IL HSR Tier 1 North Early Span Fabrication Package

The Union Pacific Railroad (UPRR) will issue a Request for Proposal (RFP) for the acquisition of material, and fabrication and delivery of bridge materials to the UPRR Bridge 92.12 Joliet Subdivision over the Vermillion River, 0.4 miles north of Pontiac, IL. Delivery of completed spans expected NLT May 31, 2012.

Two (2) - 75' long through plate girder ballast deck skewed spans including fixed and expansion bearings are required for "drop-in" span replacement. Basic specifications as follow:

- Overall length of Bridge 92.12 is 150'.
- Girders are welded built-up sections.
- Girder webs are PL 3/4 x 54 x 75' 0"(FCM).
- Girder top flanges are PL 3 x 18 x 75'0".
- Bottom flanges are PL 3 x 24 x 75'0"(FCM).
- Centerline to centerline of girders is 11' 3".
- End floorbeams are W24 x 68 (FCM).
- Interior floorbeams are W24 x 55(FCM).
- All member connections are bolted.
- Ballast pans are 5/8" thick.
- Holes for walkway brackets (supplied by others) are to be shop-drilled.
- Estimated weight of one TPG span (not including bolts) is 159,664 LB. (79.9 Ton).
- The two spans are identical.

Materials and fabrication must be in accordance with Chapter 15: Steel Structures of the AREMA Manual for Railway Engineering. Material shall conform to the following requirements:

- Girder Bottom Flange and Web, Beams - ASTM A709 Gr. 50W F2
- Girder Top Flange, Bearing Stiffeners and Knee Braces - ASTM A709 Gr. 50W T2
- Ballast Pans ASTM A709 Gr. 36 T2
- Cover Plates ASTM A36
- All Other Structural Steel ASTM A588
- America Recovery and Reinvestment Act of 2009 Buy America Provisions

All potential vendors wishing to bid on the project, as described above, must meet the following criteria:

- AISC Major Steel Bridge (CBR) Certification
- AISC Fracture Critical Endorsement
- Mandatory compliance with the UPRR Quality Management Plan dated March 28, 2011.
- Prefer vendors with prior construction of spans that are in accordance with AREMA Specifications.

To register and receive all specifications, prints and documents for this package, please submit electronic copies of your AISC Major Steel Bridge (CBR) Certification and AISC Fracture Critical Endorsement via email to:

Mark Sudeta
Senior Manager – Strategic Sourcing
Union Pacific Railroad
1400 Douglas St STOP 0780
Omaha, NE 68179
mssudeta@up.com

Union Pacific Railroad Company

Illinois High Speed Rail Project

Quality Management Plan

Table of Contents

Union Pacific Railroad Illinois High Speed Rail Project
Quality Management Plan

Introduction

This manual shall serve as the Quality Management Plan (QMP) for the Union Pacific Railroad Company (UPRR) activities on the Illinois High Speed Rail Project. Coupled with the Construction Agreement and other contractual agreements, this document describes the quality assurance and quality control responsibilities and defines the various roles and responsibilities for the successful completion of this project.

The Illinois Department of Transportation (IDOT) has determined that the project quality system should follow guidelines provided by the Federal Transit Administration for federally funded transit capital improvement projects. The quality system outlined in this document, applicable only for the Illinois High Speed Rail Project, is based on the fifteen elements of the FTA Quality Assurance and Quality Control Guidelines (FTA-IT-90-5001-02.1) dated February 2002.

The UPRR QMP for activities on the Illinois High Speed Rail Project establishes the documented quality system which shall be maintained to ensure project quality objectives are satisfied. The manual is comprised of five components:

- UPRR Illinois High Speed Rail Quality Management Plan Elements
- Appendix A: UPRR Illinois High Speed Rail Project Organization Chart
- Appendix B: UPRR Illinois High Speed Rail Quality Management Procedures
- Appendix C: UPRR Illinois High Speed Rail Design Criteria
- Appendix D: Forms
- Appendix E: Procurement Checklists

UPRR Illinois High Speed Rail Quality Management Plan Elements

Element 1: Management Responsibility

This element of the QMP defines the UPRR organization and the responsibilities of all levels of this organization to communicate, implement and maintain the QMP as directed by the UPRR Executive Manager. This section designates the Project Manager as having the responsibility and the defined authority to ensure that the quality policy is maintained and implemented. This section defines the persons responsible for the quality assurance functions and the delegated persons to perform those functions.

This section also delegates responsibility to verify the implementation and maintenance of the QMP to the QA Manager. The QA Manager has the responsibility to initiate action to prevent quality problems, to identify and record quality problems, to initiate solutions through appropriate channels, and to verify implementation of solutions to quality problems.

An organization chart which illustrates the UPRR organizational structure for the project included in Appendix A. This element is supported by procedures, located in Appendix B, which define detailed instruction for the implementation of the management commitments to quality and QMP maintenance.

Element 2: Documented Quality System

This element establishes the documented quality system which shall be maintained to ensure project quality objectives are satisfied. The quality system includes:

- Quality Policy
- Quality Management Plan
- Quality Management Procedures
- Quality Records

Element 2 includes the requirement for establishment of written plan procedures and instructions which are uniformly identified and controlled and are subject to periodic reviews.

The quality system requirements of this element will be extended to UPRR subcontractors and suppliers, as appropriate.

Element 3: Design Control

Element 3 of the QMP establishes the procedures which shall be maintained to control and verify the design of the project in order to ensure that the design criteria, other specified requirements, and requirements of the relevant regulatory agencies are met. Design control includes assuring that the design standards are understood, defining design interfaces among project team members, verification and validation of design elements, design review and changes as submitted to IDOT.

An important component of design control is the identification, documentation and approval of internal and external design inputs for use in performing design activities. Design criteria distribution to all project team members will be controlled and documented

At established stages, design activities will be systematically reviewed and documented. Design will be verified and validated to ensure compliance with design input requirements, preparation and configuration in accordance with project requirements and conformance to UPRR and IDOT requirements.

This element is supported by procedures, located in Appendix B, which define detailed instruction for the control of design input, output, review and documentation and Appendix C which identifies Design Criteria.

Element 4: Document Control

Control of project documents and data are established and maintained by the procedures of Element 4. The document control measures shall ensure that all relevant documents are current.

Project document control also includes authorized personnel review, distribution, storage and control of invalid and/or obsolete documents.

This element is supported by procedures, located in Appendix B, which define detailed instruction for the control of documents.

UPRR considers most engineering and design input and deliverables as quality records and are therefore covered in Element 13: Quality Records.

Element 5: Purchasing

Element 5 of the QMP establishes procedures which ensure that subcontractor and supplier services procured by UPRR are provided in accordance with UPRR standards and contractual requirements of IDOT. Subcontractors and suppliers must maintain quality programs appropriate to the work being performed and in accordance with UPRR plans and specifications.

This element assures that subcontractors and suppliers are qualified to provide the services being procured by UPRR. Also, that quality documents required from the subcontractor and /or supplier are listed in their contractual agreement and are ultimately received.

This element is supported by procedures, located in Appendix B and Procurement Checklists located in Appendix E.

Element 6: Product Identification and Traceability

Element 6 establishes procedures for the identification, handling and production control of items to prevent the use of incorrect or defective items and to ensure that only correct and acceptable items are used or installed. These procedures require that items produced by subcontractors and supplier services procured by UPRR should be physically identified and clearly marked with unique identification in accordance with UPRR standards to the fullest extent possible.

This element is supported by procedures, located in Appendix B.

Element 7: Process Control

Element 7 of the QMP provides that the production and installation processes that directly affect quality shall be performed by utilizing standard installation procedures. UPRR standards and contractual requirements require suppliers and subcontractors to identify, plan and control the production and installation processes that directly affect quality, utilize qualified personnel and maintain records of control measures and activities.

To achieve accuracy and consistency in production and installation, process control should include appropriate standards and monitoring and control of processes and product characteristics during production and installation.

Subcontractors and suppliers must maintain quality programs to ensure that work being performed is in accordance with UPRR plans and specifications and that control activity records are maintained.

This element is supported by procedures, located in Appendix B.

Element 8: Inspection and Testing

Inspection and testing procedures which verify quality are established by the procedures included in Element 8. Test requirements, acceptance criteria and test conditions are included in UPRR design documents and material specifications. The quality system requirements of this element will be extended to all UPRR subcontractors and suppliers and shall be included in UPRR contract documents.

Inspection and testing procedures included in this element extend to three areas: receipt of incoming materials and supplies, in-process activities and final acceptance and testing.

When products are delivered, verification is made that they are in conformance with UPRR and project requirements. Verification should be in accordance with Element 8 procedures and specification requirements.

In-process testing and inspection of the work will be conducted to verify conformance of an item or work activity to specified requirements or documented procedures. Both inspection and process monitoring methods will be performed, as necessary, to ensure that the specified requirements for the control of work processes and the quality of the item are being achieved throughout the duration of the work.

Final inspection and testing will ensure that all specified inspections and tests, including those specified for receipt of product or in-process work, have been carried out and the resulting data meet specifications. Final inspection and testing will be carried out and properly documented to ensure conformance of the finished product to the specifications.

Quality records resulting from inspection and testing associated with each of the three areas shall be made permanent and controlled in conformance with QMP document controls procures.

This element is supported by procedures, located in Appendix B and Procurement Checklists in Appendix E.

Element 9: Inspection, Measuring and Test Equipment

Inspection, measuring and test equipment required to perform inspection and testing activities shall be identified, controlled, calibrated and maintained in order to demonstrate the conformance of work to the specified requirements. Inspection, measuring, and test equipment used should meet the standards of accuracy for the measurements which are required. The equipment should be re-calibrated at regular intervals, with such re-calibration properly documented and records maintained.

The equipment should be properly maintained to ensure its fitness for use. When in use, the user should ensure that the environmental conditions are suitable for the use of the equipment. Requirements for test equipment are included in UPRR design documents and material specifications. The quality system requirements of this element will extend to all UPRR subcontractors and suppliers.

This element is supported by procedures, located in Appendix B.

Element 10: Inspection and Test Status

The inspection and testing status of work during production and installation shall be identified and maintained. The purpose of this is to ensure that only work that has passed required inspections and tests are accepted for installation or use.

The test and inspection status should be identified by means of markings, stamps, tags, labels, routing cards, inspections records, test software, physical location, or other suitable means. The status identification indicates the conformance or nonconformance with regard to inspections and tests performed.

This element is supported by procedures, located in Appendix B.

Element 11: Nonconformance

The procedures associated with Element 11 control nonconforming work to preclude its inadvertent use or installation. They identify how nonconforming work should be identified, documented, and evaluated to determine appropriate disposition. Nonconforming work or items should be segregated whenever possible and practical. Those affected by the nonconforming work should be notified.

The responsibility for review and authority for the disposition of nonconforming work is defined. This control provides for the identification and documentation of nonconforming work and disposition of the nonconformance. Additionally, it provides for the re-inspection of repaired, reworked and/or replaced product or work.

This element is supported by procedures, located in Appendix B.

Element 12: Corrective Action

Corrective action procedures are established and documented by Element 12 procedures. These include the investigation of the cause of nonconforming work, the corrective action needed to prevent recurrence and analysis to detect and prevent potential causes of nonconforming work.

One of four types of disposition may result from corrective actions: use-as-is, rework, repair, or scrap. The procedures supporting this element include ensuring that corrective actions are taken, their effectiveness and the identification of changes in procedures resulting from corrective action.

This element is supported by procedures, located in Appendix B.

Element 13: Quality Records

Element 13 procedures define the establishment and maintenance of quality records. These procedures identify which records should be kept, responsibility for production and collection, and responsibility for indexing, filing, storage, maintenance, and disposition of quality records.

Quality records will be maintained to show achievement of quality objectives and appropriate functioning of the quality management system. The quality system requirements of this element will extend to all UPRR subcontractors and suppliers.

Quality records will be legible and be kept in an environment to minimize deterioration and damage. Retention times and final disposition are established and recorded.

Following are examples of the types of quality records requiring control:

- Quality Management Plan and associated procedures
- Calculations
- Contract document reviews (internal and external)
- Design drawings, specifications and reports
- Inspection reports
- Test data
- Nonconformance
- Corrective actions
- Training records
- Audit reports
- Contracts

This element is supported by procedures, located in Appendix B.

Element 14: Quality Audits

Internal Audits shall be conducted to ensure that the elements of the quality system are functioning as intended. Quality audits serve as a tool to reinforce quality requirements and should address root causes of non-conformances identified during the audit.

Each audit will be scheduled and conducted by qualified quality personnel. The audits and follow-up actions will be documented and conducted in accordance with Element 14 procedures. The results of the audits will be presented to the personnel having responsibility in the area being audited. Responsible management personnel should take timely corrective action on the deficiencies found by the audit.

This element is supported by procedures, located in Appendix B.

Element 15: Training

Element 15 of the QMP establishes training requirements for all personnel performing activities affecting quality on this project. All UPRR personnel performing activities affecting quality

should be qualified on the basis of appropriate education, training, and/or experience, as required by UPRR. Appropriate training and qualification records will be provided on an as needed basis.

These minimum training requirements apply to all UPRR employees and all General Contractors specifically retained for the Illinois High Speed Rail project.

This element is supported by procedures, located in Appendix B.

Union Pacific Railroad Company
Illinois High Speed Rail

Quality Management Plan

Appendix A
Project Organization Chart

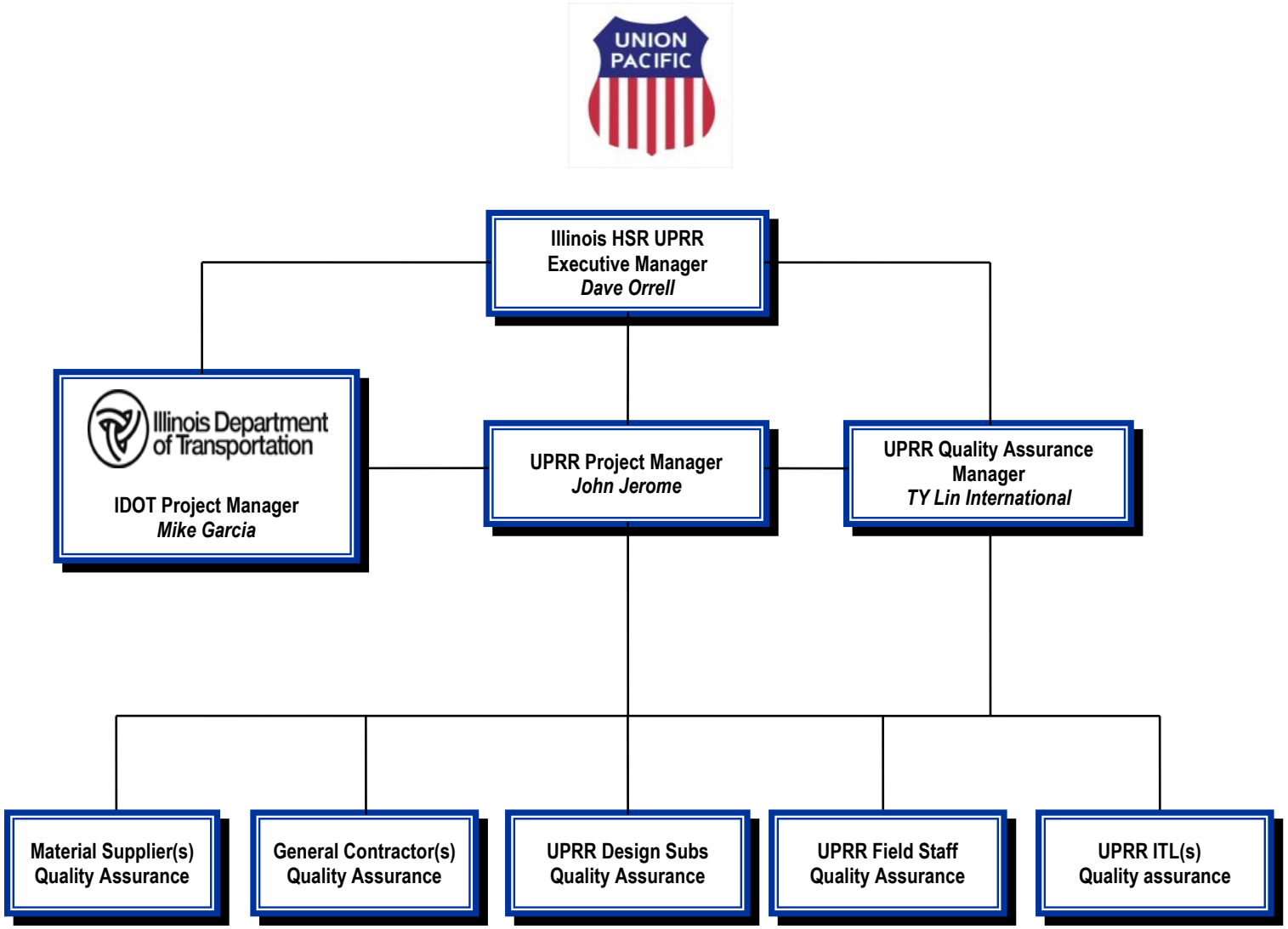

Figure 1-1

Union Pacific Railroad IL HSR Project Organization Chart

Union Pacific Railroad Company
Illinois High Speed Rail

Quality Management Plan

Appendix B
Quality Procedures

Appendix B Table of Contents

Procedure 1-1: Management Organization and Responsibility

1.0 PURPOSE AND SCOPE

This section identifies the functional organization and responsibilities to assure effective execution of the UPRR Illinois High Speed Rail QMP. The function of QA Manager is an independent verification and assessment of activities to assure UPRR's compliance with the QMP. This Quality Procedure describes the functions and responsibilities of personnel assigned to this project.

2.0 RESPONSIBILITIES

For the purposes of the UPRR Illinois High Speed Rail Project QMP, the UPRR organization shall be as defined below and illustrated in Appendix A. The UPRR Executive Manager of UPRR delegates responsibility for implementation of this QMP to the Project Manager and the QA Manager.

The roles and responsibilities of the different positions in the context of QMP are summarized below.

2.1 UPRR Executive Manager

The UPRR Executive Manager of UPRR is responsible for maintaining final authority for the implementation and maintenance of the requirements of the QMP. The UPRR Executive Manager is responsible for delegation of authority for the verification of QMP compliance to the QA Manager. The UPRR Executive Manager is also responsible for approving the UPRR Quality Procedures, which implement the QMP.

2.2 Quality Assurance Manager

The QA Manager is responsible to the UPRR Executive Manager for reviewing and accepting Quality Procedures for compliance and consistency with FTA-IT-90-5001-02.1.

The QA Manager has the authority and responsibility to perform the following activities:

- QMP training
- Identify quality problems
- Reviewing project instruction or other implementing procedures to ensure correct interpretation of the requirements set forth in the QMP.
- Conducting QA audits, surveys, and surveillance to verify implementation of the QMP (reference Element 14: Quality Audits).
- Verify implementation of specific responsibilities as described in the QMP.
- Maintain the official project quality record file.

- Coordinate periodic reviews of the QMP.

2.3 Project Manager

The Project Manager is responsible for implementation of the requirements of the QMP. The Project Manager is the primary contact with IDOT on matters including progress, budgets, schedules, changes and procedures. The Project Manager has overall responsibility and authority for the proper definition and execution of work required for the completion of his project in accordance with contractual requirements.

The Project Manager is responsible for stopping work on his project when information from the QA Manager indicates noncompliance. The Project Manager is responsible for overseeing, developing, and ensuring the technical work of personnel under his direct charge.

2.4 Project Designer

The Project Designer reports to the UPRR Executive Manager and is responsible for ensuring that all project design activities under his responsibility and oversight are carried out in accordance with the project's scope of services and design criteria. The Project Designer provides the design approval function within his own discipline and is responsible for the timely completion of the design criteria, drawings, calculations, specifications, reports, permits and other project deliverables. The Project Designer is responsible for the day-to-day design activities on the project, and is responsible for the technical work of engineers and subcontractors under his direct charge.

2.5 Technical Staff

Technical Staff are personnel who are assigned to perform work on the Illinois High Speed Rail project. They are responsible for engineering, planning, design, checking and verification functions, and shall be trained and qualified as required to perform project functions in accordance with UPRR standards.

Technical Staff also have specific project support duties as assigned by the Project Manager which support these Quality Procedures. The responsibilities include maintaining the project files, distribution of documents, drawings and reports, and coordination with the Project Team on filing, indexing, storage, retrieval and disposal of project documents and files.

2.6 Support Staff

Support Staff are clerical personnel supporting the Project Manager and/or Project Designer. They are responsible for the administrative tasks assigned by the Project Manager and/or Project Designer.

2.7 Subcontractors and Suppliers

The UPRR QA Manager will assure that all subcontractors and suppliers receive a copy of the QMP and understand their responsibilities and obligations as part of the QMP. Subcontractors and suppliers are responsible for implementation of this QMP in their area of work, for identifying and providing adequate resources to support the quality program, and for meeting contract specification requirements.

3.0 REFERENCES

3.1 Procedure 1-2: Manage Review of Quality Management Plan

3.2 Procedure 2-1: Documented Quality System

3.3 Procedure 2-2: Preparation and Control of the Quality Management Plan and Procedures

3.4 Element 3: Design Control

3.5 Element 14: Quality Audits

4.0 RECORDS

Documents generated by Element 1.0 and Procedure 1-1 shall be stored and maintained by the Project Manager and/or Project Designer, in accordance with Procedure 13-1.

5.0 ATTACHEMENTS

Appendix A: UPRR Illinois High Speed Rail Project Organization Chart

Procedure 1-2: Management Review of Quality Management Plan

1.0 PURPOSE AND SCOPE

This section identifies the functional organization and responsibilities to assure effective maintenance of the UPRR Illinois High Speed Rail QMP. This Quality Procedure describes the functions and responsibilities of personnel assigned to this project.

2.0 PERIODIC MANAGEMENT REVIEW OF THE UPRR QMP

As delegated by the UPRR Executive Manager, the QA Manager and Project Manager will perform a periodic review of this QMP to determine its effectiveness. The results of this review shall document any actions that are determined to improve the QMP. The review shall occur, at a minimum, twelve months from the date of this QMP and within twelve months of every subsequent review.

The roles and responsibilities of the different positions in the context of QMP are summarized below.

2.1 UPRR Executive Manager

The UPRR Executive Manager is the final authority for the maintenance of the requirements of the QMP. The UPRR Executive Manager may delegate authority for the maintenance of the QMP to the QA Manager as appropriate.

2.2 Quality Assurance Manager

The QA Manager is responsible to the UPRR Executive Manager for reviewing and maintaining Quality Procedures for compliance and consistency with FTA-IT-90-5001-02.1. The QA Manager has the authority and responsibility to perform periodic reviews of the QMP.

- Conducting QA audits, surveys, and surveillance to verify implementation of the QMP (Element 14.0: Quality Audits).
- Coordinate periodic reviews of the QMP.
- Coordinate any revisions to the QMP and preparation of revised provision submittals to IDOT for acceptance.

2.3 Project Manager

With the QA Manager, the Project Manager shall perform periodic reviews of the QMP. The Project Manager is responsible for implementation of any revisions to the requirements of the QMP.

2.4 Project Designer

The Project Designer is responsible for implementing the QMP design elements as directed by the Project Manager.

2.5 Subcontractors and Suppliers

The Project Manager will assure that all subconsultants are aware of any revisions and their responsibilities and obligations as part of the QMP.

3.0 REFERENCES

3.1 Element 14: Quality Audits

4.0 RECORDS

Documents generated by Element 1.0 and Procedure 1-2 shall be stored and maintained by the Project Manager and/or Project Designer, in accordance with Procedure 13-1.

5.0 ATTACHEMENTS

None

Procedure 2-1: Documented Quality System

1.0 PURPOSE AND SCOPE

This section identifies the basis for and describes the scope of the UPRR Illinois High Speed Rail Project QMP. The QMP includes the policy, organizational responsibilities and procedures as described in this Quality Procedure.

2.0 GENERAL

The QMP is based upon applicable criteria contained in FTA-IT-90-5001-02.1. The procedures contained herein reflect the requirements of the scope of work associated with the implementation of the Illinois High Speed Rail Project.

These Quality Procedures are identified and organized in sections which are numbered consistently with the applicable criteria from FTA-IT-90-5001-02.1. The UPRR QMP elements in relation to the FTA document are listed below:

FTA Element	FTA Quality Program Elements	Elements of the UPRR QMP
2.2.1	Management Responsibility	1.0
2.2.2	Documented Quality System	2.0
2.2.3	Design Control	3.0
2.2.4	Document Control	4.0
2.2.5	Purchasing	5.0
2.2.6	Product ID & Traceability	6.0
2.2.7	Process Control	7.0
2.2.8	Inspection & Testing	8.0
2.2.9	Inspection, Measuring Test Equipment	9.0
2.2.10	Inspection and Test Status	10.0
2.2.11	Nonconformance	11.0
2.2.12	Corrective Action	12.0
2.2.13	Quality Records	13.0
2.2.14	Quality Audits	14.0
2.2.15	Training	15.0

3.0 REFERENCES

Per each individual section of this QMP.

4.0 RECORDS

Quality records shall be maintained using standard forms as identified in each individual section of this QMP.

5.0 QUALITY SYSTEM ELEMENTS

The project Quality Management System is comprised of the following seven elements:

5.1 UPRR Illinois High Speed Rail Quality Policy

5.2 UPRR Illinois High Speed Rail Quality Management Plan Elements

5.3 Appendix A: UPRR Illinois High Speed Rail Project Organization Chart

5.4 Appendix B: UPRR Illinois High Speed Rail Quality Management Procedures

5.4.1 Procedure 1-1: Management Organization and Responsibility

5.4.2 Procedure 1-2: Management Review of Quality Management Plan

5.4.3 Procedure 2-1: Documented Quality System

5.4.4 Procedure 2-2: Preparation and Control of the Quality Management Plan and Procedures

5.4.5 Procedure 3-1: Control of Design Process and Input

5.4.6 Procedure 3-2: Preparation and Checking of Calculations

5.4.7 Procedure 3-3: Preparation, Checking and Review of Drawings, Specifications, and Reports

5.4.8 Procedure 4-1: Identification and Control of Quality Documents

5.4.9 Procedure 4-2: Control of Invalid and Obsolete Documents

5.4.10 Procedure 4-3: Preparation and Distribution of Meeting Minutes

5.4.11 Procedure 4-4: Preparation and Control of Correspondence

5.4.12 Procedure 5-1: Control of Purchased Items and Services

5.4.13 Procedure 6-1: Product Identification and Traceability

5.4.14 Procedure 7-1: Process Control

5.4.15 Procedure 8-1: Inspection and Testing

5.4.16 Procedure 9-1: Control of Testing Equipment

5.4.17 Procedure 10-1: Inspection and Test Status

5.4.18 Procedure 11-1: Nonconforming Work Report

5.4.19 Procedure 12-1: Corrective Action Procedures

5.4.20 Procedure 13-1: Storage and Maintenance of Quality Records

5.4.21 Procedure 14-1: Quality Audits

5.4.22 Procedure 15-1: Training

5.5 Appendix C: UPRR Illinois High Speed Rail Design Criteria

5.6 Appendix D: Quality Forms

5.6.1 Form 2-1: Controlled Document Transmittal Form
5.6.2 Form 2-2: Quality Management Plan Distribution Log
5.6.3 Form 4-1: Quality Document Log
5.6.4 Form 4-2: Meeting Attendance Record
5.6.5 Form 12-1: Nonconforming Work Report
5.6.6 Form 12-2: Nonconforming Work Report Log
5.6.7 Form 14-1: Audit Plan
5.6.8 Form 14-3: Audit Finding Report
5.6.9 Form 15-1: UPRR Training Matrix
5.6.10 Form 15-2: Training Record

5.7 Appendix E: QA/QC Checklist

Procedure 2-2: Preparation and Control of the Quality Management Plan and Procedures

1.0 PURPOSE AND SCOPE

To establish the requirements for preparation, review, approval, distribution, revision, and retention of the QMP and Quality Procedures.

Quality Procedures are developed to implement the requirements of the UPRR QMP for the Illinois High Speed Rail Project. All quality procedures developed for this project are part of, and are assembled as the QMP.

2.0 APPLICABILITY

This QMP has been developed for the Illinois High Speed Rail Project. Quality procedures herein are applicable to this project only. The effective date of the QMP is the date of approval by the UPRR Executive Manager.

3.0 FORMAT AND CONTENT OF PROCEDURES

To the extent possible, procedures shall utilize the following format (note: X = UPRR QMP section number):

Section	Heading	Content
1.0	PURPOSE AND SCOPE	A statement which identifies a standard method or basis for the performance of quality control activities.
2.0, 3.0,etc.	(Appropriate Topic Headings, as needed)	The actions or steps and applicable requirements to implement the procedure.
X.0	REFERENCES (as needed)	A list of other procedures which represent additional reference information relative to the procedure subject matter.
X.0	RECORDS (as needed)	The designation of records or documents which provide objective evidence that the requirements of the procedures have been met.
X.0	ATTACHMENTS or FORMS or both (as needed)	List of forms, checklists, review sheets, figures, flow charts, drawings, etc.

4.0 PREPARATION, REVIEW, AND APPROVAL

The QA Manager, in cooperation with the Project Manager, is responsible for the development of the Quality Management Plan. Together, they identify project activities which require a quality management procedure and for the development of scope and content. Quality management procedures shall follow the format outlined in Section 3.0 of this procedure. The QA Manager is responsible for the review of quality procedures. The UPRR Executive Manager is responsible for approval of the QMP and for submission to IDOT.

5.0 CONTROL AND DISTRIBUTION

All UPRR project team members are responsible for the use of only the latest approved QMP and associated procedures. All Quality Assurance Procedures are produced with the header as shown on this procedure. Procedure numbers correspond to the element numbers of the UPRR QMP and are numbered sequentially. Each procedure is effective on the date included in the header and shall note any revisions.

Changes to the QMP and Quality Procedures shall be controlled by date and revision number in the QMP document footer and the Appendix B: Quality Procedures header. All controlled QMP documents will be distributed by the QA Manager using Form 2-1: Controlled Document Transmittal. The QA Manager will maintain a list of QMP document holders on Form 2-2: QMP Distribution Log. QMP document holders shall acknowledgement receipt by signing and returning a copy of Form 2-1. They should then dispose of any superseded copies.

6.0 REVISION

Revisions to the QMP or to individual procedures within the QMP may be prepared. However, a revised QMP shall not normally be reissued when revisions apply only to individual procedures. UPRR will notify IDOT when the QMP and/or Procedures are revised.

Any individual within the UPRR organization may request that a revision be made to a procedure by documenting the recommended change and forwarding it to the Project Manager who shall forward to the Quality Assurance Manager for disposition.

The Initial QMP and Quality Procedures shall be dated and identified as Revision 0. All revisions to the QMP and associated Quality Procedures shall be reviewed by the QA manager, who shall assign revision numbers and reissue dates. The UPRR Executive Manager shall be responsible for approving all revisions to this QMP for submission to IDOT. The QA Manager or his designee shall be responsible for distributing and controlling revisions as noted in Section 5.0 of this procedure.

7.0 REFERENCES

Procedure 13-1, "Storage and Maintenance of Quality Records"

8.0 RECORDS

Controlled copies of the QMP and supporting Quality Procedures and any subsequent revisions to the QMP, including Forms 2-1 and 2-2 shall be filed and maintained by the QA Manager for historical reference as quality records in accordance with Procedure 13-1.

9.0 ATTACHMENTS

9.1 Form 2-1: Controlled Document Transmittal

9.2 Form 2-2: Quality Management Plan distribution Log

Procedure 3-1: Control of Design Process and Design Inputs

1.0 PURPOSE AND SCOPE

This procedure prescribes the methods for identification, documentation, approval and control of internal and external design inputs for use in performing design activities. It is anticipated that project design will be by UPRR subconsultants. It will be managed by the UPRR Project Designer or designee with day to day direction by a Subconsultant Project Designer.

2.0 RESPONSIBILITIES

Prior to the start of design, the UPRR Executive Manager , Project Manager and Project Designer shall review the applicable design input resource documents and develop the project design criteria. The design criteria are identified in Appendix C: UPRR Illinois High Speed Rail Design Criteria and controlled and maintained as a quality record. Design criteria will include identification of the UPRR and IDOT design standards and codes to be used on the project, as well as appropriate detailed design and materials specifications.

The design criteria will be identified and distributed to all project team personnel and the Subconsultant Project Designer in accordance with Procedures 4-1, 4-3 and 4-4 using Form 2-1 as appropriate. Any revisions, additions, or deletions to the design criteria will be incorporated in Appendix C with revision number and issued date noted for control purposes. They will then be distributed to the design team and Subconsultant Project Designer as by the QA Manager when so directed by the Project Designer, or designee. Any invalid or obsolete design input will be removed in accordance with Procedure 4-2.

The Project Designer is responsible for receiving and determining the applicability of any external design input documents for use on project design activities. The Project Designer is responsible for coordinating design interface internally, with subconsultants, and with IDOT, and for maintaining records of activities related to design.

3.0 REFERENCES

3.1 Procedure 4-1: Identification and Control of Quality Documents

3.2 Procedure 4-2: Control of Invalid and Obsolete Documents

3.3 Procedure 4-3: Preparation and Distribution of Meeting Minutes

3.4 Procedure 4-4: Preparation and Control of Correspondence

3.5 Procedure 13-1: Storage and Maintenance of Quality Records

4.0 RECORDS

Design input documents, both internal and external, such as letters, memos, etc., which are prepared or received by the UPRR project team shall be designated as quality records and assembled by appropriate staff and transmitted to the QA Manager for management in accordance with Procedure 13-1

5.0 ATTACHMENTS

5.1 Appendix C: UPRR Illinois High Speed Rail Project Design Criteria

5.2 Form 2-1: Controlled Document Transmittal

Procedure 3-2: Preparation and Checking of Calculations

1.0 PURPOSE AND SCOPE

This procedure establishes the requirements for preparing, checking, and processing of project supporting calculations. It is anticipated that project design will be executed by UPRR subconsultants and reviewed by the Project Designer and/or designee. As such, it is the responsibility of the subconsultant preparing project plans to determine appropriate calculation and checking procedures. Subconsultant calculation and checking procedure details should be clearly defined in their project quality plan. While it is the responsibility of the subconsultant designers to determine and define appropriate procedures, it is expected that they will, at a minimum, incorporate the following elements.

2.0 CALCULATIONS

This work will be directed by either the Project Designer or Subconsultant Project Designer or Subconsultant Project Designer, as appropriate.

2.1 Preparing Calculations

The preparation of calculations should, at a minimum, include the following:

2.1.1. Standard computation paper should be utilized for all hand calculations.

2.1.2. Each calculation should identify the project name, number, description of work, name of individual preparing the calculation, date, page number and total pages in the particular set of calculations.

2.1.3. Assumptions, design criteria, equations, available data, applicable codes, etc. should to be noted as part of each calculation.

2.1.4. Sketches should be included, as necessary, to illustrate details.

2.1.5. All computations should include explanatory notes to assure clarity.

2.1.6. Project software must be validated and verified, as necessary, prior to use in the calculations.

2.2 Check of Calculations

A checker should be assigned for checking the calculations. The checker should be an individual other than the person who performed the calculations and who is technically competent. If more than one checker is used, the calculations should identify which pages were checked by each checker.

The check should include the following items, as a minimum:

2.2.1. An accuracy check, which includes the following:

2.2.1.1. Confirming that the calculations have been properly completed and contain the required administrative information.

2.2.1.2. Confirming computational accuracy (alternative calculations may be performed).

2.2.1.3. Confirming accurate transfer of data from inputs.

2.2.2. A criteria check, which includes the following:

2.2.2.1. Verifying that the basis for engineering judgments is adequately documented.

2.2.2.2. Confirming reasonableness of assumptions and criteria.

2.2.2.3. Confirming the correct use and complete referencing of current and approved design inputs.

2.2.2.4. Verifying compliance to project technical criteria and UPRR requirements.

2.2.2.5. Evaluating the reasonableness and adequacy of results.

2.2.2.6. Confirming that the results address the purpose of the calculation.

2.2.3. The checker should identify any errors, corrections, or comments, document them as a quality record and transmit to the preparer. The preparer should resolve all comments, document and maintain the changes as a quality record document.

2.3 Processing of Completed Calculations

When all checking activities have been completed, the calculations, including the computer runs and all documents generated during the checking process shall be filed and maintained as quality records.

3.0 REVISIONS TO CALCULATIONS

Revisions to calculations should be prepared, checked, and approved by the same method as the original calculations. Checking should include the revised information's effect on the overall design, as applicable. Any invalid or obsolete calculations must be controlled in accordance with Procedure 4-2.

4.0 REFERENCES

4.1 Procedure 3-1: Control of Design Process and Design Inputs

4.2 Procedure 4-2: Control of Invalid and Obsolete Documents

4.3 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

Final calculations shall be designated as quality records, and maintained and stored by either the Project Designer or Subconsultant Project Designer, as appropriate. If

requested, copies of the calculation documents will be provided to the QA Manager.

6.0 ATTACHMENTS

None

Procedure 3-3: Preparation, Checking and Review of Design Drawings, Specifications and Reports

1.0 PURPOSE AND SCOPE

This procedure provides the methods for the control and documentation of the output of the design process. This includes the preparation and checking of design drawings, specifications, and reports and the submission for client (UPRR and/or IDOT) management review. It is anticipated that project design will be by UPRR subconsultants. While it is expected that subconsultant project quality plan will detail their drawing preparation and checking procedures, they must incorporate the following minimum elements.

2.0 GENERAL

The Project Designer will designate a format for technical drawings, the format and content of technical specifications and technical reports. The Project Designer will also determine client (UPRR) document submission requirements (normally at 30%, 60% and 90% completion).

The configuration of the design output shall be strictly controlled. All drawings shall have a standard UPRR title block and conform to any specific requirements of UPRR and IDOT. All plan sheets shall be uniquely numbered. All specifications are to follow Construction Specification Institute (CSI) format.

All project computer aided design (CAD) standards shall conform to the requirements of UPRR's computer aided design and drafting (CADD) Standards and Guidelines and Standards.

3.0 PREPARATION OF DOCUMENTS

3.1 Check of Documents

Once each document is completed in the final format (for the appropriate submission level), the preparer will provide the checker with a check print copy of the document and label as CHECK PRINT. The checker shall review the details and standard sheet check

print and shall document any comments by marking up the check print. The checker shall review the documents for constructability, operability and maintainability. The checker shall sign and date the plan sheet check print upon completion of the check.

When the check is completed, the checker shall return the check print and any documents generated during the checking process to the preparer. The preparer shall resolve all comments and make all necessary changes to the plan sheets.

The Subconsultant Project Designer shall resolve any plan comments that cannot be resolved between the preparer and the checker.

When all changes have been made to the original plan sheets, the checker shall review the corrected version against the check print to ensure that all comments have been resolved.

For specifications and reports, the Subconsultant Project Designer or designee shall be the reviewer.

3.2 Interdisciplinary Review

The Subconsultant Project Designer shall determine the need for and coordinate all interdisciplinary reviews. The interdisciplinary review shall not take the place of normal communications or exchange of design inputs between the disciplines. The interdisciplinary reviews normally occur as part of the checking of documents (as outlined above).

Interdisciplinary reviews are intended to coordinate items that are common to several disciplines. The reviewing group evaluates the document for inclusion of appropriate requirements of their technical discipline.

When the review is completed, the reviewers shall submit all comments and any documents generated during the review to the preparer. The preparer shall resolve all comments and make the necessary changes. The Subconsultant Project Designer shall resolve any comments that cannot be resolved between the reviewer and preparer.

3.3 Processing of Completed Design Document Review

When all checking activities have been completed, the design documents, including all back-up documentation and any documents generated during the checking process shall be reviewed by the Subconsultant Project Designer prior to being submitted to project management for review.

4.0 PROJECT MANAGEMENT REVIEW

4.1 Procedure

Project Management Review is a process for review of completed documents which have been checked and are submitted (at the appropriate submittal stages) as finalized documents. Each submission shall be stamped by the Subconsultant Project Designer as

"review submittal". The Project Designer will designate the appropriate review staff depending on the submission completion status and distribute the submittal to the review team. Review meetings will be scheduled by the Project Designer. Such meetings shall be documented and communications distributed in accordance with Procedures 4-3 and 4-4.

4.2 Document Review

The Project Designer or designee will review the document for compatibility with project requirements, technical accuracy, latest design criteria, incorporation of prior directions and review comments. The documents will be annotated with comments, reviewer signature and date. If comments are provided during meetings, they shall be documented in minutes conforming with Procedure 4-3.

The Project Designer shall return the review submittal to the Subconsultant Project Designer for changes and corrections necessary with communications distributed in accordance with Procedures 4-4

4.3 Document Approval

Once all comments have been resolved and final documents received, they shall be signed or initialed by the Project Designer, Project Manager and UPRR Executive Manager, as appropriate. The Project Designer will then approve reproduction and submission for procurement action.

5.0 REFERENCES

5.1 Procedure 3-1: Control of Design Input

5.2 Procedure 4-1: Identification and Control of Quality Records

5.3 Procedure 4-2: Control of Invalid and Obsolete Documents

5.4 Procedure 4-3: Preparation and Distribution of Meeting Minutes

5.5 Procedure 4-4: Preparation and Control of Correspondence

5.6 Procedure 13-1: Storage and Maintenance of Quality Records

6.0 RECORDS

All formal check prints, design review documents, and QA/QC plan preparation checklists shall be maintained by the Design Subconsultant as quality records in accordance with Procedure 13-1. If requested, copies of check prints, review documents and checklists shall be transmitted to the QA Manager.

7.0 ATTACHMENTS

7.1 Appendix C: Project Design Criteria

Procedure 4-1: Identification and Control of Quality Documents

1.0 PURPOSE AND SCOPE

This procedure provides for the control of project documents to ensure that relevant documents are current and that invalid or obsolete documents are not used inadvertently. All applicable quality records will be identified and controlled, including those of subcontractors and suppliers.

2.0 APPLICABILITY

Documentation relating to all project activity is to be prepared and maintained in accordance with this procedure. Such documentation and record maintenance includes the following areas:

- Drawings
- Specifications
- Inspection procedures
- Test procedures
- Special work instructions
- Operational procedures
- QA program and procedures

3.0 CONTROL AND DISTRIBUTION

3.1 Document Identification

All UPRR project team members are responsible for the use of only the latest approved Quality Documents. All quality documents shall be clearly identified with Project identification, date version and revision numbers.

3.2 Document Distribution

Copies of the documents will be available for effective functioning of the quality management system and distributed using Form 2-1: Controlled Document Transmittal. The QA Manager or designee will maintain all quality records. Form 4-1: Quality Document Log will be maintained to list the current version (by number or date) of quality documents required for the execution of the project, the location of the original of each document and holders of document copies. Changes should be promptly distributed to all requiring locations and the document log revised, as appropriate.

4.0 REFERENCES

4.1 Procedure 3.3: Preparation and Checking of Design Drawings, Specifications and Reports

4.2 Procedure 4.2: Control of Invalid and Obsolete Documents

4.2 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

All quality documents shall be maintained by the QA Manager or designee as quality records in accordance with Procedure 13-1.

6.0 ATTACHMENTS

Form 2-1: Controlled Document Transmittal

Form 4-1: Quality Document Log

Procedure 4-2: Control of Invalid and Obsolete Documents

1.0 PURPOSE AND SCOPE

This procedure provides the methods for the control of invalid and obsolete documents.

2.0 GENERAL

Obsolete and/or invalid documents are to be controlled by removal from all points of use. If such documents are to be retained for legal and/or record preservation purposes, they are to be clearly identified and maintained as such.

3.0 CONTROL OF DOCUMENTS

The QA Manager shall be responsible for the identification of documents which have become obsolete and/or invalid. These documents shall be removed from office filing areas and project files. Documents to be maintained for legal and/or record purposed shall be clearly marked as 'Obsolete" and maintained in conformance with Procedure 13-1: Storage and Maintenance of Quality Records.

4.0 REFERENCES

4.1 Procedure 13-1, "Storage and Maintenance of Quality Records"

5.0 RECORDS

All obsolete records to be retained shall be maintained by the QA Manager or designee as quality records in accordance with Procedure 13-1.

6.0 ATTACHMENTS

None

Procedure 4-3: Preparation and Distribution of Meeting Minutes

1.0 PURPOSE AND SCOPE

This procedure provides the methods for the preparation and distribution of meeting minutes.

2.0 GENERAL

The Project Manager will designate a format for meeting minutes.

3.0 PROCEDURE

The Project Manager shall be responsible for the preparation of meeting minutes which document all meeting discussions and guidance relative to design input and/or output. The Project Manager may delegate the responsibility to the Project Designer or other appropriate designee.

Once established, the configuration of the meeting minutes shall be identified by date, location, project number, attendees, and subject.

1.1 Meeting Attendance Sheet

All meeting attendees will be documented with their contact information on an attendance sheet similar to Form 4-2.

3.2 Meeting Minutes Content

Minutes will document all material discussed at the meeting and will include such items as status of design or construction activities, requests for information, inspection and testing results, issues or problems requiring resolution.

3.3 Meeting Minutes Distribution

Meeting minutes shall be prepared in a draft format and approved for distribution by the Project Manager or designee. Draft Minutes shall be distributed to all meeting attendees for review and comment. Any comments, additions or corrections shall be requested within five days of the issue date of the draft minutes. If comments are received, the minutes shall be revised and redistributed for review and comment for an additional five day period. If no comments are received, the minutes will be deemed approved and filed in the project files and maintained as quality documents as outlined in Procedure 13-1.

4.0 REFERENCES

4.1 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

All minutes and attendance records shall be filed by the Project Manager and/or Project Engineer and transmitted periodically to the QA Manager or designee as quality records in accordance with Procedure 13-1.

6.0 ATTACHMENTS

6.1 Form 4-2: Meeting Attendance Record

Procedure 4-4: Preparation and Control of Correspondence

1.0 PURPOSE AND SCOPE

This procedure provides the methods for the control and documentation of in and out correspondence.

2.0 GENERAL

Each project location shall have a correspondence file. Periodically, this file will be transferred to the QA Manager who shall maintain the project correspondence quality record. This file should be established and maintained in conformance with Procedure 13-1: Storage and Maintenance of Quality Records.

3.0 PREPARATION OF DOCUMENTS

In consultation with the Project Manager and Project Designer, the QA Manager or designee shall be responsible for the establishment of a project correspondence file in conformance with Procedure 13-1. The file shall contain folders for IDOT correspondence, internal correspondence, subconsultant, subcontractor, supplier correspondence and other agency correspondence

4.0 REFERENCES

4.1 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

All correspondence shall be maintained by the QA Manager, Project Manager, Project Designer and/or designee as quality records in accordance with Procedure 13-1.

6.0 ATTACHMENTS

None

Procedure 5-1: Control of Purchased Items and Services

1.0 PURPOSE AND SCOPE

This procedure establishes responsibilities and procedural methods for the procurement of items and services under the scope of the Illinois High Speed Rail Project and defined by the IDOT construction Agreement.

Procurement documents include subcontracts, drawings, specifications, letters, instructions or other documents used to define requirements for the contracting of subconsultant services.

2.0 GENERAL

The UPRR Executive Manager or designee in conjunction with the Project Manager and Project Designer shall assure that applicable design bases and other requirements necessary for adequate quality are included or referenced in documents for contracting of services.

The UPRR Executive Manager or designee shall assure that all IDOT technical requirements and UPRR quality requirements have been included in the preparation of subconsultant agreements.

Appendix E presents a series of checklists which are to be used as verification of compliance with the procurement of materials and services for the project.

3.0 RESPONSIBILITIES

The UPRR Supply Department has responsibility for the procurement activities of the project. These activities include, but are not limited to, the following:

- Subconsultant services for design, construction management, testing, and survey
- Subcontractor services for construction of new facilities and equipment or maintenance/renewal of existing ones
- Procurement of vehicles and equipment, associated capital maintenance items, and miscellaneous equipment
- Material required for all construction activities

3.0 SUBCONSULTANT SELECTION

Design subconsultants shall be selected based on a qualifications selection process. The following criteria will be considered when selecting design subconsultants and shall be documented as quality records by the QA Manager:

- Previous experience with UPRR projects.

- UPRR's previous experience with the subconsultant.
- When appropriate, prequalification(s) by IDOT for tasks for which subconsultant is being considered.
- DBE Prequalification with IDOT, as applicable.

Subconsultant agreements shall identify the need for the preparation of subconsultant quality management procedures. Quality records are required to be maintained by the subconsultant and their respective disposition requirements. The subconsultant shall maintain quality assurance records for a minimum of five years and shall submit to UPRR upon request.

4.0 PROCEDURAL REQUIREMENTS

The procurement activities associated with the Illinois High Speed Rail Project and defined by the UPRR Construction Agreement with IDOT. This agreement sets forth the standards used for processing third-party contracts, describes the activities required, defines the need for sealed bid or negotiated contracts, and designated requirements based on the dollar value of the contract and funding sources.

5.0 PROCUREMENT DOCUMENT REVIEW AND APPROVAL

The completed procurement document packages shall be reviewed by the Project Manager and Project Designer to assure that proper quality technical requirements are addressed. Any discrepancies, additions, or deletions shall be brought to the attention of the UPRR Executive Manager for inclusion in the contract documents prior to final approval. The QA Manager will review procurement document packages annually on a sampling basis.

6.0 REFERENCES

6.1 Procedure 13-1: Storage and Maintenance of Quality Records

7.0 RECORDS

The completed Procurement Packages and the QA Manager's reviews shall be considered quality documents. All quality documents shall be maintained by the QA Manager (or designee) as quality records in accordance with Procedure 13-1.

8.0 ATTACHMENTS

8.1 Appendix E: Procurement Checklists

Procedure 6-1: Product Identification and Traceability

1.0 PURPOSE AND SCOPE

This section establishes the procedures for the identification, handling and production control of items to prevent the use of incorrect or defective items and to ensure that only correct and acceptable items are used or installed. These procedures require that items produced by subcontractors and supplier services procured by the UPRR be identified and clearly marked with identification in accordance with UPRR standards to the fullest extent possible.

2.0 RESPONSIBILITIES

The roles and responsibilities of the different entities responsible for Product Identification & Traceability are summarized below:

2.1 Design Subcontractors

UPRR Design subcontractors are responsible for establishing and maintaining controls as necessary to provide identification of the Final Contract Documents under their preparation are provided to the UPRR for incorporation into the work. At a minimum each page needs to be numbered accordingly, the date of final issuance and initials of the preparer and checker must be affixed to the final documents. All subsequent revisions shall be identified by revision number & the actual date of revision issue. A copy of their procedures and controls shall be provided to the UPRR Project Designer and QA Manager for their information and future quality audits.

2.2 UPRR In-House Design Staff

The UPRR Project Designer is responsible for establishing and maintaining controls as necessary to provide identification of the Final Contract Documents under their preparation are included into the project. At a minimum each page needs to be numbered accordingly, the date of final issuance and initials of the preparer and checker must be affixed to the final documents. All subsequent revisions shall be identified by revision number and the actual date of revision issue. A copy of their procedures and controls shall be provided to the UPRR Project Designer and QA Manager for their information and future quality audits.

2.3 Material Suppliers

The UPRR Material suppliers are responsible for establishing and maintaining internal controls as necessary to provide product identifications for materials to be delivered to the UPRR for incorporation into the work. A copy of the suppliers proposed control/methods for ensuring the proper handling, storage,

product identification and an internal documented procedure for tracking such controls.

2.4 UPRR Project Quality Manager

The UPRR QA Manager shall conduct periodic quality audit reviews of the Design subcontractor's, UPRR In-House Design Staff and Material Suppliers to ensure that the product identification controls established are being implemented. Upon completion of said quality audit reviews, he shall document in writing a summary of findings and file it for future reference.

3.0 DISTRIBUTION

Upon review of the UPRR design subcontractors, material suppliers and UPRR in-house design staff quality control processes copies shall be forwarded to the UPRR Project Manager for information.

4.0 REFERENCES

5.1 Procedure 3-3: Preparation, Checking and Review of Design Drawings, Specifications and Reports

5.2 Procedure 4-4: Control of Invalid and Obsolete Documents

5.3 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

5.1 Copies of the UPRR design subcontractors, material suppliers and UPRR in-house design staff quality control processes and the UPRR QA Manager's quality audit reviews shall be considered quality documents.

5.2 All quality documents shall be maintained by the QA Manager or designee as quality records in accordance with Procedure 13-1.

6.0 ATTACHMNETS

None

Procedure 7-1: Process Control

1.0 PURPOSE AND SCOPE

This section establishes control of the production and installation processes that directly affect quality and ensure that these processes are performed by utilizing standard production and installation procedures.

2.0 POLICIES

It is the policy of the UPRR that all procurement specifications, standards & contractual obligations contain requirements for the control of the production and installation processes that directly affect quality. Each subcontractor / supplier is required to identify and establish quality control processes to assure that all specifications, standards and contractual obligations are being met for the production and installation that affect quality.

3.0 RESPONSIBILITIES

The roles and responsibilities of the different entities responsible for Process Control are summarized below:

3.1 Design Subconsultants

The UPRR Design subconsultants are responsible for establishing and maintaining project process controls for the final document production that directly affect the quality of the final product delivered to the UPRR for incorporation into the work. Each Design subconsultant needs to establish and control processes that incorporate quality checks throughout all phases of the of the Final documents production. A copy of their detailed quality control processes shall be provided to the UPRR Project Designer and QA Manager for their information & future quality audit reviews.

3.2 UPRR In-House Design Staff

The UPRR Project Designer is responsible for maintaining current UPRR project process controls for the production that directly affect the quality of the final contract documents. A copy of the current UPRR design control processes shall be provided to the QA Manager for information and future quality audits

3.3 Material Suppliers

The UPRR material suppliers are responsible to identify and establish quality control processes to assure that all specifications, standards and contractual obligations are being met for all production and installation phases that directly affect quality. A copy of the suppliers proposed quality control processes for assuring compliance with UPRR specifications, standards and contractual

obligations shall be submitted to the UPRR QA Manager for information & future quality audits.

3.4 UPRR Project Quality Manager

The UPRR QA Manager or designee shall conduct periodic quality audit reviews of the Design subcontractor's, UPRR In-House Design Staff and Material Suppliers to ensure that control processes directly affecting quality are being implemented. Upon completion of said quality audit reviews, he shall document in writing a summary of findings and file it for future reference.

4.0 REFERENCES

4.1 Procedure 3.3: Preparation and Checking of Design Drawings, Specifications and Reports

4.2 Procedure 4-4: Control of Invalid and Obsolete Documents

4.3 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

5.1 Copies of the UPRR design subcontractors, material suppliers and UPRR in-house design staff quality control processes and the UPRR QA Manager's quality audit reviews shall be considered quality documents.

5.2 All quality documents shall be maintained by the QA Manager or designee as quality records in accordance with Procedure 13-1.

6.0 ATTACHMNETS

None

Procedure 8-1: Inspection and Testing

1.0 PURPOSE AND SCOPE

This section establishes inspection and testing procedures to be implemented as necessary to verify quality. Current UPRR acceptance criteria, test requirements and test conditions are identified in the design Contract documents and Contract procurement specifications. The quality system requirements shall extend to all UPRR subcontractors and suppliers.

2.0 POLICIES

UPRR material suppliers for the Illinois High Speed Rail Project must submit a copy of their current Quality Management Plan detailing internal Inspection and Testing procedures which meet UPRR requirements for material identified in the IDOT Construction Agreement.

The Plan shall include identification of the QA Manger in charge, types of quality control tests and test frequencies, detailed Quality Assurance Procedures (including handling of nonconforming materials, retesting procedures, preventative plan to prevent nonconforming items from being transmitted), the process for submittal of all QA\QC test reports for fabricated and/or assembled materials and material certification for items out of the control of the supplier (i.e. signal wires, switch heaters, signal gates and components, etc).

For items installed in the field by UPRR subcontractors, the UPRR requires that such subcontractors are required to perform quality control testing for all components identified in UPRR contract documents. The UPRR shall contract with an Independent Testing Laboratory (ITL) to perform periodic Quality Assurance Testing for items installed in the field.

For items directly installed by UPRR forces and under their direct control (such as field welds, rail, ballast, etc) the UPRR has established quality procedures for assuring that the finished product meets their requirements.

3.0 RESPONSIBILITIES

The roles and responsibilities of the different entities responsible for Inspection and Testing are summarized below:

3.1 UPRR Material Suppliers

The UPRR material suppliers are responsible for providing a copy of their current Quality Management Plan (that details their internal inspection and testing procedures to meet the UPPR requirements), the full execution of the QMP, all specified documentation outlined in the QMP and for the filing/control of the quality records. Copies of all test reports shall be forwarded immediately to the QA Manager or designee upon completion for review.

3.2 UPRR Subcontractors

UPRR subcontractors are responsible for full compliance with all aspects of quality control inspection and testing identified in their UPRR contract. All QC inspection and testing shall be scheduled and performed by the subcontractor or representative to prevent the possibility of nonconforming items being incorporated into the work. Copies of all QC test reports shall be forwarded to the UPRR QA Manager or Project Manager, as directed by the UPRR, immediately upon completion and prior to the commencement of other subsequent work components. The UPRR shall contract with an independent test laboratory (ITL) to perform periodic Quality Assurance Testing of work items by the subcontractor. The ITL's QA Test reports shall be forwarded to the UPRR QA Manager or Project Manager, as directed by the UPRR.

3.3 UPRR Work Forces

The UPRR field foremen are responsible to assure that all work installed by UPRR forces under their direct control is in full accordance with the UPRR established quality procedures for finished product requirements. All copies of required quality assurance reports shall be forwarded to the UPRR QA Manager or Project Manager.

4.0 DISTRIBUTION

All UPRR material suppliers, subcontractors, UPRR ITL's and UPRR field foremen shall forward copies of all quality control and quality assurance testing reports to the UPRR QA Manager or Project Manager for review and control as quality records. Upon review for completeness and accuracy, copies will be distributed to the UPRR Project Manager to verify that the components of the work have been tested and that the quality requirements are being met.

5.0 REFERENCES

5.1 Procedure 13-1: Storage and Maintenance of Quality Records

6.0 RECORDS

6.1 Copies of all quality control and quality assurance tests reports from material suppliers, UPRR subcontractors, UPRR ITL's and UPRR foremen shall be considered quality documents and shall be filed/retained at the UPRR headquarters in Omaha.

6.2 Copies of all inspection and testing reports shall be considered quality documents and shall be maintained in accordance with Procedure 13-1.

7.0 ATTACHMNETS

None

Procedure 9-1: Inspection, Measuring and Test Equipment

1.0 PURPOSE AND SCOPE

This section establishes inspection, measuring and testing equipment procedures to be implemented to control, calibrate and maintain equipment in order to demonstrate conformance of the work to the specified requirements. Inspection, measuring and testing equipment should meet the standards of accuracy and shall be calibrated at regular intervals, with the re-calibration properly documented and the records maintained. The current UPRR acceptance criteria, test requirements and test conditions are identified in the design contract documents and procurement specifications. The quality system requirements shall extend to all UPRR subcontractors and suppliers.

2.0 POLICIES

It is the policy of the UPRR for this project that all UPRR material suppliers submit a copy of their current Quality Management Plan detailing their internal procedures for the control, calibration, and maintenance of their inspection, measuring and test equipment to demonstrate conformance with UPRR requirements. The Plan shall include identification of their QA Manger in charge, the types of testing equipment to be utilized, the procedures and frequency to be implemented for the calibration of equipment to verify it's accuracy and the control of all equipment calibration documentation.

For items installed in the field, UPRR requires that their subcontractors perform quality control testing for all components identified in the contract documents. The subcontractor will be required to submit their own and/or their Independent Testing Laboratory (ITL) subcontractor's Quality Management plan that identifies their internal procedures for calibrating, maintaining and controlling related documentation for all inspection, measuring and testing equipment to be utilized to show conformance of the work to the required specifications.

The UPRR shall contract with an ITL to perform periodic Quality Assurance testing for items installed in the field. The ITL will be required to submit their own Quality Management Plan that identifies their internal procedures for calibrating, maintaining and controlling related documentation for all inspection, measuring and testing equipment to be utilized to show conformance of the work to the required specifications.

For all inspection, measuring and testing equipment under the direct control of UPRR forces (such as the EC & DC Cars for checking rail welds & geometry), the UPRR shall comply with their established procedures for calibrating, maintaining and controlling related documentation for all inspection, measuring and testing equipment to be utilized to show conformance of the work to the required specifications.

3.0 RESPONSIBILITIES

The roles and responsibilities of the different entities responsible for Inspection, Measuring & Test Equipment are summarized below:

3.1 UPRR Material Suppliers

The UPRR material suppliers are responsible for providing a copy of their current Quality Management Plan that details their internal inspection, measuring and testing procedures to be internally implemented to control, calibrate, and maintain their equipment to demonstrate work conformance to meet the UPRR requirements. The Plan shall include identification of their QA Manger in charge, the types of measuring & testing equipment to be utilized, the procedures and frequency to be implemented for the calibration of equipment to verify it's accuracy and the control of all equipment calibration documentation

3.2 UPRR Subcontractors

The UPRR subcontractors are responsible for full compliance with all aspects of the Quality Control Inspection & Testing identified in the UPRR Contract Documents. The subcontractor and/or their ITL subcontractors shall submit their own Quality Management plan that identifies their internal procedures for calibrating, maintaining and controlling related documentation for all inspection, measuring and testing equipment to be utilized to show conformance of the work to the required specifications.

3.3 UPRR Independent Testing Laboratory

The UPRR may contract with an Independent Testing Laboratory (ITL) to perform periodic Quality Assurance Testing for items installed in the field. The ITL will be required to submit their own Quality Management plan that identifies their internal procedures for calibrating, maintaining and controlling related documentation for all inspection, measuring and testing equipment to be utilized to show conformance of the work to the required specifications.

3.4 UPRR Work Forces

For this project, the UPRR has assigned personnel to maintain their various pieces of inspection, measuring & testing equipment. These individuals are responsible to assure that all pieces of UPRR equipment used to verify work compliance are calibrated & maintained within tolerable industry standards. All maintenance & calibration documentation of UPRR inspection, measuring and testing equipment shall be forwarded to UPRR QA Manager for control of the documents.

4.0 REFERENCES

4.1 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

5.1 All UPRR material suppliers, subcontractor, subcontractor ITL and UPRR contracted ITL shall maintain current copies of their calibration and maintenance documentation of all equipment to be utilized on this project that will be used to verify work is in compliance with specified requirements. Copies of calibration and maintenance reports shall be forwarded to the QA Manager or designee upon request.

5.2 Copies of all calibration & maintenance reports shall be considered quality documents and shall be maintained in accordance with Procedure 13-1.

6.0 ATTACHMNETS

None

Procedure 10-1: Inspection and Test Status

1.0 PURPOSE AND SCOPE

This section establishes that the inspection and testing status of work during production and installation is identified and that only work that has passed the required inspections and tests is accepted for installation. The current UPRR acceptance criteria, test requirements and test conditions are identified in the design Contract documents and Contract procurement specifications. The quality system requirements shall extend to all UPRR subcontractors and suppliers.

2.0 POLICIES

It is the policy of the UPRR for this project that all UPRR material suppliers submit for approval a copy of their current Quality Management Plan detailing their internal inspection and test status procedures in place to for work during protection and installation to ensure that only materials that have passed the required inspections and tests are shipped for incorporation into the work.

The subcontractors are required to provide the UPRR with a copy of their Quality Management Plan identifying their procedures determining the inspection and testing status to assure that materials being incorporated into their work are in full compliance with all specifications identified in the Contract Documents. For other materials fabricated off -site or supplied for incorporation into the work, the subcontractor shall provide all quality tests conducted for all stages of the fabricated materials offsite and provide notarized letters of material certification from material suppliers denoting the project name, date and that the material provided is in full compliance with all specifications listed in the contract documents.

The subcontractor will be required to submit their own and/or their Independent Testing Laboratory (ITL)'s Quality Management Plan that identifies their internal procedures for inspection and testing status of work to assure that only work which has full compliance with the specifications outlined in the contract documents.

The UPRR shall contract with an ITL to perform periodic Quality Assurance Testing for items installed in the field. The ITL will be required to submit their own Quality Management Plan that identifies their internal procedures for inspection and test status to assure that their tests performed on installed work show conformance with the required specifications.

3.0 RESPONSIBILITIES

The roles and responsibilities of the different entities responsible for Inspection & Test Status are summarized below:

3.1 UPRR Material Suppliers

All UPRR material suppliers submit a copy of their current Quality Management Plan detailing their internal inspection and test status procedures in place to ensure that only materials that have passed the required inspections and tests are shipped for incorporation into the work. The Plan shall include identification of their QA Manger in charge, the type of internal checks and documentation prepared to verify that all specification requirements have been satisfied prior to shipment. All internal verification of compliance documentation shall be maintained by the supplier and copies of such documentation shall be forwarded to the UPRR QA Manager and UPRR Project Manager simultaneously at the time of the materials being shipped.

3.2 UPRR Subcontractors

The subcontractors are required to provide to the UPRR a copy of their Quality Management Plan identifying their procedures determining the inspection and testing status to assure that materials being incorporated into their work are in full compliance with all specifications identified in the contract documents. For items installed in the field, the UPRR requires that subcontractors provide material certifications for all materials incorporated into the work. Examples of required field installed certifications include test reports for HMA placement (density, extraction, gradations, etc), concrete (strength, slump, air content, etc), earthwork (density, moisture content, proctor tests, etc), field weld tests (ultrasound, welder certification, etc.) and other testing requirements identified in the contract documents.

For materials fabricated offsite or supplied for incorporation into the work, the subcontractor shall provide all quality tests conducted for all stages of the fabricated materials offsite and provide notarized letters of material certification from material suppliers denoting the project name, date and that the material provided is in full compliance with all specifications listed in the contract documents.

3.3 UPRR Independent Testing Laboratory

The UPRR may contract with an Independent Testing Laboratory (ITL) to perform periodic Quality Assurance Testing for items installed in the field. The

ITL will be required to submit their own Quality Management plan that identifies their internal procedures for inspection and test status to assure that their tests performed on installed work show conformance with the required specifications.

4.0 REFERENCES

4.1 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

5.1 All UPRR material suppliers, subcontractors, subcontractor ITLs and UPRR contracted ITL shall maintain and implement current copies of their Quality Management Plans to ensure that the inspection and testing status of work during production and installation is identified and that only work that has passed the required inspections and tests is accepted for installation. Copies of inspection and test status reports shall be forwarded to the QA Manager or designee upon request.

5.2 Copies of all test status reports shall be considered quality documents and shall be maintained in accordance with Procedure 13-1.

6.0 ATTACHMNETS

None

Procedure 11-1: Nonconformance

1.0 PURPOSE AND SCOPE

This section establishes that the procedures for the control of nonconforming work to prevent its inadvertent use or installation. The procedures should also identify how nonconforming work is identified, documented and evaluated to determine the appropriate disposition.

2.0 POLICIES

It is the policy of the UPRR for this project that all UPRR material suppliers submit for approval a copy of their current Quality Management Plan detailing their internal procedures for the control of nonconforming work. The plan must address how nonconforming items are precluded from inadvertent use or installation. The procedures must identify how nonconforming items are identified, documented, evaluated to determine appropriate disposition and notifies those that are affected by the nonconforming work.

The subcontractors are required to provide to the UPRR a copy of their Quality Management Plan identifying their procedures determining the procedures to deal with nonconforming work and to preclude its inadvertent use or installation into the work.

The subcontractor will be required to submit their own and/or their Independent Testing Laboratory (ITL)'s Quality Management Plan that identifies their procedures for dealing with nonconforming and to preclude its inadvertent use or installation into the work.

The UPRR shall contract with an ITL to perform periodic Quality Assurance Testing for items installed in the field. The ITL will be required to submit their own Quality Management Plan that identifies their internal procedures for dealing with nonconforming work and to preclude it from recurring in their work.

3.0 RESPONSIBILITIES

The roles and responsibilities of the different entities responsible for nonconformance issues are summarized below:

3.1 UPRR Material Suppliers

All UPRR material suppliers submit a copy of their current Quality Management Plan detailing procedures to identify how nonconforming work is identified, documented and evaluated to determine the appropriate disposition. It shall also

detail the procedures for segregating the nonconforming work, when possible and practical, and how those affected by the nonconforming work are to be notified.

3.2 UPRR Subcontractors

Subcontractors are required to provide UPRR a copy of their Quality Management Plan identifying their procedures to identify how nonconforming work is identified, documented and evaluated to determine the appropriate disposition. It shall also detail the procedures for segregating the nonconforming work, when possible and practical, and how those affected by the nonconforming work are to be notified.

3.3 UPRR Independent Testing Laboratory

The UPRR may contract with an Independent Testing Laboratory (ITL) to perform periodic Quality Assurance Testing for items installed in the field. The ITL will be required to submit their own Quality Management plan that identifies their internal procedures to identify how nonconforming work is identified, documented and evaluated to determine the appropriate disposition. It shall also detail the procedures to implemented to prevent recurrence of their identified nonconforming work and how those affected by the nonconforming work are to be notified.

4.0 REFERENCES

4.1 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

5.1 All UPRR material suppliers, subcontractors, subcontractor ITLs and UPRR contracted ITL shall maintain procedures that address nonconforming work and all internal nonconforming work documentation. Nonconforming work shall be documented on Form 12-1: Nonconforming Work Report or a similar document. Copies of all nonconforming work documentation shall be forwarded immediately to all affected parties and the UPRR QA Manager upon request.

5.2 Copies of all nonconforming work reports shall be considered quality documents and shall be maintained in accordance with Procedure 13-1.

6.0 ATTACHMENTS

6.1 Form 12-1: Nonconforming Work Report

6.2 Form 12-2: Nonconforming Work Report Log

Procedure 12-1: Corrective Action

1.0 PURPOSE AND SCOPE

This section establishes that the corrective action procedures which include the investigation of the cause of nonconforming work, the corrective action needed to prevent recurrence and analysis to detect / prevent potential causes of nonconforming work.

2.0 POLICIES

It is the policy of the UPRR for this project that all UPRR material suppliers submit for approval a copy of their current Quality Management Plan detailing their internal corrective actions for dealing with nonconforming work, the corrective action needed to prevent recurrence and analysis to detect and prevent potential causes of nonconforming work.

The subcontractors are required to provide a copy of their Quality Management Plan identifying their procedures for determining the corrective action procedures for dealing with nonconforming work, the corrective action needed to prevent recurrence and analysis to detect and prevent potential causes of nonconforming work.

The subcontractor will be required to submit their own and/or their Independent Testing Laboratory (ITL)'s Quality Management Plan that identifies their internal procedures for determining the corrective action procedures for dealing with nonconforming work, the corrective action needed to prevent recurrence and analysis to detect and prevent potential causes of nonconforming work.

The UPRR shall contract with an ITL to perform periodic Quality Assurance Testing for items installed in the field. The ITL will be required to submit their own Quality Management Plan that identifies their internal procedures for determining the corrective action procedures for dealing with nonconforming work, the corrective action needed to prevent recurrence and analysis to detect and prevent potential causes of nonconforming work.

3.0 RESPONSIBILITIES

The roles and responsibilities of the different entities responsible for Corrective Action are summarized below:

3.1 UPRR Material Suppliers

All UPRR material suppliers submit for a copy of their current Quality Management Plan detailing their internal corrective action procedures in place that include the investigation of the cause of nonconforming work, the corrective

action needed to prevent recurrence and analysis to detect and prevent potential causes of nonconforming work. The material supplier's QMP needs to address the issue with noncompliant product and provide details ensuring that corrective actions are taken, their effectiveness and the identification of changes in procedures resulting from corrective action.

3.2 UPRR Subcontractors

The Subcontractors are required to provide a copy of their Quality Management Plan identifying their corrective action procedures for investigation of the cause of nonconforming work, the corrective action needed to prevent recurrence and analysis to detect and prevent potential causes of nonconforming work. The Subcontractor's QMP needs to address the issues of rework or repair and provide details ensuring that corrective actions are taken, their effectiveness and the identification of changes in procedures resulting from corrective action.

3.3 UPRR Independent Testing Laboratory

The UPRR may contract with an Independent Testing Laboratory (ITL) to perform periodic quality assurance testing for items installed in the field. The ITL will be required to submit their own Quality Management plan that identifies their internal procedures for corrective actions to address testing report clerical errors or inaccurate field test results and provide details ensuring that corrective actions are taken, their effectiveness and the identification of procedural changes resulting from corrective actions.

4.0 REFERENCES

4.1 Procedure 13-1: Storage and Maintenance of Quality Records

5.0 RECORDS

5.1 All UPRR material suppliers, subcontractors, subcontractor ITLs and UPRR contracted ITL shall maintain procedures to ensure that the corrective actions of are implemented. Corrective actions shall be documented on Form 12-1: Nonconforming Work Report or a similar document. Copies of all nonconforming work documentation shall be forwarded immediately to all affected parties and the UPRR QA Manager upon request.

5.2 Copies of all corrective action reports shall be considered quality documents and shall be maintained in accordance with Procedure 13-1.

6.0 ATTACHMNETS

None

Procedure 13-1: Storage and Maintenance of Quality Records

1.0 PURPOSE AND SCOPE

This procedure describes the methods for storing and maintaining quality records generated by this project.

2.0 POLICIES

2.1 Quality records document evidence of the quality of services. Unless otherwise identified, quality records are classified as non-permanent and will be maintained for a minimum of five years. Quality records include the following:

- Design drawings, specifications and reports
- Contract document reviews and approvals
- Design calculations
- Project instructions/directives (e.g. meeting minutes, correspondence, contract requirements)
- Material/equipment certifications and test reports
- Inspection and testing reports
- Qualification and training records
- Nonconformance and corrective action reports
- Audit plans, checklists, and reports
- Training records
- Contracts and associated items (including modifications and/or supplements)

2.2 All quality records shall be legible and identifiable as to project and type of record. They shall be stored in secure climate controlled file areas to minimize deterioration and damage. The disposition of project records shall be in accordance with the project contract requirements.

2.3 Revisions to completed quality records may only be made by revising the document or by lining out the incorrect entry, entering the corrected data, and dating and initialing the revision.

2.4 Access to quality record files is not restricted.

3.0 RESPONSIBILITIES

3.1 Quality records will be generated by UPRR internal and subconsultant design activities, UPRR and subcontractor construction activities, UPRR procurement and supply activities, material suppliers, and UPRR construction administration activities (including inspection and testing). Quality documents from all sources

will be clearly identified and maintained in conformance with Procedure 4-1: Identification and Control of Quality Documents.

3.2 Upon completion of each project activity, these documents shall be transferred for retention to the UPRR headquarters in Omaha. In consultation with the Project Manager and/or Project Designer, the QA Manager may determine if some original documents should be maintained by the original generator. As directed by the QA Manager, files will be transmitted in hard copy and/or electronic format to UPRR headquarters in Omaha. Transmittal will be via Form 2-1.

3.3 The QA Manager or designee will maintain a record of all quality documents, their status and location in accordance with Procedure 4-1. Form 4-1: Quality Document Log will be used to identify the current version (by number and date) of quality documents required for the execution of the project, the location of the original of each document and holders of document copies

4.0 REFERENCES

4.1 Procedure 4-1: Identification and Control of Quality Documents

5.0 RECORDS

All records generated by each of the applicable sections and/or procedures of this QMP shall be stored and maintained in accordance with this procedure.

6.0 ATTACHMENTS

6.1 Form 2-1: Controlled Document Transmittal

6.2 Form4.1: Quality Document Log

Procedure 14-1: Quality Audits

1.0 PURPOSE AND SCOPE

This procedure describes the method to conduct and document quality audits for this project.

2.0 BASIC REQUIREMENTS

2.1 Management audits of the project shall occur as described in Section 3.0 of this procedure.

2.2 In order to verify the implementation of all elements of this QMP, project quality audits will be conducted once every 12 months.

2.3 Audits shall be conducted by the QA Manager.

3.0 AUDIT IMPLEMENTATION

3.1 Audit Team: The QA Manager shall act as the lead auditor. Team members will be selected as determined by the QA Manager.

3.2 Audit Plan: The QA Manager shall prepare a specific audit plan, similar to Form 14-1: Audit Plan, that includes the following.

3.2.1 Purpose and scope of audit

3.2.2 Pertinent policies, procedures, standards, and requirements to be reviewed

3.2.3 Results of any prior audits

3.3 Notification: The QA Manager shall notify project participants, including the UPRR Executive Manager, Project Manager and Project Designer and others as required, concerning the audit in writing. A copy of the audit plan shall be provided prior to the audit.

3.4 Audit Conduct: The audit shall be conducted using the Audit Plan developed as part of the audit. Those attending the audit will sign an attendance list which will become part of the audit report. The QA Manager is responsible for documenting the audit results in an Audit Report.

3.5 Audit Report: After completion of the audit, the QA Manager will immediately report any noncompliance items to the UPRR Executive Manager and Project Manager. An audit report, similar to Form 14-2: Audit Finding Report shall be

prepared and signed by the QA Manager and issued within 30 days of the audit. The Audit Report will provide a summary audit results, detail corrective action for nonconforming work compliance areas and recommendations for improving the QMP.

3.6 Once corrective action has been completed, the Project Manager, or other responsible party, shall notify the QA Manager, who shall verify the adequacy of the corrective action and record the corrective action in the Audit Report.

4.0 REFERENCES

4.1 Entire Quality Management Plan

5.0 RECORDS

The audit plan, audit report, audit checklist, and any other associated documentation shall be designated as quality records, and maintained in accordance with Procedure 13-1.

6.0 FORMS

6.1 Form 14-1: Audit Plan

6.2 Form 14-2: Audit Finding Report

Procedure 15-1: Training

1.0 PURPOSE AND SCOPE

This procedure describes the methods and requirements for identifying the training needs and provision of such training for all personnel performing activities affecting quality as required by UPRR.

2.0 TRAINING PROGRAM

2.1 The Training Program consists of Quality Management Plan (QMP) training and Unique Project Skills training. The QMP training program is not a formal one, but rather is done informally through one-on-one or small group interaction between the QA Manager, Project Manager, Project Designer and staff involved in quality activities. Training shall consist of review and understanding by all project team members of the QMP and its included procedures

2.2 Unique Project Skills training is based on requirements identified by UPRR contract or internal procedures for job performance related to project quality needs, including appropriate railroad safety requirements. These procedures are essential to the performance of UPRR employees and are documented in UPRR training manuals and rule books. The appropriate UPRR managers verify that required training activities are complete and that if special certifications are required, that such certifications are maintained as employee records.

All inclusive of project requirements related to the project, the QMP will serve as the informal outline for project training. Therefore, the Project Manager shall assure that all project team members, including General Contractors specifically retained for the Illinois High Speed Rail Project have reviewed this QMP as part of the training program.

3.0 PROCEDURE

3.1 The QA Manager shall work with the Project Manager and Project Designer to plan and conduct the informal quality assurance training sessions for UPRR and subcontract personnel as required. The QMP will serve as the informal outline for project QMP training. Therefore, the Project Manager shall assure that all project team members and General Contractors have reviewed this QMP as part of the training program.

3.2 A record similar to Form 15-2: Training Record shall be used to document that training has occurred, training activities covered and those in attendance.

4.0 REFERENCES

4.1 QMP Document

5.0 RECORDS

Training records, training outlines, and any other associated documentation shall be designated as quality records and will be provided on an as needed basis.

6.0 FORM

6.1 Form 15-1: Mandatory Training Matrix

6.2 Form 15-2: Training Record

Union Pacific Railroad Company
Illinois High Speed Rail

Quality Management Plan

Appendix C
Project Design Criteria

Project Design Criteria

1.0 This will be a living document that expands as pieces are added to the project (stations, fencing, walls, etc.) The following list identifies the majority of the UPRR current Standards that apply to the project in general and then those for Class 6 Track and the ICC requirements.

ENGINEERING STANDARDS, DESIGN DRAWINGS, AND SPECIFICATIONS

BNSF/Union Pacific Common Standards - 141 lb. rail section, 136JK lb. rail section (DWG 177000)

BNSF/Union Pacific Common Standards - 136 JK lb. rail section (DWG 176500)

Union Pacific Engineering Standards for ties

- Rubber padded concrete ties (DWG 0215A)
- Prestressed scalloped concrete tie 505S-50 (DWG 0201 D)
- Concrete turnout ties (DWG 0206D)
- Concrete guard rail tie, GRT-UP (DWG 0202C)
- Concrete guard tie for Safelok III fasteners (DWG 0208A)

Union Pacific concrete tie specification (Springfield/Joliet Subdivision) 4/10

Typical turnout construction pad, No. 20 and No. 24 turnouts

Union Pacific Engineering Standards: concrete turnout

- No. 24 concrete turnout 141 lb. (DWG 5065C)
- No. 20 concrete tie turnout 141 lb. rail (DWG 5060J)
- No. 15 concrete tie turnout 141 lb. (DWG 5048A)
- No. 11 concrete tie turnout 141 lb. (DWG 5035C)

BNSF/Union Pacific Common Standards: turnouts, 136 lb.

- Panel 1 (DWG 341000)
- Panel 2 (DWG 341001)
- Panel 3 (with optional RBM Frog) (DWG 341002)
- Panel 3 (with optional SMSG Frog) (DWG 341004)
- Panel 4 (DWG 341003)

Steel duct transition tie for power switches (DWG 0205B)

Typical road crossing section

Burlington Northern Santa Fe/Union Pacific Common Standards - Curved concrete panels (DWG 200902)

Union Pacific Engineering Standards - Concrete grade crossing tie (DWG 0203C)

Union Pacific Engineering Standards - Concrete grade crossing tie for Safelok III fasteners (DWG 0209A)

Burlington Northern Santa Fe/Union Pacific Common Standards concrete panels

- · General specifications for road crossings with concrete panels (DWG 200901)
- · Typical details for concrete panels (DWG 200900)
- · Prestressed concrete panels for 10'0 concrete ties (l0C) (DWG 200301)
- · Precast concrete panels for 10'0" long concrete ties (l0C) (DWG 200302)
- · Layout for concrete panels on 10'0" concrete ties (l0C) (DWG 200300)

High Speed Track Transition Zones for Concrete Tie Grade Crossing (DWG 6030, 2 sheets) 08/25/10

Standard Transition Zones at Bridges (DWG 6031) 08/25/10

Track 2A Capacity Straightline Springfield and Joliet Subdivisions date - 12/17/2010

Design Drawings and Specifications – as they are developed during design process

550000 W36 & W40 BEAM SPAN, 31' TO 69' LENGTHS

580000 W18 & W24 BEAM SPAN, 14' TO 34' LENGTHS

551000 LOW PROFILE STEEL TPG-BD SPANS, 31' TO 64' LENGTHS

500000 PRECAST/PRESTRESSED CONCRETE BEAM BRIDGES, 30" DOUBLE CELL BOX BEAM; 14", 16", 18" AND 20" SLAB BEAM SPANS - 30" X 7'-0" DOUBLE BOX BEAM, FABRICATION PLANS

501000 PRECAST/PRESTRESSED CONCRETE BEAM BRIDGES, 30" DOUBLE CELL BOX BEAM; 14", 16", 18" AND 20" SLAB BEAM SPANS - 30" BOX BEAM PRECAST SUBSTRUCTURE ELEMENTS

502000 PRECAST/PRESTRESSED CONCRETE BEAM BRIDGES, 30" DOUBLE CELL BOX BEAM; 14", 16", 18" AND 20" SLAB BEAM SPANS - CONCRETE BOX AND SLAB BEAM HARDWARE

530000 PRECAST/PRESTRESSED CONCRETE BEAM BRIDGES, 30" DOUBLE CELL BOX BEAM; 14", 16", 18" AND 20" SLAB BEAM SPANS - CONCRETE BOX AND SLAB BEAM OVERALL DETAILS

530020 PRECAST/PRESTRESSED CONCRETE BEAM BRIDGES, 30" DOUBLE CELL BOX BEAM; 14", 16", 18" AND 20" SLAB BEAM SPANS - SLAB BEAM, FABRICATION PLANS

531000 PRECAST/PRESTRESSED CONCRETE BEAM BRIDGES, 30" DOUBLE CELL BOX BEAM; 14", 16", 18" AND 20" SLAB BEAM SPANS - SLAB BEAM PRECAST SUBSTRUCTURE ELEMENTS

531010 PRECAST/PRESTRESSED CONCRETE BEAM BRIDGES, 30" DOUBLE CELL BOX BEAM; 14", 16", 18" AND 20" SLAB BEAM SPANS - PRECAST CONCRETE PILE CAP
532000 CONCRETE BEAM BRIDGES - CAST-IN-PLACE CONCRETE CAPS

531200 CONCRETE BEAM BRIDGES - SINGLE TRACK TWO PIECE END CAP - DETACHABLE BACKWALLS

530100 CONCRETE BEAM BRIDGES - DOUBLE TRACK BRIDGES AT 20' CENTERS - TYPICAL SECTIONS FOR DOUBLE TRACK AT 20' CENTERS

531600 CONCRETE BEAM BRIDGES - DOUBLE TRACK BRIDGES AT 20' CENTERS - HARDWARE FOR DOUBLE TRACK AT 20' CENTERS

531400 CONCRETE BEAM BRIDGES - DOUBLE TRACK BRIDGES AT 20' CENTERS - PRECAST FILLER BLOCKS FOR DOUBLE TRACK AT 20' CENTERS

680000 ROUND STEEL PIPE CULVERTS GENERAL NOTES AND DETAILS

680010 ROUND STEEL PIPE CULVERTS - SMOOTH STEEL PIPE

680020 ROUND STEEL PIPE CULVERTS - CORRUGATED STEEL PIPE CULVERTS

680030 ROUND STEEL PIPE CULVERTS - STRUCTURAL PLATE PIPE CUVLERTS

680100 END TREATMENTS FOR PIPE CULVERTS - GENERAL NOTES AND DETAILS

680120 END TREATMENTS FOR PIPE CULVERTS - TYPE A HEADWALL DETAILS

680130 END TREATMENTS FOR PIPE CULVERTS - TYPE B HEADWALL DETAILS

680140 END TREATMENTS FOR PIPE CULVERTS - TYPE C HEADWALL DETAILS

680150 END TREATMENTS FOR PIPE CULVERTS - TYPE C HEADWALL DETAILS

680160 END TREATMENTS FOR PIPE CULVERTS - HANDRAIL DETAILS AND TABLES

117908 CAST-IN-PLACE CONCRETE COLLARS FOR CSP CULVERTS

109472 STANDARD BALLAST RETAINER - PRECAST CONCRETE STANDARD BALLAST RETAINER

0575 STANDARD BARRICADE FOR PLACEMENT AT BRIDGE BACKWALLS

750000 Track Circuit Connections, Bonding, Related Equipment and Location of Insulation Joints

760000 Switches, Derails, Switch Locks, Movable Point Frogs and Fittings
770000 Signals and Lamps

780000 Interlockings and Control Machines

790000 Highway Crossing Signals and Gates

800000 Battery Housings and Junction Boxes

810000 Barricades, Foundations, Bases, Pedestals, Masts and Bridges

820000 Batteries and Charging Equipment

830000 Detectors and Indicators

840000 Lightning Protection Methods and Grounding

850000 Mechanical Connections of Wires, Cables and Terminals

860000 Inspection, Tests and Operating Characteristics of Signal Equipment

870000 Painting and Lubrication

890000 Tools and Test Equipment

900000 Transformers, Power and Pole Line Construction

910000 Houses, Cases and Bungalows Terminal Boards, Relay Racks

920000 Signal Locations and Elevation Plans

930000 Circuit and Wiring Diagrams

940000 Switch Heaters

970000 Symbols

980000 Bulletin Diagrams and Applications, Exhibits and Drawings

990000 Miscellaneous

Union Pacific Railroad Company
Illinois High Speed Rail

Quality Management Plan

Appendix D
Quality Forms

Appendix D Table of Contents

Illinois High Speed Rail Project

Quality Management Plan Distribution Log

QMP Revision	QMP Date	Type of Transmittal	Document Holder (Name & Company)

Illinois High Speed Rail Project

Quality Document Log

Quality Document	Document Preparer	Date	Document Location

Illinois High Speed Rail Project

Meeting Attendance Record

Date: _____ Location: _____

Meeting Host: _____

Meeting Purpose: _____

Name	Organization	Telephone	Email

Illinois High Speed Rail Project

Nonconforming Work Report Number _____

NWR Date: _____ **Prepared By: _____**

Response Due Date: _____ **Project Manager: _____**

Description of Nonconformance:

_____ _____

Project Manager **Date**

_____ _____

QA Manager **Date**

Illinois High Speed Rail Project

Nonconforming Work Report Number ____

Disposition of Nonconformance (attach justification)

Rework: ___ Retest:___ Use As Is:___ Repair:___ Reject:___ No Action Required:____

For all dispositions other than "no action required"; state proposed corrective action, action to assure quality of work completed prior to determination of noncompliance, probable cause of nonconformance and action to prevent recurrence of nonconformance.

Corrective Action:

Probable Cause:

Action to Prevent Recurrence:

Quality Assurance Evaluation of Response to Nonconformance:

_____ _____

Project Manager Date

_____ _____

QA Manager Date

Illinois High Speed Rail Project

Nonconforming Work Report Log

NWR Number	NWR Date	Description	Recommended Disposition	Date Corrected

Illinois High Speed Rail Project

AUDIT PLAN

Task Audited: _____ **Project Manager: _____**
Audit Schedule: **Audit Scope and Items to be Audited:** **Applicable Documents:** **Follow Up from Previous Audits:**
Audit Team Members:
Audit Plan Approval By: **_____ _____** **QA Manager (Lead Auditor) Date**

Illinois High Speed Rail Project

AUDIT FINDING REPORT

Audit Finding Report Number: _____ Date: _____
Prepared By: _____ Issued Date: _____ **Assigned To: _____ Response Due Date: _____**
Requirement: **Description of Nonconformance:** **Recommend Corrective Action:**
Corrective action taken to correct nonconformance, Probable cause of nonconformance and actions to prevent recurrence of nonconformance:
Acceptable Response: _____ Date: _____ **QA Manager**
Nonconformance Corrected: _____ Date: _____ **QA Manager**

Illinois High Speed Rail Project

TRAINING MATRIX

Title/Position	*Quality Assurance Training (all applicable elements of FTA-IT-5001-02.1 and UPRR QMP)*	*Project Specific QMP Procedures*	*UPRR Illinois High Speed Rail Design Standards*	*UPRR Material Specifications and Standards*	*UPRR Training Manuals and Rule Books*	*UPRR Safety Training*	*IDOT Highway Standards (if applicable to project)*
UPRR Executive Manager	RA		RA				
Quality Assurance Manager	RA	RA	RA	RA			RA
Project Manager	RA	RA	RA	RA	RA	RA	RA
Project Designer	RA	RA	RA	RA			RA
Technical Staff		RA	RA	RA	RA	RA	RA
UPRR Construction Personnel					TS	TS	
Design Sub-consultants		TS	TS	TS	RA	TS	RA
General Contractors and Suppliers		RA	RA	RA	RA	TS	RA

RA-Reading Assignment

TS-Training Session

Illinois High Speed Rail Project

TRAINING RECORD

Training Topic: _____

Instructor (print): _____

Date of training: _____

Type of Training: ___Training Session _____Required Reading

NAME (PRINT)	SIGNATURE	DATE

Union Pacific Railroad Company
Illinois High Speed Rail

Quality Management Plan

Appendix E
Project Procurement Checklists

Appendix E Table of Contents

Rail Procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	**Provide copy of UPRR Specifications & Standard Details with testing requirements**	
Supplier(s)/Fabricator(s)	**Provide copy of Current QA/QC Plan including the following details:**	
	> Identify the QA/QC Manager in charge	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items from being shipped	
	> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	**> Provide QA Testing of Materials delivered to project (as conditions warrant)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	
Independent Testing Laboratory (IDOT/PB)	**> Provide QA Testing of Materials delivered to project (as conditions warrant)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	

Steve Ashmore - UPRR	**> Provide copies of all QA/QC Material Test Reports received to TY Lin**	

Ballast Procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	**Provide copy of UPRR Specifications & Standard Details with testing requirements** **Identify all potential suppliers for the project**	
Supplier(s)/Fabricator(s)	**Provide copy of Current QA/QC Plan including the following details:**	
	> Identify the QA/QC Manager in charge	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items from being shipped	
	> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	**> Provide QA Testing of Materials delivered to project (as conditions warrant)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	
Independent Testing Laboratory (IDOT/PB)	**> Provide QA Testing of Materials delivered to project (TBD)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	

Steve Ashmore - UPRR	**> Provide copies of all QA/QC Material Test Reports received to TY Lin**	

Concrete Ties Procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	**Provide copy of UPRR Specifications & Standard Details with testing requirements** **Identify all potential suppliers for the project**	
Supplier(s)/Fabricator(s)	**Provide copy of Current QA/QC Plan including the following details:**	
	> Identify the QA/QC Manager in charge	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items from being shipped	
	> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	**> Provide QA Testing of Materials delivered to project (as conditions warrant)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	
Independent Testing Laboratory (IDOT/PB)	**> Provide QA Testing of Materials delivered to project (TBD)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	

Steve Ashmore - UPRR	**> Provide copies of all QA/QC Material Test Reports received to TY Lin**	

OTM (Other Track Materials) Procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	**Provide copy of UPRR Specifications & Standard Details with testing requirements** **Identify all potential suppliers for the project**	
Supplier(s)/Fabricator(s) **(For Fabricated Items)** **(i.e. clips & toes,**	**Provide copy of Current QA/QC Plan including the following details:** **> Identify the QA/QC Manager in charge** **> Identify the types of QC testing being performed** **> Identify the frequency of QC testing being performed** **> Indentify in detail the Quality Assurance procedures in place** **~ Detail the procedures for noncompliant material (due to failing QC tests)** **~ Retesting** **~ Preventative Plan/Procedures to prevent noncompliant items from being shipped** **> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details** **> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability**	
Supplier(s) **(i.e. signal wire, gate placards, swtich targets, heaters, junction boxes, etc.)**	**> Supplier to provide a Letter of Certification to UPRR that the Materials being supplied are in accordance with the Specifications & Standard details.**	
Independent Testing Laboratory (UPRR)	**> Provide QA Testing of Materials delivered to project (as conditions warrant)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	
Independent Testing Laboratory (IDOT/PB)	**> Provide QA Testing of Materials delivered to project (TBD)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	

Switches Procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	Provide copy of UPRR Specifications & Standard Details with testing requirements Identify all potential suppliers for the project	
Supplier(s)/Fabricator(s) (For Fabricated Items)	Provide copy of Current QA/QC Plan including the following details:	
	> Identify the QA/QC Manager in charge	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items from being shipped	
	> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	> Provide QA Testing of Materials delivered to project (as conditions warrant) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	
Independent Testing Laboratory (IDOT/PB)	> Provide QA Testing of Materials delivered to project (TBD) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	

Steve Ashmore - UPRR	> Provide copies of all QA/QC Material Test Reports received to TY Lin	

Concrete Crossing Panels procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	Provide copy of UPRR Specifications & Standard Details with testing requirements Identify all potential suppliers for the project	
Supplier(s)/Fabricator(s) (For Fabricated Items)	Provide copy of Current QA/QC Plan including the following details:	
	> Identify the QA/QC Manager in charge	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Aquire a copy of concrete mix design(s), with sources, from each supplier	
	> Aquire rebar tests/ pre-stressed strand certifications from suppliers - including	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items from being shipped	
	> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	> Provide QA Testing of Materials delivered to project (as conditions warrant) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	
Independent Testing Laboratory (IDOT/PB)	> Provide QA Testing of Materials delivered to project (TBD) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	

Steve Ashmore - UPRR	> Provide copies of all QA/QC Material Test Reports received to TY Lin	

HMA At Crossings Procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	Provide copy of UPRR Specifications & Standard Details with testing requirements Identify all potential suppliers for the project	
Supplier(s)/Fabricator(s) (For Fabricated Items)	Provide copy of Current QA/QC Plan including the following details:	
	> Identify the QA/QC Manager in charge	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Aquire a copy of mix design(s) from each supplier, with sources	
	> Aquire Department of Agriculture certifications for certified scales	
	> Provide copies of mechanical date and weight stamped tickets when available	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items from being shipped	
	> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	> Provide QA Testing of Materials delivered to project (as conditions warrant) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	
Independent Testing Laboratory (IDOT/PB)	> Provide QA Testing of Materials delivered to project (TBD) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	

Steve Ashmore - UPRR	> Provide copies of all QA/QC Material Test Reports received to TY Lin	

Field Welds procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	Provide copy of UPRR Specifications & Standard Details with testing requirements Identify all potential suppliers for the project	
Supplier(s)/Fabricator(s) (For Fabricated Items)	Provide copy of Current QA/QC Plan including the following details:	
	> Identify the QA/QC Manager in charge	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Provide a suppliers letter of certification for weld kits and components	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items from being shipped	
	> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	> Provide QA Testing of Materials delivered to project (as conditions warrant) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	
Independent Testing Laboratory (IDOT/PB)	> Provide QA Testing of Materials delivered to project (TBD) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	

Steve Ashmore - UPRR	> Provide copies of all QA/QC Material Test Reports received to TY Lin	

Signals Procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	Provide copy of UPRR Specifications & Standard Details with testing requirements Identify all potential suppliers for the project	
Supplier(s)/Fabricator(s) (For Fabricated Items)	Provide copy of Current QA/QC Plan including the following details:	
	> Identify the QA/QC Manager in charge	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Identify which components will be covered by letters of certification	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items from being shipped	
	> Provide Letter of Certification to UPRR that the Materials being supplied are in accordance with the Project Specifications & Standard Details	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	> Provide QA Testing of Materials delivered to project (as conditions warrant) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	
Independent Testing Laboratory (IDOT/PB)	> Provide QA Testing of Materials delivered to project (TBD) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	

Steve Ashmore - UPRR	> Provide copies of all QA/QC Material Test Reports received to TY Lin	

General Contractor Earthwork Procurement Checklist

Earthwork

Responsible Party	Item	Received
Union Pacific RR	**Provide copy of UPRR Specifications & Standard Details with testing requirements** **Identify General Contractor(s)**	
General Contractor(s)	**Provide copy of Current QA/QC Plan identifying the following:**	
	> Identify the QA/QC Manager in charge	
	> Identify all potential Borrow Sites	
	> Identify the types of QC testing being performed (Nuclear / Proof Roll)	
	> Identify the frequency of QC testing being performed (Each Lift)	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material (due to failing QC tests)	
	~ Retesting (Disc & dry)	
	~ Preventative Plan/Procedures to prevent noncompliant operations	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	**> Provide QA Testing of Materials delivered to project (as conditions warrant)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	
Independent Testing Laboratory (IDOT/PB)	**> Provide QA Testing of Materials delivered to project (TBD)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	

Steve Ashmore - UPRR	**> Provide copies of all QA/QC Material Test Reports received to TY Lin**	

General Contractor Drainage Procurement Checklist

Drainage items

Responsible Party	Item	Received
Union Pacific RR	**Provide copy of UPRR Specifications & Standard Details with testing requirements** **Identify General Contractor(s)**	
General Contractor(s)	**Provide copy of Current Supplier QA/QC Plan identifying the following:**	
	> Identify the QA/QC Manager in charge	
	> Identify if IDOT Certified Plant/Supplier	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items being shipped	
	~IDOT Certified Plant (LA-15 or IL OK Stamp)	
	~ Provide Letter of Certification	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	**> Provide QA Testing of Materials delivered to project (as conditions warrant)** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	
Independent Testing Laboratory (IDOT/PB)	**> IDOT Certified Plant LA-15 or IL OK Stamp** **> Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR**	

Steve Ashmore - UPRR	**> Provide copies of all QA/QC Material Test Reports received to TY Lin**	

General Contractor Track Work / Installation (Sidings / Double Track)
Procurement Checklist

Responsible Party	Item	Received
Union Pacific RR	Provide copy of UPRR Specifications & Standard Details with testing requirements Identify General Contractor(s)	
General Contractor(s)	Provide copy of Current Subcontractor QA/QC Plan identifying the following:	
	> Identify the QA/QC Manager in charge	
	> Identify if IDOT Certified Welder Certification	
	> Identify the types of QC testing being performed	
	> Identify the frequency of QC testing being performed	
	> Indentify in detail the Quality Assurance procedures in place	
	~ Detail the procedures for noncompliant material	
	~ Retesting	
	~ Preventative Plan/Procedures to prevent noncompliant items being shipped ~IDOT Certified Plant (LA-15 or IL OK Stamp) ~ Provide Letter of Certification	
	> Provide Copies of QC Test results for materials being delivered to the project to Mr. Stephen Ashmore - UPRR upon availability	
Independent Testing Laboratory (UPRR)	> Provide QA Testing of Materials delivered to project (Geometry Cart by UPRR) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	
Independent Testing Laboratory (IDOT/PB)	> IDOT QA (TBD) > Provide copies of QA Test results to Mr. Stephen Ashmore - UPRR	

Steve Ashmore - UPRR	> Provide copies of all QA/QC Material Test Reports received to TY Lin	

HSR Steel Spans Prepurchase (MP 92.12)
Fabricator's QA QC & Deliverables Checklist

Date
Submitted

_____ **: Provide Certification of Compliance for Materials & Fabrication in accordance with Chapter 15: Steel Structures of the AREMA Manual for Railway Engineering**

_____ **: Provide Copy of Fabricator's verification under AISC Quality Certification Program for Major Steel Bridges (CBR) w/ Fractural Critical Endorsement**

Material Certifications of Conformance & Associated Manufacturer Test Reports

Girder, Bottom Flange and Web, Beams

_____ : Provide Fabricator's Certification of Conformance to ASTM A709 Gr. 50W F2
_____ : Provide Certification that the material supplied meets the longitudinal Charpy V-notch requirements for zone 2
_____ : Provide Copy of Associated Manufacturer Test Reports
_____ : Provide Copy of Mill Certifications

Girder Top Flange, Bearing Stiffeners and Knee Braces

_____ : Provide Fabricator's Certification of Conformance to ASTM A709 Gr. 50W T2
_____ : Provide certification that the material supplied meets the longitudinal Charpy V-notch requirements for zone 2
_____ : Provide Copy of Associated Manufacturer Test Reports
_____ : Provide Copy of Mill Certifications

High Strength Bolts

_____ : Provide Certification of Conformance to ASTM A325, Type 3
_____ : Provide Associated Manufacturer Test Reports
_____ : Provide Copy of Mill Certifications

Nuts

_____ : Provide Certification of Conformance to ASTM A563
_____ : Provide Associated Manufacturer Test Reports
_____ : Provide Copy of Mill Certifications

Washers

_____ : Provide Certification of Conformance to ASTM F436
_____ : Provide Associated Manufacturer Test Reports
_____ : Provide Copy of Mill Certifications

HSR Steel Spans Prepurchase (MP 92.12)
Fabricator's QA QC & Deliverables Checklist

Date
Submitted

_____ **: Provide Detailed shop drawings**

_____ **: Provide Bimonthly periodic fabrication progess photographs**

_____ **: Provide Written Notice to UPRR when spans are assembled for inspection**

_____ **: Provide Certification of Blast Cleaning was performed in accordance with SSPC-SP6**

_____ **: Provide Certification of Solvent Cleaning was performed in accordance with SSPC-SP1**

_____ **: Provide Certification that Bearing Pads meet the requireents of Table 15-10-2 of the AREMA Manual**

_____ **: Provide Buy America Certifications for all components supplied**