



U.S. Department  
of Transportation  
**Federal Railroad  
Administration**

# Grant/Cooperative Agreement

1. RECIPIENT NAME AND ADDRESS California High-Speed Rail Authority 925 L St Ste 1404 Sacramento, CA 95814-3704		2. AGREEMENT NUMBER: FR-HSR-0037-11-01-00		3. AMENDMENT NO. 0	
		4. PROJECT PERFORMANCE PERIOD: FROM 08/01/2011 TO 08/31/2012			
		5. FEDERAL FUNDING PERIOD: FROM 08/01/2011 TO 08/31/2012			
1A. IRS/VENDOR NO. [REDACTED]		6. ACTION New			
1B. DUNS NO. [REDACTED]					
7. CFDA#: [REDACTED]		9. TOTAL OF PREVIOUS AGREEMENT AND ALL AMENDMENTS 0			
8. PROJECT TITLE California High-Speed Train System – San Francisco to San Jose Project Section: Communications-Based Overlay Signal System/PTC System Project		10. AMOUNT OF THIS AGREEMENT OR AMENDMENT		16,000,000	
		11. TOTAL AGREEMENT AMOUNT		16,000,000	
12. INCORPORATED ATTACHMENTS THIS AGREEMENT INCLUDES THE FOLLOWING ATTACHMENTS, INCORPORATED HEREIN AND MADE A PART HEREOF: Special Provisions, Attachment 1 PRIIA of 2008 and Corridor Development Program Clauses, Attachment 1A General Provisions, Attachment 2  Award Attachments: Statement of Work, Attachment 3 Quarterly Progress Report for FRA, Attachment 4					
13. STATUTORY AUTHORITY FOR GRANT/ COOPERATIVE AGREEMENT Omnibus Appropriations Act, 2010, Public Law 111-117 (December 16, 2009)					
14. REMARKS					
<b>GRANTEE ACCEPTANCE</b>			<b>AGENCY APPROVAL</b>		
15. NAME AND TITLE OF AUTHORIZED GRANTEE OFFICIAL Mr. Roelof Van Ark			17. NAME AND TITLE OF AUTHORIZED FRA OFFICIAL Ms. Gina Christodoulou-AO		
16. SIGNATURE OF AUTHORIZED GRANTEE OFFICIAL Electronically Signed		16A. DATE 06/17/2011	18. SIGNATURE OF AUTHORIZED FRA OFFICIAL Electronically Signed		18A. DATE 06/24/2011
<b>AGENCY USE ONLY</b>					
19. OBJECT CLASS CODE: 41010			20. ORGANIZATION CODE: 9013000000		
21. ACCOUNTING CLASSIFICATION CODES					
DOCUMENT NUMBER FR-HSR-0037-11-01-00		FUND [REDACTED]	BY 2011	BPAC [REDACTED]	AMOUNT 16,000,000

## Special Provisions, Attachment 1

### 1. Identification of Awarding Agency and Grantee:

The Grantee and the Administrator of the FRA, acting by delegation from the Secretary of Transportation, have entered into this Cooperative Agreement ("Agreement") to conduct and fund this project, as more specifically set forth in the Statement of Work, Attachment 3, attached hereto and made a part hereof ("the Project").

### 2. Scope:

The Grantee shall furnish all personnel, facilities, equipment, and other materials and services (except as otherwise specified herein) necessary to perform the approved Project, as set forth in the Statement of Work (Attachment 3), and in accordance with the representations, certifications and assurances set forth in the Grantee's application(s), and any amendments thereto ("Application"), incorporated herein by reference and made a part hereof.

### 3. Awarding Agency Participation:

The FRA will provide, on an "as available" basis, one professional staff person, to be designated as the Grant Manager, to review work or work products in progress, and arrange for the review of the Project results upon completion. If this award is made as a cooperative agreement, FRA will have substantial programmatic involvement. Substantial involvement means that, after award, technical, administrative, or programmatic staff will assist, guide, coordinate, or otherwise participate in Project activities.

### 4. Term:

Unless sooner terminated in accordance with its terms, this Agreement shall be valid for the period described in Section 4 of the Grant/Cooperative Agreement. This time frame includes the period for both completion of the Project, and completion and submission of a final report on Project results, as described in Section 11 and/or other deliverables as agreed to between the parties.

### 5. Total Project Cost; Cost-Sharing Responsibility:

- a. The total estimated cost of the Project is \$20,000,000.00.
- b. FRA funding assistance is limited to 80% of the estimated cost for completing the Project or \$16,000,000.00, whichever is less. Costs for completing the Project in excess of the amounts set forth in this section will be the responsibility of the Grantee.
- c. Grantee funding assistance shall not be less than 20% of the total cost of the Project. Consequently, of the amount specified in subparagraph (a) of this section, Grantee funding is not to be less than \$4,000,000.00. The Grantee may provide its funding assistance under this subsection from permissible non-Grantee sources.
- d. When requesting payment, the Grantee must identify: (1) the total amount of costs; (2) Grantee funding assistance applied to the Project; and (3) the balance of Federal assistance dollars requested for payment.
- e. Funding responsibility for the Project under this Agreement is recapped as follows:

RECIPIENT NAME:

FRA Funding Assistance	+	Grantee Cash Contribution	+	Grantee In-Kind Contribution Total	=	Total Project Funding
\$16,000,000.00	+	\$4,000,000.00	+	\$0	=	\$20,000,000.00

f. In accordance with Attachment 2, Sections 7c.(5) and d.(1) herein, FRA hereby authorizes the incurrence of pre-agreement costs by the Grantee on or after December 17, 2009, in anticipation of Agreement award, but such costs are allowable only to the extent that they are otherwise allowable under the terms of this Agreement.

**6. Program Income:**

a. The Grantee is encouraged to earn income to defray Project costs. Unless prohibited by 49 C.F.R. Part 18.25 or 49 C.F.R. Part 19.24, as applicable, or otherwise agreed to in writing to by FRA and the Grantee, any program income derived from the Project shall be committed under this Agreement to further eligible objectives of the Project.

b. Program income shall be proportionally deducted from Project outlays, which shall include both the Federal and non-Federal shares of Project costs, as applicable.

**7. Payment Method:**

Payment of FRA funding through FRA’s Office of Financial Services, shall be made on a reimbursable basis whereby the Grantee will be reimbursed, after the submission of proper invoices, for actual expenses incurred.

The Grantee will use the Automated Clearing House (ACH) Electronic Vendor Payment method for transfer of reimbursed funds and submit an SF 270 form.

Unless directed otherwise, requests for payment shall be made via email to [9-AMC-AMZ-FRA-INVOICES@FAA.GOV](mailto:9-AMC-AMZ-FRA-INVOICES@FAA.GOV) or by mail to:

MMAC/DOT/FRA  
 AMZ-150, Accounts Payable  
 P.O. Box 268943  
 Oklahoma City, OK 73126

Or via Federal Express to:

MMAC/DOT/FRA  
 AMZ-150, Accounts Payable  
 HQ Bldg, Rm 272-F  
 6500 S MacArthur Blvd  
 Oklahoma City, OK 73169

**8. Reports, Presentations and Other Deliverables:**

Whether for technical examination, administrative review, or publication, all submittals shall be of a professional quality and suitable for their intended purpose.

**9. Progress Reports:**

Four quarterly progress reports following the form of Attachment 4 shall be submitted for periods: January 1- March 31, April 1-June 30, July 1-September 30, and October 1-December 31. The Grantee shall furnish one (1) copy to the Grant Manager on or before the thirtieth (30th) calendar day of the month following the end of the quarter being reported. Each report shall set forth concise statements concerning activities relevant to the Project, and shall include, but not be limited to, the following:

- a) Relate the state of completion of items in the Statement of Work to expenditures of the relevant budget elements.
- b) An account of significant progress (findings, events, trends, etc.) made during the reporting period.
- c) A description of any technical and/or cost problem(s) encountered or anticipated that will affect completion of the grant within the time and fiscal constraints as set forth in the Agreement, together with recommended solutions or corrective action plans (with dates) to such problems, or identification of specific action that is required by the FRA, or a statement that no problems were encountered.
- d) An outline of work and activities planned for the next reporting period.

**10. Quarterly Federal Financial Report:**

The Grantee shall furnish one (1) copy of a quarterly financial status report to the Grant Manager, and one (1) copy to the Administrative Officer, on or before the thirtieth (30th) calendar day of the month following the end of the quarter being reported. The Grantee shall use SF-425, Federal Financial Report, in accordance with the instructions accompanying the form, to report all transactions, including Federal cash, Federal expenditures and unobligated balance, recipient share, and program income.

**11. Interim and/or Final Report(s):**

If required, interim reports will be due at intervals specified in the Statement of Work. Within 90 days of the Project completion date or termination by FRA, the Grantee shall furnish one (1) hard copy and one (1) reproducible master original to the Grant Manager, and one (1) hard copy to the FRA Administrative Officer of a Summary Project Report. A final version of this report, detailing the results and benefits of the Grantee's improvement efforts, shall be furnished by the expiration date of this Agreement.

**12. Administrative Responsibility:**

Jennifer Capps, Office of Financial Management, is designated as FRA's Administrative Officer for this Project. All FRA administrative duties under this Agreement are to be performed by the Administrative Officer, unless otherwise specified.

**13. Grant Manager:**

- a. Cherron Riddick, Office of Railroad Policy and Development, is designated as FRA's Grant Manager. The Grant Manager will oversee the technical administration of this Agreement and act as technical liaison with the Grantee. The Grant Manager is not authorized to change the Statement of

Work or specifications as stated in this Agreement, to make any commitments or otherwise obligate the FRA, or authorize any changes which affect this Agreement's monetary amount, the delivery schedule, period of performance or other terms or conditions.

b. The FRA official authorized to sign this Agreement is the only individual who can legally commit or obligate FRA for the expenditure of public funds. The technical administration of this Agreement shall not be construed to authorize the revision of the terms and conditions of this Agreement.

**14. Delivery/Mailing Addresses:**

Unless directed otherwise, all deliverables and copies of reports required to be delivered to the Grant Manager under this Agreement shall be delivered F.O.B. destination, under transmittal letter, to:

Federal Railroad Administration  
 Office of Railroad Policy and Development  
 1200 New Jersey Avenue, SE (Mail Stop 20)  
 Washington, DC 20590  
 ATTN: Cherron Riddick

Unless directed otherwise, all deliverables and copies of reports required to be delivered to the Administrative Officer under this Agreement shall be delivered F.O.B. destination, under transmittal letter, to:

Federal Railroad Administration  
 Office of Financial Management  
 1200 New Jersey Avenue, SE (Mail Stop 45)  
 Washington, DC 20590  
 ATTN: Jennifer Capps

**15. Governing Regulations:**

The Grantee acknowledges that its performance shall be governed by and in compliance with the following Administrative and Cost Principles:

For State, Local and/or Tribal Governmental Entities:

- 49 C.F.R. Part 18, "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments"
- OMB Circular A-87, "Cost Principles for State and Local Governments," as amended.

For non-profit and for-profit:

- 49 C.F.R. Part 19, "Uniform Administrative Requirements for Grants and Cooperative Agreements With Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations" (applies to non-profit and for-profit organizations)
- OMB Circular A- 21, "Cost Principles for Educational Institutions" (applies to educational institutions)
- OMB Circular A-122, "Cost Principles for Nonprofit Organizations" (applies to private non-profit organizations)
- Federal Acquisition Regulation, 48 C.F.R. Chapter I, Subpart 31.2, "Contracts with Commercial Organizations" (applies to for-profit organizations).

These identified circulars and regulations are hereby incorporated into this Agreement by reference as if fully set out herein.

## **PRIIA of 2008 and Corridor Development Program Clauses, Attachment 1A**

### **1. Section 1. Railroad Agreements.**

The Grantee represents that it has entered into and will abide by, or will enter into and abide by, a written agreement, in form and content satisfactory to FRA, with any railroad owning property on which the Project is to be undertaken, in accordance with 49 U.S.C. 24405(c)(1) and section 4.2.6 of the High Speed Intercity Passenger Rail (HSIPR) Program Interim Guidance published in the Federal Register on July 1, 2010 (75 FR 38344). Such agreement shall provide for compensation for use, assurance regarding the adequacy of infrastructure capacity, a commitment to keeping railroad collective bargaining agreements in full force and effect, and compliance with liability requirements consistent with 49 U.S.C. 28103. The Grantee shall not enter into or agree to any substantive changes to the FRA approved written agreement with the railroad on which the Project is undertaken without FRA's prior written consent. The Grantee may not obligate or expend any funds (federal, state or private) for final design and/or construction of the Project, or commence any part of the final design and/or construction for the Project, or any component of the Project, without receiving FRA's prior written approval of the executed railroad agreement satisfying the requirements of this section.

### **Section 2. Service Outcome Agreements with Infrastructure Owners and Operators.**

a. The Grantee represents that it has or will have satisfactory continuing control over the use of Project improvements and the capability and ability to maintain the Project improvements for the useful life of the Project, in accordance with 49 U.S.C. 24402(b)(1) and (c)(1)(B). Satisfactory continuing control may be established by either the direct ownership of Project improvements or through a written agreement(s) in form and content satisfactory to FRA with the owners of infrastructure on which the Project is to be undertaken and the proposed service operator of any rail passenger service that benefits from the Project, which agreement(s) shall authorize construction of, access to, and/or use of Project improvements for a minimum of twenty years from the date the Project improvements are placed in service. Such agreements may be combined, if appropriate.

b. The written agreement(s) shall include the following minimum terms and conditions tailored to the Project: (1) specific identification of Project benefits in terms relevant to the Project being implemented, including, as appropriate, additional frequencies, improved reliability, future availability of developed capacity, and improved schedules, (2) a firm commitment on the part of the infrastructure owner and operator to achieving the Project benefits included in the Grantee's application and reflected in the Statement(s) of Work attached to this Agreement, and (3) reasonable and appropriate enforcement mechanisms that provide for prompt resolution of disputes and the ability of the Grantee to obtain the Project benefits funded through this Agreement in an expeditious and reasonable manner.

c. The Grantee shall not enter into or agree to any substantive changes in the FRA-approved written agreement(s) with the infrastructure owner and service operator without FRA's prior written consent.

d. The Grantee may not obligate or expend any funds (federal, state or private) for final design and/or construction of the Project, or commence any part of final design and/or construction for the Project or any component of the Project, without receiving FRA's prior written approval of a fully executed agreement(s) satisfying the requirements of this section.

e. The agreement required by this section 2 is supplemental to any agreement that may be required by

section 1 of Attachment 1A, however, the requirements of sections 1 and 2 may be satisfied in one agreement, where appropriate.

### **Section 3. Project Management Plan.**

The Grantee may not obligate or expend any funds (federal, state or private) for final design and/or construction of the Project, or commence any part of final design and/or construction for the Project or any component of the Project, without receiving FRA's prior written approval of a project management plan that complies with the requirements of 49 U.S.C. §24403(a) and section 4.2.6 of the High Speed Intercity Passenger Rail (HSIPR) Program interim guidance published in the Federal Register on July 1, 2010 (75 FR 38344). The project management plan should document assumptions and decisions regarding communications, management processes, execution and overall project control.

### **Section 4. Financial Plans.**

The Grantee may not obligate or expend any funds (federal, state or private) for final design and/or construction of the Project, or commence any part of final design and/or construction for the Project or any component of the Project, without receiving FRA's prior written approval of a financial plan that complies with the requirements of section 4.2.6 of the High Speed Intercity Passenger Rail (HSIPR) Program interim guidance published in the Federal Register on July 1, 2010 (75 FR 38344) and that demonstrates: (1) that prior to initiation of final design, the Grantee has secured firm commitments of all funding (other than that provided through this Agreement) required to complete construction of the Project, and (2) that prior to initiation of construction, the Grantee has secured commitments for the financing necessary to support the ongoing operation of the Project, including necessary maintenance and recapitalization during the first twenty (20) years of operations. The financial plan shall also provide: (1) finalized projections for the sources and uses of all Project funds, during both the development and construction phases of the Project and for the first twenty (20) years of operations, and (2) a detailed assessment of financial risks facing the Project during both the construction and operations phases (including risks such as capital cost overruns, revenue shortfalls, and operating and maintenance cost overruns), along with proposed actions for mitigating or accommodating such risks (including assessment of additional funding sources available to compensate for potential capital or operating financing shortfalls).

### **Section 5. Environmental Assessment.**

Prior to initiating final design, or commencing construction for the Project or any component of the Project, the Grantee shall submit all necessary environmental documentation, in accordance with Attachment 2, section 21(d) of this Agreement, and receive FRA's written confirmation that relevant Project environmental reviews have been completed for the overall Project or for an individual component of the Project that the Grantee proposes to advance to final design or construction. The Grantee may not obligate or expend any funds (federal, state or private) for final design and/or construction of the Project, or commence any part of final design and/or construction for the Project or any component of the Project, without receiving such written confirmation from FRA.

### **Section 6. Final Design and Engineering.**

Prior to commencing final design activities for the Project or any individual component of the Project, the Grantee shall submit to FRA a complete set of Preliminary Engineering documents, prepared by or on behalf of the Grantee in accordance with the provisions of Appendix 2.3 of the High-Speed Intercity Passenger Rail (HSIPR) Program interim guidance published in the Federal Register on July 1, 2010 (75 FR 38350), and in accordance with the Statement(s) of Work incorporated into this Agreement. Except in unusual circumstances and where approved in advance by FRA, the submitted



Preliminary Engineering documents shall include evidence of concurrence by infrastructure owners and operators of rail service whose operations would be affected by the Project improvements. The Grantee may not obligate or expend any funds (federal, state or private) for final design and/or final engineering of the Project, or commence any part of final design and/or final engineering for the Project or any component of the Project, without receiving FRA's prior written approval of the Preliminary Engineering documents.

#### **Section 7. Construction.**

Prior to commencing construction activities for the Project or any individual component of the Project, the Grantee shall submit to FRA a complete set of Final Design documents, completed by or on behalf of the Grantee in accordance with the provisions of Appendix 2.4 of the High-Speed Intercity Passenger Rail (HSIPR) Program interim guidance published in the Federal Register on July 1, 2010 (75 FR 38350), and in accordance with the Statement(s) of Work incorporated into this Agreement. In unusual circumstances where the Preliminary Engineering documents approved by FRA did not contain evidence of concurrence by infrastructure owners and operators of rail service whose operations would be affected by Project improvement, then the submitted Final Design documents shall include evidence of concurrence by such infrastructure owners and operators. The Grantee may not obligate or expend any funds (federal, state or private) for construction of the Project, as defined in the Statement(s) of Work, or commence any part of construction for the Project or any component of the Project, without receiving FRA's prior written approval of the Final Design documents.

#### **Section 8. Design/Build Program Plan.**

Project components being implemented by the Grantee through a design/build implementation Process shall, with FRA's concurrence, comply with this section 8 in lieu of sections 6 and 7. Prior to commencing any design activities that follow preliminary engineering/design, and expressly including the preparation of final construction plans and detailed specifications for the performance of construction work for the Project or any individual component of the Project, the Grantee shall submit to FRA a comprehensive Design/Build Program Plan completed by or on behalf of the Grantee, and as described in the Statement of Work attached to this Agreement. The Design/Build Program Plan shall include, at a minimum, a description identifying: (1) the suitability of the Project as a design/build candidate, (2) the performance metrics to be used to assess successful Project completion, (3) the composition of the design/build Project team, (4) Project scope, (5) the decision factors to be used for the selection from among the design/build proposals, and (6) methods for contract administration. FRA may issue additional guidance in the future further describing the required contents of Design/Build Program Plans. Except in unusual circumstances and where approved in advance by FRA, the Grantee will be responsible for providing in the Design/Build Program Plan evidence of concurrence by infrastructure owners and operators of rail service whose operations would be affected by the Project improvements. The Grantee may not obligate or expend any funds (federal, state or private) for implementing the design/build implementation process for the Project (not including preparation of the Plan) or any component of the Project or commence any part of implementing the design/build implementation process (not including the preparation of the Plan) without receiving FRA's prior written approval of the Design/Build Program Plan.

#### **Section 9. Property Acquisition.**

The Grantee may not obligate or expend any funds (federal, state or private) for the Project, to acquire any real property for the Project, including right-of-way, unless the property acquisition is specifically authorized in a Statement of Work incorporated as an attachment to this Agreement, or the Grantee has received FRA's prior written permission indicating that FRA has completed all required National Environmental Policy Act (NEPA) and related environmental reviews, and all other predicates to



property acquisition have been completed.

#### **Section 10. Detailed Statements of Work For Project Components.**

The Grantee may not obligate or expend any funds (federal, state or private) for the final design and/or construction of the Project or commence any activity on or for the Project, that is not specifically authorized in a Statement of Work incorporated as an attachment to this Agreement and/or which has not secured all required FRA approvals. The parties recognize that this Agreement contemplates a phased Project implementation process, whereby individual Project components or phases will be implemented as they are developed by the Grantee and approved by FRA. These phases may be reflected in terms of stages of Project development (e.g., preliminary engineering, final design, or construction) or in terms of individual Project components (e.g., stations, interlocking, or third track construction) of the larger Project. The parties contemplate a series of amendments to this Agreement that will add greater definition to the individual Project components to be undertaken by the Grantee for each phase or component of Project implementation, and will authorize the Grantee to initiate the next phase of Project implementation, as reflected in the agreed-upon amendments or supplements to the Statement of Work. It is the Grantee's responsibility to propose revised or additional statements of work (including a detailed scope, schedule and budget) significantly in advance of proposed implementation, to allow for the Grantee and the FRA to agree on the components of that next phase, and adopt a revised or supplemental Statement of Work through an amendment to this Agreement.

#### **Section 11. Buy America.**

The Grantee shall comply with the Buy America provisions set forth in 49 U.S.C. 24405(a) for the Project with respect to the use of steel, iron, and manufactured goods produced in the United States, subject to the conditions therein set forth.

#### **Section 12. Labor Provisions.**

49 U.S.C. 24405(b) provides that persons conducting rail operations over rail infrastructure constructed or improved in whole or in part with funds provided through this Agreement shall be considered a "rail carrier," as defined by 49 U.S.C. 10102(5), for the purposes of Title 49, United States Code, and any other statute that adopts that definition or in which that definition applies, including the Railroad Retirement Act of 1974 (45 U.S.C 231 et seq.), the Railway Labor Act (43 U.S.C.151 et seq.), and the Railroad Unemployment Insurance Act (45 U.S.C. 351 et seq.). The Grantee shall reflect these provisions in its agreements with the entities operating rail services over such rail infrastructure to the extent required by 49 U.S.C. 24405(b) and other laws referenced above.

#### **Section 13. Labor Protective Arrangements.**

For a project that uses rights-of-way owned by a railroad, the Grantee shall comply with the protective arrangements established under Section 504 of the Railroad Revitalization and Regulatory Reform Act of 1976 (4R Act), 45 U.S.C. 836, with respect to employees affected by actions taken in connection with the Project financed in whole or in part under this Agreement (See 49 U.S.C. 24405(c).) The Grantee agrees to include the applicable protective arrangements established by the Department of Labor under 45 U.S.C. 836. in its agreements with entities operating rail services over rail infrastructure constructed as part of the Project. The following definitions apply for purposes of applying those protective arrangements:

'Protected employee' means an employee of a railroad who had an employment relationship with such railroad on the date on which the Grantee first applied for financial assistance applicable to the Project involved and who is affected by actions taken pursuant to this Agreement; provided, however,

that an employee who was benefitted solely as a result of the Project shall not be a protected employee under these provisions.

'Railroad' means a rail carrier or a common carrier by railroad or express as defined in 49 U.S.C. 10102, and includes the National Railroad Passenger Corporation and the Alaska Railroad as well as a person that conducts rail operations over rail infrastructure constructed or improved with funding provided in whole or in part in a grant made pursuant to this Agreement.

#### **Section 14. Maintenance Responsibility and Refunds.**

a. Except as otherwise provided herein, the Grantee shall ensure the maintenance of Project property to the level of utility (including applicable FRA track safety standards) which exists when the Project improvements are placed in service (as set forth in the Statement(s) of Work incorporated into this Agreement) for a period of twenty (20) years from the date such Project property was placed in service, consistent with the satisfactory continuing control and maintenance responsibilities of 49 U.S.C. 24402(b)(1) and (c)(1) and as addressed in Section 2 above. In the event the Project property is not maintained as required by this section, for a period of time in excess of six (6) months, or such other period as may be mutually determined by the parties, and is not restored within a reasonable time to the level of utility which exists when the Project improvements are placed in service, the Grantee will refund to FRA a pro-rata share of the Federal contribution, based upon the percentage remaining of the twenty (20) year period that commenced when the Project property was placed in service.

b. In the event that all intercity passenger rail service making use of the Project property is discontinued during the twenty (20) year period, the Grantee shall continue to ensure that maintenance of the Project property, as set forth above, for a period of one (1) year from the date of the discontinuance to allow for the possible reintroduction of intercity rail passenger service.

#### **Section 15. Project Use for Intercity Passenger Rail Service and Refunds.**

a. The Grantee acknowledges that the purpose of the Project is to benefit intercity passenger rail service. In the event that all intercity passenger rail service making use of the Project improvements is discontinued (for any reason) at any time during a period of twenty (20) years from the date such Project improvements were placed in service, as set forth above, and if such intercity passenger rail service is not reintroduced during a one (1) year period following the date of such discontinuance, the Grantee shall refund to FRA, no later than eighteen (18) months following the date of such discontinuance, a pro-rata share of the Federal contribution, based upon the percentage of the twenty (20) year period remaining at the time of such discontinuance.

b. To the extent necessary and appropriate, sections 14 and 15 shall be implemented in a manner so as to avoid any double counting of any refunds paid or required to be paid to the FRA.

#### **Section 16. Davis-Bacon Act Provisions.**

Payment of prevailing wages on the Project is required by 49 U.S.C. 24405(c)(2) for Project components that use or would use rights-of-way owned by a railroad. The Grantee shall comply with the provisions of 49 U.S.C. 24405(c) (2), with respect to the payment of prevailing wages consistent with the provisions of 49 U.S.C. 24312. For these purposes, wages in collective bargaining agreements negotiated under the Railway Labor Act are deemed to comply with Davis-Bacon Act requirements.

#### **Section 17. Replacement of Existing Intercity Passenger Rail Service.**

49 U.S.C. 24405(d) requires any entity providing intercity passenger railroad transportation on a project funded by this Agreement to comply with certain requirements with respect to its employees and the employees of preexisting intercity rail passenger services. The Grantee shall comply with the applicable provisions of 49 U.S.C. 24405(d) to the extent it is or becomes a provider of intercity passenger railroad transportation. If it is not the operator or provider of the intercity passenger rail services benefitting from the Project funded under this Agreement, then it shall notify its selected operator of the requirements imposed by section 24405(d).

## General Provisions, Attachment 2

### 1. Definitions. As used in this Agreement:

- a. **Agreement** means this Grant Agreement or Cooperative Agreement, including all attachments.
- b. **Application** means the signed and dated proposal by or on behalf of the Grantee, as may be amended, for Federal financial assistance for the Project, together with all explanatory, supporting, and supplementary documents heretofore filed with and accepted or approved by FRA.
- c. **Approved Project Budget** means the most recently dated written statement, approved in writing by FRA, of the estimated total cost of the Project, the items to be deducted from such total in order to calculate the estimated net Project cost, the maximum amount of Federal assistance for which the Grantee is currently eligible, the specific items (including contingencies specified) for which the total may be spent, and the estimated cost of each of such items. The term "Approved Project Budget" also includes "Financial Plan" as used in 49 C.F.R. Part 19.
- d. **Awarding Agency** means (1) with respect to a grant, the Federal agency, and (2) with respect to a subgrant, the party that awarded the subgrant. In the case of a Federal Agency, the term "Awarding Agency" also includes "Federal Awarding Agency" as used in 49 C.F.R. Part 19.
- e. **Federal Railroad Administration** is an operating administration of the U.S. Department of Transportation.
- f. **Federal Government** means the United States of America and any executive department or agency thereof.
- g. **Grantee** means any entity that receives Federal grant assistance directly from FRA for the accomplishment of the Project.
- h. **Project** means the task or set of tasks set forth in the approved Application which the Grantee carries out pursuant to this Agreement, as set forth in the Statement of Work (Attachment 3).
- i. **Subgrantee** means any entity that receives FRA assistance from an FRA Grantee, rather than from FRA directly. The term "subgrantee" does not include "third party contractor."
- j. **U.S. DOT** means the U.S. Department of Transportation, including its operating administrations.

### 2. Accomplishment of the Project:

#### a. General Requirements:

The Grantee agrees to carry out the Project in a sound, economical, and efficient manner, and in

accordance with the provisions of this Agreement, grant guidance, the Application, the Approved Project Budget, the Statement of Work, Project schedules, and all applicable laws, regulations, and published policies. This includes, but is not limited to the following, as applicable:

- 1) U.S. DOT regulations, "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments" (common grant management rule), 49 C.F.R. Part 18, applies to Projects with governmental bodies.
- 2) U.S. DOT regulations, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations," 49 C.F.R. Part 19, applies to Projects with institutions of higher education and private nonprofit organizations. 49 C.F.R. Part 19 also applies to grants and cooperative agreements with private for-profit organizations.

**b. Application of Federal, State, and Local Laws and Regulations.**

- 1) Federal Laws and Regulations. The Grantee understands that Federal laws, regulations, policies, and related administrative practices to this Agreement on the date the Agreement was executed may be modified from time to time. The Grantee agrees that the most recent of such Federal requirements will govern the administration of this Agreement at any particular time, except if there is sufficient evidence in this Agreement of a contrary intent. Likewise, new Federal laws, regulations, policies and administrative practices may be established after the date the Agreement has been executed and may apply to this Agreement. To achieve compliance with changing Federal requirements, the Grantee agrees to include in all sub-assistance agreements and third party contracts financed with FRA assistance, specific notice that Federal requirements may change and the changed requirements will apply to the Project as required. All limits or standards set forth in this Agreement to be observed in the performance of the Project are minimum requirements.
- 2) State or Territorial Law and Local Law. Except to the extent that a Federal statute or regulation preempts State or territorial law, nothing in this Agreement shall require the Grantee to observe or enforce compliance with any provision thereof, perform any other act, or do any other thing in contravention of any applicable State or territorial law; however, if any of the provisions of this Agreement violate any applicable State or territorial law, or if compliance with the provisions of this Agreement would require the Grantee to violate any applicable State or territorial law, the Grantee agrees to notify the FRA immediately in writing in order that FRA and the Grantee may make appropriate arrangements to proceed with the Project as soon as possible.

**c. Funds of the Grantee.** Unless approved otherwise by FRA, the Grantee agrees to complete all actions necessary to provide the matching contributory funds or cost share of the Project costs, if applicable, at or before the time that such funds are needed to meet Project expenses.

**d. Changed Conditions of Performance (Including Litigation).** The Grantee agrees to notify FRA immediately of any change in local law, conditions, or any other event that may affect its ability to perform the Project in accordance with the terms of this Agreement. In addition, the Grantee agrees to notify FRA immediately of any decision pertaining to the Grantee's conduct of litigation that may affect FRA's interests in the Project or FRA's administration or enforcement of applicable Federal laws or regulations. Before the Grantee may name FRA as a party to litigation for any reason, the Grantee agrees first to inform FRA; this proviso applies to any type of litigation whatsoever, in any forum.

**e. No FRA Obligations to Third Parties.** Absent FRA's express written consent, and notwithstanding any concurrence by FRA in or approval of the award of any contract of the Grantee (third party contract) or subcontract of the Grantee (third party subcontract) or the solicitation thereof, FRA shall not be subject to any obligations or liabilities to third party contractors or third party

subcontractors or any other person not a party to this Agreement in connection with the performance of the Project.

### 3. Ethics:

a. **Standards of Conduct.** The Grantee agrees to maintain a written code or standards of conduct that shall govern the performance of its officers, employees, board members, or agents engaged in the award and administration of contracts supported by Federal funds. The code or standards shall provide that the Grantee's officers, employees, board members, or agents may neither solicit nor accept gratuities, favors or anything of monetary value from present or potential contractors or subgrantees. The Grantee may set minimum rules where the financial interest is not substantial or the gift is an unsolicited item of nominal intrinsic value. As permitted by State or local law or regulations, such code or standards shall provide for penalties, sanctions, or other disciplinary actions for violations by the Grantee's officers, employees, board members, or agents, or by contractors or subgrantees or their agents.

1) **Personal Conflict of Interest.** The Grantee's code or standards must provide that no employee, officer, board member, or agent of the Grantee may participate in the selection, award, or administration of a contract supported by Federal funds if a real or apparent conflict of interest would be involved. Such a conflict would arise when any of the parties set forth below has a financial or other interest in the firm selected for award:

- a) The employee, officer, board member, or agent;
- b) Any member of his or her immediate family;
- c) His or her partner; or
- d) An organization that employs, or is about to employ, any of the above.

2) **Organizational Conflicts of Interest.** The Grantee's code or standards of conduct must include procedures for identifying and preventing real and apparent organizational conflicts of interests. An organizational conflict of interest exists when the nature of the work to be performed under a proposed third party contract, may, without some restrictions on future activities, result in an unfair competitive advantage to the contractor or impair the contractor's objectivity in performing the contract work.

b. **Existing Provisions.** This section does not require the Grantee to implement a new code or standards of conduct where a State statute, or written code or standards of conduct, already effectively covers all of the elements of a.

### 4. Approved Project Budget:

The Grantee agrees to carry out the Project in accordance with the Approved Project Budget, written approval of which the Grantee shall secure prior to being reimbursed under this Agreement. If the Approved Project Budget is included in this Agreement as Attachment 3, execution of the Agreement shall constitute such written approval. The Grantee agrees to obtain the prior written approval of FRA's Associate Administrator for Railroad Development or the Associate Administrator for Railroad Safety, as applicable, for any revisions to the Approved Project Budget that equal or exceed 10 percent any line item or pertain to a line item involving contingency or miscellaneous costs. For revisions to the Approved Project Budget that are less than 10 percent of any line item, and do not involve contingency or miscellaneous costs, the Grantee agrees to notify FRA of the revisions to the Approved Project Budget. Any revisions to the Approved Project Budget must not affect total project costs or the respective cost-sharing responsibilities set forth in Attachment 1, Section 5.

### 5. Accounting Records:

a. **Project Accounts.** The Grantee agrees to establish and maintain for the Project either a separate set of accounts or accounts within the framework of an established accounting system, in a manner consistent with 49 C.F.R. § 18.20, or 49 C.F.R. § 19.21, as amended, whichever is applicable.

b. **Funds Received or Made Available for the Project.** Consistent with the provisions of 49 C.F.R. § 18.21, or 49 C.F.R. § 19.21, as amended, whichever is applicable, the Grantee agrees to record in the Project Account, and deposit in a financial institution all Project payments received by it from FRA pursuant to this Agreement and all other funds provided for, accruing to, or otherwise received on account of the Project (Project Funds). The Grantee is encouraged to use financial institutions owned at least 50 percent by minority group members.

c. **Documentation of Project Costs and Program Income.** All costs charged to the Project, including any approved services contributed by the Grantee or others, shall be supported by properly executed payrolls, time records, invoices, contracts, or vouchers describing in detail the nature and propriety of the charges. The Grantee also agrees to maintain accurate records of all Program Income derived from Project implementation.

d. **Checks, Orders, and Vouchers.** The Grantee agrees that all checks, payrolls, invoices, contracts, vouchers, orders, or other accounting documents pertaining in whole or in part to the Project shall be clearly identified, readily accessible, and, to the extent feasible, kept separate from documents not pertaining to the Project.

#### 6. Record Retention:

a. **Submission of Proceedings, Contracts and Other Documents.** During the course of the Project and for three years thereafter, the Grantee agrees to retain intact and to provide any data, documents, reports, records, contracts, and supporting materials relating to the Project as FRA may require. Reporting and record-keeping requirements are set forth in-

- 1) 49 C.F.R. Part 18 for governmental Grantees; and
- 2) 49 C.F.R. Part 19 for private non-profit and for-profit Grantees.

Project closeout does not alter these requirements.

#### b. Audit and Inspection.

1) General Audit Requirements. A Grantee that is:

- a) a State, local government or Indian tribal government agrees to comply with the audit requirements of 49 C.F.R. § 18.26 and OMB Circular A-133, and any revision or supplement thereto.
- b) an institution of higher education or nonprofit organization agrees to comply with the audit requirements of 49 C.F.R. § 19.26 and OMB Circular A-133, and any revision or supplement thereto.
- c) a private for-profit organization agrees to comply with the audit requirements of OMB Circular A-133.

The Grantee agrees to obtain any other audits required by FRA. Project closeout will not alter the Grantee's audit responsibilities. Audit costs for Project administration and management are allowable under this Project to the



extent authorized by OMB Circular A-87, Revised; OMB Circular A-21, Revised; or OMB Circular A-122, Revised.

2) Inspection by Federal Officials. The Grantee agrees to permit the Secretary and the Comptroller General of the United States, or their authorized representatives, to inspect all Project work, materials, payrolls, and other data, and to audit the books, records, and accounts of the Grantee and its contractors pertaining to the Project. The Grantee agrees to require each third party contractor whose contract award is not based on competitive bidding procedures as defined by the Secretary to permit the Secretary of Transportation and the Comptroller General of the United States, or their duly authorized representatives, to inspect all work, materials, payrolls, and other data and records involving that contract, and to audit the books, records, and accounts involving that contract as it affects the Project.

## 7. Payments:

**a. Request by the Grantee for Payment.** The Grantee's request for payment of the Federal share of allowable costs shall be made to FRA at the address shown in Section 7 of Attachment 1, Special Provisions, and will be acted upon by FRA as set forth in this section. Each payment made to the Grantee must comply with Department of the Treasury regulations, "Rules and Procedures for Funds Transfers," 31C.F.R. Part 205. To receive a Federal assistance payment, the Grantee must:

- 1) Have demonstrated or certified that it has made a binding commitment of non-Federal funds, if applicable, adequate when combined with Federal payments, to cover all costs to be incurred under the Project to date. A Grantee required by Federal statute or this Agreement to provide contributory matching funds or a cost share agrees:
  - a) to refrain from requesting or obtaining Federal funds in excess of the amount justified by the contributory matching funds or cost share that has been provided; and
  - b) to refrain from taking any action that would cause the proportion of Federal funds made available to the Project at any time to exceed the percentage authorized under this Agreement. The requirement for contributory matching funds or cost share may be temporarily waived only to the extent expressly provided in writing by FRA.
- 2) Have submitted to FRA all financial and progress reports required to date under this Agreement; and
- 3) Have identified the source(s) of financial assistance provided under this Project, if applicable, from which the payment is to be derived.

## **b. Payment by FRA.**

- 1) Reimbursement Payment by FRA. FRA uses the reimbursement method, whereby the Grantee agrees to:
  - a. Complete and submit Standard Form 3881, "Payment Information Form - ACH Payment Vendor Payment System," to FRA; and
  - b. Complete and submit Standard Form 270, "Request for Advance or Reimbursement," to FRA.
- 2) Upon receipt of a payment request and adequate accompanying information (invoices in accordance with applicable cost principles), FRA will authorize payment by direct deposit, or if



requested by the Grantee, by issuance of a treasury check (allow 30 day processing time for issuance of check), provided the Grantee: (i) is complying with its obligations under this Agreement, (ii) has satisfied FRA that it needs the requested Federal funds during the requisition period, and (iii) is making adequate and timely progress toward Project completion. If all these circumstances are present, FRA may reimburse allowable costs incurred by the Grantee up to the maximum amount of FRA's share of the total Project funding.

3) Other Payment Information.

a. The Grantee agrees to adhere to and impose on its subgrantees all applicable foregoing "Payment by FRA" requirements of this Agreement.

b. If the Grantee fails to adhere to the foregoing "Payment by FRA" requirements of this Agreement, FRA may revoke the portion of the Grantee's funds that has not been expended.

c. **Allowable Costs.** The Grantee's expenditures will be reimbursed only if they meet all requirements set forth below:

1) Conform with the Project description, the Statement of Work, and the Approved Project Budget and all other terms of this Agreement;

2) Be necessary in order to accomplish the Project;

3) Be reasonable for the goods or services purchased;

4) Be actual net costs to the Grantee (i.e., the price paid minus any refunds, rebates, or other items of value received by the Grantee that have the effect of reducing the cost actually incurred);

5) Be incurred (and be for work performed) after the effective date of this Agreement, unless specific authorization from FRA to the contrary is received in writing;

6) Unless permitted otherwise by Federal status or regulation, conform with Federal guidelines or regulations and Federal cost principles as set forth below:

a. For Grantees that are governmental organizations, the standards of OMB Circular A-87, Revised, "Cost Principles for State and Local Governments" apply;

b. For Grantees that are institutions of higher education, the standards of OMB Circular A-21, Revised, "Cost Principles for Educational Institutions" apply;

c. For Grantees that are private nonprofit organizations, the standards of OMB Circular A-122, Revised, "Cost Principles for Nonprofit Organizations" apply; and

d. For Grantees that are for-profit organizations, the standards of the Federal Acquisition Regulation, 48 C.F.R. Chapter I, Subpart 31.2, "Contracts with Commercial Organizations" apply.

7) Be satisfactorily documented; and

8) Be treated uniformly and consistently under accounting principles and procedures approved and prescribed by FRA for the Grantee, and those approved or prescribed by the Grantee for its subgrantees and contractors.

**d. Disallowed Costs.** In determining the amount of Federal assistance FRA will provide, FRA will exclude:

- 1) Any Project costs incurred by the Grantee before the obligation date of this Agreement, or amendment or modification thereof, whichever is later, unless specifically allowed by this Agreement, otherwise permitted by Federal law or regulation, or unless an authorized representative of FRA states in writing to the contrary;
- 2) Any costs incurred by the Grantee that are not included in the latest Approved Project Budget; and
- 3) Any costs attributable to goods or services received under a contract or other arrangement that is required to be, but has not been, concurred in or approved in writing by FRA.

The Grantee agrees that reimbursement of any cost under the "Payment by FRA," part of this Agreement does not constitute a final FRA decision about the allowability of that cost and does not constitute a waiver of any violation by the Grantee of the terms of this Agreement. The Grantee understands that FRA will not make a final determination about the allowability of any cost until an audit of the Project has been completed. If FRA determines that the Grantee is not entitled to receive any part of the Federal funds requested, FRA will notify the Grantee stating the reasons therefore. Project closeout will not alter the Grantee's obligation to return any funds due to FRA as a result of later refunds, corrections, or other transactions. Nor will Project closeout alter FRA's right to disallow costs and recover funds on the basis of a later audit or other review. Unless prohibited by law, FRA may offset any Federal assistance funds to be made available under this Project as needed to satisfy any outstanding monetary claims that the Federal Government may have against the Grantee. Exceptions pertaining to disallowed costs will be assessed based on their applicability, as set forth in the applicable Federal cost principals or other written Federal guidance.

**e. Bond Interest and Other Financing Costs.** To the extent permitted in writing by FRA, bond interest and other financing costs are allowable.

**f. Requirement to Remit Interest.** The Grantee agrees that:

- 1) Any interest earned by the Grantee on FRA funds must be remitted to FRA, except as provided by 31 U.S.C. § 6503, or the Indian Self-Determination Act, 25 U.S.C. § 450 et seq., and any regulations thereunder that may be issued by the U.S. Secretary of the Treasury.
- 2) Irrespective of whether the Grantee has deposited funds in an interest-bearing account, the Grantee agrees to pay to FRA interest on any FRA funds that the Grantee has drawn down and failed to spend for eligible Project activities. Unless waived by FRA, interest will be calculated at rates imposed by the U.S. Secretary of the Treasury beginning on the fourth day after the funds were deposited in the Grantee's bank or other financial depository. This requirement does not apply to any Grantee that is a state, state instrumentality, or Indian Tribal Government, except as permitted under applicable state law and by regulations that may be issued by the U.S. Secretary of the Treasury.
- 3) Upon notice by FRA to the Grantee of specific amounts due, the Grantee agrees to promptly remit to FRA any excess payment of amounts or disallowed costs, including any interest due thereon.

**g. De-obligation of Funds.** FRA reserves the right to de-obligate unspent FRA funds prior to Project closeout.

## 8. Property, Equipment and Supplies:

Unless otherwise approved by FRA, the following conditions apply to property, equipment, and supplies financed under this Agreement:

a. **Use of Property.** The Grantee agrees that Project property, equipment, and supplies shall be used for the provision of the Project activity for the duration of its useful life, as determined by FRA. Should the Grantee unreasonably delay or fail to use Project property, equipment, or supplies during its useful life, the Grantee agrees that FRA may require the Grantee to return the entire amount of FRA assistance expended on that property, equipment, or supplies. The Grantee further agrees to notify FRA immediately when any Project property or equipment is withdrawn from use in the Project activity or when such property or equipment is used in a manner substantially different from the representations made by the Grantee in its Application or the text of the Project description.

b. **General Federal Requirements.**

1) a Grantee that is a governmental entity agrees to comply with the property management standards of 49 C.F.R. §§ 18.31, 18.32, and 18.33, including any amendments thereto, and other applicable guidelines or regulations that are issued.

2) a Grantee that is not a governmental entity agrees to comply with the property standards of 49 C.F.R. §§ 19.30 through 19.37 inclusive, including any amendments thereto, and other applicable guidelines or regulations that are issued. Exceptions to the requirements of 49 C.F.R. §§ 18.31, 18.32, and 18.33, and 49 C.F.R. §§ 19.30 through 19.37 inclusive, must be specifically approved by FRA.

c. **Maintenance.** The Grantee agrees to maintain the Project property and equipment in good operating order, and in accordance with any guidelines, directives, or regulations that FRA may issue.

d. **Records.** The Grantee agrees to keep satisfactory records with regard to the use of the property, equipment, and supplies, and submit to FRA, upon request, such information as may be required to assure compliance with this section of this Agreement.

e. **Transfer of Project Property.** The Grantee agrees that FRA may:

1) require the Grantee to transfer title to any property, equipment, or supplies financed with FRA assistance made available by this Agreement, as permitted by 49 C.F.R. § 18.32(g) or 49 C.F.R. §§ 19.30 through 19.37 inclusive, whichever may be applicable.

2) direct the disposition of property or equipment financed with FRA assistance made available under this Agreement, as set forth by 49 C.F.R. §§ 18.31 and 18.32 or 49 C.F.R. §§ 19.30 through 19.37 inclusive, whichever may be applicable.

f. **Withdrawn Property.** If any Project property, equipment, or supplies are not used for the Project for the duration of its useful life, as determined by FRA, whether by planned withdrawal, misuse or casualty loss, the Grantee agrees to notify FRA immediately. Disposition of withdrawn property, equipment, or supplies shall be in accordance with 49 C.F.R. §§ 18.31 and 18.32 for a Grantee that is a governmental entity, or 49 C.F.R. §§ 19.30 through 19.37 inclusive, for a Grantee that is an institution of higher education or a private organization.

g. **Encumbrance of Project Property.** Unless expressly authorized in writing by FRA, the Grantee agrees to refrain from:

1) Executing any transfer of title, lease, lien, pledge, mortgage, encumbrance, contract,

grant anticipation note, alienation, or other obligation that in any way would affect FRA interest in any Project property or equipment; or

2) Obligating itself in any manner to any third party with respect to Project property or equipment.

The Grantee agrees to refrain from taking any action or acting in a manner that would adversely affect FRA's interest or impair the Grantee's continuing control over the use of Project property or equipment.

#### 9. Relocation and Land Acquisition:

The Grantee agrees to comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, 42 U.S.C. §§ 4601 et seq.; and U.S. DOT regulations, "Uniform Relocation and Real Property Acquisition for Federal and Federally Assisted Programs," 49 C.F.R. Part 24.

#### 10. Flood Hazards:

The Grantee agrees to comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, 42 U.S.C. § 4012a(a), with respect to any construction or acquisition Project.

#### 11. Procurement:

**a. Federal Standards.** The Grantee agrees to comply with the Procurement Standards requirements set forth at 49 C.F.R. § 18.36 or 49 C.F.R. §§ 19.40 through 19.48 inclusive, whichever may be applicable, and with applicable supplementary U.S. DOT or FRA directives or regulations. If determined necessary for proper Project administration, FRA reserves the right to review the Grantee's technical specifications and requirements.

**b. Buy American.** The Grantee agrees that no funds may be expended in contravention of provisions of the Buy American Act (41 U.S.C. §§ 10a-c), as required by Section 412 of the Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2010 (Division A of Public Law 111-117 (December 16, 2009)). As required by Section 413 of the appropriations act, the Grantee represents that it has never been convicted of violating the Buy American Act, and agrees that it will not make funding received under the appropriations act available to any person or entity that has been convicted of violating the Buy American Act.

**c. Cargo Preference -- Use of United States-Flag Vessels.** Pursuant to U.S. DOT, Maritime Administration regulations, "Cargo Preference -- U.S.-Flag Vessels," 46 C.F.R. Part 381, the Grantee shall insert the following clauses in contracts let by the Grantee in which equipment, materials or commodities may be transported by ocean vessel in carrying out the Project:

As required by 46 C.F.R. Part 381, The contractor agrees -

- 1) To utilize privately owned United States-flag commercial vessels to ship at least 50% of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, materials, or commodities pursuant to this contract to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- 2) To furnish within 20 days following the date of loading for shipments originating within the

United States, or within 30 working days following the date of loading for shipment originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) above to the recipient (through the prime contractor in the case of subcontractor bills-of lading) and to the Division of Cargo Preference and Domestic Trade, Maritime Administration, 1200 New Jersey Avenue, SE, Washington, D.C. 20590, marked with appropriate identification of the Project.

3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract

**d. Notification Requirement.** With respect to any procurement for goods and services (including construction services) having an aggregate value of \$500,000 or more, the Grantee agrees to:

1) specify in any announcement of the awarding of the contract for such goods or services the amount of Federal funds that will be used to finance the acquisition; and

2) express the said amount as a percentage of the total costs of the planned acquisition.

**e. Debarment and Suspension; and Drug-Free Work Place.** The Grantee agrees to obtain certifications on debarment and suspension from its third party contractors and subgrantees and otherwise comply with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. Part 1200, and "Government wide Requirements for Drug-Free Workplace (Grants)," 49 C.F.R. Part 32.

**f. Notification of Third Party Contract Disputes or Breaches.** The Grantee agrees to notify FRA of any current or prospective major dispute, breach, or litigation pertaining to any third party contract. If the Grantee seeks to name FRA as a party to litigation for any reason, the Grantee agrees first to inform FRA before doing so. This proviso applies to any type of litigation whatsoever, in any forum.

**g. Participation by Small Business Concerns Owned and Controlled by Socially and Economically Disadvantaged Individuals.**

1) The Grantee agrees to: (a) provide maximum practicable opportunities for small businesses, including veteran-owned small businesses and service disabled veteran-owned small businesses, and (b) implement best practices, consistent with our nation's civil rights and equal opportunity laws, for ensuring that all individuals – regardless of race, gender, age, disability, and national origin – benefit from activities funded through this Agreement.

2) An example of a best practice under (b) above would be to incorporate key elements of the Department's Disadvantage Business Enterprise (DBE) program (see 49 C.F.R. Part 26) in contracts under this Agreement. This practice would involve setting a DBE contract goal on contracts funded under this Agreement that have subcontracting possibilities. The goal would reflect the amount of DBE participation on the contract that the Grantee would expect to obtain absent the effects of discrimination and consistent with the availability of certified DBE firms to perform work under the contract. When a DBE contract goal has been established by a Grantee, the contract would be awarded only to a bidder/offer that has met or made (or in the case of a design/build project, is committed to meeting or making) documented, good faith efforts to reach the goal. Good faith efforts are defined as efforts to achieve a DBE goal or other requirement of this Agreement which, by their scope, intensity, and appropriateness to the objective can reasonably be expected to achieve the goal or other requirement.

3) The Grantee must provide FRA a plan for incorporating the above best practice into its

implementation of the Project within 30 days following execution of this Agreement. If the Grantee is not able to substantially incorporate Part 26 elements in accordance with the above-described best practice, the Grantee agrees to provide the FRA with a written explanation and an alternative program for ensuring the use of contractors owned and controlled by socially and economically disadvantaged individuals.

#### 12. **Metric System:**

The Grantee agrees to use the metric system of measurement in its Project activities to the extent practicable, in conformance with applicable regulations, guidelines, and policies that U.S. DOT or FRA may issue. The Metric Conversion Act of 1975, as amended by the Omnibus Trade and Competitiveness Act of 1988 (15 U.S.C. 205), designates the metric system of measurement as the preferred system of weights and measures for United States trade and commerce, and it requires that each agency use the metric system of measurement in its procurements, grants, and other business-related activities, except to the extent that such use is impracticable or likely to cause significant inefficiencies or loss of markets to U.S. firms.

#### 13. **Patent Rights:**

a. If any invention, improvement, or discovery of the Grantee or any of its third party contractors is conceived or first actually reduced to practice in the course of or under this Project, and that invention, improvement, or discovery is patentable under the laws of the United States of America or any foreign country, the Grantee agrees to notify FRA immediately and provide a detailed report. The rights and responsibilities of the Grantee, third party contractors and FRA with respect to such invention, improvement, or discovery will be determined in accordance with applicable Federal laws, regulations, policies, and any waiver thereof.

b. If the Grantee secures a patent with respect to any invention, improvement, or discovery of the Grantee or any of its third party contractors conceived or first actually reduced to practice in the course of or under this Project, the Grantee agrees to grant to FRA a royalty-free, non-exclusive, and irrevocable license to use and to authorize others to use the patented device or process for Federal Government purposes.

c. The Grantee agrees to include the requirements of the "Patent Rights" section of this Agreement in its third party contracts for planning, research, development, or demonstration under the Project.

#### 14. **Rights in Data and Copyrights:**

a. The term "subject data" used in this section means recorded information, whether or not copyrighted, that is developed, delivered, or specified to be delivered under this Agreement. The term includes graphic or pictorial delineations in media such as drawings or photographs; text in specifications or related performance or design-type documents; machine forms such as punched cards, magnetic tape, or computer memory printouts; and information retained in computer memory. Examples include, but are not limited to: computer software, engineering drawings and associated lists, specifications, standards, process sheets, manuals, technical reports, catalog item identifications, and related information. The term does not include financial reports, cost analyses, and similar information incidental to Project administration.

b. The following restrictions apply to all subject data first produced in the performance of this Agreement:

- 1) Except for its own internal use, the Grantee may not publish or reproduce such data in whole or in part, or in any manner or form, nor may the Grantee authorize others to do so, without the written consent of FRA, until such time as FRA may have either released or approved the release of such data to the public; this restriction on publication, however, does not apply to grant agreements with academic institutions.
- 2) As authorized by 49 C.F.R. § 18.34, or 49 C.F.R. § 19.36, as applicable, FRA reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for Federal Government purposes:
  - a) Any work developed under a grant, cooperative agreement, sub-grant, sub-agreement, or third party contract, irrespective of whether or not a copyright has been obtained; and
  - b) Any rights of copyright to which a Grantee, subgrantee, or a third party contractor purchases ownership with Federal assistance.
- c. When FRA provides assistance to a Grantee for a Project involving planning, research, or development, it is generally FRA's intent to increase the body of knowledge, rather than to limit the benefits of the Project to those parties that have participated therein. Therefore, unless FRA determines otherwise, the Grantee understands and agrees that, in addition to the rights set forth in preceding portions of this section of this Agreement, FRA may make available to any FRA Grantee, subgrantee, third party contractor, or third party subcontractor, either FRA's license in the copyright to the "subject data" derived under this Agreement or a copy of the "subject data" first produced under this Agreement. In the event that such a Project which is the subject of this Agreement is not completed, for any reason whatsoever, all data developed under that Project shall become subject data as defined herein and shall be delivered as FRA may direct.
- d. To the extent permitted by State law, the Grantee agrees to indemnify, save and hold harmless FRA, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by the Grantee of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under this Agreement. The Grantee shall not be required to indemnify FRA for any such liability arising out of the wrongful acts of employees or agents of FRA.
- e. Nothing contained in this section on rights in data, shall imply a license to FRA under any patent or be construed as affecting the scope of any license or other right otherwise granted to FRA under any patent.
- f. The requirements of this section of this Agreement do not apply to material furnished to the Grantee by FRA and incorporated in the work carried out under this Agreement, provided that such incorporated material is identified by the Grantee at the time of delivery of such work.
- g. Unless FRA determines otherwise, the Grantee agrees to include the requirements of this section of this Agreement in its third party contracts for planning, research, development, or demonstration under the Project.

**15. Acknowledgment of Support and Disclaimer:**

- a. An acknowledgment of FRA support and a disclaimer must appear in any grantee publication, whether copyrighted or not, based on or developed under the Agreement, in the following terms:

"This material is based upon work supported by the Federal Railroad Administration



under a grant/cooperative agreement, dated ." (Fill-in appropriate identification of grant/cooperative agreement)

b. All grantee publications must also contain the following:

"Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the Federal Railroad Administration and/or U.S. DOT."

c. The Grantee agrees to cause to be erected at the site of any construction, and maintain during construction, signs satisfactory to FRA identifying the Project and indicating that FRA is participating in the development of the Project.

#### **16. Reprints of Publications:**

At such time as any article resulting from work under this Agreement is published in a scientific, technical, or professional journal or publication, two reprints of the publication should be sent to FRA's Grant Manager, clearly referenced with the appropriate identifying information.

#### **17. Site Visits:**

FRA, through its authorized representatives, has the right, at all reasonable times, to make site visits to review Project accomplishments and management control systems and to provide such technical assistance as may be required. If any site visit is made by FRA on the premises of the Grantee, subgrantee, contractor, or subcontractor under this Agreement, the Grantee shall provide and shall require its subgrantees or subcontractors to provide, all reasonable facilities and assistance for the safety and convenience of FRA representatives in the performance of their duties. All site visits and evaluations shall be performed in such a manner as will not unduly delay work being conducted by the Grantee, subgrantee, contractor, or subcontractor.

#### **18. Safety Oversight:**

To the extent applicable, the Grantee agrees to comply with any Federal regulations, laws, or policy and other guidance that FRA or U.S. DOT may issue pertaining to safety oversight in general, and in the performance of this Agreement, in particular.

#### **19. Civil Rights:**

The Grantee agrees to comply with all civil rights laws and regulations, in accordance with applicable Federal directives, except to the extent that the FRA determines otherwise in writing. These include, but are not limited to, the following: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) (as implemented by 49 C.F.R. Part 21), which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex, (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 1601-1607), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§ 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title V111 of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), as amended, relating to

nondiscrimination in the sale, rental or financing of housing, (i) 49 U.S.C. § 306, which prohibits discrimination on the basis of race, color, national origin, or sex in railroad financial assistance programs; (j) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance was made; and (k) the requirements of any other nondiscrimination statute(s) which may apply to the Grantee.

## 20. Americans With Disabilities Act:

The Grantee agrees to utilize funds provided under this Agreement in a manner consistent with the requirements of the Americans With Disabilities Act of 1990, as amended (42 U.S.C. § 12101 et seq.).

## 21. Environmental Protection:

a. All facilities that will be used to perform work under this Agreement shall not be so used unless the facilities are designed and equipped to limit water and air pollution in accordance with all applicable local, state and Federal standards.

b. The Grantee will conduct work under this Agreement, and will require that work that is conducted as a result of this Agreement be in compliance with the following provisions, as modified from time to time, all of which are incorporated herein by reference: section 114 of the Clean Air Act, 42 U.S.C. 7414, and section 308 of the Federal Water Pollution Control Act, 33 U.S.C. 1318, and all regulations issued thereunder. The Grantee certifies that no facilities that will be used to perform work under this Agreement are listed on the List of Violating Facilities maintained by the Environmental Protection Agency ("EPA"). The Grantee will notify the Administrator as soon as it or any contractor or subcontractor receives any communication from the EPA indicating that any facility which will be used to perform work pursuant to this Agreement is under consideration to be listed on the EPA's List of Violating Facilities; provided, however, that the Grantee's duty of notification hereunder shall extend only to those communications of which it is aware, or should reasonably have been aware. The Grantee will include or cause to be included in each contract or subcontract entered into, which contract or subcontract exceeds Fifty Thousand Dollars (\$50,000.00) in connection with work performed pursuant to this Agreement, the criteria and requirements of this section and an affirmative covenant requiring such contractor or subcontractor to immediately inform the Grantee upon the receipt of a communication from the EPA concerning the matters set forth herein.

c. The Grantee may not expend any of the funds provided in this agreement on construction or other activities that represent an irretrievable commitment of resources to a particular course of action affecting the environment until after all environmental and historic preservation analyses required by the National Environmental Policy Act (42 U.S.C. 4332)(NEPA), the National Historic Preservation Act (16 U.S.C. 470(f))(NHPA), and related laws and regulations have been completed and the FRA has provided the Grantee with a written notice authorizing the Grantee to proceed.

d. The Grantee shall assist the FRA in its compliance with the provisions of NEPA, the Council on Environmental Quality's regulations implementing NEPA (40 C.F.R. Part 1500 et seq.), FRA's "Procedures for Considering Environmental Impacts" (45 Fed. Reg. 40854, June 16, 1980), as revised May 26, 1999, 64 Fed. Reg. 28545), Section 106 of the NHPA, and related environmental and historic preservation statutes and regulations. As a condition of receiving financial assistance under this agreement, the Grantee may be required to conduct certain environmental analyses and to prepare and submit to the FRA draft documents required under NEPA, NHPA, and related statutes and regulations (including draft environmental assessments and proposed draft and final environmental impact statements).

e. No publicly-owned land from a park, recreational area, or wildlife or waterfowl refuge of national,

state, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, state or local significance as so determined by such officials shall be used by the Grantee without the prior written concurrence of FRA. The Grantee shall assist the FRA in complying with the requirements of 49 U.S.C. §303(c).

f. The Grantee agrees to facilitate compliance with the policies of Executive Order No. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 42 U.S.C. '4321 note, except to the extent that the FRA determines otherwise in writing.

## 22. Project Completion, Audit, Settlement, and Closeout:

a. **Project Completion.** Within 90 days of the Project completion date or termination by FRA, the Grantee agrees to submit a final Federal Financial Report (Standard Form 425), a certification or summary of Project expenses, and third party audit reports, as applicable.

b. **Audits.** Each governmental Grantee agrees to undertake the audits required by 49 C.F.R. § 18.26 and OMB Circular A-128 or any revision or supplement thereto. Each non-governmental Grantee agrees to undertake the audits required by 49 C.F.R. § 19.26 and OMB Circular A-133 or any revision or supplement thereto.

c. **Remittance of Excess Payments.** If FRA has made payments to the Grantee in excess of the total amount of FRA funding due, the Grantee agrees to promptly remit that excess and interest as may be required by the "Payment by FRA" section of this Attachment.

d. **Project Closeout.** Project closeout occurs when all required Project work and all administrative procedures described in 49 C.F.R. Part 18, or 49 C.F.R. Part 19, as applicable, have been completed, and when FRA notifies the Grantee and forwards the final Federal assistance payment, or when FRA acknowledges the Grantee's remittance of the proper refund. Project closeout shall not invalidate any continuing obligations imposed on the Grantee by this Agreement or by the FRA's final notification or acknowledgment.

## 23. Right of FRA to Terminate:

a. Upon written notice, the Grantee agrees that FRA may suspend or terminate all or part of the financial assistance provided herein if the Grantee has violated the terms of this Agreement, or if FRA determines that the purposes of the statute under which the Project is authorized would not be adequately served by continuation of Federal financial assistance for the Project. Any failure to make reasonable progress on the Project or other violation of this Agreement that significantly endangers substantial performance of the Project shall provide sufficient grounds for FRA to terminate this Agreement.

b. In general, termination of any financial assistance under this Agreement will not invalidate obligations properly incurred by the Grantee and concurred in by FRA before the termination date, to the extent those obligations cannot be canceled. However, if FRA determines that the Grantee has willfully misused Federal assistance funds by failing to make adequate progress, failing to make reasonable use of the Project property, facilities, or equipment, or failing to adhere to the terms of this Agreement, FRA reserves the right to require the Grantee to refund the entire amount of FRA funds provided under this Agreement or any lesser amount as may be determined by FRA.

c. Expiration of any Project time period established for this Project does not, by itself, constitute an expiration or termination of this Agreement.

## 24. Transparency Act Requirements—Reporting Subawards and Executive Compensation (Does

**not Apply to American Recovery and Reinvestment Act Funds):**

The Grantee will insert the following clause in all first-tier subgrants of \$25,000 or more--

**a. Reporting of First-Tier Subawards.**

1) Applicability. Unless you are exempt as provided in paragraph d. of this section, you must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for subaward to an entity (see definitions in subsection e. of this section).

2) Where and when to report.

a. You must report each obligating action described in subsection a.1. of this section to <http://www.fsrs.gov>.

b. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3) What to report. You must report the information about each obligating action that the submission instructions posted at <http://www.fsrs.gov> specify.

**b. Reporting Total Compensation of Recipient Executives.**

1) Applicability and what to report. You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if—

a. the total Federal funding authorized to date under this award is \$25,000 or more;

b. in the preceding fiscal year, you received—

(1) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

(2) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

c. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 ([15 U.S.C. 78m\(a\), 78o\(d\)](#)) or [section 6104 of the Internal Revenue Code of 1986](#). (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

2) Where and when to report. You must report executive total compensation described in subsection b.1. of this section:

a. As part of your registration profile at <http://www.ccr.gov>.

b. By the end of the month following the month in which this award is made, and annually thereafter.

**c. Reporting of Total Compensation of Subrecipient Executives.**

1) Applicability and what to report. Unless you are exempt as provided in subsection d. of this section, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if—

a. in the subrecipient's preceding fiscal year, the subrecipient received—

(1) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at [2 CFR 170.320](#) (and subawards); and

(2) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

b. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 ([15 U.S.C. 78m\(a\), 78o\(d\)](#)) or [section 6104 of the Internal Revenue Code of 1986](#). (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)

2) Where and when to report. You must report subrecipient executive total compensation described in subsection c.1. of this section:

a. To the recipient.

b. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (i.e., between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

**d. Exemptions.**

If, in the previous tax year, you had gross income, from all sources, under \$300,000, you are exempt from the requirements to report:

a. Subawards,

and

b. The total compensation of the five most highly compensated executives of any subrecipient.

**e. Definitions. For purposes of this section:**

1) Entity means all of the following, as defined in 2 CFR part 25:

a. A Governmental organization, which is a State, local government, or Indian tribe;

b. A foreign public entity;

c. A domestic or foreign nonprofit organization;

- d. A domestic or foreign for-profit organization;
  - e. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.
- 2) Executive means officers, managing partners, or any other employees in management positions.
- 3) Subaward:
- a. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
  - b. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. — .210 of the attachment to OMB Circular A-133, “Audits of States, Local Governments, and Non-Profit Organizations”).
  - c. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.
- 4) Subrecipient means an entity that:
- a. Receives a subaward from you (the recipient) under this award; and
  - b. Is accountable to you for the use of the Federal funds provided by the subaward.
- 5) Total compensation means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see [17 CFR 229.402\(c\)\(2\)](#)):
- a. Salary and bonus.
  - b. Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
  - c. Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
  - d. Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
  - e. Above-market earnings on deferred compensation which is not tax-qualified.
  - f. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

## 25. Entire Agreement:

This Agreement constitutes the entire agreement between the parties. All prior discussions and

understandings concerning such scope and subject matter are superseded by this Agreement.

**26. Grant Amendments:**

Modifications to this Agreement may be made only in writing, signed by the each party's authorized representative, and specifically referred to as a modification to this Agreement.

**27. Flow Down Provisions:**

The Grantee shall include provisions to carry out the purposes of this Agreement in all contracts or grant agreements with persons who perform any part of the work under this Agreement. There shall be provisions for a further flow down of such requirements to each sub-tier contractor or grantee as required.

**28. Successors and Assignees:**

This Agreement may not be assigned without the express prior written consent of the other party.

**29. Execution:**

This Agreement may be executed in several counterparts, each of which shall be deemed an original.

**30. Severability:**

If any provision of this Agreement is held invalid, all remaining provisions of this Agreement shall continue in full force and effect to the extent not inconsistent with such holding.



# AWARD ATTACHMENTS

California High-Speed Rail Authority

FR-HSR-0037-11-01-00

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1. Statement of Work, Attachment 3
2. Quarterly Progress Report for FRA, Attachment 4

## ATTACHMENT 3

### STATEMENT OF WORK

#### California High-Speed Train System – San Francisco to San Jose Project Section:

#### Communications-Based Overlay Signal System/PTC System Project

#### BACKGROUND

On October 16, 2008, President Bush signed the Rail Safety Improvement Act of 2008 (“RSIA”) into law. RSIA reauthorized the Federal Railroad Administration’s (FRA) safety programs and reemphasized that the highest priority of FRA is to ensure the safety of our Nation’s railroad system. The Act also included a mandate that all Class I railroads and intercity passenger and commuter railroads implement positive train control (PTC) by December 31, 2015. This requirement applies to the California High-Speed Rail Authority’s (CHSRA or Grantee) San Francisco to San Jose portion of the California High-Speed Train (CAHST) System, which may include<sup>1</sup> shared use of the Peninsula Corridor Joint Powers Board’s (PCJPB) Caltrain corridor.

PTC is an advanced technologies collision avoidance system designed to monitor train location and to prevent collisions and other related safety incidents. In particular, the goals of PTC are to help prevent train-to-train collisions, speeding and overspeed derailments, incursions into track work zones, and the movement of trains through switches left in the wrong position. Through sophisticated technology, PTC is designed to keep a train under its maximum speed limit and within the limits of its authorization to be on a specific track.

CHSRA intends to establish an agreement with PCJPB who is pursuing development and implementation of Communications Based Overlay Signal System/Positive Train Control (CBOSS/PTC), which will improve rail safety, provide enhanced operational benefits for passenger rail service, and fulfill federally mandated positive train control safety improvements along the Caltrain/CAHST San Francisco to San Jose corridor. The CBOSS/PTC communication system has been specified to provide a reliable means for PTC information exchange at speeds up to 125 mph between CBOSS/PTC-equipped vehicles, wayside devices, employees-in-charge handheld devices, and the operations control center in San Jose.

The CBOSS/PTC system will prioritize the provision of the statutory PTC functionality: automatic enforcement to protect against stop signal run through, train-to-train collisions, overspeed, intrusion into work zones, and routing over misaligned switches satisfying the requirements of the RSIA. The CBOSS/PTC specification also includes a solution that will allow for improved schedule management, station stop enforcement, crossing safety improvements, and optimized operating performance.

Steps to completion of the CBOSS/PTC system include design development, final design and acceptance, material equipment manufacturing and procurement, field installation and testing,

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<sup>1</sup> A decision on construction of high-speed rail in the San Francisco to San Jose section of the CAHST system will be made only after all required environmental reviews under the National Environmental Policy Act, California Environmental Quality Act, and related laws and regulations have been successfully completed.

commissioning, and safety certification of an interoperable vital train control system. This Grant will contribute funding toward the design development of the CBOSS/PTC system and associated project administration that is necessary for the Critical Design Review (Project).

PCJPB has commenced the procurement of the CBOSS/PTC system, and proposals are currently being evaluated. PCJPB plans to award a design/procure/install system contract by third quarter of 2011. Consistent with the requirements of this Grant Agreement, the procurement will comply with the Buy America requirements contained in 49 U.S.C. § 24405(a).

## **GENERAL OBJECTIVE AND PROJECT BENEFIT**

The Grantee intends to carry out the Project through an agreement with PCJPB to complete the design development necessary for the Project. PCJPB will manage the Project and provide direct oversight over the contractor; however, the Grantee is responsible for completing the Project. CHSRA and PCJPB contemplate that the Caltrain corridor CBOSS/PTC system would be provided on all main tracks between San Francisco (milepost [MP] 0.1) and CP Lick (MP 51.6) along the San Francisco to San Jose corridor of the CAHST System. As a result of this Project, the Grantee will have the information necessary to determine the design solution that prioritizes the statutory PTC functionality: a vital overlay system that satisfies the requirement of the RSIA but may also provide improved schedule management, station stop enforcement, crossing safety improvements, and optimized operating performance.

The Project will produce a detailed design development plan for implementing PTC in the Caltrain corridor, which when constructed would provide a safer and more functional work environment while reducing costs during construction of the San Francisco to San Jose section of the CAHST System. Moreover, the development of the CBOSS/PTC product supports the CAHST schedule because the solution will be implemented in 2015, which is in advance of currently planned construction.

The work funded by this grant/cooperative agreement will identify the necessary interoperable interfaces that CHSRA must specify for its Automatic Train Control system procurement. This will reduce technical risk for CHSRA and reduce project cost contingencies for the shared corridor design and implementation.

## **DESCRIPTION OF WORK**

The major tasks and deliverables of this Project to be carried out and completed by the Grantee through the agreement with PCJPB are as follows:

- Task 1 – project execution plan and project administration (Project scope description and detailed work breakdown structure (WBS); Interoperability Coordination Plan; Design, Procurement, Installation, and Testing Management Plans and Quality Assurance/Quality Control Plan; Project Safety and Security Management Plan, Configuration Management Plan, and Risk Management Plan;

Training Plan and Project Baseline Schedule; System Engineering Plan; and related activities);

- Task 2 – development of PTC data that includes corridor mapping update, data gathering, and PTC database development;
- Task 3 – system architecture and concept design and approval (system integration and interface requirement specifications, system utility plan, and related activities);
- Task 4 – PTC Development Plan (PTCDP);
- Task 5 – system hardware and software critical design and approval (field, onboard, data communications, and back office system critical design packages including software report, software testing plan, and procedure); and
- Task 6 – PTC Product Safety Plan (PTCSP) outline.

### **Project Limits:**

This Project consists of design and development work and does not include construction. It will further development of a CBOSS/PTC system that, once implemented, will provide vital overlay of its existing wayside block signal and centralized traffic control systems on the mainline tracks between the northern terminal located at 4th and King Street Station in San Francisco and CP Lick south of San Jose.

### **Task 1: Project Administration and Project Execution:**

The Grantee, through agreement with PCJPB, shall oversee Project administration and execution. PCJPB shall review contractor's key personnel resumes and approve the contractor's Project organization structure, which addresses relationships among the PCJPB Caltrain corridor project management team, contractor's project team, and third parties.

PCJPB will provide track access training material for all personnel participating in the design development phase of the Project on the PCJPB standards and Roadway Worker Protection and will conduct proficiency tests.

The Grantee, through agreement with PCJPB, shall submit for FRA's review and approval the Project Execution Plan, which will demonstrate the work scope, baseline budget, schedule, its precise execution methods, and the administration processes and procedures, and include the following:

- Project scope description and its WBS for delivery of the CBOSS/PTC system;
- Development and approval of the Contractors' Contract Deliverables Requirements List (CDRL);
- Development and approval of the Project Integrated Baseline Schedule;
- Integrated Work Plan;

- Interface Management Plan;
- Quality Assurance and Control Plan;
- Health and Safety Plans;
- Risk Management Plan that addresses project risk identification, assessment, evaluation, and mitigation process; Project risk register;
- PTC Safety Program to achieve Caltrain corridor PTC system certification;
- Caltrain System Safety Security Management Plan;
- Engineering Management Plan;
- Procurement Management (Material and subcontract) and Material assignment schedule (MAS);
- Testing and Commissioning Plan;
- System Cutover and Implementation Plan;
- Project Controls Plan (Budget/Cost, Schedule, Change Management);
- Configuration Management System;
- Training Plan;
- System Engineering Plan; and
- Interoperability Coordination Plan

The Grantee, through agreement with PCJPB, shall complete the specification and system design for PTC, giving priority to the PTC statutory functions (prevent train to train collisions, prevent overspeed derailments, protect road workers [operating within the limits of their authority], prevent movement of train through misaligned switch, and interoperate with other railroads PTC systems).

## **Task 2: PTC Data Management**

PTC Data Management is actual development of a PTC database and ongoing effort of managing PTC data. To meet FRA's safety requirements and to ensure the implementation of the safest possible CBOSS/PTC system, the Grantee, through agreement with PCJPB, shall develop or cause to be developed a reliable and accurate CBOSS/PTC database with spatially enabled maps of all railroad components relevant to rail operations. This CBOSS/PTC database will contain information including but not limit to railroad subdivisions, track centerlines, track gradients, control points, switches, mileposts, grade crossings, curves, time table speed limits, turnout speeds, clearance/fouling points, operational constraints, passenger platforms, work zone limits, etc. The data from the database would be loaded into the back office server and onboard computers within locomotives and cab cars. The database must be accessible in a format that works in the CBOSS/PTC system and can be plainly understood by those who will operate, maintain, and update the data in the future. The CBOSS/PTC database must be compatible for all railroads, both freight and passenger, since the railroads operate on each other's territories and share tracks.

The database must have up-to-date mapping to establish the indispensable foundation for a CBOSS/PTC system. To accomplish this, the Grantee will ensure current PCJPB track charts and composite maps from San Francisco to San Jose or Gilroy are updated with high-accuracy track centerline stationing and mileposts and establishment of coordinates (latitude and longitude) for all required CBOSS/PTC data points. The track charts, composite maps, and operating characteristics will allow the vital CBOSS/PTC database to be established and maintained as a CBOSS/PTC “controlled” document and to ensure the data meets or exceeds the minimum requirements of FRA Part 236, Subpart I – Positive Train Control system.

### **Task 3: System Architecture and Concept Design**

The Grantee, through agreement with PCJPB, shall complete or cause to be completed the Preliminary Design, which shall represent the architecture of hardware and software elements and their interfaces both internal and external to the appropriate level of detail as defined by FRA. Comprehensive product specifications are to be included as well as Interface Control Documents that establish how the design elements connect and work with one another. Successful completion of the Preliminary Design Reviews provides assurance that the follow-on work to develop the Critical Design Review packages can be commenced with minimum risk.

Before Preliminary Design begins, a site survey of the Center Control Facility and signal and grade crossing equipment enclosures shall be performed to verify that the configuration of the signal system corresponds to the current (at the time of survey) as-built information for all locations where Caltrain CBOSS/PTC system equipment will be needed.

The Preliminary Design documentation will provide the basis for an initial evaluation of the System’s operational performance and its reliability and availability. A suite of approved engineering, design, and quality assurance plans governs the entire design process.

### **Task 4: Caltrain PTC Development Plan**

The Grantee, through agreement with PCJPB, shall develop or cause to be developed a Caltrain corridor PTCDP in accordance with FRA’s regulation at 49 C.F.R. 236.1015. The PTCDP shall consist of a detailed description of the CBOSS/PTC system itself and a Concept of Operations document describing the use of CBOSS/PTC for railroad operations in this corridor. Any supporting materials, including development-related deliverables, will be included as part of the PTCDP.

### **Task 5: System Hardware and Software Critical Design and Approval**

The objective of the Critical Design Phase is to define at a detailed level each type of element that makes up the system, both from a hardware and software (including data) perspective. The detailed definition of element types and the interfaces that join them allows functional and system operating performance verification to be achieved.

The Grantee through the agreement with PCJPB shall complete or cause to be completed the Critical Design Review (CDR) package, which includes updated analyses demonstrating that system performance, including operating, reliability, availability, and maintainability, will meet the contract requirements and that equipment layout information is acceptable for all installation locations and each type of vehicle. Verification of the design is typically done within simulated equipment environments and/or by document review. Successful completion of the CDR allows Final Design efforts to be commenced for all installation locations and train types following the CDR accepted element type designs at minimum program risk.

The Grantee, through agreement with PCJPB, shall complete the specification and system design for PTC giving priority to the PTC statutory functions (prevent train-to-train collisions, prevent over speed derailments, protect road workers, operating within the limits of their authority, prevent movement of train through misaligned switch, and interoperate with other railroads PTC systems).

### **Task 6: PTCSP Outline**

The Grantee, through agreement with PCJPB, shall develop or cause to be developed the CBOSS/PTC PTCSP in accordance with the requirements of 49 C.F.R Part 236 regulations pertaining to the PTC Safety Plan. Since the PTCSP must be developed to address the complete system, baseline product safety management activities addressing product-specific or product-related issues shall be provided that describes how the CBOSS/PTC system will be safely supported and operated. The PTCSP Outline shall focus on the following areas:

- The description of the system architecture that satisfies the safety requirements. The system architecture documentation shall describe both hardware and software aspects.
- A list of system components and their physical relationship within the system. Safety-critical functions performed by the system shall be identified.
- The description of hazard assessment and mitigation; subsystem and system hazard analyses process.
- Summary-level description of major tasks and activities of system safety management and system safety engineering required to identify, evaluate, and eliminate/control hazards.
- Major system safety program milestones.

The PTCSP shall be developed so as to be consistent with the Notice of Product Intent (NPI) filed by PCJPB for the Caltrain corridor, and the PTCDP that will be prepared and submitted after the notice to proceed is issued to PCJPB's contractor because it requires Contractor input and support.

## **PROJECT SCHEDULE**



<b>WBS ID</b>	<b>Task Descriptions</b>	<b>Complete Date</b>
	PCJPB Award CBOSS/PTC Contract	Aug. 2011
1818-01-980	Task 1: Complete Project Administration and Project Execution	Oct. 2011
1818-01-150	Task 2: Complete PTC data mapping and PTC critical data verification	Dec. 2011
1818-01-110	Task 3: Complete and Approve System Architecture and Concept Design	Jan. 2012
1818-01-180	Task 4: Submit PTCDP	Nov. 2011
1818-01-120/130	Task 5: Complete and Approve Critical Design	Aug. 2012
1818-01-820	Task 6: Submit PTCSP outline	Aug. 2012

**Schedule of Work:**

The period of performance for the above work shall begin in August 2011 and end August 2012.

**Prerequisites:**

1. Provisional approval of PCJPB PTCIP and PTCNPI issued on September 30, 2010.
2. PCJPB PTCIP progress report submitted on March 25, 2011.

**PERFORMANCE OBJECTIVES AND DELIVERABLES**

This Project is being undertaken because development and ultimately installation of the CBOSS/PTC system will reduce cost and risk for the high-speed rail and other operations on the corridor and will contribute to eventual implementation of future high-speed rail service by ensuring signal priority as well as throughput and worker safety protections by creating the work windows necessary for construction of California’s high-speed train project while passenger and freight rail service continues to operate.

Deliverables by Task are listed in the following:

**Task 1: PTC System Project Administrative and Project Execution**

1. Approved Project Org. Chart
2. Interoperability Coordination Plan;
3. System Engineering Plan;
4. Contractor’s Project Execution Plans:
  - a. Project Scope Description and its WBS;
  - b. Contractors’ Contract Deliverables Requirements List (CDRL);

- c. Project Integrated Baseline Schedule;
- d. Integrated Work Plan;
- e. Interface Management Plan;
- f. Quality Assurance and Control Plan;
- g. Health and Site Safety Plan;
- h. Risk Management Plan & Risk Register;
- i. Caltain System Safety Security Management Plan;
- j. Engineering Management Plan;
- k. Procurement Management Plan and Material Assignment Schedule;
- l. Testing and Commissioning Plan;
- m. System Cutover and Implementation Plan;
- n. Project Controls Plan (Budget/Cost, Schedule, Change Management);
- o. Configuration Management System; and
- p. Training Plan.

### **Task 2: PTC Data Management**

1. Outlined Data Management Plan.
2. Updated plans including maps and track charts with relevant CBOSS/PTC track, signal, and operation data.
3. Outline of standards and requirements for database infrastructure.

### **Task 3: System Architecture and Concept Design and Approval**

1. Preliminary design package – vehicle
  - a. Vehicle subsystem architecture;
  - b. Vehicle subsystem layouts for revenue cars, locomotives, and work trains;
  - c. Vehicle hardware designs;
  - d. Vehicle software designs including on-board database;
  - e. Vehicle interface designs; and
  - f. Vehicle human interface design.
2. Preliminary design package –wayside

- a. Wayside subsystem architecture and layout;
  - b. Wayside subsystem hardware designs;
  - c. Wayside subsystem software & database designs;
  - d. Wayside subsystem interface designs; and
  - e. Wayside subsystem installation drawings including transponder placement, if used.
3. Preliminary design package –wireless network
- a. Wireless network architecture;
  - b. Wireless network system design and layout;
  - c. Radio coverage design;
  - d. Radio licensing requirements;
  - e. Data coding, message structure, protocol;
  - f. Wireless network back-haul and other network and network interface designs;
  - g. Data communications system architecture; and
  - h. Data communications system layout.
4. Preliminary design package – back-office subsystem(s)
- a. Office system architecture;
  - b. Office equipment layouts at ROCS;
  - c. Office hardware designs;
  - d. Office software designs;
  - e. Office database designs;
  - f. Office interface designs; and
  - g. Office human interface design.
  - h. ROCS – CBOSS/PTC functional design;
  - i. ROCS – CBOSS/PTC interface design; and
  - j. ROCS – CBOSS/PTC human interface design.

#### **Task 4: Caltrain Corridor PTC Development Plan**

- 1. Caltrain Corridor PTCDP

#### **Task 5: Critical Design and Approval**

1. Critical design package –vehicle (each type of locomotive and train end)
  - a. Vehicle subsystem architecture;
  - b. Vehicle subsystem layouts for revenue cars, locomotives, and work trains;
  - c. Vehicle hardware designs;
  - d. Vehicle software designs including onboard database;
  - e. Vehicle interface designs; and
  - f. Vehicle human interface design.
2. Critical design package –wayside (each type of wayside location)
  - a. Wayside subsystem architecture and layout;
  - b. Wayside subsystem hardware designs;
  - c. Wayside subsystem software & database designs;
  - d. Wayside subsystem interface designs; and
  - e. Wayside subsystem installation drawings including transponder placement, if used.
3. Critical design package –wireless network
  - a. Wireless network architecture;
  - b. Wireless network system design and layout;
  - c. Radio coverage design;
  - d. Radio licensing requirements;
  - e. Data coding, message structure, protocol;
  - f. Wireless network back-haul and other network and network interface designs;
  - g. Data communications system architecture; and
  - h. Data communications system layout.
4. Critical design package –back-office server(s)
  - a. Office system architecture;
  - b. Office equipment layouts at ROCS;
  - c. Office hardware designs;
  - d. Office software designs;
  - e. Office database designs;
  - f. Office interface designs; and
  - g. Office human interface design.
  - h. ROCS – CBOSS/PTC functional design;

- i. ROCS – CBOSS/PTC interface design; and
- j. ROCS – CBOSS/PTC human interface design.

**Task 6: Outline JPB PTC Product Safety Plan**

- 1. Preliminary draft of outline PTC Product Safety Plan

**PROJECT ESTIMATE/BUDGET**

The total estimated cost of the Project (CBOSS/PTC Development Phase) is \$20,000,000, for which FRA will contribute an estimated 80% of the total cost but not more than \$16,000,000. Any additional expense required beyond that provided in this grant/cooperative agreement to complete the Project shall be borne by the Grantee. The Project cost summary by Task is described in the table below:

<b>WBS ID</b>	<b>Task Descriptions</b>	<b>US\$ (Millions)</b>
	PCJPB Award CBOSS/PTC Contract	
1818-01-980	Task 1: Project Administration and Project Execution	1.30
1818-01-150	Task 2: PTC data management development	0.80
1818-01-110	Task 3: System architecture and Concept Design	2.07
1818-01-180	Task 4: Caltrain Corridor PTCDP	0.45
1818-01-120/130	Task 5: PTC system hardware and software Critical Design	10.57
1818-01-820	Task 6: Caltrain Corridor PTCSP outline	0.85
1818-01-999	CHSRA and JPB Project Management and Oversight	3.30
1818-01-940	Project Contingency*	0.66
	<b>Total Project cost</b>	<b>20.00</b>

\* The total for project contingency is the aggregate of individual task contingencies.

**CBOSS/PTC System Project – Development Phase (FRA Grant)**

FRA (80% of project cost):	\$ 16,000,000
Grantee Contribution - State Prop 1B & Local funds (20% of project cost):	\$ 4,000,000
<b>Total Project Cost</b>	<b>\$ 20,000,000</b>

**PROJECT COORDINATION**

### Coordination with other Railroads:

The Caltrain/CAHST San Francisco to San Jose corridor is host to the following tenant railroads and the PTC equipment on these operators' trains must be interoperable with the Caltrain and CAHST wayside system:

South of Quint Street lead interconnects with:

- Union Pacific Railroad (UPRR)

South of CP Coast, Caltrain interconnects with:

- Amtrak and California Department of Transportation (Caltrans)
- Capital Corridor Joint Powers Authority
- San Joaquin Regional Rail Commission, managing agency for Altamont Commuter Express (ACE)

The Caltrain services operate as a tenant railroad on a portion of track owned by UPRR between CP Lick and Gilroy Station, and will require interoperability with the UPRR. The freight railroads will provide for the core requirements of PTC, however, they also have specific needs such as energy management, train health status and train dynamics management that are not required for interoperability from a tenant railroad and regulatory perspective.

The Caltrain/CAHST San Francisco to San Jose corridor PTC system will consist of an existing Automatic Block Signal (ABS) system and Centralized Traffic Control (CTC), which will be supplemented by the addition of a vital communications-based system designed to be interoperable with V-ETMS. Caltrain corridor tenant railroads will be utilizing V-ETMS onboard equipment.

The Caltrain/CAHST San Francisco to San Jose corridor PTC system will be designed, built, tested and placed into service as part of the PTC system proposals currently under review, one of which will be selected and awarded by PCJPB in August 2011. Various provisions of the winning proposal and its associated contract will be used as the vehicle to accomplish the requirements of this SOW. The PTC system design that PCJPB intends to implement is outlined in PCJPB's PTC Notice of Product Intent (NPI).

The design requirements include specific requirements for interoperability between the Caltrain corridor/CAHST San Francisco to San Jose project section's PTC system and the PTC technology used by the tenant railroads, V-ETMS. The Grantee, through agreement with PCJPB, will manage these commitments to result in a fully interoperable PTC system.

### Coordination with FRA

The Grantee, through agreement with PCJPB, shall maintain a close relationship with FRA during the CBOSS/PTC development and implementation phases. Informal presentations, discussion and draft documents should be provided to FRA to receive guidance and endorsement of the processes being used for meeting FRA safety regulations.

### Coordination with PCJPB

The Project is proposed to be funded by Federal, State (non-Prop 1A), and local sources, including the FRA High-Speed Intercity Passenger Rail funds being provided through this Agreement. PCJPB is the railroad owner and operator. CHSRA is the Grantee and the funding partner with FRA for the Project. CHSRA and PCJPB will enter into a separate cooperative or joint development agreement to complete the Project (CHSRA/PCJPB Agreement). CHSRA will administer this Grant Agreement, process reimbursements, monitor the Project, and provide status reports as needed to FRA. Through the CHSRA/PCJPB Agreement, the PCJPB will be responsible for managing the Project and will work directly with the Grantee to provide any information requested by FRA.

## **PROJECT MANAGEMENT**

The Grantee intends to perform all Project Management (PM) services described in this Section through the CHSRA/PCJPB Agreement but remains ultimately responsible for ensuring that the following PM services are carried out. The Grantee's costs for its share of PM services may be chargeable against the Total Project Cost.

**Project Execution Plan (PEP)** – The PEP and Project System Engineering Plan submitted by PCJPB's Contractor as described in the Task 1 above shall be reviewed and approved. Project execution planning is a continuous, iterative process, and PEP is intended to be a living document that will be revised periodically to fully describe evolving aspects or phases of the project.

**Contract Deliverable Requirement List (CDRL)** –The selected contractor's CDRL will be reviewed and approved within 45 days of NTP. The CDRL shall be consistent with and support the project Baseline Schedule and reflect the relationship with the project WBS. The CDRL is a living document and is required to be updated to reflect any changes to the work and to be expanded corresponding to design, analysis, and test-related documents as the project evolves. Approved CDRL will be used as a tool for tracking and monitoring deliverable and submittal status.

**Design Review and Approval** – During the evolution of design, the Grantee, through agreement with PCJPB, will monitor the Contractor's efforts to determine the degree to which objectives of the Contract are being achieved through the use of design reviews and audits. The Contractor must establish validity, compatibility, and conformance with interface requirements, through the performance of system design demonstrations, at the physical, functional, and operational program levels. Design reviews, audits, and inspections shall be conducted jointly by PCJPB, through the Grantee, and the PCJPB Contractor.

**Risk Register** – All credible risks shall be recorded and evaluated in the risk register. The risk register shall be continually updated to indicate newly identified risks as well as risks that are considered closed. The Contractor shall submit its risk register as part of the Monthly Progress Report submittal.

**Change Management** –A formalized process and procedure for identifying and evaluating trends (a deviation from the established baseline) for budget or schedule throughout the life of the project shall be established so that timely appropriate action can be taken by the project team without cost or wasted effort. The essence of cost-trending is timeliness rather than precision, enabling PCJPB and the Contractor to make timely decisions that can influence the direction of



project costs. A Trend Report, which identifies scope, cost, and schedule impact for each trend, shall be submitted by the Contractor and reviewed by PCJPB and the Grantee. Trends, which are identified and approved by PCJPB for scope changes, will be processed as a Change Order. The Contractor will identify which changes and trends are attributable to the Owner/Project and which are at no-cost to the project.

Project Forecast – The entire project shall be periodically reevaluated to ensure that all elements of the project properly interrelate and that the forecasted overall project cost and schedule reflect the best, most current judgment of the project team. The objectives of a project forecast are to evaluate the current status of the total project cost (to-date and to-go) and the project schedule to determine critical items for review and action and to provide a sound basis for future project control. Project forecast typically includes budget, schedule and scope change reviews, escalation, contingency analyses, etc.

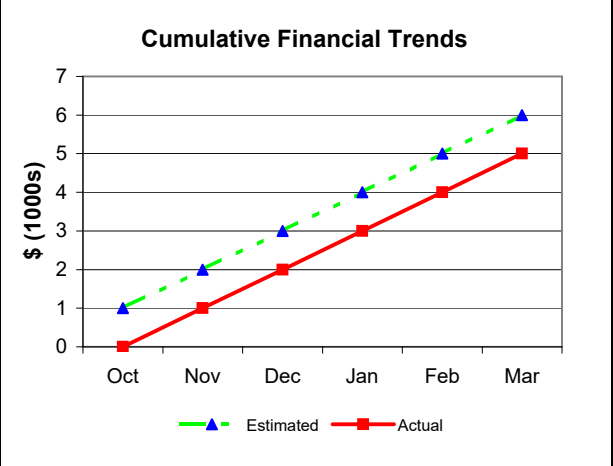
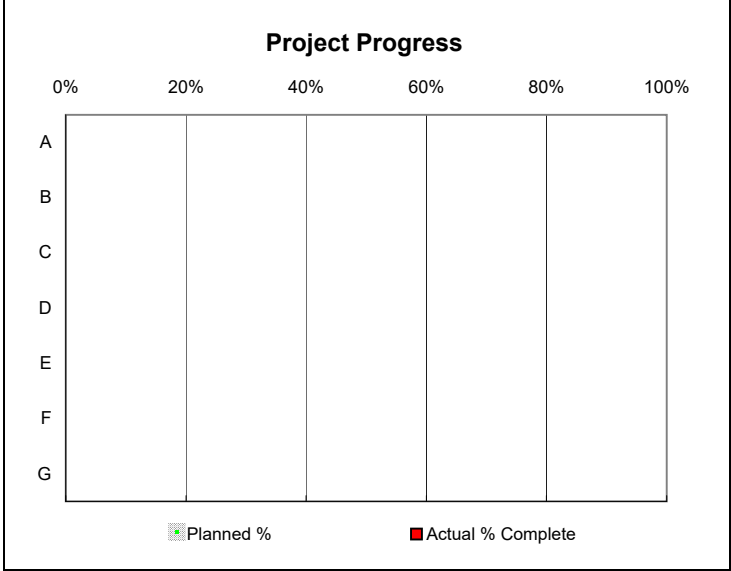
Monthly Progress Report – Contractor's Monthly Progress and Performance Report highlights key/major events accomplished, critical project issues (areas of concern), and proposed corrective actions (including PCJPB's actions), project major milestones planned versus actual/forecast, key milestones and/or events for the next month. The monthly report shall include discipline highlights and a table showing plan versus actual progress for the development phase of the project. If significantly behind plan, the report shall include a brief explanation as to why progress has fallen behind and what corrective action is in progress or being planned to recover. Emphasis should be placed on addressing current events impacting the execution of the work and the proposed work around. An Overall Total Project Cost Summary that reflects total contract value to-date, contract payment status, Project Management Schedule along with critical path analyses, Project Change Log, Quality Compliance Report, and Safety Report and Risk Register shall also be part of monthly report submittal. PCJPB shall submit a project Monthly Progress Report to Grantee in support of Grants management and reporting.

**Quarterly Progress Report for FRA**

Grant No. WBS No. Description Grantee Manager: FRA Manager:	Performance Progress		Financial Progress	
	Period Ending:		Funding Level:	\$0.00
	Start Date:		Expended:	\$0.00
	End Date:		Remaining:	\$0.00
		% Expended:	0%	

Project Description:

Significant Accomplishments This Period:



\$1000s	Oct	Nov	Dec	Jan	Feb	Mar
Estimated	1	2	3	4	5	6
Actual	0	1	2	3	4	5
Monthly		1	1	1	1	1

Milestones and Deliverables:	Start	Planned Completion	Revised Completion	Actual Completion	Planned %	Actual % Complete
A						
B						
C						
D						
E						
F						
G						

Technical/Cost/Schedule Problems:

Work Planned for Next Period: