COLORADO
Department of Transportation

CENTRAL 70 PROJECT

Public Disclosure Administrative and Technical Proposal:
5280 CONNECTORS

5280 Connectors
Linking Communities

VOLUME 2 | Electronic Copy | Binder 5 of 8

TRANSPARENCY | RELIABILITY | ACCOUNTABILITY | INCLUSIVITY

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2.1 Technical Proposal

Volume 2 Technical Submissions
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2.2 Alternative Technical Concepts (ATCs)

SECTION 2.1.9

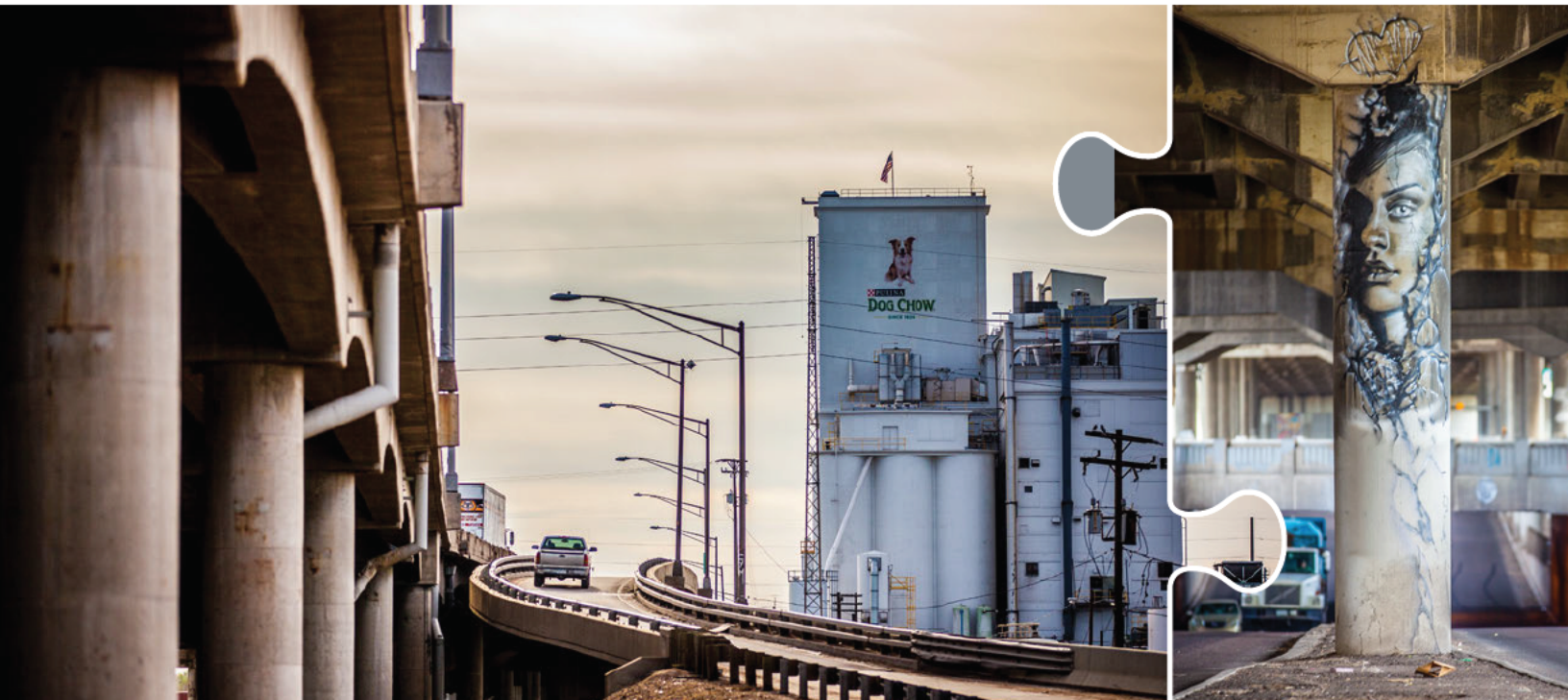
APPENDIX B: DRAFT PROJECT MANAGEMENT PLAN

APPENDIX B: DRAFT PROJECT MANAGEMENT PLAN

As stated in Form B (Confidential Contents Index), this section has been redacted in accordance with Section 1.5 of the RFP and C.R.S. § 24-72-204.

SECTION 2.1.10

APPENDIX C: PROPOSAL SCHEDULE



Overview

This schedule narrative accompanies 5280 Connectors' Proposal Schedule. It explains key assumptions and approached used by our team in developing our schedule.

Highlights

Our Proposal Schedule:

- Defines resources and activities.
- Drives the logic for project milestones.
- Communicates critical path and milestones visually.
- Is designed to create reports for different levels of review.
- Is a living document.

5280 Connectors is committed to developing and maintaining a reliable schedule that fully accounts for important project activities. Our schedule management approach is collaborative and focused on addressing project risk and creating a blueprint for on-time project delivery, regardless of the challenges that arise.

Appendix C

Proposal Schedule Summary

Central 70 Project

Volume 2
Technical Proposal

June 1, 2017

Exhibit

Exhibit 1. Sample Work Breakdown Structure (WBS)

1.0 Purpose

The 5280 Connectors draft Baseline Schedule is provided in Binder 6 of 8 of the proposal appendices.

This schedule narrative provides information related to our schedule development methodology and assumptions used in developing our draft Baseline Schedule. Our collaborative approach to schedule development and approval combines the judgment, means and methods, and best practices incorporated by our team with CDOT input and feedback to arrive at an approved Baseline Schedule focused on eliminating risk and achieving milestones.

2.0 General

Our schedule will be developed and maintained in accordance with Schedule 8, Section 3. The schedule shall be based on the Critical Path Method (CPM) and submitted in a Primavera P6 v7 compatible format in compliance with Schedule 8, Section 3.1. Our Project Scheduler, Aaron Letterly meets the experience and certification requirements stated in Section 3.1.

3.0 Schedule Work Plan

Prior to NTP1, our team will provide a detailed Schedule Work Plan in accordance with Schedule 8, Section 3, along with all required supporting documentation. Revisions or updates to the Schedule Work Plan shall be performed in accordance with Schedule 8 and subject to CDOT approval.

4.0 Project Schedule Overview

4.1. Work Breakdown Structure (WBS)

Our draft Baseline Schedule was developed to meet or exceed CDOT's requirements for a level 6 WBS. This schedule has a substantial completion date that meets the baseline substantial completion date and final acceptance deadline.

4.2. Inclusion of Seasonal Limitations and Other Restrictions

Our team has done a complete weather analysis for Denver for the most recent 10-year period and has determined a number of weather days for various types and disciplines of work, such as asphalt paving, concrete paving, excavation and fill. We have also accounted for restrictions at Swansea Elementary School and connections and tie-in points to Denver Water.

4.3. Schedule Float

Float in the schedule will be a shared resource between the Enterprises and the 5280 Connectors team and used to mitigate delays caused by Supervening Events or other events that occur during the project.

4.4. Right-of-Way Schedule

Our team utilized the dates specified in Project Agreement, Schedule 18, Appendix A for Right of Way Parcels and will develop sequences for any additional Right of Way Parcels prior to submission of our Baseline Schedule as required as a condition of NTP1.

4.5. Utility Schedule

We developed sequences for utility coordination and relocation activities in the proposal schedule for all

utilities identified in the RFP. We will refine the sequences in collaboration with the Developer's utility manager and applicable utility owners after financial close and prior to submission of the Baseline Schedule to CDOT as required as a condition of NTP1.

4.6. Railroad Coordination

We developed sequences for coordination and relocation activities in the proposal schedule for railroad activities, taking into consideration our team's historical knowledge and understanding of current agreements with the individual railroad entities. We will refine this portion of the schedule in collaboration with individual railroad owners after financial close and prior to submission of the Baseline Schedule to CDOT as required as a condition of NTP1.

5.0 Schedule Development Requirements

The draft Baseline Schedule complies with all requirements provided in Schedule 8, Section 3.3.7 (f.)

6.0 Work Breakdown Structure

A sample Work Breakdown Structure is provided in Exhibit 1. This sample represents the WBS for Work Area 1 structures.

Exhibit 1.
Sample Work Breakdown Structure (WBS)

Sample Work Breakdown Structure: Work Area 1 - Structures		
WBS Code	WBS Name	Total Activities
CENTRAL 70 - PBS-02.03.11	Structures	2759
CENTRAL 70 - PBS-02.03.11.01	Work Area 01 - Sand Creek to Chambers Station 2194+00 to 2447+77.15	334
CENTRAL 70 - PBS-02.03.11.01.01	Design - Structures - Work Area 01	119
CENTRAL 70 - PBS-02.03.11.01.01.5.2.12	DESIGN - Geotechnical - Area 01	54
CENTRAL 70 - PBS-02.03.11.01.01.5.2.7	DESIGN - Structures - Area 01	65
CENTRAL 70 - PBS-02.03.11.01.02	Procurement - Structures - Area 01	35
CENTRAL 70 - PBS-02.03.11.01.02.01	Structures - Submittals - Work Area 01	18
CENTRAL 70 - PBS-02.03.11.01.02.02	Structures - Fabrication - Work Area 01	16
CENTRAL 70 - PBS-02.03.11.01.03	Construction - Structures - Area 01	180
CENTRAL 70 - PBS-02.03.11.01.03.01	WA01 - Phase I - Structures	105
CENTRAL 70 - PBS-02.03.11.01.03.01.00	WA01- Phase I - Stage 00 - Structures	0
CENTRAL 70 - PBS-02.03.11.01.03.01.00.01	WA01- Phase I - Stage 00 - Structures - Bridges	0
CENTRAL 70 - PBS-02.03.11.01.03.01.00.02	WA01- Phase I - Stage 00 - Structures - Walls	0
CENTRAL 70 - PBS-02.03.11.01.03.01.01	WA01- Phase I - Stage 01 - Structures	105
CENTRAL 70 - PBS-02.03.11.01.03.01.01.01	WA01- Phase I - Stage 01 - Structures - Bridges	95
CENTRAL 70 - PBS-02.03.11.01.03.01.01.01.1	Peoria Street 01 - WB Inside - Bridge Phase/Stage 01	36
CENTRAL 70 - PBS-02.03.11.01.03.01.01.01.02	I-270 EB Flyover 02 - Bridge Phase/Stage 01	59
CENTRAL 70 - PBS-02.03.11.01.03.01.01.02	WA01- Phase I - Stage 01 - Structures - Walls	10
CENTRAL 70 - PBS-02.03.11.01.03.01.02	WA01- Phase I - Stage 02 - Structures	0
CENTRAL 70 - PBS-02.03.11.01.03.01.02.01	WA01- Phase I - Stage 02 - Structures - Bridges	0
CENTRAL 70 - PBS-02.03.11.01.03.01.02.02	WA01- Phase I - Stage 02 - Structures - Walls	0
CENTRAL 70 - PBS-02.03.11.01.03.02	WA01 - Phase II - Structures	37
CENTRAL 70 - PBS-02.03.11.01.03.02.01	WA01- Phase II - Stage 01 - Structures	37
CENTRAL 70 - PBS-02.03.11.01.03.02.01.01	WA01- Phase II - Stage 01 - Structures - Bridges	37
CENTRAL 70 - PBS-02.03.11.01.03.02.01.01.01	Peoria Street 01 - WB Outside - Bridge Phase/Stage 02	37
CENTRAL 70 - PBS-02.03.11.01.03.02.01.02	WA01- Phase II - Stage 01 - Structures - Walls	0
CENTRAL 70 - PBS-02.03.11.01.03.02.02	WA01- Phase II - Stage 02 - Structures	0
CENTRAL 70 - PBS-02.03.11.01.03.02.02.01	WA01- Phase II - Stage 02 - Structures - Bridges	0
CENTRAL 70 - PBS-02.03.11.01.03.02.02.02	WA01- Phase II - Stage 02 - Structures - Walls	0
CENTRAL 70 - PBS-02.03.11.01.03.03	WA01 - Phase III - Structures	38
CENTRAL 70 - PBS-02.03.11.01.03.03.01	WA01- Phase III - Stage 01 - Structures	38
CENTRAL 70 - PBS-02.03.11.01.03.03.01.01	WA01- Phase III - Stage 01 - Structures - Bridges	38
CENTRAL 70 - PBS-02.03.11.01.03.03.01.01.01	Peoria Street 01 - WB Middle - Bridge Phase/Stage 03	38

SECTION 2.1.11

APPENDIX D: DRAFT STAGE 1 QUALITY MANAGEMENT PLAN

Overview

This Appendix D includes the 5280 Connectors Draft Stage 1 Quality Management Plan that addresses the requirements set forth in Section 6 of Schedule 8 (Project Administration) to the Project Agreement.

It describes our approach to implement and maintain an effective quality program to manage, control, document and verify that our obligations comply with the Project Agreement. This Stage 1 Quality Management Plan, focuses on early phase quality management that includes the design and planning of the construction work. The Stage 2 Quality Management Plan focuses on the execution of the Construction Work, Operations and Maintenance of the Project.

Highlights

Our Draft Stage 1 Quality Management Plan:

- Separates key quality management personnel from operational staff to ensure that quality does not take a back seat to production
- Gives key quality staff authority to act and stop work if necessary to ensure that issues are addressed when they occur
- Ensures robust training of project staff to ensure that quality processes and procedures are understood
- Creates a system of checks and balances to monitor quality during the execution of the Work
- Focuses on constant improvement and addressing quality issues systematically in order to avoid repeat quality non-compliance activities

5280 Connectors understands that placing the needs of the Project and the affected stakeholders above individual interests ultimately benefits everyone involved. We encourage collaboration among team members, recognizing that it benefits all stakeholders to resolve quality issues at the lowest possible level. We empower our staff to make appropriate decisions regarding quality and insist on timely resolution of quality issues. We will work to promote a culture of quality at every level.

Appendix D

Draft Stage 1 Quality Management Plan

Central 70 Project

Volume 2
Technical Proposal

June 1, 2017

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1.0 Purpose

Our approach to Quality Management considers all elements of the Project from NTP 1 through final closeout. This Stage 1 Quality Management Plan (QMP) is the master document that outlines the Project team's understanding of expectations of the Federal Highway Administration (FHWA) and the Colorado Department of Transportation (CDOT), the High Performance Transportation Enterprise (HPTE), and the Colorado Bridge Enterprise for the Quality Management of the Non-Construction Elements associated with the Central 70 Project.

2.0 Reference Documents

The following reference documents form the basis of this plan's structure:

- Central 70 contract documents
  - Project Agreement, Schedule 8, Section 6
  - Instructions to Proposers

3.0 Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society for Testing and Materials
BE	Colorado Bridge Enterprise
CAR	Corrective Action Report
CCRL	Cement and Concrete Reference Laboratory
CDOT	Colorado Department of Transportation
CM	Design-Build Construction
CO	Change Order
COC	Certificate of Compliance
CPCM	Construction Process Control Manager
CPCP	Construction Process Control Plan
CQCM	Construction Quality Control Manager
CQMP	Construction Quality Management Plan
CR	Constructability Review
CTR	Certified Test Report
	Manager
CWP	Construction Work Plan
DBE	Disadvantaged Business Enterprise
DBM	Design Build Manager
DCD	Document Control Department
DCM	Document Control Manager
DCN	Design Change Number
DCPR	Design Control Procedures
DCS	Document Control System
DDF	Design Field Change
DDL	Design Discipline Lead
DM	Design Manager
DPCA	Design Process Control Auditor
DPCM	Design Process Control Manager
DQMP	Design Quality Management Plan
DRTL	Deliverable Requirements Tracking List
EOR	Engineer of Record
EMT	Executive Management Team
ESB	Emerging Small Business
FDC	Field Design Change
FHWA	Federal Highway Administration
HMA	Hot Mix Asphalt
HPTE	Colorado High Performance Transportation Enterprise
IDC	Independent Design Check
IDR	Inter-Disciplinary Review
ICQC	Independent Construction Quality Control
IDQM	Independent Design Quality Manager
IQC	Independent Quality Control
IQCF	Independent Construction Quality Control Firm
IQCM	Independent Quality Construction Manager
JSA	Job Safety Analysis Worksheet
MTIP	Material Testing and Inspection Plan
NCHRP	National Cooperative Highway Research Program

NCN	Nonconformance Notice
NCR	Nonconformance Report
NDC	Notice of Design Change
NDRD	New Development Redevelopment
NEC	National Electric Code
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NSBA	National Steel Bridge Alliance
NTCIP	National Transportation Communications for ITS Protocol
NTP	Notice to Proceed
O&M	Operations and Maintenance
OCR	Optical Character Recognition
OJT	On-the-Job Training
OMP	Operations Management Plan
OMQMP	O&M Quality Management Plan
OMR	Operations & Maintenance Review
OTIS	Online Transportation Information System
OTSR	Over-the-Shoulder Review
OVT	Owner Verification Testing
PA	Public Address
PAR	Preventative Action Report/Request
PC	Process Control
PCCP	Portland Cement Concrete Pavement
PCM	Process Control Manager
PCM	Project Communications Manager
PCP	Process Control Procedure(s)
PCR	Process Control Review
PDA	Pile Driving Analyzer
PE	Permanent Easement
PIARC	Permanent International Association of Road Congresses
PIP	Public Information Plan
PLC	programmable logic controller
PM	Design-Build Project Manager
PMP	Project Management Plan
PNS	Pacific Northwest Snow Fighters
PoE	Power over Ethernet
POSS	Point of Slope Selection
PQM	Project Quality Manager
PSQF	Permanent Stormwater Quality Facilities
PTFE	polytetrafluoroethylene
PTI	Post-Tensioning Institute
PUC	Public Utility Commission
PVC	polyvinyl chloride
QA	Quality Assurance
QAO	Quality Assurance Oversight
QC	Quality Control
QHP	Quality Hold Point
QMO	Quality Management Organization
QMP	Quality Management Plan
QMS	Quality Management System
QO	Quality Organization
QRD	Quality Records Database
RAP	Recycled Asphalt Pavement
RCA	Root Cause Analysis
REC	Recognized Environmental Condition
RFC	Release for Construction
RFI	Request for Information
RFP	Request for Proposals
RHM	Recognized Hazardous Material
ROD	Record of Decision
ROW	Right-of-Way
RPM	Reflective Pavement Markers
RTD	Regional Transportation District
RTK	Real Time Kinematic
RTM	Requirements Traceability Matrix
RWIS	Road Weather Information System
SAP	Sampling Analysis Plan
SB	Colorado Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCP	Stormwater Construction Permit
SFP	small form-factor pluggable
SMA	stone matrix asphalt
SMFO	Single-Mode Fiber Optic
SMP	Safety Management Plan
SMVMS	Side Mounted Variable Message Signs
SOLIT	Safety of Life in Tunnels
SOV	Single Occupancy Vehicle
SPCC	Spill Prevention Control and Countermeasures

SWO	Stop Work Order
TCP	Temporary Traffic Control Plan
TDC	Traffic Data Collection Unit
TDM	Travel Demand Management
TE	Temporary assessment
TMOSS	Terrain Modeling Survey System
TMP	Transportation Management Plan
TOP	Transportation Operations Plan
TPR	Third Party Review
TQR	Technical Quality Review
TSS	Total suspended solids
TTI	Travel Time Indicators
UBC	Uniform Building Code
UDFCD	Urban Drainage and Flood Control District
UE	Utility easements
UNCC	Utility Notification Center of Colorado
UPRR	Union Pacific Railroad
UPS	Uninterruptible Power Supply
URA	Utility Relocation Agreement
USFWS	U.S. Fish and Wildlife Service
VA	Voice Alarm
VCS	ventilation control system
VFD	Vacuum Fluorescent Display
VMS	Variable Message Sign
VTMS	Variable Toll Message Sign
WBS	Work Breakdown Structure
WDP	Workforce Development Plan
WQCV	Water Quality Capture Volume

4.0 Definitions

Acceptance – The meaning as defined by *the Project Agreement for the Central 70 Project, Annex A – Definitions and Abbreviations*: has the meaning given to it in Section 2.2.3.a and "Accept", "Acceptable" and "Accepted" shall be similarly construed. The Enterprises (or CDOT acting as their designee) shall give their determination in writing that any matter or information appears to comply with the Agreement.

Approval – The meaning as defined by *the Project Agreement for the Central 70 Project, Annex A – Definitions and Abbreviations*: "Approve" or "Approved" has the meaning given to it in Section 2.2.3.b and "Approve" and "Approved" shall be similarly construed.

Agreement – Has the meaning given to it in the Project Agreement for the Central 70 Project Preamble and, for certainty, includes Annex A (Definitions and Abbreviations) and the Schedules.

As-Built Documents – The revised set of drawings, specifications, documents, data and surveys submitted by Developer and Accepted by the Department pursuant to Schedules 8 (Project Administration) and 10 (Design and Construction Requirements) and showing the exact dimensions, geometry, and location of completed construction work.

Corrective Action Request (CAR) – To give a request to correct an action that has adverse impact on quality or systematic issues.

Change Order (CO) – Has the meaning given to it in Section 1.2.e of Schedule 24 (Change Procedure) of the Agreement.

City of Denver – The City and County of Denver, Colorado.

Colorado Bridge Enterprise (BE) – A government-owned business within CDOT, individually an "Enterprise."

Colorado Department of Transportation (CDOT) – The Colorado Department of Transportation.

Colorado High Performance Transportation Enterprise (HPTE) – A government-owned business within and a division of the Colorado Department of Transportation (CDOT), individually an "Enterprise."

Constructability Review (CR) – A Constructability Review (CR) is a review conducted by the Construction Joint Venture to assess the design in relation to construction and installation.

Deliverable for Acceptance – Any deliverable that, pursuant to the Agreement, must be submitted either:

(a) for Acceptance; or

(b) for consent, Approval or like assent, to the extent that the Department is or the Enterprises are, as applicable, pursuant to the express provisions of this Agreement, required to act reasonably in deciding whether to give such consent, Approval or like assent.

Deliverable for Approval – Any deliverable that, pursuant to the Agreement, must be submitted either:

(a) for Approval; or

(b) for consent, Approval or like assent, to the extent that such is pursuant to the express provisions of this Agreement or pursuant to Section 2.2.4.b of the Project Agreement, in, as applicable, the Department's or the Enterprises' discretion.

Deliverable for Information – Any deliverable that, pursuant to the Agreement, must be submitted by Developer for Information.

Deliverable for Third Party Review – Any reviewable deliverable that requires review or Approval by a governmental authority, utility owner, railroad or other third person in addition to the review or Approval by the Department or the Enterprises.

Deliverable Requirements Tracking List (DRTL) – Has the meaning given to it in Section 7(a) of Schedule 9.

Design Deliverable – A work product that comprises construction documents intended to be Released for Construction for a specific portion of the Project required pursuant to the Agreement to be submitted or resubmitted to the Enterprises or the Department, as applicable, for Approval, Acceptance, any other consent, Approval or like assent, or information, excluding, for certainty, notices and correspondence.

Design Change Number (DCN) – The formal tracking number given to any revisions to Release for Construction (RFC) design change. A DCN will be issued for any Request for Information (RFI) that leads to a Field Design Change (FDC), Notice of Design Change (NDC), Change Order (CO) or any other action that results in a change to the plans after they have been released for construction.

Design Discipline Lead (DDL) – Individual(s) responsible for the overall coordination and management of the design functions related to a specific discipline of engineering.

Design Documents – All drawings (including plans, elevations, sections, details, and diagrams), specifications, reports, calculations and records, at any stage of development or revision necessary for design of the Project in accordance with the Project Agreement.

Design Manager (DM) – Responsible for verifying that the overall Project design is completed and design criteria requirements are met; managing the Lead Engineer's personnel; and administering all design requirements in the Agreement. The Design Manager shall have authority to suspend design work.

Design Inputs – Requirements essential for the specific types of products and services to be designed and developed (i.e., Design Standards).

Design Process Control Auditor (DPCA) – Reports directly to the DPCM or may be the DPCM and is responsible for reviewing Design PC records for conformance with the Project Agreement and the DQMP.

Design Process Control Manager (DPCM) – The individual tasked with overall responsibility for establishing, implementing, monitoring and reporting on the Design Quality Management System. Shall review and approve all design submittals required by the Department and prior to submitting to the IDQM as required for an Independent Design Quality Control Review.

Design Control Procedures (DCPR) – Procedures defined in this Design Quality Management Plan that provide specific instruction on the implementation of Process Control and Quality Control requirements.

Design Progress Review Meeting – The Developer shall hold one design progress review meeting during the design development process (e.g., 90% package) and invite the Department to attend. The design progress review meetings shall be scheduled, conducted, and documented by the Developer. The Developer shall take meeting minutes and submit those minutes to the Department for Acceptance within four Working Days after each meeting.

Design Quality Management Plan (DQMP) – Document that provides direction to produce design deliverables in a well-defined and systematic fashion that meet the Agreement requirements. The DQMP promotes prevention and a proactive approach, and focuses on documentation and continuous improvement of the design delivery processes.

Design Verification Review (Quality Assurance Oversight) – The Department will perform design verification reviews on the products of design (drawings, specifications, and other design deliverables) on an ongoing basis during the Work. The Developer shall submit documents for design verification reviews to the Department for Acceptance a minimum of five Working Days in advance of review meeting.

Detailed Check – A comprehensive documented check of design documents to confirm their correctness. The check consists of an internal review within the discipline. (Yellow, Red, Green, Blue – check print stamp).

Directive Letter – Has the meaning given to it in Section 1.4.a of Schedule 24 (Change Procedure) of the Agreement.

Document Control Manager (DCM) – The DCM is a member of the Lead Engineer and responsible for the management of Project documents, including transmittals.

Document Control System (DCS) – As defined in Schedule 8 (Project Administration) Section 13 (Document Management), *The Department will use Aconex (Section 13.1.2), the Developer will use SharePoint (Section 13.1.1) and the Engineer will use ProjectWise.* All design deliverable submissions and corresponding Department or third party reviews will be transferred electronically through Aconex.

Document Originator – A Lead Engineer member who generates a design product, e.g. calculations, drawings or reports.

Document Checker – A Lead Engineer member who performs calculation, drawing, report or specification checking. The document checker shall be independent of the document originator, and shall have qualifications equivalent to or greater than the document originator. The document checker shall be familiar with the Project requirements.

Document Backchecker – A Lead Engineer member who shall be assigned by the DDL, or may be the document originator. The backchecker shall review the document checker's changes, edits, and/or comments, and shall approve corrections as necessary, resolve comments or differences, and discuss any nonconformance issues and opportunities for improvement, with the checker and originator (if not the backchecker). If the backchecker is not the originator, he/she shall be familiar with the Project requirements, including the Design Basis Manual(s), the DQMP, the Project Agreement, applicable Federal, state, and local requirements, and other requirements of the Project.

Document Updater – A Lead Engineer member who shall be assigned by the DDL or document originator, or may be the originator, if applicable. The document updater shall physically implement all corrections and revisions to the applicable document (i.e., calculation sheet, CADD drawing), as approved by the checker and backchecker.

Document Rechecker – Generally, the document rechecker shall be the checker, or his/her designee. The rechecker shall review the hard copy of updated document and compare with the backchecked and approved check print (plan drawing or calculation sheet), to verify that all corrections or changes were incorporated in the updated document. Verification shall not be performed by viewing the document electronically. The rechecker cannot be the originator, backchecker or updater.

Enterprises – Colorado Bridge Enterprise (BE) and Colorado High Performance Transportation Enterprise (HPTE) together.

Field Design Change (FDC) – A formal request by the Construction Joint Venture to the Lead Engineer and the Department requesting a change to post-RFC plans due to a change in field conditions, change in construction methodology, or modification to the design that was not envisioned during the review period prior to release for construction.

HDR Engineering, Inc. (HDR) – The Lead Engineer.

Independent Design Check (IDC) – A method of Quality Control defined by the CDOT *Bridge Design Manual* for checking of certain structural designs. The independent Design Check Method involves the development of a completely separate set of calculations to verify that the design originator's outcome reasonably satisfies the Project requirements and standards.

Inter-Disciplinary Review (IDR) – A review of a design deliverable by other disciplines (inclusive of operations and maintenance, environmental, utility and right-of-way reviews) to promote consistency and eliminate conflicts among disciplines other than the originator of the design deliverable. These will be required for all design submittals.

Nonconformance Report (NCR) – A report indicating that certain design work is not conforming to the requirements of the agreement.

Notice of Design Change (NDC) – A formal notice by the Lead Engineer to the Construction Joint Venture and the Enterprises (or CDOT acting as their designee) that there is a change to the post-RFC documents due to a change in agreement requirements (i.e. Request for Change Proposal), enhanced

plan detail to aid in construction, or response to RFI that requires a plan change. The Lead Engineer issues Form DCPR-09A.

Over-the-Shoulder Review (OTSR) – Informal review by the Department of design work in production prior to formal submittals and written design reviews. Accomplished through the task force meetings, periodic task force breakout meetings and scheduled design progress review meetings.

Preventative Action Request (PAR) – Processes of obtaining and documenting actions to prevent the potential occurrence of Nonconforming Work.

Project – The Central 70 Project, as more specifically described in the Agreement Recitals and Schedule 10 Design and Construction Requirements of the Agreement, and all Work to be provided by the Developer as a condition to Final Acceptance.

Process Control (PC) – The activities performed by or on behalf of Lead Engineer to verify and document that a product meets the requirements of the Project Agreement, which activities may include checking, shop drawing review and document control.

Quality Control (QC) – All of the planned and systematic activities implemented within the DQMP and demonstrated as needed to provide adequate confidence that deliverables will satisfactorily fulfill quality requirements of the Project Agreement.

Quality Management Plan (QMP) – The plan that documents our commitment to quality and all quality requirements of the agreement of which the Design Quality Management Plan is a component. The current plan that satisfies the requirements of Section 6 of Schedule 8 (Project Administration) and has been submitted by Developer and approved by the Department pursuant to Schedule 8 (Project Administration).

Quality Management System (QMS) – A set of policies, processes and procedures required for planning and execution (production/development/service) in the core business area of an organization (i.e., areas that can impact the organization's ability to meet customer requirements). ISO 9001:2015 is an example of a Quality Management System and the basis for this Design Quality Management Plan.

Quality Records Database (QRD) – The secure web-based application (*Aconex*) for recording results of the Department verification reviews and responses to nonconformance notices, as described in Schedule 8 (Project Administration) Section 13.1.2.

Rating Package – As defined in the CDOT *Rating Manual.*

Released for Construction (RFC) – The designation assigned to construction documents that have been approved by the Construction Joint Venture and accepted by the Department for construction.

Released for Construction Deliverable – Any RFC document that is a deliverable.

Request for Information (RFI) – A formal request by the Construction Joint Venture to the DDL for clarification related to the design plans, specifications, technical requirements, or any other matter related to clarifying construction requirements.

Restricted Activity – Has the meaning given to it in Section 3(a) of Schedule 9. (Related to commencement by the Developer of restricted activities on an “at-risk” basis).

Reviewable Deliverable – Any deliverable that is a deliverable for Approval, a deliverable for Acceptance or a deliverable for information.

Stop Work Order (SWO) – Notice requiring employers to immediately suspend all Work.

Skanska/Zachry – The Construction Joint Venture.

Task Force Meeting – A weekly meeting conducted for a specific discipline to coordinate the design development within the Developer’s organizations and with the Department and other affected agencies. At a minimum, the Developer shall prepare an agenda and conduct each meeting to discuss the status of the design, coordinate the design development between design disciplines, discuss constructability issues,

and identify any questions associated with design requirements. *The Developer shall take meeting minutes for all task force meetings and provide minutes to the Department for Acceptance within four Working Days after each meeting*. The Developer shall provide final minutes to the Department via the Department's document management system on a monthly basis.

Technical Quality Review (TQR) – A peer-level review for design approach, suitability, conformance with clients' design criteria, standards, and Project requirements.

Third Party Reviews (TPR) – A review conducted by a governmental authority, utility owner, railroad or other third person to assess the suitability of a particular design deliverable.

Ultimate Configuration – The elements defining the Project as set forth in Schedule 10 Design and Construction Requirements of the Agreement and any permitted modifications thereto contained in the Proposal Documents.

5.0 Quality Policy

5280 Connectors recognizes that quality is the obligation of every member of the Project. Our team has the knowledge, experience and commitment to provide products and services that meet the requirements of the Project Agreement. This Quality Management Plan (QMP) describes the policies, program, organizational responsibilities, and procedures that will confirm that all items of Work are constructed in conformance with the Project Agreement. Implementation and enforcement of the procedures and controls of these plans have the total support of our Executive Management Team (EMT).

Quality of the Work is the responsibility of those individuals performing the Work. As members of the Project team, we agree on and commit to values such as honesty, professional pride, partnership and integrity, which will guide our behavior and help us foster solid working relationships throughout the life of the Project. It is our policy to meet Project requirements as defined by the contract documents and adhere to Project quality objectives.

5280 Connectors Commitment Statement

5280 Connectors understands that placing the needs of the Project and the affected stakeholders above individual interests ultimately benefits everyone involved. We encourage collaboration among team members, recognizing that it benefits all stakeholders to resolve quality issues at the lowest possible level. We empower our staff to make appropriate decisions regarding quality and insist on timely resolution of quality issues. We will work to promote a culture of quality at every level.

The "5280 Connectors Commitment to Quality," shown above, as well as the quality objectives detailed below, will be posted in several locations throughout the Project office and site to foster and encourage the development of a culture of quality among all Project team members.

6.0 Quality Objectives and Principles

The objectives of our quality program are to:

- Exceed CDOT's expectations by building confidence and trust in the Project team through collaboration with the Department's Quality Assurance Oversight (QAO) program.
- Document compliance with the requirements of the Project Agreement.
- Proactively and satisfactorily address quality issues that arise throughout the Project life.

The quality program is based on the following principles:

- **Transparency** – We will achieve its quality goals through the promotion of communication, trust and a team atmosphere among all Project stakeholders.

- **Reliability** – We will encourage a quality culture at every level. We continuously evaluate process and personnel to improve performance.
- **Accountability** – We document quality process implementation to verify continuous application of the QMP and conformance with Project requirements.
- **Inclusivity** – Our QMP will govern Project delivery for all elements of Work at every Project phase and promote collaboration among all disciplines, stakeholders and CDOT.

7.0 Quality Approach

8.0 Updates and Revisions to the Project Quality Management Plan

The Project Quality Manager is responsible for maintaining the QMP. Any revisions or updates must be reviewed and approved by the Project Quality Manager (PQM), Independent Quality Construction Manager (IQCM), Independent Design Quality Manager (IDQM), Construction Processes Control Manager (CPCM), and the Design Process Control Manager (DPCM). Once the proposed revision or update has been approved by these key members of the QMO, it will be submitted to CDOT for Final Approval. Once the update or revision has been approved by CDOT, the revised hard copies of the revised QMP will be distributed to the IQCM, IDQM, CPCM, and DPCM, as well as posted to the Project's Document Control System (DCS).

We will make revisions to the QMP if any of the following conditions are discovered to exist:

- When the QMO detects systemic or fundamental breaches of the Project Agreement of deficiencies in the manner the Work is inspected or tested, including breaches or deficiencies that have caused or that may cause Nonconforming Work to be performed, or when the Department advises 5280 Connectors of such a problem.
- The QMP or a procedure within the QMP no longer adequately addresses what it was originally intended to address.
- The QMP or a procedure within the QMP does not conform with the Project Agreement.
- An audit by 5280 Connectors or the Department identifies a deficiency in the QMP requiring an update.
- Changes to our QMO require a revision to the QMP.
- Our team is undertaking, or about to undertake, activities that are not covered within the current QMP.
- The Department requires the QMP to be updated at its request.

The QMP may be revised at other times, as long as the revision is approved by the PQM, IQCM, IDQM, CPCM, DPCM, and CDOT.

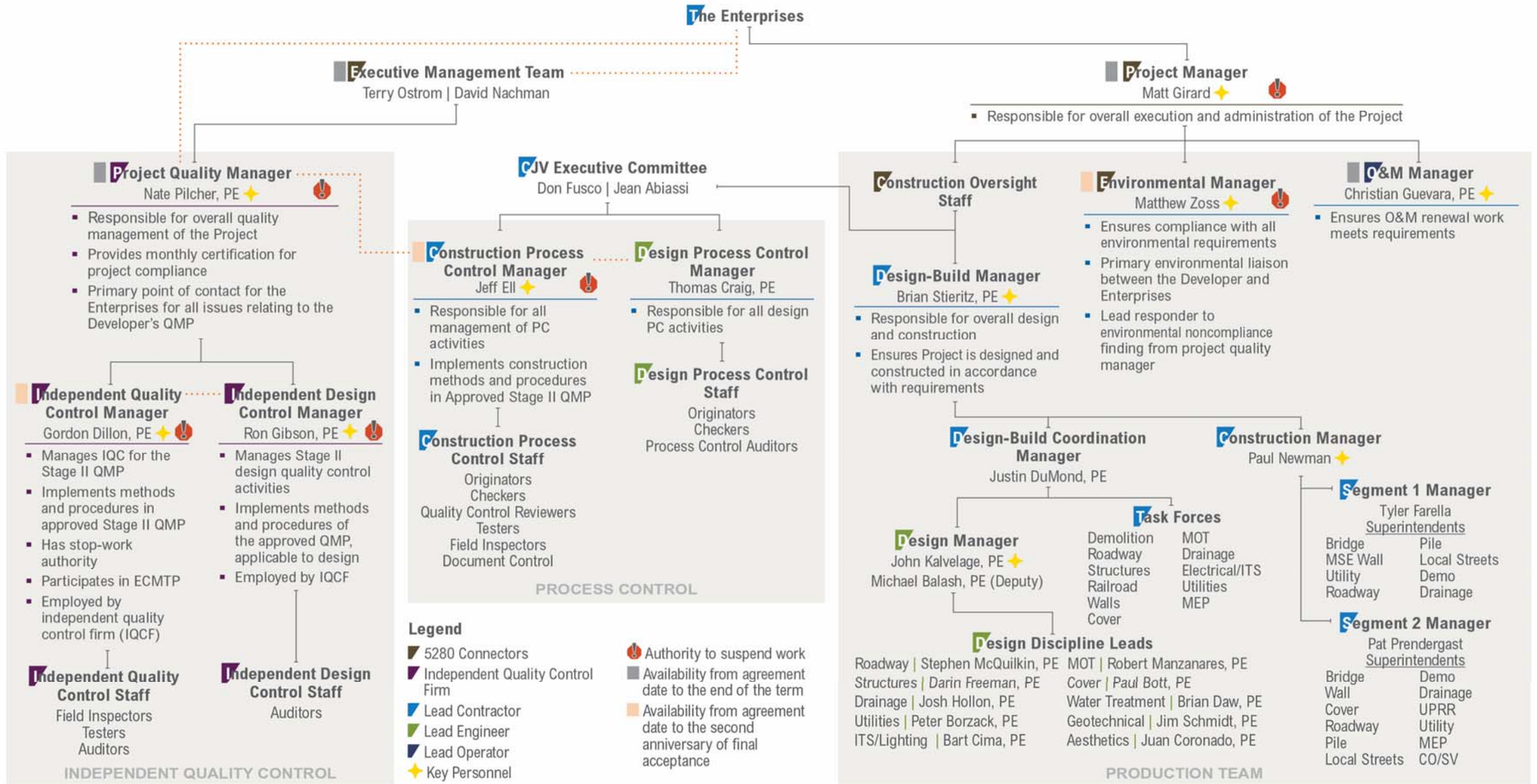
All revisions will be tracked numerically for clarity. Additionally, the PQM will maintain hard copies of all of the previous versions of the QMP throughout the Construction Period, along with "red-lined" copies detailing the specific changes made for each revision. A red-lined copy will be made available upon request. Once an updated version of the QMP has been approved by CDOT, older versions of the QMP will no longer be applicable for Work performed on the Project.

9.0 Quality Management Organization

Our commitment to quality begins at the highest level, including the Project's Executive Management Team. Our Quality Management Organization QMO is outlined below. The QMO will implement, establish and maintain the Process Control (PC) and Independent Quality Control (IQC) procedures, testing and observations necessary to verify that work items meet contract requirements.

We will update and distribute this QMO Chart to CDOT when any changes to the organization are made.

Figure 1 | Project Quality Management Organizational Chart



10.0 Roles and Responsibilities

All members of the QMO have the authority and responsibility to verify the achievement of quality. The responsibilities of all personnel who manage, perform and verify the quality of Work include:

- Identify items and initiate actions to prevent the occurrence of Work that does not conform to the contract documents.
- Identify, document and resolve quality problems.
- Recommend areas for quality improvement.
- Verify the implementation of quality improvement solutions.
- When Nonconforming Work is identified, stop all Work that is affected by the Nonconforming Work until the deficiency is corrected.

Additionally, the PQM, IDQM, DPCM, CPCM, and IQCM have the following shared responsibilities:

- Facilitate compliance of Work with the requirements of the Project Agreement and the approved QMP.
- Approve Developer-quality processes and procedures.
- Provide adequate resources and trained personnel for PC and IQC activities.
- Verify the adequacy and enforcement of quality procedures, processes, inspections, and tests for all Work.
- Establish and implement procedures to control and verify the Work performed by Subconsultants, Subcontractors and Suppliers meets the requirements of the Project Agreement.
- Verify the QMP is being implemented and report in writing regularly to the EMT regarding the status of implementation.
- Verify that quality records are properly prepared, completed, maintained and delivered to the Department, as required by the Project Agreement, to provide evidence of PC and IQC activities performed and quality results achieved.
- Verify that IQC staff is independent of Project Manager Nate Pilcher and regularly reports to the EMT.
- Continually promote awareness of the requirements of the Project Agreement throughout our entire Project organization.

Position-specific roles and responsibilities of the QMO members, regarding implementation of this QMP, include:

10.1 Project Manager (PM)

- Responsible for the overall execution and administration of the Developer's responsibilities.
- Has the authority to bind 5280 Connectors on matters delegable pursuant to Law and our governing documents affecting Project execution and administration.
- Has the authority to suspend Work.

10.2 Construction Manager (CM)

- Responsible for verifying that the Project is constructed in accordance with the contract documents.
- Responsible for managing construction personnel, scheduling of construction quality personnel, and administering compliance with all technical requirements applicable to the construction work.
- Has the authority to suspend Work.

10.3 Design-Build Manager (DBM)

- Responsible for the overall design and construction of the Project and for managing the Design-Build Team.
- Verify that the Project is designed and constructed in accordance with the technical requirements.
- Has the authority to suspend Work.

10.4 Design Manager (DM)

- Responsible for verifying that the overall Project design is completed and design criteria are met.
- Responsible for the Design Team's personnel.
- Responsible for administering all design requirements in this QMP.
- Has the authority to suspend Work.

10.5 Project Quality Manager (PQM)

- Responsible for overall quality management of the Project.
- Has the authority to suspend Work that does not comply with requirements of the Project Agreement.
- Provide monthly certification that Work is being performed in compliance with Law and Project design.
- Reporting quarterly on the performance of the quality system to EMT and the Department for review and as a basis for improvement of the quality system.
- Direct supervision of the IDQM and IQCM and their respective staffs.
- Shall not be involved with scheduling or production activities.
- Shall provide all final checks, approvals and certifications for quality.
- Shall be responsible for verifying, certifying and providing documented evidence that the Work meets the requirements of the Project Agreement.
- Shall have the authority and responsibility for the success of our quality program, and shall verify that authority and responsibilities are defined and communicated within the organization.
- Shall be the primary point of contact to the Department for all issues relating to Developer's Quality Management Plan, including preparation, review, implementation, and updates.
- Verifying that a quality system is established, implemented and maintained.

10.6 Independent Design Quality Manager (IDQM)

- Responsible for verifying quality management on all design Work carried out on the Project.
- Has the authority to suspend Work that does not comply with requirements of the Project Agreement.
- Shall not be involved with scheduling or production activities.
- Shall be responsible for all design Quality Control activities for the Work.
- Shall verify that the methods and procedures contained in the approved QMP, related to design, are implemented and followed by the Developer, Subcontractors, Fabricators, Suppliers, and Vendors in the performance of the Work.

- Verifying that quality records, related to design work, are properly prepared, completed and maintained and delivered to the Department, as required by the Project Agreement, to provide evidence of PC, QC and IQC activities performed and quality results achieved.
- Promoting awareness of the requirements of the Project Agreement, related to design work, throughout the Developer's entire Project organization.

10.7 Construction Process Control Manager (CPCM)

- Responsible for confirming that all methods and procedures contained in this QMP are carried out on the Project.
- Has the authority to suspend Work that does not comply with requirements of the Project Agreement.
- Shall verify that the methods and procedures contained in the approved QMP, related to construction, are implemented and followed by the Developer, Subcontractors, Fabricators, Suppliers, and Vendors, both on-site and off-site in the performance of the Work.
- Shall not be involved with scheduling or production activities.

10.8 Design Process Control Manager (DPCM)

- Has the authority to suspend Work that does not comply with requirements of the Project Agreement.
- Shall be responsible for all Design PC activities.

10.9 Independent Quality Control Manager (IQCM)

- Responsible for managing all independent Quality Control aspects contained in this QMP.
- Has the authority to suspend Work that does not comply with requirements of the Project Agreement.
- Shall be an employee of the IQCF and shall be responsible for management of the IQC aspect of the QMP.
- Shall not report to any person or party directly responsible for design or construction production.

10.10 Environmental Manager

- The Environmental Manager is responsible for verifying compliance with all environmental requirements and commitments.
- Has the authority to suspend Work that does not comply with requirements of the Project Agreement.

10.11 Independent Quality Control (IQC) Personnel

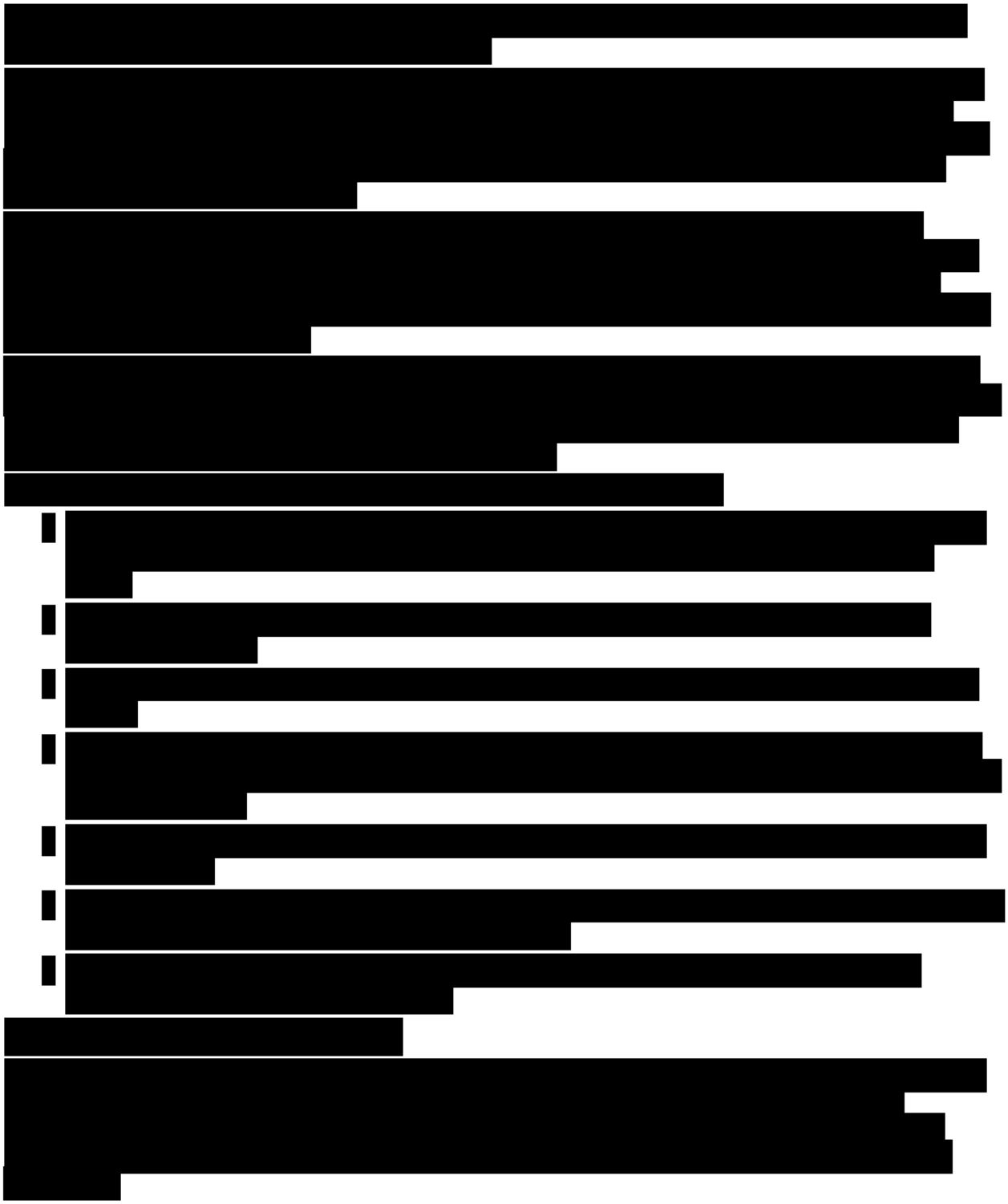
- IQC personnel shall not participate in any PC activities and shall be independent of the PC personnel.
- Tasked with observing and reporting to verify Developer's process control and work activities at designated frequencies with regard to compliance with Project requirements.
- Shall not be involved with scheduling or production activities.
- Report directly to the IQCM, IDQM, and PQM.

10.12 Process Control (PC) Personnel

- Under the direction of the DPCM and CPCM, provide PC checks, sampling, testing, and observation of Work to refine Work processes to produce Work in conformance with the Project requirements.

- Shall not be involved with scheduling or production activities.
- Report directly to the DPCM and CPCM.

11.0 Document Control



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13.0 Internal Auditing of Environmental Compliance Requirements

The Environmental Compliance Work Plan (ECWP) describes how our Process Control (PC) and Independent Quality Control (IQC) programs function to verify compliance with environmental requirements and the Project Agreement. Our IQC program verifies that construction work meets compliance with the Project Agreement and all environmental requirements by performing inspections/audits with support from the Environmental Manager (EM).

13.1 Internal Auditing of Water Quality Control and Water Resources

5280 Connectors will retain and utilize a SWMP administrator, while the PC program will retain and utilize erosion control inspector(s) as required by the Project Special Provisions revision of *CDOT Specification: Section 208* (Section 208) and the Project Agreement: Schedule 17.

The ECWP includes an organization chart identifying the key personnel responsible for implementing the Project's water quality compliance activities. The ECWP specifically identifies the individuals and positions that shall serve in the roles referenced in Section 208, and a detailed description of the roles that the PC and IQC programs shall be assigned in the Quality Control and quality assurance of water quality activities. In the event of recurring nonconformance events, the ECWP provides details of the following IQC processes.

- Environmental Quality Hold Points
- Environmental Nonconformance Process
    - Communication
    - Workflow
    - Approvals

The IQC program will include water quality compliance requirements as part of all inspection and field reviews and shall issue Nonconformance Reports (NCRs), if required, to bring the Project into compliance with the CDPS-SCP, CDOT's MS4 permit, and the construction standards for water quality and erosion control. The IQC program shall retain and utilize:

- Inspector(s) who have successfully completed the Transportation Erosion Control Supervisory certificate training (TECS) as provided by CDOT; and
- One (1) TECS-certified inspector per every 40 acres of total disturbed area, or portion thereof, which is at any time actively receiving temporary and interim stabilization measures as defined in Section 208.04(e).

The IQC program will audit the SWMP Notebook monthly during the period from the issuance of NTP2 until Final Acceptance. A monthly summary of the audit, audit findings and scanned material will be submitted to CDOT, scanned and entered into the DCS in electronic format. The material to be audited includes:

- CDOT Form No. 1388 (daily inspection forms) and all items required in Section 208.03(d)1.;
- Form 1176 (routine and post-storm inspection reports) and the documentation of the Corrective Action for any findings;
- Form 105 water quality-related issues; and
- All other correspondence relating to water quality, and any reports of reportable spills submitted to CDPHE.

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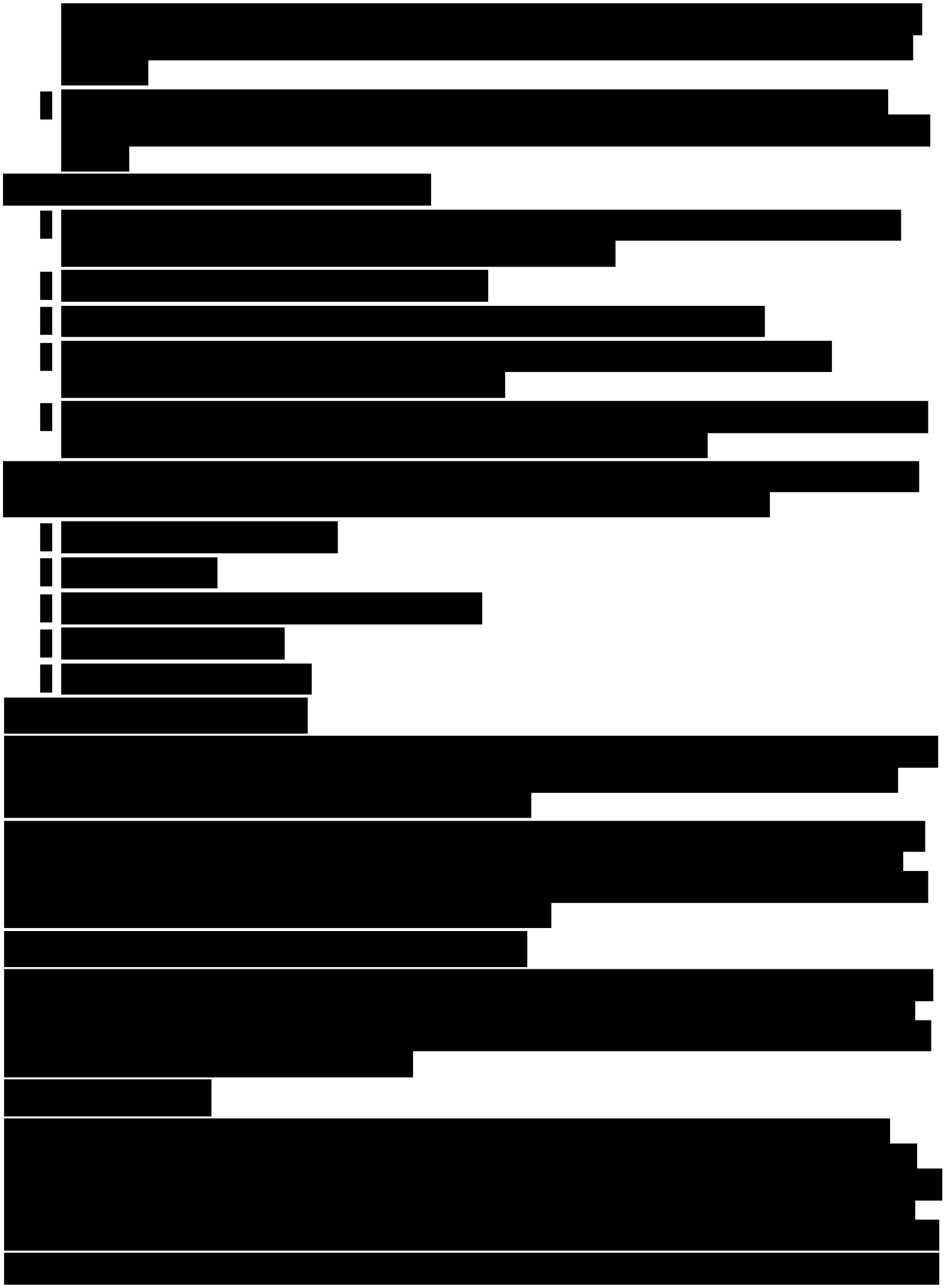

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15.0 Corrective Actions

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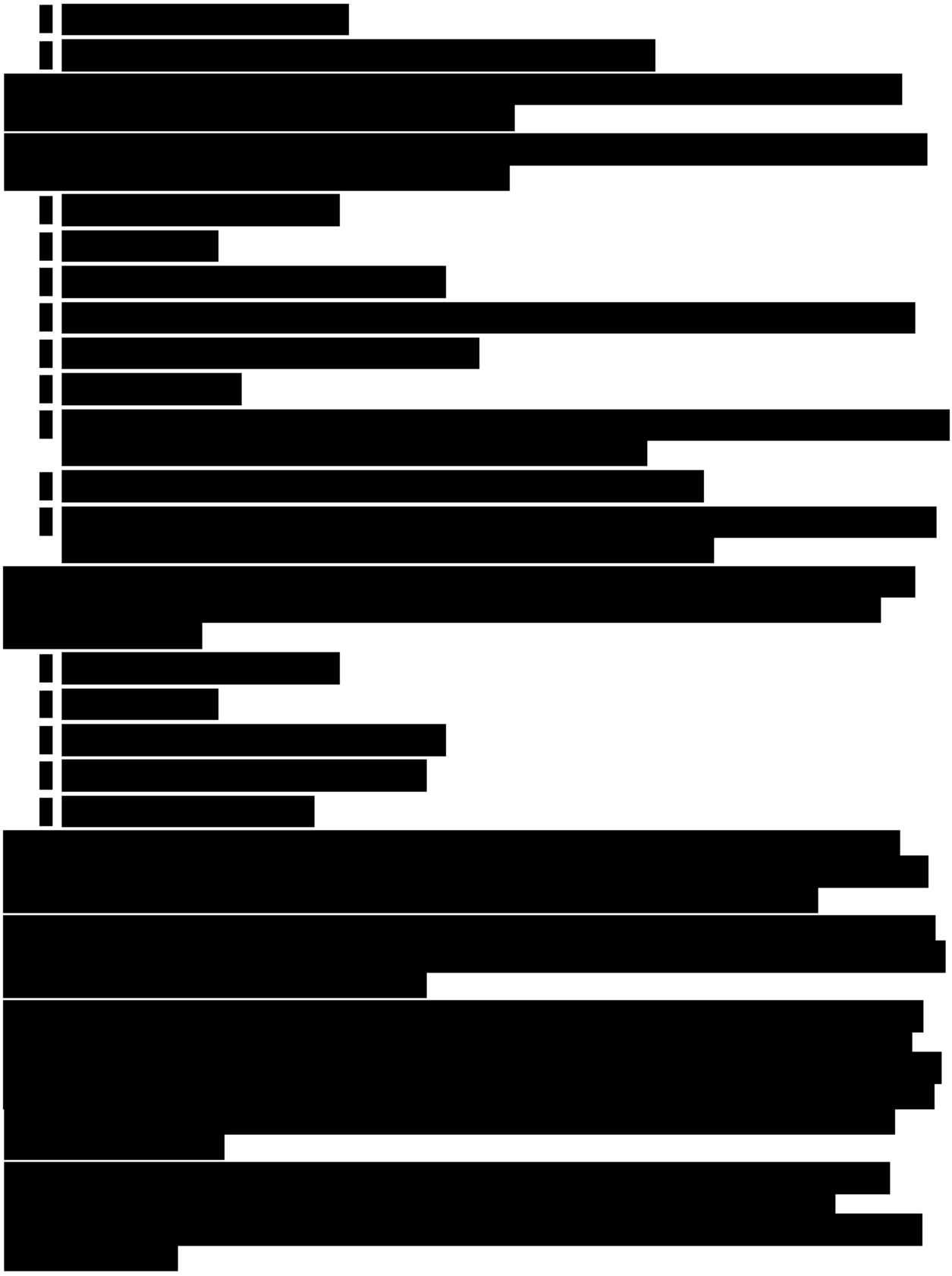

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18.0 Regular Project Certification

The PQM is required by the PA to provide the following regular certifications and updates to the Enterprises and the 5280 Executive Management Team.

18.1 Monthly Certification to the Enterprises

The PQM shall report the status of the Work's quality monthly in writing to the Enterprises and provide documented evidence that the Work meets the requirements of the Project Agreement.

18.2 Quarterly Update to the Executive Management Team

The PQM shall report quarterly on the performance of the quality system to our Executive Management Team (EMT) and the Enterprises as a basis for the improvement of the quality system.

18.3 Certification to the Enterprises at Required Times

The PQM shall submit a certificate that the Work performed meets the requirements of the Project Agreement in the form set out in Appendix B to Schedule 8, amended as appropriate. These certificates shall be provided to the Enterprises at the following times.

- Prior to each milestone completion
- Prior to substantial completion
- Prior to Final Acceptance
- At any other time requested by the Enterprises (including in relation to any Renewal Work)

19.0 Department Oversight Program

This section presents our understanding of the Department's Quality Assurance Oversight Program as defined in Schedule 8, Section 6 of the PA. We will coordinate with the Department's representatives to facilitate implementation of the Department's Quality Assurance Oversight Program. The PQM will serve as the primary point of contact between the Department and the Developer to resolve issues regarding implementation of the Department's oversight program.

19.1 Quality Assurance Oversight

We understand that the Department retains the responsibility for the Work associated with the Central 70 Project as required in Title 23, Code of Federal Regulations, Part 637.

The Department will periodically audit or conduct verification reviews of our quality management activities to assess the Developer's compliance with the requirements of the PA. There will be four types of verification reviews conducted by the Department.

- Design verification reviews: The Department will perform design verification reviews on the products of design on an ongoing basis during the Work. The Developer shall submit documents for design verification reviews to the Department for Acceptance a minimum of five Working Days in advance of a review meeting.
- Construction verification inspection: Inspections on construction activities.
- Construction verification testing: Sampling and testing of materials to validate the Developer IQC testing program. Verification test results will be stored in the QRD.
- Process audits: Process audits on the implementation of the Developer work activities, excluding design and construction. Such activities may include the requirements of the PA, such as public information, maintenance of traffic, environmental compliance, safety, Project management processes, and meeting the requirements of the approved QMP.

The Department-generated observations will be presented to the Developer through the Department's Quality Oversight Verification Reports. Items will be identified as conforming or nonconforming to related PA requirements. We will respond to nonconforming items. A construction Nonconformance Report (NCN) will be closed by the Department upon the verification of a resolution of the issue approved by the Department.

19.2 Independent Assurance

The Department will perform independent assurance tests to verify that:

- IQC personnel are trained and certified and can demonstrate that they understand the test procedures they are performing
- The Department verification personnel are trained and certified and can demonstrate that they understand the test procedures they are performing
- The test equipment used by the Developer IQC personnel and Department verification personnel is calibrated
- Split sample test results correlate

Independent assurance test results will also be used as referee tests to assess statistically significant differences observed between IQC test and Department verification test results.

19.3 Governmental Authority Inspections

We understand that Governmental Authorities with appropriate jurisdiction or as required by Law shall have a right to inspect the Work associated with the Central 70 Project.

20.0 Design Quality Management Plan

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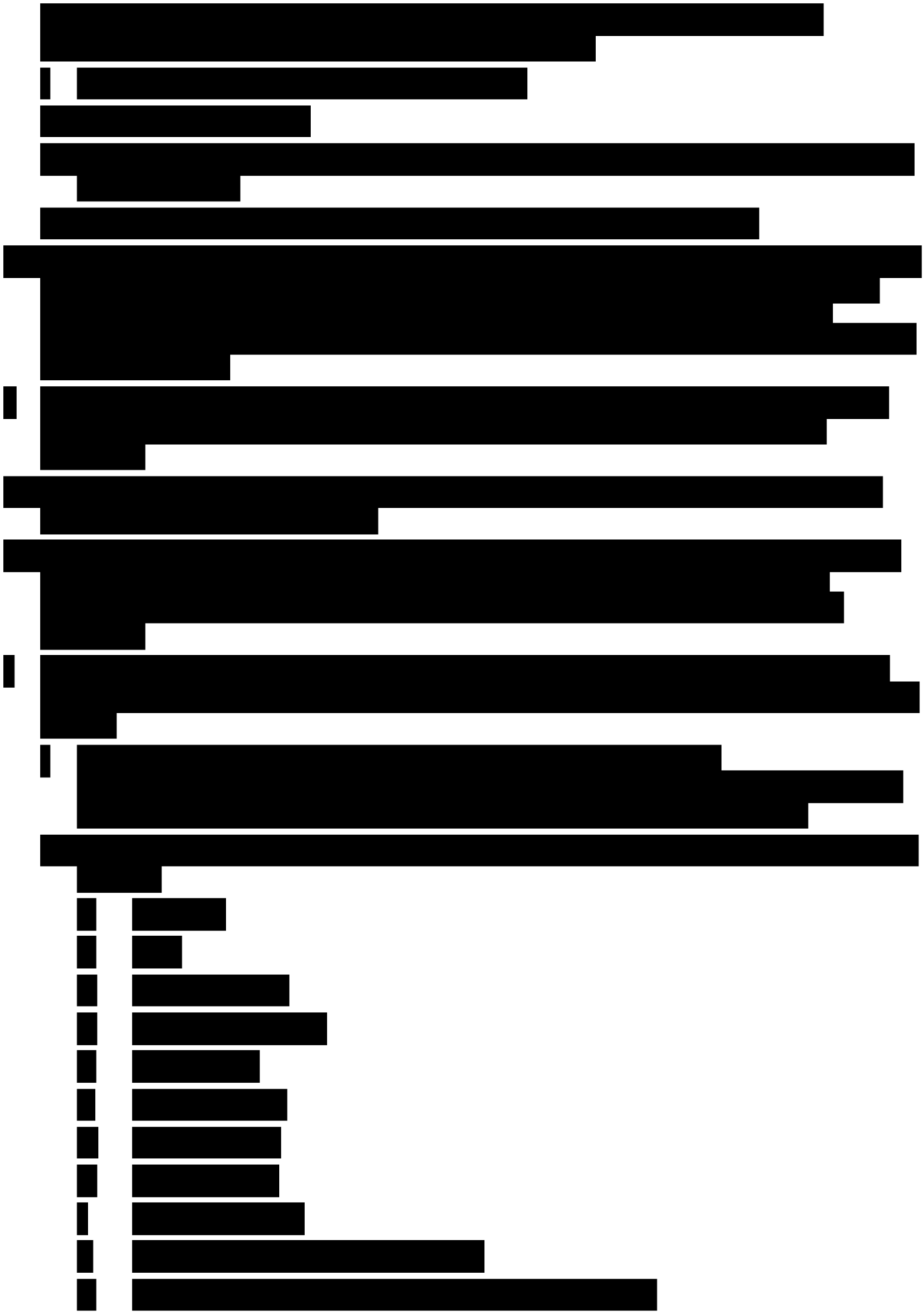

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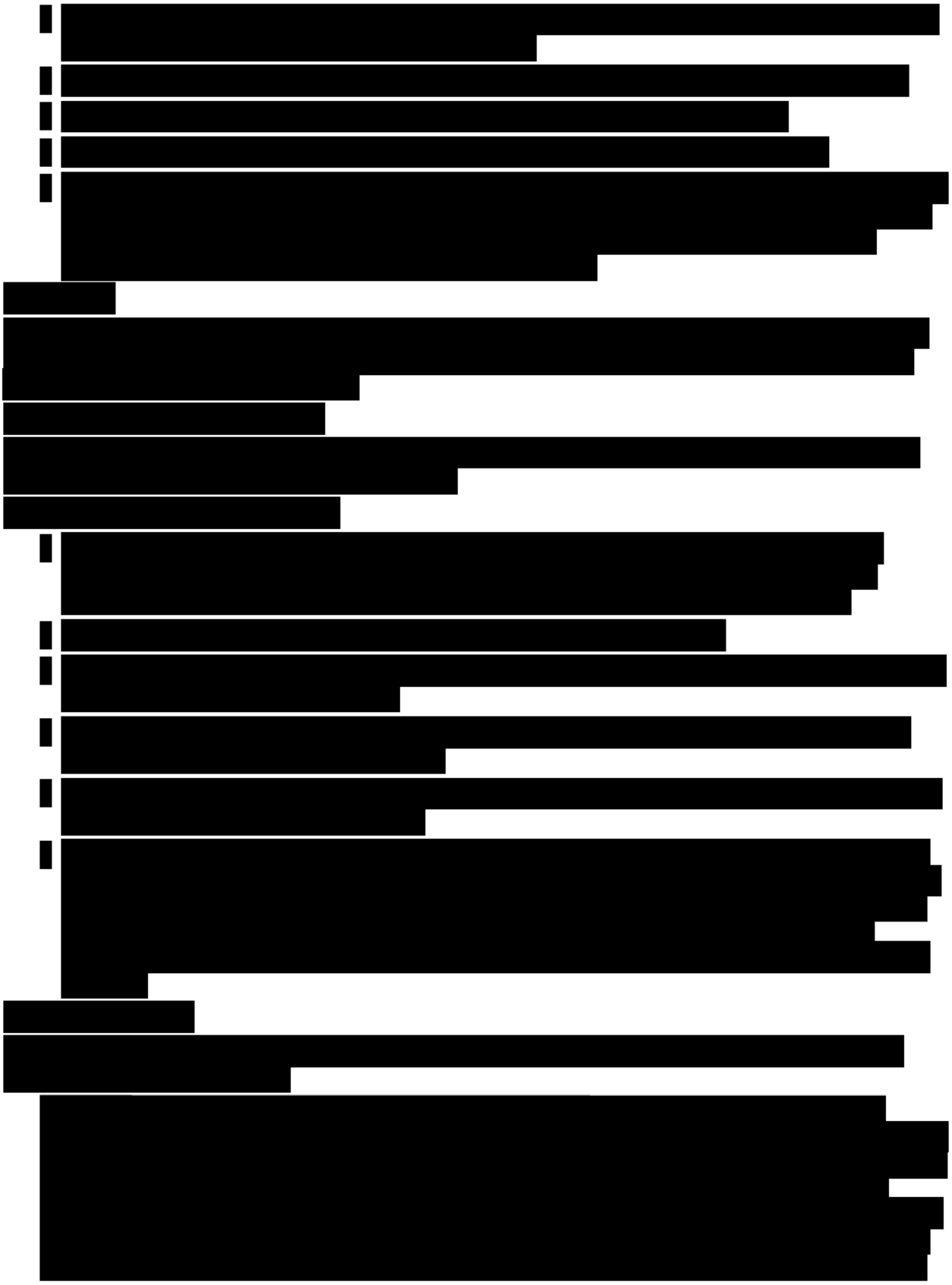

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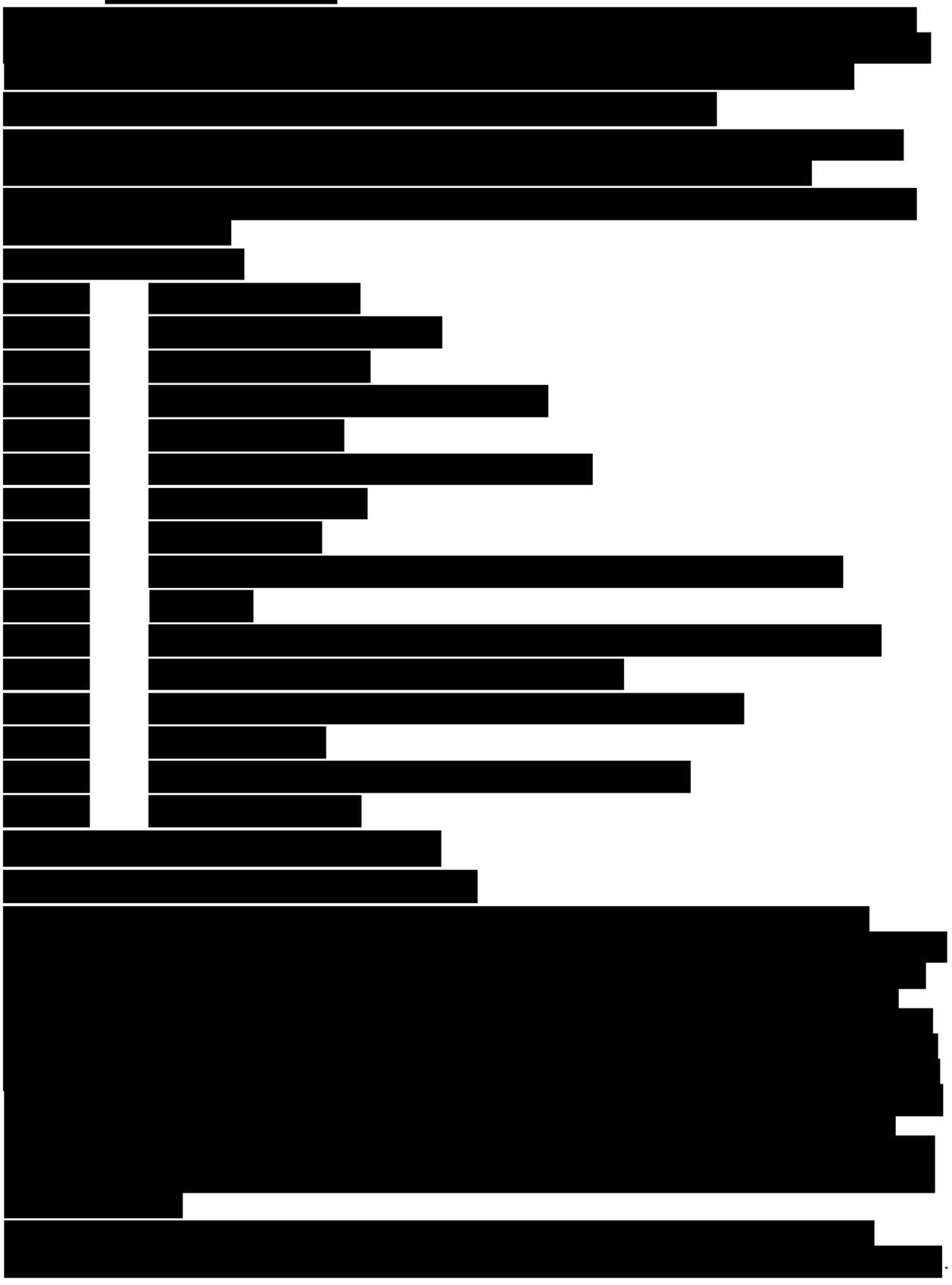

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APPENDIX D: DRAFT STAGE 1 QUALITY MANAGEMENT PLAN

Exhibit 1-1 to Exhibit 1-56

As stated in Form B (Confidential Contents Index), this section has been redacted in accordance with Section 1.5 of the RFP and C.R.S. § 24-72-204.

Exhibit 2.
Listing of Design PC & QC Personnel

Exhibit 3.
Design Process Control Forms

Design Development and PC Process Documentation (DD) Form
Originator Certificate of Completion
Notice of Design Change (NDC)
Design Change Number (DCN)
Independent Design Check Review Comment Form (IDC)
CR, IDR & TQR Forms 11A, 11B, 12A & 12B

Exhibit 4.
Design Quality Control Forms

Design Quality Audit Checklist - Form 13A
Deliverable Certification – Form 13C & 13C_AB
Internal Audit Forms 13D, 13E & 13F
Corrective Action Request Forms 15A & 15B

Exhibit 5.
Comment and Resolution Form

Exhibit 6.
Deliverable Requirements Tracking List (DRTL) - Sample

Exhibit 7.
Design Deliverable List

Exhibit 8.
Document Templates

QC Review Request – Email Template
Bluebeam Session Request – Email Template
Report/Study Template

Exhibit 9.
Design Quality Training

APPENDIX D: DRAFT STAGE 1 QUALITY MANAGEMENT PLAN

Exhibit 10. Quality Process Control Procedures (PCP)

As stated in Form B (Confidential Contents Index), this section has been redacted in accordance with Section 1.5 of the RFP and C.R.S. § 24-72-204.

SECTION 2.1.12

APPENDIX E: DRAFT STAGE 2 QUALITY MANAGEMENT PLAN

Overview

This Appendix E includes 5280 Connectors' Draft Stage 2 Quality Management Plan that addresses the requirements set forth in Section 6 of Schedule 8 (Project Administration) of the Project Agreement.

It describes our approach to all construction-related quality procedures and plans in compliance with the Project Agreement and with the International Organization for Standardization (ISO) 9001:201 standard.

Highlights

Our Draft Stage 2 Quality Management Plan:

- Shows our commitment to provide quality Work.
- Provides an effective means to manage, control and document the Work.
- Ensures collaboration between our quality team and the Colorado Department of Transportation's quality oversight program team.
- Provides guidelines for following ISO 9001 standards.
- Extends to all Subcontractor tiers.
- Focuses on the development of tools that assist employees on gaining an understanding of the system.
- Allows for improvements to be made throughout the Central 70 Project to incorporate lessons learned and changes necessary to ensure Work compliance with the Project Agreement and other governing standards.

5280 Connectors understands, and has as its express policy, that placing the quality requirements of the Project Agreement and affected stakeholders above potentially conflicting individual interests ultimately benefits all involved and impacted by our work.

We will encourage collaboration among team members, recognizing that it benefits all stakeholders to resolve quality issues at the lowest possible and most expedient level.

We will also empower our staff to make appropriate decisions regarding quality, including suspension of Work, and will insist on timely resolution of quality issues.

Finally, we will promote a culture of quality at every level of our organization.

Appendix E

Draft Stage 2 Quality Management Plan

Central 70 Project

Volume 2
Technical Proposal

June 1, 2017

Contents

Appendix

Figures

1.0 Purpose

5280 Connectors' (Developer) approach to quality management is to consider all elements of the Central 70 Project (Project) from Notice to Proceed 1 (NTP1) through final closeout. This Stage 2 Draft Quality Management Plan (QMP) is the master document that memorializes the Project team's understanding of the expectations of the Federal Highway Administration (FHWA), the Colorado Department of Transportation (CDOT or Department), the High Performance Transportation Enterprise (HPTE), and the Colorado Bridge Enterprise (BE) for the quality management of the Project construction-related procedures and plans.

2.0 Reference Documents

The following reference documents form the basis of this plan's structure:

- Central 70 Project contract documents
  - Project Agreement, Schedule 6, Section 6
  - Instructions to Proposers

3.0 Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society for Testing and Materials
BE	Colorado Bridge Enterprise
BMP	Best Management Practices
CAR	Corrective Action Report
CCRL	Cement and Concrete Reference Laboratory
CDOT	Colorado Department of Transportation
CM	Design-Build Construction
CO	Change Order
COC	Certificate of Compliance
CQCM	Construction Quality Control Manager
CPCM	Construction Process Control Manager
CQMP	Construction Quality Management Plan
CR	Constructability Review
CTR	Certified Test Report
	Manager
CPCM	Construction Processes Control Manager
CPCP	Construction Process Control Plan
CWP	Construction Work Plan
DBE	Disadvantaged Business Enterprise
DBM	Design Build Manager
DCD	Document Control Department
DCM	Document Control Manager
DCN	Design Change Number
DCS	Document Control System
DCPR	Design Control Procedures
DDL	Design Discipline Lead
DDF	Design Field Change
DM	Design Manager
DPCA	Design Process Control Auditor
DPCM	Design Process Control Manager
DQMP	Design Quality Management Plan
DRTL	Deliverable Requirements Tracking List
EOR	Engineer of Record
EMT	Executive Management Team
ESB	Emerging Small Business
FDC	Field Design Change
FHWA	Federal Highway Administration
HMA	Hot Mix Asphalt
HPTE	Colorado High Performance Transportation Enterprise
IDC	Independent Design Check
IDR	Interdisciplinary Review
IQC	Independent Quality Control
ICQC	Independent Construction Quality Control
IQCF	Independent Construction Quality Control Firm

IQCM	Independent Quality Construction Manager
IPQM	Independent Project Quality Manager
IDQM	Independent Design Quality Manager
JSA	Job Safety Analysis Worksheet
MTIP	Material Testing and Inspection Plan
NCR	Nonconformance Report
NCHRP	National Cooperative Highway Research Program
NCN	Nonconformance Notice
NCR	Nonconformance Report
NDC	Notice of Design Change
NDRD	New Development Redevelopment
NEC	National Electric Code
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NSBA	National Steel Bridge Alliance
NTCIP	National Transportation Communications for ITS Protocol
NTP	Notice to Proceed
O&M	Operations and Maintenance
OCR	Optical Character Recognition
OJT	On–The-Job Training
OMP	Operations Management Plan
OMQMP	Operations and Maintenance (O&M) Quality Management Plan
OMR	Operations & Maintenance Review
OTIS	Online Transportation Information System
OTSR	Over-The-Shoulder Review
OVT	Owner Verification Testing
PA	Public Address.
PAR	Preventative Action Report
PCM	Process Control Manager
PQM	Project Quality Manager
QAO	Quality Assurance Oversight
QMO	Quality Management Organization
QMP	Quality Management Plan
RCA	Root Cause Analysis
PAR	Preventative Action Request
PC	Process Control
PCCP	Portland Cement Concrete Pavement.
PCM	Project Communications Manager
PCP	Process Control Procedure(s)
PCR	Process Control Review
PDA	Pile Driving Analyzer
PE	Permanent Easement.
PIARC	Permanent International Association of Road Congresses
PIP	Public Information Plan
PLC	Programmable Logic Controller
PM	Design-Build Project Manager
PMP	Project Management Plan
PNS	Pacific Northwest Snow Fighters
PoE	Power Over Ethernet
POSS	Point of Slope Selection
PQM	Project Quality Manager
PSQF	Permanent Stormwater Quality Facilities
PTFE	Polytetrafluoroethylene
PTI	Post-Tensioning Institute
PUC	Public Utility Commission
PVC	Polyvinyl Chloride
QA	Quality Assurance
QAO	Quality Assurance Oversight
QC	Quality Control
QHP	Quality Hold Point
QMP	Quality Management Plan
QMS	Quality Management System
QO	Quality Organization
QRD	Quality Records Database
RAP	Recycled Asphalt Pavement
REC	Recognized Environmental Condition
RFC	Released for Construction
RFI	Request for Information
RFP	Request for Proposals
RHM	Recognized Hazardous Material
ROD	Record of Decision
ROW	Right-of-Way
RPM	Reflective Pavement Markers
RTD	Regional Transportation District
RTK	Real Time Kinematic
RTM	Requirements Traceability Matrix

RWIS	Road Weather Information System
SAP	Sampling Analysis Plan
SB	Colorado Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCP	Stormwater Construction Permit
SFP	Small Form-Factor Pluggable
SMA	Stone Matrix Asphalt
SMFO	Single-Mode Fiber Optic
SMP	Safety Management Plan
SMVMS	Side Mounted Variable Message Signs
SOLIT	Safety of Life in Tunnels
SOV	Single Occupancy Vehicle
SPCC	Spill Prevention Control and Countermeasures
SWO	Stop Work Order
TCP	Temporary Traffic Control Plan
TDC	Traffic Data Collection Unit
TDM	Travel Demand Management
TE	Temporary Assessment
TMOSS	Terrain Modeling Survey System
TMP	Transportation Management Plan
TOP	Transportation Operations Plan
TPR	Third Party Review
TQR	Technical Quality Review
TSS	Total Suspended Solids
TTI	Travel Time Indicators
UBC	Uniform Building Code
UDFCD	Urban Drainage and Flood Control District
UE	Utility Easements
UNCC	Utility Notification Center of Colorado
UPRR	Union Pacific Railroad
UPS	Uninterruptible Power Supply
URA	Utility Relocation Agreement
USFWS	U.S. Fish and Wildlife Service
VA	Voice Alarm
VCS	Ventilation Control System
VFD	Vacuum Fluorescent Display
VMS	Variable Message Sign
VTMS	Variable Toll Message Sign
WBS	Work Breakdown Structure
WDP	Workforce Development Plan
WQCV	Water Quality Capture Volume

4.0 Definitions

5280 Connectors — The Developer.

Acceptance — Defined by the Project Agreement for the Project, Annex A (Definitions and Abbreviations) in Section 2.2.3.a. "Accept," "acceptable" and "accepted" shall be similarly construed. BE and HPTE (together known as "Enterprises") or CDOT acting as their designee shall give their determination in writing that any matter or information appears to comply with the Project Agreement.

Approval — Defined by the Project Agreement for the Project, Annex A (Definitions and Abbreviations) in Section 2.2.3.b. "Approve" or "approved" shall be similarly construed.

Agreement — Defined in the Project Agreement for the Project Preamble and, for certainty, includes Annex A (Definitions and Abbreviations) and the Schedules.

As-Built Documents — The revised set of drawings, specifications, documents, data and surveys submitted by our team and accepted by the Department pursuant to Schedules 8 (Project Administration) and 10 (Design and Construction Requirements), which show the exact dimensions, geometry and location of completed Construction Work.

Corrective Action Request (CAR) — A request made to correct an action that has an adverse impact on quality or systematic issues.

Change Order (CO) — Defined in Section 1.2.e of Schedule 24 (Change Procedure) of the Project Agreement.

City and County of Denver (CCD) — The City and County of Denver, Colorado.

Colorado Bridge Enterprise (BE) — A government-owned business within CDOT; individually an "Enterprise."

Colorado Department of Transportation — The Colorado of Transportation (CDOT).

Colorado High Performance Transportation Enterprise (HPTE) — A government-owned business, within and a division of CDOT; individually an "Enterprise."

Constructability Review (CR) — A review conducted by the Construction Joint Venture (CJV) to assess the design in relation to construction and installation.

Construction Joint Venture (CJV) — Comprised of the firms of Skanska and Zachry.

Deliverable for Acceptance — Any deliverable that, pursuant to the Project Agreement, must be submitted for either:

a) Acceptance; or

b) Consent, approval or like assent, to the extent that the Department is or the Enterprises are, as applicable, pursuant to the express provisions of this Project Agreement, required to act reasonably in deciding whether to give such consent, approval or like assent.

Deliverable for Approval — Any deliverable, pursuant to the Project Agreement, that must be submitted for either:

a) Approval; or

b) Consent, approval or like assent, to the extent that such is pursuant to the express provisions of this Project Agreement or pursuant to Section 2.2.4.b of the Project Agreement, as applicable, at the Department's or the Enterprises' discretion.

Deliverable for Information — Any deliverable, pursuant to the Project Agreement, that must be submitted for information.

Deliverable for Third Party Review — Any reviewable deliverable that requires review or Approval by a governmental authority, utility owner, railroad or other third person, in addition to the Department or the Enterprise's review or Approval.

Deliverable Requirements Tracking List (DRTL) — Defined in Schedule 9, Section 7(a).

Department – (a) CDOT acting pursuant to a delegation of authority by the Enterprises pursuant to Section 18.1.2 of the Project Agreement; or (b) the Enterprises, but only if and to the extent that: (i) The context may require it; or (ii) The Enterprises otherwise notify the Developer.

Design Deliverable — A Work product comprised of construction documents intended to be Release for Construction (RFC) for a specific portion of the Project, as required pursuant to the Project Agreement, to be submitted or resubmitted to the Department for Approval, Acceptance, any other consent, approval or like assent, or information, excluding for certainty, notices and correspondence.

Design Change Number (DCN) — The formal tracking number given to any revisions to RFC design changes. A DCN will be issued for any request for information (RFI) that leads to a field design change (FDC), notice of design change (NDC), change order (CO), or any other action that results in a change to the plans after they have been RFC.

Design Control Procedures (DCPR) — Procedures defined in this DQMP that provide specific instruction on process control implementation and QC requirements.

Design Discipline Lead (DDL) — Individual(s) responsible for the overall coordination and management of the design functions related to a specific engineering discipline.

Design Documents — All drawings (including plans, elevations, sections, details and diagrams), specifications, reports, calculations and records at any stage of development or revision necessary for Project design in accordance with the Project Agreement.

Designer or Lead Engineer — HDR Engineering, Inc. (HDR).

Design Manager (DM) — Responsible for:

a) Ensuring that the overall Project design is complete and design criteria requirements are met.

b) Managing the Designer's personnel.

c) Administering all design requirements in the Project Agreement. The DM will have the authority to suspend design Work.

Design Inputs — The requirements essential for the specific types of products and services to be designed and developed (i.e., design standards)

Design Process Control Auditor (DPCA) — Reports directly to the Design Process Control Manager (DPCM), and is responsible for reviewing design process control records for conformance with the Project Agreement and the Design Quality Management Plan (DQMP).

Design Process Control Manager (DPCM) — The individual tasked with overall responsibility for establishing, implementing, monitoring and reporting on the Design Quality Management System. The DPCM will review and approve all design submittals required by the Department, and prior to submitting to the Independent Design Quality Manager (IDQM), as required for an independent design quality control (QC) review.

Design Progress Review Meeting — 5280 Connectors will hold design progress review meetings during the design development process (e.g., 90 percent package) and invite the Department to attend. We will schedule, conduct and document design progress review meetings, and will take meeting minutes and submit those minutes to the Department for Acceptance within four working days after each meeting.

Design Quality Management Plan (DQMP) — A document that provides direction to produce design deliverables in a well-defined and systematic fashion that meet the Project Agreement requirements. It

promotes prevention and a proactive approach, and focuses on documentation and continuous improvement of the design delivery processes.

Design Verification Review (Quality Assurance Oversight) — Design verification reviews on the design products (drawings, specifications and other design deliverables) performed by the Department on an ongoing basis during the Work. Documents submitted by 5280 Connectors for design verification reviews and Acceptance a minimum of five Working Days in advance of a review meeting.

Detailed Check — A comprehensive documented check of design documents to confirm their correctness. The check consists of an internal review within the discipline (Yellow, Red, Green, and Blue — Check print stamp).

Developer — Skanska Infrastructure Development Inc. and Plenary Group USA Ltd.

Directive Letter — Defined in Schedule 24 (Change Procedure), Section 1.4.a of the Project Agreement.

Document Control Manager (DCM) — Designer team member responsible for the management of Project documents, including transmittals.

Document Control System (DCS) — Defined in Schedule 8 (Project Administration), Section 13 (Document Management): The Department will use Aconex (Section 13.1.2), 5280 Connectors will use Skanska's Project Document Portal (Section 13.1.1), and the Engineer will use ProjectWise. All design deliverable submissions and corresponding Department or third party reviews will be transferred electronically through Aconex.

Document Originator — Designer team member who generates a design product, e.g., calculations, drawings or reports.

Document Checker — Designer team member who provides checks for calculations, drawings, reports or specifications. Shall be independent of the document originator, and have qualifications equivalent to or greater than the document originator, and be familiar with the Project requirements.

Document Back-Checker — Designer team member assigned by the DDL, or may be the document originator. Reviews the document checker's changes, edits, and/or comments, approves corrections as necessary, resolves comments or differences, and discusses any nonconformance issues and opportunities for improvement with the checker and the document originator (if not the back-checker). If the back-checker is not the document originator, he/she shall be familiar with the Project requirements, including the Design Basis Manual(s), DQMP, Project Agreement, and applicable federal, state and local requirements in addition to other Project requirements.

Document Updater — Designer team member assigned by the DDL or the document originator, or may be the document originator, if applicable. The document updater shall physically implement all corrections and revisions to the applicable document (i.e., calculation sheet[s], CADD drawing[s]), as approved by the checker and back-checker.

Document Re-checker — Generally, this will be the checker or his/her designee. Will review the updated document hard copy and compare it with the back-checked and approved check print (plan drawing or calculation sheet) to make sure that all corrections or changes were incorporated in the updated document. Verification shall not be performed by viewing the document electronically. The re-checker cannot be the document originator, back-checker or updater.

Enterprises — Colorado Bridge Enterprise (BE) and Colorado High Performance Transportation Enterprise (HPTE) together.

Field Design Change (FDC) — A formal request by the Developer's Construction Joint Venture (CJV) to the Designer and the Department requesting a change to post-RFC plans due to a change in field conditions, construction methodology, or modification to the design that was not envisioned during the review period prior to RFC.

HDR Engineering, Inc. (HDR) — The Designer.

Independent Design Check (IDC) — A method of QC defined by the CDOT *Bridge Design Manual* for checking certain structural designs. It involves developing a completely separate set of calculations to verify that the Design Originator's outcome reasonably satisfies the Project's requirements and standards.

Interdisciplinary Review (IDR) — A review of a design deliverable by other disciplines (inclusive of operations and maintenance [O&M], environmental, utility and right-of-way [ROW] reviews) to promote consistency and eliminate conflicts among disciplines other than the originator of the design deliverable. These will be required for all design submittals.

Nonconformance Report (NCR) — A report indicating that certain design Work is not conforming to the requirements of the Project Agreement.

Notice of Design Change (NDC) — A formal notice by the Designer to the CJV and the Enterprises (or CDOT acting as their designee) that there is a change to the post-RFC documents due to a change in Project Agreement requirements (i.e., request for change proposal), enhanced plan detail to aid in construction, or response to an RFI that requires a plan change. The Designer will issue Form DCPR-09A.

Over-The-Shoulder Review (OTSR) — The Department will provide an informal review of design Work in production prior to formal submittals and written design reviews. It will be accomplished through task force meetings, periodic task force breakout meetings, and scheduled design progress review meetings

Preventative Action Request (PAR) — The process of obtaining and documenting preventative actions to prevent the potential occurrence of Nonconforming Work.

Project - The Central 70 Project, as more specifically described in the Recitals and Schedule 10 (Design and Construction Requirements) of the Project Agreement. 5280 Connectors will provide all Work as a condition to Final Acceptance.

Process Control (PC) — The activities performed by or on behalf of the Designer to confirm and document that a product meets the requirements of the Project Agreement. Activities may include checks, shop drawing review and document control.

Quality Control (QC) — All the planned and systematic activities implemented within the DQMP, and demonstrated, as needed, to provide adequate confidence that deliverables will satisfactorily fulfill the Project Agreement's quality requirements.

Quality Management Plan (QMP) — The plan that documents our commitment to quality and all quality requirements of the Project Agreement, of which the Design Quality Management Plan is a component. The current plan that satisfies the requirements of Schedule 8 (Project Administration), Section 6 and has been submitted and approved by the Department pursuant to Schedule 8.

Quality Management System (QMS) — A set of policies, processes and procedures required for planning and execution (production/development/service) of an organization's core business area (i.e., areas that can impact the organization's ability to meet customer requirements.) ISO 9001:2015 is an example of a QMS, and is the basis for this Design Quality Management Plan.

Quality Records Database (QRD) — This is the secure web-based application (*Aconex*) for recording results of the Department verification reviews and responses to nonconformance notices (NCNs), as described in Schedule 8 (Project Administration), Section 13.1.2

Rating Package — Defined in CDOT's *Rating Manual*

Released for Construction (RFC) — The designation assigned to construction documents that have been approved by the CJV and accepted by the Department for construction.

Released for Construction Deliverable — Any RFC Document that is a deliverable.

Request for Information (RFI) — A formal request by the CJV to the DDL for clarification related to the design plans, specifications, technical requirements or any other matter related to clarifying construction requirements.

Restricted Activity — Defined in Schedule 9, Section 3(a) (related to the commencement of restricted activities on an "at-risk" basis)

Reviewable Deliverable — Any deliverable that is a deliverable for Approval, a deliverable for Acceptance, or a deliverable for information.

Stop Work Order (SWO) — A notice requiring employers to immediately suspend all Work

Skanska/Zachry — The firms that comprise the CJV.

Task Force Meeting — A discipline-specific weekly meeting conducted to coordinate the design development within our organizations and with the Department and other affected agencies. At a minimum, we will prepare an agenda and conduct each meeting to discuss the design status, coordinate the design development between design disciplines, discuss constructability issues, and identify any questions associated with design requirements. We will take meeting minutes for all task force meetings and provide minutes to the Department for Acceptance within four working days after each meeting. We will provide final minutes to the Department via the Department's document management system on a monthly basis.

Technical Quality Review (TQR) — A peer-level review for design approach, suitability, conformance with clients' design criteria, standards, and Project requirements.

Third Party Review (TPR) — A review conducted by a governmental authority, utility owner, railroad or other third person to assess the suitability of a particular design deliverable

Ultimate Configuration — The elements defining the Project as set forth in Schedule 10 (Design and Construction Requirements) of the Project Agreement and any permitted modifications contained in the Proposal Documents.

5.0 Quality Policy

We recognize that quality in construction is the obligation of every applicable Project employee. Our team has the knowledge, experience and commitment to provide all products and services applicable to this Project such that they fully meet the Project Agreement requirements. This QMP describes the construction-related policies, programs, plans, organizational responsibilities and procedures, which will ensure that all items of Work are constructed, quality-inspected and tested in conformance with the Project Agreement. The implementation and enforcement of our procedures and controls have the complete support of 5280 Connectors' Executive Management Team (EMT).

5280 Connectors Commitment to Quality

5280 Connectors understands, and has as its express policy, that placing the quality requirements of the Project Agreement and affected stakeholders above potentially conflicting individual interests ultimately benefits all involved and impacted by our Work.

We will encourage collaboration among team members, recognizing that it benefits all stakeholders to resolve quality issues at the lowest possible, and most expedient, level.

We will also empower our staff to make appropriate decisions regarding quality, including suspension of Work, and will insist on timely resolution of quality issues.

Finally, we will promote a culture of quality at every level of our organization.

To begin with, work quality is the responsibility of the individuals performing the Work. In this case, it is construction quality management. As members of the 5280 Connectors Project team, we agree on and commit to the values of honesty, professional pride, collaboration, partnership and integrity, which will guide our behavior and help us foster solid working relationships throughout the life of the Project. It is our express policy to meet or exceed Project requirements as defined by the contract documents and adhere to Project quality objectives.

The "5280 Connectors Commitment to Quality" (explained in the text box on page 8) and the quality objectives detailed in Section 5.0 will be posted in several locations throughout the Project office and Project site to foster and encourage the development of a culture of quality among all Project team members.

6.0 Quality Objectives and Principles

Our quality program objectives are to:

- Meet or exceed the Department's expectations by building confidence and trust in the Project team through full and transparent collaboration with the HPTE and BE (Enterprises) and the Quality Assurance Oversight (QAO) program.
- Meet document compliance by following all relevant Project Agreement requirements.
- Be proactive so as to satisfactorily address quality issues that arise throughout the Project's life in a timely and compliant manner.

Our Project Quality Program is based on the following principles:

- **Transparency** — We will achieve our quality goals through the promotion of open communication, trust and a team collaboration atmosphere among all Project stakeholders.
- **Reliability** — We will encourage a quality culture at every level of our organization and with Subcontractors. We will continuously evaluate processes and personnel to improve performance.
- **Accountability** — We will document all quality process implementation steps to ensure continuous application of the QMP and conformance with Project requirements.
- **Inclusivity** — Our QMP will govern Project delivery for all elements of Work at every Project phase, and promote collaboration among all discipline stakeholders and the Department.

7.0 Quality Approach

8.0 Updates and Revisions to the Project Quality Management Plan

Our Project Quality Manager (PQM) Nate Pilcher P.E. is responsible for maintaining the QMP. Any revisions or updates to the PQM must be reviewed and approved by the following key members of the QMO:

- PQM
- Independent Quality Construction Manager (IQCM)
- Independent Design Quality Manager (IDQM)
- Construction Processes Control Manager (CPCM)
- Design Process Control Manager (DPCM)

Once the proposed revision or update is approved by these key members of the QMO, it will be submitted to CDOT for final Approval. Once the Department approves the update or revision, hard copies of the revised QMP will be distributed to the IQCM, IDQM, CPCM and DPCM as well as posted to the Project's Document Control System (DCS).

We will make revisions to the QMP if any of the following conditions are discovered to exist:

- When the QMO detects systemic or fundamental breaches of the Project Agreement, specifically deficiencies in the manner the Work is inspected or tested, including breaches or deficiencies that have caused or that may cause Nonconforming Work to be performed, or when the Department advises us of such a problem.
- When the QMP or a procedure within the QMP no longer adequately addresses what it was originally intended to address.
- When the QMP or a procedure within the QMP does not conform to the Project Agreement.
- When an audit conducted by our team or the Department identifies a deficiency in the QMP requiring an update.
- When changes to our team's QMO will require a revision to the QMP.
- If we are undertaking or about to undertake activities that are not covered within the current QMP.
- When the Department requires the QMP to be updated at its request.

The QMP may be revised at other times if the revision is approved by the PQM, IQCM, IDQM, CPCM, DPCM and the Department.

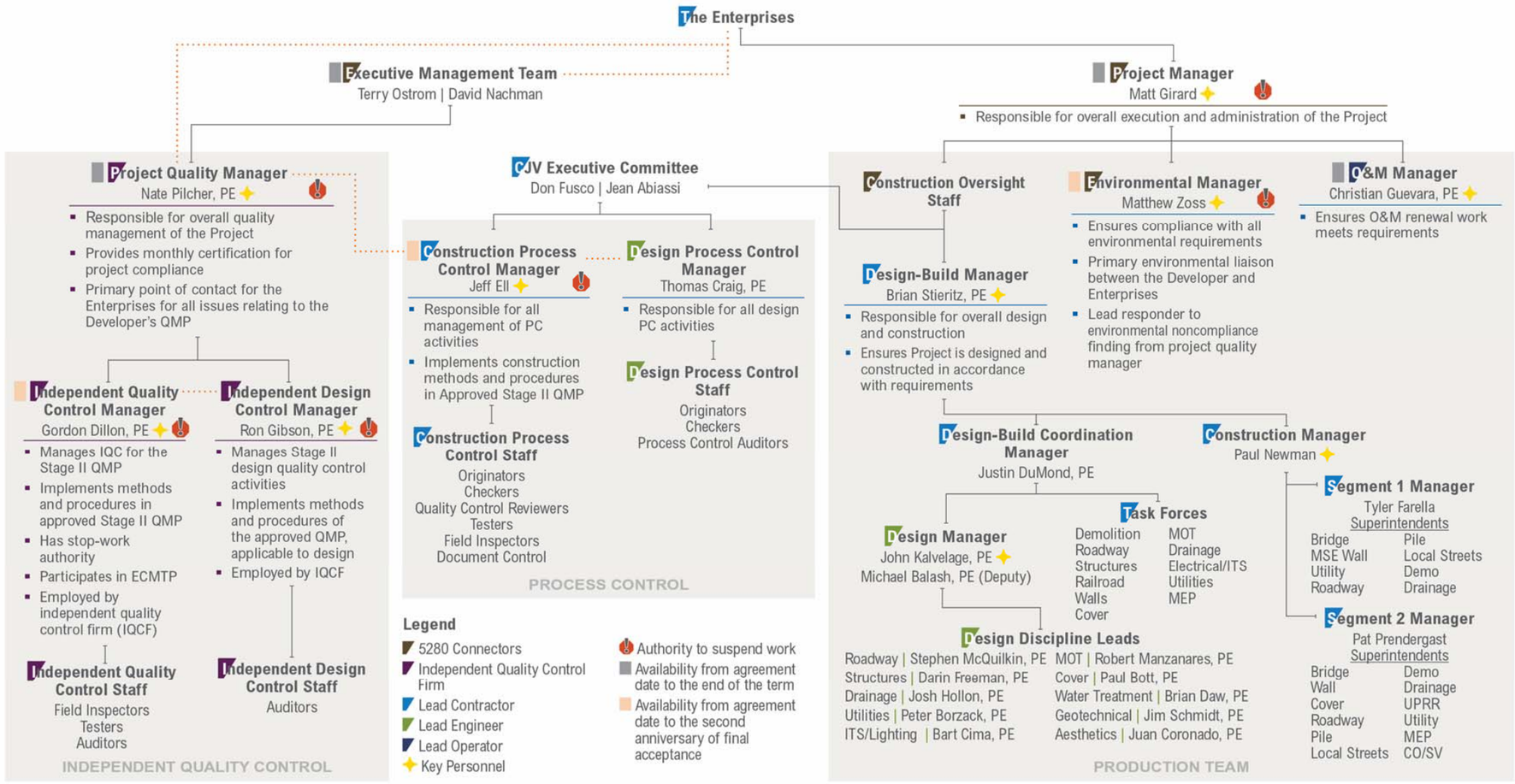
All revisions will be tracked numerically for clarity. Additionally, the PQM will maintain hard copies of all of the previous versions of the QMP throughout the Construction Period, including "red-lined" copies detailing the specific changes made for each revision. A "red-lined" copy will be made available upon request. Once an updated version of the QMP is approved by CDOT, older versions of the QMP will no longer be applicable for Work performed on the Project.

9.0 Quality Management Organization

Our team's commitment to quality begins at the highest level, including our Project EMT. Our QMO is visually depicted in Figure 2 on page 12. The QMO will implement, establish and maintain the PC and IQC procedures and the testing and observations necessary to ensure that Work items meet contract requirements.

We will update and distribute this QMO chart to the Department when any changes to the organization are made.

Figure 2 | Project Quality Management Organizational Chart



10.0 Roles and Responsibilities

All QMO members have the authority and responsibility to ensure the achievement of quality and suspend work as needed. The responsibilities of all personnel who manage, perform and ensure the quality of Work include the following:

- Identify items and initiate actions to prevent the occurrence of Work that does not conform to the contract documents.
- Identify, document and resolve quality problems.
- Recommend areas for quality improvement.
- Ensure implementation of quality improvement solutions.
- Identify Nonconforming Work, and stop all Work that is affected by the Nonconforming Work until the deficiency is corrected.

Additionally, the PQM, IDQM, DPCM, CPCM and IQCM have the following shared responsibilities:

- Facilitate Work compliance with the Project Agreement's requirements and the approved QMP.
- Approve quality processes and procedures.
- Provide adequate resources and trained personnel for PC and IQC activities.
- Ensure the adequacy and enforcement of quality procedures, processes, inspections and tests for all Work.
- Establish and implement procedures to control and ensure the Work performed by Subconsultants, Subcontractors and Suppliers meet the Project Agreement's requirements.
- Ensure the QMP is being implemented and regularly report in writing to the Developer's executive management regarding the status of the QMP implementation.
- Ensure that quality records are properly prepared, completed, maintained and delivered to the Department, as required by the Project Agreement, to provide evidence that PC and IQC activities are performed and quality results are achieved.
- Ensure that IQC staff is independent of the Project Manager and regularly reports to the Developer's executive management.
- Continually promote awareness of the Project Agreement's requirements throughout 5280 Connectors' entire Project organization.

Position specific roles and responsibilities of the QMO members regarding implementation of this QMP include the following:

10.1 Project Manager (PM)

- Responsible for the overall execution and administration of our responsibilities.
- Has authority to bind 5280 Connectors on matters delegable pursuant to law and the governing documents affecting Project execution and administration.
- Has authority to suspend Work.

10.2 Construction Manager (CM)

- Ensure that the Project is constructed in accordance with the contract documents.
- Manage construction personnel, schedule construction quality personnel, and administer compliance with all Technical Requirements applicable to the Construction Work.
- Has authority to suspend Work.

10.3 Design-Build Manager (DBM)

- Responsible for the overall design and construction of the Project and for managing the design-build team.
- Ensure that the Project is designed and constructed in accordance with the Technical Requirements.
- Has authority to suspend Work.

10.4 Design Manager (DM)

- Ensure that the overall Project design is complete and design criteria is met.
- Responsible for the design team's personnel.
- Responsible for administering all QMP design requirements.
- Has authority to suspend Work.

10.5 Project Quality Manager (PQM)

- Responsible for overall Project quality management.
- Has authority to suspend Work that does not comply with Project Agreement requirements.
- Provide a monthly certification that Work is performed in compliance with law and Project design.
- Report quarterly to the Developer's executive management and the Department on the quality system performance for review and as a basis for improvement of the quality system.
- Provide direct supervision of the IDQM and IQCM and their respective staffs.
- Will not be involved with schedule or production activities.
- Provide all final checks, approvals and certifications for quality.
- Assure, certify and provide documented evidence that the Work meets the Project Agreement requirements.
- Has the authority and responsibility for our quality program success, and shall ensure that authorities and responsibilities are defined and communicated within the organization.
- Responsible as the primary point of contact to the Department for all issues relating to the QMP, including preparation, review, implementation and updates.
- Ensure that a quality system is established, implemented and maintained.

10.6 Independent Design Quality Manager (IDQM)

- Ensure quality management on all Project design Work.
- Has authority to suspend Work that does not comply with requirements of the Project Agreement.
- Will not be involved with schedule or production activities
- Responsible for all design quality control (QC) activities for the Work
- Ensure that the approved QMP methods and procedures related to design are implemented and followed by our team, Subcontractors, fabricators, Suppliers and Vendors in the performance of the Work.
- Ensure that quality records related to design Work are properly prepared, completed, maintained and delivered to the Department as required by the Project Agreement to provide evidence of PC, QC and IQC activities performed and quality results achieved.

- Promote awareness of the Project Agreement requirements related to design Work throughout the entire Project organization.

10.7 Construction Process Control Manager (CPCM)

- Ensure all QMP methods and procedures are carried out on the Project.
- Has authority to suspend Work that does not comply with the Project Agreement requirements.
- Ensure that the approved QMP methods and procedures related to construction are implemented and followed by our team, Subcontractors, fabricators, Suppliers and Vendors, both on-site and off-site, in the performance of the Work.
- Will not be involved with schedule or production activities.

10.8 Design Process Control Manager (DPCM)

- Has authority to suspend Work that does not comply with the Project Agreement requirements.
- Responsible for all design PC activities.

10.9 Independent Quality Control Manager (IQCM)

- Manage all IQC aspects contained in this QMP.
- Has authority to suspend Work that does not comply with the Project Agreement requirements.
- Responsible for managing the IQC aspect of the QMP. Shall be an employee of the Independent Construction Quality Control Firm (IQCF).
- Will not report to any person or party directly responsible for design or construction production.

10.10 Environmental Manager

- Ensure compliance with all Environmental Requirements and commitments.
- Has the authority to suspend Work that does not comply with the Project Agreement requirements.

10.11 Independent Quality Control (IQC) Personnel

- Is independent of the PC personnel. Will not participate in any PC activities.
- Observe and report to verify the PC and Work activities at designated frequencies for compliance with Project requirements.
- Will not be involved with schedule or production activities
- Report directly to the IQCM, IDQM and PQM.

10.12 Process Control (PC) Personnel

- Provide PC checks, sampling, testing and Work observation to refine Work processes and products Work in conformance with the Project requirements under the direction of the DPCM and CPCM.
- Will not be involved with schedule or production activities
- Report directly to the DPCM and CPCM.

11.0 [redacted]

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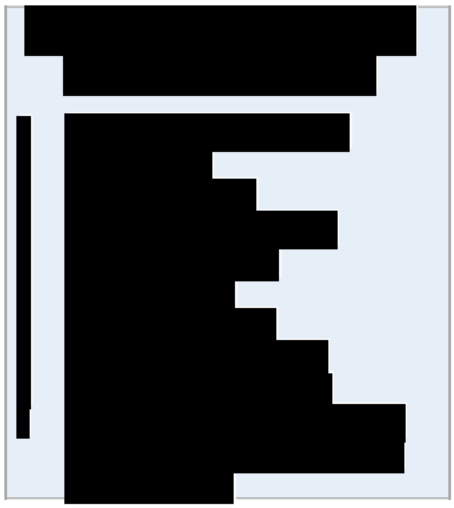

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12.0 [redacted]

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13.0 Internal Auditing of Environmental Compliance Requirements

5280 Connectors' Environmental Compliance Work Plan (ECWP) describes how our PC and IQC programs function to ensure compliance with the Environmental Requirements and the Project Agreement. Our IQC program assures Construction Work meets compliance with the Project Agreement and all applicable local, state and federal Environmental Requirements by performing inspections/audits with support from the Environmental Manager.

13.1 Internal Auditing of Water Quality Control and Water Resources

We will retain and utilize a Stormwater Management Plan (SWMP) administrator. The PC program will retain and utilize erosion control inspector(s) as required by the Project's Special Provisions revision of CDOT Specification Section 208 and the Project Agreement (Schedule 17).

The ECWP includes an organization chart identifying the key personnel responsible for implementing the Project's water quality compliance activities. The ECWP specifically identifies 1) the individuals and positions who will serve in the roles referenced in Section 208; and 2) a detailed description of the roles that the PC and the IQC programs shall be assigned in the quality control and quality assurance (QA/QC) of water quality activities. The ECWP provides details of the following IQC processes in the event of recurring nonconformance events:

- Environmental quality hold points (QHP)
- Environmental nonconformance process
    - Communication
    - Workflow
    - Approvals

The IQC program will include water quality compliance requirements as part of all inspection and field reviews. It will issue NCRs, if required, to bring the Project into compliance with the Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP), CDOT's municipal separate storm sewer system (MS4) permit, and the construction standards for water quality and erosion control. The IQC program shall retain and utilize:

- Inspector(s) who have successfully completed the Transportation Erosion Control Supervisory Certificate Training (TECS) as provided by CDOT; and
- One (1) TECS-certified inspector per every 40 acres of total disturbed area, or portion thereof, which is at any time actively receiving temporary and interim stabilization measures as defined in Section 208.04(e).

The IQC program will audit the SWMP notebook monthly during the period from the issuance of NTP2 until Final Acceptance. A monthly summary of the audit, audit findings, and scanned material will be submitted to the Department, scanned to an electronic format (as needed), and entered into the Project DCS. The material to be audited includes:

- CDOT Form No. 1388 (Daily Inspection Forms) and all items required in Section 208.03(d)1
- Form 1176 (Routine and Post-Storm Inspection Reports) and Corrective Action documentation for any findings
- Form 105 (water quality related issues)
- All other correspondence relating to water quality and any reportable spills submitted to the Colorado Department of Public Health and Environment (CDPHE)

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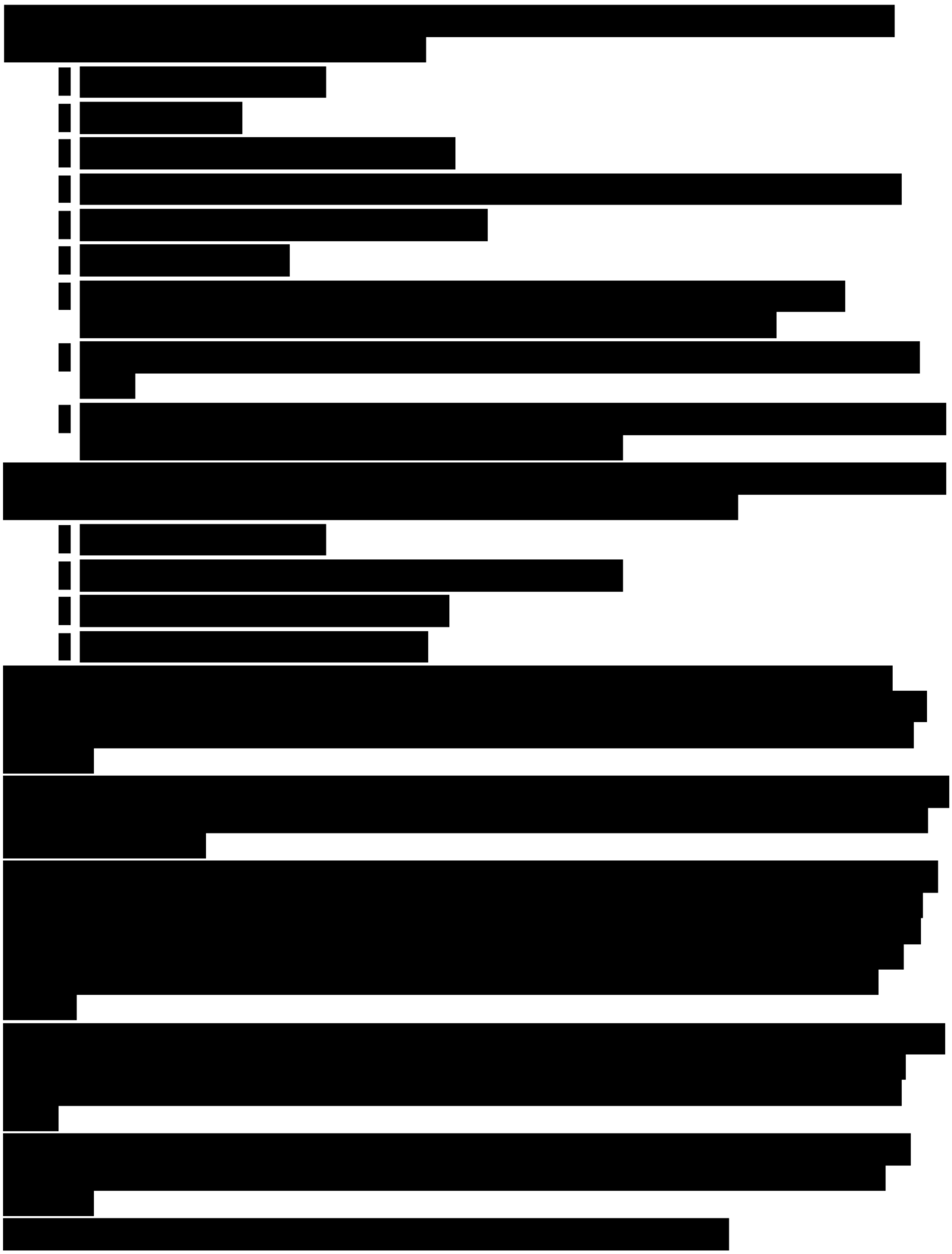

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18.0 Regular Project Certification

The PQM is required by the Project Agreement to provide the following regular certifications and updates to the Enterprises and the Project's Executive Management.

18.1 Monthly Certification to the Department

The PQM shall report the status of the Work's quality each month in writing to the Department, and provide documented evidence that the Work meets the requirements of the Project Agreement.

18.2 Quarterly Update to the Executive Management Team

The PQM will report to the EMT and the Enterprises each quarter on the quality system performance as a basis for quality system improvement.

18.3 Certification to the Enterprises at Required Times

The PQM will submit a certificate that the Work performed meets the requirements of the Project Agreement in the form set out in Appendix B to Schedule 8, amended as appropriate. These certificates will be provided to the Department at the following intervals:

- Prior to each Milestone Completion
- Prior to substantial completion
- Prior to Final Acceptance
- At any other time, as requested by the Enterprises (including in relation to any Renewal Work)

19.0 Department Oversight Program

This section presents our understanding of the Department's QAO Program as defined in Section 6, Schedule 8 of the Project Agreement. We will coordinate with the Department's representatives to facilitate implementation of the QAO Program. The PQM will serve as the primary point of contact between the Department and our team to resolve issues regarding the implementation of the QAO Program.

19.1 Quality Assurance Oversight

We understand that CDOT will retain the responsibility for the Work associated with the Project as required in Title 23, Code of Federal Regulations (CFR), Part 637 (23 CFR 637).

The Department will periodically audit or conduct verification reviews on our quality management activities to assess compliance with the requirements of the Project Agreement. There will be four types of verification reviews conducted by the Enterprises and/or CDOT, including:

- **Design Verification Reviews** — Reviews will be conducted on the design products on an ongoing basis during the Work. We will submit documents for design verification reviews to the Department for Acceptance a minimum of five working days in advance of a review meeting.
- **Construction Verification Inspection** — Inspections will be conducted on construction activities.
- **Construction Verification Testing** —Sampling and testing will be conducted on materials to validate the IQC testing program. Verification test results will be stored in the QRD.
- **Process Audits** —Audits will be conducted on Work implementation activities excluding design and construction. Such activities may include Project Agreement requirements such as public information, maintenance of traffic, environmental compliance, safety, Project management processes, and meeting the approved QMP requirements.

All Department-generated observations will be presented to our team through the Quality Oversight Verification Reports. Items will be identified as conforming or Nonconforming to related Project Agreement requirements. We will respond to Nonconforming items. CDOT will close construction NCNs upon verification of the issue resolution approved by the Department.

19.2 Independent Assurance

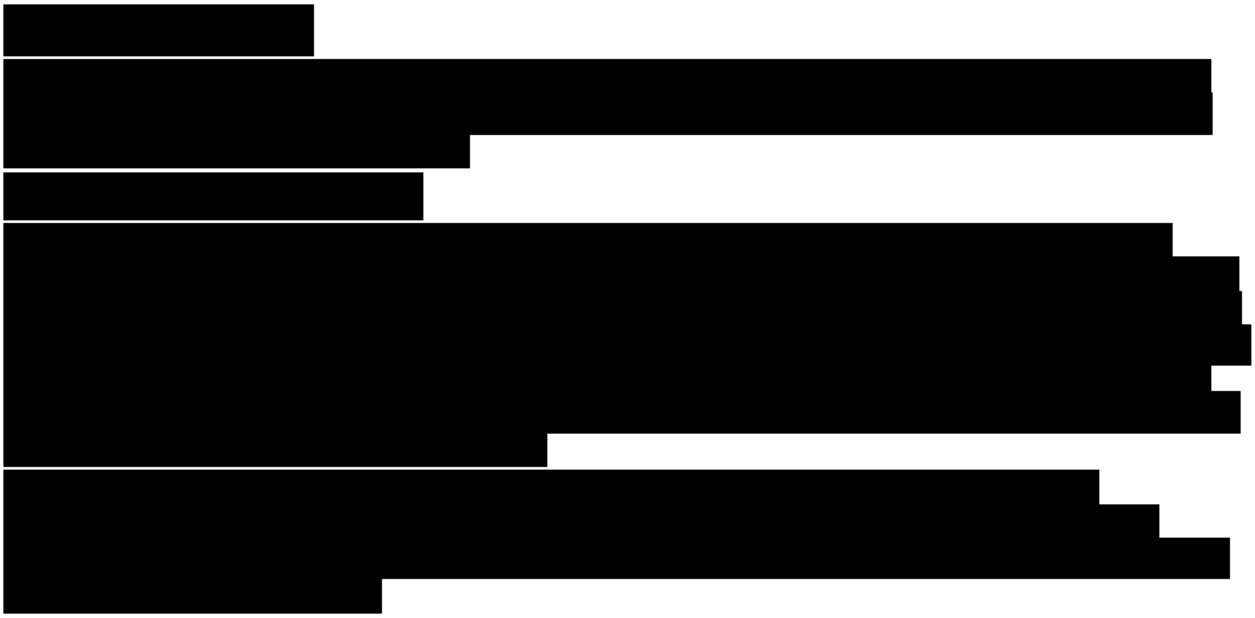
CDOT will perform independent assurance tests to ensure that:

- IQC personnel are trained, certified and demonstrate that they understand the test procedures they are performing.
- Department verification personnel are trained, certified and demonstrate that they understand the test procedures they are performing.
- Our IQC personnel and the Department verification personnel use calibrated test equipment
- Split sample test results are correlated.

Independent assurance test results will also be used as referee tests to assess statistically significant differences observed between our IQC test results and the Department's verification test results.

19.3 Governmental Authority Inspections

We understand that Governmental Authorities with appropriate jurisdiction or as required by law shall have a full right to inspect Project Work as per the Project Agreement.



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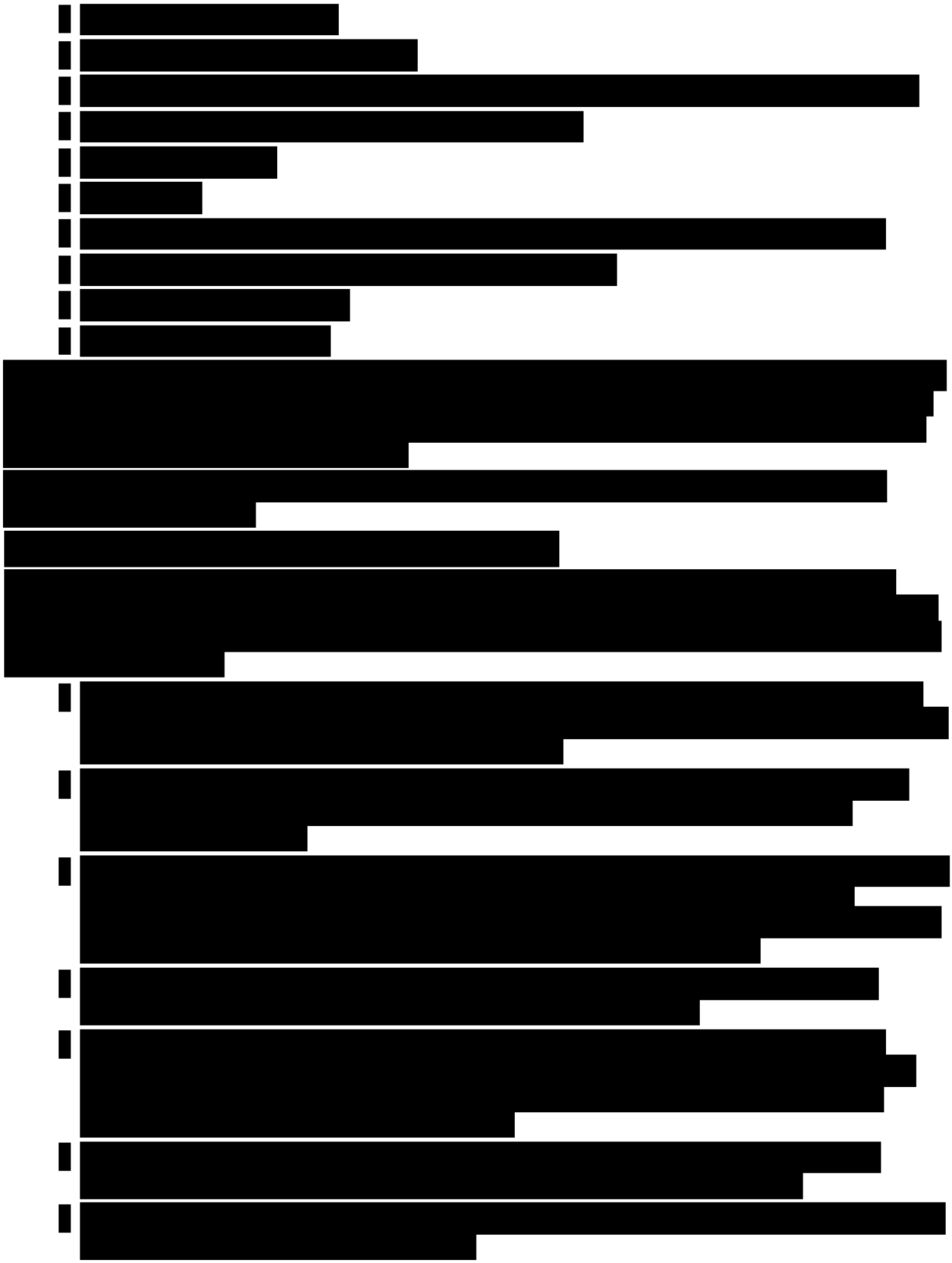

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EXHIBIT 1: QUALITY PROCESS CONTROL PROCEDURES

As stated in Form B (Confidential Contents Index), this section has been redacted in accordance with Section 1.5 of the RFP and C.R.S. § 24-72-204.

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