING BOOM.
2. THREE FOOT CLEARANCE TO ENERGIZED CATENARY AND SIGNAL POWER AND FIFTEEN FOOT CLEARANCE TO TRANSMISSION MUST BE MAINTAINED AT ALL TIMES.

No.	Revisions	Date	By

AMTRAK®

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

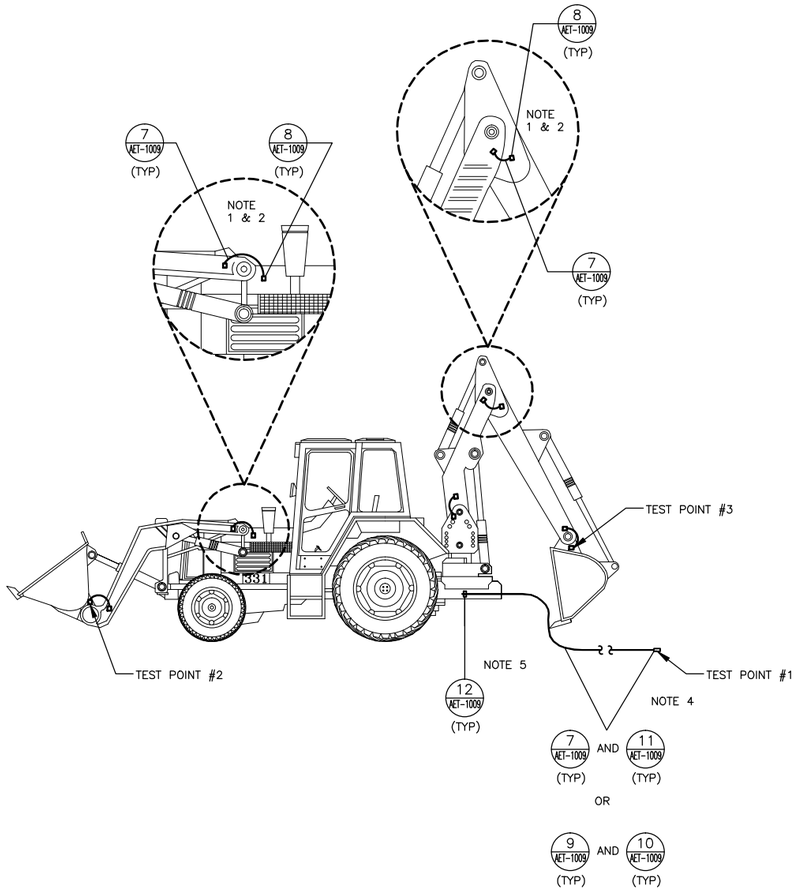
ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

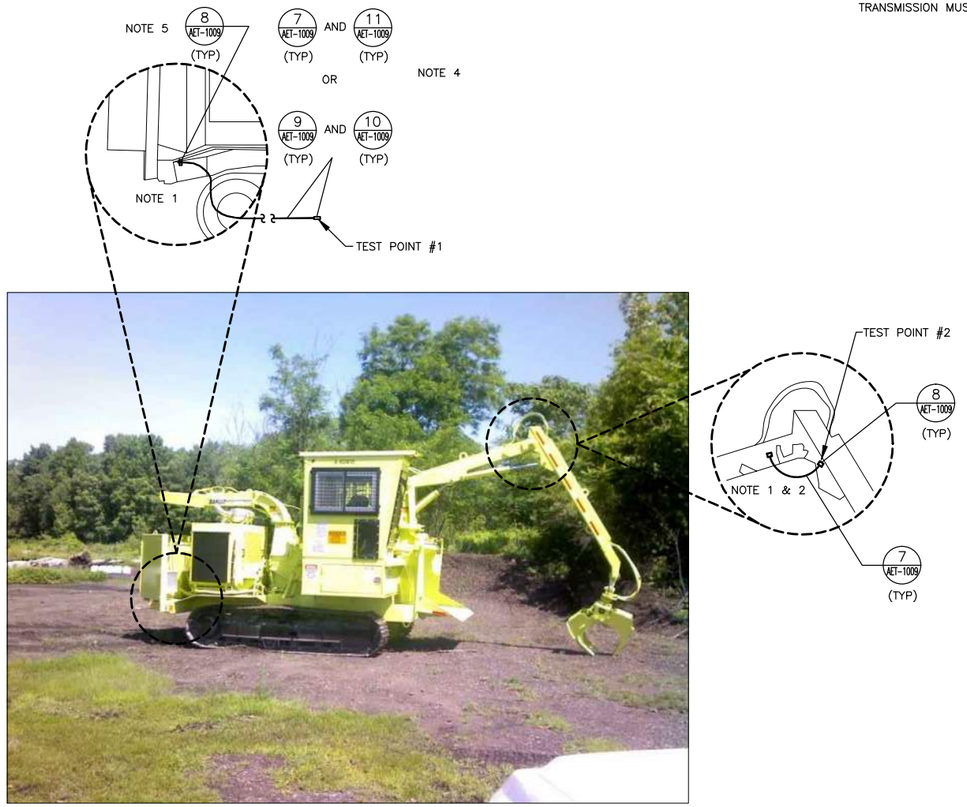
VEHICLE GROUNDING
PORTABLE LIGHT & WIRE TRAILER

Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

File No:	
Design No:	
Sheet No.	
Dwg. No.	AET–1004



1 – TYPICAL BACKHOE GROUNDING
SCALE: NONE



2 – TYPICAL TREE GRINDER (BANDIT)
SCALE: NONE

NOTES:

1. ALL BONDS MUST ALLOW FOR FULL EXTENSION OF EQUIPMENT AND SHALL NOT PINCH OR OTHERWISE INTERFERE.
2. BONDS REQUIRED FOR ALL EXTENSIONS CAPABLE OF HEIGHTS OF 12' OR MORE.
3. GROUNDING CONDUCTOR SHALL BE ATTACHED TO FRAME.
4. THE GROUNDING CABLE USED DEPENDS ON WHETHER IT IS CLAMPED TO THE RAIL OR A STRUCTURE.
5. IF CONNECTION NOT POSSIBLE, USE WELDED ANGLE CONNECTION (DETAIL #8, AET–1009.)

PROCEDURE:

1. WHEN WORKING IN PROXIMITY TO ENERGIZED CONDUCTORS, WHETHER ON RAIL OR ROADWAY, GROUNDING CABLE MUST BE ATTACHED TO RAIL AND GROUNDING PAD OF TRUCK BEFORE OPERATING BOOM.
2. THREE FOOT CLEARANCE TO ENERGIZED CATENARY AND SIGNAL POWER AND FIFTEEN FOOT CLEARANCE TO TRANSMISSION MUST BE MAINTAINED AT ALL TIMES.

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

VEHICLE GROUNDING
BACKHOE & TREE GRINDER (BANDIT)

Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

File No:	
Design No:	
Sheet No.	
Dwg. No.	AET–1005

NOTES:

1. ALL BONDS MUST ALLOW FOR FULL EXTENSION OF EQUIPMENT AND SHALL NOT PINCH OR OTHERWISE INTERFERE.
2. BONDS REQUIRED FOR ALL EXTENSIONS CAPABLE OF HEIGHTS OF 12' OR MORE.
3. GROUNDING CONDUCTOR SHALL BE ATTACHED TO FRAME.
4. THE GROUNDING CABLE USED DEPENDS ON WHETHER IT IS CLAMPED TO THE RAIL OR A STRUCTURE.
5. IF CONNECTION NOT POSSIBLE, USE WELDED ANGLE CONNECTION (DETAIL #8, AET-1009.)

PROCEDURE:

1. WHEN WORKING IN PROXIMITY TO ENERGIZED CONDUCTORS, WHETHER ON RAIL OR ROADWAY, GROUNDING CABLE MUST BE ATTACHED TO RAIL AND GROUNDING PAD OF TRUCK BEFORE OPERATING BOOM.
2. THREE FOOT CLEARANCE TO ENERGIZED CATENARY AND SIGNAL POWER AND FIFTEEN FOOT CLEARANCE TO TRANSMISSION MUST BE MAINTAINED AT ALL TIMES.

1 / – TYPICAL SPEED SWING
SCALE: NONE

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

VEHICLE GROUNDING
SPEED SWING

Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

File No:	
Design No:	
Sheet No.	
Dwg. No.	AET-1006

NOTES:

1. ALL BONDS MUST ALLOW FOR FULL EXTENSION OF EQUIPMENT AND SHALL NOT PINCH OR OTHERWISE INTERFERE.
2. BONDS REQUIRED FOR ALL EXTENSIONS CAPABLE OF HEIGHTS OF 12' OR MORE.
3. GROUNDING CONDUCTOR SHALL BE ATTACHED TO FRAME.
4. THE GROUNDING CABLE USED DEPENDS ON WHETHER IT IS CLAMPED TO THE RAIL OR A STRUCTURE.
5. IF CONNECTION NOT POSSIBLE, USE WELDED ANGLE CONNECTION (DETAIL #8, AET-1009.)

PROCEDURE:

1. WHEN WORKING IN PROXIMITY TO ENERGIZED CONDUCTORS, WHETHER ON RAIL OR ROADWAY, GROUNDING CABLE MUST BE ATTACHED TO RAIL AND GROUNDING PAD OF TRUCK BEFORE OPERATING BOOM.
2. THREE FOOT CLEARANCE TO ENERGIZED CATENARY AND SIGNAL POWER AND FIFTEEN FOOT CLEARANCE TO TRANSMISSION MUST BE MAINTAINED AT ALL TIMES.

1 / – TYPICAL DRILL RIG/CANISTER INSTALLATION
SCALE: NONE

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

VEHICLE GROUNDING
DRILL RIG/CANISTER INSTALLATION

Scale: NTS | Drawn: CBS | Checked: – | Date: 3/20/13

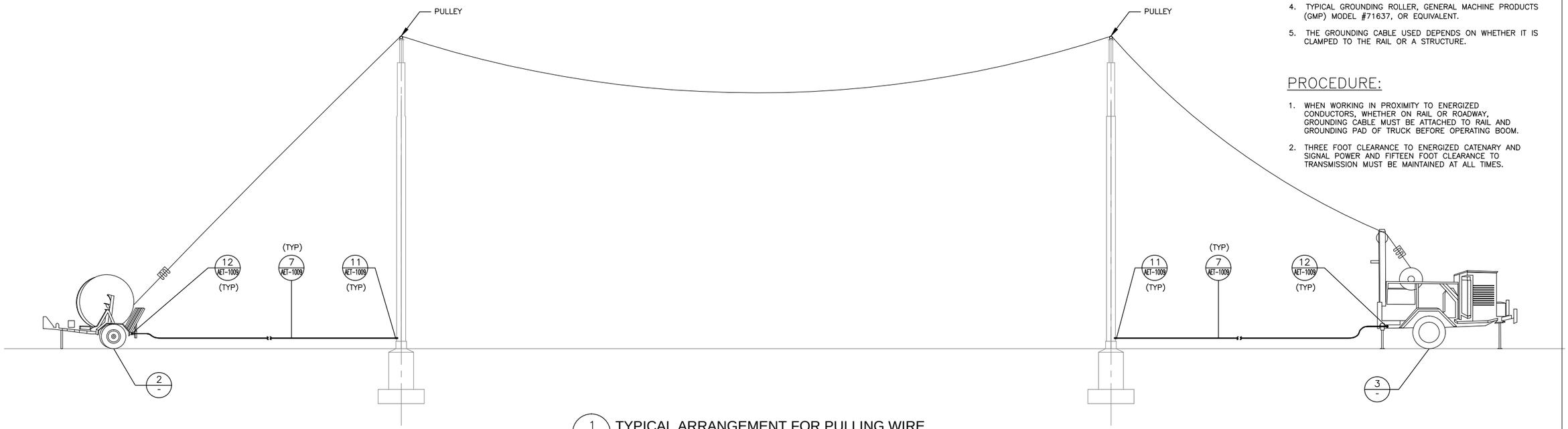
File No:	
Design No:	
Sheet No.	
Dwg. No.	AET-1007

NOTES:

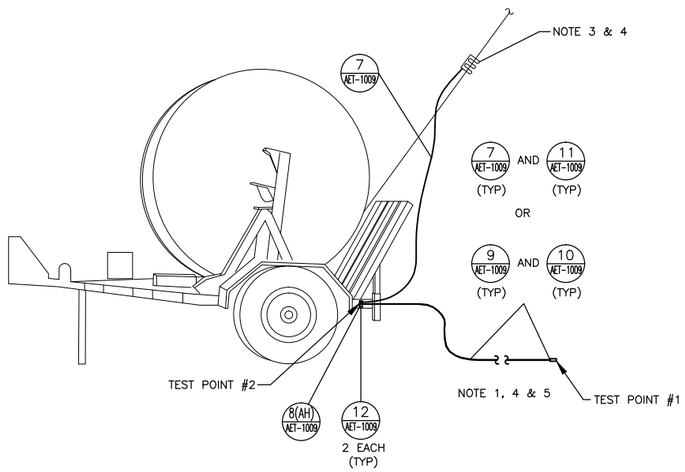
1. ALL BONDS MUST ALLOW FOR FULL EXTENSION OF EQUIPMENT AND SHALL NOT PINCH OR OTHERWISE INTERFERE.
2. BONDS REQUIRED FOR ALL EXTENSIONS CAPABLE OF HEIGHTS OF 12' OR MORE.
3. ROLLING GROUND NEEDED FOR STEEL PULL LINE & BARE CONDUCTORS ONLY. NOT NEEDED FOR NYLON PULL LINE.
4. TYPICAL GROUNDING ROLLER, GENERAL MACHINE PRODUCTS (GMP) MODEL #71637, OR EQUIVALENT.
5. THE GROUNDING CABLE USED DEPENDS ON WHETHER IT IS CLAMPED TO THE RAIL OR A STRUCTURE.

PROCEDURE:

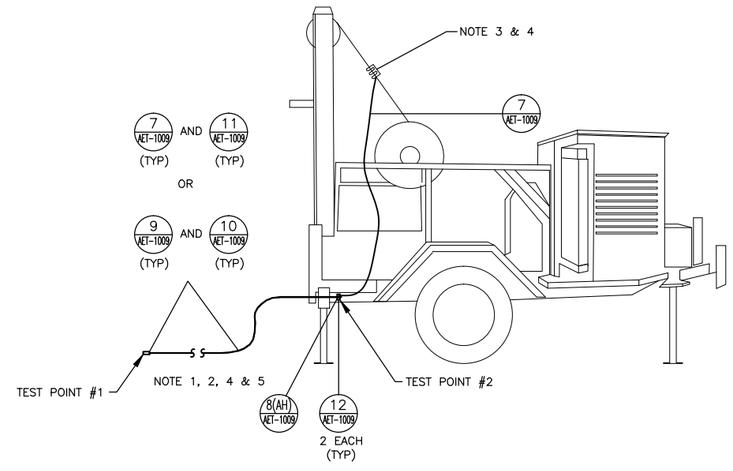
1. WHEN WORKING IN PROXIMITY TO ENERGIZED CONDUCTORS, WHETHER ON RAIL OR ROADWAY, GROUNDING CABLE MUST BE ATTACHED TO RAIL AND GROUNDING PAD OF TRUCK BEFORE OPERATING BOOM.
2. THREE FOOT CLEARANCE TO ENERGIZED CATENARY AND SIGNAL POWER AND FIFTEEN FOOT CLEARANCE TO TRANSMISSION MUST BE MAINTAINED AT ALL TIMES.



1 – TYPICAL ARRANGEMENT FOR PULLING WIRE
SCALE: NONE



2 – TYPICAL WIRE TRAILER
SCALE: NONE



3 – TYPICAL PULLING TRAILER
SCALE: NONE

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

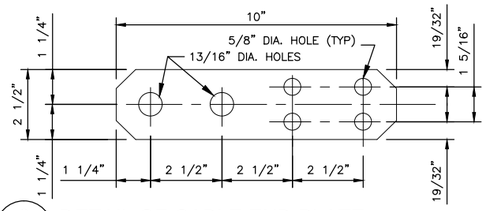
ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

VEHICLE GROUNDING WIRE TRAILER & GROUND WHEN PULLING WIRE

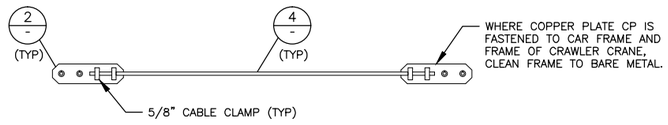
Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

File No:	
Design No:	
Sheet No.	
Dwg. No.	AET–1008

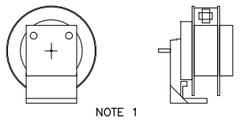


2 – DETAIL OF CABLE END PLATE

2 1/2" x 1 /2" X 10" H.D. COPPER – TINNED

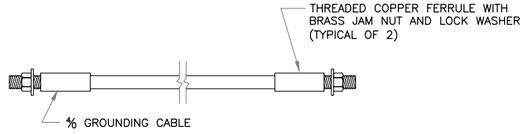


3 – CABLES FOR GROUNDING CRAWLER CRANE MOUNTED ON FLAT CAR



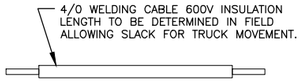
6 – REEL ASSEMBLY DETAIL

1 – REEL ASSEMBLY – HASTINGS #21366
SAP#5000002735
1 – RAIL GROUND CLAMP – SAFETY LINE, INC #75675475,
AMT #44015520013
1 – COPPER FERRULE (THREADED) – HASTINGS #13001, P50349
AMT #4444457053



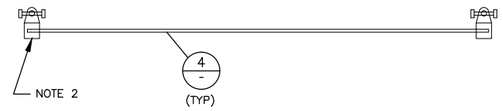
7 – GROUNDING CABLE DETAIL

2 – COPPER FERRULE (THREADED) – HASTINGS #13001, P50349
AMT #4444457053
1 – ⅛ GROUNDING CABLE (LENGTH AS NEEDED)



4 – CABLE FOR GROUNDING DETAIL

1 – ⅛ GROUNDING CABLE – HASTINGS CAT #9228,
AMT #4401520003



5 – CABLES FOR GROUNDING ROADWAY MACHINES

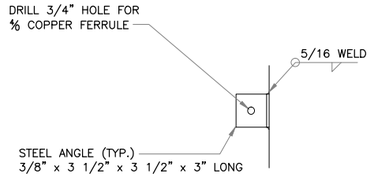
NOTES:

1. REEL SYSTEM MAY BE USED, CABLE MUST BE FULLY EXTENDED PRIOR TO MAKING CONNECTIONS.
2. SEE TYPICAL CONNECTIONS ON THIS SHEET.

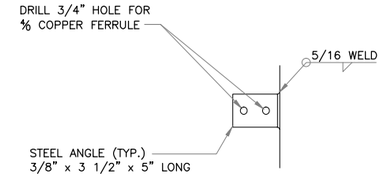
TYPICAL GROUNDING EQUIPMENT APPLICATION						
APPLICATION	PERMANENT OR TEMPORARY	DETAILS				COMMENTS
		RETURN	VEHICLES	CABLES	APPLICATION LENGTH	
CRANE– FRAME TO FLAT CAR	P	#13	#13	#4	25'	
CRANE – BOOM TO FRAME	P	#8	#8	#7	5'	
ELECTRIFIED TERRITORY:						
VEHICLE TO OCS STRUCTURE	T	#11	#8 OR #12	#7	50', NOTE 1	
VEHICLE TO RUNNING RAIL	T	#10	#8 OR #12	#9	50', NOTE 1	
NON ELECTRIFIED TERRITORY:						
VEHICLE TO RUNNING RAIL	T	#10	#12	#9	50', NOTE 1	

NOTES:
1) IN ELECTRIFIED TERRITORY, CABLE CANNOT EXCEED 175'. IN NON–ELECTRIFIED TERRITORY CABLE LENGTH CANNOT EXCEED 200'. TYPICAL LENGTH IS 50'.
2) ALL CABLE LENGTHS SUBJECT TO SPECIFIC EQUIPMENT ADJUSTMENTS.

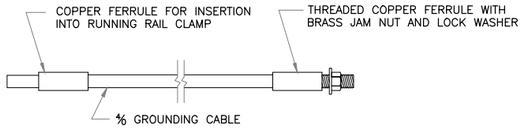
1 – TYPICAL GROUNDING EQUIPMENT APPLICATION CHART



8 – TYPICAL WELDED CONNECTION DETAILS

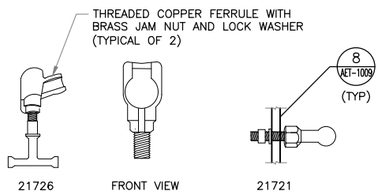


8(AH) – TYPICAL WELDED CONNECTION DETAILS



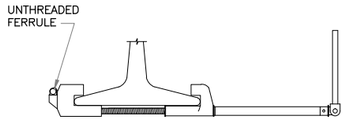
9 – GROUNDING CABLE DETAIL

1 – COPPER FERRULE (BOLTED) – HASTINGS #P30247, P50349
AMT #4444457054
1 – COPPER FERRULE (THREADED) – HASTINGS #13001, P50349
AMT #4444457053
50' – ⅛ GROUNDING CABLE (APPLICATION TABLE NOTE 1)



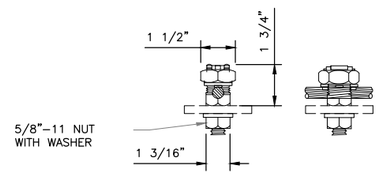
12 – BALL SOCKET GROUND CLAMP & BALL STUD DETAILS

1 – BALL SOCKET GROUND CLAMP – HASTINGS 21726
SAP#5000002736
1 – BALL STUD – HASTINGS 21721
SAP#5000002734
1 – COPPER FERRULE (THREADED) – HASTINGS #13001, P50349
AMT #4444457053



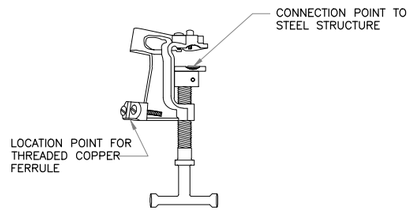
10 – RUNNING RAIL CLAMP DETAIL

1 – RAIL TYPE GROUND CLAMP – SAFETY LINE, INC #75675475
AMT #4401520013
1 – COPPER FERRULE (BOLTED) – HASTINGS #P30247, P50349
AMT #4444457054



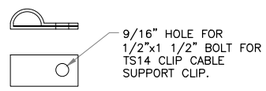
13 – MECHANICAL GROUNDING CONNECTOR

1 – MECHANICAL GROUNDING CONNECTOR – BURNDY KC28
AMT #4445405201



11 – STRUCTURE CLAMP WITH TEE HANDLE DETAIL

1 – FLAT FACE GROUND CLAMP – WHITE RUBBER #760CM3ET
AMT #4401520024
1 – COPPER FERRULE (THREADED) – HASTINGS #13001, P50349
AMT #4444457053



14 – TYPICAL GROUNDING CLIP

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

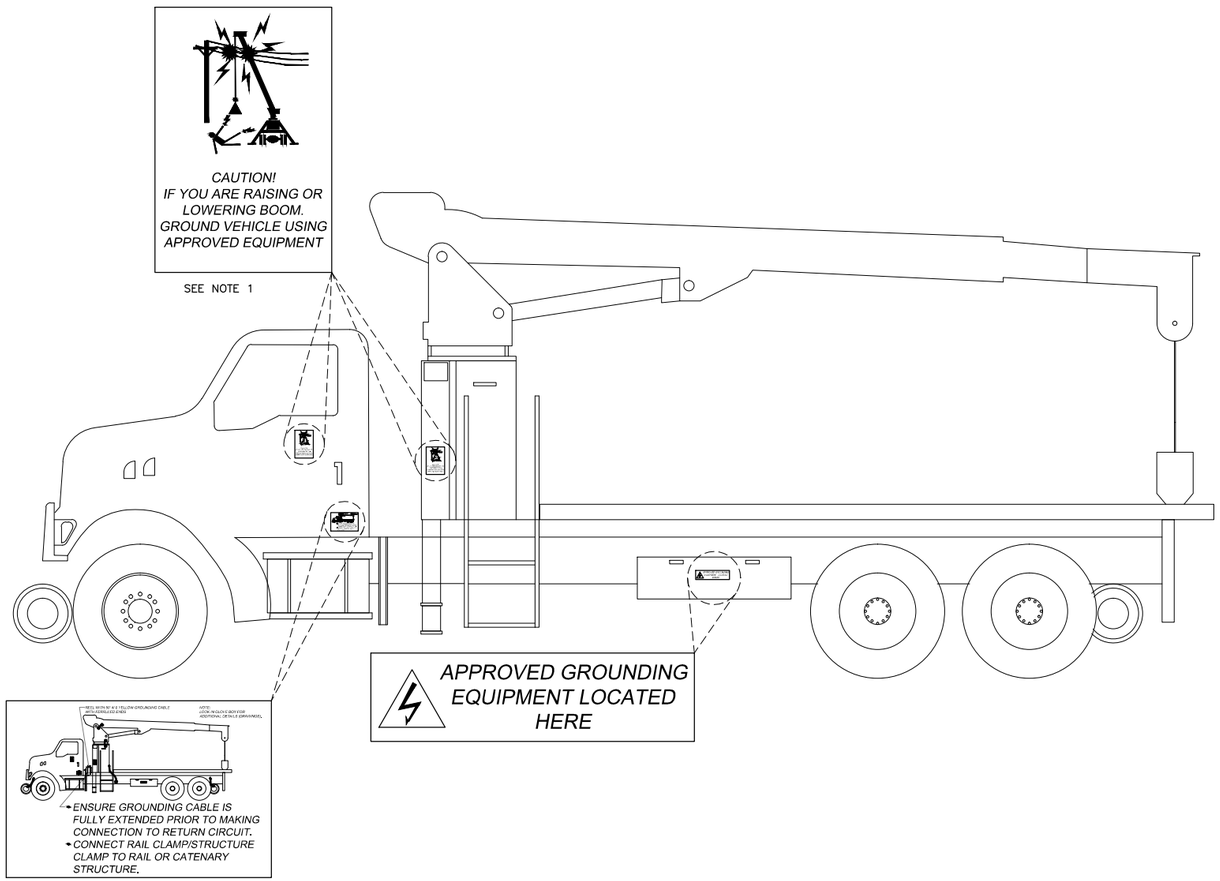
TYPICAL CONNECTION DETAILS

Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

File No:	
Design No:	
Sheet No.	
Dwg. No.	AET–1009

GENERAL NOTES:

1. PROVIDE ANSI GREEN AND BLACK SIGNS ON DRIVER AND PASSENGER DOORS OF VEHICLE AND BOTH SIDES OF VEHICLE EQUIPMENT.



1 – TYPICAL VEHICLE SIGNAGE

No.	Revisions	Date	By

AMTRAK

Office of Engineering
Engineering Design
National Railroad Passenger Corporation
30TH Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
Deputy Chief Engineer Electric Traction	
Sig:	
Director Electric Traction & Standards	
Sig:	
Sig:	

ELECTRIC TRACTION DEPT.
30 TH. & MARKET STR.
PHILADELPHIA, PA

ELECTRIFICATION STANDARDS

VEHICLE GROUNDING
TYPICAL SIGNAGE

Scale: NTS	Drawn: CBS	Checked: –	Date: 3/20/13

File No:	
Design No:	
Sheet No.	
Dwg. No.	AET–1010

CABLE DUCT, TROUGH AND ENCLOSURE
TIERS & STATIC WHEEL LOAD RATINGS

If work shall be done on AMTRAK property that involves heavy trucks, equipment, or machinery along the right of way, duct lines and pull boxes shall be inspected to insure they can withhold the appropriate weight.

Application Tiers & Static Vertical Wheel Load Ratings per

ANSI/SCTE 77 2010 "Specification for Underground Enclosure Integrity"

TIER 5 - Loading Requirements - Design Load = 5,000 lbs. Test Load = 7,500 lbs. (Vertical)

Design Load = 600 lbs. /sq. ft. Test Load = 900 lbs./sq. ft. (Lateral)

Sidewalk applications with a safety factor for occasional non-deliberate vehicular traffic.

TIER 8 – Loading Requirements – Design Load = 8000 lbs. Test Load = 12,000 lbs. (Vertical)

Design Load = 600 lbs. /sq. ft. Test Load = 900 lbs./sq. ft. (Lateral)

Sidewalk applications with a safety factor for non-deliberate vehicular traffic.

TIER 15 – Loading Requirements - Design Load = 15,000 lbs. Test Load = 22,500 lbs. (Vertical)

Design Load = 800 lbs./sq. ft. Test Load = 1,200 lbs./sq. ft. (Lateral)

Driveway, parking lot, and off-roadway applications subject to occasional non deliberate

heavy vehicular traffic.

TIER 22 – Loading Requirements – Design Load -22,500 lbs. Test Load = 33,750 lbs. (Vertical)

Design Load = 800 lbs./sq. ft. Test Load = 1,200 lbs./sq. ft (Lateral)

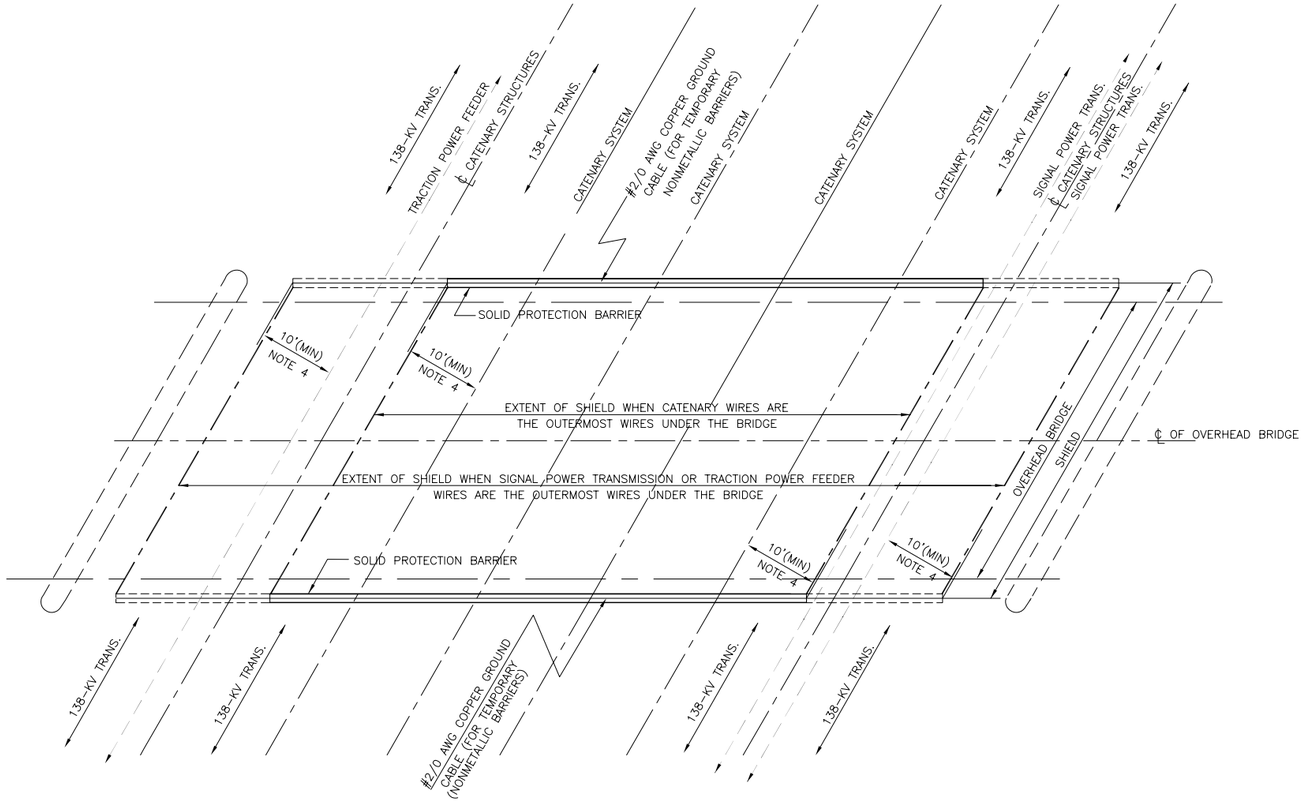
Driveway, parking lot, and off-roadway applications subject to occasional non deliberate

heavy vehicular traffic

D2

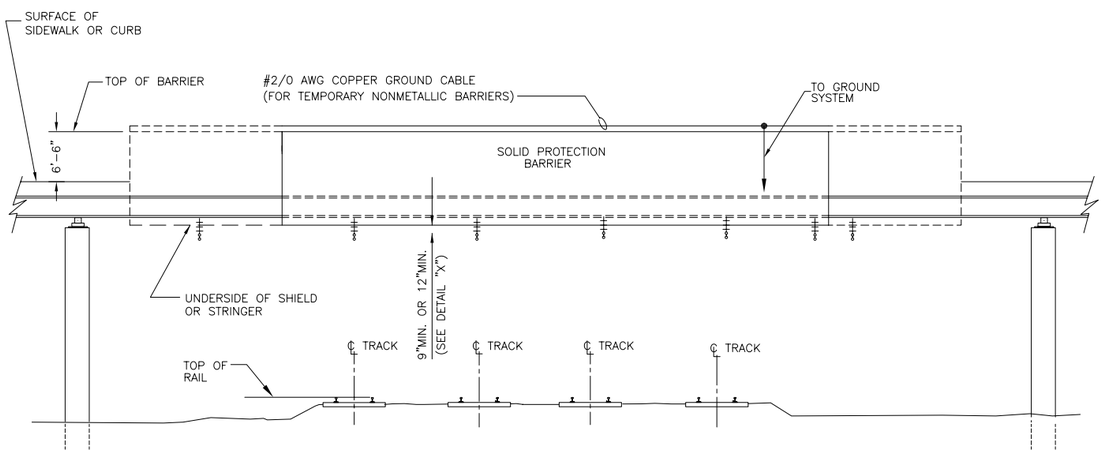
Amtrak

Amtrak Standard ET-1447-D



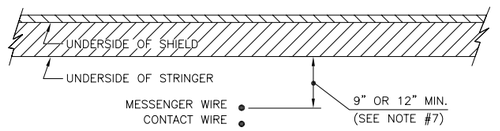
PLAN

SCALE: 1"=10'-0"



ELEVATION

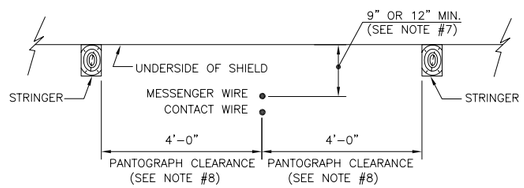
SCALE: 1"=10'-0"



DETAIL "X"

STRINGERS LONGITUDINAL TO THE BRIDGE

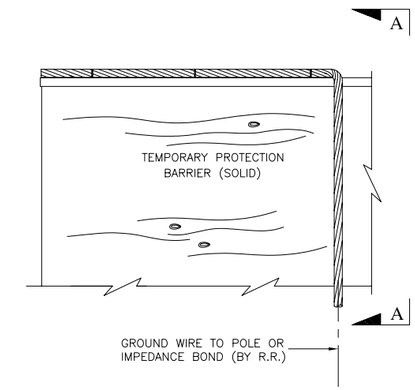
NO SCALE



DETAIL "X"

STRINGERS TRANSVERSE TO THE BRIDGE

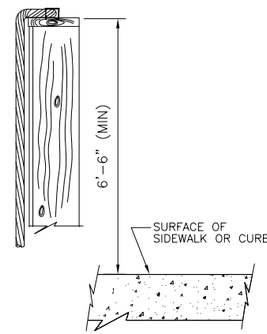
NO SCALE



DETAIL "Y"

APPLICATION OF GROUND CABLE TO TEMPORARY PROTECTION BARRIER

NO SCALE



SECTION "A-A"

NO SCALE

GENERAL NOTES:

1 – TEMPORARY PROTECTION SHIELDS SHALL BE USED, WITH CERTAIN EXCEPTIONS, DURING DEMOLITION OF EXISTING BRIDGES OR ERECTION OF NEW BRIDGES IN ORDER THAT WORK ON THE BRIDGE STRUCTURE CAN PROCEED OVER THE ELECTRIFICATION FACILITIES WITHOUT REQUIRING DEENERGIZATION OF THE WIRES. ELECTRIFICATION FACILITIES SHALL BE DEENERGIZED DURING THE TIME THE STRUCTURAL FRAME AND THE TEMPORARY PROTECTION SHIELD ARE BEING ERECTED OVER OR NEAR THE WIRES. THE ABOVE WORK SHALL BE DONE UNDER THE DIRECTION OF A QUALIFIED RAILROAD EMPLOYEE.

IN CASES WHERE THERE IS INSUFFICIENT ELECTRICAL CLEARANCE BETWEEN THE WIRES AND THE BRIDGE STRUCTURE FOR ERECTION OF A SHIELD, ALL WORK OVER THE WIRES SHALL BE PERFORMED WITH THE WIRES DEENERGIZED AND UNDER THE PROTECTION OF A QUALIFIED RAILROAD EMPLOYEE.

IN CASES WHERE PRESTRESSED BEAMS ARE USED OR WHERE METALLIC FORMS BECOME A PART OF THE PERMANENT BRIDGE STRUCTURE, ERECTION MAY BE ABLE TO PROCEED WITHOUT A SHIELD, IN WHICH CASE ALL WORK OVER THE WIRES DURING ERECTION SHALL BE DONE WITH THE WIRES DEENERGIZED AND UNDER THE PROTECTION OF A QUALIFIED RAILROAD EMPLOYEE.

THE TEMPORARY BARRIER SHALL BE INSTALLED WHETHER OR NOT A TEMPORARY SHIELD IS USED.

2 – DETAILS OF ANY PROPOSED SHIELD AND BARRIER SHALL BE SUBMITTED TO THE RAILROAD FOR APPROVAL, AND WORK ON ANY SHIELD OR BARRIER SHALL NOT BE STARTED BEFORE SUCH APPROVAL IS OBTAINED.

3 – THE TEMPORARY PROTECTION SHIELDS SHALL BE OF SOLID CONSTRUCTION (TONGUE AND GROOVE OR EQUAL) AND SHALL BE PROVIDED WITH A SOLID PROTECTION BARRIER HAVING A MINIMUM HEIGHT OF 6'–6" ABOVE THE SURFACE OF THE SIDEWALK OR CURB OF THE BRIDGE TO PROTECT WORKMEN AGAINST CONTACT WITH RAILROAD WIRES PASSING UNDER THE BRIDGE AND TO PREVENT DAMAGE TO THE WIRES.

4 – THE TEMPORARY PROTECTION SHIELD AND BARRIER SHALL EXTEND NOT LESS THAN 10 FEET BEYOND THE OUTERMOST RAILROAD WIRE PASSING UNDER THE BRIDGE MEASURED IN A HORIZONTAL PLANE AND NORMAL TO THE WIRE, AND SHALL PREVENT MATERIALS, AND DEBRIS, FROM FALLING ON OR CONTACTING THE WIRES.

5 – THE PROTECTION SHIELD SHALL BE DESIGNED FOR A MINIMUM LIVE LOAD OF 100 LBS. PER SQUARE FOOT. IF THE SHIELD IS TO SERVE AS A FORM OR IS TO CARRY ANY PART OF THE OVERHEAD STRUCTURE DURING ERECTION, IT SHALL BE DESIGNED FOR THE SUPERIMPOSED LOADS. IF THE SHIELD IS TO BE USED FOR PROTECTION DURING DEMOLITION OF AN OVERHEAD STRUCTURE, IT SHALL BE DESIGNED FOR A MINIMUM LIVE LOAD OF 100 LBS. PER SQUARE FOOT, OR A CONCENTRATED LIVE LOAD AT ANY POINT OF NOT LESS THAN 2,000 POUNDS.

6 – NONMETALLIC TEMPORARY PROTECTION BARRIERS SHALL BE PROVIDED WITH 2/0 AWG SIZE COPPER GROUND CABLE CONNECTED TO THE RAILROAD GROUND SYSTEM PER DETAIL "Y", THIS DRAWING. METALLIC BARRIERS SHALL BE BONDED AND GROUNDED BY A METHOD AND WITH MATERIALS APPROVED BY THE ELECTRIC TRACTION DEPARTMENT. THE RAILROAD SHALL INSTALL ALL GROUNDING MATERIALS.

7 – TEMPORARY PROTECTION SHIELDS OF TIMBER CONSTRUCTION SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 12 INCHES TO THE RAILROAD WIRES. THE CORRESPONDING CLEARANCE TO STEEL CONSTRUCTION SHALL BE 9 INCHES.

8 – WHERE STRINGERS TRANSVERSE TO THE BRIDGE ARE USED, THE MINIMUM HORIZONTAL CLEARANCE BETWEEN STRINGERS AND RAILROAD WIRES SHALL BE 4 FEET AS SHOWN IN DETAIL "X".

9 – TEMPORARY PROTECTION BARRIERS SHALL REMAIN IN PLACE AT LEAST UNTIL PERMANENT PROTECTION BARRIERS AND GROUNDING ARE COMPLETED.

10 – WHERE REQUIRED BY LOCAL CONDITIONS, THE ELECTRICAL CLEARANCES SHOWN ON THIS DRAWING MAY BE INCREASED BY THE ELECTRIC TRACTION DEPARTMENT.

11 – ANY MODIFICATION OF THE ELECTRICAL REQUIREMENTS SHOWN ON THIS DRAWING SHALL BE SUBMITTED TO THE ELECTRIC TRACTION DEPARTMENT FOR APPROVAL.

THIS DRAWING SUPERSEDES P.R.R. DRAWING ET-1447-D-2

No	Revisions	Date	By

AMTRAK

OFFICE OF
V.P., Chief Engineer
Engineering
National Railroad Passenger Corporation
30TH Street Station–Philadelphia, Pennsylvania 19104

Approved	Date
Chief Engineer Electric Traction - R. J. Verhelle /S/	1/18/00
Director Electric Traction Design - M. D. Insogna /S/	1/18/00

1" 0" 10" 20"

Scale: 1"= 10'-0"

E. T. STANDARD

ELECTRIFIED TERRITORY O.H. BRIDGES
TEMPORARY PROTECTION SHIELD & BARRIERS

Designed: DPT	Drawn: BJT	Checked: MDI	Date: 01-13-00

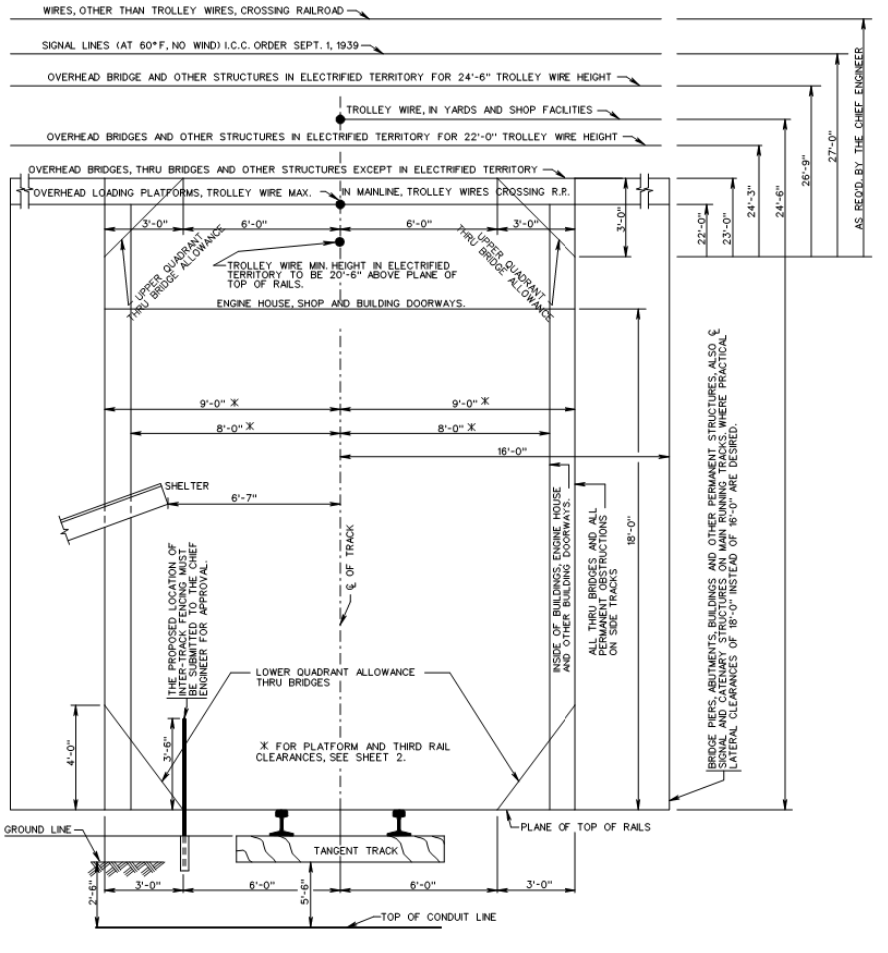
File No.:	3FF3B
Ref. No.:	ET-1447-D-2
Sheet No:	1 of 1

ET-1447-D

D3

Amtrak

Amtrak Standard Plan "Minimum Roadway Clearance 70050.001.08"



NOTES:

CLEARANCE REQUIREMENTS SHOWN ON THIS PLAN APPLY ONLY TO NEW CONSTRUCTION OR RECONSTRUCTION. EXISTING STRUCTURES AND TRACKS MAY BE MAINTAINED AND EXTENDED AT PRESENT CLEARANCES, UNLESS OTHERWISE REQUIRED BY LOCAL OR STATE AUTHORITIES.

STRUCTURES MUST NOT BE LOCATED NEARER TO THE TRACK THAN THE MINIMUM CLEARANCE LIMITS SHOWN ON THIS PLAN AND THESE DISTANCES SHOULD BE EXCEEDED WHERE POSSIBLE. CONSIDERATION SHOULD BE GIVEN TO THE PROBABILITY OF INCREASED DISTANCE BETWEEN TRACK CENTER LINES. WIDENING ROADBED SHOULDERS AND WIDENING AND DEEPENING DITCHES, AND THE STRUCTURES SHOULD BE LOCATED ACCORDINGLY.

FOR STANDARD DISTANCES BETWEEN TRACK CENTER LINES AND THE SPACING OF TRACKS WHERE INTERTRACK CLEARANCE - LIMITING OBJECTS ARE LOCATED, SEE MW-1000 SPECIFICATIONS FOR INSPECTION, CONSTRUCTION AND MAINTENANCE OF TRACK

WHERE PHYSICAL CONDITIONS IMPOSE INSURMOUNTABLE RESTRICTIONS, NECESSITATING CLEARANCES CLOSER THAN THOSE SPECIFIED, THE MATTER MUST BE SUBMITTED TO THE CHIEF ENGINEER FOR ANY MODIFICATIONSAND EXCEPTIONS TO THIS STANDARD.

MINIMUM CLEARANCES SHOWN ON THIS PLAN ARE FOR TANGENT LEVEL TRACK.

FOR CURVED TRACK THE FOLLOWING PROVISIONS APPLY:

VERTICAL - MEASURED VERTICALLY ABOVE HIGH RAIL EXCEPT FOR PASSENGER AND FREIGHT PLATFORMS WHICH ARE MEASURED PERPENDICULAR TO THE PLANE OF TOP OF RAIL.

LATERAL - OUTSIDE AND INSIDE CLEARANCES SHALL BE MEASURED RADIALLY AND HORIZONTALLY AND INCREASED BY 1 1/2 INCHES PER DEGREE OF CURVATURE OVER THAT SHOWN FOR TANGENT TRACK.

IN ADDITION, THE INSIDE CLEARANCE FOR SUPER ELEVATED TRACK SHALL BE FURTHER INCREASED BY 1 INCH FOR EACH 1 INCH OF SUPERELEVATION FOR EACH 5 FEET OF HEIGHT ABOVE TOP OF LOW RAIL.

✳ FOR STATE CLEARANCE REQUIREMENTS, SEE A.R.E.M.A. MANUAL, CHAPTER 28, SECTION 3.6, LEGAL CLEARANCE REQUIREMENTS BY STATES.

OFFICE OF THE
CHIEF ENGINEER OF TRACK

Philo., PA Date: August 1, 2016 Approved:

No.	Revisions	Date	By
08	ADDED SHEET 2	08-01-16	KJW

STANDARD TRACK PLAN
MINIMUM ROADWAY CLEARANCES

Designed: Amtrak | Drawn: TDI-SLC | Checked: MT | Date: 08-01-16 | Dwg. No.: 70050.001.08

D4

Amtrak

Amtrak's EP 3014 Section 01520 “Requirements for Temporary Protection Shields for Demolition and Construction of Overhead Bridges and Other Structures”

SECTION 01142A – SUBMISSION DOCUMENTATION REQUIRED FOR AMTRAK REVIEW AND APPROVAL OF PLANS FOR BRIDGE ERECTION, DEMOLITION AND OTHER CRANE/ HOISTING OPERATIONS OVER RAILROAD RIGHT-OF-WAY

PART 1 - GENERAL

1.1 SCOPE

A. Amtrak requires that a site-specific work plan for accomplishing hoisting operations be prepared for every applicable project, and for each type of lift on a project.
   1. The plan shall demonstrate adherence to Amtrak safety rules.
   2. The plan shall demonstrate constructibility.
   3. The plan shall minimize impact to rail operations.
   4. The approved plan will provide the basis for field inspection/ verification of the actual work.

B. Preparation, review and approval of the Crane/ Hoisting site-specific work plan does not relieve the Contractor from meeting other Amtrak requirements for adequate planning and documentation of proposed work procedures within the Right-of-Way of the railroad..

C. Current Amtrak safety rules shall be adhered to in every respect.

D. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/ hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 THE CONTRACTOR SHALL PROVIDE, AT A MINIMUM, THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL BY AMTRAK ENGINEERING STRUCTURES:

A. Plan view showing location(s) of cranes, operating radii, with delivery and/or disposal locations shown. Provide all necessary dimensions for locating the elements of the plan.

B. Plans and computations showing the weight of the pick.

C. Crane rating sheets, demonstrating that cranes are adequate for 150% of the calculated pick weight. That is, the cranes shall be capable of picking 150% of the load, while maintaining normal, recommended factors of safety. The adequacy of the crane for the proposed pick shall be determined by using the manufacturer's published crane rating chart and not the maximum crane capacity. Crane and boom nomenclature is to be indicated.

D. Calculations demonstrating that slings, shackles, lifting beams, etc. are adequate for 150% of the calculated pick weight.

E. Location plan showing obstructions, indicating that the proposed swing is possible. "Walking" of load using two cranes will not be permitted. Rather, multiple picks and repositioning of the crane may be permitted to get the load to the needed location for the final pick, if necessary.

F. Data sheet listing types and sizes of slings and other connecting equipment. Include copies of catalog cuts for specialized equipment. Detail attachment methods on the plans.

G. A complete procedure, indicating the order of lifts and any repositioning or re-hitching of the crane or cranes.

H. Temporary support of any components or intermediate stages, as may be required.

I. A time schedule of the various stages, as well as a schedule for the entire lifting process.

END OF SECTION 01142A

D5

Amtrak

Amtrak Engineering Practice
EP3014 “Maintenance and
Protection of Railroad Traffic
During Contractor Operations” ”

SCOPE AND NATURE

This practice provides procedures for Contractors to follow, when working on Amtrak Right-of-Way, adjacent to Amtrak tracks, to assure the protection of trains and maintenance of scheduled railroad operations.

SPECIAL REFERENCE

Note: This information was included under former Engineering Practice 1305.

Contractors shall comply with procedures detailed in the following specifications, when applicable:

Section	Title	Revision No.	Revision Date
01141A	Safety and Protection of Railroad Traffic and Property	4	10/01/12
01142A	Submission Documentation Required for Amtrak Review and Approval of Plans for Bridge Erection, Demolition and Other Crane/ Hoisting Operations over Railroad Right-of-Way	1	12/15/05
01520A	Requirements for Temporary Protection Shields for Demolition and Construction of Overhead Bridges and Other Structures	1	08/07/01
02261A	Requirements for Temporary Sheeting and Shoring to Support Amtrak Tracks	3	06/20/08

SPECIAL MATERIALS

Not Applicable

PROCEDURE

1. The Contractor shall conform to the applicable specifications.

2. Amtrak I&C shall assure that agencies and other third parties proposing construction on or adjacent to Amtrak Right-of-Way conform to Amtrak requirements detailed herein.

3. Amtrak Design and Construction shall review the Contractor’s proposed design and construction procedures for conformance with specifications, with sound engineering design practice and with the procedures detailed in the applicable Engineering Practice documents.

4. Amtrak Construction shall monitor the activities of the Contractor on-site to assure compliance/ adherence to approved procedures throughout the construction period.

REPORTING

As detailed in the specifications.

RESPONSIBILITY

Amtrak I&C Staff	Comply with Procedure
Director Project Initiation & Development	Assure Compliance
Amtrak Design Staff	Comply with Procedure
Director Structures Design	Assure Compliance
Amtrak Construction Staff	Comply with Procedure
Deputy Chief Engineer Construction	Assure compliance

SECTION 01141A – SAFETY AND PROTECTION OF RAILROAD TRAFFIC AND PROPERTY

PART 1 - GENERAL

1.1 SCOPE

A. This specification describes the safety procedures and protection provisions for Contractors and Permittees entering and working upon railroad property.

B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PRE-ENTRY MEETING

A. Before entry of Permittee and/or Contractors onto Railroad's property, a pre-entry meeting shall be held at which time Permittee and/or Contractors shall submit for written approval of the Chief Engineer, plans, computations and a detailed description of proposed methods for accomplishing the work, including methods for protecting Railroad's traffic. Any such written approval shall not relieve Permittee and/or Contractor of their complete responsibility for the adequacy and safety of their operations.

3.2 RULES, REGULATIONS AND REQUIREMENTS

A. Railroad traffic shall be maintained at all times with safety and continuity, and Permittee and/or Contractors shall conduct their operations in compliance with all rules, regulations, and requirements of Railroad (including these Specifications) with respect to any work performed on, over, under, within or adjacent to Railroad's property. Permittee and/or Contractors shall be responsible for acquainting themselves with such rules, regulations and requirements. Any violation of Railroads safety rules, regulations, or requirements shall be grounds for the immediate suspension of the Permittee and/or Contractor work, and the re-training of all personnel, at the Permittee's expense.

3.3 MAINTENANCE OF SAFE CONDITIONS

A. If tracks or other property of Railroad are endangered during the work, Permittee and/or Contractor shall immediately take such steps as may be directed by Railroad to restore safe conditions, and upon failure of Permittee and/or Contractor to immediately carry out such direction, Railroad may take whatever steps are reasonably necessary to restore safe conditions. All costs and expenses of restoring safe conditions, and of repairing any damage to Railroad's trains, tracks, right-of-way or other property caused by the operations of Permittee and/or Contractors, shall be paid by Permittee.

3.4 PROTECTION IN GENERAL

A. Permittee and/or Contractors shall consult with the Chief Engineer to determine the type and extent of protection required to insure safety and continuity of railroad traffic. Any Inspectors, Track Foremen, Track Watchmen, Flagman, Signalmen, Electric Traction Linemen, or other employees deemed necessary by Railroad, at its sole discretion, for protective services shall be obtained from Railroad by Permittee and/or Contractors. The cost of same shall be paid directly to Railroad by Permittee. The provision of such employees by Railroad, and any other precautionary measures taken by Railroad, shall not relieve Permittee and/or Contractors from their complete responsibility for the adequacy and safety of their operations.

3.5 PROTECTION FOR WORK NEAR ELECTRIFIED TRACK OR WIRE

A. Whenever work is performed in the vicinity of electrified tracks and/or high voltage wires, particular care must be exercised, and Railroad's requirements regarding clearance to be maintained between equipment and tracks and/or energized wires, and otherwise regarding work in the vicinity of electrified tracks, must be strictly observed. No employees or equipment will be permitted to work near overhead wires, except when protected by a Class A employee of Railroad. **Permittee and/or Contractors must supply an adequate length of grounding cable (4/0 copper with approved clamps) for each piece of equipment working near or adjacent to any overhead wire**.

3.6 FOULING OF TRACK OR WIRE

A. No work will be permitted within twenty-five (25) feet of the centerline of track or the energized wire or have potential of getting within twenty-five (25) feet of track wire without the

approval of the Chief Engineer's representative. Permittee and/or Contractors shall conduct their work so that no part of any equipment or material shall foul an active track or overhead wire without the written permission of the Chief Engineer's representative. When Permittee and/or Contractors desire to foul an active track, they must provide the Chief Engineer's representative with their site-specific work plan a minimum of twenty-one (21) working days in advance, so that, if approved, arrangements may be made for proper protection of Railroad. Any equipment shall be considered to be fouling a track or overhead wire when located (a) within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire, or (b) in such a position that failure of same, with or without a load, would bring it within fifteen (15) feet from the centerline of the track or within fifteen (15) feet from the wire and requires the presence of the proper Railroad protection personnel.

B. If acceptable to the Chief Engineer's representative, a safety barrier (approved temporary fence or barricade) may be installed at fifteen (15) feet from centerline of track or overhead wire to afford the Permittee and/or Contractor with a work area that is not considered fouling. Nevertheless, protection personnel may be required at the discretion of the Chief Engineer's representative.

3.7 TRACK OUTAGES

A. Permittee and/or Contractors shall verify the time and schedule of track outages from Railroad before scheduling any of their work on, over, under, within, or adjacent to Railroad's right-of-way. Railroad does not guarantee the availability of any track outage at any particular time. Permittee and/or Contractors shall schedule all work to be performed in such a manner as not to interfere with Railroad operations. Permittee and/or Contractors shall use all necessary care and precaution to avoid accidents, delay or interference with Railroad's trains or other property.

3.8 DEMOLITION

A. During any demolition, the Contractor must provide horizontal and vertical shields, designed by a Professional Engineer registered in the state in which the work takes place. These shields shall be designed in accordance with the Railroad's specifications and approved by the Railroad, so as to prevent any debris from falling onto the Railroad's right-of-way or other property. A grounded temporary vertical protective barrier must be provided if an existing vertical protective barrier is removed during demolition. In addition, if any openings are left in an existing bridge deck, a protective fence must be erected at both ends of the bridge to prohibit unauthorized persons from entering onto the bridge.

B. Ballasted track structure shall be kept free of all construction and demolition debris. Geo-textiles or canvas shall be placed over the track ties and ballast to keep the ballast clean.

3.9 EQUIPMENT CONDITION

A. All equipment to be used in the vicinity of operating tracks shall be in "certified" first-class condition so as to prevent failures that might cause delay to trains or damage to Railroad's property. No equipment shall be placed or put into operation near or adjacent to operating tracks without first obtaining permission from the Chief Engineer's representative. **Under no**

circumstances shall any equipment or materials be placed or stored within twenty-five (25) feet from the centerline of an outside track, except as approved by the Site Specific Safety Work Plan. To insure compliance with this requirement, Permittee and/or Contractors **must establish a twenty-five (25) foot foul line prior to the start of work** by either driving stakes, taping off or erecting a temporary fence, or providing an alternate method as approved by the Chief Engineer's representative. Permittee and/or Contractors will be issued warning stickers which must be placed in the operating cabs of all equipment as a constant reminder of the twenty-five (25) foot clearance envelope.

3.10 STORAGE OF MATERIALS AND EQUIPMENT

A. No material or equipment shall be stored on Railroad's property without first having obtained permission from the Chief Engineer. Any such storage will be on the condition that Railroad will not be liable for loss of or damage to such materials or equipment from any cause.

B. If permission is granted for the storage of compressed gas cylinders on Railroad property, they shall be stored a minimum of 25 feet from the nearest track in an approved lockable enclosure. The enclosure shall be locked when the Permittee and/or Contractor is not on the project site.

3.11 CONDITION OF RAILROAD'S PROPERTY

A. Permittee and/or Contractors shall keep Railroad's property clear of all refuse and debris from its operations. Upon completion of the work, Permittee and/or Contractors shall remove from Railroad's property all machinery, equipment, surplus materials, falsework, rubbish, temporary structures, and other property of the Permittee and/or Contractors and shall leave Railroad's property in a condition satisfactory to the Chief Engineer.

3.12 SAFETY TRAINING

A. All individuals, including representatives and employees of Permittee and/or Contractor, before entering onto Railroad's property and before coming within twenty-five (25) feet of the centerline of the track or energized wire must first attend Railroad's Contractor Orientation Computer Based Training Class. The Contractor Orientation Class will be provided electronically at **www.amtrakcontractor.com**. Upon successful completion of the course and test, the individual taking the course will receive a temporary certificate without a photo that is valid for three weeks. The individual must upload a photo of himself/herself that will be embedded in the permanent ID card. The photo ID will be mailed to the individual's home address and must be worn/displayed while on Railroad property. Training is valid for one calendar year. All costs of complying with Railroad's safety training shall be at the sole expense of Permittee and/or Contractor. The Permittee and/or Contractor shall appoint a qualified person as its Safety Representative. The Safety Representative shall continuously ensure that all individuals comply with Railroad's safety requirements. All safety training records must be maintained with the Permittee's and/or Contractor's site specific work plan.

3.13 NO CHARGES TO RAILROAD

A. It is expressly understood that neither these Specifications, nor any document to which they are attached, include any work for which Railroad is to be billed by Permittee and/or Contractors, unless Railroad gives a written request that such work be performed at Railroad's expense.

END OF SECTION 01141A

SECTION 01142A – SUBMISSION DOCUMENTATION REQUIRED FOR AMTRAK REVIEW AND APPROVAL OF PLANS FOR BRIDGE ERECTION, DEMOLITION AND OTHER CRANE/ HOISTING OPERATIONS OVER RAILROAD RIGHT-OF-WAY

PART 1 - GENERAL

1.1 SCOPE

A. Amtrak requires that a site-specific work plan for accomplishing hoisting operations be prepared for every applicable project, and for each type of lift on a project.
   1. The plan shall demonstrate adherence to Amtrak safety rules.
   2. The plan shall demonstrate constructibility.
   3. The plan shall minimize impact to rail operations.
   4. The approved plan will provide the basis for field inspection/ verification of the actual work.

B. Preparation, review and approval of the Crane/ Hoisting site-specific work plan does not relieve the Contractor from meeting other Amtrak requirements for adequate planning and documentation of proposed work procedures within the Right-of-Way of the railroad..

C. Current Amtrak safety rules shall be adhered to in every respect.

D. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/ hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 THE CONTRACTOR SHALL PROVIDE, AT A MINIMUM, THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL BY AMTRAK ENGINEERING STRUCTURES:

A. Plan view showing location(s) of cranes, operating radii, with delivery and/or disposal locations shown. Provide all necessary dimensions for locating the elements of the plan.

B. Plans and computations showing the weight of the pick.

C. Crane rating sheets, demonstrating that cranes are adequate for 150% of the calculated pick weight. That is, the cranes shall be capable of picking 150% of the load, while maintaining normal, recommended factors of safety. The adequacy of the crane for the proposed pick shall be determined by using the manufacturer's published crane rating chart and not the maximum crane capacity. Crane and boom nomenclature is to be indicated.

D. Calculations demonstrating that slings, shackles, lifting beams, etc. are adequate for 150% of the calculated pick weight.

E. Location plan showing obstructions, indicating that the proposed swing is possible. "Walking" of load using two cranes will not be permitted. Rather, multiple picks and repositioning of the crane may be permitted to get the load to the needed location for the final pick, if necessary.

F. Data sheet listing types and sizes of slings and other connecting equipment. Include copies of catalog cuts for specialized equipment. Detail attachment methods on the plans.

G. A complete procedure, indicating the order of lifts and any repositioning or re-hitching of the crane or cranes.

H. Temporary support of any components or intermediate stages, as may be required.

I. A time schedule of the various stages, as well as a schedule for the entire lifting process.

END OF SECTION 01142A

SECTION 01520A – REQUIREMENTS FOR TEMPORARY PROTECTION SHIELDS FOR DEMOLITION AND CONSTRUCTION OF OVERHEAD BRIDGES AND OTHER STRUCTURES

PART 1 - GENERAL

1.1 SCOPE

A. This engineering practice describes items to be included in the design and construction of temporary protection shields for construction overhead and near to Amtrak tracks.

B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for crane/ hoisting operations has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTRACTORS WORKING ON OVERHEAD OR NEARBY DEMOLITION AND/OR CONSTRUCTION ADJACENT TO AMTRAK TRACKS, SHALL CONFORM TO THE FOLLOWING

DESIGN AND CONSTRUCTION REQUIREMENTS FOR TEMPORARY PROTECTION SHIELDING:

A. The Contractor shall maintain a specified level of protection to railroad facilities, during demolition and construction activities that occur overhead and nearby Amtrak tracks, as shown on the Contract Plans, as detailed in the Contract Specifications, and as described below.

B. Prior to the start of construction, the Contractor shall submit to Amtrak for review and approval, detailed, site specific plans for temporary protection shields. The plans will be reviewed as to the methods of erection, and as to whether or not the proposed installation will provide the required level of protection. No construction shall proceed until the Contractor has received written approval of the Contractor's complete, site specific plans, from Amtrak.

C. The Contractor shall design the protection shields to conform to all applicable and governing federal, state and local laws and regulations.

D. Drawings for the proposed temporary protection shields shall be signed and sealed by a Licensed Professional Engineer. Complete design calculations, clearly referenced to the drawings, and easy to review, shall be provided with submission of drawings.

E. Protection shields shall be designed for the following, minimum load and size criteria.
   1. The horizontal shield design liveload on horizontal surfaces shall be the greater of a minimum of 100 pounds per square foot (psf) [5000 Pascals] or the anticipated liveload to be produced by the Contractor's anticipated operations. When determining the appropriate design live load, the designer shall consider factors such as the physical capacity of proposed debris-catching platforms to retain materials, and the type of equipment the platforms might support. Positive means of demolition and construction controls shall be provided to assure that debris that may collect on the shield will not exceed the design live load. The horizontal protection shield, in plan view, shall cover no less than the area directly over the tracks plus ten feet minimum beyond the centerline of the outermost tracks.
   2. The vertical shield shall be designed to carry a minimum 30 psf [1500 Pascals] allowance for wind load. The vertical shield shall extend a minimum of 6'-6" [1950 millimeters] above the top of the adjacent surface, such as curb or sidewalk. Anti-climb wings shall be installed at each end, as necessary, to restrict access to the railroad property.

F. The vertical and horizontal clearance envelopes required for maintenance of railroad operations, shall be indicated on the site specific work plans. These clearances are subject to review and approval by Amtrak. If applicable, both temporary and permanent envelopes shall be indicated on the plans. The temporary protection shields shall be installed outside the limits of these minimum vertical and horizontal clearances shown on the site specific work plans.

G. In electrified territory, temporary protection shields shall be bonded and grounded.

H. Temporary protection shields shall be designed and constructed to prevent dust, debris, concrete, formwork, paint, tools, or anything else from falling onto the railroad property below.

I. The temporary protection shields shall be attached to the structure in accordance with site specific work plans submitted by the Contractor and approved by Amtrak. Drilling in structural members and welding will generally not be permitted in members that are scheduled to remain in place in the reconstructed structure. For existing members scheduled for demolition or for later reconstruction, any proposed attachment shall be designed with consideration of potential existing, deteriorated conditions.

J. The Contractor shall provide the Amtrak on-site representative, for review and approval prior to any construction activity in the effected area, a proposed construction schedule for the installation, maintenance and removal of the temporary protection shields.

K. The temporary protection shields shall be installed prior to the start of any other work over the railroad in the effected areas. No construction shall proceed until the Amtrak on-site representative reviews and approves the Contractor's installed protection. Before proceeding with the work, Amtrak must be satisfied, in its sole judgment, that sufficient protection has been provided to proceed with the work.

L. The Contractor shall install and remove temporary protection shields only when an Amtrak representative is on-site.

M. The Contractor shall not install or remove temporary protection shields during train operations.

N. Temporary protection shields shall remain in place for the duration of construction activities over and nearby the railroad in the effected areas. The Contractor may remove temporary construction only after approved by Amtrak on-site representatives.

O. Where site specific conditions impose insurmountable restrictions to the design of temporary construction conforming to the limitations listed above, the design of temporary construction shall be developed in close coordination with Amtrak design review personnel. The Chief Engineer, Structures shall provide final approval of temporary construction that does not conform to the above limitations.

END OF SECTION 01520A

SECTION 02261A – REQUIREMENTS FOR TEMPORARY SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS

PART 1 - GENERAL

1.1 SCOPE

A. This engineering practice describes items to be included in the design and construction of temporary sheeting and shoring construction adjacent and proximate to Amtrak tracks.

B. Use of this specification is as required by Amtrak, as described in Amtrak Engineering Practice EP3014.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.3 DEFINITIONS

A. CHIEF ENGINEER: Amtrak Vice President, Chief Engineer

B. RAILROAD: National Railroad Passenger Corporation (Amtrak), and/or the duly authorized representative

C. ENGINEERING PRACTICE: Amtrak Engineering Practices establish a system of uniform practices, notices and instructions for the Amtrak Engineering Department, providing current, permanent and temporary, departmental procedures and policies.

1.4 SUBMISSION REQUIREMENTS

A. Unless otherwise directed in the Contract, the Contractor shall submit five sets of plans and calculations to the authorized representative of the Chief Engineer, Structures, whose name and address will be provided at the project pre-construction meeting.

B. Submitted calculations and plans shall be signed and sealed by a Professional Engineer, registered in the State in which the work will be performed.

C. The Contractor shall revise and resubmit plans and calculations as many times as necessary, until a complete and correct site-specific work plan for temporary sheeting and shoring has been approved.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTRACTORS INSTALLING TEMPORARY CONSTRUCTION SHEETING AND SHORING TO SUPPORT AMTRAK TRACKS SHALL CONFORM TO THE FOLLOWING:

A. Footings for all piers, columns, walls, or other facilities shall be located and designed so that any temporary sheeting and shoring for support of adjacent track or tracks during construction, will not be closer than toe of ballast slope. The dimension from gage of rail to toe of ballast, along tangent track, is 7'-5"; see dimensions on Track standard plans for curved track dimensions.

B. USE OF SHEETING: When support of track or tracks is necessary during construction of the above-mentioned facilities, interlocking steel sheeting, adequately braced and designed to carry Cooper E80 live-load plus 50 percent impact allowance is required. Soldier piles and lagging will be permitted for track support ONLY when required penetration of steel sheet piling cannot be obtained, due to site-specific conditions that make steel sheet piling placement impracticable, in the opinion of the authorized, Amtrak design review engineer.
   1. For usual soil conditions and limited excavations, sheeting is required when the near-track excavation extends beneath or nearer to the track than the Theoretical Railroad Embankment Line. The Theoretical Railroad Embankment Line is defined as a line that starts at grade, ten foot from the centerline of the outer track, and extends downward, away from the track, at a slope of 1-1/2 horizontal to one vertical.
   2. For special soil conditions, such as soft organic soils and rock conditions, and for unusual excavation conditions, temporary supports for excavations may be necessary even when the limits fall beyond the Theoretical Railroad Embankment Line, requiring site specific analysis by a professional, geotechnical engineer.
   3. See Sketch SK-1, "Normal Requirements for Sheet Piling Adjacent to Tracks".

C. Exploratory trenches, three feet deep and 15 inches wide in the form of an "H", with outside dimensions matching the proposed outside dimensions of sheeting, shall be hand dug, prior to placing and driving the sheeting, in any area where railroad or utility underground installations are known or suspected. These trenches are for exploratory purposes only, and shall be backfilled and immediately compacted, in layers. This work shall be performed only in the presence of a railroad inspector.

D. Absolute use of track is required while driving sheeting adjacent to running track. Track usage shall be prearranged per standard procedures, through the Amtrak project representative.

E. Cavities adjacent to sheet piling, created by pile driving, shall be filled with sand, and any disturbed ballast shall be restored and tamped immediately.

F. Sheet piling cutoffs
   1. During construction, sheeting shall be cut off at an elevation no higher than the top of tie.
   2. At the completion of construction activities involving the use of sheet piling, sheet piling may be pulled if there will be no adverse impact to the railroad track support bed, as determined by the Amtrak site engineer. This will generally be permitted when both of these conditions are met:
      a. the sheeting face is at least ten feet distant from the centerline of track, and
      b. the bottom of the excavation that the sheeting supported prior to backfilling, does not fall within an assumed influence zone under the tracks. The assumed influence

zone is defined as the area, as seen in cross-sectional view, falling beneath the Theoretical Underground Track Disturbance Line. This line is defined as a line that starts at the end and bottom of the ties, and extends from the track outward and downward at a one-to-one (45-degree) slope.

3. Sheet piling that is to be left in-place, shall be cut off below the ground line
   a. at least eighteen inches below final ground line at the sheeting, and
   b. no higher than 24 inches below the elevation of the bottom of the nearest ties
4. See Sketch SK-1, "Normal Requirements for Sheet Piling Adjacent to Tracks".

G. The excavation adjacent to the track shall be covered, ramped and protected by handrails, barricades and warning lights, as required by applicable safety regulations, and as directed by Amtrak.

H. Final backfilling of excavation shall conform to project specifications.

I. The Contractor shall provide Amtrak with a detailed schedule of proposed construction operations, detailing each step of the proposed temporary construction operations in proximity to Amtrak tracks, so that Amtrak may review and approve the proposed operations, and may properly inspect and monitor operations.

J. Drawings for the proposed temporary sheeting and shoring shall be signed and sealed by a Licensed Professional Engineer. Complete design calculations, clearly referenced to the drawings, and easy to review, shall be provided with submission of drawings.

K. Where site specific conditions impose insurmountable restrictions to the design of temporary construction conforming to the limitations listed above, the design of temporary construction shall be developed in close coordination with Amtrak design review personnel. The Chief Engineer, Structures shall provide final approval of temporary construction that does not conform to the above limitations.

1. When Amtrak grants approval for sheeting closer than standard minimum clearances, the Contractor shall develop a survey plan, if not already required by the project, for the adjacent tracks, to be conducted prior to, during, and after the temporary sheeting construction operations. If settlement is detected, construction operations shall be suspended until the track has been returned to its initial condition, and stabilized, as determined by the Amtrak project site representative.
2. The Contractor shall stockpile ten (10) tons of approved ballast at the project site, and maintain that amount in ready reserve, to allow for the possible need to restore track profile.

L. Particular care shall be taken in the planning, design and execution of temporary construction, as relates to railroad slope protection and drainage facilities. Erosion and sediment control best management practices shall be designed and employed, as approved by Amtrak. Any unintended disruption to railroad drainage facilities, caused by the temporary construction, shall be promptly remedied, as directed by the Engineer, solely at the Contractor's cost.

M. The following Information Sketch is attached:

1. Figure No. SK-1: Normal Requirements for Sheet Piling Adjacent to Track

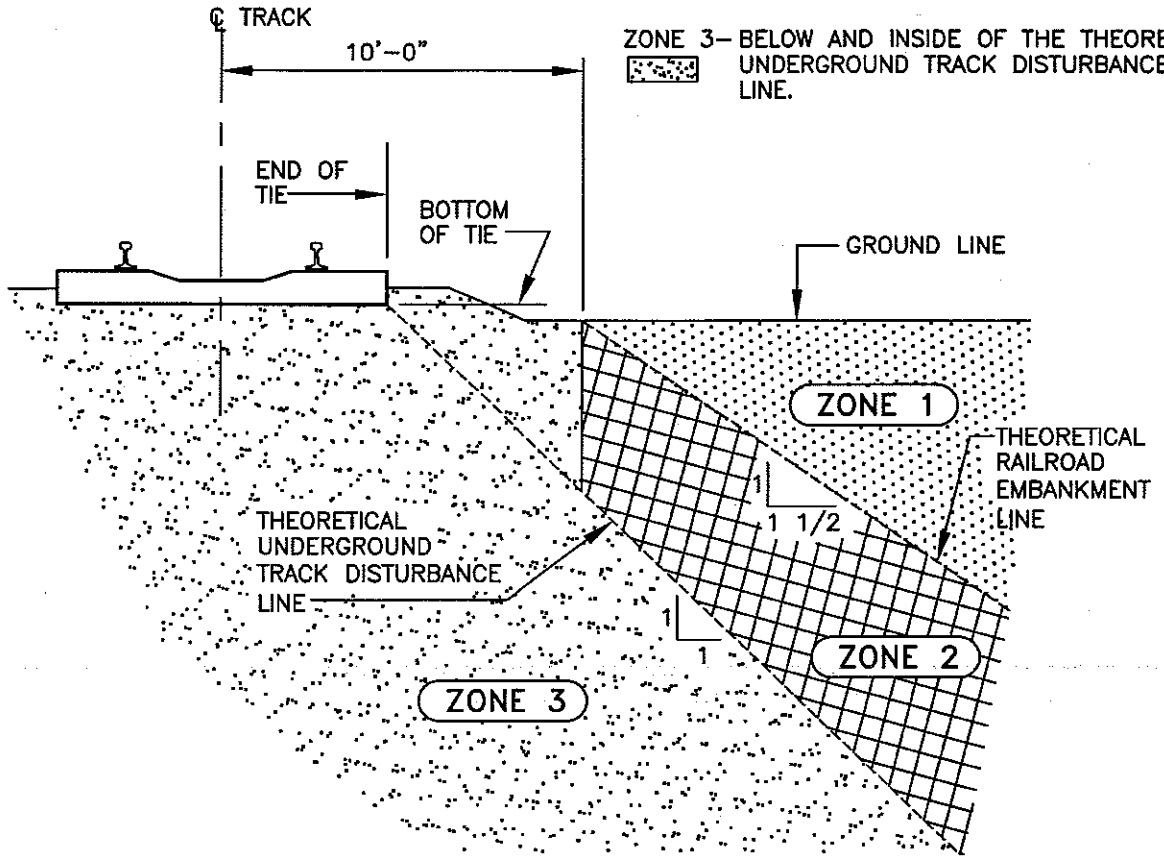
END OF SECTION 02261A

LEGEND

ZONE 1 – ABOVE AND OUTSIDE THE THEORETICAL RAILROAD EMBANKMENT LINE.

ZONE 2 – FARTHER THAN 10 FEET FROM THE CENTERLINE OF TRACK, BELOW THE THEORETICAL RAILROAD EMBANKMENT LINE AND ABOVE THE THEORETICAL UNDERGROUND TRACK DISTURBANCE LINE.

ZONE 3 – BELOW AND INSIDE OF THE THEORETICAL UNDERGROUND TRACK DISTURBANCE LINE.



NORMAL REQUIREMENTS FOR SHEET PILING ADJACENT TO TRACK

(1) EXCAVATIONS WITHIN ZONE 1 – ABOVE AND OUTSIDE OF THE THEORETICAL RAILROAD EMBANKMENT LINE – DO NOT NORMALLY REQUIRE SHEETING TO PROTECT RAILROAD ROAD BED. SHEETING MAY BE REQUIRED FOR OTHER REASONS.

(2) EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 2 REQUIRE SHEETING, BUT THE SHEETING MAY NORMALLY BE PULLED AFTER THE EXCAVATION HAS BEEN BACKFILLED.

(3) EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 3 WILL NORMALLY REQUIRE THE SHEETING TO BE LEFT IN PLACE AND CUT–OFF PER REQUIREMENTS.

Office of Chief Engineer
STRUCTURES
National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

SKETCH 1
SPEC. 02261A – REV. 1

Designed	Drawn	Date
CJR	JLM	8/06/01

File No:	
Design No:	3501
Sheet No.	1 of 1
Dwg. No.	SK–1