VDOT
Virginia Department of Transportation

Manual for Construction Management

Construction Division

VDOT GOVERNANCE DOCUMENT

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PREFACE

Purpose:

This manual has been prepared to promote the consistent administration of construction contracts by engineers, construction managers, and inspectors on all VDOT projects. It is intended to serve as an informational and procedural guide and to be used in conjunction with contract documents, specifications, standards, and policy directives (State and Federal). It is neither a textbook nor a substitute for engineering knowledge, experience, or judgment.

As the Responsible Charge Engineer for construction, VDOT's Area Construction Engineer (ACE) has the ultimate responsibility to deliver successful construction projects. This manual will identify individual tasks that are the responsibility of the ACE; however, many of these tasks may be delegated to members of the project team. Delegation may be determined based on associated risk, time commitments, budget constraints, etc. and should be documented on the ACE's Delegation of Responsibility Matrix. The successful completion of tasks delegated to non-VDOT employees must be verified by the ACE.

Section 1.1: Constructability Reviews

VDOT Road Design Manual, Appendix E, Concurrent Engineering Constructability Review Guidelines

Purpose:

Constructability Reviews identify issues that contractors may encounter constructing the project as designed. Comments generated during the review should focus on ways the design could be changed to produce a better, quicker, more economical, or safer way to construct the project. The emphasis is on "HOW" the project will be constructed and traffic will be maintained throughout construction.

Timeline: *One review at each milestone of project development*

- Scoping Constructability Review
- Preliminary Field Inspection (PFI) Constructability Review
- Public Hearing (PH) Constructability Review
- Field Inspection (FI) Constructability Review
- Pre-Ad Conference (PAC) Constructability Review

Format:

The Area Construction Engineer that will be responsible for constructing the project, or his/her designee, should attend the preliminary engineering milestone meeting for each phase of project development. This meeting provides an opportunity for the Area Construction Engineer to discuss any potential constructability issues discovered during the review with the project development team.

Prior to the PFI and FI constructability reviews, the proposed project should be reviewed in the field by the Area Construction Engineer or his/her designee. During the field visit, the Area Construction Engineer should document the following conditions on the current plans: existing vehicular, pedestrian and bicycle traffic patterns; field conditions and utilities that are not reflected on the plans; existing entrances and access routes for commercial and residential properties; and any visible environmental, drainage, or structure and bridge concerns. Digital photos greatly aid in defining the issue(s) and should be taken, provided to the design Project Manager, and referenced in the constructability review comments.

Review Guidelines:

The depth of each constructability review will vary depending on the project scope and the phase of project development:

- Scoping: Identify existing conditions which may present construction problems and recommend a project footprint that allows the project to be easily constructed. The project footprint needs to consider the overall width of the project corridor (including potential utility, drainage, or construction easements) and the appropriate project limits at the beginning and end of the project, all intersecting streets, and all stream or drainage crossings. Identifying appropriate project limits is critical at this stage of project development because the project limits are used as the basis for future environmental studies, geotechnical reports, topographical surveys, etc.

- Preliminary Field Inspection (PFI): Provide comments regarding the conceptual plans and profiles based on the field review. Consider maintenance of traffic (MOT) requirements, and the potential locations of staging areas, storm water management facilities, relocated utilities, and right-of-way and easements.
- Public Hearing (PH): Provide comments on the revised plans that include profiles and cross sections. A thorough review of cross sections is recommended to verify that there is enough space for the contractor to construct the proposed project and maintain traffic during construction. All impacts to private property and the traveling public must be verified. Perform a conflict analysis to confirm that pipes and other subsurface construction items will not be in conflict with proposed or existing utilities. This will be the last time to easily make significant changes to the project design.
- Field Inspection (FI): Provide comments on the detailed plans based on the field review. It is critical that the Sequence of Construction (SOC) and MOT be thoroughly reviewed at this stage to ensure constructability and drivability. All right-of-way, permanent easements, and temporary easements necessary to construct the project needs to be correctly identified because this will be the last time to make design adjustments prior to the acquisition of right-of-way and easements.
- Pre Ad Conference (PAC): Provide comments on the final plans and confirm that all traffic patterns identified in the MOT plans (including detours) meet the needs of the traveling public and are constructible in accordance with the phases outlined in the proposed SOC. A biddability review of the contract documents will also be conducted prior to PAC. This will be the last time to make design adjustments prior to advertisement.

Appendix E of the VDOT Roadway Design Manual provides detailed guidelines for items that should be considered during constructability reviews at the PFI, PH, FI, and PAC stages of project development.

Documentation:

Constructability review comments are documented on the standard VDOT comment form and provided to the design Project Manager by the Area Construction Engineer or his/her designee prior to the preliminary engineering milestone meeting for each phase of project development. The designer's official responses to the constructability comments need to be reviewed to ensure that the intent of the comment was understood and that the issue was adequately addressed.

Keys for Success:

No design will be perfect, but thorough constructability reviews during the project development process by the professionals responsible for constructing the project can substantially reduce the number of change orders encountered during construction. The reviews will consider everything that the contractor and traveling public will encounter during construction, from site preparation to final acceptance. This may include: material delivery and storage, tree and brush clearing operations, temporary drainage and SWPPP requirements, placement of large machinery, in-plan utility construction, field office locations, areas of pavement demolition and/or build-up, haul routes, site access, private property access, detour routes, and appropriate lane/shoulder closure durations.

Section 1.2: Contract Time Determination Report (CTDR) Development

Purpose:

The CTDR establishes the appropriate fixed completion date, interim milestone requirements, or other schedule related contract requirements for the project based on the scope of work identified in the plans and contract documents. With exceptions of on-call contracts, a CTDR shall be developed for ALL projects as outlined below.

CTDR Categories:

The CTDR category is chosen based on the project complexity, type, duration, and size using the table below as guidance. If a project does not fit into a single CTDR category, engineering judgement is used to determine which project specific requirement(s) will be the guiding factor. It is important to identify the appropriate category because it will be used to establish the contractor's project specific scheduling requirements that are identified in the Scheduling Special Provision of the contract and used to measure the contractor's "on-time" performance during construction.

	Complexity & Risk	Types of Projects	Project Duration	Construction Estimate
Category M	Very Low	Seasonal maintenance; paving projects	One construction season or less	N/A
Category I	Low	Bridge repair, signal modification; turn lane; shoulder widening; sidewalks or trails	One construction season or less	$2 million or less
Category II	Low to Medium	Small bridge replacement; intersection improvements; secondary road widening	One or two construction seasons	Up to $5 million
Category III	Medium	Bridge replacement; primary road widening	Multiple construction seasons	Up to $10 million
Category IV	High	Interstate bridge replacement; interchange improvements; interstate widening; ITS; design-build	Multiple construction seasons	Up to $100 million
Category V	Very High	Major interstate interchange reconstruction; mega projects; P3 projects	Multiple construction seasons	$100 million or greater

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Timeline:

- Category M – When plans and quantities are available
- Category I and II – Field Inspection (FI)
- Category III, IV &V – Preliminary Field Inspection (PFI)

The CTDR is developed by the District Construction Project Controls section during the project development phase based on the CTDR category as identified above. The final CTDR should be reviewed by the Area Construction Engineer responsible for constructing the project and provided to the

preliminary engineering Project Manager prior to the Pre-Advertisement Conference (PAC).

Format and Documentation:

A complete CTDR will include the following sections:

I. Title Page
II. Table of Contents
III. Project Overview (including project map)
IV. Schedule Category, Methodology, and Assumptions (including key production rates, reference data, calendars, resourcing, approach and schedule narrative for each phase of construction)
V. Findings and Recommendations (including key dates such as advertisement, bid opening, execution, Notice to Proceed, Fixed Completion Date and any milestones)
VI. Appendix I – Final Schedule
VII. Appendix II – Calculations for Liquidated Damages, Incentives, and Disincentives

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CTDR Schedule Methodologies:

The methodology and type of schedule developed as the basis of the CTDR will depend on the Schedule Category and whether the project will utilize an early completion incentive. Minimally, the CTDR must be based on an Estimated Cost Method Schedule for Category M and I projects, a Bar Chart Schedule for Category II projects, and a Critical Path Method (CPM) Schedule for Category III, IV, or V projects. In addition, the CTDR for all projects which include an early completion incentive must be based on a CPM Schedule. Minimum requirements for each schedule methodology are as follows:

- Estimated Cost Method Schedule: The Estimated Cost Method Schedule utilizes a comparison of contract value (dollars) to contract time (calendar days) to estimate a project's duration. The Construction Division has developed tables based on historical data to illustrate project cost versus project time. The tables can be sorted by project types, road system, and geographic locations, and are available at Project Controls InsideVDOT site. The Fixed Completion Date for the project will be based on the appropriate contract duration that is calculated using the estimated contract value of similar projects.
- Bar Chart Schedule: The Bar Chart Schedule determines a project duration by breaking the project down into work components with durations of no more than two weeks. Each work component must be well defined and have easily understood relationships. All components necessary to complete the work should be listed in chronological order and include begin and end dates. A template is available at Project Controls InsideVDOT website.
- CPM Schedule: CPM schedules show the highest level of detail and used to illustrate complex relationships. Primavera .xer format should be used to create all CPM schedules. The work components should be broken down into individual activities that are assigned durations and linked using logical relationships. Refer to the VDOT CTDR manual for additional requirements regarding the development of CPM Schedules.

Calculating Liquidated Damages:

Liquidated Damages (LDs) allow VDOT to recover contract administration costs that will be incurred by the Department each day the project is not completed beyond the contract fixed completion date. Standard rates for LDs are available in Road and Bridge Specification Section 108.06 (b). These rates may be modified to meet project specific conditions. Justification should be provided in the CTDR and must

include a calculation that clearly identifies the daily costs that VDOT will incur if the project is delayed, such as:

- Direct labor (Inspectors, Construction Managers, Area Construction Engineers, etc.), and
- Non-salary direct costs (vehicles, fuel, computers, communication devices, etc.)

If the standard rates are not used, a Special Provision for the project specific LD's should be written and provided to the L&D Project Manager prior to PAC, to be included in the contract.

Calculating Completion Incentives & Disincentives:

Incentives and disincentives encourage contractors to complete a project or phases of a project, ahead of schedule to reduce impacts to the traveling public. Incentives are used on many projects and can be calculated to include:

- Contractor's daily acceleration costs
- VDOT's daily administration costs
- Road user costs (RUC)

Disincentives are not penalties and may only be applied on projects that offer incentives. The disincentive can be calculated to include:

- VDOT's daily administration costs
- Road user costs (RUC)

The maximum incentive value of a project typically approaches 5% of the estimated contract value. If a disincentive is utilized, the daily value of disincentive should not exceed the daily value of the incentive.

Supporting documentation detailing incentive and disincentive calculations must be included in the appendix of the CTDR. VDOT's daily administration costs may be calculated in a similar fashion as the method used for LDs. RUC must be determined using VDOT's Highway User Benefit-Cost Analysis Program (HUB-CAP). FHWA Technical Advisory T 5080.10 also provides additional guidance for the development and implementation of incentives and disincentives using contractor daily acceleration costs.

If disincentives include VDOT's daily administration costs, it is important that the disincentives and LDs never be applied concurrently. In this case, Special Provisions for disincentives must be written so that LDs can only be assessed once the contract completion date has passed and the disincentive is no longer being applied. Additionally, if multiple disincentives are set forth in the contract (i.e. disincentives associated with multiple contract milestones and/or the contract completion date), at no time shall more than one disincentive charge be assessed.

Keys for Success:

A CTDR that accurately outlines a project's anticipated schedule and duration will ensure there is adequate time for the project to be completed and verify that only accelerated work is incentivized. During the development of the CTDR, pay close attention to the proposed maintenance of traffic (MOT) phases and sequence of construction identified in the design plans. These elements represent an illustrated schedule that depict the designer's intentions to get the project from Notice to Proceed (NTP) to final completion. Utilize standard production rates and consider the time of year that each element of work will be completed. Environmental permit conditions and winter weather conditions need to be taken into account to develop an accurate schedule.

Section 1.3: CEI Budget Development

Purpose:

Construction Engineering & Inspection (CEI) budgets detail the expenses VDOT will incur to administer a construction project. This includes all direct labor (Inspectors, Construction Managers, Area Construction Engineers, etc.), indirect labor (personnel providing construction guidance from L&D, Environmental, Structure & Bridge, Traffic Engineering, Contract Administration, Construction, etc.) and non-salary direct costs (vehicles, computers, cell phones, etc.) that will be used from the pre-construction meeting to final acceptance and project financial closeout.

An accurate CEI budget must be established and included in the overall project budget to ensure that the project is fully funded.

Timeline:

- Scoping – Based on a percentage of estimated construction costs and included in construction phase of PCES estimate.
- Field Inspection – Based on preliminary CTDR schedule and preliminary estimate of direct labor, indirect labor, and non-salary direct costs.
- Pre-Advertisement Conference (PAC) – Based on final CTDR schedule and final estimate of direct labor, indirect labor, and non-salary direct costs.

Format and Documentation:

The preliminary engineering Project Manager (PM) will establish the percentage based CEI budget in the early stages of project development by denoting a percentage (typically 10-15%) of the contract value as an initial estimate. As the specific project requirement(s) and duration(s) are developed, the Area Construction Engineer, or his/her designee, will develop the detailed CEI estimate using the approved spreadsheet located on the Project Controls InsideVDOT site. The final CEI budget will be provided to the PM prior to PAC. The State Construction Engineer, or designee, is the approval authority for all CEI budgets under 20% of contract value. Any CEI budget exceeding 20% of contract value must be approved by the Deputy Chief Engineer.

Keys to Success:

Create the CEI Budget using the CTDR and District Manpower Plan as major resources. The CTDR will provide the total contract duration and key assumptions relative to the number of working days and number of crews working concurrently. The Manpower Plan should identify the number and experience level of the inspection staff required to oversee the project and whether VDOT or consultant staff should be assigned. Coordinate with other VDOT disciplines to estimate a reasonable amount of indirect labor that will be required during construction. Include indirect labor as necessary for shop drawing reviews, environmental compliance inspections, materials lab testing, structural inspections, CQIP, final record audits, etc.

Section 1.4: Biddability Reviews

VDOT Road Design Manual, Section 2G-10 – Biddability Review and Appendix E

Purpose:

The Biddability Review should identify anything in the contract documents that needs to be included, removed, revised, or clarified for contractors to prepare accurate bids for the project. At this point of the project development process, the design has been finalized. The primary goal of the biddability review is to ensure that all elements of work identified in the final design plans and contract documents are accurately included in the Engineer's Estimate, fully considered in the Contract Time Determination Report (CTDR), and properly referenced in the contract.

Timeline: *Pre-Advertisement Conference*

As the design is developed, the design engineer should:

1. Tally all bid items and associated quantities that will be required to complete the scope of work identified in the plans as a basis for the L&D Engineer's Estimate
2. Identify Special Provisions (SP) and Special Provision Copied Notes (SPCN) that will be required to explain, measure, and pay for unique aspects of the project that are not covered in the VDOT Road and Bridge Specifications

Prior to the Pre-Advertisement Conference (PAC), the Area Construction Engineer that will be responsible for constructing the project, or his/her designee, should review the Preliminary Engineering Estimate, CTDR, permits, plans and other contract documents (including proposed SP, SPCN, and SS) and provide initial biddability comments to the design Project Manager.

Once the proposal is developed, a final biddability review should be performed prior to advertisement to confirm that all comments were addressed and the proposal contains everything necessary to enable accurate bids and proper construction management in the field.

Format:

The Area Construction Engineer that will be responsible for constructing the project, or his/her designee, should attend the PAC to discuss any potential biddability issues discovered during the initial review with the project development team. The Area Construction Engineer should coordinate the resolution of any final biddability review comments directly with the design Project Manager.

Review Guidelines:

The depth of each Biddability Review will vary depending on the project scope and complexity of construction. Minimally, the following should be considered when reviewing the L&D Engineer's Estimate, CTDR, and other contract documents for biddability prior to PAC:

- Preliminary Engineering Estimate: This estimate must be thoroughly reviewed to ensure it includes everything required to construct the project and considers all factors that could influence the price of the work. The bid items and quantities identified in the Preliminary Engineering Estimate must include all permanent and temporary items shown in the plans or referenced in the contract documents, as well as any existing items that will be demolished during construction. It is important to confirm that all bid items are eligible for federal participation (if applicable), associated quantities and units are accurate, and unit prices are reasonable. Quantities in the Schedule of Items should

match those listed in any quantity tables included in the plans. All non-standard pay items must be reviewed to verify that they are correctly identified in the Schedule of Items and that the associated unit price is appropriate for the non-standard work required. In addition to reviewing the bid items and quantities, it is important to confirm that all non-contract work is correctly accounted for in the L&D Engineer's Estimate. This will include the final CEI budget, construction contingency, and all possible incentives/bonuses that can be obtained by the contractor for exceptional performance. Non-contract items may also include projected payments for state/local police, railroad coordination, and work to be completed by state forces.

- CTDR: The CTDR is developed during the later phases of project development and should be reviewed one last time prior to PAC to verify that all necessary work packages are included and associated durations are reasonable. The schedule should be compared against the proposed Sequence of Construction (SOC) and Maintenance of Traffic (MOT) plans to make sure that they are consistent and to confirm that any recent plan changes were accurately captured. In addition, it is important to verify that long lead times were considered for any elements that require shop drawing approval prior to fabrication (such as structural steel or pre-cast drainage structures), environmental permit conditions were taken into account (such as time of year restrictions), and weather/temperature dependent activities were scheduled appropriately (such as asphalt paving).
- Bid Proposal and other contract documents: The Bid Proposal, Schedule of Items and plans must be reviewed to verify that all necessary SP, SPCN and SS have been identified in the bid proposal and that they accurately explain the construction and payment for non-standard items (such as specialty retaining walls or jack and bore pipe), the requirements for any permits or environmental commitments, and any intended deviations from the VDOT Road and Bridge Specifications or Standards (such as a delayed Notice to Proceed). Typically, pay items that note "ATTD" or "PLAN" will require additional information. A list of common SP, SPCN, and SS can be found in the Construction Division Specification Library.

Documentation:

Biddability Review comments are documented on the standard VDOT comment form and provided to the design Project Manager by the Area Construction Engineer or his/her designee. The Project Manager's official responses to the Biddability comments need to be provided and reviewed to ensure that the intent of the comment was understood and adequately addressed. Any changes made to the plans, contract, or other contract documents after Final Submittal should be vetted through the Area Construction Engineer or his/her designee prior to advertisement.

Keys for Success:

During construction, the Area Construction Engineer will rely on the language in the contract to administer the project and settle disputes with the contractor. Thorough Biddability reviews prior to advertisement can substantially reduce the number of change orders, NOIs, and overruns encountered during construction. The review takes into account everything in the plans and contract documents that the contractor may consider when developing their bid. This may include: discrepancies between quantities noted on the plans and in the schedule of items, discrepancies in units, items that have low quantities that typically overrun, MOT requirements, temporary items (such as temporary traffic signals or temporary drainage or E&S controls), incentives/disincentives, and liquidated damages.

Section 1.5: Manpower Planning

Purpose:

Proactive construction resource management is essential to ensure that qualified personnel are appropriately assigned to each project and that each District's construction program will be adequately staffed. Forecasting construction management and inspection needs will help both the Department and industry develop better long range plans to estimate future manpower requirements.

Timeline:

- Preliminary Field Inspection – Following approval of the scoping report, estimate the number of inspectors required for the project and the approximate beginning and end dates for their involvement based on the project's scope of work and target advertisement date
- Field Inspection – Update inspection needs and durations based on preliminary CTDR. Identify the specific classifications of full-time/part-time construction staff that will be required (Construction Managers, Senior Inspectors, Inspectors, and/or Inspector Trainees, NACE, etc…)
- PAC – Finalize construction staffing plan and identify staff by name and organization

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Format and Documentation:

The Area Construction Engineer, or his/her designee, identifies staffing needs at the various stages of the project development process outlined above. The number of full time, part time, and temporary construction staff required should be consistent with those identified in the CEI Budget and provided to District Project Controls for inclusion in the Districtwide Construction Manpower Plan. The Districtwide Construction Manpower Plan will be a Primavera schedule that identifies the proposed utilization of construction resources for 24 months. This will allow the District Construction Engineer to readily identify unassigned or overbooked inspection resources and forecast the need for consultant inspection staff as their construction program fluctuates. VDOT staff must be fully utilized on a district-wide basis before inspection can be outsourced to consultants.

The Districtwide Construction Manpower Plan will be provided to the Central Office Project Controls Section twice annually for the development of a Statewide Construction Manpower Plan. Manpower Plan templates for each district can be found at the Construction Division's Project Controls site.

Keys for Success:

Inspection assignments should consider required inspection experience, potential for night work, availability of VDOT staff versus consultant resources, and the project CEI budget. Ensure project staffing coincides with construction activities, especially during times of minimal production which typically occurs during project start-up, close-out, and winter operations. Project contingency is available to cover unanticipated inspection requirements while liquidated damages will cover additional inspection costs associated with project delays.

Section 1.6: Pre-Construction Conference

Purpose:

A pre-construction conference is required on all construction contracts per section 105.02 of the VDOT Road and Bridge Specifications. This conference will set the tone and outline expectations for the contract. VDOT will review key contract requirements and the Contractor will share their plan to approach and complete the work. This may likely be the first time the project team members meet each other and it is important that key team members are available to attend in person.

VDOT Road and Bridge Specifications Section 105.02

Timeline: *After Notice of Award AND before Notice to Proceed (NTP)*

A preconstruction conference shall be scheduled after notice of award and prior to NTP. It is the Area Construction Engineer or his/her designee's responsibility to schedule this conference by contacting the Contractor and determining an agreeable date and location. The NTP documentation may be given to the Contractor at the pre-construction conference if all other requirements that must be addressed prior to NTP have been met.

Format for Conference:

A face to face conference should be held with the Contractor's key staff as well as all key staff from the VDOT team (including consultants). The Area Construction Engineer or his/her designee is responsible to invite required attendees. The conference should take place at a VDOT office in a conference room large enough to accommodate invited attendees. A field visit may occur prior to, or after the formal conference.

Topics to Cover:

The topics and depth of items discussed at a pre-construction conference will vary depending on the project scope, experience of project staff, familiarity of the contractor with similar VDOT projects, and funding source for the project.

Required Pre-Construction Conference Topics per Specification:

- Contractor's planned operations for prosecuting and completing the Work in accordance with the Contract
- Area Construction Engineer and the Contractor written authorities and responsibilities of project personnel for each party
- On larger contracts, the Contractor and VDOT shall also come prepared to discuss key issues and project specific requirements necessary for preparation and submittal of the baseline progress schedule; unless a separate Scheduling Conference is otherwise scheduled
- Review of contract plans and documents
- Project Communication and Decision Making - VDOT Road and Bridge Specifications Section 105.03(d)

Recommended Pre-Construction Conference Topics:

- Welcome and Introductions
- Safety – including designated Work Zone Traffic Control Coordinator
- Sequence of Construction – plan requirements as well as Contractors plan
- Project Communication and Decision Making Escalation Process
- Submittals to include source of supply, shop drawings
- Constructability Issues
- Third Party Agreements (Local agencies, governments)
- Right of Way Impacts
- Subcontractors – subletting requests
- Structures
- EEO/DBE/SWaM Civil Rights requirements
- Contractor Performance Evaluations (CPE)
- Contract/Project Overview
- Limitations of Operations (Lane Closure Restrictions, Notifications to TOC)
- Environmental permit requirements and commitments
- Erosion and Sediment Control Requirements
- Means and Methods – Contractor led
- Potential Risks, Associated Impacts, and Mitigation
- Access Issues / Releases
- Materials requirements (Buy America)
- Utility Impacts
- Railroad Coordination Requirements
- Quantity verification and payment expectations
- Fixed Completion Date Requirements / Incentives / Disincentives / Milestone
- Pedestrian access through the work zone
- Rideability Notification Requirements

Attendee List:

Pre-Construction conferences should be attended by professionals that are knowledgeable about the project to facilitate relevant and meaningful discussion.

Expected Attendees:

- Area Construction Engineer
- Construction Manager
- Project Records Manager (if applicable)
- Lead Inspector and Senior Inspector(s)
- Contractor's Project/Construction Manager
- Contractor's Superintendent / Foremen
- Major Subcontractors invited by Contractor
- Designer of Record
- District Safety Supervisor
- Representative from District Civil Rights Section
- Representative from District Environmental Section
- Representative from District Materials Section
- Representative from District Construction Project Controls Section
- Representative from Regional Traffic Engineering and/or TOC Sections
- FHWA Area Engineer for projects of Division interest (PoDI)

Optional Attendees:

- District Construction Engineer (Projects over $10 million or as requested)
- Residency Engineer/ Residency Administrator or designee
- Representative from District Structure and Bridge
- Representative from District Hydraulics Section
- Representative from District Communications
- Railroad Coordinator
- Representative(s) from impacted localities
- Representative from Regional Utility / Right of Way Sections
- Representative from public utility entities that require in-plan adjustments
- Representative from private utility companies that still need to relocate facilities

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Documentation:

Agenda – Prepared by the Area Construction Engineer or his/her designee ahead of time and distributed to expected attendees at least 3 business days prior to the Pre-Construction Conference. Each VDOT Section listed on the sample agenda should have the opportunity to make changes to their portion of the Agenda. Copies of the final Agenda are provided to all attendees at the beginning of the Pre-Construction Conference.

Sign-in Sheet – Prepared by the Area Construction Engineer or his/her designee ahead of time and brought to the Pre-Construction Conference. The sign-in sheet should include the project name, project number, Pre-Construction Conference date, time & location, and have blank spaces for each attendee's name, company, email address, work phone number, and cell phone number. Everyone in attendance must complete the sign-in sheet.

Minutes – Prepared by the Area Construction Engineer or his/her designee to document discussions, understandings and agreements made at the pre-construction conference. The minutes include the completed sign-in sheet and follow the same outline as the Agenda with additional detail regarding each topic. They should be distributed in draft format to attendees within three business days of the Pre-Construction Conference with a request for comments within two business days. The official Pre-Construction Conference Minutes should be finalized and distributed no later than five business days following the conference date.

Keys for Success:

The Pre-Construction Conference sets the foundation for communication, documentation, and contract administration for the rest of the project. Use this time to establish ground rules for construction submittals and to gain an understanding of the Contractor's intended means and methods for the construction of the project. Identify and discuss the contractor's major risks to completing the project on time and under budget. Work with the Contractor to help monitor and mitigate those items throughout the life of the project. Ultimately, the Contractor and VDOT's ability to work together as a team to solve problems and deliver the project will be a determining factor in whether or not the project is viewed as a success or failure. Team building starts at the Pre-Construction Conference.

Section 1.7: Consultant Staff Assignments

Purpose:

Consultant CEI staff provide essential services to the Department and are vital to the successful delivery of construction projects. Typically utilized as staff augmentation, consultant CEI staff should be assigned when the Department requires specialized technical expertise or when adequate VDOT manpower is not available.

Timeline:

Field Inspection - For major projects, consider a Project Specific CEI Contract

PAC - For all other projects, initiate a Task Order (TO) request with the selected on-call consultant

Pre-Construction Conference – Confirm the TO has been executed so all necessary CEI staff can attend the meeting

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Format and Documentation:

The Area Construction Engineer (ACE) is responsible for ensuring the project is properly staffed. Assignments for consultant CEI staff should be consistent with those identified in the Manpower Plan and the total cost for the TO should be such that the TO plus all anticipated VDOT staff charges fall within the project's CEI budget. The ACE or his/her designee should coordinate with the District Contract Manager and the selected consulting firm's Construction Inspection Coordinator (CIC) to identify specific CEI staff based on project needs and availability. Once personnel have been identified, the Task Order is drafted by Department staff using the standard TO template, submitted to the CIC for acceptance, reviewed by the District Contract Manager (DCM) and approved by the ACE. The Task Order request should contain at a minimum:

- Project Name
- Name, Classification, Firm, Duration, and Hourly Rate of assigned CEI Staff
- Federal and/or State charge codes
- Non-Salary Direct Expenses for vehicles, communication devices, travel, etc.

Fixed billable rates may be found in the appropriate Memorandum of Agreement (MOA) for District Wide CEI services. The field rate is used for staff working on site or out of a VDOT facility while the home rate is used for staff working out of the consultant's office or on part-time and/or short-term assignments. All non-salary direct costs should be included in the TO and based on costs identified in the MOA. TO related documents (including the approved TO, consultant staff qualifications and certifications, and security background checks) should be retained with project records.

Keys for Success:

Early coordination and continued engagement during the task is essential to maximize the value of CEI consultants. When developing the TO, it is important to make sure that the hourly rates were based on the term that the TO will be executed regardless of the term when the services will be provided. Charges for travel, mileage, and/or communications devices are generally referenced as "prevailing rates" in the MOA and should not exceed those allowed by VDOT's current travel policy or applicable Construction Division memorandums. Coordination with the DCM throughout the TO development, approval, and execution is essential to avoid errors with invoice payment and contract term renewal.