





Third Party Contracts  
Quality Management Plan  
(TPCQMP)

November 1, 2022

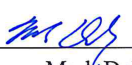
Revision 02

REVIEW AND APPROVAL RECORD

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## INTRODUCTION

As part of a regional transportation network, Metra provides safe, reliable, efficient commuter rail service that enhances the economic and environmental health of northeast Illinois. To be a world-class commuter rail agency linking communities throughout the region, Metra is committed to:

- Providing the safest, most efficient, and reliable service to our customers
- Sustaining our infrastructure for future generations
- Leading the industry in achieving continuous improvement, innovation, and transparency
- Facilitating economic vitality throughout northeast Illinois

The United States Department of Transportation, Federal Transit Administration ([FTA](#)) has published Quality Management System (QMS) Guidelines. In 2019, Quality Management System Guidelines (2019 Update), serving as the fourth and most recent update, was issued by FTA to recipients of FTA-funded capital program project sponsors in developing their own QMS.

Metra is committed to completing capital projects in conformance with required standards that are consistent with corporate guidance, regulatory and contractual requirements. Metra’s goal is to complete the capital projects on schedule, within budget, in a manner that provides for continued satisfactory performance during the useful life of each project's assets. To ensure this commitment, Metra has developed this Third-Party Contracts Quality Management Plan (TPCQMP), which documents Metra’s commitment for implementation of the Metra Corporate Quality Manual (CQM) and funding agency quality requirements.

The TPCQMP incorporates all requirements of Metra’s CQM applicable to Metra’s Capital Program. It is the responsibility of the Metra Capital Program team, Consultants, Contractors and their subconsultants and subcontractors, as well as the applicable Metra stakeholder department(s), to implement the quality elements described in the TPCQMP. The success of the TPCQMP’s implementation depends on all participating parties understanding their responsibilities as defined in the TPCQMP. The understanding of the plan’s implementation occurs through the training of all project personnel, including Metra staff, Third-Party Consultants, Contractors, subconsultants and subcontractors.

The TPCQMP is part of a four-volume set of guidance manuals for the Capital Delivery Program. The Metra Project Manager (PM) is responsible for overseeing and directing consultants and contractors hired by Metra to assist in the development and delivery of the project. The primary focus of each Manual is as follows:

- Metra PM Manual: provides standards and guidance for Metra staff and consultants hired by Metra to assist in the delivery of projects in the Capital Program.
- Third Party Contracts Quality Management Plan: provides standards and guidance for compliance with Metra’s CQM and FTA Quality Management System Guidelines by PMs and other Metra staff,

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designers and other consultants, and contractors, their subcontractors, and suppliers on the Capital Program.

- Metra Design Manual (DMAN): provides requirements, standards and guidance for Metra PMs, other Metra staff, designers, and other consultants hired by Metra to perform preliminary engineering and final design of projects within the Capital Program.
- Metra Construction Manual (CMAN): provides requirements, standards, and guidance for Metra PMs, other Metra staff, designers, construction managers, and other consultants hired by Metra to oversee execution of construction projects within the Capital Program.

Capital Project Delivery Templates are referenced throughout this Manual to provide guidance to PMs, Metra staff, stakeholders, consultants, and contractors for the successful delivery of Metra capital projects. The TPCQMP is intended to be used in combination with other Metra policies, procedures, and guidelines as well as the policies, procedures, requirements, and guidelines of external authorities having jurisdiction. When applicable, the TPCQMP will reference supporting documents; where external authorities having jurisdiction have published updated policies, procedures, requirements and guidelines, the current version of these external references shall apply.

Consultants and construction vendors under contract with Metra are required to follow the terms and conditions of their respective contracts. The Capital Delivery Program manuals have been written in coordination with these contract documents. The specific scope and type of work for the Third-Party Contractors are detailed in their respective contract(s), Task Order(s), Request(s) for Specific Services (RFSS), or other contractual documents.

The TPCQMP provides guidance in implementation of the quality requirements for the various types of capital projects undertaken by Metra or outsourced to the Third-Party Contractors for completion. The quality requirements are referenced in these contracts. To further emphasize the Third-Party's commitment to the full execution of these requirements, prior to start of contract work, the "TPCQMP Letter of Authorization", shall be prepared by the Metra PM and coordinated with each Third-Party, executed by the Third-Party, and submitted to the Metra PM as contractual documentation of the Third-Party commitment to full implementation of the TPCQMP policies, procedures, requirements, and guidelines.

Should compliance with the Third-Party contract scope, schedule, or contract terms and conditions require additional procedures and/or documentation not included in the TPCQMP, the Third-Party Consultant or Contractor (TPC) shall provide this documentation to the Metra PM or designee for review and approval prior to the commencement of their project work.

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**1. ELEMENT 1 - MANAGEMENT RESPONSIBILITY**

**1.1 PURPOSE**

The purpose of this quality element is to identify the requirements of management responsibility, and to direct the Capital Project team in the level of management commitment that is required for successful implementation of the contractual quality requirements.

**1.2 RESPONSIBILITIES / RESOURCES**

**1.2.1 METRA MANAGEMENT COMMITMENT TO QUALITY**

Metra’s PM assigned oversight for capital projects has the authority and the day-to-day responsibility to ensure that the requirements of the TPCQMP are adequately implemented by the Third-Party Consultants and Contractors, their subs and/or Metra personnel for the work performed on the capital projects.

The PM is required to maintain oversight of quality control activities performed by project personnel for the work activities relating to the capital projects, and to ensure that project records, including checklists, logs, designs, drawings, specifications, submittals, etc., included in the TPCQMP, as well as those contractually required, are accurately completed, updated, and maintained as required throughout the duration of the project.

The PM or their designee shall designate any Metra project-specific quality requirements for the project.

Metra’s project personnel assigned to capital projects are required to follow and implement the same TPCQMP requirements as the Third-Party Consultants and Contractors.

The Manager, QC/QA is responsible for providing Metra and TPC project personnel with day-to-day quality assurance and/or quality control support to ensure that the requirements of the TPCQMP are completed as contractually required. Program quality support personnel will be responsible to:

- Develop and present the necessary training materials for all project personnel involved in the work activities for capital projects, including Third Parties, to ensure that they are adequately trained for adherence to the TPCQMP requirements.
- Ensure that all revisions to the TPCQMP and quality document updates are communicated to all applicable parties. Communication is followed by training, as applicable. Training is documented.

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- Provide new project personnel with the training necessary for implementation of the TPCQMP.
- Develop the internal Metra department’s quality assurance audit schedule for the assessment of Metra’s oversight on the capital project work activities.
- Monitor the resolution and completion of proposed corrective actions for deficiencies resulting from both internal and corporate external, Third-Party quality audits.
- Provide quality assurance oversight through the monitoring of quality control activities performed by Metra personnel for work activities relating to capital projects as specified in the applicable sections of the TPCQMP.
- Conduct internal quality assurance audits, assessments, surveillance audits to verify the implementation and overall effectiveness of Metra’s activities and oversight of the TPCQMP for capital projects, and to verify compliance of the FTA QMS Guidelines.
- Provide suggested revisions proposed by Capital Delivery personnel for the TPCQMP received during quality assurance audits and provide input for subsequent revision(s) to the TPCQMP.

The Director - Corporate Quality Assurance, or their designee, is responsible for and has the authority, responsibility, and independence to:

- Develop the annual quality assurance audit schedule for Third-Party capital projects.
- Conduct Third-Party quality assurance audits, assessments, surveillances, etc., to determine the status and verify the overall implementation and effectiveness of the TPCQMP, and to verify compliance with the Metra CQM and FTA QMS Guidelines.
- Identify and report Third-Party quality issues/deficiencies for initiation of corrective action through appropriate channels to correct and prevent recurrence of the reported deficiencies.

1.2.2 THIRD-PARTY QUALITY RESPONSIBILITIES

1.2.2.1 QUALITY ASSURANCE RESPONSIBILITIES

Third-Party Quality Assurance personnel shall be independent of the pressures of production and of cost and schedule considerations in quality

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decisions and shall have direct access to responsible management at a level where appropriate action may be taken.

1.2.2.2 QUALITY CONTROL RESPONSIBILITIES

The TPC shall maintain primary quality control responsibilities for their products and/or services provided to Metra, from initiation through completion of the project. The TPC shall assign quality control personnel who shall perform quality control activities which ensure that the quality of their work complies with the requirements of the TPCQMP.

- The TPC has the responsibility to ensure that the day-to-day primary quality control (QC) activities are, implemented, documented, and maintained per written, approved procedures, as contractually required.
- The TPC shall implement the applicable guidelines provided in various sections of the TPCQMP in their entirety.
- The TPC's subcontractors shall implement the requirements of the TPCQMP. This includes the quality of their products and/or services, and the completion of all required related project documentation.
- The TPC shall complete, maintain, and submit to Metra or its designee all applicable project records required by the TPCQMP as the work progresses, and again at the completion of the project.
- The TPC shall implement the appropriate procedure to correct deficiencies identified through quality assurance assessments, audits, surveillances etc., and/or documented nonconformance and corrective action report(s). See Elements 12 and 14 of the TPCQMP.
- The TPC shall complete corrective actions documented through Metra's quality audits, at no cost to Metra, within the specified timeframe established and mutually agreed upon by the TPC, Metra PM and the Corporate Quality Assurance Director. The corrective actions are to include effective measures to prevent, or significantly reduce, the recurrence of reported nonconformances. See Elements 12 and 14 of TPCQMP.

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1.3 REQUIREMENTS

1.3.1 THIRD PARTY MANAGEMENT COMMITMENT DOCUMENTATION

1.3.1.1 DELIVERABLE: LETTER OF MANAGEMENT COMMITMENT / “TPCQMP LETTER OF AUTHORIZATION”

The TPCQMP provides guidance in implementation of the quality requirements for the various types of capital projects undertaken by Metra or outsourced to the TPC. A “TPCQMP Letter of Authorization” shall be prepared by the PM in coordination with each Third-Party, executed by the Third-Party, and then submitted to the Metra PM as contractual documentation of the Third-Party adherence commitment to the full implementation of the TPCQMP policies, procedures, requirements, and guidelines.

1.3.1.2 DELIVERABLE: ORGANIZATIONAL CHART

1.3.1.2.1 ORGANIZATIONAL CHART REQUIREMENTS

The TPC shall provide an organizational chart to Metra for approval within 30 days of contract award. The organizational chart shall provide and accurately portray the interfacing relationships between Metra and the TPC’s key project personnel. The TPC’s organizational chart is to include its management, quality assurance, quality control personnel, subconsultant’s and subcontractor’s project personnel. Quality Control responsibilities can be added to the organizational chart or as a separate document. Quality Control personnel are to be identified.

1.3.1.2.2 ORGANIZATIONAL CHART REVISIONS

A revised organizational chart shall be submitted to Metra or Metra’s designee for approval prior to implementing changes or assignments of key project personnel.

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1.4 REFERENCES

1.4.1 PROJECT MANAGER MANUAL

1.4.2 [DESIGN MANUAL](#)

1.4.3 [CONSTRUCTION MANUAL](#)

1.4.4 [ORGANIZATIONAL CHART INSTRUCTIONS](#)

1.4.5 [ORGANIZATIONAL CHART SAMPLE](#)

1.5 ADDITIONAL DOCUMENTS

1.5.1 [ORGANIZATIONAL CHART TEMPLATES](#)

1.5.2 [LETTER OF MANAGEMENT COMMITMENT TEMPLATE](#)

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**2. ELEMENT 2 - DOCUMENTED QUALITY SYSTEM**

**2.1 PURPOSE**

This quality element establishes Metra’s process for the Third-Party quality plan for the Capital Delivery program. Documentation of the quality plan includes the completion, execution, and management activities by Third-Parties relating to their contractual obligations on Metra Capital Projects.

**2.1 REQUIREMENTS**

**2.1.1 THIRD PARTY CONTRACTS QUALITY MANAGEMENT PLAN - ADHERENCE TO QUALITY REQUIREMENTS**

As a contractual requirement, the TPC shall adhere to the TPCQMP, which along with the contract documents include references to the procedures that are to be implemented and maintained for any activities affecting project quality. These procedures shall define the applicable instructions and responsibilities of both quality assurance and quality control, as described below:

**2.1.1.1 QUALITY ASSURANCE AND CONTROL RESPONSIBILITIES AND DOCUMENTATION**

Define in writing the project’s quality assurance and quality control responsibilities and those responsible for performing them. Personnel assigned to quality assurance and control activities shall be identified in an Organizational Chart, which shall be reviewed/approved by the Metra PM prior to starting work activities.

**2.1.1.2 QUALITY ACTIVITIES**

Include the quality activities required to ensure that the level of quality is controlled and maintained throughout all phases of the project. For example, quality activities conducted during design may include, but are not limited to, checking calculations, plan reviews by quality control staff, etc. The quality activities conducted during construction may include, but are not limited to, receipts of items, materials and/or equipment, installation, inspection, testing and documentation not included in the TPCQMP.

**2.1.1.3 ORDER OF PRECEDENCE**

The TPC’s Quality Management Plan (QMP) shall be consistent with Metra’s TPCQMP. If the two documents conflict, the TPCQMP shall supersede the TPC’s QMP.

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2.1.2 QUALITY PROCEDURES DOCUMENTATION:

2.1.2.1 QUALITY PROCEDURES

Quality procedures, forms, checklists, logs, etc. shall include the following components, as appropriate to the specific procedure:

- Purpose and Scope (of the procedure)
- Requirements
- Procedures
- References (Standards, specifications, regulations, directions, or guidelines outside of the procedure)
- Related Documents (Other forms, records and/or procedures that relate to the procedure)

2.1.2.2 COMPLIANCE WITH FTA QMS GUIDELINES

Quality Procedures shall comply with the applicable requirements of the FTA Quality Management System Guidelines.

2.1.2.3 OTHER COMPLIANCE REQUIREMENTS

Quality Procedures shall comply with other regulatory and special contractual requirements imposed by Metra.

2.2 ADDITIONAL REFERENCES

2.2.1 [DESIGN MANUAL](#)

2.2.2 [CONSTRUCTION MANUAL](#)

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### 3. ELEMENT 3 - DESIGN CONTROL

#### 3.1 PURPOSE

The purpose of this quality element is to accurately identify, document and maintain records of design and construction contract documents and subsequent revisions to the design and construction drawings, specifications, and other related documents.

#### 3.2 REQUIREMENTS

##### 3.2.1 DESIGN CONTROL PROCEDURES

###### 3.2.1.1 DESIGN CONTROL PROCEDURE REQUIREMENTS

The TPC (Design) shall adhere to design control procedures. The TPC shall submit to Metra, or its designee, for review and approval as required quality documentation as described in this Element, including, but not limited to QC checklists, QA checklists, Disposition of Review Comments Log, and the Drawing Log.

###### 3.2.1.2 DESIGN CONTROL PROCEDURES

The TPC shall implement the design control procedures which shall include:

- Identification, review, and documentation of design inputs
- Regulatory requirements
- Performance objectives
- Preparation of and checking calculations, specifications, and drawings
- Project-specific inspection and testing criteria
- Planning design interfaces
- Assigning competent personnel to perform design QC reviews
- Submittal and QA review of design documents
- Provide oversight for design activities

###### 3.2.1.3 DURATION

The TPC shall maintain these procedures for the duration of the project.

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### 3.2.2 DESIGN CONTROL

#### 3.2.2.1 DESIGN CONTROL DURING DESIGN

The TPC (Design) shall control design activities through review, verification, and validation throughout the design process, including the internal auditing of project-related design documentation by the TPC. The design control activities should include and identify the organizational interfaces between the various groups (producing, reviewing, and commenting on design as well as the transmittal, review, and documentation of activities reviewed, including the design changes) are adequately identified in the design project records. Project records shall clearly track documents as they move within the TPC’s organization and between the TPC and Metra. The TPC (Design) shall reference manufacturer’s guidelines, installation guides, technical manuals and all other specification documentation as required when developing the project specifications.

#### 3.2.2.2 DESIGN INPUT

The TPC shall incorporate Metra-furnished design criteria including Metra standards, industry codes and standards, standard specifications, special conditions, drawings and/or other design requirements, into their design documents. The design documents shall include inspection and test requirements, calculations, drawings, sketches, specifications, standards, procedures, instructions, reports, etc., as applicable. The TPC shall generate required design submittals, bid documents, issued for construction documents and for record documentation using digital modeling software compliant with the standards specified in the Third-Party contract. The TPC shall follow the Metra requirements established in the consultant’s contract, in developing and formatting all reports, estimates, supporting documentation and technical specifications. Refer also to the Metra Computer-Aided Design and Drafting (CADD) Manual.

#### 3.2.2.3 SUBCONSULTANT DESIGN CONTROL

The TPC shall verify that work performed by the TPC’s subconsultant(s) or subcontractor(s) meet all project design criteria, is consistent with the developed design documentation and the TPC’s contractual agreement with Metra. The TPC shall document this verification process prior to milestone submittals.

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3.2.2.4 DESIGN CHANGE CONTROL

3.2.2.4.1 DESIGN CHANGE CONTROL REQUIREMENTS

Design changes, including field changes should be governed by the same design control measures as those applied to the original design.

3.2.2.4.2 REVIEW / APPROVAL OF DESIGN CHANGES

Design changes shall be reviewed and approved by the individual or group that performed the original design whenever possible, or alternatively, at the same level of competency, expertise and responsibility as the original individual or group.

3.2.3 DESIGN VERIFICATION

3.2.3.1 DESIGN VERIFICATION DURING DESIGN

The TPC (Design) shall control design activities through review, verification, and validation throughout the design process, including, the internal auditing of project-related design documentation by the TPC.

3.2.3.1.1 DESIGN REVIEW PROCESS

The Design / Engineering Consultant shall utilize Metra’s Design Review Process to verify their work. The process is further detailed in the Metra Design Manual.

3.2.3.1.2 DESIGN REVIEW CHECKLISTS

The Design / Engineering Consultant shall utilize Design Review checklists to verify their work.

3.2.3.1.3 DESIGN VERIFICATION

The TPC shall conduct internal quality control audit(s) to check calculations, drawings, specifications, reports, etc. Documentation of this quality check shall be sent to Metra for review with the TPC’s submittal to Metra. The TPC shall provide documentation of these audits for final project records submittal.

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3.2.3.1.4 METRA REVIEW

The TPC shall distribute submissions to Metra and others for comments, as indicated in the Contract.

3.2.3.1.5 RESPONSE TO METRA COMMENTS

The TPC shall track and respond in writing to the review comments with the completed resolution using the Disposition of Review Comments Log form, Bluebeam review process, or as required by Metra or its designee.

3.2.3.2 DESIGN VERIFICATION DURING CONSTRUCTION

3.2.3.2.1 CONTRACT DOCUMENT REVIEW

The TPC (Construction Manager and Contractor) shall review the most-recently issued Contract Documents, whether Issued for Construction (IFC), Issued for Bid, or otherwise contractually issued drawings and specifications to ensure compliance with the construction contract.

3.2.3.2.2 REVISING DESIGN DOCUMENTS DURING CONSTRUCTION

The TPC shall implement design control procedures that shall track revisions made to the contract documents that are IFC or Issued for Bid. Record Document shall be verified against observed or documented conditions or other contractual reporting through project completion.

3.2.3.2.3 RFI RESPONSE

The TPC (Design) shall resolve contractor RFI's as indicated in the Contract.

3.2.4 SUBMITTALS

See Section 5.2.3.

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3.3 ADDITIONAL REFERENCES

3.3.1 [DESIGN MANUAL](#)

3.3.2 [DRAWING LOG INSTRUCTIONS](#)

3.3.3 [DRAWING LOG SAMPLE](#)

3.3.4 [REQUEST FOR INFORMATION INSTRUCTIONS](#)

3.3.5 [REQUEST FOR INFORMATION SAMPLE](#)

3.3.6 [REQUEST FOR INFORMATION LOG INSTRUCTIONS](#)

3.3.7 [REQUEST FOR INFORMATION LOG SAMPLE](#)

3.3.8 [DISPOSITION OF REVIEW COMMENTS LOG INSTRUCTIONS](#)

3.3.9 [DISPOSITION OF REVIEW COMMENTS LOG SAMPLE](#)

3.4 ADDITIONAL DOCUMENTS

3.4.1 [DISPOSITION OF REVIEW COMMENTS LOG](#)

3.4.2 [DRAWING LOG FORM](#)

3.4.3 [REQUEST FOR INFORMATION FORM](#)

3.4.4 [REQUEST FOR INFORMATION LOG](#)

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**4. ELEMENT 4 - DOCUMENT CONTROL**

**4.1 PURPOSE**

This quality element has been developed and documented to establish the requirements of Metra’s Document Control Process and assign the applicable responsibilities to all parties involved in all phases of the work activities relating to capital contracts.

**4.2 REQUIREMENTS**

**4.2.1 DOCUMENT CONTROL PROCEDURES REQUIREMENTS**

TPC shall maintain control of project documents and data during all phases of project work and shall use standard Metra forms, logs, and checklists or Metra-approved modifications to the standard forms, logs, or checklists to document changes issued contract documents and all contract deliverable documents. All project records shall be legible, identifiable, and retrievable.

**4.2.2 DOCUMENTATION REQUIREMENTS**

**4.2.2.1 DESIGN DOCUMENTATION REQUIREMENTS**

The TPC shall document the review, approval, release, distribution, and revisions of all contract records, such as communications, meetings, design drawings, specifications, reports, shop drawings, procedures, etc. The TPC shall document all drawings and drawing revisions on the Drawing Log for IFB and IFC (when applicable) for distribution, maintenance, and/or transfer to Metra at project completion. The TPC shall maintain records of Metra Audits and Review of Design Submittals, including written responses to review comments and nonconformance resolutions.

**4.2.2.2 SUBCONTRACTOR DOCUMENTATION REQUIREMENTS**

The TPC shall require subcontractors to complete, maintain and submit documentation required in the contract and specifications.

**4.2.2.3 CONSTRUCTION DOCUMENTATION REQUIREMENTS**

While construction is in progress, the TPC (Contractor) shall maintain an annotated field copy of the current issue of Contract Documents (IFC or Issued for Bid (IFB) drawings and specifications) at the construction site which shows all deviations to the drawings and specifications. Deviations include all field changes, discovered conditions, approved alternates, changes per Requests for Information (RFI’s) from the Designer/Engineer, non-conformances, contract modifications, etc. Each change shall be

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“clouded” directly on the annotated field copy of drawings and specifications and reference the source of the change. Voided or updated drawings or portions of drawings shall be clearly marked. A current copy of the Drawing Log shall be maintained and located adjacent to the annotated field set of drawings and specifications. Evidence of maintaining the updated field set may be used during the pay application process by Metra as progress deliverable, if indicated in the contract.

4.2.2.4 FILE NAMING STRUCTURE

The TPC and their subs shall implement the Project File Naming and tagging requirements referenced in the TPCQMP for all project records and communications.

4.2.2.5 PROJECT MEETING DOCUMENTATION

The TPC shall participate in, document and follow-up on items related to project meetings as required in the Design Manual and Construction Manual, and as indicated in the Contract.

4.2.3 DOCUMENT CONTROL REQUIREMENTS

4.2.3.1 PERSONNEL RESPONSIBLE

The TPC shall identify personnel, positions, or departments responsible for preparing, reviewing, or providing concurrence, approving, and issuing documents.

4.2.3.2 CONFIGURATION MANAGEMENT

The TPC shall establish baseline drawings and specifications. Changes to these documents shall follow established change control requirements and processes.

4.2.3.3 OBSOLETE INFORMATION

The TPC shall eliminate all obsolete documentation from each work location. When obsolete documents are required to be retained, the remaining obsolete documents shall be clearly identified as obsolete.

4.2.3.4 DOCUMENT DISTRIBUTION

The TPC shall provide a completed transmittal form when distributing project records.

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#### 4.2.3.5 DOCUMENT STORAGE

See Element 13.

#### 4.2.4 FORMS AND INSTRUCTIONS

##### 4.2.4.1 METRA-CONTROLLED FORMS AND INSTRUCTIONS

The TPC shall use the forms and procedures referenced in the TPCQMP to control project records and data during all phases of the project. Documentation shall include forms, checklists, and logs. All TPCQMP forms, checklists, logs, procedures, instructions, samples, and related project documents such as contracts, specifications and drawings are considered “controlled documents”. Revisions to these documents shall be uniquely identifiable and traceable.

##### 4.2.4.2 CHANGES TO METRA FORMS

The TPC shall not change forms, checklists and logs provided by Metra without prior Metra approval. Proposed changes to forms referenced in the TPCQMP shall be submitted by the TPC in writing to the Metra PM for review and approval prior to use. The revised form cannot be used until the TPC has received written approval from the Metra PM. Use of unauthorized forms will be considered a Noncompliance and will require completion of a Nonconformance Report (NCR).

##### 4.2.4.3 PROJECT MANAGEMENT INFORMATION SYSTEM (PMIS)

Metra may contractually require the use of a Metra-approved PMIS in executing project management for some capital projects. When PMIS is required, it shall be implemented to ensure compliance, and address the implementation of the applicable quality requirements. When PMIS is not required, the applicable forms, checklists and logs required for compliance with the TPCQMP will be completed along with any other related documentation, at the appropriate time, and submitted to Metra. Unless contractually required otherwise, only one system, either the forms, checklists and logs referenced in the manuals should be followed in the implementation of the quality requirements.

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## 5. ELEMENT 5 - PURCHASING

### 5.1 PURPOSE

This quality element has been developed and documented to establish the requirements and assign the applicable responsibilities to all parties involved in the procurement process relating to capital contracts, including TPC, their subconsultants and/or their subcontractors, and all other parties related to the capital contracts/projects. The development of this procedure is to ensure that Metra’s quality procurement standards are followed and implemented as directed by this document.

### 5.2 REQUIREMENTS

#### 5.2.1 PURCHASING PROCEDURES

##### 5.2.1.1 PURCHASING PROCEDURE REQUIREMENTS

The TPC shall implement purchasing procedures in the TPCQMP to ensure that the work, products, and services purchased for, through and as a result of a capital project, conforms to the requirements specified in the FTA QMS Guidelines (2019 Update) and Metra’s procurement processes, including but not limited to, milestone submittals, deliverables, the assignment of competent and qualified project personnel, training requirements, and the approved work scope.

##### 5.2.1.2 CHANGE MODIFICATION

The TPC shall execute contract change modifications as indicated in the project specifications.

#### 5.2.2 PERSONNEL SELECTION/PROCUREMENT

##### 5.2.2.1 PERSONNEL QUALIFICATIONS REQUIREMENTS

The TPC shall employ qualified project personnel with adequate experience, training, qualifications, and certifications commensurate with the scope, complexity, and special nature of the activities to be managed, verified, inspected, tested and/or installed. The TPC shall employ qualified personnel with appropriate certifications and licenses, as required per codes, standards and regulations of the involved community, city, village, township, county, Occupational Safety and Health Administration ([OSHA](#)), Trade Associations, such as American Welding Society, American Concrete Institute, State of Illinois, etc.

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5.2.2.2 SUBCONSULTANT AND SUBCONTRACTOR REQUIREMENTS

The TPC shall select subconsultants and subcontractors based on their ability to meet the Metra contractual requirements, including quality and timeliness requirements. The TPC is to ensure and document the selection of its subconsultants and subcontractors, following the approved procurement procedures, system, checklists, etc. The TPC shall contractually require its subconsultants and subcontractors to implement the same contractual requirements as that of the TPC’s contract with Metra and to ensure that their subconsultants and subcontractors fully understand, acknowledge, and agree to the Third-Party contract and to Metra’s terms and conditions, and has the capacity to perform and complete the scope of work, as required. The TPC shall require its subconsultants and subcontractors to complete, update, maintain, and submit documentation that demonstrates and verifies their implementation of the procurement standards established by Metra in conformance with the FTA, Federal Railroad Administration ([FRA](#)), and/or other regulatory agency regulations as contractually required.

5.2.2.3 INSPECTION AND TESTING PERSONNEL

The TPC shall provide qualified inspection and testing personnel to perform the inspections and tests required in the contract documents. The TPC shall maintain records of the qualifications of persons and companies conducting inspections or tests. Training, certification, or licensing for qualification shall be included on the Training Log.

5.2.2.4 EQUIPMENT INSPECTION AND TESTING PERSONNEL

When the TPC is responsible for equipment inspection and testing, the TPC shall provide qualified personnel to conduct the inspections and tests. Qualifications shall be documented, kept current, and verifiable. Applicable training, certification and licensing of personnel conducting the inspections or tests shall be included on the Training Log provided in the TPCQMP. For tools or equipment that require a daily or ‘prior to use’ basis, such as weight scale or survey equipment, the TPC shall provide trained, qualified project personnel to perform these calibration checks.

5.2.2.5 PERSONNEL DETERMINING ROOT CAUSE ANALYSIS

The TPC shall provide qualified personnel to determine the root cause of nonconformance(s), and to develop, implement and verify the corrective and preventive action for each nonconformance issued, as indicated in Elements 11 and 12 of the TPCQMP.

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5.2.2.6 TRAINING PERSONNEL

All training shall be provided by qualified and/or certified personnel, as needed. See Element 15 for additional requirements.

5.2.2.7 CONFLICT OF INTEREST

The TPC shall ensure that there is no conflict of interest in providing the design, administrative services, or construction management services, as applicable.

5.2.2.8 QUALITY AUDITING PERSONNEL

Quality Auditors are required to have experience or training appropriate with the scope, complexity, or special nature of the activities to be audited. Quality auditors must have sufficient authority and organizational freedom to perform quality audits as per the written procedure. Quality Auditor’s qualifications shall be kept current and maintained on file. The training for personnel which qualifies is as follows:

- Training administered by Metra Quality
- American Society for Quality (ASQ) Certified Quality Auditor or similar certification
- National Transit Institute (NTI) Quality Assurance and Quality Control in Transit course or equivalent training

5.2.3 SUBMITTAL REQUIREMENTS (FOR CONSTRUCTION PHASE)

5.2.3.1 DELIVERABLE

Submittal Log.

5.2.3.2 PRELIMINARY SUBMITTAL LOG REQUIREMENTS

The TPC shall provide a preliminary Submittal Log, which indicates lead-times of all materials. The TPC shall provide this information into the Metra PM or designee for review/approval before the start of construction activities. The TPC shall provide an updated Submittal Log at each construction progress meeting.

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5.2.3.3 CERTIFICATION CONFIRMATION

The TPC shall use the submittals process to verify materials requiring certification of manufactured items or items requiring certified test reports or other inspection and test reports for items procured from suppliers meet specification requirements.

5.2.3.4 SUBMITTAL REQUIREMENTS

The TPC shall provide submittals for Metra’s review at the various stages or submittal of deliverables identified in the TPC’s scope of work documents and TPC Contract, and at any other milestones indicated in the approved schedule or contract.

5.2.3.5 DESIGNER OF RECORD / ENGINEER OF RECORD SUBMITTAL REVIEW

The TPC (Design) shall review and provide disposition for Shop Drawings received from Metra or designee and respond within the time specified in the Contract.

5.3 ADDITIONAL REFERENCES

5.3.1 PROJECT MANAGER MANUAL

5.3.2 [DESIGN MANUAL](#)

5.3.3 [CONSTRUCTION MANUAL](#)

5.3.4 [SUBMITTAL LOG INSTRUCTIONS](#)

5.3.5 [SUBMITTAL LOG SAMPLE](#)

5.3.6 [CONTRACT MODIFICATION COST WORKSHEET INSTRUCTIONS](#)

5.3.7 [CONTRACT MODIFICATION COST WORKSHEET SAMPLE](#)

5.3.8 [CONTRACT MODIFICATION TIME & MATERIAL \(T&M\) FORM INSTRUCTIONS](#)

5.3.9 [CONTRACT MODIFICATION T&M FORM SAMPLE](#)

5.3.10 [CONTRACT MODIFICATION LOG INSTRUCTIONS](#)

5.3.11 [CONTRACT MODIFICATION LOG SAMPLE](#)

5.4 ADDITIONAL DOCUMENTS

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- 5.4.1 [SUBMITTAL LOG](#)
- 5.4.2 [CONTRACT MODIFICATION COST WORKSHEET](#)
- 5.4.3 [CONTRACT MODIFICATION T&M FORM](#)
- 5.4.4 [CONTRACT MODIFICATION LOG](#)

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**6. ELEMENT 6 - PRODUCT IDENTIFICATION AND TRACEABILITY**

**6.1 PURPOSE**

This quality element establishes the requirements for the identification and control of the items and services procured, maintained, and used throughout the various phases of the capital project to prevent the inadvertent use of improperly identified materials, products and/or services or those found to be nonconforming.

**6.2 REQUIREMENTS**

**6.2.1 PRODUCT IDENTIFICATION AND TRACEABILITY PROCEDURE REQUIREMENTS**

The TPC and their subconsultants or subcontractors shall implement Product Identification and Traceability Procedures to control their work activities and materials to prevent the inadvertent use or installation of incorrect, unidentified, or defective items. Work activities may include the following: inspection, testing, design, installation, construction, and executive oversight. Materials may include material assemblies, material parts, components, and batches. These procedures shall include processes that verify that materials meet contract and regulatory requirements. Materials shall be installed by qualified personnel. The TPC shall use Metra forms to document the implementation of the requirements of this Element.

**6.2.2 DOCUMENTATION FOR PROCURED ITEMS**

The TPC shall maintain the required documentation for all items procured and/or used in all phases of their work, including but not limited to materials, equipment, and services. Documentation shall reference drawings, specifications, standards, physical and chemical materials test reports, etc., when required by drawings, codes, standards, or specifications, industry standards and practices, and contractual requirements.

**6.2.3 PROCESSING NONCONFORMING MATERIALS**

When materials are considered nonconforming, the TPC shall follow procedures as indicated in Element 11 of the TPCQMP and shall work with Metra to resolve the issue.

**6.2.4 RECEIPT OF MATERIALS**

The TPC shall identify, tag, segregate and document all materials received as required in the Contract.

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6.3 ADDITIONAL REFERENCES

- 6.3.1 [CONSTRUCTION MANUAL](#)
- 6.3.2 [RFIM FORM INSTRUCTIONS](#)
- 6.3.3 [RFIM FORM SAMPLE](#)
- 6.3.4 [RFIM LOG INSTRUCTIONS](#)
- 6.3.5 [RFIM LOG SAMPLE](#)
- 6.3.6 [RFMR FORM \(SIGNALS\) INSTRUCTIONS](#)
- 6.3.7 [RFMR FORM \(SIGNALS\) SAMPLE](#)
- 6.3.8 [RFMR LOG \(SIGNALS\) INSTRUCTIONS](#)
- 6.3.9 [RFMR LOG \(SIGNALS\) SAMPLE](#)

6.4 ADDITIONAL DOCUMENTS

- 6.4.1 [RFIM FORM](#)
- 6.4.2 [RFIM LOG](#)
- 6.4.3 [RFMR FORM \(SIGNALS\)](#)
- 6.4.4 [RFMR LOG \(SIGNALS\)](#)

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## 7. ELEMENT 7 - PROCESS CONTROL

### 7.1 PURPOSE

This quality element has been developed and documented to establish the requirements and assign the applicable responsibilities to all parties involved in all phases of the work activities relating to capital contracts. The development of this document is to ensure this procedure, and all those included in the TPCQMP, which directly affect the quality of the product, service, and work activities, are followed and implemented as directed.

### 7.2 REQUIREMENTS

#### 7.2.1 SPECIAL PROCESSES

##### 7.2.1.1 DELIVERABLE

Written Procedure for Special Processes.

##### 7.2.1.2 SPECIAL PROCESSES EXECUTED

The TPC shall follow procedures in the TPCQMP for Special Processes as indicated below.

##### 7.2.1.3 SPECIAL PROCESSES DEFINED

Special Processes are the processes for which results cannot be verified by subsequent inspection and testing of the product. Metra has identified and planned for the work activities directly affecting the quality of special processes to ensure that these activities are completed under controlled conditions.

##### 7.2.1.4 SPECIAL PROCESSES WRITTEN PROCEDURES

The TPC shall develop a written procedure for each special process. The written procedure is to specify the methods for verifying the acceptability of processing materials, activity, and final installation. The TPC shall submit these written procedures to Metra CM or designee for review/approval before special process work begins.

##### 7.2.1.5 SPECIAL PROCESSES IMPLEMENTATION

The TPC and the Metra PM/oversight, or its designee, shall ensure that continuous monitoring and/or conformance with documented procedures, performed in proper sequence, is accomplished for all special processes including, but not limited to, welding, chemical cleaning, nondestructive

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examination (NDE), special coatings, cold weather concrete curing, construction sequencing, lead and asbestos abatement, etc.

**7.2.1.6 SPECIAL PROCESSES CONTROL AND OVERSIGHT**

The TPC shall control all special processes by procedures, instructions, drawings, checklists and/or other appropriately defined means. Special processes shall be performed by qualified personnel.

**7.2.2 PROCESS CONTROL**

The TPC shall implement Metra’s process control procedures when executing their contracted work, including design, construction management and construction.

**7.2.2.1 DESIGN /DRAWING CONTROL PROCESS**

The TPC shall follow Metra’s procedures in Element 3 of the TPCQMP when providing design services, and as required in the contract. The TPC shall utilize construction and installation best practices in accordance with established industry procedures and contractual requirements utilizing suitable equipment for construction. The TPC shall provide adequate inspection during execution of the work.

**7.2.2.2 DOCUMENT CONTROL PROCESS**

The TPC shall follow procedures in the TPCQMP (Element 4) and as required in the Contract, to maintain control of project documents and data during all phases of the project.

**7.2.2.3 PURCHASING PROCESS**

The TPC shall follow purchasing procedures in the TPCQMP (Element 5), and as required in the Contract, including correct account codes, cost, schedule, milestone submittals, deliverables, the assignment of competent and qualified project personnel, training requirements, and the approved work scope.

**7.2.2.4 PRODUCT IDENTIFICATION AND TRACEABILITY PROCESS**

The TPC shall follow Product Identification and Traceability procedures in the TPCQMP (Element 6), and as required in the Contract.

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7.2.2.5 [INSPECTION AND TESTING, CALIBRATION, AND INSPECTION AND TESTING STATUS PROCESS](#)

The TPC shall follow procedures in the TPCQMP (Elements 8, 9 and 10) for Inspection and Testing, Calibration, and Inspection and Testing Status and per requirements in the Contract. The TPC shall provide a testing schedule and an Equipment and Calibration Log.

7.2.2.6 [NONCONFORMANCE AND CORRECTIVE / PREVENTIVE ACTION PROCESS](#)

TPC shall follow procedures in the TPCQMP (Elements 11 and 12), Nonconformance and Corrective/Preventive Action, and per requirements in the Contract.

7.2.2.7 [QUALITY RECORDS PROCESS](#)

The TPC shall follow procedures in the TPCQMP (Element 13) for Quality Records and per requirements in the Contract.

7.2.2.8 [QUALITY AUDITS PROCESS](#)

The TPC shall follow Metra procedures for Quality Audits, as required in Element 14 of the TPCQMP and per requirements in the Contract.

7.2.2.9 [TRAINING PROCESS](#)

The TPC shall follow Metra procedures for Training as required (Element 15) of the TPCQMP and per requirements in the Contract.

7.3 [ADDITIONAL REFERENCES](#)

7.3.1 [CONSTRUCTION MANUAL](#)

7.3.2 [DESIGN MANUAL](#)

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**8. ELEMENT 8 - INSPECTION AND TESTING**

**8.1 PURPOSE**

This quality element establishes requirements and assigns responsibilities for planning and performing inspection and testing of items and activities affecting quality during all phases of the project work, to provide assurance that the final accepted parts, materials, batches, service, or other work activity conforms to specified requirements.

**8.2 REQUIREMENTS**

**8.2.1 DELIVERABLE**

Inspection and Testing Plan (ITP).

**8.2.2 INSPECTION AND TESTING PLAN REQUIREMENTS**

**8.2.2.1 INSPECTION AND TESTING PLAN (ITP) REQUIREMENTS**

The TPC shall prepare an ITP that lists the inspections and tests required in the contract documents for the various items, parts, materials, batches, services, and work activities planned. The ITP shall include inspection and testing required at the factory prior to shipping, and inspection and testing required at the project site. The TPC may create two ITPs, one which lists inspection and testing for the project site and one for remote testing at any manufacturing location. The TPC may also combine these two ITPs into one document. The ITP shall be reviewed/approved by Metra PM or its designee prior to the start of construction.

**8.2.3 INSPECTION AND TESTING PROCEDURES**

**8.2.3.1 DELIVERABLE**

Written Test Procedure.

**8.2.3.2 TESTING PROCEDURES**

The TPC shall develop and implement written test procedures to demonstrate design and performance characteristics are as specified in design and operating requirements. Test procedures shall include the following, as applicable:

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8.2.3.2.1 CONDITION OF EQUIPMENT AND ITEM(S) TO BE TESTED

8.2.3.2.2 TEST OBJECTIVES

8.2.3.2.3 TEST PREREQUISITES, IF ANY

8.2.3.2.4 REQUIRED EQUIPMENT AND INSTRUMENTATION

8.2.3.2.5 REQUIRED INSPECTION ‘WITNESS’ AND ‘HOLD POINTS’

8.2.3.2.6 REQUIRED ENVIRONMENTAL CONDITIONS

8.2.3.2.7 PRECAUTIONS TO BE TAKEN IN PREPARATION AND PERFORMANCE OF TEST

8.2.3.2.8 PERSONNEL QUALIFICATIONS

8.2.3.2.9 DATA TO BE COLLECTED

8.2.3.2.10 RECOGNIZED INDUSTRY STANDARD TEST METHODS, SUPPLIER MANUALS, MAINTENANCE INSTRUCTIONS OR APPROVED DRAWINGS MAY BE USED IN PLACE OF SPECIALLY PREPARED TEST PROCEDURES AS LONG AS THESE DOCUMENTS INCLUDE ADEQUATE INSTRUCTIONS TO ENSURE SATISFACTORY PERFORMANCE OF THE TEST

8.2.3.2.11 ACCEPTANCE / REJECTION CRITERIA

8.2.3.3 APPLICATION AND REMOVAL OF TAGS

Written procedures shall include the responsibility for application and removal of tags, markings, labels, and stamps from the items that fail tests.

8.2.3.4 INSPECTION AND TESTING REQUIREMENTS

The TPC shall adhere to Inspection and Testing requirements in the Contract.

8.2.4 INSPECTION AND TESTING RESULTS

8.2.4.1 ACCEPTANCE OF INSPECTIONS AND TESTS

The party contractually responsible for inspection and testing should ensure that the inspections and tests have passed all acceptance criteria. Upon completion, inspection and test results are to be transmitted to all applicable parties.

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8.2.4.2 DISTRIBUTION OF INSPECTION AND TEST RESULTS

See Section 10.2.3.

8.3 ADDITIONAL REFERENCES

8.3.1 [CONSTRUCTION MANUAL](#)

8.3.2 [INSPECTION AND TESTING LOG INSTRUCTIONS](#)

8.3.3 [INSPECTION AND TESTING LOG SAMPLE](#)

8.4 ADDITIONAL DOCUMENTS

8.4.1 [INSPECTION AND TESTING LOG](#)

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## 9. ELEMENT 9 - INSPECTION, MEASURING AND TEST EQUIPMENT

### 9.1 PURPOSE

This quality element documents the requirements and assigns the responsibilities for the identification, control, calibration, and maintenance of the inspection, measuring, and test equipment required to perform the project’s inspection and testing activities, as per the contract.

### 9.2 REQUIREMENTS

#### 9.2.1 DELIVERABLE

Equipment Calibration Log.

#### 9.2.2 EQUIPMENT CALIBRATION LOG REQUIREMENTS

Prior to construction, the TPC shall generate a preliminary Equipment Calibration Log, which identifies equipment anticipated to be used on the project for inspection measuring and testing requiring calibration. This document shall be reviewed/ approved by Metra or its designee prior to starting work. The TPC shall use Metra’s standard forms.

#### 9.2.3 DELIVERABLE

Calibration Personnel and Written Procedures.

#### 9.2.4 CALIBRATION PERSONNEL AND WRITTEN PROCEDURE REQUIREMENTS

The TPC shall determine who calibrates the tools and equipment, whether by the TPC, by a consultant or by a calibration service agency. When the TPC subcontracts require inspection and testing, the TPC shall review the testing agency’s written procedures for control of inspection, measuring, and testing equipment to confirm compliance with TPCQMP requirements. This documentation shall be included with the TPC’s ITP. In cases of conflict, the requirements in Metra’s TPCQMP supersede the testing agency’s requirements. The TPC shall retain a copy of the testing agency’s procedures in the project files and include with closeout documents.

#### 9.2.5 DELIVERABLE

Tool Calibration.

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### 9.2.6 TOOL CALIBRATION REQUIREMENTS

Prior to the start of work, The TPC shall calibrate tools and equipment at specified intervals, which will be used for inspection, measuring, and testing activities throughout the project. The TPC shall record results of the calibration on the Equipment Calibration Log. The TPC shall use national standards to calibrate tools and equipment. If calibration standards do not exist for a certain tool or piece of equipment, manufacturer’s suggested standards may be used and noted in the Equipment Calibration Log.

### 9.2.7 EXECUTION REQUIREMENTS

#### 9.2.7.1 CALIBRATION STATUS

The TPC shall clearly identify on the body of the tool or equipment the status of its calibration. In the event labeling of the item itself is impractical, the calibration label should be placed on the item’s case or container. If the tool or equipment is stationary, the calibration status may be documented on a separate calibration sheet and maintained in the immediate area. For equipment requiring daily calibration checks, a log sheet may be used to record this data. These log sheets shall become an amendment to the Equipment Calibration Log.

#### 9.2.7.2 RECORDING INSPECTION, MEASURING AND TEST RESULTS

During execution of the work, the TPC shall record all inspection, measuring and test equipment on the Equipment Calibration Log. The TPC shall provide item descriptions, models, serial numbers, current calibration information on dates, results, name of person who calibrated the item, and other relevant information. The TPC shall provide updated documentation of the calibration status of inspection, measuring and testing equipment using the Equipment Calibration Log and the calibration sheet, referenced in Section 9.2.7.1 above.

#### 9.2.7.3 TESTING AND INSPECTION EQUIPMENT MAINTENANCE

The TPC shall maintain and store inspection, measuring and test equipment per manufacturer’s recommendations.

#### 9.2.7.4 EQUIPMENT FAILURES

If a tool or piece of equipment used for inspection, measuring, and/or testing is found to be out of calibration, the TPC shall immediately remove it from service until the tool is calibrated or replaced. The TPC shall reinspect/retest items that were inspected/tested with the uncalibrated

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equipment to confirm compliance. This process shall continue until the test/inspection results are deemed free of suspect. In cases where the calibration is determined to be deficient, the items are subject to recall. The TPC shall remove and tag inspection and testing equipment when any of the following occur: (1) Equipment does not perform to specifications, (2) Equipment is prone to go out of adjustment, (3) Equipment has been damaged, or (4) Equipment calibration cannot be verified. The TPC shall document this action on the NCR provided in the TPCQMP and submit a copy of the NCR to the Metra PM, who will determine corrective action. Refer to Elements 11 and 12 for additional information regarding nonconformance and corrective action procedures.

9.2.8 POST-CONSTRUCTION REQUIREMENTS

The TPC shall include the project’s completed Equipment Calibration Log in the closeout documents, as indicated in the specifications.

9.3 ADDITIONAL REFERENCES

9.3.1 [DESIGN MANUAL](#)

9.3.2 [CONSTRUCTION MANUAL](#)

9.3.3 [EQUIPMENT CALIBRATION LOG INSTRUCTIONS](#)

9.3.4 [EQUIPMENT CALIBRATION LOG SAMPLE](#)

9.4 ADDITIONAL DOCUMENTS

9.4.1 [EQUIPMENT CALIBRATION LOG](#)

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## 10. ELEMENT 10 - INSPECTION AND TEST STATUS

### 10.1 PURPOSE

This quality element establishes requirements and assigns responsibilities for identifying the inspection and test status of work during production and installation to ensure that only those items and work that have passed the required inspections and tests are used and accepted.

### 10.2 REQUIREMENTS

#### 10.2.1 STATUS OF MATERIALS

The TPC shall identify the status of materials that have been tested or inspected by means of markings, stamps, tags, labels, inspection records, test software, physical location, or other suitable means. The markings shall clearly indicate nonconformances, if any. The TPC shall use RFIM documents for construction projects and RFMR documents for signal projects - to document that construction materials comply with procurement and contractual requirements, and to verify that the items, parts, materials, batches, etc., delivered are per the purchase orders and delivery tickets.

#### 10.2.2 STATUS DOCUMENTATION OF COMPLETED TESTS AND INSPECTIONS

The TPC shall document the status of completed tests and inspected work in Daily Reports and weekly construction meeting minutes. When testing is performed by an independent testing agency, the TPC shall obtain and maintain test reports. Testing information shall be kept current on the Inspection and Testing Log and shall be distributed to Metra in a timely manner, as indicated in the specifications. Testing documentation shall include both conforming and nonconforming results.

#### 10.2.3 DISTRIBUTION OF TEST AND INSPECTION RESULTS

The TPC shall distribute inspection and test results to Metra and all applicable parties in a timely manner, as indicated in the specifications.

#### 10.2.4 STATUS OF INSPECTION AND TEST FAILURES

If inspections and tests fail to meet required acceptance criteria, the TPC shall document the nonconformance on the NCR as indicated in Element 11 of the TPCQMP and shall distribute the report to all applicable parties, and at the construction progress meeting(s).

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10.3 ADDITIONAL REFERENCES

10.3.1 [CONSTRUCTION MANUAL](#)

10.3.2 [DAILY REPORT INSTRUCTIONS](#)

10.3.3 [DAILY REPORT SAMPLE](#)

10.3.4 [MEETING MINUTES INSTRUCTIONS](#)

10.3.5 [MEETING MINUTES SAMPLE](#)

10.3.6 [INSPECTION AND TESTING LOG INSTRUCTIONS](#)

10.3.7 [INSPECTION AND TESTING LOG SAMPLE](#)

10.3.8 [EQUIPMENT CALIBRATION LOG INSTRUCTIONS](#)

10.3.9 [EQUIPMENT CALIBRATION LOG SAMPLE](#)

10.3.10 [NONCONFORMANCE REPORT INSTRUCTIONS](#)

10.3.11 [NONCONFORMANCE REPORT SAMPLE](#)

10.3.12 [NONCONFORMANCE LOG INSTRUCTIONS](#)

10.3.13 [NONCONFORMANCE LOG SAMPLE](#)

10.4 ADDITIONAL DOCUMENTS

10.4.1 [DAILY REPORT](#)

10.4.2 [MEETING MINUTES](#)

10.4.3 [INSPECTION AND TESTING LOG](#)

10.4.4 [EQUIPMENT CALIBRATION LOG](#)

10.4.5 [NONCONFORMANCE REPORT](#)

10.4.6 [NONCONFORMANCE LOG](#)

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## 11. ELEMENT 11 - NONCONFORMANCE

### 11.1 PURPOSE

This quality element has been developed to establish requirements for Metra’s Nonconformance process for control of nonconforming item(s) and/or work, to ensure that the item(s) and/or work are clearly identified, documented, and evaluated to prevent the inadvertent use or installation of such item(s) and/or work, and to determine the appropriate means of disposition.

### 11.2 RESPONSIBILITIES

#### 11.2.1 NONCONFORMANCE PROCEDURES REQUIREMENTS

The TPC shall adhere to Metra’s nonconformance procedures as contractually required. The TPC shall provide Nonconformance documentation as required as work progresses and in their project closeout documentation.

#### 11.2.2 NONCONFORMANCE DOCUMENTATION

The TPC shall document nonconforming materials, products and/or work on the NCR provided in the TPCQMP. The TPC shall provide backup (verifying documents) for each NCR. The documents shall be traceable back to the original findings, disposition, and corrective actions to which they are applicable. The TPC shall match information listed on the NCR such as dates, descriptions, contract info, etc., to the information recorded on the NCR Log.

#### 11.2.3 NONCONFORMANCE DISPOSITION

##### 11.2.3.1 NONCONFORMANCE DISPOSITION OVERSIGHT

The TPC shall work with Metra or its designee to evaluate nonconforming work to determine appropriate disposition. The Metra PM or its designee shall be the approval authority for disposition of nonconforming materials, products and/or work. See Section 11.2.3.2 for additional requirements for review and concurrence.

##### 11.2.3.2 NONCONFORMANCE DISPOSITION CATEGORIES

###### 11.2.3.2.1 USE AS IS

A determination to accept nonconforming work requires concurrence of the Metra PM and Metra Managing Director. In addition, this determination requires review and concurrence of

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the Engineer of Record (EOR). The Managing Director shall sign the form per the NCR instructions.

11.2.3.2.2 USE AS IS FOR ALTERNATE APPLICATIONS

Requires concurrence of the Metra PM.

11.2.3.2.3 REPAIR

A determination to accept nonconforming work ‘With Repair’ requires the concurrence of the Metra PM. In addition, this determination requires review and concurrence of EOR.

11.2.3.2.4 REWORK TO MEET REQUIREMENTS

Nonconforming material, product or work that has been reworked or repaired is to be re-inspected to ensure the original requirements or specifications have been met. The re-inspection and results of the re-inspection are to be noted on both the Daily Report (provided in the TPCQMP) and the NCR. Nonconforming materials or construction are to be recorded with location noted on inspection reports or nonconformance reports as applicable. When available, photographs of nonconformance should be included with the NCR records as supporting evidence.

11.2.3.3 NONCONFORMANCE CLOSEOUT

The organization responsible for correction of the reported nonconformance (TPC, sub, and Metra) is also responsible for completing the NCR. The TPC is responsible for tracking the nonconforming item or work through closure of the NCR. The TPC shall verify and document the completed corrective action(s) prior to submitting the NCR for closure.

11.2.4 AUDIT NONCONFORMANCES (FINDINGS)

If a Nonconformance (“Finding”) is identified during the Audit process by Metra’s quality assurance representative, he/she will issue an Audit Finding Report form for each Finding, by Element. (See example that follows.) The TPC shall submit an Audit Response Form for each Finding (by Element), per the “Instructions for Completing the Audit Finding Response Forms” document.

**“Finding by Element” Example:** There were five findings noted during ABQ’s last quality audit; two were noted and reported under Document Control. One was noted and reported under Purchasing, and two were noted and reported under Process

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Control. As a result, three Audit Findings were issued to ABQ; one for Document Control, one for Purchasing and one for Process Control.

11.3 ADDITIONAL REFERENCES

11.3.1 [DESIGN MANUAL](#)

11.3.2 [CONSTRUCTION MANUAL](#)

11.3.3 [NONCONFORMANCE REPORT INSTRUCTIONS](#)

11.3.4 [NONCONFORMANCE REPORT SAMPLE](#)

11.3.5 [NONCONFORMANCE LOG INSTRUCTIONS](#)

11.3.6 [NONCONFORMANCE LOG SAMPLE](#)

11.3.7 [DAILY REPORT INSTRUCTIONS](#)

11.3.8 [DAILY REPORT SAMPLE](#)

11.4 ADDITIONAL DOCUMENTS

11.4.1 [NONCONFORMANCE REPORT](#)

11.4.2 [NONCONFORMANCE LOG](#)

11.4.3 [DAILY REPORT](#)

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## 12. ELEMENT 12 - CORRECTIVE AND PREVENTIVE ACTION

### 12.1 PURPOSE

Metra has established, documented, and implemented this quality element to direct the activities and responsibilities required to effectively correct nonconforming or deficient materials, parts, services and/or work, and the proactive measures to prevent the recurrence of deficiencies.

### 12.2 RESPONSIBILITIES

#### 12.2.1 CORRECTIVE AND PREVENTIVE ACTION PROCEDURES REQUIREMENTS

The TPC shall adhere to Metra’s Corrective and Preventive Action procedures, instructions, and/or guidelines as contractually required.

#### 12.2.2 METRA CONCURRENCE

The TPC and Metra shall work together to resolve correction of the reported nonconforming item, work, material, equipment etc. The TPC shall document actions taken on Metra’s NCR form. The TPC may be assessed punitive measures from Metra, per contractual agreement, including termination of the contract for ineffective or incomplete corrective action.

#### 12.2.3 ROOT CAUSES

When responsible for correction of a nonconformance, the TPC shall investigate, determine, and document the root cause of the reported nonconformance on the NCR. The TPC shall also provide the appropriate action to successfully correct the deficiency and to prevent, or significantly reduce, the recurrence of the reported deficiency. Before corrective action is started, the TPC shall have written approval from Metra or its designee. Root cause analysis should be used by management to identify trends, based on analysis of nonconformances and audit findings.

#### 12.2.4 REPORTING AND TRACKING

The TPC shall report and discuss proposed corrective action(s) for all NCRs issued during the project’s regularly scheduled progress meetings. The TPC shall track the status of each NCR on the NCR Log until the NCR is successfully completed, approved, and closed. The TPC shall document and maintain results regarding the effectiveness of the corrective action for nonconforming items, work, materials, equipment etc.

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12.2.5 IMPLEMENTATION

When the TPC implements corrective action, the TPC shall adhere to Metra PM’s decision for disposition, and for implementing the appropriate action to correct the deficiency and prevent recurrence.

12.2.6 REVISED PROCEDURES

The TPC shall incorporate changes resulting from corrective action(s) into their procedures and implement the revised procedures to prevent recurrence. If the agreed upon corrective/preventive action requires existing procedures to be revised or new procedures to be developed, project personnel shall be trained per Element 15 in the TPCQMP.

12.3 ADDITIONAL REFERENCES

12.3.1 [DESIGN MANUAL](#)

12.3.2 [CONSTRUCTION MANUAL](#)

12.3.3 [NONCONFORMANCE REPORT INSTRUCTIONS](#)

12.3.4 [NONCONFORMANCE REPORT SAMPLE](#)

12.3.5 [NONCONFORMANCE LOG INSTRUCTIONS](#)

12.3.6 [NONCONFORMANCE LOG SAMPLE](#)

12.4 ADDITIONAL DOCUMENTS

12.4.1 [NONCONFORMANCE REPORT](#)

12.4.2 [NONCONFORMANCE LOG](#)

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### 13. ELEMENT 13 - QUALITY RECORDS

#### 13.1 PURPOSE

This quality element has been developed for the collection, filing, indexing, storage, maintenance, retrieval, and disposition of the project quality records necessary to provide evidence of quality procedures.

#### 13.2 REQUIREMENTS

##### 13.2.1 RECORDS RESPONSIBILITY

The TPC and their subcontractors (vendors, suppliers, subconsultants, etc.) are responsible for maintaining quality records during their full scope of work, which may include design, construction, inspection, assembly and/or installation phases.

##### 13.2.2 ELECTRONIC RECORDS

Unless otherwise specified in the contractual documents, the TPC shall maintain all project documents in electronic format for the duration specified in the contract documents. The TPC shall provide electronic files as a project closeout deliverable, as specified in the contract and specifications. Information and documentation maintained in the electronic files and folders are to match the related electronic log entries. The electronic files and the entries in the electronic logs should support each other. The TPC shall maintain additional electronic copies of project records remotely located from the facility where work is being performed, to ensure their safety from deterioration and/or damage.

##### 13.2.3 CONSTRUCTION DOCUMENTATION

The TPC shall maintain field documents (construction drawings, specifications, and submittals) at the construction site and shall be able to access the following for verification: Testing results, delivery slips, and certifications for material deliveries and installation of construction on site.

##### 13.2.4 QUALITY RECORDS

Each TPC on the project shall identify, file, and maintain quality records to make them readily retrievable when requested by Metra or its designee. The TPC shall maintain project records with sufficient information to identify the record, item, or activity to which it applies. Hard copy files will be considered valid only if stamped, initialed, or signed and dated by authorized personnel. The TPC shall keep all project records and logs current, during the duration of the project work.

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### 13.2.5 QUALITY AUDITS

During Metra’s Quality Assurance and Surveillance Audits, the TPC shall provide Metra’s Quality Auditors with quality documentation/project records as needed. The records shall be available and readily retrievable. The TPC shall maintain audit records and shall provide them for review, as needed. Audit records shall include the following:

- Audit Notifications
- Audit Checklists
- Audit Finding Reports
- Audit Finding Response forms
- Audit Closure Notifications

### 13.2.6 RECORD PROTECTION

The TPC shall maintain project records in an environment that minimizes deterioration and damage, prevents loss, precludes entry of unauthorized personnel, and facilitates document retrieval without undue delay.

### 13.2.7 IDENTIFICATION OF QUALITY RECORDS

All project quality records are to be identifiable by contract, project and (where applicable) task numbers, and project description. Where applicable, project records must be dated and include signatures of responsible personnel.

### 13.2.8 CLOSE-OUT DOCUMENTATION

The TPC shall provide project close-out documentation to Metra as required in the Contract and Specifications, including drawings, operations and maintenance manuals and warranties.

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13.3 ADDITIONAL REFERENCES

13.3.1 PROJECT MANAGER MANUAL

13.3.2 [DESIGN MANUAL](#)

13.3.3 [CONSTRUCTION MANUAL](#)

13.3.4 [PROJECT/DELIVERABLES LIST INSTRUCTIONS](#)

13.3.5 [PROJECT/DELIVERABLES LIST SAMPLE](#)

13.4 ADDITIONAL DOCUMENTS

13.4.1 [PROJECT/DELIVERABLES LIST](#)

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## 14. ELEMENT 14 - QUALITY AUDITS

### 14.1 PURPOSE

This quality element has been developed to establish the requirements of Metra’s Quality Audit process.

### 14.2 REQUIREMENTS

#### 14.2.1 AUDITEE COOPERATION

The TPC shall cooperate with Metra’s Quality Assurance personnel during external audits of the TPC. The audits shall be performed periodically by qualified quality personnel who are independent of the work being audited and shall follow the written audit procedure developed to direct audit activities. The TPC shall also cooperate with Metra when Metra conducts periodic quality audits of specific work processes to evaluate the TPC’s adherence to specific, approved work plans and procedures.

#### 14.2.2 METRA’S EXTERNAL AUDIT NOTIFICATION

When being audited by Metra quality assurance staff, the TPC (Auditee) should typically be notified in writing at least 14 working days in advance of the audit.

#### 14.2.3 METRA’S EXTERNAL AUDIT CHECKLIST

Prior to the External Audit Meeting, the TPC shall review the audit checklist, which is developed from the standards and/or requirements in the TPCQMP. The TPC shall have all documents on the checklist readily available for Metra’s Auditors to review.

#### 14.2.4 METRA’S EXTERNAL AUDIT REQUIREMENTS

##### 14.2.4.1 PARTICIPATION REQUIRED

The TPC shall participate in quality assurance audits conducted by Metra or its designee to determine if the requirements of the TPCQMP are being implemented by the TPC. The TPC shall respond to documents issued to the TPC from the Metra Auditor or designee, including the following:

- Pre-audit document submittal
- Audit schedule
- Audit notification
- Audit checklist

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- Audit report
- Audit findings (nonconformances) classified as major, minor and observations)
- Corrective action activities
- Audit closure notification

**14.2.4.2 AUDITEE STAFFING REQUIREMENTS**

The TPC shall provide appropriate administrative support and documentation to facilitate Metra’s external quality assurance audits and to resolve items requiring corrective action identified by the audits. The TPC shall assign personnel within their organization to document quality assurance activities and to verify that they are implementing quality control activities in the TPCQMP as they complete their contracted work.

**14.2.4.3 POST AUDIT CONFERENCE**

The TPC shall participate in Metra’s post-audit conference at the conclusion of the audit to discuss the audit results, determine due date for corrective action(s) necessary to resolve audit findings. The TPC shall complete corrective action work as agreed upon in the audit report.

**14.2.4.4 NCR (AUDIT FINDINGS) RESOLUTION**

The TPC shall respond to the audit NCR/deficiencies and proposed corrective actions to resolve audit findings.

**14.2.5 AUDIT REPORTING**

**14.2.5.1 AUDIT FOLLOW-UP**

The TPC shall perform follow-ups of previous external audits performed by Metra, as scheduled. Follow-ups shall verify completion and implementation of corrective actions identified during Metra’s quality assurance audits, per requirements in Element 12 of the TPCQMP. Quality audits shall remain open until all corrective action, including documentation, is completed.

**14.2.5.2 AUDIT PROGRESS REPORT**

The TPC shall provide progress reports to the Metra PM of external Metra audit nonconformances (Findings) and their corrective actions at project

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meetings. Corrective actions required to resolve audit findings shall be noted in the Action Items portion of the Meeting Minutes and tracked through completion.

#### 14.2.5.3 FOLLOW-UP SURVEILLANCE AUDIT

The TPC shall participate in all external Metra Quality Assurance follow-up surveillance audits as necessary to verify the completion of corrective action and its effectiveness in preventing reoccurrence of nonconformances.

### 14.2.6 AUDIT CLOSURE

#### 14.2.6.1 AUDIT RECORD FILING

The TPC shall create an electronic folder for each quality assurance audit performed by Metra. The TPC shall file all the documents in chronological order from the initiation of the audit until it is closed. The folder shall include the following: Audit scheduling, including the audit notification; Activities prior to the audit, including checklists; Activities during the Audit, including the Audit report, Audit Findings or (if any) and their associated Corrective actions; Audit Closeout and Miscellaneous audit-related documents.

#### 14.2.6.2 AUDIT REPORT REQUIREMENTS

The TPC shall complete actions required by the Audit Report and associated Audit Finding Report(s) (if any) issued by Metra or its designee, using Metra’s Audit Finding Response form and following the Audit Finding Response Form’s Instructions. The TPC shall return the completed and signed forms to Metra’s Lead Auditor as scheduled.

#### 14.2.6.3 AUDIT NONCOMPLIANCE REQUIREMENTS

For each Audit Finding, the TPC shall provide, on the Audit Finding Response form, the following information:

- Root cause analysis
- Proposed corrective action
- Action to prevent reoccurrence

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#### 14.2.6.4 EXECUTING CORRECTIVE ACTION

After corrective actions have been completed by the TPC, Metra or its designee shall review the work and provide review comments to the TPC. If no follow-up action is required, the TPC shall then return all audit documentation, including documentation of implementation of Corrective Action(s) to the Metra Lead Auditor for closure of the audit. The TPC shall be notified in writing regarding verifying the implementation of the completed corrective actions in future quality assurance audits by Metra, if any.

#### 14.2.6.5 COMPLETING OPEN AUDIT ITEMS

The TPC shall complete all open Audit Finding Report(s) as scheduled, including corrective actions. Failure to complete Corrective Actions, as described in the Audit Report and Audit Finding Report(s) as scheduled is subject to punitive provisions of the contract.

#### 14.2.6.6 AUDIT CLOSURE NOTIFICATION

The TPC shall be notified in writing by Metra or its designee regarding closure of the audit.

### 14.2.7 TPC INTERNAL AUDIT PROCESS

#### 14.2.7.1 INTERNAL AUDITS

The TPC shall also conduct internal audits as the project progresses to verify the TPC's compliance with the TPCQMP. The audits should be performed periodically (no less than annually) by qualified quality personnel who are independent of the work being audited.

The TPC shall verify their subcontractors and/or subconsultant's compliance with the TPCQMP and other contractual requirements. The audits should be performed periodically (no less than annually) by qualified quality personnel who are independent of the work being audited.

#### 14.2.7.2 INTERNAL AUDITING STAFF REQUIREMENTS

TPC shall have a qualified quality representative on staff to perform internal audits of their project team as well as audits of their subconsultants and/or subcontractors.

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14.3 ADDITIONAL REFERENCES

14.3.1 [DESIGN MANUAL](#)

14.3.2 [CONSTRUCTION MANUAL](#)

14.3.3 [MEETING MINUTES INSTRUCTIONS](#)

14.3.4 [MEETING MINUTES SAMPLE](#)

14.4 ADDITIONAL DOCUMENTS

14.4.1 [MEETING MINUTES](#)

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## 15. ELEMENT 15 - TRAINING

### 15.1 PURPOSE

Metra has established and implemented this quality element to ensure that training needs are identified and that personnel involved in the performance of the work and work-related activities are qualified, certified, and/or licensed in the processes required for completing the contractual and/or regulatory activities being performed.

### 15.2 REQUIREMENTS

#### 15.2.1 DELIVERABLE

Training Log.

#### 15.2.2 TRAINING REQUIREMENTS RECORDED

The TPC shall identify training requirements in the TPCQMP on the Training Log. Required training for project personnel shall be identified and submitted to Metra or its designee within 30 days of the execution of the contract. The Training Log shall be maintained throughout the project and shall be provided as a part of the project closeout documentation, as indicated in the contract documents. The TPC shall verify that all training, certificates, licenses, etc. required for project work activities are kept current, and that this information is documented on the Training Log.

#### 15.2.3 ADDITIONAL REQUIRED TRAINING

The TPC shall document all other required training, such as OSHA, Metra Safety Training, other Railroad Safety Training, etc., on the Training Log provided in the TPCQMP. If a Nonconformance's corrective/preventive action requires the revision of existing procedures or the development of new procedures, all applicable project personnel are to be trained and the training verifiable.

#### 15.2.4 STAFF AND SUBCONTRACTOR TRAINING

The TPC shall provide additional training to their staff and subcontractors, as required, for their scope of work, and record the training on the Training Log, provided in the TPCQMP.

#### 15.2.5 TRAINING LOG DOCUMENTATION

The TPC shall document their training on the Training Log provided in the TPCQMP, and shall include the attendance sheets, safety training cards and/or any other applicable proof of training.

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15.2.6 TPCQMP TRAINING

The TPC shall complete TPCQMP training prior to conducting project specific work. Training shall include all key project personnel, including, but not limited to the following: TPC’s senior management, TPC’s quality personnel, and TPC’s subconsultants and subcontractors.

15.2.7 REVISED TPCQMP TRAINING

The TPC shall complete training for revisions to the TPCQMP.

15.2.8 ADDITIONAL TRAINING

The TPC shall record, on the Training Log, all project-related additional training received during the course of contracted work, including training in the use of Metra Manuals.

15.3 ADDITIONAL REFERENCES

15.3.1 PROJECT MANAGER MANUAL

15.3.2 [DESIGN MANUAL](#)

15.3.3 [CONSTRUCTION MANUAL](#)

15.3.4 [TRAINING LOG INSTRUCTIONS](#)

15.3.5 [TRAINING LOG SAMPLE](#)

15.4 ADDITIONAL DOCUMENTS

15.4.1 [TRAINING LOG](#)

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## APPENDIX A - REVISION HISTORY

| Revision Date | Revision Number | Section Number              | Reason for Revision  | Revision Description   |
|---------------|-----------------|-----------------------------|--|--|
| N/A           | 00              | All                         | No revision at this time   | New document   |
| 4/1/19        | 01              | 3.0                         | To update Section 3.0 to account for the Signal Dept. design activities. | Updated Responsibilities and Procedures for the Signal Dept. activities. |
| 11/1/2022     | 02              | 3.4.8.1; 3.4.9              | Issued For Bid (IFB) Document Requirements                               | Content was removed and can be found in CADD Manual                      |
| 11/1/2022     | 02              | 3.4.8.1; 3.4.10.1; 3.4.10.2 | Issued for Construction (IFC) Document Requirements                      | Content was removed and can be found in CADD Manual                      |
| 11/1/2022     | 02              | 3.4.10.4                    | Revisions to Issued for Construction (IFC) Document Requirements         | Content was removed and can be found in CADD Manual                      |
| 11/1/2022     | 02              | 3.4.10.3                    | Initiation of RFI's  | Content was removed and can be found in Construction Manual              |
| 11/1/2022     | 02              | 3.4.4.2; 3.4.6.2; 3.4.10.3  | Resolution of RFI's  | Content was removed and can be found in Design Manual                    |
| 11/1/2022     | 02              | N/A                         | Specification Requirement - Installation Requirements                    | Content was removed and can be found in Design Manual                    |
| 11/1/2022     | 02              | N/A                         | Specification Requirement - Handling, Storage and Shipment               | Content was removed and can be found in Design Manual                    |

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| Revision Date | Revision Number | Section Number        | Reason for Revision   | Revision Description                                      |
|---------------|-----------------|-----------------------|---|---|
| 11/1/2022     | 02              | N/A                   | Specification Requirement - Delivery Location                               | Content was removed and can be found in Design Manual     |
| 11/1/2022     | 02              | N/A                   | Specification Requirement - Special Instructions                            | Content was removed and can be found in the Design Manual |
| 11/1/2022     | 02              | N/A                   | Specification Requirement - Project Deliverables                            | Content was removed and can be found in the Design Manual |
| 11/1/2022     | 02              | N/A                   | Specification Requirement - Test and Inspection Characteristics and Methods | Content was removed and can be found in the Design Manual |
| 11/1/2022     | 02              | 5.4.2.8               | Design Control Scheduling   | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 5.4.2.8               | Schedule Updates  | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 5.4.2.5               | Change Modification Requirements  | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 5.4.2.4               | Cost Estimate Requirements  | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 6.4.7; 6.4.12; 8.4.2a | Materials Acceptance by Metra   | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 5.4.2.10              | Punch List Requirements   | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | N/A                   | Unresolved Nonconformances  | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 13.4.3.4              | Project Completion  | Covered in Contract Specifications                        |

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| Revision Date | Revision Number | Section Number                                       | Reason for Revision                                       | Revision Description                                      |
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| 11/1/2022     | 02              | 4.4.10; 13.4.3.1;<br>13.4.3.2; 13.4.3.5;<br>13.4.5.1 | Project Closeout Document Requirements                    | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 3.4.11.2-4   | As-Built Drawings   | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | N/A  | Final Payment   | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 6.4.4; 6.4.5;<br>6.4.11; 8.4.2                       | Receiving Materials                                       | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 6.4.6  | Tagging / Identifying Construction Materials              | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 6.4.8; 6.4.9;<br>6.4.10; 6.4.11                      | Tracking Materials  | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | N/A  | Identifying Inspections and Tests – Designer Requirements | Content was removed and can be found in the Design Manual |
| 11/1/2022     | 02              | 8.4.3.2  | Elements to include in the ITP                            | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 8.4.3.3; 8.4.3.4                                     | Approvals Required for Changes to the ITP                 | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 8.4.3.5; 8.4.4.1                                     | Scheduling Inspections and Tests                          | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 8.4.4.4; 8.4.5.1;<br>8.4.5.2; 2.4.12                 | Inspection and Testing Requirements                       | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 8.4.4.3  | Failed Inspections and Tests                              | Covered in Contract Specifications                        |
| 11/1/2022     | 02              | 2.4.8; 5.4.2.6;<br>13.4.3.3                          | Project Deliverables List Requirements                    | Covered in Contract Specifications                        |

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| 11/1/2022     | 02              | 3.4.12   | Signal In-Process Drawings                          | Content was removed and can be found in the Design Manual  |
| 11/1/2022     | 02              | 3.4.13   | Signal Request for Proposal (RFP) Contract Drawings | Content was removed and can be found in the Design Manual  |
| 11/1/2022     | 02              | 3.4.14   | Signal Issued for Construction (IFC) Drawings       | Content was removed and can be found in the Design Manual  |
| 11/1/2022     | 02              | 3.4.15   | Signal In-Service Drawings                          | Content was removed and can be found in the Design Manual  |
| 11/1/2022     | 02              | 3.4.5.4; 3.4.6.4;<br>3.4.6.5; 5.4.2.9                            | Progress Meetings                                   | Content was removed and can be found in the Design Manual/<br>Construction Manual                                      |
| 11/1/2022     | 02              | 3.4.6.6  | Project Photos                                      | Content was removed and can be found in the Design Manual/<br>Construction Manual / Covered in Contract Specifications |
| 11/1/2022     | 02              | 6.4.7  | Job Site Materials Receipt                          | Content was removed and can be found in the Construction Manual / Covered in Contract Specifications                   |
| 11/1/2022     | 02              | 14.4.1; 14.4.5;<br>14.4.8.2; 14.4.8.4;<br>14.4.8.5;<br>14.4.11.2 | Metra Internal Auditing                             | Content was removed and can be found in the Project Manager Manual   |

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## APPENDIX B – MANAGEMENT COMMITMENT AND AUTHORIZATION

Metra's capital program includes projects that involve design, construction, procurement, and installation of materials providing for the operation of a safe, reliable, and convenient commuter railroad system. The TPCQMP has been established to ensure these objectives are accomplished in a manner which will provide consistent, high-quality implementation of the TPC scope of work.

The TPCQMP reflects Metra management's quality guidelines that apply to all project activities performed by the TPC.

The Chief of the Department that is leading the work for Metra has the authority and ultimate responsibility for ensuring the implementation of the Third-Party Contracts Quality Management Plan (TPCQMP) and that all work activities relating to capital projects is implemented according to the requirements of the Federal Transit Administration (FTA) Quality Management System (QMS) Guidelines, FTA-PA-27-5194-12.1 (2019). The two Metra departments that often lead work utilizing Third Party Contracts include but are not limited to the Capital Delivery Department and the Engineering Department.

The TPCQMP applies to all Consultants, Contractors, their Subcontractors, and Metra personnel performing work for Metra capital projects in the implementation of this TPCQMP.

If a Nonconformance is identified during project work activities, the project personnel must take the appropriate steps to implement the recommended corrective action within the scheduled time allotted. Noncompliance and/or noncompletion of the recommended corrective action may be considered a breach of contract subject to the terms and conditions defined in the contract.

The Manager, QA/QC, has the authorization and the responsibility to ensure compliance to the TPCQMP. Internal audits performed by the Manager, QA/QC - Engineering are conducted to verify implementation of the TPCQMP by its internal force account personnel.

The Corporate Quality Assurance Director has been authorized to verify implementation of the TPCQMP through external, Third-Party quality assurance audits. The Corporate Quality Assurance Director has the responsibility to identify quality concerns, recommend solutions and verify implementation of the appropriate corrective actions.

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## REFERENCE A – ACRONYMS AND ABBREVIATIONS

| ACRONYM | DEFINITION                                    |
|---------|---|
| CADD    | Computer-Aided Design and Drafting            |
| CMAN    | Metra Construction Manual                     |
| CQM     | Metra’s Corporate Quality Manual              |
| DMAN    | Metra Design Manual                           |
| EOR     | Engineer of Record                            |
| FRA     | Federal Railroad Administration               |
| FTA     | Federal Transit Administration                |
| IFB     | Issued for Bid                                |
| IFC     | Issued for Construction                       |
| ITP     | Inspection and Test Plan(s)                   |
| NCR     | Nonconformance Report                         |
| NDE     | Non Destructive Examination                   |
| NEPA    | National Environmental Policy Act             |
| OSHA    | Occupational Safety and Health Administration |
| PM      | Project Manager                               |
| PMIS    | Project Management Information Systems        |
| QA      | Quality Assurance                             |
| QA/QC   | Quality Assurance/Quality Control             |
| QC      | Quality Control                               |
| QMP     | Quality Management Plan                       |
| QMS     | Quality Management System                     |
| RFI     | Request for Information                       |
| RFIM    | Request for Inspection of Material            |
| RFMR    | Request for Material Received                 |
| RFP     | Request for Proposal                          |
| RFSS    | Request for Specific Services                 |
| T&M     | Time and Material                             |
| TPC     | Third-Party Consultant/Contractor             |
| TPCQMP  | Third Party Contracts Quality Management Plan |

## REFERENCE B – DEFINITIONS

**Audit:** An evidence gathering process. Audit evidence is used to evaluate how well audit criteria are being met. Audits must be objective, impartial, and independent, and the audit process must be both systematic and documented.

**Audit Finding:** Result from a process that evaluates audit evidence and compares it against audit criteria. Audit findings can show that audit criteria are being met (conformity) or that they are not being met (nonconformity).

**Bulletin:** A change to the contract documents after contract award that may or may not result in a change order.

**Calibrate:** (1) to check, adjust, or standardize a measuring instrument, usually by comparing it with an accepted model, (2) to determine, check, or rectify the graduation of any instrument giving quantitative measurements.

**Calibration:** (1) Adjusting a measuring instrument to make it accurate, (2) The set of operations which establish, under specified conditions, the relationship between values indicated by a measuring instrument or measuring system and the corresponding values of a quantity realized by a reference standard, (3) setting of a measurement device between two dimensions, (4) to set with one device to a precise measurement made in as similar a way as possible with a second device of known magnitude or correctness.

**Contractor or Consultant:** An organization providing services or products to Metra under direct contractual agreement. It could be Construction Contractor, Construction Management Consultant, Project Management Consultant, Project Administration Consultant, etc. A joint venture with two or more consultants and/or contractors is also considered to be a TPC. Subcategories of TPCs include:

**Construction Contractors** - Third Parties contracted to self-perform or directly manage construction work for Metra.

**Construction Management Consultants** - Third Parties contracted to oversee procurement, fabrication, and construction work on Metra's behalf.

**Design Consultants** - Third Parties contracted to do design work for Metra. This may include technical consultant and vendors providing design of manufactured, fabricated or on-site executed products and facilities.

**Testing Consultants** - Third Parties contracted to do testing work for Metra.

**Controlled Document:** A document, for which the initial issue and the subsequent revisions are controlled by the issuing department utilizing the revision number and/or issue date, distribution location, and distribution per approved procedures.

**Corrective Action:** Action taken to address and reduce the impact or correct a detected deficiency, nonconformance or another undesirable situation.

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**Deficiency:** An audit or review finding that is identified as a deviation from an established requirement (quality plan, specification, etc.).

**Designer:** The organization responsible for design. This could be Metra itself, and/or a consultant or contractor providing architectural/engineering design services.

**Design Input:** Design objectives, typically provided in the form of product performance specifications, product descriptions with specifications relating to configuration, composition, incorporated elements, and other design features.

**Force Account / Metra Force Account:** Metra’s in-house workforce, which includes management, engineering, and mechanical department forces.

**Hold Point:** A hold point is a documented point in a series of events or a process where work activities stop, and notifications are made for the necessary inspection/verification of completed work.

**Inspection:** Activities such as measuring, examining, testing, gauging one or more characteristics of a product or service and comparing these with specified requirements to determine conformity.

**Item:** Material, equipment, work, service etc. activity during design, construction, installation, testing, etc.

**Key Personnel:** Employees listed on the initial organizational chart submitted to Metra prior to start-up of the project.

**Major Finding:** Evidence of a total breakdown or absence of the stated requirement.

**Minor Finding:** Evidence of a deficiency in a part, material, service, or work observed, the process or a stated requirement.

**Management:** Metra organization responsible for managing the project. Also, the management group of any consultant or contractor contractually involved in the completion of Metra capital projects.

**Nonconformance:** A deviation from or noncompliance with the requirements of the contract, design, specifications, plans, procedures, instructions, etc.

**Objective Evidence:** Documentation, records or statements of fact pertaining to the quality of an item or service or to the existence and implementation of a quality system element, which is based on observation, measurement or test and can be verified.

**Observation:** a part, material, action or work observed during the audit that is not to the extent of a deficiency, but one that has the indications of becoming a deficiency if circumstances, activities and/or actions remain unchanged. They can also identify best practices or improvement opportunities.

**Procedure:** Documented steps in a process that describe how the process is to be performed.

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**Process Control:** A methodology within a process intended to ensure the output of the process conforms to specifications.

**Project Deliverables:** Includes the electronic and/or hard copy documents identified in the scope of work and the contractual documents, e.g., Request for Proposal (RFP), IFB, drawings, specifications. Some of the deliverables may be reports, completed logs, forms, checklists, warranties and guarantees, certificate of conformance, quality records, equipment, spare parts, operating, maintenance, training, and users manuals, submittals, as-builts, recall notices, etc.

**Purchaser:** Metra or other Third-Party Contractor’s organization responsible for specifying, contracting, and accepting requirements for goods or services.

**Quality Assurance (QA):** All those planned and systematic actions necessary to provide adequate confidence that a product or service will satisfy given requirements for quality. It is also referred to as the quality of the process. QA emphasizes actions at a management level that directly improve the chances that QC actions will result in a product or service that meets requirements.

**Quality Plan:** A document which outlines the specific quality practices, resources, and sequence of activities relevant to a particular product, service, contract or project.

**Quality Audit:** A systematic and independent review to determine whether quality activities and related results comply with planned arrangements. The audit also determines whether these arrangements are implemented effectively and are suitable to achieve objectives.

**Quality Control (QC):** The operational techniques that are used to assure that the product or service meets requirements and that the work meets the product or service goals. Generally, QC refers to the act of taking measurements, testing, and inspecting a process or product to assure that it meets specifications.

**Quality Management System:** A formalized system that documents the structure, responsibilities, and procedures required to achieve effective quality management.

**Quality Oversight:** (or Quality Surveillance): Oversight can be identified as watchful care or general supervision. Quality oversight can range from an informal process of keeping in touch with the QA organization to a second layer of QA activities, depending upon the circumstances. Quality oversight varies the execution of the Quality Program. Quality surveillance generally refers to the same actions included in quality oversight.

**Quality Procedures:** Written instructions for implementing various components of the Quality Management System. Procedures should identify what is to be done, who should do it, and how, where, and when it should be done.

**Quality Records:** Records that provide objective evidence demonstrating that a quality requirement has been met or how well a quality process is performing.

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**Repair:** The item can be repaired to make it acceptable for its intended use, although it will still not meet its original requirements.

**Rework:** The item can be completed or corrected so that it is brought into conformance with the original requirements.

**Root Cause:** An underlying factor that caused a deficiency or nonconformance and should be permanently eliminated through process improvement.

**Root Cause Analysis:** Methodology for determination of the root cause of a deficiency or nonconformance.

**Scrap:** Rejecting the item for use as originally intended. However, the item may be used for alternate applications if it is determined acceptable for the alternate application.

**Special Process:** A process, the results of which cannot be verified by subsequent inspection and testing of the product.

**Specifications:** The documents that prescribe the requirements with which the product or service has to conform. Note: A specification would refer to or include drawings, patterns or other relevant documents and should also indicate the means and criteria whereby conformity can be checked.

**Standard:** (1) an idea or thing with the known or assigned correctness, (2) test and measurement standards that define the methods to be used to assess the performance or other characteristics of a product or process, (3) a level of quality or accomplishment, (4) common and repeated use of rules, conditions, guidelines or characteristics for products or related processes and production methods, and related management systems practices.

**Subcontractor or Subconsultant:** Any organization supplying services or products under contract to a contractor or consultant. The subcontractor/subconsultant would not contract directly with Metra, but with a contractor/consultant or another subcontractor/subconsultant.

**Surveillance:** The continual monitoring of a process; a type of periodic assessment or audit conducted to determine whether a process continues to perform to a predetermined standard.

**Third-Party Contracts or Third-Party Contractors/Consultants:** Any organization supplying services or products under contract with Metra, which includes design consultants, construction contractors, construction management consultants, project management consultants, purchasers, suppliers or vendors, subcontractors or subconsultants, fixed facility railroads and municipalities.

**Traceability:** (1) the ability to verify the history, location, or application of an item or service by means of documented recorded identification; (2) traceable to a particular project, specific warranty, test report, supplier, point in time, purchase order, or through production.

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**Use-As-Is:** Although it does not meet its original requirements, this item can be used with no adverse conditions while continuing to meet all engineering functional requirements of safety, performance and fit.

**User Department / Metra User Department:** The Metra departments involved in the completion of capital projects, e.g., Mechanical, Procurement, Design Engineering, Construction Engineering, Communication Engineering, Electrical Engineering, Station and Parking Design, Signal Engineering, Force Account, etc.

**Verification:** Reviewing, inspecting, testing, checking, auditing, or otherwise establishing and documenting whether items, processes, or services, or documents conform to specified requirements.

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## REFERENCE C – REFERENCE STANDARDS

1. FTA Quality Management System Guidelines, (2019 Update)  
<https://www.transit.dot.gov/funding/grant-programs/capital-investments/quality-management-system-guidelines>
2. Occupational Safety and Health Association (Requirements applicable to task)  
<https://www.osha.gov/>

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