

DIVISION 1
SECTION 01 10 00
SUMMARY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Work covered by the Contract Documents.
 2. Phased construction.
 3. Work under other contracts.
 4. Owner-furnished products.
 5. Owner's occupancy requirements.
 6. Applicable Codes.
 7. Reference standards.
 8. Use of premises and work restrictions.
 9. Specification formats and conventions.
 10. Execution, correlation and intent – Contract Documents.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification:
1. The project name, the project's location and physical address is listed within the bid documents under the Invitation for Bid and in the Bid Form B.1.
- B. King County Housing Authority (KCHA) is the Owner/Developer of the project and as such will designate a representative that will be the single contact point between the Contractor and KCHA.
- C. KCHA will be responsible for hiring the Design Professional.
- D. The Scope of Work, in its entirety, along with the technical specifications are part of the bid documents. An overview of the scope is part of the Invitation to Bid and the Bid Form B.1.

1.4 PHASED CONSTRUCTION

- A. Construction shall be phased to accommodate Owner's desired schedule as noted in the bid documents and/or drawings, if applicable. Final Project Schedule shall include phasing schedule to be prepared by the Contractor, and reviewed and approved by the Owner.
- B. Contractor shall prepare a phasing plan to maintain access to residential units during construction. Plan to be reviewed and approved by Owner prior to Work commencing.
- C. Before commencing Work of each phase of construction, submit an updated copy of Contractor's Final Project Schedule showing the sequence, commencement and completion dates, and move-out and -in dates of residents for all phases of the Work.

1.5 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

1.6 OWNER-FURNISHED PRODUCTS

- A. Owner will furnish products as indicated. This section includes receiving, unloading, handling, storing, protecting, and installing Owner-furnished products.
- B. Owner-Furnished Products:
 - 1. Products and materials as noted on drawings or otherwise indicated for re-use.
 - 2. Products and materials as noted on drawings or otherwise indicated to be supplied by Owner.

1.7 OWNER'S OCCUPANCY REQUIREMENTS

- A. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and to place and install equipment in completed areas of the building before Substantial Completion. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work. PRIOR to partial Owner Occupancy:
 - 1. Owner will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied.
 - 2. Contractor is responsible for obtaining a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
 - 3. The mechanical and electrical systems shall be fully operational; all required tests and inspections shall be successfully completed for areas to be occupied. On occupancy, Owner will operate and maintain mechanical and electrical systems serving the occupied portions of building.
 - 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for the occupied portions of building.
 - 5. Coordinate insurance requirements with Owner prior to Owner occupancy of completed areas of the building.

1.8 CUTTING & PATCHING – Refer to Section 01 73 29 – Cutting and Patching.

1.9 APPLICABLE CODES

- A. Perform all Work in accordance with the current code requirements of the city holding jurisdiction over the site where Work is to be completed.
- B. Certification of Code Compliance: All materials, methods and equipment shall comply with requirements of applicable codes and the Contract Documents, including requirements of all incorporated standards. The Contractor shall furnish, as a part of the Contract, certification of such compliance if requested by the Architect or the Code Enforcing Agency. Such certification shall be submitted in the form of test results or other data from a recognized independent testing laboratory. Contractor shall coordinate and provide all required submittals to the Code Enforcing Agency in a timely manner so as to not delay progress of the Project.

1.10 USE OF PREMISES AND WORK RESTRICTIONS

- A. General: Contractor shall have full use of premises for construction operations subject to phased construction requirements as specified in this Section and as indicated on Drawings by the Contract limits.
 - 1. Security Procedures: Refer to the Scope of Work Division 1, Section 4 Safety, Protection & Restoration and 01 50 00 Temporary Facilities and Controls, for required security procedures to be followed while working at this building.
 - 2. Contractor Identification: All Contractors on site shall be easily identifiable and must wear clothing, name badges, hardhats, safety vests, or other visible identification or identifying article (approved by Owner) with employee's, laborer or staff member's company logo or company name.

- B. Use of Site: Limit use of premises to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Limits: Confine construction operations to areas as indicated on drawings.
- C. Use of Parking Lot: Limited.
- D. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- E. On-Site Work Hours: Work in the existing occupied buildings will start no earlier than 8:00am, and will be completed by 4:30pm. Hours for work performed outside of the building will be at the discretion of Owner's Representative.
 - 1. Early Morning Hours: As approved by Owner's representative.
 - 2. Hours for Utility Shutdowns: Notify Owner and all affected utility companies seventy-two (72) hours in advance of proposed shutdown.
 - 3. Contractor to notify residents of Work a minimum of forty-eight (48) hours prior to start of Work.
 - a. If Work progress or new work affects additional or a new set of residents, the Contractor must give a new notice of work to all affected residences a minimum of forty-eight (48) hours prior to start of Work.
 - 4. Hours for Core Drilling and other loud activities must comply with city of jurisdiction's noise codes.
- F. Nonsmoking Properties. All of King County Housing Authority properties are nonsmoking.
- G. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.
- H. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.
 - 1. Maintain list of approved screened personnel with Owner's representative.

1.11 SPECIFICATION FORMATS AND CONVENTIONS

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 33-division format and CSI/CSC's "2010 Master Format" numbering system.
 - 1. Division 01: Sections in Division 01 govern the execution of the Work of all Sections in the Specifications.
- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural and plural words shall be interpreted as singular, where applicable, as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

- 1.12 EXECUTION, CORRELATION AND INTENT – CONTRACT DOCUMENTS
- A. General: If there is a discrepancy between Scope of Work, Specifications and/or Drawings, the Scope of Work shall take precedence followed by the Specifications and lastly the drawings. Contact Owner immediately for clarification of conflicts, corrections and clarifications.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION 01 10 00

DIVISION 1
SECTION 01 26 00
CONTRACT MODIFICATION PROCEDURES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract Modifications.
- B. Related Sections:
1. Division 01 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

- A. Reference Article 7 in the General Conditions.

1.4 PROPOSAL REQUESTS

- A. The Contractor will have fourteen (14) calendar days from first notification to supply Owner with the information outlined in this section.
- B. Owner-Initiated Change Order Requests (COR): Contractor will issue a detailed description of:
1. Proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
2. Change Order Requests (COR) and Construction Change Directives (CCD) shall be initiated by the Owner, dated and sequentially numbered on Owner provided forms.
3. CORs are not instructions either to stop Work in progress or to execute the proposed change.
4. After receipt of COR, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
- a. Provide a cost breakdown, including overhead and profit as a separate line item, and time extension request as provided for in Article 7 of the General Conditions.
- b. Provide all necessary product information, specifications, etc. required to justify any Contractor requested changes.
5. The allowed markup shall cover all indirect project costs, including but not limited to, the project Overhead, Profit and General Conditions
- a. The Contractor shall be allowed a maximum of fourteen (14%) percent Overhead, Profit, and General Conditions, on the cost of craft labor, equipment, small tools and materials for self-performed Change Order work.
- b. The Contractor shall be allowed a maximum of eight (8%) percent Overhead, Profit and General Conditions on the cost of craft labor, equipment, small tools and materials for Subcontractor Change Order work. The Contractor is not allowed to take profit on the profit of the Subcontractor as stated in form HUD-5370, section 29.

- c. A Subcontractor shall be allowed a maximum of fourteen (14%) percent of the cost of craft labor, equipment, materials and small tools for Overhead, Profit and General Conditions, for self-performed Change Order work.
 - d. A Lower-Tier Subcontractor shall be allowed a maximum of fourteen (14%) percent of the cost of craft labor, equipment, materials and small tools for Overhead, Profit and General Conditions, for self-performed Change Order work.
6. Include a list of quantities of products required (or eliminated) their unit costs and a total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 7. Indicate applicable taxes, delivery charges, equipment rental and amounts of trade discounts.
 8. Include costs of labor and supervision directly attributable to the change.
 9. Include an updated Contractor's Final Project Schedule that indicates the effect of the change, including but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - a. Time extension requests must demonstrate the impact on the project Critical Path Schedule. See the General Conditions Article 8 and Section 01 32 00 - Construction Progress Documentation.
 10. Review all pricing provided by subcontractors and suppliers for accuracy and completeness. Verify that their scope of work is consistent with the requested change. Verify math is correct and that markup rates complies with the General Conditions.
 11. After signing the Change Order Request or CCD, the Contractor shall return it to the Owner.
 12. Quotation Form: Use forms acceptable to Owner.
 13. After review of the Contractor's price, cost breakdown and requested time extension, if any, the Owner will submit for estimation and do one of the following:
 - a. Sign and route for approval.
 - b. Reject and resubmit to the Contractor for pricing correction.
 - c. Revise the Change Order Request or CCD and submit to the Contractor for repricing.
 14. Prior to the Owner's acceptance of Change Order Requests, appropriate personnel shall also review the change requests.
- C. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Owner.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 2. Provide a cost breakdown, including overhead and profit as a separate line item, and time extension request as provided for in Article 7 of the General Conditions.
 3. Provide all necessary product information, specifications, etc. required to justify any Contractor requested changes.
 4. Allowances for direct supervision, safety, small tools, overhead and profit are limited by the General Conditions, Article 7.1.1.
 6. Include a list of quantities of products required (or eliminated), their unit costs and total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

7. Indicate applicable taxes, delivery charges, equipment rental and amounts of trade discounts.
8. Include costs of labor and supervision directly attributable to the change.
9. Include an updated Contractor's Final Project Schedule that indicates the effect of the change, including but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - a. Time extension requests must demonstrate the impact on the project Critical Path Schedule. See the General Conditions Article 8, and Section 01 32 00-Construction Progress Documentation.
10. Comply with requirements in Division 01 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.
11. Proposal Request Form: Use form acceptable to Owner.
12. After review of the Contractor's price, cost breakdown and requested time extension, if any, the Owner will submit for estimation and do one of the following:
 - a. Sign and send on for approval.
 - b. Reject and resubmit to the Contractor for pricing correction.
 - c. Revise the Change Order Request or CCD and submit to the Contractor for repricing.
12. Prior to the Owner's acceptance of Change Order Requests, appropriate personnel shall also review the change requests.

1.5 CONSTRUCTION CHANGE DIRECTIVE (CCD)

- A. The Contractor will have fourteen (14) calendar days from first notification to supply Owner with the information outlined in this section.
- B. Construction Change Directive: The Owner may issue a Field Authorization in accordance with provisions in Article 7, General Conditions. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- C. Documentation: Maintain detailed records on a time and material basis of Work required by the CCD, with supporting documentation as required by CORs.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract, consistent with Article 7 of the General Conditions of the Contract.

1.6 CHANGE ORDER PROCEDURES

- A. The Contractor will have fourteen (14) calendar days from first notification to supply Owner with the information outlined in this section.
- B. When approved and signed by the Owner, the Construction Change Directive will either be included in a Change Order Request (COR) to be charged against the Contract Allowance, or will be included in a formal Change Order, which will modify the Contract amount.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION 01 26 00

**DIVISION 1
SECTION 01 29 00
PAYMENT PROCEDURES**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.3 DEFINITIONS

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1.4 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Master Project Schedule.
1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
 - a. Application for Payment forms with Continuation Sheets.
 - b. Submittal Schedule.
 2. Submit the Schedule of Values to Owner at earliest possible date but no later than fourteen (14) calendar days after the date of bid opening.
 3. Sub-schedules: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Documents as a guide to establish line items for the Schedule of Values. Lines items are based on Scope of Work and sequencing.
1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.
 - b. Name of Owner.
 - c. Owner's contract number.
 - d. Contractor's name and address.
 - e. Date of submittal.
 2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
 - a. Item #, including separate line for an Allowance (if applicable).
 - b. Description of the Work.
 - c. Total Dollar Value.
 - d. Previous Application Amount.
 - e. Dollar Amount Charged on Current Pay Application.
 - f. Stored Materials.
 - g. Total Complete and Stored.
 - 1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total one hundred (100%) percent.
 - h. Balance to Finish

- i. Retainage
3. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Documents. Provide several line items for principal subcontract amounts, where appropriate.
4. Round amounts to nearest one (1) cent; total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing per Article 9.3.2 King County Housing Authority General Conditions Based on the AIA A201-2017 Document.
6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
 - 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 the Schedule of Values or distributed as general overhead expense, at Contractor's option.
8. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Owner and paid for by Owner.
- B. Payment Application Times:
 1. The date for each progress payment is indicated in the Contract between Owner and Contractor.
 2. The period of construction Work covered by each Application for Payment is the period indicated in the Contract.
- C. Payment Application Forms:
 1. Use Payment Application forms as provided by Owner for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarized and executed by a person authorized to sign legal documents on behalf of Contractor. Owner will return incomplete applications without action.
 1. Entries shall match data on the Schedule of Values and Contractor's Final Project 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.
 3. Provide current Subcontractor List with each Application for Payment.
- E. Submission: Contractor will submit the following along with a transmittal:
 1. Transmit Application for Payment with a transmittal form listing attachments and recording appropriate information about the application.

2. One (1) signed and notarized original Application for Payment to Owner per Article 5 of the King County Housing Authority Construction Contract Based on the AIA 101-2017 Document.
 3. One (1) signed and notarized original General Contractor Certification Upon Application for Payment (see 01 29 00 GC Certification Sample).
 4. One (1) signed and dated Section 3 Labor Hours Benchmark Report for the time period covered by the Application of Payment.
- F. Initial Application for Payment: Administrative actions and submittals that must precede the first Application for Payment include the following:
1. List of subcontractors. (Required at pre-construction conference.)
 2. Schedule of Values. (Required prior to Notice to Proceed.)
 3. Contractor's Final Project Schedule to be created in MS Project or equivalent format. (Required at pre-construction conference.)
 4. Certificates of insurance and insurance policies. (Required prior to contract award.)
 5. Performance and payment bonds. (Required prior to contract award.)
 6. Section 3 Work Plan, for projects whose contract value is five hundred thousand dollars (\$500,000) or higher.
 7. Intent to Pay Prevailing Wages must be filed with L&I.
- G. All Application for Payments will be reviewed for completion and correctness, including reasons outlined in the King County Housing Authority General Conditions Based on the AIA A201-2017 Document.
- H. Application for Payment at Substantial Completion:
1. **After** Owner issues the Certificate of Substantial Completion, submit an Application for Payment showing one hundred (100%) percent completion for portion of the Work claimed as substantially complete.
 2. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 3. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following (refer to Article 9.9 in the King County Housing Authority General Conditions Based on the AIA A201-2017 Document:
1. Completion of Project closeout requirements.
 2. Completion of Items specified.
 3. Ensure that unsettled claims will be settled.
 4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
 5. Transmittal of required Project construction records to the Owner.
 6. Proof that fees and similar obligations were paid.
 7. Removal of temporary facilities and services.
 8. Removal of surplus materials, rubbish and similar elements.
 9. Operations and Maintenance Manuals
 10. Record Drawings (i.e. As-built drawings, redline drawings)
 11. Final Affidavits of Wages Paid filed with L&I.

- 1.6 PAYMENT REQUESTS USING INVOICES
- A. Based upon Invoice(s) submitted to the Owner by the Contractor, the Owner shall make payment(s) on account of the Contract Sum to the Contractor. Each invoice shall contain the following:
1. Name of the Contractor
 2. Date of Invoice
 3. Name of Project
 4. Contract Number
 5. Line-item accounting of work performed and charges for each line item
 6. Subtotal
 7. Retainage amount (5%) *[if applicable]*
 8. Total of invoice (Subtotal – retainage) *[if applicable]*
- B. All Payment Requests Using Invoices will be reviewed for completion and correctness, including reasons outlined in the King County Housing Authority General Conditions Based on the AIA A201-2017 Document.
- 1.7 SPECIAL PAYMENT REQUIREMENTS (Not Used)
- PART 2 PRODUCTS (Not Used)**
- PART 3 EXECUTION (Not Used)**

END OF SECTION 01 29 00

GENERAL CONTRACTOR CERTIFICATION UPON APPLICATION FOR PAYMENT

OWNER:	<u>King County Housing Authority</u>	PAY REQUEST NUMBER:	<u>01</u>
GENERAL CONTRACTOR:	_____	DATE: PERIOD FROM:	<u>Enter on '01 - Continuation'</u>
PROJECT NAME:	_____	THROUGH:	<u>Enter on '01 - Continuation'</u>
SCOPE OF WORK:	_____	CONTRACT NUMBER:	_____

1.	ORIGINAL CONTRACT AMOUNT:	\$	_____	0.00
2.	APPROVED CHANGE ORDER(S):	\$	_____	0.00
3.	CURRENT CONTRACT AMOUNT:	\$	_____	0.00
4.	AMOUNT OF PREVIOUS CERTIFICATES FOR PAYMENT:	\$	_____	0.00
5.	AMOUNT OF CURRENT CERTIFICATE FOR PAYMENT REQUEST:	\$	_____	0.00

By submitting the accompanying Application for Payment, the Contractor certifies, agrees and warrants to the Owner as follows:

- The Contractor has made full payment to all laborers, subcontractors and suppliers of material and equipment whose charges were included in any prior Application for Payment, subject only to (a) retainage at the contract rate, and (b) the matters set forth below or on an attachment hereto.
- The Contractor knows of no one making a claim for payment other than those included in the current Application for Payment, who will be paid when the current Application for Payment is paid by Owner, except as noted below or on an attachment hereto.
- In consideration of payments made by Owner, the Contractor hereby waives and releases any and all claims and demands (including any claims and demands made by laborers, subcontractors and suppliers of material and equipment) against Owner and the Project for all periods up to and including the period covered by this Application for Payment, subject only to (a) receipt of payment of the current Application, (b) applicable retainage, and (c) the matters set forth below or on an attachment hereto.

EXCEPTION(S) - DESCRIPTION: _____ AMOUNT: _____

GENERAL CONTRACTOR NAME: _____

BY AUTHORIZED SIGNER: _____ PRINT NAME _____ TITLE _____ DATE _____

**State of Washington
County of King**

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that (he/she) signed this instrument and acknowledged it to be (his/her) free and voluntary act for the uses and purposes mentioned in the instrument.

Signed before me on this _____ Day of _____

SEAL

Notary Public in and for the State of Washington

Residing at: _____

My Commission Expires: _____



DIVISION 1
SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General project coordination procedures.
 - 2. Coordination Drawings.
 - 3. Project meetings.
 - 4. Requests for Information (RFIs).
- B. See Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.3 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Document.

1.4 COORDINATION

- A. Coordination: Contractor's Responsibility to coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's Final Project Schedule.
 - 2. Preparation of the Schedule of Values.
 - 3. Installation and removal of temporary facilities and controls.
 - 4. Delivery and processing of submittals.
 - 5. Progress meetings.
 - 6. Pre-installation conferences.
 - 7. Project closeout activities.

1.5 PROJECT MEETINGS

- A. General: Contractor is responsible for scheduling and conducting meetings and conferences at Project site, unless otherwise indicated.

1. Attendees: Inform participants, others who are involved and individuals whose presence is required, of date and time of each meeting. Notify Owner of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned; send the electronic version of the meeting minutes to the Project Manager and the Construction Project Specialist, within three (3) business days of the meeting.
- B. Pre-construction Conference: A pre-construction conference shall be scheduled before starting construction. Owner to hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference.
 2. Agenda: Owner to discuss items of significance that could affect progress, including the following:
 - a. Scope of Work.
 - b. Contract Start and End Dates.
 - c. Authority of Owner's Personnel.
 - d. Davis Bacon/Prevailing Wage Certified Payroll Reports/Labor Relations and Section 3.
 - e. Insurance Certificate including Endorsements and Performance & Payment Bonds.
 - f. General Requirements/Special Conditions.
 - g. Final Project Schedule, including Phasing.
 - h. Easements, Permits, Lines & Grades.
 - i. Contractor's Superintendent.
 - j. Subcontractor List.
 - k. Safety Plan (see attachment at end of this section).
 - l. Tests, Samples and Observations.
 - m. Progress Meetings and Reports.
 - n. Applications and Certificates of Payment; Retention.
 - o. Progress Payments.
 - p. Change Orders.
 - q. Warranty Requirements.
 - r. Submittals.
 - s. Temporary Storage Facilities, Staging Areas and Jobsite Security.
 - t. Clean-up and Trash Removal.
 - u. Salvage of Materials and Spare Materials.
 - v. Record Drawings.
 - w. Substantial Completion, Final Payment and Retainage.
 - x. Recycling and Energy Conservation.
 - y. Minutes: The Owner will record and distribute Pre-construction meeting minutes via email.
- C. Progress Meetings: The Contractor will conduct progress meetings at weekly intervals, refer to Article 3.1.5 of General Conditions.
1. Attendees: In addition to representatives of Owner and the Contractor, each subcontractor, supplier and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Final Project Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Final Project Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Contractor shall provide a short-term look-ahead schedule for presentation and review at each progress meeting.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Status of correction of deficient items.
 - 14) Field observations.
 - 15) RFIs.
 - 16) Status of proposal requests.
 - 17) Pending changes.
 - 18) Status of Change Orders.
 - 19) Pending claims and disputes.
 - 20) Documentation of information for payment requests.
 - 21) Safety
 - 22) Section 3 compliance and status
3. Minutes: Contractor will record the meeting minutes.
4. Reporting: Contractor will email the minutes to all concerned prior to the meeting and will distribute written copies of the minutes of the meeting to each party present and to parties who should have been present.
 - a. Schedule Updating: Revise Contractor's Two (2)-Week Look Ahead Schedule after each progress meeting. This schedule will be discussed in each progress meeting. Issue revised schedule concurrently with the report of each meeting.
 - b. Contractor's weekly reports will consist of five (5) daily reports, each reflecting the preceding five (5) days. These reports will be sent electronically to the Owner on a schedule that will be determined at the Pre-Construction Meeting or at each progress meeting.

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
1. RFIs generated from subcontractor or supplier of the Contractor must be routed through the General Contractor.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
 3. If a suggestion can be determined or derived at by the initiator of the RFI, it is required the suggestion be supplied with the submitted RFI. If no suggestion is given where one is possible, the RFI will be returned as incomplete.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
1. Project name and number.
 2. RFI Subject.
 3. Date.
 4. Name of Contractor.
 5. Name of Architect.
 6. RFI number, numbered sequentially.
 7. Specification Section number and title and related paragraphs, as appropriate.
 8. Drawing number and detail references, as appropriate.
 9. Field dimensions and conditions, as appropriate.
 10. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 11. Contractor's signature.
 12. Attachments: Include drawings, descriptions, measurements, photos, product data, shop drawings and other information necessary to fully describe items needing interpretation.
- C. Hard-Copy RFIs: Form established by Contractor's Project Management system.
1. Identify each page of attachments with the RFI number and sequential page number.
- D. Owner's Action: Owner will review each RFI, determine action required and return it. Allow five (5) working days for Owner's acknowledgement of each RFI.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Owner's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Owner's action may include a request for additional information, in which case Owner's time for response will start again.
 3. Owner's action may include architect and/or engineer recommendation or approval of proposed solution.
 4. Owner's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Order Request according to General Conditions.
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Owner in writing within five (5) days of receipt of the RFI response.

- E. On receipt of Owner's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Owner within three (3) days if Contractor disagrees with response.
- F. Contractor RFI Log: Prepare, maintain and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:
 - 1. Project name.
 - 2. Name and address of Contractor.
 - 3. Name and address of Architect.
 - 4. RFI number including RFIs that were dropped and not submitted.
 - 5. RFI description.
 - 6. Date the RFI was submitted.
 - 7. Date Architect's response was received.
 - 8. Identification of related Minor Change in the Work, Construction Change Directive and Change Order Request, as appropriate.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

GENERAL CONTRACTOR SITE SAFETY PLAN CHECKLIST

Following is a list of the elements that are typically addressed in a construction site specific safety plan. A site-specific safety plan will be one of the required post-selection documents be submitted by the contractor selected through this bid solicitation.

NOTE: In addition to the typical elements of a construction safety plan that addresses the contractor, KCHA requires that if a/the employee(s) of the Contractor or any sub-contractor is asked to put on a mask by either a resident or property manager when they are in a building or resident's unit, the employee(s) will do so; the Contractor should reflect this in their safety plan.

The selected contractor with responsible for obtaining similar plans from all subcontractors and for the supervision and enforcement of safety requirements on the site. The contractor's Site-Specific Safety Plan will be submitted to KCHA before any work can begin. The Plan will need to address the following:

1. An initial job/job-site safety orientation and a schedule of weekly safety meetings that show employees and subcontractors what they need to know to perform their job assignments safely.
2. Details how and when to report on-the-job injuries.
3. Identifies on-site available 1st Aid / CPR trained personnel, readily accessible first-aid on the jobsite and/or access to the nearest clinic or hospital from the job site.
4. Identifies what to do in an emergency, including how to exit the workplace.
5. Lists the required personal protective equipment (PPE) and describes the proper use and care of the PPE.
6. Details the on-site Haz-Com Program that identifies hazardous materials (Asbestos, Lead) or chemicals including instruction about the safe use and storage.
7. Designates an on-site representative responsible for job-site Safety.
8. Designates who is responsible for performing and recording regular periodic site reviews, and inspections for your employees and subcontractors.
9. Describes programs related to housekeeping and jobsite safety.
10. Outlines the job-site specific fall protection plan.
11. Describes electrical and/or power generation controls on-site.
12. Has provisions for trenching /excavations and/or confined space entry.
13. Has provisions for "masking-up".

END OF SECTION 01 31 00

DIVISION 1
SECTION 01 32 00
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Contractor's Final Project Schedule.
 2. Submittals Schedule (refer to Article 3.10.2 in General Conditions).
 3. Daily construction reports.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring and controlling the construction project. Activities included in a Final Project Schedule consume time and resources.
1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 2. Predecessor Activity: An activity that precedes another activity in the network.
 3. Successor Activity: An activity that follows another activity in the network.
- B. CPM: Critical Path Method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- C. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Float: The measure of leeway in starting and completing an activity.
1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
- E. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- F. Major Area: A story of construction, a separate building or a similar significant construction element.

1.4 SUBMITTALS

- A. Submittals Schedule: Submit one (1) electronic copy of schedule to the Owner. Arrange the following information in a tabular format
1. Scheduled date for first submittal.
 2. Specification Section number and title.
 3. Submittal category (action or informational).
 4. Name of subcontractor (if applicable).
 5. Description of the Work covered.
 6. Scheduled date for Architect's final release or approval.

- B. Contractor's Final Project Schedule: Submit one (1) electronic copy of initial schedule to the Owner. The copy should be large enough to show entire schedule for entire construction period in legible size font.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Final Project Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from parties involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals to the Owner, arranged in chronological order by dates required by Final Project Schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication and delivery when establishing dates.
 - 1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Final Project Schedule.
 - 2. Submit concurrently with the first complete submittal of Contractor's Final Project Schedule.

2.2 CONTRACTOR'S FINAL PROJECT SCHEDULE, GENERAL (refer to Article 3.10.1 in the General Conditions)

- A. Contractor to provide a baseline, cost-loaded schedule in MS Project or Primavera to the Owner's Representative one (1) day **prior** to the weekly project meeting. Contractor is to update the schedule weekly.
- B. Time Frame: Extend schedule from date established for commencement of the Work to date of Substantial Completion as set by the date of Notice to Proceed.
 - 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
 - 1. Activity Duration.
 - 2. Procurement Activities: Include procurement process activities for long lead items and major items as separate activities in schedule.
 - a. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication and delivery.
 - 3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Final Project Schedule with Submittals Schedule.
 - 4. Startup and Testing Time: Include not less than ten (10) days for startup and testing.
 - 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in Final Project Schedule, and show how the sequence of the Work is affected.
 - 1. Phasing: Arrange list of activities on schedule by phase.
 - 2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 - 3. Work Restrictions: Show the effect of the following items on the Final Project Schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use of premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
 - 4. Work Stages: Indicate important stages of construction for each major portion of the Work.
- E. Milestones: Include milestones indicated in the Contract Documents in Final Project Schedule, including, but not limited to, the Notice to Proceed, Substantial Completion and Final Completion.
- F. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.

2.3 CONTRACTOR'S FINAL PROJECT SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit to the Owner a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Final Project Schedule within fourteen (14) calendar days of date after Letter of Award. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project. The Gantt-Chart Final Project Schedule can be either in MS Project or equivalent format.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require three (3) months or longer to complete, indicate an estimated completion percentage in ten (10%) percent increments within time bar.

PART 3 EXECUTION

3.1 CONTRACTOR'S FINAL PROJECT SCHEDULE

- A. Contractor's Final Project Schedule Updating: At two (2) week intervals, update schedule to reflect actual construction progress and activities. Issue schedule three (3) days before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.

- B. Distribution: Distribute electronic copies of approved schedule to Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 01 32 00

**DIVISION 1
SECTION 01 33 00
SUBMITTAL PROCEDURES**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples and other submittals.
- B. Related Sections:
 - 1. See Division 01 40 00 Section "Quality Requirements" for submitting test and inspection reports and for mockup requirements.
 - 2. See Division 01 77 00 Section "Closeout Procedures" for submitting warranties.
 - 3. See Division 01 78 39 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 4. See Division 01 78 23 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires Owner's responsive action.
- B. Informational Submittals: Written information that does not require Owner's responsive action. Submittals may be rejected for not complying with requirements.

PART 2 PRODUCTS (GENERAL)

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements:
 - 1. Submit electronic submittals to Owner via email as PDF electronic files.
 - a. Owner will return annotated file. Annotate and retain one (1) copy of file as an electronic Project record document file.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Owner reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows:
 - 1. Time for review shall commence on Owner's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

2. Initial Review: Allow five (5) calendar days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Owner will advise Contractor when a submittal being processed must be delayed for coordination.
 3. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 4. Resubmittal Review: Allow seven (7) calendar days for review of each resubmittal.
- D. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 4 by 5 inches on label or beside title block to record Contractor's review and approval markings and action taken by Owner.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect (if applicable).
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use consecutively numbered submittals (001, 002, etc.), followed by the Specification Section number, followed by a sequential number indicating version (e.g., 001-13 3300-0).
 - 2) Example: 001 – 011300 – 0
 - a) 001: Consecutively numbered submittals
 - b) 01 13 00: Specification Section
 - c) 0: Version of submittal (0 = original submittal; 1 = first resubmittal; 2 = 2nd resubmittal; etc.)
 - i. Number and title of appropriate Specification Section.
 - j. Drawing number and detail references, as appropriate.
 - k. Location(s) where product is to be installed, as appropriate.
 - l. Other necessary identification.
- E. Deviations: Highlight, encircle or otherwise specifically identify deviations from the Contract Documents on submittals.
1. Substitution Requests.
- F. Additional Copies: Unless additional copies are required for final submittal, and unless Owner observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
1. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.
- G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Owner will return submittals, without review, received from sources other than Contractor.
1. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
- H. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.

2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked "Make Corrections Noted" or "No Exceptions Taken".
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers and others as necessary for performance of construction activities. Show distribution on transmittal forms.
1. Use for Construction: Use only final submittals with mark indicating "Make Corrections Noted" or "No Exceptions Taken".
- 2.2 CONTRACTOR'S USE OF ARCHITECT'S CAD FILES
- A. General: At Contractor's written request, copies of Architect's CAD files will be provided to Contractor for Contractor's use in connection with Project, subject to the following conditions:
1. Release of CADD information will be restricted to the following categories:
 - a. Architectural floor plans.
 - b. Site plan.
 - c. Reflected ceiling plans.
 - d. Exterior elevations.
 - e. Stair sections.
 2. The CADD database will contain only the background information; the sheet numbers, sheet titles, room names and numbers, reference symbols, and other similar data will not be included.
 3. The CADD database will be generated on PC hardware with Autodesk AutoCAD software. Architect has the capability to develop CADD output to meet capabilities of all major platforms and major media types.
 4. When requesting CADD databases, specify the output form required.

PART 3 PRODUCTS (SUBMITTALS)

3.1 ACTION SUBMITTALS

- A. General: Prepare and submit to Owner, Action Submittals required by individual Specification Sections.
- B. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Owner.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner, containing the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name of Construction Manager.

- e. Name of Contractor.
 - f. Name of firm or entity that prepared submittal.
 - g. Names of subcontractor, manufacturer, and supplier.
 - h. Category and type of submittal.
 - i. Submittal purpose and description.
 - j. Specification Section number and title.
 - k. Specification paragraph number or drawing designation and generic name for each of multiple items.
 - l. Drawing number and detail references, as appropriate.
 - m. Location(s) where product is to be installed, as appropriate.
 - n. Related physical samples submitted directly.
 - o. Indication of full or partial submittal.
 - p. Transmittal number, numbered consecutively.
 - q. Submittal and transmittal distribution record.
 - r. Other necessary identification.
 - s. Remarks.
5. Metadata: Include the following information as keywords in the electronic submittal file metadata:
- a. Project name.
 - b. Number and title of appropriate Specification Section.
 - c. Manufacturer name.
 - d. Product name.
- C. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
- 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Manufacturer's catalog cuts.
 - e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Operational range diagrams.
 - h. Compliance with specified referenced standards.
 - i. Testing by recognized testing agency.
 - 4. Number of Copies: Submit to Owner, one (1) complete and legible copy of the Product Data in a pdf format, unless otherwise indicated. Owner will return one (1) complete and legible copy of the accepted Product Data in a pdf format (unless wet stamp is required and then the Owner will return one (1) stamped, hard copy along with the pdf).
- D. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal of Architect's CAD Drawings is otherwise permitted.
- 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.

- e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shop-work manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Notation of coordination requirements.
 - j. Notation of dimensions established by field measurement.
 - k. Relationship to adjoining construction clearly indicated.
 - l. Seal and signature of professional engineer if specified.
 - m. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
2. Sheet Size: Except for templates, patterns and similar full-size drawings, submit to Owner, Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 36 by 48 inches.
 3. Number of Copies: Submit to Owner, one (1) complete and legible copy of the Product Data in a pdf format, unless otherwise indicated. Owner will return one (1) complete and legible copy of the accepted Product Data in a pdf format (unless wet stamp is required and then the Owner will return one (1) stamped, hard copy along with the pdf).
- E. Samples: Submit to Owner, Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures and patterns available.
 - a. Number of Samples: Submit one (1) full set of available choices where color, pattern, texture or similar characteristics are required to be selected from manufacturer's product line. Owner will return submittal with options selected.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three (3) sets of Samples. Owner will retain two (2) Sample sets; remainder will be returned.

- F. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location.
 - 1. Number of Copies: Submit to Owner, one (1) complete and legible copy of the Product Data in a pdf format, unless otherwise indicated. Owner will return one (1) complete and legible copy of the accepted Product Data in a pdf format (unless wet stamp is required and then the Owner will return one (1) stamped, hard copy along with the pdf).
- G. Submittals Schedule: Comply with requirements specified in the General Conditions and Contract.
- H. Application for Payment: Comply with requirements specified in the Contract.
- I. Schedule of Values: Comply with requirements specified in the Contract. If needed, combine subcontract list in paragraph below with product list above. Subcontract list is required by General Conditions to be submitted as soon as practical after award of the Contract.
- J. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.
 - 1. Number of Copies: Submit electronically to Owner, one (1) copy of subcontractor list, unless otherwise indicated.

3.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit to Owner, one (1) complete and legible copy of the Product Data in a pdf format, unless otherwise indicated. Owner will not return copies.
 - 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 - 3. Test and Inspection Reports: Comply with requirements specified in Division 01 40 00 Section "Quality Requirements."
- B. Coordination Drawings: Comply with requirements specified in Division 01 31 00 Section "Project Management and Coordination."
- C. Contractor's Final Project Schedule: Comply with requirements specified in the General Conditions and Contract.
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and Owners, and other information specified.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

- G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- I. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- L. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- M. Pre-construction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- N. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- O. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- P. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 78 23 Section "Operation and Maintenance Data."
- Q. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- R. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address and telephone number of manufacturer.
- S. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
 - 1. Statement on condition of substrates and their acceptability for installation of product.
 - 2. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.

3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - T. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
 - U. Material Safety Data Sheets (MSDSs): Submit information directly to Owner.
 1. Owner will not review submittals that include MSDSs and will return them for resubmittal.
- 3.3 DELEGATED DESIGN
- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Owner.
 - B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, electronically submit one (1) copy of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.
 2. If submittal has a wet stamp, then submit three (3) hard copies, with the wet stamp to Owner for approval. Owner will return one (1) copy to Contractor.

PART 4 EXECUTION

4.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions.

4.2 OWNER'S ACTION

- A. Action Submittals: Owner will review each submittal, make marks to indicate corrections or modifications required, and return it. Owner will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.
- B. Informational Submittals: Owner will review each submittal and will not return it, or will return it if it does not comply with requirements. Owner will forward each submittal to appropriate party.
- C. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 01 33 00

DIVISION 1
SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specified tests, inspections and related actions do not limit Contractor's other quality assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. See Divisions 02 through 33 for specific test and inspection requirements, if applicable. Not all Divisions will be used.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Owner.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.
- D. Pre-construction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

- H. Testing Agency: An entity engaged to perform specific tests, inspections or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Lower Tier Subcontractor, to perform a particular construction operation, including installation, erection, application and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- J. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of two (2) previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two (2) or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Owner for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Owner for a decision before proceeding.

1.5 TESTING SUBMITTALS

- A. Qualification Data: For testing agencies, as prescribed by Contract, but not provided by Owner shall demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Reports: Prepare and electronically submit to the Owner certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on re-testing and re-inspecting.
- C. Permits, Licenses and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for

fee payments, judgments, correspondence, records and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6

QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly or product that is similar to those indicated for this Project in material, design and extent.
- F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
 - 1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design and extent to those indicated for this Project.
- I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Owner.
 - 2. Notify Owner seven (7) calendar days in advance of dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain Owner's approval of mockups before starting work, fabrication or construction.

5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 6. Demolish and remove mockups when directed, unless otherwise indicated.
- J. Laboratory Mockups: Comply with requirements of pre-construction testing and those specified in individual Sections in Divisions 02 through 33.

1.7 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least twenty-four (24) hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where quality-control services are indicated as Contractor's responsibility, electronically submit a certified written report, in duplicate, of each quality-control service to the Owner.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 33 00 Section "Submittal Procedures."
- D. Re-testing/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including re-testing and re-inspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- E. Testing Agency Responsibilities: Cooperate with Owner and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Owner and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which on-site tests will be conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Electronically submit to the Owner a certified written report, in duplicate, of each test, inspection and similar quality-control service through Contractor.

5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- F. Associated Services: Cooperate with agencies performing required tests, inspections and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples and similar activities.
- 1.8 SPECIAL TESTS AND INSPECTIONS
- A. Special Tests and Inspections: Owner will engage a qualified special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Owner and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Owner with copy to Contractor and to authorities having jurisdiction.
 4. Electronically submitting to the Owner a final report of special tests and inspections, which includes a list of unresolved deficiencies, at Substantial Completion.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Re-testing and re-inspecting corrected work.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.

2. Comply with the Contract Document requirements for Division 01 73 29 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.
 - C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

**DIVISION 1
SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 73 00 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. See Division 01 Section "Execution" for progress cleaning requirements.
- C. See Divisions 02 through 33 for temporary heat, ventilation, and humidity requirements for products in those Sections. Not all Divisions will be used.

1.3 DEFINITIONS

- A. Permanent Enclosure: As determined by Owner, permanent or temporary roofing is complete, insulated and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.4 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, testing agencies and authorities having jurisdiction.
- B. Water Service from Existing System: Water from Owner's existing water system is available for use with approval of Owner's Representative. Provide connections and extensions of services as required for construction operations. Contractor must notify Owner forty-eight (48) hours before use of water service.
- C. Electric Power Service from Existing System: Contractor is responsible for supplying power service and distribution as required for construction operations, unless other arrangements are made with approval of Owner's Representative.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Existing Permanent Facilities: Contractor shall assume responsibility for operation, maintenance and protection of each existing permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.
- B. Conditions of Use: The following conditions apply to use of temporary services and existing facilities by all parties engaged in the Work:
 - 1. Keep temporary services and existing facilities clean and neat.
 - 2. Relocate temporary services as required by progress of the Work.

3. Provide temporary keys and lock cores throughout duration of Contractor's occupancy of Owner's space. Contractor to provide Owner's Representative with temporary construction keys matching construction cores installed for access.
 - a. When Contractor is given keys to KCHA property, Contractor will claim responsibility for the keys by signing for keys acquired.
 - b. If Contractor loses keys, Contractor is responsible for rekeying all locks associated with lost key **withing twenty-four (24) hours**.
 - c. Contractor is responsible for returning keys back to Owner's Representative when Work is completed.

PART 2 PRODUCTS

2.1 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls and foundations adequate for normal loading.
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished and equipped to accommodate materials and equipment for construction operations.
- C. Contractor is responsible for security of Temporary Facilities.

2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 1. Use of gasoline-burning space heaters, open-flame heaters or salamander-type heating units is prohibited.
 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 13 at each return air grille in system and remove and replace at end of construction.
- C. Self-Contained Toilet Units: Single-occupant units of chemical, aerated re-circulation, or combustion type; vented; fully-enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
- D. Drinking-Water Fixtures: Containerized, tap-dispenser, bottled-water, drinking-water units, including paper cup supply.
 1. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45 to 55 degrees F.
- E. Electrical Outlets: Properly configured, NEMA-polarized outlets to prevent insertion of 110-to-120-V plugs into higher-voltage outlets; equipped with ground-fault circuit interrupters, reset button and pilot light.
- F. Power Distribution System Circuits: Where permitted, and overhead and exposed for surveillance, wiring circuits, not exceeding 125-V AC, 20-A rating, and lighting circuits may be nonmetallic sheathed cable.

PART 3 EXECUTION

3.1 INSTALLATION, GENERAL

- A. With Owner's approval, locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services. Provide Owner with seventy-two (72) hour notice if disturbance is to occur to site staff or residents.
- B. Water Service: Connect to Owner's existing water service facilities. Clean and maintain water service facilities in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- C. Sanitary Facilities: Provide temporary toilets, wash facilities and drinking water for use by construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation and maintenance of fixtures and facilities.
 - 1. Toilets: Use of Owner's existing toilet facilities will be permitted with Owner's approval, as long as facilities are cleaned and maintained daily. At Substantial Completion, restore these facilities to condition existing before initial use.
- D. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
 - 1. Maintain a minimum temperature of 50 degrees F in permanently enclosed portions of building for normal construction activities, and 65 degrees F for finishing activities and areas where finished Work has been installed.
 - 2. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes and odors from entering occupied areas.
- E. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
- F. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - 1. Connect temporary service to Owner's existing power source, as directed by Owner after receiving approval by Owner's Representative.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

3.3 SUPPORT FACILITIES INSTALLATION

- A. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 73 00 Section "Execution" for progress cleaning requirements. Contractor shall not use Owner's waste receptacles for any disposal.
- B. Parking: Use designated areas of Owner's existing parking areas for construction personnel upon Owner's approval.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway and subsoil contamination or pollution or other undesirable effects.
- C. Security Enclosure and Lockup: Install substantial temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
- D. Barricades, Warning Signs, and Lights: Comply with Owner's instructions for erecting structurally adequate barricades, including warning signs and lighting.
- E. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by Owner.
- F. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- G. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by tenants from fumes and noise.
 - 1. Construct dustproof partitions with two (2) layers of 6-mil polyethylene sheet on each side. Overlap and tape full length of joints.
 - 2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
 - 3. Seal joints and perimeter.
 - 4. Protect air-handling equipment.
 - 5. Provide walk-off mats at each entrance through temporary partition.
 - 6. Dust Control/Air handlers
- H. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Prohibit smoking on Owner's property.
 - 2. Supervise welding operations, combustion-type temporary heating units and similar sources of fire ignition according to requirements of authorities having jurisdiction.

- 3.5 OPERATION, TERMINATION AND REMOVAL
- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
 - B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a twenty-four (24) hour basis where required to achieve indicated results and to avoid possibility of damage.
 - C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
 - D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 77 00 Section "Closeout Procedures."

END OF SECTION 01 50 00

DIVISION 1
SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. See Division 01 77 00 Section "Closeout Procedures" for submitting warranties for Contract closeout.
- C. See Divisions 02 through 33 for specific requirements for warranties on products and installations specified to be warranted. Not all Divisions will be used.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated, as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance and other characteristics that equal or exceed those of specified product.
- B. Substitutions: Changes in products, materials, equipment and methods of construction from those required by the Contract Documents and proposed by Contractor.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. Substitution Requests: Electronically submit one (1) copy of each request for consideration to the Owner. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.

- b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, which will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and the names and addresses of Architects and Owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Final Project Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
2. Owner's Action: If necessary, the Owner will request additional information or documentation for evaluation within seven (7) calendar days of receipt of a request for substitution. Owner will notify Contractor of acceptance or rejection of proposed substitution within fourteen (14) calendar days of receipt of request, or seven (7) calendar days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Signed and Approved Substitution Request Form.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.
- 1.5 QUALITY ASSURANCE
- A. Compatibility of Options: If Contractor is given option of selecting between two (2) or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
- 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING
- A. Deliver, store and handle products using means and methods that will prevent damage, deterioration and loss, including theft. Comply with manufacturer's written instructions.
 - B. Delivery and Handling:

1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged or sensitive to deterioration, theft and other losses.
3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.

1.7

PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
1. Manufacturer's Warranty: Pre-printed written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Electronically submit a draft for approval before final execution to the Owner.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
 3. Refer to Divisions 2 through 33 for specific content requirements and particular requirements for submitting special warranties. Not all Divisions will be used.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Owner will make selection.
 5. Where products are accompanied by the term "match sample," sample to be matched is Owner's.
 6. Descriptive, performance and reference standard requirements in the Specifications establish "salient characteristics" of products.
- B. Product Selection Procedures:
1. Products: Where Specifications include a list of names of both products and manufacturers, provide one (1) of the products listed or equal product that complies with requirements.
 2. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one (1) of the manufacturers listed or equal manufacturer that complies with requirements.
 3. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one (1) of the products listed, or a equal product. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed "or Equal" product.
 4. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one (1) of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed manufacturer.
 5. Product Options: Where Specifications indicate that sizes, profiles and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
 6. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one (1) of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions and other characteristics that are based on the product named. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product by the other named manufacturers.
 7. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Owner's sample. Owner's decision will be final on whether a proposed product matches.
 - a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.

8. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns and textures" or a similar phrase, select a product that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Owner will select color, pattern, density or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Owner will select color, pattern, density or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Owner will consider requests for substitutions if received within sixty (60) days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Owner.
- B. Conditions: Owner will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Owner will return requests without action, except to record noncompliance with these requirements:
 1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner and similar considerations.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 4. Substitution request is fully documented and properly submitted.
 5. Requested substitution will not adversely affect Contractor's Final Project Schedule.
 6. Requested substitution has received necessary approvals of authorities having jurisdiction.
 7. Requested substitution is compatible with other portions of the Work.
 8. Requested substitution has been coordinated with other portions of the Work.
 9. Requested substitution provides specified warranty.

PART 3 EXECUTION (Not Used)

END OF SECTION 01 60 00

DIVISION 1
SECTION 01 73 00
EXECUTION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. General installation of products.
 - 3. Progress cleaning.
 - 4. Starting and adjusting.
 - 5. Protection of installed construction.
 - 6. Correction of the Work.
- B. See Division 01 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

1.3 SUBMITTALS

- A. Not Applicable

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work. Notify Owner of any discrepancies between plans and actual conditions on site.
 - 1. Before construction, verify the location and points of connection of utility services.
- B. Acceptance of Conditions: Examine substrates, areas and conditions, with Installer or Applicator and Owner present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 3. Examine walls, floors and roofs for suitable conditions where products and systems are to be installed.
 - 4. Proceed with installation only after unsatisfactory conditions have been corrected and approved by Owner. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Owner, per Section 01 31 00.
 - 1. It is the Contractor's responsibility to coordinate between the various Contract Documents, including the Drawings and Specifications, with neither superseding the other. In the event of conflicts or discrepancies among the Contract Documents, it is the Contractor's responsibility to seek clarification.
 - 2. Where conflicts and/or omissions have not been brought to the attention of the Owner, it is understood that the Contractor has made provisions in the bid for the most-costly material or methods.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Owner promptly.
- B. General: Engage experienced layout engineers to lay out the Work using accepted surveying practices.
 - 1. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 2. Inform installers of lines and levels to which they must comply.
 - 3. Check the location, level and plumb, of every major element as the Work progresses.
 - 4. Notify Owner when deviations from required lines and levels exceed allowable tolerances.

3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts and wiring in finished areas unless otherwise indicated.
 - 4. Install materials in lengths that produce the minimum number of joints.
- B. Comply with manufacturers' written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produces harmful noise and dust levels. Refer to Dust Control in the Scope of Work.
- F. Templates: Obtain and distribute to the parties involved, templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Attachments: Provide blocking and attachment plates, anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Owner.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, submit proposed joint layout, for Owner's approval. Fit exposed connections together to form hairline joints.
 - 1. Use weather cuts, miters, back caulk as needed. Use lengths that minimize joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
 - 1. If required, Contractor must submit MSDS for all products to be used onsite to Owner for approval. Owner shall have seven (7) calendar days to review and approve/disapprove of the product.
 - 2. If required, Contractor must submit a weekly schedule detailing when and where approved products will be used on an hour-by-hour basis. This schedule must be submitted to the Owner for approval ten (10) calendar days prior to when the product(s) will be used.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully in compliance with Section 01 74 19 "Construction Waste Management and Disposal."
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than seven (7) calendar days during normal weather or three (3) calendar days if the temperature is expected to rise above 80 degrees F.
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - 4. Do not use Owner receptacles.
 - 5. Recycle as outlined in Waste Management Plan in Section 01 74 19.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period.

3.7 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units and re-test.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 01 40 00 Section "Quality Requirements."

3.8 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturers' written instructions for temperature and relative humidity.

3.9 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 73 29 Section "Cutting and Patching."
 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction as well as landscapes and hardscapes to their original condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched and broken glass or reflective surfaces.

END OF SECTION 01 73 00

DIVISION 1
SECTION 01 73 29
CUTTING AND PATCHING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. See Divisions 02 through 33 for specific requirements and limitations applicable to cutting and patching individual parts of the Work. Not all Divisions will be used.

1.3 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- D. Visual Requirements:
 - 1. Unless indicated otherwise, patching, extending or matching shall be performed as necessary to make the Work complete, with all components matching and consistent.
 - 2. Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Owner's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
 - 3. Patching materials shall meet the requirements of the jurisdictional code authorities.
 - 4. All patching procedures shall be reviewed with the Owner prior to proceeding.

1.4 WARRANTY

- A. Existing Warranties: Remove, replace, patch and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Cut, move or remove items as necessary for access to alterations and renovations work; replace and restore at completion.
- E. Contact the Owner when unsuitable materials not marked for removal - such as rotted wood, rusted metals and deteriorated concrete and masonry are discovered.
- F. Remove debris and abandoned items from area and from concealed spaces.
- G. Prepare surfaces and remove surface finishes to provide for proper installation of new work and new finishes.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. Provide appropriate dust control while cutting through surfaces. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 31 and 33 Sections (Sections may not be used) where required by cutting and patching operations.
 - 5. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 4. Ceilings: Patch, repair or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Trim existing doors as necessary to clear new floor finishes; refinish trimmed areas.
- E. Where existing items are indicated as cut or reconfigured, cap and finish all exposed edges to match the existing construction to remain. Provide new or relocated supports spaced to be consistent with the installation.
- F. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty and similar materials.

END OF SECTION 01 73 29

The resource conservation program at KCHA tracks the disposal and recycling data for all KCHA activities. These includes all of the waste and recycling generated by residents, food composting, yard waste composting, unit-improvement waste, illegal dumping waste, and all waste created during the construction and demolition process.

Our goals for all of these areas are:

1. Track the diversion of our waste and improve when possible
2. Meet KCHA recycling goals.

Please provide estimates, to the best of your ability, about the projected waste being generated on this project as well as how much of that waste is being recycled vs disposed. If estimates aren't possible, then we will need this information at project close-out.

Project Name: _____

Project Address: _____

Work Order No.: _____ **Job No.:** _____

DESCRIPTION	WEIGHT	QUANTITY (Circle One)		
		Lbs.	CY	Tons
Total Waste Generated**		Lbs.	CY	Tons
Waste Disposed		Lbs.	CY	Tons
Waste Recycled		Lbs.	CY	Tons
**Waste Disposed plus Waste Recycled should equal Total Waste Generated				
What % of the total waste do you estimate you will recycle?				

The following tables identify materials expected on this project, the quantities generated, whether they will be disposed or recycled, and what facility they will be disposed or recycled at.

DEMOLITION PHASE				
MATERIAL	QUANTITY Lbs./CY/Tons	DISPOSAL / RECYCLE? (CIRCLE ONE)		DISPOSAL OR RECYCLING FACILITY
		Disposal	Recycle	

Example: Roofing, 3 tons, Recycle, DTG Recycle

CONSTRUCTION PHASE				
MATERIAL	QUANTITY Lbs./CY/Tons	DISPOSAL / RECYCLE? (CIRCLE ONE)		DISPOSAL OR RECYCLING FACILITY
		Disposal	Recycle	

Example: Misc. Con. Mat., 30 cy, Recycle, Waste Management

**DIVISION 1
SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Project Documents, and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
1. Salvaging of non-hazardous demolition and construction waste.
 2. Recycling of non-hazardous demolition and construction waste.
 3. Disposing of non-hazardous demolition and construction waste.

1.3 DEFINITIONS

- A. Construction Waste: All non-hazardous building and site materials or other non-hazardous solid waste resulting from construction, remodeling, renovation, repair or land-clearing operations. Construction waste includes packaging and material that is recycled, reused, salvaged or disposed as garbage.
- B. Demolition Waste: All non-hazardous building and site materials or other non-hazardous solid waste resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing for the purpose of using the material in the manufacture of a new product.
1. Source-Separated Recycling: The process of separating recyclable materials in separate containers as they are generated on the job-site. The separated materials are hauled directly to a recycling facility or transfer station.
 2. Co-mingled Recycling: The process of collecting mixed recyclable materials in one container on-site. The container is taken to a material recovery facility where materials are separated for recycling.
- E. Re-Use: Making use of a material without altering its form. Materials can be reused on-site or reused on other project off-site. Examples include, but are not limited to the following:
1. Grinding of concrete for use as sub-base material.
 2. Chipping of land-clearing debris for use as mulch.
- F. Salvage: Recovery of demolition or construction waste and subsequent sale or re-use in another facility.
- G. Salvage and Re-use: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 PERFORMANCE GOALS

- A. General: Material from demolition projects shall be recycled or reused whenever practicable (RCW 39.04.135). Contractor to develop a waste management plan that results in end-of-Project rates for salvage/recycling of fifty (50%) percent by weight of total waste generated by the Work by one or a combination of the following:
1. Salvage.

2. Reuse.
 3. Source-separated Recycling.
 4. Co-mingled Recycling.
- B. Salvage/Recycle Goals: Owner's goal is to salvage and recycle as much non-hazardous demolition and construction waste as possible including the following materials:
1. Cardboard.
 2. Clean dimensional wood.
 3. Metals: Material banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
 4. Gypsum board.

1.5 SUBMITTALS

- A. Waste Management Plan: Submit one (1) electronic copy of the plan within seven (7) calendar days of date established for the Notice of Proceed.
- B. Waste Reduction Progress Reports: Electronically submit, concurrent with Final Application for Payment, the report to the Owner. Include separate reports for demolition and construction waste. Include the following information:
1. Material category.
 2. Generation point of waste.
 3. Destination of waste.
 4. Total quantity of waste in tons.
 5. Quantity of waste salvaged, both estimated and actual in tons.
 6. Quantity of waste recycled, both estimated and actual in tons.
 7. Total quantity of waste recovered (salvaged plus recycled) in tons.
 8. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- C. Waste Reduction Calculations: Before request for Substantial Completion, electronically submit a copy of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work to the Owner.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts and invoices. If waste is taken to a facility that landfills and recycles, include facility record of recycling rate for the period of construction.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts and invoices.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements: Conduct construction waste management activities in accordance with State of Washington RCW 70.95.240, Seattle Municipal Code Chapter 21.36 and all other applicable laws and ordinances.
- B. Review of the following publications and programs (request copies by calling King County Solid Waste Division at 206-477-4466)
1. Construction Recycling Directory for Seattle/ King County.
 2. Contractors Guide: Save money and resources through job-site recycling and waste prevention.

3. King County Solid Waste Division list of Recycling Facilities ([Guide to King County Recycling & Transfer Facilities](#)).

1.7 WASTE MANAGEMENT PLAN

- A. General: Develop a plan consisting of waste identification, waste reduction work plan and cost/revenue analysis. Include separate sections in plan for demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery and handling and transportation procedures.
 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses and telephone numbers.
 3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses and telephone numbers.
 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses and telephone numbers.
 5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address and telephone number of each landfill and incinerator facility.
 6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling and designated location on Project site where materials separation will be located.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:
 1. Total quantity of waste.
 2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
 3. Total cost of disposal (with no waste management).
 4. Savings in hauling and tipping fees that are avoided.
 5. Handling and transportation costs. Include cost of collection containers for each type of waste.
 6. Net additional cost or net savings from waste management plan.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by Owner. Provide handling, containers, storage, signage, transportation and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Waste Management Coordinator: Contractor shall be responsible for implementing, monitoring, and reporting status of waste management work plan.

- C. Training: Train workers, subcontractors and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - 1. Distribute waste management plan to everyone concerned within one (1) day of submittal return. A hard copy should remain on site. Send the plan electronically to the Owner.
 - 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling and disposal.
 - 3. The General Contractor will ensure that the waste plan is communicated to the crews and subcontractors on site. They will be informed of:
 - a. How materials should be separated, and why.
 - b. Where materials should go.
 - c. How often the materials will be collected and delivered to the appropriate facilities.
 - d. The importance of recycling, and KCHA's recycling goals for the project.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways and other adjacent occupied and used facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated and sold.
 - 2. Comply with Division 01 50 00 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection and noise control.
 - 3. Clearly label the recycling bins and waste containers on site.
 - 4. Post lists of recyclable and non-recyclable materials in many locations, in different languages.
- E. To the greatest extent possible, include in material purchasing agreements a waste reduction provision requesting that materials and equipment be delivered in packaging made of recyclable material, that they reduce the amount of packaging, that packaging be taken back for reuse or recycling, and to take back all unused product. Ensure that subcontractors require the same provisions in their purchase agreements.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in the Work:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until installation.
 - 4. Protect items from damage during transport and storage.
 - 5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports and miscellaneous materials necessary to make items functional for use indicated.
- B. Salvaged Items for Sale and Donation: Not permitted on Project site.
- C. Salvaged Items for Owner's Use:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to Owner's designated off-site storage area.
 - 5. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Receivers and Processors: The list below is provided for information only; available recycling receivers and processors include, but are not limited to, the following:

1. Washington State Department of Ecology, Recycling, Northwest Region 206-594-0000.
 2. Industrial Materials Exchange (IMEX), Hazardous Waste Management Program, King County, Washington.
 3. The “Recycling Plus Program Manual” published by the Washington State Clean Washington Center can be used to develop a job site reduction program. The manual includes a job-site recycling worksheet and form, tips on waste reduction, and other technical assistance. The manual also includes sample language for waste reduction requirements for subcontractors’ agreements, as well as sample provision for a full-service recycling agreement.
 4. LEED Reference Guide, Construction Waste Management section.
 5. RecoveryOne is a resource recovery, recycling and research facility dedicated to developing sustainable waste management systems. www.recovery1.com or by phone at 833-548-3879.
 6. Total Reclaim offers a wide variety of innovative environmental services for management of electronics and other hard to handle materials, including fluorescent lamps, refrigerant gases and appliances. www.totalreclaim.com or by phone 206-343-7443.
 7. Washington State Department of Ecology Dangerous Waste Guidance <https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/dangerous-waste-guidance>
 8. King County Designated C&D Facilities <https://kingcounty.gov/so-so/dept/dnrp/waste-services/garbage-recycling-compost/services/construction-demolition/facilities>
- C. Recycling Incentives: Revenues, savings, rebates, tax credits and other incentives received for recycling waste materials shall accrue to Owner.
- D. Procedures: Separate recyclable waste from other waste materials, trash and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 4. Store components off the ground and protect from the weather.
 5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.
- 3.4 RECYCLING DEMOLITION WASTE
- A. Wood Materials: Sort and stack members according to size, type and length. Separate lumber, engineered wood products, panel products and treated wood materials.
 - B. Metals: Separate metals by type.
 1. Structural Steel: Stack members according to size, type of member and length.
 2. Remove and dispose of bolts, nuts, washers and other rough hardware.
 - C. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
 - D. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.

- E. Plumbing Fixtures: Separate by type and size.
- F. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers and other components by type and size.
- G. Lighting Fixtures: Separate lamps by type and protect from breakage.
- H. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers and other devices by type.
- I. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- C. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - 1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.6 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 01 74 19

**DIVISION 1
SECTION 01 77 00
CLOSEOUT PROCEDURES**

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
1. Inspection procedures.
 2. Warranties.
 3. Final cleaning.
- B. See the Owner-Contractor Contract for requirements for Applications for Payment for Substantial and Final Completion.
- C. See Division 01 78 39 Section "Project Record Documents" for submitting Record Drawings, Record Specifications and Record Product Data.
- D. See Division 01 78 23 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
- E. See Divisions 02 through 33 for specific closeout and special cleaning requirements for the Work in those Divisions. Not all Divisions will be used.

1.3 SUBSTANTIAL COMPLETION (Refer to Article 9.7 KCHA General Conditions)

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 2. Advise Owner of pending insurance changeover requirements.
 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications and similar documents (to be included in O&M Manuals).
 4. Obtain and submit to Owner, the releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 5. Prepare and submit Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys and similar final record information to the Owner.
 6. Deliver tools, spare parts, extra materials and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 8. Complete startup testing of systems.
 9. Submit test/adjust/balance records to the Owner.
 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools and similar elements.
 11. Advise Owner of changeover in heat and other utilities.
 12. Submit changeover information related to Owner's occupancy, use, operation and maintenance.

13. Complete final cleaning requirements, including touchup painting.
 14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
 15. Provide training on all newly installed systems by qualified personnel. Training will be presented to those that use the equipment, i.e. tenants site staff, facility users.
- B. Inspection: Submit a written request for inspection for Substantial Completion to the Owner. On receipt of request, Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. Owner will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Owner, that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.
- 1.4 CONTRACT COMPLETION (Refer to Article 9.9 in KCHA General Conditions)
- A. Preliminary Procedures: Before requesting final inspection for determining date of Contract Completion, complete the following:
1. Submit a final Application for Payment according to the Owner-Contractor Contract provisions to the Owner.
 2. Submit to the Owner, a certified copy of Owner's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Owner. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements to the Owner.
 4. Instruct Owner's personnel in operation, adjustment and maintenance of products, equipment and systems.
- B. Inspection: Submit a written request for final inspection for acceptance to the Owner. On receipt of request, Owner will either proceed with inspection or notify Contractor of unfulfilled requirements. Owner will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
- 1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)
- A. Preparation: After Contractor has performed own Quality Control of the Work, Contractor will notify and schedule punch list inspection with Owner and other team members. Owner will document items needing correction on Owner provided form listing area inspected and deficient item needing correction. Owner will provide Contractor with copy of punch list after inspection is completed. Owner has right to stop inspection due to quantity of repetitious items identified by Owner, or if Contractor has not performed own Quality Control of the Work
1. Organize list of spaces in sequential order.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment and building systems.
- 1.6 WARRANTIES (Refer to Article 3.5 in KCHA General Conditions)



- A. Submittal Time: Submit warranties in an electronic format on request of Owner for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual and Division 01 78 23 Operation and Maintenance Data Section 2.3.F.
- C. Submit all warranties to Owner in an electronic format.

PART 2 PRODUCTS

2.1 MATERIALS

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

PART 3 EXECUTION

3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and anti-pollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains and other foreign deposits.
 - c. Remove tools, construction equipment, machinery and surplus material from Project site.
 - d. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - e. Sweep concrete floors broom clean in unoccupied spaces.
 - f. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - g. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - h. Remove labels that are not permanent.
 - i. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.

- j. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings and other foreign substances.
 - k. Replace parts subject to unusual operating conditions.
 - l. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - m. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers and grills.
 - n. Clean light fixtures, lamps, globes and reflectors to function with full efficiency. Replace burned-out bulbs and those noticeably dimmed by hours of use, and defective or noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - o. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

DIVISION 1
SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
1. Operation manuals for systems, subsystems, and equipment Maintenance manuals for the care and maintenance of products, materials, finishes, systems, and equipment.
- B. See Divisions 02 through 33 Sections for specific operation and maintenance manual requirements for the Work in those Sections. Every Division may not be used.

1.3 SUBMITTALS

- A. Manual: Submit one (1) electronic copy of each manual in final form at least fifteen (15) calendar days before final inspection. Owner will return copy with comments within fifteen (15) calendar days after final inspection.
1. Correct or modify each manual to comply with Owner's comments. Submit one (1) hard copy and one (1) electronic copy on a flash drive (or via email at Owner's Representative's request) of each corrected manual within fifteen (15) calendar days of receipt of Owner's comments.

PART 2 - PRODUCTS

2.1 MANUALS- GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain a title page, table of contents and manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name, address and telephone number of Contractor.
 6. Name and address of Architect.
 7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem and equipment. If possible, assemble instructions for subsystems, equipment and components of one (1) system into a single binder.

1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software for computerized electronic equipment.
4. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents and drawing locations.

2.2 OPERATION MANUALS

- A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and equipment descriptions, operating standards, operating procedures, operating logs, wiring and control diagrams, and license requirements.
- B. Descriptions: Include the following:
 1. Product name and model number.
 2. Manufacturer's name.
 3. Equipment identification with serial number of each component.
 4. Equipment function.
 5. Operating characteristics.
 6. Limiting conditions.
 7. Performance curves.
 8. Engineering data and tests.
 9. Complete nomenclature and number of replacement parts.
- C. Operating Procedures: Include start-up, break-in and control procedures; stopping and normal shutdown instructions; routine, normal, seasonal and weekend operating instructions; and required sequences for electric or electronic systems.
- D. Systems and Equipment Controls: Describe the sequence of operation and diagram controls as installed.
- E. Piped Systems: Diagram piping as installed and identify color-coding where required for identification.

2.3 PRODUCT MAINTENANCE MANUAL

- A. Content: Organize manual into a separate section for each product, material and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.
- B. Source Information: List each product included in manual; identify by product name and arrange to match manual's table of contents. For each product, list name, address and

telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

- C. Product Information: Include the following, as applicable:
 - 1. Product name and model number.
 - 2. Manufacturer's name.
 - 3. Color, pattern and texture.
 - 4. Material and chemical composition.
 - 5. Re-ordering information for specially manufactured products.
- D. Maintenance Procedures: Include manufacturer's written recommendations and inspection procedures, types of cleaning agents, methods of cleaning, schedule for cleaning and maintenance, and repair instructions.
- E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.
- F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

2.4 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual; identify by product name and arrange to match manual's table of contents. For each product, list name, address and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including maintenance instructions, drawings and diagrams for maintenance, nomenclature of parts and components, and recommended spare parts for each component part or piece of equipment.
- D. Maintenance Procedures: Include test and inspection instructions, troubleshooting guide, disassembly instructions, and adjusting instructions that detail essential maintenance procedures.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

PART 3 EXECUTION**3.1 MANUAL PREPARATION**

- A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material and finish incorporated into the Work.
- B. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem and piece of equipment not part of a system.
- C. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data includes more than one (1) item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
- D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
- E. Comply with Division 01 77 00 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

DIVISION 1
SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
1. Record Drawings.
 2. Record Specifications.
 3. Record Product Data.
- B. See Division 01 78 23 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
- C. See Divisions 02 through 33 Sections for specific requirements for Project Record Documents of the Work in those Sections. Every Division may not be used.

1.3 CLOSEOUT SUBMITTALS

- A. Record Drawings: Submit to Owner PDF **and** CAD files of scanned record prints.
- B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and contract modifications to the Owner.
- C. Record Product Data: Submit to the Owner, an annotated PDF electronic files and directories of each submittal.
1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.
- D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous recordkeeping requirements and submittals in connection with various construction activities.
- E. Submit annotated PDF electronic files and directories of each submittal.

PART 2 PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one (1) set of black-line white prints of the Contract Drawings and Shop Drawings.
1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is installer, subcontractor or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
 2. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.

3. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
 4. Note Field Authorization numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
1. Record Prints:
 - a. Record Prints and Record Drawings are to be in PDF format.
 - b. Organize Record Prints and Record Drawings into well-labelled folders.
 - c. Record Prints and Record Drawings will be labeled for easy identification.
 2. Identification of the PDF file(s) should include:
 - a. Project name.
 - b. Date.
 - c. Designation "PROJECT RECORD DRAWINGS."
 - d. Name of Architect.
 - e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer and other information necessary to provide a record of selections made.
 4. Note related Change Orders, Record Product Data and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 3. Note related Change Orders, Record Specifications and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Submit annotated PDF electronic files and directories for each miscellaneous record and submittal.

PART 3 EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one (1) copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Owner's reference during normal working hours.

END OF SECTION 01 78 39