PROJECT MANUAL

Volume 1 of 1
Divisions 00 – 33

Gregory-Portland Independent School District High School Fencing Project CSP#2223-05

Prepared by

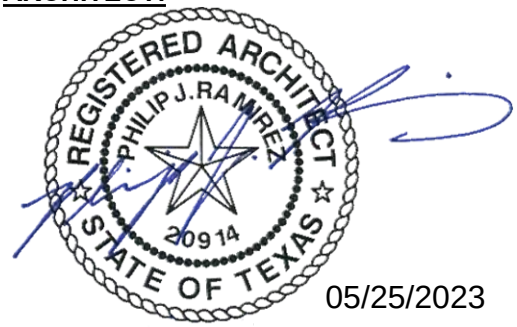
TURNER | RAMIREZ ARCHITECTS

3751 South Alameda St.
Corpus Christi, Texas 78411
361.994.8900

100% Construction Documents Re-Bid – May 25th, 2023
Project Number 2021-19N

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 00 01 07 SEALS PAGE

ARCHITECT:  05/25/2023	**PHILIP RAMIREZ** **TURNER, RAMIREZ, & ASSOCIATES** **3751 S. ALAMEDA ST.** **CORPUS CHRISTI, TX 78411** **V | 361.994.8900** **F | 361.994.8955** **E | philip@trarch.com**

END OF SECTION 00 01 07

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 00 01 10 TABLE OF CONTENTS

DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 – GENERAL REQUIREMENTS

DIVISION 32 – EXTERIOR IMPROVEMENTS

END OF DOCUMENT 00 01 10

SECTION 00 01 15 LIST OF DRAWING SHEETS

1.1 LIST OF DRAWINGS

A. Drawings: Drawings consist of the Contract Drawings and other drawings listed on the Table of Contents page of the separately bound drawing set titled 100% Re-Bid Submission, dated 05/25/2023, as modified by subsequent Addenda and Contract modifications.

FRONT END

Sheet No.	Sheet Name
A0.0	COVER
A0.1	SYMBOL AND ABBREVIATIONS & GENERAL NOTES
A0.2	TAS 2012 EXCERPTS

ARCHITECTURAL DEMOLITION

Sheet No.	Sheet Name
AD1.1	SITE DEMOLITION

ARCHITECTURAL

Sheet No.	Sheet Name
A1.0	OVERALL SITE PLAN
A1.1	ENLARGED SITE PLAN – AREA A
A1.2	ENLARGED SITE PLAN – AREA B
A1.3	SITE DETAILS
A1.4	SITE DETAILS

ELECTRICAL

Sheet No.	Sheet Name
ES1.0	ELECTRICAL SITE PLAN
E1.0	PANEL SCHEDULES, LOAD SUMMARY, & RISER (ONE-LINE) DIAGRAMS
E2.0	ELECTRICAL SPECIFICATIONS
E3.0	ELECTRICAL SPECIFICATIONS

END OF DOCUMENT 00 01 15

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 00 21 16 INSTRUCTIONS TO BIDDERS

1.01 RECEIPT AND OPENING OF PROPOSALS

A. Competitive sealed proposals will be received from qualified Proposers by Gregory-Portland ISD, in the School Administration Building of the Gregory-Portland ISD, 1200 Broadway Blvd., Portland, Texas 78374. The Proposal shall be submitted in two parts as follows: Part “A” and "B" of the Proposal shall be received until **2:00 P.M., THURSDAY JUNE 15th, 2023.** Upon submission of Part “A” of the Proposal, they will be publicly opened and read aloud for the furnishing of all labor, materials, and equipment, and performing all work required for **High School Fencing Project**, Texas, and in compliance with Project manual and drawings, and other contract documents as prepared by Architect.

B. The School District will receive Part “B” of the Proposal and evaluate the submittal according to the selection criteria in order to determine which Proposal offers the best value to the District. The District will, within forty-five (45) days of the opening of Proposals, rank each of the Proposers using the Selection Criteria. Each Proposer will be notified of the rankings. If cost objectives cannot be reached with the top ranked offer, the District will move to the second ranked offer and other offers in turn until the cost objectives are met.

C. Refer to Part 2 of this section for information regarding the proposal evaluation process and procedures.

D. THERE WILL BE A PRE-PROPOSAL MEETING HELD AT 2:00 P.M., Thursday, JUNE 01st, 2023, AT THE G-PISD STUDENT SUPPORT CENTER, 1100 LANG ROAD, ROOM #10, PORTLAND, TEXAS 78374. Please Park in the small parking lot on the left side of the facility. Use door #3 to gain access. The door has access control and is locked, please utilize the doorbell to notify staff to let you in.*DO NOT USE THE FRONT DOOR MAIN ENTRANCE, that entrance is for students and staff. ATTENDANCE IS HIGHLY RECOMMENDED.

1.02 PREPARATION OF PROPOSAL

A. The Proposer shall submit a competitive sealed proposal for the General Construction of the project as bound in the project manual, Section 00 42 00 Part A and Section 00 43 35 Part B. A proposal will be considered incomplete unless both Parts A and B of the Proposal are submitted. The Proposer’s competitive sealed Proposal shall include all of the following items:
   1. Part “A” submission:
      a. Proposal Section 00 42 00, Part A.
      b. Cashier's Check, Certified Check, or Bid Bond for no less than 5% of the largest possible total for the proposal submitted.
   2. Part “B” submission:
      a. Proposal Section 00 43 35 Part “B”

B. The successful Proposer will be required to enter into a contract with the Gregory-Portland ISD and to furnish a Performance and Payment Bond of approved form through an approved bonding company duly authorized to do business in the State of Texas, and currently listed in the Department of Treasury Federal Register, in the amount of not less than 100% of the contract price, conditioned upon the performance of the contract. Performance and Payment Bonds shall be in full compliance with Texas Government Code Chapter 2253. AIA Bonds (AIA Document A312) do not comply. Bonding Companies using “Reinsuring Insurance Companies” to expand the Bonding Companies Bonding Limits will not be acceptable unless also approved by the Owner.

1.03 WAGE RATES

A. Attention is called to the fact that the Contractor must comply with all Federal, State and Local labor laws, including Chapter 2258 Texas Government Code Title 10, which requires that the Contractor pay not less than the following prevailing wage rates and rates for legal

holidays and overtime, which have been ascertained by the awarding body and listed in Section 00 73 43 - Wage Rate Requirements

1.04 DISCLOSURE OF INTERESTED PARTIES

A. In accordance with LGC 2252.908, the awarded Vendor is required to submit to the Texas Ethics Commission a fully executed Form 1295 electronically. The Texas Ethics Commission WILL NOT accept a paper submittal. Upon submittal of that form to the Texas Ethics Commission, the awarded Vendor MUST forward a copy of the submitted form to the Director of Purchasing. The District must then go to the Texas Ethics Commission and acknowledge that you have submitted Form 1295. NO CONTRACT CAN/WILL BE SIGNED OR EXECUTED UNTIL THIS PROCESS HAS BEEN COMPLETED.

B. Contractor shall file online at the following location: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.ht

1.05 PROPOSAL GUIDELINES

A. Attention is called to the fact that the Owner is exempt from the payment of the State Sales Tax normally levied against material costs. The contract sum, as identified by the Proposal, shall not include any allowance for the payment of State Sales Tax on materials required to complete the work. The successful Proposer, upon award of the contract, will be furnished with a permit number, which will enable him to purchase the required materials without payment of such taxes.

B. The Project Manual and Drawings may be examined, without charge, in the Architect's office and Electronic Documents (PDF Files) may be downloaded at ___GPISD Website_____.

C. The Architect will supply Project Manual and Drawings to various plan rooms where it appears to be in the Owner's interest to do so.

D. All definitions set forth in the General Conditions of the Contract for Construction, AIA Document A201, and the Supplementary General Conditions included in the Project Manual are applicable to the Instructions to Proposers.

E. Contract Documents include the Advertisement or Invitation for Proposal, Instructions to Proposers, the Proposal Form, and the proposed contract documents (drawings and project manual), including any addenda issued prior to receipt of competitive sealed proposals.

F. Addenda are written or graphic instruments issued prior to the execution of the contract which modify or interpret the proposal documents, including drawings and project manual, by additions, deletions, clarifications, or corrections and should be acknowledged by the Proposer on the Proposal form. Addenda will become part of the contract documents when the construction contract is executed. ADDENDA WILL BE PUBLISHED ON THE WEBSITE OF ____GPISD_____. NO ADDENDA WILL BE MAILED OR FAXED TO ANY PLANHOLDER.

G. Each Proposer, by making a competitive sealed proposal, represents that he has carefully studied, compared, and understands the contract documents including any and all addenda items.

H. Each Proposer, by making a competitive sealed proposal, represents that he has familiarized himself with and understands the local conditions under which work is to be performed, including prevailing subsurface conditions.

I. All competitive sealed proposals must be prepared on the form provided by the Architects and submitted with all other required material in accordance with the Instructions to Proposers. When the proposal contains multiple "Bid Items", it shall be understood that the Owner may award each Proposal Item separately, or in any combination that the Owner chooses.

J. A proposal is invalid if it has not been deposited at the designated location prior to the time and date for receipt of proposals indicated in the Advertisement or Invitation for Proposal or

prior to any extension thereof issued to the Proposers.

K. Unless otherwise provided in any supplement to the Instruction to Proposers, no Proposer shall modify, withdraw, or cancel his proposal or any part thereof for forty-five days after the time designated for the receipt of proposals in the Advertisement or Invitation for Proposal.

L. Each Proposer represents that his competitive sealed proposal is based upon the material and equipment described in the contract documents.

M. Each Proposer shall carefully study and compare the proposal documents, and not later than seven (7) days prior to the date for receipt of competitive sealed proposals, shall make written request to the Architect for interpretation or correction of any ambiguity, inconsistency, or error therein which he may discover. Any interpretation or correction will be issued in a written addendum by the Architects. Only a written interpretation or correction by an addendum shall be binding. No Proposer shall rely upon any interpretation or correction given by any other method.

N. No substitution will be considered unless a written request has been submitted to the Architect for approval at least seven (7) days prior to the date for receipt of proposals. Each such request shall include a complete description of the proposed substitute, the name of the material or equipment for which it is to be substituted, drawings, cuts, performance and test data and any other data or information necessary for a complete evaluation.

O. If the Architect approves any proposed substitution, such approval will be set forth in an Addendum.

P. Should the particular equipment, which any bidder proposes to install, require other space conditions other than those shown on the drawings, he shall arrange for such space with the Architect before submitting a bid. Should changes become necessary because of failure to comply with this requirement, the contractor shall be fully responsible for making such changes. The contractor shall be required to submit working drawings of all equipment, which varies from the drawings and the project manual, and any interference must be eliminated before work proceeds.

Q. The Proposer acknowledges the right of the Owner to reject any or all proposals and to waive any informality or irregularity in any proposal received. In addition, the Proposer recognizes the right of the Owner to reject a proposal if the Proposer failed to furnish any required bid security or to submit the data required by the contract documents, or if the proposal is in any way incomplete or irregular.

R. By submitting a proposal, each proposer agrees to waive any claim it has or may have against the Owner, the Architect/Engineer, and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any proposal; waiver of any requirements under the Bid Documents; or the Contract Documents; acceptance or rejection of any proposals; and award of the Contract.

S. In case of ambiguity or lack of clearness in stating the price in the Proposal, the Owner reserves the right to adopt the price written in words or to reject the Proposal.

1.06 GUARANTEES

A. Besides guarantees required elsewhere, the contractor shall guarantee the work in general for one year. Contractors shall be held responsible for and must make good any defects arising or discovered in any part of their work within one year period noted on the form, and in certain other parts as required by the project manual for a long period. Where detailed specifications call for guarantees as above specified, they shall cover the special features called for.

B. In addition to guarantees called for elsewhere in the project manual, the contractor shall guarantee all of his work for a period of one year after the date of substantial completion against defective material or faulty workmanship that may arise within that period.

C. All guarantees must be submitted to the Architect before the final payment request will be approved.

D. All guarantees must be submitted to the Architect in the following form as prerequisite to acceptance for payment.

GUARANTEE FOR_____

We hereby guarantee the _____

which we have installed in the_____ at ___

for_____(_____)years from the date of full completion and acceptance by the Owner.

We agree to repair or replace to the satisfaction of the Architect, and at no expense to the Owner, any or all work that may prove defective in workmanship or materials or is not meeting the specification requirements within that period (ordinary wear and tear and unusual abuse or neglect excepted) together with any other work which may be damaged or displaced in so doing.

In the event of our failure to comply with the above-mentioned conditions within a reasonable time after being notified in writing, we, collectively and separately, do hereby authorize the Owner to proceed to have the defects repaired and made good at our expense, and will pay the costs and charges therefore immediately upon demand.

Signature of Subcontractor_____ Date_

Signature of Contractor_____

PROPOSAL EVALUATION PROCESS AND PROCEDURES

201 COMPETITIVE SEALED PROPOSAL EVALUATION AND RANKING PROCEDURES

A. The following procedures shall be used to evaluate and recommend a construction contractor for selection by the School District through the use of Competitive Sealed Proposals, as authorized in Texas Government Code 2269.

202 PROPOSAL EVALUATION COMMITTEE

A. For each construction project utilizing the Competitive Sealed Proposal method of procurement, the School Board shall convene a Proposal Evaluation Committee (Committee) may be comprised from of the following individuals:
   1. School Board Members
   2. School Administration
   3. District's Financial Officer or Consultant
   4. Staff
   5. Project Architect
   6. Project Engineer
   7. Program Manager

203 PROPOSAL EVALUATION COMMITTEE FUNCTION

A. The Committee shall perform an evaluation of all submitted Proposals and shall recommend an order of selection ranking of all Proposers to the School Board. The following procedures shall be used by the Committee in the evaluation process:

   1. As soon as possible following the public opening of Proposals, the Committee shall meet to conduct a preliminary examination of each Proposal for compliance with the published requirements.

   2. The Committee shall conduct thorough discussions and evaluations of all Proposals.

   3. Within forty-five (45) days after publicly opening the Proposals, the Committee shall produce a ranking of Proposers in the order of the best value to the School District.

4. The recommended ranking shall be based on the data furnished by the Proposers in response to the request for Competitive Sealed Proposals. The following is a list of rating categories and values for each category. To provide the best value to the School District, these categories and values may be revised by the Committee based on the project type and conditions at the time Proposals are requested. Unless modified by addendum prior to opening of the Proposals, the following listing of categories and values shall be utilized by the Committee:

RATING CATEGORY	VALUE
Priced for Construction Contract Amount	40.00
Ability to Meet the District's Needs (TABs 2 and 5)	20.00
Quality of Vendor Services (TABs 3 & 4)	15.00
Reputation of Vendor Services (Reference + TABs 6 & 7)	15.00
Quality of the Vendors Proposal Packet	10.00
TOTAL OF WEIGHTED VALUE	**100.00**

B. GENERAL EVALUATION PROCEDURES
   1. Proposed Construction Contract Amount will be rated using mathematical processes described below. Each of the other listed rating categories shall be evaluated on a scale of zero to ten. Each rating category response will be evaluated, and the Committee shall produce a single evaluation determination in each category for each Proposal received.

C. PROPOSED CONSTRUCTION CONTRACT AMOUNT EVALUATION
   1. This evaluation ranking shall be based on a value of one (1) assigned to the lowest proposed amount. Each successive Proposer's contract amount shall be scored as follows; Low Proposer amount divided by the next low Proposer amount and multiply that figure by 1 equals the score for that Proposer.
   2. These resulting ratings are then multiplied by the value of this rating category, producing the construction contract amount score for each Proposer.

D. SCORING
   1. Proposers may receive equal rating in the Proposed Construction Contract Amount category if their proposed amounts in these categories are identical.
   2. With the exception of the Proposed Construction Contract Amount ratings, all other category rating determinations among Proposers may receive identical values if, in the opinion of the Committee, the qualification data provided by Proposers are determined to be equal for a selected category.
   3. Upon determining a rating for each category, a categorical score for each Proposer shall be calculated by multiplying the category value by the Committee determined rating.
   4. The total score for a Proposer shall be determined by adding the scores received for each category. The maximum score attainable for all categories shall be one hundred (100).
   5. The Committee shall produce a tabulation of scores, which identifies the Proposers their Proposed Construction Contract Amounts, and their individual total scores.

204 COMPETITIVE SEALED PROPOSALS PREPARATION AND SUBMISSION

A. PREPARATION
   1. The Proposal shall be based on conditions at the project site, the project Drawings

and Specifications and any addenda issued.

2. A Proposal showing omissions, alterations, conditions, or carrying riders or other qualifiers, which modifies the Proposal, may at the Owner's discretion, be rejected as irregular.
3. The various sections of the Proposal data should be separated by tabbed dividers. The tabs must identify the sections by number and name rather than simply a number or alphabet.

B. SUBMISSION

1. If the Proposer chooses to issue a "No Response" (N/R) to a question on the Proposal, an explanation of this action is required. Failure to provide an adequate explanation may be viewed by the Owner as an incomplete response and may subject the entire Proposal to rejection or at a minimum a score of zero (0) will be given for that category.
2. Only one Proposal may be submitted by each Proposer. If two or more Proposals are submitted, either in one envelope or in separate envelopes, such multiple Proposals may be subject to rejection.
3. Proposals received after the advertised time for the Proposal opening will be ineligible and will be returned unopened.
4. After all Proposals are opened, but before the names of the Proposers and the monetary Proposals are read aloud, they will be examined by the presiding official to determine if they are complete, in proper form and properly signed. If an error or omission is discovered and classified by the presiding official as a technicality, which the Owner has reserved the right to waive, the Proposer's representative may be permitted to make the appropriate correction. Any such correction will be announced and explained to the others present at the Proposal opening. A Proposal that is not and cannot be made eligible for consideration under this procedure will not be read, nor will the Proposal prices by revealed publicly.
5. A Proposer will receive no compensation or reimbursement of expenses incurred in of the preparation of a Competitive Sealed Proposal submission.
6. The Owner reserves the right to reject any or all Proposals, and waive any and/or all formalities.

2.05 PUBLIC INFORMATION AND NOTICE OF CONFIDENTIALITY

A. The Owner considers all Proposal information, documentation and supporting materials submitted in response to this Proposal request to be non-confidential and/or non-proprietary in nature, and therefore, shall be subject to the public disclosure under the Texas Public Information Act (Texas Government Code, Sec. 552.001, et seq.) after the award of the contract.

B. The Proposer must identify and designate those portions of their technical Proposal that contains trade secrets or other proprietary data. If the Proposal includes such data, the Proposer shall:

1. Mark the cover sheet of the Technical Proposal with the following phrase: "This Proposal includes data that shall not be disclosed outside the School District and the A/E design team and shall not be duplicated, used or disclosed in whole or in part for any purpose other than to evaluate the Proposal."
2. Mark each sheet and the specific data on that sheet that the Proposer wishes to restrict with the following phrase: "Use or disclosure of the specifically marked data is subject to the restrictions regarding confidentiality cited on the cover sheet of this Proposal."

2.06 OWNERSHIP OF COMPETITIVE SEALED PROPOSAL

A. Submitted Proposals, documentation and supporting material shall become the property of the Owner.

B. After award or rejection action by the Owner, the Proposer's financial statement and other information that has been properly identified and marked in accordance with Paragraph 2.05 of these Instructions for Competitive Sealed Proposals, entitled "Public Information and Notice of Confidentiality," will be returned to the Proposer as expeditiously as possible.

2.07 SITE INVESTIGATION

A. It is the responsibility of each Proposer to examine the project site, existing improvements and adjacent property and be familiar with existing conditions before submission of Proposal.

B. After investigating the project site and comparing the Project Manual and Drawings with the existing conditions, the Proposer should immediately notify the A/E of any conditions for which requirements are not clear, or about which there is any question regarding the extent of the work involved.

C. Should the successful Proposer fail to make the required investigation and should a question arise after award of the contract as to the extent of the work involved in any particular case, after receiving recommendations from the A/E, the Owner will make the interpretation of the Contract Documents.

2.08 EVALUATION AND CONTRACT AWARD PROCESS

A. Proposals will be opened publicly to identify the names of the Proposer and their respective proposed contract amount. Other contents of the Proposals will be afforded security sufficient to preclude disclosure of the contents prior to award or rejection action.

B. Once the Proposal Part B has been submitted, the Owner may opt to interview each Proposer prior to the actual evaluation of the Proposals.

C. Proposals will be evaluated by the Proposal Evaluation Committee as set forth in 2.02.A. The criteria for evaluation and selection of the successful Proposer for this award will include the factors listed in 2.03.A.4.

D. Within forty-five (45) calendar days after opening the Proposals, the Owner will evaluate and rank each Proposal with respect to the published selection criteria described under Paragraph 2.03. After opening and ranking, an award may be made on the basis of the initially submitted Proposal, without discussion, clarification or modification, or the Owner may discuss with the selected Proposer any element of the Proposal. Other than the data read at the Proposal opening, the Owner shall not disclose any information derived from the Proposals submitted by competing firms in conducting such discussions. If the Owner determines that it is unable to reach a satisfactory agreement with the first ranked Proposer, the Owner will terminate discussions with that Proposer. The Owner will then proceed with negotiations with each successive Proposer as they appear in the order of ranking until an agreement is reached, or until the Owner has rejected all Proposals. After termination of discussions with any Proposer, Owner will not resume discussions with that Proposer.

E. The Owner reserves the right to accept or reject any or all alternates or to accept any combination of alternates considered advantageous to the Owner.

F. The award or rejection action regarding this Proposal is at the sole discretion of the Owner and the Owner makes no warranty regarding this Proposal that a contract will be awarded to any Proposer.

G. The Owner agrees that if the Contract is awarded, it will be awarded to the Proposer offering the best value to the Owner, based upon the published selection criteria, and upon its ranking evaluation. The Owner is not bound to accept the lowest priced Proposal if that Proposal is judged not to be the best value for the Owner, as determined by the Owner.

END OF SECTION 00 21 16

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 00 42 00 PROPOSAL FORM – PART "A" - BASE BID

DATE_____

1.01 TO: GREGORY-PORTLAND ISD, PORTLAND, TEXAS.

A. Having carefully examined the project manual, drawings, and related documents entitled: G-PISD High Fencing Project as prepared by Architect, as well as the premises and conditions affecting the work, the undersigned proposes to furnish all materials, labor, and equipment, and perform all work required by the contract documents for the G-PISD High School Fencing Project, in accordance with said documents, of which this Proposal is a part, for the following sum:

B. PROPOSAL ITEM NO. 1: For the High School Fencing Project for Gregory-Portland ISD in compliance with and as shown on the drawings and herein specified for the sum of:

$_____

C. Refer to Section 01 14 00 Work Restrictions for specific project schedule. The Contractor acknowledges that they have read and understand the project schedule as stated in Section 01 14 00. Please initial as acknowledged____(initials).

D. The undersigned acknowledges_____addenda to the project manual and drawings.

E. The undersigned agrees, if awarded the contract, to execute and deliver to the Owner, at the time of the signing of the contract, a Performance and Payment Bond of approved form through an approved bonding company duly authorized to do business in the State of Texas, and currently listed in the Department of Treasury Federal Register, which is acceptable surety within their Uni underwriting limitations on bonds, in favor of the Gregory-Portland ISD as specified in the Instructions To Proposers contained in the project manual.

F. The undersigned further agrees that the Certified Check, Cashier's Check, or Proposal (Bid) Bond in the amount of five (5%) percent of his Proposal, payable to the Gregory-Portland ISD, accompanying this Proposal, is left in escrow with the Architect, that it's amount is the measure of liquidated damages the Owner will sustain by the failure of the undersigned to execute and deliver the above-named agreement, or in furnishing the 100% Payment and Performance Bonds within ten (10) days of written notification of the award of the contract to him, then the Certified Check, Cashier's Check, or Proposal Bond shall become the property of the Owner; but if this Proposal is not accepted within forty-five (45) days of the time set for the submission of proposals, or if the undersigned executes and delivers said contract and bonds, the check shall be returned to him on receipt thereof.

G. If he is notified of the acceptance of this Proposal within forty-five (45) days of the time set for the opening of proposals, he agrees to execute a contract for the above work for the above- stated compensation in the form of the Agreement Form G-PISD Construction Contract Template (Section 00 52 00).

H. It is further agreed that extended periods of labor strikes, unusual and destructive weather conditions that are beyond the normal weather patterns, and other generally recognized "Acts of God" will be cause for an approved extension of the above-stipulated completion of time schedule. It is also agreed that a request for extension of time will be made in writing by the Contractor to the Architect within fifteen (15) days after the time of occurrence for any consideration to be given the request. It is agreed that no additional funds are allowed for Extensions of Time.

I. Contractor has read and agrees with all provisions and articles of the contract documents. Respectfully submitted,

Contractor:_____

Per:_____

VENDOR COMPLIANCE TO STATE LAW

Gregory-Portland ISD

Please answer the following questions and return with this bid:

Texas law prohibits cities and governmental units from awarding contracts to a non-resident unless the amount of such proposal by a Texas resident by the amount the Texas resident would be required to underbid in the non-resident bidder's state. For information regarding this series of questions, see Article 601g of the Texas Civil Statutes.

Is your principal place of business in Texas? Yes No (Circle

One) If no, in which state is your principal place of business? _____

If your principal place of business is not Texas, does your state favor resident bidders in your state by some dollar increment or percentage? Yes No (Circle One)

If yes, what is that dollar increment or percentage? _____

AUTHORIZED SIGNATURE_____ NAME OF COMPANY_____

ADDRESS_____

CITY_____ STATE_____ ZIP CODE_____

DATE_____

NOTIFICATION OF HAZARDOUS MATERIALS AFFIDAVIT

STATE OF

TEXAS [___]

COUNTY

Before me, undersigned authority on this day personally appeared_____, _____known to me to be the person whose name is subscribed below, who, on oath stated:

"As the appropriate official of the company, contractor, or subcontractor submitting this affidavit in conjunction with a bid submitted to the Gregory-Portland ISD, I acknowledge that this company, contractor, or subcontractor has been notified that copies of the Asbestos Hazard Emergency Response Act (AHERA) for the school(s) where such company, contractor or subcontractor has been contracted to perform work are available at the Gregory-Portland ISD, Portland, Texas. I understand that it is our responsibility to familiarize ourselves with such plans and that it is our responsibility to inform every worker that we use on this project as to the availability of these plans.

We also acknowledge that we will be required to obtain clearance from the Gregory-Portland ISD, prior to executing any work on this project."

Name of Company:_____

By:_____

Title:_____

STATE OF

TEXAS COUNTY

OF [_____]

Sworn to and subscribed before my hand at_____, Texas this the day of _____, 20 _____ , A.D.

_____

Notary Public in and for [____] County, Texas

END OF SECTION 00 42 00

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 00 43 35 PROPOSAL FORM PART "B" QUALIFICATIONS

DATE _____

TO: GREGORY-PORTLAND ISD, PORTLAND, TEXAS.

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION IN THE SEQUENCE AND FORMAT PRESCRIBED HEREIN AND AS OUTLINED IN THE INSTRUCTIONS TO PROPOSERS SECTION 00 21 16, PARAGRAPH 2.04.A AND 2.04.B. SUPPLEMENTAL MATERIALS PROVIDING ADDITIONAL INFORMATION MAY BE ATTACHED, BUT THE INFORMATION REQUESTED BELOW IS TO BE PROVIDED IN THIS FORMAT AND TABBED AS NOTED.

TAB 1: FIRM INFORMATION

Name of Firm: _____

Address of Principal Office: _____

Phone Number: _____

Fax Number: _____

Email Address and/or Web Address: _____

Form of Business Organization (Corporation, Partnership, Limited Liability Partnership, Individual, Joint Venture, other?): _____

Year Founded: _____

Primary individual to contact: _____

TAB 2: SCHEDULE:

The Proposer shall submit a schedule for this project.

State your organization's project plan or proposed approach to this project.

If selected, this proposed schedule shall become part of the Owner – Contractor Agreement AIA Document A101.

TAB 3: KEY PROJECT PERSONNEL:

Given the scope and schedule of the project, identify all proposed personnel for this project including but not limited to the Project Manager, Estimator, and Superintendent who would work on the project. Provide a resume and references for each individual. Note current projects on which individual is working including the project name, location, contract amount, percent complete, and the completion date of those projects. Also note the length of tenure with your company (hire date) for each proposed individual. Provide an organizational chart for this project noting whether the individual is On Site or Off Site. This organizational chart shall become part of the Owner – Contractor Agreement AIA Document A101. Members of the proposed team, once approved, shall not be changed without prior written approval of the Owner.

TAB 4: SUBCONTRACTORS:

Provide a list of all the major Subcontractors and Suppliers for each category listed below for this project. All categories may not be used.

• Earthwork	• Site Utilities
• Concrete	• Masonry
• Steel Fabrication	• Landscape and Irrigation
• Roofing	• Waterproofing
• Glass and Glazing	• Drywall
• Resilient Floor Covering/Carpet	• Ceramic Tile/Quarry Tile
• Terrazzo Flooring	• Painting

• Sprinkler System	• Plumbing
• Mechanical (HVAC)	• HVAC Controls
• Electrical	• Technology
• Fire Alarm	• Security
• Public Address	• Demolition

You may provide a maximum of three (3) proposed Sub-contractors for each category. However, no additional Sub-contractors will be considered after submission of this list.

TAB 5: PROJECT EXPERIENCE:

List all educational projects and all other major projects constructed or demolished by your firm within the last five (5) years in similar scope and size to the project herein. For each project provide the name of the project; nature of the project/function of the building; size (square feet); locations; cost; completion date; name and contact person, address and phone number of both the Owner and Architect; and the manner in which your organization was selected (Bid, RFP, CM or other method).

TAB 6: FINANCIAL BACKGROUND:

Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:

Current assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory, and prepaid expenses).
Non-current assets (e.g., net fixed assets, other assets).
Current liabilities (e.g., accounts payable, notes payable (current), accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes).
Non-current liabilities (e.g., notes payable).
Capital accounts and retained earnings (e.g., capital, capital stock, authorized and outstanding shares par value, earned surplus and retained earnings).

Name and address of firm preparing attached financial statement and date thereof.

Is the attached financial statement for the identical organization named under item 1 above? If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent, and subsidiary).

Provide name, address, phone for bank reference.

Surety: Name of bonding company, name and address of agent. State total bonding capacity and total current bonding obligations with and without this project.

Please note that this information will be reviewed by the Owners Financial Officer or Consultant acting in that capacity. Reference Section 00 21 16 for information regarding confidentiality.

TAB 7: CLAIMS AND SUITS:

List all lawsuits, requested arbitration and mediation with regard to construction contracts in the last ten (10) years.

List all judgments, claims, arbitration proceedings, mediation or suits pending or anticipated against your organization.

If your company has been in business less than ten (10) years then include any former company information if applicable.

TAB 8: QUALITY PROGRAM:

State your organization's overall approach to quality control for this project.

TAB 9: FELONY CONVICTION

NOTICE: FELONY CONVICTION

NOTIFICATION

State of Texas Legislative Senate Bill No. 1, Section 44.034, Notification of Criminal History, Subsection (a), states “a person or business entity that enters into a contract with a school district must give advance notice to the district if the person or an owner or operator of the business entity has been convicted of a felony. The notice must include a general description of the conduct resulting in the conviction of a felony.

Subsection (b) states “a school district may terminate a contract with a person or business entity if the district determines that the person or business entity failed to give notice as required by Subsection (a) or misrepresented the conduct resulting in the conviction. The district must compensate the person or business entity for services performed before the termination of the contract

THIS NOTICE IS NOT REQUIRED OF A PUBLICLY-HELD

CORPORATION PLEASE COMPLETE THE INFORMATION BELOW

I, undersigned agent for the firm named below, certify that the information concerning notification of felony conviction has been reviewed by me and the following information furnished is true to the best of my knowledge.

VENDOR’S NAME:_____

AUTHORIZED COMPANY OFFICIAL’S NAME (PRINTED):_____

My firm is publicly-held corporation; therefore, this reporting requirement is not applicable. Signature of Company Official:_____

My firm is not owned nor operated by anyone who has been convicted of a felony. Signature of Company Official:_____

My firm is owned or operated by the following individual(s) who has/have been convicted of a felony:

Name of Felon(s):_____

_____

Details of Conviction(s):_____

_____

_____

Signature of Company Official:_____

END OF SECTION 00 43 35

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 00 43 93 PROPOSAL SUBMITTAL CHECKLIST

THE FOLLOWING ITEMS ARE TO BE SUBMITTED TO GREGORY-PORTLAND ISD, AS DESCRIBED IN SECTION 00 21 16 - INSTRUCTIONS TO PROPOSERS:

1.01 NOTE: ALL PROPOSALS MUST BE HAND-DELIVERED.

1.02 PROPOSAL FORM PART "A"

SUBMITTED ON _____, NO LATER THAN _____ P.M.

A. Proposal Form – Part "A" – Base Bid Proposal – three (3) copies

B. ( ) Bid Bond or Bid Security (Include base bid and all alternates) – three (3) copies

C. ( ) Vendor Compliance to State Law – three (3) copies

D. ( ) Notification of Hazardous Materials Affidavit – three (3) copies

1.03 PROPOSAL FORM PART "B" – QUALIFICATIONS

SUBMITTED ON _____, NO LATER THAN _____ P.M.

A. ( ) Proposal Part "B" – Qualifications – five (5) copies of the information as outlined in the Proposal, Tabbed, and Bound.

B. ( ) Contractor's Qualification Statement AIA Document A305 – three (3) copies

C. ( ) Felony Conviction Notification Form – three (3) copies

1.04 PROPOSAL FORM PART "A" and "B"

SUBMITTED ON _____, NO LATER THAN _____ P.M.

A. ( ) USB Drive containing all items listed above – one (1) copy.

END OF SECTION 00 43 93

THIS PAGE INTENTIONALLY
LEFT BLANK

GREGORY-PORTLAND INDEPENDENT SCHOOL DISTRICT
Portland, Texas

CONSTRUCTION CONTRACT

THE STATE OF TEXAS §
COUNTY OF SAN PATRICIO §

The GREGORY-PORTLAND INDEPENDENT SCHOOL DISTRICT (hereafter called "Owner") and_____(hereafter called "Contractor"), hereby agree as follows:

1. Contractor agrees to construct for Owner in accord with the Contract Documents the following: G-PISD High Fencing Project, according to the contract documents prepared or compiled by Turner | Ramirez Architects.

2. Contractor agrees to furnish, at his own expense, all labor, services, materials, tools, equipment and supervision necessary to the full and final completion of the Project, and everything incidental thereto, as shown on the Drawings, stated in the Specifications, or properly inferable therefrom, all in accord with the Contract Documents, as hereafter defined.

3. The Contract Documents consist of this Construction Contract and the following instruments which are incorporated herein:

   a. Request for Competitive Sealed Proposals
   b. Proposal
   c. Conditions of the Contract (General and Supplemental)
   d. Drawings
   e. Specifications
   f. Addenda and amendments to the foregoing as follows:
      (1) Addendum No. 1 dated_____.
      (2) Addendum No. 2 dated_____.

4. Immediately following the execution of this Contract and before performing any work, Contractor shall furnish to Owner a valid Performance Bond and Payment Bond, each in the full amount of the contract price on forms promulgated by Owner, written by companies acceptable to and approved by Owner and a required Certificate of Insurance, each in accord with the requirements of the Contract Documents.

5. Contractor shall commence work as directed in a written Notice to Proceed from the Owner, and shall substantially complete the work on or before_____days from the date of commencement established in the Notice to Proceed. If the work is not timely completed in accord with the terms of the Contract Documents, Contractor shall be liable to Owner for damages calculated in accord with the terms and provisions of Article 12 of the Supplemental General Conditions of the Contract. If liquidated damages are assessed according to Article 12, it is expressly agreed that the said sum per day is a fair estimate of the pecuniary damages which will be sustained by the Owner in the event that the work is not completed within the agreed time. Said sum shall be considered as liquidated damages only and in no sense shall be considered a penalty, said damages being caused by additional compensation to personnel, for loss of interest on money, and other miscellaneous increased costs, all of which are difficult to exactly ascertain. Such liquidated damages, if assessed, shall be in addition to, and not in lieu of any other rights or remedies Owner may have against Contractor for failure to timely achieve completion of the work.

6. The total contract price is_____
_____Dollars ($_____),
which includes the base bid and alternates numbers:_____.

7. The parties hereto agree that they will take such steps and execute such instruments as may be necessary to enable Owner to claim its exemption from the State of Texas Limited Sales Tax for materials used in such Project. All savings resulting from such tax exemption shall be for the benefit of the Owner.

8. The Board of Trustees, by majority vote, is the only representative of the Owner (an independent school district) having the power to enter into a contract, to approve changes in the scope of the work, to approve a change order, or to agree to an extension to the date of completion of the work. The Board may authorize a representative to act on behalf of the Owner in the day-to-day administration of the contract.

Executed in Portland, Texas, on_____, 2023.

ATTEST:

_____
Secretary

GREGORY-PORTLAND INDEPENDENT SCHOOL DISTRICT

Owner

By _____
Victor Hernandez, President
Board of Trustees

By _____
Dr. Michelle Cavazos, Superintendent of Schools

ATTEST:

_____
Secretary

_____
Contractor

By_____
*Name:
*Title: President

Address: _____

_____

*Typed or clearly printed

GREGORY-PORTLAND INDEPENDENT SCHOOL DISTRICT
Portland, Texas

PERFORMANCE BOND

THE STATE OF TEXAS §

COUNTY OF SAN PATRICIO §

KNOW ALL MEN BY THESE PRESENTS:

That we,_____, Contractor, as Principal, and _____, as Surety, are hereby held and firmly bound unto the GREGORY- PORTLAND INDEPENDENT SCHOOL DISTRICT (hereafter called "Owner") in the full and just sum of_____Dollars ($_____) for the payment of which the said Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that: WHEREAS the Principal entered into a certain Contract, which Contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein, with the Owner acting by and through its Board of Trustees, dated___, 2023, for the construction of the G-PISD High School Fencing Project, in accord with the Drawings, Specifications and other Contract Documents pertaining thereto prepared by the project architect Turner | Ramirez Architects.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform the Contract in accord with the Drawings, Specifications, and other Contract Documents pertaining thereto, as well as any changes, extensions, deletions or modifications thereof which may be made by Owner, with or without notice to the Surety, and shall fully indemnify and save harmless the Owner from all costs and damage which Owner may suffer by reason of Principal's default or failure so to do, shall fully reimburse and repay Owner all outlay and expense which Owner may incur in making good any such default, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

PROVIDED that any additions, deletions, alterations or changes which may be made in the terms of the Contract or in the Drawings, Specifications or other Contract Documents, or in the work to be done thereunder, or the making by the Owner of any payment or pre-payment under the Contract, or the giving by the Owner of any extension of time for the performance of the Contract, or the granting of any other forbearance on the part of either the Owner or the Principal to the other shall not in any way release the Principal or the Surety, or either of them, their heirs, executors, administrators, successors or assigns, from their liability or the liability of any of them hereunder, notice to the Surety of any such addition, deletion, alteration, change, payment, pre-payment, extension or forbearance being hereby expressly waived.

PROVIDED FURTHER, that this bond is made and entered into solely for the protection of the Owner pursuant to the provisions of Chapter 2253, Government Code, as amended, and all liabilities on this bond are to be determined in accord with the provisions thereof.

EXECUTED on_____, 2023.

PRINCIPAL	SURETY
_____	_____
Contractor	(Corporate Name)
By_____	_____
Name:_____	Attorney-in-Fact
Title:_____	Name:_____

ATTEST:

_____
*Name:_____
*Title:_____

Address of Contractor:	Address of Surety:
	_____
	_____
	_____

_____
*Typed or clearly printed

GREGORY-PORTLAND INDEPENDENT SCHOOL DISTRICT
Portland, Texas

PAYMENT BOND

THE STATE OF TEXAS §

COUNTY OF SAN PATRICIO §

KNOW ALL MEN BY THESE PRESENTS:

That we,_____, Contractor, as Principal, and _____, as Surety, are hereby held and firmly bound unto the GREGORY- PORTLAND INDEPENDENT SCHOOL DISTRICT (hereafter called "Owner") in the full and just sum of_____Dollars ($_____) for the payment of which the said Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that: WHEREAS the Principal entered into a certain Contract, which Contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein, with the Owner acting by and through its Board of Trustees, dated_ _____, 2023, for the construction of the G-PISD High School Fencing Project in accord with the Drawings, Specifications and other Contract Documents pertaining thereto prepared by the project architect Turner | Ramirez Architects.

NOW, THEREFORE, if the Principal shall promptly make payment to all claimants as defined in Chapter 2253, Government Code, as amended, supplying labor and materials in the prosecution of the work provided for in said Contract, as well as any changes, extensions, deletions or modifications thereof which may be made by Owner, with or without notice to Surety, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

PROVIDED that any additions, deletions, alterations or changes which may be made in the terms of the Contract or in the Drawings, Specifications or other Contract Documents, or in the work to be done thereunder, or the making by the Owner of any payment or pre-payment under the Contract, or the giving by the Owner of any extension of time for the performance of the Contract, or the granting of any other forbearance on the part of either the Owner or the Principal to the other shall not in any way release the Principal or the Surety, or either of them, their heirs, executors, administrators, successors or assigns, from their liability or the liability of any of them hereunder, notice to the Surety of any such addition, deletion, alteration, change, payment, pre-payment, extension or forbearance being hereby expressly waived.

PROVIDED FURTHER, that this bond is made and entered into solely for the protection of all claimants as defined in Chapter 2253, Government Code, as amended, supplying labor and material in the prosecution of the work provided for in said Contract, and each such claimant shall have a direct right of action under the bond as provided in such Chapter 2253, Government Code, as amended.

EXECUTED on_____, 2023.

PRINCIPAL	SURETY
_____	_____
Contractor	(Corporate Name)
By_____	_____
Name:_____	Attorney-in-Fact
Title:_____	Name:_____

ATTEST:

_____
*Name:_____
*Title:_____

Address of Contractor:	Address of Surety:
	_____
	_____
	_____

_____
*Typed or clearly printed

SUPPLEMENTAL GENERAL CONDITIONS

Article 1. Construing the Contract Documents:

In the event of ambiguity or conflict in the Contract Documents: Supplemental General Conditions take precedence over General Conditions; Specifications take precedence over Drawings; figures take precedence over scale dimensions; and descriptive notes take precedence over general notes or code indications, unless the contrary intention is apparent.

Where a project engineer rather than a project architect is serving as the design professional for the project, any reference in the contract documents to the “architect” for the project shall be understood to mean the project “engineer.”

Except as provided above, changes in Contract Documents made with the consent of all parties in ink control those printed or typed, and typewritten provisions control over printed, multilithed, or photocopied provisions.

In the event errors, conflicts, omissions or discrepancies are noted in the Contract Documents or in the work done by others affecting his work, Contractor shall notify Architect at once and Architect will issue instructions to correct such errors, conflicts or discrepancies. This includes typographical errors in the Specifications and notational errors on the Drawings, where doubtful of interpretation. If, after such errors, conflicts, omissions or discrepancies have been noted, Contractor proceeds with the work so affected without instructions from the Architect, he shall make good any resulting damage or defect.

Article 2. Drawings and Specifications:

There are certain intricacies of construction which are impracticable to specify in detail or to fully cover on the Drawings, but all such details are to be worked out along the lines of good practice, and in compliance with the ordinances covering such work.

Contractor, upon completion of the Project, shall furnish Architect with record drawings showing actual location in line and elevation of all new exterior utility lines within the limits of the site and of any relocation from that shown on the Drawings of concealed piping, wiring, cable or conduit within the lines of the building.

Article 3. Laying out Building:

Contractor shall employ an experienced and competent licensed surveyor or civil engineer to establish a permanent bench mark to which easy access may be had during the progress of the Work, determine all lines and grades, and verify same from time to time during the progress of the Work.

Article 4. Materials:

Unless otherwise indicated in the Contract Documents, all materials shall be new, in strict compliance with the Specifications and the best of their respective kinds.

Before ordering any materials or doing any work, Contractor shall verify all

measurements at the site and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of any difference between actual dimensions and the measurements indicated on the Drawings. Any differences which may be found shall be submitted to Architect for his consideration and instructions before ordering material or proceeding with the work.

Materials shall be furnished at such times and in such quantities as to insure the uninterrupted progress of the work according to schedule. Materials stored shall be properly protected from weather or damage.

Upon receipt of notice from Architect that any material placed in the Project or on the site is not of the quality specified or has been improperly placed, Contractor shall remove same from the site or have same replaced, as the case may be, within seventy two (72) hours after receipt of such notice.

Article 5. Inspection and Testing of Materials:

All testing of materials and equipment used in the construction of the Project shall be conducted at the discretion of Owner and at Owner's expense, unless otherwise specifically provided in the Contract Documents. Any retesting of material or equipment that fails to meet the requirements of the specifications will be at Contractor's expense.

Article 6. Handling Materials:

Contractor shall be responsible for the proper care and protection of all materials, tools and equipment delivered to the site for his use.

When any room of the Project is used as a shop, storeroom, or otherwise, the Contractor will be held responsible for any repairs, patching or cleaning arising from such use.

Contractor shall protect and be responsible for any damage to his work or material, from the date of the Contract until the date of acceptance, and shall make good without cost to Owner, any damage or loss that may occur during this period.

Cement, lime, gypsum and other materials affected by the weather shall be covered and protected to keep them free from damage at all times.

Contractor shall store all materials as directed, in a manner that will allow the Architect or Owner's representative to inspect them. Should any material be found defective or in any way not in accordance with the Contract, such material, without regard to the stage of completion, may be rejected by Architect and, if so rejected, shall be removed at once from the premises by Contractor installing same.

Article 7. Substituted Materials, Products, Methods or Services:

In certain instances specific materials, products, methods and services have been specified by brand or trade-name partly for the purpose of establishing the effect or standard of quality desired. Upon the prior written approval of Architect, substitutions for such specifically named materials, products, methods or services may be made provided the materials, products, methods or services desired to be substituted have been proven to Architect to provide the effect or standard of quality desired. The decision of the Architect is absolute and final.

Article 8. Salvaged Materials:

Used materials belonging to Owner or obtained from demolition or excavation operations at the site of the Project and reconditioned for incorporation into the Project are hereafter termed "salvaged materials". Similar materials, owned by parties other than Owner and purchased, or to be purchased, for incorporation into the Project, are termed "second hand material".

Salvaged materials may be incorporated into the Project only if allowed in the Contract Documents.

Article 9. Temporary Facilities:

Contractor shall make temporary connections for all utilities necessary during construction and shall remove them after completion of the Project.

Contractor shall provide and maintain sanitary facilities for workmen at the job in accordance with the laws of Texas and the code and ordinances of the City of Portland. Contractor shall completely remove such facilities when the Project is completed.

All or a portion of the work necessary to complete the Project may be done on or near buildings which presently are in use as schools, or will be so used before the completion of such Project, and the Contractor must take all precautions necessary to protect students, employees and the public during the term of such Construction Contract.

In conjunction with, but not in lieu of the requirements of Article 10.2.3 of the General Conditions, the contractor may provide temporary construction fencing generally 4’ tall and orange in color as necessary to protect the public and work. The Contractor is responsible for taking necessary precautions to protect the public from hazards associated with his construction site and protect his work from damage by the public.

The Contractor shall maintain protection measures in a state of good repair at all times for the duration of the project. Any condition of the protection measures which the engineer or owner deems hazardous will be corrected immediately. If such conditions are not corrected immediately upon verbal or written notice, the owner will correct the hazardous conditions and the cost of the corrective action will be deducted from the contractor’s payment.

Article 10. Cooperation with Owner and City Building Officials:

When required, Contractor shall notify the proper official of the City of Portland in advance of all stopping and starting of construction. Contractor shall cooperate with City officials at all times. If any authorized City official, or authorized representative of Owner, should deem an inspection necessary, Contractor shall provide the proper facilities to insure that such official, or representative, can conveniently examine and inspect the work. The Contractor shall document all City inspections by recording the date and time of the inspection and the name of the inspector. This information shall be submitted by the Contractor to the Architect on a monthly basis along with Contractor's request for payment.

The contractor shall submit copies of all City permits, interim inspections, and final inspections, including a Certificate of Occupancy where required, for the project showing compliance with code requirements of the entities with jurisdiction with the Record Documents for the Project.

Article 11. Insurance:

A. Contractor's Liability Insurance

Contractor shall purchase and maintain the liability insurance required by Paragraph 11.1 of the General Conditions with minimum limits as follows:

1. General Aggregate Limit
   $2,000,000
   Applies to all bodily injury and property damage (other than products/completed operations) personal injury and advertising injury.

2. Products/Completed Operations Aggregate
   $2,000,000 Applies to all bodily injury and property damage included in products/completed operations. Completed operations insurance coverage must be for a policy period of not less than three years.

3. Personal and Advertising Injury
   $1,000,000 Applies to all claims by one person or organization.

4. Each Occurrence Limit
   $1,000,000
   Applies to all bodily injury and property damage incurred in one occurrence.

5. Umbrella (excess liability policy)
   $5,000,000 or additional limits on all risks.

6. Automobile Liability Insurance (with a minimum combined single limit)
   $1,000,000

All insurance must be written by insurance companies which are rated in the A.M. Best Key Rating Guide -- Property & Casualty with a policyholder's rating of A and a financial size category of Class VII. A Designated Project or Premises Endorsement (CG 25 01 11 85) which applies the general aggregate to the project must be provided. The Owner is to be named as additional insured in the policy and a waiver of subrogation shall be provided to the Owner. Completed operations insurance coverage must be for a policy period of not less than three years. No policy shall contain any exclusion for explosion, collapse, or underground coverage. The required motor vehicle

liability insurance shall provide coverage for all owned, non-owned and hired vehicles.

B. Builder's Risk Insurance

Contractor shall purchase and maintain until the Project has been accepted by Owner broad form builder's risk insurance covering replacement cost of the Project (including additions and modifications) together with Contractor's equipment, materials and supplies relating to the Project which are on the job site, in transit to the job site or at a temporary storage location pending delivery to the job site. In addition, soft cost coverage for Architect's fees shall be included. Owner shall be named as an insured, loss payee on the policy.

C. Workers' Compensation Insurance Certificate

1. Definitions:

Certificate of coverage ("certificate"). A copy of a certificate of insurance, a certificate of authority to self-insure issued by the Texas Workers' Compensation Commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project - includes the time from the beginning of the work on the project until the Contractor's/person's work on the Project has been completed and accepted by the Owner.

Persons providing services on the Project ("subcontractor" in §406.096, Texas Labor Code) - includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the Project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the Project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the Project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

2. The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the Project, for the duration of the Project.

3. The Contractor must provide a certificate of coverage to the Owner prior to being awarded the contract.

4. If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the Project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the Owner showing that coverage has been extended.

5. The Contractor shall obtain from each person providing services on the Project, and provide to the Owner:

   (a) a certificate of coverage, prior to that person beginning work on the Project, so the Owner will have on file certificates of coverage showing coverage for all persons providing services on the Project; and

   (b) no later than seven days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project.

6. The Contractor shall retain all required certificates of coverage for the duration of the Project and for one year thereafter.

7. The Contractor shall notify the Owner in writing by certified mail or personal delivery, within 10 days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project.

8. The Contractor shall post on the Project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the Project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

9. The Contractor shall contractually require each person with whom it contracts to provide services on the Project, to:

   (a) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the Project, for the duration of the Project;

   (b) provide to the Contractor, prior to that person beginning work on the Project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the Project, for the duration of the Project;

   (c) provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage

period shown on the current certificate of coverage ends during the duration of the Project;

(d) obtain from each other person with whom it contracts, and provide to the Contractor:

(1) a certificate of coverage, prior to the other person beginning work on the Project; and

(2) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;

(e) retain all required certificates of coverage on file for the duration of the Project and for one year thereafter;

(f) notify the Owner in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project; and

(g) contractually require each person with whom it contracts, to perform as required by paragraphs a-f, with the certificates of coverage to be provided to the person for whom they are providing services.

10. By signing the Construction Contract or providing or causing to be provided a certificate of coverage, the Contractor is representing to the Owner that all employees of the Contractor who will provide services on the Project will be covered by workers' compensation coverage for the duration of the Project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

11. The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the Owner to declare the contract void if the Contractor does not remedy the breach within ten days after receipt of notice of breach from the Owner.

12. The coverage requirement recited above does not apply to sole proprietors, partners, and corporate officers who are excluded from coverage in an insurance policy or certificate of authority to self-insure that is delivered, issued for delivery, or renewed on or after January 1,

1996. 28 TAC 110.110(i).

Article 12. Damages:

If the Project is not completed in accord with the Contract Documents within the Contract Time then Owner shall be entitled to recover from Contractor, at Owner's sole election: (a) all loss or damage incurred or sustained by Owner of every kind and nature whatsoever; or (b) liquidated damages in the amount of Five Hundred Dollars ($500) per day for each calendar day thereafter until the Project is completed.

SECTION 01 10 00 SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Contractor's use of site and premises.
5. Work restrictions.
6. Specification and Drawing conventions.

B. Related Requirements:
1. Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.2 PROJECT INFORMATION

A. Project Identification: Gregory – Portland Independent School District High School Fencing Project.
1. Project Locations: 4601 Wildcat Dr., Portland, Texas 78374.

B. Owner: Gregory Portland ISD, Portland, Texas.
1. Owner's Representative: Thomas Lawing.

C. Architect: Turner | Ramirez Architects, 3751 S. Alameda St., Corpus Christi, Texas, 78411.
1. Architect's Representative: TRA.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:
1. Gregory-Portland High School Fencing Project: The Gregory Portland High School Fencing project is anticipated to be fencing in the entire Gregory-Portland High School Campus with a decorative fence that matches the style, aluminum material, 8’ – 0” height and black color as the fence at Wildcat Stadium. The fence will also have four (4) motorized rolling gates with access control and data and two (2) swing gates for pedestrian access and one (1) chain link swing gate. There shall also be conduits run to provide future technology at each motorized rolling gate. The professional services required to proceed with the design phases for the Gregory Portland High School Fencing project will be broken out in the following Task I which will include all design phases for the new building.

B. Type of Contract:
1. Project will be constructed under a single prime contract.

1.4 PHASED CONSTRUCTION

A. The Work shall be conducted in two phases, with each phase substantially complete as indicated.
   1. As indicated on the Drawings .
      a. Commencement of Construction:
         1) Notice to Proceed: Work of this phase shall commence **Monday June 26th, 2023,** after the Notice to Proceed.
      b. Substantial Completion:
         1) Completion on or before **Thursday October 26th, 2023**.

B. Before commencing Work of each phase, submit an updated copy of Contractor's construction schedule showing the sequence, commencement, and completion dates for all phases of the Work.

1.5 CONTRACTOR'S USE OF SITE AND PREMISES

A. Unrestricted Use of Site: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.

B. Limits on Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
   1. Limits on Use of Site: Confine demolition operations to areas indicated on the drawings.
   2. Driveways, Walkways, and Entrances: Keep driveways and entrances serving premises outside of the demolition area clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

C. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.6 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.
   1. Comply with limitations on use of public streets, work on public streets, rights of way, and other requirements of authorities having jurisdiction.

B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
   1. Notify Owner not less than two days in advance of proposed utility interruptions.
   2. Obtain Owner's written permission before proceeding with utility interruptions.

C. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.
   1. Notify Owner not less than two days in advance of proposed disruptive operations.
   2. Obtain Owner's written permission before proceeding with disruptive operations.

D. Smoking and Controlled Substance Restrictions: Use of tobacco products, alcoholic beverages, and other controlled substances on Owner's property is not permitted.

E. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

F. 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.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

A. 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. Imperative mood and streamlined language are generally used in the Specifications. 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.
   2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
   3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
   4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 00 Contracting Requirements: General provisions of the Contract, including General and Supplementary Conditions, apply to all Sections of the Specifications.

C. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 01 25 00 SUBSTITUTION 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 substitutions.

B. Related Requirements:
1. Section 01 21 00 "Allowances" for products selected under an allowance.
2. Section 01 23 00 "Alternates" for products selected under an alternate.
3. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.
1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Substitution Request Form: Use "Substitution Request" form provided by Architect.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES .
j. Detailed comparison of Contractor's construction schedule using proposed substitutions 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 date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
m. 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.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
   a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
   b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.6 PROCEDURES

A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.7 SUBSTITUTIONS

A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
   a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
   b. Substitution request is fully documented and properly submitted.
   c. Requested substitution will not adversely affect Contractor's construction schedule.
   d. Requested substitution has received necessary approvals of authorities having jurisdiction.
   e. Requested substitution is compatible with other portions of the Work.
   f. Requested substitution has been coordinated with other portions of the Work.
   g. Requested substitution provides specified warranty.
   h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

THIS PAGE INTENTIONALLY
LEFT BLANK

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 Requirements:
1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.
2. Section 01 31 00 "Project Management and Coordination" for requirements for forms for contract modifications provided as part of web-based Project management software.

1.3 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
c. Include costs of labor and supervision directly attributable to the change.
d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
e. Quotation Form: Use forms acceptable to Architect.

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect .
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. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use form acceptable to Architect.

1.4 ADMINISTRATIVE CHANGE ORDERS

A. Allowance Adjustment: See Section 01 21 00 "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714 . Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
   1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
   1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

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. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

B. Related Requirements:
1. Section 01 21 00 "Allowances" for procedural requirements governing the handling and processing of allowances.
2. Section 01 22 00 "Unit Prices" for administrative requirements governing the use of unit prices.
3. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
4. Section 01 32 00 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

1.3 DEFINITIONS

A. Site Visit: Architect's visits to the site at intervals necessary in the judgement of the Architect to become generally familiar with the progress and quality of the Work completed and to determine in general if the Work completed is in accordance with the Contract Documents. Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of Work.

B. 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 construction schedule.
1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule, including the following:
a. Application of Payment forms with Continuation Sheets.
b. Submittals Schedule.
c. Items required to be indicated as separate activities in Contractor's Construction Schedule.
2. Submit the schedule of values to Architect at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

3. Sub schedules for Separate Elements of Work: Where the Contractor's construction schedule defines separate elements of the Work, provide sub schedules showing values coordinated with each element.

B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.
   1. Identification: Include the following Project identification on the schedule of values:
      a. Project name and location.
      b. Owner's name.
      c. Owner's Project number.
      d. Name of Architect.
      e. Architect's Project number.
      f. Contractor's name and address.
      g. Date of submittal.
   2. Arrange schedule of values consistent with format of AIA Document G703 .
   3. Arrange the schedule of values in tabular form, with separate columns to indicate the following for each item listed:
      a. Related Specification Section or division.
      b. Description of the Work.
      c. Name of subcontractor.
      d. Name of manufacturer or fabricator.
      e. Name of supplier.
      f. Change Orders (numbers) that affect value.
      g. Dollar value of the following, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent. Round dollar amounts to whole dollars, with total equal to Contract Sum.
         1) Labor.
         2) Materials.
         3) Equipment.
   4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual Table of Contents. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum. Break down principal subcontract amounts into separate labor and materials items. Breakdown of subcontractor's schedule of values must be true and accurate.
   5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
   6. 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 if required.
   7. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
   8. Include separate line items under Contractor and principal subcontracts for Project closeout requirement in an amount totaling five percent of the Contract Sum and subcontract amount.

9. 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: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense at Contractor's option.
10. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments, as certified by Architect and paid for by Owner.

B. Payment Application Times: The date for each progress payment is indicated in the Owner/Contractor Agreement. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.

C. Application for Payment Forms: Use AIA Document G702 and AIA Document G703 as form for Applications for Payment.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.
1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
1. Provide description of item(s) being stored.
2. Provide location of the bonded warehouse(s) where materials or equipment are stored.
3. Provide a Bill of Sale made to the Owner stating there will be no additional cost for transportation and delivery of the stored item(s).
4. Provide statement certifying that the item or any part thereof will not be installed in any construction other than the Work under this Contract.
5. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment for stored materials.

6. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
7. Provide summary documentation for stored materials indicating the following:
    a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from all entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment .
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
5. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Combined Contractor's construction schedule (preliminary if not final) incorporating Work of multiple contracts, with indication of acceptance of schedule by each Contractor.
5. Products list (preliminary if not final).
6. Schedule of unit prices.
7. Submittal schedule (preliminary if not final).
8. List of Contractor's staff assignments.
9. List of Contractor's principal consultants.
10. Copies of building permits.
11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
12. Initial progress report.
13. Report of preconstruction conference.
14. Certificates of insurance and insurance policies.

15. Performance and payment bonds.
16. Data needed to acquire Owner's insurance.

I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
   1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
   2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
   1. Evidence of completion of Project closeout requirements, including, but not limited to:
      a. Transmital of required Project Record Documents to Owner.
      b. Evidence of completion of demonstration and training.
   2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
   3. Updated final statement, accounting for final changes to the Contract Sum.
   4. AIA Document G706.
   5. AIA Document G706A.
   6. AIA Document G707.
   7. Evidence that claims have been settled.
   8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
   9. Final liquidated damages settlement statement.
   10. Occupancy permits and similar approvals or certifications by governing authorities and franchised services, assuring Owner's full access and use of completed work.
   11. Owner's Closeout Forms:
      a. Contractor's Release and Waiver of Lien
      b. Contractor's Lead free Affidavit
      c. Contractor's Asbestos Free Affidavit
      d. Contractor's Non-Use of Urea-formaldehyde Affidavit
      e. Subcontractor's / Material Supplier's Affidavit
      f. Contractor's Affidavit for Completion

1.6 REVIEW OF APPLICATION FOR PAYMENT

A. Draft Copy: Submit draft (pencil) copy of the Application for Payment ten days prior to due date for review by Architect.

B. Draft Copy Review Meeting: The Owner, Architect, and Contractor shall meet prior to payment application due date to review the draft (pencil) copy of the Application for Payment. Questions resulting from this review shall be answered by the Contractor and clarified prior to receipt of the official copy of the Application for Payment.

C. Upon receipt of the official Application for Payment and other documentation as required by the Architect, including the updated Schedule of Values and the updated Contractor's

Construction Schedule if required, the Architect shall review the documents received to determine if they correspond to the agreements reached during the draft copy review meeting. If necessary, the Architect shall revise the Application for Payment to correspond to the agreements reached, execute the Certificate for Payment, and forward the executed copies to the Owner.

D. The Architect will rely on the accuracy and completeness of the information furnished by the Contractor. Issuance of a Certificate of Payment will not be deemed to represent that the Architect have performed audits of the supporting data.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

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. Section includes administrative provisions for coordinating construction operations on Project, including, but not limited to, the following:
   1. General coordination procedures.
   2. Coordination drawings.
   3. RFIs.
   4. Digital project management procedures.
   5. Project meetings.

B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.

C. Related Requirements:
   1. Section 01 32 00 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
   2. Section 01 73 00 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
   3. Section 01 77 00 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 INFORMATIONAL SUBMITTALS

A. 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. Include the following information in tabular form:
   1. Name, address, telephone number, and email address of entity performing subcontract or supplying products.
   2. Number and title of related Specification Section(s) covered by subcontract.
   3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses, cellular telephone numbers, and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1.4 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections 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 to ensure maximum performance and accessibility for required maintenance, service, and repair.
   3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
   1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and scheduled 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 construction 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. Preinstallation conferences.
   7. Project closeout activities.
   8. Startup and adjustment of systems.

1.5 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
   1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
      a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
      b. Coordinate the addition of trade-specific information to coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
      c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.

d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
f. Indicate required installation sequences.
g. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:
1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within plenums to accommodate layout of light fixtures and other components indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms, showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Mechanical and Plumbing Work: Show the following:
   a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
   b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
   c. Fire-rated enclosures around ductwork.
7. Electrical Work: Show the following:
   a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
   b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
   c. Panel board, switchboard, switchgear, transformer, busway, generator, and motor-control center locations.
   d. Location of pull boxes and junction boxes, dimensioned from column center lines.
8. Fire-Protection System: Show the following:
   a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
9. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are

not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.

10. Coordination Drawing Prints: Prepare coordination drawing prints according to requirements in Section 013300 "Submittal Procedures."

C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
   1. File Preparation Format:
      a. Same digital data software program, version, and operating system as original Drawings.
   2. File Submittal Format: Submit or post coordination drawing files using PDF format.
   3. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
      a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
      b. Digital data files will be provided in the software and format that is used to prepare the Contract Documents. Translations to different programs or modifications to the drawing setup will be the responsibility of the Contractor.
      c. Contractor shall execute a data licensing agreement in the form of Agreement included in this Project Manual or furnished by the Architect.

1.6 REQUEST FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
   1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
   2. Coordinate and submit RFIs in a prompt manner to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
   1. Project name.
   2. Owner name.
   3. Owner's Project number.
   4. Name of Architect.
   5. Architect's Project number.
   6. Date.
   7. Name of Contractor.
   8. RFI number, numbered sequentially.
   9. RFI subject.
   10. Specification Section number and title and related paragraphs, as appropriate.
   11. Drawing number and detail references, as appropriate.
   12. Field dimensions and conditions, as appropriate.
   13. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
   14. Contractor's signature.
   15. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. 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 returned without action or withdrawn.
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 Proposal Request, as appropriate.
9. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

1.7 PROJECT WEB SITE

A. Use Owner's Project Web site for purposes of hosting and managing project communication and documentation until Final Completion. Project Web site shall include the following functions:
1. Project directory.
2. Project correspondence.
3. Meeting minutes.
4. Contract modifications forms and logs.
5. RFI forms and logs.
6. Task and issue management.
7. Photo documentation.
8. Schedule and calendar management.
9. Submittals forms and logs.
10. Substitution requests.
11. Payment application forms.
12. Drawing and specification document hosting, viewing and updating.
13. Online document collaboration.
14. Reminder and tracking functions.
15. Archiving functions.

B. On completion of Project, provide one complete archive copy(ies) of Project Web site files to Owner and to Architect in a digital storage format acceptable to Architect.

C. Contractor, subcontractors and other parties granted access by Owner to Project Web Site shall execute a data licensing agreement in the form of Agreement acceptable to Owner and Architect.

1.8 PROJECT MEETINGS

A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of seven days prior to meeting.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
4. Notification: Inform participants three days prior to meetings not regularly scheduled.

B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement.
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. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:
    a. Responsibilities and personnel assignments.
    b. Tentative construction schedule.
    c. Phasing.
    d. Critical work sequencing and long lead items.
    e. Designation of key personnel and their duties.
    f. Lines of communications.
    g. Procedures for processing field decisions and Change Orders.
    h. Procedures for RFIs.
    i. Procedures for processing Submittals.
    j. Procedures for processing substitution requests.
    k. Procedures for processing field decisions, proposal requests and Change Orders.
    l. Procedures for testing and inspecting.
    m. Procedures for processing Applications for Payment.
    n. Distribution of the Contract Documents.
    o. Procedures for moisture and mold control.
    p. Procedures for disruptions and shutdowns.
    q. Construction waste management and recycling.
    r. Office, work and storage areas.
    s. Preparation of Record Documents.
    t. Use of the premises and existing building.
    u. Work restrictions.
    v. Working hours.
    w. Owner's occupancy requirements.
    x. Responsibility for temporary facilities and controls.
    y. Procedures for moisture and mold control.
    z. Procedures for disruptions and shutdowns.
    aa. Construction waste management and recycling.
    bb. Office, work, and storage areas.
    cc. Equipment deliveries and priorities.
    dd. First aid.

ee. Security.
ff. Progress cleaning.

3. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other Sections and when required for coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. For exterior installations that require TDI Certification, include the TDI Inspector. Advise Architect of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
a. Contract Documents.
b. Options.
c. Related RFIs.
d. Related Change Orders.
e. Purchases.
f. Deliveries.
g. Submittals.
h. Review of mockups.
i. Possible conflicts.
j. Compatibility requirements.
k. Time schedules.
l. Weather limitations.
m. Manufacturer's written instructions.
n. Warranty requirements.
o. Compatibility of materials.
p. Acceptability of substrates.
q. Temporary facilities and controls.
r. Space and access limitations.
s. Regulations of authorities having jurisdiction.
t. TDI Certification requirements.
u. Testing and inspecting requirements.
v. Installation procedures.
w. Coordination with other work.
x. Required performance results.
y. Protection of adjacent work.
z. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to Owner and Architect, but no later than 30 days prior to the scheduled date of Substantial Completion.
   1. Conduct the conference to review requirements and responsibilities related to Project closeout.
   2. Attendees: Authorized representatives of Owner, Owner's Commissioning Authority, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
   3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
      a. Preparation of Record Documents.
      b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
      c. Submittal of written warranties.
      d. Requirements for preparing operations and maintenance data.
      e. Requirements for delivery of material samples, attic stock, and spare parts.
      f. Requirements for demonstration and training.
      g. Preparation of Contractor's punch list.
      h. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
      i. Submittal procedures for closeout documents.
      j. Coordination of separate contracts.
      k. Owner's partial occupancy requirements.
      l. Installation of Owner's furniture, fixtures, and equipment.
      m. Responsibility for removing temporary facilities and controls.

E. Progress Meetings: Contractor will conduct progress meetings at weekly intervals.
   1. Coordinate dates of meetings with preparation of payment requests.
   2. Attendees: In addition to representatives of Owner , Owner's Commissioning Authority and Architect, each contractor, 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 meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
   3. 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 Construction 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 construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
         1) Review schedule for next period.
      b. Review present and future needs of each entity present, including the following:
         1) Interface requirements.
         2) Sequence of operations.

3) Resolution of BIM component conflicts.
4) Status of submittals.
5) Deliveries.
6) Off-site fabrication.
7) Access.
8) Site use.
9) Temporary facilities and controls.
10) Work hours.
11) Hazards and risks.
12) Progress cleaning.
13) Quality and work standards.
14) Status of correction of deficient items.
15) Field observations.
16) Status of RFIs.
17) Status of Proposal Requests.
18) Pending changes.
19) Status of Change Orders.
20) Pending claims and disputes.
21) Documentation of information for payment requests.
22) Testing and inspection requirements.
23) Other business relating to the Work.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information. Include a brief summary, in narrative form, of the progress since the previous meeting and report.
   a. Schedule Updating: Contractor shall revise the construction schedule after each progress meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

F. Coordination Meetings: Contractor will conduct Project coordination meetings at regular intervals corresponding to the Work that needs to be coordinated. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
   1. Attendees: In addition to representatives of Owner , Owner's Commissioning Authority and Architect, each contractor, 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 meetings shall be familiar with Project and authorized to conclude matters relating to the Work.
   2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
      a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting, where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
c. Review present and future needs of each contractor present, including the following:
    1) Interface requirements.
    2) Sequence of operations.
    3) Resolution of BIM component conflicts.
    4) Status of submittals.
    5) Deliveries.
    6) Off-site fabrication.
    7) Access.
    8) Site use.
    9) Temporary facilities and controls.
    10) Work hours.
    11) Hazards and risks.
    12) Progress cleaning.
    13) Quality and work standards.
    14) Status of RFIs.
    15) Proposal Requests.
    16) Change Orders.
    17) Pending changes.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

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

1. Contractor's Construction Schedule.
2. Construction schedule updating reports.
3. Daily construction reports.
4. Site condition reports.

1.2 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 construction schedule consume time and resources.

1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
2. Predecessor Activity: An activity that precedes another activity in the network.
3. Successor Activity: An activity that follows another activity in the network.

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. Event: The starting or ending point of an activity.

E. Float: The measure of leeway in starting and completing an activity.

1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

1.3 INFORMATIONAL SUBMITTALS

A. Format for Submittals: Submit required submittals in the following format:

1. Working electronic copy of schedule file.
2. PDF file.

B. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.

1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals.

C. Construction Schedule Updating Reports: Submit with Applications for Payment.

D. Daily Construction Reports: Submit at weekly intervals.

E. Site Condition Reports: Submit at time of discovery of differing conditions.

1.4 COORDINATION

A. Coordinate Contractor's Construction Schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.5 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Time Frame: Extend schedule from date established for the Notice to Proceed to date of final completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.

B. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:

1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule.

4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect’s and Construction Manager's administrative procedures necessary for certification of Substantial Completion.
5. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.

C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.

1. Phasing: Arrange list of activities on schedule by phase.
2. Work Restrictions: Show the effect of the following items on the 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. Seasonal variations.
   g. Environmental control.

D. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:

1. Unresolved issues.
2. Unanswered Requests for Information.
3. Rejected or unreturned submittals.
4. Notations on returned submittals.
5. Pending modifications affecting the Work and the Contract Time.

E. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week 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 final completion percentage for each activity.

F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.

G. Distribution: Distribute copies of approved schedule to Architect , Construction Manager, 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.

1.6 GANTT-CHART SCHEDULE REQUIREMENTS

A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's Construction Schedule within 30 days of date established for the Notice to Proceed .

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 months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

1.7 CPM SCHEDULE REQUIREMENTS

A. Prepare network diagrams using AON (activity-on-node) format.

B. Startup Network Diagram: Submit diagram within 14 days of date established for the Notice to Proceed. Outline significant construction activities for the first 90 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

C. CPM Schedule: Prepare Contractor's Construction Schedule using a time-scaled CPM network analysis diagram for the Work.

1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than 60 days after date established for the Notice to Proceed.
    a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates.
2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.

D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.

1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
   a. Preparation and processing of submittals.
   b. Mobilization and demobilization.
   c. Purchase of materials.
   d. Delivery.
   e. Fabrication.
   f. Utility interruptions.
   g. Installation.
   h. Work by Owner that may affect or be affected by Contractor's activities.
   i. Testing and inspection.
   j. Commissioning.
   k. Punch list and final completion.
   l. Activities occurring following final completion.
2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.
   a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.

E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall Project schedule.

F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:

1. Contractor or subcontractor and the Work or activity.
2. Description of activity.
3. Main events of activity.
4. Immediate preceding and succeeding activities.
5. Early and late start dates.
6. Early and late finish dates.
7. Activity duration in workdays.
8. Total float or slack time.
9. Average size of workforce.
10. Dollar value of activity (coordinated with the schedule of values).

G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:

1. Identification of activities that have changed.
2. Changes in early and late start dates.

3. Changes in early and late finish dates.
4. Changes in activity durations in workdays.
5. Changes in the critical path.
6. Changes in total float or slack time.
7. Changes in the Contract Time.

1.8 REPORTS

A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 32 00

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. Section Includes:
1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

B. Related Requirements:
1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Section 01 31 00 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
3. Section 01 32 00 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
4. Section 01 32 33 "Photographic Documentation" for submitting preconstruction photographs, periodic construction photographs, and Final Completion construction photographs.
5. Section 01 40 00 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
6. Section 01 77 00 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
7. Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.

1.3 DEFINITIONS

A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."

B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. A FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 SUBMITTAL SCHEDULE

A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.
   1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
   2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
   3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.
      a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.
   4. Format: Arrange the following information in a tabular format:
      a. Scheduled date for first submittal.
      b. Specification Section number and title.
      c. Submittal Category: Action; informational.
      d. Name of subcontractor.
      e. Description of the Work covered.
      f. Scheduled date for Architect's final release or approval.
      g. Scheduled dates for purchasing.
      h. Scheduled date of fabrication.
      i. Scheduled dates for installation.
      j. Activity or event number.
   5. Architect reserves the right to withhold 10 percent of each payment request, in addition to retainage fee, if any, until the submittal schedule is received and accepted by the Architect.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic copies of Drawings of the Contract Drawings and Project Manual will not be provided by Architect.

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. Submit all Action and Informational submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.

a. Exception: Where samples for initial selection and samples for verification are both required, submit samples for verification after initial selection has been returned by Architect.

3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
4. 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. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. Architect will document on submittal the date and time of receipt. Submittals received by Architect after 1:00 p.m. will be considered as received the following working day. 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.
   1. Initial Review: Allow 10 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination. Delaying submittals to facilitate coordination between submittals shall not constitute a delay of the Work nor shall it be the basis for an extension of time.
   2. Sequential Review: Sequential review is a submittal that requires review by more than one design discipline. Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 15 days for initial review of each submittal.
   3. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.
   4. If intermediate submittal is necessary, process it in same manner as initial submittal.
   5. Allow 15 days for review of each resubmittal.

D. Paper Submittals: Place a permanent label or title block on each submittal item 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 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
   3. Include the following information for processing and recording action taken:
      a. Project Name.
      b. Date.
      c. Name of Architect.
      d. Name of Contractor.
      e. Name of Subcontractor.
      f. Name of Supplier.
      g. Name of Manufacturer.
      h. Unique identifier, including revision number. Submittals shall be numbered with the Section number, followed by a dash, followed by a three-digit number, followed by a dash, and ending in a sequential submission number

as indicated below. The numbering system shall be retained throughout all revisions.
1) Section Number: Section number where submittal is specified.
2) Two-digit Number: Sequential number, beginning with "01," for each submittal transmitted to Architect for each Section.
3) Submission Number: Use ".0" for initial submittal, ".1" for first resubmittal, ".2" for second resubmittal, and so forth.
4) Three-Digit Number: Sequential number, beginning with (001), for each submittal issued to Architect chronologically.
a) Example: 06 10 00.01.0 - (001) - (Section 06 10 00, first submission of the Section, initial submittal).

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.

4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect or Construction Project Manager observe noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
a. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect and Construction Project Manager.

5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will discard submittals received from sources other than Contractor.

E. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file with links enabling navigations to each item.
a. Unique identifier, including revision number. Submittals shall be numbered with the Section number, followed by a dash, followed by a three-digit number, followed by a dash, and ending in a sequential submission number as indicated below. The numbering system shall be retained throughout all revisions.
1) Section Number: Section number where submittal is specified.
2) Two-digit Number: Sequential number, beginning with "01," for each submittal transmitted to Architect for each Section.
3) Submission Number: Use ".0" for initial submittal, ".1" for first resubmittal, ".2" for second resubmittal, and so forth.
4) Three-Digit Number: Sequential number, beginning with (001), for each submittal issued to Architect chronologically.
a) Example: 06 10 00.01.0 - (001) - (Section 06 10 00, first submission of the Section, initial submittal).
b) Example: 06 10 00.01.1 - (001.R1) - (Section 06 10 00, first submission of the Section, first resubmittal, third submittal issued in chronological order, but Resubmittal).
c) Example: 05 50 00.01.0 - (020) - (Section 05 50 00, first submission of the Section, twentieth submittal issued in chronological order).

d) Example: 05 50 00.07.0 - (030) - (Section 05 50 00, seventh submission of the Section, thirtieth submittal issued in chronological order, but Resubmittal).
e) Example: 05 50 00.07.1 - (030.R1) - (Section 05 50 00, seventh submission of the Section, first resubmittal, fiftieth submittal issued in chronological order, but Resubmittal).

2. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
3. Scanned Copies: Legible scanned PDF files of paper originals are acceptable. Scanned submittals that are not legible will be rejected.
4. Sheet Orientation: Orient PDF sheets to a "Ready-to-Read" orientation with majority of text horizontal to the sheet with no additional adjustments or formatting required by the viewer.
5. File Security: Do not set any permissions on the file. Protected documents will not be accepted.
6. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software.
7. Metadata: Include the following information in the electronic submittal file metadata:
   a. Title: Project title.
   b. Author: Contractor's name.
   c. Subject: Submittal type (product data, shop drawing, report, etc.)
   d. Keywords: Number and title of appropriate Specification Section; manufacturer name; product name / model number.
8. File Size: Limit file size of each submittal as follows. Break larger PDF files into multiple packages where necessary to meet delivery restrictions. Identify split packages as "1 of #" and "2 of #" in the subject line.
   a. Email Delivery: 2 Megabytes.
   b. FTP Delivery: 100 Megabytes.

F. Options: Identify options requiring selection by Architect.

G. Deviations and Additional Information: On an attached separate document, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

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 stamped with Architect's action stamp marker "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED," and Project Manager's approval notation.
4. Costs of compensation for Architect's additional services and expenses made necessary for review of submittals exceeding the limits set forth below shall be at the Contractor's expense.
   a. Reviews of Each Submittal: Two, including initial review.

I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.

J. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals with Architect's action stamp marked "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS AS NOTED."

K. The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been reviewed by the Architect and returned to Contractor with Architect's action stamp marked "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS AS NOTED."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 33 00

SECTION 01 35 16 ALTERATION PROJECT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes special procedures for alteration work.

1.2 DEFINITIONS

A. Alteration Work: This term includes remodeling, renovation, repair, and maintenance work performed within existing spaces or on existing surfaces as part of the Project.

B. Consolidate: To strengthen loose or deteriorated materials in place.

C. Design Reference Sample: A sample that represents the Architect's Prebid selection of work to be matched; it may be existing work or work specially produced for the Project.

D. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

E. Match: To blend with adjacent construction and manifest no apparent difference in material type, species, cut, form, detail, color, grain, texture, or finish; as approved by Architect.

F. Refinish: To remove existing finishes to base material and apply new finish to match original, or as otherwise indicated.

G. Repair: To correct damage and defects, retaining existing materials, features, and finishes. This includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials.

H. Replace: To remove, duplicate, and reinstall entire item with new material. The original item is the pattern for creating duplicates unless otherwise indicated.

I. Replicate: To reproduce in exact detail, materials, and finish unless otherwise indicated.

J. Reproduce: To fabricate a new item, accurate in detail to the original, and from either the same or a similar material as the original, unless otherwise indicated.

K. Retain: To keep an element or detail secure and intact.

L. Strip: To remove existing finish down to base material unless otherwise indicated.

1.3 PROJECT MEETINGS FOR ALTERATION WORK

A. Coordination Meetings: Conduct coordination meetings specifically for alteration work at monthly intervals. Coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.

1. Agenda: Review and correct or approve minutes of previous coordination meeting. Review other items of significance that could affect progress of alteration work. Include topics for discussion as appropriate to status of Project.
2. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

1.4 MATERIALS OWNERSHIP

A. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered or uncovered during the Work, regardless of whether they were previously documented, remain Owner's property.

1.5 INFORMATIONAL SUBMITTALS

A. Alteration Work Program: Submit 30 days before work begins.

B. Fire-Prevention Plan: Submit 30 days before work begins.

1.6 QUALITY ASSURANCE

A. Alteration Work Program: Prepare a written plan for alteration work for whole Project, including each phase or process and protection of surrounding materials during operations. Show compliance with indicated methods and procedures specified in this and other Sections. Coordinate this whole-Project alteration work program with specific requirements of programs required in other alteration work Sections.

1. Dust and Noise Control: Include locations of proposed temporary dust- and noise-control partitions and means of egress from occupied areas coordinated with continuing on-site operations and other known work in progress.
2. Debris Hauling: Include plans clearly marked to show debris hauling routes, turning radii, and locations and details of temporary protective barriers.

B. Fire-Prevention Plan: Prepare a written plan for preventing fires during the Work, including placement of fire extinguishers, fire blankets, rag buckets, and other fire-control devices during each phase or process. Coordinate plan with Owner's fire-protection equipment and requirements. Include fire-watch personnel's training, duties, and authority to enforce fire safety.

C. Safety and Health Standard: Comply with ANSI/ASSP A10.6.

1.7 STORAGE AND HANDLING OF SALVAGED MATERIALS

A. Existing Materials to Remain: Protect construction indicated to remain against damage and soiling from construction work. Where permitted by Architect, items may be dismantled and taken to a suitable, protected storage location during construction work and reinstalled in their original locations after alteration and other construction work in the vicinity is complete.

B. Storage: Catalog and store items within a weathertight enclosure where they are protected from moisture, weather, condensation, and freezing temperatures.

1. Identify each item for reinstallation with a nonpermanent mark to document its original location. Indicate original locations on plans, elevations, sections, or photographs by annotating the identifying marks.
2. Secure stored materials to protect from theft.
3. Control humidity so that it does not exceed 85 percent. Maintain temperatures 5 deg F or more above the dew point.

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

A. Protect persons, motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm resulting from alteration work.

1. Use only proven protection methods, appropriate to each area and surface being protected.
2. Provide temporary barricades, barriers, and directional signage to exclude the public from areas where alteration work is being performed.
3. Erect temporary barriers to form and maintain fire-egress routes.
4. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during alteration work.
5. Contain dust and debris generated by alteration work, and prevent it from reaching the public or adjacent surfaces.
6. Provide shoring, bracing, and supports as necessary. Do not overload structural elements.
7. Protect floors and other surfaces along hauling routes from damage, wear, and staining.
8. Provide supplemental sound-control treatment to isolate demolition work from other areas of the building.

B. Temporary Protection of Materials to Remain:

1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.

2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.

C. Comply with each product manufacturer's written instructions for protections and precautions. Protect against adverse effects of products and procedures on people and adjacent materials, components, and vegetation.

D. Utility and Communications Services:

1. Notify Owner, Architect, authorities having jurisdiction, and entities owning or controlling wires, conduits, pipes, and other services affected by alteration work before commencing operations.
2. Disconnect and cap pipes and services as required by authorities having jurisdiction, as required for alteration work.
3. Maintain existing services unless otherwise indicated; keep in service, and protect against damage during operations. Provide temporary services during interruptions to existing utilities.

E. Existing Drains: Prior to the start of work in an area, test drainage system to ensure that it is functioning properly. Notify Architect immediately of inadequate drainage or blockage. Do not begin work in an area until the drainage system is functioning properly.

1. Prevent solids such as adhesive or mortar residue or other debris from entering the drainage system. Clean out drains and drain lines that become sluggish or blocked by sand or other materials resulting from alteration work.
2. Protect drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

F. Existing Roofing: Prior to the start of work in an area, install roofing protection as indicated on Drawings.

3.2 PROTECTION FROM FIRE

A. General: Follow fire-prevention plan and the following:

1. Comply with NFPA 241 requirements unless otherwise indicated.
2. Remove and keep area free of combustibles, including rubbish, paper, waste, and chemicals, unless necessary for the immediate work.
   a. If combustible material cannot be removed, provide fire blankets to cover such materials.

B. Heat-Generating Equipment and Combustible Materials: Comply with the following procedures while performing work with heat-generating equipment or combustible materials, including welding, torch-cutting, soldering, brazing, removing paint with heat, or other operations where open flames or implements using high heat or combustible solvents and chemicals are anticipated:

1. Obtain Owner's approval for operations involving use of welding or other high-heat equipment. Use of open-flame equipment is not permitted. Notify Owner at least 72 hours before each occurrence, indicating location of such work.

2. As far as practicable, restrict heat-generating equipment to shop areas or outside the building.
3. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
4. Use fireproof baffles to prevent flames, sparks, hot gases, or other high-temperature material from reaching surrounding combustible material.
5. Prevent the spread of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
6. Fire Watch: Before working with heat-generating equipment or combustible materials, station personnel to serve as a fire watch at each location where such work is performed. Fire-watch personnel shall have the authority to enforce fire safety. Station fire watch according to NFPA 51B, NFPA 241, and as follows:
    a. Train each fire watch in the proper operation of fire-control equipment and alarms.
    b. Prohibit fire-watch personnel from other work that would be a distraction from fire-watch duties.
    c. Cease work with heat-generating equipment whenever fire-watch personnel are not present.
    d. Have fire-watch personnel perform final fire-safety inspection each day beginning no sooner than 30 minutes after conclusion of work in each area to detect hidden or smoldering fires and to ensure that proper fire prevention is maintained.
    e. Maintain fire-watch personnel at each area of Project site until 60 minutes after conclusion of daily work.

C. Fire-Control Devices: Provide and maintain fire extinguishers, fire blankets, and rag buckets for disposal of rags with combustible liquids. Maintain each as suitable for the type of fire risk in each work area. Ensure that nearby personnel and the fire-watch personnel are trained in fire-extinguisher and blanket use.

D. Sprinklers: Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to sprinklers, shield them temporarily with guards.

1. Remove temporary guards at the end of work shifts, whenever operations are paused, and when nearby work is complete.

3.3 PROTECTION DURING APPLICATION OF CHEMICALS

A. Protect motor vehicles, surrounding surfaces of building, building site, plants, and surrounding buildings from harm or spillage resulting from applications of chemicals and adhesives.

B. Cover adjacent surfaces with protective materials that are proven to resist chemicals selected for Project unless chemicals being used will not damage adjacent surfaces as indicated in alteration work program. Use covering materials and masking agents that are waterproof and UV resistant and that will not stain or leave residue on surfaces to which they are applied. Apply protective materials according to manufacturer's written

instructions. Do not apply liquid masking agents or adhesives to painted or porous surfaces. When no longer needed, promptly remove protective materials.

C. Do not apply chemicals during winds of sufficient force to spread them to unprotected surfaces.

D. Neutralize alkaline and acid wastes and legally dispose of off Owner's property.

E. Collect and dispose of runoff from chemical operations by legal means and in a manner that prevents soil contamination, soil erosion, undermining of paving and foundations, damage to landscaping, or water penetration into building interior.

3.4 GENERAL ALTERATION WORK

A. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs or video recordings.

B. Perform surveys of Project site as the Work progresses to detect hazards resulting from alterations.

C. Notify Architect of visible changes in the integrity of material or components whether from environmental causes including biological attack, UV degradation, freezing, or thawing or from structural defects including cracks, movement, or distortion.

1. Do not proceed with the work in question until directed by Architect.

END OF SECTION 01 35 16

SECTION 01 40 00 QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspection 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.

1.2 DEFINITIONS

A. Experienced: When used with an entity or individual, "experienced" unless otherwise further described means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.

1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).

D. Mockups: Physical assemblies of portions of the Work constructed to establish the standard by which the Work will be judged. Mockups are not Samples.

1. Mockups are used for one or more of the following:
   a. Verify selections made under Sample submittals.
   b. Demonstrate aesthetic effects.
   c. Demonstrate the qualities of products and workmanship.
   d. Demonstrate successful installation of interfaces between components and systems.

e. Perform preconstruction testing to determine system performance.

2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.

E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.

F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source; for example, plant, mill, factory, or shop.

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."

I. 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.

J. 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. Contractor's quality-control services do not include contract administration activities performed by Architect.

1.3 DELEGATED DESIGN SERVICES

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 Architect.

B. Delegated Design Services Statement: Submit 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, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.4 CONFLICTING REQUIREMENTS

A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 ACTION SUBMITTALS

A. Mockup Shop Drawings:

1. Include plans, sections, elevations, and details, indicating materials and size of mockup construction.
2. Indicate manufacturer and model number of individual components.
3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 INFORMATIONAL SUBMITTALS

A. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:

1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
2. Main wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.

B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

C. Permits, Licenses, and Certificates: For Owner's record, 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.

1.7 REPORTS AND DOCUMENTS

A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, telephone number, and email address 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 inspection.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:

1. Statement on condition of substrates and their acceptability for installation of product.
2. Statement that products at Project site comply with requirements.
3. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
4. Results of operational and other tests and a statement of whether observed performance complies with requirements.
5. Other required items indicated in individual Specification Sections.

C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:

1. Statement that equipment complies with requirements.
2. Results of operational and other tests and a statement of whether observed performance complies with requirements.
3. Other required items indicated in individual Specification Sections.

1.8 QUALITY ASSURANCE

A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing

engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.

C. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented according to ASTM E329 ; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.

1.9 QUALITY CONTROL

A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.

1. Engage a qualified testing agency to perform quality-control services.
   a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspection 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.

B. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

C. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the locations from which test samples will be taken and in which in-situ tests are 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. Submit 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 duties of Contractor.

D. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives 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 inspection. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
6. Security and protection for samples and for testing and inspection equipment at Project site.

E. 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 inspection.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.10 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency 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 Architect 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 Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:

1. Date test or inspection was conducted.
2. Description of the Work tested or inspected.
3. Date test or inspection results were transmitted to Architect.
4. Identification of testing agency or special inspector conducting test or inspection.

B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and authorities' having jurisdiction reference during normal working hours.

1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

A. General: On completion of testing, inspection, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

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

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

B. Related Requirements:
1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.

1.2 INFORMATIONAL SUBMITTALS

A. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.

B. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.

1.3 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.

B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

A. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
2. Conference room of sufficient size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot- square tack and marker boards.
3. Drinking water and private toilet.
4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
5. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.

2.2 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
   1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to Drawing for disposition of salvaged Terrazzo Wildcat Floor Logo that is designated as Owner's property under Bid Alternate No. 4.

3.2 INSTALLATION, GENERAL

A. 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.

C. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

3.3 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.

B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
   1. Connect temporary sewers to as directed by authorities having jurisdiction.

C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.

D. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.

E. Temporary 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. Provide temporary dehumidification systems when required to reduce ambient and substrate moisture levels to level required to allow installation or application of finishes and their proper curing or drying.

F. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.

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.

H. Electronic Communication Service: Provide secure WiFi wireless connection to internet with provisions for access by Architect and Owner.

3.4 SUPPORT FACILITIES INSTALLATION

A. Comply with the following:

1. Provide temporary field offices, shops, and sheds in the designated area on the Drawings.
2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.

1. Provide dust-control treatment that is nonpolluting and nontracking. Reapply treatment as required to minimize dust.

C. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.

D. Parking: Use areas designated on Drawings for parking areas for construction personnel.

E. Storage and Staging: Use designated areas of Project site for storage and staging needs.

F. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.

1. Identification Signs: Provide Project identification signs as indicated on Drawings.
2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.
   a. Provide temporary, directional signs for construction personnel and visitors.
3. Maintain and touch up signs so they are legible at all times.

G. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

3.5 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.
   1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.

B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

C. Temporary Erosion and Sedimentation Control: Comply with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Section 311000 "Site Clearing."

D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.

E. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.

F. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using materials approved by authorities having jurisdiction.

G. Site Enclosure Fence: Before construction operations begin , furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.
   1. Extent of Fence: Project boundaries As indicated on Drawings.
   2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.

I. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.

J. 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; manage fire-prevention program.
   1. Prohibit smoking in construction areas. Comply with additional limits on smoking specified in other Sections.
   2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
   3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
   4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.6 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 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, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 01 77 00 "Closeout Procedures."

END OF SECTION 01 50 00

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 01 60 00 PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

B. Related Requirements:

1. Section 01 25 00 "Substitution Procedures" for requests for substitutions.

1.2 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products, unless indicated otherwise.
3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in Part 2 "Comparable Products" Article, 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. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.

1. Evaluation of Comparable Products: In addition to the basis-of-design product description, product attributes and characteristics may be listed to establish the significant qualities related to type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other special features and requirements for purposes of evaluating comparable products of additional manufacturers named in the specification. Manufacturer's published attributes and characteristics of basis-of-design product also establish salient characteristics of products for purposes of evaluating comparable products.

C. Subject to Compliance with Requirements: Where the phrase "Subject to compliance with requirements" introduces a product selection procedure in an individual Specification Section, provide products qualified under the specified product procedure. In the event that a named product or product by a named manufacturer does not meet the other requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.

D. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 01 33 00 "Submittal Procedures."

E. Substitution: Refer to Section 01 25 00 "Substitution Procedures" for definition and limitations on substitutions.

1.3 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products, using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

1.5 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: Written standard warranty form furnished by individual manufacturer for a particular product and issued in the name of the Owner or endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner and issued in the name of the Owner or endorsed by manufacturer to Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.

3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, 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 meeting requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

B. Product Selection Procedures:

1. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
   a. For approval of products by unnamed manufacturers, comply with requirements in Section 01 25 00 "Substitution Procedures" for substitutions for convenience.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration of Comparable Products: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with the following requirements:

1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes,

such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.

3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation, as specified in Section 01 33 00 "Submittal Procedures."

1. Form of Approval of Submittal: As specified in Section 01 33 00 "Submittal Procedures."
2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

C. Submittal Requirements, Two-Step Process: Approval by the Architect of Contractor's request for use of comparable product is not intended to satisfy other submittal requirements. Comply with specified submittal requirements.

D. Submittal Requirements, Single-Step Process: When acceptable to Architect, incorporate specified submittal requirements of individual Specification Section in combined submittal for comparable products. Approval by the Architect of Contractor's request for use of comparable product and of individual submittal requirements will also satisfy other submittal requirements.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 73 00 EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes general administrative and procedural requirements governing execution of the Work, including, but not limited to, the following:
   1. Construction layout.
   2. Field engineering and surveying.
   3. Progress cleaning.

B. Related Requirements:
   1. Section 01 77 00 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
   2. Section 02 41 16 "Structure Demolition" for demolition and removal of existing building.

1.2 INFORMATIONAL SUBMITTALS

A. Certificates: Submit certificate signed by land surveyor , certifying that location and elevation of improvements comply with requirements.

1.3 QUALITY ASSURANCE

A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

B. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of specified products and equipment.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
   1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.

C. 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 EXAMINATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
   1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
   2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
   1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
   2. List of detrimental conditions, including substrates.

3.2 PREPARATION

A. Existing Utility Information: Furnish information to Owner that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.

B. Field Measurements: Take field measurements as required to document the Work properly.

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 Architect in accordance with requirements in Section 01 31 00 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding with demolition, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks and existing conditions. If discrepancies are discovered, notify Architect promptly.

B. Engage a land surveyor experienced in documenting the Work, using the following accepted surveying practices:
   1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
   2. Establish limits on use of Project site.

3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
4. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Existing Piers to Remain: Locate and document the foundations and piers that are below the level required by demolition and are to remain.

D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

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.
1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 PROGRESS CLEANING

A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
    a. Use containers intended for holding waste materials of type to be stored.
3. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

B. Site: Maintain Project site free of waste materials and debris.

C. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 01 74 19 "Construction Waste Management and Disposal."

END OF SECTION 01 73 00

SECTION 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:
   1. Disposing of nonhazardous demolition and construction waste.
   2. Disposing of hazardous asbestos waste.

B. Related Requirements:
   1. Section 31 10 00 "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.
   2. Section 02 41 16 "Structure Demolition".

1.2 DEFINITIONS

A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition operations.

C. Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner’s property.

1.3 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Comply with requirements in Section 02 41 16 "Structure Demolition."

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.
   1. Distribute waste management plan to everyone concerned within three days of submittal return.
   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.

C. 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 and recycled.
   2. Comply with Section 01 50 00 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Comply with requirements in Section 02 41 16 "Structure Demolition" for salvaging demolition waste.

B. Salvaged Items for Sale: Not permitted on Project site.

C. Salvaged Items for Owner's Use:
   1. Clean salvaged items.
   2. Store items in a secure area until delivery to Owner.
   3. Transport items to Owner's storage area designated by Owner.
   4. 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. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.
   1. Provide appropriately marked containers or bins for controlling recyclable waste until 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. Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overfilling bins.

3.4 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged or recycled, 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. General: Except for items or materials to be salvaged or recycled, remove waste materials and legally dispose of at designated spoil areas on Owner's property.

C. Burning: Do not burn waste materials.

END OF SECTION 01 74 19

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 01 77 00 CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
   1. Substantial Completion procedures.
   2. Final completion procedures.
   3. Final cleaning.

B. Related Requirements:
   1. Section 01 78 39 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of cleaning agent.

B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.3 CLOSEOUT SUBMITTALS

A. Certificates of Release: From authorities having jurisdiction.

B. Certificate of Insurance: For continuing coverage.

C. Field Report: For pest-control inspection.

1.4 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
   1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
   2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, damage or settlement surveys, property surveys, and similar final record information.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
   1. Advise Owner of pending insurance changeover requirements.
   2. Advise Owner of changeover in utility services.
   3. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
   4. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
   5. Complete final cleaning requirements.
   6. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.

1.5 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
   1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."
   2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
   3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1.6 LIST OF INCOMPLETE ITEMS

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
   1. Organize items applying to each space or area by major element, such as site grading, landscaping, etc.
   2. Include the following information at the top of each page:
      a. Project name.
      b. Date.

c. Name of Architect.
d. Name of Contractor.
e. Page number.

3. Submit list of incomplete items in the following format:
   a. PDF Electronic File: Architect will return annotated file.

1.7 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.

B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

C. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
   1. Submit on digital media acceptable to Architect .

D. Warranties in Paper Form:
   1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.

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.
   1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

A. Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution 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 designated portion of Project:
   a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
   b. 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.
   c. Leave Project clean and ready for occupancy.

C. Construction Waste Disposal: Comply with waste-disposal requirements in Section 017419 "Construction Waste Management and Disposal."

3.2 REPAIR OF THE WORK

A. Complete repair and restoration operations required by Section 01 73 00 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION 01 77 00

SECTION 01 78 23 OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory manuals.
2. Systems and equipment operation manuals.
3. Systems and equipment maintenance manuals.
4. Product maintenance manuals.

1.2 CLOSEOUT SUBMITTALS

A. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

1.3 FORMAT OF OPERATION AND MAINTENANCE MANUALS

A. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
2. File Names and Bookmarks: Bookmark individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

B. Manuals, Paper Copy: Submit manuals in the form of hard-copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaforpost-type 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.
2. 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.

1.4 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization of Manuals: 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 the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: 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 and contact information for Contractor.
6. Name and contact information for Architect.
7. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
8. 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 system into a single binder.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

1.5 SYSTEMS AND EQUIPMENT OPERATION MANUALS

A. Systems and Equipment Operation Manual: Assemble a complete set of data indicating operation of each system, subsystem, and piece of equipment not part of a system. Include information required for daily operation and management, operating standards, and routine and special operating procedures.

B. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

C. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
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.

D. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

E. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

F. Piped Systems: Diagram piping as installed, and identify color coding where required for identification.

1.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of

a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.

B. 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 warranties and bonds, as described below.

C. Manufacturers' Maintenance Documentation: Include the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins; include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
    a. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

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. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

H. 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.

1.7 PRODUCT MAINTENANCE MANUALS

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. 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.

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. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. 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.

1. Include procedures to follow and required notifications for warranty claims.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 78 23

THIS PAGE INTENTIONALLY
LEFT BLANK

SECTION 01 78 39 PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for Project Record Documents, including the following:

1. Record Drawings.
2. Record specifications.
3. Record Product Data.

B. Related Requirements:

1. Section 01 78 23 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.2 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit one set(s) of marked-up record prints.
2. Number of Copies: Submit copies of Record Drawings as follows:
   a. Initial Submittal:
      1) Submit one paper-copy set(s) of marked-up record prints.
      2) Submit PDF electronic files of scanned record prints and one set(s) of file prints.
      3) Submit Record Digital Data Files and one set(s) of plots.
      4) Architect will indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
   b. Final Submittal:
      1) Submit three paper-copy set(s) of marked-up record prints.
      2) Submit PDF electronic files of scanned Record Prints and three set(s) of file prints.
      3) Print each drawing, whether or not changes and additional information were recorded.

B. Record Specifications: Submit annotated PDF electronic files of Project's Specifications, including addenda and Contract modifications.

C. Record Product Data: Submit 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.

1.3 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

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 provide information for preparation of corresponding 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. Accurately record information in an acceptable drawing technique.
   c. Record data as soon as possible after obtaining it.
   d. Record and check the markup before enclosing concealed installations.
   e. Cross-reference record prints to corresponding photographic documentation.
2. Content: Types of items requiring marking include, but are not limited to, the following:
   a. Dimensional changes to Drawings.
   b. Revisions to details shown on Drawings.
   c. Depths of foundations.
   d. Locations and depths of underground utilities.
   e. Revisions to routing of piping and conduits.
   f. Revisions to electrical circuitry.
   g. Actual equipment locations.
   h. Duct size and routing.
   i. Locations of concealed internal utilities.
   j. Changes made by Change Order or Work Change Directive.
   k. Changes made following Architect's written orders.
   l. Details not on the original Contract Drawings.
   m. Field records for variable and concealed conditions.
   n. Record information on the Work that is shown only schematically.
3. Mark the Contract Drawings and Shop Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
4. Mark record prints with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:

1. Format: Annotated PDF electronic file with comment function enabled.
2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
3. Refer instances of uncertainty to Architect for resolution.

4. Architect will furnish Contractor with one set of digital data files of the Contract Drawings for use in recording information.

C. Format: Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

1. Record Prints: Organize record prints into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
2. Format: Annotated PDF electronic file with comment function enabled.
3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
4. Identification: As follows:
   a. Project name.
   b. Date.
   c. Designation "PROJECT RECORD DRAWINGS."
   d. Name of Architect.
   e. Name of Contractor.

1.4 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. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
5. Note related Change Orders, Record Product Data, and Record Drawings where applicable.

B. Format: Submit record specifications as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Specifications.

1.5 RECORD PRODUCT DATA

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and revisions to Project Record Documents as they occur; do not wait until end of Project.

B. 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.

C. Format: Submit Record Product Data as annotated PDF electronic file or scanned PDF electronic file(s) of marked-up paper copy of Product Data.

1. Include Record Product Data directory organized by Specification Section number and title, electronically linked to each item of Record Product Data.

1.6 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store Record Documents 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 Architect's reference during normal working hours.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 78 39

SECTION 01 79 00 DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:

1. Instruction in operation and maintenance of systems, subsystems, and equipment.
2. Demonstration and training video recordings.

1.2 INFORMATIONAL SUBMITTALS

1.3 CLOSEOUT SUBMITTALS

A. Demonstration and Training Video Recordings: Submit one copy within seven days of end of each training module.

1. At completion of training, submit complete training manual(s) for Owner's use prepared in same PDF file format required for operation and maintenance manuals specified in Section 01 78 23 "Operation and Maintenance Data."

1.4 QUALITY ASSURANCE

1.5 COORDINATION

A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations and to ensure availability of Owner's personnel.

B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data have been reviewed and approved by Architect.

1.6 INSTRUCTION PROGRAM

A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual Specification Sections.

B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
   a. System, subsystem, and equipment descriptions.
   b. Performance and design criteria if Contractor is delegated design responsibility.
   c. Operating standards.
   d. Regulatory requirements.
   e. Equipment function.
   f. Operating characteristics.
   g. Limiting conditions.
   h. Performance curves.
2. Documentation: Review the following items in detail:
   a. Emergency manuals.
   b. Systems and equipment operation manuals.
   c. Systems and equipment maintenance manuals.
   d. Product maintenance manuals.
   e. Project Record Documents.
   f. Identification systems.
   g. Warranties and bonds.
   h. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:
   a. Instructions on meaning of warnings, trouble indications, and error messages.
   b. Instructions on stopping.
   c. Shutdown instructions for each type of emergency.
   d. Operating instructions for conditions outside of normal operating limits.
   e. Sequences for electric or electronic systems.
   f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
   a. Startup procedures.
   b. Equipment or system break-in procedures.
   c. Routine and normal operating instructions.
   d. Regulation and control procedures.
   e. Control sequences.
   f. Safety procedures.
   g. Instructions on stopping.
   h. Normal shutdown instructions.
   i. Operating procedures for emergencies.
   j. Operating procedures for system, subsystem, or equipment failure.
   k. Seasonal and weekend operating instructions.
   l. Required sequences for electric or electronic systems.
   m. Special operating instructions and procedures.
5. Adjustments: Include the following:
   a. Alignments.
   b. Checking adjustments.
   c. Noise and vibration adjustments.

d. Economy and efficiency adjustments.

6. Troubleshooting: Include the following:
   a. Diagnostic instructions.
   b. Test and inspection procedures.
7. Maintenance: Include the following:
   a. Inspection procedures.
   b. Types of cleaning agents to be used and methods of cleaning.
   c. List of cleaning agents and methods of cleaning detrimental to product.
   d. Procedures for routine cleaning.
   e. Procedures for preventive maintenance.
   f. Procedures for routine maintenance.
   g. Instruction on use of special tools.
8. Repairs: Include the following:
   a. Diagnosis instructions.
   b. Repair instructions.
   c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
   d. Instructions for identifying parts and components.
   e. Review of spare parts needed for operation and maintenance.

1.7 PREPARATION

A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 017823 "Operation and Maintenance Data."

B. Set up instructional equipment at instruction location.

1.8 INSTRUCTION

A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.

B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

C. Scheduling: Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

   1. Schedule training with Owner ,through Architect, with at least seven days' advance notice.

D. Training Location and Reference Material: Conduct training on-site in the completed and fully operational facility using the actual equipment in-place. Conduct training using final operation and maintenance data submittals.

E. Cleanup: Collect used and leftover educational materials and give to Owner. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

1.9 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

A. General: Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.

1. At beginning of each training module, record each chart containing learning objective and lesson outline.

B. Digital Video Recordings: Provide high-resolution, digital video in MPEG format, produced by a digital camera with minimum sensor resolution of **12** megapixels and capable of recording in full HD mode.

1. Submit video recordings on CD-ROM or thumb drive .

C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.

D. Light Levels: Verify light levels are adequate to properly light equipment. Verify equipment markings are clearly visible prior to recording.

E. Preproduced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION 01 79 00

SECTION 32 31 19 DECORATIVE METAL FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
1. Decorative aluminum fences.
2. Horizontal-slide gates.
3. Gate operators, including controls.

B. Related Requirements:
1. Section 03 30 53 "Miscellaneous Cast-in-Place Concrete" for concrete bases for gate operators, drives, and controls .
2. Division 26 Sections for electrical service and connections for system disconnect switches and powered devices including, but not limited to, motor operators, controls, and limit switches.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For fencing and gates.
1. Include plans, elevations, sections, gate locations, post spacing, and attachment details.
2. Gate Operator: Show locations and details for installing operator components, switches, and controls. Indicate motor size, electrical characteristics, drive arrangement, mounting, and grounding provisions.
3. Wiring Diagrams: Include diagrams for power, signal, and control wiring.

C. Samples: For each fence material and for each color specified.
1. Provide Samples 12 inches in length for linear materials.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For gate operators to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Wind Loading:
1. Fence Height: 0 to 15 feet.
2. Wind Exposure Category: C.

3. Design Wind Speed: 120 mph (ASD) (3 second gust) and an equivalent 155 mph wind velocity (LRFD) .

2.2 DECORATIVE ALUMINUM FENCES

A. Decorative Aluminum Fences: Fences made from aluminum extrusions.
   1. Basis-of-Design Product: Subject to compliance with requirements, provide Ameristar Perimeter Security; ASSA ABLOY; Echelon II Classic Design Heavy Industrial Aluminum Ornamental Fence System or comparable product.

B. Posts: Square extruded tubes.
   1. Line Posts: 3 by 3 inches with 0.125-inch wall thickness.
   2. End and Corner Posts: 3 by 3 inches with 0.125-inch wall thickness.
   3. Horizontal-Slide Gate Post, Openings Wider Than 12 Feet: 6 by 6 inches with 0.250-inch wall thickness.

C. Post Caps: Aluminum castings that cover entire top of posts .

D. Rails: Extruded-aluminum channels, 1-1/2 by 1-1/2 inches , with 0.100-inch- thick sidewalls and 0.070-inch- thick top .

E. Pickets: Extruded-aluminum tubes, 1 inch square, with 0.062-inch wall thickness .
   1. Extend pickets beyond top rail as indicated and press flat and trim to produce spear point shape .
   2. Picket Spacing: 4 inches clear, maximum.

F. Fasteners: Manufacturer's standard tamperproof, corrosion-resistant, color-coated fasteners matching fence components.

G. Fabrication: Assemble fences into sections by fastening pickets to rails.
   1. Fabricate sections with clips welded to rails for field fastening to posts.
   2. Drill clips for fasteners before finishing.

H. Finish: Baked enamel or powder coating.
   1. Color: Black.

2.3 SWING GATES

A. Gate Configuration: As indicated.

B. Gate Frame Height: 8 feet.

C. Gate Opening Width: 36 inches.

D. Frame Corner Construction: Welded or assembled with corner fittings.

E. Additional Rails: Provide as indicated, complying with requirements for fence rails.

F. Infill: Comply with requirements for adjacent fence.

G. Picket Size, Configuration, and Spacing: Comply with requirements for adjacent fence.

H. Hardware: Latches permitting operation from both sides of gate, hinges, and keepers for each gate leaf more than 5 feet wide.

I. Hinges: BHMA A156.1, Grade 1, suitable for exterior use.
1. Function: 39 - Full surface, triple weight, antifriction bearing.
2. Material: Wrought steel, forged steel, cast steel, or malleable iron; galvanized.

J. Electric Strikes: BHMA A156.31, Grade 1, of configuration required for use with lock specified, fail -safe, and suitable for exterior use.
1. Mounting Plate: Configuration necessary for mounting electric strikes. Fabricate from 1/8-inch- thick, aluminum plate.
2. Mounting: Mortise into post.

K. Aluminum Finish: Baked enamel or powder coating.
1. Color: Black.

2.4 HORIZONTAL-SLIDE GATES

A. Basis of Design Product: Subject to compliance with requirements, provide Ameristar Perimeter Security; ASSA ABLOY, Transport II Classic Design Ornamental Cantilever Gate System or comparable product.

B. Gate Configuration: Single leaf.
1. Type: Cantilever slide, with external roller assemblies.

C. Gate Frame Height: 8 feet.

D. Gate Opening Width: As indicated on drawings.

E. Automated vehicular gates shall comply with ASTM F 2200, Class II.

F. Aluminum Frames and Bracing: Fabricate members from square tubing.
1. Sizes as recommended by manufacturer for this application.

G. Frame Corner Construction:
1. Welded frame and 5/16-inch- diameter, adjustable truss rods for panels 5 feet wide or wider.

H. Additional Rails: Provide as indicated, complying with requirements for fence rails.

I. Infill: Comply with requirements for adjacent fence.

J. Picket Size, Configuration, and Spacing: Comply with requirements for adjacent fence.

K. Hardware: Latches permitting operation from both sides of gate, locking devices hangers roller assemblies and stops fabricated from mill-finished, Grade 319 aluminum-alloy casting with stainless-steel fasteners.

L. Aluminum Finish: Baked enamel or powder coating.
1. Color: Black.

2.5 GATE OPERATORS

A. Provide factory-assembled automatic operating system designed for gate size, type, weight, and operation frequency. Provide operation control system with characteristics suitable for Project conditions, with remote-control stations, safety devices, and weatherproof enclosures; coordinate electrical requirements with building electrical system.
   1. Provide operator designed so motor may be removed without disturbing limit-switch adjustment and without affecting auxiliary emergency operator.
   2. Provide operator with UL approval.
   3. Provide electronic components with built-in troubleshooting diagnostic feature.
   4. Provide unit designed and wired for both right-hand/left-hand opening, permitting universal installation.

B. Comply with NFPA 70.

C. UL Standard: Manufacturer and label gate operators to comply with UL 325.

D. Emergency Access Requirements: Comply with requirements of authorities having jurisdiction for automatic gate operators on gates that must provide emergency access.

E. Motor Characteristics: Sufficient to start, accelerate, and operate connected loads at designated speeds, within installed environment, with indicated operating sequence, and without exceeding nameplate rating or considering service factor. Comply with NEMA MG 1 and the following:
   1. Voltage: 208-220 V. Verify with gate manufacturer.
   2. Horsepower: As required by gate manufacturer for the gate indicated.
   3. Enclosure: Manufacturer's standard.
   4. Duty: Continuous duty at ambient temperature of 105 deg F and at altitude of 3300 feet above sea level.
   5. Service Factor: 1.15 for open dripproof motors; 1.0 for totally enclosed motors.
   6. Phase: One.

F. Gate Operators: Concrete base mounted and as follows:
   1. Mechanical Slide Gate Operators:
      a. Duty: Heavy duty, commercial/industrial.
      b. Operating Type: Wheel-and-rail drive.
      c. Drive Type: Enclosed worm gear and chain-and-sprocket reducers, roller-chain drive.
   2. Furnish and install concrete base for gate operator and card reader as required by gate manufacturer.

G. Remote Controls: Electric controls separated from gate and motor and drive mechanism, with manufacturer's standard enclosure for pedestal mounting, and with space for additional optional equipment. Provide the following remote-control device(s):
   1. Card Reader: Functions only when authorized card is presented. Programmable, multiple -code system; face-lighted unit fully visible at night.
      a. Reader Type: Proximity.
   2. Digital Keypad Entry Unit: Programmable, multiple-code capability of not less than 100 possible individual codes, consisting of 4-digit codes.
      a. Features: Capable of monitoring and auditing gate activity.

b. Face-lighted unit with keypad fully visible at night.

H. Vehicle Loop Detector: System includes automatic closing timer with adjustable time delay, timer cutoff switch, and loop detector designed to hold gate open until traffic clears. System includes electronic detector with adjustable detection patterns, adjustable sensitivity and frequency settings, and panel indicator light designed to detect presence or transit of a vehicle over an embedded loop of wire and to emit a signal activating the gate operator. System includes number of loops consisting of multiple strands of wire, number of turns, loop size, and method of placement, as recommended in writing by detection system manufacturer for function indicated, at location indicated on Drawings.

I. Limit Switches: Adjustable switches, interlocked with motor controls and set to automatically stop gate at fully retracted and fully extended positions.

J. Accessories:
1. Equipment Bases/Pads: Precast or cast in place concrete, dimensioned and reinforced according to gate operator component manufacturer's written instructions and as indicated on Drawings.

2.6 ALUMINUM

A. Aluminum, General: Provide alloys and tempers with not less than the strength and durability properties of alloy and temper designated in paragraphs below for each aluminum form required.

B. Extrusions: ASTM B 221, Alloy 6063-T5.

C. Tubing: ASTM B 429/B 429M, Alloy 6063-T6.

D. Plate and Sheet: ASTM B 209, Alloy 6061-T6.

E. Die and Hand Forgings: ASTM B 247, Alloy 6061-T6.

F. Castings: ASTM B 26/B 26M, Alloy A356.0-T6.

2.7 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
1. For aluminum, provide type and alloy as recommended by producer of metal to be welded and as required for strength and compatibility in fabricated items.

B. Concrete: Normal-weight, air-entrained, ready-mix concrete complying with requirements in Section 03 30 00 "Cast-in-Place Concrete" with a minimum 28-day compressive strength of 3000 psi, 3-inch slump, and 1-inch maximum aggregate size.

C. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M and specifically recommended by manufacturer for exterior applications.

2.8 ALUMINUM FINISHES

A. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 2 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
   1. Color: Black.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.

B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 DECORATIVE FENCE INSTALLATION

A. Install fences according to manufacturer's written instructions.

B. Install fences by setting posts as indicated and fastening rails and infill panels to posts.

C. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil. Cantilever support posts shall be set in concrete footers having a minimum depth of 48 inches.
   1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
   2. Concrete Fill: Place concrete around and and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
      a. Exposed Concrete: Extend 2 inches above grade. Finish and slope top surface to drain water away from post.
   3. Posts Set in Concrete: Extend post to within 6 inches of specified excavation depth, but not closer than 3 inches to bottom of concrete.
   4. Space posts uniformly at 8 feet o.c. max.

3.4 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.5 GATE OPERATOR INSTALLATION

A. General: Install gate operators according to manufacturer's written instructions, aligned and true to fence line and grade.

B. Excavation for Support Posts Pedestals Concrete Bases: Hand-excavate holes for bases in firm, undisturbed soil to dimensions and depths and at locations as required by gate operator component manufacturer's written instructions and as indicated.

C. Concrete Bases: Cast-in-place or precast concrete, dimensioned and reinforced according to gate operator component manufacturer's written instructions and as indicated on Drawings.

D. Vehicle Loop Detector System: Cut grooves in pavement and bury and seal wire loop according to manufacturer's written instructions. Connect to equipment operated by detector.

E. Comply with NFPA 70 and manufacturer's written instructions for grounding of electric-powered motors, controls, and other devices.

3.6 ADJUSTING

A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.

B. Automatic Gate Operators: Energize circuits to electrical equipment and devices. Adjust operators, controls, safety devices, alarms, and limit switches.
   1. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
   2. Test and adjust controls, alarms, and safeties. Replace damaged and malfunctioning controls and equipment.

C. Lubricate hardware, gate operators, and other moving parts.

3.7 DEMONSTRATION

A. Train Owner's personnel to adjust, operate, and maintain gates.

END OF SECTION 32 31 19

THIS PAGE INTENTIONALLY
LEFT BLANK