



Massachusetts Bay Transportation Authority

CAPITAL PROGRAMS USER GUIDE:

CONSTRUCTION DESIGN CHANGE REQUEST (DCR)

Table of Contents

1.0	Policy.....	2
2.0	Purpose.....	2
3.0	Responsibilities.....	2
4.0	Instructions.....	4
5.0	Exceptions.....	6
6.0	Document History.....	6
7.0	Appendices	6

1.0 Policy

The Construction Design Change Request (DCR) Process is a controlled and documented process for evaluating, approving, and tracking a proposed change to contract documents. DCRs must be approved before implementing any proposed change.

Contract documents comprise the conformed drawings and specifications used for the delivery of a project. Any Request for Information (RFI) that results in a change to the contract documents requires initiation of a DCR. Any Construction Design Change Request that results from a design error or omission shall be tracked through the Design Errors and Omissions Evaluation Process.

All Capital Programs construction contracts, including Capital Delivery, Transformation, and Expansion, and any Transit-Oriented Development projects that construct MBTA assets, shall follow this Construction Design Change Request Process. This process does not apply to the design process.

2.0 Purpose

The purpose of this procedure is to ensure that the requirements of contract documents or the Basis of Design are maintained when design changes are proposed. This is accomplished by requiring that the same stakeholders who reviewed the original design also review proposed DCRs to ensure maintenance of Basis of Design (BOD) characteristics such as scope, schedule, cost, durability, maintainability, and operations performance.

The Office of the Chief Engineer shall review changes affecting Safety, Budget, Schedule, and Quality to ensure review by parties with the appropriate level of authority.

The DCR process will generate data that will help identify trends that require improvement to produce high quality deliverables.

3.0 Responsibilities

All parties participating in delivery of Capital Programs projects shall use the DCR process to initiate, evaluate, document, and track changes to the contract documents. A DCR shall be initiated when:

- ❖ the response to a RFI will result in the change to the conformed project documents;
- ❖ a change to the contract is requested by the MBTA through the Project Manager;
- ❖ there is an error or an omission;
- ❖ the construction contractor submits a proposal in accordance with the requirements specification section 00700, 2.4. Contractor Cost Reduction Value Engineering (VE).

3.1 Construction Contractor

- 3.1.1 Coordinates requests from subcontractors, vendors, suppliers, and/or fabricators.

3.1.2 Provides all information required for the Design Team and the MBTA to evaluate the proposed change. Required information includes evidence of maintenance of BOD while conforming to the VE process as allowed by their contract.

3.1.3 Distributes updated documents to subcontractors, suppliers, and fabricators.

3.2 Design Team (Project Manager)

3.2.1 Determines whether the response to an RFI will result in a change to contract.

3.2.2 Verifies whether a proposed change complies with contract documents.

3.2.3 Determines whether the Safety Certification Plan needs to be updated because of the change.

3.2.4 Determines, within five working days of receipt, whether the proposed change includes sufficient data to complete review or whether additional information is required.

3.2.5 Verifies whether the change maintains the Basis of Design while conforming with the **VECP**.

3.2.6 Performs the same quality control and quality assurance process required by their approved Quality Management Plan on the proposed change as they performed on the original contract documents.

3.2.7 Verifies specified project quality control requirements applicable after change is performed and updates contract documents if required.

3.2.8 Provides response to design review comments.

3.2.9 Distributes revised documents if a change is approved.

3.3 The MBTA Project Office (Project Manager)

3.3.1 Comprises the Project Manager and assigned Project Coordinator, Budget Analyst and Project Controls staff, and includes the Resident Engineer during the construction phase.

3.3.2 Tracks DCRs for evaluation as potential errors or omissions.

3.3.3 Coordinates review with the Office of the Chief Engineer, Design Team, and QA/QC as applicable, both formally and informally, as required to expedite the process.

3.3.4 Reviews the proposed change for acceptance or rejection and determines whether a work directive is required.

3.3.5 Initiates a Change Order if the DCR is approved.

3.4 MBTA Office of the Chief Engineer (OCE) or Designee

- 3.4.1 Coordinates review with Operations, Engineering and Maintenance and the same stakeholders who reviewed the original design in their purview.
- 3.4.2 Determines, within five working days of receipt, whether the proposed change includes evidence of maintenance of Basis of Design while conforming with the VECP.
- 3.4.3 Notifies the Project Office whether complex evaluations, as determined by the OCE, will require additional time for review.

3.5 MBTA QA/QC (Construction QA/QC or PM/CM Quality Manager as applicable)

- 3.5.1 Verifies that the Design Team has updated QC requirements that result from the change.
- 3.5.2 Develop Lessons Learned to share with Project Controls.

3.6 MBTA QA/QC Construction Quality Audit Manager (when PM/CM Quality team is used)

- 3.6.1 Audits the PM/CM Quality team to verify compliance with this procedure.

3.7 Internal and External Stakeholders

- 3.7.1 The same parties that participated during the project's design phase as members of the Project Development Group (PDG) shall evaluate design change requests in their purview.

3.8 PMIS Team

- 3.8.1 Provides data for lessons learned for all DCRs.
- 3.8.2 Works with QA/QC and Project Controls to report lessons learned in a format that provides organized, useful, and easily available information.

4.0 Instructions

Please navigate to the [PMIS Quick Reference & User Guides](#) if you need further assistance.

4.1 Initiation

- 4.1.1 The group that initiates the change shall furnish all information required for review as described above in section 3.1.
- 4.1.2 If the DCR is a result of an error or omission, identified in Section 3.1.3 above, then the Project Office shall refer to and follow the Design Errors and Omissions Evaluation Process.

4.2 Evaluation

- 4.2.1 The Design Team shall coordinate with stakeholders to evaluate the proposed change for evidence of maintenance of BOD while conforming to the VE process as allowed by their contract and shall provide the MBTA PM with recommendations regarding the proposed change within five business days, unless otherwise mutually agreed upon by the Design Team and MBTA Project Manager in coordination with OCE.
- 4.2.2 If the Design Team determines the proposed change does not provide the required evidence, they will forward the recommendation to reject the proposed change to the Project Office and to the OCE with supporting documentation.
- 4.2.3 If The Design Team determines there is insufficient data to evaluate the merit of the change, they shall notify the Project Office to return the DCR to the initiator for further revision.
- 4.2.4 If The Design Team determines the proposed change does provide the required evidence, they shall prepare a draft formal revision with changes to any affected construction contract document and forward their recommendation to accept the proposed change to the MBTA Project Office and OCE with supporting documentation.
 - 4.2.4.1 OCE shall evaluate Design Team recommendations in coordination with applicable stakeholders.
 - 4.2.4.2 If the OCE determines the proposed change provides evidence of maintenance of Basis of Design while conforming with the VECP, it shall notify the Project Office to continue processing the change.
 - 4.2.4.3 The Project Office shall then forward the recommendation to MBTA Construction QA/QC.
- 4.2.5 The MBTA QA/QC (or PM/CM Quality Team) shall review the proposed QC procedures.
 - 4.2.5.1 If the QC procedures are not consistent with contract requirements or approved quality control plan, they shall return the DCR to the MBTA PM to coordinate revision by the Design Team.
 - 4.2.5.2 If the QC procedures associated with the proposed change are consistent with contract requirements and the contractor's approved quality control plan, they shall forward the DCR to Project Office for action.

4.3 Finalization

- 4.3.1 The Project Office shall coordinate design package finalization and distribution with the Design Team.
- 4.3.2 The Project Office shall initiate the approved change order process.

5.0 Exceptions

No exceptions.

6.0 Document History

Document Owner: Capital Programs Support – Quality Assurance/Quality Control (QA/QC)

VERSION / RELEASE DATE

V1 / September 1, 2022

7.0 Appendices

7.1 Templates

- ❖ N/A

7.2 Reference Documents

- ❖ [MBTA Capital Delivery QA Plan](#) Section 3 Design Control, Section 6 Product Identification and Traceability, Section 4 Document Control, Section 5 Purchasing, Chapter 13 Quality Records.
- ❖ [MBTA Specification section 00700, 2.4. Contractor Cost Reduction Value Engineering \(VE\)](#)