**SECTION 01 – GENERAL REQUIREMENTS**

**SECTION 01100 – SUMMARY**

PART 1 – GENERAL

* 1. SUMMARY
		1. This Section includes the following:
			1. Work covered by the Contract Documents.
			2. Type of the Contract.
			3. Work phases.
			4. Work under other contracts.
			5. Products ordered in advance.
			6. Owner-furnished products.
			7. Use of premises.
			8. Owner's occupancy requirements.
			9. Work restrictions.
			10. Specification formats and conventions.
			11. Permit Applications 11002 & 11003, Subcontractor Information Form 11006 and Weather Delay Request Form 11007.
	2. RELATED DOCUMENTS
		1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
		2. In Divisions 1 through 49 Sections of the Specifications of the Project Manual, the terms “Contractor, General Contractor or Design Builder” are synonymous with “Construction Manager”.
	3. PROJECT INFORMATION
		1. Project Location: (Click here to enter Project Name and Address)
		2. Architect: (Click here to enter Architect’s Name and Address)
			1. Architect’s Representative: (Enter Representative’s Name & Phone No.)
		3. Architect’s Consultants: (Click here to enter Consultant’s Name and Address)
		4. Owner: (Click here to enter Owner’s Name and Address)
			1. Owner’s Representative: (Enter Representative’s Name & Phone No.)
	4. WORK COVERED BY CONTRACT DOCUMENTS
1. The Work consists of the following:
2. This project involves (Click here to enter scope outline)
	* 1. Type of Contract
			1. Project will be constructed under a single Construction Management contract.
		2. Work Phases
			1. The Work shall be conducted in one phase.
	1. WORK UNDER OTHER CONTRACTS
		1. The Owner reserves the right and frequently will contract portions of the Work directly with other contractors than the CM.
		2. The Owner and other contractors and subcontractors may be working at the site during the performance of the Construction Contract, and Contractor's work may be interfered with as a result of such concurrent activities. Contractor shall fully cooperate with Owner and other contractors to avoid any delay or hindrance of the Work. Owner may require that certain facilities be used concurrently by Contractor and other parties and Contractor shall comply with such requirements.
		3. If any part of the Contractor's work depends on proper execution or results from any work performed by the Owner or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the Owner any apparent discrepancies or defects in such work that render it unsuitable for such proper execution. Failure of the Contractor to so report shall constitute an acceptance of the Owner or separate contractor's work as fit and proper to receive Contractor's Work, except as to defects which may subsequently become apparent in such work performed by others.
		4. List of Other Contracts:

|  |  |  |
| --- | --- | --- |
| No. | Description | Contractor’s Name |
| 1 | (Enter Description) | (Contractor’s Name) |
| 2 | (Enter Description) | (Contractor’s Name) |
| 3 | (Enter Description) | (Contractor’s Name) |
| 4 | (Enter Description) | (Contractor’s Name) |

* 1. PRODUCTS ORDERED IN ADVANCE

|  |  |  |
| --- | --- | --- |
| No. | Description | Vendor’s Name |
| 1 | (Enter Description) | (Vendor’s Name) |
| 2 | (Enter Description) | (Vendor’s Name) |
| 3 | (Enter Description) | (Vendor’s Name) |
| 4 | (Enter Description) | (Vendor’s Name) |

* 1. OWNER FURNISHED PRODUCTS
		1. The Owner reserves the right and frequently will purchase or provide materials or equipment that are portions of the Work and require Contractor installation.
		2. If any part of the Contractor's work depends on Owner provided equipment or materials, the Contractor shall, prior to proceeding with the Work, promptly report to the Owner any apparent discrepancies or delays that would directly affect it’s execution of the Work. Failure of the Contractor to so report shall constitute an acceptance of the Owner’s delivery as fit and proper to receive Contractor's Work.
		3. List of Owner furnished Contractor Installed Products:

|  |  |  |
| --- | --- | --- |
| No. | Description | Vendor’s Name |
| 1 | (Enter Description) | (Vendor’s Name) |
| 2 | (Enter Description) | (Vendor’s Name) |
| 3 | (Enter Description) | (Vendor’s Name) |
| 4 | (Enter Description) | (Vendor’s Name) |

1. USE OF PREMISES
	* 1. General: Contractor shall have full use of premises for construction operations, including use of Project site, during construction period. Contractor's use of premises is limited only by Owner's right to perform work or to retain other contractors on portions of Project and to any limitations indicated on the Drawings.
		2. Use of Site: Limit use of premises to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
			1. Limits: Confine constructions operations to project limits shown on the drawings.
			2. Owner Occupancy: Allow for Owner occupancy of Project site.
			3. Driveways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
				1. Schedule deliveries to minimize use of driveways and entrances by construction operations.
				2. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
	1. OWNER'S OCCUPANCY REQUIREMENTS
		1. Partial Owner Occupancy: When the Work is in an existing building the Owner may occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits, unless otherwise indicated.
			1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
			2. Provide not less than **72** hours' notice to Owner of activities that will affect Owner's operations.
		2. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of building, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
2. Architect will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.
3. Obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
4. Before partial Owner occupancy, mechanical, electrical and all Life Safety systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of building.
5. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of building.
	1. WORK RESTRICTIONS
		1. Work Restrictions, General: Comply with restrictions on construction operations.
			1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.
		2. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
			1. Notify Owner and Architect not less than 72 hours in advance of proposed utility interruptions.
			2. Do not proceed with utility interruptions without Owner's written permission.
		3. Noise, Vibration and Odor: Coordinate operations that may result in high levels of noise and vibration, odors or other disruption with Owner.
			1. Notify Owner and Architect not less than 72 hours in advance of proposed utility interruptions.
			2. Do not proceed with utility interruptions without Owner's written permission.
		4. Controlled Substances: Smoking and the use of other controlled substances on the Project site is not permitted.
		5. Dress Code and Conduct: All workmen on the construction site shall wear a shirt at all times. No workmen shall engage in any verbal expressions or physical gestures directed towards visitors, employees of Owner, Students or any other person at this construction site, which may be considered sexual harassment. Any person found engaging in any offensive conduct will be immediately removed and banned from the construction site.
			1. The Contractor or sub-contractor will be required to re-staff. Any delays or loss of time will be at the cost of the contractor or subcontractor and at no cost to the college.
	2. SPECIFICATION FORMATS AND CONVENTIONS
		1. Specification Format: The Specifications are organized into Divisions and Sections using the 50-division format and CSI/CSC's "MasterFormat" numbering system.
			1. Section Identification: The Specifications use Section numbers and titles to help cross- referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete because all available Section numbers are not used. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.
			2. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
		2. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
			1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
			2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION

1. As provided in 1013.38 F.S., the Owner employees a Building Official, certified and registered pursuant to 468 part XIII. All permitting and inspections will be conducted through the Director of Facilities office.
	1. Inspections shall be scheduled no less than 24 hours in advance by calling (850) 627-9888. The Owner shall not be held liable for missed or delayed inspections when requested by any other means.
2. In compliance with NFPA 51B and OSHA, the District requires, on any project where welding will be performed as part of the Work, the Contractor shall identify an individual that will be responsible for verifying welder certification and site safety. Form 01103 shall be completed and submitted to the Director of Facilities prior to the start of welding.
3. The Owner requires all Subcontractors to register with the office of Facilities Maintenance prior to the start of any work. Form 01106, Sub-Contractor Information Form is provided herein for registration.
4. Requests for a time extension due to inclement weather (Rain Delay).
	1. Weather which hinders or prevents work is not a basis for a time extension unless it surpasses in severity the weather reasonably to be expected in the locality at that particular time of the year.
	2. If the contractor files notice that he was delayed by weather sufficiently severe as to entitle him to additional time, he must send notification within 24 hours of the end of the event to be followed by supporting data with their next pay application but no longer than 30 days.
		1. Event notifications shall be e-mailed to hunterw@gcpsmail.com.
		2. Backup documentation for requests for time extensions due to adverse weather shall be considered only for and equal to the number of rain days in excess of the mean average of 10 years or more for any given time period as shown on NOAA, National Weather Service Forecast for the area closest to the project site. If current rainfall is less than average, contract time will not be extended.

END OF SECTION 01100

***FORM 01102*** Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**BUILDING PERMIT APPLICATION**

**I hereby make application for a permit to perform the work as described herein and certify that all provisions of the law shall be complied with whether specified herein or not.**

Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Location: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Manager: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Application Information:**

Company Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mailing Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Fax: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cell: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-mail Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Florida License Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Project Type:** (check one)

[ ] New Construction [ ] Addition [ ] Remodel [ ] Repair [ ] Roofing

[ ] Mechanical [ ] Electrical [ ] Plumbing [ ] Renovation [ ] Other

Total Square Footage (\_\_\_\_\_\_\_\_\_\_), number of stories (\_\_\_\_\_), estimated duration of project (\_\_\_\_\_\_\_\_\_\_\_)

Estimated cost of project ($\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_). Is any of the work to be sub-contracted? [ ]  Yes [ ]  No

*If so, attach a list of sub-contractors, their completed sub-contractor application form and copies of their license and insurance.*

**Description of Work:**

**Architect/Engineer:**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mailing Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Fax: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cell: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Building Code in effect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Occupancy: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I hereby declare that all the information submitted herein is true and correct. I understand that it is the owner and contractor’s responsibility to comply with all state and federal laws, rules and regulations pertaining to notification and asbestos removal procedures.

**Note:** A current certificate of Insurance naming GCS as certificate holder is required before a building permit and notice to proceed can be issued.

Name (Print): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***FORM 01103***

**HOT WORK PERMIT APPLICATION**

Following OSHA’s Part 1910, Occupational Safety and Health Standards – 29 Code of Federal Regulations (CFR) and NFPA 51B, GCS requires the permitting of all welding. The General Contractor (GC) or Construction Manager (CM) shall familiarize themselves with these regulations submitting the completed application to the Director of Facilities.

The GC/CM shall identify their individual responsible for inspections below.

Before cutting or welding is permitted, the area shall be inspected by the individual responsible for authorizing cutting and welding operations. He shall designate precautions to be followed in granting authorization to proceed listing them on this permit submitting a copy to the owner.

 **Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Company Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Individual responsible for site inspection:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Description of Work:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Duration: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** (hours/days)

**Precautions:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Attach welder’s certification**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Authorizing Signature Date*

***FORM 01106***

**SUB-CONTRACTOR INFORMATION FORM**

***Please type or print clearly. It is mandatory to attach a copy of any applicable license and insurance. Forms that cannot be read or missing required backup will be rejected and may be grounds for loss of contract.***

 **Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Sub-Contractors Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

General Contractor’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Name: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Trade Discipline: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (Type of work ex: Framing, Electrical, Mechanical etc…)

Mailing Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Phone Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Cell Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fax Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-mail address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FL Dept. of Business & Professional Regulation License No.: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Project Supervisor:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (Name of Subcontractor’s project supervisor)

 Phone Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Cell Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 E-mail address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Qualifying Agent’s Signature:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Print Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***FORM 01107***

**WEATHER DELAY REQUEST FORM**

**Instructions:** Weather which hinders or prevents work is not a basis for a time extension unless it surpasses in severity the weather reasonably to be expected in the locality at that particular time of the year. If the contractor files notice that he was delayed by weather sufficiently severe as to entitle him to additional time, he must send notification within 24 hours of the end of the event to be followed by supporting data with their next pay application but no longer than 30 days.

**E-mail notification is acceptable and preferred. Attach a copy of the e-mail when submitting formal request.**

Requests for time extensions due to adverse weather shall be considered only for and equal to the number of rain days in excess of the mean average of 10 years or more for any given time period as shown on NOAA, National Weather Service Forecast Office, Tallahassee, FL. If current rainfall is less than average, contract time will not be extended. <http://www.nws.noaa.gov/climate/index.php?wfo=tae>

Contractor’s Company Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Event Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is the work on Critical Path? \_\_\_\_\_\_\_\_\_\_\_\_

Description of work affected: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Length of Delay: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If the work is not on the Critical Path, how many days of delay until this work category will be on Critical Path? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Not valid without supporting data***

**SECTION 01110 – PRODUCT EVALUATION AND APPROVAL**

PART 1 – GENERAL

1. SUMMARY
	* 1. This section includes the following:
			1. Florida Product Evaluation and Approval requirements and forms.
2. REFERENCES
	1. Florida Statute 553.842
	2. Florida Administrative Code 9B-72
	3. Definition: Product Evaluation and Approval system that applies statewide concurrently with the Florida Building Code.
3. RESPONSIBILITY
4. The Contractor is responsible for providing products approved by the State of Florida with approval numbers.  **Do not use products that do not have a Florida approval number.**
5. SUBMITTAL
6. Submit a copy of the approved product schedule, (attached at the end of this section), to the Architect within thirty (30) days after project has been awarded. In addition to State requirements comply with the requirements of the local jurisdiction of the project.
7. Submit the following product approval specification sheet, or local jurisdiction form to obtain building permits.
8. CATEGORIES
	1. General: Products, methods, or systems of construction, used in the exterior envelope of a building must be approved by the Building Department. The products covered are those products, methods or systems that affect the structural integrity of the building envelope, including but not limited to the following categories:

|  |  |
| --- | --- |
| 1. Panel Walls | 2. Exterior Doors  |
| 3. Roofing Products | 4. Skylights |
| 5. Windows | 6. Shutters |
| 7. Structural Components | 8. New and Innovative Building Envelope Products |

* 1. If the Contractor fails to comply with this requirement, non-complying components shall be removed and replaced with components that do comply at no expense to the Owner.
1. PRODUCT APPROVAL APPLICATION
2. Florida Administrative Code 9B-72 State Product Approval, requires defined categories, as listed above in section 1.5, to be approved prior to use in construction. While we encourage the use of State Approved Products, the F.A.C. makes provision for local approval.
3. Its recommended, any Contractor or Material Provider wishing to pursue local approval, to familiarize itself with state procedure by visiting: [**http://www.floridabuilding.org/fbc/committees/product\_approval/product\_approval\_powerpoint\_031604.pdf**](http://www.floridabuilding.org/fbc/committees/product_approval/product_approval_powerpoint_031604.pdf). The time and cost associate with testing and approval is at the Contractor’s or Provider’s expense. GCS shall be not be liable for any of the costs.
4. Seeking local approval will not be grounds for a time extension to the contract. The Contractor shall still be required to maintain the Substantial Completion date as stated in the Agreement.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01110

***FORM 01111***

**PRODUCT APPROVAL SHEET**

**For State Certified Products**

**Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**GC/CM Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

As required by Florida Statute 553.842 and Florida Administrative Code 9B-72, please provide the information and the product approval number(s) on the building components listed below if they will be utilized on the construction project for which you are applying for a building permit. We recommend you contact your local product supplier should you not know the product approval number for any of the applicable listed products. More information about statewide product approval can be obtained at [www.floridabuilding.org](http://www.floridabuilding.org/)

|  |  |  |  |
| --- | --- | --- | --- |
| **Category/Subcategory** | **Manufacturer** | **Product Description** | **Approval Number(s)** |
| **A. EXTERIOR DOORS** |  |  |  |
| 1. Swinging |  |  |  |
| 2. Sliding |  |  |  |
| 3. Sectional |  |  |  |
| 4. Roll up |  |  |  |
| 5. Automatic |  |  |  |
| 6. Other |  |  |  |
|  |  |  |  |
| **B. WINDOWS** |  |  |  |
| 1. Single hung |  |  |  |
| 2. Horizontal Slider |  |  |  |
| 3. Casement |  |  |  |
| 4. Double Hung |  |  |  |
| 5. Fixed |  |  |  |
| 6. Awning |  |  |  |
| 7. Pass -through |  |  |  |
| 8. Projected |  |  |  |
| 9. Mullion |  |  |  |
| 10. Wind Breaker |  |  |  |
| 11 Dual Action |  |  |  |
| 12. Other |  |  |  |
|  |  |  |  |
| **C. PANEL WALL** |  |  |  |
| 1. Siding |  |  |  |
| 2. Soffits |  |  |  |
| 3. EIFS |  |  |  |
| 4. Storefronts |  |  |  |
| 5. Curtain walls |  |  |  |
| 6. Wall louver |  |  |  |
| 7. Glass block |  |  |  |
| 8. Membrane |  |  |  |
| 9. Greenhouse |  |  |  |
| 10. Other |  |  |  |
|  |  |  |  |
| **D. ROOFING PRODUCTS** |  |  |  |
| 1. Asphalt Shingles |  |  |  |
| 2. Underlayment |  |  |  |
| 3. Other |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Category/Subcategory (cont.)** | **Manufacturer** | **Product Description** | **Approval Number(s)** |
| 3. Roofing Fasteners |  |  |  |
| 4. Non-structural Metal Roof |  |  |  |
| 5. Built-Up Roofing |  |  |  |
| 6. Modified Bitumen |  |  |  |
| 7. Single Ply Roofing Sys |  |  |  |
| 8. Roofing Tiles |  |  |  |
| 9. Roofing Insulation |  |  |  |
| 10. Waterproofing |  |  |  |
| 11. Wood shingles /shakes |  |  |  |
| 12. Roofing Slate |  |  |  |
| 13. Liquid Applied Roof Sys |  |  |  |
| 14. Cements-Adhesives – Coatings |  |  |  |
| 15. Roof Tile Adhesive |  |  |  |
| 16. Spray Applied Polyurethane Roof |  |  |  |
| 17. Other |  |  |  |
|  |  |  |  |
| **E. SHUTTERS** |  |  |  |
| 1. Accordion |  |  |  |
| 2. Bahama |  |  |  |
| 3. Storm Panels |  |  |  |
| 4. Colonial |  |  |  |
| 5. Roll-up |  |  |  |
| 6. Equipment |  |  |  |
| 7. Others |  |  |  |
|  |  |  |  |
| **F. SKYLIGHTS** |  |  |  |
| 1. Skylight |  |  |  |
| 2. Other |  |  |  |
|  |  |  |  |
| **G. STRUCTURAL****COMPONENTS** |  |  |  |
| 1. Wood connector/anchor |  |  |  |
| 2. Truss plates |  |  |  |
| 3. Engineered lumber |  |  |  |
| 4. Railing |  |  |  |
| 5. Coolers-freezers |  |  |  |
| 6. Concrete Admixtures |  |  |  |
| 7. Material |  |  |  |
| 8. Insulation Forms |  |  |  |
| 9. Plastics |  |  |  |
| 10. Deck-Roof |  |  |  |
| 11. Wall |  |  |  |
| 12. Sheds |  |  |  |
| 13. Other |  |  |  |
| 14. Other |  |  |  |
| 15. Other |  |  |  |
| 16. Other |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Category/Subcategory (cont.)** | **Manufacturer** | **Product Description** | **Approval Number(s)** |
| **H. NEW EXTERIOR ENVELOPE PRODUCTS** |  |  |  |
| 1. |  |  |  |
| 2. |  |  |  |
| 3. |  |  |  |
| 4. |  |  |  |
| 5. |  |  |  |

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Print Name**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Applicant’s Signature Date**

***FORM 01112***

**PRODUCT APPROVAL APPLICATION FORM**

**In the absence of State approval, the following category of products must be approved by GCS’ Building Official prior to issuance of a Building Permit. For more detailed information, visit:** [**http://www.floridabuilding.org/fbc/committees/product\_approval/product\_approval\_powerpoint\_031604.pdf**](http://www.floridabuilding.org/fbc/committees/product_approval/product_approval_powerpoint_031604.pdf)

**Product categories are:**

|  |  |  |  |
| --- | --- | --- | --- |
| Panel Walls | Exterior Doors | Roofing Products | Skylights |
| Windows | Shutters | Structural Components | New Envelope Products  |

**Applicant Information**

Company applying: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mailing address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Office phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cell phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Fax number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-mail address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Category of product: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 FL professional

 Name of applicant’s and/or professional firm

 technical representative: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ registration # (if any): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Quality Assurance Entity Information**

Name of Assurance Entity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mailing address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Office phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cell phone: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Fax number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-mail address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Category of product: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 FL professional

 Name of Entity’s and/or professional firm

 technical representative: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ registration # (if any): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Product Information**

Product Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Model # (if any): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**List all manufacturer requirements, Limitations, Code Section Numbers and/or Reference Standards:**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Attach any reports from Testing Labs, Evaluation Entities or Certification Agencies. Include their name and address.**

**Where applicable, attach Installation Instructions. Attach any other information that may assist with evaluation of product.**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Authorizing Signature Date

**SECTION 01 21 00 – ALLOWANCES**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes administrative and procedural requirements governing allowances.
	2. Types of allowances include the following.
		1. Lump Sum Allowances.
2. SELECTION AND PURCHASE
	1. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
	2. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
	3. Purchase products and systems selected by Architect from the designated supplier.
3. SUBMITTALS
	1. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
	2. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.
4. COORDINATION
	1. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.
5. LUMP SUM ALLOWANCES
	1. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Architect under allowance and shall include taxes, freight, and delivery to Project site.
	2. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the Contract Sum and not part of the allowance.
	3. Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.
		1. If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.
6. ADJUSTMENT OF ALLOWANCES
	1. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
		1. Include installation costs in purchase amount only where indicated as part of the allowance.
		2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
		3. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances.
		4. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
	2. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
		1. Do not include Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
		2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

1. EXAMINATION
	1. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.
2. PREPARATION
	1. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.
3. SCHEDULE OF ALLOWANCES (Not Used)

END OF SECTION 01 21 00

**SECTION 01230 – ALTERNATES**

PART 1 – GENERAL

1. SUMMARY
2. This Section includes administrative and procedural requirements for alternates.
3. DEFINITIONS
4. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
5. The cost or credit for each alternate is the net addition to the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.
6. PROCEDURES
7. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
8. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
9. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
10. Execute accepted alternates under the same conditions as other work of the Contract.
11. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

1. SCHEDULE OF ALTERNATES
2. Alternate No. One:
3. Alternate No. Two:

END OF SECTION 01230

**SECTION 01260 – CONTRACT MODIFICATION PROCEDURE**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes administrative and procedural requirements for handling and processing Contract modifications.
	2. This Section includes the following:
		1. Form 01262, Direct Purchase Request
		2. Form 01263, Direct Purchase Invoice Coversheet
		3. Form 01264, Contingency Modification Request
		4. Form 01265, Change Order Request
2. MINOR CHANGES IN THE WORK
	1. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."
3. PROPOSAL REQUEST
4. Owner Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
	* 1. Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
		2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
			1. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
			2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
			3. Include costs of labor and supervision directly attributable to the change.
			4. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
			5. Quotation Form: Use Acceptable to Architect.
5. Contractor Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
6. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
7. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
8. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
9. Include costs of labor and supervision directly attributable to the change.
10. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
11. Comply with requirements in Division 01 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
12. Proposal Request Form: Use form acceptable to Architect.
13. ADMINISTRATIVE CHANGE ORDERS
14. Allowance Adjustment: Refer to Division 01 Section "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
15. Unit Price Adjustment: Refer to Division 01 Section "Unit Prices" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect measured scope of unit price work.
16. Direct Owner Purchase: Refer to Division 01 Section “Direct Material Purchase Procedure” for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect direct material purchases.
17. CONTINGENCY MODIFICATION PROCEDURE
	1. When minor changes to scope can more effectively meet design intent and contingency is sufficient to cover the cost of the change, the Contractor can request use of Contingency by submission of Owner’s Contingency Modification Form, 01264.
18. CHANGE ORDER PROCEDURE
19. The Owners Change Order Request Form shall be used to initiate a Change Order.
20. The Contractor shall submit to the Architect a completed Owner’s Change Order Request Form, 01265, for review and approval.
21. On Owner's acceptance the Architect will issue a Change Order on AIA Document G701.
22. CONSTRUCTION CHANGE DIRECTIVE
23. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
24. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
25. Documentation Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
26. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION

1. When the Owner exercises its right to direct purchase materials or equipment, Owner’s form 01262, Direct Purchase Change Order Request Form, shall be used.
	1. This form will initiate a PO from the Owner to the material or equipment provider and a Change Order to the Contractor’s PO.
		1. Unless stated otherwise in the Contract Documents, the Tax Savings shall be added to the project Contingency by means of a Contingency Modification Request Form.
2. When invoicing the Owner for payment on a Direct Purchase Order, the billing entity shall use Owner’s form 12603, Direct Purchase Order Invoice Coversheet.
3. Using or adding to the project Contingency, Owner’s form 01263 shall be used.

END OF SECTION 01260

***FORM 01262***

**DIRECT PURCHASE CHANGE ORDER REQUEST FORM**

**(Sales Tax Saving)**

***This form is used to request a deduction in the amount of an existing PO for the Direct Purchase of materials or equipment for the SALES TAX SAVINGS.***

**DPO #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**PO # Being Modified: 1) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Requestor’s Name: 2) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Material Provider: 3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Supporting Documentation:** (If multiple DPO’s are submitted, list each on a separate form)

Quote #: 4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Amount of Quote: 5) $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Amount of Tax: 6) $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Amount of Purchase: 7) $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 (Line 7 should = the total amount of the DPO)

**Sales Tax Savings:** (Line 8 should = the amount on line 6) **8) $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 Original PO Amount (PO from line 1) 9) $**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 Net of Previous Change Orders: 10) $**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 PO Sum to Date: 13) $**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Amount of this Deduction: 14) $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**New PO Amount: 15) $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Authorizations:**

Material Provider: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contractor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Architect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Owner’s Representative: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***FORM 01263***

**DIRECT PURCHASE ORDER INVOICE**

**COVERSHEET**

This form must be used as a coversheet for Direct Purchase Order invoices. Increase invoice tracking log for larger projects as needed.

**Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Invoice #: \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Vendor’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Purchase Order #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Trade Contractor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contractor Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Description of Material:**

 **Invoice Tracking Log: Original PO Amount: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| Vendor Invoice No. | Date of Invoice | Amount of Invoice |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| Total invoices this request |  |  |
| Total invoice to date  |  |  |
| Amount remaining |  |  |

**Authorizing Signatures:**

Trade Contractor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contractor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Architect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Owner’s Representative: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Note, it is mandatory to attach copies of the vendor’s invoices listed.**

***FORM 01264***

**CONTINGENCY MODIFICATION FORM**

**This form is to be used for requesting the use of Project Contingency. This request does not constitute approval until acceptance and signed by the GCS.**

**CMR #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Project Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Contractor’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 PO #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date Needed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Reference Documents:** (attach copies of all backup documentation)

Architectural Supplemental Instruction # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Request for Information # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Construction Change Directive # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Change Order # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Scope of Work Summary:** (attach additional sheets if needed)

**Impact to Project:**

 Additional Calendar Days Required: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Original Substantial Completion Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 New Substantial Completion Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Cost Summary:**

 Original Contingency Sum: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Net of Previous Modifications: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Contingency Sum to Date: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Amount of this Modification: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **New Contingency Amount: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Authorizations:**

Contractor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Material Provider: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Architect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Owner’s Representative: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***FORM 01265***

**CHANGE ORDER REQUEST FORM**

***This form is to be used for requesting a change to the scope of work of an existing project or the duration of time to an existing contract. Upon acceptance of the request a modification may be made to the purchase order, contract or both. This request does not constitute a change order until accepted and signed by GCS.***

**COR #: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Project Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Contractor’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 PO # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date Needed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Reference Documents:** (attach copies of all backup documentation)

Architectural Supplemental Instruction # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Request for Information # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Construction Change Directive # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Scope of Work Summary:** (attach additional sheets as needed)

**Impact to Project:**

 Additional Calendar Days Required: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Original Substantial Completion Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 New Substantial Completion Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Summary of Impact:** (attach additional sheets as needed)

**Cost Summary:**

 Original Contract Sum: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Net of Previous Change Orders: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Contract Sum to Date: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Amount of Change Order: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **New Contract Amount: $ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Authorizations:**

Contractor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Material Provider: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Architect: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Owner’s Representative: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SECTION 01290 – PAYMENT PROCEDURES**

PART 1 – GENERAL

1. SUMMARY
	1. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.
2. SCHEDULE OF VALUES
	1. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.
		1. Correlate line items in the schedule of values with other required administrative forms and schedules, including the following:
			1. Application for Payment forms with continuation sheets.
			2. Submittal schedule
			3. Items required to be indicated as separate activities in Contractor's construction schedule.
		2. Submit the schedule of values to Architect at earliest possible date but no later than seven days before the date scheduled for submittal of initial Applications for Payment.
		3. The Architect shall review the Schedule of Values, verifying proper content, and forward the Owner a copy.
		4. Sub-schedules for Phased Work: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
	2. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one-line item for each Specification Section.
		1. Identification: Include the following Project identification on the schedule of values.
			1. Project name and location.
			2. Name of Architect.
			3. Architect's project number.
			4. Contractor's name and address.
			5. Date of submittal.
		2. Arrange schedule of values consistent with format of AIA Document G703.
		3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide multiple line items for principal subcontract amounts in excess of five percent of Contract Sum.
		4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
		5. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
		6. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
		7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
		8. Each item in the schedule of values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
			1. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
		9. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.
3. APPLICATIONS FOR PAYMENT
4. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
5. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
6. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
7. Payment Application Times: Progress payments shall be submitted to Architect by the 25th day of each month. The period covered by each Application for Payment is one month, ending on the last day of the month.
8. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment or Contractor’s computer print-out sheet with all required data from G702 and G703 and as approved by the Owner.
9. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
10. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
11. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
12. Transmittal: Submit four signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
13. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
14. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
15. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
16. When an application shows completion of an item, submit conditional final or full waivers.
17. Owner reserves the right to designate which entities involved in the Work must submit waivers.
18. Waiver Forms: Submit waivers of lien on forms, executed in a manner acceptable to Owner.
19. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

|  |  |
| --- | --- |
| * + - 1. List of subcontractors
 | * + - 1. Schedule of values
 |
| * + - 1. Contractor's construction schedule
 | 4. Schedule of unit prices |
| 1. Submittal schedule
 | 1. List of Contractor's staff assignments
 |
| 1. List of Contractor's principal consultants
 | 1. Copies of building permits
 |
| 1. Initial progress report
 | 1. Report of preconstruction conference
 |
| 1. Copies of authorizations and licenses
 | 1. Certificates of insurance and insurance policies
 |

1. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
2. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
3. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
4. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
5. Evidence of completion of Project closeout requirements.
6. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
7. Updated final statement, accounting for final changes to the Contract Sum.
8. AIA Document G706-1994, "Contractor's Affidavit of Payment of Debts and Claims."
9. AIA Document G706A-1994, "Contractor's Affidavit of Release of Liens."
10. AIA Document G707-1994, "Consent of Surety to Final Payment."
11. Evidence that claims have been settled.
12. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
13. Final liquidated damages settlement statement.
14. Received Board approval for Final Payment

PART 2 – PRODUCTS

PART 3 – EXECUTION

END OF SECTION 01290

**SECTION 01310 – PROJECT MANAGEMENT AND COORDINATION**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
		1. Coordination drawings.
		2. Requests for Information (RFIs).
		3. Project meetings.
	2. RELATED SECTIONS:
		1. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
2. DEFINITIONS
	1. RFI: Request from Owner, Architect, or Contractor seeking information from each other during construction.
3. COORDINATION
4. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation.
	* 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
		2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
		3. Make adequate provisions to accommodate items scheduled for later installation.
5. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
6. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
7. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

|  |  |
| --- | --- |
| * + - 1. Preparation of Contractor's construction schedule
 | * + - 1. Installation and removal of temporary facilities and controls
 |
| * + - 1. Preparation of the schedule of values
 | * + - 1. Delivery and processing of submittals
 |
| * + - 1. Progress meetings
 | * + - 1. Pre-installation conferences
 |
| * + - 1. Project closeout activities
 | * + - 1. Startup and adjustment of systems
 |

1. COORDINATION DRAWINGS
2. Coordination Drawings, General: Prepare coordination drawings in accordance with requirements in individual Sections, where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
3. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
	* + 1. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
			2. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
4. Coordination Drawing Organization: Organize coordination drawings as follows:
5. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire protection, fire alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid.
6. Plenum Space: Indicate sub-framing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings.
7. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire protection, fire alarm, and electrical equipment.
8. Structural Penetrations: Indicate penetrations and openings required for all disciplines,
9. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
10. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are the Contractor's responsibility.
11. REQUEST FOR INFORMATION
12. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
13. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
14. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
15. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

|  |  |
| --- | --- |
| 1. Project name | 2. Date Submitted |
| 3. Project number | 4. Requested Reply Date |
| 5. Name of Contractor | 6. Name of Architect |
| 7. RFI number, numbered sequentially | 8. RFI subject |
| 9. Specification Section number and title and related paragraphs, as appropriate | 10. Drawing number and detail references, as appropriate |
| 11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI. | 12. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation |
| 13. Contractor's signature |  |

1. RFI Forms: AIA Document G716. RFI Form to be fill out completely. The Owner shall be copied, upon submission, on all RFIs.
2. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
3. The following RFIs will be returned without action:

|  |  |
| --- | --- |
| 1. Requests for approval of submittals | 2. Requests for approval of substitutions |
| 3. Incomplete RFIs or inaccurately prepared RFIs | 4. Requests for adjustments in the Contract Time or the Contract Sum |
| 5. Requests for coordination information already indicated in the Contract Documents | 6. Requests for interpretation of Architect's actions on submittals |

1. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
2. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
3. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
4. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.
5. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use CSI Log Form 13.2B. Include the following:

|  |  |
| --- | --- |
| 1. Project name | 2. RFI description |
| 3. Name and address of Contractor | 4. Date the RFI was submitted |
| 5. Name and address of Architect | 6. Date Architect's response was received |
| 7. RFI number including RFIs that were dropped and not submitted | 8. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate |
| 9. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate |  |

1. PROJECT MEETING
2. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
3. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
4. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
5. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
6. Preconstruction Conference: Architect will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
7. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference.
8. Agenda: Discuss items of significance that could affect progress, including the following:

|  |  |
| --- | --- |
| 1. Tentative construction schedule | 2. Work restrictions |
| 3. Phasing | 4. Working hours |
| 5. Critical work sequencing and long-lead items | 6. Owner's occupancy requirements |
| 7. Designation of key personnel and their duties | 8. Procedures for moisture and mold control |
| 9. Procedures for processing field decisions and Change Orders | 10. Responsibility for temporary facilities and controls |
| 11. Procedures for RFIs | 12. Procedures for disruptions and shutdowns |
| 13. Procedures for testing and inspecting | 14. Security |
| 15. Procedures for processing Applications for Payment | 16. Construction waste management and recycling |
| 17. Distribution of the Contract Documents | 18. Parking availability |
| 19. Submittal procedures | 20. Office, work, and storage areas |
| 21. Sustainable design requirements | 22. Equipment deliveries and priorities |
| 23. Preparation of record documents | 24. First aid |
| 25. Use of the premises and existing buildings | 26. Progress cleaning |

1. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.
2. Attendees: Installer and representatives of manufacturers and fabricators shall attend the meeting. Advise Owner and Architect of scheduled meeting dates.
3. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

|  |  |
| --- | --- |
| 1. Contract Documents | 2. Warranty requirements |
| 3. Options | 4. Compatibility of materials |
| 5. Related RFIs | 6. Acceptability of substrates |
| 7. Related Change Orders | 8. Temporary facilities and controls |
| 9. Purchases | 10. Space and access limitations |
| 11. Deliveries | 12. Regulations of authorities having jurisdiction |
| 13. Submittals | 14. Testing and inspecting requirements |
| 15. Review of mockups | 16. Installation procedures |
| 17. Possible conflicts | 18. Coordination with other work |
| 19. Compatibility problems | 20. Required performance results |
| 21. Time schedules | 22. Protection of adjacent work |
| 23. Weather limitations | 24. Protection of construction and personnel |
| 25. Manufacturer's written recommendations |  |

1. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
2. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
3. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
4. Owner’s Progress Meetings: Conduct progress meetings at monthly intervals.
5. Attendees: Owner and Architect, Owner’s User Group, the Contractor, the Architect’s consultants concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work
6. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
7. Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
8. Review schedule for next period.
9. Review Owner provided equipment and coordination.
10. Review present and future needs of each entity present, including the following:

|  |  |
| --- | --- |
| 1. Interface requirements | 2. Sequence of operations |
| 3. Status of submittals | 4. Deliveries |
| 5. Off-site fabrication | 6. Access |
| 7. Site utilization | 8. Temporary facilities and controls |
| 9. Progress cleaning | 10. Quality and work standards |
| 11. Status of correction of deficient items | 12. Field observations |
| 13. Status of RFIs | 14. Status of proposal requests |
| 15. Pending changes | 16. Status of Change Orders |
| 17. Pending claims and disputes | 18. Documentation of information for payment requests |

1. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes.
2. Schedule Updating: Issue revised schedule concurrently with the report of each meeting.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01310

**SECTION 01320 – CONSTRUCTION PROGRESS DOCUMENTATION**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

|  |  |
| --- | --- |
| 1. Contractor's construction schedule | 2. Daily construction reports |
| 3. Field condition reports |  |

1. DEFINITIONS
	1. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
		1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
		2. Predecessor Activity: An activity that precedes another activity in the network.
		3. Successor Activity: An activity that follows another activity in the network.
	2. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of the Project.
	3. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
	4. Float: The measure of leeway in starting and completing an activity.
		1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
2. INFORMATIONAL SUBMITTALS
3. Format for Submittals: Submit required submittals in the following format:
4. Two paper copies.
5. Start-up Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
6. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
7. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
8. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
9. Logic Report: List of preceding and succeeding activities for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
10. Total Float Report: List of all activities sorted in ascending order of total float.
11. Earnings Report: Compilation of Contractor's total earnings from the Notice to Proceed until most recent Application for Payment.
12. Daily Construction Reports: Submit at weekly intervals.
13. Field Condition Reports: Submit at time of discovery of differing conditions.
14. COORDINATION
15. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
16. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.
17. Secure time commitments for performing critical elements of the Work from entities involved.
18. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 – PRODUCTS

1. CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL
	1. Time Frame: Extend schedule from date established for the Notice to Proceed to date of Substantial Completion.
		1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
	2. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
		1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
		2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
		3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
		4. Startup and Testing Time: Include not less than 10 days for startup and testing.
		5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
		6. Punch List and Final Completion: Include not more than 30 days for punch list and final completion.
	3. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule.
	4. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
2. CONTRACTOR'S CONSTRUCTION SCHEDULE (CPM SCHEDULE)
	1. General: Prepare network diagrams using AON (activity-on-node) format.
	2. Start-up Network Diagram: Submit diagram within 14 days of date established for the Notice to Proceed. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
	3. CPM Schedule: Prepare Contractor's construction schedule using a time-scaled CPM network analysis diagram for the Work.
		1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 60 days after date established for the Notice to Proceed.
			1. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Architect's approval of the schedule.
		2. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
		3. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule in order to correlate with Contract Time.
	4. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the start-up network diagram, prepare a skeleton network to identify probable critical paths.
		1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
		2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
		3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
		4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
			1. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
	5. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall project schedule.
	6. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
	7. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
3. REPORTS
	1. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

|  |  |
| --- | --- |
| 1. List of subcontractors at Project site | 2. List of separate contractors at Project site |
| 3. Approximate count of personnel at Project site | 4. High and low temperatures and general weather conditions, including rain  |
| 5. Equipment at Project site | 6. Material deliveries |
| 7. Accidents | 8. Meetings and significant decisions |
| 9. Unusual events | 10. Stoppages, delays, shortages, and losses |
| 11. Meter readings and similar recordings | 12. Emergency procedures |
| 13. Orders and requests of authorities having jurisdiction | 14. Construction Change Directives received and implemented |
| 15. Change Orders received and implemented | 16. Services connected and disconnected |
| 17. Equipment or system tests and startups | 18. Partial completions and occupancies |
| 19. Substantial Completions authorized |  |

* 1. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 – EXECUTION

1. CONTRACTOR'S CONSTRUCTION SCHEDULE
	1. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule at each regularly scheduled progress meeting.
		1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
		2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
		3. As the Work progresses, indicate final completion percentage for each activity.
	2. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
		1. Post copies in Project meeting rooms and temporary field offices.
		2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01320

**SECTION 01330 – SUBMITTAL PROCEDURES**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
	2. Related Sections:

Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.

Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.

Division 01 Section "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.

1. DEFINITIONS
	1. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.
	2. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.
2. ACTION SUBMITTALS
3. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or modifications to submittals noted by the Architect and additional time for handling and reviewing submittals required by those corrections.
4. SUBMITTAL ADMINISTRATIVE REQUIREMENTS
5. Architect's Digital Data Files: Electronic copies of CAD Drawings of the Contract Drawings, floor plans and elevations only, will be provided upon request by Architect for Contractor's use in preparing submittals.
	* 1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings upon request by Contractor for use in preparing Shop Drawings.
			1. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
			2. Contractor shall execute a data licensing agreement in the form of AIA Document C106, Digital Data Licensing Agreement.
6. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
7. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
8. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
9. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
10. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
11. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
12. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
13. Resubmittal Review: Allow 15 days for review of each resubmittal.
14. Identification and Information: Place a permanent label or title block on each paper copy submittal item for identification.
15. Indicate name of firm or entity that prepared each submittal on label or title block.
16. Provide a space approximately 150 by 200 mm (6 by 8 inches) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
17. Include the following information for processing and recording action taken:

|  |  |
| --- | --- |
| a. Project Name | b. Date |
| c. Name of Architect | d. Name of Contractor |
| e. Name of Construction Manager | f. Name of Subcontractor |
| g. Name of Supplier | h. Name of Manufacturer |
| i. Submittal number or other unique identifier, including revision identifier (see note) | j. Number and title of appropriate Specification Section |
| k. Drawing number and detail references, as appropriate | l. Location(s) where product is to be installed, as appropriate |
| m. Other necessary identification |  |

(NOTE) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).

1. Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
2. Assemble complete submittal package into a single indexed file with links enabling navigation to each item.
3. Name file with submittal number or other unique identifier, including revision identifier.
4. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01. A).
5. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
6. Include the following information on an inserted cover sheet:

|  |  |
| --- | --- |
| a. Project Name | b. Date |
| c. Name and Address of Architect | d. Name and Address of CM |
| e. Name of Contractor | f. Name of Subcontractor |
| g. Name of Supplier | h. Name of Manufacturer |
| i. Number and title of appropriate Specification Section | j. Drawing number and detail references, as appropriate |
| k. Location(s) where product is to be installed, as appropriate | l. Name of firm or entity that prepared submittal |
| m. Related physical samples submitted directly | n. Other necessary identification |

1. Options: Identify options requiring selection by the Architect.
2. Deviations: Identify deviations from the Contract Documents on submittals.
3. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
4. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
5. Transmittal: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will discard submittals received from sources other than Contractor.
6. Transmittal Form: Use AIA Document G810.
7. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.
8. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
9. Note date and content of previous submittal.
10. Note date and content of revision in label or title block and clearly indicate extent of revision.
11. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
12. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, and installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
13. Use for Construction: Use only final submittals that are marked with approval notation from Architect's action stamp.

PART 2 – PRODUCTS

1. SUBMITTAL PROCEDURES
	1. General Submittal Procedure Requirements:
		1. Action Submittals: Submit three paper copies of each submittal, unless otherwise indicated. Architect will return two copies.
		2. Informational Submittals: Submit two paper copies of each submittal, unless otherwise indicated. Architect will not return copies.
		3. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 01 Section "Closeout Procedures.”
		4. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
			1. Provide a digital signature with digital certificate on electronically-submitted certificates and certifications where indicated.
			2. Provide a notarized statement on original paper copy certificates and certifications where indicated.
		5. Test and Inspection Reports Submittals: Comply with requirements specified in Division 01 Section "Quality Requirements."
	2. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
		1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
		2. Mark each copy of each submittal to show which products and options are applicable.
		3. Include the following information, as applicable:

|  |  |
| --- | --- |
| a. Manufacturer's catalog cuts | b. Manufacturer's product specifications |
| c. Standard color charts  | d. Testing by recognized testing agency |
| e. Statement of compliance with specified referenced standards | f. Application of testing agency labels and seals |
| g. Notation of coordination requirements | h. Availability and delivery time information |

* + 1. For equipment, include the following in addition to the above, as applicable:

|  |  |
| --- | --- |
| a. Wiring diagrams showing factory-installed wiring | b. Clearances required to other construction, if not indicated on accompanying Shop Drawings |
| c. Printed performance curves | d. Operational range diagrams |

* + 1. Submit Product Data before or concurrent with Samples.
		2. Submit Product Data in the following format:
			1. Three paper copies of Product Data, unless otherwise indicated. Architect will return two copies.
	1. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based upon Architect's digital data drawing files is otherwise permitted.
		1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable.

|  |  |
| --- | --- |
| a. Identification of products | b. Schedules |
| c. Compliance with specified standards | d. Notation of coordination requirements |
| e. Notation of dimensions established by field measurement | f. Seal and signature of professional engineer if specified |
| g. Relationship and attachment to adjoining construction clearly indicated |  |

* + 1. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 215 by 280 mm (8-1/2 by 11 inches) but no larger than 600 by 900 mm (24 by 36 inches).
		2. Submit Shop Drawings in the following format:
			1. Two opaque (bond) copies of each submittal. Architect will return one copy.
	1. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
		1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
		2. Identification: Attach label on unexposed side of Samples that includes the following:

|  |  |
| --- | --- |
| a. Generic description of Sample | b. Sample source |
| c. Product name and name of manufacturer | d. Number and title of applicable Specification Section |

* + 1. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
			1. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
			2. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
		2. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
			1. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
		3. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
			1. Number of Samples: Submit two sets of Samples. Architect will retain one Sample sets; remainder will be returned.
				1. If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
	1. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
	2. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
	3. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures.”
	4. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A.
		1. Submit subcontract list in the following format:
			1. Number of Copies: Two paper copies of subcontractor list, unless otherwise indicated. Architect will return one copy.
	5. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
	6. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
	7. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on American Welding Society (AWS) forms. Include names of firms and personnel certified.
	8. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
	9. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
	10. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
	11. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
	12. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
	13. Product Test Reports: Submit written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
	14. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
	15. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."
	16. Field Test Reports: Submit reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
	17. Maintenance Data: Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
	18. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
1. DELEGATED-DESIGN SERVICES
	1. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
		1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
	2. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit three paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
		1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 – EXECUTION

1. CONTRACTOR’S REVIEW
	1. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
	2. Project Closeout and Maintenance/Material Submittals: Refer to requirements in Division 01 Section "Closeout Procedures."
	3. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
2. ARCHITECT’S ACTION
	1. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
	2. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.
	3. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
	4. Incomplete submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
	5. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01330

**SECTION 01400 – QUALITY REQUIREMENTS**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes administrative and procedural requirements for quality assurance and quality control.
	2. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
		1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
		2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
	3. Related Sections:
		1. Divisions 02 through 49 Sections for specific test and inspection requirements.
2. DEFINITIONS
	1. **Quality-Assurance Services:** Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
	2. **Quality-Control Services:** Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
	3. **Mockups:** Full size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
		1. Laboratory Mockups: Full-size, physical assemblies constructed at testing facility to verify performance characteristics.
	4. **Preconstruction Testing:** Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
	5. **Product Testing:** Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
	6. **Source Quality-Control Testing:** Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
	7. **Field Quality-Control Testing:** Tests and inspections that are performed on-site for installation of the Work and for completed Work.
	8. **Testing Agency:** An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
	9. **Installer/Applicator/Erector:** Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
		1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.
	10. **Experienced:** When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
3. CONFLICTING REQUIREMENTS
4. **Referenced Standards:** If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
5. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.
6. INFORMATIONAL SUBMITTALS
7. **Contractor's Statement of Responsibility:** When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.
	* 1. Main wind-force resisting system or a wind-resisting component listed in the wind-force-resisting system quality assurance plan prepared by the Architect.
8. **Testing Agency Qualifications:** For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
9. REPORTS AND DOCUMENTS
10. **Test and Inspection Reports:** Prepare and submit certified written reports specified in other Sections. Include the following:

|  |  |
| --- | --- |
| 1. Date of issue | 2. Project title and number |
| 3. Name, address, and telephone number of testing agency | 4. Dates and locations of samples and tests or inspections |
| 5. Names of individuals making tests and inspections | 6. Description of the Work and test and inspection method |
| 7. Identification of product and Specification Section | 8. Test and inspection results and an interpretation of test results |
| 9. Complete test or inspection data | 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting |
| 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements | 12. Name and signature of laboratory inspector |
| 13. Recommendations on retesting and re-inspection |  |

1. **Manufacturer's Field Reports:** Prepare written information documenting tests and inspections specified in other Sections. Include the following:

|  |  |
| --- | --- |
| 1. Name, address, and telephone number of representative making report | 2. Statement on condition of substrates and their acceptability for installation of product |
| 3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken | 4. Results of operational and other tests and a statement of whether observed performance complies with requirements |
| 5. Other required items indicated in individual Specification Sections |  |

1. **Permits, Licenses, and Certificates:** For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
2. QUALITY ASSURANCE
3. **General:** Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
4. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
5. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
6. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
7. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
8. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
9. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
10. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
11. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
12. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
13. Manufacturer's Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
14. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
15. Contractor responsibilities include the following:

|  |  |
| --- | --- |
| a. Provide test specimens representative of proposed products and construction | b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work |
| c. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work | d. When testing is complete, remove test specimens, assemblies, mockups; do not reuse products on Project |

1. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
2. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
3. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
4. Notify Architect seven days in advance of dates and times when mockups will be constructed.
5. Demonstrate the proposed range of aesthetic effects and workmanship.
6. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
7. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
8. Demolish and remove mockups when directed, unless otherwise indicated.
9. QUALITY CONTROL
10. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
11. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
12. Costs for retesting and re-inspection construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.
13. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner, are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
14. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
15. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
16. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
17. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
18. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
19. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
20. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.
21. Retesting/Re-inspection: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspection, for construction that replaced Work that failed to comply with the Contract Documents.
22. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
23. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
24. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
25. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
26. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
27. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
28. Do not perform any duties of Contractor.
29. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
30. Access to the Work.
31. Incidental labor and facilities necessary to facilitate tests and inspections.
32. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
33. Facilities for storage and field curing of test samples.
	* 1. Retain first subparagraph below if required or is not common practice in Project vicinity.
34. Delivery of samples to testing agencies.
35. Preliminary design mix proposed for use for material mixes that require control by testing agency.
36. Security and protection for samples and for testing and inspecting equipment at Project site.
37. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
38. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 – PRODUCTS

PART 3 – EXECUTION

1. REPAIR AND PROTECTION
	1. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
		1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 01 Section "Execution."
	2. Protect construction exposed by or for quality-control service activities.
	3. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01400

SECTION 01420 – REFERNECES

PART 1 – GENERAL

1. DEFINITIONS
	1. General: Basic Contract definitions are included in the Conditions of the Contract.
	2. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
	3. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
	4. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
	5. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
	6. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
	7. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
	8. "Provide": Furnish and install, complete and ready for the intended use.
	9. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.
2. INDUSTRIAL STANDARDS
	1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
	2. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
	3. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
		1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
3. ABRBREVIATIONS AND ACRONYMS
	1. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S.”
	2. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

|  |  |
| --- | --- |
| AA | Aluminum Association, Inc. (The) |
|  |  |
| AAADM | American Association of Automatic Door Manufacturers |
|  |  |
| AABC | Associated Air Balance Council |
|  |  |
| AAMA | American Architectural Manufacturers Association |
|  |  |
| AASHTO | American Association of State Highway and Transportation Officials |
|  |  |
| AATCC | American Association of Textile Chemists and Colorists |
|  |  |
| ABAA | Air Barrier Association of America |
|  |  |
| ABMA | American Bearing Manufacturers Association |
|  |  |
| ACI | American Concrete Institute |
|  |  |
| ACPA | American Concrete Pipe Association |
|  |  |
| AEIC | Association of Edison Illuminating Companies, Inc. (The) |
|  |  |
| AF&PA | American Forest & Paper Association |
|  |  |
| AGA | American Gas Association |
|  |  |
| AGC | Associated General Contractors of America (The) |
|  |  |
| AHA | American Hardboard Association |
|  | (Now part of CPA) |
|  |  |
| AHAM | Association of Home Appliance Manufacturers |
|  |  |
| AI | Asphalt Institute |
|  |  |
| AIA | American Institute of Architects (The) |
|  |  |
| AISC | American Institute of Steel Construction |
|  |  |
| AISI | American Iron and Steel Institute |
| AITC | American Institute of Timber Construction |
|  |  |
| ALCA | Associated Landscape Contractors of America |
|  | (Now PLANET - Professional Landscape Network) |
|  |  |
| ALSC | American Lumber Standard Committee, Incorporated |
|  |  |
| AMCA | Air Movement and Control Association International, Inc. |
|  |  |
| ANSI | American National Standards Institute |
|  |  |
| AOSA | Association of Official Seed Analysts, Inc. |
|  |  |
| APA | Architectural Precast Association |
|  |  |
| APA | APA - The Engineered Wood Association |
|  |  |
| APA EWS | APA - The Engineered Wood Association; Engineered Wood Systems |
|  | (See APA - The Engineered Wood Association) |
|  |  |
| API | American Petroleum Institute |
|  |  |
| ARI | Air-Conditioning & Refrigeration Institute |
|  |  |
| ARMA | Asphalt Roofing Manufacturers Association |
|  |  |
| ASCE | American Society of Civil Engineers |
|  |  |
| ASCE/SEI | American Society of Civil Engineers/Structural Engineering Institute |
|  | (See ASCE) |
|  |  |
| ASHRAE | American Society of Heating, Refrigerating and Air-Conditioning Engineers |
|  |  |
| ASME | ASME International |
|  | (American Society of Mechanical Engineers International) |
|  |  |
| ASSE | American Society of Sanitary Engineering |
|  |  |
| ASTM | ASTM International |
|  | (American Society for Testing and Materials International) |
|  |  |
| AWCI | Association of the Wall and Ceiling Industry |
|  |  |
| AWCMA | American Window Covering Manufacturers Association |
|  | (Now WCMA) |
|  |  |
| AWI | Architectural Woodwork Institute |
|  |  |
| AWPA | American Wood Protection Association |
|  | (Formerly: American Wood Preservers' Association) |
|  |  |
| AWS | American Welding Society |
|  |  |
| AWWA | American Water Works Association |
| BHMA | Builders Hardware Manufacturers Association |
|  |  |
| BIA | Brick Industry Association (The) |
|  |  |
| BICSI | BICSI, Inc. |
|  |  |
| BIFMA | BIFMA International |
|  | (Business and Institutional Furniture Manufacturer's Association International) |
| BISSC | Baking Industry Sanitation Standards Committee |
|  |  |
| BWF | Badminton World Federation |
|  | (Formerly: IBF - International Badminton Federation) |
|  |  |
| CCC | Carpet Cushion Council |
|  |  |
| CDA | Copper Development Association |
|  |  |
| CEA | Canadian Electricity Association |
|  |  |
| CEA | Consumer Electronics Association |
|  |  |
| CFFA | Chemical Fabrics & Film Association, Inc. |
|  |  |
| CGA | Compressed Gas Association |
|  |  |
| CIMA | Cellulose Insulation Manufacturers Association |
|  |  |
| CISCA | Ceilings & Interior Systems Construction Association |
|  |  |
| CISPI | Cast Iron Soil Pipe Institute |
|  |  |
| CLFMI | Chain Link Fence Manufacturers Institute |
|  |  |
| CRRC | Cool Roof Rating Council |
|  |  |
| CPA | Composite Panel Association |
|  |  |
| CPPA | Corrugated Polyethylene Pipe Association |
|  |  |
| CRI | Carpet and Rug Institute (The) |
|  |  |
| CRSI | Concrete Reinforcing Steel Institute |
|  |  |
| CSA | Canadian Standards Association |
|  |  |
| CSA | CSA International |
|  | (Formerly: IAS - International Approval Services) |
|  |  |
| CSI | Cast Stone Institute |
|  |  |
| CSI | Construction Specifications Institute (The) |
|  |  |
| CSSB | Cedar Shake & Shingle Bureau |
| CTI | Cooling Technology Institute |
|  | (Formerly: Cooling Tower Institute) |
|  |  |
| DHI | Door and Hardware Institute |
|  |  |
| EIA | Electronic Industries Alliance |
|  |  |
| EIMA | EIFS Industry Members Association |
|  |  |
| EJCDC | Engineers Joint Contract Documents Committee |
| EJMA | Expansion Joint Manufacturers Association, Inc. |
|  |  |
| ESD | ESD Association |
|  | (Electrostatic Discharge Association) |
|  |  |
| ETL SEMCO | Intertek ETL SEMCO |
|  | (Formerly: ITS - Intertek Testing Service NA) |
|  |  |
| FIBA | Federation International de Basketball |
|  | (The International Basketball Federation) |
|  |  |
| FIVB | Federation International de Volleyball |
|  | (The International Volleyball Federation) |
|  |  |
| FM Approvals | FM Approvals LLC |
|  |  |
| FM Global | FM Global |
|  | (Formerly: FMG - FM Global) |
|  |  |
| FMRC | Factory Mutual Research |
|  | (Now FM Global) |
|  |  |
| FRSA | Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. |
|  |  |
| FSA | Fluid Sealing Association |
|  |  |
| FSC | Forest Stewardship Council |
|  |  |
| GA | Gypsum Association |
|  |  |
| GANA | Glass Association of North America |
|  |  |
| GRI | (Part of GSI) |
|  |  |
| GS | Green Seal |
|  |  |
| GSI | Geosynthetic Institute |
| HI | Hydraulic Institute |
|  |  |
| HI | Hydronics Institute |
|  |  |
| HMMA | Hollow Metal Manufacturers Association |
|  | (Part of NAAMM) |
|  |  |
| HPVA | Hardwood Plywood & Veneer Association |
|  |  |
| HPW | H. P. White Laboratory, Inc. |
|  |  |
| IAS | International Approval Services |
|  | (Now CSA International) |
|  |  |
| IBF | International Badminton Federation |
|  | (Now BWF) |
|  |  |
| ICEA | Insulated Cable Engineers Association, Inc. |
| ICRI | International Concrete Repair Institute, Inc. |
|  |  |
| IEC | International Electro-technical Commission |
|  |  |
| IEEE | Institute of Electrical and Electronics Engineers, Inc. (The) |
|  |  |
| IESNA | Illuminating Engineering Society of North America |
|  |  |
| IEST | Institute of Environmental Sciences and Technology |
|  |  |
| IGCC | Insulating Glass Certification Council |
|  |  |
| IGMA | Insulating Glass Manufacturers Alliance |
|  |  |
| ILI | Indiana Limestone Institute of America, Inc. |
|  |  |
| ISO | International Organization for Standardization |
|  | Available from ANSI |
|  |  |
| ISSFA | International Solid Surface Fabricators Association |
|  |  |
| ITS | Intertek Testing Service NA |
|  | (Now ETL SEMCO) |
|  |  |
| ITU | International Telecommunication Union |
|  |  |
| KCMA | Kitchen Cabinet Manufacturers Association |
|  |  |
| LMA | Laminating Materials Association |
|  | (Now part of CPA) |
|  |  |
| LPI | Lightning Protection Institute |
|  |  |
| MBMA | Metal Building Manufacturers Association |
|  |  |
| MFMA | Maple Flooring Manufacturers Association, Inc. |
|  |  |
| MFMA | Metal Framing Manufacturers Association, Inc. |
|  |  |
| MH | Material Handling |
|  | (Now MHIA) |
|  |  |
| MHIA | Material Handling Industry of America |
| MIA | Marble Institute of America |
|  |  |
| MPI | Master Painters Institute |
|  |  |
| MSS | Manufacturers Standardization Society of The Valve and Fittings Industry Inc. |
|  |  |
| NAAMM | National Association of Architectural Metal Manufacturers |
|  |  |
| NACE | NACE International |
|  | (National Association of Corrosion Engineers International) |
|  |  |
| NADCA | National Air Duct Cleaners Association |
| NAGWS | National Association for Girls and Women in Sport |
|  |  |
| NAIMA | North American Insulation Manufacturers Association |
|  |  |
| NBGQA | National Building Granite Quarries Association, Inc. |
|  |  |
| NCAA | National Collegiate Athletic Association (The) |
|  |  |
| NCMA | National Concrete Masonry Association |
|  |  |
| NCPI | National Clay Pipe Institute |
|  |  |
| NCTA | National Cable & Telecommunications Association |
|  |  |
| NEBB | National Environmental Balancing Bureau |
|  |  |
| NECA | National Electrical Contractors Association |
|  |  |
| NeLMA | Northeastern Lumber Manufacturers' Association |
|  |  |
| NEMA | National Electrical Manufacturers Association |
|  |  |
| NETA | InterNational Electrical Testing Association |
|  |  |
| NFHS | National Federation of State High School Associations |
|  |  |
| NFPA | NFPA |
|  | (National Fire Protection Association) |
|  |  |
| NFRC | National Fenestration Rating Council |
|  |  |
| NGA | National Glass Association |
|  |  |
| NHLA | National Hardwood Lumber Association |
|  |  |
| NLGA | National Lumber Grades Authority |
|  |  |
| NOFMA | NOFMA: The Wood Flooring Manufacturers Association |
|  | (Formerly: National Oak Flooring Manufacturers Association) |
|  |  |
| NOMMA | National Ornamental & Miscellaneous Metals Association |
| NRCA | National Roofing Contractors Association |
|  |  |
| NRMCA | National Ready Mixed Concrete Association |
|  |  |
| NSF | NSF International |
|  | (National Sanitation Foundation International) |
|  |  |
| NSSGA | National Stone, Sand & Gravel Association |
|  |  |
| NTMA | National Terrazzo & Mosaic Association, Inc. (The) |
|  |  |
| NTRMA | National Tile Roofing Manufacturers Association |
|  | (Now TRI) |
|  |  |
| NWWDA | National Wood Window and Door Association |
|  | (Now WDMA) |
|  |  |
| OPL | Omega Point Laboratories, Inc. |
|  | (Now ITS) |
|  |  |
| PCI | Precast/Prestressed Concrete Institute |
|  |  |
| PDCA | Painting & Decorating Contractors of America |
|  |  |
| PDI | Plumbing & Drainage Institute |
|  |  |
| PGI | PVC Geomembrane Institute |
|  |  |
| PLANET | Professional Landcare Network |
|  | (Formerly: ACLA - Associated Landscape Contractors of America) |
|  |  |
| PTI | Post-Tensioning Institute |
|  |  |
| RCSC | Research Council on Structural Connections |
|  |  |
| RFCI | Resilient Floor Covering Institute |
|  |  |
| RIS | Redwood Inspection Service |
|  |  |
| SAE | SAE International |
|  |  |
| SDI | Steel Deck Institute |
| SDI | Steel Door Institute |
|  |  |
| SEFA | Scientific Equipment and Furniture Association |
|  |  |
| SEI/ASCE | Structural Engineering Institute/American Society of Civil Engineers |
|  | (See ASCE) |
|  |  |
| SGCC | Safety Glazing Certification Council |
|  |  |
| SIA | Security Industry Association |
|  |  |
| SIGMA | Sealed Insulating Glass Manufacturers Association (Now IGMA) |
| SJI | Steel Joist Institute |
|  |  |
| SMA | Screen Manufacturers Association |
|  |  |
| SMACNA | Sheet Metal and Air Conditioning Contractors' |
|  | National Association |
|  |  |
| SMPTE | Society of Motion Picture and Television Engineers |
|  |  |
| SPFA | Spray Polyurethane Foam Alliance |
|  | (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division) |
|  |  |
| SPIB | Southern Pine Inspection Bureau (The) |
|  |  |
| SPRI | Single Ply Roofing Industry |
|  |  |
| SSINA | Specialty Steel Industry of North America |
|  |  |
| SSPC | SSPC: The Society for Protective Coatings |
|  |  |
| STI | Steel Tank Institute |
|  |  |
| SWI | Steel Window Institute |
|  |  |
| SWRI | Sealant, Waterproofing, & Restoration Institute |
|  |  |
| TCA | Tile Council of America, Inc. |
|  | (Now TCNA) |
|  |  |
| TCNA | Tile Council of North America, Inc. |
|  |  |
| TIA/EIA | Telecommunications Industry Association/Electronic Industries Alliance |
|  |  |
| TMS | The Masonry Society |
|  |  |
| TPI | Truss Plate Institute, Inc. |
|  |  |
| TPI | Turfgrass Producers International |
| TRI | Tile Roofing Institute |
|  |  |
| UL | Underwriters Laboratories Inc. |
|  |  |
| UNI | Uni-Bell PVC Pipe Association |
|  |  |
| USAV | USA Volleyball |
|  |  |
| USGBC | U.S. Green Building Council |
|  |  |
| USITT | United States Institute for Theatre Technology, Inc. |
|  |  |
| WASTEC | Waste Equipment Technology Association |
|  |  |
| WCLIB | West Coast Lumber Inspection Bureau |
| WCMA | Window Covering Manufacturers Association |
|  |  |
| WCSC | Window Covering Safety Council |
|  | (Formerly: WCMA - Window Covering Manufacturers Association) |
|  |  |
| WDMA | Window & Door Manufacturers Association |
|  | (Formerly: NWWDA - National Wood Window and Door Association) |
|  |  |
| WI | Woodwork Institute (Formerly: WIC - Woodwork Institute of California) |
|  |  |
| WIC | Woodwork Institute of California |
|  | (Now WI) |
|  |  |
| WMMPA | Wood Moulding & Millwork Producers Association |
|  |  |
| WSRCA | Western States Roofing Contractors Association |
|  |  |
| WWPA | Western Wood Products Association |

* 1. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.

|  |  |
| --- | --- |
| IAPMO | International Association of Plumbing and Mechanical Officials |
|  |  |
| ICC | International Code Council |
|  |  |
| ICC-ES | ICC Evaluation Service, Inc. |

* 1. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

|  |  |
| --- | --- |
| CE | Army Corps of Engineers |
|  |  |
| CPSC | Consumer Product Safety Commission |
|  |  |
| DOC | Department of Commerce |
|  |  |
| DOD | Department of Defense |
|  |  |
| DOE | Department of Energy |
|  |  |
| EPA | Environmental Protection Agency |
|  |  |
| FAA | Federal Aviation Administration |
|  |  |
| FCC | Federal Communications Commission |
|  |  |
| FDA | Food and Drug Administration |
|  |  |
| GSA | General Services Administration |
| HUD | Department of Housing and Urban Development |
|  |  |
| LBL | Lawrence Berkeley National Laboratory |
|  |  |
| NCHRP | National Cooperative Highway Research Program |
|  |  |
| NIST | National Institute of Standards and Technology |
|  |  |
| OSHA | Occupational Safety & Health Administration |
|  |  |
| PBS | Public Buildings Service |
|  | (See GSA) |
|  |  |
| PHS | Office of Public Health and Science |
| RUS | Rural Utilities Service |
|  | (See USDA) |
|  |  |
| SD | State Department |
|  |  |
| TRB | Transportation Research Board |
|  |  |
| USDA | Department of Agriculture |
|  |  |
| USPS | Postal Service |

* 1. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

|  |  |
| --- | --- |
| ADAAG | Americans with Disabilities Act (ADA) |
|  | Architectural Barriers Act (ABA) |
|  | Accessibility Guidelines for Buildings and Facilities |
|  | Available from U.S. Access Board |
|  |  |
| CFR | Code of Federal Regulations |
|  | Available from Government Printing Office |
|  |  |
| DOD | Department of Defense Military Specifications and Standards |
|  | Available from Department of Defense Single Stock Point |
|  |  |
| DSCC | Defense Supply Center Columbus |
|  | (See FS) |
|  |  |
| FED-STD | Federal Standard |
|  | (See FS) |
|  |  |
| FS | Federal Specification |
|  | Available from Department of Defense Single Stock Point |
|  |  |
|  | Available from Defense Standardization Program |
|  | Available from General Services Administration |
|  |  |
|  | Available from National Institute of Building Sciences |
|  |  |
| FTMS | Federal Test Method Standard |
|  | (See FS) |
|  |  |
| MIL | (See MILSPEC) |
|  |  |
| MIL-STD | (See MILSPEC) |
|  |  |
| MILSPEC | Military Specification and Standards |
|  | Available from Department of Defense Single Stock Point |
|  |  |
| UFAS | Uniform Federal Accessibility Standards |
|  | Available from Access Board |

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION 01420

**SECTION 01500 – TEMPORARY FACILITIES AND CONTROLS**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
	2. Related Section:
		1. Division 01 Section "Summary" for work restrictions and limitations on utility interruptions.
2. USE CHARGES
	1. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
	2. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
3. INFORMATIONAL SUBMITTALS
4. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
5. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
6. QUALITY ASSURANCE
7. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
8. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
9. PROJECT CONDITIONS
10. Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 – PRODUCTS

1. MATERIALS
	1. Chain-Link Fencing: Minimum 50-mm (2-inch), 3.8-mm- (0.148-inch-) thick, galvanized steel, chain-link fabric fencing; minimum 1.8 m (6 feet) high with galvanized steel pipe posts; minimum 60-mm- (2-3/8-inch-) OD line posts and 73-mm- (2-7/8-inch-) OD corner and pull posts.
	2. Portable Chain-Link Fencing: Minimum 50-mm (2-inch), 3.8-mm- (0.148-inch-) thick, galvanized steel, chain-link fabric fencing; minimum 1.8 m (6 feet) high with galvanized steel pipe posts; minimum 60-mm- (2-3/8-inch-) OD line posts and 73-mm- (2-7/8-inch-) OD corner and pull posts, with 42-mm- (1-5/8-inch-) OD top and bottom rails. Provide concrete bases for supporting posts.
2. TEMPORARY FACILITIES
	1. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
	2. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect and construction personnel office activities and to accommodate project meetings specified in other Division 01 Sections. Keep office clean and orderly.
	3. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
3. EQUIPMENT
	1. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
	2. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
		1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
		2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
		3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return air grille in system and remove at end of construction and clean HVAC system as required in Division 01 Section "Closeout Procedures."

PART 3 – EXECUTION

1. INSTALLATION, GENERAL
	1. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
		1. Locate facilities to limit site disturbance as specified in Division 01 Section "Summary."
	2. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
2. TEMPORARY UTILITY INSTALLATION
	1. General: Install temporary service or connect to existing service.
		1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
	2. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
		1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
	3. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
	4. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
	5. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
	6. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
	7. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
	8. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
		1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
	9. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Install one telephone line(s) for each field office.
		1. At each telephone, post a list of important telephone numbers.

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| a. Police and fire departments | b. Ambulance service |
| c. Contractor's home office | d. Architect's office |
| e. Engineers' offices | f. Owner's office |
| g. Principal subcontractors' field and home offices | h.  |

* + 1. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.
1. SUPPORT FACILITIES INSTALLATION
	1. General: Comply with the following:
		1. Provide construction for temporary offices, shops, and sheds located within construction area or within 9 m (30 feet) of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
		2. Maintain support facilities until Architect Schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
	2. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.
		1. Provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.
	3. Traffic Controls: Comply with requirements of authorities having jurisdiction.
		1. Protect existing site improvements to remain including curbs, pavement, and utilities.
		2. Maintain access for fire-fighting equipment and access to fire hydrants.
	4. Parking: Use designated areas of Owner's existing parking areas for construction personnel.
	5. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
		1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
		2. Remove snow and ice as required to minimize accumulations.
	6. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
		1. Identification Signs: Provide Project identification signs as indicated on Drawings.
		2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
			1. Provide temporary, directional signs for construction personnel and visitors.
		3. Maintain and touchup signs so they are legible at all times.
	7. Waste Disposal Facilities: Comply with requirements specified in Division 01 Section "Construction Waste Management and Disposal."
	8. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.
	9. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
		1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
2. SECURITY AND PROTECTION FACILITIES INSTALLATION
	1. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
	2. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
	3. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
	4. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
	5. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for Owner. Perform control operations lawfully, using environmentally safe materials.
	6. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
	7. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
	8. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather-tight enclosure for building exterior.
		1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
	9. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
		1. Prohibit smoking in construction areas.
		2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
		3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
3. MOISTURE AND MOLD CONTROL
	1. Contractor's Moisture Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
	2. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete.
	3. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
4. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
5. Keep interior spaces reasonably clean and protected from water damage.
6. Discard or replace water-damaged and wet material.
7. Discard, replace or clean stored or installed material that begins to grow mold.
8. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
	1. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
		1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
		2. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.
9. OPERATION, TERMINATION, AND REMOVAL
	1. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
	2. Maintenance: Maintain facilities in good operating condition until removal.
	3. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
	4. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
		1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
		2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 01500

**SECTION 01600 – PRODUCT REQUIREMENTS**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
	2. Related Section:
		1. Division 01 Section "Substitution Procedures" for requests for substitutions.
2. DEFINITIONS
	1. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
		1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
		2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
		3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
	2. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.
3. ACTION SUBMITTALS
4. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
	* 1. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
		2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
5. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.
6. QUALITY ASSURANCE
7. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
8. PRODUCT DELIVERY, STORAGE, AND HANDLING
9. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
10. Delivery and Handling:
11. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
12. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
13. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
14. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
15. Storage:
16. Store products to allow for inspection and measurement of quantity or counting of units.
17. Store materials in a manner that will not endanger Project structure.
18. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
19. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
20. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
21. Protect stored products from damage and liquids from freezing.
22. PRODUCT WARRANTIES
23. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
24. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
25. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
26. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
27. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
28. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
29. Refer to Divisions 02 through 49. Sections for specific content requirements and particular requirements for submitting special warranties.
30. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 – PRODUCTS

1. PRODUCT SELECTION PROCEDURES
	1. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
2. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
3. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
4. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
5. Where products are accompanied by the term "as selected," Architect will make selection.
6. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
	1. Product Selection Procedures:
		1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
		2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
		3. Products:
			1. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
			2. Non-restricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
		4. Manufacturer:
			1. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will no] be considered.
			2. Non-restricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
		5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
	2. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
		1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 01 Section "Substitution Procedures" for proposal of product.
	3. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.
7. COMPARABLE PRODUCTS
	1. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
8. Evidence that the proposed product does not require revisions to the Contract Documents that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
9. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
10. Evidence that proposed product provides specified warranty.
11. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
12. Samples, if requested.

PART 3 – EXECUTION (Not Used) If reference to a special warranty form was added where a single warranty must cover work by several contractors, insert form here and delete "Not Used" above.

END OF SECTION 01600

**SECTION 01730 EXECUTION**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:

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| 1. Construction layout | 2. Field engineering and surveying |
| 3. Installation of the Work | 4. Cutting and patching |
| 5. Coordination of Owner-installed products | 6. Progress cleaning |
| 7. Starting and adjusting | 8. Protection of installed construction |
| 9. Correction of the Work |  |

* 1. Related Sections:
		1. Division 01 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.
1. QUALITY ASSURANCE
	1. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
		1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from the Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.
			1. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
		2. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
		3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
2. WARRANTY
	1. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 – PRODUCTS

1. MATERIALS
	1. General: Comply with requirements specified in other Sections.
		1. For projects requiring compliance with sustainable design and construction practices and procedures, utilize products for patching that comply with requirements of Division 01 Section "Sustainable Design Requirements."
	2. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
		1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

PART 3 – EXECUTION

1. EXAMINATION
	1. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
		1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
		2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
	2. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.

Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.

Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

1. PREPARATION
	1. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
	2. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
	3. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect according to requirements in Division 01 Section "Project Management and Coordination."
2. CONSTRUCTION LAYOUT
	1. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
	2. General: Lay out the Work using accepted surveying practices.

Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.

Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.

Inform installers of lines and levels to which they must comply.

Check the location, level and plumb, of every major element as the Work progresses.

Notify Architect when deviations from required lines and levels exceed allowable tolerances.

* 1. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
	2. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
1. FIELD ENGINEERING
	1. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
	2. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
2. INSTALLATION
	1. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

Make vertical work plumb and make horizontal work level.

Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.

Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.

* 1. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
	2. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
	3. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
	4. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
	5. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
	6. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.

Allow for building movement, including thermal expansion and contraction.

Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

* 1. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
	2. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
1. CUTTING AND PATCHING
	1. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
		1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
		2. No exterior concrete or asphalt paving will be cut for any reason without the expressed written permission of the School District. Directional boring is to be utilized when practical to do so.
	2. Temporary Support: Provide temporary support of work to be cut.
	3. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
	4. Adjacent Occupied Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
	5. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
	6. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.

In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.

Revise first subparagraph below to suit Project.

Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

Retain subparagraph below if required to prevent multiple cutting and patching in the same area. Add specific requirements for multiple contracts and special conditions requiring coordination.

Proceed with patching after construction operations requiring cutting are complete.

* 1. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.

Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.

Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.

Insert specific refinishing requirements for floors, walls, and ceilings. Revise first subparagraph below to suit Project.

Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

Revise first subparagraph below to suit Project or delete.

Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.

Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.

* 1. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.
1. PROGRESS CLEANING
	1. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.

Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg. F (27 deg. C).

Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

* 1. Site: Maintain Project site free of waste materials and debris.
	2. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
		1. Remove liquid spills promptly.
		2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
	3. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
	4. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
	5. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
	6. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.
	7. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
	8. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
	9. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
1. STARTING AND ADJUSTING
	1. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
	2. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
	3. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
	4. Manufacturer's Field Service: Comply with qualification requirements in Division 01 Section "Quality Requirements."
2. PROTECTION OF INSTALLED CONSTRUCTION
	1. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
	2. Comply with manufacturer's written instructions for temperature and relative humidity.
3. CORRECTION OF THE WORK
	1. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
	2. Restore permanent facilities used during construction to their specified condition.
	3. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
	4. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
	5. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01730

**SECTION 01770 – CLOSEOUT PROCEDURE**

PART 1 – GENERAL

1. SUMMARY
	1. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

|  |  |
| --- | --- |
| 1. Substantial Completion procedures | 2. Final completion procedures |
| 3. Final completion checklist, form 17701 | 4. Warranties |
| 5. Final cleaning |  |

* 1. **Related Sections:**
		1. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
		2. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
		3. Division 01 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
		4. Divisions 02 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.
1. SUBSTANTIAL COMPLETION
	1. **Preliminary Procedures:** Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete with request.
2. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.

For first two subparagraphs below, see Evaluations.

1. Advise Owner of pending insurance changeover requirements.
2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
3. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

Delete first subparagraph below if submittal of final record information is delayed until final acceptance.

1. Prepare and submit Project Record Documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
2. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

Coordinate first subparagraph below with Division 08 door hardware Sections. Revise if Owner makes final changeover or if key-control system manufacturer delivers keys directly to Owner.

1. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
2. Complete startup testing of systems.
3. Submit test/adjust/balance records.
4. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
5. Advise Owner of changeover in heat and other utilities.
6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

Delete both subparagraphs below if Project does not include these items or if they are delayed until final acceptance.

1. Complete final cleaning requirements, including touchup painting.
2. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
	1. **Inspection:** Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
		1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
		2. Results of completed inspection will form the basis of requirements for final completion.
3. FINAL COMPLETION
4. **Preliminary Procedures:** Before requesting final inspection for determining final completion, complete the following.
5. **Inspection:** Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
6. **Re-inspection:** Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
7. LIST OF INCOMPLETE ITEMS (PUNCH LIST)
8. **Organization of List:** Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
9. Organize list of spaces in sequential order, starting with exterior areas first.
10. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
11. Submit list of incomplete items in the following format:
	* + 1. One paper copy, unless otherwise indicated.
12. WARRANTIES
13. **Submittal Time:** Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
14. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
15. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 215-by-280-mm (8-1/2-by-11-inch) paper.
16. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
17. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

Retain subparagraph below in addition to paper copy documents if required by Owner. Indexing requirement below can be performed automatically using PDF publishing software.

1. Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide table of contents at beginning of document.
2. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 – PRODUCTS

1. MATERIALS
	1. **Cleaning Agents:** Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 – EXECUTION

1. FINAL CLEANING
	1. **General:** Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
	2. **Cleaning:** Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.

Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.

Rake grounds that are neither planted nor paved to a smooth, even-textured surface.

Remove tools, construction equipment, machinery, and surplus material from Project site.

Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.

Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

Sweep concrete floors broom clean in unoccupied spaces.

Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.

Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.

Remove labels that are not permanent.

Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates.

Revise six subparagraphs below to suit Project. Check for conflict or duplication with provisions in other Sections, particularly Divisions 20 through 29.

Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.

Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.

Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

Leave Project clean and ready for occupancy.

* 1. **Pest Control:** Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.
	2. The Contractor shall complete the Final Payment Checklist and compare it to the Owners list prior to approval of final payment.

END OF SECTION 01770

***FORM 01771* FINAL PAYMENT CHECKLIST**

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contractor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of Notice to Proceed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Substantial Completion Date (include change orders): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ # of days \_\_\_\_\_\_

Final Completion Date (include change orders): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ # of days \_\_\_\_\_\_

Actual Substantial Completion Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ # of days \_\_\_\_\_\_

Actual Final Completion Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ # of days \_\_\_\_\_\_

|  |  |
| --- | --- |
| [ ]  Punch list complete (date)\_\_\_\_\_\_\_\_\_\_\_ | [ ]  Warranties assigned to College |
| [ ]  1 year warranties (start date)\_\_\_\_\_\_\_\_\_ | [ ]  Operation & Maintenance manuals |
| [ ]  As-built drawings, paper and CAD | [ ]  Staff training  |
| [ ]  Engineer of Record’s floor elevation certificate | [ ]  Fire alarm certificate |
| [ ]  Approved fire alarm shop drawings | [ ]  Sprinkler certificate |
| [ ]  Approved sprinkler system shop drawings | [ ]  State Fire Marshal’s certificate of occupancy |
| [ ]  Threshold certificate | [ ]  Elevator certificate of operation |
| [ ]  Substantial Completion (date)\_\_\_\_\_\_\_\_ | [ ]  Health Department |
| [ ]  Final Florida building code inspections | [ ]  Termite certificate |
| [ ]  Product approval specification checklist | [ ]  Potable water system disinfection |
| [ ]  Backflow prevention | [ ]  HVAC test & balance |
| [ ]  HVAC closeout documents | [ ]  Electrical closeout documents |
| [ ]  Gas closeout documents | [ ]  Certificate of Occupancy (date)\_\_\_\_\_\_\_\_ |

If any of the above are not applicable, indicate by N/A

If any of the above are not checked, explain here: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature Date

**SECTION 01780 – OPERATION AND MAINTENACE DATA**

PART 1 – GENERAL

1. SUMMARY
2. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
	1. Emergency manuals.
	2. Operation manuals for systems, subsystems, and equipment.
	3. Maintenance manuals for the care and maintenance of products, materials, and finishes, systems and equipment.
3. See Divisions 02 through 49 Sections for specific operation and maintenance manual requirements for the Work in those Sections.
4. SUBMITTALS
	1. Manual: Submit one copy of each manual in final form at least 15 days before final inspection. Architect will return copy with comments within 15 days after final inspection.
		1. Correct or modify each manual to comply with Architect's comments. Submit 2 copies of each corrected manual within 15 days of receipt of Architect's comments.

PART 2 – PRODUCTS

1. MANUALS, GENERAL
	1. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain a title page, table of contents, and manual contents.
	2. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:

|  |  |
| --- | --- |
| 1. Subject matter included in manual | 2. Name and address of Project |
| 3. Name and address of Owner  | 4. Date of submittal |
| 5. Name, address, and telephone number of Contractor | 6. Cross-reference to related systems in other operation and maintenance manuals |
| 7. Name and address of Architect |  |

* 1. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
	2. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
		1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 215-by-280-mm (8-1/2-by-11-inch) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
			1. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
		2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual’
		3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
		4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
			1. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
			2. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.
1. EMERGENCY MANUALS
	1. Content: Organize manual into a separate section for type of emergency, emergency instructions, and emergency procedures.
	2. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component for fire, water leak, power failure and equipment failure.
	3. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.
	4. Emergency Procedures: Include instructions on stopping, shutdown instructions for each type of emergency, operating instructions for conditions outside normal operating limits, and required sequences for electric or electronic systems.
2. OPERATION MANUALS
	1. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and equipment descriptions, operating standards, operating procedures, operating logs, wiring and control diagrams, and license requirements.
	2. Descriptions: Include the following:

|  |  |
| --- | --- |
| 1. Product name and model number  | 2. Manufacturer's name |
| 3. Equipment function | 4. Operating characteristics |
| 5. Limiting conditions  | 6. Performance curves |
| 7. Equipment identification with serial number of each component | 8. Complete nomenclature and number of replacement parts |
| 9. Engineering data and tests |  |

* 1. Operating Procedures: Include start-up, break-in, and control procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; and required sequences for electric or electronic systems.
	2. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.
	3. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.
1. PRODUCT MAINTENANCE MANUALS
	1. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
	2. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
	3. Product Information: Include the following, as applicable:

|  |  |
| --- | --- |
| 1. Product name and model number | 2. Manufacturer's name  |
| 3. Color, pattern, and texture | 4. Material and chemical composition |
| 5. Reordering information for specially manufactured products |

* 1. Maintenance Procedures: Include manufacturer's written recommendations and inspection procedures, types of cleaning agents, methods of cleaning, schedule for cleaning and maintenance, and repair instructions.
	2. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
	3. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS
	1. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
	2. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
	3. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including maintenance instructions, drawings and diagrams for maintenance, nomenclature of parts and components, and recommended spare parts for each component part or piece of equipment.
	4. Maintenance Procedures: Include test and inspection instructions, troubleshooting guide, disassembly instructions, and adjusting instructions that detail essential maintenance procedures.
	5. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
	6. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
	7. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
	8. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 – EXECUTION

1. MANUAL PREPARATION
	1. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.
	2. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
	3. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
	4. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
	5. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
		1. Do not use original Project Record Documents as part of operation and maintenance manuals.
	6. Comply with Division 01 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01780

**SECTION 01790 – DEMONSTRATION AND TRAINING**

PART 1 – GENERAL

1. SUMMARY
	1. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
		1. Demonstration of operation of systems, subsystems, and equipment.
		2. Training in operation and maintenance of systems, subsystems, and equipment.
	2. See Divisions 02 through 49 Sections for specific requirements for demonstration and training for products in those Sections.

PART 2 – PRODUCTS

1. INSTRUCTION PROGRAM
	1. Program Structure: Develop an instruction program that includes individual training for each system and equipment not part of a system, as required by individual Specification Sections, and as follows:
	2. Training Modules: For each module, include instruction for the following:
2. Basis of System Design, Operational Requirements, and Criteria: Include system and equipment descriptions, operating standards, regulatory requirements, equipment function, operating characteristics, limiting conditions, and performance curves.
3. Documentation: Review emergency, operations, and maintenance manuals; Project Record Documents; identification systems; warranties and bonds; and maintenance service agreements.
4. Emergencies: Include instructions on stopping; shutdown instructions; operating instructions for conditions outside normal operating limits; instructions on meaning of warnings, trouble indications, and error messages; and required sequences for electric or electronic systems.
5. Operations: Include startup, break-in, control, and safety procedures; stopping and normal shutdown instructions; routine, normal, seasonal, and weekend operating instructions; operating procedures for emergencies and equipment failure; and required sequences for electric or electronic systems.
6. Adjustments: Include alignments and checking, noise, vibration, economy, and efficiency adjustments.
7. Troubleshooting: Include diagnostic instructions and test and inspection procedures.
8. Maintenance: Include inspection procedures, types of cleaning agents, methods of cleaning, procedures for preventive and routine maintenance, and instruction on use of special tools.
9. Repairs: Include diagnosis, repair, and disassembly instructions; instructions for identifying parts; and review of spare parts needed for operation and maintenance.

PART 3 – EXECUTION

1. INSTRUCTION
	1. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
	2. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
		1. Schedule training with Owner with at least seven days' advance notice.

END OF SECTION 01790

**END OF DIVISION 01 – GENERAL REQUIREMENTS**