

VPS ARCHITECTURE
PROJECT MANUAL

***CK NEWSOME CENTER RENOVATION
IFB-508-02-2026
EVANSVILLE, INDIANA***

OWNER:

**City of Evansville, Indiana
1 NW Martin Luther King, Jr. Blvd.
Evansville, Indiana 47708**

**VPS Project No. 2025060.00
April 2026**

City of Evansville



Invitation For Bids IFB-508-02-2026 **CK Newsome Center Renovation**

Issue Date: April 27, 2026

Issued By: City of Evansville
Parks and Recreation Department
100 E. Walnut Street
C.K. Newsome Building
Evansville, IN 47713

Transmitted Via: Email and Posting on Website:
<https://www.evansvillegov.org/city/departement/division.php?structureid=133>

Plan Holder List: Contractors obtaining a bid package should send an email to:
Paul Bouseman at pabouseman@evansville.in.gov letting him know that
they have obtained a package

Proposals Due: Wednesday May 20, 2026, at 12:00 Noon CST
1 NW Martin Luther King Jr. Blvd.
Evansville, IN 47708
Room 301

VENDOR INSTRUCTIONS

1. INTRODUCTION

- A. The Board of Park Commissioners (the "Board") by and through the City of Evansville (the "City"), is soliciting competitive sealed bids from qualified contractors of the Installation of two new irrigation systems for two separate city golf courses.
- B. Your company, among others, is invited to submit a bid on a competitive basis in the format described. The bid documents establish requirements and defines responsibilities of the proposing vendor (hereinafter "Vendor," "Respondent," or "Contractor") to install the first phase of a multiuse, accessible trail.

2. GENERAL REQUIREMENTS

The responsibilities of the Contractor include, but shall not be limited to, the following:

- A. The Contractor shall purchase all items needed to provide services.
- B. The Contractor will furnish all tools and labor required for service.
- C. The Contractor shall coordinate with Paul Bouseman, Deputy Director for time and space to complete all work required.
- D. Contractor will be responsible for any needed traffic control (vehicular and/or pedestrian) during construction.
- E. Contractor must possess the required local licensing that pertain to work on this project at the time of bid opening, per Evansville Municipal Code 3.95.030.
- F. Prime Contractors are required to be designated as a Responsible Bidder at the time of bid submission for any bid over \$150,000 per Evansville Municipal Code 3.95.040. Submittal requirements of subcontractors may be provided immediately after bid award, but prior to the execution of a contract.
- G. Contractor must have a written drug testing program in place at the time of bid submission for any bid over \$10,000 per Evansville Municipal Code 3.95.020.
- H. Awarded Contractor must carry the required insurance throughout the bidding process until completion of this project listed in the General Conditions.

3. RESPONSE INSTRUCTIONS

The submitted bid must follow the rules and format established within this Invitation to Bid. Adherence to these rules will ensure a fair and objective analysis of all quotes. Failure to complete any portion of this request may result in rejection of a bid.

4. Pre-Bid Conference

A Mandatory Pre-bid Conference will be conducted on May 4, 2026, at 1:00 pm, local time in the Snack Bar Room in the CK Newsome Center at 100 E. Walnut. All prospective bidders must attend this conference and will be deemed unresponsive if not represented.

5. CONTACT WITH MUNICIPALITY EMPLOYEES

To ensure a fair and objective evaluation of all bids, Vendors are required to submit all inquiries in writing to Paul Bouseman at his pabouseman@evansville.in.gov email should be titled: **CK Newsome Center Renovation.**

Inquiries shall be submitted no later than eight (8) days prior to the stated opening time and date. This

is to allow for ample time to respond and disseminate to all perspective parties.

All changes in specifications shall be in writing in the form of an addendum and furnished to all contractors. Verbal information obtained otherwise will not be considered in awarding of quotes. No changes to specifications will be permitted within seven (7) days prior to the bid opening.

6. ACCESS BID DOCUMENTS

Before submitting a bid, vendors shall examine the specifications in order to understand all existing conditions and limitations.

7. COSTS OF BID PREPARATION AND SUBMISSION

Each vendor shall be responsible for all costs incurred in order to prepare and submit their response to this IFB.

8. BID BOND

- A. Each bid shall be accompanied (in the same envelope) by a bid bond or certified check, made payable to the "CITY OF EVANSVILLE", in an amount equal to five percent (5%) of the total bid submitted.

No bid may be withdrawn after the opening of bid without the consent of the Evansville Board of Parks Commissioner for a period of thirty (30) days after the scheduled time of opening bids.

9. PUBLIC OPENING PROCEDURES

- A. No award will be made or implied at this time, unless otherwise indicated.
- B. Only the following information will be given:
 - Vendor name and amount of bid
- C. Bids or related documents may not be reviewed at the bid opening. No discussion of any nature concerning brand names, deliveries, samples, etc. can be entered into between any Purchasing Department personnel and any Vendor during or after the bid opening until the evaluation of bids have been completed and a recommendation for award has been made.
- D. A copy of the bid tabulation will be available to review in the Purchasing Department upon completion of the recommended award.
- E. Vendors who wish to review or request copies of bids may do so by contacting the Purchasing Department at 812-436-4915. A copy fee will be charged for copies.

10. ACCESS TO PUBLIC RECORDS

- A. All submissions may be considered public documents under applicable laws and may be subject to disclosure. Some bid records are public as soon as received by the City, others become public at bid opening, and others at bid award. Contractor recognizes and agrees that City will not be responsible or liable in any way for any losses that the Contractor may suffer from the lawful disclosure of information or materials to third parties.
- B. Any materials requested to be treated as confidential documents, proprietary information, or trade secrets must be clearly identified and readily separable from the balance of the bid submission. Such designations will not necessarily be conclusive, and Contractor may be required to justify why such material should not, upon written request, be disclosed by the City under the applicable public records act.

- C. City will endeavor to provide at least two (2) business days' notice to the Contractor of a public records request for material submitted pursuant to this IFB (Invitation for Bid). The City will then release the document in accordance with the City's policy for responding to such requests unless both of the following are true:
- i. the Contractor responds to the notice with any objection to the production of the document within two (2) business days of receipt of the notice; and
 - ii. the Contractor agrees in writing to indemnify City, in a form acceptable to City, in the event a challenge is brought for withholding a public record based on Contractor having designated it a trade secret.

11. BID FORMAT AND FORMS

Each bid will be prepared in the format specified, incorporating the additional forms provided at the end of this document, and be submitted in a **sealed** envelope.

The bidder shall give the unit prices in both written form and numerical form for each item. In the event of a discrepancy between written prices and numerical prices the written price form will take precedence and will be used in computing the total project cost.

Submit one (1) original and one (1) electronic copy on a flash drive in a Windows-compatible and searchable format such as PDF. Bids must be clear, concise, typewritten, and must be signed in ink by the official authorized to bind the submitter to its provisions.

The contents of this bid will become incorporated within any contract signed by the Board and the provider of service. Do not retype this bid. Instead, respond on a separate page and cite the section number for each response. All areas of the request must be addressed in the same sequence cited in the Bid instructions in order that proper consideration is given to the bid. ***Bids submitted without information or incomplete content will result in the bid being removed from consideration.***

12. DELIVERY OF BIDS

The submittals must be sealed and clearly labeled:

SEALED BID ENCLOSED
IFB-508-02-2026
CK NEWSOME CENTER RENOVATION

1 NW Martin Luther King, Jr. Blvd, Room 323
Evansville, Indiana 47708
Bid Open Date: May 20, 2026

It is the sole responsibility of the vendor to see that their bid is received in the proper time. Any bids received after the bid opening date and time shall be eliminated from consideration and returned to the Vendor unopened.

Bids must be delivered by 11:45am CDT on May 20, 2026, to the following address:

Purchasing Department
1 NW Martin Luther King, Jr. Blvd, Room 323
Evansville, Indiana 47708

NOTE: Any bids submitted after 11:45am on May 20, 2026, but before the scheduled

opening at 12:00 PM CDT shall be delivered to Room 312 Civic Center, 1 NW Martin Luther King Jr. Blvd., Evansville, Indiana 47708.

BID EVALUATION

1. EVALUATIONS

The bid selected shall be the lowest responsive and responsible bidder that provides the most comprehensive approach that meets the stated requirements. The Board reserves the right to award on a line-item basis.

2. RIGHT TO DISCUSSIONS

The agency reserves the right to conduct discussions with Respondents for the purpose of clarification to assure full understanding of, and responsiveness to, the solicitation requirements. The agency further reserves the right to excuse technical defects in a bid when, in its sole discretion, such excuse is beneficial to the agency.

3. RIGHT OF REFUSAL

The Board reserves the right to reject any one or all bids, or any part of any bid, to waive any irregularities in any bid, and to award the purchase in the best interest of the Board /City. Furthermore, the City reserves the right to hold the bid of the three (3) lowest Vendors for a period of sixty (60) calendar days from and after the time of the bid opening.

4. AWARD OF CONTRACT

It is the intent of the Board to enter into a contract with a provider that will emphasize administrative efficiencies, and possess the capacity, infrastructure, and organizational competence to perform required functions necessary for managed care under this bid.

Award recommendations are contingent upon an initial evaluation of the Contractor's qualifications to determine if the Contractor is a quality service provider. The Contractor's policies and procedures may be evaluated as a further determination of quality.

The process of evaluating each Contractor's bid may involve interviews with a random sampling of the Contractor's current and previous customers. This is not an exclusive criterion for awarding the contract.

It is anticipated that contract(s) will be awarded on or before May 15, 2026.

5. SUBCONTRACTORS

The Board intends to contract with one prime Contractor who will be solely responsible for contractual performance. In the event the prime Contractor utilizes one or more subcontractors, the prime Contractor will assume any and all responsibility for performance of services by the subcontractor(s). Additionally, the City of Evansville must be named as a third-party beneficiary in all subcontracts.

A list of all subcontractors proposed to take part in the performance of the contract must be provided to the City of Evansville for approval prior to contract execution. This request may require that sufficient financial or background information pertaining to included subcontractors be provided.

The City of Evansville reserves the right to limit and/or reject any and all subcontractors.

6. E-VERIFY PROGRAM

Pursuant to Indiana Code 22-5-1.7-11 (b)(2) the Contractor shall provide documentation that it has enrolled and is participating in the E-Verify Program (see Indiana Legal Employment Declaration form). Contractor is required to submit proof from the E-Verify Program that it is currently enrolled in the Program. An example of confirmation is the confirmation e-mail received from E-Verify that the Contractor has successfully enrolled in E-Verify.

7. TAXES

The City of Evansville is exempt from federal, state, and local taxes and will not be responsible for any such taxes in connection with the award or performance of this contract.

8. LICENSES AND PERMITS

The successful Vendor or Vendors shall furnish the City of Evansville upon request any and all documentation regarding licenses, permits, certifications and/or registrations required by the laws and regulations of the City of Evansville, Vanderburgh County, the State of Indiana, and the United States of America.

The Provider certifies that it is now and will remain in good standing with the aforementioned governmental agencies and that it will maintains its licenses, permits, certifications and/or registrations in force during the term of the contract/agreement with the City of Evansville, Vanderburgh County, Indiana.

9. CHOICE OF LAW AND VENUE

Any and all actions or proceedings arising out of, or related to, this bid and any resulting contract shall be governed by and construed in accordance with the laws of the State of Indiana. Submission of this bid by Vendor constitutes consent and stipulation to jurisdiction and venue in the courts of Vanderburgh County, Indiana, concerning all litigation and proceedings arising out of or related to this bid and any resulting contract.

10. CONTRACTOR'S ACKNOWLEDGMENT

The Contractor shall comply with the provisions as set forth in Indiana Code § 5-16-13, et al. as required by Indiana Code § 5-16-13-7. Additionally, Contractor shall execute the attached "Contractor's Acknowledgement" and return to Owner prior to the commencement of any Work.

11. SPECIFICATIONS:

See Construction Documents.

LENGTH OF CONTRACT

The Contract shall be awarded by action of The Evansville Board of Parks Commissioners

The Board of Park Commissioners shall furnish the Bidder receiving award with a notice of award and three signed copies of the contract. The Contractor shall sign all three copies, returning two to the Evansville Board of Public Commissioners along with the required Proof of Insurance. The Contractor shall have Ten (10) Calendar Days from the notice of award to submit all required documents to execute this contract. If all requirements are not met within the specified time period, the Contractor's Bid Bond accompanying this bid, and the proceeds thereof, shall be paid into the general fund of the City of Evansville, unless a mutual resolution is met by both parties due to an

unforeseen incident involving this bid. When all these requirements have been met, the Department of Parks and Recreation may issue the Contractor a notice to proceed. The Contractor shall commence work within ten (10) days after issuance of the notice to proceed.

The Contractor shall be required to guarantee the improvements for a period of three (3) years from the date of final acceptance against all defects in materials and workmanship and shall agree that during the guarantee period specified they will, at own expense, make all repairs which may become necessary.

In case repairs become necessary, the Owner shall give written notice to the Contractor to make the repairs. In case of failure of the Contractor to commence the repairs within ten (10) days after notice, the Owner may cause the repairs to be made and may thereupon recover the reasonable cost of the repairs so made from the Contractor, together with the cost of the supervision and inspection thereof.

The Owner shall have ninety (90) days after the expiration of the guarantee period in which to notify the Contractor of any repairs necessary on the date of expiration.

12. Project Schedule

The Bid Package will be available to Bidders on April 27, 2026.

Original reference drawings are available from the Owner upon request.

Bid Meeting will be at 1:00 pm, May 4, 2026, at CK Newsome Community Center

Sealed Bids are due May 20, 2026.

The Contract will be awarded to the Successful Bidder by June 3, 2026.

The Successful Bidder will begin work by June 22, 2026.

The Work shall be Substantially Complete by December 23, 2026.

Any reference made to any manufacturer or brand name is not to be construed as a limiting factor in the bid, but is meant to show the minimum scope and quality of the product to be quoted. Contractor can submit approved equals for items that vary from those requested.

Note – If the project cost exceeds budget, project may award by individual location(s) or rejected in total.

- A. The Contractor is to provide to the City of Evansville a copy of its “Random Drug Testing Program and Contractor’s Licenses” as provided for in Chapter 3.95 of the City of Evansville Municipal Code if the quote is \$10,000 or more or if under \$10,000 the contractor is to provide the City of Evansville a copy of its “Contractor’s Licenses and Random Drug Testing Program” which is to include at a minimum random drug testing of at least the five (5) drug panel tests as provided for in Chapter 3.95 (a copy of which is attached) in Title 3 of the City of Evansville Municipal Code at the time of the quote.
- B. A coverage limit of not less than General Aggregate: \$5,000,000, Products & Completed Operations Aggregate, Not Less Than \$5,000,000; Personal & Advertising Injury, Not Less Than \$1,000,000; Each

Occurrence Not Less Than \$750,000; Fire Damage (Any one fire) Not less Than \$50,000; Medical Expense (Any one person), Not Less Than \$5,000.

The evidence of insurance coverage shall be endorsed and provided to City of Evansville, prior to start of the project showing City of Evansville as additional insured.

Other insurance requirements are listed in Section XI under "Scope of Services."

C. Notice to Proceed & Schedule of Work:

NOTE: If work is not completed in the time schedule set above, a \$100 per day penalty in liquidated damages will be assessed against the Contractor for each day work does not meet the guideline as specified unless a mutual resolution is met by both parties due to an unforeseen incident involving this bid.

D. Final Inspection & Invoicing: Upon completion of the work, Contractor shall schedule an inspection with owner and architect. After inspection, a list of items needing additional work or correction will be provided to the Contractor. Upon completion of these items, the Contractor shall request another inspection. This process will be repeated until all work is deemed acceptable to the City. The last inspection shall constitute the final inspection and acceptance of the work by the City (the "Final Inspection"). Until the Final Inspection, no part of the work will be accepted. Only upon Final Inspection may the Contractor submit an invoice for the contract amount as modified by any written change orders.

E. Responsibility of Damage: Pavement, sidewalks, vehicles, yard ruts, office equipment, building structure including walls, traffic signal equipment, traffic signs, pedestrians, vehicular, other traffic, etc. shall be protected against damage or disfigurement from material or equipment used in the removal and/or installation of the equipment. Contractor shall be responsible for all damages accordingly. Contractor shall be responsible to keep working area clean of debris.

13. WARRANTY REQUIREMENTS

A. Warranty – 1 year one entire project.

14. QUALIFICATIONS

- **Minimum Qualifications**

- Contractor and their employees must present themselves in a professional manner at all times. Shirts are to be worn at all times. Offensive clothing and language will not be tolerated
- The use of alcohol or illegal drugs will not be tolerated.

- **Statement of Experience**

- Contractor must submit three (3) local letters of references.
- Contractor must submit list of manpower to be utilized.
- Contractor must submit length business has been in existence doing this type of work.

- **Non-Compliance**

- The Contractor also agrees that should the Contractor fail to comply with the terms of the contract, Contractor will be given four (4) days to bring in such non-compliance to compliance. If Contractor fails to correct such non-compliance, the City may do one or more of the following:
 - Terminate the contract and pay the Contractor only to the date of termination less any amounts owed to the City by the Contractor.
 - Use its own workers or hire another contractor to remedy the breach and

withhold from payments due the Contractor the cost of such corrective measures.

- Any other remedy allowed at law or equity.

15. INVOICE SUBMISSION

B. The invoice submitted for payment must include the following:

1. Name "Evansville Parks and Recreation" on the invoice(s).
2. All invoices must be itemized. Must have company name, address, phone number.
3. Invoices must have an invoice number and not duplicate any others.

16. INSURANCE

- The Contractor shall procure and keep in force during the term of the contract general liability insurance that shall protect it and the Owner (as an additional insured) and any subcontractors performing work under the contract against claims for damage for personal injury, occupational sickness or disease, including accidental death, as well as the claims for property damage, which may arise from operations under the contract, whether such operations be by Contractor or by any subcontractor(s), or by any one directly or indirectly employed by either of them, in the amount of at least (\$1,000,000) one million dollars combined single limit for each occurrence. Contractor shall carry worker's compensation insurance coverage in amounts required by Indiana law for all of its employees who perform work under the contract.
- The City of Evansville shall be named as additional insured on such general liability insurance. Certificates of insurance must be presented to the Board of Public Works or its designated representative (Purchasing Department) prior to the commencement of the contract.

17. DAMAGE TO PREMISES

- If the property or contents is damaged in any way whatsoever by reason of any act or omission of the Contractor or its employees, the Contractor shall immediately repair at its own cost and expense the building, structure, wall, fence, equipment, etc., as damaged.
- Upon failure of the Contractor to make such repairs, the Board of Park Commissioners and/or the City of Evansville may repair such damage at the cost and expense of the Contractor and shall have the right to terminate the contract.

Tabulation Pages

DATE:

The Board of Parks Commissioners / City of Evansville invite your bid for the following item:

**For
CK NEWSOME CENTER RENOVATION**

To be opened at 12 pm (CDT) on **May 20, 2026**, in Room 312 of the Civic Center Complex.

The undersigned proposes to furnish and deliver, in accordance with the requirements of the Instructions to Vendor's and the Specifications **April 27, 2026**, prepared by VPS Architects.

Please be advised that any alterations, changes in bid format, etc., will make it difficult to evaluate bids and may lead to confusion. All items should be quoted in the units, quantities, and units of measurements specified. Do not submit alternate bid unless requested. The City of Evansville and the Board of Public Works shall reserve the right to reject any or all bids or any part thereof.

QUOTATIONS

1. All prices F.O.B. to City of Evansville, 47708. Yes___No ___

INDEMNIFICATION

Bidder will indemnify and hold harmless the City of Evansville and Vanderburgh County in accordance with the provisions contained herein? Yes___No ___

BIDDER QUALIFICATION AND EXPERIENCE

1. Bidder has included three (3) references? Yes___No ___

2. Bidder possesses necessary occupational license(s)? Yes___No ___

Printed Name of Person Giving Quote

Date:_____

BID SHEET

[PLEASE MAKE THIS PAGE 1 OF YOUR SUBMISSION]

Base Bid Amount: \$ _____

Written: _____

Alternate No. 1: \$ _____

Written: _____

Alternate No. 2: \$ _____

Written: _____

Alternate No. 3A: \$ _____

Written: _____

Alternate No. 3B: \$ _____

Written: _____

Alternate No. 4: \$ _____

Written: _____

VENDOR'S CHECKLIST:

In order to be accepted as a valid bid, the following items MUST be included with your bid, along with any other information requested in the specifications.

1. Bid Sheet _____

2. Form 96 _____

3. Flash Drive _____

4. Conflict of Interest Disclosure _____

5. EEO Statement _____

6. Addenda Acknowledgment _____

7. E-Verify _____

8. Non-collusion Affidavit _____

9. Warranty Information _____

10. Bond _____

11. Flash Drive _____

12. RBO Prequalification Letter _____

13. Reference Letters _____

NON-COLLUSION AFFIDAVIT

The undersigned bidder or agent, being duly sworn on oath, says that they have not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by them, entered into any combination, collusion or agreement with any person relative to the price to be quote by anyone at such letting nor to prevent any person from quoting nor to induce anyone to refrain from quoting, and that this quote is made without reference to any other quote and without an agreement, understanding or combination with any other person in reference to such quoting. Bidder further says that no person or persons, firms, or corporation has, has or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

AUTHORIZED SIGNATURE

DATE

NAME & TITLE (PLEASE PRINT)

TELEPHONE

COMPANY NAME

FAX

ADDRESS (STREET)

CITY, STATE, ZIP CODE

Subscribed and sworn to before me this _____ day of _____, 2026.

My Commission Expires: _____

Notary Public

County of Residence: _____

CONTRACTOR'S STATEMENT ON SUB-CONTRACTORS

1. There are NO sub-Contractors associated with this IFB.

Authorized Signee: _____

Printed Name: _____

Title: Date: _____

For (Company): _____

OR

2. Listed below are sub-Contractors associated with this IFB. Additional sheets are attached as required. I _____ have also attached appropriate Disadvantage Business Certifications.

Name of Company: _____

Address: _____

Contact Person: _____

Telephone #: _____

E-mail: _____

Name of Company: _____

Address: Contact Person: _____

Telephone #: _____

E-mail: _____

EQUAL EMPLOYMENT OPPORTUNITY

During the performance of the contract, the Contractor agrees as follows:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin political affiliation or belief, age or disability. The Contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to race, color, religion, sex, national origin, political affiliation or belief, age, or disability. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notice setting forth the provisions of the nondiscrimination clause.

2. The Contractor agrees that all services, facilities, activities and programs provided as part of the contract will meet the requirements of the Americans with Disabilities Act and the rules and regulations promulgated thereunder.

3. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor; state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, political affiliation or belief, age or disability.

4. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided, advertising, the labor union or workers' representative of the Contractor's commitments under the Equal Employment Opportunity Section of the contract and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

5. In the event of the Contractor's noncompliance with the nondiscrimination clauses of the contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further City/County contract.

Vendor Representative (Please Print)

Signed

Vendor Name

Telephone

Vendor Address

Date

INDIANA LEGAL EMPLOYMENT DECLARATION

The State of Indiana has enacted a law (I.C. 22-5-1.7) requiring all state agencies and political subdivisions request verification from their contractors that their employees are legally eligible to work in the United States. This Declaration serves as notice that all Contractors doing business with the City of Evansville must, as a term of their contract:

1. Enroll in and verify the work eligibility status of newly hired employees of the contractor through the E-Verify programs (but is not required to do this if the E-Verify program no longer exists); and
2. Verify, by signature below, that the Contractor does not knowingly employ unauthorized aliens.

I, _____, a duly authorized agent of _____ (name of Company), declare under penalties of perjury that _____ (name of Company) does not employ unauthorized aliens to the best of its knowledge and belief.

(Name of Company)

By: _____

(Authorized Representative of Company)

Subscribed and sworn to before me on this _____ day of _____, 2026.

My Commission Expires: _____

County of Residence: _____

Notary Public – Signature

Notary Public – Printed Name

For instructions and electronic registration for E-verify, please see:

<https://e-verify.uscis.gov/enroll/StartPage.aspx?JS=YES>

CONFLICT OF INTEREST / FAMILIAL DISCLOSURE FORM

Project: _____

ALL BIDDERS must complete this Conflict of Interest Familial Disclosure Form and must attach the completed form to the bid.

As the bidder, I affirm that no principal, representative, agent, employee, contractor or potential subcontractors, or other acting on behalf of or legally capable of acting on the behalf of the bidder (a "Bidder Party"), is currently an employee of the City of Evansville ("City"), any City department or a member of any City Board or Council; nor will any such person connected to the bidder be privy to any City information which may constitute a conflict of interest; or, if such a conflict or relationship does exist, I have disclosed the nature of the relationship or conflict below.

By the attached sworn and notarized statement we are disclosing the following familial relationship(s) that exists between a Bidder Party and any employee or member of any City Department or board.

As the bidder, I understand that completing this form and self-disclosing potential conflicts of interest does not necessarily disqualify a bidder, but aids in identifying conflicts of interests which must be addressed pursuant to I.C. 35-44.1-1 et al. Further, the City will insure that any individuals identified with a potential conflict will not be allowed to participate in the scoring or evaluation of the bid packages, to insure the integrity of the bid process.

The following is a list of individuals who may pose a potential conflict of interest as described above. Please provide the name, relationship with the City and the nature of the potential conflict, or if applicable: "NONE" :

Signature(s): _____ **Title:** _____

Vendor/Bidder: _____

STATE OF _____)

) **SS:**

COUNTY OF _____)

BEFORE ME, a Notary Public in and for said County and State, personally appeared _____,

_____ of _____, who having been duly sworn, acknowledged and affirmed that they did sign said instrument as such officer or authorized agent for and on behalf of _____, and by authority granted by such entity, that the same is their free act and deed and the free act and deed of said entity.

WITNESS my hand and notarial seal this _____ day of _____, 2026.

My commission expires:

Notary Public

My County of residence is:

_____ County, State of _____

Printed Name of Notary Public



CONTRACTOR'S BID FOR PUBLIC WORK - FORM 96

State Form 52414 (R2 / 2-13) / Form 96
(Revised 2013) Prescribed by State Board
of Accounts

PART 1

(To be completed for all bids. Please type or print)

Date (month, day, year): _____

1.

Governmental Unit (Owner): City of Evansville, Indiana, by and through its Board of Public Works

County: Vanderburgh County, Indiana

Bidder (Firm): _____

Address: _____

City/State/ZIP code: _____

Telephone Number: _____

Agent of Bidder (if applicable): _____ Pursuant to notices given, the undersigned offers to furnish labor and/or material necessary to complete the public works project of City of Evansville, Indiana, by and through its Board of Public Works, in accordance with plans and specifications prepared by Metropolitan Evansville Transit System and dated for the sum of

_____ \$ _____

The undersigned further agrees to furnish a bond or certified check with this bid for an amount specified in the notice of the letting. If alternative bids apply, the undersigned submits a BID for each in accordance with the notice. Any addendums attached will be specifically referenced at the applicable page.

If additional units of material included in the contract are needed, the cost of units must be the same as that shown in the original contract if accepted by the governmental unit. If the bid is to be awarded on a unit basis, the itemization of the units shall be shown on a separate attachment.

The contractor and his subcontractors, if any, shall not discriminate against or intimidate any employee, or applicant for employment, to be employed in the performance of this contract, with respect to any matter directly or indirectly related to employment because of race, religion, color, sex, national origin or ancestry. Breach of this covenant may be regarded as a material breach of the contract.

CERTIFICATION OF USE OF UNITED STATES STEEL PRODUCTS

(If applicable)

I, the undersigned bidder or agent as a contractor on a public works project, understand my statutory obligation to use steel products made in the United States (I C 5-16-8-2). I hereby certify that I and all subcontractors employed by me for this project will use U.S. steel products on this project if awarded. I understand that violations hereunder may result in forfeiture of contractual payments.

Name of Contractor

Signature

Printed Name/Title

PART II
(For projects of \$150,000 or more — IC 36-1-124)

Governmental Unit: City of Evansville, Indiana, by and through its Board of Public Works

Bidder (Firm) _____

Date (month, day, year): _____

These statements to be submitted under oath by each bidder with and as a part of his bid. Attach additional pages for each section as needed.

SECTION I EXPERIENCE QUESTIONNAIRE

1. What public works projects has your organization completed for the period of one (1) year prior to the date of the current bid?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

2. What public works projects are now in process of construction by your organization?

Contract Amount	Class of Work	Completion Date	Name and Address of Owner

3. Have you ever failed to complete any work awarded to you? _____ If so, where and why?

4. List references from private firms for which you have performed work.

SECTION II PLAN AND EQUIPMENT QUESTIONNAIRE

1. Explain your plan or layout for performing proposed work. (Examples could include a narrative of when you could begin work, complete the project, number of workers, etc. and any other information which you believe would enable the governmental unit to consider your bid.)

2. Please list the names and addresses of all subcontractors (i.e. persons or firms outside your own firm who have performed part of the work) that you have used on public works projects during the past five (5) years along with a brief description of the work done by each subcontractor.

3. If you intend to sublet any portion of the work, state the name and address of each subcontractor, equipment to be used by the subcontractor, and whether you will require a bond. However, if you are unable to currently provide a listing, please understand a listing must be provided prior to contract approval. Until the completion of the proposed project, you are under a continuing obligation to immediately notify the governmental unit in the event that you subsequently determine that you will use a subcontractor on the proposed project.

4. What equipment do you have available to use for the proposed project? Any equipment to be used by subcontractors may also be required to be listed by the governmental unit.

5. Have you entered into contracts or received offers for all materials which substantiate the prices used in preparing your bid? If not, please explain the rationale used which would corroborate the prices listed.

SECTION III CONTRACTOR'S FINANCIAL STATEMENT

Attachment of bidder's financial statement is mandatory. Any bid submitted without said financial statement as required by statute shall thereby be rendered invalid. The financial statement provided hereunder to the governing body awarding the contract must be specific enough in detail so that said governing body can make a proper determination of the bidder's capability for completing the project if awarded.

The undersigned bidder or agent, being duly sworn on oath, says that he has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to include anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He further says that no person or persons, firms, or corporation has, have or will receive directly or indirectly, any rebate, fee, gift, commission or thing of value on account of such sale.

BID OF

(Contractor)

(Address)

FOR PUBLIC WORKS PROJECTS OF

Filed _____, _____

Action taken

RANDOM DRUG TESTING POLICY

Following are the requirements for required random drug testing programs as provided for in Chapter 3.95 of the Evansville Municipal Code.

The Contractor, and every Sub-Contractor doing construction work on the project, shall have a random drug testing program in place at the time of submission of his quote or bid which shall, at a minimum, meet the following qualifications and criteria:

- A. The Contractor shall maintain a random drug testing program, and the program shall be reduced to writing.
- B. The drug testing program shall contain at least a five (5) drug panel that tests for the following drugs: amphetamines, cocaine, opiates (2,000 ng/ml), PCP, and THC.
- C. All the employees of the Contractor are subject to at least annual testing, and at least one-twelfth (1/12th) of 25% of the employer's total workforce shall be selected randomly each month for testing.
- D. The random drug testing program operated by the Contractor shall contain a progressive discipline component for employees who fail the drug test that meets at least the following minimum steps:
 - 1. The first positive test shall result in a thirty (30) day period of ineligibility for work, and upon returning to work, one (1) year of unannounced follow-up testing.
 - 2. A second positive test shall result in a ninety (90) day period of ineligibility for work, and upon returning to work, one (1) year of unannounced follow-up testing.
 - 3. A third positive test shall result in a one (1) year period of ineligibility for work, and upon returning to work, one (1) year of unannounced follow-up testing.
 - 4. Any subsequent positive test shall be treated the same as a third positive test.
 - 5. At the discretion of the employer, the discipline issued above may include more severe discipline including, but not limited to, dismissal of the employee.
- E. Evidence of the Contractor's drug testing policy shall be submitted with the bid. Failure to provide evidence of the Contractor's random drug testing policy or program shall result in a rejection of the bid. Submitting false information concerning compliance with the requirements of this chapter shall result in the rejection of the bid or cancellation of the Contract if an award has been made prior to determining the information is false by the Board, Commission, or Agency. In such event, the Contractor shall be paid only for the work done prior to cancellation of the Contract.
- F. This section shall be applicable only to construction contracts where the cost of the contract is more than Ten Thousand Dollars.

CONTRACTOR'S ACKNOWLEDGMENT

The undersigned Contractor certifies under the penalties of perjury, and in accordance with I.C. § 5-16-13 *et seq.* and I.C. § 22-5-1.7-11.1 *et seq.* as follows:

1. The Contractor has enrolled in and will verify the work eligibility status of all newly hired employees through the E-Verify program so long as the E-Verify program is in existence. The Contractor does not and shall not knowingly employ an unauthorized alien.
2. The Contractor shall receive a certificate from each subcontractor of any tier on the project that, at the time of certification, the subcontractor does not knowingly employ or contract with an unauthorized alien and has enrolled and is participating in the E-Verify program.
3. If the Agreement is for \$10,000 or more, Contractor has established an employee drug testing program in compliance with Evansville Municipal Code 3.95.020 and has attached hereto the written plan for the program or a copy of the relevant part of the collective state bargaining agreement providing for such program.
4. If the Agreement is for \$300,000 or more, Contractor has attached a current certificate of qualification issued by the State of Indiana under I.C. § 4-13.6-4 or I.C. § 8-23-10.
5. If the Agreement is for \$150,000 or more, Contractor shall provide a current certification as a Responsible Bidder in compliance with Evansville Municipal Code 3.95.040. This Code includes, among other requirements, evidence that the Contractor is in compliance with I.C. § 5-16-13-12 and its requirements pertaining to participation in apprenticeship and training programs applicable to the work to be performed on the public work project.
6. The Contractor acknowledges that discrimination or intimidation of any employee hired for the performance of work under this Agreement, by Contractors and subcontractors, on account of race, religion, color, sex, national origin or ancestry is prohibited under I.C. § 5-16-6-1.

On behalf of Contractor, I hereby acknowledge and certify under the penalties of perjury that the foregoing statements are true and correct to the best of my knowledge and belief.

CONTRACTOR:

Date: _____

By: _____

(Printed Name and Title)

GENERAL CONDITIONS

1. DEFINITIONS

The Contract Documents consist of the Contract, the Notice to Bidders, the Bid Proposal, the Instructions to Bidders, the General Conditions, the Special Conditions, the Special Provisions, the Project Drawings, the Standard Drawings and the Specifications. The Standard Specifications of the Indiana Department of Transportation (INDOT), Current Edition, are referenced in the Contract Documents, and are incorporated by reference.

The Contract shall consist solely of all written terms of this written agreement, entered into by and between the Owner and by the Contractor in the performance of the Work and the payment therefore and the Contract Documents. This Contract and the Contract Documents supersedes any prior agreements, written or oral, between the Owner and the Contractor.

The following terms are used in these Contract Documents, and are defined as follows:

- a) Project The entire improvement proposed by the Owner to be constructed in whole or in part pursuant to the Contract.
- b) Owner The City of Evansville, acting by and through the lawful conduct of the appropriate Board or Commission.
- c) Contractor The person, persons, firms or corporations to whom the Contract is awarded by the Owner, including all agents, employees, workmen or assignees of said Contractor.
- d) SubContractor A person, firm, or corporation other than the Contractor, who supplies labor, workmen and materials, or labor only, or work at the site of the Project at the request of the Contractor.
- e) Work All work, including materials, labor, supervision, use of tools, etc., necessary to complete the Project in full compliance with the terms of the Contract, including work performed by the Contractor and his SubContractor(s).
- f) Engineer Three I Design
- g) Surety The person, firm or corporation that has executed, as surety, the Contractor's Performance Bond, securing the Contractor's performance of the Contract.
- h) Affected County Vanderburgh County or an adjacent county.
- i) E-Verify Program An electronic verification of work authorization program of the Illegal Immigration Reform and Immigration Responsibility Act of 1996 (P.L. 104-208), Division C, Title IV, s.403(a), as amended, operated by the United States Department of Homeland Security or successor work authorization program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work authorization status of newly hired employees under the Immigration Reform and Control Act of 1986 (P.L. 99-603).
- j.) Local Indiana Business A business whose principal place of business is in an Affected County; a business that pays a majority of its payroll (in dollar volume) to residents of Affected Counties; or a business that employees residents of Affected Counties as a majority of its employees.

The Owner, Contractor and Engineer are treated throughout the Contract Documents as if each were of the singular number and masculine gender. When the term Person or Persons is used, it shall be understood to include an Individual, a Firm, a Partnership, an Association, a Corporation, or other business entity.

When the terms Owner or Engineer are used, they shall be understood to mean the Owner and Engineer defined in b) and f) above, unless the wording clearly indicates another meaning.

2. INTENT OF CONTRACT DOCUMENTS

The provisions of the Contract Documents, the Specifications and the Project Drawings are complementary, and what is called for by any one shall be interpreted as being called for in all other writings, composing this Contract. The creation of the Contract Documents is to express the intentions of the parties with respect to the contract price the cost of all labor and materials, water, fuel, tools, plant, equipment, transportation and all other expense necessary for the proper execution and further to express the intent of the parties as to other issues relating to the manner by which the Work shall proceed. Words describing materials or Work which have a well-known technical or trade meaning, unless otherwise specifically defined in the Contract Documents, shall be construed in accordance with their recognized meanings.

Any Work shown on the Project Drawings and not addressed or included in the Contract Documents, or not addressed or included in the Specifications, shall be performed by the Contractor as if this Work was shown on the Project Drawings and included in the Specifications. If the Project Drawings and Specifications should be contradictory in any part, the Specifications shall govern. The Contractor shall advise the Owner in writing of any alleged omissions of Specification(s) prior to the initiation of any Work shown on

the Project Drawings or called for in the Contract Documents.

3. CONTRACT DRAWINGS AND SPECIFICATIONS

All Work shall be executed in strict conformity with the Project Drawings and Specifications, and the Contractor shall do no Work without proper Project Drawings and Instructions. The Contractor shall be liable for all claims and costs arising from failure to perform Work without proper Project Drawings and Instructions.

Unless otherwise provided in the Special Conditions, the Owner will furnish to the Contractor, free of charge, all copies of the Project Drawings and Specifications reasonably necessary to carry out the Work.

Figured dimension on the Project Drawings shall be taken as correct, but shall be checked by the Contractor before starting construction. Any errors, omissions, or discrepancies shall be brought to the attention of the Engineer, and his decision thereon shall be final. Correction of errors or omissions on the Project Drawings or in the Specifications may be made by the Engineer when such correction can reasonably be considered necessary for the proper execution and completion of the Work. (See Section 23 "Changes in the Work")

All notes on the Project Drawings shall be followed. The Owner or Engineer shall furnish additional instructions, by means of Project Drawings or otherwise, necessary for the proper execution of the Work. All such Project Drawings and Instructions shall be consistent with the Contract Documents.

The Contractor represents and warrants that he has completely familiarized himself with and understands the terms and provisions of the Contract Documents, Project Drawings and Specifications prior to performing any Work.

4. OWNERSHIP OF DRAWINGS

All Project Drawings, Specifications and copies thereof furnished by the Owner or Engineer are the property of the Owner and are not to be used on any other Project. All Project Drawings and Specifications with the exception of one signed set for each party to the Contract, are to be returned to the Owner on completion of the Project.

5. CONTRACT SECURITY

Contractors responding to the bid are required to submit a **Bid Bond** or a Certified Check pursuant to the provisions of I.C. 36-1-12-4.5, in the amount of five percent (5%) of the total bid proposal as a guarantee that all provisions of the specifications shall be met. The bond or certified check shall be made payable to the City of Evansville. All bonds or checks of unsuccessful bidders will be returned to the unsuccessful Contractor(s) after award of purchase by the Owner and to the successful Contractor(s) after the Performance Bond has been received and accepted.

The successful Contractor shall be required to execute a **Payment Bond** pursuant to the provisions of I.C. 36-1-12-13.5 for the benefit of the Owner, the subContractors, material suppliers and other service providers in an amount equal to the contract price with such sureties as shall be acceptable to Owner, prior to the beginning of the work. The payment bond shall be binding on the Contractor, the subContractor(s), and their successors and assigns for the payment of all indebtedness to all persons for labor and services performed, materials furnished or services rendered. The surety of the payment bond may not be released until one (1) year after the board's final settlement with the Contractor.

The successful Contractor shall furnish and pay for an approved one hundred percent (100%) **Performance Bond** (Indiana Form 86A) pursuant to the provisions of I.C. 36-1-12-14 covering the faithful performance of the Contract and the payment of all obligations arising thereunder, with such sureties as the Owner may approve, prior to work beginning. The Performance Bond serves as a guarantee that all provisions of the bid, the attached specifications and resulting Contract shall be met. The surety of the performance bond may not be released until one (1) year after the date of the board's final settlement with the Contractor.

6. OR EQUAL CLAUSE

Whenever, in any section of the Contract Documents, an article, material, or equipment is defined by describing a proprietary product, generic term or by using the name of a manufacturer or Responder, the term "or equal", if not inserted, shall be implied. The specific article, material, or equipment mentioned shall be understood as indicating the type, function, minimum standard of design, efficiency, and quality desired and shall not be construed in such a manner as to exclude manufacturer's products of comparable quality, design and efficiency.

7. CONTRACTOR'S INSURANCE

The Contractor shall not commence any Work under this Contract until he has obtained insurance of the types and in the amounts required by this Section, nor shall the Contractor allow any SubContractor(s) to commence any Work on his Subcontract until all insurance required of the SubContractor(s) has been obtained. The Contractor shall be responsible for verifying the acquisition and maintenance of said insurance by any SubContractor(s) hired by the Contractor. The Contractor shall name the City of Evansville as an additional insured to all insurance contracts procured by the Contractor in accordance with this Section. All insurance procured by the Contractor is to be placed with insurers whom maintain a Best's rating of no less than A:VII. The Contractor shall be solely responsible for the payment of all premiums associated with any insurance required by Owner, and the Contractor shall be solely responsible for the payment of all deductibles to which such policies are subject, whether or not the Owner is an insured under the policy. The Contractor shall advise all SubContractor(s) of the requirements set forth above.

Commercial General Liability (CGL) Insurance: The Contractor shall furnish and maintain, at the Contractor's expense during the life of the Contract, such Commercial General Liability Insurance as shall protect him, the Owner, as an additional insured, and any SubContractor(s) performing Work under this Contract, from claims for damage for personal injury, occupational sickness or disease, including accidental death, as well as the claims for property damage, which may arise from operations under this Contract, whether

such operations be by himself or by any SubContractor(s), or by any one directly or indirectly employed by either of them. The amounts of such insurance shall be as required by law. The Owner shall have the right to reject the insurance carrier selected by the Contractor. No Work shall commence prior to the Owner receiving a certificate of insurance verifying the coverages to be provided as defined herein. In the absence of regulations, the amounts of coverage shall be as follows:

General Aggregate:	Not Less Than \$2,000,000
Products & Completed Operations Aggregate:	Not Less Than \$2,000,000
\$2,000,000 Personal & Advertising Injury:	Not Less Than \$1,000,000
Each Occurrence:	Not Less Than \$1,000,000
Fire Damage (Any one fire):	Not less Than \$300,000
Medical Expense (Any one person):	Not Less Than \$5,000

Umbrella/Excess Liability: The Contractor shall furnish and maintain Umbrella and/or Excess Liability, over and above the limits noted above in the CGL section of this agreement, with limits of at least \$3,000,000 per occurrence with a corresponding \$3,000,000 Aggregate limit. This limit shall be reflected on a submitted Certificate of Insurance with all Additional Insured and Indemnification language to correspond and follow all underlying terms and conditions of the CGL policy.

Worker's Compensation Insurance: The Contractor shall furnish certificates from the Worker's Compensation Board of Indiana, or its successor, that he is fully covered by Worker's Compensation and Occupational Diseases insurance, on all Employees on the Project. The Contractor shall maintain said coverage for the life of the Contract. The same requirements pertain to any SubContractor(s). The Contractor shall be responsible for verifying that all SubContractor(s) have Workmen's Compensation and Occupational Insurance Coverage. No Work shall commence prior to the Owner receiving a certificate of insurance verifying the coverages provided herein. For any work to be conducted or performed on or over navigable waters, the Workers Compensation certificate must include proof of coverage to include related to the United States Longshore and Harbor (USL&H) Workers Compensation Act as defined in U.S. Code 33, Chapter 18.

Errors & Omissions (E&O) Liability for Specified Contractor Types: In addition to provision of General Liability and Workers Compensation Insurance, for work to be performed by "professional" services entities (i.e. – Architects, Engineers, Surveyors, Inspection Services), proof should be provided indicating coverage for Professional Liability indicating limits of not less than \$1,000,000 per occurrence with a corresponding \$1,000,000 Aggregate limit.

Automobile Liability: The Contractor shall furnish and maintain, at his expense during the life of the Contract, automobile liability insurance, covering claims for damages because of bodily injury, death or property damage arising from the use of all motor vehicles engaged in operating within the terms of this Contract. The amounts of such combined single limit coverage shall be not less than (\$1,000,000) for any one occurrence, including hired and non-owned vehicles. All SubContractor(s) of the Contractor shall have similar automobile liability insurance. The Contractor shall be responsible for verifying that all SubContractor(s) have said automobile liability insurance. Coverage 1 shall apply. No Work shall commence prior to the Owner receiving a certificate of insurance verifying the coverage provided herein.

Special Hazards: Special Hazards, as determined by the Owner, shall be covered by rider or riders in amounts to be agreed upon, to the Liability Insurance policy or policies required to be furnished by the Contractor, and all SubContractor(s) employed by the Contractor, or by separate policies of insurance in the amounts as defined in the Special Conditions of the Contract Documents. All such special Hazards insurance coverage shall have the Owner as an additional insured. No Work requiring special hazard coverage shall commence until the Owner has received a certificate of insurance verifying the coverage required herein.

Builder's Risk Insurance: The Contractor, and all SubContractor(s) employed by the Contractor, shall maintain Builder's Risk Insurance, "all risk" coverage, on the Project for the benefit of the Owner. The Contractor shall be responsible for verifying that all SubContractor(s) have the required Builder's Risk Insurance coverage.

However, this provision shall not release the Contractor from his obligation to complete the Project, and the Contractor and his Surety shall be obligated to full performance of the Contract.

SubContractor(s) Insurance: The Contractor shall require all SubContractor(s) to secure and maintain in force during the term of this Contract, all such insurance coverages defined above. The Contractor shall verify the existence of all said insurance policies and coverages. No Work by a SubContractor(s) shall commence prior to the Owner receiving a certificate of insurance verifying the coverage required herein.

Other Provisions: Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Owner, its officers, officials, employees and volunteers by the Contractor and SubContractor(s). The Contractor's and SubContractor's insurance shall apply separately to each insured against whom claim is made or suit is brought except with respect to the limits of the insurer's liability. The insurer shall agree to waive all rights of subrogation against the Owner, its officers, officials, employees and volunteers for losses arising from Work performed by the Contractor for the Owner. The Contractor shall be responsible for notifying all insurance carriers of this contract provision and shall be liable to the Owner for any failure to so notify and advise any insurance carrier of this provision.

8. PROOF OF INSURANCE

The Contractor shall furnish the Owner with satisfactory proof of coverage of the insurance required, in a reliable company or companies to be approved by the Owner, licensed to do business in the State of Indiana, before commencing any Work. Such proof shall consist of certificates executed by the respective insurance companies, filed with the Owner. The certificates of insurance shall show the name and address of the Company, expiration date or dates, and the policy number or numbers. The Owner reserves the right to require complete, certified copies of all required insurance policies at any time.

Proof of insurance shall be maintained up to date, and failure to maintain adequate coverage and proof shall be deemed sufficient reason for cancellation of the Contract. All insurance shall provide that the policy shall not be canceled, terminated or modified unless thirty (30) days prior to such cancellation, termination or modification written notice is given to the Owner. No policy may be modified, terminated or canceled by the Contractor without the prior written approval of the Owner.

9. SHOP DRAWINGS AND SAMPLES

The Contractor shall submit, in a prompt manner, at least two copies of all shop or Project Drawings and schedules for every item of equipment or material to be incorporated in the Work which is fabricated or manufactured off site, including those pertaining to structural and reinforcing steel, electrical, plumbing, carpentry, heating and ventilation. The Contractor shall make any corrections required by the Owner or Engineer, and resubmit the required revised Project Drawings without delay. The Engineer's review of such Drawings shall extend only to determining the conformity of such equipment and materials with the general features of the Project Drawings and Specifications prepared by the Engineer.

It shall be the responsibility of the Contractor to determine the correctness of all Specifications and dimensions and minor details of such equipment and materials so that they will fit into the completed Work, and so that when incorporated in the Work, correct operation will result. The Contractor shall furnish for approval all samples required by the Specifications. The Work shall be in accordance with approved samples.

10. PERMITS, SURVEYS AND COMPLIANCE WITH LAWS

The Contractor shall keep fully informed of Federal, State and Municipal laws, ordinances, regulations, codes and standards, or any other bodies having jurisdiction or authority, which in any manner may affect the conduct of the Work or the Work of any employee. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, codes and standards. The Contractor shall protect, indemnify, and exculpate the Owner and its representatives, against any civil claim or civil liability arising from or based on the violation or any such laws, ordinances, regulations, codes and standards whether by himself or his employees, even if such violation is due wholly or in part to violation of said laws, ordinances, regulations, codes or standards by the Owner or its representatives.

The Contractor shall give all notices, and procure and pay for all permits, licenses and bonds, necessary for the prosecution of the Work, as required by Municipal, State and Federal ordinances, regulations, codes and laws, unless specifically provided otherwise in the Special Conditions or the Specifications. If the Contractor observes that the Project Drawings and Specifications are at variance with rules, codes or laws, he shall promptly notify the Owner or Engineer in writing, and any necessary changes shall be made as provided in the Contract for changes in the Work. If the Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and gives no notice to the Owner or Engineer, he shall bear all costs and damages, including but not limited to attorney's fees, arising from said Work.

The Owner will furnish all site surveys, unless otherwise provided. The Contractor shall provide construction staking, unless otherwise provided.

11. ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees for any patented product used by him or incorporated in the Work. The Contractor shall defend all suits or claims for infringement of any patent right brought against himself or the Owner, and shall save the Owner harmless from liability or loss or damage of any nature or kind, including costs, expenses and attorney's fees arising from the infringement or allegation of infringement of any patent or patent right, or because of any royalty, fee or license for the use, arrangement or operation of any tools, machinery, appliances, devices or materials which may be used by the Contractor or furnished by him in fulfillment of the requirements of this Contract.

12. PROTECTION OF WORK AND PROPERTY

The Contractor shall continuously maintain adequate protection and security of the Project site, and shall indemnify the property of the Owner and any adjacent property from injury, damage, loss or claim, including a claim for attorney's fees, arising in connection with this Contract. The Contractor shall exercise due diligence at all times in protection of persons and property from injury. The Contractor shall promptly notify the Owner of any accidents arising in the course of operations under the Contract causing bodily injury or property damage.

The Contractor and any SubContractor(s) employed by the Contractor, will be responsible for any and all damage to person(s) or property, public or private, that may be caused by his operation in the performance of this Contract, and the Contractor shall defend any suit that may be brought against himself or the Owner on account of damage inflicted by his operations, and shall be liable for any attorney's fees incurred by the Owner, and any judgments awarded against the Owner, Contractor or SubContractor(s) employed by the Contractor arising from such damage.

13. MATERIALS AND WORKMANSHIP

Unless otherwise stipulated, in writing and approved by the Owner, the Contractor shall provide and pay for all material, labor, water, tools, equipment, light, power, heat transportation and other facilities necessary for the execution and completion of the Work.

Unless otherwise stipulated in the Specifications, all workmanship, equipment, materials and articles incorporated in the Work shall be new and of the best grade of their respective kinds. When required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the Project any unfit person, or anyone not skilled in the Work assigned to him.

When required by the Specifications, or when called for by the Owner, the Contractor shall obtain the Owner's approval of the materials or articles to be used in the Work. The Contractor in obtaining this approval shall furnish the Owner full information concerning the materials or articles which he contemplates incorporating in the Work. Samples of materials shall be submitted for approval when so directed. Machinery, equipment, materials and articles installed or used without such approval shall be used at the risk of the Contractor. All materials and workmanship shall be guaranteed by the Contractor and the Surety for a period of three years from the date of final acceptance. The Contractor further guarantees the materials and workmanship of all Work performed by any SubContractor(s) employed on the Project by the Contractor for a period of three (3) years from the date of final acceptance of the Work.

No material of any kind shall be installed in the Project until it has been inspected and accepted by the Engineer. All material rejected shall be immediately removed from the site of the Work and not again offered for inspection. Any materials or workmanship found at any time to be defective shall be remedied at once regardless of previous inspections.

At any time during the course of construction of the Project, when, in the opinion of the Engineer, provisions of the Contract Documents are being violated by the Contractor, its employees, or any SubContractor(s) hired by the Contractor, the Engineer will have the right and authority to order all construction to cease and require the removal and replacement of all defective Work. In the event the Engineer orders a cessation of any Work, the Contractor shall not proceed until arrangements satisfactory to the Engineer are made by the Contractor for resumption of the Work in compliance with the provisions of the Contract Documents. It shall not be construed as a waiver of defects if the Engineer shall not order the Work stopped or material removed, as the case may be. The Contractor shall be liable for the cost of any defective Work performed by the Contractor or any SubContractor(s) employed by the Contractor.

14. INSPECTION OF WORK AND TESTING OF MATERIALS

The Owner and Engineer shall at all times have access to the Work, and the Contractor shall provide proper facilities for access and for inspection of the Work. All material to be incorporated in the Work, all labor performed, and all tools, appliances and methods used, shall be subject to the inspection and approval or rejection of the Owner. Any Work rejected by the Owner by reason of defective materials, workmanship or that said Work fails to comply with the Contract Documents shall be repaired at the expense of the Contractor.

The Contractor, and any SubContractor(s) hired by the Contractor, shall execute the Work only in the presence of the Engineer or his Inspector, during normal working hours unless provision has been made for Work on other shifts. The presence of the Engineer or inspector shall in no way relieve the Contractor of the responsibility of his Contract, or be any warrant for the furnishing of bad materials or poor workmanship.

The inspection and supervision of the Work by the Engineer is intended to aid the Owner in determining whether the labor, materials, and workmanship being provided by the Contractor or a SubContractor(s) hired by the Contractor are in compliance with the Contract Documents. Any inspection and supervision by the Engineer shall not operate to release the Contractor from any of his Contract obligations, or be deemed as the acceptance of such Work.

All laboratory tests shall be made by a testing laboratory employed by the Contractor and approved by the Engineer. The cost of tests shall be paid by the Contractor. Unless otherwise provided in the Special Conditions, the Contractor shall furnish the materials to be tested, and incidental material and labor required at the site in connection with the tests, the costs of which shall be considered to be included in the price or prices for the Contract items.

Where in Contract Documents, laws, ordinances, codes, or the Engineer's instructions require any Work to be specially tested or approved, the Contractor shall give the Owner or Engineer timely notice of the readiness of the Work for inspection, and if the inspection is performed by any person other than the Owner or Engineer, of the date and time fixed for the inspection. Inspections by the Owner or Engineer shall be made promptly. If any Work should be covered up without approval or consent of the Owner or Engineer, it must, if required by the Engineer, be uncovered for examination at the Contractor's expense.

No material of any kind shall be installed in the Project until it has been inspected and accepted by the Engineer. All material rejected shall be immediately removed from the site of the Work and not reused for any Work associated with the Project. Any materials or workmanship found at any time to be defective shall be remedied at once regardless of previous inspections.

The Owner shall have the right, at any time before final acceptance of the Project, or at any other time, to make an examination of the Work already completed. Where necessary, the Owner in conducting any inspection may remove or tear out any Work previously performed. The Contractor, at the request of the Owner, shall promptly furnish all necessary facilities, labor and materials required to perform any inspection. If any Work is found to be defective in any material respect due to fault of the Contractor, or his SubContractor(s), the Contractor shall be liable for any expense incurred by reason of the examination and any reconstruction. If, however, such Work is found to meet the requirements of the Contract, the actual cost of labor and materials necessarily involved in the examination and replacement, plus fifteen percent (15%), will be allowed the Contractor in payment for the examination.

15. CONTRACTOR'S SUPERINTENDENT

The Contractor shall have at the site of the Work at all times a competent foreman, superintendent, or other representative satisfactory to the Owner, to supervise the Work of the Contractor and the Work of any SubContractor(s) hired by the Contractor. All such persons shall have the authority to act for the Contractor, and all instructions given to such person by the Engineer shall be followed and shall be as binding as if given to the Contractor. All directions which are required by the General Conditions, Project Drawings, or Specifications to be given by the Owner shall be given in writing.

All supervisory personnel employed by the Contractor or a SubContractor(s) hired by the Contractor shall give efficient supervision

to the Work, using his best skill and attention, and shall carefully study and compare all Project Drawings, Specifications and other instructions, and shall at once report to the Owner or Engineer any error, inconsistency or omission which they might discover.

16. RECEIVING OF SHIPMENTS

Shipments of material to be used by the Contractor or any SubContractor(s) should be delivered to the site only during the regular working hours of the Contractor or SubContractor(s). If a delivery is made during other than normal working hours, an authorized employee or agent must be on duty to receive such materials. No employee of the Owner or Engineer shall be authorized to receive any shipments of materials.

17. USE OF PREMISES

The Contractor and any SubContractor(s) hired by the Contractor shall confine his workmen, materials and operations to limits indicated on the Project Drawings. The Contractor shall not impede any Work to be performed on the Project with his materials. The Contractor shall enforce the Owner's instructions regarding signs, advertisements, fires and smoke.

18. CUTTING, PATCHING AND DIGGING

The Contractor shall do all cutting, fitting or patching of his Work that may be required to make its several parts fit together properly as shown upon or reasonably implied by, the Project Drawings and Specifications for the completed Work.

Any claim for damages arising from any negligent, defective or ill-timed Work shall be borne by the party responsible therefor. However, the Contractor shall indemnify the Owner against all claims arising from negligent, defective or ill-timed Work performed by the Contractor or any SubContractor(s) hired by the Contractor. The Contractor shall not endanger any Work by cutting, digging or otherwise, and shall not cut or alter the Work or any other Contractor without the consent of the Owner or Engineer.

19. CLEANING UP

The Contractor shall at all times keep the premises free from accumulations of waste material or rubbish caused by his employees or Work, and at the completion of the Work he shall remove all his rubbish from the site and all his tools and surplus materials and shall leave his Work "broom clean" or its equivalent, unless instructed differently. In case of dispute the Owner may remove the rubbish and charge the cost to the Contractor at a rate the Owner shall determine to be just.

20. WAGE RATES

The Contractor shall agree to comply with all State and Federal statutory requirements pertaining to wage rates applicable to this contract, including, but not limited to Indiana Code 5-16-13. The Contractor represents and warrants that prior to commencing any Work he has familiarized himself with any said laws. The Contractor shall require all of his SubContractor(s) to comply with all State and Federal Statutory requirements pertaining to wages which may be applicable to this Contract including but not limited to Indiana Code 5-16-13. Failure to comply with any such statutory requirements shall constitute a material breach of the Contract, and may result in the Owner taking one or more of the following actions:

- a) Referral of suspected violations of state or federal law to appropriate law enforcement agencies; and/or,
- b) Rescinding or voiding the Contract; and/or,
- c) Invoking all other legal and equitable remedies available.

The Contractor and its SubContractor(s) agree to fully cooperate with the Owner in his efforts to investigate and verify compliance with applicable wage laws. Such cooperation shall include, but not be limited to, permitting on-site questioning of employees of the Contractor or SubContractor(s) and reasonable access for inspection of all relevant records of the Contractor or SubContractor(s).

The Contractor shall be liable for all costs, including attorney's fees, incurred by the Owner by reason of the failure of the Contractor or SubContractor(s) hired by the Contractor to comply with these provisions.

21. HIRING OF LABOR - RACE DISCRIMINATION

Every Contract for or on behalf of the State of Indiana, or any municipal corporation thereof, for the construction, alteration or repair of any public building or public Work, shall contain provisions by which the Contractor agrees:

- a) That in the hiring of employees for the performance of Work under this Contract, or any Subcontract hereunder, no Contractor, SubContractor(s) nor any person acting on behalf of such Contractor or SubContractor(s), shall by reason of race or color, discriminate against any citizen of the State of Indiana who is qualified and available to perform the Work to which the employment relates; and,
- b) That no Contractor, SubContractor(s), nor any person on his behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of Work under this Contract on account of race or color; and,
- c) That there may be deducted from the amount payable to the Contractor by the Owner, under this Contract, a penalty of not less than ten dollars (\$10.00) or more than two thousand five hundred (\$2,500.00) for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the Contract; and,
- d) That this Contract may be canceled or terminated by the Owner, and all money due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this section of the Contract; and,
- e) The Contractor shall indemnify the Owner against all losses and claims, including attorney's fees, arising from the failure by the Contractor to comply with this provision.

22. ALLOWANCES

The Contractor has included in the Contract Price an amount associated with any allowances named in the Contract Documents, and shall cause the Work so covered to be done by such SubContractor(s), and for such sums as the Owner or Engineer may direct, the Contract Price being adjusted in conformity therewith. The Contractor declares that the Contract Price includes such sums for expense and profit on account of cash allowances as he deems proper.

No demand for expenses or profit other than those included in the Contract Price will be allowed, unless said demand has been previously authorized by the Owner in writing. The Contractor shall not be required to employ any such persons against whom he has a reasonable objection.

23. CHANGES IN THE WORK

The Owner may, without invalidating the Contract, order extra Work or make changes by altering, adding to, or deducting from the Work. All such Work shall be executed under the conditions of the original Contract Document, except that any claim for extension of time caused thereby shall be made at the time of the ordering of such change. Any modifications ordered by the Owner shall cause the Contract Price to be modified in an amount to be agreed in writing, by the parties, and approved by the appropriate Board prior to any such Work being performed.

Adjustment, if any, in the amounts to be paid to the Contractor by reason of any such changes shall be determined by one or more of the following methods:

- a) By Unit Prices contained in the Contractor's original bid and incorporated in this Contract; or,
- b) By a supplemental schedule of prices contained in the Contractor's original bid and incorporated in this Contract;
- c) By an acceptable lump sum or unit price proposal of the Contractor; or,
- d) On a cost plus basis, not to exceed a specified limit, defined as the cost of labor, materials, and insurance, plus a specified percentage of cost of such labor, materials and insurance; provided the specified percentage does not exceed fifteen percent (15%) of the aggregate of the cost of such labor, materials, and insurance.

In cases where a lump sum proposal is submitted by the Contractor in excess of Five Hundred Dollars (\$500) and the Owner considers the lump sum proposal excessive or unreasonable, the Owner shall have the right to solicit Contract Proposals for the additional or modified Work from other Contractors.

In cases where additional Work is ordered by the Owner which was not contemplated in the original proposal, or where the additional Work ordered by the Owner has a cost of construction in excess of twenty percent of the original Contract Price for any item constituting five percent or more of the total Contract Price, the Owner is required by Indiana statutes to seek bid proposals from other Contractors for such Work. If a proposal for such added Work is obtained from another Contractor at an amount less than the proposal submitted by the Contractor, the Owner reserves the right to make an award of such Work to the lower proposal, or to negotiate further with the Contractor.

The Engineer is not authorized to act for the Owner in giving orders for extra or additional Work, either in writing or verbally. Extra Work or changes in quantities must be approved by the appropriate Board of the Owner prior to Work being performed.

If the Contractor claims that any instruction, by drawing or otherwise, results in the Contractor being entitled to receive additional payment under this Contract, he shall give the Owner written notice thereof within a reasonable time after the receipt of such instructions. In no event shall the Contractor be authorized to proceed to execute the Work without the prior written consent of the Owner.

24. CLAIMS FOR EXTRA COST

If the Contractor claims that any instruction, by Project Drawings or otherwise, involves extra cost under this Contract, he shall give the Owner or Engineer written notice thereof within a reasonable time after the receipt of such instruction, and in no event shall the Contractor proceed or authorize a SubContractor(s) to proceed to perform the Work, except in emergency endangering life or property, until the Contractor has complied with the provisions in Section 23, "Changes in The Work". The Owner shall have no liability for a claim for extra cost unless the Contractor has complied with Section 23 prior to commencing the extra Work.

25. OWNER'S RIGHT TO DO WORK

If the Contractor neglects to prosecute the Work as required by the terms of the Contract Documents, Project Drawings or Specifications, the Owner may, after three (3) days written notice to the Contractor, without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment due the Contractor.

26. DEDUCTIONS FOR UNCORRECTED WORK

The Contractor agrees that the Owner may at its discretion waive the right to correct Work injured, defective Work, defective materials, or Work and materials not provided in accordance with the terms of the Contract Documents, Project Drawings and Specifications. The Contractor consents to the Owner exercising its discretion to deduct from the Contract Price a reasonable amount associated with said injured Work, defective Work, defective materials, or Work and materials provided which are not in accordance with the Contract Documents, Project Drawings and Specifications.

27. TERMINATION FOR BREACH

In the event that any provision of this Contract is violated by the Contractor or by any of his SubContractor(s), or if the Contractor should become a debtor in a bankruptcy proceedings, or if he should make a general assignment of his assets for the benefit of his creditors, or if a receiver should be appointed for any reason on account of his insolvency, or if he should persistently or repeatedly fail to supply sufficiently skilled workmen or proper materials as required by the Specifications, Project Drawings and Contract Documents, or if he should disregard the instruction of the Engineer, then the Owner may serve written notice upon the Contractor and the Surety of its intention to terminate this Contract, specifying the reasons for such intent to terminate. If, within ten (10) days after the serving of such notice, the Contractor has failed to correct the listed deficiencies to the satisfaction of the Owner, the Contractor shall be deemed in default. In the event of default, the Contract shall be deemed terminated, the Owner shall immediately serve notice thereof upon the Contractor and Surety. The Surety shall then take over and perform the Contract, provided, however, that if the Surety does not commence performance thereof within thirty (30) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the Work and prosecute the same to completion. The Contractor and the Surety shall be jointly liable for all expenses, including but not limited to labor, materials, administrative expense and attorney's fees, incurred by the Owner in completing the Contract, and recovering the costs associated therewith.

28. COMPLETION OF WORK BEFORE FINAL PAYMENT

In cases where the Contractor has failed to complete minor items of Work within the time set for completion of the Contract, but limited to cases where the value of such uncompleted Work does not exceed five (5) percent of the total construction cost of the Work, then the Owner shall have the right without terminating this Contract, to complete said items of Work, deducting from the sums due the Contractor under this Contract the total cost which the Owner may incur in completing such minor items of Work by force account, or by employing some other Contractor to complete such minor items of Work. Prior to completing such items of Work, the Owner shall deliver to the Contractor a written statement, enumerating and describing the items not completed, and demanding completion of same, within a time to be fixed in such statement by the Owner. The time set forth in such statement must depend on the time reasonably required for the performance of the Work in question, but shall not in any event be less than ten days, nor more than thirty days. If the Contractor refuses or neglects to comply within the time stated, the Owner may proceed to complete the Contract, and the Contractor shall be liable to the Owner for all expenses, including but not limited to labor, materials, administrative expenses and attorney's fees, incurred in the completion of the Contract and the recovery of all costs associated therewith.

29. CORRECTION OF WORK AFTER FINAL PAYMENT

Neither the act of final payment nor any provision in the Contract Documents shall relieve the Contractor of responsibility for negligence in the furnishing and installation of faulty materials or workmanship, and unless otherwise specified, the Contractor shall remedy at his expense any such defects, whether such defects were caused by the Work of the Contractor, or any SubContractor(s) hired by the Contractor, and pay for any damage resulting therefrom, which shall appear within a period of three years from the date of final acceptance. The Owner shall give notice of observed defects with reasonable promptness.

30. DELAYS AND EXTENSION OF TIME

If the Contractor is delayed in the progress of the Work by any act of neglect of the Owner or the Engineer, or by any other Contractor employed by the Owner, or by changes ordered in the Work, or by strikes, lockouts, fire, unusual delay in transportation, unavoidable casualties, or by causes beyond the Contractor's control, or by delay authorized by the Owner, or by any cause which the Owner deems to justify the delay, then the time of completion shall be extended for such reasonable time as the Owner may decide.

31. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE

If the Work is ordered stopped by an order of any court, or other public authority, for a period of three months, through no act or fault of the Contractor, anyone employed by him, or any SubContractor(s) hired by the Contractor, the Contractor may, upon seven (7) days written notice to the Owner, stop Work or terminate this Contract and recover from the Owner payment for all Work satisfactorily performed.

32. DISPUTES

All disputes concerning the interpretation of the General Conditions, Project Drawings or Specifications, questions of fact arising under this Contract shall be decided by the Engineer, subject to written appeal by the Contractor, within ten days, to the Owner, whose decision shall be final and conclusive upon the parties hereto. In the meantime, the Contractor shall diligently proceed with the Work as directed.

33. DAMAGES

If the Owner should suffer damage in any manner because of any act of the Contractor, anyone employed by him, or any SubContractor(s) hired by the Contractor, then the Owner shall be indemnified by the Contractor for all cost arising, including but not limited to attorney's fees. Claims under this clause shall be made in writing to the Contractor within a reasonable time, at the first notice of such damage.

34. PAYMENT

Payment for Work completed and accepted will be based on the Contract unit price for the actual quantities of materials used unless stipulated otherwise. Payment in the amount of ninety percent (90%) of the progress estimate, approved by the Engineer, will be made on the following schedule for projects with a total cost of less than \$200,000. Payment in the amount of ninety-five percent (95%) of the progress estimate, approved by the Engineer, will be made on the following schedule for projects costing more than \$200,000:

- a) Progress Estimates must be delivered to the Engineer by the Friday following the last day of the month. An original detailed invoice, along with a signed, completed claim form, will be required. The act of submitting any claim for the payment of any Work shall expressly be a representation by the Contractor that the Contractor, and any SubContractor(s) hired by the Contractor, have complied with the provisions of Section 20 herein.
- b) If the billing is in order, to the satisfaction of the Engineer, it will be signed by the Engineer, and forwarded to the appropriate Board for

approval at their next meeting. Incomplete invoices, improper billings, or uncompleted Work may cause delays in processing.

c) After approval by the Board, the Claim will be processed for payment. A check will normally be written within thirty (30) days of receipt of a proper invoice and a valid, signed claim.

d) Within thirty (30) days of the completion of the Work, a final inspection will be held. The Contractor will be notified of the date of this inspection, but attendance is not required. A written summary of requirements for remedial or repair Work will be communicated to the Contractor, and payment of retainage will not be made until all remedial Work cited by the Engineer is completed to the satisfaction of the Engineer. Bills for final claims will be processed in the manner outlined in Paragraphs a), b) and c) above.

On Projects where factors beyond the control of the Contractor cause unreasonable delays in completion of the Project and final payment, or where the Owner determines that satisfactory progress is being made, the ten percent retainage may be reduced at the discretion of the Owner. Reduced retainage must cover the potential cost of replacement or repair of uncompleted or improperly completed portions of the Work. Retainage will normally not be reduced below five percent (5%) until substantial completion of the Project. The Contractor shall submit "Consent of Surety" on AIA Document G707A, "Consent of Surety to Reduction in or Partial Release of Retainage", prior to any request for reduction of retainage.

An Escrow Agreement, as pertains to the Provisions of Indiana Code 36-1-12-14, shall not apply to this contract.

35. FINAL PAYMENT / WAIVER OF LIEN / GUARANTEE

Final payment shall not become due until the Contractor has furnished the Owner an affidavit that all bills or claims from SubContractor(s), material suppliers of the Contractor and SubContractor(s) and labor costs of the Contractor and SubContractor(s) in connection with the Contract have been paid.

The Contractor's right to payment will be based on the units of material in place, as determined by the Engineer, in accordance with the provisions set forth in the Contract Documents. Any materials, workmanship or equipment furnished by the Contractor, or any SubContractor(s) hired by the Contractor, a part of this Contract which proves to be defective or fails to operate properly within three (3) years following the date of Owner's acceptance of the Work (excepting any damage resulting from normal wear and tear, or violence or casualty not the fault of the Contractor) shall be promptly repaired and replaced by the Contractor upon notification from the Owner. All such replacement and repair Work shall be done at the cost of the Contractor. The Contractor shall indemnify the Owner against all costs or claims arising from any defective material, workmanship or equipment provided by the Contractor, or any SubContractor(s) hired by the Contractor. The date of acceptance shall be established by the Engineer only after all Work under this Contract has been substantially completed as to quality of workmanship and materials.

36. SEPARATE CONTRACTS

The Owner reserves the right to let other Contracts in connection with other Work associated with the Project but which is not the subject of this Contract. The Contractor shall afford other Contractors reasonable access to the site of the Project for the delivery and storage of materials and the performance of their Work, and shall properly connect and coordinate his Work.

If any part of the Contractor's Work requires the coordination of Work of any other Contractor, the complete Work to be performed by another Contractor, or Work to be performed by the Owner, the Contractor shall coordinate all such Work and shall inspect and promptly report to the Owner or Engineer any defects in such Work that prohibits the Contractor from performing his Work. Failure by the Contractor to so inspect and report shall constitute an acceptance of the other's Work as fit and proper for the reception of his Work, except as to defects which may develop in the other Contractor's Work after the execution of the Work.

To ensure the proper execution of his subsequent Work, the Contractor shall measure Work already in place, and shall at once report to the Owner or Engineer any discrepancy between the executed Work and the Project Drawings.

37. ASSIGNMENT

The Contractor shall not assign the Contract or sublet it as a whole, nor shall he assign any monies due or to become due to him hereunder, without the previous written consent of the Owner.

38. SUBCONTRACTS

The Contractor shall, as soon as practicable after the execution of the Contract, notify the Owner or Engineer in writing of the names of SubContractor(s) which the Contractor proposes to have perform any Work, and the Owner or Engineer may within a reasonable time object the use of said SubContractor(s) as incompetent or unfit.

If the Contractor has submitted before execution of the Contract a list of SubContractor(s), and the change of any name on such list is required to be approved in writing by the Owner after such execution, the Contract price shall be increased or decreased by the difference in cost occasioned by such change. The Contractor agrees that he is as fully responsible to the Owner for the acts and omissions of his SubContractor(s), and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

Nothing contained in the Contract Documents shall create any contractual relation between any SubContractor(s) and the Owner.

39. RELATIONS OF CONTRACTOR AND SUBCONTRACTOR

The Contractor agrees to bind every SubContractor(s), and every SubContractor(s) shall agree to be bound by the terms of the Contract, and the Contract Documents, as far as applicable to his Work, including the following provisions, unless specifically noted to the contrary in a Subcontract approved in writing as adequate by the Owner and Engineer.

a) The SubContractor(s) shall agree:

(1) To be bound to the Contractor by the terms of the Contract, and the Contract Documents, and to assume toward him all the obligations and responsibilities that the Contractor, by these documents, assumes toward the Owner.

(2) To make all claims for extras, for extensions of time, and for damages for delays or otherwise, to the Contractor, in the manner provided in the Contract Documents for like claims by the Contractor upon the Owner, except that the time for making claims for extra cost is one week.

b) The Contractor shall agree:

(1) To be bound to the SubContractor(s) by all the obligations that the Owner assumes to the Contractor under this Contract, and the Contract Documents, and by all provisions thereof affording remedies and redress to the Contractor from the Owner.

(2) To pay the SubContractor(s) to such extent as may be provided by the Contract Documents or the Subcontract.

(3) To make no demand for liquidated damages or penalty for delay in any sum in excess of such amount as may be specifically named in the Subcontract.

(4) That no claim for services rendered or materials furnished by the Contractor to the SubContractor(s) shall be valid unless written notice thereof is given by the Contractor to the SubContractor(s) during the first ten days of the calendar month following that in which the claim originated.

Nothing in this article shall create any obligation on the part of the Owner to pay to or to see to the payment of any sums of any Subcontract.

40. COMPLIANCE WITH E-VERIFY PROGRAM

Pursuant to IC 22-5-1.7, Contractor shall enroll in and verify the work eligibility status of all newly hired employees of Contractor through the E-Verify Program ("Program"). Contractor is not required to verify the work eligibility status of all newly hired employees through the Program if the Program no longer exists.

Contractor and its subContractors shall not knowingly employ or contract with an unauthorized alien or retain an employee or contract with a person that Contractor or its subContractor subsequently learns is an unauthorized alien. If Contractor violates this Section 16.23, Owner shall require Contractor to remedy the violation not later than thirty (30) days after Owner notifies Contractor. If Contractor fails to remedy the violation within the thirty (30) period, Owner shall terminate the contract for breach of contract. If Owner terminates the contract, Contractor shall, in addition to any other contractual remedies, be liable to Owner for actual damages. There is a rebuttable presumption that Contractor did not knowingly employ an unauthorized alien if Contractor verified the work eligibility status of the employee through the Program.

If Contractor employs or contracts with an unauthorized alien but Owner determines that terminating the contract would be detrimental to the public interest or public property, Owner may allow the contract to remain in effect until Owner procures a new Contractor.

Contractor shall, prior to performing any work, require each subContractor to certify to Contractor that the subContractor does not knowingly employ or contract with an unauthorized alien and has enrolled in the Program. Contractor shall maintain on file a certification from each subContractor throughout the duration of the Project. If Contractor determines that a subContractor is in violation of this Section 16.23, Contractor may terminate its contract with the subContractor for such violation. Such termination may not be considered a breach of contract by Contractor or the subContractor.

41. PUBLIC CONSTRUCTION PROJECTS

The Evansville Municipal Code (EMC) Chapter 3.95 addresses topics concerning Public Construction Projects of the City of Evansville.

- Random Drug Testing Required. Pursuant to EMC 3.95.020 Contractor shall maintain a random drug testing program for all construction contracts where the cost of the contract is more than \$10,000.
- License Required at Time of Submission of Bid. Pursuant to EMC 3.95.030 Contractor, and every subContractor to be used on a project, shall be properly licensed to do the work by the Evansville-Vanderburgh County Building Commission office at the time the bid or quote is opened. Any bid or quote by a Contractor not so licensed, or indicating the use of a subContractor not so licensed, shall be rejected as nonresponsive to the bid or quote request, or the bidder or quoter shall be determined to be a nonresponsible bidder or quoter.
- Responsible Bidding Practices and Submission Requirements. Pursuant to EMC 3.95.040 each Contractor proposing to submit bids on any City of Evansville public works project estimated to be at least \$150,000 or more must, prior to the bid submission deadline, be designated as a Responsible Bidder as identified in EMC 3.95.040. Each first-tier subContractor shall be required to adhere to the requirements of the Responsible Bidder ordinance as though it were bidding directly to the City, except that first-tier subContractors shall submit the required information to the bidder and the bidder shall then forward said information to the City.

42. PROTECTION OF PERSONS AND PROPERTY

Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connect with the performance of the Contract. Upon award of Contract, the Contractor shall submit a written copy of all the Company's Safety and Health Programs, and the annual employee safety training plan.

Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations,

and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner.

PROJECT MANUAL

PROJECT TITLE: CK Newsome Center Renovation IFB-508-02-2026

PROJECT LOCATION: CK Newsome Community Center
100 E. Walnut Street
Evansville, Indiana 47713

PROJECT OWNER: City of Evansville Parks & Recreation Department
100 E. Walnut Street
CK Newsome Community Center
Evansville, Indiana 47713

THE SPECIFICATIONS AND ACCOMPANYING DRAWINGS COMPLY, TO THE BEST OF OUR KNOWLEDGE, WITH APPLICABLE RULES AND REGULATIONS OF THE STATE BOARD OF HEALTH, THE INDIANA DEPARTMENT OF FIRE PREVENTION AND BUILDING SAFETY, AND WITH APPLICABLE LOCAL RULES, REGULATIONS, AND ORDINANCES.

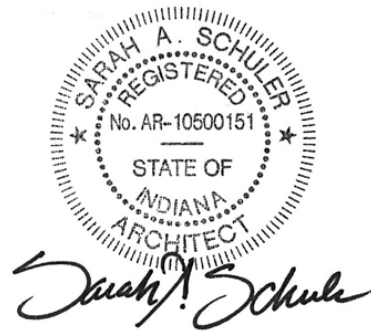
PLANS AND SPECIFICATIONS CERTIFIED BY:

ARCHITECT

VPS ARCHITECTURE
528 MAIN STREET | SUITE 400
EVANSVILLE, INDIANA 47708

Tel (812) 423-7729
Fax (812) 425-4561

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BIDDING AND CONTRACTING REQUIREMENTS

Invitation for Bids (IFB-508-02-2026).....40

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AD101	FIRST FLOOR DEMOLITION PLAN
A101	ARCHITECTURAL FIRST FLOOR PLAN - BASE BID
A102	ARCHITECTURAL FIRST FLOOR PLAN - ALTERNATE
A201	REFLECTED CEILING PLAN - BASE BID
A202	REFLECTED CEILING PLAN - ALTERNATE
A504	INTERIOR ELEVATIONS
A505	ENLARGED PLANS & SCHEDULES

PLUMBING

P001	PLUMBING GENERAL NOTES AND LEGEND
PD101	FIRST FLOOR PLUMBING DEMOLITION PLAN
P101	FIRST FLOOR PLUMBING PLAN
P201	ENLARGED PLUMBING PLANS
P301	PLUMBING ISOMETRIC DIAGRAMS

MECHANICAL

M001	MECHANICAL GENERAL NOTES AND LEGENDS
MD101	FIRST FLOOR MECHANICAL DEMOLITION PLAN
M101	FIRST FLOOR MECHANICAL PLAN
M301	MECHANICAL ENLARGED PLANS
M401	MECHANICAL SCHEDULES AND DETAILS

ELECTRICAL

E001	ELECTRICAL SYMBOLS AND ABBREVIATIONS
ED101	FIRST FLOOR ELECTRICAL DEMOLITION PLAN
E101	FIRST FLOOR ELECTRICAL PLAN
E401	ELECTRICAL SCHEDULES

END OF LIST OF DRAWINGS

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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 alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Basketball Equipment.

1. Replace (2) existing basketball equipment systems with new equipment, controller, goals, and nets, in accordance with Section 116623 Gymnasium Equipment, including electrical.

B. Alternate No. 2: Additional Painting and Base.

1. Paint walls, including cleaning and surface preparation in Corridors 104 and 105 in accordance with Section 099000 Painting. Replace existing wall base with new resilient wall base, in accordance with Section 096513 Resilient Base and Accessories.

C. Alternate No. 3A: Additional Painting - Gym Walls.

1. Paint walls, including cleaning and surface preparation in Gym 128 above existing blue accent stripe, full height of wall, in accordance with Section 099000 Painting.

D. Alternate No. 3B: Additional Painting - Gym Ceiling.

1. Paint exposed roof deck and structure, including cleaning and surface preparation in Gym 128, in accordance with Section 099000 Painting.

E. Alternate No. 4: Reception Desk.

1. Provide custom millwork reception desk including power and data in Foyer 101.

F. Alternate No. 5: Foyer LVT Flooring.

1. Remove existing VCT flooring, patch and prep floor, and provide new LVT and resilient wall base in Foyer 101.

END OF SECTION 012300

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 016000 "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 and proposed by Contractor.
 - 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 in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify 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 CSI Form 13.1A.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination 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 substitution 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 and 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 substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating 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.

PART 2 - PRODUCTS

2.1 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: Architect will consider requests for substitution if received within 60 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.
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 offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 - b. Requested substitution does not require extensive revisions to the Contract Documents.
 - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - d. Substitution request is fully documented and properly submitted.
 - e. Requested substitution will not adversely affect Contractor's construction schedule.
 - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - g. Requested substitution is compatible with other portions of the Work.
 - h. Requested substitution has been coordinated with other portions of the Work.
 - i. Requested substitution provides specified warranty.

- j. 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.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Coordination Drawings.
 - 2. Administrative and supervisory personnel.
 - 3. Project meetings.
 - 4. Requests for Interpretation (RFIs).
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility will be assigned to a specific contractor.
- C. Related Sections include the following:
 - 1. Division 01 Section "Construction Progress Documentation" for preparing and submitting Contractor's Construction Schedule.
 - 2. Division 01 Section "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.3 DEFINITIONS

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

1.4 COORDINATION

- A. Coordination: The Prime Contractor (GC) is the assigned Project Coordinator and responsible for overall project administration, management, coordination, scheduling and installation of all Work. The Prime General Contractor (GC) contractor shall coordinate and schedule all construction operations with those of other contractors and entities to ensure proper, efficient and orderly installation of each part of the Work required to adhere to the project schedule. Each contractor shall coordinate its operations with operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.

2. Coordinate installation of different components with all contractors to ensure maximum accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- 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 activities of other contractors to avoid conflicts and to ensure orderly progress of the Work and safety of the occupants of existing facilities affected by construction activities. Such administrative activities include, but are not limited to, the following:
1. Preparation and updating of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation, maintenance and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Weekly Contractor Coordination Meetings.
 6. Progress meetings.
 7. Preinstallation conferences.
 8. Project closeout activities.
 9. Startup and adjustment of systems.
 10. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. Refer to other Sections for disposition of salvaged materials that are designated as Owner's property.

1.5 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:
 - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - b. Indicate required installation sequences.

- c. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
 2. Sheet Size: At least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).
 3. Number of Copies: Submit electronically.
 4. Refer to individual Sections for Coordination Drawing requirements for Work in those Sections.
- 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 and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
1. Include special personnel required for coordination of operations with other contractors.

1.7 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.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within [three] <Insert number> days of the meeting.
- B. Preconstruction Conference: The Owner's Representative shall Schedule a preconstruction conference before starting construction, at a time convenient to the Contractor, Owner and Architect. Project Preconstruction conference shall be conducted at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; all major subcontractors, suppliers, other concerned parties and others as requested by Owner's Representative are required to attend the conference. All participants at

- the conference shall be familiar with Project and authorized to conduct matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing and long-lead items.
 - d. Designation of key personnel and their duties.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Commissioning procedures, requirements and submittals.
 - l. Preparation of Record Documents.
 - m. Use of the premises and existing building.
 - n. Utility relocations (Fiber, water, electric, sanitary sewer).
 - o. Work restrictions.
 - p. Owner's occupancy requirements.
 - q. Responsibility for temporary facilities and controls.
 - r. Construction waste management and recycling (Dumpster and concrete wash-out locations).
 - s. Construction staging areas and parking availability.
 - t. Office, work, and storage areas.
 - u. Equipment deliveries and priorities.
 - v. First aid.
 - w. Security.
 - x. Progress cleaning.
 - y. Working hours.
 - z. School testing times and dates.
 - aa. Student pick-up and drop-off times and routes.
 - bb. Site cleaning, roadway and drives cleaning, main drive access from North Embree Street safety requirements, signage.
 - cc. Record drawings or As-built drawings documentation and updating.
 3. Minutes: Record and distribute meeting minutes.
- C. Preinstallation Conferences: The Prime Contractor (GC) shall be responsible to conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction and additional pre-installation meetings as requested by Owner's Representative.
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. 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. The 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 problems.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written recommendations.
 - 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. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.
 - y. 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 parties who should have been present.
 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. Progress Meetings: The General Contractor will conduct the Progress Meetings and distribute meeting agenda and meeting minutes. Progress meetings will be established on a bi-monthly basis or more frequently as determined by the Architect or the Owner's Representative, to review the progress of construction, possible delays, problems, and projected construction activity. The General Contractor will provide a Project Meeting Schedule at the Pre-Construction Meeting. Contractor and his principal sub-contractors, suppliers' representatives or manufacturer's representatives are required to attend as requested by the Owner's Representative and failing to be in attendance at project meetings, when specifically requested, will be taken into consideration when payment applications are being considered for approval by the Architect and the Owner's Representative. General Contractor shall be charged \$250.00 for each unexcused absence, from meetings in which they or their principal sub-contractors, manufacturer's representative's or suppliers are requested to attend, as determined by the Architect or the Owner's Representative. A deduct Change Order for these changes will be issued prior to contract closeout. This in no way relieves the Contractor for coordination due to lack of attendance.
1. Notice of said meetings will originate in the on-site field office of the Contractor.
 2. Contractor will require his principal subcontractors to attend.
 3. The progress and schedule of each involved Contractor shall be coordinated at this meeting. The representatives of the Contractor present shall have the authority to change the Contractor's work schedule or authorize work with the consent of the Owner's Representative and the Architect.

- Attendance at these meetings is required for approval of the Contractor's Application for Payment.
4. Coordinate dates of meetings with preparation of payment requests.
 5. Contractor shall be required to submit to the Owner's Representative an updated Progress Report 2 days before each progress meeting. Contractor will be required to review same during the meeting.
 6. Contractor shall include a line item identified as Progress Meetings on Schedule of Values/Payment Application. Contractor shall include an amount of \$10,000 for Progress Meetings.
 7. Minimum Agenda shall be as follows but not limited to the following:
 - a. Review work progress since last meeting.
 - b. Note field observations, problems, and decisions.
 - c. Identify problems which impede planned progress.
 - d. Review off-site fabrication problems.
 - e. Review and discuss possible long lead products/equipment.
 - f. Develop corrective measure and procedures to regain planned schedule.
 - g. Revise Construction Schedule as indicated.
 - h. Plan progress during next work period.
 - i. Review submittal schedules, expedite as required to maintain schedule.
 - j. Tracking of material deliveries.
 - k. Maintaining of quality and work standards.
 - l. Review possible security safety issues.
 - m. Review and discuss testing.
 - n. Complete other current business.
 - o. Documentation of information for approval of Applications for Payment.
- E. Coordination Meetings: Prime Contractor (GC) shall conduct Project coordination meetings at weekly intervals. 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 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 and are required to participate. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work. Contractor and his principal sub-contractors, suppliers' representatives or manufacturer's representatives required to attend as requested by the Owner's Representative and failing to be in attendance at coordination meetings, when specifically requested, will be taken into consideration when payment applications are being considered for approval by the Architect and the Owner's Representative. Contractor shall be charged \$250.00 for each unexcused absence, from meetings in which they or their principal sub-contractors, manufacturer's representative's or suppliers are requested to attend, as determined by the Architect or the Owner's Representative. A deduct Change Order for these changes will be issued prior to contract closeout. This in no way relieves the Contractor for coordination due to lack of attendance.
 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) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Change Orders.
 - 14) Site cleaning, roadway and drives cleaning, main drive access from N. Embree Street safety requirements, signage.
 - 15) Site and building security.
 - 16) Record drawings or As-built drawings documentation and updating.
3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting. Meetings shall be conducted and minutes kept/distributed by GC.
 4. Contractor shall include a line item identified as Coordination Meetings on Schedule of Values/Payment Application.

1.8 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
 1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
 1. Project name.
 2. Date.
 3. Name of Contractor.
 4. Name of Architect.

5. RFI number, numbered sequentially.
 6. Specification Section number and title and related paragraphs, as appropriate.
 7. Drawing number and detail references, as appropriate.
 8. Field dimensions and conditions, as appropriate.
 9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 10. Contractor's signature.
 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
 - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs: CSI Form 13.2A.
1. Identify each page of attachments with the RFI number and sequential page number.
- D. Software-Generated RFIs: Software-generated form with substantially the same content as indicated above.
1. Attachments shall be electronic files in Adobe Acrobat PDF format.
- E. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow seven working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for coordination information already indicated in the Contract Documents.
 - d. Requests for adjustments in the Contract Time or the Contract Sum.
 - e. Requests for interpretation of Architect's actions on submittals.
 - f. Incomplete RFIs or RFIs with numerous errors.
 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Preliminary Construction Schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Submittals Schedule.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Field condition reports.
 - 7. Special reports.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes.
 - 3. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
 - 4. Division 01 Section "Quality Requirements" for submitting a schedule of tests and inspections.

1.3 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by Architect.

- C. 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.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. 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.
- G. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.
- H. Major Area: A story of construction, a separate building, or a similar significant construction element.
- I. Milestone: A key or critical point in time for reference or measurement.
- J. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.
- K. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.

1.4 SUBMITTALS

- A. Qualification Data: For scheduling consultant.
- B. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
 - 1. Scheduled date for first submittal.
 - 2. Specification Section number and title.
 - 3. Submittal category (action or informational).
 - 4. Name of subcontractor.
 - 5. Description of the Work covered.
 - 6. Scheduled date for Architect's final release or approval.
- C. Preliminary Construction Schedule: Submit two opaque copies.

1. Approval of cost-loaded preliminary construction schedule will not constitute approval of Schedule of Values for cost-loaded activities.
- D. Contractor's Construction Schedule: Submit two copies of initial schedule, large enough to show entire schedule for entire construction period.
 1. Submit an electronic copy of schedule, and labeled to comply with requirements for submittals. Include type of schedule (Initial or Updated) and date on label.

1.5 QUALITY ASSURANCE

- A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within 24 hours of Architect's request.
- B. Prescheduling Conference: Conduct conference at Project site with all sub-contractors, major material suppliers to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to the Preliminary Construction Schedule and Contractor's Construction Schedule, including, but not limited to, the following:
 1. Review software limitations and content and format for reports.
 2. Verify availability of qualified personnel needed to develop and update schedule.
 3. Discuss constraints.
 4. Review delivery dates for Owner-furnished products.
 5. Review schedule for work of Owner's separate contracts.
 6. Review time required for review of submittals and resubmittals.
 7. Review requirements for tests and inspections by independent testing and inspecting agencies.
 8. Review time required for completion and startup procedures.
 9. Review and finalize list of construction activities to be included in schedule.
 10. Review submittal requirements and procedures.
 11. Review procedures for updating schedule.

1.6 COORDINATION

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

PART 2 - PRODUCTS

2.1 SUBMITTALS SCHEDULE

- A. Preparation: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, resubmittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
 2. Initial Submittal: Submit concurrently with preliminary bar-chart schedule. Include submittals required during the first 60 days of construction. List those required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 - a. At Contractor's option, show submittals on the Preliminary Construction Schedule, instead of tabulating them separately.
 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Procedures: Comply with procedures contained in AGC's "Construction Planning & Scheduling."
- B. Time Frame: Extend schedule from date established for commencement of the Work 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.
- C. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than twenty (20) days, unless specifically allowed by Architect.
 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Division 01 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
 4. Startup and Testing Time.
 5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.

- D. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.
1. Phasing: Arrange list of activities on schedule by phase.
 2. Work under More Than One Contract: Include a separate activity for each contract.
 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Division 01 Section "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
 6. 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. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
 7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Close-outs
 - m. Startup and placement into final use and operation.
 8. Area Separations: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Structural completion.
 - b. Permanent space enclosure.
 - c. Completion of mechanical installation.
 - d. Completion of electrical installation.
 - e. Substantial Completion.

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

2.3 PRELIMINARY CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within seven days of date established for commencement of the Work.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first 60 days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 30 days of date established for commencement of the Work. Base schedule on the Preliminary Construction Schedule and whatever updating and feedback was received since the start of Project.
- 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 3 months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

2.5 SPECIAL REPORTS

- A. General: Submit special reports directly to Owner within day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.
- B. Reporting Unusual Events: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, response by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule two days before each regularly scheduled progress meeting.

1. Revise schedule as approved by Owner's Representative immediately after each meeting or other activity where revisions have been recognized or made. Approved updated schedule will be submitted concurrently with the Progress Meeting Minutes of each such meeting.
 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Architect Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

END OF SECTION 013200

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals. Contractor shall provide submittals for all significant components of Work and/or as indicated on drawings.
- B. Related Sections include the following:
 - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting and conference minutes and for submitting Coordination Drawings.
 - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
 - 4. Division 01 Section "Quality Requirements" for submitting test and inspection reports.

1.3 DEFINITIONS

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

1.4 SUBMITTAL PROCEDURES

- A. General: Electronic copies of CAD Drawings of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- C. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- D. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
 5. 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.
- E. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space approximately 6 by 8 inches (150 by 200 mm) on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Architect.
 - d. Name and address of Contractor.
 - e. Name and address of subcontractor.
 - f. Name and address of supplier.
 - g. Name of manufacturer.
 - h. Submittal number or other unique identifier, including revision identifier.
 - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 061000.01.A).
 - 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.
- F. Deviations: Highlight or otherwise specifically identify deviations from the Contract Documents on submittals.
- G. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.

1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
 2. Additional copies submitted for maintenance manuals will be marked with action taken and will be returned.
 3. Submit one copy via email of submittal to Owner's Representative at same time original initial copy of submittal is transmitted to Architect.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
1. Transmittal Form: Provide locations on form for the following information:
 - a. Project name.
 - b. Date.
 - c. Destination (To:).
 - d. Source (From:).
 - e. Names of subcontractor, manufacturer, and supplier.
 - f. Category and type of submittal.
 - g. Submittal purpose and description.
 - h. Specification Section number and title.
 - i. Drawing number and detail references, as appropriate.
 - j. Transmittal number, numbered consecutively.
 - k. Submittal and transmittal distribution record.
 - l. Remarks.
 - m. Signature of transmitter.
 2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect and on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.
- I. 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.
- J. 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.
- 1.5 CONTRACTOR'S USE OF ARCHITECT'S CAD FILES
- A. General: At Contractor's written request, copies of Architect's CAD files will be provided to Contractor for Contractor's use in connection with Project, subject to the following conditions:
1. The electronic file is provided to the user for a 7-day acceptance period. During this period, the user may review and examine the CAD file and obtain corrections as part of the initial provider fee. Any changes requested after this period will be considered additional services. The provider fee referenced is the \$50.00 per sheet mentioned in Paragraph 1.4.A.

2. The provider fee is required for the cost of handling and does not imply ownership of the information contained on electronic media. The provider fee referenced is the \$50.00 per sheet mentioned in Paragraph 1.4.A. The CAD file provided by the Architect is intended for use only on this project.
3. The Architect makes no warranty as to the compatibility of this file to any operating system, software, or software release other than those stated.
4. The Architect makes no warranty as to the compatibility of this file to any operating system, software, or software release other than those stated.
5. Any use and reuse by the Contractor, subcontractors, suppliers and other assigns will be at the user's risk and full legal responsibilities. Furthermore, the user will, to the fullest extent permitted by law, indemnify and hold the Architect harmless from any and all claims arising out of or resulting therefrom.
6. Due to the potential for modification of the CAD data, the Architect reserves the right to, at its discretion, remove all company names or logos identifying its ownership and involvement from the CAD media.
7. For documentation and record purposes, the Architect will retain a copy of the CAD data.
8. Because CAD data stored on electronic media can deteriorate undetected or be modified without the Architect's knowledge, the Contractor, subcontractors, suppliers and assigns agree that the Architect cannot be held liable for the completeness and correctness of the electronic data after acceptance of the electronic data after acceptance of the electronic files.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
 1. Submit electronic submittals directly to extranet specifically established for Project.
 2. Submit electronic copy of all submittals, shop drawings, product information, etc... to Owner's Representative.
 3. Upon Contractor's receipt of reviewed/approved Shop Drawings/Submittals from the Architect/Engineer, the Contractor shall immediately, within three days of receipt, provide hard copies of reviewed/approved Shop Drawings/Submittals to Owner's Representative in original full size. Contractor shall provide all such documents in an indexed binder. Such documents shall be kept in the possession of the Owner's Representative.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.

- d. Standard color charts.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Mill reports.
 - j. Standard product operation and maintenance manuals.
 - k. Compliance with specified referenced standards.
 - l. Testing by recognized testing agency.
 - m. Application of testing agency labels and seals.
 - n. Notation of coordination requirements.
4. Submit Product Data before or concurrent with Samples.
 5. Number of Copies: Submit three copies of Product Data, unless otherwise indicated. Architect will return two copies. Mark up and retain one returned copy as a Project Record Document.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale.
1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Design calculations.
 - j. Compliance with specified standards.
 - k. Notation of coordination requirements.
 - l. Notation of dimensions established by field measurement.
 - m. Relationship to adjoining construction clearly indicated.
 - n. Seal and signature of professional engineer if specified.
 - o. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 30 by 40 inches (750 by 1000 mm).
 3. Number of Copies: Submit three opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Submit five copies where copies are required for operation and maintenance manuals. Architect will retain two copies; remainder will be returned. Electronic submittals are permitted in lieu of hardcopies.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 4. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
 5. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect will retain two Sample sets; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule or List: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product.
 2. Number and name of room or space.
 3. Location within room or space.

4. Number of Copies: Submit three copies of product schedule or list, unless otherwise indicated. Architect will return two copies.
- F. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation" for Architect's action.
- G. Submittals Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- H. Application for Payment: Comply with requirements specified in Division 01 Section "Payment Procedures."
- I. Schedule of Values: Comply with requirements specified in Division 01 Section "Payment Procedures."
- J. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 1. Name, address, and telephone number 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.
 4. Number of Copies: Submit three copies of subcontractor list, unless otherwise indicated. Architect will return two copies.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 1. Number of Copies: Submit two copies of each submittal, unless otherwise indicated. Architect will not return copies.
 2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 3. Test and Inspection Reports: Comply with requirements specified in Division 01 Section "Quality Requirements."
- B. Coordination Drawings: Comply with requirements specified in Division 01 Section "Project Management and Coordination."
- C. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- D. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- E. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.

- F. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- G. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- H. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- I. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- J. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- K. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- L. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- M. Schedule of Tests and Inspections: Comply with requirements specified in Division 01 Section "Quality Requirements."
- N. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- O. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- P. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

- Q. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 Section "Operation and Maintenance Data." Submit maintenance and operating data, manufacturer contract information, local service contact information, instructions, etc...in electronic PDF or other approved format to Owner's Representative upon request.
- R. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- S. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Submit maintenance and operating data, manufacturer contact information, local service contact information, instructions, etc., in electronic PDF or other approved electronic format to Owner's Representative upon request. Include the following, as applicable:
1. Preparation of substrates.
 2. Required substrate tolerances.
 3. Sequence of installation or erection.
 4. Required installation tolerances.
 5. Required adjustments.
 6. Recommendations for cleaning and protection.
- T. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Record and maintain record of all start-up reports, start-up dates, servicing/maintenance reports, inspection reports, etc...and submit to the Owner's Representative upon request. Include the following, as applicable:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- U. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- V. Submit all warranty information in electronic PDF or other approved electronic format to Owner's Representative upon request.

- W. At project closeout submit complete itemized room finish schedule that indicates all interior and exterior final paint information, ceiling tiles information, floor covering information etc., in a three-ring binder and also in electronic PDF or other approved format to Owner's Representative upon request.
- X. At project closeout submit complete itemized casework key log and tagged keys, each tagged per room number and location to Owner's Representative."

2.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit three copies of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:

- C. Informational Submittals: Architect will review each submittal and will not return it or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division 01 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples.

- D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.
- E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.
- G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- K. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

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

1.5 SUBMITTALS

- A. Qualification Data: 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.
- B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Description of test and inspection.
 - 3. Identification of applicable standards.
 - 4. Identification of test and inspection methods.
 - 5. Number of tests and inspections required.
 - 6. Time schedule or time span for tests and inspections.
 - 7. Entity responsible for performing tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.
- C. Reports: Prepare and submit certified written reports that include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 - 12. Name and signature of laboratory inspector.
 - 13. Recommendations on retesting and reinspecting.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

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- C. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. **Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.
- F. **Specialists:** Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. **Testing Agency Qualifications:** An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. **Preconstruction Testing:** Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

J. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.

a. Allow seven days for initial review and each re-review of each mockup.

5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed, unless otherwise indicated.

K. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 02 through 49.

1.7 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Payment for the quality control/testing agency services that is designated to be the Owner's responsibility, will be paid by the Owner directly to the quality control/testing agency. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.

3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 01 Section "Submittal Procedures."
- D. **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.
- E. **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 location 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. Does not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- F. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- G. **Coordination:** Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities. Contractors shall coordinate scheduling for quality control/testing agency services that is designated to be the

Owner's responsibility, with the Owner's Representative. Allow sufficient and reasonable time for Owner's Representative to contact and schedule the quality control/testing agency.

- H. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.
 - 1. Distribution: Distribute schedule to Owner, Architect testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.8 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, 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 ACCEPTABLE TESTING AGENCIES

3.2 TEST AND INSPECTION LOG

- A. 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 modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.3 REPAIR AND PROTECTION

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

END OF SECTION 014000

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 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.
- D. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the organizations responsible for the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG Americans with Disabilities Act (ADA) (800) 872-2253
Architectural Barriers Act (ABA) (202) 272-0080
Accessibility Guidelines for Buildings and Facilities
Available from Access Board
www.access-board.gov

CFR Code of Federal Regulations (866) 512-1800
Available from Government Printing Office (202) 512-1800
www.gpoaccess.gov/cfr/index.html

DOD Department of Defense Military Specifications and Standards (215) 697-6257
Available from Department of Defense Single Stock Point
<http://dodssp.daps.dla.mil>

DSCC Defense Supply Center Columbus
(See FS)

FED-STD Federal Standard
(See FS)

FS Federal Specification (215) 697-6257
Available from Department of Defense Single Stock Point
<http://dodssp.daps.dla.mil>

Available from Defense Standardization Program
www.dps.dla.mil

Available from General Services Administration (202) 619-8925
www.gsa.gov

Available from National Institute of Building Sciences (202) 289-7800
www.nibs.org

FTMS Federal Test Method Standard
(See FS)

MIL	(See MILSPEC)	
MIL-STD	(See MILSPEC)	
MILSPEC	Military Specification and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-6257
UFAS	Uniform Federal Accessibility Standards Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The) www.aluminum.org	(703) 358-2960
AAADM	American Association of Automatic Door Manufacturers www.aaadm.com	(216) 241-7333
AABC	Associated Air Balance Council www.aabchq.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
AASHTO	American Association of State Highway and Transportation Officials www.transportation.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists (The) www.aatcc.org	(919) 549-8141
ABAA	Air Barrier Association of America www.airbarrier.org	(866) 956-5888
ABMA	American Bearing Manufacturers Association www.abma-dc.org	(202) 367-1155

ACI	ACI International (American Concrete Institute) www.aci-int.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AHA	American Hardboard Association (Now part of CPA)	
AHAM	Association of Home Appliance Manufacturers www.aham.org	(202) 872-5955
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
AITC	American Institute of Timber Construction www.aitc-glulam.org	(303) 792-9559
ALCA	Associated Landscape Contractors of America (Now PLANET - Professional Landcare Network)	
ALSC	American Lumber Standard Committee, Incorporated www.alsc.org	(301) 972-1700
AMCA	Air Movement and Control Association International, Inc. www.amca.org	(847) 394-0150
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020

AOSA	Association of Official Seed Analysts, Inc. www.aosaseed.com	(505) 522-1437
APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
APA	Architectural Precast Association www.archprecast.org	(239) 454-6989
API	American Petroleum Institute www.api.org	(202) 682-8000
ARI	Air-Conditioning & Refrigeration Institute www.ari.org	(703) 524-8800
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (The American Society of Mechanical Engineers International) www.asme.org	(800) 843-2763 (973) 882-1170
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9585
AWCI	AWCI International (Association of the Wall and Ceiling Industry International) www.awci.org	(703) 534-8300
AWCMA	American Window Covering Manufacturers Association (Now WCSC)	
AWI	Architectural Woodwork Institute www.awinet.org	(800) 449-8811 (703) 733-0600
AWPA	American Wood-Preservers' Association www.awpa.com	(334) 874-9800
AWS	American Welding Society	(800) 443-9353

	www.aws.org	(305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
BICSI	BICSI www.bicsi.org	(800) 242-7405 (813) 979-1991
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International) www.bifma.com	(616) 285-3963
BISSC	Baking Industry Sanitation Standards Committee www.bissc.org	(866) 342-4772
CCC	Carpet Cushion Council www.carpetcushion.org	(203) 637-1312
CDA	Copper Development Association www.copper.org	(800) 232-3282 (212) 251-7200
CEA	Canadian Electricity Association www.canelect.ca	(613) 230-9263
CFFA	Chemical Fabrics & Film Association, Inc. www.chemicalfabricsandfilm.com	(216) 241-7333
CGA	Compressed Gas Association www.cganet.com	(703) 788-2700
CIMA	Cellulose Insulation Manufacturers Association www.cellulose.org	(888) 881-2462 (937) 222-2462
CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583
CPA	Composite Panel Association www.pbmdf.com	(301) 670-0604

CPPA	Corrugated Polyethylene Pipe Association www.cppa-info.org	(800) 510-2772 (202) 462-9607
CRI	Carpet & Rug Institute (The) www.carpet-rug.com	(800) 882-8846 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	CSA International (Formerly: IAS - International Approval Services) www.csa-international.org	(866) 797-4272 (416) 747-4000
CSI	Cast Stone Institute www.caststone.org	(770) 972-3011
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
CSSB	Cedar Shake & Shingle Bureau www.cedarbureau.org	(604) 820-7700
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute) www.cti.org	(281) 583-4087
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
EIA	Electronic Industries Alliance www.eia.org	(703) 907-7500
EIMA	EIFS Industry Members Association www.eima.com	(800) 294-3462 (770) 968-7945
EJCDC	Engineers Joint Contract Documents Committee www.ejdc.org	(703) 295-5000
EJMA	Expansion Joint Manufacturers Association, Inc. www.ejma.org	(914) 332-0040
ESD	ESD Association www.esda.org	(315) 339-6937
FIBA	Federation Internationale de Basketball Amateur (The International Basketball Federation) www.fiba.com	41 22 545 00 00
FIVB	Federation Internationale de Volleyball (The International Volleyball Federation)	41 21 345 35 35

	www.fivb.ch	
FMG	FM Global (Formerly: FM - Factory Mutual System) www.fmglobal.com	(401) 275-3000
FMRC	Factory Mutual Research (Now FMG)	
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. www.floridarroof.com	(407) 671-3772
FSA	Fluid Sealing Association www.fluidsealing.com	(610) 971-4850
FSC	Forest Stewardship Council www.fsc.org	49 228 367 66 0
GA	Gypsum Association www.gypsum.org	(202) 289-5440
GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GRI	(Now GSI)	
GS	Green Seal www.greenseal.org	(202) 872-6400
GSI	Geosynthetic Institute www.geosynthetic-institute.org	(610) 522-8440
HI	Hydraulic Institute www.pumps.org	(888) 786-7744 (973) 267-9700
HI	Hydronics Institute www.gamanet.org	(908) 464-8200
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)	
HPVA	Hardwood Plywood & Veneer Association www.hpva.org	(703) 435-2900
HPW	H. P. White Laboratory, Inc. www.hpwhite.com	(410) 838-6550
IAS	International Approval Services (Now CSA International)	

IBF	International Badminton Federation www.intbadfed.org	(6-03) 9283-7155
ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(770) 830-0369
ICRI	International Concrete Repair Institute, Inc. www.icri.org	(847) 827-0830
IEC	International Electrotechnical Commission www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IESNA	Illuminating Engineering Society of North America www.iesna.org	(212) 248-5000
IEST	Institute of Environmental Sciences and Technology www.iest.org	(847) 255-1561
IGCC	Insulating Glass Certification Council www.igcc.org	(315) 646-2234
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510
ILI	Indiana Limestone Institute of America, Inc. www.iliai.com	(812) 275-4426
ISO	International Organization for Standardization www.iso.ch	41 22 749 01 11
	Available from ANSI www.ansi.org	(202) 293-8020
ISSFA	International Solid Surface Fabricators Association www.issfa.net	(877) 464-7732 (702) 567-8150
ITS	Intertek www.intertek.com	(800) 345-3851 (713) 407-3500
ITU	International Telecommunication Union www.itu.int/home	41 22 730 51 11
KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org	(703) 264-1690
LMA	Laminating Materials Association (Now part of CPA)	

LPI	Lightning Protection Institute www.lightning.org	(800) 488-6864 (804) 314-8955
MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
MFMA	Maple Flooring Manufacturers Association, Inc. www.maplefloor.org	(847) 480-9138
MFMA	Metal Framing Manufacturers Association www.metalframingmfg.org	(312) 644-6610
MH	Material Handling (Now MHIA)	
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America www.marble-institute.com	(440) 250-9222
MPI	Master Painters Institute www.paintinfo.com	(888) 674-8937
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. www.mss-hq.com	(703) 281-6613
NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(312) 332-0405
NACE	NACE International (National Association of Corrosion Engineers International) www.nace.org	(800) 797-6623 (281) 228-6200
NADCA	National Air Duct Cleaners Association www.nadca.com	(202) 737-2926
NAGWS	National Association for Girls and Women in Sport www.aahperd.org/nagws/	(800) 213-7193, ext. 453
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NBGQA	National Building Granite Quarries Association, Inc. www.nbgqa.com	(800) 557-2848
NCAA	National Collegiate Athletic Association (The) www.ncaa.org	(317) 917-6222
NCMA	National Concrete Masonry Association	(703) 713-1900

	www.ncma.org	
NCPI	National Clay Pipe Institute www.ncpi.org	(262) 248-9094
NCTA	National Cable & Telecommunications Association www.ncta.com	(202) 775-3550
NEBB	National Environmental Balancing Bureau www.nebb.org	(301) 977-3698
NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers' Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NETA	InterNational Electrical Testing Association www.netaworld.org	(888) 300-6382 (303) 697-8441
NFHS	National Federation of State High School Associations www.nfhs.org	(317) 972-6900
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NFRC	National Fenestration Rating Council www.nfrc.org	(301) 589-1776
NGA	National Glass Association www.glass.org	(866) 342-5642 (703) 442-4890
NHLA	National Hardwood Lumber Association www.natlhardwood.org	(800) 933-0318 (901) 377-1818
NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association) www.nofma.org	(901) 526-5016
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400

NSF	NSF International (National Sanitation Foundation International) www.nsf.org	(800) 673-6275 (734) 769-8010
NSSGA	National Stone, Sand & Gravel Association www.nssga.org	(800) 342-1415 (703) 525-8788
NTMA	National Terrazzo & Mosaic Association, Inc. (The) www.ntma.com	(800) 323-9736 (540) 751-0930
NTRMA	National Tile Roofing Manufacturers Association (Now TRI)	
NWWDA	National Wood Window and Door Association (Now WDMA)	
OPL	Omega Point Laboratories, Inc. (Acquired by ITS - Intertek) www.opl.com	(800) 966-5253 (210) 635-8100
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
PDCA	Painting & Decorating Contractors of America www.pdca.com	(800) 332-7322 (314) 514-7322
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (978) 557-0720
PGI	PVC Geomembrane Institute http://pgi-tp.ce.uiuc.edu	(217) 333-3929
PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America) www.landcarenetwork.org	(800) 395-2522 (703) 736-9666
PTI	Post-Tensioning Institute www.post-tensioning.org	(602) 870-7540
RCSC	Research Council on Structural Connections www.boltcouncil.org	(800) 644-2400 (312) 670-2400
RFCI	Resilient Floor Covering Institute www.rfci.com	(301) 340-8580
RIS	Redwood Inspection Service www.calredwood.org	(888) 225-7339 (415) 382-0662
RTI	(Formerly: NTRMA - National Tile Roofing Manufacturers Association) (Now TRI)	

SAE	SAE International www.sae.org	(877) 606-7323 (724) 776-4841
SDI	Steel Deck Institute www.sdi.org	(847) 458-4647
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association www.sefalabs.com	(516) 294-5424
SGCC	Safety Glazing Certification Council www.sgcc.org	(315) 646-2234
SIA	Security Industry Association www.siaonline.org	(703) 683-2075
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)	
SJI	Steel Joist Institute www.steeljoist.org	(843) 626-1995
SMA	Screen Manufacturers Association www.smacentral.org	(561) 533-0991
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980
SMPTE	Society of Motion Picture and Television Engineers www.smpte.org	(914) 761-1100
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division) www.sprayfoam.org	(800) 523-6154
SPIB	Southern Pine Inspection Bureau (The) www.spib.org	(850) 434-2611
SPRI	Single Ply Roofing Industry www.spri.org	(781) 647-7026
SSINA	Specialty Steel Industry of North America www.ssina.com	(800) 982-0355 (202) 342-8630
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(877) 281-7772 (412) 281-2331

STI	Steel Tank Institute www.steeltank.com	(847) 438-8265
SWI	Steel Window Institute www.steelwindows.com	(216) 241-7333
SWRI	Sealant, Waterproofing, & Restoration Institute www.swrionline.org	(816) 472-7974
TCA	Tile Council of America, Inc. www.tileusa.com	(864) 646-8453
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance www.tiaonline.org	(703) 907-7700
TMS	The Masonry Society www.masonrysociety.org	(303) 939-9700
TPI	Truss Plate Institute, Inc. www.tpinst.org	(703) 683-1010
TPI	Turfgrass Producers International www.turfgrassod.org	(847) 649-5555
TRI	Tile Roofing Institute (Formerly: RTI - Roof Tile Institute) www.tilerroofing.org	(312) 670-4177
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
USAV	USA Volleyball www.usavolleyball.org	(888) 786-5539 (719) 228-6800
USGBC	U.S. Green Building Council www.usgbc.org	(202) 828-7422
USITT	United States Institute for Theatre Technology, Inc. www.usitt.org	(800) 938-7488 (315) 463-6463
WASTEC	Waste Equipment Technology Association www.wastec.org	(800) 424-2869 (202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651

WCMA	Window Covering Manufacturers Association (Now WCSC)	
WCSC	Window Covering Safety Council (Formerly: WCMA - Window Covering Manufacturers Association) www.windowcoverings.org	(800) 506-4636 (212) 297-2109
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association) www.wdma.com	(800) 223-2301 (847) 299-5200
WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California) www.wicnet.org	(916) 372-9943
WIC	Woodwork Institute of California (Now WI)	
WMMPA	Wood Moulding & Millwork Producers Association www.wmmpa.com	(800) 550-7889 (530) 661-9591
WSRCA	Western States Roofing Contractors Association www.wsrca.com	(800) 725-0333 (650) 570-5441
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

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

BOCA	BOCA International, Inc. (See ICC)	
IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICBO	International Conference of Building Officials (See ICC)	
ICBO ES	ICBO Evaluation Service, Inc. (See ICC-ES)	
ICC	International Code Council www.iccsafe.org	(888) 422-7233 (703) 931-4533
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543

SBCCI Southern Building Code Congress International, Inc.
(See ICC)

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

CE Army Corps of Engineers
www.usace.army.mil

CPSC Consumer Product Safety Commission (800) 638-2772
www.cpsc.gov (301) 504-7923

DOC Department of Commerce (202) 482-2000
www.commerce.gov

DOD Department of Defense (215) 697-6257
<http://.dodssp.daps.dla.mil>

DOE Department of Energy (202) 586-9220
www.energy.gov

EPA Environmental Protection Agency (202) 272-0167
www.epa.gov

FAA Federal Aviation Administration (866) 835-5322
www.faa.gov

FCC Federal Communications Commission (888) 225-5322
www.fcc.gov

FDA Food and Drug Administration (888) 463-6332
www.fda.gov

GSA General Services Administration (800) 488-3111
www.gsa.gov

HUD Department of Housing and Urban Development (202) 708-1112
www.hud.gov

LBL Lawrence Berkeley National Laboratory (510) 486-4000
www.lbl.gov

NCHRP National Cooperative Highway Research Program
(See TRB)

NIST National Institute of Standards and Technology (301) 975-6478
www.nist.gov

OSHA	Occupational Safety & Health Administration www.osha.gov	(800) 321-6742 (202) 693-1999
PBS	Public Building Service (See GSA)	
PHS	Office of Public Health and Science www.osophs.dhhs.gov/ophs	(202) 690-7694
RUS	Rural Utilities Service (See USDA)	(202) 720-9540
SD	State Department www.state.gov	(202) 647-4000
TRB	Transportation Research Board www.nas.edu/trb	(202) 334-2934
USDA	Department of Agriculture www.usda.gov	(202) 720-2791
USPS	Postal Service www.usps.com	(202) 268-2000

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

CBHF	State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation www.dca.ca.gov/bhfti	(800) 952-5210 (916) 574-2041
CPUC	California Public Utilities Commission www.cpuc.ca.gov	(415) 703-2782
TFS	Texas Forest Service Forest Resource Development http://txforests-service.tamu.edu	(936) 639-8180

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections include the following:
 - 1. Division 01 Section "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

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

1.4 SUBMITTALS

- A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 2. Form: Tabulate information for each product under the following column headings:
 - a. Specification Section number and title.
 - b. Generic name used in the Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Projected delivery date or time span of delivery period.
 - h. Identification of items that require early submittal approval for scheduled delivery date.
 3. Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of initial product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - a. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.
 4. Completed List: Within 60 days after date of commencement of the Work, submit 3 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 5. Architect's Action: Architect will respond in writing to Contractor within 15 days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirement to comply with the Contract Documents.
- B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified material or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.

- g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 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 7 days of receipt of additional information or documentation, whichever is later.
 - a. Form of Acceptance: Change Order.
 - b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.
- C. Comparable Product Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Division 01 Section "Submittal Procedures."
 - b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.
- D. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 01 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.

2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- C. Storage:
 1. Store products to allow for inspection and measurement of quantity or counting of units.
 2. Store materials in a manner that will not endanger Project structure.
 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 4. Store cementitious products and materials on elevated platforms.
 5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 7. Protect stored products from damage and liquids from freezing.
 8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 1. **Manufacturer's Warranty:** Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. **Special Warranty:** Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."
- D. All Warranties: Warranties to be submitted as previously described but also all warranties shall be submitted in an electronic PDF format or another approved electronic format.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Architect will make selection.
 - 5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
 - 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
 - 7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
 - 1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements.
 - 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
 - 3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
 - 4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
 - 5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with

- requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
 7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
 8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
 9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 - a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.
 10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Architect will consider requests for substitution if received within 60 days after commencement of the Work. Requests received after that time may be considered or rejected at discretion of Architect.
- B. 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:
 1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 2. Requested substitution does not require extensive revisions to the Contract Documents.

3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
4. Substitution request is fully documented and properly submitted.
5. Requested substitution will not adversely affect Contractor's Construction Schedule.
6. Requested substitution has received necessary approvals of authorities having jurisdiction.
7. Requested substitution is compatible with other portions of the Work.
8. Requested substitution has been coordinated with other portions of the Work.
9. Requested substitution provides specified warranty.
10. 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.

2.3 COMPARABLE PRODUCTS

- A. Conditions: Architect will consider Contractor's request for comparable product 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:
1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 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.

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

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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

- B. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Location of existing utilities.
 - 4. General installation of products.
 - 5. Progress cleaning.
 - 6. Starting and adjusting.
 - 7. Protection of installed construction.
 - 8. Correction of the Work.
- C. Related Sections include the following:
 - 1. Division 01 Section "Project Management and Coordination" for procedures for coordinating field engineering with other construction activities.
 - 2. Division 01 Section "Submittal Procedures" for submitting surveys.

1.3 QUALITY ASSURANCE

- D. 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.

PART 2 – PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: 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 and other construction affecting the Work.
 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 2. Before construction activities perform “pot-holing” of existing underground utilities to confirm exact location of each utility including but not limited to electrical conductors, fiber optics cable, water lines, sanitary sewer lines, storm lines, etc. After location of each, provide as-built drawing in electronic format documenting the exact location indicating depth, size, type, etc...with accurate dimensions from permanent landmarks. Temporarily install identification markers to retain such defined locations of underground utilities during construction activities if required and as directed by Owner’s Representative. The lack of performing the previous mentioned “pot-holing” and location of existing underground utilities resulting in damage to such underground utility, the Contractor shall be responsible to repair such utility to original condition at no additional cost to the Owner.
 3. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

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 fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. 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. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents. Submit requests on CSI Form 13.2A, "Request for Interpretation."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.
- B. General: Engage a land surveyor to lay out the Work using 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 dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3. Inform installers of lines and levels to which they must comply.
 - 4. Check the location, level and plumb, of every major element as the Work progresses.
 - 5. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
 - 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. 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 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 - 4. Maintain minimum headroom clearance of 8 feet (2.4 m) in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
 - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
- D. Installed Work: Keep installed work clean and dust free. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Concealed Spaces: Remove dust and debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

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

3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements for "Cutting and Patching."
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections include the following:
 - 1. Division 01 Section "Selective Structure Demolition" for demolition of selected portions of the building.
 - 2. Divisions 02 through 49 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.3 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.

1.5 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:

1. Primary operational systems and equipment.
2. Air or smoke barriers.
3. Fire-suppression systems.
4. Mechanical systems piping and ducts.
5. Control systems.
6. Communication systems.
7. Electrical wiring systems.
8. Operating systems of special construction in Division 13 Sections.

C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:

1. Water, moisture, or vapor barriers.
2. Membranes and flashings.
3. Exterior curtain-wall construction.
4. Equipment supports.
5. Piping, ductwork, vessels, and equipment.
6. Noise- and vibration-control elements and systems.

D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

E. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.6 WARRANTY

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

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Comply with requirements specified in other Sections.

B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize prevent interruption to occupied areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 - 4. Excavating and Backfilling: Comply with requirements in applicable Division 31 Sections where required by cutting and patching operations.

5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 6. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove dust, dirt, paint, mortar, oils, putty, and similar materials.

END OF SECTION 017329

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. Concrete masonry units.
 - 2. Mortar and grout.
 - 3. Steel reinforcing bars.
 - 4. Masonry-joint reinforcement.
 - 5. Miscellaneous masonry accessories.

1.3 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.

- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.6 FIELD CONDITIONS

- A. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 - 1. Protect base of walls from mortar splatter by spreading coverings on floor and over wall surface.
 - 2. Protect sills, ledges, and projections from mortar droppings.
 - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
- B. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.
- C. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality from single manufacturer for each cementitious component and from single source or producer for each aggregate.

2.2 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6 except as modified by requirements in the Contract Documents.
- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.

2.3 CONCRETE MASONRY UNITS

- A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
 - 1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
- B. CMUs: ASTM C 90.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2800 psi (19.3 MPa).
 - 2. Density Classification: Normal weight.
 - 3. Size (Width): Manufactured to dimensions 3/8 inch (10 mm) less-than-nominal dimensions.
 - 4. Exposed Faces: Provide color and texture matching existing.

2.4 MASONRY LINTELS

- A. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs matching adjacent CMUs in color, texture, and density classification, with reinforcing bars placed as indicated and filled with coarse grout. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

2.5 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150/C 150M, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
 - 1. Alkali content shall not be more than 0.1 percent when tested according to ASTM C 114.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.
- D. Masonry Cement: ASTM C 91/C 91M.
- E. Mortar Cement: ASTM C 1329/C 1329M.
- F. Aggregate for Mortar: ASTM C 144.
 - 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
 - 2. For joints less than 1/4 inch (6 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.

G. Aggregate for Grout: ASTM C 404.

H. Water: Potable.

2.6 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60 (Grade 420).

2.7 TIES AND ANCHORS

A. General: Ties and anchors shall extend at least 1-1/2 inches (38 mm) into masonry but with at least a 5/8-inch (16-mm) cover on outside face.

B. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M, with ASTM A 153/A 153M, Class B-2 coating.
2. Galvanized-Steel Sheet: ASTM A 653/A 653M, Commercial Steel, G60 (Z180) zinc coating.
3. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
4. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

C. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- (6.35-mm-) diameter, hot-dip galvanized steel wire.
2. Tie Section: Triangular-shaped wire tie made from 0.187-inch- (4.76-mm-) diameter, hot-dip galvanized steel wire.

D. Rigid Anchors: Fabricate from steel bars 1-1/2 inches (38 mm) wide by 1/4 inch (6.35 mm) thick by 24 inches (610 mm) long, with ends turned up 2 inches (51 mm) or with cross pins unless otherwise indicated.

1. Corrosion Protection: Hot-dip galvanized to comply with ASTM A 153/A 153M.

2.8 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene, urethane or PVC.

- B. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D 226/D 226M, Type I (No. 15 asphalt felt).

2.9 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated.
 - 1. For reinforced masonry, use Type S.
 - 2. For interior nonload-bearing partitions, Type O may be used instead of Type N.
- D. Grout for Unit Masonry: Comply with ASTM C 476.
 - 1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.
 - 2. Proportion grout in accordance with ASTM C 476, Table 1.
 - 3. Provide grout with a slump of 8 to 11 inches (200 to 280 mm) as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 - 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
 - 2. Verify that reinforcing dowels are properly placed.
 - 3. Verify that substrates are free of substances that would impair mortar bond.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Build chases and recesses to accommodate items specified in this and other Sections.
- B. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.
- C. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- D. Matching Existing Masonry: Match coursing, bonding, color and texture of existing masonry.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

- 1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).
- 2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).
- 3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

- 1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2-inch (12-mm) maximum.
- 2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2-inch (12-mm) maximum.
- 3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2-inch (12-mm) maximum.
- 4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2-inch (12-mm) maximum.
- 5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m), 3/8 inch in 20 feet (9 mm in 6 m), or 1/2-inch (12-mm) maximum.
- 6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m), or 1/2-inch (12-mm) maximum.
- 7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch (1.5 mm).

C. Joints:

- 1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm).

2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch (9 mm) or minus 1/4 inch (6 mm).
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm).

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less-than-nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4 inches (100 mm). Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.
- D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.
- H. Fill cores in hollow CMUs with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- I. Build nonload-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.
 1. Install compressible filler in joint between top of partition and underside of structure above.

3.5 MORTAR BEDDING AND JOINTING

- A. Lay hollow CMUs as follows:
 1. Bed face shells in mortar and make head joints of depth equal to bed joints.

2. Bed webs in mortar in all courses of piers, columns, and pilasters.
3. Bed webs in mortar in grouted masonry, including starting course.
4. Fully bed entire units, including areas under cells, at starting course where cells are not grouted.

- B. Lay solid CMUs with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.
- D. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

3.6 MASONRY-JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch (13 mm) elsewhere. Lap reinforcement a minimum of 6 inches (150 mm).
 1. Space reinforcement not more than 16 inches (406 mm) o.c.
 2. Provide reinforcement not more than 8 inches (203 mm) above and below wall openings and extending 12 inches (305 mm) beyond openings in addition to continuous reinforcement.
- B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.
- C. Provide continuity at corners by using prefabricated L-shaped units.
- D. Cut and bend reinforcing units as directed by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

3.7 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

- A. Anchor masonry to structural steel and concrete, where masonry abuts or faces structural steel or concrete, to comply with the following:
 1. Provide an open space not less than 1/2 inch (13 mm) wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
 2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
 3. Space anchors as indicated, but not more than 24 inches (610 mm) o.c. vertically and 36 inches (915 mm) o.c. horizontally.

3.8 LINTELS

- A. Provide masonry lintels where shown and where openings of more than 12 inches (305 mm) for brick-size units and 24 inches (610 mm) for block-size units are shown without structural steel or other supporting lintels.
- B. Provide minimum bearing of 8 inches (200 mm) at each jamb unless otherwise indicated.

3.9 REINFORCED UNIT MASONRY INSTALLATION

- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.
 - 1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
 - 2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other loads that may be placed on them during construction.
- B. Placing Reinforcement: Comply with requirements in TMS 602/ACI 530.1/ASCE 6.
- C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
 - 1. Comply with requirements in TMS 602/ACI 530.1/ASCE 6 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
 - 2. Limit height of vertical grout pours to not more than 60 inches (1520 mm).

3.10 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.

2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.

END OF SECTION 042200

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. Loose Steel Lintels.
 - 2. Steel framing and supports for applications where framing and supports are not specified in other Sections.

1.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Paint products.
 - 2. Grout.
- B. Shop Drawings: Show fabrication and installation details for metal fabrications.
 - 1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.
- C. Samples for Verification: For each type and finish of extruded nosing and tread.
- D. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

- E. Qualification Data: For qualified professional engineer.
- F. Mill Certificates: Signed by manufacturers of stainless-steel certifying that products furnished comply with requirements.
- G. Welding certificates.
- H. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers certifying that shop primers are compatible with topcoats.

1.5 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 - 2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."
 - 3. AWS D1.6, "Structural Welding Code - Stainless Steel."

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

1.7 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorages and steel weld plates and angles for casting into concrete. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

PART 2 - PRODUCTS

2.1 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Stainless-Steel Sheet, Strip, and Plate: ASTM A 240/A 240M or ASTM A 666, Type 304.
- C. Stainless-Steel Bars and Shapes: ASTM A 276, Type 304.
- D. Steel Tubing: ASTM A 500, cold-formed steel tubing.
- E. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless otherwise indicated.
- F. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

2.3 FASTENERS

- A. General: Unless otherwise indicated, provide Type 304 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.
 - 1. Provide stainless-steel fasteners for fastening aluminum.
 - 2. Provide stainless-steel fasteners for fastening stainless steel.
- B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with hex nuts, ASTM A 563 (ASTM A 563M); and, where indicated, flat washers.
- C. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 325, Type 3 (ASTM A 325M, Type 3); with hex nuts, ASTM A 563, Grade C3 (ASTM A 563M, Class 8S3); and, where indicated, flat washers.
- D. Stainless-Steel Bolts and Nuts: Regular hexagon-head annealed stainless-steel bolts, ASTM F 593 (ASTM F 738M); with hex nuts, ASTM F 594 (ASTM F 836M); and, where indicated, flat washers; Alloy Group 1 (A1).
- E. Anchor Bolts: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563; and, where indicated, flat washers.
 - 1. Hot-dip galvanize or provide mechanically deposited, zinc coating where item being fastened is indicated to be galvanized.
- F. Eyebolts: ASTM A 489.
- G. Machine Screws: ASME B18.6.3 (ASME B18.6.7M).
- H. Lag Screws: ASME B18.2.1 (ASME B18.2.3.8M).
- I. Wood Screws: Flat head, ASME B18.6.1.
- J. Plain Washers: Round, ASME B18.22.1 (ASME B18.22M).

- K. Lock Washers: Helical, spring type, ASME B18.21.1 (ASME B18.21.2M).
- L. Anchors, General: Anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
- M. Cast-in-Place Anchors in Concrete: Either threaded type or wedge type unless otherwise indicated; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, all hot-dip galvanized per ASTM F 2329.
- N. Post-Installed Anchors: Torque-controlled expansion anchors or chemical anchors.
 - 1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5, unless otherwise indicated.
 - 2. Material for Exterior Locations and Where Stainless Steel is Indicated: Alloy Group 1 (A1) stainless-steel bolts, ASTM F 593 (ASTM F 738M), and nuts, ASTM F 594 (ASTM F 836M).

2.4 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Shop Primers: Provide primers that comply with Division 09 painting Sections.
- C. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
 - 1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.
- D. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.
- F. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- G. Concrete: Comply with requirements in Division 03 Section "Cast-in-Place Concrete" for normal-weight, air-entrained, concrete with a minimum 28-day compressive strength of 3000 psi (20 MPa).

2.5 FABRICATION, GENERAL

- A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- D. Form exposed work with accurate angles and surfaces and straight edges.
- E. Weld corners and seams continuously to comply with the following:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.
- G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
- I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
 - 1. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches (3.2 by 38 mm), with a minimum 6-inch (150-mm) embedment and 2-inch (50-mm) hook, not less than 8 inches (200 mm) from ends and corners of units and 24 inches (600 mm) o.c., unless otherwise indicated.

2.6 MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.
 - 1. Fabricate units from slotted channel framing where indicated.
 - 2. Furnish inserts for units installed after concrete is placed.
- C. Galvanize miscellaneous framing and supports where indicated.

- D. Prime miscellaneous framing and supports with zinc-rich primer where indicated.

2.7 LOOSE STEEL LINTELS

- A. Fabricate loose steel lintels from steel angles and shapes of size indicated for openings and recesses in masonry walls and partitions at locations indicated. Fabricate in single lengths for each opening unless otherwise indicated. Weld adjoining members together to form a single unit where indicated.
- B. Size loose lintels to provide bearing length at each side of openings equal to 1/12 of clear span but not less than 8 inches (200 mm) unless otherwise indicated.
- C. Galvanize loose steel lintels located in exterior walls.

2.8 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish metal fabrications after assembly.
- C. Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

2.9 STEEL AND IRON FINISHES

- A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.
 - 1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.
- B. Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.
 - 1. Shop prime with universal shop primer unless zinc-rich primer is indicated.
- C. Preparation for Shop Priming: Prepare surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
- D. Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.
 - 1. Stripe paint corners, crevices, bolts, welds, and sharp edges.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- C. Field Welding: Comply with the following requirements:
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove welding flux immediately.
 - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.
- E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

- A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.
- B. Anchor supports for operable partitions securely to and rigidly brace from building structure.
 - 1. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

3.3 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
 - 1. Apply by brush or spray to provide a minimum 2.0-mil (0.05-mm) dry film thickness.
- B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Division 09 painting Sections.

- C. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION 055000

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. This Section includes the following:
 - 1. Wood blocking and nailers.
 - 2. Plywood backing panels.

1.3 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 - 2. NHLA: National Hardwood Lumber Association.
 - 3. NLGA: National Lumber Grades Authority.
 - 4. SPIB: The Southern Pine Inspection Bureau.
 - 5. WCLIB: West Coast Lumber Inspection Bureau.
 - 6. WWPA: Western Wood Products Association.

1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
 - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
 - 3. For fire-retardant treatments specified to be High-Temperature (HT) type include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
 - 4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

B. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:

1. Preservative-treated wood.

1.5 QUALITY ASSURANCE

A. Forest Certification: For the following wood products, provide materials produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship":

1. Dimension lumber framing.
2. Miscellaneous lumber.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

B. Deliver interior wood materials that are to be exposed to view only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
 2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat all miscellaneous carpentry, unless otherwise indicated.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, materials shall comply with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.
1. Treatment shall not promote corrosion of metal fasteners.
 2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
 3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
 4. Design Value Adjustment Factors: Treated lumber shall be tested according to ASTM D 5664, and design value adjustment factors shall be calculated according to ASTM D 6841.
- C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- E. For exposed items indicated to receive a stained or natural finish, chemical formulations shall not bleed through, contain colorants, or otherwise adversely affect finishes.
- F. Application: Treat items indicated on Drawings, and the following:
1. Concealed blocking.
 2. Plywood backing panels.

2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
 - 1. Blocking.
 - 2. Nailers.
 - 3. Rooftop equipment bases and support curbs.
- B. For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber with 15 percent maximum moisture content of any species.
- C. For blocking not used for attachment of other construction Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

2.5 PLYWOOD BACKING PANELS

- A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm) nominal thickness.

2.6 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

2.7 METAL FRAMING ANCHORS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- B. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.

2.8 MISCELLANEOUS MATERIALS

- A. Flexible Flashing: Self-adhesive, rubberized-asphalt compound, bonded to a high-density, polyethylene film to produce an overall thickness of not less than 0.025 inch (0.6 mm).

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Where wood-preserved-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- C. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- D. Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.
- E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
 - 1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches (406 mm) o.c.
- F. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
 - 1. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches (2438 mm) o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal- (38-mm actual-) thickness.
- G. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- H. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
 - 1. Use inorganic boron for items that are continuously protected from liquid water.
 - 2. Use copper naphthenate for items not continuously protected from liquid water.

- I. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. NES NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
- J. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for screeding or attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

3.3 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061053

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. Plastic-laminate-faced architectural cabinets and countertops.
- 2. Wood furring, blocking, shims, and hanging strips for installing plastic-laminate-faced architectural cabinets unless concealed within other construction before cabinet installation.
- 3. Wood Veneer.

- B. Related Requirements:

- 1. Section 061000 "Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing cabinets and concealed within other construction before cabinet installation.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product, including high-pressure decorative laminate and cabinet hardware and accessories.

- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

- 1. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
- 2. Show locations and sizes of cutouts and holes for electrical switches and outlets and other items installed in architectural plastic-laminate cabinets.

- C. Samples for Initial Selection:

- 1. Plastic laminates.
- 2. PVC edge material.
- 3. Wood Veneer.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and fabricator.
- B. Evaluation Reports: For fire-retardant-treated materials, from ICC-ES.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of products.
- C. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver cabinets until painting and similar operations that could damage woodwork have been completed in installation areas. If cabinets must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" article.

1.8 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install cabinets until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where cabinets are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support cabinets by field measurements before being enclosed and indicate measurements on Shop Drawings.
- C. Established Dimensions: Where cabinets are indicated to fit to other construction, establish dimensions for areas where cabinets are to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.9 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that cabinets can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE-FACED ARCHITECTURAL CABINETS

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of architectural plastic-laminate cabinets indicated for construction, finishes, installation, and other requirements.
1. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with those selections and requirements in addition to the quality standard.
- B. Grade: Premium.
- C. Type of Construction: Frameless.
- D. Cabinet, Door, and Drawer Front Interface Style: Flush overlay.
- E. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or if not indicated, as required by woodwork quality standard.
- F. Laminate Cladding for Exposed Surfaces:
1. Horizontal Surfaces: Grade HGS.
 2. Postformed Surfaces: Grade HGP.
 3. Vertical Surfaces: Grade HGS.
 4. Edges: PVC edge banding, 0.12 inch (3 mm) thick, matching laminate in color, pattern, and finish.
 5. Pattern Direction: As indicated.
- G. Materials for Semiexposed Surfaces:
1. Surfaces Other Than Drawer Bodies: Thermoset decorative panels.
 - a. Edges of Thermoset Decorative Panel Shelves: PVC or polyester edge banding.
 - b. For semiexposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, NEMA LD 3, Grade VGS.
 2. Drawer Sides and Backs: Thermoset decorative panels with PVC or polyester edge banding.
 3. Drawer Bottoms: Thermoset decorative panels.

- H. Concealed Backs of Panels with Exposed Plastic-Laminate Surfaces: High-pressure decorative laminate, NEMA LD 3, Grade BKL.
- I. Drawer Construction: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body.
 - 1. Join subfronts, backs, and sides with glued rabbeted lock joints supplemented by mechanical fasteners.
- J. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 - 1. Match Architect's sample.
 - a. Solid colors, matte finish.
 - b. Wood grains, matte finish.
 - c. Patterns, matte finish.

2.2 WOOD MATERIALS

- A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
 - 1. Wood Moisture Content: 5 to 10 percent.
- B. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of referenced quality standard for each type of woodwork and quality grade specified unless otherwise indicated.
 - 1. Medium-Density Fiberboard: ANSI A208.2, Grade 130, made with binder containing no urea formaldehyde.
 - 2. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde.
 - 3. Softwood Plywood: DOC PS 1, medium-density overlay.

2.3 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets except for items specified in Section 087100 "Door Hardware."
- B. Frameless, Heavy-Duty, Concealed Hinges (European Type): BHMA A156.9, B01602, 135 degrees of opening, self-closing.
- C. Wire Pulls: Back mounted, solid metal, 4 inches (100 mm) long, 5/16 inch (8 mm) in diameter or as indicated.
- D. Catches: Magnetic catches, BHMA A156.9, B03141.
- E. Shelf Rests: BHMA A156.9, B04013; metal, two-pin type with shelf hold-down clip.

- F. Drawer Slides: BHMA A156.9.
 - 1. Grade 1HD-100 and Grade 1HD-200: Side mounted; full-extension type; zinc-plated-steel ball-bearing slides.
 - 2. For drawers more than 3 inches (75 mm) high but not more than 6 inches (150 mm) high and not more than 24 inches (600 mm) wide, provide Grade 1.
 - 3. For drawers more than 6 inches (150 mm) high or more than 24 inches (600 mm) wide, provide Grade 1HD-100.
- G. Door and Drawer Silencers: BHMA A156.16, L03011.
- H. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
 - 1. Satin Stainless Steel: BHMA 630.
- I. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.
- J. Grommets: 2" dia. black molded plastic grommets with matching plastic caps w/ slot for wire passage.
- K. Adjustable Shelf Standards and Supports: Knape and Vogt Series 87-187.
- L. Closet Rods: Provide units equal to Knape and Vogt Series 770 Heavy Duty Round Tubing; 1-5/16" inner dimension 1-3/32", wall thickness .109"; finish-Brilliant Chrome with manufacturer's compatible support 764 flange for round tubing.

2.4 COUNTERTOPS

- A. Countertops, General: Provide smooth, clean exposed tops and edges in uniform plane free of defects. Provide front and end overhang of 1 inch (25 mm) over base cabinets.
- B. Plastic-Laminate Tops: Plastic-laminate sheet, shop bonded to both sides of 1-1/8-inch (29-mm) plywood or particleboard. Sand surfaces to which plastic laminate is to be bonded.
 - 1. Plastic Laminate for Flat Tops: Grade HGS.
 - 2. Plastic Laminate for Formed Tops: Grade HGP.
 - 3. Plastic Laminate for Backing: Grade BKL.
 - 4. Provide 3-mm PVC edging on front edge of top, on top edges of backsplashes and end splashes, and on ends of tops and splashes.
 - 5. Support Brackets: Hefele Hebgo 287.74.052 or equal.
- C. Where indicated, provide 1-1/2" thick maple butcher block countertops with clear sealer.

2.5 WOOD VENEER

- A. Quality Standard: Unless otherwise indicated, comply with AWI's AWMAC's and WI's Architectural Woodwork Standards.

1. Grade: Premium or Custom.
2. Wood Species: White Oak.
3. Cut: Plain sliced.
4. Veneer Matching: Book matching.
5. Grain Direction: Vertical with continuous vertical matching.
6. Stain: Architect has full range of manufacturer's stain colors.

2.6 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide metal expansion sleeves or expansion bolts for post-installed anchors. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.
- C. Adhesives: Do not use adhesives that contain urea formaldehyde.

2.7 FABRICATION

- A. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- B. Fabricate cabinets to dimensions, profiles, and details indicated.
- C. Complete fabrication, including assembly and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
- D. Shop-cut openings to maximum extent possible to receive hardware, appliances, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition cabinets to average prevailing humidity conditions in installation areas.
- B. Before installing cabinets, examine shop-fabricated work for completion and complete work as required.

3.2 INSTALLATION

- A. Grade: Install cabinets to comply with same grade as item to be installed.
- B. Assemble cabinets and complete fabrication at Project site to the extent that it was not completed in the shop.
- C. Install cabinets level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- D. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork.
 - 1. Use filler matching finish of items being installed.
- F. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
 - 1. Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches (400 mm) o.c. with No. 10 wafer-head screws sized for not less than 1-1/2-inch (38-mm) penetration into wood framing, blocking, or hanging strips or No. 10 wafer-head sheet metal screws through metal backing or metal framing behind wall finish.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective cabinets, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean cabinets on exposed and semiexposed surfaces.

END OF SECTION 064116