



Home of the Falcons

PROJECT MANUAL
INCLUDING SPECIFICATIONS

FOR

VENETIA VALLEY SCHOOL FIELD RESTORATION PROJECT

177 North San Pedro Road
San Rafael, CA 94903

ARCHITECT

SVA Architects, Inc.

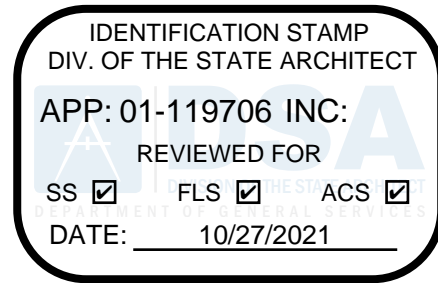
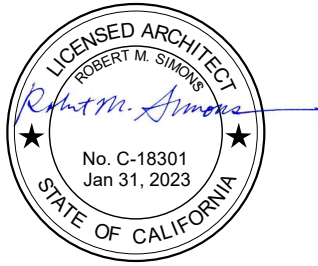
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SVA Project Number:

2017-40104.810

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**Specification Approval for:
VENETIA VALLEY SCHOOL
FIELD RESTORATION PROJECT**



**Robert Simons, AIA
Architect, SVA Architects Inc.**

C-18301

SECTION 00 01 10

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**PROJECT MANUAL
INTRODUCTORY INFORMATION**

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Not used

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Not used.

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Not used.

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Not used.

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Not used.

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Not used.

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Not used.

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Not used.

DIVISION 11 – EQUIPMENT

Not used.

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Not used.

DIVISION 13 – SPECIAL CONSTRUCTION

Not used.

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Not used.

DIVISION 21 – FIRE SUPPRESSION

Not used.

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Not used.

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Not used.

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Not used.

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Not used.

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Not used.

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Not used.

DIVISION 33 –UTILITIES

Not used.

END OF SECTION

SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Project consists of construction of ***Venetia Valley School Field Restoration Project*** located at 177 N San Pedro Rd, San Rafael, CA 94903 as indicated in Contract Documents.
 - 1. Owner reserves right to remove and retain possession of existing items prior to start of Contract.
 - 2. Removal of hazardous material shall be per separately provided hazardous material abatement report prepared by others. Architect shall not be involved in determination, removal or disposal of hazardous materials.

1.2 REQUIREMENTS INCLUDED

- A. This section includes administrative provisions:
 - 1. Work sequence.
 - 2. Contractors use of premises.
 - 3. Field engineering.
 - 4. Regulatory requirements and reference standards.
 - 5. Owner furnished Contractor installed products (OFCI).
 - 6. Owner pre-ordered products.

1.3 WORK SEQUENCE

- A. Coordinate construction schedule and operations with Owner and Architect.
- B. Perform construction in phases as indicated.

1.4 CONTRACTORS USE OF PREMISES

- A. Limit use of premises for Work and construction operations and to allow for work by other contractors.
- B. Coordinate use of premises and access to site under direction of Owner and Architect.

1.5 FIELD ENGINEERING

- A. Provide field engineering services; establish lines and levels by use of recognized engineering survey practices.
- B. Locate and protect control and reference points.

1.6 REGULATORY REQUIREMENTS AND REFERENCE STANDARDS

A. Regulatory Requirements:

1. Architect has contacted governing authorities and reviewed design requirements of local, state and federal agencies for applicability to Project.
2. Contractor shall be responsible for contacting governing authorities directly for necessary information and decisions bearing upon performance of Work.

B. Reference Standards:

1. For Products specified by association or trade standards, comply with requirements of referenced standard, except when more rigid requirements are specified or are required by applicable codes.
2. Applicable date of each standard is that in effect as of date on proposal or date on Contract where no proposal is available, except when a specific date is specified.

1.7 OWNER FURNISHED CONTRACTOR INSTALLED PRODUCTS (OFCI)

A. Select products are to be furnished and paid for by Owner and installed by Contractor:

1. Refer to Drawings and Specifications.

B. Owner's Responsibilities:

1. Arrange for and deliver shop drawings, product data, and samples to Contractor.
2. Arrange and pay for product delivery to site.
3. Inspect products jointly with Contractor on delivery.
4. Submit claims for transportation damage.
5. Arrange for replacement of damaged, defective, or missing items.
6. Arrange for manufacturer's warranties, inspections, and service.

C. Contractor's Responsibilities:

1. Review shop drawings, product data, and samples.
2. Receive and unload products at site.
3. Inspect jointly with Owner for completeness and damage.
4. Handle, store, and install products.
5. Finish products as required after installation.
6. Repair or replace items damaged by Work of this Contract.

1.8 OWNER PRE-ORDERED PRODUCTS

A. Select products have been pre-ordered by Owner:

1. Refer to Drawings.

B. Owner has negotiated purchase orders for these products for incorporation into Project.

1. Purchase orders are assigned to Contractor; costs shall be included into base bid.

2. Contractor's responsibilities are same as if Contractor negotiated purchase orders.

END OF SECTION

SECTION 01 20 00

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Special administrative and procedural requirements necessary to prepare and process Application for Payment.

1.2 SCHEDULE OF VALUE

- A. Coordination: Coordinate preparation of Schedule of Values with preparation of Contractor's Construction Schedule.
1. Correlate line items in Schedule of Values with other required administrative forms and schedules, including application for Payment forms with Continuation Sheets, Submittals Schedule, and Contractor's Construction Schedule.
 2. Submit Schedule of Values to Architect at earliest possible date but no later than seven days before date scheduled for submittal of initial Application for Payment.
- B. Format and Content: Use Project Manual table of contents as guide to establish line items for Schedule of Values. Provide at least one line item for each Specification Section.
1. Identification: Include following Project identification on Schedule of Values.
 - a. Project name and location.
 - b. Name of Architect.
 - c. Architect's Project number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Submit draft of AIA Document G703 Continuation Sheets.
 3. Provide breakdown of Contract Sum in enough detail to facilitate continued evaluation of Application for Payment and progress reports. Coordinate with Project Manual table of contents.
 - a. Provide several line items for principal subcontract amounts where appropriate.
 4. Round amounts to nearest whole dollar; total shall equal Contract Sum.
 5. Provide separate line item in Schedule of Values for each part of 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 Schedule of Value for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of Work.
7. Each item in Schedule of Values and Application for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - a. 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 Schedule of Values or distributed as general overhead expense at Contractor's option.
8. Schedule Updating: Update and resubmit Schedule of Values before next application for Payment when Change Orders or Construction Change Directives result in a change in Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.
 1. Initial Application for Payment: Application for Payment at time of Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: Date for each progress payment is indicated in Agreement between Owner and Contractor. Period of construction Work covered by each Application for Payment is period indicated in Agreement.
- C. Payment Application Forms: AIA Document G702 and AIA Document G703 Continuation Sheets as form for Application for Payment.
- D. Application Preparation: Complete every entry on form. Execute by person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
 1. Entries shall match data on Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal:
 1. Contractor shall provide ten copies of Application for Payment one week prior to Payment Request ("Draw") Meeting, for review of team members.
 2. Contractor shall provide ten wet signed copies of Application for Payment at Payment Request ("Draw") Meeting.
 - a. Provide each copy with transmittal form listing attachments and recording appropriate information about application.

- b. Copies shall include waivers of lien and similar attachments if required.
- F. Waivers of Mechanic's Lien: With each Application for Payment submit waivers of mechanic's lien from every entity who is lawfully entitled to file a mechanic's lien arising out of Contract and related to Work covered by payment.
- 1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 - 2. When an application shows completion of an item, submit final or full waivers.
 - 3. Owner reserves right to designate which entities involved in Work must submit waivers.
 - 4. Waiver Forms: Submit waivers of lien on forms executed in manner acceptable to Owner.
- G. 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.
 - 2. Schedule of Values.
 - 3. Contractor's Construction Schedule (preliminary if not final).
 - 4. Schedule of unit prices.
 - 5. Submittals Schedule (preliminary if not final).
 - 6. List of Contractor's staff assignments.
 - 7. List of Contractor's principal consultants.
 - 8. Copies of building permits.
 - 9. Copies of authorizations and licenses from authorities having jurisdiction for performance of Work.
 - 10. Initial progress report.
 - 11. Report of preconstruction conference.
 - 12. Certificates of insurance and insurance policies.
- H. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted including but not necessarily limited to following.
- 1. Evidence of completion of Project closeout requirements.

2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement accounting for final changes to Contract Sum.
4. AIA Document G706, Contractor's Affidavit of Payment of Debts and Claims.
5. AIA Document G706A, Contractor's Affidavit of Release of Liens.
6. AIA Document G707, Consent of Surety to Final Payment.
7. Evidence that claims have been settled.
8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Completion.
9. Final liquidated damages settlement statement.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. General: Procedures are described for requesting substitution of unlisted materials in lieu of materials named in Specifications or approved for use in addenda.
 - 1. Provide products listed in Contract Documents, products by manufacturers listed in Contract Documents, and products meeting specified requirements.
 - a. Contract Amount: Base on materials and products included in Contract Documents.
 - b. Where materials and products are listed in Contract Documents, materials and products by manufacturers not listed shall not be used without Owner's and Architect's approval of Contractor's written request for substitution.
 - 2. Purpose: After bidding, substitutions will only be considered where Owner will receive benefit or because specified materials are no longer available due to no fault of Contractor.
 - 3. Purpose: Substitutions will only be considered where Owner will receive benefit or because specified materials are no longer available due to conditions beyond Contractor control.
 - a. Owner benefits either from a Contractor proposed reduction of the Contract amount or from a reduction in Contract time based on acceptance of proposed substitution.
 - b. List proposed cost or time reductions on request for substitution.
 - c. Requests not including a proposed cost or time reduction will not be considered unless Contractor submits supporting information indicating specified materials are not available.
- B. Related Sections:
 - 1. Section 01 60 00: Product requirements.

1.2 SUBSTITUTIONS

- A. Within a period of 35 days after award of Contract, Owner and Architect will consider formal requests for substitutions only from Contractor as specified in 1.1 Summary.
 - 1. Owner and Architect will consider only one request for substitution for each material; where requests are denied Contractor shall be required to provide specified materials.

2. After initial 35-day period, requests will be considered only when a product becomes unavailable through no fault of Contractor; more than one request for substitution will be considered if necessary.
- B. Prior to submittal of second Request for Payment Owner and Architect will consider formal requests for substitutions from Contractor as specified in 1.1 Summary.
 1. Owner and Architect will consider only one request for substitution for each material; where requests are denied Contractor shall be required to provide specified materials.
 2. After payments begin, requests will be considered only when a product becomes unavailable through no fault of Contractor; more than one request for substitution will be considered if necessary.
- C. Submit each request with sequentially numbered "Substitution Request Transmittal" acceptable to Owner and Architect; submit separate request for each product and support each request with:
 1. Product identification with manufacturer's literature and samples where applicable.
 2. Name and address of similar projects on which product has been used, and date of installation.
- D. Submit itemized comparison of proposed substitution with product specified and list significant variations.
- E. Submit data relating to changes in construction schedule.
- F. Note effect of substitution on other work, products, or separate contracts.
 1. Note if acceptance of substitution could require revision of Contract Documents, Drawings, details or Specifications.
- G. Include accurate cost data comparing proposed substitution with product and amount of net change in Contract price.
 1. Include costs to other contractors and costs for revisions to Drawings, details or Specifications.
- H. Substitutions will not be considered for acceptance when:
 1. They are indicated or implied on submittals without a formal request from Contractor.
 2. They are requested directly by a subcontractor or supplier.
 3. Acceptance will require substantial revision of Contract Documents.
- I. Substitute products shall not be ordered without written acceptance of Owner and Architect.

- J. Owner and Architect will determine acceptability of proposed substitutions and reserves right to reject proposals due to insufficient information.

1.3 CONTRACTOR'S REPRESENTATION

- A. Requests constitute a representation that Contractor:
 - 1. Has investigated proposed product and determined it meets or exceeds, in all respects, specified product.
 - 2. Will provide same warranty or longer warranty for substitution as for specified product.
 - 3. Will coordinate installation and make other changes that may be required for Work to be complete in all respects.
 - 4. Waives claims for additional costs that subsequently become apparent.
 - 5. Will pay costs of changes to Contract Documents, Drawings, details and Specifications required by accepted substitutions.

1.4 ARCHITECT'S DUTIES

- A. Review Contractor's requests for substitutions with reasonable promptness.
 - 1. Architect will recommend that Owner accept or reject substitution request.
 - 2. Upon request, Architect will provide cost for changes to Contract Documents, Drawings, details and Specifications required for substitutions.
- B. Notify Contractor in writing of decision to accept or reject requested substitution.

CONTRACTOR'S SUBSTITUTION REQUEST

(Use separate form for each request)

Date: _____ Request No.: _____

TO: **Architect** _____
Phone: _____ Fax: _____

PROJECT: _____ Project No.: _____
CONTRACTOR _____

SPECIFIED ITEM: _____

Section: _____ Page: _____ Paragraph: _____ Description: _____

Drawing Number(s): _____ Detail Number(s): _____

The undersigned request consideration of the following:

PROPOSED SUBSTITUTION: _____

REASON FOR NOT GIVING PRIORITY TO SPECIFIED ITEMS: _____

SAVINGS or CREDIT to OWNER for ACCEPTING SUBSTITUTE: \$ _____

PROJECT COMPLETION CHANGE for ACCEPTING SUBSTITUTE Days _____

Attached data includes description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:

1. Proposed substitution has been fully checked and coordinated with the Contract Documents.
2. The proposed substitution does not affect dimensions shown on Drawings.
3. The proposed substitution does not require revisions to mechanical or electrical work.
4. The undersigned will pay for changes to the building design, including architectural and engineering design, detailing, and construction costs caused by the requested substitution.
5. The proposed substitution will have no adverse effect on other trades, construction schedule, or warranty.
6. Maintenance and service parts will be locally available for the proposed substitution.
7. The proposed substitution will have no adverse effect on LEED credits (applies to LEED Projects ONLY)
8. The proposed substitution will have no adverse effect on Green Building Requirements where applicable.

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item.

Attachments: The attached data is furnished herewith for evaluation of the proposed substitution.

Catalog Drawings Samples Reports Tests Other: _____

Submitted by: _____

(Firm) (Authorized Legal Signature)

(Address) (Telephone)

For use by the Architect: Accepted Accepted as Noted Rejected: Submit Specified Item

BY: _____
(Authorized Signature)

Date: _____ Remarks: _____

END OF SECTION

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: This section specifies administrative and procedural requirements governing Contract modification procedures.
 - 1. Requests for Information (RFI).
 - 2. Change Order.
 - 3. Allowances.
 - 4. Construction Change Directive.
- B. Related Requirements:
 - 1. Section 01 25 00: Substitution procedures.
 - 2. Section 01 30 00: Administrative requirements.

1.2 MINOR CHANGES IN WORK

- A. Architect will issue supplemental instructions authorizing minor changes in Work, not involving adjustment to Contract Sum or Contract Time, on AIA Form G710, Architect's Supplemental Instructions or similar form.

1.3 REQUESTS FOR INFORMATION

- A. Contractor may submit a written Request for Information (RFI) in format approved by Architect relating to perceived inconsistencies and omissions in Contract Documents.
 - 1. A record of RFI's is to be maintained by Contractor along with information regarding origin of request, date of request, and date request was received from Architect. Number RFI's sequentially based on date of request.
- B. Requests for Information shall be used only as a means of obtaining clarification of information not included in Contract Documents and shall not be used to assist Contractor in preparation of shop drawings or other information required by Contract.
 - 1. Contract Documents are intended to contain enough information to show aesthetic and design intent and to provide information such that construction procedures (means and methods) may be reasonably inferred.
 - 2. Contract Documents are not intended to provide specific information related to means and methods of construction nor are they intended to be exhaustive in content.
- C. Contractor shall carefully review requests for information by subcontractors and suppliers to ascertain if information is in Contract Documents prior to submitting a Request for Information to Architect based on requests by others.
 - 1. Contractor may suggest possible solutions to fit Project conditions where appropriate.

- D. Architect reserves right to return RFI's that do not reasonably relate to necessary clarification of intent of Contract Documents and to charge Contractor for time and materials involved in answering RFI's where information is in Contract Documents.
 - 1. RFI's shall not be used as a request for substitutions; refer to Section 01 25 00 – Substitution Procedures.

1.4 CHANGE ORDERS

- A. Owner-Initiated Proposal Requests: Architect will issue detailed description of proposed changes in Work that require adjustment to Contract Sum or Contract Time. If necessary, description will include supplemental or revised Drawings and Specifications.
 - 1. Proposal requests issued by Architect are for information only. Do not consider changer order proposal requests as instruction either to stop work in progress or to execute proposed change.
 - 2. Within 10 days of receipt of a proposal request, submit estimate of cost necessary to execute change to Architect for Owner's review.
 - a. Include list of quantities of products required and unit costs, with total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental and amounts of trade discounts.
 - c. Include a statement indicating effect of proposed change in Work will have on Contract Time.
- B. Contractor-Initiated Proposals: When latent or unforeseen conditions require modifications to Contract, Contractor may propose changes by submitting a request for a change to Architect and Owner.
 - 1. Include statement of reasons for change and effect of change on Work. Provide a complete description of proposed change. Indicate effect of proposed change on Contract Sum and Contract Time.
 - 2. Include a list of quantities of products required and unit costs with total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental and amounts of trade discounts.
 - 4. Comply with requirements in Section 01 25 00 - Substitution Procedures if proposed change requires substitution of unspecified product or system for specified product or system.
- C. Proposal Request Form: Use AIA Document G709 for Change Order Proposal Requests; other substitute formats shall be submitted to Owner and Architect for approval prior to use.

- D. Change Order Procedures: Contractor shall be directed to proceed with Work upon Owner's approval of Proposal.
 - 1. Architect will issue Change Order for signatures of Owner and Contractor on AIA Form G701 or similar form, including approved Change Order proposals for that time period.
 - 2. Amounts of each Change Order shall be indicated in each Request for Payment including payment status for each individual Change Order.

1.5 ALLOWANCES

- A. Allowance Adjustment: For Contract items bid based on allowance, submit Change Order Proposal on difference between actual purchase amount and allowance, based on work-in-place.
 - 1. Include installation cost in purchase amount only where indicated as part of allowance.
 - 2. When requested, prepare explanations and documentation to substantiate amounts claimed for work done based on allowances.
 - 3. Submit substantiation of a change in Scope of work claimed in Change Orders related to allowances.
 - 4. Owner reserves right to establish actual quantity of work-in-place by independent quantity survey, measure or count.
- B. Submit claims for increase costs because of a change in scope or nature of allowance described in Contract Documents, whether for purchase order amount or Contractor's handling, labor, installation, overhead and profit.
 - 1. Submit claims within 21 days of receipt of Change Order or Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than 21 days.
 - 2. Do not include Contractor's or subcontractor's indirect expense in Change Order cost amount unless it is clearly shown that nature or extent of work has changed from what could have been foreseen from information in Contract Documents.
 - 3. No change to Contractor's indirect expense is permitted for selection of higher or lower-priced materials or systems of same scope and nature as originally indicated.

1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When Owner and Contractor disagree on terms of Proposal Request, Architect may issue a Construction Change Directive per AIA Form G714 or similar form.
 - 1. Construction Change Directive instructs Contractor to proceed with change in Work, for subsequent inclusion in Change Order.
 - 2. Construction Change Directive contains a complete description of change in Work. It also designates method to be followed to determine change in Contract Sum or Contract Time.

- B. Documentation: Maintain detailed records on a time and material basis of Work required by Construction Change Directive. Coordinate scheduling with Construction Manager to allow monitoring by Owner if desired.
 - 1. After completion of change, submit itemized account and supporting data necessary to substantiate cost and time adjustments to Contract.

END OF SECTION

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes general procedural requirements for ongoing submittals.
 - 1. Schedule of values.
 - 2. Product data and manufacturer's literature.
 - 3. Shop drawings.
 - 4. Samples.
 - 5. Manufacturers' certificates.
 - 6. Excess materials and attic stock.
 - 7. Design build (delegated design) procedures.
 - 8. Deferred approval requirements.

- B. Related Requirements:
 - 1. Section 01 31 00: Project management and coordination.
 - 2. Section 01 32 10: Construction Schedule – Bar Chart.
 - 3. Section 01 40 00: Test reports, manufacturer's field reports, and mock-ups.
 - 4. Section 01 70 00: Manufacturers' instructions.
 - 5. Section 01 77 00: Closeout requirements including Project Record Documents.
 - 6. Section 01 78 00: Warranties.

1.2 GENERAL SUBMITTAL PROCEDURES

- A. Submittals: Transmit each item using form approved by Architect; submit sample to Architect for approval prior to use.
 - 1. Identify Project, Contractor, subcontractor, major supplier.
 - a. Attach sequential identification number for each new submittal.
 - b. Identify each resubmittal using original submittal number and sequential identification clearly indicating item is resubmitted.
 - 2. Identify pertinent Drawing sheet and detail number, and Specification section number as appropriate.
 - 3. Identify deviations from Contract Documents.
 - 4. Provide space for Contractor and Architect review stamps.

5. Contractor: Review and stamp submittals from subcontractors prior to submitting to Architect.
 - a. Review submittals and indicate where conflicts occur with Contract Documents and with work of other subcontractors.
 - b. Return submittals that vary significantly from Contract Documents for correction and resubmittal prior to submitting to Architect.
 - c. Submittals that vary significantly from Contract Documents and that fail to indicate thorough Contractor review prior to submission to Architect will be returned without review.
 - d. cursory review and stamping of subcontractor submittal by Contractor shall not be acceptable.
- B. Initial Schedules: Submit initial progress schedule and schedule of value in duplicate within 15 working days after award of Contract.
 1. After review by Owner and Architect revise and resubmit where required.
- C. Comply with progress schedule for submittals related to Work progress. Coordinate submittal of related items.
- D. After Architect review of submittal, revise and resubmit as required, identify changes made since previous submittal.
- E. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply.

1.3 TYPES OF SUBMITTALS

- A. General: Project requires various types of submittals to maintain communications, minimize misunderstandings, avoid unnecessary conflicts, and to ensure complete documentation for Project Record Documents.
 1. Maintain complete set of submittals including required revisions.
- B. Construction Schedules: Submit construction progress schedules for Design Team and Owner review and to maintain entire team up-to-date on construction activities.
- C. Schedule of Values: Submit Schedule of Values indicating division of Work, subcontractors to perform work, products being used, and values attributed to each to inform Design Team and Owner.
- D. Action Submittals: Submittals relating to product data and manufacturer's literature, shop drawings, and samples for Design Team review and comment; do not begin fabrication, delivery, or installation until Design Team review is complete.
- E. Information Submittals: Submittals relating to certifications, qualifications, reports, including test reports, and instructions are for information; Design Team may choose to comment but action is not generally anticipated.

1. Manufacturer installation instructions and recommendations shall be considered information submittals.
- F. Design/Build Submittals: Where portion of Work requires design by specialized professionals submit information necessary to ensure work complies with Contract Documents along with certifications signed by qualified professional.
 1. Calculations: Do not submit calculations unless specifically required by Contract Documents; submit calculations required by applicable authorities directly to applicable authorities;
 - a. Submit certification by qualified professional indicating required calculations have been prepared and work conforms to Contract Documents and applicable codes and regulations.
- G. Maintenance Materials Submittals: Compile maintenance information and materials during Work to ensure complete set of documents, maintenance manuals, and operation instructions.
- H. Closeout Submittals: Compile closeout submittals, organize, and submit to Owner prior to or at time of Substantial Completion. Project will not be considered Substantially Complete until closeout submittals have been received by Owner.
- I. Material Safety Data Sheets (MSDS): MSDS will only be reviewed by Architect when submitted to show compliance with LEED certification requirements.
 1. Non-LEED submittals that include material safety data sheets will be returned for resubmittal.

1.4 SCHEDULE OF VALUES

- A. Submit typed schedule on AIA Form G703 or another Owner and Architect pre-approved 8-1/2" by 11" paper format; Contractor's standard media-driven printout will be considered on request. Submit within 15 days after award of Contract.
- B. Format: Table of Contents of this Project Manual, with modifications as pre-approved by Owner and Architect; identify each line item with number and title of major Specification sections.
- C. Include in each line item a directly proportional amount of Contractor overhead and profit.
- D. Revise schedule to list change orders for each Application for Payment.
 1. Submit subschedule for each phase of Work.

1.5 PRODUCT DATA/MANUFACTURERS' LITERATURE

- A. Action Submittals: Mark each copy to identify applicable Products, models, options, and other data; supplement manufacturers' standard data to provide information unique to the Work.

- B. Information Submittals: Include manufacturers' installation instructions only when required by Specifications or specifically requested by Architect.
 - 1. Maintain copy of manufacturer installation instructions and recommendations in Contractor's field office for review.
- C. Product data shall be submitted as electronic PDF files unless otherwise noted or approved by Architect in advance.
 - 1. Where paper copies are permitted submit number of copies Contractor requires, plus one copy to be retained by Architect.
- D. Submit number of copies Contractor requires, plus one copy to be retained by Architect.

1.6 SHOP DRAWINGS

- A. Shop drawings shall be submitted as electronic PDF files unless otherwise noted or approved by Architect in advance.
 - 1. Where prints are permitted submit one reproducible print; minimum sheet size 8-1/2" by 11".
- B. Shop drawings shall be submitted in reproducible format acceptable to Architect and Owner; computerized PDF files will be acceptable unless otherwise directed.
 - 1. Prints: Submit one reproducible print; minimum sheet size 8-1/2" by 11".
 - 2. Prints: Submit three reproducible prints; minimum sheet size 8-1/2" by 11".
- C. Distribution: After review, reproduce and distribute.

1.7 SAMPLES

- A. Submit full range of manufacturers' standard colors, textures, and patterns for Architect's selection.
- B. Submit samples to illustrate functional characteristics of Product, with integral parts and attachment devices.
- C. Coordinate submittal of different categories for interfacing work.
- D. Include identification on each sample, giving full information.
- E. Submit number of samples required by Contractor plus one to be retained by Architect.
 - 1. Maintain one set of approved samples at Project Field Office.

- F. Sizes: Provide following sizes unless otherwise specified.
 - 1. Flat or Sheet Products: Minimum 6" square, maximum 12" by 12".
 - 2. Linear Products: Minimum 6", maximum 12" long.
 - 3. Bulk Products: Minimum one pint, maximum one gallon.

G. Full size samples may be used in the Work upon approval.

1.8 MANUFACTURERS' CERTIFICATES

- A. Submit certificates, in duplicate in accordance with requirements of each Specification section.

1.9 EXCESS MATERIALS AND ATTIC STOCK

- A. Excess Materials: Excess materials shall be considered property of Owner; inform Owner of extent of excess materials and methods required for handling and storage; remove from site excess materials not required by Owner for maintenance stock.
- B. Attic Stock: Owner may choose to obtain additional attic stock for maintenance purposes where excess materials are not considered adequate.
 - 1. Owner may require as much as 5% extra materials for maintenance purposes. Exact amount of each material shall be determined by Owner based on following meeting and additional costs determined by Contractor.
 - a. Contractor shall be prepared to order up to 5% extra materials on items that may not be readily available in future such as custom colors, off-shore manufacture, anticipated life span under 5 years, and potential for damage.
 - 1) Do not order extra attic stock until extent is determined and agreed to by Owner including which materials require extra stock and exactly how much those materials will cost including shipping and handling.
 - b. Excess Materials: Furnish excess materials only for materials that have a shelf-life of more than three years.
 - 2. Meeting: Conduct meeting prior to beginning Work to discuss extent of materials Owner would like to receive at Project Closeout for attic stock for maintenance materials; where available include personnel from Owner's maintenance crew.
 - a. Estimate amount of excess materials to be anticipated to be ordered in addition to materials for handling and storage and how those materials will be invoiced and identified regarding material and location in Project.
 - b. Determine area necessary for adequate storage, handling, and identifying excess materials and attic stock and discuss with Owner.
 - c. Submit information regarding equipment necessary for handling of excess materials and attic stock due to weight, size, and storage requirements.

- d. Assist Owner in determining where on-site or off-site additional attic stock for maintenance purposes will be delivered and stored.
3. Additional Costs: After meeting submit to Owner detailed listing of additional costs for each material Owner may like to receive for attic stock and assist Owner in modifying listing to determine acceptable final costs.
 - a. Include unit prices for desired attic stock where excess materials are not adequate for Owner maintenance stock.
4. Substantial Completion: Submit Construction Bulletin at Substantial Completion indicating changes to Contract Amount for attic stock including unit price totals for materials where excess materials are not adequate.
5. Final Completion: Ensure attic stock has been received, identified, cataloged, and stored at locations agreed upon with Owner based on Change Order indicating amounts finally agreed to by Owner.

1.10 DESIGN/BUILD PROCEDURES

- A. Design as Part of Means and Methods of Construction: Select Project components require construction team design as part of means and methods of construction as described in various sections.
 1. Terms commonly used such as Design/Build, Delegated Design, and Design/Assist are applicable to these procedures as determined by law but shall be generally referred to in these documents as Design/Build.
 - a. In general Design/Build includes design by licensed professionals with expertise beyond that allowed under standard architectural licensure, and outside of scope of work of other design professionals on the design team.
 2. Contractor may be required to provide design services as part of construction for specific work defined as design or design-build where special expertise is required that is not available in the Project design team.
 3. Subcontractors, fabricators, and manufacturers may be required to provide design services as part of their work due to special expertise in design services for their specific components, refer to technical sections for Design/Build.
 4. Contractor, subcontractors, fabricators, manufacturers, and suppliers shall be responsible for attachments, anchors, fasteners, adhesives, and connectors suitable to applications unless specific items are listed in Contract Documents.
 - a. Where specific items are listed in Contract Documents Contractor, subcontractors, fabricators, manufacturers, and suppliers shall review and submit comments where items listed are not acceptable.
 - b. Where no comments are received, listed items shall be considered acceptable.

- B. Contractor acknowledges and accepts responsibility for specialty design as part of means and methods of construction, as well as coordination of parties involved to achieve architectural design intent indicated in Contract Documents.
 - 1. Design-build work includes sizing, sequencing, and detailing for construction by professional licensed or registered engineer or design professional with special expertise applicable to portion of Work involved.
 - 2. Design-build work shall be constructed in compliance with building codes and regulations in effect and shall be fit and proper for intended use.
 - 3. Design-build work shall include drawings, specifications, and calculations prepared, stamped, and signed by qualified professional licensed or registered engineer licensed in the Project location as appropriate to design-build work.
 - a. Plans, specifications, and calculations shall be acceptable to Owner, Owner's Representative, and applicable authorities.
- C. Where required by Owner Contractor shall submit copies of current insurance policies covering errors and omissions of persons designing design-build work with deductibles and limits per occurrence as mutually agreed by Owner and Contractor.
 - 1. Provide endorsement to insurance providing for 30-day notice to Owner prior to cancellation or material reduction in coverage.
 - 2. Insurance shall be maintained for not less than applicable statute of limitations for claims of latent defects, if such insurance is not written on an occurrence basis during time design-build work is designed and constructed.
- D. Review proposed layouts with Design Team and with various trades prior to commencing work related to design-build work.

1.11 DEFERRED APPROVAL REQUIREMENTS

- A. Installation of deferred approval items shall not be started until detailed plans, specifications, and engineering calculations have been accepted and signed by Architect or Engineer of Record responsible for Project design.
- B. Deferred Approval Items shall be signed by California registered architect or professional engineer delegated responsibility covering specific work shown requiring approval by Division of the State Architect.
 - 1. Deferred approval items for this Project include but may not be limited to following:
 - a. Translucent Walls and Roofs – Section 08 45 00.
 - b. Telescopic Bleachers – Section 12 66 01.
 - c. Grandstands – Section 13 34 16.
 - d. Hydraulic Elevators – Section 14 24 00.

2. Deferred approval drawings and specifications become part of the approved submittal documents for the Project when they are submitted to and approved by Division of the State Architect.
3. Submit four prints of each drawing. Drawings shall include empty 7” by 9” space on first sheet reserved for Architect to add “General Conformance Block” required for DSA.
4. Submit four copies of calculations, product data and test reports.
5. Identify and specify supports, fasteners, spacing, penetrations, etc., for each deferred approval items, including calculations for each fastener.
6. Submit documents to Architect of Record for review.
7. Deferred submittal documents shall bear stamp and signature of architect or engineer licensed in State of California and responsible for work shown on deferred submittal documents.
8. Architect of Record will forward submittal to appropriate Project Engineer.
9. Review of Project Architect or Engineer of Record is for conformance with design concept shown on Contract Documents. Neither Architect or Engineer of Project shall be responsible for review for correctness of deferred approval items.
10. After review by Architect/Engineer of Record, Architect of Record will forward two copies of submittal to Division of the State Architect for approval.
11. Respond to review comments made by Division of the State Architect and revise and resubmit submittal for final approval.
12. Architect of Record will forward two copies of final revised submittal to the Division of the State Architect for approval.
13. The Division of the State Architect will return one copy of final submittal to the Architect of Record.
14. Architect of Record will forward one copy of evidence of submittal approval by Division of the State Architect for final distribution by General Contractor.

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Description of Project management and coordination including but not necessarily limited to the following:
 - 1. General Project coordination procedures.
 - 2. Coordination drawings.
 - 3. Staff names.
 - 4. Administrative and supervisory personnel.
 - 5. Project meetings.
- B. Related Sections:
 - 1. Section 01 30 00: Administrative requirements.
 - 2. Section 01 79 00: Demonstration and training.

1.2 COORDINATION

- A. Coordination: Coordinate construction operations included in various Specifications sections to ensure efficient and orderly installation of each part of Work.
 - 1. Coordinate construction operations that depend on each other for proper installation, connection, and operation.
 - 2. Coordinate work to assure efficient and orderly sequence of installation of construction elements.
 - 3. Make provisions for accommodating items installed by Owner or under separate contracts.
- B. Prepare memoranda for distribution to each party involved as needed, outlining special procedures required for coordination.
 - 1. Include required notices, reports, and list of attendees at meetings; include Architect and Owner in distribution.
- C. Verify characteristics of interrelated operating equipment are compatible; coordinate work having interdependent responsibilities for installing, connection to, and placing such equipment in service.

- D. Coordinate space requirements and installation of mechanical and electrical work indicated diagrammatically on Drawings.
 - 1. Follow routing shown for pipes, ducts, and conduits as closely as possible; make runs parallel with lines of building.
 - 2. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated; coordinate locations of fixtures and outlets with finish elements.
- F. Administrative Procedures: Coordinate scheduling and timing of administrative procedures with other construction activities and activities of other contractors to avoid conflicts and ensure orderly progress of Work.

1.3 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings for areas where space availability is limited and necessitates maximum utilization of space for components and where separate entities, products, and materials require coordination.
 - 1. Require each subcontractor with items located in ceiling space to furnish coordination drawings of their items to assist in preparation of Contractor's Coordination Drawings.
 - 2. Indicate relationship of components shown on separate Shop Drawings.
 - 3. Indicate required installation sequences.
 - 4. Ceiling Spaces: Take special care to coordinate structure, ceiling systems, equipment located in ceiling spaces, fire protection systems, mechanical systems, and electrical systems.
- B. Staff Names: Immediately after receipt of notice to proceed or immediately after signing of Contract by Owner and Contractor, submit list of principal staff assignments, including superintendent and other personnel in attendance at Project site.
 - 1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone.

1.4 SUPERVISORY AND ADMINISTRATIVE PERSONNEL

- A. Provide supervisory personnel, in addition to Project Superintendent, as required for proper and timely performance of Work and coordination of subcontracts.
- B. Provide administrative staff as required to allow Project Superintendent and supervisory personnel to allocate maximum time to Project supervision and coordination.

1.5 PROJECT MEETINGS

- A. Schedule and administer Project meetings throughout progress of Work:

1. Pre-construction meeting.
 2. Progress meetings at weekly intervals.
 3. Pre-installation conferences.
 4. Coordination meetings.
 5. Special meetings.
- B. Make physical arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes and distribute copies within two days to Architect, Owner, participants, and those affected.
- C. Attendance: Job superintendent, major subcontractors and suppliers as appropriate to agenda; Architect, Owner, and Owner and Architect's consultants as appropriate to agenda topics for each meeting.
- D. Suggested Agenda: Review of Work progress, status of progress schedule and adjustments, delivery schedules, submittals, requests for information, maintenance of quality standards, pending changes and substitutions, and issues needing resolution.

END OF SECTION

SECTION 01 32 10

CONSTRUCTION SCHEDULE - BAR CHART

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. References.
- B. Performance requirements.
- C. Qualifications.
- D. Quality Assurance.
- E. Project record documents.
- F. Submittals.
- G. Review and evaluation.
- H. Format.
- I. Cost and schedule reports.
- J. Early work schedule.
- K. Construction schedule.
- L. Short interval schedule.
- M. Requested time adjustment schedule.
- N. Recovery schedule.
- O. Updating schedules.
- P. Distribution.

1.2 REFERENCES

- A. Construction Planning and Scheduling Manual - A Manual for General Contractors and the Construction Industry, The Associated General Contractors of America (AGC).
- B. National Weather Service - Local Climatological Data.

1.3 PERFORMANCE REQUIREMENTS

- A. Ensure adequate scheduling during construction activities so work may be prosecuted in an orderly and expeditious manner within stipulated Contract Time.

- B. Ensure coordination of Contractor and subcontractors at all levels.
- C. Ensure coordination of submittals, fabrication, delivery, erection, installation, and testing of materials and equipment.
- D. Ensure on-time delivery of Owner furnished materials and equipment.
- E. Ensure coordination of jurisdictional reviews.
- F. Assist in preparation and evaluation of applications for payment.
- G. Assist in monitoring progress of work.
- H. Assist in evaluation of proposed changes to Contract Time.
- I. Assist in evaluation of proposed changes to Construction Schedule.
- J. Assist in detection of schedule delays and identification of corrective actions.

1.4 QUALIFICATIONS

- A. Scheduler: Personnel with 3 years minimum experience in scheduling construction work of a complexity and size comparable to this Project.
- B. Administrative Personnel: 3 years minimum experience in using and monitoring schedules on comparable projects.

1.5 QUALITY ASSURANCE

- A. Perform work in accordance with Construction Planning and Scheduling Manual published by the AGC.
- B. In the event of discrepancy between the AGC publication and this section, provisions of this section shall govern.

1.6 PROJECT RECORD DOCUMENTS

- A. Submit record documents under provisions of Section 01 77 00.
- B. Submit one reproducible and two copies of final Record Construction Schedule which reflects actual construction of this Project.
- C. Record schedule shall be certified for compliance with actual way project was constructed.
- D. Receipt of Record Construction Schedule shall be a condition precedent to any retainage release or final payment.

1.7 SUBMITTALS

- A. Within 7 days from the Notice of Award submit proposed Early Work Schedule and preliminary Cost Report defining activities for first 60 days of Work.

- B. Within 45 days from the Notice of Award submit proposed Construction Schedule and final Cost Report.
- C. Submit updated Construction Schedule at least 10 days prior to each Application for Payment.
- D. Submit Short Interval Schedule at each Construction Progress Meeting.
- E. Submit Time Adjustment Schedule within 10 days of commencement of a claimed delay.
- F. Submit Recovery Schedules as required by completion of work.
- G. Submit one reproducible and two copies of each schedule and cost report.

1.8 REVIEW AND EVALUATION

- A. Early Work Schedule shall be reviewed during Preconstruction Conference with Owner and Architect.
- B. Within 5 days of receipt of Owner and Architect's comments provide satisfactory revision to Early Work Schedule or adequate justification for activities in question.
- C. Acceptance by Owner of corrected Early Work Schedule shall be a condition precedent to making any progress payments for first 60 days of Contract.
- D. Cost loaded values of Early Work Schedule shall be a basis for determining progress payments during first 60 days of Contract.
- E. Participate in joint review of Construction Schedule and Reports with Owner and Architect.
- F. Within 7 days of receipt of Owner and Architect's comments provide satisfactory revision to Construction Schedule or adequate justification for activities in question.
- G. In the event that an activity or element of work is not detected by Owner or Architect review, such omission or error shall be corrected by next scheduled update and shall not affect Contract Time.
- H. Acceptance by Owner of corrected Construction Schedule shall be a condition precedent to making any progress payments after first 60 days of Contract.
- I. Cost-loaded values of Construction Schedule shall be basis for determining progress payments.
- J. Review and acceptance by Owner and Architect of Early Work Schedule or Construction Schedule does not constitute responsibility whatsoever for accuracy or feasibility of schedules nor does such acceptance expressly or impliedly warrant, acknowledge or admit reasonableness of activities, logic, duration, or cost loading stated or implied on schedules.

1.9 FORMAT

- A. Shall be fully developed horizontal bar-chart-type schedule prepared under concepts and methods outlined in AGC Construction Planning and Scheduling Manual.
- B. Provide separate bar for each activity or operation.
- C. Activity shall not have a duration longer than 14 days or a value over \$20,000.00 except non-construction activities for procurement and delivery.
- D. Prepare schedule on sheet of sufficient width to clearly show data.
- E. Provide continuous heavy vertical line identifying first day of week.
- F. Provide continuous subordinate vertical line identifying each day of week.
- G. Identify activities by number, description, and cost.
- H. Show each activity in proper sequence.
- I. Indicate graphically sequences necessary for related activities.
- J. Provide legend of symbols and abbreviations used.

1.10 COST AND SCHEDULE REPORTS

- A. Activity Analysis: Tabulate each activity and identify for each activity:
 - 1. Description.
 - 2. Interface with outside contractors or agencies.
 - 3. Duration.
 - 4. Start date.
 - 5. Finish date.
 - 6. Actual start date.
 - 7. Actual finish date.
 - 8. Monetary value keyed to Schedule of Values.
 - 9. Responsibility.
 - 10. Percentage complete.
 - 11. Variance positive or negative.
- B. Cost Report: Tabulate each activity and identify for each activity:

1. Description.
2. Total cost.
3. Percentage complete.
4. Value prior to current period.
5. Value this period.
6. Value to date.

1.11 EARLY WORK SCHEDULE

- A. Shall establish scope of work to be performed during the first 60 days of Contract.
- B. Shall contain the following phases and activities:
 1. Procurement activities to include mobilization, shop drawings and sample submittals.
 2. Identification of key and long-lead elements and realistic delivery dates.
 3. Construction activities in units of whole days limited to 14 days for each activity except non-construction activities for procurement and delivery.
 4. Approximate cost and duration of each activity.
- C. Shall contain seasonal weather considerations. Seasonal rainfall shall be 10 year average for the month as evidenced by Local Climatological Data obtained from U.S. National Weather Service.
- D. Activities shall be incorporated into Construction Schedule.
- E. No application for payment will be evaluated or processed until Early Work Schedule has been submitted and reviewed.
- F. Shall be updated on a monthly basis while Construction Schedule is being developed.
- G. Failure to submit an adequate or accurate Early Work Schedule or failure to submit on established dates will be considered a substantial breach of Contract.

1.12 CONSTRUCTION SCHEDULE

- A. Shall include Early Work Schedule as first 60 days of Construction Schedule.
- B. Shall be a fully developed horizontal bar-chart-type schedule.
- C. Shall indicate a completion date for project that is no later than required completion date.
- D. Conform to mandatory dates specified in the contract documents.

- E. Should schedule indicate a completion date earlier than any required completion date, Owner or Architect shall not be liable for any costs should project be unable to be completed by such date.
- F. Seasonal weather shall be considered in planning and scheduling of all work. Seasonal rainfall shall be 10 year average for the month as evidenced by Local Climatological Data obtained from U.S. National Weather Service.
- G. Provide sub-schedules to define critical portions of entire schedule.
- H. Indicate procurement activities, delivery and installation of Owner furnished material and equipment.
- I. Level of detail shall correspond to complexity of work involved.
- J. As developed shall show sequence of activities required for complete performance of Work.
- K. Shall be logical and show a coordinated plan of Work.
- L. Show order of activities. Include specific dates of completion.
- M. Duration of activities shall be coordinated with subcontractors and suppliers and shall be best estimate of time required.
- N. Failure to include any activity shall not be an excuse for completing all work by required completion date.
- O. An activity shall meet the following criteria:
 - 1. Any portion or element of work, action, or reaction that is precisely described, readily identifiable, and is a function of a logical sequential process.
 - 2. Descriptions shall be clear and concise. Beginning and end shall be readily verifiable. Starts and finishes shall be scheduled by logical restraints.
 - 3. Responsibility shall be identified with a single performing entity.
 - 4. Additional codes shall identify building, floor, bid item and CSI classification.
 - 5. Assigned dollar value (cost-loading) of each activity shall cumulatively equal total contract amount. Mobilization, bond and insurance costs shall be separate. General requirement costs, overhead, profit, shall be prorated throughout all activities. Activity costs shall correlate with Schedule of Values.
- P. For major equipment and materials show a sequence of activities including:
 - 1. Preparation of shop drawings and sample submissions.
 - 2. Review of shop drawings and samples.
 - 3. Finish and color selection.

4. Fabrication and delivery.
 5. Erection or installation.
 6. Testing.
- Q. Include a minimum of 15 days prior to completion date for punch lists and clean up. No other activities shall be scheduled during this period.

1.13 SHORT INTERVAL SCHEDULE

- A. Shall be fully developed horizontal bar-chart-type schedule directly derived from Construction Schedule.
- B. Prepare schedule on sheet of sufficient width to clearly show data.
- C. Identify activities by same description as Construction Schedule.
- D. Show each activity in proper sequence.
- E. Indicate graphically sequences necessary for related activities.
- F. Indicate activities completed or in progress for previous 2 week period.
- G. Indicate activities scheduled for succeeding 2 week period.
- H. Further detail may be added if necessary to monitor schedule.

1.14 REQUESTED TIME ADJUSTMENT SCHEDULE

- A. Updated Construction Schedule shall not show a completion date later than the Contract Time, subject to any time extensions processed as part of a Change Order.
- B. If an extension of time is requested a separate schedule entitled "Requested Time Adjustment Schedule" shall be submitted to Owner and Architect.
- C. Indicate requested adjustments in Contract Time which are due to changes or delays in completion of work.
- D. Extension request shall include forecast of project completion date and actual achievement of any dates listed in Agreement.
- E. To the extent that any requests are pending at time of any Construction Schedule update, Time Adjustment Schedule shall also be updated.
- F. Schedule shall be a fully developed horizontal bar-chart-type schedule.
- G. Accompany schedule with formal written time extension request and detailed impact analysis justifying extension.
- H. Time impact analysis shall demonstrate time impact based upon date of delay, and status of construction at that time.

- I. Activity delays shall not automatically constitute an extension of Contract Time.
- J. Failure of subcontractors shall not be justification for an extension of time.
- K. Extensions will be granted only to extent that time adjustments extend Contract completion date.
- L. Owner shall not have an obligation to consider any time extension request unless requirements of Contract Documents, and specifically, but not limited to these requirements are complied with.
- M. Owner shall not be responsible or liable for any construction acceleration due to failure of Owner to grant time extensions under Contract Documents should requested adjustments in Contract Time not substantially comply with submission and justification requirements of Contract for time extension requests.
- N. In the event a Requested Time Adjustment Schedule and Time Impact Analysis are not submitted within 10 days after commencement of a delay it is mutually agreed that delay does not require a Contract time extension.

1.15 RECOVERY SCHEDULE

- A. When activities are behind Construction Schedule a supplementary Recovery Schedule shall be submitted.
- B. Form and detail shall be sufficient to explain and display how activities will be rescheduled to regain compliance with Construction Schedule.
- C. Maximum duration shall be one month and shall coincide with payment period.
- D. Ten days prior to expiration of Recovery Schedule verification to determine if activities have regained compliance with Construction Schedule will be made. Based upon this verification the following will occur:
 - 1. Supplemental Recovery Schedule will be submitted to address subsequent payment period.
 - 2. Construction Schedule will be resumed.

1.16 UPDATING SCHEDULES

- A. Review and update schedule at least 10 days prior to submitting an Application for Payment.
- B. Approved change orders which affect schedule shall be identified as separate new activities.
- C. Change orders of less than \$20,000.00 value or less than 3 days duration need not be shown unless completion date is affected.
- D. Maintain schedule to record actual prosecution and progress.

- E. No other revisions shall be made to schedule unless authorized by Owner.
- F. Provide narrative Progress Report at time of schedule update which details the following:
 - 1. Activities or portions of activities completed during previous reporting period.
 - 2. Actual start dates for activities currently in progress.
 - 3. List of major construction equipment used during reporting period and any equipment idle.
 - 4. Number of personnel by craft engaged on Work during reporting period.
 - 5. Progress analysis describing problem areas.
 - 6. Current and anticipated delay factors and their impact.
 - 7. Proposed corrective actions for Recovery Schedule.
 - 8. Proposed modifications, additions, deletions and changes in Construction Schedule.
- G. Schedule update will form basis upon which progress payments will be made.
- H. Owner will not be obligated to review or process Application for Payment until schedule and Progress Report have been submitted.

1.17 DISTRIBUTION

- A. Following joint review and acceptance of updated schedules distribute copies to Owner, Architect, and all other concerned parties.
- B. Instruct recipients to promptly report in writing any problem anticipated by projections shown in schedule.

END OF SECTION

SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes general quality control requirements.
 - 1. General quality control.
 - 2. Manufacturers' field services.
 - 3. Mock-ups.
 - 4. Independent testing laboratory services and inspections.
- B. Related Requirements:
 - 1. Refer to applicable codes and Specifications sections for test requirements.

1.2 QUALITY CONTROL, GENERAL

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

1.3 MANUFACTURER'S FIELD SERVICES

- A. When specified in respective Specification sections, require manufacturer or supplier to have qualified personnel provide on-site observations and recommendations.
 - 1. Observe field conditions, including conditions of surfaces and installation.
 - 2. Observe quality of workmanship.
 - 3. Provide recommendations to assure acceptable installation and workmanship.
 - 4. Where required, start, test, and adjust equipment as applicable.
- B. Representative shall submit written report to Architect or Owner listing observations and recommendations.

1.4 MOCK-UPS

- A. Erect field samples and field mock-ups at locations on site as approved in advance and in accordance with requirements where included in Specifications section.
 - 1. Test mock-ups requiring special equipment may be erected at location having access to necessary equipment; coordinate with Architect.
- B. Field samples and mock-ups not approved and not capable of being acceptably revised shall be removed from site.
- C. Approved field samples and mock-ups may be used as part of Project.

1.5 TESTING LABORATORY SERVICES AND INSPECTIONS

- A. Testing laboratory services and inspections specified and required by applicable codes and regulations will be performed by firms independent of firms related to construction operations and shall be acceptable to applicable authorities.
 - 1. Notify Owner immediately where potential conflict of interest may be involved with testing laboratories or inspection services for Project.
 - 2. Owner or Architect may also require independent testing of items where doubts exist that product or system does not conform to Contract Documents.
 - 3. Owner will employ and pay for testing laboratory and special inspectors to provide Project specific testing and inspections under applicable codes and Specification sections except where indicated otherwise.
 - a. Owner employment of testing laboratory and inspectors shall not relieve Contractor of obligation to perform Work in accordance with requirements of applicable codes and Contract Documents.
 - 1) Laboratory and inspectors may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 - b. Retesting required because of non-conformance to specified requirements shall be performed by Owner's testing laboratory.
 - 1) Payment for retesting shall be charged to Contractor by deducting inspection and testing charges from Contract amount.
 - c. Owner provided testing shall be limited to Project specific testing and shall not include general tests or approvals of materials, equipment or systems.
 - d. Owner provided inspections shall be limited to Project design team inspections and special inspectors required by applicable authorities.
- B. Services shall be performed in accordance with requirements of governing authorities and with specified standards.
- C. DSA Projects: Testing and inspections shall be performed in accordance with DSA 103 Form.
- D. Reports will be submitted to Architect in duplicate giving observations and results of tests and inspections, indicating compliance or non-compliance with specified standards and with Contract Documents.
 - 1. Where required, testing laboratory and inspectors will submit copy of tests and inspections directly to enforcing agency.

- E. Contractor shall cooperate with testing laboratory and inspection personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
 - 1. Notify Owner, Architect, inspectors, and testing laboratory sufficiently in advance of expected time for operations requiring inspection and testing services.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes temporary construction facilities and temporary controls.
 - 1. Electricity and lighting.
 - 2. Heat and ventilation.
 - 3. Water and sanitary facilities.
 - 4. Construction aids.
 - 5. Temporary enclosures.
 - 6. Barriers.
 - 7. Cleaning during construction.
 - 8. Project identification.
 - 9. Field offices.
 - 10. Cellular telephone service.
 - 11. Storage.
- B. Related Requirements:
 - 1. Section 01 70 00: Progress cleaning and final cleaning.
 - 2. Section 01 74 10: Waste management.
- C. Provide temporary construction facilities and temporary controls as required to conform to applicable authorities and as required to complete Project in accordance with Contract Documents.
 - 1. Authorities: Contact governing authorities to establish extent of temporary facilities and temporary controls required by authorities.
 - 2. Building Manager: Contact Building Manager to establish extent of temporary facilities and temporary controls required by building management.

1.2 ELECTRICITY AND LIGHTING

- A. Provide electrical service required for construction operations, with branch wiring and distribution boxes located to allow service and lighting by means of construction-type power cords.
 - 1. Connection to existing electrical service is permitted.
 - 2. Owner will pay costs of energy used from existing on-site services.
 - 3. Provide separate metering and reimburse Owner for costs of energy used from existing on-site services.
- B. Provide lighting for construction operations.

1. Permanent lighting may be used during construction; maintain lighting and make routine repairs.

C. Owner will pay costs of energy used from existing on-site services.

D. Provide separate metering and reimburse Owner for costs of energy used from existing on-site services.

1.3 HEAT AND VENTILATION

A. Provide heat and ventilation as required to maintain specified conditions for construction operation, to protect materials and finishes from damage due to temperature and humidity.

B. Coordinate use of existing facilities with Owner.

1. Supplement with temporary units as required to maintain specified conditions for construction operations, and to protect materials and finishes from damage due to temperature or humidity.

C. Owner will pay costs of energy used from existing on-site services.

1.4 WATER AND SANITARY FACILITIES

A. Provide water service required for construction operations; extend branch piping with outlets located so water is available by use of hoses.

1. Connection to existing facilities is permitted.

2. Owner will pay for water used from existing on-site services.

B. Provide and maintain required sanitary facilities and enclosures.

1. Existing facilities shall not be used.

2. Where existing sanitary facilities are designated to be used during construction operations maintain in sanitary condition. Verify availability with Building Management prior to beginning on-site work.

1.5 CONSTRUCTION AIDS

A. Noise, Dust and Pollution Control: Provide materials and equipment necessary to comply with local requirements for noise, dust and pollution control.

B. Fire Protection: Maintain on-site fire protection facilities as required by applicable authorities and insurance requirements.

C. Security: Protect Site and Work; prevent unauthorized entry, vandalism, and theft.

1. Coordinate with Owner's security program.

D. Dewatering: Provide and operate drainage and pumping equipment; maintain excavations and site free of standing water.

- E. Use of Existing Facilities: Verify availability of existing facilities for construction operations with Owner prior to beginning on-site construction.
 - 1. Existing stairs shall not be used.
 - 2. Designated existing stairs may be used by construction personnel; coordinate with Owner.
 - 3. Existing elevators shall not be used.
 - 4. Designated elevators may be used, coordinate use with Owner; provide protective coverings for finish surfaces of elevator cars and entrances.

1.6 ENCLOSURES

- A. Temporary Closures: Provide temporary weather-tight closures for exterior openings for acceptable working conditions, for protection for materials, to protect interior materials from dampness, for temporary heating, and to prevent unauthorized entry.
 - 1. Provide doors with self-closing hardware and locks.
- B. Temporary Partitions: Provide temporary partitions as required to separate work areas from occupied areas, to prevent penetration of dust and moisture into occupied areas, and to prevent damage to existing areas and equipment.
 - 1. Construction: Framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces; Flame Spread Rating of 25 in accordance with ASTM E84.
 - 2. Paint surfaces exposed to view in occupied areas.

1.7 BARRIERS

- A. Barriers: Provide barriers as required to prevent public entry to construction areas and to protect adjacent properties from damage from construction operations.
 - 1. Fence: Provide minimum 8-foot high commercial grade chain link or painted solid wood fence around construction site; equip with gates with locks.
 - 2. Covered Walkways: Provide lighted covered painted walkways as required by governing authorities for public rights-of-way and for public access to existing building.
- B. Barricades: Provide barricades as required by governing authorities.
- C. Tree Protection: Provide barriers around trees and plants designated to remain; protect against vehicular traffic, stored materials, dumping, chemically injurious materials, and puddling or continuous running water.

1.8 CLEANING DURING CONSTRUCTION

- A. Control accumulation of waste materials and rubbish; recycle or dispose of off-site.

- B. Clean interior areas prior to start of finish work, maintain areas free of dust and other contaminants during finishing operations.

1.9 PROJECT IDENTIFICATION

- A. Project Sign: Provide minimum 32-square foot Project identification sign of wood frame and exterior grade plywood construction, painted, with computer generated graphics by professional sign maker.
 - 1. Design: As furnished by Architect.
 - 2. Submit to Owner and Architect additional names or changes proposed to Project sign for prior written approval.
 - 3. Erect on site at location established by Architect.
- B. Other Signs: Subject to approval of Architect and Owner.

1.10 FIELD OFFICES

- A. Field Office: Provide weather-tight field office, with lighting, electrical outlets, data outlets, heating, and ventilating equipment, and equipped with furniture.
 - 1. Meeting Space: In addition, provide space for Project meetings with table and chairs to accommodate minimum six persons.
 - 2. Telephone Service: Provide telephone service to field office.
 - 3. Multi-Purpose Copier: Provide plain paper multi-purpose color and black-and-white copier with enlargement and reduction capability and with built-in printer, scanner, and facsimile capabilities.

1.11 CELLULAR TELEPHONE SERVICE

- A. Cellular Telephone Service: Furnish on-site Project Managers with cellular telephone. Ensure Owner and Architect ability to contact site during construction operations.
 - 1. Schedules: Submit schedules of on-site Project Managers with individual cellular telephone numbers to Owner and Architect; maintain schedules and cell phone numbers up to date during Project on-site operations.

1.12 STORAGE

- A. Storage for Tools, Materials, and Equipment: Limit on-site storage to Project area; provide weather-tight storage, with heat and ventilation for products requiring controlled conditions.
 - 1. Maintain adequate space for organized storage and access.
 - 2. Provide lighting for inspection of stored materials.

1.13 REMOVAL

- A. Remove temporary materials, equipment, services, and construction prior to Substantial Completion Inspection.
- B. Clean and repair damage caused by installation or use of temporary facilities.
- C. Restore existing facilities used during construction to specified or original condition.

END OF SECTION

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes basic product requirements governing material and equipment.
 - 1. General product requirements.
 - 2. Product list.
 - 3. Quality assurance.
 - 4. Delivery, storage, and handling.
- B. Related Requirements:
 - 1. Section 01 25 00: Substitution procedures.
 - 2. Section 01 30 00: Submittal of manufacturers' certificates.
 - 3. Section 01 77 00: Operation and maintenance data.

1.2 GENERAL PRODUCTS REQUIREMENTS

- A. Products include material, equipment, and systems.
- B. Comply with Specifications, referenced standards, and applicable codes and regulations as minimum requirements.
- C. Provide new materials except as specifically allowed by Contract Documents.
- D. Materials to be supplied in quantity within a Specification section shall be by one manufacturer, shall be the same, and shall be interchangeable.
- E. Provide equipment and systems composed of materials from a single manufacturer except where otherwise recommended by equipment or systems manufacturer or where otherwise indicated in Contract Documents.
- F. Contractor's Options: Comply with following options; requests for substitutions for named manufacturers and products shall comply with requirements specified in Section 01 25 00 – Substitution Procedures.
 - 1. Products Identified by Reference Standards: Select product meeting referenced standard for products specified only by reference standard.
 - a. Requests for Substitutions to be limited to products not complying with referenced standards.
 - 1) Submit justification for non-compliance with reference standards as part of Request for Substitutions; if product is foreign made submit rationale why foreign standards and basic materials indicates compliance.

2. Named Manufacturers: Where names of manufacturers are specified select any named manufacturer product meeting Specifications for products specified by naming one or more manufacturers.
 - a. Submit Request for Substitution for any manufacturer not named.
 3. Named Manufacturers and Named Products: Select any named manufacturer named product meeting Specifications for products specified by naming one or more manufacturers and products.
 - a. Where only one manufacturer and product is named together with additional manufacturers without specific products, Requests for Substitutions to be limited to products not comparable to that specified.
 - 1) Contractors, subcontractors, suppliers, and manufacturers shall take special care to ensure comparable products are being supplied based on design, performance, quality, and longevity.
 - 2) Substitutions: Submit Request for Substitution for any manufacturer not named and for products not comparable to those specified in design, performance, quality, and longevity.
 4. Basis of Design: Where manufacturer or manufacturer and product both are indicated as Basis of Design, submit Request for Substitution for other manufacturers and products.
 5. "Or Equal" Clauses: Submit request for substitution for manufacturer or product not specifically named in Specifications where terms "or equal", "or approved equal", or similar references are made.
- G. Nameplates: Do not attach or imprint manufacturer or producer nameplates on exposed surfaces in occupied spaces except for required labels and operating data.
1. Equipment Nameplates: Provide permanent nameplate on service connected and power operated equipment located on easily accessible surface inconspicuous in occupied spaces.
 - a. Provide name of product and manufacturer, model and serial number, capacity, speed, rating, and similar information.

1.3 SUBMITTALS

- A. Product List: Within 35 days after award of Contract, submit to Owner and Architect a complete list of major products proposed for installation, with name of manufacturer, trade name, and model.
- B. Product List: Prior to submittal of second Request for Payment, submit to Architect complete list of major products which are proposed for installation, with name of manufacturer, trade name, and model.

1. Tabulate products by Specification number and title.

C. Substitutions: Refer to Section 01 25 00 – Substitution Procedures.

1.4 QUALITY ASSURANCE

A. Comply with industry standards and applicable codes except when more restrictive tolerances or requirements indicate more rigid standards or precise workmanship.

B. Perform work by persons qualified to produce workmanship of specified quality.

C. Install products straight, true-to-line, and in correct relationship to adjacent materials, with hairline joints, free of rough, sharp and potentially hazardous edges.

D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1. Seismic Anchors: Conform to code requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Transport products by methods to avoid product damage, deliver in undamaged condition in manufacturer's unopened containers or packaging.

B. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.

C. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.

D. For exterior storage of fabricated products, place on sloped supports above ground.

E. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.

F. Arrange storage to provide access for inspection; periodically inspect to assure products are undamaged and are maintained under required conditions.

G. Provide equipment and personnel to handle products by methods to prevent soiling and prevent damage.

H. Promptly inspect shipments to assure products comply with requirements, quantities are correct, and products are undamaged.

I. Immediately remove from Project products damaged, wet, stained, and products with mold and products with mildew.

1. Take special care to prevent absorbent products such as gypsum board and acoustical ceiling units from becoming wet.

END OF SECTION

SECTION 01 70 00

EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes execution requirements.
 - 1. Installer qualifications.
 - 2. Examination.
 - 3. Manufacturer's instructions.
 - 4. Installation.
 - 5. Cleaning.
 - 6. Protection.
- B. Related Requirements:
 - 1. Section 01 50 00: Cleaning during construction.
 - 2. Section 01 77 00: Closeout procedures.
 - 3. Section 01 79 00: Demonstration and training.

1.2 INSTALLER QUALIFICATIONS

- A. Experienced Installers: Installers to have minimum five-years successful experience installing items like those required for Project, except for individuals in training under direct supervision of experienced installer.

1.3 EXAMINATION

- A. Acceptance of Conditions: Beginning installation of a product signifies installer has examined substrates, areas, and conditions for compliance with manufacturer requirements for tolerances and other conditions affecting performance.
- B. Field Measurements: Take field measurements as required to fit Work properly; recheck measurements prior to installing each product.
 - 1. Where portions of Work are to fit to other construction verify dimensions of other construction by field measurements before fabrication; allow for cutting and patching to avoid delaying Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

1.4 MANUFACTURERS' INSTRUCTIONS

- A. Manufacturer's Recommendations: When work is specified to comply with manufacturers' recommendations or instructions, distribute copies to persons involved and maintain one set in field office.
 - 1. Conform to requirements specified in Section 01 30 00 for submittal of recommendations or instructions to Architect; submit to Architect only where specified or where specifically requested; otherwise keep in Field Office.
- B. Perform work in accordance with details of recommendations and instructions and specified requirements.
 - 1. Should a conflict exist between Specifications and recommendations or instructions consult with Architect.
- C. Where manufacturer's information notes special recommendations in addition to installation instructions, comply with both recommendations and instructions.

1.5 INSTALLATION

- A. Pre-Installation Meetings: Installers and suppliers are to attend pre-installation meetings scheduled by Contractor.
- B. Comply with manufacturers written recommendations and installation instructions unless more restrictive requirements are specified.
- C. Locate Work and components accurately, in correct alignment and elevation.
 - 1. Make vertical work plumb and horizontal work level.
 - 2. Install components to allow space for maintenance and ease of removal for replacement.
- D. Install products at time and under conditions to ensure best possible results; maintain conditions required for product performance until Substantial Completion.
- E. Conduct operations so no part of Work is subject to damaging operations or excessive loads during normal conditions.
- F. Securely anchor permanent construction in place, accurately located and aligned with other portions of Work.
- G. Allow for building movement including thermal expansion and contraction.
- H. Make joints of uniform width; arrange joints as indicated, for best visual effect where not otherwise indicated; fit exposed connections together to form hairline joints except where otherwise indicated.

1.6 CLEANING

- A. Cleaning During Construction: Specified in Section 01 50 00 - Temporary Facilities and Controls.
- B. Progress Cleaning: Keep installed areas clean using cleaning materials specifically recommended by manufacturers of product being cleaned; where not otherwise recommended use nontoxic materials that will not damage surfaces.
 - 1. Remove debris from concealed spaces before enclosing space.
 - 2. Supervise construction operations to assure no part of construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during construction period.
- C. Final Cleaning: Execute final cleaning at Substantial Completion.
 - 1. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances; polish transparent and glossy surfaces; vacuum carpeted and soft surfaces.
 - a. Vacuuming Equipment: Type with high efficiency particulate arrestor (HEPA) type filters; properly maintained.
 - 2. Clean equipment and fixtures to a sanitary condition, clean filters of mechanical equipment, replace filters where cleaning is impractical.
 - a. Clean ducts.
 - 3. Clean site; sweep paved areas.
 - 4. Remove waste, surplus materials and rubbish from Project and site; recycle to maximum extent feasible.

1.7 PROTECTION

- A. Protect products subject to deterioration with impervious cover. Provide ventilation to avoid condensation and trapping water.
- B. Take care to use protective covering and blocking materials that do not soil, stain, or damage materials being protected.
- C. After installation, provide coverings to protect products from damage from traffic and construction operations, remove when no longer needed.
- D. Protect interior materials from water damage; immediately remove wet materials from site to prevent growth of mold and mildew on site.

END OF SECTION

SECTION 01 73 00

CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Contractor is responsible for cutting, fitting and patching to complete Work and to:
1. Make its parts fit together properly.
 2. Uncover work to provide for installation of ill-timed work.
 3. Remove and replace defective work.
 4. Remove and replace work not conforming to Contract Documents.
 5. Remove samples of installed work as required for testing.
 6. Provide routine penetrations of non-structural surfaces for installation of piping.
 7. Provide routine penetrations of non-structural surfaces for installation of conduit.
- B. Related Requirements:
1. Section 01 50 00: Temporary facilities and controls.

1.2 SUBMITTALS

- A. Submit written request well in advance of cutting or alteration which affects:
1. Work of Owner or separate contractor.
 2. Structural value or integrity of any element of Project.
 3. Integrity of weather-exposed or moisture-resistant elements.
 4. Efficiency, operational life, maintenance or safety of operational elements.
 5. Visual qualities of sight-exposed elements.
- B. Request shall include:
1. Identification of Project and description of affected work.
 2. Necessity for cutting or alteration.
 3. Effect on work of Owner or separate contractor.
 4. Effect on structural integrity, or weatherproof integrity of Project.
 5. Alternatives to cutting and patching.
 6. Cost proposal, when applicable.
 7. Written permission of separate contractor whose work will be affected.
 8. Description of proposed work including:
 - a. Scope of cutting, patching, alteration, or excavation.
 - b. Products proposed to be used.
 - c. Extent of refinishing to be included.
- C. Should conditions of Work or schedule indicate a change of products from original installation, Contractor shall submit request for substitution as specified in Section 01 25 00 – Substitution Procedures.
- D. Submit written notice to Architect designating date and time work will be uncovered.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Comply with Specifications and standards for each specific product involved.
- B. Where Specifications and standards have not been provided, provide materials and fabrication consistent with quality of Project and intended for commercial construction.
- C. Provide new materials for cutting and patching unless otherwise indicated.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Inspect existing conditions of Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect conditions affecting installation of products, or performance of work.
- C. Report unsatisfactory or questionable conditions to Architect in writing; do not proceed with work until Architect has provided further instructions.

3.2 PREPARATION

- A. Provide adequate temporary support as necessary to assure structural value or integrity of affected portion of Work.
 - 1. Provide services of licensed engineer for designing temporary support where required by applicable authorities for temporary supports and for shoring; submit engineering calculations directly to applicable authorities upon request.
- B. Protect other portions of Project from damage.

3.3 PERFORMANCE

- A. Execute cutting by methods that provide proper surfaces to receive installation of repairs and finishes.
 - 1. Execute excavating and backfilling by methods which will prevent settlement, and which will prevent damage to other work.
- B. Employ same installer or fabricator to perform cutting and patching work as employed for new construction for:
 - 1. Weather-exposed or moisture resistant elements.
 - 2. Sight-exposed finished surfaces.
- C. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.

- D. Restore work that has been cut or removed; install new products to provide completed Work in accordance with requirements of Contract Documents.
- E. Fit work tight to pipes, sleeves, ducts, conduit and penetrations through surfaces.
- F. Refinish entire surfaces as necessary to provide even finish to match adjacent finishes:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish entire unit.

END OF SECTION

SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes Contract closeout procedures.
 - 1. Substantial Completion.
 - 2. Final Completion.
 - 3. Project record documents.
 - 4. Material and finish data.
 - 5. Operation and maintenance manuals.
- B. Related Requirements:
 - 1. Section 01 30 00: Administrative requirements including attic stock.
 - 2. Section 01 78 00: Warranties.
 - 3. Section 01 79 00: Demonstration and training.

1.2 SUBSTANTIAL COMPLETION

- A. Immediately prior to Substantial Completion, schedule agency reviews as required for "temporary certificate of occupancy" or for "certificate of occupancy".
- B. When Contractor considers Work, or a designated portion thereof is substantially complete, submit written notice, with list of items to be completed or corrected.
 - 1. List ("Punch List"): Format pre-approved by Owner and Architect; tabular form with each space listed required.
- C. Within a reasonable time, Owner and Architect will inspect status of completion and may add to "Punch List".
 - 1. Contractor shall pay for Architect's time and direct expenses where more than one Substantial Completion inspection is required.
- D. Should Owner and Architect determine Work is not substantially complete, Contractor will be promptly notified in writing, giving reasons.
- E. Contractor shall remedy deficiencies and send a second written notice of substantial completion; Architect will reinspect Work.
 - 1. Contractor shall pay for Architect's time and direct expenses where more than one Substantial Completion inspection is required.
- F. When Work is determined to be substantially complete by Architect, a Certificate of Substantial Completion will be prepared in accordance with General Conditions.

- G. DSA Projects: Contractor shall complete DSA 6-C Form and upload electronically to DSAbbox within three days of completion of Work.

1.3 FINAL COMPLETION

- A. When Work is complete, submit written certification indicating:
 - 1. Work has been inspected for compliance with Contract Documents.
 - 2. Work has been completed in accordance with Contract Documents and deficiencies listed (in 'Punch List") with Certificate of Substantial Completion have been corrected.
 - 3. Equipment and systems have been tested in presence of Owner's representative and are operational.
 - 4. Work is complete and ready for final inspection.
- B. Special Submittals: In addition to submittals required by Contract, submit following.
 - 1. Provide submittals required by governing authorities to governing authorities with copies included in Project Record Documents.
 - 2. Submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 PROJECT RECORD DOCUMENTS

- A. Keep documents current; do not permanently conceal any work until required information has been recorded.
 - 1. Owner will provide Contractor with a separate set of Drawings to maintain for Project Record Documents.
 - 2. Store reproducible Drawings, one set of Project Manual, and one copy of each Change Order separate from documents used for construction, for use as Project Record Documents.
 - 3. Indicate actual work on Drawings; indicate actual products used in Project Manual, including manufacturer, model number and options.
 - 4. Update Project Record Documents daily and allow for Architect inspection at least once a month.
- B. At Contract close-out submit documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.
- C. As-Built Documents: General Contractor shall have electronic "As Built" sets of Contract Documents (Project Drawings and Project Specifications) prepared prior to Final Completion.

1. Contractor shall use one complete electronic set of Contract Documents (Drawings and Specifications) for use for "As-Builts".
 2. As-Built Drawings: Revise Drawings based on Record Documents and field measurements made after installation and indicate actual locations of structural elements, ducts, piping, wiring, and equipment.
 - a. Professional draftspersons experienced in electronic media used for Contract Documents shall revise original Project Drawings based on information recorded on Project Record Documents.
 3. As-Built Specifications: Revise Specifications to indicate manufacturers who provided materials specified along with specifics indicating accessories, options, and finishes used in Project.
 - a. Cross referencing Submittal records is acceptable for accessories only.
 4. Review Submittal: Submit two copies of electronic media of "As-Built" Documents to Architect for review.
 - a. After Architect review, revise where indicated and submit final electronic media to Owner.
- D. Final Completion Submittal: At Project Completion submit both Project Record Documents and As-Built Documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.

1.5 MATERIAL AND FINISH DATA

- A. Provide data for primary materials and finishes.
- B. Submit two sets prior to final inspection, bound in 8-1/2" by 11" three-ring binders with durable plastic covers, clearly identified regarding extent of contents.
 1. Electronic Format: Where available in electronic format, submit USB 3.0 flash drives with information required for material and finish data.
- C. Arrange by Specification division and give names, addresses, and telephone numbers of subcontractors and suppliers. List:
 1. Trade names, model or type numbers.
 2. Cleaning instructions.
 3. Product data.
 4. Maintenance recommendations.

1.6 OPERATION AND MAINTENANCE MANUALS

- A. Provide manuals for:
 1. Electrically operated items.
 2. Electrical equipment and controls.
 3. Maintenance manuals provided as part of Submittals.

- B. Submit two sets prior to final inspection, bound in 8-1/2" by 11" three-ring binders with durable plastic covers, clearly identified regarding extent of contents.
- C. Provide a separate volume for each system, with a table of contents and index tabs for each volume.
- D. Arrange by Specification division and gives names, addresses, and telephone numbers of Subcontractors and suppliers. List:
 - 1. Appropriate design criteria.
 - 2. List of equipment and parts lists.
 - 3. Operating and maintenance instructions.
 - 4. Shop drawings and product data.
- E. Electronic Format: Where available in electronic format, submit two USB 3.0 flash drives with information required for operation and maintenance manuals.

END OF SECTION

SECTION 01 78 00

WARRANTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Warranties: Compile required, and incidental warranties required by Contract Documents.
 - 1. Manufacturer Warranties: Provide manufacturer's standard warranties where specified including inspections and services included or required as part of manufacturer's standard warranty.
 - 2. Special Warranties: Provide special warranties as required by Specifications sections.
 - 3. These warranties shall be in addition to and not a limitation of other rights Owner may have against Contractor under Contract Documents and which may be prescribed by law, regardless of wording of warranty.
- B. Extended Correction Period: Contractor shall correct failure of materials and systems to perform in a manner consistent with their intended use including but not limited to failure of waterproofing and roofing systems to resist penetration from water.
 - 1. Standard Correction Period: One year after Substantial Completion or Beneficial Occupancy by Owner except where otherwise noted in Contract Documents; coordinate with General Conditions and Supplementary Conditions.
 - a. Items used by Contractor during construction operations shall not be considered substantially completed.
 - b. Correction of Work Period begins with Owner occupancy not completion of component.
 - 2. Extended Correction Period: Requirements are same as standard correction period but for an extended period as indicated in Specifications sections.
 - 3. Contractor Responsibilities: Bear cost of correcting failed work and replacing construction damaged by failure of materials and systems to perform in a manner consistent with their intended use during correction period.
 - a. Requirements for correction period shall apply to Subcontractors, suppliers, installers, and those responsible for failed work.
 - b. Owner and Design Team shall not be responsible for determining degree of responsibility of those involved.

4. Owner's Rights under Law: Correction period shall be in addition to and not a limitation of other rights Owner may have against Contractor under Contract Documents and which may be prescribed by law.

1.2 FORM OF SUBMITTAL

- A. Special Warranty and Extended Correction Period Forms: Provide duplicate copies, notarized or on Contractor and Manufacturer's letterhead without conditions or exceptions to requirements specified.
 1. Assemble documents executed by subcontractors, installers, suppliers, and manufacturers.
 2. Provide table of contents and assemble in binder with durable plastic cover, clearly identified regarding extent of contents.
 3. Electronic Format: Submit USB 3.0 flash drives of warranties, in Microsoft Word.
- B. Manufacturer Warranty Forms: Use manufacturer's standard forms unless otherwise directed in Contract Documents; completed form shall not detract from or confuse interpretations of Contract Documents.
 1. Manufacturer's authorized representative shall sign manufacturer warranties.
 2. Subcontractor and installer shall countersign warranty where specified.
 - a. Provide required warranties for waterproofing and roofing systems countersigned by subcontractor and installer.
- C. Submit final warranties prior to final application for payment.
 1. For equipment put into use with Owner's permission during construction, submit within ten days after first operation.
 2. For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.
- D. Provide information for Owner's personnel regarding proper procedure in case of failure and instances that might affect validity of manufacturer warranty.
- E. Size: 8-1/2" by 11" for three-ring binder; fold larger sheets to fit.

1.3 WARRANTIES AND CORRECTION OF WORK DOCUMENTS

- A. Warranties and Correction of Work Documents are intended to protect Owner against failure of work and against deficient, defective and faulty materials and workmanship, regardless of sources.
- B. Limitations: Warranties and correction of work requirements are not intended to cover failures that result from:

1. Unusual or abnormal phenomena of the elements.
 2. Owner's misuse, maltreatment or improper maintenance of work.
 3. Vandalism after substantial completion.
 4. Insurrection or acts of aggression including war.
- C. Related Damages and Losses: Remove and replace work which is damaged as result of failure, or which must be removed and replaced to provide access for correction of work.
- D. Reinstatement: After correction of work reinstate warranty or extended correction period for corrected work to date of original expiration, but not less than half original period.
1. Correction of Work Period: The general correction of work period specified shall not be extended by corrective work except to extent required to correct failure and repair or replace materials damaged by failure.
- E. Replacement Cost: Replace or restore failing items without regard to anticipated useful service lives where part of correction of work period, extended correction of work period, and special warranty period unless otherwise noted.
- F. Rejection of Warranties: Owner reserves right to reject unsolicited and coincidental product warranties that detract from or confuse interpretations of Contract Documents.

END OF SECTION

SECTION 01 79 00

DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Provide equipment and systems demonstration and instruction in accordance with Contract Documents.
 - 1. Video record seminars and system demonstrations.
- B. Related Sections:
 - 1. Section 01 31 00: Project management and coordination.
 - 2. Section 01 77 00: Contract closeout procedures.
 - 3. Refer to Facility Services Subgroups for mechanical and electrical requirements.

1.2 DESCRIPTION

- A. Seminar Agenda and Outline:
 - 1. Prepare a seminar agenda and outline in consultation and cooperation with Owner. Include following:
 - a. Equipment and systems that will be included in seminars.
 - b. Name of companies and representatives presenting at seminars.
 - c. Outline of each seminar's content.
 - d. Time and date allocated to each system and item of equipment.
 - 2. Submit preliminary seminar agenda and outline for review and comment by Owner.
 - a. Revise and resubmit agenda and outline until all seminar requirements have been satisfied and seminar dates and presenters have been finalized.
 - 3. Submit final seminar agenda and outline no later than eight weeks before date of Acceptance of Work.
- B. Seminar Organization:
 - 1. Contractor's presentation leaders shall chair seminars.
 - a. Coordinate qualification of training personnel, seminar contents, and presentations with Owner.
 - 2. Coordinate individual presentations and ensure manufacturer's representatives scheduled to be at training seminars are present.

3. Arrange for presentation leaders familiar with design operation, maintenance and troubleshooting of equipment and systems.
 - a. Where one person is not familiar with all aspects of equipment or system; arrange for specialists familiar with each aspect.
4. Coordinate proposed seminar dates with Owner and select mutually agreeable dates.
5. Video Recording: Arrange for video recording (audio and video) of training seminars and system demonstrations, including seminar and demonstration questions and answers.

C. Seminar Content:

1. Architect's Consultants will explain design philosophy of primary systems.
2. Include following information in presentations dealing with specific systems.
 - a. An overview of how system is intended to operate.
 - b. Describe design parameters, constraints and operational requirements.
 - c. Describe system operation strategies.
 - d. Provide information to help in identifying and troubleshooting problems.
3. Include following information in presentations dealing with equipment.
 - a. Explanation of how equipment operates.
 - b. Recommended preventative and routine maintenance.

D. System Demonstration:

1. Demonstrate operation of equipment and systems when specified in individual technical sections. Include following in demonstration.
 - a. Start-up and shut down.
 - c. Operation.
 - d. Scheduled and preventative maintenance.
 - e. Troubleshooting.
2. Demonstration may be conducted at time of original starting with Owner's prior approval.

E. Seminar and Demonstration Questions:

1. Be prepared to answer questions raised by Owner's personnel at demonstrations and seminars.
2. If unable to satisfactorily answer questions immediately, provide written response within three days.

F. Use manufacturer's operation and maintenance data as basis of instruction.

1.3 SUBMITTALS

- A. Video Recording: Submit three copies of each video recording in DVD format acceptable to Owner; include label on each DVD and on each container identifying Project and Seminar content.

END OF SECTION