

**FACILITIES DESIGN**

**SPECIFICATION**

**TRAINING GUIDELINES**

**VERSION 1.0**

**May 19, 2017**

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**STANDARD SPECIFICATION OVERVIEW**

The overview highlights key Facilities Construction related points. It does not describe all Sections, or even all points within a Section.

1.20-1.00 FACILITIES CONSTRUCTION – GENERAL

* Section 1.20 adds requirements to the Form 816 Division I that are special to Facilities Construction.
* Facilities Construction is defined as the type of construction that requires the issuance of a Certificate of Compliance by the State Building Inspector's representative at the completion of the project, and includes site work considered ancillary to this type of construction.

1.20-1.02.04 FACILITIES CONSTRUCTION - EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK

* Bidder's requirement to review Project Site and all applicable Contract documents before bid.
* Disclaimer on subsurface information and utility information.
* Bidder's requirement to notify the Department of all omissions, errors, discrepancies.
* Organization of CSI-formatted Specifications and Language used.

1.20-1.02.13 FACILITIES CONSTRUCTION - KNOWLEDGE OF APPLICABLE LAWS

* State of Connecticut Building Codes, Fire Safety Codes, Fire Prevention Codes, and the ADA

1.20-1.03.01 FACILITIES CONSTRUCTION - CONSIDERATION OF BIDS

* Requirements for the Contractor's submission of the Schedule of Values

1.20-1.03.02 FACILITIES CONSTRUCTION - AWARD AND EXECUTION OF CONTRACT

* Requirement to typically Award Contract within 60 days of Bid Opening

1.20-1.03.07 FACILITIES CONSTRUCTION - INSURANCE

* Includes requirement for Architect/Engineer Professional Liability Insurance (relates to Working Drawings/Delegated Design)

1.20-1.03.08 FACILITIES CONSTRUCTION - NOTICE TO PROCEED AND COMMENCEMENT OF WORK

* Requirement to typically issue Notice to Proceed within 45 days of Contract execution
* Removes winter shutdown

1.20-1.04.01 FACILITIES CONSTRUCTION - INTENT OF CONTRACT

* Describes the schematic nature of the plans
* Notes that the Contract organization and division of work does not dictate the organization of Contractor and subcontractor work

1.20-1.05.02 FACILITIES CONSTRUCTION - PLANS AND CONTRACTOR SUBMITTALS

* General - see Special Provision
* Submittal Preparation and Processing - see Special Provision
* Transmittal of Submittals - see Special Provision
* Submittal Schedule
* Working Drawings (Delegated Design Submittals)
* Shop Drawings
* Coordination Drawings
* Product Data
* Product Samples
* Quality Assurance Submittals
* Submittal Reviewer's Action: "No Exceptions Noted," "Exceptions as Noted," "Revise and Resubmit," "Rejected," and "No Action Required"

1.20-1.05.04 FACILITIES CONSTRUCTION - COORDINATION OF SPECIAL PROVISIONS, PLANS, SUPPLEMENTAL SPECIFICATIONS AND STANDARD SPECIFICATIONS AND OTHER CONTRACT REQUIREMENTS

* Outlines the order of governance of Contract provisions. In descending order:

* + Environmental Permits.
	+ Environmental Permit Applications.
	+ Special Provisions (including some Boilerplate documents and CSI-formatted Specifications).

* + - Additions and revisions to the standard and supplemental specifications that apply only to an individual project or a small group of projects.
		- Developmental or pilot specifications: Developed around a new process, procedure, or material with the prior knowledge that subsequent adjustments might be necessary prior to adoption for standard usage. Each is assigned an Owner.
		- Notice to Contractors direct the contractor to the appropriate location to view the new/revised requirement or special provision. They should not be used to direct work, specify method of measurement, basis of payment, or direct materials.
	+ Plans other than Standard Sheets (Enlarged details on plans, used to clarify construction, shall take precedence over smaller details of the same area; and information in schedules or tables, titled as such, shall take precedence over other data on plans).
	+ Standard Sheets.
	+ Supplemental Specifications.

* + - Additions and revisions to the standard specifications used to update the standard specifications between publications. Requires specific approval from the Specification Committee for adoption as a formal supplement to the published book.
	+ Standard Specifications and other Contract Requirements.
		- Specifications approved for general application and repetitive use, compiled and made available in book form.
* Discusses Industry Standards.

1.20-1.05.05 FACILITIES CONSTRUTION - COOPERATION BY CONTRACTOR

* Contractor's responsibility to have Contractor representative on-site at all times.
* Describes the Contractor's requirement to maintain documents on site.
* Describes the Contractor's responsibility to maintain a complete set of Record Drawings and Record Specifications.
* Describes the Contractor's requirement to submit No Asbestos Certifications.

1.20-1.05.08 FACILITIES CONSTRUCTION - SCHEDULES AND REPORTS

* Requirement for Daily Construction Reports

1.20-1.05.10 FACILITIES CONSTRUCTION - INSPECTION

* Addresses the requirement for inspections by a building code official

1.20-1.05.11 FACILITIES CONSTRUCTION - REMOVAL OF DEFECTIVE OR UNAUTHORIZED WORK

* Addresses the requirement to remove materials with a higher probability of asbestos

1.20-1.05.16 FACILITIES CONSTRUCTION - DIMENSIONS AND MEASUREMENTS

* Contractor's responsibility to verify dimensions and measurements and to notify Engineer of conflicts

1.20-1.05.23 FACILITIES CONSTRUCTION - REQUESTS FOR INFORMATION (RFI's) AND REQUESTS FOR CHANGE (RFC's)

* Describes the RFI and RFC procedures and timelines.

1.20-1.05.24 FACILITIES CONSTRUCTION - PROJECT MEETINGS

* Pre-Construction Meetings
* Pre-Installation Meetings
* Progress Meetings
* Coordination Meetings
* Project Closeout Meeting

1.20-1.06.01 FACILITIES CONSTRUCTION - SOURCE OF SUPPLY AND QUALITY

* Contractor's responsibility to obtain Engineer approval of source of supply of all materials
* "Buy America" provisions for permanently incorporated steel and iron (FHWA requirement)
* Named products in Contract represent basis for the standard required
* Naming Manufacturer Does Not Imply Acceptability of Products
* Single Source Responsibility for Products
* Compatibility of Products
* Equipment Nameplates
* Concealment of Nameplates and Trademarks

1.20-1.06.02 FACILITIES CONSTRUCTION - SAMPLES AND TEST

* Contractor's responsibility to obtain Engineer approval of all materials
* Department responsibility to maintain "Schedule of Minimum Requirements for Sampling Materials for Test"

1.20-1.06.03 FACILITIES CONSTRUCTION - STORAGE

* General Storage Requirements for Materials.

1.20-1.06.07 FACILITIES CONSTRUCTION - CERTIFIED TEST REPORTS AND MATERIALS CERTIFICATES

* Contractor's requirement to submit to the Engineer, not the Designer

1.20-1.06.08 FACILITIES CONSTRUCTION - WARRANTIES

* Standard Product Warranties
* Manufacturer's Disclaimers and Limitations on Warranties
* Warranty Requirements
* Warranty Submittal Requirements
* Warranty Format
* Failure of Warranted Project Work

1.20-1.06.25 FACILITIES CONSTRUCTION - PRODUCT SELECTION

* General
* Prohibition of Product Substitutes
* Semi-Proprietary Specification Requirements
* Non-Proprietary Specification Requirements
* Descriptive Specification Requirements
* Performance Specification Requirements
* Visual Matching
* Visual Selection
* Basis-of-Design Product Specification

1.20-1.07.02 FACILITIES CONSTRUCTION - PERMITS AND LICENSES

* Requirements for NOIC, Demolition Permit, and other Permits

1.20-1.07.06 FACILITIES CONSTRUCTION - SANITARY PROVISIONS

* Contractor's Prohibition of Use of State's Existing Toilet Facilities.

1.20-1.08.01 FACILITIES CONSTRUCTION - TRANSFER OF WORK OR CONTRACT

* Standardizes the default Facilities Construction requirement for work to be performed by the Contractor = 25%

1.20-1.08.02 FACILITIES CONSTRUCTION - ESTABLISHMENT OF CONSTRUCTION FIELD OFFICE

* Requires the Contractor to purchase code books

1.20-1.08.03 FACILITIES CONSTRUCTION - PROSECUTION OF WORK

* Permanent Utilities: In Contractor's Name Until Certificate of Compliance
* Temporary Utilities, Services, and Facilities

* + Utility Usage Charges
	+ Contractor's Plan for Implementation/Termination of Temporary Utilities
	+ Obtain Certifications and Permits and Arrange for Inspections
	+ General Installation Requirements for Temporary Facilities
	+ Electrical Installation Requirements
	+ Heating Requirements
	+ Water Service Requirement
	+ Waste Removal from the Project
	+ Removal of Temporary Facilities

* Cutting and Patching

* + Approval Process
	+ Protection of Structural Elements
	+ Protection of Visual Elements
	+ Warranty
	+ Materials
	+ Coordination
	+ Preparation
	+ Performance
	+ Cleaning

* Selective Demolition

* + Definitions
	+ Approval Process
	+ Repair Materials
	+ Examination
	+ Utility Services
	+ Preparation
	+ Pollution Controls
	+ Performance
	+ Reuse of Building Elements
	+ Removed and Salvaged Materials
	+ Removed and Reinstalled Materials
	+ Existing Materials to Remain
	+ Patching and Repairing
	+ Disposal of Demolished Materials

1.20-1.08.05 FACILITIES CONSTRUCTION - PERSONNEL AND EQUIPMENT

* Temporary Heating Units
* Portable Fire Extinguishers

1.20-1.08.07 FACILITIES CONSTRUCTION - DETERMINATION OF CONTRACT TIME

* Removes winter shutdown

1.20-1.08.08 FACILITIES CONSTRUCTION - EXTENSION OF TIME

* Removes winter shutdown

1.20-1.08.09 FACILITIES CONSTRUCTION - FAILURE TO COMPLETE WORK ON TIME

* Removes winter shutdown

1.20-1.08.11 FACILITIES CONSTRUCTION - FINAL CLEANING UP

* Final Cleaning

1.20-1.08.12 FACILITIES CONSTRUCTION - SEMI-FINAL, SUBSTANTIAL COMPLETION, AND FINAL INSPECTIONS

* Semi-Final Inspection Requirements
* Substantial Completion Inspection Requirements
* Final Inspection Requirements

1.20-1.08.13 FACILITIES CONSTRUCTION - TERMINATION OF CONTRACTOR'S RESPONSIBILITY

Utility Services

Spare Parts

Insurance Coverage

1.20-1.08.14 FACILITIES CONSTRUCTION - ACCEPTANCE OF PROJECT

* Record Documents
* Operation and Maintenance Manuals (General Requirements, Product Maintenance Manuals, and Equipment and Systems Maintenance Manual)
* Training (including videotaping)

1.20-1.09.00 FACILITIES CONSTRUCTION - UNIT PRICES, LUMP SUM ITEMS, MAJOR LUMP SUM ITEMS

* Unit Prices, Lump Sum Items, Major Lump Sum Item - see Special Provision
* Mobilization and Project Closeout

1.20-9.75 MOBILIZATION FOR FACILITIES CONSTRUCTION

* Mobilization and Project Closeout

**SPECIAL PROVISIONS**

**(INCLUDING BOILERPLATE DOCUMENTS AND CSI SPECIFICATIONS)**

All Boilerplate documents are password protected to ensure that the original documents are not inadvertently modified. Use the following procedure on each file to remove the password from the project specific copy:

1. Copy each file to the project-specific directory. Open each file as “Read Only.”

2. Select “File” and then “Save.” Insert a new filename or destination and select “Save.”

3. Select “File” and then “Save As.” Select “Options,” and erase the “\*” from the password window and un-check “Read Only.” Select “OK” and then select “Save.”

**File Naming Conventions:**

BoilerPlate Documents:

As noted within the Table. Filenames are based on the Office of Processing's Listing of Specifications (See Processing Intranet Site for a sample list). Filenames must remain as noted within the Table to ensure that the Contracts are assembled correctly by the Contract Assembly Computer System. Additional Notice to Contractor files shall be named in a convention consistent to those within the Table. Should it become necessary to create a new filename (other than for additional Notice to Contractors), coordinate the filename with the Office of Processing. **The following are the current categories of BoilerPlate Documents: ALL PROJECTS and RAILROAD PROJECTS.** Documents shall be edited for the specific project. Edit guides are included in many documents to simplify this effort.

Special Provisions:

Use 7-digit number followed by an 'A,' "xxxxxxxA.DOC." Processing will combine these documents into one file by the Contract Assembly Computer System. Do not include any additional files that are not intended to be included in the Contract. To ensure that these documents are correctly incorporated into the Project, please follow these guidelines:

* All files shall be submitted in Microsoft Word format.
* All editing assistance comments are contained within "**[ ]**" and are to be deleted upon final editing. Unless otherwise noted, the information included in the documents is applicable to all Projects.
* All Special Provisions must be created using the Office of Processing's current Special Provision Template (not the Owned Special Provision Template), located on the Intranet. Refer to the related Special Provision Template instructions for additional information. These files include (3) formats ("SPEC HEAD 1," "SPEC HEAD 2," and "NORMAL") that are required by the Contract Assembly Computer System.
	+ "SPEC HEAD 1" - Use this format for titles of Notice to Contractors, Standard Specifications Section Names, titles of Special Provisions, and as otherwise indicated on the Intranet. "SPEC HEAD 1" information will be automatically included in Contract Special Provision Index.
	+ "SPEC HEAD 2" - Use this format for Standard Specifications Article Names and as otherwise indicated on the Intranet.
	+ "NORMAL" - Use this format for all other text.

CSI-Formated Specifications:

Naming of the Table of Contents: "00000C0.doc"

Naming of Contract Specifications: Use CSI number, "xxxxxCx.doc" or "xxxxxCx.xx.doc."

Naming of Addendum Specifications: Use CSI number, "xxxxxCx-Axx.doc" or "xxxxxCx.xx-Axx.doc."

Include CSI-formatted Specifications with their built-in MASTERSPEC templates. Do not attempt to run these documents through the Special Provision template.

All editing assistance comments are contained within "**[ ]**" and are to be deleted upon final editing. Unless otherwise noted, the information included in the documents is applicable to all Projects. Leave the date in the header.

**ALL PROJECTS**

0.000\_0\_Designer Edit Guide\_Do Not Include in BoilerPlate

List of exclusions and assumptions

0.000\_Design Report.doc

At FDP, this document is transmitted to DOT Office of Communications. It is not included in the FDP documents to Processing.

0.000\_Index Information - Permit List.doc

Referenced file is a sample. List required Project Permits. Do not include Municipal Demolition Permit and Notice of Intent to Construct.

0.001\_Liquidated Damages.doc

Referenced file is a sample.

0.010\_NTCFDALL001 - Pre-Bid Site Visit.doc

0.010\_NTCFDALL002 - Funding.doc

0.010\_NTCFDALL003 - FTA Buy America.doc

0.010\_NTCFDALL004 - Project Description.doc

0.010\_NTCFDALL005 - Historical Renovation Projcet.doc

0.010\_NTCFDALL006 – Project Superintendent.doc

0.010\_NTCFDALL007 - Submittals.doc

0.010\_NTCFDALL008 - Early Submittals.doc

0.010\_NTCFDALL009 - Sole Source Products.doc

0.010\_NTCFDALL010 - Potential for Asbestos Containing Materials.doc

0.010\_NTCFDALL011 - Pre-Installation Meetings.doc

0.010\_NTCFDALL012 - Closeout Documents.doc

0.010\_NTCFDALL013 - Utility Service Connections.doc

Utility relocations as well

0.010\_NTCFDALL014 - CADD Files

0.010\_NTCFDALL015 - Existing Survey GPS System.doc

0.010\_NTCFDALL016 - Threshold Building.doc

0.010\_NTCFDALL017 - Threshold Building Permit Requirements.doc

0.010\_NTCFDALL018 - Threshold Building Design and Calculation Submission Requirements.doc

0.010\_NTCFDALL019 - Threshold Building Occupancy.doc

0.010\_NTCFDALL020 - Threshold Building & Special Inspections.doc

0.127\_SEC1.20.doc

0-MLSI-A.doc

Major Lump Sum Item on Project - Rename the file with the actual Item Number. Whenever possible, try to use existing item names and numbers from the Office of Processing. If it is necessary to create a new item, use a generic name to increase the likelihood that it can be used again in the future.

0714999A.doc

Monitoring Structures - used for Bridge, Track, and Retaining Wall Monitoring - Include Estimate for Item in Contract.

0969000A NewMaster072312 - Reference (Owned Special Provision).doc

The Facilities Design Project Manager shall coordinate the need for this Special Provision with the District Office of Construction. Include Estimate for Item in Contract.

0969050A Document Control Specialist\_A1 (Not a Standard).doc

Draft

00000C0.doc

CSI-Formatted Specifications Table of Contents

01323C3.doc or 0603169A.doc

Progress Photographs - Include Estimate for Item or in MLSI as applicable.

01700C0.doc or 0980001A.doc

Construction Staking - Include Estimate for Item or in MLSI as applicable

30050C0.doc or 0000195A.doc

Temporary Maintenance Work Area - Sample language for temporary Owner facilities to include where required.

**DESIGNER EDITING GUIDELINES**

Division 1 of the Standard Specifications is “owned” by the Specifications Committee, so project-specific changes need to be approved by them. Consultation with the Facilities Design BoilerPlate Coordinator is required.

Unless otherwise noted, Facilities Design projects are governed by Article 1.20 of the Standard Specifications. In order to do so, the Designers shall:

Plans and Special Provisions:

Review to eliminate conflicts with the Standard Specifications and delete all information that is already covered in the Standard Specifications and replace said information with a reference to the appropriate Standard Specifications Article.

Special Provisions (including CSI-formatted Specifications):

To date, the following list of edit guides have been developed:

1. Review and comply with the order of governance of Contract provisions outlined in Article 1.20-1.05.04.

2. Sections 1.20-1.01.01, 1.20-1.01.02, and 1.20-1.01.03 include commonly used definitions, abbreviations, and terms. It is not recommended to repeat any of these elsewhere, just use the abbreviation or term. Advise the BoilerPlate Specifications Coordinator of new abbreviations and terms to add to Section 1.20-1.01.

3. Do not delete/modify the Revision Date in the headers of the BoilerPlate documents. This date represents the original file Revision Date.

4. Please note that the only acceptable documentation related to **Asbestos** is now a manufacturer certification letter.

5. Language Recommendations: Refer to FILENAME: *"Sample Language for CSI Specs.doc"* for sample language for many of the following recommendations in CSI-formatted Specifications (sample language for Special Provisions would be similar):

* Follow MasterSpec guides for spacing, formatting, etc. for CSI-formatted Specifications.
* Use less passive voice.
* Do not use the word **"New."** All work is assumed to be new unless labelled **"Existing."**
* "**The Contractor shall** . . . " and "**The Engineer will** . . . " are appropriate phrases.
* **"Designer:"** Defined in Article 1.20-1.01.01 to be employees of Facilities Design or its consultants and it should be capitalized. Don't use "Architect."
* **"Engineer:"** Defined in Article 1.20-1.01.01 and interpreted to be the construction inspectors and it should be capitalized.
* Use "Owner" in lieu of **"Department,"** **"State,"** or **"ConnDOT"** if applicable since Owner is now defined.
* When referencing a specific project, **"Project"** and **"Project Site"** shall be capitalized.
* Use **"plan Sheet X-X"** or **"plans"** to refer to the drawings.
* Use **"CSI Section XXXXXX"** to refer to specific CSI-formatted Specifications. Use **"PART X.X"** to replace "Article" when used in the CSI-formatted Specifications but is not intended to reference the Standard Specifications.
* Use **"Standard Specifications Section X.XX"** or **"Standard Specifications Article X.XX.XX"** to refer to specific parts of the Standard Specifications.
* Replace all references to CSI Division 1 Sections with the appropriate **Article of** **Section 1.20** and **Notice to Contractor** references.
* Replace all references to CSI Site Work Division Sections with a reference to the appropriate Standard Specifications Article or Item No. where applicable.
* Submittals: Revise based on sample language recommendations noted above. Reevaluate all submittal requirements in the specifications and retain only those that are necessary (for example, fewer samples).
* **Pre-Installation Meetings**: Replace "Conference" used by MasterSpec with "Meetings" to match Article 1.20-1.05.24.
* **Warranties**: All warranties shall be noted to begin "with the issuance of the Certificate of Compliance" or with "Substantial Completion."
* **Spare Parts**: Replace "Extra Materials" used by MasterSpec with "Spare Parts."
* **Inspections** and **Training.**

6. There is a belief in construction that the special provisions are the method by which to pay the Contractor. For example, if something is fully detailed on the plans but there is no special provision for that item, the Department owes the Contractor money. Therefore, the special provisions must be complete.