# FRANKLIN COUNTY CONVENTION FACILITIES AUTHORITY

# PROJECT MANUAL

for the

## Greater Columbus Convention Center
## Employee Locker Room, Restroom, and
## Back of House Renovation Project

Technical Specifications Prepared By:

**BBCO**

**September 10, 2024**

# NOTICE TO BIDDERS
# FRANKLIN COUNTY CONVENTION FACILITIES AUTHORITY
## Greater Columbus Convention Center
## Employee Locker Room, Restroom and Back of House Renovation

Sealed proposals will be received by the Franklin County Convention Facilities Authority, hereinafter referred to as the "Owner" of the Greater Columbus Convention Center ("GCCC"), 400 N. High St., Columbus, Ohio 43215 until **October 1, 2024, at 3:00 PM** local time and will be publicly opened and read aloud immediately thereafter, for the furnishing of materials and performing the labor for the execution and construction of:

**GCCC Employee Locker Room, Restroom, and Back of House Renovation**

Owner's Estimate: $1,000,000

in accordance with specifications prepared by BBCO. All information for bidders, including the Project Manual, Form of Proposal, Plans, Technical Specifications, Contract, Contract Bond and other Contract Documents (collectively, "Bid Documents") may be examined at:

Franklin County Convention Facilities Authority
400 N. High Street, 4th Floor
Columbus, Ohio 43215

Requests for copies of Bid Documents as well as questions regarding plans and specifications should be addressed to Jordan Edmonds, In-House Counsel, Franklin County Convention Facilities Authority, email: jedmonds@fccfa.org. Bid Documents will also be available on the Authority's website: www.meetusincolumbus.com.

No bidder may withdraw their bid within 60 days after the actual date of the bid opening, except as provided for in the Bid Documents.

Each bid must be accompanied by a Bid Guaranty and Contract Bond in the exact form included in the Bid Documents and meeting the requirements of Section 153.54 of the Ohio Revised Code.

State of Ohio prevailing wage rates and Equal Employment Opportunity requirements are applicable to this bid invitation for all work performed pursuant to this contract.

The Franklin County Convention Facilities Authority reserves the right to waive any informalities or in its sole discretion, to reject any or all bids.

**Bids shall be sealed and delivered on or before October 1, 2024, at 3:00 PM EST to:**

**Franklin County Convention Facilities Authority**
**400 North High Street, 4th Floor**
**Columbus, Ohio 43215**

## INSTRUCTIONS TO BIDDERS

## GENERAL REQUIREMENTS & INFORMATION

a) Bidder shall inspect all plans and specifications and visit the site of the work to verify existing conditions and to become familiar with the conditions under which the work will be performed.

b) The Form of Proposal, Bid Guaranty, Responsibility Analysis Form, Project Schedule, and all other required submittals, each fully executed, are to be submitted in sealed form and addressed to the Franklin County Convention Facilities Authority as provided for in the Notice to Bidders. **Interested bidders must provide one original and three hard copies of all required submittals.**

c) Owner & Architect:

1) The Owner is:

Franklin County Convention Facilities Authority (FCCFA)
400 North High Street, 4th Floor
Columbus, Ohio 43215-2096
Phone: 614-827-2800

2) The Architect is:

BBCO Design, LLC
326 South High Street, Suite 500
Columbus, Ohio 43215
Phone: 614-443-2524

d) The Project consists of providing all labor, materials, equipment, and services necessary for the timely and proper completion of construction for the renovation of back of house spaces including employee locker rooms, restrooms, lunchroom, main service corridor, and storage rooms as described within the Project Manual, drawings, and technical specifications.

Bidders are responsible for visiting the site to determine existing conditions. No plea of ignorance of conditions that exist, or of conditions or difficulties that may be encountered in the execution of the work, as a result of the failure to make such examination and investigation, will be accepted as an excuse for any failure or omission on the part of the bidders to fulfill in every respect all the requirements of the contract, nor will the same be accepted as a basis for any claim whatsoever for extra compensation or for an extension of time.

## ARTICLE 1. PROPOSALS

a) For lump sum bids, separate bids will be received for any or all divisions of work shown on the Form of Proposal. If not bidding a given contract on the Form of Proposal mark it "N/A".

b) In the case of unit price bids, the Bidder shall submit bids on all items listed, unless other instructions are noted in the Form of Proposal.

Unless otherwise expressly provided in the Project Manual and related bid documents, such unit prices shall be fully-loaded rates that include, but are not limited to, all overhead, profit, labor, materials, equipment, services, insurance and bonding costs necessary for the timely and proper installation of the item for which the unit prices are requested. The unit prices quoted in the proposal shall be the basis for any change orders entered into under the contract, unless the Owner determines that the use of such unit prices will cause substantial inequity to either the bidder or the Owner.

c) **The Proposal shall contain the following documents:**

1) The Form of Proposal (bid)
2) The Bid Guaranty
3) EEO Certification Clause
4) Non-Discrimination Policy Compliance
5) Contractor's Review Certificate
6) Manufacturer's Declaration and Subcontractor Declaration
7) Declaration of Insurance
8) Project Schedule
9) Responsibility Analysis Form

d) The wording of the Form of Proposal shall be used without change, alteration, or addition (except as provided for in the Project Manual). Any other change in the wording may cause the bid to be rejected; however, the Owner reserves the right to waive any informalities not affecting the substance of the bid.

e) The forms used in submitting the bid shall be those furnished by the Owner in the Project Manual.

f) The bid shall contain the Bid Guaranty meeting the requirements of Section 153.54 of the Ohio Revised Code.

g) Bidders shall take the following precautions in preparing bids:

1) Sign the bid. Failure to do so shall result in rejection of the bid. Bids shall be signed with the name typed below the signature. A bidder that is a corporation shall sign its bid with the legal name of the corporation followed by the name

of the state of incorporation and the legal signature, including title, of an officer authorized to bind the corporation to a contract.

2) Alternates:

The Owner has requested bids on alternates and, the bidder should include the cost of the alternates requested on its Form of Proposal.

Where the Form of Proposal provides for quoting either an addition or deduction for an "Alternate," indicate whether the sum named is an addition or deduction by ruling out the words not applicable. Any alteration or erasure must be initiated by the bidder.

All requested alternates shall be bid by all bidders. If no change in the base bid is required enter "no change". Do not mark with any notation other than the cost change or "no change" (e.g., "N/A" or "No Bid", shall be taken as meaning "No Change" and a cost of $0.00 shall be used in determining the lowest and best bidder and preparation of the contract). If a bidder does not accept a value of $0.00 for any incorrectly marked alternates accepted by the Owner, the bid shall be considered non-responsive and be grounds for the rejection of the bid. At the time of awarding the contract, the Owner will select or reject alternates as it determines is in its best interest.

If, during the progress of the work, the Owner desires to reinstate any alternate not included in the contract, the Owner reserves the right to reinstate the alternate at the price bid by the bidder provided that such action is taken in sufficient time so as not to delay the progress of the work or cause the bidder additional expense.

3) Complete and sign the Equal Employment Opportunity Certification attached to the Form of Proposal.

4) Bidders shall acknowledge and note receipt of addenda on the Form of Proposal.

5) Bids shall not be submitted by facsimile, email, or other electronic forms of transmission.

6) Bids shall be enclosed in a sealed opaque envelope with the bidder's name and the title of the project printed in the upper left-hand corner and addressed as follows: Offices of the Franklin County Convention Facilities Authority, 400 N. High St., Fourth Floor, Columbus, Ohio 43215.

h) All bids are valid for a period of sixty (60) days after the date of opening bids. A bidder for a contract with the Owner may withdraw their bid from consideration if the price

bid was substantially lower than the other bids, providing the bid was submitted in good faith and the reason for the price bid being substantially lower was a clerical mistake as opposed to a judgment mistake and was actually due to an unintentional and substantial quantity of work, labor, or material made directly in the compilation of the bid. Request to withdraw such bid must be made in writing and filed with the Owner within two (2) business days after the opening of bids.

**ARTICLE 2. METHOD OF AWARD**

a) The Owner will receive bids for each of the contracts as set forth on the Form of Proposal and as defined in the Project Manual.

Subject to the right of the Owner to reject any and all bids and as provided below, the Owner will award a single contract for each of the contracts/bid packages listed in the Project Manual or one or more combined contracts for combination(s) of the bid packages. Bidders must furnish all information requested on or accompanying the Form of Proposal. Failure to do so may result in disqualification of the bid.

b) Determination of Lowest and Best Bid (see Instructions to Bidder's Responsibility Analysis Form):

Subject to the right of the Owner to reject any or all bids, the Owner will award the contract for the work to the bidder submitting the lowest and best bid, taking into consideration accepted alternates. In determining which bid is the lowest and best bid, the Owner may take into consideration not only the amount of the bid but such of the following criteria as it, in its sole discretion, deems appropriate and may give such weight thereto as it deems appropriate:

1) The bidder's financial ability to complete the contract successfully and on time without resort to its Surety;

2) The bidder's prior experience with similar work on comparable or more complex projects;

3) The bidder's prior history of the successful and timely completion of similar projects;

4) The bidder's equipment and facilities;

5) The adequacy, in numbers and experience, of the bidder's work force to complete the contract successfully and on time;

6) The bidder's prior experience on other projects of the Owner, including the bidder's demonstrated ability to complete its work on these projects in accordance with the contract documents and on time, and its ability to work with the Owner.

7) The bidder's compliance with federal, state, and local laws, rules, and regulations, including but not limited to, the prevailing wage law and Occupational Safety and Health Act.

8) All of the foregoing with respect to each of the subcontractors which the bidder intends to use on the Project;

9) Any changes to the sample contract suggested by the bidder; and

10) Depending upon the type of work, other essential factors, as the Owner may determine.

Absent special circumstances, no bidder shall be deemed responsible unless the bidder has been in existence at least thirty-six months.

c) Acceptance of the contract within the 60-day period following the opening of bids automatically assumes that if materials, labor or subcontract cost increases, they shall be absorbed by the successful bidder. Award of contracts beyond the 60-day period shall be reviewed for increased costs after award of the contract only if the cause for delay is no fault of the successful bidder.

d) If, in the opinion of the Owner, the acceptance of the lowest bid is not in the best interest of the Owner, the Owner may accept at its discretion, another bid so opened, or reject all bids and advertise for other bids. Such advertisement will be for such time, in such form and in such newspapers as may be directed by the Owner.

e) No contract shall be awarded if the low bidder is more than 20% below the median of all others bids received for projects where the estimate is $100,000 or more, and no contract shall be awarded if the low bidder is more than 25% below the median of all other bids received for projects where the estimate is less than $100,000, unless the following occurs and/or are reviewed.

1) An interview with the bidder, the purpose of which is to determine what, if anything, has been overlooked in the bid in question, and to analyze the process envisioned by the bidder to complete the work in question.

2) The financial status of the bidder and its Surety based upon certified financial statements submitted by each.

3) Receipt of written confirmation by the Surety that it has reviewed the bid in question.

4) The record of the bidder in performing other public works projects in the past.

If after review and consideration, the acceptance of the lowest and best bid is not in the best interest of the Owner, the Owner may accept another proposal so opened or reject all proposals and advertise for other bids.

f) In accordance with Ohio Revised Code 153.12, no contract will be awarded if the price of the contract exceeds the published estimate by more than twenty percent.

g) If individual and combined contract bids are included on the Form of Proposal and a bidder opts to submit multiple bids, a bidder shall not be permitted to be determined to be the low bidder for any individual contract bid if that bidder withdraws a lower combination contract bid for any reason (including omission of any work item or math/clerical errors).

h) The Owner reserves the right to disqualify bids, before or after opening, upon evidence of collusion with intent to defraud or other illegal practices on the part of the bidder.

i) After determination of the lowest and best bid, the selected contractor shall receive a Recommendation of Award, a copy of the full unexecuted contract and an unexecuted copy of the Notice of Authority to Proceed ("NTP") with construction. The successful bidder ("Contractor") shall then provide the required items for formal execution of the contract and NTP by the Owner all in accordance with Article 8. If the Project Schedule requires that the Contractor commence work (or make commitments and preparations to commence the work) prior to receipt of the fully executed contract and NTP, the Contractor, in order to meet the requirements of the Project Schedule, shall be solely responsible to notify the Owner in writing 10 business days before the date that such NTP is required. The Owner may direct the Contractor to proceed with the work with an executed NTP before the formal execution of the contract. If the Contractor has met all of the requirements for executing a contract and the Owner chooses not to execute the contract, the Contractor shall be reimbursed for all reasonable costs incurred as a result of starting work under the NTP and prior to receipt of a fully executed contract.

j) No contract shall be entered into until:

1) The Industrial Commission has certified that the corporation, partnership, or person so awarded the contract has complied with Sections 4123.01 to 4123.99 (Workers' Compensation), inclusive of the Ohio Revised Code;

2) If the bidder so awarded the contract is a foreign corporation, the Secretary of State has certified that such corporation is authorized to do business in this state; and, if the bidder so awarded the contract is a non-Ohio person or partnership, then until the bidder has filed with the Secretary of State a Power of Attorney designating the Secretary of State as its agent for the purpose of accepting service of summons in any action brought under Section 153.05 of the Revised Code or under Sections 4123.02 to 4123.99 inclusive, of the Ohio Revised Code.

3) The successful bidder shall notify the Owner, within 3 calendar days after receipt of the Recommendation of Award, the provisions the bidder has made or reasonably can be expected to make in order to meet the provisions of the Owner's Disadvantaged Business Participation Plan. Notification shall include a statement of the bidder's present intention concerning which portions of the contract will be awarded to disadvantaged business subcontractors and materialmen and the identity of the intended subcontractor or materialman, if any. Within such five (5) calendar day period, the successful bidder may request in writing a longer period of time to meet the provisions of the plan. Such request shall set forth the reasons additional time is required. The Owner shall notify the successful bidder in writing of its approval or disapproval of the request. If additional time is approved by the Owner or if formal execution of the contract is delayed due to any failure of the bidder to meet the requirements of the Owner's Disadvantaged Business Participation Plan, the bidder shall remain responsible for all the requirements and timelines of the Project.

4) The required certificates of insurance coverage (as set forth in the contract) and bond are submitted to the Owner.

5) A copy of the contract is forwarded to the successful bidder by the Owner, signed by the successful bidder and returned to the Owner.

6) All requirements of Article 8 herein have been satisfied.

The contract cannot be fully executed until this information is provided. If the bidder fails to provide the documents within the required time, the bidder is solely responsible to meet all Project Schedule requirements regardless of the date of the formal execution of the contract.

**ARTICLE 3. BID GUARANTY**

a) All Bid Guaranties and Contract Bonds must be satisfactory to the Owner.

b) The Bid Guaranty and Contract Bond meeting the requirements of Section 153.54(B) of the Ohio Revised Code, as furnished by the Owner, shall be used without change of wording.

c) <u>If the amount is left blank, the penal sum of the Bid Guaranty and Contract Bond will be the full amount of the bidder's base bid plus add alternates; alternatively, if completed, the amount must not be less than the full amount of the base bid plus add alternates, stated in dollars and cents. A percentage is not acceptable.</u>

d) The Bid Guaranty and Contract Bond must be signed by an Authorized Agent of an acceptable Surety Bonding Company and by the bidder. The bond must be issued by a surety company authorized by the Ohio Department of Insurance to transact business in the State of Ohio. It is essential that the bond be issued by a surety company which

can adequately demonstrate a record of competent underwriting, efficient management, adequate reserves, and soundness of investments.

e) Bid Guaranties and Contract Bonds must be supported by credentials showing the Power of Attorney of the Agent.

f) In lieu of the Bid Guaranty referred to in Article 2(b) above, the bidder may submit the Bid Guaranty provided in Division (C) of Section 153.54 of the Ohio Revised Code, in the form of a Certified Check, Cashier's Check, or Letter of Credit pursuant to Chapter 1305 of the Ohio Revised Code. A Bid Bond is not acceptable for use as a Bid Guaranty.

g) The amount of the Certified Check, Cashier's Check or Letter of Credit shall be equal to 10% of the base bid plus add alternates.

h) The Bid Guaranty shall be payable to the Franklin County Convention Facilities Authority.

i) Bid Guaranties shall be returned to all unsuccessful bidders immediately after the contract is executed.

j) The Certified Check, Cashier's Check or Letter of Credit shall be returned to the successful bidder upon filing of the Bond required in Division (C), Section 153.54 of the Ohio Revised Code. The Performance Bond shall not be deemed "filed" until the Contract is fully executed.

**ARTICLE 4. STANDARDS – SUBSTITUTIONS**

a) Those articles, devices, materials, forms of construction, fixtures, etc., named in the specifications to denote the kind and quality required shall be known as "Standards" and all bids shall be based on the same.

b) Where two or more "Standards" are named together, the Contractor may furnish any one of the "Standards" named, but the Contractor shall make their selection known to the Owner within thirty (30) days following the award of the contract. Failure to comply with this requirement will automatically hold up payment requests from the Contractor in view of possible improper materials being used on the project. The first "Standard" listed shall be considered as the basis of design. If the Contractor opts to use a named "Standard" other than the basis of design and this results in any necessary modifications to any other element of the contract documents, the Contractor shall be responsible for all associated additional costs.

c) Bidders desiring consideration for the use of material, equipment, etc., not named in the specifications may submit proposals for the substitution of same for "Standards" as specified, using the "Substitution Sheet" attached to the proposal form and listing, for each proposed change: (1) the "Standard" specified, (2) the substitution, and (3) the

change in bid price, (or "no change"). Proposed substitutions must be included on the "Substitution Sheet" to be considered. Complete specifications and descriptions of any proposed substitutions being considered for acceptance shall be furnished to the Owner promptly upon request. Acceptance of substitutes shall be at the sole discretion of the Owner.

d) Any substitution accepted must be incorporated in the formal contract.

e) Substitution shall not affect the determining of lowest and best bid.

f) No substitution will be considered prior to receipt of bids unless written request for approval has been received by the Owner at least **10 days prior to the date for receipt of bids**. A statement setting forth changes in other materials, equipment, or other portions of the work, including changes in the work of other contractors that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Owner's decision of approval or disapproval of a proposed substitution shall be final. If the brand or product is acceptable, the Owner will approve it prior to bidding in an addendum issued by the Owner to all bidders on record.

g) In proposing a substitution, the bidder represents and warrants that each proposed substitution will not result in any changes to the project, including changes to the work of other contractors, or any decrease in the performance of any equipment or systems to be installed in the project and agrees to pay any additional costs incurred by the Owner as a result of a substitution which is accepted.

h) **Following the award of the contract, there shall be no substitutions**, except pursuant to a change order. The Owner in its sole discretion may decline to consider a substitution for a change order.

i) If the specified materials and/or manufacturers are no longer available, it is the bidder's responsibility to notify the Owner during the bidding period. Substitutions made during the construction period resulting from these conditions (i.e., failure of the bidder to notify Owner) will be made solely at the Owner's discretion.

## ARTICLE 5. EXAMINATION OF DOCUMENTS

a) Each bidder shall examine all bid documents, including, but not limited to, the Project Manual, Project Schedule, Notice to Bidders, Form of Proposal, addenda, plans, specifications, form contract. etc., for all other divisions of the work as well as its own, noting particularly all requirements which will affect its work in any way. These Bid Documents shall become the Contract Documents, as defined in the contract that governs the relationship between the Contractor and the Owner when the contract is executed. Failure of a bidder to become fully acquainted with the amount and nature of work required to complete its division of the work in conformity with all requirements for the project as a whole will not be considered subsequently as a basis for extra compensation.

b) Should any requirements in the plans and/or specifications for the project, as a whole, appear to a bidder to be in disagreement with those for the part of the work on which the bidder proposes to bid or in the case of a discrepancy in the plans and specifications, a request for clarification, in writing should be addressed to the Owner at least 5 calendar days prior to the date set for opening bids. The Owner will reply to all such inquires through an addendum. Verbal interpretations will not be honored and are not legally binding. The Owner will forward a copy of same to all individuals holding plans and specifications. If, in examining the contract documents, the bidder discovers an apparent violation of the Ohio Basic Building Code, or other applicable statute or regulation, the bidder shall report such apparent violation to the Owner promptly. However, this provision shall not be construed as imposing responsibility on the bidder to ensure conformity of the plans and specifications to the Ohio Basic Building Code and other applicable regulations.

c) No allowance will be made subsequently for any omission, error, or negligence of the bidder.

d) Unless specifically assigned to one contract for all aspects of the project, each bidder is responsible to include all requirements for all sections contained in the Project Manual, and Project Schedule, in the base bid amount. (Contract is not limited to only those specifications sections listed in the contract summary of work).

**ARTICLE 6. OPENING OF BIDS**

Bids shall be opened and read publicly at the time and place named in the Notice to Bidders. The time for opening bids shall be extended at the discretion of the Owner with no further advertising when an addendum to the plans or specifications is issued within 72 hours of the scheduled bid opening, excluding Saturdays, Sundays and Legal Holidays.

**ARTICLE 7. ADDENDA**

a) Any explanation, interpretation, correction, or modification of the Project Manual or Bid Documents will be issued in the form of an addendum, which shall be the only means considered legally binding; explanations, interpretations, etc., made by any other means shall <u>not</u> be legally binding. All addenda shall become a part of the contract documents.

b) Bidders shall submit questions to the Owner no later than 5 days prior to the advertised bid date, to allow sufficient time for the Owner to respond. All addenda will be issued except as hereafter provided and mailed or otherwise furnished to persons who have obtained Bid Documents for the project, at least 72 hours prior to the published time for the opening of bids; excluding Saturdays, Sundays, and legal holidays. If any addendum is issued within such 72-hour period, then the time for opening of bids shall be extended one week with no further advertising of bids required.

c) Copies of each addendum will be sent only to the bidders to whom Bid Documents have been issued. Receipt of addenda shall be indicated by bidders in the space provided on the Form of Proposal.

d) Each bidder shall carefully read and review the Bid Documents and immediately bring to the attention of the Owner any error, omission, inconsistency, or ambiguity therein.

e) If a bidder fails to indicate receipt of all addenda through the last addendum issued by the Owner on its Form of Proposal, the bid of such bidder will be deemed to be responsive only if:

1) The bid received clearly indicates that the bidder received the addendum, such as where the addendum added another item to be bid upon and the bidder submitted a bid on that item; or

2) The addendum involves only a matter of form or is one which has either no effect or has merely a trivial or negligible effect on price, quantity, quality, or delivery of the item bid upon.

## ARTICLE 8. ADDITIONAL SUBMITTAL REQUIREMENTS

a) Upon receipt of the Notification of Recommendation of Award (NOA), the successful bidder will submit the following to the Owner:

1) One copy of the Executed Contract;
2) Contract Bond;
   a) Including Certificate of Compliance issued by the Department of Insurance, showing the Bonding Company is Licensed to do business in the State of Ohio.
   b) Including a Financial Statement of the Bonding Company.
3) Certificate of Insurance;
4) Completed W-9 Form;
5) Workers' Compensation Certificate (Industrial Commission certification of O.R.C. requirements).

If the bidder fails to provide the documents within the required time, the bidder is solely responsible to meet all Project Schedule requirements regardless of the date of the formal execution of the contract. Failure of the bidder to provide these documents within 15 days of receipt of the NOA may result in rejection of the bid.

b) The successful bidder shall notify the Owner, within three calendar days of receipt of the NOA, of the provisions the bidder has made or reasonably can be expected to make in order to meet the provisions of the Owner's Disadvantaged Business Participation Plan.

c) Within fifteen calendar days of receipt of the NOA or such longer time as may be permitted in writing by the Owner, the apparent low bidder will submit the following to Owner:

1) The list of all proposed subcontractors, suppliers, manufacturers, and vendors.

After approval by the Owner of the list submitted by the successful bidder, the list shall not be changed unless written approval of the change is authorized by the Owner.

2) Schedule of Values including a breakdown of labor and material for the project, and the sum thereof.

3) A current name of the person or persons proposed to represent the bidder as project manager(s) or superintendent(s).

4) A shop drawing and submittal schedule (includes every submittal requirement in the specifications).

d) Within 15 calendar days of receipt of the NOA, the successful bidder is required to submit a Project Schedule to the Owner which shall, at a minimum, show detailed work operations and durations. The intent of this requirement is to allow the Owner an opportunity to more fully understand how the Contractor intends to complete the detail of the project. This detailed working schedule shall identify workforce requirements and be thoroughly coordinated with the Owner and all other subcontractors. The Contractor shall prosecute its work, at the direction of the Owner, furnishing at all times sufficient skilled workers, materials, and equipment to perform its work to meet the line-item progress required by the Project Schedule, so as not to delay the completion of the whole or any part of the work. The Owner anticipates construction will begin on November 1, 2024, and be completed prior to February 15, 2025.

## ARTICLE 9. TAXES

Materials purchased for use or consumption in connection with the proposed work will be exempt from the State of Ohio Sales Tax as provided for in Section 5739.02 of the Ohio Revised Code and also from the State of Ohio Use Tax, Section 5741.01.

## ARTICLE 10. LIQUIDATED DAMAGES

Liquidated damages shall apply to the terms of the contract.

## ARTICLE 11. PROJECT SCHEDULE

Each bidder is required to submit a proposed schedule with the bid which shall at a minimum, show work operations and duration.

## ARTICLE 12. OWNER'S RIGHT TO WAIVE DEFECTS AND IRREGULARITIES

a) The Owner reserves the right to waive any and all irregularities provided that the defects and irregularities do not affect the amount of the bid in any material respect or otherwise give the bidder a competitive advantage.

b) By submitting a bid, the bidder agrees that (i) the Owner's determination of whether a defect or irregularity affects the amount of the bid in any material respect or otherwise gives the bidder a competitive advantage will be final and conclusive, and (ii) the bidder will pay the Owner's attorneys' and consultants' fees related to any challenge to the bid procedure or process, brought directly or indirectly by the bidder and/or any of its affiliates, which is unsuccessful.

## ARTICLE 13. PRE-BID MEETING

A pre-bid meeting and site tour will be held on Monday September 16, 2024, at 10:00 AM EST. Potential bidders should plan to meet in the Trott Meeting Room located on the second floor of the Greater Columbus Convention Center at 400 N. High St., Columbus, OH 43215.

## ARTICLE 14. CONTINUITY OF CONVENTION CENTER OPERATIONS

The Contractor shall plan and perform all work without creating any interruption or disruption to normal Greater Columbus Convention Center operations and functions. All necessary interruptions and disruptions must be minimized, planned, scheduled, and approved by the Owner. In preparation of the bid, bidders may not assume the use of any activity or operation that will result in the disruption of convention center activities without the prior approval of the Owner.

## ARTICLE 15. PREVAILING OR MINIMUM WAGE RATES

a) Each laborer, worker or mechanic employed by the bidder for the work herein specified or by the subcontractor or by other persons performing work for the project shall be paid not less than the prevailing wage rates as determined by the Department of Industrial Relations of the State of Ohio in accordance with Chapter 4115 of the Ohio Revised Code.

b) In the event the wage rate for any labor classification is changed between the time the rates are published herein and the time the work required by the contract is performed, or in the event any class of labor employed is not included in the published schedule of prevailing wages, then the rate prevailing at the time the work is actually performed, as ascertained and determined by the Department of Industrial Relations of the State of Ohio or the US Department of Labor, shall govern the work under the contract. No increase in the contract sum will be allowed for any later increase in the prevailing rates or wages as they may apply to this work.

## ARTICLE 16. PAYROLL SUBMITTAL

a) All contractors and subcontractors shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than the prevailing rate of wages, as set forth in the contract documents. Such records shall be preserved for a period of three years from the date of completion of the contract.

b) The Contractor and each subcontractor shall deliver to the Owner a certified copy of their payroll, with each month's payment application for the previous month's weekly payrolls which shall show for each employee paid any wages, their name, current address, social security number, number of hours worked each day during the pay period and the total hours worked for each week, their hourly rate of pay, their job classification, fringe payments, and deductions from their wages. In addition, the Contractor, at the beginning of the performance under the contract, shall give to the Owner a schedule of the dates during the life of the contract with the Owner on which the Contractor is required to pay wages to employees and a complete list of all subcontractors. Upon completion of the contract and prior to final payment, the Contractor and each subcontractor shall file with the Owner an affidavit stating full compliance with Chapter 4115 of the Ohio Revised Code. The Owner will withhold payment of any monthly/partial and/or final payment until all requirements have been met in accordance with the terms of the contract.

## ARTICLE 17. INSURANCE

Insurance requirements shall be defined in the contract.

## DIVERSITY, EQUITY, AND INCLUSION POLICY

Through the adoption of this Diversity, Equity, and Inclusion Policy ("DEI Policy") the Franklin County Convention Facilities Authority ("FCCFA") affirms its commitment to equal opportunity and non-discrimination in all aspects of its operations including, but not limited to, contracting and procurement, employee recruitment and selection, compensation and benefits, professional development and training, promotions, transfers, layoffs, and terminations. Pursuant to this DEI Policy the FCCFA will not participate in either active or passive unlawful discrimination of any type and will strive to maintain an open, diverse, and inclusive workplace for all employees, officers, contractors, and subcontractors.

It is the position of the FCCFA that discrimination of any kind based upon age, sex, race, color, religion, disability, national origin, genetic information, ethnicity, ancestry, sexual orientation, gender identity or expression, family or marital status, military or veteran status, or any other basis prohibited by the laws of the United States, the State of Ohio, or the City of Columbus ("Protected Status") is prohibited. No person shall be unlawfully denied the benefit of, or otherwise be discriminated against in connection with their employment, the award or performance of any contract, or the modification of any contract or award.

The fundamental tenets of this DEI Policy are as follows:

- All Contractors shall have an equal opportunity to compete with respect to contracting and procurement activities of the FCCFA, regardless of age, sex, race, color, religion, disability, national origin, genetic information, ethnicity, ancestry, sexual orientation, gender identity or expression, family or marital status, military or veteran status, or any other Protected Status;

- No Contractor or FCCFA employee shall have engaged or shall engage in any kind of unlawful discrimination involving age, sex, race, color, religion, disability, national origin, ethnicity, ancestry, genetic information, sexual orientation, gender identity or expression, family or marital status, or any other Protected Status, whether or not such unlawful discrimination is related to the FCCFA or any contract with the FCCFA;

- The FCCFA and any Contractor seeking to do business with the FCCFA shall, whenever possible, craft bid specifications which enable MBE/WBE participation that is consistent with demographics for the City of Columbus;

- The FCCFA through its staff, facility management companies and other contractors will (i) monitor and provide periodic reports to the FCCFA Board of Directors regarding compliance by the FCCFA and its Contractors with this DEI Policy; (ii) collect and record information on the inclusion of minorities and women in their contracting, procurement, and workforce activities; and (iii) analyze data to evaluate the inclusion of minorities and women in the FCCFA's contracting, procurement, and workforce activities. Specific reporting requirements shall include:

- Semi-annual diversity profile updates from all key service partners and facility management companies;
- Documentation of contractor compliance with this DEI Policy in any recommendation of award presented to the FCCFA Board of Directors;
- Monthly board reports describing MWBE participation rates for all ongoing construction projects.

- The FCCFA shall review this DEI Policy periodically to ensure that it effectively promotes and achieves diversity, equity, inclusion, non-discrimination and equal opportunity in connection with the FCCFA's operations, and all contracting and procurement activities; and

- All Contractors and employees shall comply with this DEI Policy. A Contractor's success or failure to comply with this DEI Policy will be a factor in any award of a contract to such Contractor. An employee's success or failure to comply with this DEI Policy will be a factor considered in connection with any disciplinary measures or continued employment with FCCFA.

The FCCFA through its staff, facility management companies and other contractors shall be responsible for implementing, monitoring and evaluating this DEI Policy.

If the FCCFA determines that the objectives of this DEI Policy are not being achieved, the FCCFA Board of Directors may, in their discretion, direct the Executive Director to conduct further investigations into the reasons for not achieving such objectives.

This DEI Policy applies to all contracting and procurement activities of the FCCFA, including contracting for construction, professional and non-professional services and procurement of goods and supplies.

This DEI Policy shall be referenced in each bid and Request for Proposal or Qualifications document issued by the FCCFA. A Contractor's failure to comply with this DEI Policy may result in (a) debarment from participation in future FCCFA contracting opportunities, (b) liability for breach of contract and (c) the enforcement of any other remedies available under the related contract or applicable law.

# FORM OF PROPOSAL

Submitted By:_____

on:_____ , 2024

To: Franklin County Convention Facilities Authority
400 North High Street, 4th Floor
Columbus, Ohio 43215-2096

having read the Project Manual, Specifications and examined the Drawings entitled:

**GCCC Employee Locker Room, Restroom, and Back of House Renovation**

as prepared by the Franklin County Convention Facilities Authority for the construction of said project and having also received, read and included their provisions in the bid all addenda thereto as follows:

Addendum No:_____ Dated: _____ Addendum No: _____ Dated: _____

Addendum No:_____ Dated: _____ Addendum No: _____ Dated: _____

and having also inspected the site of and the conditions affecting and governing the construction of said project, the undersigned proposes to furnish all materials and perform all labor as specified, described, shown, and required in the Project Manual, Specifications and Drawings for the Work, for the indicated sum:

(NOTE: Fill in all spaces of items being bid and quote the sum in both words and figures.)

ESTIMATE FOR PROJECT
**($1,000,000.00)**

Total material, labor and services for the project – **GCCC Employee Locker Room, Restroom, and Back of House Renovation** - for the lump sum amount of:

_____

Dollars ($ _____ )

**Alternate 1** (estimate $150,000):_____

# FORM OF PROPOSAL (continued)

## EXECUTION OF PROPOSAL

**NOTE A: TIME OF COMPLETION**

a) It is understood and agreed that the work embodied in this contract shall be completed no later than the completion date stated within the contract, unless an extension of time is granted by the Owner.

b) Upon failure to have all work completed within the period of time above mentioned, the Contractor shall forfeit and pay, or cause to be paid, to the Owner for and as liquidated damages to be deducted from any payment due or to become due to the said contractor, the sum set forth in the following table for the size of contract, for each and every day thereafter that the said work remains in an unfinished condition.

| DOLLAR AMOUNT OF CONTRACT | DOLLARS PER DAY |
|---|---|
| $0 to $100,000.00 | $250.00 |
| $100,000.01 to $500,000.00 | $500.00 |
| $500,000.01 to $1,000,000.00 | $1,000.00 |
| $1,000,000.01 to $10,000,000.00 | $2,500.00 |
| $10,000,000.01 and up | $5,000.00 |

**NOTE B: Failure to sign proposal may result in rejection of the Bid.**

**THIS PROPOSAL SUBMITTED BY:** _____

_____
Name of Contractor

**BY:** _____
**Signature of Contractor or Authorized Representative**

**DATE:** _____

Contact Person for contract processing: _____

Mailing Address if different from above: _____

_____

## FRANKLIN COUNTY CONVENTION FACILITIES AUTHORITY

### Diversity, Equity & Inclusion Policy

_____ (name of Contractor) hereby has reviewed the FCCFA's Diversity, Equity & Inclusion Policy.

The contractor agrees to comply with all policy requirements and, directly or indirectly, (1) has not engaged, is not engaged, and will not engage in any kind of unlawful discrimination involving race, color, sex, sexual orientation or gender identity, disability, age, religion, veteran status or national origin, whether or not such discrimination is related to a contract or procurement activity with or for the FCCFA and (2) will not, for any purpose related to its engagement by the FCCFA, employ or contract with persons or businesses which the Contractor knows or has reason to know have engaged, are engaged, or will engage in any kind of unlawful discrimination involving race, color, sex, sexual orientation or gender identity, disability, age, religion, veteran status or national origin, whether or not such unlawful discrimination is related to a contract or procurement activity with or for the FCCFA. The contractor further agrees to incorporate these requirements in all subcontracts on this project regardless of tier.

Date: _____ _____

Signature of Contractor or Authorized Representative

( ) Submitted own Affirmative Action Plan.

( ) Contractor has been certified as a minority and/or female owned business. (Submit copy of certification as received from the federal government and/or any Ohio government unit or public authority).

Note: This certification must be filled and signed. Failure to comply may invalidate your bid.

**DECLARATION OF INSURANCE TO THE**
**FRANKLIN COUNTY CONVENTION FACILITIES AUTHORITY**

THIS IS TO CERTIFY THAT THE FOLLOWING DESCRIBED POLICIES OF INSURANCE HAVE BEEN ISSUED AND ARE IN FULL FORCE AND EFFECT AT THIS TIME:

1. Name of Insured (Contractor):

2. Address:

3. Title and Location: (Contract Job Site) — Franklin County Convention Facilities Authority - Greater Columbus Convention Center

4. Project: — GCCC Employee Locker Room, Restroom, and Back of House Renovation

5. Policy Number(s), Carriers and Expiration Dates:

| TYPE OF INSURANCE | | LIMITS OF LIABILITY IN $1,000 AMOUNTS Each Occurrence | Aggregate |
|---|---|---|---|
| **GENERAL LIABILITY** | | | |
| Comprehensive Form | Bodily Injury | $ | $ |
| Premises-Operations | | | |
| Explosion and Collapse Hazard | Property Damage` | $ | $ |
| Underground Hazard | | | |
| Products/Completed Operations Hazard | Combined | $ | $ |
| Contractual Hazard | Single Limit | $ | $ |
| Broad Form Property Damage | | | |
| Independent Contractors | Personal Injury | $ | $ |
| Personal Injury | | | |
| **AUTOMOBILE LIABILITY** | Bodily Injury Each Person | $ | |
| Comprehensive Form | | | |
| Owned | Bodily Injury Each Accident | $ | |

| | | | |
|---|---|---|---|
| Hired<br>Non-Owned | Property Damage | $ | |
| **EXCESS LIABILITY** | Combined Single Limit | $ | |
| Umbrella Form | Combined Single Limit | $ | $ |
| Following Form | Self-Insured | $ | |

List any manuscript or unusual exclusions for forms and attach copies.

Check those of the following operations which are excluded:

_____ Asbestos removal or abatement _____ PCP Removal _____ Demolition

It is agreed that sixty (60) days written notice of cancellation or material change in the described policy(s) will be given to the holder of this certificate, known as the Franklin County Convention Facilities Authority, 400 North High Street, Columbus, OH 43215.

**Insurance Agency:**

Address: Telephone:

**Contractor's Signature:** **Agent's Signature:**

_____ _____

Date: _____ Date: _____

ADDITIONAL INSURED WITH RESPECT TO THIS JOB ONLY; AS THEIR INTEREST MAY APPEAR:

1. Franklin County Convention Facilities Authority, its other contractors and own forces, if any, and the subcontractors, sub-subcontractors, consultants, agents, and employees of any of them, in their individual capacities as such;
2. The Franklin County Convention Facilities Authority Board, its members, consultants, agents, and employees of any of them, in their individual capacities as such;
3. The Architect/Engineer, its consultants, agents, and employees of any of them, in their individual capacities as such; and
4. The Construction Manager, its consultants, agents, and employees of any of them, in their individual capacities as such.
5. ASM Global, its consultants, agents, and employees of any of them, in their individual capacities as such.

**FRANKLIN COUNTY CONVENTION FACILITIES AUTHORITY**
**MANUFACTURER'S DECLARATION**

## Part A

Contractor's Name and Address:

Project Title and Location**:** GCCC Employee Locker Room, Restroom, and Back of House Renovation

## Part B (Complete for all suppliers but do not include subcontractors.)

**Name:** Type/Brand Name of Supplies:

Address: Phone:
**Minority/Female Business: _____ Yes**
**_____ No**

---

**Name:** Type/Brand Name of Supplies:

Address: Phone:
**Minority/Female Business: _____ Yes**
**_____ No**

---

**Name:** Type/Brand Name of Supplies:

Address: Phone:

**Minority/Female Business: _____ Yes**
**_____ No**

---

**Name:** Type/Brand Name of Supplies:

Address: Phone:

**Minority/Female Business: _____ Yes**
**_____ No**

(attach additional pages as needed)

**FRANKLIN COUNTY CONVENTION FACILITIES AUTHORITY**
**SUBCONTRACTOR DECLARATION**

## Part A

Contractor's Name and Address:

Project Title and Location**:** GCCC Employee Locker Room, Restroom, and Back of House Renovation

**Part B (Complete for all subcontractors, specify brand name of their material)**

**Name:** Type Work:

FTID#:
Address: Brand Name(s):

**Minority/Female Business: _____ Yes**
**_____ No**

Phone:

---

**Name:** Type Work:

FTID#:
Address: Brand Name(s):

**Minority/Female Business: _____ Yes**
**_____ No**

Phone:

---

**Name:** Type Work:

FTID#:
Address: Brand Name(s):

**Minority/Female Business: _____ Yes**
**_____ No**

Phone:

(attach additional pages as needed)

**FRANKLIN COUNTY CONVENTION FACILITIES AUTHORITY**
**CONTRACTOR'S REVIEW CERTIFICATE**

The undersigned acknowledges that:

(1) the contractor's authorized agent has carefully read and understood all of the Bid Documents submitted for the GREATER COLUMBUS CONVENTION CENTER EMPLOYEE LOCKER ROOM, RESTROOM, AND BACK OF HOUSE RENOVATION, including, but not limited to, the Notice to Bidders, Instructions to Bidders, Form of Proposal, Substitution Sheet, Prevailing Wage Determination, Form of Bid Guaranty and Contract Bond, this Contractor's Review Certificate, Project Manuals, Specifications and Drawings; and

(2) the Bid Documents are sufficient and adequate for the undersigned to perform the Work; and

(3) the contractor's authorized agent has carefully reviewed the site and conditions under which the Work will be performed, or has been given ample opportunity to do so, and fully assumes the risk for any condition at the site that could have been discovered by a careful and diligent review of the site; and

(4) the contractor's authorized agent has confirmed that the contractor's surety is authorized to do business in the State of Ohio.

**Dated:** _____

**CONTRACTOR:** _____

**By:** _____
SIGNATURE

_____
TYPED OR PRINTED NAME

**Its:** _____

NOTE: The Bidder should review the Bid Documents and the site and conditions under which the Work will be performed so that the Bidder can give the acknowledgments contained in this Certificate.

## BID GUARANTY AND CONTRACT BOND

KNOW ALL MEN BY THESE PRESENT, that we, the undersigned

(Name and Address)

as Principal and

(Name of Surety)

as Surety, are hereby held and firmly bound unto the Franklin County Convention Facilities Authority as Obligee in the penal sum of the dollar amount of the bid submitted by the Principal to the Obligee on this _____day of _____, 2024 to undertake the project known as the Greater Columbus Convention Center Employee Locker Room, Restroom, and Back of House Renovation. The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, incorporating any additive or deductive alternative proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee. In no case shall the penal sum exceed the amount of _____ dollars ($____ _____).

(If the above line is left blank, the penal sum will be the full amount of the Principal's bid, including add alternates.) Alternatively, if completed, the amount stated must not be less than the full amount of the bid, including add alternates, in dollars and cents. A percentage is not acceptable. For the payment of the penal sum well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above-named Principal has submitted a bid on the above referred to Project;

NOW, THEREFORE, if the Obligee accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the Principal pays to the Obligee the difference, not to exceed ten percent of the penalty hereof, between the amount specified in the bid and such larger amount for which the Obligee may in good faith contract with the next lowest bidder to perform the Work covered by the bid; or in the event the Obligee does not award the Contract to the next lowest bidder and resubmits the Project for bidding, the Principal will pay the Obligee the difference, not to exceed ten percent of the penalty hereof, between the amount specified in the bid, or the costs, in connection with the resubmission, or printing new contract documents, required advertising and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect. If the Obligee accepts the bid of the Principal and the Principal, within ten days after the awarding of the Contract, enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said Contract is made a part of this Bond the same as though set forth herein; and

IF THE SAID Principal shall well and faithfully perform each and every condition of such Contract; and indemnify the Obligee against all damage suffered by failure to perform such

Contract according to the provisions thereof and in accordance with the plans, details, specifications, and bills of material therefor; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said Contract; we agreeing and assenting that this undertaking shall be for the benefit of any materialman, subcontractor or laborer having a just claim, as well as for the Obligee herein; then this obligation shall be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

THE SAID Surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said Contract or in or to the plans and specifications therefor shall in any way affect the obligations of said Surety on its Bond, and it does hereby waive notice of any such modifications, omissions or additions to the terms of the Contract or to the Work or to the specifications.

SIGNED AND SEALED This _____ day of _____, 2024.

PRINCIPAL:

BY:

TITLE:

SURETY

SURETY COMPANY ADDRESS:

Street

City State Zip

Telephone:

BY:

Attorney-in-Fact

If the requirements of Section 3905.41 of the Ohio Revised Code are applicable or if Surety Agent's Address is other than Ohio, and the Ohio Department of Insurance's Certificate of Compliance is not attached, please complete Ohio Resident Agent Information as follows:

SURETY AGENT'S ADDRESS:

_____
Agency Name:

_____
Street

_____
City State Zip

_____
Telephone

_____
Agency Name:

_____
Street

_____
City State Zip

_____
Telephone

NOTE Failure by any party to sign this Bid Guaranty and Contract Bond shall result in rejection of bid.

# INSTRUCTIONS TO BIDDERS
# RESPONSIBILITY ANALYSIS FORM

**FRANKLIN COUNTY CONVENTION FACILITIES AUTHORITY**
**DETERMINATION OF LOWEST AND BEST BID**

This form must be completed in its entirety and submitted with the Bid Form. Attach additional sheets if necessary to provide complete answers to the questions below. Do not include any misleading statements and make sure to include all facts necessary to make the statements made not misleading. The term "Project" means the project for which the attached bid is submitted. All references to "**Bidder**" should be answered with respect to the **actual legal entity** submitting the bid.

Subject to the right of the Owner to reject any or all bids, the Owner will award the Contract for the Work to the Bidder submitting the lowest and best bid, taking into consideration accepted alternates. In determining which bid is the lowest and best bid, the Owner may take into consideration not only the amount of the bid but such of the following criteria as the Owner, in its sole discretion, deems appropriate, and may give such weight thereto as it deems appropriate:

Bidder Name _____

Bid Package No.: 2024-2_____

Trade/Service _____

Product(s) Supplied_____

1. Bidder shall provide all information listed below with its bid, unless otherwise noted. Failure to do so may, at the Owner's discretion, result in rejection of the bid.

2. The Owner reserves the right to reject all bids.

3. Will the Bidder employ supervisory personnel on this Project that have three (3) or more years in the specific trade and/or maintain the appropriate state license?

   _____Yes _____No

4. On a separate sheet, provide information to demonstrate the following:

   - Bidder's previous performance to complete its work on projects of similar size and scope.
   - Bidder's previous ability to complete these same projects on time.
   - Bidder's previous ability to work with this Owner, Architect, Engineer and/or Construction Manager.

5. Bidder shall not have an EMR (Workers' Compensation Interstate/Intrastate Experience Modification Rate) greater than 1.5. If Bidder's EMR is above 1.0, Bidder shall provide a letter

from Insurance Broker providing EMR for the most recent five (5) years, reasoning for EMR being above 1.0 and incident rates for that time period.

6. Has the Bidder been in existence at least 36 months?

_____Yes _____No

7. Has the Bidder, or any principal, owner, officer, stockholder, affiliate or any person involved in the bidding, contracting or leasing process been cited in the last five (5) years for violations of or failure to comply with any laws including without limitation:

a. Workers' compensation laws _____Yes _____ No

b. Wage and hour laws (including the Davis-Bacon Act and the Ohio Prevailing Wage Act) _____Yes _____ No

c. Unemployment laws _____Yes _____ No

d. Tax laws _____Yes _____ No

e. Fair Labor Standards Act _____Yes _____ No

f. Immigration laws _____Yes _____ No

g. Licensing requirements _____Yes _____ No

h. OSHA _____Yes _____ No

i. EPA _____Yes _____ No

j. Any items below: _____Yes _____ No

1. A judgment or conviction for any business-related conduct constituting a crime under federal, state or local government law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing or bid collusion or any crime related to truthfulness and/or business conduct.

2. A criminal investigation or indictment for any business-related conduct constituting a crime under federal, state or local government law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing or bid collusion or any crime related to truthfulness and/or business conduct.

3. An unsatisfied judgment, injunction or lien for any business-related conduct obtained by any federal, state or local government agency including, but not limited to, judgments based on taxes owed and fines and penalties assessed by any federal, state, or local government agency.

4. An investigation for a civil or criminal violation for any business-related conduct by any federal, state or local agency.

5. A grant of immunity for any business-related conduct constituting a crime under federal, state or local governmental law including, but not limited to, fraud, extortion, bribery, racketeering, price-fixing, bid collusion or any crime related to truthfulness and/or business conduct.

6. An administrative proceeding or civil action seeking specific performance or restitution in connection with any federal, state or local contract or lease.

7. A sanction imposed as a result of judicial or administrative proceedings relative to any business or professional license.

8. A consent order with the Ohio Environmental Protection Agency, or a federal, state or local government enforcement determination involving a violation of federal, state, or local environmental laws.

If yes, on a separate sheet, provide complete details including the date of each citation or violation; the nature of each violation; and the sanction for each violation. If the Bidder was fined, include the dollar amount.

For purposes of 7.a. above, a violation of the Workers' compensation laws is a determination by the Ohio Bureau of Workers Compensation that the contractor is not in compliance with Ohio Workers' Compensation laws and regulations.

For purposes of 7.b. above, a violation of the Ohio Prevailing Wage Act is a determination by the Ohio Department of Commerce, Division of Labor and Worker Safety, Wage and Hour Division, or successor that the contractor is not in compliance with the provisions, duties, obligations and is subject to the remedies and penalties of Chapter 4115 of the Ohio Revised Code.

8. Does Bidder have any outstanding liens? If yes, on a separate sheet identify each circumstance and Bidder's response.

   _____Yes _____ No

9. Has Bidder been party to litigation or arbitration proceedings in connection with any work performed, services rendered, or products supplied in the last five years? If yes, on a separate sheet, provide complete details, including dates, parties, whether Bidder was a plaintiff/claimant or defendant/respondent, the nature of the dispute and the ultimate determination or other resolution (i.e. settlement).

   _____Yes _____ No

10. In the last five years, has Bidder had work rejected as defective (other than minor re-work accomplished without formal notice)? If yes, on a separate sheet identify each circumstance and Bidder's response.

    _____Yes _____ No

11. In the last five years, has Bidder's contract or employment been terminated prior to completion of a project for any reason other than convenience of the Owner? If yes, on a separate sheet identify each such circumstance and provide full details.

    _____Yes _____ No

12. Bidder shall secure any required bonds from a surety licensed to do business in the State of Ohio with an A.M. Best Company rating of at least A. Has Bidder met this requirement?

    _____Yes _____ No

13. Has Bidder's construction license ever been revoked in any state?

    _____Yes _____ No

14. In the last five years, has Bidder had its own forces supplemented by an Owner, contractor or construction manager or had a claim made against it for defective, delayed or non-compliant work? If yes, on a separate sheet identify each such circumstance and provide full details.

    _____Yes _____ No

15. Bidder for a skilled contract (i.e. plumbing, electrical, HVAC, or fire safety) shall certify that Bidder will not subcontract greater than 50% of its awarded contract.

16. Does Bidder provide a minimum healthcare medical plan for those employees working on the project? If yes, list the healthcare plan provider below.

    _____Yes _____No

    Healthcare Medical Plan Provider: _____

17. Does Bidder contribute to an employee pension or retirement plan for those employees working on the project? If yes, list the pension or retirement plan provider below.

    _____Yes _____No

    Pension Plan or Retirement Plan Provider: _____

    The contractor may be asked to provide ERISA form 5500 for the retirement plan.

18. Has Bidder implemented an OSHA compliant Safety Program?

    _____Yes _____No

19. Does Bidder maintain a substance abuse policy that meets or exceeds requirements of the Ohio BWC and that its personnel are subject to on this Project?

    _____Yes _____No

20. Is the bidder a foreign corporation (i.e. not incorporated under the laws of Ohio) or an individual or partnership?

    _____Yes _____No

21. If yes to Item 20 above, provide proof of a Certificate of Good Standing from the Secretary of State showing the right of the Bidder to do business in the State and/or proof of filing with the Secretary of State a Power of Attorney designating the Secretary of State as Bidder's agent.

22. Bidder shall certify that the Bidder's subcontractors / vendors shall meet all requirements contained herein.

23. The Owner reserves the right to request the following information within 48 hours of the bid date:

    a. On a separate sheet, list all projects greater than $1,000,000 completed by Bidder in the preceding five years and for each, provide Bidder's original contract amount, final contract amount and a reference name and phone number.

    b. For the three largest projects listed from Item 3 above list your average manpower and peak manpower along with the original duration of the project and final duration of the project.

    c. On a separate sheet, provide Bidder's current work load under contract. List each current project and its respective contract amount and scheduled duration.

    d. On a separate sheet, provide information on Bidder's equipment and facilities.

    e. Bidder shall provide sufficient financial information to demonstrate fiscal capability to perform the project. All financial information identified by the Bidder as a trade secret and contained herein shall be treated as a trade secret and exempt from Ohio's Public Records laws, but the Owner's sole duty shall be to notify Bidder of any requests for that information so that Bidder is afforded the opportunity, at Bidder's expense, to contest in court the disclosure of any such information. The Owner may, but shall not be obligated to, contest any request for the disclosure of such information.

    f. On a separate sheet, identify, in numbers and experience, the Bidder's work force. Differentiate between hourly and salaried staff. Describe Bidder's workforce, focusing on worker experience and continuity.

    g. Bidder for a skilled trade contract or fire safety contract shall certify and upon request, provide evidence that Bidder is a state licensed heating, ventilating, and air conditioning contractor, refrigeration contractor, electrical contractor, plumbing contractor, or hydronics contractor or licensed by the State Fire Marshall and uses skilled, trained personnel.

    h. Identify the number of man hours and associated wages for each trade classification included in the Contractor's and Subtiers' Base Bid. Separately list the subtier's information. Provide additional sheet if more room is needed. DO NOT include payroll taxes, assessments or fringe benefits of any kind in the Wage amounts.

| Trade | Man Hours | Wages (No fringes or OH&P) |
|---|---|---|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

| | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

The Undersigned certifies under oath that the information provided herein and on all supplemental pages of explanation is true, complete and correct.

_____
Company

By _____

Title _____
(Signature must be notarized)

Sworn to and subscribed in my presence this_____ day of _____, _____

By _____ , the _____ of

_____ , a_____on

behalf of the _____ .

_____
Notary Public

My Commission Expires: _____

Franklin County Convention Facilities Authority
Bid Evaluation Process:

In determining the lowest and best bid for construction contracts, the Franklin County Convention Facilities Authority will take the following steps and consider the following items in making this determination. The Authority reserves its discretion to evaluate the price and quality of bids to ensure that the lowest and best bid is selected. The Authority reserves its discretion to modify this process at any time and for any reason without notice.

1. Select which alternates will be accepted.

2. Identify the apparent low bidder based on the accepted alternates.

    2.1 Is the apparent low bid responsive? Are all required bid submissions included?

    2.2 Has the bidder qualified their bid in a way that would disqualify the bid?

3. Meet with the bidder to determine that all project scope is clearly understood and included. Discuss project schedule, safety and all project requirements. Identify key project staff. Identify subcontractors. Identify long lead time equipment. Discuss submission, review and approval process. Identify and discuss other items pertinent to the job.

4. Is the bidder well qualified?

    4.1 Background Check:
        Check Dun and Bradstreet.
        Run Lexus/Nexus check.
        Check for prevailing wage and workers compensation compliance.

    4.2 Is the bidder qualified for a job of this scope? (Questions 4, 6, 15, 23.a, b,c,d,e)

    4.3 Has the bidder demonstrated that they will provide qualified, well trained staff? (Questions 3, 23.f, g)

    4.4 Does the bidder provide a minimum healthcare medical plan for those employees working on the project? (Question 16)

        Does the bidder contribute to an employee pension or retirement plan for those employees working on the project? (Question 17)

    4.5 Does the bidder have a history of providing quality construction services? (Questions 6, 9, 10, 11, 13, 14)

    4.6 Does the bidder maintain a safe workplace? (Questions 5, 18, 19)

    4.7 Does the bidder follow all applicable laws? (Question 7)

    4.8 Is the bidder financially stable? (Questions 7.j.3, 8, 12, 23.e)

5. If it is determined that the apparent low bid is responsive, valid and the bidder is well qualified:

5.1 Assemble all necessary documentation and paperwork required in the bid documents.

5.2 Submit a resolution for board approval to enter into the contract.

5.3 Issue a notice to proceed.

5.4 Sign a contract with the successful bidder.

## Technical Specifications

# GCCC Employee Locker and Restroom Renovation

400 North High Street
Columbus, Ohio 43215

## Greater Columbus Convention Center

400 North High Street
Columbus,  43215
2024-023

**BID SET**
09.09.2024


**ARCHITECTURE**
BBCO DESIGN
325 SOUTH HIGH STREET
SUITE 500
COLUMBUS, OH 43215

**MEP**
POINT ONE DESIGN
2800 CORPORATE EXCHANGE DR
COLUMBUS, OH 43231

**DIVISION 01 - GENERAL REQUIREMENTS**

# SECTION 011000 - SUMMARY

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work under Owner's separate contracts.
5. Owner-furnished/Contractor-installed (OFCI) products.
6. Contractor's use of site and premises.
7. Coordination with occupants.
8. Work restrictions.
9. Specification and Drawing conventions.

B. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

### 1.2 PROJECT INFORMATION

A. Project Identification: Greater Columbus Convention Center

1. Project Location: 400 N. High Street Columbus, OH 43215

B. Owner: Greater Columbus Convention Center

1. Owner's Representative: Ken Paul, Executive Director
400 N. High Street, 4th Floor
Columbus, OH 43215

C. Architect: BBCO

1. Architect's Representative: Bhakti Bania, CEO, Architect
325 South High Street, Ste. 500
Columbus, OH 43215
Phone: (614) 437-2040

D. Architect's Consultants: Architect has retained the following design professionals, who have prepared designated portions of the Contract Documents:

1. Point One Design Ltd., Mechanical, Electrical, and Plumbing
   a. MEP Representative: Dave Ulliman, Founding Partner, Electrical Design
      2800 Corporate Exchange Drive
      Columbus, OH 43231
      Phone: (614) 540-3500

## 1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Renovation of the existing back of house employee locker room/restroom, back of house service hallway, breakroom, and storage rooms located on the first floor of the Convention Center. The scope of the locker room/restroom renovation includes replacing existing floors, ceilings, lighting, and counters; demolition of existing showers and stalls; replacing sinks, toilets/urinals, toilet accessories, and toilet partitions; accessibility upgrades; replacing lockers and benches; and providing new paint/wall finishes.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

## 1.4 PHASED CONSTRUCTION

A. The Work shall be conducted in two (2) phases, with each phase substantially complete as indicated.

1. Extent and division of phasing is to be coordinated with the owner.

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

## 1.5 OWNER-FURNISHED/CONTRACTOR-INSTALLED (OFCI) PRODUCTS

A. Owner's Responsibilities: Owner will furnish products indicated and perform the following, as applicable:

1. Provide for delivery of Owner-furnished products to Project site.
2. Upon delivery, inspect, with Contractor present, delivered items.
   a. If Owner-furnished products are damaged, defective, or missing, arrange for replacement.
3. Obtain manufacturer's inspections, service, and warranties.
4. Inform Contractor of earliest available delivery date for Owner-furnished products.

B. Contractor's Responsibilities: The Work includes the following, as applicable:

1. Designate delivery dates of Owner-furnished products in Contractor's construction schedule, utilizing Owner-furnished earliest available delivery dates.
2. Receive, unload, handle, store, protect, and install Owner-furnished products.
3. Make building services connections for Owner-furnished products.
4. Protect Owner-furnished products from damage during storage, handling, and installation and prior to Substantial Completion.
5. Repair or replace Owner-furnished products damaged following receipt.

C. Owner-Furnished/Contractor-Installed (OFCI) Products:

1. Refer to Contract Documents, G-100 Building Interior Scope Matrix/ Table.

## 1.6 CONTRACTOR'S USE OF SITE AND PREMISES

A. Restricted Use of Site: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.

B. Limits on Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits on Use of Site: Confine construction operations to area of work indicated in the Drawings.
2. Driveways, Walkways, and Entrances: Keep driveways parking garage, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weathertight condition throughout construction period. Repair damage caused by construction operations.

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

## 1.7 COORDINATION WITH OCCUPANTS

A. Full Owner Occupancy: Owner will occupy site and existing building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.

## 1.8 WORK RESTRICTIONS

A. Comply with restrictions on construction operations.

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

B. On-Site Work Hours: Limit work in the existing building to normal business working hours, Monday through Friday, unless otherwise indicated.

C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:

1. Notify Construction Manager and Owner not less than two days in advance of proposed utility interruptions.
2. Obtain Construction Manager's and Owner's written permission before proceeding with utility interruptions.

D. Noise, Vibration, Dust, and Odors: Coordinate operations that may result in high levels of noise and vibration, dust, odors, or other disruption to Owner occupancy with Owner.

1. Notify Construction Manager and Owner not less than two days in advance of proposed disruptive operations.
2. Obtain Construction Manager's and Owner's written permission before proceeding with disruptive operations.

E. Smoking and Controlled Substance Restrictions: Use of tobacco products , alcoholic beverages, and other controlled substances within the existing building on Project site and on Owner's property is not permitted.

F. Employee Identification: Owner will provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.

G. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.

1. Maintain list of approved screened personnel with Owner's representative.

## 1.9 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

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

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

# SECTION 012300 - ALTERNATES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

### 1.2 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 the 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 alternates into the Work. No other adjustments are made to the Contract Sum.

### 1.3 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. Execute accepted alternates under the same conditions as other work of the Contract.

C. 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. 01: Storage Room 105 and 106

1. Base Bid: Work on scrubber dump in Storage 105 and replacement of mop sink in Storage 106.
2. Alternate: Removal of the ACT ceiling grid and tiles in Storage Room 105 & 106. Existing ceiling to be exposed. Prepare and paint walls up to the existing ceiling height. Refer to A-800 Room Finish Schedule for paint color. Remove existing lighting and replace with suspended LED lighting per electrical drawings.

END OF SECTION 012300

# SECTION 012500 - SUBSTITUTION PROCEDURES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Document 002600 "Procurement Substitution Procedures" for requirements for substitution requests prior to award of Contract.
2. Section 016000 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

### 1.2 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.

### 1.3 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 form provided in Project Manua that is part of web-based Project management software acceptable to Architect.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
   a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
   b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
   c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable

Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.

d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
e. Samples, where applicable or requested.
f. Certificates and qualification data, where applicable or requested.
g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.
h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES, Ohio Building Code and Existing Building 2024.
j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
k. Cost information, including a proposal of change, if any, in the Contract Sum.
l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within [seven] 7 days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within [15] of receipt of request, or [seven] 7 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.

## 1.4 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.

1.5 PROCEDURES

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

1.6 SUBSTITUTIONS

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

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

B. Substitutions for Convenience: Not allowed unless otherwise indicated.

C. Substitutions for Convenience: Architect will consider requests for substitution if received within [60] after commencement of the Work, the Notice to Proceed, and the Notice of Award. 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 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

# SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

### 1.2 MINOR CHANGES IN THE WORK

A. Architect will issue through Construction Manager supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710 form included in Project Manual web-based Project management software.

1. Work Change Proposal Requests issued by Construction Manager are not instructions either to stop work in progress or to execute the proposed change.

### 1.3 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Construction Manager will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Construction Manager are not instructions either to stop work in progress or to execute the proposed change.
2. Within 20 days, when not otherwise specified, receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Construction Manager.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 012500 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.

## 1.4 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Change Proposal Request, Construction Manager will issue a Change Order for signatures of Owner and Contractor on AIA Document G701, AIA Document G701CMa and form included in Project Manual form provided as part of web-based Project management software.

## 1.5 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect, and Construction Manager may issue a Construction Change Directive on AIA Document G71, AIA Document G714CMa, and form included in Project Manual form provided as part of web-based Project management software. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

## 1.6 WORK CHANGE DIRECTIVE

A. Work Change Directive: Architect and Construction Manager may issue a Work Change Directive on EJCDC Document C-94, form included in Project Manual, form provided as part of web-based Project management software. Work Change Directive instructs

Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Work Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

# SECTION 012900 - PAYMENT PROCEDURES

## PART 1 - GENERAL

### 1.1 SUMMARY

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

### 1.2 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the schedule of values with preparation of Contractor's construction schedule.

1. Coordinate line items in the schedule of values with items required to be indicated as separate activities in Contractor's construction schedule.
2. Submit the schedule of values to Architect through Construction Manager at earliest possible date, but no later than seven days before the date scheduled for submittal of initial Applications for Payment.

B. Format and Content: Use Project Manual table of contents as a guide to establish line items for the schedule of values. Provide at least one line item for each Specification Section.

1. Arrange schedule of values consistent with format of AIA Document G703.
2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of [five] percent of the Contract Sum.
3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
   a. Differentiate between items stored on-site and items stored off-site.
4. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
5. Overhead Costs: Include total cost and proportionate share of general overhead and profit for each line item.
6. Overhead Costs: Show cost of temporary facilities and other major cost items that are not direct cost of actual work-in-place as separate line items.
7. Closeout Costs. Include separate line items under Contractor and principal subcontracts for Project closeout requirements in an amount totaling five percent of the Contract Sum and subcontract amount.
8. Schedule of Values Revisions: Revise the schedule of values when Change Orders or Construction Change Directives result in a change in the Contract Sum.

Include at least one separate line item for each Change Order and Construction Change Directive.

1.3 APPLICATIONS FOR PAYMENT

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

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

C. Payment Application Times: Submit Application for Payment to Architect by the 15th of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.

1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.

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

E. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Construction Manager will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.

F. Transmittal: Submit [three] 3 signed and notarized original copies of each Application for Payment to Construction Manager by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.

1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment, subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.

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

H. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).
4. Products list (preliminary if not final).
5. Sustainable design action plans, including preliminary project materials cost data.
6. Schedule of unit prices.
7. Submittal schedule (preliminary if not final).
8. List of Contractor's staff assignments.
9. List of Contractor's principal consultants.
10. Copies of building permits.
11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
12. Initial progress report.
13. Report of preconstruction conference.
14. Certificates of insurance and insurance policies.
15. Performance and payment bonds.
16. Data needed to acquire Owner's insurance.

I. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

J. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. AIA Document G706.

5. AIA Document G706A.
6. AIA Document G707.
7. Evidence that claims have been settled.
8. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.
9. Final liquidated damages settlement statement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

# SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. Coordination drawings.
3. RFIs.
4. Digital project management procedures.
5. Project meetings.

B. Related Requirements:

1. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
2. Section 019113 "General Commissioning Requirements" for coordinating the Work with Owner's Commissioning Authority.

### 1.2 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations included in different Sections that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.

5. Progress meetings.
6. Preinstallation conferences.
7. Project closeout activities.
8. Startup and adjustment of systems.

## 1.3 COORDINATION DRAWINGS

A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely indicated on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
   a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
   b. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Plenum Space: Indicate subframing for support of ceiling , raised access floor, and wall systems, mechanical and electrical equipment, and related Work. Locate components within plenums to accommodate layout of light fixtures and other components indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are

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

C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:

1. File Preparation Format:
   a. Same digital data software program, version, and operating system as original Drawings.
   b. RVT – AutoDesk Revit operating in Microsoft Windows.
2. File Submittal Format: Submit or post coordination drawing files using PDF format.
3. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
   a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
   b. Digital Data Software Program: Drawings are available in Autodesk Revit.
   c. Contractor shall execute a data licensing agreement in the form acceptable to Owner and Architect.

## 1.4 REQUEST FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information, clarification, or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return without response those RFIs submitted to Architect by other entities controlled by Contractor.
2. Coordinate and submit RFIs in a prompt manner 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 information or interpretation and the following:

1. Owner name.
2. Owner's Project number.
3. Name of Architect.
4. Architect's Project number.
5. Date.
6. Name of Contractor.
7. RFI number, numbered sequentially.
8. RFI subject.
9. Specification Section number and title and related paragraphs, as appropriate.
10. Drawing number and detail references, as appropriate.
11. Field dimensions and conditions, as appropriate.
12. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
13. Contractor's signature.

14. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

C. RFI Forms: Contractor's standard form as acceptable to Owner and Architect.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven days for Architect's response for each RFI. RFIs received by Architect or Construction Manager after 3:00 p.m. will be considered as received the following working day.

1. The following Contractor-generated RFIs will be returned without action:
   a. Requests for approval of submittals.
   b. Requests for approval of substitutions.
   c. Requests for approval of Contractor's means and methods.
   d. Requests for coordination information already indicated in the Contract Documents.
   e. Requests for adjustments in the Contract Time or the Contract Sum.
   f. Requests for interpretation of Architect's actions on submittals.
   g. Incomplete RFIs or inaccurately prepared RFIs.
2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt by Architect or Construction Manager of additional information.
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 Section 012600 "Contract Modification Procedures."
   a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect and Construction Manager in writing within five days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Include the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of Architect.
4. RFI number including RFIs that were returned without action or withdrawn.
5. RFI description.
6. Date the RFI was submitted.
7. Date Architect's and Construction Manager's response was received.

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 if Contractor disagrees with response.

## 1.5 DIGITAL PROJECT MANAGEMENT PROCEDURES

A. Use of Architect's Digital Data Files: Digital data files of Architect's BIM model and/or CAD drawings will be provided by Architect for Contractor's use during construction.

1. Digital data files may be used by Contractor in preparing coordination drawings, Shop Drawings, and Project record Drawings.
2. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Contract Drawings.
3. Digital Drawing Software Program: Contract Drawings are available in Autodesk Revit.
4. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Architect.
    a. Subcontractors, and other parties granted access by Contractor to Architect's digital data files shall execute a data licensing agreement in the form of Agreement acceptable to Owner and Architect.
5. The following digital data files will be furnished for each appropriate discipline:
    a. Floor plans.
    b. Reflected ceiling plans.

B. Web-Based Project Management Software Package: Provide, administer, and use web-based Project management software package for purposes of hosting and managing Project communication and documentation until Final Completion.

1. Web-based Project management software includes, at a minimum, the following features:
    a. Compilation of Project data, including Contractor, subcontractors, Architect, architect's consultants, Owner, and other entities involved in Project. Include names of individuals and contact information.
    b. Access control for each entity for each workflow process, to determine entity's digital rights to create, modify, view, and print documents.
    c. Document workflow planning, allowing customization of workflow between project entities.
    d. Creation, logging, tracking, and notification for Project communications required in other Specification Sections, including, but not limited to, RFIs, submittals, Minor Changes in the Work, Construction Change Directives, and Change Orders.
    e. Track status of each Project communication in real time, and log time and date when responses are provided.
    f. Procedures for handling PDFs or similar file formats, allowing markups by each entity. Provide security features to lock markups against changes once submitted.
    g. Processing and tracking of payment applications.
    h. Processing and tracking of contract modifications.
    i. Creating and distributing meeting minutes.
    j. Document management for Drawings, Specifications, and coordination drawings, including revision control.
    k. Management of construction progress photographs.
    l. Mobile device compatibility, including smartphones and tablets.
    m. <Insert description of software feature>.
2. Provide up to seven web-based Project management software user licenses for use of Owner , Owner's Commissioning Authority, Construction Manager, Architect, and Architect's consultants. Provide [eight] hours of software training at Architect's office for web-based Project software users.

3. At completion of Project, provide digital archive in format that is readable by common desktop software applications in format acceptable to Architect. Provide data in locked format to prevent further changes.

C. PDF Document Preparation: Where PDFs are required to be submitted to Architect, prepare as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
3. Certifications: Where digitally submitted certificates and certifications are required, provide a digital signature with digital certificate on where indicated.

1.6 PROJECT MEETINGS

A. General: Schedule and conduct Construction Manager will schedule and conduct meetings and conferences at Project site unless otherwise indicated.

B. Preconstruction Conference: Construction Manager will schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than [15] days after execution of the Agreement.

1. Attendees: Authorized representatives of Owner , Owner's Commissioning Authority, Construction Manager, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
2. Agenda: Discuss items of significance that could affect progress, including the following:
   a. Responsibilities and personnel assignments.
   b. Tentative construction schedule.
   c. Phasing.
   d. Critical work sequencing and long lead items.
   e. Designation of key personnel and their duties.
   f. Lines of communications.
   g. Use of web-based Project software.
   h. Procedures for processing field decisions and Change Orders.
   i. Procedures for RFIs.
   j. Procedures for testing and inspecting.
   k. Procedures for processing Applications for Payment.
   l. Distribution of the Contract Documents.
   m. Submittal procedures.
   n. Sustainable design requirements.
   o. Preparation of Record Documents.
   p. Use of the premises and existing building.
   q. Work restrictions.

r. Working hours.
s. Owner's occupancy requirements.
t. Responsibility for temporary facilities and controls.
u. Procedures for moisture and mold control.
v. Procedures for disruptions and shutdowns.
w. Construction waste management and recycling.
x. Parking availability.
y. Office, work, and storage areas.
z. Equipment deliveries and priorities.
aa. First aid.
bb. Security.
cc. Progress cleaning.

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

C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity when required by other sections and when required for coordination with other construction.

1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect , Construction Manager, and Owner's Commissioning Authority of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
   a. Contract Documents.
   b. Options.
   c. Related RFIs.
   d. Related Change Orders.
   e. Purchases.
   f. Deliveries.
   g. Submittals.
   h. Sustainable design requirements.
   i. Review of mockups.
   j. Possible conflicts.
   k. Compatibility requirements.
   l. Time schedules.
   m. Weather limitations.
   n. Manufacturer's written instructions.
   o. Warranty requirements.
   p. Compatibility of materials.
   q. Acceptability of substrates.
   r. Temporary facilities and controls.
   s. Space and access limitations.
   t. Regulations of authorities having jurisdiction.
   u. Testing and inspecting requirements.
   v. Installation procedures.
   w. Coordination with other work.

x. Required performance results.
y. Protection of adjacent work.
z. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

D. Progress Meetings: Conduct progress meetings at biweekly intervals.

1. Coordinate dates of meetings with preparation of payment requests.
2. Attendees: In addition to representatives of Owner , Owner's Commissioning Authority, Construction Manager, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
   a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
      1) Review schedule for next period.
   b. Review present and future needs of each entity present, including the following:
      1) Interface requirements.
      2) Sequence of operations.
      3) Resolution of BIM component conflicts.
      4) Status of submittals.
      5) Status of sustainable design documentation.
      6) Deliveries.
      7) Off-site fabrication.
      8) Access.
      9) Site use.
      10) Temporary facilities and controls.
      11) Progress cleaning.
      12) Quality and work standards.
      13) Status of correction of deficient items.
      14) Field observations.
      15) Status of RFIs.
      16) Status of Proposal Requests.

17) Pending changes.
18) Status of Change Orders.
19) Pending claims and disputes.
20) Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.
   a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

# SECTION 013300 - SUBMITTAL PROCEDURES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

### 1.2 DEFINITIONS

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

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

### 1.3 SUBMITTAL SCHEDULE

A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and Construction Manager and additional time for handling and reviewing submittals required by those corrections.

### 1.4 SUBMITTAL FORMATS

A. Submittal Information: Include the following information in each submittal:

1. Project name.
2. Date.
3. Name of Architect.
4. Name of Contractor.
5. Name of firm or entity that prepared submittal.
6. Names of subcontractor, manufacturer, and supplier.
7. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.

8. Category and type of submittal.
9. Submittal purpose and description.
10. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
11. Drawing number and detail references, as appropriate.
12. Indication of full or partial submittal.
13. Location(s) where product is to be installed, as appropriate.
14. Other necessary identification.
15. Remarks.
16. Signature of transmitter.

B. Options: Identify options requiring selection by Architect.

C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect and Construction Manager on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.

D. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

E. Submittals for Utilizing Web-Based Project Management Software: Prepare submittals as PDF files, or other format indicated by Project management software.

## 1.5 SUBMITTAL PROCEDURES

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Email: Prepare submittals as PDF package, and transmit to Architect by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect.
2. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's and Construction Manager'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 advise Contractor when a submittal being processed must be delayed for coordination.
2. Resubmittal Review: Allow 15 days for review of each resubmittal.

D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

E. 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.

F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's and Construction Manager's action stamp.

## 1.6 SUBMITTAL REQUIREMENTS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
    a. Manufacturer's catalog cuts.
    b. Manufacturer's product specifications.
    c. Standard color charts.
    d. Statement of compliance with specified referenced standards.
    e. Testing by recognized testing agency.
    f. Application of testing agency labels and seals.
    g. Notation of coordination requirements.
    h. Availability and delivery time information.
4. For equipment, include the following in addition to the above, as applicable:
    a. Wiring diagrams that show factory-installed wiring.
    b. Printed performance curves.
    c. Operational range diagrams.
    d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
   a. Identification of products.
   b. Schedules.
   c. Compliance with specified standards.
   d. Notation of coordination requirements.
   e. Notation of dimensions established by field measurement.
   f. Relationship and attachment to adjoining construction clearly indicated.
   g. Seal and signature of professional engineer if specified.

C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.

1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
   a. Project name and submittal number.
   b. Generic description of Sample.
   c. Product name and name of manufacturer.
   d. Sample source.
   e. Number and title of applicable Specification Section.
   f. Specification paragraph number and generic name of each item.
3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics, and identification information for record.
4. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
5. 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.
6. 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 three full sets 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.

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, contact information of architects and owners, and other information specified.

E. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.

F. Certificates:

1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

G. Test and Research Reports:

1. Compatibility Test Reports: Submit 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 substrate preparation and primers required.
2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit 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.
5. Product Test Reports: Submit written reports indicating that 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.

6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
   a. Name of evaluation organization.
   b. Date of evaluation.
   c. Time period when report is in effect.
   d. Product and manufacturers' names.
   e. Description of product.
   f. Test procedures and results.
   g. Limitations of use.

## 1.7 CONTRACTOR'S REVIEW

A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect and Construction Manager.

B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp, and indication in web-based Project management software. Include 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.

   1. Architect will not review submittals received from Contractor that do not have Contractor's review and approval.

## 1.8 ARCHITECT'S REVIEW

A. Action Submittals: Architect will review each submittal, indicate corrections or revisions required, and return it.

   1. PDF Submittals: Architect will indicate, via markup on each submittal, the appropriate action.
   2. Submittals by Web-Based Project Management Software: will indicate, on Project management software website, the appropriate action.

B. Informational Submittals: Architect and Construction Manager will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect and Construction Manager will forward each submittal to appropriate party.

C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect and Construction Manager.

D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

E. Architect and Construction Manager will return without review and discard submittals received from sources other than Contractor.

F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013300

# SECTION 013516 - ALTERATION PROJECT PROCEDURES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes special procedures for alteration work.

### 1.2 DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

1.3 PROJECT MEETINGS FOR ALTERATION WORK

A. Preliminary Conference for Alteration Work: Before starting alteration work, Construction Manager will conduct conference at Project site, 400 N. High Street Columbus, OH 43215.

1. Attendees: In addition to representatives of Owner and Contractor, Owner's insurer, testing service representative, and chemical-cleaner manufacturer(s) shall be represented at the meeting.
2. Agenda: Discuss items of significance that could affect progress of alteration work, including review of the following:
   a. Fire-prevention plan.
   b. Governing regulations.
   c. Areas where existing construction is to remain and the required protection.
   d. Hauling routes.
   e. Sequence of alteration work operations.
   f. Storage, protection, and accounting for salvaged and specially fabricated items.
   g. Existing conditions, staging, and structural loading limitations of areas where materials are stored.
3. Reporting: Construction Manager will record conference results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from conference.

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

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

1.4 MATERIALS OWNERSHIP

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

1.5 INFORMATIONAL SUBMITTALS

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

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

## 1.6 QUALITY ASSURANCE

A. Title X Requirement: Each firm conducting activities that disturb painted surfaces shall be a "Lead-Safe Certified Firm" according to 40 CFR 745, Subpart E, and use only workers that are trained in lead-safe work practices.

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

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

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

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

## 1.7 STORAGE AND HANDLING OF SALVAGED MATERIALS

A. Salvaged Materials:

1. Clean loose dirt and debris from salvaged items unless more extensive cleaning is indicated.
2. Pack or crate items after cleaning; cushion against damage during handling. Label contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area on-site, off-site and designated by Owner indicated on Drawings.
5. Protect items from damage during transport and storage.

B. Salvaged Materials for Reinstallation:

1. Repair and clean items for reuse as indicated.
2. Pack or crate items after cleaning and repairing; cushion against damage during handling. Label contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment unless otherwise indicated. Provide connections, supports, and miscellaneous materials to make items functional for use indicated.

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

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

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

PART 2 - PRODUCTS - (Not Used)

PART 3 - EXECUTION

3.1 PROTECTION

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

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

B. Temporary Protection of Materials to Remain:

1. Protect existing materials with temporary protections and construction. Do not remove existing materials unless otherwise indicated.
2. Do not attach temporary protection to existing surfaces except as indicated as part of the alteration work program.

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

D. Utility and Communications Services:

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

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

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

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

## 3.2 PROTECTION FROM FIRE

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

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

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

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

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

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

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

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

## 3.3 PROTECTION DURING APPLICATION OF CHEMICALS

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

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

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

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

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

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

## 3.4 GENERAL ALTERATION WORK

A. Record existing work before each procedure (preconstruction), and record progress during the work. Use digital preconstruction documentation photographs or video recordings. Comply with requirements in Section 013233 "Photographic Documentation."

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

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

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

END OF SECTION 013516

# SECTION 014000 - QUALITY REQUIREMENTS

## PART 1 - GENERAL

### 1.1 SUMMARY

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

B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
2. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

### 1.2 DEFINITIONS

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

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

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

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

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

E. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) in accordance with 29 CFR 1910.7, by a testing agency accredited in accordance with NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and

acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.

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

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

H. 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.

I. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect.

## 1.3 CONFLICTING REQUIREMENTS

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

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

## 1.4 INFORMATIONAL SUBMITTALS

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

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

B. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in

the form of a recent report on the inspection of the testing agency by a recognized authority.

C. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

## 1.5 REPORTS AND DOCUMENTS

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

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

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

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

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

1. Statement that equipment complies with requirements.

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

## 1.6 QUALITY ASSURANCE

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

B. 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. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.

C. 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.

D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, 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.

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 in material, design, and extent to those indicated for this Project.

F. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.

1. Requirements of authorities having jurisdiction supersede requirements for specialists.

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

H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

## 1.7 QUALITY CONTROL

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

1. Engage a qualified testing agency to perform quality-control services.
   a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspection will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

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

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

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected Work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform duties of Contractor.

D. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Preliminary design mix proposed for use for material mixes that require control by testing agency.
6. Security and protection for samples and for testing and inspection equipment at Project site.

E. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.

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

## 1.8 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency and/or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in the Statement of Special Inspections attached to this Section, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected Work.

# PART 2 - PRODUCTS (Not Used)

# PART 3 - EXECUTION

## 3.1 TEST AND INSPECTION LOG

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

1. Date test or inspection was conducted.

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

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

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

## 3.2 REPAIR AND PROTECTION

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

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

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

# SECTION 014200 - REFERENCES

## PART 1 - GENERAL

### 1.1 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": Unload, temporarily store, unpack, assemble, erect, place, anchor, apply, work to dimension, finish, cure, protect, clean, and similar operations at Project site.

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.

### 1.2 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.

1. For standards referenced by applicable building codes, comply with dates of standards as listed in building codes.

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.

## 1.3 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities indicated in Gale's "Encyclopedia of Associations: National Organizations of the U.S." or in Columbia Books' "National Trade & Professional Associations of the United States."

B. Industry Organizations, List: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. The information in this list is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. AABC - Associated Air Balance Council; www.aabc.com.
2. AAMA - American Architectural Manufacturers Association; (see FGIA).
3. AAPFCO - Association of American Plant Food Control Officials; www.aapfco.org.
4. AASHTO - American Association of State Highway and Transportation Officials; www.transportation.org.
5. AATCC - American Association of Textile Chemists and Colorists; www.aatcc.org.
6. ABMA - American Bearing Manufacturers Association; www.americanbearings.org.
7. ABMA - American Boiler Manufacturers Association; www.abma.com.
8. ACI - American Concrete Institute; www.concrete.org.
9. ACP - American Clean Power; (Formerly: American Wind Energy Association); www.cleanpower.org.
10. ACPA - American Concrete Pipe Association; www.concretepipe.org.
11. AEIC - Association of Edison Illuminating Companies, Inc. (The); www.aeic.org.
12. AF&PA - American Forest & Paper Association; www.afandpa.org.
13. AGA - American Gas Association; www.aga.org.
14. AHAM - Association of Home Appliance Manufacturers; www.aham.org.
15. AHRI - Air-Conditioning, Heating, and Refrigeration Institute (The); www.ahrinet.org.
16. AI - Asphalt Institute; www.asphaltinstitute.org.
17. AIA - American Institute of Architects (The); www.aia.org.
18. AISC - American Institute of Steel Construction; www.aisc.org.
19. AISI - American Iron and Steel Institute; www.steel.org.
20. AITC - American Institute of Timber Construction; (see PLIB).
21. AMCA - Air Movement and Control Association International, Inc.; www.amca.org.
22. AMPP - Association for Materials Protection and Performance; www.ampp.org.
23. ANSI - American National Standards Institute; www.ansi.org.

24. AOSA/SCST - Association of Official Seed Analysts (The)/Society of Commercial Seed Technologists (The); www.analyzeseeds.com.
25. APA - APA - The Engineered Wood Association; www.apawood.org.
26. APA - Architectural Precast Association; www.archprecast.org.
27. API - American Petroleum Institute; www.api.org.
28. ARMA - Asphalt Roofing Manufacturers Association; www.asphaltroofing.org.
29. ASA - Acoustical Society of America; www.acousticalsociety.org.
30. ASCE - American Society of Civil Engineers; www.asce.org.
31. ASCE/SEI - American Society of Civil Engineers/Structural Engineering Institute; (see ASCE).
32. ASHRAE - American Society of Heating, Refrigerating and Air-Conditioning Engineers; www.ashrae.org.
33. ASME - ASME International; American Society of Mechanical Engineers (The)
34. ASSE - ASSE International; (American Society of Sanitary Engineering); www.asse-plumbing.org.
35. ASSP - American Society of Safety Professionals; www.assp.org.
36. ASTM - ASTM International; www.astm.org.
37. ATIS - Alliance for Telecommunications Industry Solutions; www.atis.org.
38. AVIXA - Audiovisual and Integrated Experience Association; www.avixa.org.
39. AWI - Architectural Woodwork Institute; www.awinet.org.
40. AWMAC - Architectural Woodwork Manufacturers Association of Canada; www.awmac.com.
41. AWPA - American Wood Protection Association; www.awpa.com.
42. AWS - American Welding Society; www.aws.org.
43. AWWA - American Water Works Association; www.awwa.org.
44. BHMA - Builders Hardware Manufacturers Association; www.buildershardware.com.
45. BIA - Brick Industry Association (The); www.gobrick.com.
46. BICSI - BICSI, Inc.; www.bicsi.org.
47. BIFMA - Business and Institutional Furniture Manufacturer's Association; www.bifma.org.
48. BISSC - Baking Industry Sanitation Standards Committee; www.bissc.org.
49. BWF - Badminton World Federation; www.bwfbadminton.com.
50. CARB - California Air Resources Board; www.arb.ca.gov.
51. CDA - Copper Development Association Inc.; www.copper.org.
52. CE - Conformite Europeenne (European Commission); www.ec.europa.eu/growth/single-market/ce-marking.
53. CEA - Canadian Electricity Association; www.electricity.ca.
54. CFFA - Chemical Fabrics and Film Association, Inc.; www.chemicalfabricsandfilm.com.
55. CFSEI - Cold-Formed Steel Engineers Institute; www.cfsei.org.
56. CGA - Compressed Gas Association; www.cganet.com.
57. CIMA - Cellulose Insulation Manufacturers Association; www.cellulose.org.
58. CISCA - Ceilings & Interior Systems Construction Association; www.cisca.org.
59. CISPI - Cast Iron Soil Pipe Institute; www.cispi.org.
60. CLFMI - Chain Link Fence Manufacturers Institute; www.chainlinkinfo.org.
61. CPA - Composite Panel Association; www.compositepanel.org.
62. CRI - Carpet and Rug Institute (The); www.carpet-rug.org.
63. CRRC - Cool Roof Rating Council; www.coolroofs.org.
64. CRSI - Concrete Reinforcing Steel Institute; www.crsi.org.

65. CSA - CSA Group; www.csagroup.org.
66. CSI - Cast Stone Institute; www.caststone.org.
67. CSI - Construction Specifications Institute (The); www.csiresources.org.
68. CSSB - Cedar Shake & Shingle Bureau; www.cedarbureau.org.
69. CTA - Consumer Technology Association; www.cta.tech.
70. CTI - Cooling Technology Institute; www.coolingtechnology.org.
71. DASMA - Door and Access Systems Manufacturers Association; www.dasma.com.
72. DHA - Decorative Hardwoods Association; www.decorativehardwoods.org.
73. DHI - Door and Hardware Institute; www.dhi.org.
74. ECIA - Electronic Components Industry Association; www.ecianow.org.
75. EIMA - EIFS Industry Members Association; www.eima.com.
76. EJMA - Expansion Joint Manufacturers Association, Inc.; www.ejma.org.
77. EOS/ESD - EOS/ESD Association, Inc.; Electrostatic Discharge Association; www.esda.org.
78. ESTA - Entertainment Services and Technology Association; www.esta.org.
79. EVO - Efficiency Valuation Organization; www.evo-world.org.
80. FCI - Fluid Controls Institute; www.fluidcontrolsinstitute.org.
81. FGIA - Fenestration and Glazing Industry Alliance; https://fgiaonline.org.
82. FIBA - Federation Internationale de Basketball; (The International Basketball Federation); www.fiba.com.
83. FIVB - Federation Internationale de Volleyball; (The International Volleyball Federation); www.fivb.org.
84. FM Approvals - FM Approvals LLC; www.fmapprovals.com.
85. FM Global - FM Global; www.fmglobal.com.
86. FRSA - Florida Roofing and Sheet Metal Contractors Association, Inc.; www.floridaroof.com.
87. FSA - Fluid Sealing Association; www.fluidsealing.com.
88. FSC - Forest Stewardship Council U.S.; www.fscus.org.
89. GA - Gypsum Association; www.gypsum.org.
90. GS - Green Seal; www.greenseal.org.
91. HI - Hydraulic Institute; www.pumps.org.
92. HMMA - Hollow Metal Manufacturers Association; (see NAAMM).
93. IAPSC - International Association of Professional Security Consultants; www.iapsc.org.
94. IAS - International Accreditation Service; www.iasonline.org.
95. ICC - International Code Council; www.iccsafe.org.
96. ICEA - Insulated Cable Engineers Association, Inc.; www.icea.net.
97. ICPA - International Cast Polymer Association (The); www.theicpa.com.
98. ICRI - International Concrete Repair Institute, Inc.; www.icri.org.
99. IEC - International Electrotechnical Commission; www.iec.ch.
100. IEEE - Institute of Electrical and Electronics Engineers, Inc. (The); www.ieee.org.
101. IES - Illuminating Engineering Society; www.ies.org.
102. IEST - Institute of Environmental Sciences and Technology; www.iest.org.
103. IGMA - Insulating Glass Manufacturers Alliance; (see FGIA).
104. IGSHPA - International Ground Source Heat Pump Association; www.igshpa.org.
105. ILI - Indiana Limestone Institute of America, Inc.; www.iliai.com.
106. Intertek - Intertek Group; www.intertek.com.
107. ISA - International Society of Automation (The); www.isa.org.
108. ISFA - International Surface Fabricators Association; www.isfanow.org.

109. ISO - International Organization for Standardization; www.iso.org.
110. ITU - International Telecommunication Union; www.itu.int.
111. KCMA - Kitchen Cabinet Manufacturers Association; www.kcma.org.
112. LPI - Lightning Protection Institute; www.lightning.org.
113. MBMA - Metal Building Manufacturers Association; www.mbma.com.
114. MCA - Metal Construction Association; www.metalconstruction.org.
115. MFMA - Maple Flooring Manufacturers Association, Inc.; www.maplefloor.org.
116. MFMA - Metal Framing Manufacturers Association, Inc.; www.metalframingmfg.org.
117. MHI - Material Handling Industry; www.mhi.org.
118. MMPA - Moulding & Millwork Producers Association; www.wmmpa.com.
119. MPI - Master Painters Institute; www.paintinfo.com.
120. MSS - Manufacturers Standardization Society of The Valve and Fittings Industry, Inc.; www.msshq.org.
121. NAAMM - National Association of Architectural Metal Manufacturers; www.naamm.org.
122. NACE - NACE International; (National Association of Corrosion Engineers International); (see AMPP).
123. NADCA - National Air Duct Cleaners Association; www.nadca.com.
124. NAIMA - North American Insulation Manufacturers Association; www.insulationinstitute.org.
125. NALP - National Association of Landscape Professionals; www.landscapeprofessionals.org.
126. NBGQA - National Building Granite Quarries Association, Inc.; www.nbgqa.com.
127. NBI - New Buildings Institute; www.newbuildings.org.
128. NCAA - National Collegiate Athletic Association (The); www.ncaa.org.
129. NCMA - National Concrete Masonry Association; www.ncma.org.
130. NEBB - National Environmental Balancing Bureau; www.nebb.org.
131. NECA - National Electrical Contractors Association; www.necanet.org.
132. NeLMA - Northeastern Lumber Manufacturers Association; www.nelma.org.
133. NEMA - National Electrical Manufacturers Association; www.nema.org.
134. NETA - InterNational Electrical Testing Association; www.netaworld.org.
135. NFHS - National Federation of State High School Associations; www.nfhs.org.
136. NFPA - National Fire Protection Association; www.nfpa.org.
137. NFPA - NFPA International; (see NFPA).
138. NFRC - National Fenestration Rating Council; www.nfrc.org.
139. NGA - National Glass Association (The); www.glass.org.
140. NHLA - National Hardwood Lumber Association; www.nhla.com.
141. NLGA - National Lumber Grades Authority; www.nlga.org.
142. NOFMA - National Oak Flooring Manufacturers Association; (see NWFA).
143. NOMMA - National Ornamental & Miscellaneous Metals Association; www.nomma.org.
144. NRCA - National Roofing Contractors Association; www.nrca.net.
145. NRMCA - National Ready Mixed Concrete Association; www.nrmca.org.
146. NSF - NSF International; www.nsf.org.
147. NSI - Natural Stone Institute; www.naturalstoneinstitute.org.
148. NSPE - National Society of Professional Engineers; www.nspe.org.
149. NSSGA - National Stone, Sand & Gravel Association; www.nssga.org.
150. NTMA - National Terrazzo & Mosaic Association, Inc. (The); www.ntma.com.
151. NWFA - National Wood Flooring Association; www.nwfa.org.

152. NWRA - National Waste & Recycling Association; www.wasterecycling.org.
153. PCI - Precast/Prestressed Concrete Institute; www.pci.org.
154. PDI - Plumbing & Drainage Institute; www.pdionline.org.
155. PLASA - PLASA; www.plasa.org.
156. PLIB - Pacific Lumber Inspection Bureau; www.plib.org.
157. PVCPA - Uni-Bell PVC Pipe Association; www.uni-bell.org.
158. RCSC - Research Council on Structural Connections; www.boltcouncil.org.
159. RFCI - Resilient Floor Covering Institute; www.rfci.com.
160. RIS - Redwood Inspection Service; (see WWPA).
161. SAE - SAE International; www.sae.org.
162. SCTE - Society of Cable Telecommunications Engineers; www.scte.org.
163. SDI - Steel Deck Institute; www.sdi.org.
164. SDI - Steel Door Institute; www.steeldoor.org.
165. SEFA - Scientific Equipment and Furniture Association (The); www.sefalabs.com.
166. SEI/ASCE - Structural Engineering Institute/American Society of Civil Engineers; (see ASCE).
167. SIA - Security Industry Association; www.securityindustry.org.
168. SJI - Steel Joist Institute; www.steeljoist.org.
169. SMA - Screen Manufacturers Association; www.smainfo.org.
170. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association; www.smacna.org.
171. SMPTE - Society of Motion Picture and Television Engineers; www.smpte.org.
172. SPFA - Spray Polyurethane Foam Alliance; www.sprayfoam.org.
173. SPIB - Southern Pine Inspection Bureau; www.spib.org.
174. SPRI - Single Ply Roofing Industry; www.spri.org.
175. SRCC - Solar Rating & Certification Corporation; www.solar-rating.org.
176. SSINA - Specialty Steel Industry of North America; www.ssina.com.
177. SSPC - SSPC: The Society for Protective Coatings; (see AMPP).
178. STI/SPFA - Steel Tank Institute/Steel Plate Fabricators Association; www.steeltank.com.
179. SWI - Steel Window Institute; www.steelwindows.com.
180. SWPA - Submersible Wastewater Pump Association; www.swpa.org.
181. TCA - Tilt-Up Concrete Association; www.tilt-up.org.
182. TCNA - Tile Council of North America, Inc.; www.tcnatile.com.
183. TEMA - Tubular Exchanger Manufacturers Association, Inc.; www.kbcdco.tema.org.
184. TIA - Telecommunications Industry Association (The); www.tiaonline.org.
185. TMS - The Masonry Society; www.masonrysociety.org.
186. TPI - Truss Plate Institute; www.tpinst.org.
187. TPI - Turfgrass Producers International; www.turfgrasssod.org.
188. TRI - Tile Roofing Industry Alliance; www.tileroofing.org.
189. UL - Underwriters Laboratories Inc.; www.ul.org.
190. UL LLC - UL LLC; www.ul.com.
191. USAV - USA Volleyball; www.usavolleyball.org.
192. USGBC - U.S. Green Building Council; www.usgbc.org.
193. USITT - United States Institute for Theatre Technology, Inc.; www.usitt.org.
194. WA - Wallcoverings Association; www.wallcoverings.org.
195. WCLIB - West Coast Lumber Inspection Bureau; (see PLIB).
196. WCMA - Window Covering Manufacturers Association; www.wcmanet.org.
197. WDMA - Window & Door Manufacturers Association; www.wdma.com.

198. WI - Woodwork Institute; www.woodworkinstitute.com.
199. WSRCA - Western States Roofing Contractors Association; www.wsrca.com.
200. WWPA - Western Wood Products Association; www.wwpa.org.

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. This information is believed to be accurate as of the date of the Contract Documents.

1. DIN - Deutsches Institut fur Normung e.V.; www.din.de.
2. IAPMO - International Association of Plumbing and Mechanical Officials; www.iapmo.org.
3. ICC - International Code Council; www.iccsafe.org.
4. ICC-ES - ICC Evaluation Service, LLC; www.icc-es.org.

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. Information is subject to change and is up to date as of the date of the Contract Documents.

1. CPSC - U.S. Consumer Product Safety Commission; www.cpsc.gov.
2. DOC - U.S. Department of Commerce; www.commerce.gov.
3. DOD - U.S. Department of Defense; www.defense.gov.
4. DOE - U.S. Department of Energy; www.energy.gov.
5. DOJ - U.S. Department of Justice; www.ojp.usdoj.gov
6. DOS - U.S. Department of State; www.state.gov.
7. EPA - United States Environmental Protection Agency; www.epa.gov.
8. FAA - Federal Aviation Administration; www.faa.gov.
9. GPO - U.S. Government Publishing Office; www.gpo.gov.
10. GSA - U.S. General Services Administration; www.gsa.gov.
11. HUD - U.S. Department of Housing and Urban Development; www.hud.gov.
12. LBNL - Lawrence Berkeley National Laboratory; Energy Technologies Area; www.lbl.gov/.
13. NIST - National Institute of Standards and Technology; www.nist.gov.
14. OSHA - Occupational Safety & Health Administration; www.osha.gov.
15. TRB - Transportation Research Board; National Cooperative Highway Research Program; The National Academies; www.trb.org.
16. USACE - U.S. Army Corps of Engineers; www.usace.army.mil.
17. USDA - U.S. Department of Agriculture; Agriculture Research Service; U.S. Salinity Laboratory; www.ars.usda.gov.
18. USDA - U.S. Department of Agriculture; Rural Utilities Service; www.usda.gov.
19. USP - U.S. Pharmacopeial Convention; www.usp.org.
20. USPS - United States Postal Service; www.usps.com.

E. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the standards and regulations in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. CFR - Code of Federal Regulations; Available from U.S. Government Publishing Office; www.govinfo.gov.
2. DOD - U.S. Department of Defense; Military Specifications and Standards; Available from DLA Document Services; www.dsp.dla.mil/Specs-Standards/.
3. DSCC - Defense Supply Center Columbus; (see FS).
4. FED-STD - Federal Standard; (see FS).
5. FS - Federal Specification; Available from DLA Document Services; www.dsp.dla.mil/Specs-Standards/.
   a. Available from Defense Standardization Program; www.dsp.dla.mil.
   b. Available from U.S. General Services Administration; www.gsa.gov.
   c. Available from National Institute of Building Sciences/Whole Building Design Guide; www.wbdg.org.
6. MILSPEC - Military Specification and Standards; (see DOD).
7. USAB - United States Access Board; www.access-board.gov.
8. USATBCB - U.S. Architectural & Transportation Barriers Compliance Board; (see USAB).

F. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they are to mean the recognized name of the entities in the following list. This information is subject to change and is believed to be accurate as of the date of the Contract Documents.

1. BEARHFTI; California Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation; (see BHGS).
2. BHGS; State of California Bureau of Household Goods and Services; (Formerly: California Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation); www.bhgs.dca.ca.gov.
3. CCR; California Code of Regulations; Office of Administrative Law; California Title 24 Energy Code; www.oal.ca.gov/publications/ccr/.
4. CDPH; California Department of Public Health; Indoor Air Quality Program; www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/Main-Page.aspx.
5. CPUC; California Public Utilities Commission; www.cpuc.ca.gov.
6. SCAQMD; South Coast Air Quality Management District; www.aqmd.gov.
7. TFS; Texas A&M Forest Service; Sustainable Forestry and Economic Development; https://tfsweb.tamu.edu/.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 014200

# SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

## PART 1 - GENERAL

### 1.1 SUMMARY

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

B. Related Requirements:

1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

### 1.2 USE CHARGES

A. Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.

B. Electric Power Service from Existing System: Electric power from Owner's existing system is available for use. Provide connections and extensions of services as required for construction operations.

### 1.3 INFORMATIONAL SUBMITTALS

A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.

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

C. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold. Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.

1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and requirements for replacing water-damaged Work.
2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with

water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.

3. Indicate methods to be used to avoid trapping water in finished work.

## 1.4 QUALITY ASSURANCE

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

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

C. Accessible Temporary Egress: Comply with applicable provisions in the DOJ's 2010 ADA Standards for Accessible Design an ICC A117.1.

## 1.5 PROJECT CONDITIONS

A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

# PART 2 - PRODUCTS

## 2.1 TEMPORARY FACILITIES

A. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Space within the existing facility and area of work shall be used and coordinated with the Owner.

## 2.2 EQUIPMENT

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

# PART 3 - EXECUTION

## 3.1 TEMPORARY FACILITIES, GENERAL

A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

## 3.2 INSTALLATION, GENERAL

A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

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

## 3.3 SUPPORT FACILITIES INSTALLATION

A. Comply with the following:

1. Utilize designated area within existing building for temporary field offices.
2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Parking: Use designated areas of Owner's existing parking areas for construction personnel.

C. Storage and Staging: Provide temporary offsite area for storage needs. Use designated areas of Project site for short-term staging needs.

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

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

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

F. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

G. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.

H. Existing Elevator Use: Use of Owner's existing elevators will be permitted in specified areas in coordination with Owner, provided elevators are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.

1. Do not load elevators beyond their rated weight capacity.
2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work so no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.

## 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.

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

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

D. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

1. Where heating or cooling is needed and permanent enclosure is incomplete, insulate temporary enclosures.

E. Temporary Partitions: Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.

1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
2. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.

3. Provide walk-off mats at each entrance through temporary partition.

F. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241; manage fire-prevention program.

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

## 3.5 MOISTURE AND MOLD CONTROL

A. Moisture and Mold Protection: Protect stored materials and installed Work in accordance with Moisture and Mold Protection Plan.

B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:

1. Protect porous materials from water damage.
2. Protect stored and installed material from flowing or standing water.
3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.

C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:

1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
2. Keep interior spaces reasonably clean and protected from water damage.
3. Periodically collect and remove waste containing cellulose or other organic matter.
4. Discard or replace water-damaged material.
5. Do not install material that is wet.
6. Discard and replace stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.

D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.

## 3.6 OPERATION, TERMINATION, AND REMOVAL

A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.

B. Maintenance: Maintain facilities in good operating condition until removal.

1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.

C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.

D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 015000

# SECTION 016000 - PRODUCT REQUIREMENTS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. The Work of 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; and comparable products.

B. Related Requirements:

1. Section 012500 "Substitution Procedures" for requests for substitutions.

### 1.2 DEFINITIONS

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

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Salvaged items or items reused from other projects are not considered new products. Items that are manufactured or fabricated to include recycled content materials are considered new products unless otherwise indicated.
3. Comparable Product: Product by named manufacturer that is demonstrated and approved through the comparable product submittal process described in "Comparable Products" Article, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Basis-of-Design Product Specification: A specification in which a single manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation. Published attributes and characteristics of basis-of-design product establish salient characteristics of products.

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

attributes and characteristics of basis-of-design product also establish salient characteristics of products for purposes of evaluating comparable products.

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

D. Comparable Product Request Submittal: An action submittal requesting consideration of a comparable product, including the following information:

1. Identification of basis-of-design product or fabrication or installation method to be replaced, including Specification Section number and title and Drawing numbers and titles.
2. Data indicating compliance with the requirements specified in "Comparable Products" Article.

E. Basis-of-Design Product Specification Submittal: An action submittal complying with requirements in Section 013300 "Submittal Procedures."

F. Substitution: Refer to Section 012500 "Substitution Procedures" for definition and limitations on substitutions.

## 1.3 QUALITY ASSURANCE

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

## 1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

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

## 1.5 PRODUCT WARRANTIES

A. Warranties specified in other Sections are to be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

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

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

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. Specified Form: When specified forms are included in the Project Manual, prepare a written document, using indicated form properly executed.
3. See other Sections for specific content requirements and particular requirements for submitting special warranties.

## PART 2 - PRODUCTS

### 2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties meeting requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in Specifications establish salient characteristics of products.

B. Product Selection Procedures:

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

a. For approval of products by unnamed manufacturers, comply with requirements in Section 012500 "Substitution Procedures" for substitutions for convenience.

C. Visual Matching Specification: Where Specifications require the phrase "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.

1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Section 012500 "Substitution Procedures" for proposal of product.

D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or a similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

E. Sustainable Product Selection: Where Specifications require product to meet sustainable product characteristics, select products complying with indicated requirements. Comply with requirements in Division 01 sustainability requirements Section and individual Specification Sections.

1. Select products for which sustainable design documentation submittals are available from manufacturer.

## 2.2 COMPARABLE PRODUCTS

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

1. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those of the named basis-of-design product. Significant product qualities include attributes, such as type, function, in-service performance and physical properties, weight, dimension, durability, visual characteristics, and other specific features and requirements.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

B. Architect's Action on Comparable Products Submittal: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for a comparable product. Architect will notify Contractor of approval or rejection

of proposed comparable product within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

1. Architect's Approval of Submittal: Marked with approval notation from Architect's action stamp. See Section 013300 "Submittal Procedures."
2. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

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

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

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

# SECTION 017300 - EXECUTION

## PART 1 - GENERAL

### 1.1 SUMMARY

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

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

B. Related Requirements:

1. Section 011000 "Summary" for coordination of Owner-furnished products and limits on use of Project site.
2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, replacing defective work, and final cleaning.
3. Section 024119 "Selective Demolition" for demolition and removal of selected portions of the building.

### 1.2 DEFINITIONS

A. Cutting: Removal of in-place construction necessary to permit installation or performance of subsequent work.

B. Patching: Fitting and repair work required to restore construction to original conditions after installation of subsequent work.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

A. Comply with requirements specified in other Sections.

1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with sustainable design requirements.

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

1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to Architect for the visual and functional performance of in-place materials. Use materials that are not considered hazardous.

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

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

## PART 3 - EXECUTION

### 3.1 EXAMINATION

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

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, gas service piping, and water-service piping; underground electrical services; and other utilities.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
2. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
3. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.

C. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:

1. Description of the Work, including Specification Section number and paragraph, and Drawing sheet number and detail, where applicable.
2. List of detrimental conditions, including substrates.
3. List of unacceptable installation tolerances.
4. Recommended corrections.

D. 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 local utility and 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 in accordance with requirements in Section 013100 "Project Management and Coordination."

## 3.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to existing conditions. If discrepancies are discovered, notify Architect promptly.

## 3.4 INSTALLATION

A. 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 96 inches in occupied spaces, unless otherwise indicated on Drawings.

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 satisfactory results as judged by Architect. 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 of type expected for Project.

E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on-site and placement in permanent locations.

F. Tools and Equipment: Select tools or equipment that minimize production of excessive noise levels.

G. Templates: Obtain and distribute to the parties involved templates for Work specified to be factory prepared and field installed. Check Shop Drawings of other portions of the Work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

H. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions with manufacturer.

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.

I. Joints: Make joints of uniform width. Where joint locations in exposed Work are not indicated, arrange joints for the best visual effect, as judged by Architect. Fit exposed connections together to form hairline joints.

## 3.5 CUTTING AND PATCHING

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

C. Temporary Support: Provide temporary support of Work to be cut.

D. 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.

E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements in Section 011000 "Summary."

F. 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 and prevent interruption to occupied areas.

G. 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 neatly to minimum 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 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.

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

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical 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, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch, corner to corner of wall and edge to edge of ceiling. 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 and ensures thermal and moisture integrity of building enclosure.

I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

## 3.6 PROGRESS CLEANING

A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, in accordance with regulations.
   a. Use containers intended for holding waste materials of type to be stored.
4. Coordinate progress cleaning for joint-use areas where Contractor and other contractors are working concurrently.

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

C. Work Areas: Clean areas where Work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces in accordance with written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in Section 015000 "Temporary Facilities and Controls." Section 017419 "Construction Waste Management and Disposal."

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 ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

## 3.7 STARTING AND ADJUSTING

A. Coordinate startup and adjusting of equipment and operating components with requirements in Section 019113 "General Commissioning Requirements."

B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.

D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

E. Manufacturer's Field Service: Comply with qualification requirements in Section 014000 "Quality Requirements."

## 3.8 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Protection of Existing Items: Provide protection and ensure that existing items to remain undisturbed by construction are maintained in condition that existed at commencement of the Work.

C. Comply with manufacturer's written instructions for temperature and relative humidity.

## 3.9 CORRECTION OF THE WORK

A. Repair or remove and replace damaged, defective, or nonconforming Work. Restore damaged substrates and finishes.

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Repair Work previously completed and subsequently damaged during construction period. Repair to like-new condition.

C. Restore permanent facilities used during construction to their specified condition.

D. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

F. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

# SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.

### 1.2 DEFINITIONS

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

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

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

D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

### 1.3 ACTION SUBMITTALS

A. Waste Management Plan: Submit plan within 7 days of date established for the Notice to Proceed.

### 1.4 INFORMATIONAL SUBMITTALS

A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report.

B. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

C. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

## 1.5 WASTE MANAGEMENT PLAN

A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.

B. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed.

# PART 2 - PRODUCTS

## 2.1 PERFORMANCE REQUIREMENTS

A. General: Achieve end-of-Project rates for salvage/recycling of 50 percent by weight of total nonhazardous solid waste generated by the Work. Facilitate recycling and salvage of materials.

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

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

B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.

C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work.

1. Distribute waste management plan to everyone concerned within three days of submittal return.
2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged and recycled.
2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

A. Comply with requirements in Section 024119 "Selective Demolition” for salvaging demolition waste.

B. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

C. Salvaged Items for Sale and Donation : Not permitted on Project site.

D. Salvaged Items for Owner's Use:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers with label indicating elements, date of removal, quantity, and location where removed.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area on-site and designated by Owner.
5. Protect items from damage during transport and storage.

## 3.3 RECYCLING demolition and construction WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

C. Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process.

D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved construction waste management plan.

1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
   a. Inspect containers and bins for contamination and remove contaminated materials if found.
2. Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overfilling bins.

## 3.4 RECYCLING DEMOLITION WASTE

A. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.

B. Metal Suspension System: Separate metal members, including trim and other metals from acoustical panels and tile, and sort with other metals.

C. Piping: Reduce piping to straight lengths and store by material and size. Separate supports, hangers, valves, sprinklers, and other components by material and size.

D. Conduit: Reduce conduit to straight lengths and store by material and size.

E. Lamps: Separate lamps by type and store according to requirements in 40 CFR 273.

## 3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

B. Paint: Seal containers and store by type.

## 3.6 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

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

C. Burning: Do not burn waste materials.

END OF SECTION 017419

# SECTION 017700 - CLOSEOUT PROCEDURES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures.
2. Final Completion procedures.
3. Submittal of Project warranties.
4. Final cleaning.

### 1.2 ACTION SUBMITTALS

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

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

### 1.3 SUBSTANTIAL COMPLETION PROCEDURES

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

B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Owner. Label with manufacturer's name and model number.
5. Submit testing, adjusting, and balancing records.

6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Advise Owner of pending insurance changeover requirements.
2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
3. Complete startup and testing of systems and equipment.
4. Perform preventive maintenance on equipment used prior to Substantial Completion.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
6. Advise Owner of changeover in utility services.
7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
9. Complete final cleaning requirements.
10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.

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

## 1.4 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:

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

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final

inspection and tests. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

## 1.5 LIST OF INCOMPLETE ITEMS

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, listed by room or space number.
2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
    a. Project name.
    b. Date.
    c. Name of Architect and Construction Manager.
    d. Name of Contractor.
    e. Page number.
4. Submit list of incomplete items in the following format:
    a. PDF Electronic File: Architect will return annotated file.

## 1.6 SUBMITTAL OF PROJECT WARRANTIES

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

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

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

1. Submit on digital media acceptable to Owner and Architect by email to Architect.

D. Warranties in Paper Form:

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

E. Provide additional copies of each warranty to include in operation and maintenance manuals.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

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

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

## PART 3 - EXECUTION

### 3.1 FINAL CLEANING

A. Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
    a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
    b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
    c. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    d. Clean flooring, removing debris, dirt, and staining; clean in accordance with manufacturer's instructions.
    e. Vacuum and mop concrete.
    f. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean in accordance with manufacturer's instructions if visible soil or stains remain.
    g. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
    h. Remove labels that are not permanent.

i. Wipe surfaces of mechanical and electrical equipmentand similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
j. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
k. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
l. Clean ducts, blowers, and coils.
   1) Clean HVAC system in compliance with NADCA ACR.
m. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
n. Clean strainers.
o. Leave Project clean and ready for occupancy.

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

## 3.2 CORRECTION OF THE WORK

A. Complete repair and restoration operations required by "Correction of the Work" Article in Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION 017700

# SECTION 017823 - OPERATION AND MAINTENANCE DATA

## PART 1 - GENERAL

### 1.1 SUMMARY

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

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

### 1.2 CLOSEOUT SUBMITTALS

A. Submit operation and maintenance manuals indicated. Provide content for each manual as specified in individual Specification Sections, and as reviewed and approved at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect and Commission Authority will comment on whether content of operation and maintenance submittals is acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

### 1.3 FORMAT OF OPERATION AND MAINTENANCE MANUALS

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

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

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

1. Binders: Heavy-duty, three-ring, vinyl-covered, binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
2. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
   a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
   b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

## 1.4 SYSTEMS AND EQUIPMENT OPERATION MANUALS

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

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

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

C. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

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

1. Startup procedures.

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

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

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

## 1.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Systems and Equipment Maintenance Manuals: Assemble a complete set of data indicating maintenance of each system, subsystem, and piece of equipment not part of a system. Include manufacturers' maintenance documentation, preventive maintenance procedures and frequency, repair procedures, wiring and systems diagrams, lists of spare parts, and warranty information.

B. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranties and bonds, as described below.

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

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

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

1. Test and inspection instructions.

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

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

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

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

H. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

## 1.6 PRODUCT MAINTENANCE MANUALS

A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

B. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

C. Product Information: Include the following, as applicable:

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

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

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

5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017823

# SECTION 017839 - PROJECT RECORD DOCUMENTS

## PART 1 - GENERAL

### 1.1 SUMMARY

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

1. Record Drawings.

B. Related Requirements:

1. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

### 1.2 CLOSEOUT SUBMITTALS

A. Record Drawings: Comply with the following:

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

### 1.3 RECORD DRAWINGS

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

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

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

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

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

## 1.4 MAINTENANCE OF RECORD DOCUMENTS

A. Maintenance of Record Documents: Store Record Documents in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

## PART 2 - PRODUCTS (Not Used)

## PART 3 - EXECUTION (Not Used)

END OF SECTION 017839

# SECTION 017900 - DEMONSTRATION AND TRAINING

## PART 1 - GENERAL

### 1.1 SUMMARY

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

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

### 1.2 INFORMATIONAL SUBMITTALS

A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.

1. Indicate proposed training modules using manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.

### 1.3 CLOSEOUT SUBMITTALS

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

1. At completion of training, submit complete training manual(s) for Owner's use prepared in same paper and PDF file format required for operation and maintenance manuals specified in Section 017823 "Operation and Maintenance Data."

### 1.4 QUALITY ASSURANCE

A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.

B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 014000 "Quality Requirements," experienced in operation and maintenance procedures and training.

C. Preinstruction Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination."

## 1.5 COORDINATION

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

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

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

## 1.6 INSTRUCTION PROGRAM

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

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

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
    a. System, subsystem, and equipment descriptions.
    b. Performance and design criteria if Contractor is delegated design responsibility.
    c. Operating standards.
    d. Regulatory requirements.
    e. Equipment function.
    f. Operating characteristics.
    g. Limiting conditions.
    h. Performance curves.
2. Documentation: Review the following items in detail:
    a. Emergency manuals.
    b. Systems and equipment operation manuals.
    c. Systems and equipment maintenance manuals.
    d. Product maintenance manuals.
    e. Project Record Documents.
    f. Identification systems.
    g. Warranties and bonds.
    h. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:

a. Instructions on meaning of warnings, trouble indications, and error messages.
b. Instructions on stopping.
c. Shutdown instructions for each type of emergency.
d. Operating instructions for conditions outside of normal operating limits.
e. Sequences for electric or electronic systems.
f. Special operating instructions and procedures.

4. Operations: Include the following, as applicable:
   a. Startup procedures.
   b. Equipment or system break-in procedures.
   c. Routine and normal operating instructions.
   d. Regulation and control procedures.
   e. Control sequences.
   f. Safety procedures.
   g. Instructions on stopping.
   h. Normal shutdown instructions.
   i. Operating procedures for emergencies.
   j. Operating procedures for system, subsystem, or equipment failure.
   k. Seasonal and weekend operating instructions.
   l. Required sequences for electric or electronic systems.
   m. Special operating instructions and procedures.
5. Adjustments: Include the following:
   a. Alignments.
   b. Checking adjustments.
   c. Noise and vibration adjustments.
   d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
   a. Diagnostic instructions.
   b. Test and inspection procedures.
7. Maintenance: Include the following:
   a. Inspection procedures.
   b. Types of cleaning agents to be used and methods of cleaning.
   c. List of cleaning agents and methods of cleaning detrimental to product.
   d. Procedures for routine cleaning.
   e. Procedures for preventive maintenance.
   f. Procedures for routine maintenance.
   g. Instruction on use of special tools.
8. Repairs: Include the following:
   a. Diagnosis instructions.
   b. Repair instructions.
   c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
   d. Instructions for identifying parts and components.
   e. Review of spare parts needed for operation and maintenance.

## 1.7 PREPARATION

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

B. Set up instructional equipment at instruction location.

## 1.8 INSTRUCTION

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

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

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

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

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

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

## 1.9 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.

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

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

1. Submit video recordings on thumb drive.

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

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017900

# SECTION 024119 - SELECTIVE DEMOLITION

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Salvage of existing items to be reused or recycled.

### 1.2 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

### 1.3 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Greater Columbus Convention Center, 400 N. High Street Columbus, OH 43215.

### 1.4 INFORMATIONAL SUBMITTALS

A. Engineering Survey: Submit engineering survey of condition of building.

B. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property for dust control and for noise control. Indicate proposed locations and construction of barriers.

C. Schedule of selective demolition activities with starting and ending dates for each activity.

D. Predemolition photographs or video.

### 1.5 CLOSEOUT SUBMITTALS

A. Inventory of items that have been removed and salvaged.

### 1.6 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.
2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.

G. Arrange selective demolition schedule so as not to interfere with Owner's operations.

1.7 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Inventory and record the condition of items to be removed and salvaged.

## 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
2. Arrange to shut off utilities with utility companies.
3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
4. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
    a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
    f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
    g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

## 3.3 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

C. Remove temporary barricades and protections where hazards no longer exist.

## 3.4 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
4. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
6. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal."

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition, cleaned, and reinstalled in their original locations after selective demolition operations are complete.

3.5 CLEANING

A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction and recycle or dispose of them according to Section 017419 "Construction Waste Management and Disposal."

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."

B. Burning: Do not burn demolished materials.

C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

# SECTION 033000 - CAST-IN-PLACE CONCRETE

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Cast-in-place concrete, including concrete materials, mixture design, placement procedures, and finishes.

### 1.2 DEFINITIONS

A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, and other pozzolans materials subject to compliance with requirements.

B. Water/Cement Ratio (w/cm): The ratio by weight of water to cementitious materials.

### 1.3 ACTION SUBMITTALS

A. Product Data: For each of the following.

1. Portland cement.
2. Fly ash.
3. Slag cement.
4. Blended hydraulic cement.
5. Aggregates.
6. Admixtures:
   a. Include limitations of use, including restrictions on cementitious materials, supplementary cementitious materials, air entrainment, aggregates, temperature at time of concrete placement, relative humidity at time of concrete placement, curing conditions, and use of other admixtures.
7. Vapor retarders.
8. Liquid floor treatments.
9. Curing materials.
10. Joint fillers.

B. Design Mixtures: For each concrete mixture, include the following:

1. Mixture identification.
2. Minimum 28-day compressive strength.
3. Durability exposure class.
4. Maximum w/cm.
5. Calculated equilibrium unit weight, for lightweight concrete.
6. Slump limit.

7. Air content.
8. Nominal maximum aggregate size.
9. Indicate amounts of mixing water to be withheld for later addition at Project site if permitted.
10. Intended placement method.
11. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

C. Concrete Schedule: For each location of each Class of concrete indicated in "Concrete Mixtures" Article, including the following:

1. Concrete Class designation.
2. Location within Project.
3. Exposure Class designation.
4. Formed Surface Finish designation and final finish.
5. Final finish for floors.
6. Curing process.
7. Floor treatment if any.

1.4 INFORMATIONAL SUBMITTALS

A. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Curing compounds.
4. Vapor retarders.
5. Joint-filler strips.

B. Material Test Reports: For the following, from a qualified testing agency:

1. Portland cement.
2. Fly ash.
3. Slag cement.
4. Blended hydraulic cement.
5. Aggregates.
6. Admixtures:

C. Research Reports: For concrete admixtures in accordance with ICC's Acceptance Criteria AC198.

D. Preconstruction Test Reports: For each mix design.

E. Field quality-control reports.

1.5 QUALITY ASSURANCE

A. Ready-Mixed Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.

1. Manufacturer certified in accordance with NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

1.6 PRECONSTRUCTION TESTING

A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on each concrete mixture.

1. Include the following information in each test report:
   a. Admixture dosage rates.
   b. Slump.
   c. Air content.
   d. Seven-day compressive strength.
   e. 28-day compressive strength.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Comply with ASTM C94/C94M and ACI 301.

1.8 FIELD CONDITIONS

A. Cold-Weather Placement: Comply with ACI 301 and ACI 306.1.

B. Hot-Weather Placement: Comply with ACI 301 and ACI 305.1.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with ACI 301 unless modified by requirements in the Contract Documents.

2.2 CONCRETE MATERIALS

A. Cementitious Materials:

1. Portland Cement: ASTM C150/C150M, **gray**.
2. Fly Ash: ASTM C618, Class C or F.
3. Slag Cement: ASTM C989/C989M, Grade 100 or 120.
4. Blended Hydraulic Cement: ASTM C595/C595M, cement.

B. Normal-Weight Aggregates: ASTM C33/C33M, coarse aggregate or better, graded. Provide aggregates from a single source.

1. Alkali-Silica Reaction: Comply with one of the following:
   a. Expansion Result of Aggregate: Not more than 0.04 percent at one-year when tested in accordance with ASTM C1293.
   b. Expansion Results of Aggregate and Cementitious Materials in Combination: Not more than 0.10 percent at an age of 16 days when tested in accordance with ASTM C1567.
   c. Alkali Content in Concrete: Not more than 4 lb./cu. yd. for moderately reactive aggregate or 3 lb./cu. yd. for highly reactive aggregate, when tested in accordance with ASTM C1293 and categorized in accordance with ASTM C1778, based on alkali content being calculated in accordance with ACI 301.
2. Maximum Coarse-Aggregate Size: Match existing.
3. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Lightweight Aggregate: ASTM C330/C330M, match existing maximum aggregate size.

D. Air-Entraining Admixture: ASTM C260/C260M.

E. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride in steel-reinforced concrete.

1. Water-Reducing Admixture: ASTM C494/C494M, Type A.
2. Retarding Admixture: ASTM C494/C494M, Type B.
3. Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type D.
4. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.
5. High-Range, Water-Reducing and -Retarding Admixture: ASTM C494/C494M, Type G.
6. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II.

F. Water and Water Used to Make Ice: ASTM C94/C94M, potable.

## 2.3 VAPOR RETARDERS

A. Sheet Vapor Retarder, Class A: ASTM E1745, Class A not less than 10 mils thick. Include manufacturer's recommended adhesive or pressure-sensitive tape.

## 2.4 LIQUID FLOOR TREATMENTS

A. Penetrating Liquid Floor Treatment: Clear, chemically reactive, waterborne solution of inorganic silicate or siliconate materials and proprietary components; odorless; that penetrates, hardens, and densifies concrete surfaces

## 2.5 CURING MATERIALS

A. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

B. Moisture-Retaining Cover: ASTM C171, polyethylene film burlap-polyethylene sheet.

1. Color:
   a. Ambient Temperature Below 50 deg F: Black.
   b. Ambient Temperature between 50 deg F and 85 deg F: Any color.
   c. Ambient Temperature Above 85 deg F: White.

C. Curing Paper: 8-feet- wide paper, consisting of two layers of fibered kraft paper laminated with double coating of asphalt.

D. Water: Potable or complying with ASTM C1602/C1602M.

E. Clear, Waterborne, Membrane-Forming, Dissipating Curing Compound: ASTM C309, Type 1, Class B.

F. Clear, Waterborne, Membrane-Forming, Nondissipating Curing Compound: ASTM C309, Type 1, Class B, certified by curing compound manufacturer to not interfere with bonding of floor covering.

G. Clear, Waterborne, Membrane-Forming, Curing and Sealing Compound: ASTM C1315, Type 1, Class A.

## 2.6 RELATED MATERIALS

A. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber.

B. Floor Slab Protective Covering: 8-feet- wide cellulose fabric.

## 2.7 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, in accordance with ACI 301.

1. Use a qualified testing agency for preparing and reporting proposed mixture designs, based on laboratory trial mixtures.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash or Other Pozzolans: 25 percent by mass.
2. Slag Cement: 50 percent by mass.
3. Total of Fly Ash or Other Pozzolans, Slag Cement: 50 percent by mass, with fly ash or pozzolans not exceeding 25 percent by mass.

4. Total of Fly Ash or Other Pozzolans: 35 percent by mass with fly ash or pozzolans not exceeding 25 percent by mass.

C. Admixtures: Use admixtures in accordance with manufacturer's written instructions.

1. Use water-reducing, high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability.
2. Use water-reducing and -retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.

## 2.8 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete in accordance with ASTM C94/C94M and ASTM C1116/C1116M, and furnish batch ticket information.

B. Project-Site Mixing: Measure, batch, and mix concrete materials and concrete in accordance with ASTM C94/C94M. Mix concrete materials in appropriate drum-type batch machine mixer.

1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than five minutes after ingredients are in mixer, before any part of batch is released.
2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd..
3. Provide batch ticket for each batch discharged and used in the Work, indicating Project identification name and number, date, mixture type, mixture time, quantity, and amount of water added. Record approximate location of final deposit in structure.

# PART 3 - EXECUTION

## 3.1 INSTALLATION OF EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining Work that is attached to or supported by cast-in-place concrete.

1. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
2. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of ANSI/AISC 303.
3. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.

## 3.2 INSTALLATION OF VAPOR RETARDER

A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder in accordance with ASTM E1643 and manufacturer's written instructions.

1. Install vapor retarder with longest dimension parallel with direction of concrete pour.
2. Face laps away from exposed direction of concrete pour.
3. Lap vapor retarder over footings and grade beams not less than 6 inches, sealing vapor retarder to concrete.
4. Lap joints 6 inches and seal with manufacturer's recommended tape.
5. Terminate vapor retarder at the top of floor slabs, grade beams, and pile caps, sealing entire perimeter to floor slabs, grade beams, foundation walls, or pile caps.
6. Seal penetrations in accordance with vapor retarder manufacturer's instructions.
7. Protect vapor retarder during placement of reinforcement and concrete.
    a. Repair damaged areas by patching with vapor retarder material, overlapping damages area by 6 inches on all sides, and sealing to vapor retarder.

## 3.3 JOINTS

A. Construct joints true to line, with faces perpendicular to surface plane of concrete.

B. Construction Joints: Coordinate with floor slab pattern and concrete placement sequence.

1. Install so strength and appearance of concrete are not impaired, at locations indicated on Drawings or as approved by Architect.
2. Place joints perpendicular to main reinforcement.
    a. Continue reinforcement across construction joints unless otherwise indicated.
    b. Do not continue reinforcement through sides of strip placements of floors and slabs.
3. Form keyed joints as indicated. Embed keys at least 1-1/2 inches into concrete.
4. Locate joints for beams, slabs, joists, and girders at third points of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
5. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.

C. Control Joints in Slabs-on-Ground: Form weakened-plane control joints, sectioning concrete into areas as indicated. Construct control joints for a depth equal to at least of concrete thickness as follows:

1. Grooved Joints: Form control joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of control joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
2. Sawed Joints: Form control joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random cracks.

D. Isolation Joints in Slabs-on-Ground: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

1. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface unless otherwise indicated on Drawings.
2. Terminate full-width joint-filler strips not less than 1/2 inch or more than 1 inch below finished concrete surface, where joint sealants, specified in Section 079200 "Joint Sealants," are indicated.
3. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

E. Doweled Joints:

1. Install dowel bars and support assemblies at joints where indicated on Drawings.
2. Lubricate or asphalt coat one-half of dowel bar length to prevent concrete bonding to one side of joint.

F. Dowel Plates: Install dowel plates at joints where indicated on Drawings.

## 3.4 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of formwork, reinforcement, embedded items, and vapor retarder is complete and that required inspections are completed.

1. Immediately prior to concrete placement, inspect vapor retarder for damage and deficient installation, and repair defective areas.
2. Provide continuous inspection of vapor retarder during concrete placement and make necessary repairs to damaged areas as Work progresses.

B. Notify Architect and testing and inspection agencies 24 hours prior to commencement of concrete placement.

C. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect in writing, but not to exceed the amount indicated on the concrete delivery ticket.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301, but not to exceed the amount indicated on the concrete delivery ticket.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness.

1. If a section cannot be placed continuously, provide construction joints as indicated.
2. Deposit concrete to avoid segregation.
3. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
4. Consolidate placed concrete with mechanical vibrating equipment in accordance with ACI 301.
    a. Do not use vibrators to transport concrete inside forms.
    b. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6 inches into preceding layer.
    c. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity.
    d. At each insertion, limit duration of vibration to time necessary to consolidate concrete, and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.

1. Do not place concrete floors and slabs in a checkerboard sequence.
2. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
3. Maintain reinforcement in position on chairs during concrete placement.
4. Screed slab surfaces with a straightedge and strike off to correct elevations.
5. Level concrete, cut high areas, and fill low areas.
6. Slope surfaces uniformly to drains where required.
7. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface.
8. Do not further disturb slab surfaces before starting finishing operations.

## 3.5 FINISHING FLOORS AND SLABS

A. Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish:

1. While still plastic, texture concrete surface that has been screeded and bull-floated or darbied.
2. Use stiff brushes, brooms, or rakes to produce a profile depth of 1/4 inch in one direction.
3. Apply scratch finish to surfaces.

C. Float Finish:

1. When bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operation of specific float apparatus, consolidate concrete surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats.
2. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture and complies with ACI 117 tolerances for conventional concrete.

3. Apply float finish to surfaces

D. Trowel Finish:

1. After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel.
2. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance.
3. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
4. Do not add water to concrete surface.
5. Do not apply hard-troweled finish to concrete, which has a total air content greater than 3 percent.
6. Apply a trowel finish to surfaces
7. Finish and measure surface, so gap at any point between concrete surface and an unleveled, freestanding, 10-ft.- long straightedge resting on two high spots and placed anywhere on the surface

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces as indicated in Drawings. While concrete is still plastic, slightly scarify surface with a fine broom perpendicular to main traffic route.

1. Coordinate required final finish with Architect before application.
2. Comply with flatness and levelness tolerances for trowel-finished floor surfaces.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, ramps, and locations indicated on Drawings.

1. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.
2. Coordinate required final finish with Architect before application.

G. Slip-Resistive Finish: Before final floating, apply slip-resistive finish to concrete stair treads, platforms, ramps as indicated on Drawings

1. Apply in accordance with manufacturer's written instructions and as follows:
   a. Uniformly spread of dampened slip-resistive over surface in one or two applications.
   b. Tamp aggregate flush with surface, but do not force below surface.
   c. After broadcasting and tamping, apply float finish.
   d. After curing, lightly work surface with a steel wire brush or an abrasive stone and water to expose slip-resistive

## 3.6 INSTALLATION OF MISCELLANEOUS CONCRETE ITEMS

A. Filling In:

1. Fill in holes and openings left in concrete structures after Work of other trades is in place unless otherwise indicated.
2. Mix, place, and cure concrete, as specified, to blend with in-place construction.

3. Provide other miscellaneous concrete filling indicated or required to complete the Work.

B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

## 3.7 CONCRETE CURING

A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

1. Comply with ACI 301 and ACI 306.1 for cold weather protection during curing.
2. Comply with ACI 301 and ACI 305.1 for hot-weather protection during curing.
3. Maintain moisture loss no more than 0.2 lb/sq. ft. x h, calculated in accordance with ACI 305.1, before and during finishing operations.

B. Curing Formed Surfaces: Comply with ACI 308.1 as follows:

1. Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
2. Cure concrete containing color pigments in accordance with color pigment manufacturer's instructions.
3. If forms remain during curing period, moist cure after loosening forms.
4. If removing forms before end of curing period, continue curing for remainder of curing period, as follows:
    a. Continuous Fogging: Maintain standing water on concrete surface until final setting of concrete.
    b. Continuous Sprinkling: Maintain concrete surface continuously wet.
    c. Absorptive Cover: Pre-dampen absorptive material before application; apply additional water to absorptive material to maintain concrete surface continuously wet.
    d. Water-Retention Sheeting Materials: Cover exposed concrete surfaces with sheeting material, taping, or lapping seams.
    e. Membrane-Forming Curing Compound: Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
        1) Recoat areas subject to heavy rainfall within three hours after initial application.
        2) Maintain continuity of coating and repair damage during curing period.

C. Curing Unformed Surfaces: Comply with ACI 308.1 as follows:

1. Begin curing immediately after finishing concrete.
2. Interior Concrete Floors:
    a. Floors to Receive Floor Coverings Specified in Other Sections: Contractor has option of the following:
        1) Absorptive Cover: As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.

a) Lap edges and ends of absorptive cover not less than 12 inches.
b) Maintain absorptive cover water saturated, and in place, for duration of curing period, but not less than seven days.

2) Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive.
a) Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
b) Cure for not less than seven days.

3) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:
a) Water.
b) Continuous water-fog spray.

b. Floors to Receive Penetrating Liquid Floor Treatments: Contractor has option of the following:
1) Absorptive Cover: As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.
a) Lap edges and ends of absorptive cover not less than 12 inches.
b) Maintain absorptive cover water saturated, and in place, for duration of curing period, but not less than seven days.

2) Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive.
a) Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
b) Cure for not less than seven days.

3) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:
a) Water.
b) Continuous water-fog spray.

c. Floors to Receive Polished Finish: Contractor has option of the following:
1) Absorptive Cover: As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.
a) Lap edges and ends of absorptive cover not less than 12 inches.
b) Maintain absorptive cover water saturated, and in place, for duration of curing period, but not less than seven days.

2) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:
a) Water.
b) Continuous water-fog spray.

d. Floors to Receive Chemical Stain:
1) As soon as concrete has sufficient set to permit application without marring concrete surface, install curing paper over entire area of floor.

2) Install curing paper square to building lines, without wrinkles, and in a single length without end joints.
3) Butt sides of curing paper tight; do not overlap sides of curing paper.
4) Leave curing paper in place for duration of curing period, but not less than 28 days.

e. Floors to Receive Urethane Flooring:
1) As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.
2) Rewet absorptive cover, and cover immediately with polyethylene moisture-retaining cover with edges lapped 6 inches and sealed in place.
3) Secure polyethylene moisture-retaining cover in place to prohibit air from circulating under polyethylene moisture-retaining cover.
4) Leave absorptive cover and polyethylene moisture-retaining cover in place for duration of curing period, but not less than 28 days.

f. Floors to Receive Curing Compound:
1) Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
2) Recoat areas subjected to heavy rainfall within three hours after initial application.
3) Maintain continuity of coating, and repair damage during curing period.
4) Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

g. Floors to Receive Curing and Sealing Compound:
1) Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller in accordance with manufacturer's written instructions.
2) Recoat areas subjected to heavy rainfall within three hours after initial application.
3) Repeat process 24 hours later, and apply a second coat. Maintain continuity of coating, and repair damage during curing period.

## 3.8 TOLERANCES

A. Conform to ACI 117.

## 3.9 APPLICATION OF LIQUID FLOOR TREATMENTS

A. Penetrating Liquid Floor Treatment: Prepare, apply, and finish penetrating liquid floor treatment in accordance with manufacturer's written instructions.

1. Remove curing compounds, sealers, oil, dirt, laitance, and other contaminants and complete surface repairs.
2. Do not apply to concrete that is less than three days old.
3. Apply liquid until surface is saturated, scrubbing into surface until a gel forms; rewet; and repeat brooming or scrubbing.
4. Rinse with water; remove excess material until surface is dry.

5. Apply a second coat in a similar manner if surface is rough or porous.

B. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller in accordance with manufacturer's written instructions.

## 3.10 FIELD QUALITY CONTROL

A. Concrete Tests: Testing of composite samples of fresh concrete obtained in accordance with ASTM C 172/C 172M shall be performed in accordance with the following requirements:

1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
    a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing to be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
2. Slump: ASTM C143/C143M:
    a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
    b. Perform additional tests when concrete consistency appears to change.
3. Slump Flow: ASTM C1611/C1611M:
    a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
    b. Perform additional tests when concrete consistency appears to change.
4. Air Content: ASTM C231/C231M pressure method, for normal-weight concrete;
    a. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
5. Concrete Temperature: ASTM C1064/C1064M:
    a. One test hourly when air temperature is 40 deg F and below or 80 deg F and above, and one test for each composite sample.
6. Unit Weight: ASTM C567/C567M fresh unit weight of structural lightweight concrete.
    a. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
7. Compression Test Specimens: ASTM C31/C31M:
    a. Cast and laboratory cure two sets of three 6-inch by 12-inch or 4-inch by 8-inch cylinder specimens for each composite sample.
    b. Cast, initial cure, and field cure standard cylinder specimens for each composite sample.
8. Compressive-Strength Tests: ASTM C39/C39M.
    a. Test one set laboratory-cured specimens at seven days and one set of two specimens at 28 days.
    b. Test one set field-cured specimens at seven days and one set of two specimens at 28 days.
    c. A compressive-strength test to be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.

9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor to evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
10. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength, and no compressive-strength test value falls below specified compressive strength by more than 500 psi if specified compressive strength is 5000 psi, or no compressive strength test value is less than 10 percent of specified compressive strength if specified compressive strength is greater than 5000 psi.
11. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
12. Additional Tests:
    a. Testing and inspecting agency to make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.
    b. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42/C42M or by other methods as directed by Architect.
        1) Acceptance criteria for concrete strength to be in accordance with ACI 301, Section 1.6.6.3.
13. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
14. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

B. Measure floor and slab flatness and levelness in accordance with ASTM E1155 within 48 hours of completion of floor finishing and promptly report test results to Architect.

## 3.11 PROTECTION

A. Protect concrete surfaces as follows:

1. Protect from petroleum stains.
2. Diaper hydraulic equipment used over concrete surfaces.
3. Prohibit vehicles from interior concrete slabs.
4. Prohibit use of pipe-cutting machinery over concrete surfaces.
5. Prohibit placement of steel items on concrete surfaces.
6. Prohibit use of acids or acidic detergents over concrete surfaces.
7. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by liquid floor treatments installer.
8. Protect concrete surfaces scheduled to receive surface hardener or polished concrete finish using Floor Slab Protective Covering.

END OF SECTION 033000

# SECTION 042200 - CONCRETE UNIT MASONRY

## 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. 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 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Greater Columbus Convention Center , 400 N. High Street Columbus, OH 43215

### 1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For the following:

1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.

### 1.6 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.

## 1.7 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.

# 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, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

## 2.2 PERFORMANCE REQUIREMENTS

A. Provide unit masonry that develops indicated net-area compressive strengths at 28 days.

1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to TMS 602/ACI 530.1/ASCE 6.
2. Determine net-area compressive strength of masonry by testing masonry prisms according to ASTM C 1314.

## 2.3 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**.**

C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

## 2.4 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.
2. Provide square-edged units for outside corners unless otherwise indicated.

B. CMUs: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of match existing.
2. Density Classification: match existing.
3. Size (Width): Manufactured to dimensions 3/8 inch less-than-nominal dimensions.
4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.

## 2.5 CONCRETE LINTELS

A. General: Provide one of the following:

B. Concrete Lintels: ASTM C 1623, matching CMUs in color, texture, and density classification; and with reinforcing bars indicated.

C. Concrete Lintels: Precast or formed-in-place concrete lintels complying with requirements in Section 033000 "Cast-in-Place Concrete," and with reinforcing bars indicated.

## 2.6 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.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Cemex S.A.B. de C.V.
   b. Essroc.
   c. Holcim (US) Inc.
   d. Lafarge North America Inc.
   e. Lehigh Hanson; Heidelberg Cement Group.

E. Mortar Cement: ASTM C 1329/C 1329M.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Lafarge North America Inc.
2.

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.

G. Water: Potable.

## 2.7 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. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

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

## 2.8 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.
2. Use masonry cement or mortar cement mortar unless otherwise indicated.
3. For exterior masonry, use Portland cement-lime masonry cement or mortar cement mortar.
4. For reinforced masonry, use Portland cement-lime masonry cement or mortar cement mortar.
5. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

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, Property Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.

1. For masonry below grade or in contact with earth, use Type S. Matching existing.
2. For reinforced masonry, use Type N. Matching existing.
3. For mortar parge coats, use Type N. Matching existing.
4. For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions; and for other applications where another type is not indicated, use Type N. Matching existing.
5. For interior nonload-bearing partitions, Type O may be used instead of Type N. Matching existing.

# 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 foundations are within tolerances specified.
3. Verify that reinforcing dowels are properly placed.
4. 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.

## 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 or minus 1/4 inch.
2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch 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, or 1/2-inch 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, 1/4 inch in 20 feet, or 1/2-inch maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch 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, 1/4 inch in 20 feet, or 1/2-inch maximum.
5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2-inch maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2-inch maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch.

## 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 bond pattern; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.

C. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. 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.

D. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

E. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

F. 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.

G. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

H. 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.
2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch clearance between end of anchor rod and end of tube. Space anchors 48 inches o.c. unless otherwise indicated.

3. Wedge nonload-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.
4. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 078443 "Joint Firestopping."

## 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 on footings.
4. Fully bed entire units, including areas under cells, at starting course on footings 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. Set cast-stone trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.

1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
2. Wet joint surfaces thoroughly before applying mortar.
3. Rake out mortar joints for pointing with sealant.

D. Rake out mortar joints at pre-faced CMUs to a uniform depth of 1/4 inch and point with epoxy mortar to comply with epoxy-mortar manufacturer's written instructions.

E. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

F. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.

G. Cut joints flush where indicated to receive waterproofing 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 on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.

1. Space reinforcement not more than 16 inches o.c.
2. Space reinforcement not more than 8 inches o.c. in foundation walls and parapet walls.

3. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings.

B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.

C. Provide continuity at wall intersections by using prefabricated T-shaped units.

D. Provide continuity at corners by using prefabricated L-shaped units.

E. Cut and bend reinforcing units as directed by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

## 3.7 LINTELS

A. Provide concrete lintels where shown and where openings of more than 12 inches for brick-size units and 24 inches for block-size units are shown without structural steel or other supporting lintels.

B. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

## 3.8 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 or 12.67 ft.

## 3.9 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.

## 3.10 MASONRY WASTE DISPOSAL

A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

B. Masonry Waste Recycling: Return broken CMUs not used to manufacturer for recycling.

C. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042200

# SECTION 061000 - ROUGH CARPENTRY

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Wood blocking and nailers.

### 1.2 ACTION SUBMITTALS

A. Product Data:

1. For each type of process and factory-fabricated product.
2. For preservative-treated wood products.

## PART 2 - PRODUCTS

### 2.1 MISCELLANEOUS LUMBER

A. Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.

B. Dimension Lumber Items: Construction or No. 2 grade lumber of any species.

C. Concealed Boards: 15 percent maximum moisture content and any of the following species and grades:

1. Mixed southern pine or southern pine; No. 2 grade; SPIB.
2. Eastern softwoods; No. 3 Common grade; NeLMA.
3. Northern species; No. 2 Common grade; NLGA.
4. Western woods; Construction or No. 2 Common grade; WCLIB or WWPA.

### 2.2 FASTENERS

A. General: Fasteners are to be of size and type indicated and comply with requirements specified in this article for material and manufacture. Provide nails or screws, in sufficient length, to penetrate not less than 1-1/2 inches into wood substrate.

1. Where rough 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 A153/A153M.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

A. Set work to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.

B. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

C. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
3. ICC-ES evaluation report for fastener.

### 3.2 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, wet enough that moisture content exceeds that specified, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

# SECTION 064116 - PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Plastic-laminate-clad architectural cabinets.
2. Cabinet hardware and accessories.
3. Wood furring, blocking, shims, and hanging strips for installing plastic-laminate-clad architectural cabinets that are not concealed within other construction.

### 1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Greater Columbus Convention Center, 400 H. High Street Columbus, OH 43215

### 1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.

B. Shop Drawings:

1. Include plans, elevations, sections, and attachment details.

C. Samples: For each exposed product and for each color and texture specified.

## PART 2 - PRODUCTS

### 2.1 ARCHITECTURAL CABINET MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work

## 2.2 PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

A. Quality Standard: Unless otherwise indicated, comply with the Architectural Woodwork Standards for grades of cabinets indicated for construction, finishes, installation, and other requirements.

1. Provide labels and certificates from AWI and WI certification program indicating that woodwork complies with requirements of grades specified.
    a. This Project has been registered with AWI as AWI Quality Certification Program Number .

B. Architectural Woodwork Standards Grade: Economy.

C. Type of Construction: Frameless

D. High-Pressure Decorative Laminate: ISO 4586-3, grades as indicated or if not indicated, as required by quality standard.

1. Basis of Design:
    a. Formica Laminate Anti-Microbial Collection, 8844A Aged Ash – As indicated in drawings.

E. Exposed Surfaces:

1. Plastic-Laminate Grade: 12, HGP.
2. Edges: Grade HGS, PVC tape, 0.035-inch minimum thickness, matching laminate in color, pattern, and finish indicated in the drawings.
3. Pattern Direction: Horizontally for fixed panels and as indicated in the drawings.

F. Concealed Backs of Panels with Exposed Plastic-Laminate Surfaces: High-pressure decorative laminate, ISO 4586-3, grade to match exposed surface.

G. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:

1. As indicated by laminate manufacturer's designations.
2. Match Architect's sample.
3. As selected by Architect from laminate manufacturer's full range in the following categories:
    a. Wood grains, matte finish.

## 2.3 WOOD MATERIALS

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of architectural cabinet and quality grade specified unless otherwise indicated.

1. Wood Moisture Content: 5 to 10 percent.

B. Composite Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of architectural cabinet and quality grade specified unless otherwise indicated.

1. Particleboard (Medium Density): ANSI A208.1, Grade M-2

## 2.4 MISCELLANEOUS MATERIALS

A. Furring, Blocking, Shims, 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. Adhesive for Bonding Plastic Laminate: as selected by fabricator to comply with requirements.

1. Adhesive for Bonding Edges: adhesive specified above for faces.

## 2.5 FABRICATION

A. 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.

B. 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.

C. Install glass to comply with applicable requirements in Section 088000 "Glazing" and in GANA's "Glazing Manual."

1. For glass in frames, secure glass with removable stops.
2. For exposed glass edges, polish and grind smooth.

# PART 3 - EXECUTION

## 3.1 INSTALLATION

A. Before installation, condition cabinets to humidity conditions in installation areas for not less than 72 hours.

B. Architectural Woodwork Standards Grade: Install cabinets to comply with quality standard grade of item to be installed.

C. Anchor cabinets to anchors or blocking built in or directly attached to substrates. Secure with wafer-head cabinet installation screws.

D. Install cabinets level, plumb, and true in line to a tolerance of 1/8 inch in 96 inches using concealed shims.

1. Scribe and cut cabinets to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
2. Install cabinets without distortion so doors and drawers fit openings 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.
3. Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches o.c. with

END OF SECTION 064116

# SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Interior standard steel doors and frames.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include the following:

1. Elevations of each door type.
2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.

C. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Products with comparable designs, materials, performance characteristics and finishes by the following manufacturers are also acceptable:

1. Amweld Building Products, Inc.
2. Ceco Door Products.
3. Curries Co., Kewanee Corp.
4. Mesker Door, Inc.,
5. Pioneer Industries Inc.
6. Republic Builders Products Performance Requirements

2.2 INTERIOR STANDARD STEEL DOORS AND FRAMES

A. Construct hollow-metal doors and frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Standard-Duty Doors and Frames: ANSI/SDI A250.8, Level 1; ANSI/SDI A250.4, Level C.

1. Doors:
   a. Type: As indicated in the Door and Frame Schedule on Drawings.
   b. Thickness: 1-3/4 inches
   c. Face: Uncoated steel sheet, minimum thickness of 0.053 inch.
   d. Edge Construction: Model 1, Full Flush
   e. Core: Manufacturer's standard
2. Frames:
   a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch.
   b. Construction: Knocked down

2.3 FRAME ANCHORS

A. Jamb Anchors:

1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
2. Quantity: Minimum of four anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.
3. Postinstalled Expansion Anchor: Minimum 3/8-inch- diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.

B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.

C. Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at top of underlayment.

D. Material: ASTM A879/A879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.

1. For anchors built into exterior walls, steel sheet complying with ASTM A1008/A1008M or ASTM A1011/A1011M; hot-dip galvanized in accordance with ASTM A153/A153M, Class B.

## 2.4 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A1011/A1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B.

D. Inserts, Bolts, and Fasteners: Hot-dip galvanized in accordance with ASTM A153/A153M.

E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

F. Mineral-Fiber Insulation: ASTM C665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E136 for combustion characteristics.

## 2.5 FABRICATION

A. Door Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

B. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.

1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.

2. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
   a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
   b. Double-Door Frames: Drill stop in head jamb to receive two door silencers.

C. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping in accordance with ANSI/SDI A250.6, the Door Hardware Schedule on Drawings, and templates.

1. Reinforce doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.
2. Comply with BHMA A156.115 for preparing hollow-metal doors and frames for hardware.

## 2.6 STEEL FINISHES

A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

# PART 3 - EXECUTION

## 3.1 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.

B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

## 3.2 INSTALLATION

A. Hollow-Metal Frames: Comply with ANSI/SDI A250.11 or NAAMM-HMMA 840.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
   a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.

b. Install frames with removable stops located on secure side of opening.

2. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces**.**

3. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
   a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
   b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
   c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
   d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

B. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.

1. Non-Fire-Rated Steel Doors: Comply with ANSI/SDI A250.8 or NAAMM-HMMA 841 and NAAMM-HMMA guide specification indicated.

## 3.3 FIELD QUALITY CONTROL

A. Repair or remove and replace installations where inspections indicate that they do not comply with specified requirements.

B. Reinspect repaired or replaced installations to determine if replaced or repaired door assembly installations comply with specified requirements.

## 3.4 REPAIR

A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint in accordance with manufacturer's written instructions.

C. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 081113

# SECTION 087100 - DOOR HARDWARE

## PART 1 - GENERAL

### 1.01 SUMMARY

A. Section includes:

1. Hinges
2. Self-closing hinges and pivots
3. Center-hung and offset pivots
4. Mortise Locks
5. Manual Flush Bolts
6. Lock Cylinders
7. Key Control Cabinet
8. Astragals
9. Concealed Closers
10. Door Gasketing
11. Thresholds

### 1.02 REFERENCES

A. UL LLC

1. UL 10B - Fire Test of Door Assemblies
2. UL 10C - Positive Pressure Test of Fire Door Assemblies
3. UL 1784 - Air Leakage Tests of Door Assemblies
4. UL 305 - Panic Hardware

B. DHI - Door and Hardware Institute

1. Sequence and Format for the Hardware Schedule
2. Recommended Locations for Builders Hardware
3. Keying Systems and Nomenclature
4. Installation Guide for Doors and Hardware

C. NFPA – National Fire Protection Association

1. NFPA 70 – National Electric Code
2. NFPA 80 – 2016 Edition – Standard for Fire Doors and Other Opening Protectives
3. NFPA 101 – Life Safety Code
4. NFPA 105 – Smoke and Draft Control Door Assemblies
5. NFPA 252 – Fire Tests of Door Assemblies

D. ANSI - American National Standards Institute

1. ANSI A117.1 – 2017 Edition – Accessible and Usable Buildings and Facilities
2. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
3. ANSI/BHMA A156.28 - Recommended Practices for Keying Systems

4. ANSI/WDMA I.S. 1A - Interior Architectural Wood Flush Doors
5. ANSI/SDI A250.8 - Standard Steel Doors and Frames

1.03 SUBMITTALS

A. General:

1. Submit in accordance with Conditions of Contract and Division 01 Submittal Procedures.
2. Prior to forwarding submittal:
   a. Review drawings and Sections from related trades to verify compatibility with specified hardware.
   b. Highlight, encircle, or otherwise specifically identify on submittals: deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.

B. Action Submittals:

1. Product Data: Submit technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
   a. Wiring Diagrams: For power, signal, and control wiring and including:
      1) Details of interface of electrified door hardware and building safety and security systems.
      2) Schematic diagram of systems that interface with electrified door hardware.
      3) Point-to-point wiring.
      4) Risers.

3. Samples for Verification: If requested by Architect, submit production sample of requested door hardware unit in finish indicated and tagged with full description for coordination with schedule.
   a. Samples will be returned to supplier. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule:
   a. Submit concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work critical in Project construction schedule.
   b. Submit under direct supervision of a Door Hardware Institute (DHI) certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule published by DHI.
   c. Indicate complete designations of each item required for each opening, include:
      1) Door Index: door number, heading number, and Architect's hardware set number.
      2) Quantity, type, style, function, size, and finish of each hardware item.
      3) Name and manufacturer of each item.
      4) Fastenings and other pertinent information.
      5) Location of each hardware set cross-referenced to indications on Drawings.
      6) Explanation of all abbreviations, symbols, and codes contained in schedule.
      7) Mounting locations for hardware.

8) Door and frame sizes and materials.
9) Degree of door swing and handing.
10) Operational Description of openings with electrified hardware covering egress, ingress (access), and fire/smoke alarm connections.

5. Key Schedule:
   a. After Keying Conference, provide keying schedule that includes levels of keying, explanations of key system's function, key symbols used, and door numbers controlled.
   b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
   c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
   d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
   e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion. Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
   f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.

C. Informational Submittals:

1. Provide Qualification Data for Supplier, Installer and Architectural Hardware Consultant.
2. Provide Product Data:
   a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
   b. Include warranties for specified door hardware.

D. Closeout Submittals:

1. Operations and Maintenance Data: Provide in accordance with Division 01 and include:
   a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
   b. Catalog pages for each product.
   c. Final approved hardware schedule edited to reflect conditions as installed.
   d. Final keying schedule
   e. Copy of warranties including appropriate reference numbers for manufacturers to identify project.
   f. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.

E. Inspection and Testing:

1. Submit written reports to the Owner and Authority Having Jurisdiction (AHJ) of the results of functional testing and inspection for:
   a. Fire door assemblies, in compliance with NFPA 80.
   b. Required egress door assemblies, in compliance with NFPA 101.

## 1.04 QUALITY ASSURANCE

A. Qualifications and Responsibilities:

1. Supplier: Recognized architectural hardware supplier with a minimum of 5 years documented experience supplying both mechanical and electromechanical door hardware similar in quantity, type, and quality to that indicated for this Project. Supplier to be recognized as a factory direct distributor by the manufacturer of the primary materials with a warehousing facility in the Project's vicinity. Supplier to have on staff, a certified Architectural Hardware Consultant (AHC) or Door Hardware Consultant (DHC) available to Owner, Architect, and Contractor, at reasonable times during the Work for consultation.
2. Installer: Qualified tradesperson skilled in the application of commercial grade hardware with experience installing door hardware similar in quantity, type, and quality as indicated for this Project.
3. Architectural Hardware Consultant: Person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and meets these requirements:
   a. For door hardware: DHI certified AHC or DHC.
   b. Can provide installation and technical data to Architect and other related subcontractors.
   c. Can inspect and verify components are in working order upon completion of installation.
   d. Capable of producing wiring diagram and coordinating installation of electrified hardware with Architect and electrical engineers.

4. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.

B. Certifications:

1. Accessibility Requirements:
   a. Comply with governing accessibility regulations cited in "REFERENCES" article 087100, 1.02.D3 herein for door hardware on doors in an accessible route. This project must comply with all Federal Americans with Disability Act regulations and all Local Accessibility Regulations.

C. Pre-Installation Meetings

1. Keying Conference
   a. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
      1) Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
      2) Preliminary key system schematic diagram.
      3) Requirements for key control system.
      4) Requirements for access control.
      5) Address for delivery of keys.

2. Pre-installation Conference
   a. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
   b. Inspect and discuss preparatory work performed by other trades.
   c. Inspect and discuss electrical roughing-in for electrified door hardware.
   d. Review sequence of operation for each type of electrified door hardware.
   e. Review required testing, inspecting, and certifying procedures.

f. Review questions or concerns related to proper installation and adjustment of door hardware.

3. Electrified Hardware Coordination Conference:
   a. Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.

## 1.05 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site. Promptly replace products damaged during shipping.

B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package. Deliver each article of hardware in manufacturer's original packaging.

C. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.

D. Provide secure lock-up for door hardware delivered to Project. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.

E. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.

F. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.

## 1.06 COORDINATION

A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete.

B. Installation Templates: Distribute for doors, frames, and other work specified to be factory or shop prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

## 1.07 WARRANTY

A. Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within published warranty period.

1. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

2. Warranty Period: Beginning from date of Substantial Completion, for durations indicated in manufacturer's published listings.
   a. Mechanical Warranty
      1) Locks
         a) 10 years
      2) Closers
         a) 30 years
      3) Automatic Operators
         a) 2 years

1.08 MAINTENANCE

A. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

B. Turn over unused materials to Owner for maintenance purposes.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. The Owner requires use of certain products for their unique characteristics and project suitability to ensure continuity of existing and future performance and maintenance standards. After investigating available product offerings, the Awarding Authority has elected to prepare proprietary specifications. These products are specified with the notation: "No Substitute."

   1. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.

B. Approval of alternate manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturers" in the individual article for the product category are only to be considered by official substitution request in accordance with section 01 25 00.

C. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.

D. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.02 MATERIALS

A. Fabrication

   1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. provide screws according to manufacturer’s recognized installation standards for application intended.

2. Finish exposed screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
3. Provide concealed fasteners wherever possible for hardware units exposed when door is closed. Coordinate with “Metal Doors and Frames”, “Flush Wood Doors”, “Stile and Rail Wood Doors” to ensure proper reinforcements. Advise the Architect where visible fasteners, such as thru bolts, are required.

B. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.

## 2.03 HINGES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
   a. Ives 5BB series

2. Acceptable Manufacturers and Products:
   a. Hager BB1191/1279 series
   b. McKinney TB series

B. Requirements:

1. Provide hinges conforming to ANSI/BHMA A156.1.
2. Provide five knuckle, ball bearing hinges.
3. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
   a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
   b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high

4. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
   a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
   b. Interior: Heavy weight, steel, 5 inches (127 mm) high

5. 2 inches or thicker doors:
   a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
   b. Interior: Heavy weight, steel, 5 inches (127 mm) high

6. Adjust hinge width for door, frame, and wall conditions to allow proper degree of opening.
7. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
8. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
   a. Steel Hinges: Steel pins
   b. Non-Ferrous Hinges: Stainless steel pins
   c. Out-Swinging Exterior Doors: Non-removable pins
   d. Out-Swinging Interior Lockable Doors: Non-removable pins
   e. Interior Non-lockable Doors: Non-rising pins

9. Provide hinges with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component. Provide mortar guard for each electrified hinge specified.

## 2.04 CONTINUOUS HINGES

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Ives

2. Acceptable Manufacturers:
   a. Select
   b. Roton

B. Requirements:

1. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
2. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum.
3. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
4. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
5. On fire-rated doors, provide aluminum geared continuous hinges classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
6. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
7. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

## 2.05 MORTISE LOCKS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
   a. Schlage L9000 series

2. Acceptable Manufacturers and Products:
   a. No Substitute

B. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1, and UL Listed for 3-hour fire doors.
2. Indicators: Where specified, provide indicator window measuring a minimum 2-3/5-inch x 3/5 inch with 180-degree visibility. Provide messages color-coded using ANSI Z535 Safety Red with full text and/or symbols, as scheduled, for easy visibility. When applicable allows for lock status indication on both sides of the door.
3. Provide locks manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance.
4. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to "KEYING" article, herein.
5. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1-inch (25 mm) throw, constructed of stainless steel.

6. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide switches and sensors integrated into the locks and latches.
7. Provide motor based electrified locksets that comply with the following requirements:
   a. Universal input voltage – single chassis accepts 12 or 24VDC to allow for changes in the field without changing lock chassis.
   b. Fail Safe/Fail Secure – changing mode between electrically locked (fail safe) and electrically unlocked (fail secure) is field selectable without opening the lock case.
   c. Low maximum current draw – maximum 0.4 amps to allow for multiple locks on a single power supply.
   d. Low holding current – maximum 0.01 amps to produce minimal heat, eliminate "hot levers" in electrically locked applications, and to provide reliable operation in wood doors that provide minimal ventilation and air flow.
   e. Connections – provide quick-connect Molex system standard.

8. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.
   a. Lever Design: 06A

## 2.06 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
   a. Schlage ND series

2. Acceptable Manufacturers and Products:
   a. No Substitute

B. Requirements:

1. Provide cylindrical locks conforming to ANSI/BHMA A156.2 Series 4000, Grade 1, and UL Listed for 3-hour fire doors.
2. Indicators: Where specified, provide escutcheon with lock status indicator window on top of lockset rose:
   a. Escutcheon height (including rose) 6.05 inches high by 3.68 inches wide.
   b. Indicator window measuring a minimum 3.52-inch by .60 inch with 1.92 square-inches of front facing viewing area and 180-degree visibility with a total of .236 square-inches of total viewable area.
   c. Provide snap-in serviceable window to prevent tampering. Lock must function if indicator is compromised.
   d. Provide messages color-coded with full text and symbol, as scheduled, for easy visibility.
   e. Unlocked and Unoccupied message will display on white background, and Locked and Occupied message will display on red background.

## 2.07 CYLINDERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:

a. Schlage Everest 29 T

2. Acceptable Manufacturers and Products:
   a. No Substitute

B. Requirements:

1. Provide cylinders/cores compliant with ANSI/BHMA A156.5; latest revision; cylinder face finished to match lockset; manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Provide cylinders in the below-listed configuration(s), distributed throughout the Project as indicated.
   a. Patented Restricted: cylinder with interchangeable core with patented, restricted keyway.
3. Patent Protection: Cylinders/cores requiring use of restricted, patented keys, patent protected.
4. Nickel silver bottom pins.

## 2.08 KEYING

A. Scheduled System:

1. Existing factory registered system:
   a. Provide cylinders/cores keyed into Owner's existing factory registered keying system. Comply with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.

B. Requirements:

1. Construction Keying:
   a. Replaceable Construction Cores.
      1) Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
         a) 3 construction control keys
         b) 12 construction change (day) keys.
      2) Owner or Owner's Representative will replace temporary construction cores with permanent cores.
2. Permanent Keying:
   a. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
      1) Master Keying system as directed by the Owner.
   b. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements will be cause for replacement of cylinders/cores involved at no additional cost to Owner.
   c. Provide keys with the following features:
      1) Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
      2) Patent Protection: Keys and blanks protected by one or more utility patent(s).
   d. Identification:
      1) Mark permanent cylinders/cores and keys with applicable blind code for identification. Do not provide blind code marks with actual key cuts.
      2) Identification stamping provisions must be approved by the Architect and Owner.

3) Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE" along with the "PATENTED" or patent number to enforce the patent protection.
4) Failure to comply with stamping requirements will be cause for replacement of keys involved at no additional cost to Owner.
5) Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.

e. Quantity: Furnish in the following quantities.
1) Permanent Control Keys: 3.
2) Master Keys: 6.
3) Change (Day) Keys: 3 per cylinder/core that is keyed differently
4) Key Blanks: Quantity as determined in the keying meeting.

## 2.09 DOOR CLOSERS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product:
a. LCN 4040XP series

2. Acceptable Manufacturers and Products:
a. No Substitute

B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2-inch (38 mm) diameter piston with 5/8-inch (16 mm) diameter double heat-treated pinion journal. QR code with a direct link to maintenance instructions.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards. Provide snap-on cover clip, with plastic covers, that secures cover to spring tube.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck. Provide graphically labelled instructions on the closer body adjacent to each adjustment valve. Provide positive stop on reg valve that prevents reg screw from being backed out.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.10 DOOR TRIM

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Ives

2. Acceptable Manufacturers:
   a. Burns
   b. Trimco

B. Requirements:

1. Provide push plates, push bars, pull plates, pulls, and hands-free reversible door pulls with diameter and length as scheduled.

2.11 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Ives

2. Acceptable Manufacturers:
   a. Burns
   b. Trimco

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide concave type where lockset has a push button of thumbturn.
2. Where a wall stop cannot be used, provide universal floor stops.
3. Where wall or floor stop cannot be used, provide overhead stop.
4. Provide roller bumper where doors open into each other and overhead stop cannot be used.

2.12 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Zero International

2. Acceptable Manufacturers:
   a. Reese
   b. Legacy

B. Requirements:

1. Provide thresholds, weather-stripping, and gasketing systems as specified and per architectural details. Match finish of other items.

2. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.
4. Size thresholds 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width unless otherwise specified in the hardware sets or detailed in the drawings.

## 2.13 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Ives

2. Acceptable Manufacturers:
   a. Burns
   b. Trimco

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

## 2.14 MAGNETIC HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer:
   a. LCN

2. Acceptable Manufacturers:
   a. Rixson
   b. Sargent

B. Requirements:

1. Provide wall or floor mounted electromagnetic door release as specified with minimum of 25 pounds of holding force. Coordinate projection of holder and armature with other hardware and wall conditions to ensure that door sits parallel to wall when fully open. Connect magnetic holders on fire-rated doors into the fire control panel for fail-safe operation.

## 2.15 DOOR POSITION SWITCHES

A. Manufacturers:

1. Scheduled Manufacturer:
   a. Schlage

2. Acceptable Manufacturers:
   a. GE-Interlogix
   b. Sargent

B. Requirements:

1. Provide recessed or surface mounted type door position switches as specified.
2. Coordinate door and frame preparations with door and frame suppliers. If switches are being used with magnetic locking device, provide minimum of 4 inches (102 mm) between switch and magnetic locking device.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance. Verify doors, frames, and walls have been properly reinforced for hardware installation.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

C. Submit a list of deficiencies in writing and proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

A. Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.

1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
2. Custom Steel Doors and Frames: HMMA 831.
3. Interior Architectural Wood Flush Doors: ANSI/WDMA I.S. 1A
4. Installation Guide for Doors and Hardware: DHI TDH-007-20

B. Install door hardware in accordance with NFPA 80, NFPA 101 and provide post-install inspection, testing as specified in section 1.03.E unless otherwise required to comply with governing regulations.

C. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.

D. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.

E. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.

F. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

G. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.

H. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated.

I. Lock Cylinders:

1. Install construction cores to secure building and areas during construction period.
2. Replace construction cores with permanent cores as indicated in keying section.
3. Furnish permanent cores to Owner for installation.

J. Wiring: Coordinate with Division 26, ELECTRICAL and Division 28 ELECTRONIC SAFETY AND SECURITY sections for:

1. Conduit, junction boxes and wire pulls.
2. Connections to and from power supplies to electrified hardware.
3. Connections to fire/smoke alarm system and smoke evacuation system.
4. Connection of wire to door position switches and wire runs to central room or area, as directed by Architect.
5. Connections to panel interface modules, controllers, and gateways.
6. Testing and labeling wires with Architect's opening number.

K. Continuous Hinges: Re-locate the door and frame fire rating labels where they will remain visible so that the hinge does not cover the label once installed.

L. Door Closers & Auto Operators: Mount closers/operators on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Mount closers/operators so they are not visible in corridors, lobbies and other public spaces unless approved by Architect.

M. Overhead Stops/Holders: Mount overhead stops/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.

N. Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings or in equipment room, or alternate location as directed by Architect.

O. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

P. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.

Q. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.

R. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.

S. Door Bottoms and Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.

## 3.03 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

   1. Spring Hinges: Adjust to achieve positive latching when door can close freely from an open position of 30 degrees.
   2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
   3. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

B. Occupancy Adjustment: Approximately three to six months after date of Substantial Completion, examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors and door hardware.

## 3.04 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items per manufacturer's instructions to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

## 3.05 DOOR HARDWARE SCHEDULE

A. The intent of the hardware specification is to specify the hardware for interior and exterior doors, and to establish a type, continuity, and standard of quality. However, it is the door hardware supplier's responsibility to thoroughly review existing conditions, schedules, specifications, drawings, and other Contract Documents to verify the suitability of the hardware specified.

B. Discrepancies, conflicting hardware, and missing items are to be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application.

C. Hardware items are referenced in the following hardware schedule. Refer to the above specifications for special features, options, cylinders/keying, and other requirements.

D. Hardware Sets:

Hardware Group No. 01

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|---|---|---|---|---|---|
| 4 | EA | HINGE | 5BB1 4.5 X 4.5 NRP | 652 | IVE |
| 1 | EA | DUTCH DOOR BOLT | 054 | 626 | IVE |
| 1 | EA | CLASSROOM LOCK | L9070L 06A | 626 | SCH |
| 1 | EA | MORTISE CYLINDER | AS REQUIRED<br>MATCH EXISTING KEY SYSTEM | 626 | |
| 1 | EA | WALL STOP/HOLDER | WS40<br>MOUNTED AT TOP OF DOOR | 626 | IVE |
| 1 | EA | WALL STOP | WS406/407CVX<br>MOUNTED AT LEVER HEIGHT | 630 | IVE |
| 3 | EA | SILENCER | SR64 | GRY | IVE |

END OF SECTION

# SECTION 092216 - NON-STRUCTURAL METAL FRAMING

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Framing systems.
2. Suspension systems.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each product.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated, in accordance with ASTM E119 by an independent testing agency.

### 2.2 FRAMING SYSTEMS

A. Framing Members, General: Comply with ASTM C645, AISI S220, and ASTM C645, Section 10 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C645, AISI S220 and ASTM C645, Section 10 requirements for metal unless otherwise indicated
2. Protective Coating: Comply with ASTM C645, ASTM A653/A653M, G40; or coating with equivalent corrosion resistance. Galvannealed products are unacceptable.
   a. Coating demonstrates equivalent corrosion resistance with an evaluation report acceptable to authorities having jurisdiction.

B. Studs and Track: ASTM C645 and ASTM C645, Section 10.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. CEMCO; California Expanded Metal Products Co.
   b. ClarkDietrich.
   c. Custom Stud.

d. Jaimes Industries.
e. MBA Building Supplies
f. MRI Steel Framing, LLC.
g. Phillips Manufacturing Co.
h. SCAFCO Steel Stud Company.
i. Steel Construction Systems

1. Minimum Base-Steel Thickness: 0.0296 inch.
2. Depth: as indicated on Drawings.

C. Hat-Shaped, Rigid Furring Channels:

2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   j. CEMCO; California Expanded Metal Products Co.
   k. ClarkDietrich.
   l. Custom Stud.
   m. Jaimes Industries.
   n. MBA Building Supplies
   o. MRI Steel Framing, LLC.
   p. Phillips Manufacturing Co.
   q. SCAFCO Steel Stud Company.
   r. Steel Construction Systems

1. Minimum Base-Steel Thickness: 0.0296 inch.
2. Depth: as indicated on Drawings.

## 2.3 SUSPENSION SYSTEMS

A. Tie Wire: ASTM A641/A641M, Class 1 zinc coating, soft temper, 0.062-inch- diameter wire, or double strand of 0.048-inch- diameter wire.

B. Hanger Attachments to Concrete:

1. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES as appropriate for the substrate.

C. Wire Hangers: ASTM A641/A641M, Class 1 zinc coating, soft temper, 0.16 inch in diameter.

D. Flat Hangers: Steel sheet.

E. Carrying Channels (Main Runners): Cold-rolled, commercial-steel sheet with a base-steel thickness of 0.0538 inch and minimum 1/2-inch- wide flanges.

1. Depth: 2 inches.

## 2.4 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards.

1. Fasteners for Steel Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

A. Installation Standard: ASTM C754.

1. Gypsum Plaster Assemblies: Also comply with requirements in ASTM C841 that apply to framing installation.
2. Portland Cement Plaster Assemblies: Also comply with requirements in ASTM C1063 that apply to framing installation.
3. Gypsum Veneer Plaster Assemblies: Also comply with requirements in ASTM C844 that apply to framing installation.
4. Gypsum Board Assemblies: Also comply with requirements in ASTM C840 that apply to framing installation.

B. Install framing and accessories plumb, square, and true to line, with connections securely fastened.

C. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

D. Install bracing at terminations in assemblies.

E. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

### 3.2 INSTALLATION OF FRAMING SYSTEMS

A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

C. Install studs so flanges within framing system point in same direction.

D. Install tracks at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts that penetrate partitions above ceiling.

1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.

2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install track section (for cripple studs) at head and secure to jamb studs.
    a. Install two studs at each jamb unless otherwise indicated.
    b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.
    c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.
3. Other Framed Openings: Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
    a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.
5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.
6. Curved Partitions:
    a. Bend track to uniform curve and locate straight lengths so they are tangent to arcs.
    b. Begin and end each arc with a stud, and space intermediate studs equally along arcs. On straight lengths of no fewer than two studs at ends of arcs, place studs 6 inches o.c.

E. Direct Furring:

1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 16 inches o.c.

F. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

## 3.3 INSTALLATION OF SUSPENSION SYSTEMS

A. Install suspension system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

B. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.

C. Suspend hangers from building structure as follows:

1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system.
    a. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.
3. Wire Hangers: Secure by looping and wire tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause hangers to deteriorate or otherwise fail.
4. Flat Hangers: Secure to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
5. Do not attach hangers to steel roof deck.
6. Do not attach hangers to permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
7. Do not attach hangers to rolled-in hanger tabs of composite steel floor deck.
8. Do not connect or suspend steel framing from ducts, pipes, or conduit.

END OF SECTION 092216

# SECTION 092900 - GYPSUM BOARD

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Tile backing panels.
3. Texture finishes.

### 1.2 ACTION SUBMITTALS

A. Product data.

B. Shop Drawings: Show locations and installation of control and expansion joints, including plans, elevations, sections, details of components, and attachments to other work.

## PART 2 - PRODUCTS

### 2.1 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

### 2.2 INTERIOR GYPSUM BOARD

A. Gypsum Board, Type X: ASTM C1396/C1396M.

1. Thickness: 5/8 inch.
2. Long Edges: Tapered

B. Mold-Resistant Gypsum Board: ASTM C1396/C1396M. With moisture- and mold-resistant core and paper surfaces.

1. Core: 5/8 inch, Type X.
2. Long Edges: Tapered.
3. Mold Resistance: ASTM D3273, score of 10 as rated in accordance with ASTM D3274.

## 2.3 TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A118.9 and ASTM C1288 or ASTM C1325, with manufacturer's standard edges.

1. Thickness: 5/8 inch.
2. Mold Resistance: ASTM D3273, score of 10 as rated in accordance with ASTM D3274.

## 2.4 TRIM ACCESSORIES

A. Interior Trim: ASTM C1047.

1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-steel sheet.
2. Shapes:
   a. Cornerbead.
   b. Bullnose bead.
   c. LC-Bead: J-shaped; exposed long flange receives joint compound.
   d. L-Bead: L-shaped; exposed long flange receives joint compound.
   e. U-Bead: J-shaped; exposed short flange does not receive joint compound.
   f. Expansion (control) joint.
   g. Curved-Edge Cornerbead: With notched or flexible flanges.

## 2.5 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C475/C475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.
2. Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
   a. Use setting-type compound for installing paper-faced metal trim accessories.
3. Fill Coat: For second coat, use setting-type, sandable topping compound.
4. Finish Coat: For third coat, use setting-type, sandable topping compound.
5. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound and high-build interior coating product designed for application by airless sprayer and to be used instead of skim coat to produce Level 5 finish.

D. Joint Compound for Tile Backing Panels:

1. Cementitious Backer Units: As recommended by backer unit manufacturer.

## 2.6 AUXILIARY MATERIALS

A. Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.

B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

C. Steel Drill Screws: ASTM C1002 unless otherwise indicated.

1. Use screws complying with ASTM C954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

## 2.7 INSTALLATION OF PANELS

A. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

B. Comply with ASTM C840.

C. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch- wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

D. For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

## 2.8 FINISHING OF GYPSUM BOARD

A. Prefill open joints, rounded or beveled edges**,** and damaged surface areas.

B. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

C. Gypsum Board Finish Levels: Finish panels to levels indicated below and in accordance with ASTM C840:

1. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.
   a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."

D. Cementitious Backer Units: Finish according to manufacturer's written instructions.

## 2.9 APPLICATION OF TEXTURE FINISHES

A. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Apply primer to surfaces that are clean, dry, and smooth.

B. Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture free of starved spots or other evidence of thin application or of application patterns.

## 2.10 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, and mold damaged.

END OF SECTION 092900

# SECTION 093013 - CERAMIC TILING

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Porcelain tile.
2. Glazed wall tile.
3. Tile backing panels.
4. Waterproof membranes.
5. Crack isolation membranes.
6. Setting material.
7. Grout materials.

### 1.2 ACTION SUBMITTALS

A. Product Data:

1. Porcelain tile.
2. Glazed wall tile.
3. Tile backing panels.
4. Waterproof membranes.
5. Crack isolation membranes.
6. Setting material.
7. Grout materials.

B. Shop Drawings: Show locations, plans, and elevations, of each type of tile and tile pattern. Show widths, details, and locations of movement joints in tile substrates and finished tile surfaces.

C. Samples:

1. Assembled samples mounted on a rigid panel, with grouted joints, for each type and composition of tile and for each color and finish required. Make samples at least 12 inches square but not fewer than four tiles. Use grout of type and in color or colors approved for completed Work.

## PART 2 - PRODUCTS

### 2.1 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.

## 2.2 PORCELAIN TILE

A. Porcelain Tile Type, Refer to A-800 Schedule and Legend and A-901 Enlarged Finish Flans: Chemical resistant.

1. Basis of Design: TileBar, Nashville, Travertine Look Polished Porcelain Tile or equivalent
2. Face Size: 12” x 24”
3. Face Size Variation: Rectified.
4. Thickness: 8mm
5. Breaking Strength: >400LBF
6. Water Absorption: <.1%
7. Product Use Classification: Floor or Wall Application. Interior, Dry (ID), Interior, Wet (IW), Interior, Wet Plus (IW+), and Exterior, Wet (EW)
8. Physical Properties: Chemical resistant when tested with indicated chemicals in accordance with ASTM C650. Stain Resistance to be Class A. Frost Resistant.
9. Tile Color, Glaze, and Pattern:
    a. Travertine Look, White,
    b. Polished,
    c. Rectangular Pattern.
    d. Refer to A-800 and drawings.
10. Grout:
    a. As indicated by manufacturer's designations and drawings.
    b. Basis of Design: Latricrete
    c. Color: 35 Mocha
    d. Size: 3/16”
11. Precoat with temporary protective coating.
12. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:
    a. Base Cap: Surface bullnose, module size same as adjoining flat tile.
        1) Tile Size: 3” x 24”
        2) Basis of Design: Schluter-DILEX-HKU R10
            a) Profile: COVE
            b) Finish/ Color: STN STEEL, V2A
            c) Radius: 3/8”

    b. Wall Base Cap: Surface bullnose.
    c. External Corners: module size same as adjoining flat tile**.**
        1) Basis of Design: Schulter-JOLLY
            a) Profile: OUT CORNER
            b) Finish / Color: STN STEEL
    d. Internal Corners: Field-butted square corners.

2.3 GLAZED WALL TILE

A. Glazed Wall Tile Type Refer to A-800 Schedule and Legend and A-901 Enlarged Finish Flans.

1. Basis of Design: Creative Materials Corporation, Urban Subway or equivalent
2. Module Size: 3” x 10”
3. Face Size Variation: Not Rectified.
4. Thickness: 7.4mm
5. Breaking Strength: Test Method ASTM C648. R>12N/mm2, S>600 N
6. Water Absorption: Test Method ASTM C373<0.5%
7. DCOF: ANSI A326.3 <0.42 = Ceramic intended for wall use only.
8. Tile Color and Pattern:
    a. Color: White
    b. Finish: Glossy
    c. Pattern: Staggered
    d. Shade Variation: V1
    e. Application: Wall Tile
9. Grout:
    a. As indicated by manufacturer's designations and drawings.
    b. Basis of Design: Laticrete
    c. Color: 90 Light Pewter
    d. Thickness : 1/8”

10. Mounting:
    a. Factory, back mounted.
    b. Pregrouted sheets of tiles are factory assembled and grouted with manufacturer's standard white silicone rubber.
11. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable. Provide shapes as follows, selected from manufacturer's standard shapes:
    a. Base:
        1) Basis of Design: Schluter-DILEX-HKU R10
            a) Profile: COVE
            b) Finish/ Color: STN STEEL, V2A
            c) Radius: 3/8”
    b. External Corners: module size same as adjoining flat tile**.**
        1) Basis of Design: Schulter-JOLLY
            a) Profile: OUT CORNER
            b) Finish / Color: STN STEEL
    c. Internal Corners: Field-butted square corners. For coved base and cap, use angle pieces designed to fit with stretcher shapes.

B. Glazed Wall Tile Type Refer to A-800 Schedule and Legend and A-901 Enlarged Finish Flans.

1. Basis of Design: Creative Materials Corporation, Urban Subway Linear or equilvant
2. Module Size: 3” x 10”
3. Face Size Variation: Not Rectified.
4. Thickness: 7.4mm

5. Breaking Strength: Test Method ASTM C648. R>12N/mm2, S>600 N
6. Water Absorption: Test Method ASTM C373<0.5%
7. DCOF: ANSI A326.3 <0.42 = Ceramic intended for wall use only.
8. Tile Color and Pattern:
    a. Color: White
    b. Finish: Matte
    c. Pattern: Monolithic
    d. Shade Variation: V1
    e. Application: Wall Tile
9. Grout:
    a. As indicated by manufacturer's designations and drawings.
    b. Basis of Design: Laticrete
    c. Color: 90 Light Pewter
    d. Thickness : 1/8”

10. Mounting:
    a. Factory, back mounted.
    b. Pregrouted sheets of tiles are factory assembled and grouted with manufacturer's standard white silicone rubber.
11. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable. Provide shapes as follows, selected from manufacturer's standard shapes:
    a. Base:
        1) Basis of Design: Schluter-DILEX-HKU R10
            a) Profile: COVE
            b) Finish/ Color: STN STEEL, V2A
            c) Radius: 3/8”
    b. External Corners: module size same as adjoining flat tile**.**
        1) Basis of Design: Schulter-JOLLY
            a) Profile: OUT CORNER
            b) Finish / Color: STN STEEL
    c. Internal Corners: Field-butted square corners. For coved base and cap, use angle pieces designed to fit with stretcher shapes.

## 2.4 TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A118.9 and ASTM C1288 or ASTM C1325, with manufacturer's standard edges in maximum lengths available to minimize end-to-end butt joints.

1. Thickness: 5/8 inch.
2. Mold Resistance: ASTM D3273, score of 10 as rated in accordance with ASTM D3274.

B. Water-Resistant Gypsum Backing Board: ASTM C1396/C1396M, with manufacturer's standard edges.

1. Core: as indicated on Drawings 5/8 inch , Type X

## 2.5 WATERPROOF MEMBRANES

A. General: Manufacturer's standard product that complies with ANSI A118.10 and ANSI A118.12 and is recommended by manufacturer for application indicated. Include reinforcement and accessories recommended by manufacturer.

B. Waterproof Membrane, Fluid Applied: Liquid-latex rubber or elastomeric polymer with continuous fabric reinforcement.

## 2.6 SETTING MATERIALS

A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.

1. Cleavage Membrane: Installer's option of material that complies with ANSI A108.02, paragraph 3.8.
2. Reinforcing Wire Fabric: Galvanized, welded-wire fabric, 2 by 2 inches by 0.062-inch diameter; comply with ASTM A1064/A1064M except for minimum wire size.
3. Expanded Metal Lath: Diamond-mesh lath complying with ASTM C847.
4. Latex Additive: Manufacturer's standard water emulsion, serving as replacement for part or all of gaging water, of type specifically recommended by latex-additive manufacturer for use with field-mixed portland cement and aggregate mortar bed.

B. Standard Dry-Set Mortar (Thinset): ANSI A118.1.

1. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to other requirements in ANSI A118.1.
2. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to other requirements in ANSI A118.15.

C. Water-Cleanable, Tile-Setting Epoxy: ANSI A118.3.

1. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 and 212 deg F, respectively, and certified by manufacturer for intended use.

## 2.7 GROUT MATERIALS

A. Sand-Portland Cement Grout: ANSI A108.10, consisting of white or gray cement and white or colored aggregate as required to produce color indicated.

B. Standard Cement Grout: ANSI A118.6.

C. Water-Cleanable Epoxy Grout: ANSI A118.3, with a VOC content of 65 g/L or less.

1. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 and 212 deg F, respectively, and certified by manufacturer for intended use.

## 2.8 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting and adhesive materials for installations indicated.

B. Vapor-Retarder Membrane: Polyethylene sheeting, ASTM D4397, 4.0 mils thick.

C. Metal Flooring Transitions: Profile designed specifically for flooring applications; height to match tile and setting-bed thickness.

1. Basis of Design: Schulter Systems
2. Description: L-Shaped
3. Material and Finish: Metallic or combination of metal and PVC or neoprene base; anodized aluminum exposed-edge material.
    a. Color: Anodized.

D. Temporary Protective Coating: Formulated to protect exposed surfaces of tile against adherence of mortar and grout; compatible with tile, mortar, and grout products and easily removable after grouting is completed without damaging grout or tile.

E. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.

F. Grout Sealer: Grout manufacturer's standard product for sealing grout joints that does not change color or appearance of grout.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
2. Verify that concrete substrates for tile floors installed with adhesives, bonded mortar bed or thinset mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.

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

## 3.2 PREPARATION

A. Remove coatings, including curing compounds or other coatings, that are incompatible with tile-setting materials.

B. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with adhesives or thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

C. Where indicated, prepare substrates to receive waterproof membrane by applying a reinforced mortar bed that complies with ANSI A108.1 and is sloped 1/4 inch per foot toward drains.

D. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

E. Substrate Flatness:

1. For tile shorter than 15 inches, confirm that structure or substrate is limited to variation of 1/4 inch in 10 ft. from the required plane, and no more than 1/16 inch in 12 inches when measured from tile surface high points.
2. For large format tile, tile with at least one edge 15 inches or longer, confirm that structure or substrate is limited to 1/8 inch in 10 ft. from the required plane, and no more than 1/16 inch in 24 inches when measured from tile surface high points.

F. Field-Applied Temporary Protective Coating: If indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

## 3.3 INSTALLATION OF CERAMIC TILE SYSTEM

A. Install tile backing panels and treat joints in accordance with ANSI A108.11 and manufacturer's written instructions for type of application indicated.

B. Install waterproof membrane to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness that is bonded securely to substrate.

1. Allow waterproof membrane to cure and verify by testing that it is watertight before installing tile or setting materials over it.

C. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely to substrate.

1. Allow crack isolation membrane to cure before installing tile or setting materials over it.

D. Install tile in accordance with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of ANSI A108 series that are referenced in TCNA installation methods and specified in tile installation schedules, and apply to types of setting and grouting materials used.

E. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

F. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

G. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

H. Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush.

I. Jointing Pattern: Lay tile as indicated in Drawings. Lay out tile work to minimize use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.

J. Movement Joints: Provide movement joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated on Drawings. Form joints during installation of setting materials, mortar beds, and tile. Keep joints free of dirt, debris, and setting materials prior to filling with sealants. Do not saw-cut joints after installing tiles.

1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.

K. Metal Flooring Transitions: Install at locations indicated where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with top of tile.

## 3.4 INTERIOR CERAMIC TILE INSTALLATION SCHEDULE

A. Interior Wall Installations, Masonry or Concrete:

1. TCNA W202I as indicated in drawings. Thinset mortar over waterproof membrane.
   a. Ceramic Tile Type: Creative Materials Corporation, Urban Subway Tile
   b. Thinset Mortar: Water-cleanable epoxy mortar.
   c. Grout: High-performance sanded cement. Water-cleanable epoxy grout.
   d. Waterproof Membrane: As recommended by setting material manufacturer.

e. Joint Width: 3/16 inch
f. Movement Joints: Types located on Drawings.

B. Interior Wall Installations, Wood or Metal Studs or Furring:

1. TCNA W242 as indicated in drawings. Organic adhesive on gypsum board.
   a. Ceramic Tile Type: Creative Materials Corporation, Urban Subway Tile
   b. Grout: High-performance sanded cement, Water-cleanable epoxy] grout.
   c. Joint Width: 3/16 inch
   d. Movement Joints: Types located on Drawings.

END OF SECTION 093013

# SECTION 095123 - ACOUSTICAL TILE CEILINGS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Acoustical tiles.
2. Metal Suspension System
3. Accessories.
4. Metal edge moldings and trim.

### 1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Greater Columbus Convention Center, 400 N. High Stret Columbus, OH 43215

### 1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design seismic restraints for ceiling systems.

B. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: Class A or Fire Guard, 25 or less
2. Smoke-Developed Index: 50 or less

### 2.2 ACOUSTICAL TILES

A. Basis of Design: Armstong World Industries or equivalent

B. Acoustical Tile Standard: Manufacturer's standard tiles of configuration indicated that comply with ASTM E1264.

1. Product: Clean Room VL Unperforated, Square Lay-In

C. Classification: Type IV, Form 2 , Pattern E, Fire Guard

D. Color: White

E. Light Reflectance (LR): .80, According to ASTM E1477

F. Ceiling Attenuation Class (CAC): 40

G. Noise Reduction Coefficient (NRC): N/A

H. Articulation Class (AC): N/A

I. Edge/Joint Detail: Square Lay-In

J. Thickness: 5/8 inch

K. Modular Size: 24” x 48”

## 2.3 METAL SUSPENSION SYSTEM

A. Basis of Design: Armstrong World Industries or equivalent

B. Metal Suspension-System Standard: Manufacturer's standard, direct-hung, fully concealed, metal suspension system that complies with applicable requirements in ASTM C635/C635M.
1. Product: Prelude Plus XL Aluminum
2. Face Dimension: 15/16”
3. Profile: Exposed Tee
4. Color: White

C. Direct-Hung, Double-Web Suspension System: Main and cross runners roll formed from and capped with cold-rolled steel sheet, prepainted, electrolytically zinc coated, or hot-dip galvanized, G30 coating designation.

1. Structural Classification: Intermediate duty system.
2. Access: Upward with initial access openings of size indicated below and located throughout ceiling within each module formed by main and cross runners, with additional access available by progressively removing remaining acoustical tiles.
   a. Initial Access Opening: In each module, 24 by 24 inches as indicated on Drawings.

## 2.4 ACCESSORIES

A. Attachment Devices: Size for five times the design load indicated in ASTM C635/C635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

B. Seismic Clips: Manufacturer's standard seismic clips designed to secure acoustical tiles in-place during a seismic event.

## 2.5 METAL EDGE MOLDINGS AND TRIM

A. Basis of Design: Armstrong World Industries or equivalent

B. Roll-Formed, Sheet-Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations complying with seismic design requirements; formed from sheet metal of same material, finish, and color as that used for of suspension-system runners.

# PART 3 - EXECUTION

## 3.1 PREPARATION

A. Measure each ceiling area and establish layout of acoustical tiles to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width tiles at borders unless otherwise indicated.

B. Layout openings for penetrations centered on the penetrating items.

## 3.2 INSTALLATION OF SUSPENDED ACOUSTICAL TILE CEILINGS

A. Install suspended acoustical tile ceilings in accordance with ASTM C636/C636M and manufacturer's written instructions.

B. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical tiles.

1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
2. Do not use exposed fasteners, including pop rivets, on moldings and trim.

C. Arrange directionally patterned acoustical tiles as indicated on reflected ceiling plans.

## 3.3 FIELD QUALITY CONTROL

A. Special Inspections: Engage a qualified special inspector to perform inspections:

1. Periodic inspection during the installation of suspended ceiling grids in accordance with ASCE/SEI 7.

END OF SECTION 095123

# SECTION 096513 - RESILIENT BASE AND ACCESSORIES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Vinyl base.
2. Vinyl molding accessories.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each exposed product and for each color and texture specified.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

### 2.2 VINYL BASE

A. Basis of Design: Johnsonite by Tarkett or equivalent.

B. Product Standard: ASTM F 1861, Type TV (vinyl, thermoplastic).

1. Group: I, solid, homogeneous
2. Style and Location:
   a. Style B, Cove: Indicated in drawings.

C. Minimum Thickness: 0.125 inch

D. Height: 4 inches.

E. Lengths: Cut lengths 48 inches long

F. Outside Corners: Preformed

G. Inside Corners: Preformed

H. Colors and Patterns:

1. Snowbound

2. Zephyr

## 2.3 VINYL MOLDING ACCESSORY

A. Basis of Design: Roppe or equivalent

B. Description: Vinyl accessories Fillets and moldings.

C. Profile and Dimensions: Quarter Round, ½" x ½"

D. Locations: Indicated in drawings.

E. Colors and Patterns: Smoke, 174

## 2.4 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

C. Floor Polish: Provide protective, liquid floor-polish products recommended by resilient stair-tread manufacturer.

# PART 3 - EXECUTION

## 3.1 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

C. Do not install resilient products until materials are the same temperature as space where they are to be installed.

D. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

## 3.2 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.

G. Preformed Corners: Install preformed corners before installing straight pieces.

H. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.
   a. Form without producing discoloration (whitening) at bends.
2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.
   a. Miter corners to minimize open joints.

## 3.3 RESILIENT ACCESSORY INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient accessories.

B. Resilient Stair Accessories:

1. Use stair-tread-nose filler to fill nosing substrates that do not conform to tread contours.
2. Tightly adhere to substrates throughout length of each piece.
3. For treads installed as separate, equal-length units, install to produce a flush joint between units.

C. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

## 3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

B. Floor Polish: Remove soil, adhesive, and blemishes from resilient stair treads before applying liquid floor polish.

1. Apply one coat(s).

C. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION 096513

# SECTION 096519 - RESILIENT TILE FLOORING

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Luxury Vinyl Tile

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient floor tile, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

### 2.2 LUXURY VINYL FLOOR TILE

A. Basis of Design: Interface or equivalent

B. Tile Standard: ASTM F 1700.

1. Class III

C. Thickness: 4.5mm

D. Size: 9.8” x 39.38”

E. Colors and Patterns:
1. Product: Northern Grain 4.5mm
2. Color: Antique Wash, A02606

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.

B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.

C. Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.

D. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

E. Do not install floor tiles until materials are the same temperature as space where they are to be installed.

1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.

F. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

### 3.2 FLOOR TILE INSTALLATION

A. Comply with manufacturer's written instructions for installing floor tile.

B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

1. Lay tiles with grain running in one direction.

C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.

1. Lay tiles with grain running in one direction.

D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.

E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.

F. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.

G. Install floor tiles on covers for telephone and electrical ducts, building expansion-joint covers, and similar items in installation areas. Maintain overall continuity of color and pattern between pieces of tile installed on covers and adjoining tiles. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.

H. Adhere floor tiles to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

I. Floor Polish: Remove soil, adhesive, and blemishes from floor tile surfaces before applying liquid floor polish.

END OF SECTION 096519

# SECTION 097200 - WALL COVERINGS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Vinyl wall covering- Custom

### 1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Greater Columbus Convention Center , 400 N. High Street Columbus, OH 43215

### 1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Show location and extent of each wall-covering type. Indicate pattern placement, seams, and termination points.

C. Samples: For each type of wall covering and for each color, pattern, texture, and finish specified.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: As determined by testing identical wall coverings applied with identical adhesives to substrates in accordance with test method indicated below by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   a. Flame-Spread Index: 15 or less.
   b. Smoke-Developed Index:
2. Fire-Growth Contribution: No flashover and heat and smoke release when tested in accordance with NFPA 265 and NFPA 286.

## 2.2 VINYL WALL COVERING

A. Basis of Design: As indicated in Drawings.

B. Description: Provide vinyl products in rolls from same production run and complying with the following:

1. Type III, Heavy Duty
2. ASTM F793/F793M for wall coverings.
   a. Category: V, Type II, Commercial Serviceability

C. Total Weight: 32.oo oz per linear yard, excluding coatings.

D. Width: 54 inches or custom

E. Backing: Scrim fabric.

1. Fiber Content: 1005% gypsum cement

F. Repeat: Custom

G. Mildew Resistance: Rating of zero or 1 when tested in accordance with ASTM G21.

H. Features:

1. Stain-Resistant Coating:
2. Antimicrobial.
3. Water-based inks.
4. Phthalate free.
5. Heavy-metals free.
6. Halogenated-fire-retardant free.
7. Microvented.
8. Bleach cleanable

I. Colors, Textures, and Patterns: Indicated on the drawings.

## 2.3 ACCESSORIES

A. Adhesive: Mildew-resistant, nonstaining, strippable adhesive, for use with specific wall covering and substrate application indicated and as recommended in writing by wall-covering manufacturer.

B. Primer/Sealer: Mildew resistant, complying with requirements in Section 099123 "Interior Painting" and recommended in writing by primer/sealer and wall-covering manufacturers for intended substrate.

C. Metal Primer: Interior ferrous metal primer complying with requirements in Section 099123 "Interior Painting" and recommended in writing by primer and wall-covering manufacturers for intended substrate.

## PART 3 - EXECUTION

### 3.1 PREPARATION

A. Comply with manufacturer's written instructions for surface preparation.

B. Clean substrates of substances that could impair bond of wall covering, including dirt, oil, grease, mold, and mildew.

C. Prepare substrates to achieve a smooth, dry, clean, structurally sound surface free of flaking, unsound coatings, cracks, and defects.

1. Moisture Content: Maximum of 5 percent on new plaster, concrete, and concrete masonry units when tested with an electronic moisture meter.
2. Plaster: Allow plaster to cure for at least 90 days. Neutralize areas of high alkalinity. Apply primer/sealer as recommended in writing by primer/sealer manufacturer and wall-covering manufacturer.
3. Metals: If not factory primed, clean and apply metal primer as recommended in writing by metal-primer manufacturer and wall-covering manufacturer.
4. Gypsum Board: Apply primer/sealer as recommended in writing by primer/sealer manufacturer and wall-covering manufacturer.
5. Painted Surfaces:
    a. Check for pigment bleeding. Apply primer/sealer to areas susceptible to pigment bleeding as recommended in writing by primer/sealer manufacturer.
    b. Sand gloss, semigloss, and eggshell finishes with fine sandpaper.

D. Remove hardware and hardware accessories, electrical plates and covers, light fixture trims, and similar items.

E. Acclimatize wall-covering materials by removing them from packaging in the installation areas not less than 24 hours before installation.

### 3.2 INSTALLATION OF WALL COVERING

A. Comply with wall-covering manufacturers' written installation instructions applicable to products and applications indicated.

B. Cut wall-covering strips in roll number sequence. Change the roll numbers at partition breaks and corners.

C. Install strips in same order as cut from roll.

1. For solid-color, even-texture, or random-match wall coverings, reverse every other strip.

D. Install wall covering without lifted or curling edges and without visible shrinkage.

E. Install seams vertical and plumb at least 6 inches from outside corners and 6 inches from inside corners unless a change of pattern or color exists at corner. Horizontal seams are not permitted.

F. Trim edges and seams for color uniformity, pattern match, and tight closure. Butt seams without overlaps or gaps between strips.

G. Fully bond wall covering to substrate. Remove air bubbles, wrinkles, blisters, and other defects.

H. Remove excess adhesive at seams, perimeter edges, and adjacent surfaces.

I. Reinstall hardware and hardware accessories, electrical plates and covers, light fixture trims, and similar items.

END OF SECTION 097200

# SECTION 099123 - INTERIOR PAINTING

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Primers.
2. Water-based finish coatings.
3. Solvent-based finish coatings.
4. Floor sealers and paints.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

Samples: For each type of topcoat product.

B. Product Schedule: Use same designations indicated on Drawings and in the Interior Painting Schedule to cross-reference paint systems specified in this Section. Include color designations.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. Basis of Design: Sherwin Williams or equivalent

### 2.2 PAINT PRODUCTS, GENERAL

A. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

B. Colors: Indicated on the drawings.

## 2.3 PRIMERS

A. Interior/Exterior Latex Block Filler: Water-based, high-solids, emulsion coating formulated to bridge and fill porous surfaces of exterior concrete masonry units in preparation for specified subsequent coatings.

1. Sherwin Williams or equivalent

B. Alkali-Resistant, Water-Based Primer: Water-based primer formulated for use on alkaline surfaces, such as plaster, vertical concrete, and masonry.

1. Sherwin Williams or equivalent

C. Interior Latex Primer Sealer: Water-based latex sealer used on new interior plaster, concrete, and gypsum wallboard surfaces.

1. Sherwin Williams or equivalent

D. Anti-Corrosive Epoxy Primer: Corrosion-resistant, solvent-based, two-component epoxy primer formulated for use on prepared, interior ferrous- and galvanized-metal surfaces.

1. Sherwin Williams or equivalent

E. Surface-Tolerant Metal Primer: Corrosion-resistant, solvent-based metal primer formulated for use on structural steel and metal fabrications that have been minimally prepared.

1. Sherwin Williams or equivalent

F. Water-Based Galvanized-Metal Primer: Corrosion-resistant, acrylic primer; formulated for use on cleaned/etched, exterior, galvanized metal to prepare it for subsequent water-based coatings.

1. Sherwin Williams or equivalent

G. Quick-Drying Aluminum Primer: Corrosion-resistant, solvent-based, alkyd or modified-alkyd primer formulated for quick-drying capabilities and for use on prepared exterior aluminum.

1. Sherwin Williams or equivalent

## 2.4 WATER-BASED FINISH COATS

A. Interior, Latex, Flat: Pigmented, water-based paint for use on primed/sealed interior plaster and gypsum board, and on primed wood and metals.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard flat finish

B. Interior, Latex, Low Sheen: Pigmented, water-based paint for use on primed/sealed interior plaster and gypsum board, and on primed wood and metals.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard low-sheen finish

C. Interior, Latex, Eggshell: Pigmented, water-based paint for use on primed/sealed interior plaster and gypsum board, and on primed wood and metals.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard eggshell finish

D. Interior, Latex, Satin: Pigmented, water-based paint for use on primed/sealed interior plaster and gypsum board, and on primed wood and metals.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard low-sheen finish

E. Interior, Latex, Semigloss: Pigmented, water-based paint for use on primed/sealed interior plaster and gypsum board, and on primed wood and metals.

1. Sherwin Williams or equivalent
2. Gloss Level: Manufacturer's standard semigloss finish

F. Interior, Latex, Gloss: Pigmented, water-based paint for use on primed/sealed interior plaster and gypsum board, and on primed wood and metals.

1. Sherwin Williams or equivalent
2. Gloss Level: Manufacturer's standard gloss finish

G. Interior, Latex, High-Performance Architectural Coating, Low Sheen: High-performance architectural latex coating providing a significantly higher level of performance than conventional latex paints in the areas of scrub resistance, burnish resistance, and ease of stain removal.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard low-sheen finish

H. Interior, Latex, High-Performance Architectural Coating, Eggshell: High-performance architectural latex coating providing a significantly higher level of performance than conventional latex paints in the areas of scrub resistance, burnish resistance, and ease of stain removal.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard eggshell finish

I. Interior, Latex, High-Performance Architectural Coating, Satin: High-performance architectural latex coating providing a significantly higher level of performance than conventional latex paints in the areas of scrub resistance, burnish resistance, and ease of stain removal.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard low-sheen finish

J. Interior, Latex, High-Performance Architectural Coating, Semigloss: High-performance architectural latex coating providing a significantly higher level of performance than conventional latex paints in the areas of scrub resistance, burnish resistance, and ease of stain removal.

1. Sherwin Williams or equivalent
2. Gloss Level: Manufacturer's standard semigloss finish

K. : Pigmented, water-based coating, containing a coarse or medium-sized sand or other hard aggregate, for use on exterior masonry, concrete, and concrete block.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard flat finish
3. Aggregate Size: Manufacturer's standard

L. Textured Latex Coating, Nonflat: Pigmented, water-based coating, containing a coarse or medium-sized sand or other hard aggregate, for use on exterior masonry, concrete, and concrete block.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard low-sheen finish
3. Aggregate Size: Manufacturer's standard

## 2.5 SOLVENT-BASED FINISH COATS

A. Interior, Alkyd, Flat: Pigmented, solvent-based alkyd paint for use on primed/sealed interior plaster, gypsum, wood, and metal walls primarily in residential and moderate traffic commercial environments.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard flat finish

B. Interior, Alkyd, Eggshell: Pigmented, solvent-based alkyd paint for use on primed/sealed interior plaster, gypsum, wood, and metal walls primarily in residential and moderate traffic commercial environments.

1. Sherwin Williams or equivalent
2. Gloss and Sheen Level: Manufacturer's standard eggshell finish

C. Interior, Alkyd, Semigloss: Pigmented, solvent-based alkyd paint for use on primed/sealed interior plaster, gypsum, wood, and metal walls primarily in residential and moderate traffic commercial environments.

1. Sherwin Williams or equivalent
2. Gloss Level: Manufacturer's standard semigloss finish

D. Interior, Alkyd, Gloss: Pigmented, solvent-based alkyd paint for use on primed/sealed interior plaster, gypsum, wood, and metal walls primarily in residential and moderate traffic commercial environments.

1. Sherwin Williams or equivalent
2. Gloss Level: Manufacturer's standard gloss finish

E. Aluminum Paint: Aliphatic, solvent-based coating consisting of varnish or alkyd binder combined with aluminum pigment that is formulated for use as a stain-blocking coating and sealer on wood, metal, bituminous-coated, and prepared masonry surfaces and to be able to be recoated with conventional alkyd and latex paints.

1. Sherwin Williams or equivalent

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.

B. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

C. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

### 3.3 INSTALLATION

A. Apply paints according to manufacturer's written instructions.

B. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

C. Painting Fire-Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed in equipment rooms:
   a. Equipment
   b. Uninsulated metal piping.
   c. Uninsulated plastic piping.
   d. Pipe hangers and supports.
   e. Metal conduit.
   f. Plastic conduit.
   g. Tanks that do not have factory-applied final finishes.
   h. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
2. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

## 3.4 CLEANING AND PROTECTION

A. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

B. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

C. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

## 3.5 INTERIOR PAINTING SCHEDULE

A. Concrete Substrates, Nontraffic Surfaces:

1. Latex System
   a. Prime Coat: Matching topcoat.
   b. Intermediate Coat: Matching topcoat.
   c. Topcoat: Interior latex paint, finish as indicated in Drawings.
2. Latex over Latex Aggregate System
   a. Prime Coat: Textured latex coating, flat.
   b. Intermediate Coat: Matching topcoat.
   c. Topcoat: Interior latex paint, finish as indicated in Drawings.
3. Latex Aggregate System:
   a. Prime Coat: As recommended in writing by topcoat manufacturer.
   b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
   c. Topcoat: Textured latex coating, finish as indicated in Drawings.
4. High-Performance Architectural Latex System
   a. Prime Coat: Alkali-resistant, water based primer.
   b. Intermediate Coat: Matching topcoat.

c. Topcoat: Interior latex, high-performance architectural coating, finish as indicated in Drawings.

5. Concrete Stain System:
   a. First Coat: Matching topcoat.
   b. Topcoat: Interior concrete stain.

B. Concrete Substrates, Traffic Surfaces:

1. Latex Floor Enamel System
   a. Prime Coat: Matching topcoat
   b. Intermediate Coat: Matching topcoat.
   c. Topcoat: Latex floor paint, low gloss.
2. Concrete Stain System
   a. First Coat: Matching topcoat.
   b. Topcoat: Interior concrete stain.
3. Water-Based Concrete Floor Sealer System
   a. First Coat: Matching topcoat.
   b. Topcoat: Water-based concrete floor sealer.
4. Solvent-Based Concrete Floor Sealer System
   a. First Coat: Matching topcoat.
   b. Topcoat: Solvent-based concrete floor sealer.

C. CMU Substrates:

1. Latex System
   a. Block Filler: Interior/exterior latex block filler.
   b. Intermediate Coat: Matching topcoat.
   c. Topcoat: Interior, latex, finish as indicated in Drawings.
2. Latex Aggregate System
   a. Prime Coat: As recommended in writing by topcoat manufacturer.
   b. Intermediate Coat: Matching topcoat.
   c. Topcoat: Textured latex coating, finish as indicated in Drawings.
3. High-Performance Architectural Latex System
   a. Block Filler: Interior/exterior latex block filler.
   b. Prime Coat: Alkali-resistant, water-based primer.
   c. Intermediate Coat: Matching topcoat.
   d. Topcoat: Interior, latex, high-performance architectural coating, finish as indicated in Drawings.

D. Gypsum Board Substrates:

1. Latex over Latex Sealer System:
   a. Prime Coat: Interior latex primer sealer.
   b. Intermediate Coat: Matching topcoat.
   c. Topcoat: Interior, latex, finish as indicated in Drawings.

END OF SECTION 099123

# SECTION 099600 - HIGH-PERFORMANCE COATINGS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes surface preparation and the application of high-performance coating systems on the following substrates:

1. Interior Substrates:
    a. Concrete, horizontal surfaces as indicated in Drawings.

### 1.2 DEFINITIONS

A. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

B. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

C. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

### 1.3 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

1. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

B. Samples: For each type of coating system and in each color and gloss of topcoat indicated.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

A. Basis of Design:
1. Sherwin Williams Resuflor 3580
    a. Color: Charcoal

B. Characteristics:
1. ASTM E84:
    a. Class: A
    b. Flame spread: 10.
    c. Smoke developed: 20.
2. ASTM D2369: 39 g/l.

A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in the Interior High-Performance Coating Schedule for the coating category indicated.

## 2.2 HIGH-PERFORMANCE COATINGS, GENERAL

A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."

B. Material Compatibility:

1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
3. Products shall be of same manufacturer for each coat in a coating system.

C. Colors: Indicated in drawings.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

## 3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and coating systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.

## 3.3 APPLICATION

A. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual."

B. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

## 3.4 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

A. Concrete Substrates, Horizontal Surfaces.

1. Epoxy System MPI INT 3.2C:
   a. Prime Coat: Epoxy, matching topcoat.
   b. Intermediate Coat: Epoxy, matching topcoat.
   c. Topcoat: Epoxy, gloss , MPI #77.

END OF SECTION 099600

# SECTION 101423.16 - ROOM-IDENTIFICATION PANEL SIGNAGE

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section includes room-identification signs that are directly attached to the building.

B. Related Requirements:

1. Section 101416 "Plaques" for one-piece, solid metal signs, with or without frames, that are used for high-end room-identification.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For room-identification signs.

1. Include fabrication and installation details and attachments to other work.
2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
3. Show message list, typestyles, graphic elements, including raised characters and Braille, and layout for each sign at least half size.

C. Samples: For each exposed product and for each color and texture specified.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design” and ICC A117.1.

### 2.2 ROOM-IDENTIFICATION SIGNS

A. Room-Identification Sign indicated in drawings : Sign with smooth, uniform surfaces; with message and characters having uniform faces, sharp corners, and precisely formed lines and profiles; and as follows:

1. Laminated-Sheet Sign: Photopolymer or Sandblasted polymer face sheet with raised graphics laminated over subsurface graphics to acrylic backing sheet to produce composite sheet.
   a. Composite-Sheet Thickness: Manufacturer's standard for size of sign.

b. Surface-Applied Graphics: Applied paint
c. Subsurface Graphics: Reverse etch image
d. Color(s): Match existing.

2. Sign-Panel Perimeter: Finish edges smooth.
   a. Edge Condition at Vertical Edges: Beveled
   b. Corner Condition in Elevation: Square
3. Mounting: Manufacturer's standard method for substrates indicated.

## 2.3 ACCESSORIES

A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signs, noncorrosive and compatible with each material joined, and complying with the following:

1. Use concealed fasteners and anchors unless indicated to be exposed.

B. Adhesive: As recommended by sign manufacturer.

C. Two-Face Tape: Manufacturer's standard high-bond, foam-core tape, 0.045 inch thick, with adhesive on both sides.

## 2.4 FABRICATION

A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.

1. Mill joints to a tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
2. Conceal connections if possible; otherwise, locate connections where they are inconspicuous.
3. Provide rabbets, lugs, and tabs necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.

B. Subsurface-Applied Graphics: Apply graphics to back face of clear face-sheet material to produce precisely formed image. Image shall be free of rough edges.

C. Subsurface-Etched Graphics: Reverse etch back face of clear face-sheet material. Fill resulting copy with manufacturer's standard enamel. Apply opaque manufacturer's standard background color coating over enamel-filled copy.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.

1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
2. Install signs so they do not protrude or obstruct according to the accessibility standard.
3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.

B. Mounting Methods:

1. Concealed Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
   a. Masonry Substrates: Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place sign in position and push until flush to surface, embedding studs in holes. Temporarily support sign in position until adhesive fully sets.
   b. Thin or Hollow Surfaces: Place sign in position and flush to surface, install washers and nuts on studs projecting through opposite side of surface, and tighten.
2. Through Fasteners: Drill holes in substrate using predrilled holes in sign as template. Countersink holes in sign if required. Place sign in position and flush to surface. Install through fasteners and tighten.
3. Adhesive: Clean bond-breaking materials from substrate surface and remove loose debris. Apply linear beads or spots of adhesive symmetrically to back of sign and of suitable quantity to support weight of sign after cure without slippage. Keep adhesive away from edges to prevent adhesive extrusion as sign is applied and to prevent visibility of cured adhesive at sign edges. Place sign in position, and push to engage adhesive. Temporarily support sign in position until adhesive fully sets.
4. Two-Face Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position, and push to engage tape adhesive.

END OF SECTION 101423.16

# SECTION 102113.17 - PHENOLIC-CORE TOILET COMPARTMENTS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Phenolic-core toilet compartments configured as toilet enclosures and urinal screens.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

B. Shop Drawings: For toilet compartments.

1. Include plans, elevations, sections, details, and attachment details.
2. Show locations of cutouts for compartment-mounted toilet accessories.
3. Show locations of centerlines of toilet fixtures.
4. Show locations of floor drains.

C. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated:

1. Each type of material, color, and finish required for toilet compartments, prepared on 3-inch- square Samples of same thickness and material indicated for Work.

D. Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material.

### 1.3 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: 25 or less.
2. Smoke-Developed Index: 0

B. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for toilet compartments designated as accessible.

2.2 PHENOLIC-CORE TOILET COMPARTMENTS

A. Basis-of-Design Product: as indicated in Drawings.

B. Toilet-Enclosure Style: as indicated in Drawings.

C. Entrance-Screen Style: as indicated in Drawings.

D. Urinal-Screen Style: Wall hung

E. Door and Panel Height: 58 inches minimum and as indicated in Drawings

F. Door Height Above Floor: 12 inches

G. Pilaster Height: 82 inches

H. Door Construction: Solid phenolic-core panel material with melamine facing on both sides fused to substrate during panel manufacture (not separately laminated), and with eased and polished edges. Provide minimum 1/2-inch thick doors. Provide door with factory predrilled hinge locations for barrel hinges.

I. Screen and Pilaster Construction: Solid phenolic-core panel material with melamine facing on both sides fused to substrate during panel manufacture (not separately laminated), and with eased and polished edges. Provide nominal 1/2-inch- thick panels.

J. Pilaster Construction: Solid phenolic-core panel material with melamine facing on both sides fused to substrate during panel manufacture (not separately laminated), and with eased and polished edges. Provide nominal 1/2-inch- thick pilasters. Provide pilaster with factory predrilled hinge locations for barrel hinges.

K. Pilaster Shoes: Formed from stainless steel sheet, not less than 0.031-inch nominal thickness and 3 inches high, No. 4 satin finish. Shoe bottom enclosed and integral to compartment structure.

L. Panel or Pilaster Pedestal Legs: Stainless steel and minimum 4 inches high. Pedestal legs adjustable in height to within 1 inch. Secure to floor with 2-1/2-inch- long, corrosion-resistant screws.

M. Brackets (Fittings):

1. Stirrup Type: Ear or U-brackets, stainless steel.
2. Continuous Type: Manufacturer's standard design

N. Phenolic-Panel Finish:

1. Facing Sheet Finish: Color-Thru, Smooth in each room.
2. Color and Pattern: 4816 Sahara Beige with manufacturer's standard through-color core matching face sheet.
3. Edge Color: Through-color matching facing sheet color.

## 2.3 HARDWARE AND ACCESSORIES

A. Hardware and Accessories: Manufacturer's standard operating hardware and accessories.

1. Material: Stainless steel.
2. Hinges: Manufacturer's standard paired, self-closing vault-type that can be adjusted to hold doors open at any angle up to 90 degrees allowing emergency access by lifting door.
3. Latch and Keeper: Manufacturer's standard surface-mounted latch unit on door for out-swinging doors and pilaster for in-swinging doors designed for occupancy indication and emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
5. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors and entrance-screen doors.
6. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

B. Overhead Bracing: Manufacturer's standard continuous, stainless steel head rail with antigrip profile and in manufacturer's standard finish.

C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized-steel, or other rust-resistant, protective-coated steel compatible with related materials.

## 2.4 MATERIALS

A. Aluminum Castings: ASTM B26/B26M.

B. Aluminum Extrusions: ASTM B221.

C. Stainless Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304, stretcher-leveled standard of flatness.

D. Stainless Steel Castings: ASTM A743/A743M.

E. Zamac: ASTM B86, commercial zinc-alloy die castings.

## 2.5 FABRICATION

A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment of toilet accessories.

B. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.

C. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.

D. Ceiling-Hung Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.

E. Floor-and-Ceiling-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at tops and bottoms of pilasters. Provide shoes and sleeves (caps) at pilasters to conceal anchorage.

F. Urinal-Screen Posts: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at tops and bottoms of posts. Provide shoes and sleeves (caps) at posts to conceal anchorage.

G. Door Size and Swings: Unless otherwise indicated, provide 24-inch- wide in-swinging doors for standard toilet compartments and 36-inch- wide out-swinging doors with a minimum 32-inch- wide clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.

1. Confirm location and adequacy of blocking and supports required for installation.

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

3.2 INSTALLATION

A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.

1. Maximum Clearances:
   a. Pilasters and Panels: 1/2 inch.
   b. Panels and Walls: 1 inch.
2. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than two brackets attached near top and bottom of panel.
   a. Locate wall brackets so holes for wall anchors occur in masonry or tile joints.
   b. Align brackets at pilasters with brackets at walls.
3. Continuous Brackets: Secure panels to walls and to pilasters with full-height brackets.
   a. Locate bracket fasteners so holes for wall anchors occur in masonry or tile joints.
   b. Align brackets at pilasters with brackets at walls.

B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.

C. Floor-Anchored Units: Set pilasters with anchors penetrating not less than 2 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors and adjust so tops of doors are level with tops of pilasters when doors are in closed position.

D. Ceiling-Hung Units: Secure pilasters to supporting structure and level, plumb, and tighten. Hang doors and adjust so bottoms of doors are level with bottoms of pilasters when doors are in closed position.

E. Floor-and-Ceiling-Anchored Units: Secure pilasters to supporting construction and level, plumb, and tighten. Hang doors and adjust so doors are level and aligned with panels when doors are in closed position.

F. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

## 3.3 ADJUSTING

A. Hardware Adjustment: Adjust and lubricate hardware in accordance with hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113

# SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Public-use washroom accessories.
2. Private-use bathroom accessories.
   Custodial accessories.
3. Hand-sanitizer dispensers.

### 1.2 ACTION SUBMITTALS

A. Product data.

B. Samples: For each exposed product and for each finish specified, full size.

1. Approved full-size Samples will be returned and may be used in the Work.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Structural Performance: Design accessories and fasteners to comply with the following requirements:

1. Grab Bars: Installed units are able to resist 250 lbf concentrated load applied in any direction and at any point.
2. .

### 2.2 PUBLIC-USE WASHROOM ACCESSORIES

A. Toilet Tissue (Roll) Dispenser indicated in drawings- provided by Owner.

B. Paper Towel (Folded) Dispenser indicated in drawings- provided by Owner.

C. Paper Towel (Roll) Dispenser indicated in drawings- provided by Owner.

D. Automatic Paper Towel (Roll) Dispenser indicated in Owner- provided by Owner.

E. Combination Towel (Folded) Dispenser/Waste Receptacle

1. Basis of Design: ASI American Specialties, Inc. or equivalent
2. Description: Combination unit for dispensing C-fold or multifold towels, with removable waste receptacle.
3. Mounting: Recessed
4. Minimum Towel-Dispenser Capacity: 600 C-fold or 800 multifold paper towels
5. Minimum Waste-Receptacle Capacity: 12 gal
6. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)
7. Liner: Reusable, vinyl waste-receptacle liner
8. Lockset: Tumbler type for towel-dispenser compartment and waste receptacle.

F. Soap Dispenser indicated in drawings – provided by Owner.

G. Grab Bar indicated in drawings

1. Basis of Design: Bobrick or equivalent
2. Mounting: Flanges with concealed fasteners.
3. Material: Stainless steel, 0.05 inch thick.
   a. Finish: Smooth, ASTM A480/A480M No. 4 finish (satin) on ends and slip-resistant texture in grip area.
4. OD: 1-1/2 inches.
5. Configuration and Length: as indicated on Drawings
   a. Straight, 36 inches long (horizontal)
   b. Straight, 42 inches long (horizontal)
   c. Straight, 18 inches long (vertical)

H. Sanitary-Napkin Disposal Unit indicated in drawings-provided by Owner.

I. Mirror, LED Backlit Mirror Unit indicated in drawings :

1. Basis of Design: Bobrick or equivalent
2. Product: B-164 2442
3. Frame: Frameless
   a. Corners: Manufacturer's standard
4. Size: as indicated on Drawings: 24” x 42”
5. Hangers: Manufacturer's standard rigid, tamper and theft resistant

J. Hook, Surface Mounted Robe Hook indicated in drawings

1. Basis of Design: Bobrick or equivalent
2. Product: B-7671
3. Description: Single-prong unit
4. Mounting: Concealed
5. Material and Finish: Stainless steel, ASTM A480/A480M No. 4 finish (satin)

2.3 FABRICATION

A. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of **six** keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories in accordance with manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

1. Remove temporary labels and protective coatings.

B. Grab Bars: Install to comply with specified structural-performance requirements.

END OF SECTION 102800

# SECTION 105113 - METAL LOCKERS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Welded corridor lockers.
2. Locks.
3. Locker benches.

### 1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal locker and bench.

B. Shop Drawings: For metal lockers.

1. Include plans, elevations, sections, and attachment details.
2. Show locker trim and accessories.
3. Include locker identification system and numbering sequence.

C. Samples: For each color specified, in manufacturer's standard size.

D. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available.

E. Samples for Verification: For the following products, in manufacturer's standard size:

1. Lockers and equipment.
2. Locker benches.

F. Product Schedule: For lockers. Use same designations indicated on Drawings**.**

### 1.3 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver metal lockers until spaces to receive them are clean, dry, and ready for their installation.

B. Deliver master and control keys to Owner by registered mail or overnight package service .

1.4 FIELD CONDITIONS

A. Field Measurements: Verify actual dimensions of recessed openings by field measurements before fabrication.

1.5 COORDINATION

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

1.6 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of metal lockers that fail in materials or workmanship, excluding finish, within specified warranty period.

1. Failures include, but are not limited to, the following:
   a. Structural failures.
   b. Faulty operation of latches and other door hardware.
2. Damage from deliberate destruction and vandalism is excluded.
3. Warranty Period for Welded Metal Lockers: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain metal lockers**,** locker benches**,** and accessories from single source from single locker manufacturer.

1. Obtain locks from single lock manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. Accessibility Standard: For lockers and locker benches indicated to be accessible, comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design" and ICC A117.1.

2.3 WELDED CORRIDOR LOCKERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide ASI Storage Solutions, an ASI Group company; Welded Corridor Lockers or comparable product by one of the following:

1. AJW Architectural Products.

2. WEC Manufacturing LLC.
3. Lyon Work Space

B. Doors: One piece; fabricated from 0.075-inch nominal-thickness steel sheet; formed into channel shape with double bend at vertical edges and with right-angle single bend at horizontal edges.

1. Reinforcement: Manufacturer's standard reinforcing angles, channels, or stiffeners for doors more than 15 inches wide; welded to inner face of doors.
2. Door Style: Vented panel as follows:
   a. Louvered Vents: No fewer than three louver openings at top and bottom for double-tier lockers.
   b. Concealed Vents: Manufacturer's standard hole pattern punched in door flanges with solid door face.

C. Body: Assembled by welding body components together. Fabricate from unperforated steel sheet with thicknesses as follows:

1. Tops, Bottoms, and Sides: 0.060-inch nominal thickness.
2. Backs: 0.048-inch nominal thickness.
3. Shelves: 0.060-inch nominal thickness, with double bend at front and single bend at sides and back.

D. Frames: Channel formed; fabricated from 0.060-inch nominal-thickness steel sheet; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral, full-height door strikes on vertical main frames.

1. Cross Frames between Tiers: Channel formed and fabricated from same material as main frames; welded to vertical main frames.

E. Hinges: Attached to door and door frame with no fewer than two factory-installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees.

1. Continuous Hinges: Manufacturer's standard, steel, full height.

F. Recessed Door Handle and Latch: Stainless steel cup with integral door pull, recessed so locking device does not protrude beyond door face; pry and vandal resistant.

1. Multipoint Latching: Finger-lift latch control designed for use with built-in combination locks or padlocks; positive automatic latching and prelocking.
   a. Latch Hooks: Equip doors 48 inches and higher with three latch hooks and doors less than 48 inches high with two latch hooks; fabricated from 0.105-inch nominal-thickness steel sheet; welded or riveted to full-height door strikes; with resilient silencer on each latch hook.
   b. Latching Mechanism: Manufacturer's standard, rattle-free latching mechanism and moving components isolated to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be

locked while door is open and then closed without unlocking or damaging lock or latching mechanism.

2. Single-Point Latching: Nonmoving latch hook designed to engage bolt of built-in combination or cylinder lock, and steel padlock loop that projects through recessed cup and is finished to match metal locker body.
   a. Latch Hook: Equip each door with one latch hook, fabricated from 0.105-inch nominal-thickness steel sheet; welded midway up full-height door strike; with resilient silencer.

G. Locks: Owner provided padlock.

H. Identification Plates: Manufacturer's standard, etched, embossed, or stamped aluminum plates, with numbers and letters at least 1/2 inch high.

I. Hooks: Manufacturer's standard ball-pointed, aluminum or steel; zinc plated.

J. Coat Rods: 3/4-inch- diameter steel, chrome finished

K. Continuous Zee Base: Fabricated from 0.075-inch nominal-thickness steel sheet.

1. Height: 4 inches.

L. Continuous Sloping Tops: Fabricated from 0.048-inch nominal-thickness steel sheet, with 1-inch vertical rise at front and slope of 1/3 depth.

1. Closures: Vertical end type.

M. Recess Trim: Fabricated from 0.048-inch nominal-thickness steel sheet.

N. Filler Panels: Fabricated from 0.048-inch nominal-thickness steel sheet.

O. Boxed End Panels: Fabricated from 0.048-inch nominal-thickness steel sheet.

P. Finished End Panels: Fabricated from 0.060-inch nominal-thickness steel sheet to cover unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of nonrecessed metal lockers; finished to match lockers.

Q. Materials:

1. Cold-Rolled Steel Sheet: ASTM A1008/A1008M, Commercial Steel (CS), Type B, suitable for exposed applications.
2. Metallic-Coated Steel Sheet: ASTM A653/A653M, Commercial Steel (CS), Type B; with A60 zinc-iron, alloy (galvannealed) coating designation.

R. Finish: Powder coat; minimum 2 mils thick.

1. Color: As indicated in drawings.
   a. Wedgewood Blue
   b. Cosmos
   c. Minute Man Blue

## 2.4 LOCKS

A. Combination Padlock: Provided by Owner.

## 2.5 LOCKER BENCHES

A. Basis-of-Design Product: Subject to compliance with requirements, provide ASI Storage Solutions, an ASI Group company; Locker Benches or comparable product by one of the following:

1. AJW Architectural Products.
2. Hadrian Manufacturing Inc.

B. Provide bench units with overall assembly height of 17-1/2 inches

C. Bench Tops: Manufacturer's standard one-piece units, with rounded corners and edges.

1. Size: Minimum 9-1/2 inches wide by 3/4 inches thick
2. Phenolic bench top:
   a. Color: Aged Ash 9844

D. Fixed-Bench Pedestals: Manufacturer's standard supports, with predrilled fastener holes for attaching bench top and anchoring to floor, complete with fasteners and anchors, and as follows:

1. Stainless Steel:
   a. 2-inch- diameter steel tubing, 0.060-inch- thick stainless steel tube, shaped into trapezoidal form. Bottom 14 inches wide with four mounting holes.
   b. Finish: No. 4, brushed.

E. Movable-Bench Pedestals: Manufacturer's standard supports, with predrilled fastener holes for attaching bench top, complete with fasteners, and as follows:

1. Stainless Steel:
   a. 2-inch- diameter steel tubing, 0.060-inch- thick stainless steel tube, shaped into trapezoidal form. Bottom 14 inches wide with four mounting holes.
   b. Finish: No. 4, brushed.

F. Materials:

1. Stainless Steel Plate, Sheet, and Strip: ASTM A240/A240M or ASTM A666, Type 304.
2. Steel Tube: ASTM A500/A500M, cold rolled.
3. Phenolic: Phenolic composite panel.

2.6 FABRICATION

A. Fabricate metal lockers square, rigid, without warp, and with metal faces flat and free of dents or distortion. Make exposed metal edges safe to touch and free of sharp edges and burrs.

1. Form body panels, doors, shelves, and accessories from one-piece steel sheet unless otherwise indicated.
2. Provide fasteners, filler plates, supports, clips, and closures as required for complete installation.

B. Fabricate each metal locker with an individual door and frame; individual top, bottom, and back; and common intermediate uprights separating compartments.

C. Welded Construction: Factory preassemble metal lockers by welding all joints, seams, and connections; with no bolts, nuts, screws, or rivets used in assembly of main locker groups. Factory weld main locker groups into one-piece structures. Grind exposed welds smooth and flush.

D. Accessible Lockers: Fabricate as follows:

1. Locate bottom shelf no lower than 15 inches above the floor.
2. Where hooks, coat rods, or additional shelves are provided, locate no higher than 48 inches above the floor.

E. Continuous Zee Base: Fabricated in lengths as long as practical to enclose base and base ends; finished to match lockers.

F. Continuous Sloping Tops: Fabricated in lengths as long as practical, without visible fasteners at splice locations; finished to match lockers.

1. Sloping-top corner fillers, mitered.

G. Individual Sloping Tops: Fabricated in width to fit one locker frame in lieu of flat locker tops; with integral back; finished to match lockers. Provide wedge-shaped divider panels between lockers.

H. Recess Trim: Fabricated with minimum 2-1/2-inch face width and in lengths as long as practical; finished to match lockers.

I. Filler Panels: Fabricated in an unequal leg angle shape; finished to match lockers. Provide slip-joint filler angle formed to receive filler panel.

J. Boxed End Panels: Fabricated with 1-inch- wide edge dimension, and designed for concealing fasteners and holes at exposed ends of nonrecessed metal lockers; finished to match lockers.

1. Provide one-piece panels for double-row (back-to-back) locker ends.

K. Finished End Panels: Fabricated to conceal unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of nonrecessed metal lockers; finished to match lockers.

1. Provide one-piece panels for double-row (back-to-back) locker ends.

L. Center Dividers: Full-depth, vertical partitions between bottom and shelf; finished to match lockers.

## 2.7 ACCESSORIES

A. Fasteners: Zinc- or nickel-plated steel, slotless-type, exposed bolt heads; with self-locking nuts or lock washers for nuts on moving parts.

B. Anchors: Material, type, and size required for secure anchorage to each substrate.

1. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls for corrosion resistance.
2. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

A. Examine walls and floors or support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

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

## 3.2 INSTALLATION

A. Install lockers level, plumb, and true; shim as required, using concealed shims.

1. Anchor locker runs at ends and at intervals recommended by manufacturer, but not more than 36 inches o.c. Using concealed fasteners, install anchors through backup reinforcing plates, channels, or blocking as required to prevent metal distortion.
2. Anchor single rows of metal lockers to walls near top and bottom of lockers
3. Anchor back-to-back metal lockers to floor.

B. Welded Lockers: Connect groups together with manufacturer's standard fasteners, with no exposed fasteners on face frames.

C. Equipment:

1. Attach hooks with at least two fasteners.
2. Attach door locks on doors using security-type fasteners.
3. Identification Plates: as indicated by Owner.
   a. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.
   b. Attach plates to upper shelf of each open-front metal locker, centered, with a least two aluminum rivets.

D. Trim: Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates.

1. Attach recess trim to recessed metal lockers with concealed clips.
2. Attach filler panels with concealed fasteners. Locate filler panels where indicated on Drawings.
3. Attach sloping-top units to metal lockers, with closures at exposed ends.
4. Attach boxed end panels using concealed fasteners to conceal exposed ends of nonrecessed metal lockers.
5. Attach finished end panels using fasteners only at perimeter to conceal exposed ends of nonrecessed metal lockers.

E. Fixed Benches: Provide no fewer than two pedestals for each bench, uniformly spaced not more than 72 inches apart. Securely fasten tops of pedestals to undersides of bench tops, and anchor bases to floor.

F. Movable Benches: Place benches in locations indicated on Drawings.

## 3.3 ADJUSTING

A. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding.

## 3.4 PROTECTION

A. Protect metal lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit use during construction.

B. Touch up marred finishes, or replace metal lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by locker manufacturer.

END OF SECTION 105113

# SECTION 123661.16 - SOLID SURFACING COUNTERTOPS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:

1. Solid surface material countertops.
2. Solid surface material backsplashes.
3. Solid surface material end splashes.

### 1.2 ACTION SUBMITTALS

A. Product Data: For countertop materials

B. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.

C. Samples: For each type of material exposed to view.

## PART 2 - PRODUCTS

### 2.1 SOLID SURFACE COUNTERTOP MATERIALS

A. Solid Surface Material: Homogeneous-filled plastic resin complying with ISFA 2-01.

1. Basis of Design:
   a. Corian
2. Colors and Patterns: Solid surface, Weathered Concrete

### 2.2 FABRICATION

A. Fabricate countertops according to solid surface material manufacturer's written instructions and to the AWI/AWMAC/WI's "Architectural Woodwork Standards."

1. Grade: Economy.

B. Configuration:

1. Front: Straight, slightly eased at top
2. Backsplash: Straight, slightly eased at corner
3. End Splash: Matching backsplash

C. Countertops:

1. 1/2-inch thick, solid surface material with front edge built up with same material.

D. Backsplashes: 1/2-inch- thick, solid surface material

E. Joints:

1. Fabricate countertops without joints.

F. Cutouts and Holes:

1. Undercounter Plumbing Fixtures: Make cutouts for fixtures [ **in shop**] using template or pattern furnished by fixture manufacturer. Form cutouts to smooth, even curves.

## 2.3 INSTALLATION MATERIALS

A. Adhesive: Product recommended by solid surface material manufacturer.

B. Sealant for Countertops: Comply with applicable requirements in Section 079200 "Joint Sealants."

# PART 3 - EXECUTION

## 3.1 INSTALLATION

A. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Predrill holes for screws as recommended by manufacturer.

B. Fasten subtops to cabinets by screwing through subtops into cornerblocks of base cabinets. Shim as needed to align subtops in a level plane.

C. Secure countertops to subtops with adhesive according to solid surface material manufacturer's written instructions.

D. Bond joints with adhesive and draw tight as countertops are set. Mask areas of countertops adjacent to joints to prevent adhesive smears.

E. Install backsplashes and end splashes by adhering to wall and countertops with adhesive.

F. Install aprons to backing and countertops with adhesive.

G. Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts to prevent damage while cutting. Make cutouts to accurately fit items to be installed, and at right angles to finished surfaces unless beveling is required for clearance. Ease edges slightly to prevent snipping.

H. Apply sealant to gaps at walls; comply with Section 079200 "Joint Sealants."

END OF SECTION 123661.16

VICINITY MAP

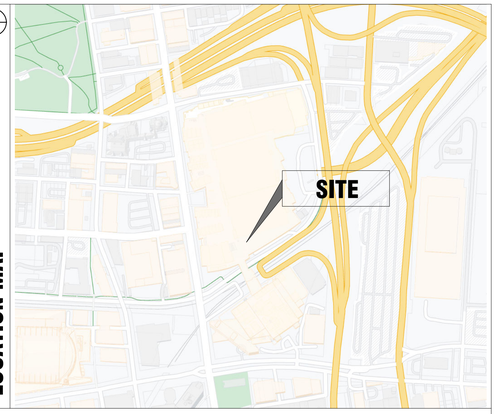
PROJECT NAME

# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION

400 N. HIGH STREET COLUMBUS, OH 43215

# BID SET

09.09.2024




LOCATION MAP

GREATER COLUMBUS CONVENTION CENTER

BBCO
326 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

## GRAPHIC SYMBOLS

| | |
|---|---|
| 1 / A101, SIM — BLDG SECTION INDICATOR SHEET NUMBER | 0 — NEW CONSTRUCTION COLUMN BUBBLE AND GRID LINE |
| 1 / A101, SIM — WALL / DETAIL SECTION NUMBER SHEET NUMBER | 0' 2' 4' 8' 12' 16' — GRAPHIC SCALE |
| A-XXX / X — EXTERIOR ELEV NUMBER SHEET NUMBER | XXX / XXX — ROOM NAME ROOM NUMBER |
| TYP. 1 / A101 — ENLARGED PLAN NUMBER SHEET NUMBER | 1 — REVISION NUMBER |
| 1 Ref, Ref 1, A101, 1 Ref, Ref 1 — INTERIOR ELEVATION NUMBER SHEET NUMBER | XX / XXX'-X" — FLOOR NUMBER ELEVATION |
| XX — INTERIOR WALL TYPE NUMBER SEE SCHEDULE | X' - X" — CEILING HEIGHT AFF |
| XX — EXTERIOR FINISH SEE SCHEDULE | DETAIL # TITLE / SCALE: X XXX, XX" = 1'-0" |
| 101 — DOOR NUMBER SEE DOOR SCHEDULE | NORTH ARROW |
| X — KEY NOTES | NEW CONSTRUCTION |
| XX-X — WALL, CEILING AND MISC FINISH / ACCESSORIES REFERENCE NUMBER | EXISTING CONSTRUCTION TO REMAIN |
| XX-X — FLOOR FINISH / ACCESSORIES REFERENCE NUMBER | EXISTING CONSTURCTION TO BE DEMOLISHED |

## PROJECT IMAGE

IMAGES ARE REPRESENTATIONAL ONLY. DRAWINGS AND SPECIFICATIONS PREVAIL.

## GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE OHIO BUILDING CODE, FIRE DEPARTMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS, AND THE BEST TRADE PRACTICES.
2. ALL DIMENSIONS MUST BE VERIFIED ON THE JOB AND THE ARCHITECT MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE DRAWINGS.
3. DIMENSIONS ARE WITNESSED TO FACE OF GWB UNLESS OTHERWISE NOTED.
4. COORDINATE LOCATIONS AND ELEVATIONS OF FLOOR DRAINS, REGISTERS, GRILLES, LOUVERS, CONVECTORS, CABINET UNIT HEATERS, PANELS, ETC. WITH MECHANICAL AND ELECTRICAL CONTRACTORS.
5. COORDINATE WORK BETWEEN ARCHITECTURAL AND DOCUMENTS FROM ALL VARIOUS DESIGN DISCIPLINES. ARCHITECT MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
6. ALL DIMENSIONS AND TIE-INS BY OTHER TRADES MUST BE FIELD VERIFIED BY INSTALLING CONTRACTOR.
7. COORDINATE FLOOR AND WALL OPENINGS AND ROOF PENETRATIONS WITH INSTALLING TRADE.
8. COORDINATE WITH MECHANICAL AND ELECTRICAL TRADES FOR INSTALLATION OF SLEEVES, CONDUITS, DAMPERS, AND OTHER BUILT-IN ITEMS WHERE RATED WALLS JOIN OTHER RATED MATERIALS OR FINISHES. USE U.L. APPROVED RATED SYSTEMS ONLY.
9. COORDINATE AND PROVIDE BLOCKING/BACKING IN PARTITIONS BEHIND ALL WALL MOUNTED ITEMS.
10. ATTACHMENTS, CONNECTIONS OR FASTENINGS OF ALL NATURE ARE TO BE PROPERLY AND PERMANENTLY SECURED IN CONFORMANCE WITH BEST INDUSTRY STANDARD PRACTICE. THE DRAWINGS SHOW ONLY SELECT CONDITIONS TO ASSIST CONTRACTOR, THEY ARE NOT INTENDED TO ILLUSTRATE EVERY DETAIL.
11. ALL EXTERIOR EXPOSED METAL SURFACES TO BE GALVANIZED UNLESS SPECIFIED OTHERWISE.
12. MAINTAIN REQUIRED SEPARATION BETWEEN DISSIMILAR MATERIALS.
13. THE CONTRACTOR SHALL DO ALL CUTTING, PATCHING, REPAIRING AS REQUIRED TO PERFORM ALL OF THE WORK INDICATED ON THE DRAWINGS, AND ALL OTHER WORK THAT MAY BE REQUIRED TO COMPLETE THE JOB.
14. ALL PIPING AND WIRING SHALL BE REMOVED TO A POINT OF CONCEALMENT AND SHALL BE PROPERLY CAPPED OR PLUGGED.
15. THE CONTRACTOR, UPON COMPLETION OF THE WORK, SHALL ARRANGE FOR ALL REQUIRED INSPECTIONS AND SIGNOFFS.

## MATERIALS LEGEND

| | |
|---|---|
| EARTH | SHIM |
| POROUS FILL / GRAVEL | RIGID INSULATION |
| CAST-IN-PLACE CONCRETE | PARTICLE BOARD |
| CMU | PLYWOOD |
| BRICK | ACOUSTIC TILE |
| GYPSUM BOARD | BATT INSULATION |
| FINISH WOOD | SPRAYED ON INSULATION |
| WOOD BLOCKING | STEEL |

## CLIENT

GREATER COLUMBUS CONVENTION CENTER

400 NORTH HIGH STREET, FLOOR 4
COLUMBUS, OH 43215
PHONE: 614-827-2500

## CONSULTANTS

MEP ENGINEER

POINT ONE DESIGN LTD.

2800 CORPORATE EXCHANGE DR #270
COLUMBUS, OH 43231
PHONE: 614-540-3500

## ARCHITECT OF RECORD

BBCO
326 SOUTH HIGH STREET SUITE 500
COLUMBUS, OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

## SEAL


BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215
09.09.2024

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

# ABBREVIATIONS

## A

| | |
|---|---|
| ABV. | ABOVE |
| A.B. | ANCHOR BOLT |
| ACOUS. | ACOUSTICAL |
| A.D. | AREA DRAIN |
| ADJ. | ADJUSTABLE |
| A.F.F. | ABOVE FINISH FLOOR |
| AGGR. | AGGREGATE |
| AHJ. | AUTHORITY HAVING JURISDICTION |
| ALUM. | ALUMINUM |
| ALT. | ALTERNATE |
| A.P. | ACCESS PANEL |
| APPROX. | APPROXIMATE |
| ARCH. | ARCHITECTURAL |
| A.R.F. | ABOVE REFERENCE FLOOR |
| ASPH. | ASPHALT |

## B

| | |
|---|---|
| B.C. | BOTTOM OF CURB |
| BD. | BOARD |
| BITUM. | BITUMINOUS |
| BLDG. | BUILDING |
| BLK. | BLOCK |
| BLKG. | BLOCKING |
| BM. | BEAM |
| B.M. | BENCH MARK |
| BOT. | BOTTOM |
| B.O. | BOTTOM OF |
| B.S.L. | BUILDING SETBACK LINE |
| B.U.R. | BUILT UP ROOF |

## C

| | |
|---|---|
| C.B. | CATCH BASIN |
| CAB. | CABINET |
| CEM. | CEMENT |
| CER. | CERAMIC |
| C.G. | CORNERGUARD |
| C.I. | CAST IRON |
| C.I.P. | CAST IN PLACE |
| C.J. | CONTROL JOINT |
| CLG. | CEILING |
| CLO. | CLOSET |
| CLR. | CLEAR |
| COL. | COLUMN |
| CONC. | CONCRETE |
| C.M.U. | CONCRETE MASONRY UNIT |
| CNTR. | COUNTER |
| CONN. | CONNECTION |
| CONST. | CONSTRUCTION |
| CONT. | CONTINUOUS |
| CORR. | CORRIDOR |
| CPT | CARPET |
| CT | CERAMIC TILE |
| CTSK | COUNTERSUNK |
| CTR | CENTER |

## D

| | |
|---|---|
| DBL | DOUBLE |
| D.F. | DRINKING FOUNTAIN |
| DEPT. | DEPARTMENT |
| DET. | DETAIL |
| DIA. | DIAMETER |
| DIAG. | DIAGONAL |
| DIM. | DIMENSION |
| DISP. | DISPENSER |
| D.N. | DOWN |
| D.O. | DOOR OPENING |
| DR | DOOR |
| DS | DOWNSPOUT |
| DWGS | DRAWINGS |

## E

| | |
|---|---|
| E. | EAST |
| E.A. | EACH |
| E.B. | EXPANSION BOLT (S) |
| E.I.F.S. | EXTERIOR INSULATING AND FINISH SYSTEM |
| E.J. | EXPANSION JOINT |
| EL | ELEVATION |
| ELEC. | ELECTRICAL |
| ELEV. | ELEVATOR |
| ENAM. | ENAMEL |
| EMER. | EMERGENCY |
| ENCL. | ENCLOSURE |
| EQ. | EQUAL |
| EQUIP. | EQUIPMENT |
| E.T.R. | EXISTING TO REMAIN |
| E.W.C. | ELECTRIC WATER COOLER |
| EXIST. (E) | EXISTING |
| EXP. | EXPANSION |
| EXT. | EXTERIOR |

## F

| | |
|---|---|
| F.D. | FLOOR DRAIN |
| FR | FIRE RETARDANT |
| FRP | FIBER GLASS REINFORCED POLYESTER |
| F.A. | FIRE ALARM |
| F.B. | FLAT BAR |
| FDN. | FOUNDATION |
| F.D.V.C. | FIRE DEPT. VALVE CABINET |
| F.E. | FIRE EXTINGUISHER |
| F.E.C. | FIRE EXTINGUISHER CABINET |
| F.H. | FLAT HEAD |
| F.H.C. | FIRE HOSE CABINET |
| FIN. | FINISH |
| FL. | FLOOR |
| FLASH. | FLASHING |
| FLUOR. | FLUORESCENT |
| F.O. | FACE OF |
| F. | FLOOR OR FEET |
| FTG. | FOOTING |
| FURR. | FURRING |

## G

| | |
|---|---|
| GA. | GAUGE |
| GALV. | GALVANIZED |
| G.B. | GRAB BAR |
| GL. | GLASS |
| GWB | GYPSUM WALL BOARD |
| GYP. | GYPSUM |
| GYP. BD. | GYPSUM BOARD |

## H

| | |
|---|---|
| H.C. | HOLLOW CORE |
| H.C.P. | HANDICAPPED |
| HDWD. | HARDWOOD |
| HDWE. | HARDWARE |
| H.M. | HOLLOW METAL |
| HORIZ | HORIZONTAL |
| HR. | HOUR |
| HGT. (HT) | HEIGHT |
| H.P. | HIGH POINT |

## I

| | |
|---|---|
| I.D. | INSIDE DIAMETER(DIM.) |
| INSUL | INSULATION |
| INT. | INTERIOR |
| INV. | INVERT |

## J

| | |
|---|---|
| JAN. | JANITOR |
| JT. | JOINT |

## K

| | |
|---|---|
| KIT. | KITCHEN |
| K.O. | KNOCK OUT |

## L

| | |
|---|---|
| LAB. | LABORATORY |
| LAM. | LAMINATED |
| LAV. | LAVATORY |
| LKR. | LOCKER |
| LP. | LOW POINT |
| LT. | LIGHT |

## M

| | |
|---|---|
| MAX. | MAXIMUM |
| MED. CAB. | MEDICINE CABINET |
| M.D.O. | MEDIUM DENSITY OVERLAY |
| MECH. | MECHANICAL |
| MET. | METAL |
| MFR. | MANUFACTURER |
| MH. | MANHOLE |
| MIN. | MINIMUM |
| MSC. | MISCELLANEOUS |
| M.O. | MASONRY OPENING |
| MTD. | MOUNTED |
| M.W. | MILLWORK |
| MTL. | METAL |
| M.R. | MOISTURE RESISTANT |
| MUL. | MULLION |

## N

| | |
|---|---|
| N. | NORTH |
| N.I.C. | NOT IN CONTRACT |
| NO. | NUMBER |
| NOM. | NOMINAL |
| N.T.S. | NOT TO SCALE |

## O

| | |
|---|---|
| O.C. | ON CENTER |
| O.D. | OUTSIDE DIAMETER (DIM.) |
| OFF. | OFFICE |
| OH. | OVERHEAD |
| OPN. | OPENING |
| OPP. | OPPOSITE |

## P

| | |
|---|---|
| P.C. | PRE-CAST |
| PLAS. | PLASTER |
| PNT. | PAINT |
| PTD. | PAINTED |
| P.LAM. | PLASTIC LAMINATE |
| PL. | PLATE |
| PLYWD. | PLYWOOD |
| PR. | PAIR |
| PT. | POINT |
| P.T.D. | PAPER TOWEL DISPENSER |

## Q

| | |
|---|---|
| Q.T. | QUARRY TILE |

## R

| | |
|---|---|
| R. | RISER |
| RAD. | RADIUS |
| REF. | REFERENCE |
| REFG. | REFRIGERATOR |
| REINF. | REINFORCEMENT |
| REQ. | REQUIRED |
| RESIL | RESILIENT |
| REV. | REVISION |
| RM. | ROOM |
| R.O. | ROUGH OPENING |
| R.O.W. | RIGHT OF WAY |
| R.T. | RESILIENT TILE |

## S

| | |
|---|---|
| S. | SOUTH |
| SC. | SOUTH CORE |
| SCHED. | SCHEDULE |
| S.D. | SOAP DISPENSER |
| SECT. | SECTION |
| SGBC. | SUSPENDED GYPSUM BOARD CEILING |
| SHR. | SHOWER |
| SHT. | SHEET |
| SIM. | SIMILAR |
| S.M.S. | SHEET METAL SCREW |
| S.N.D. | SANITARY NAPKIN DISPENSER |
| S.N.R. | SANITARY NAPKIN RECEPTACLE |
| SPEC. | SPECIFICATION |
| SQ. | SQUARE |
| S.S. | STAINLESS STEEL |
| S.SK. | SERVICE SINK |
| STA. | STATION |
| STC | SOUND TRANSMISSION COEFFICIENT |
| STD. | STANDARD |
| STL. | STEEL |
| STOR. | STORAGE |
| STRUCT. | STRUCTURAL |
| SUSP. | SUSPENDED |

## T

| | |
|---|---|
| T. | TREAD |
| T.B. | TOWEL BAR |
| T.C. | TOP OF CURB |
| T.D. | TOWEL DISPENSER |
| TEL. | TELEPHONE |
| T & G | TONGUE AND GROOVE |
| THK. | THICK (NESS) |
| T.O. | TOP OF |
| T.P.D. | TOILET PAPER DISPENSER |
| T.V. | TELEVISION |
| TERR. | TERRAZZO |
| TYP. | TYPICAL |

## U

| | |
|---|---|
| UNPTD. | UNPAINTED |
| UNFIN. | UNFINISHED |
| U.N.O. | UNLESS NOTED OTHERWISE |
| UR. | URINAL |

## V

| | |
|---|---|
| V.W.C. | VINYL WALL COVERING |
| VB. | VINYL BASE |
| V.C.T. | VINYL COMPOSTION TILE |
| VERT. | VERTICAL |
| VEST. | VESTIBULE |
| V.P. | VENEER PLASTER |
| VCGB. | VINYL COATED GYPSUM BOARD |

## W

| | |
|---|---|
| WD. | WOOD |
| W. | WEST |
| W/ | WITH |
| W.B. | WOOD BASE |
| W.C. | WATER CLOSET |
| W/O | WITHOUT |
| WP. | WATERPROOF(ING) |
| W.R. | WATER RESISITANT |
| WSCT. | WAINSCOT |
| WT. | WEIGHT |

# DRAWING INDEX



# BUILDING INTERIOR SCOPE

| # | ITEM | G.C. SUPPLIED | G.C. INSTALLED | OWNER SUPPLIED | OWNER INSTALLED | REMARKS |
|---|---|---|---|---|---|---|
| 1 | PAINT | ● | ● | | | |
| 2 | FLOORING (LVT, TILE, EPOXY, ETC) | ● | ● | | | |
| 3 | CASEWORK AND COUNTERTOPS | ● | ● | | | |
| 4 | CEILINGS (ACOUSTICAL) | ● | ● | | | |
| 5 | CEILINGS (GYP. BOARD) | ● | ● | | | |
| 6 | SPECIALTY WALL FINISHES (REFER TO DRAWINGS) | ● | ● | | | |
| 7 | PLUMBING FIXTURES | ● | ● | | | |
| 8 | LIGHTING (INTERIOR) | ● | ● | | | |
| 9 | MECHANICAL SYSTEMS (INTERIOR) | ● | ● | | | |
| 10 | INTERIOR TRIM | ● | ● | | | |
| 11 | BATHROOM ACCESSORIES TO INCLUDE:<br>- GRAB BARS<br>- SEMI-RECESSED TRASH RECEPTACLES<br>- WALL MOUNTED COAT HOOKS | ● | ● | | | |
| 12 | BATHROOM ACCESSORIES TO INCLUDE:<br>- PAPER TOWEL DISPENSERS<br>- WALL MOUNTED PUMP SOAP DISPENSERS<br>- TOILET TISSUE DISPENSERS<br>- SANITARY NAPKIN DISPOSAL | | ● | ● | | |
| 13 | SANITARY NAPKIN VENDOR | | | ● | ● | |
| 14 | DOORS AND DOOR HARDWARE | ● | ● | | | |
| 15 | MIRRORS | ● | ● | | | |
| 16 | RESILIENT BASE | ● | ● | | | |
| 17 | PORCELAIN TILE BASE | ● | ● | | | |
| 18 | WALL TILE | ● | ● | | | |
| 19 | RESTROOM EQUIPMENT | ● | ● | | | |
| 20 | LOCKERS | ● | ● | | | |
| 21 | INTERIOR SIGNAGE TO MEET BUILDING CODE REQUIREMENTS | ● | ● | | | |

## NOTES:

1. THE RESPONSIBILITY SCHEDULE TAKES PRECEDENCE OVER ALL DRAWING NOTES AND COMMENTS REGARDING RESPONSIBILITY.

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
DRAWING INDEX & ABBREVIATIONS

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL

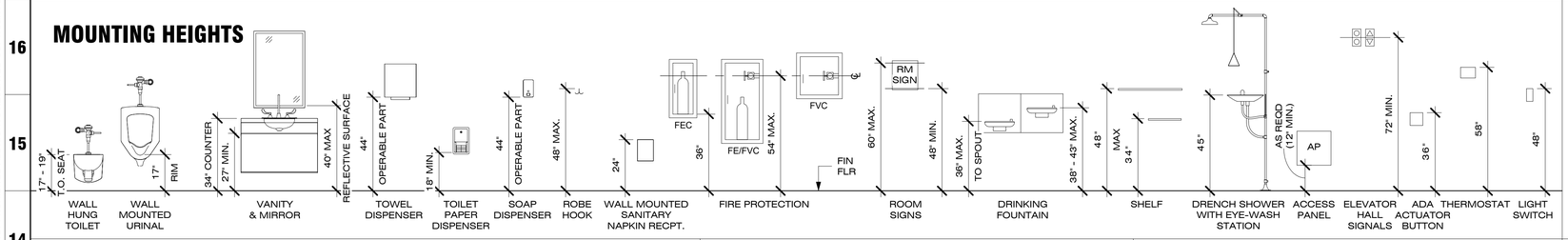
STATE OF OHIO
BHAKTI BANIA
0814783
REGISTERED ARCHITECT

BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

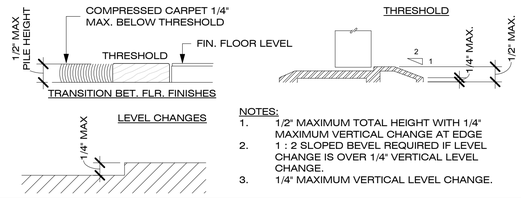
BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
G-100

## MOUNTING HEIGHTS

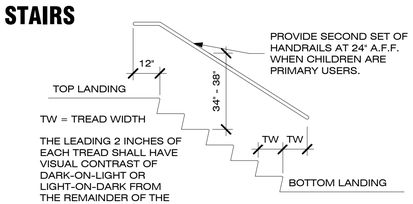


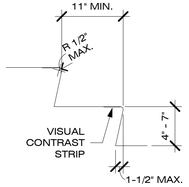

## LEVEL CHANGES



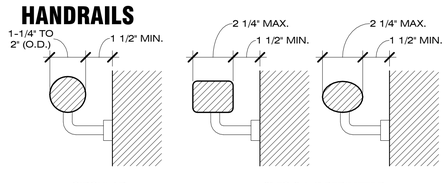

NOTES:
1. 1/2" MAXIMUM TOTAL HEIGHT WITH 1/4" MAXIMUM VERTICAL CHANGE AT EDGE
2. 1 : 2 SLOPED BEVEL REQUIRED IF LEVEL CHANGE IS OVER 1/4" VERTICAL LEVEL CHANGE.
3. 1/4" MAXIMUM VERTICAL LEVEL CHANGE.

## STAIRS

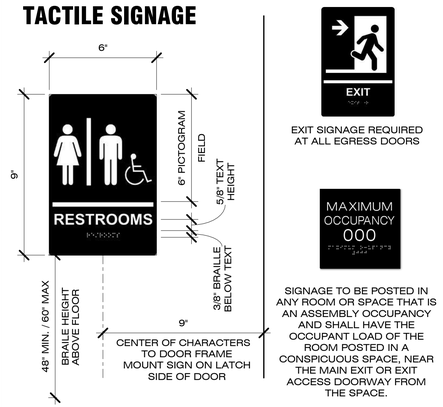



## HANDRAILS




## TACTILE SIGNAGE





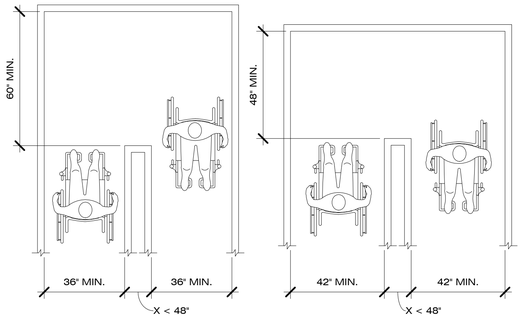


EXIT SIGNAGE REQUIRED AT ALL EGRESS DOORS

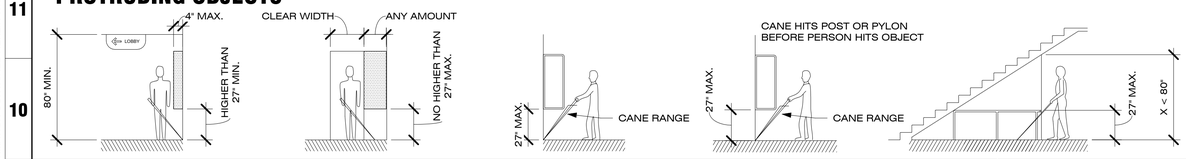



SIGNAGE TO BE POSTED IN ANY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY AND SHALL HAVE THE OCCUPANT LOAD OF THE ROOM POSTED IN A CONSPICUOUS SPACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE SPACE.

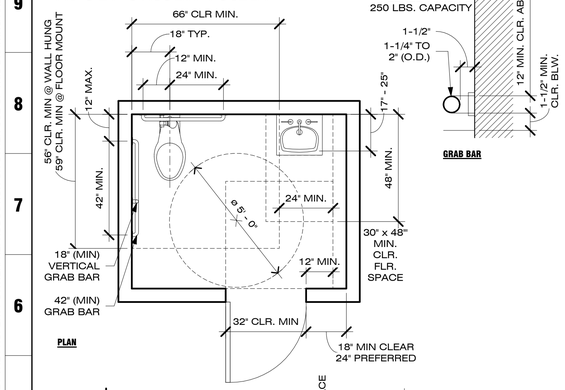
## ACCESSIBLE ROUTE: 180 DEGREE TURN



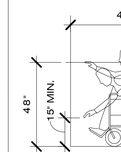

## PROTRUDING OBJECTS



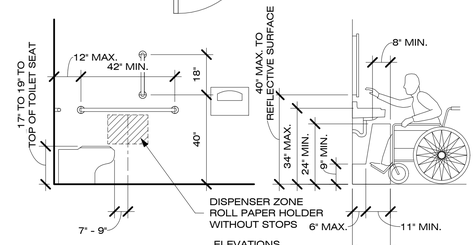

## ADULT UNISEX TOILET




PLAN



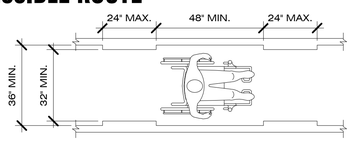

GRAB BAR



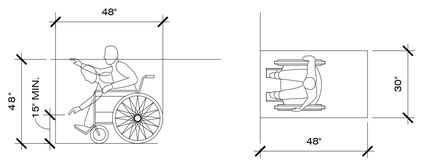

ELEVATIONS

NOTES:
1. PROVIDE PRIVACY DOOR LOCK WHEN IT IS A PRIVATE TOILET OR FOR UNISEX USE.

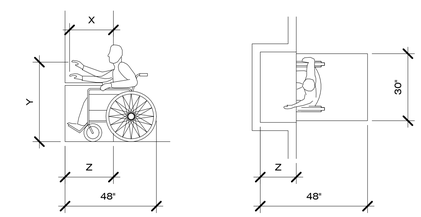
## ACCESSIBLE ROUTE




## REACH REQUIREMENTS

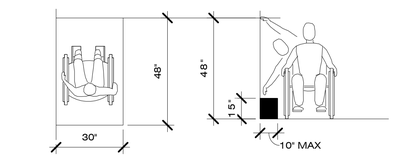



HIGH FORWARD REACH LIMIT



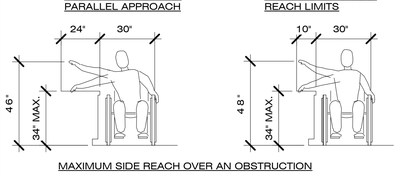

NOTES:
1. X SHALL BE < 24 INCHES; Z SHALL BE >X
2. WHEN X <20 INCHES, THEN Y SHALL BE 48 INCHES MAXIMUM
3. WHEN X IS 20 TO 25 INCHES, THEN Y SHALL BE 44 INCHES MAXIMUM

MAXIMUM FORWARD REACH OVER AN OBSTRUCTION



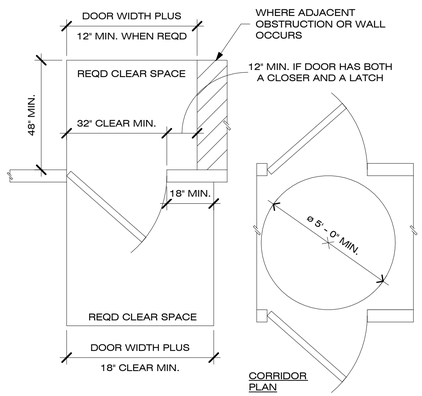

CLEAR FLOOR SPACE PARALLEL APPROACH

HIGH AND LOW SIDE REACH LIMITS

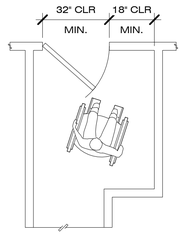



MAXIMUM SIDE REACH OVER AN OBSTRUCTION

## DOOR CLEAR SPACE

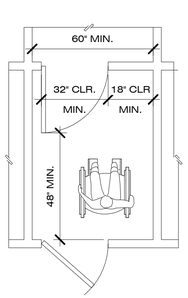



CORRIDOR PLAN




REQD DOOR CLEARANCES MAY OVERLAP REQD RAMP LANDING AREA

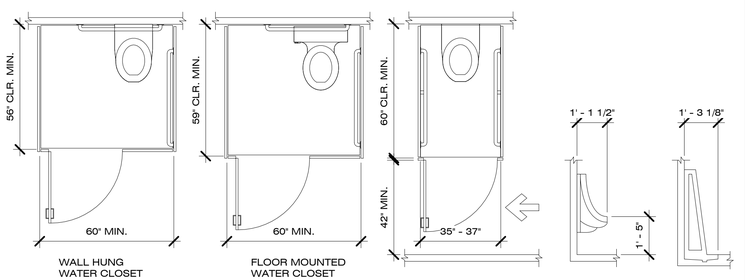
RAMP LANDING AT DOORWAY PLAN




VESTIBULE PLAN

NOTES:
1. CLEAR SPACES MUST BE LEVEL TO PREVENT WHEELCHAIRS FROM ROLLING WHEN THE OCCUPANT RELEASES THE WHEEL GRIPS TO REACH FOR THE DOOR. 1/4" PER FOOT IS ALLOWED FOR DRAINAGE.
2. WHERE DOORS OPEN ONTO, BUT NOT INTO A CORRIDOR, THE REQUIRED LEVEL AREA BEYOND THE DOORS MAY BE A MINIMUM OF 48".

## TOILET ROOMS




WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT

AMBULATORY ACCESSIBLE TOILET COMPARTMENT

HEIGHT AND DEPTH OF URINALS

## NOTES:

1. OBC 1103: "SCOPING REQUIREMENTS"1103.1 WHERE REQUIRED. SITES, BUILDINGS, STRUCTURES, FACILITIES, ELEMENTS AND SPACES, TEMPORARY OR PERMANENT, SHALL BE ACCESSIBLE TO INDIVIDUALS WITH DISABILITIES.
1103.2 GENERAL EXCEPTIONS. SITES, BUILDINGS, STRUCTURES, FACILITIES, ELEMENTS AND SPACES SHALL BE EXEMPT FROM CHAPTER 11 TO THE EXTENT SPECIFIED IN SECTION 1103.
2. OBC 1104: "ACCESSIBLE ROUTE"
1104.1 SITE ARRIVAL POINTS. AT LEAST ONE ROUTE WITHIN THE SITE SHALL BE PROVIDED FROM ACCESSIBLE FACILITIES; PUBLIC TRANSPORTATION STOPS; ACCESSIBLE PARKING; ACCESSIBLE PASSENGER LOADING ZONES; AND PUBLIC STREETS OR SIDEWALKS TO THE ACCESSIBLE BUILDING SERVED.
1104.2 WITHIN A SITE. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS AND ACCESSIBLE SPACES THAT ARE ON THE SAME SITE.
1104.3 CONNECTED SPACES. WHEN A BUILDING OR PORTION OF A BUILDING IS REQUIRED TO BE ACCESSIBLE, AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED TO EACH PORTION OF THE BUILDING, TO ACCESSIBLE BUILDING ENTRANCES CONNECTING ACCESSIBLE PEDESTRIAN WALKWAYS AND THE PUBLIC WAY.
3. ANSI A117.1-2009 SECTION 403.3: "SLOPE"
THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF A WALKING SURFACE SHALL NOT BE STEEPER THAN 1:48
4. ANSI A117.1-2009 SECTION 303: "CHANGES IN LEVEL"
303.2 VERTICAL. CHANGES IN LEVEL OF 1/4 INCH MAXIMUM IN HEIGHT SHALL BE PERMITTED TO BE VERTICAL.
303.3 BEVELED. CHANGES IN LEVEL GREATER THAN 1/4 INCH IN HEIGHT AND NOT MORE THAN 1/2 INCH MAXIMUM IN HEIGHT SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2.
303.4 RAMPS. CHANGES IN LEVEL GREATER THAN 1/2 INCH IN HEIGHT SHALL BE RAMPED. PER SECTION 405.2, RAMP RUNS SHALL HAVE A RUNNING SLOPE GREATER THAN 1:20 AND NOT STEEPER THAN 1:12.
5. ANSI A117.1-2009 SECTION 302.2: "CARPET"
CARPET OR CARPET TILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION, PAD, OR BACKING, OR NO CUSHION OR PAD. CARPET OR CARPET TILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL CUT/UNCUT PILE TEXTURE. THE PILE SHALL BE 1/2 INCH MAXIMUM IN HEIGHT. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO THE FLOOR AND HAVE TRIM ALONG THE ENTIRE LENGTH OF THE EXPOSED EDGE. CARPET EDGE TRIM SHALL COMPLY WITH SECTION 303.
6. ANSI A117.1-2009 SECTION 502: "PARKING SPACES"
502.2 VEHICLE SPACE SIZE. CAR PARKING SPACES SHALL BE 96 INCHES MINIMUM IN WIDTH. VAN PARKING SPACES SHALL BE 132 MINIMUM IN WIDTH.
502.4 ACCESS AISLE. CAR AND VAN PARKING SPACES SHALL HAVE AN ADJACENT ACCESS AISLE COMPLYING WITH SECTION 502.4
502.4.1 LOCATION. ACCESS AISLES SHALL ADJOIN AN ACCESSIBLE ROUTE. TWO PARKING SPACES SHALL BE PERMITTED TO SHARE A COMMON ACCESS AISLE. ACCESS AISLES SHALL NOT OVERLAP WITH THE VEHICULAR WAY. PARKING SPACES SHALL BE PERMITTED TO HAVE ACCESS AISLES PLACED ON EITHER SIDE OF THE CAR OR VAN SPACE. VAN PARKING SPACES THAT ARE ANGLED SHALL HAVE ACCESS AISLES LOCATED ON THE PASSENGER SIDE OF THE PARKING SPACE.
502.5 FLOOR SURFACES. PARKING SPACES AND ACCESS AISLES SHALL HAVE SURFACE SLOPES NOT STEEPER THAN 1:48. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE.
7. OBC 1111: "SIGNAGE"
1111.1.1 SIGNS TO DESIGNATE ACCESSIBLE PARKING SPACES AND PASSENGER LOADING ZONES. ACCESSIBLE PARKING SPACES, VAN-ACCESSIBLE SPACES AND RESERVED PASSENGER LOADING ZONES, SHALL BE PROVIDED WITH A SIGN MOUNTED ON A FIXED OR MOVABLE POST OR OTHERWISE AFFIXED IN A VERTICAL POSITION SO THAT THE SIGN IS CLEARLY VISIBLE TO THE DRIVER OF A VEHICLE WHEN PARKED IN SUCH A LOCATION. SIGNAGE SHALL COMPLY WITH IDENTIFICATION REQUIREMENTS LISTED IN ANSI A117.1-2009 SECTION 502.7. A NOTICE SHALL BE AFFIXED TO THIS SIGN OR POSTED ADJACENT TO IT THAT STATES THE AMONG OF THE FINE ESTABLISHED BY SECTION 4511.99 OF THE REVISED CODE FOR THE OFFENSE OF PARKING A VEHICLE IN THIS LOCATION IF IT IS NOT LEGALLY ENTITLED TO DO SO. NOTE: THE FINE ESTABLISHED BY SECTION 4115.99 OF THE OHIO REVISED CODE SHALL BE NOT LESS THAN $250.00 NOR MORE THAN $500.00.
8. ANSI A117.1-2009 SECTION 406: "CURB RAMPS"
CURB RAMPS ON ACCESSIBLE ROUTES SHALL COMPLY WITH SECTIONS 406, 405.2, 405.3 AND 405.10. CURB RAMPS AND ADJACENT SURFACES SHALL COMPLY WITH FIGURES 406.2 AND 406.3 COUNTER SLOPE.
9. ANSI A117.1-2009 SECTION 404.2.3: "MANEUVERING CLEARANCES AT DOORS."
MINIMUM MANEUVERING CLEARANCES AT DOORS SHALL INCLUDE THE FULL CLEAR OPENING WIDTH OF THE DOORWAY AND BE AS SHOWN IN FIG. 404.2.3.2. PER SECTION 404.2.3.1, THE FLOOR SURFACE WITHIN THE MANEUVERING CLEARANCES SHALL HAVE A SLOPE NOT STEEPER THAN 1:48.

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
ADA COMPLIANCE INFORMATION

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL


BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
G-200

# OHIO BUILDING CODE 2024

WORK SHALL CONFORM TO APPLICABLE GOVERNING CODES INCLUDING BUT NOT LIMITED TO THE LATEST EDITIONS OF THE FOLLOWING:

| | |
|---|---|
| OHIO BUILDING & EXISTING BUILDING CODE 2024 | INTL. ENERGY CONSERVATION CONST. CODE 2021 |
| OHIO MECHANICAL CODE 2024 | NFPA 70 (NEC) - 2023 |
| OHIO PLUMBING CODE 2024 | OHIO FIRE CODE - 2021 |
| INTERNATIONAL FUEL GAS CODE 2021 | NFPA 72 - 2022 |
| ASHRAE 2019 | NFPA 13 - 2022 |
| ICC/ANSI A117.1 - 2017 | A.D.A.A.G. |

| | |
|---|---|
| ADDRESS | 400 N HIGH STREET, COLUMBUS, OH 43215 |
| DESCRIPTION OF PROJECT | THIS PROJECT INVOLVES THE RENOVATION OF THE EMPLOYEE LOCKER AND RESTROOMS, RENOVATION OF THE EXISTING EMPLOYEE BREAKROOM, AND CEILING REPLACEMENT IN VARIOUS BACK OF HOUSE ROOMS WITHIN THE CONVENTION CENTER. |

| | | | |
|---|---|---|---|
| TYPE OF WORK | A. NEW STRUCTURE ☐ | C. ALTERATION | X |
| | B. ADDITION ☐ | D. CHANGE OF USE | ☐ |

## CHAPTER 3: OCCUPANCY DESCRIPTION

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| USE GROUP | A-2, A-3, M, B, S-2 | ASSEMBLY, MERCANTILE, BUSINESS, AND STORAGE (assumed) | | | | | | | |
| MIXED USE | X | YES | | NO | SEPARATED | | YES | X | NO |

## CHAPTERS 6: TYPES OF CONSTRUCTION

| | | |
|---|---|---|
| CONSTRUCTION TYPE | IB (assumed) | CONSTRUCTION IN WHICH THE BUILDING ELEMENTS ARE OF NONCOMBUSTIBLE MATERIALS, EXCEPT AS PERMITTED BY THIS CODE. |
| AREA OF WORK | 13,080 SF | WITH ALTERNATE 20,120 SF |

## CHAPTER 8: INTERIOR FINISHES

| INTERIOR WALL AND CEILING FINISH REQUIREMENTS | A | B | C | NONE |
|---|---|---|---|---|
| EXIT ENCLOSURES & EXIT PASSAGEWAYS | | X | | |
| CORRIDORS | | X | | |
| ROOMS AND ENCLOSED SPACES | | | X | |

## CHAPTER 9: FIRE PROTECTION SYSTEMS

| | | | | |
|---|---|---|---|---|
| AUTOMATIC SPRINKLER SYSTEM (903) - NFPA 13 | X | YES | | NO |
| STANDPIPE SYSTEM (905) | X | YES | | NO |
| PORTABLE FIRE EXTINGUISHERS (906) | X | YES | | NO |
| FIRE ALARM SYSTEM (907) | X | YES | | NO |

## CHAPTER 10: MEANS OF EGRESS

| | |
|---|---|
| OCCUPANT LOAD | UNCHANGED |

## CHAPTER 29: PLUMBING REQUIREMENTS

| EMPLOYEE AREA | OCCUPANCY | WC | | LAVATORIES | |
|---|---|---|---|---|---|
| | | M | W | M | W |
| EXISTING | UNKNOWN | 7 | 7 | 4 | 4 |
| PROVIDED | UNCHANGED | 7 | 7 | 4 | 4 |

## EXISTING BUILDING CODE - CHAPTER 6: CLASSIFICATION OF WORK

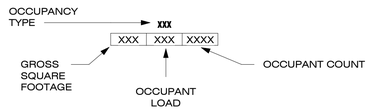
SECTION 603 ALTERATION - LEVEL 2

603.1 SCOPE
Level 2 alterations include the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment, and shall apply where the work area is equal to or less than 50 percent of the building area.

## CODE COMPLIANCE LEGEND

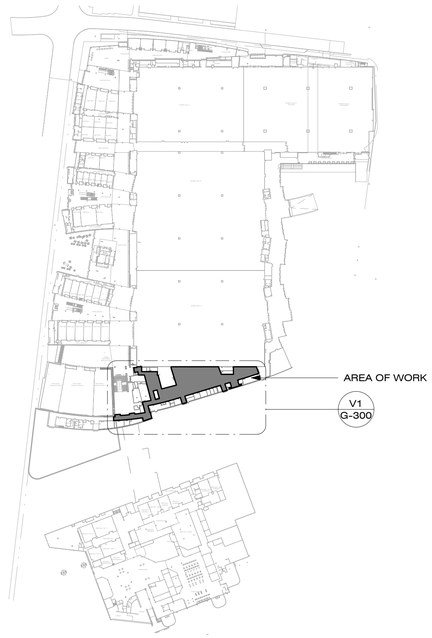
- ➔ INDICATES EXIT
- OCC OCCUPANCY
- FEC FIRE EXTINGUISHER CABINET
- FE FIRE EXTINGUISHER

NOTE: ALL INDICATED EXITS MUST RECIEVE ACCESSIBLE COMPLIANT SIGNAGE

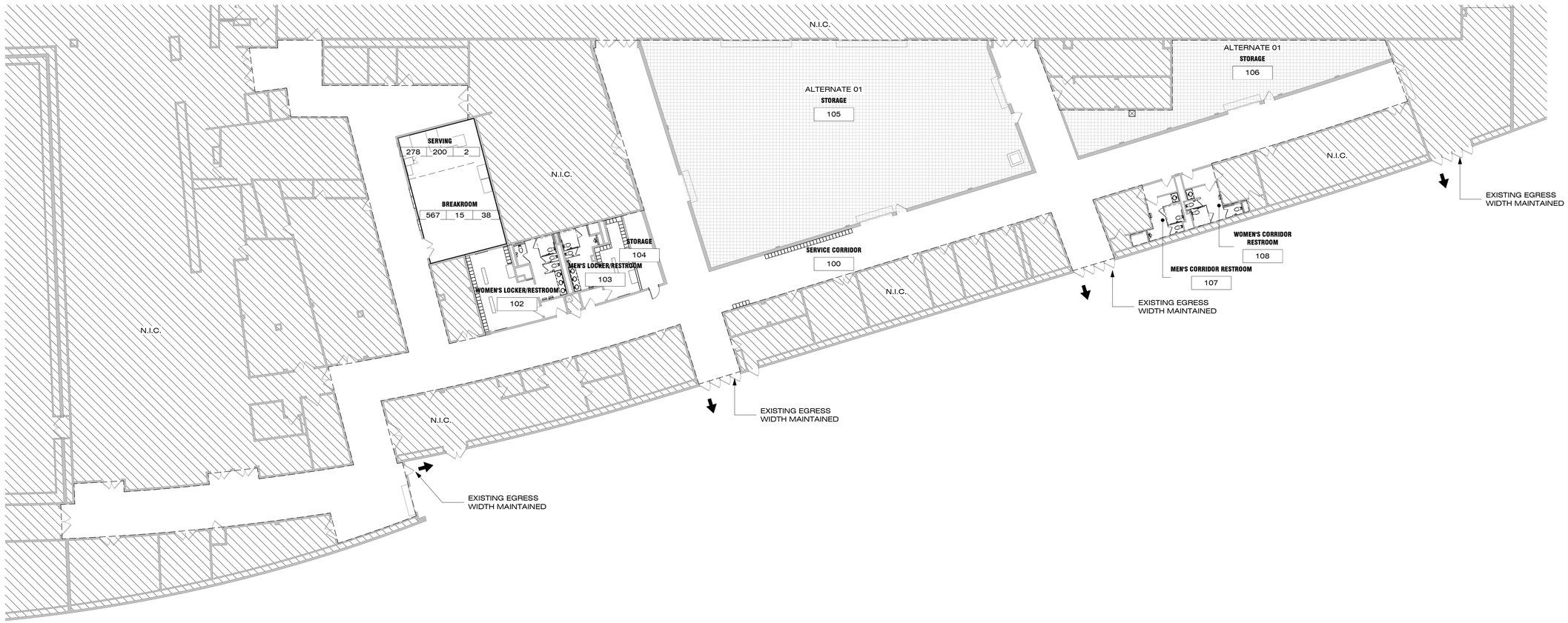




## NOTES

1. REFER A-800 SERIES FOR DOORS, WINDOWS & DOOR HARDWARE REQUIREMENTS
2. REFER G-200 SERIES FOR ACCESSIBILITY COMPLIANCE INFORMATION
3. REFER ELECTRICAL DRAWINGS FOR EGRESS LIGHTING REQUIREMENTS




**H10** AREA OF WORK PLAN
1" = 200'-0"




**V1** CODE COMPLIANCE PLAN
1/16" = 1'-0"

0 2' 4' 8' 12' 16'

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

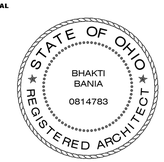
| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
**PROJECT CODE INFORMATION**

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL




BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
**2024-023**

SHEET NUMBER
# G-300

**V9** VIEW OF RENOVATED MEN'S RESTROOM
NOT TO SCALE

IMAGES ARE REPRESENTATIONAL ONLY. DRAWINGS AND SPECIFICATIONS PREVAIL.

**V1** VIEW OF RENOVATED WOMEN'S LOCKER ROOM
NOT TO SCALE

IMAGES ARE REPRESENTATIONAL ONLY. DRAWINGS AND SPECIFICATIONS PREVAIL.

**K1** VIEW OF RENOVATED BREAK ROOM
NOT TO SCALE

IMAGES ARE REPRESENTATIONAL ONLY. DRAWINGS AND SPECIFICATIONS PREVAIL.

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
CONCEPTUAL RENDERINGS

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL

STATE OF OHIO
BHAKTI BANIA
0814783
REGISTERED ARCHITECT

BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
G-800

## DEMOLITION GENERAL NOTES

A. DEMOLITION INCLUDES BUT IS NOT LIMITED TO THE REMOVAL OF SPECIFIED INTERIOR WALLS, PARTITIONS, CEILINGS, FLOOR COVERINGS, PLATFORMS, CABINETS, ETC. DEMOLITION ALSO INCLUDES THE REMOVAL OF PORTIONS OF EXISTING BUILDING STRUCTURE, ELECTRICAL, MECHANICAL AND PLUMBING FIXTURES AND EQUIPMENT AS SPECIFIED ON THE DEMOLITION DRAWINGS. CONTRACTOR IS TO CONTACT OWNER'S CONSTRUCTION MANAGER IF THERE ARE ANY QUESTIONS CONCERNING THE EXTENT OF DEMOLITION.

B. ALL ABANDONED ELECTRICAL / TELEPHONE CONDUIT, PLUMBING LINES, DRAIN LINES, AND MECHANICAL DUCTWORK AS THE RESULT OF DEMOLITION SHALL BE REMOVED BACK TO THE POINT OF ORIGIN.

C. CONTRACTOR IS TO COORDINATE THE REMOVAL, DISCONNECTION AND CAPPING OF ANY UTILITES WITH THE OWNER'S CONSTRUCTION MANAGER.

D. CONFIRM SALVAGE OF EXISTING ITEMS WITH OWNER / CM.

E. REFER TO MEP DRAWINGS FOR RELATED DEMOLITION.

F. REFER TO SELECTIVE DEMOLITION SECTION IN PROJECT SPECIFICATIONS AS REQUIRED TO ACCEPT SCHEDULED FLOOR FINISH.

G. COORDINATE REQUIRED EXTENTS OF DEMOLITION WITH CONSTRUCTION PLANS AND FIELD VERIFICATION.

H. PATCH FLOOR UNDER ALL DEMOLISHED PARTITIONS AS REQUIRED TO ACCEPT FLOOR FINISH.

I. PATCH AND INFILL ALL ABANDONED HOLES FROM ANCHOR BOLTS, SLEEVES AND CONDUITS IN CMU WALLS.

## (X) DEMOLITION KEYNOTES

D1 CLEAN AND PREPARE ALL PAINTED SURFACES INDICATED FOR NEW PAINT. REPAIR ANY DAMAGED SURFACES TO LIKE-NEW CONDITION

D2 EXISTING LOCKERS TO BE REMOVED AND RETURNED BACK TO OWNER

D3 EXISTING SCRUBBER DUMP, SEE PLUMBING DRAWINGS FOR ADD. INFO

D4 EXISTING 2X4 ACT GRID AND TILES TO BE REMOVED. MECHANICAL SYSTEMS ABOVE CEILING TO REMAIN. SEE MEP DRAWINGS FOR ADDITIONAL REQUIREMENTS

D5 ALTERNATE 01: EXISTING 2X4 ACT GRID AND TILES TO BE REMOVED. MECHANICAL SYSTEMS ABOVE CEILING TO REMAIN. SEE MEP DRAWINGS FOR ADDITIONAL REQUIREMENTS

## DESCRIPTION OF ALTERNATE 01

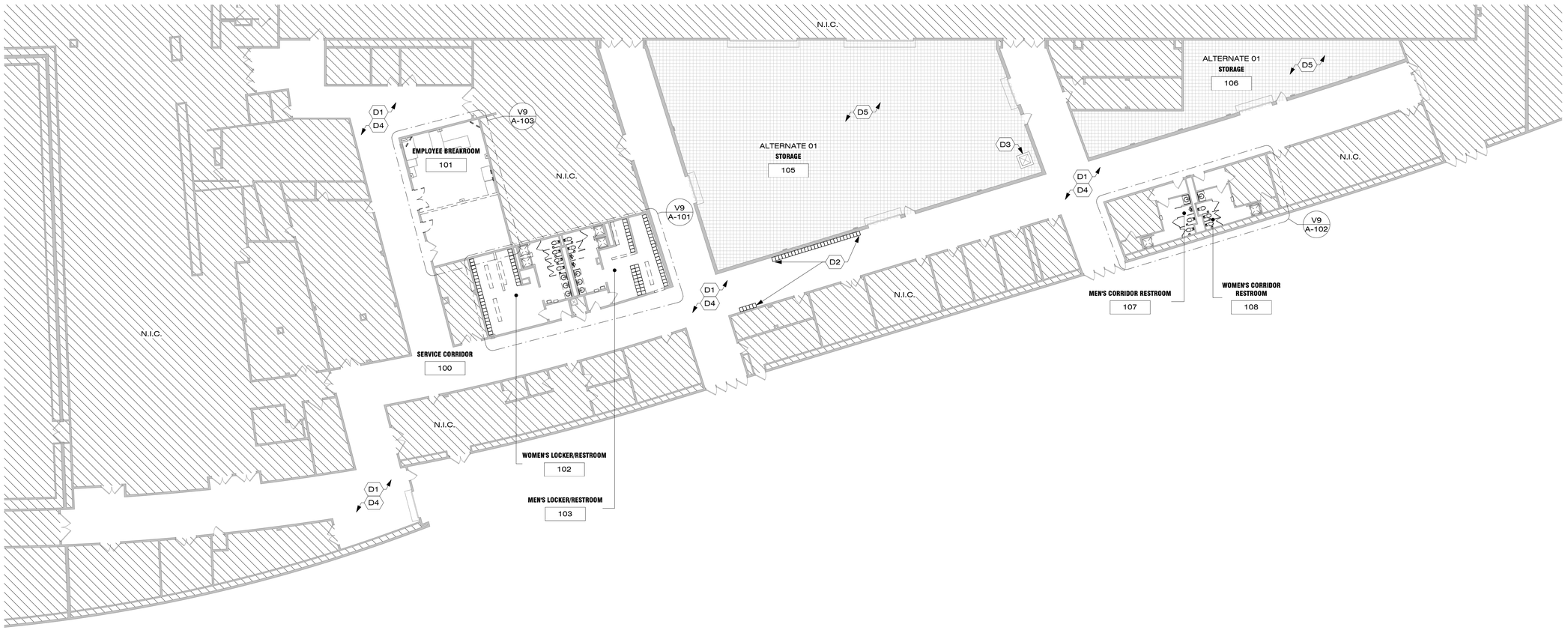
PER SPECIFICATION 012300, ALTERNATE 01 INCLUDES THE REMOVAL OF THE ACT CEILING GRID AND TILES IN STORAGE ROOM 105 & 106. EXISTING CEILING TO BE EXPOSED. PREPARE AND PAINT WALLS UP TO THE EXISTING CEILING HEIGHT. REFER TO A-800 ROOM FINISH SCHEDULE FOR PAINT COLOR. REMOVE EXISTING LIGHTING AND REPLACE WITH SUSPENDED LED LIGHTING PER ELECTRICAL DRAWINGS.

## DEMOLITION PLAN LEGEND

- EXISTING DOOR & FRAME TO BE REMOVED
- EXISTING DOOR & FRAME TO REMAIN
- EXISTING CONSTRUCTION TO BE DEMOLISHED.
- EXISTING CONSTRUCTION TO REMAIN.
- ALTERNATE 01
- NOT IN CONTRACT

## NOTE:

DIMENSIONS ARE WITNESSED TO FACE OF INTERIOR FINISH & FACE OF EXTERIOR SHEATHING & EXTERIOR FACE OF MASONRY UNLESS OTHERWISE NOTED.




**V1** OVERALL FIRST FLOOR PLAN - DEMOLITION
1/16" = 1'-0"

0 2' 4' 8' 12' 16'

GREATER COLUMBUS CONVENTION CENTER

BBCO

329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
OVERALL DEMOLITION PLAN

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL

STATE OF OHIO
BHAKTI BANIA
0814783
REGISTERED ARCHITECT

BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
**2024-023**

SHEET NUMBER
**D-100**

## GENERAL NOTES

A. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.

B. [XX] INDICATES WALL TYPE, REFER TO SHEET A-800. ALL WALLS ARE TYPE S0c, U.N.O.

C. BATT INSULATION TO BE PROVIDED WHERE GRAPHICALLY SHOWN IN PLAN.
D. ALL ROOF PENETRATIONS TO BE COORDINATED WITH MEP DWGS AND EQUIPMENT VENDOR BY INSTALLATION CONTRACTOR.
E. PROVIDE BLOCKING BEHIND ALL WALL MOUNTED ITEMS, TYP.
F. REFER TO G-200 SERIES FOR ADA COMPLIANCE INFORMATION.
G. REFER TO A-800 SERIES FOR WALL AND PARTITION DETAILS.
H. REFER TO A-800 FOR FINISH AND EQUIPMENT INFORMATION.
I. REFER TO A-900 SERIES FOR FINISH RELATED INFO.
J. MOLD AND MILDEW RESISTANT DRYWALL IN ALL RESTROOMS, U.N.O.
K. WORK TO BE COMPLETED IN TWO PHASES. COORDINATE PHASING WITH OWNER.
L. PAINTER TO ACCEPT ALL FINISHED SURFACES PRIOR TO COMMENCING WORK.

## PLAN KEYNOTES

(X)

1 ALL SERVICE CORRIDOR WALLS TO RECEIVE NEW PAINT FINISH (P-1).
2 EXISTING METAL CORNER GUARDS TO BE REPAINTED (P-2).
3 PROVIDE NEW LOCKERS IN SERVICE CORRIDOR. SEE A-400 SERIES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4 PROVIDE QTY. 6 NEW MOVABLE ROOM DIVIDERS WITHIN STORAGE SPACE. PART OF BASE BID, NOT INCLUDED IN ALTERNATE 01. (E-4).
5 NEW EPOXY FLOOR FINISH (EPOXY) THROUGHOUT SERVICE CORRIDOR OVER EXISTING SEALED CONCRETE.
6 NEW MOP SINK, SEE PLUMBING DRAWINGS FOR ADD. INFO. AS PART OF BASE BID, NOT INCLUDED IN ALTERNATE 01.
7 ALTERNATE 01: PAINT EXISTING WALLS (P-1) UP TO HEIGHT OF EXISTING CEILING. 14'-4" IN STORAGE 105 AND 9'-0" IN STORAGE 106.

## DESCRIPTION OF ALTERNATE 01

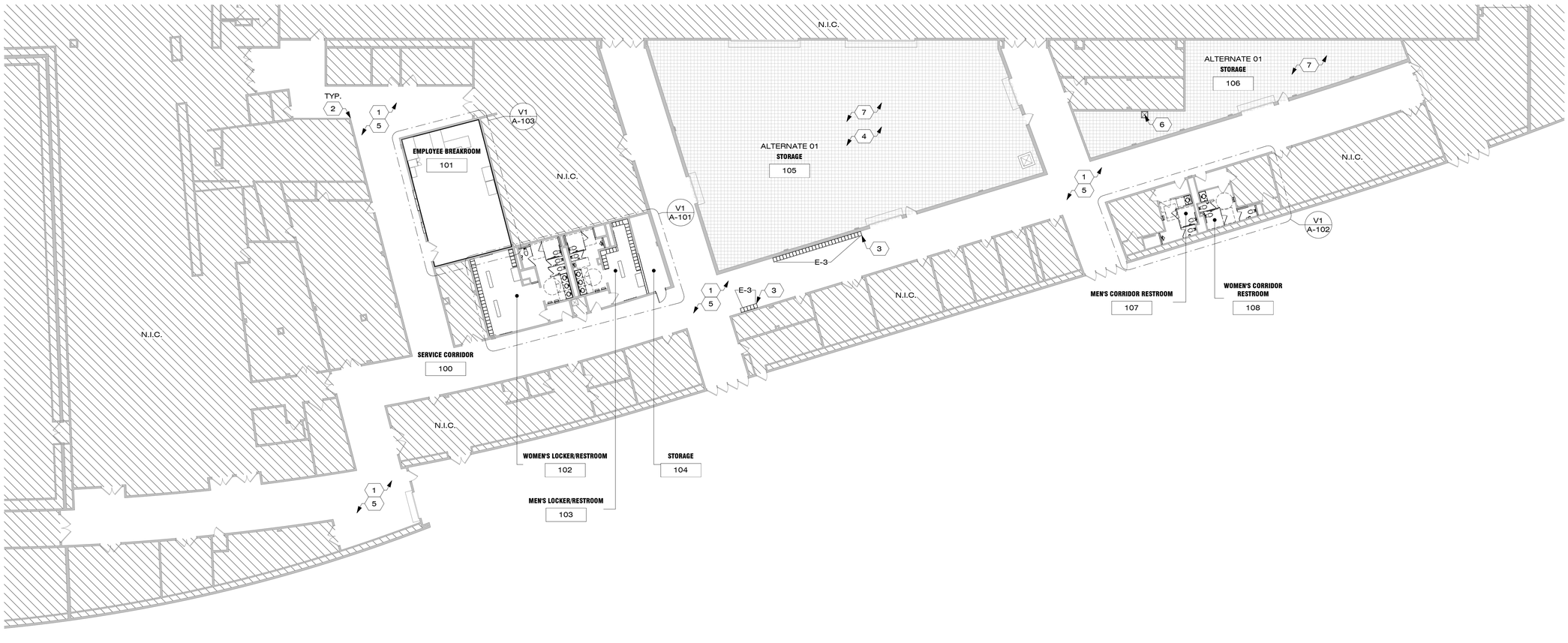
PER SPECIFICATION 012300, ALTERNATE 01 INCLUDES THE REMOVAL OF THE ACT CEILING GRID AND TILES IN STORAGE ROOM 105 & 106. EXISTING CEILING TO BE EXPOSED. PREPARE AND PAINT WALLS UP TO THE EXISTING CEILING HEIGHT. REFER TO A-800 ROOM FINISH SCHEDULE FOR PAINT COLOR. REMOVE EXISTING LIGHTING AND REPLACE WITH SUSPENDED LED LIGHTING PER ELECTRICAL DRAWINGS.

## SCOPE OF WORK LEGEND

| | |
|---|---|
| | ALTERNATE 01 |
| | NOT IN CONTRACT |

## NOTE:

DIMENSIONS ARE WITNESSED TO FACE OF INTERIOR FINISH & FACE OF EXTERIOR SHEATHING & EXTERIOR FACE OF MASONRY UNLESS OTHERWISE NOTED.




**V1 OVERALL FIRST FLOOR PLAN**
1/16" = 1'-0"

0 2' 4' 8' 12' 16'

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
OVERALL FIRST FLOOR PLAN

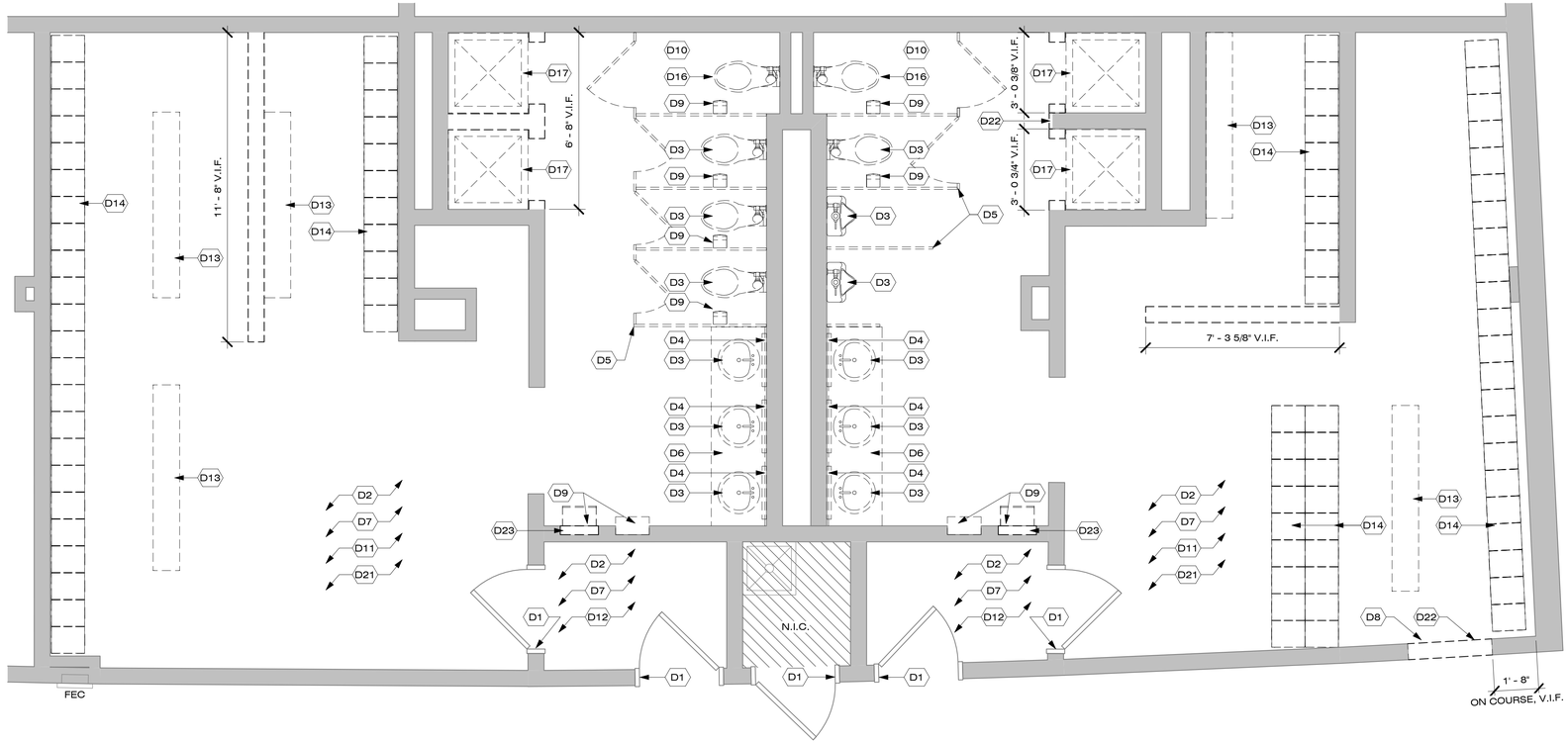
PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL


BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

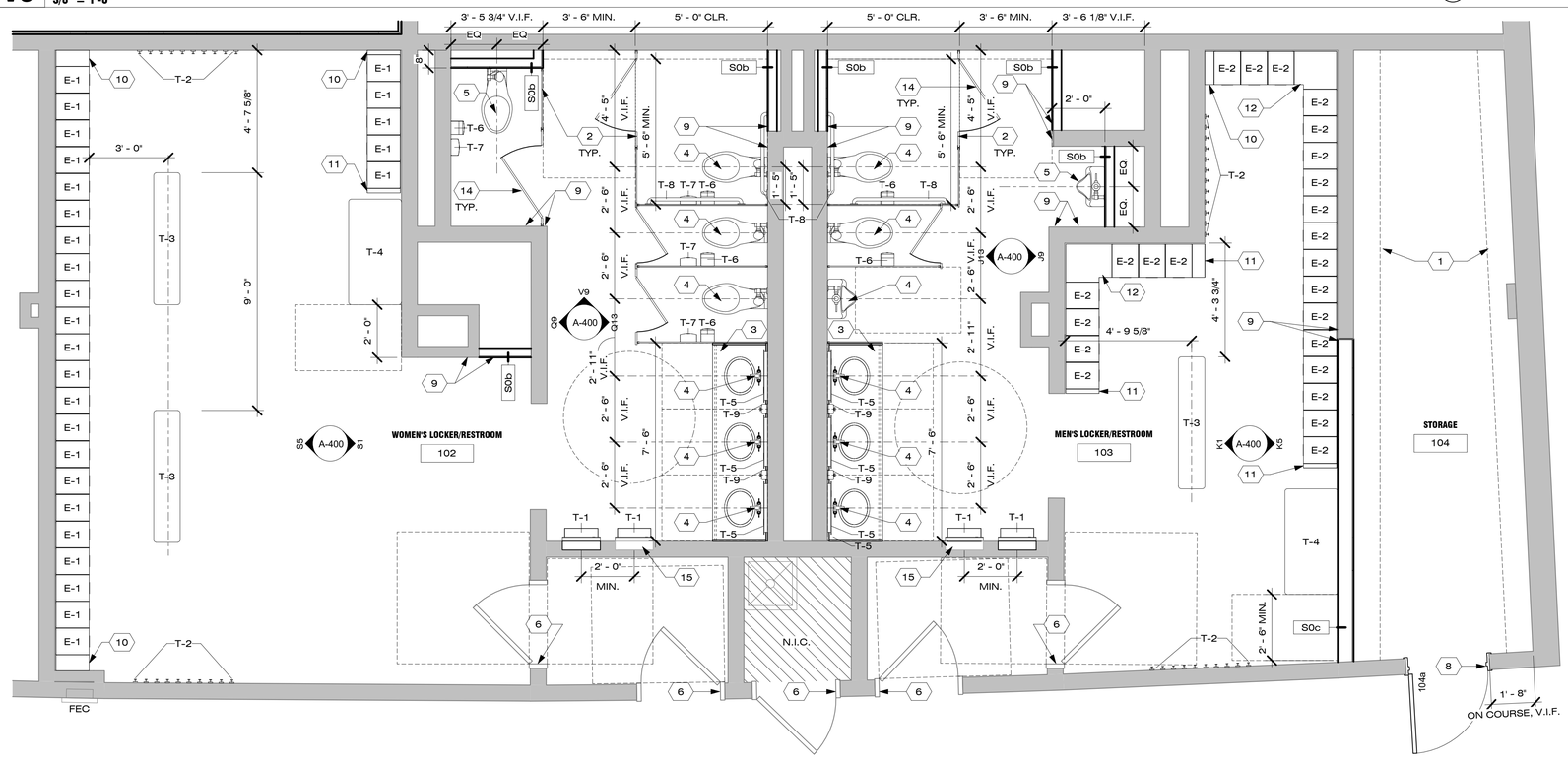
BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
A-100




## V0 FIRST FLOOR PLAN - LOCKER/RESTROOM DEMO

3/8" = 1'-0"




## V1 FIRST FLOOR PLAN - LOCKER/RESTROOM

3/8" = 1'-0"

## DEMOLITION GENERAL NOTES

A. DEMOLITION INCLUDES BUT IS NOT LIMITED TO THE REMOVAL OF SPECIFIED INTERIOR WALLS, PARTITIONS, CEILINGS, ETC. DEMOLITION ALSO INCLUDES THE REMOVAL OF PORTIONS OF EXISTING BUILDING ELECTRICAL, MECHANICAL AND PLUMBING FIXTURES AND EQUIPMENT AS SPECIFIED ON THE DEMOLITION DRAWINGS. CONTRACTOR IS TO CONTACT OWNER'S CONSTRUCTION MANAGER IF THERE ARE ANY QUESTIONS CONCERNING THE EXTENT OF DEMOLITION.
B. ALL ABANDONED ELECTRICAL / TELEPHONE CONDUIT, PLUMBING LINES, DRAIN LINES, AND MECHANICAL DUCTWORK AS THE RESULT OF DEMOLITION SHALL BE REMOVED BACK TO THE POINT OF ORIGIN.
C. CONTRACTOR IS TO COORDINATE THE REMOVAL, DISCONNECTION AND CAPPING OF ANY UTILITES WITH THE OWNER'S CONSTRUCTION MANAGER.
D. CONFIRM SALVAGE OF EXISTING ITEMS WITH OWNER.
E. REFER TO MEP DRAWINGS FOR RELATED DEMOLITION.
F. REFER TO SELECTIVE DEMOLITION SECTION IN PROJECT SPECIFICATIONS AS REQUIRED TO ACCEPT SCHEDULED FLOOR FINISH.
G. COORDINATE REQUIRED EXTENTS OF DEMOLITION WITH CONSTRUCTION PLANS AND FIELD VERIFICATION.
H. PATCH FLOOR UNDER ALL DEMOLISHED PARTITIONS AS REQUIRED TO ACCEPT FLOOR FINISH.
I. PATCH AND INFILL ALL ABANDONED HOLES FROM ANCHOR BOLTS, SLEEVES AND CONDUITS IN CMU WALLS.

## (X) DEMOLITION KEYNOTES

D1 EXISTING DOOR AND FRAME TO REMAIN. CLEAN AND PREPARE TO RECEIVE NEW PAINT.
D2 EXISTING TILE FLOOR, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.
D3 EXISTING PLUMBING FIXTURE(S) TO BE REMOVED AND REPLACED WITH SIMILAR IN SAME PLACE. SALVAGE AND RETURN TO OWNER ALL FLUSH VALVES AND CONTROLLERS.
D4 EXISTING WALL MOUNTED MIRROR(S) TO BE REMOVED.
D5 EXISTING FLOOR MOUNTED TOILET PARTITIONS TO BE REMOVED.
D6 EXISTING COUNTERTOP AND SUPPORT STRUCTURE TO BE REMOVED.
D7 EXISTING FLOOR DRAINS TO REMAIN. PROVIDE NEW FLOOR DRAIN COVERS.
D8 NEW OPENING IN EXISTING CMU WALL TO ACCEPT NEW DOOR. OPENING SHALL BE TEMPORARILY SUPPORTED WITH SHORING UNTIL LINTEL HAS BEEN INSTALLED.
D9 EXISTING TOILET ACCESSORIES TO BE REMOVED.
D10 EXISTING GRAB BARS TO BE REMOVED.
D11 EXISTING ACT CEILING & GRID TO BE REMOVED.
D12 CLEAN AND PREPARE EXISTING GWB CEILING TO RECEIVE NEW PAINT.
D13 EXISTING BENCH TO BE REMOVED.
D14 EXISTING LOCKERS TO BE REMOVED.
D15 EXISTING EPOXY FLOORING, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.
D16 EXISTING PLUMBING FIXTURE TO BE REMOVED AND CAPPED. SEE PLUMBING FOR ADD. INFO.
D17 EXISTING SHOWER AND ASSOCIATED PLUMBING FIXTURES TO BE REMOVED. SEE PLUMBING FOR ADD. INFO.
D18 EXISTING CMU WALL TO BE REMOVED TO UNDERSIDE OF STRUCTURE. CUT DOWELS THAT TIE BASE OF WALL TO SLAB. COORDINATE RELOCATION OF ELECTRIC AND FIRE ALARM. PATCH FLOOR TO ACCEPT NEW SCHEDULED FLOOR FINISH.
D19 EXISTING CMU BUMP OUT TO BE REMOVED. VERIFY REMOVAL OF CMU BUMP-OUTS MAINTAIN LATERAL SUPPORT OF REMAINING WALLS. PROVIDE DIAGONAL BRACE TO STRUCTURE ABOVE PER ACI STANDARDS.
D20 EXISTING DOOR AND FRAME TO BE REMOVED. SEE NEW WORK FOR INFILL MATERIAL.
D21 REMOVE SURFACE MOUNTED ITEMS AND PREP WALLS FOR NEW PAINT. CLEAN AND PREPARE ALL PREVIOUSLY PAINTED SURFACES FOR NEW PAINT. REPAIR ANY DAMAGED SURFACES TO LIKE-NEW CONDITION.
D22 COORDINATE EXTENT OF DEMOLITION WITH NEW WORK PLAN.
D23 SELECTIVE DEMOLITION OF EXISTING WALL TO RECEIVE NEW SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE.
D24 EXISTING DOOR AND FRAME TO REMAIN. REMOVE PAD LOCK AND HASP. PATCH AND FINISH FOR SMOOTH SURFACE. CLEAN AND PREPARE TO RECEIVE NEW PAINT.
D25 REMOVE AND RETAIN EXISTING TV'S AND MOUNTING BRACKETS FOR REINSTALLATION.
D26 EXISTING VCT FLOORING, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.

## GENERAL NOTES

A. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.
B. XX INDICATES WALL TYPE, REFER TO SHEET A-800. ALL WALLS ARE TYPE S0c, U.N.O.
C. BATT INSULATION TO BE PROVIDED WHERE GRAPHICALLY SHOWN IN PLAN.
D. ALL ROOF PENETRATIONS TO BE COORDINATED WITH MEP DWGS AND EQUIPMENT VENDOR BY INSTALLATION CONTRACTOR.
E. PROVIDE BLOCKING BEHIND ALL WALL MOUNTED ITEMS, TYP.
F. REFER TO G-200 SERIES FOR ADA COMPLIANCE INFORMATION.
G. REFER TO A-800 SERIES FOR WALL AND PARTITION DETAILS.
H. REFER TO A-800 FOR FINISH AND EQUIPMENT INFORMATION.
I. REFER TO A-900 SERIES FOR FINISH RELATED INFO.
J. MOLD AND MILDEW RESISTANT DRYWALL IN ALL RESTROOMS, U.N.O.
K. WORK TO BE COMPLETED IN TWO PHASES. COORDINATE PHASING WITH OWNER.

## (X) PLAN KEYNOTES

1 STORAGE LOCKERS/SHELVING BY OWNER.
2 NEW COLOR-THRU PHENOLIC TOILET PARTITION. SEE A-400 SERIES FOR ADD. INFO.
3 NEW WALL MOUNTED SOLID SURFACE COUNTERTOP WITH 4" BACKSPLASH, SEE A-400 SERIES FOR ADD. INFO.
4 NEW PLUMBING FIXTURE IN EXISTING LOCATION, SEE PLUMBING DRAWINGS FOR ADD. INFO.
5 NEW PLUMBING FIXTURE, SEE PLUMBING DRAWINGS FOR ADD. INFO.
6 EXISTING DOOR AND FRAME TO REMAIN. PROVIDE NEW PAINT.
7 INFILL EXISTING OPENING TO MATCH ADJACENT CMU BLOCK WALL AND PAINT TO MATCH EXISTING.
8 NEW HOLLOW METAL DOOR AND FRAME WITHIN EXISTING CMU WALL WITH NEW REINFORCED CONCRETE LINTEL. SEE A-800 FOR ADD. INFO.
9 ALIGN.
10 STEEL LOCKER FILLER PANEL. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
11 STEEL LOCKER END CAP. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
12 STEEL LOCKER CORNER FILLER. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
13 NEW RESTROOM IDENTIFICATION SIGNAGE.
14 ROBE HOOK. TYP. ALL TOILET PARTITION DOORS.
15 NEW SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE IN EXISTING OPENING.
16 RELOCATED WATER LINE FOR OWNER PROVIDED SODA MACHINE. COORDINATE FINAL LOCATION WITH OWNER.
17 SALVAGED WALL MOUNTED TV. COORDINATE LOCATION WITH OWNER AND PROVIDE BLOCKING. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
18 LINE OF GWB SOFFIT ABOVE.
19 PATCH FLOOR AS REQUIRED TO ACCEPT NEW SCHEDULED FLOOR FINISH. SEE A-800 SERIES FOR ADDITIONAL INFORMATION.

## DEMOLITION PLAN LEGEND

EXISTING DOOR & FRAME TO BE REMOVED
EXISTING DOOR & FRAME TO REMAIN
EXISTING CONSTRUCTION TO BE DEMOLISHED.
EXISTING CONSTRUCTION TO REMAIN.

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
ENLARGED PLAN (DEMO & NEW)

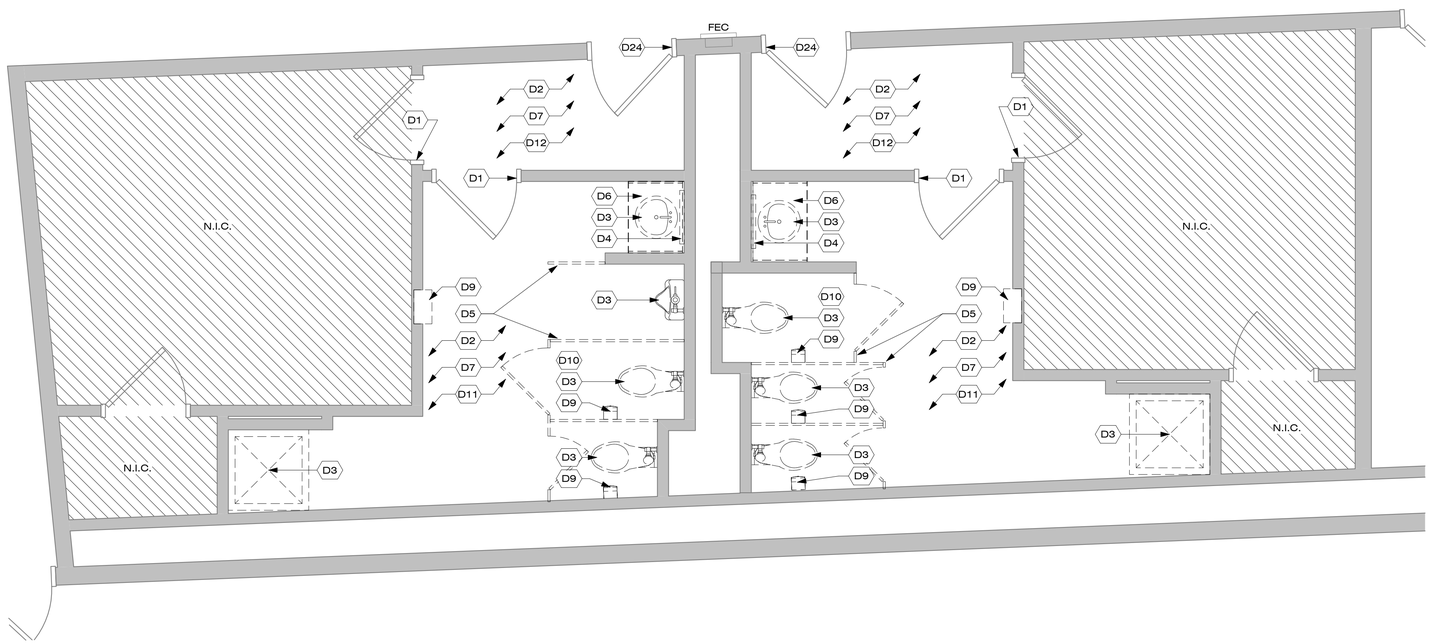
PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL


BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

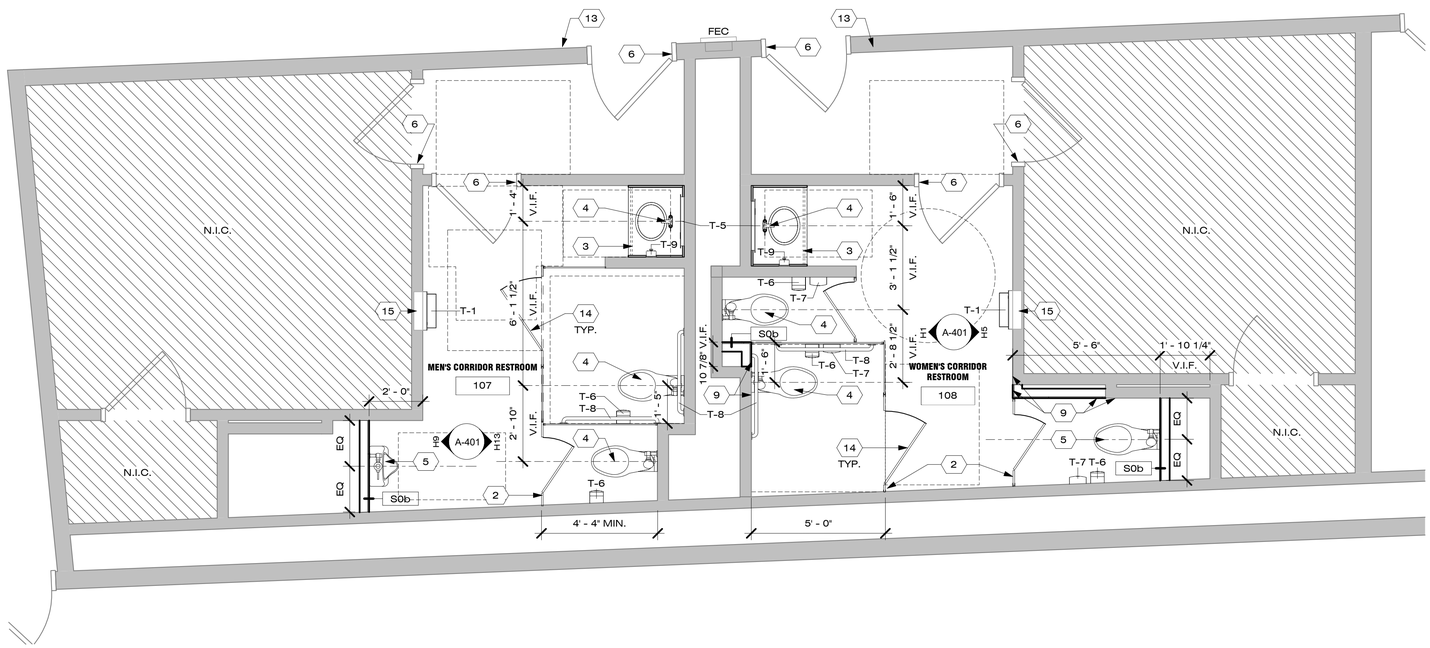
BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
A-101




**V9** FIRST FLOOR PLAN - RESTROOM DEMO
3/8" = 1'-0"

0 6" 1' 2'




**V1** FIRST FLOOR PLAN - RESTROOM
3/8" = 1'-0"

0 6" 1' 2'

## DEMOLITION GENERAL NOTES

A. DEMOLITION INCLUDES BUT IS NOT LIMITED TO THE REMOVAL OF SPECIFIED INTERIOR WALLS, PARTITIONS, CEILINGS, ETC. DEMOLITION ALSO INCLUDES THE REMOVAL OF PORTIONS OF EXISTING BUILDING ELECTRICAL, MECHANICAL AND PLUMBING FIXTURES AND EQUIPMENT AS SPECIFIED ON THE DEMOLITION DRAWINGS. CONTRACTOR IS TO CONTACT OWNER'S CONSTRUCTION MANAGER IF THERE ARE ANY QUESTIONS CONCERNING THE EXTENT OF DEMOLITION.
B. ALL ABANDONED ELECTRICAL / TELEPHONE CONDUIT, PLUMBING LINES, DRAIN LINES, AND MECHANICAL DUCTWORK AS THE RESULT OF DEMOLITION SHALL BE REMOVED BACK TO THE POINT OF ORIGIN.
C. CONTRACTOR IS TO COORDINATE THE REMOVAL, DISCONNECTION AND CAPPING OF ANY UTILITES WITH THE OWNER'S CONSTRUCTION MANAGER.
D. CONFIRM SALVAGE OF EXISTING ITEMS WITH OWNER.
E. REFER TO MEP DRAWINGS FOR RELATED DEMOLITION.
F. REFER TO SELECTIVE DEMOLITION SECTION IN PROJECT SPECIFICATIONS AS REQUIRED TO ACCEPT SCHEDULED FLOOR FINISH.
G. COORDINATE REQUIRED EXTENTS OF DEMOLITION WITH CONSTRUCTION PLANS AND FIELD VERIFICATION.
H. PATCH FLOOR UNDER ALL DEMOLISHED PARTITIONS AS REQUIRED TO ACCEPT FLOOR FINISH.
I. PATCH AND INFILL ALL ABANDONED HOLES FROM ANCHOR BOLTS, SLEEVES AND CONDUITS IN CMU WALLS.

## DEMOLITION KEYNOTES

D1 EXISTING DOOR AND FRAME TO REMAIN. CLEAN AND PREPARE TO RECEIVE NEW PAINT.
D2 EXISTING TILE FLOOR, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.
D3 EXISTING PLUMBING FIXTURE(S) TO BE REMOVED AND REPLACED WITH SIMILAR IN SAME PLACE. SALVAGE AND RETURN TO OWNER ALL FLUSH VALVES AND CONTROLLERS.
D4 EXISTING WALL MOUNTED MIRROR(S) TO BE REMOVED.
D5 EXISTING FLOOR MOUNTED TOILET PARTITIONS TO BE REMOVED.
D6 EXISTING COUNTERTOP AND SUPPORT STRUCTURE TO BE REMOVED.
D7 EXISTING FLOOR DRAINS TO REMAIN. PROVIDE NEW FLOOR DRAIN COVERS.
D8 NEW OPENING IN EXISTING CMU WALL TO ACCEPT NEW DOOR. OPENING SHALL BE TEMPORARILY SUPPORTED WITH SHORING UNTIL LINTEL HAS BEEN INSTALLED.
D9 EXISTING TOILET ACCESSORIES TO BE REMOVED.
D10 EXISTING GRAB BARS TO BE REMOVED.
D11 EXISTING ACT CEILING & GRID TO BE REMOVED.
D12 CLEAN AND PREPARE EXISTING GWB CEILING TO RECEIVE NEW PAINT.
D13 EXISTING BENCH TO BE REMOVED.
D14 EXISTING LOCKERS TO BE REMOVED.
D15 EXISTING EPOXY FLOORING, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.
D16 EXISTING PLUMBING FIXTURE TO BE REMOVED AND CAPPED. SEE PLUMBING FOR ADD. INFO.
D17 EXISTING SHOWER AND ASSOCIATED PLUMBING FIXTURES TO BE REMOVED. SEE PLUMBING FOR ADD. INFO.
D18 EXISTING CMU WALL TO BE REMOVED TO UNDERSIDE OF STRUCTURE. CUT DOWELS THAT TIE BASE OF WALL TO SLAB. COORDINATE RELOCATION OF ELECTRIC AND FIRE ALARM. PATCH FLOOR TO ACCEPT NEW SCHEDULED FLOOR FINISH.
D19 EXISTING CMU BUMP OUT TO BE REMOVED. VERIFY REMOVAL OF CMU BUMP-OUTS MAINTAIN LATERAL SUPPORT OF REMAINING WALLS. PROVIDE DIAGONAL BRACE TO STRUCTURE ABOVE PER ACI STANDARDS.
D20 EXISTING DOOR AND FRAME TO BE REMOVED. SEE NEW WORK FOR INFILL MATERIAL.
D21 REMOVE SURFACE MOUNTED ITEMS AND PREP WALLS FOR NEW PAINT. CLEAN AND PREPARE ALL PREVIOUSLY PAINTED SURFACES FOR NEW PAINT. REPAIR ANY DAMAGED SURFACES TO LIKE-NEW CONDITION.
D22 COORDINATE EXTENT OF DEMOLITION WITH NEW WORK PLAN.
D23 SELECTIVE DEMOLITION OF EXISTING WALL TO RECEIVE NEW SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE.
D24 EXISTING DOOR AND FRAME TO REMAIN. REMOVE PAD LOCK AND HASP. PATCH AND FINISH FOR SMOOTH SURFACE. CLEAN AND PREPARE TO RECEIVE NEW PAINT.
D25 REMOVE AND RETAIN EXISTING TVS AND MOUNTING BRACKETS FOR REINSTALLATION.
D26 EXISTING VCT FLOORING, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.

## GENERAL NOTES

A. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.
B. XX INDICATES WALL TYPE, REFER TO SHEET A-800. ALL WALLS ARE TYPE S0c, U.N.O.
C. BATT INSULATION TO BE PROVIDED WHERE GRAPHICALLY SHOWN IN PLAN.
D. ALL ROOF PENETRATIONS TO BE COORDINATED WITH MEP DWGS AND EQUIPMENT VENDOR BY INSTALLATION CONTRACTOR.
E. PROVIDE BLOCKING BEHIND ALL WALL MOUNTED ITEMS, TYP.
F. REFER TO G-200 SERIES FOR ADA COMPLIANCE INFORMATION.
G. REFER TO A-800 SERIES FOR WALL AND PARTITION DETAILS.
H. REFER TO A-800 FOR FINISH AND EQUIPMENT INFORMATION.
I. REFER TO A-900 SERIES FOR FINISH RELATED INFO.
J. MOLD AND MILDEW RESISTANT DRYWALL IN ALL RESTROOMS, U.N.O.
K. WORK TO BE COMPLETED IN TWO PHASES. COORDINATE PHASING WITH OWNER.

## PLAN KEYNOTES

1 STORAGE LOCKERS/SHELVING BY OWNER.
2 NEW COLOR-THRU PHENOLIC TOILET PARTITION. SEE A-400 SERIES FOR ADD. INFO.
3 NEW WALL MOUNTED SOLID SURFACE COUNTERTOP WITH 4" BACKSPLASH, SEE A-400 SERIES FOR ADD. INFO.
4 NEW PLUMBING FIXTURE IN EXISTING LOCATION, SEE PLUMBING DRAWINGS FOR ADD. INFO.
5 NEW PLUMBING FIXTURE, SEE PLUMBING DRAWINGS FOR ADD. INFO.
6 EXISTING DOOR AND FRAME TO REMAIN. PROVIDE NEW PAINT.
7 INFILL EXISTING OPENING TO MATCH ADJACENT CMU BLOCK WALL AND PAINT TO MATCH EXISTING.
8 NEW HOLLOW METAL DOOR AND FRAME WITHIN EXISTING CMU WALL WITH NEW REINFORCED CONCRETE LINTEL. SEE A-800 FOR ADD. INFO.
9 ALIGN.
10 STEEL LOCKER FILLER PANEL. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
11 STEEL LOCKER END CAP. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
12 STEEL LOCKER CORNER FILLER. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
13 NEW RESTROOM IDENTIFICATION SIGNAGE.
14 ROBE HOOK. TYP. ALL TOILET PARTITION DOORS.
15 NEW SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE IN EXISTING OPENING.
16 RELOCATED WATER LINE FOR OWNER PROVIDED SODA MACHINE. COORDINATE FINAL LOCATION WITH OWNER.
17 SALVAGED WALL MOUNTED TV. COORDINATE LOCATION WITH OWNER AND PROVIDE BLOCKING. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
18 LINE OF GWB SOFFIT ABOVE.
19 PATCH FLOOR AS REQUIRED TO ACCEPT NEW SCHEDULED FLOOR FINISH. SEE A-800 SERIES FOR ADDITIONAL INFORMATION.

## DEMOLITION PLAN LEGEND

EXISTING DOOR & FRAME TO BE REMOVED
EXISTING DOOR & FRAME TO REMAIN
EXISTING CONSTRUCTION TO BE DEMOLISHED.
EXISTING CONSTRUCTION TO REMAIN.

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

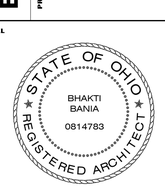
| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
ENLARGED PLAN (DEMO & NEW)

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

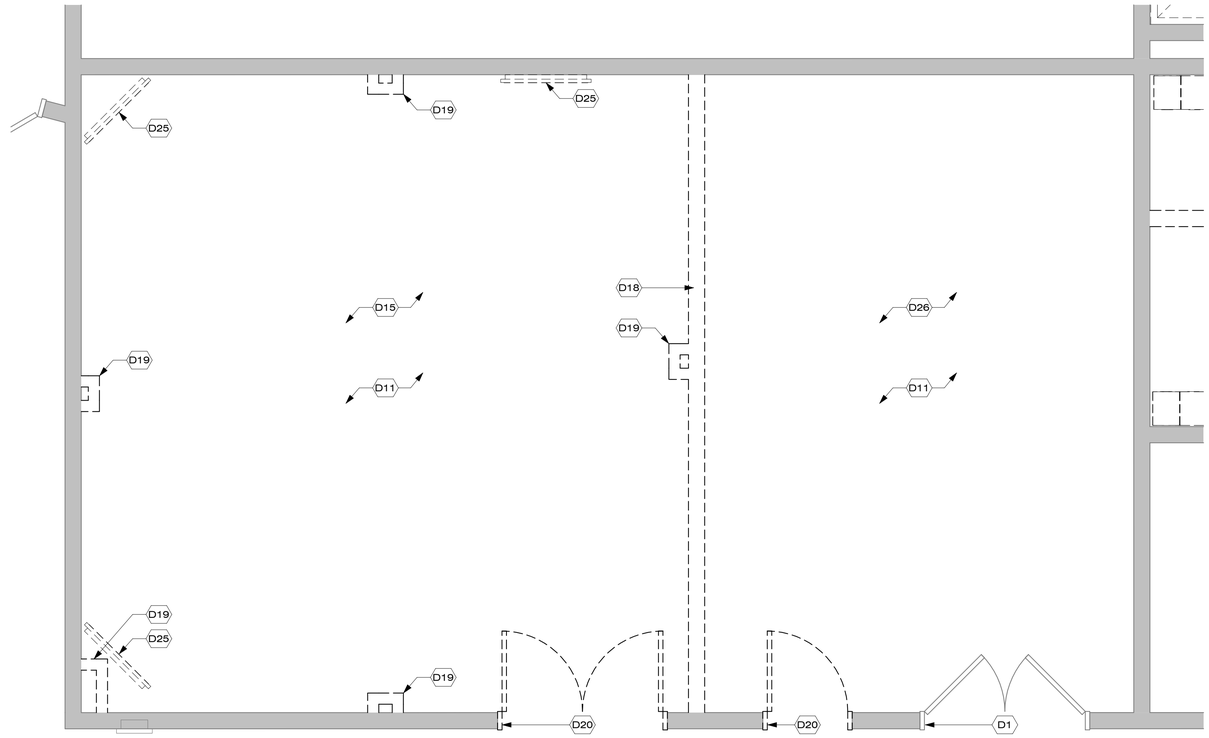
SEAL



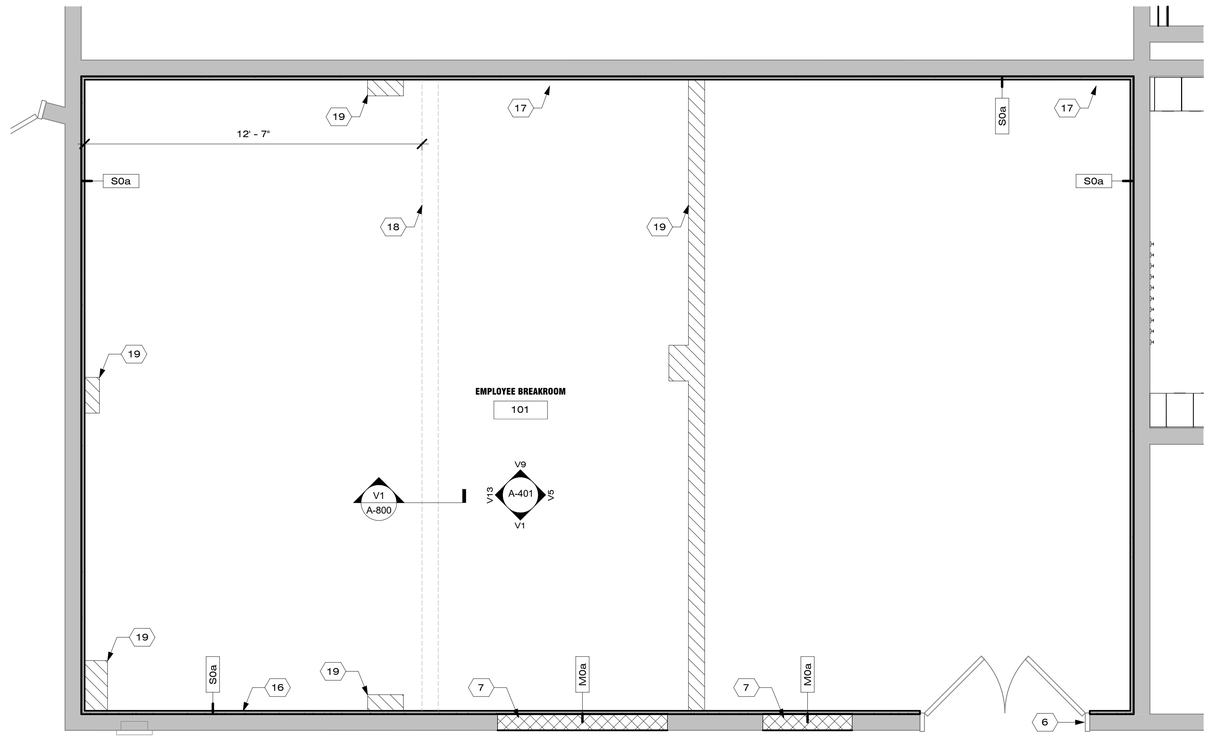

BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
A-102




**V9** FIRST FLOOR PLAN - BREAK ROOM DEMO
3/8" = 1'-0"




**V1** FIRST FLOOR PLAN - BREAK ROOM
3/8" = 1'-0"

## DEMOLITION GENERAL NOTES

A. DEMOLITION INCLUDES BUT IS NOT LIMITED TO THE REMOVAL OF SPECIFIED INTERIOR WALLS, PARTITIONS, CEILINGS, ETC. DEMOLITION ALSO INCLUDES THE REMOVAL OF PORTIONS OF EXISTING BUILDING ELECTRICAL, MECHANICAL AND PLUMBING FIXTURES AND EQUIPMENT AS SPECIFIED ON THE DEMOLITION DRAWINGS. CONTRACTOR IS TO CONTACT OWNER'S CONSTRUCTION MANAGER IF THERE ARE ANY QUESTIONS CONCERNING THE EXTENT OF DEMOLITION.
B. ALL ABANDONED ELECTRICAL / TELEPHONE CONDUIT, PLUMBING LINES, DRAIN LINES, AND MECHANICAL DUCTWORK AS THE RESULT OF DEMOLITION SHALL BE REMOVED BACK TO THE POINT OF ORIGIN.
C. CONTRACTOR IS TO COORDINATE THE REMOVAL, DISCONNECTION AND CAPPING OF ANY UTILITES WITH THE OWNER'S CONSTRUCTION MANAGER.
D. CONFIRM SALVAGE OF EXISTING ITEMS WITH OWNER.
E. REFER TO MEP DRAWINGS FOR RELATED DEMOLITION.
F. REFER TO SELECTIVE DEMOLITION SECTION IN PROJECT SPECIFICATIONS AS REQUIRED TO ACCEPT SCHEDULED FLOOR FINISH.
G. COORDINATE REQUIRED EXTENTS OF DEMOLITION WITH CONSTRUCTION PLANS AND FIELD VERIFICATION.
H. PATCH FLOOR UNDER ALL DEMOLISHED PARTITIONS AS REQUIRED TO ACCEPT FLOOR FINISH.
I. PATCH AND INFILL ALL ABANDONED HOLES FROM ANCHOR BOLTS, SLEEVES AND CONDUITS IN CMU WALLS.

## (X) DEMOLITION KEYNOTES

D1 EXISTING DOOR AND FRAME TO REMAIN. CLEAN AND PREPARE TO RECEIVE NEW PAINT.
D2 EXISTING TILE FLOOR, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.
D3 EXISTING PLUMBING FIXTURE(S) TO BE REMOVED AND REPLACED WITH SIMILAR IN SAME PLACE. SALVAGE AND RETURN TO OWNER ALL FLUSH VALVES AND CONTROLLERS.
D4 EXISTING WALL MOUNTED MIRROR(S) TO BE REMOVED.
D5 EXISTING FLOOR MOUNTED TOILET PARTITIONS TO BE REMOVED.
D6 EXISTING COUNTERTOP AND SUPPORT STRUCTURE TO BE REMOVED.
D7 EXISTING FLOOR DRAINS TO REMAIN. PROVIDE NEW FLOOR DRAIN COVERS.
D8 NEW OPENING IN EXISTING CMU WALL TO ACCEPT NEW DOOR. OPENING SHALL BE TEMPORARILY SUPPORTED WITH SHORING UNTIL LINTEL HAS BEEN INSTALLED.
D9 EXISTING TOILET ACCESSORIES TO BE REMOVED.
D10 EXISTING GRAB BARS TO BE REMOVED.
D11 EXISTING ACT CEILING & GRID TO BE REMOVED.
D12 CLEAN AND PREPARE EXISTING GWB CEILING TO RECEIVE NEW PAINT.
D13 EXISTING BENCH TO BE REMOVED.
D14 EXISTING LOCKERS TO BE REMOVED.
D15 EXISTING EPOXY FLOORING, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.
D16 EXISTING PLUMBING FIXTURE TO BE REMOVED AND CAPPED. SEE PLUMBING FOR ADD. INFO.
D17 EXISTING SHOWER AND ASSOCIATED PLUMBING FIXTURES TO BE REMOVED. SEE PLUMBING FOR ADD. INFO.
D18 EXISTING CMU WALL TO BE REMOVED TO UNDERSIDE OF STRUCTURE. CUT DOWELS THAT TIE BASE OF WALL TO SLAB. COORDINATE RELOCATION OF ELECTRIC AND FIRE ALARM. PATCH FLOOR TO ACCEPT NEW SCHEDULED FLOOR FINISH.
D19 EXISTING CMU BUMP OUT TO BE REMOVED. VERIFY REMOVAL OF CMU BUMP-OUTS MAINTAIN LATERAL SUPPORT OF REMAINING WALLS. PROVIDE DIAGONAL BRACE TO STRUCTURE ABOVE PER ACI STANDARDS.
D20 EXISTING DOOR AND FRAME TO BE REMOVED. SEE NEW WORK FOR INFILL MATERIAL.
D21 REMOVE SURFACE MOUNTED ITEMS AND PREP WALLS FOR NEW PAINT. CLEAN AND PREPARE ALL PREVIOUSLY PAINTED SURFACES FOR NEW PAINT. REPAIR ANY DAMAGED SURFACES TO LIKE-NEW CONDITION.
D22 COORDINATE EXTENT OF DEMOLITION WITH NEW WORK PLAN.
D23 SELECTIVE DEMOLITION OF EXISTING WALL TO RECEIVE NEW SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE.
D24 EXISTING DOOR AND FRAME TO REMAIN. REMOVE PAD LOCK AND HASP. PATCH AND FINISH FOR SMOOTH SURFACE. CLEAN AND PREPARE TO RECEIVE NEW PAINT.
D25 REMOVE AND RETAIN EXISTING TV'S AND MOUNTING BRACKETS FOR REINSTALLATION.
D26 EXISTING VCT FLOORING, BASE, AND TRANSITIONS TO BE REMOVED. PREPARE EXISTING FLOOR SLAB TO ACCEPT NEW SCHEDULED FINISH.

## GENERAL NOTES

A. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.
B. XX INDICATES WALL TYPE, REFER TO SHEET A-800. ALL WALLS ARE TYPE S0c, U.N.O.
C. BATT INSULATION TO BE PROVIDED WHERE GRAPHICALLY SHOWN IN PLAN.
D. ALL ROOF PENETRATIONS TO BE COORDINATED WITH MEP DWGS AND EQUIPMENT VENDOR BY INSTALLATION CONTRACTOR.
E. PROVIDE BLOCKING BEHIND ALL WALL MOUNTED ITEMS, TYP.
F. REFER TO G-200 SERIES FOR ADA COMPLIANCE INFORMATION.
G. REFER TO A-800 SERIES FOR WALL AND PARTITION DETAILS.
H. REFER TO A-800 FOR FINISH AND EQUIPMENT INFORMATION.
I. REFER TO A-900 SERIES FOR FINISH RELATED INFO.
J. MOLD AND MILDEW RESISTANT DRYWALL IN ALL RESTROOMS, U.N.O.
K. WORK TO BE COMPLETED IN TWO PHASES. COORDINATE PHASING WITH OWNER.

## (X) PLAN KEYNOTES

1 STORAGE LOCKERS/SHELVING BY OWNER.
2 NEW COLOR-THRU PHENOLIC TOILET PARTITION. SEE A-400 SERIES FOR ADD. INFO.
3 NEW WALL MOUNTED SOLID SURFACE COUNTERTOP WITH 4" BACKSPLASH, SEE A-400 SERIES FOR ADD. INFO.
4 NEW PLUMBING FIXTURE IN EXISTING LOCATION, SEE PLUMBING DRAWINGS FOR ADD. INFO.
5 NEW PLUMBING FIXTURE, SEE PLUMBING DRAWINGS FOR ADD. INFO.
6 EXISTING DOOR AND FRAME TO REMAIN. PROVIDE NEW PAINT.
7 INFILL EXISTING OPENING TO MATCH ADJACENT CMU BLOCK WALL AND PAINT TO MATCH EXISTING.
8 NEW HOLLOW METAL DOOR AND FRAME WITHIN EXISTING CMU WALL WITH NEW REINFORCED CONCRETE LINTEL. SEE A-800 FOR ADD. INFO.
9 ALIGN.
10 STEEL LOCKER FILLER PANEL. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
11 STEEL LOCKER END CAP. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
12 STEEL LOCKER CORNER FILLER. MATCH ADJACENT LOCKER COLOR. BASIS OF DESIGN: LYON STANDARD
13 NEW RESTROOM IDENTIFICATION SIGNAGE.
14 ROBE HOOK. TYP. ALL TOILET PARTITION DOORS.
15 NEW SEMI-RECESSED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE IN EXISTING OPENING.
16 RELOCATED WATER LINE FOR OWNER PROVIDED SODA MACHINE. COORDINATE FINAL LOCATION WITH OWNER.
17 SALVAGED WALL MOUNTED TV. COORDINATE LOCATION WITH OWNER AND PROVIDE BLOCKING. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
18 LINE OF GWB SOFFIT ABOVE.
19 PATCH FLOOR AS REQUIRED TO ACCEPT NEW SCHEDULED FLOOR FINISH. SEE A-800 SERIES FOR ADDITIONAL INFORMATION.

## DEMOLITION PLAN LEGEND

EXISTING DOOR & FRAME TO BE REMOVED
EXISTING DOOR & FRAME TO REMAIN
EXISTING CONSTRUCTION TO BE DEMOLISHED.
EXISTING CONSTRUCTION TO REMAIN.

GREATER COLUMBUS CONVENTION CENTER
BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
ENLARGED PLAN (DEMO & NEW)

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL
STATE OF OHIO
BHAKTI BANIA
0814783
REGISTERED ARCHITECT

BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
A-103

## GENERAL NOTES

A. DIMS WITNESSED TO FACE OF GWB, U.N.O.
B. DIMS WITNESSED TO CENTER OF LIGHT U.N.O.
C. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH MECHANICAL, ELECTRICAL, FIRE ALARM & SECURITY DRAWINGS.
D. REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC LIGHT FIXTURE DESIGNATIONS, CEILING MOUNTED DEVICES AND EXTERIOR LIGHTING LOCATIONS
E. ALL GYP. BOARD CEILINGS TO BE P-1, FLAT FINISH U.N.O.
F. ALL LIGHTS TO BE LOCATED WITHIN CENTER OF GRID, U.N.O.
G. ALL LIGHTS TO BE CENTERED WITHIN GWB CEILING, U.N.O
H. ALL DEVICES ABANDONED IN PLACE SHALL BE REMOVED.

## (X) REFLECTED CEILING PLAN KEYNOTES

1 PAINT EXISTING GWB CEILING P-1.
2 NEW LED LIGHT FIXTURE IN SIMILAR LOCATION AS EXISTING, TYP. SEE ELECTRICAL FOR ADDITIONAL INFORMATION.
3 ALTERNATE 01: NEW SUSPENDED LED LIGHT FIXTURE IN EXPOSED CEILING. SEE MEP DRAWINGS FOR EXTENT OF NEW MEP WORK.

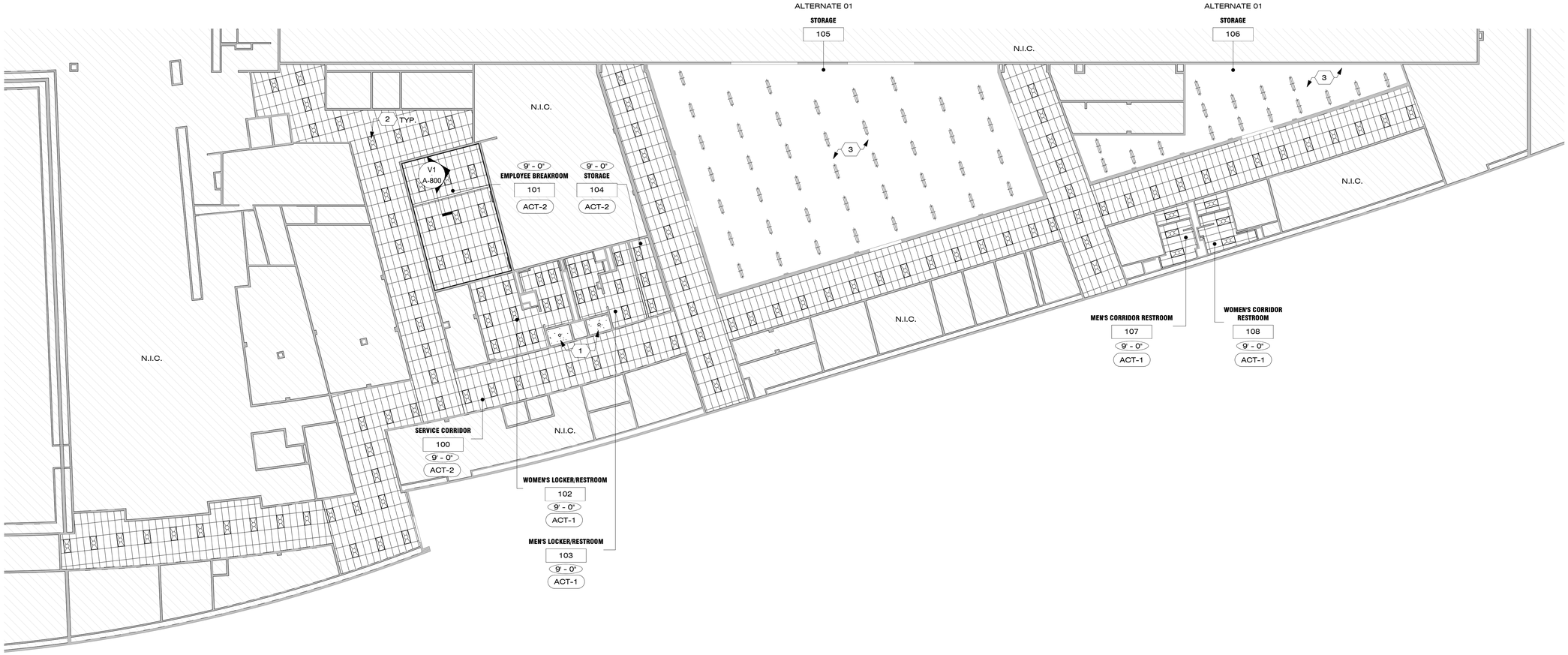
## FINISH NOTES LEGEND

(XX) WALL FINISH TAG

DIRECTION/GRAIN TAG

## RCP LEGEND

| | |
|---|---|
| | GWB CEILING AND SOFFIT |
| | 2'X4' ACT CEILING<br>REFER TO PLANS FOR FINISH TYPE AND LOCATION |
| | EXPOSED CEILINGS. ALL CONDUIT AND DUCTWORK TO BE COORDINATED WITHIN THESE AREAS. |
| | N.I.C. |




**V1 OVERALL REFLECTED CEILING PLAN**
1/16" = 1'-0"

0 2' 4' 8' 12' 16'

GREATER COLUMBUS CONVENTION CENTER

BBCO

329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
**OVERALL REFLECTED CEILING PLAN**

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

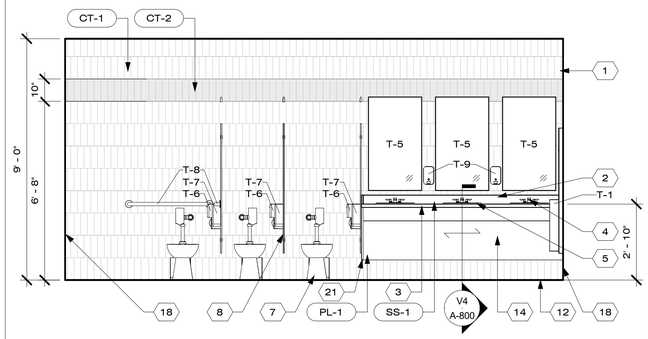
SEAL

STATE OF OHIO
BHAKTI BANIA
0814783
REGISTERED ARCHITECT

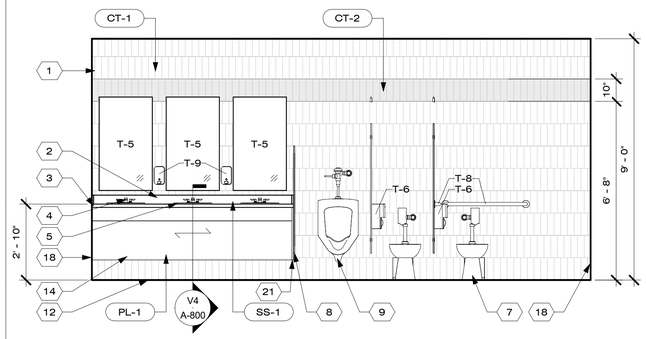
BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
**2024-023**

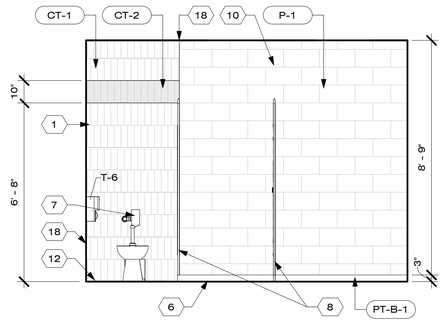
SHEET NUMBER
**A-200**



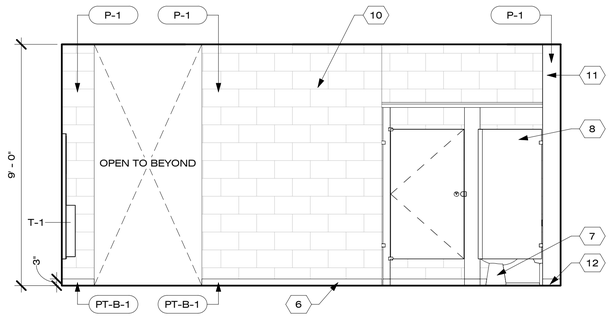

**Q13** WOMEN'S RESTROOM ELEVATION
3/8" = 1'-0"



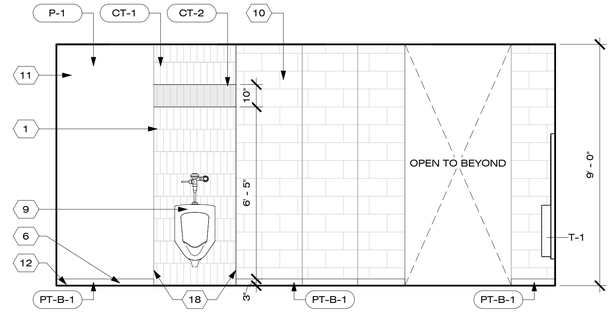

**J13** MEN'S RESTROOM ELEVATION
3/8" = 1'-0"



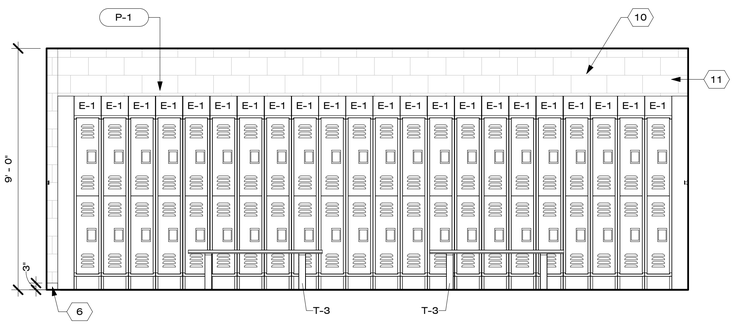

**V9** WOMEN'S RESTROOM ELEVATION
3/8" = 1'-0"



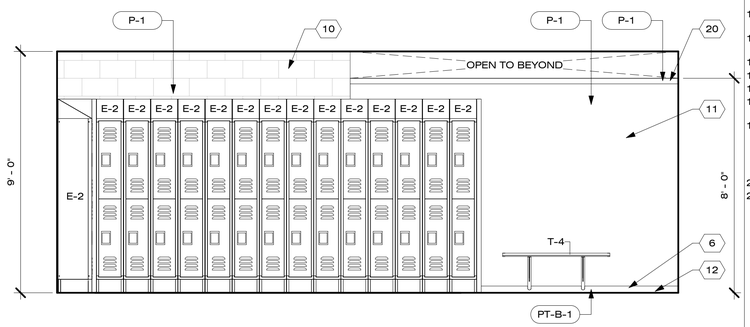

**Q9** WOMEN'S RESTROOM ELEVATION
3/8" = 1'-0"



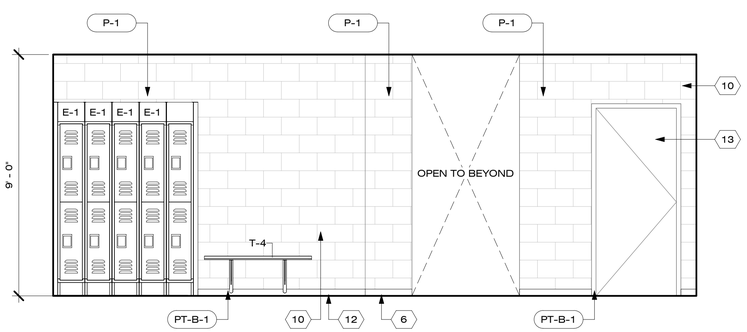

**J9** MEN'S RESTROOM ELEVATION
3/8" = 1'-0"



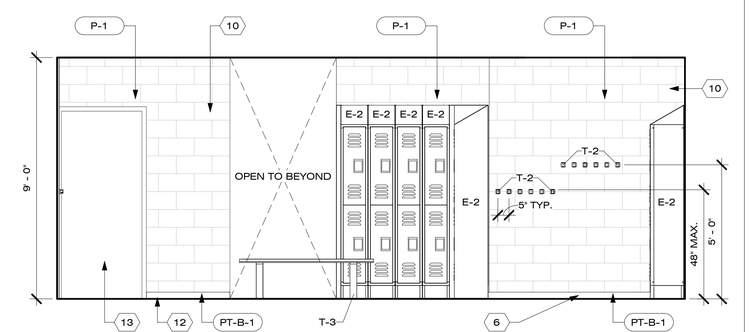

**S5** WOMEN'S LOCKER ELEVATION
3/8" = 1'-0"




**K5** MEN'S LOCKER ELEVATION
3/8" = 1'-0"




**S1** WOMEN'S LOCKER ELEVATION
3/8" = 1'-0"




**K1** MEN'S LOCKER ELEVATION
3/8" = 1'-0"

## GENERAL NOTES

A. VERIFY ALL FINISH MATERIALS AND COLORS WITH ARCHITECT PRIOR TO COMMENCING WORK.
B. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL,ELECTRICAL DRAWINGS AND SPECIFICATIONS.
C. FIELD VERIFICATION IS REQUIRED FOR QUANTITIES OF ALL MATERIALS PRIOR TO ORDERING AND INSTALLATION. DO NOT SCALE DRAWINGS.
D. ENSURE THAT FLOOR SURFACES ARE PROPERLY PREPARED FOR INSTALLATION OF SPECIFIC FLOOR FINISH
E. ALL MATERIALS ARE TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS, RECOMMENDATIONS AND SPECIFICATIONS FOR THE APPLICATION AND INTENDED USAGE
F. FLOORING TO EXTEND UNDER ALL FIXTURES AND CABINETRY U.N.O.
G. WHEN FLOOR FINISH CHANGE OCCURS AT A DOORWAY, THE SEAM IS TO BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION, U.N.O.
H. ALL FLOOR FINISHES TO BE PROTECTED FROM DAMAGE AFTER INSTALLATION. ALL DAMAGE TO BE REPAIRED AT NO COST TO THE OWNER
I. ALL DOOR FRAMES AND BASE TO BE PROTECTED TO AVOID DAMAGE DURING INSTALLATION OF FLOORING MATERIAL. ANY DAMAGE TO FRAMES, BASE & FINISHES TO BE REPAIRED AT NO COST TO OWNER
J. ALL WALLS P-1, UNLESS NOTED OTHERWISE.
K. SEE G-SERIES FOR MOUNTING HEIGHTS AND TOILET ACCESSORY DIMENSIONS.
L. SEE A-800 FOR EQUIPMENT, TOILET ACCESSORIES AND FINISH SPECIFICATIONS.
M. G.C. TO PROVIDE BLOCKING FOR GRAB BARS.
N. REFER TO FINISH SCHEDULE FOR FINISH LOCATIONS
O. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.

## X INTERIOR ELEVATION KEYNOTES

1 NEW PORCELAIN WALL TILE OVER BACKER BOARD/EXISTING CMU. REFER TO FINISH SCHEDULE ON SHEET A-800 FOR MORE INFORMATION.
2 4" BACKSPLASH TO MATCH SOLID SURFACE COUNTERTOP AT ALL ADJACENT WALLS.
3 NEW WALL MOUNTED SOLID SURFACE COUNTERTOP.
4 NEW SENSOR FAUCET. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
5 NEW UNDERMOUNT SINK. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
6 NEW 3" PORCELAIN TILE BASE.
7 NEW SENSOR FLOOR MOUNTED TOILET. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
8 NEW COLOR-THRU PHENOLIC TOILET PARTITIONS. FLOR ANCHORED/OVERHEAD BRACED. BASIS OF DESIGN: ASI GLOBAL PARTITIONS. FINISH: SAHARA BEIGE 4816.
9 NEW SENSOR WALL MOUNTED URINAL. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10 EXISTING INTERIOR PARTITION. PATCH AND REPAIR TO ACCEPT NEW FINISH.
11 NEW INTERIOR FURRING WALL.
12 COVE SHAPE PROFILE TRANSITION STRIP. BASIS OF DESIGN: SCHLUTER DILEX.
13 EXISTING DOOR AND FRAME TO REMAIN. PROVIDE NEW PAINT.
14 NEW WALL MOUNTED ADA SKIRT W/ FINISHED END PANELS.
15 VINYL COVE BASE.
16 VINYL CHAIR RAIL, 36" A.F.F. MIN.
17 FUR OUT EXISTING BLOCK WALL.
18 TRANSITION STRIP. BASIS OF DESIGN: SCHLUTER JOLLY.
19 EXISTING WALL MOUNTED TV REINSTALLED IN NEW LOCATION. PROVIDE MOVABLE HINGED WALL TV MOUNT. COORDINATE LOCATION WITH OWNER. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
20 WOOD CAP, PAINT P-1.
21 FINISHED END PANEL. PL-1.

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
INTERIOR ELEVATIONS

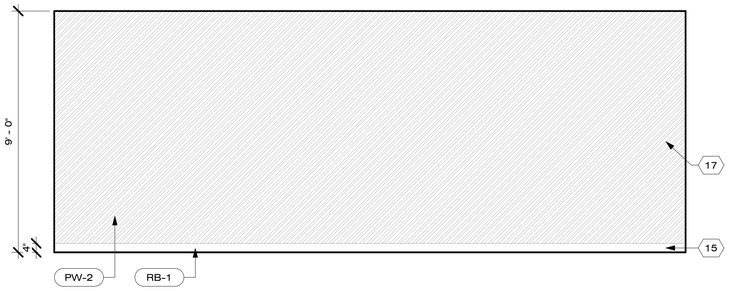
PROJECT TITLE
GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL

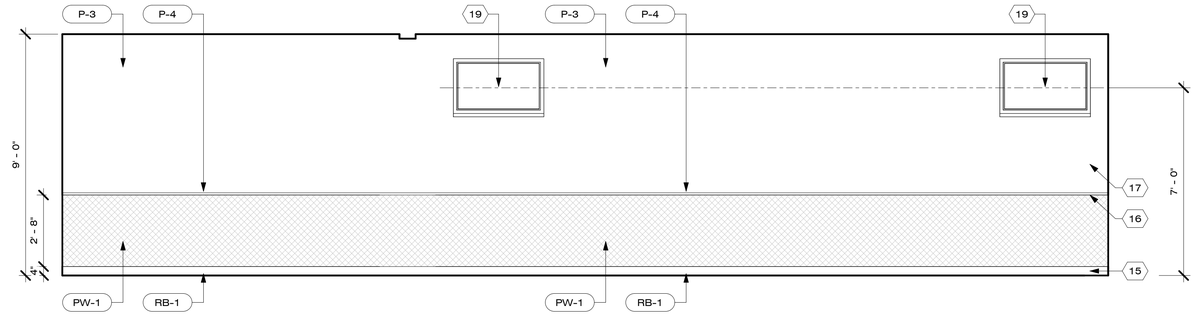

BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
2024-023

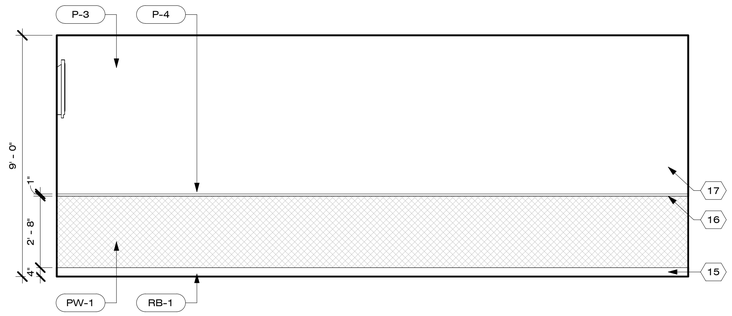
SHEET NUMBER
A-400



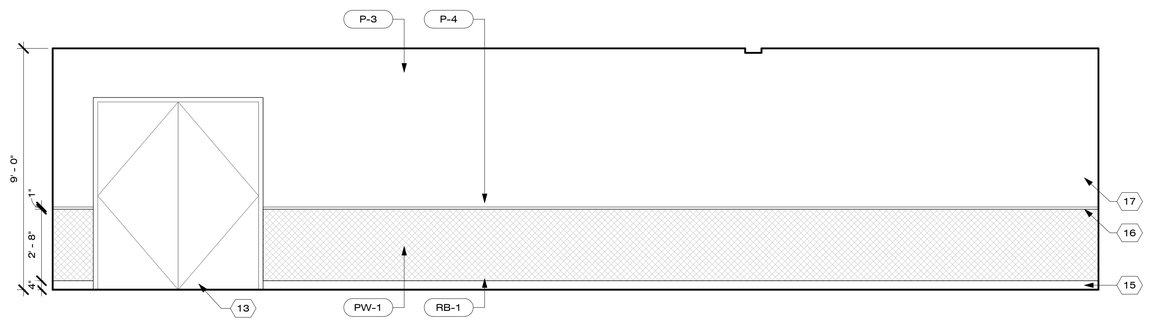

## V13 BREAKROOM ELEVATION
3/8" = 1'-0"



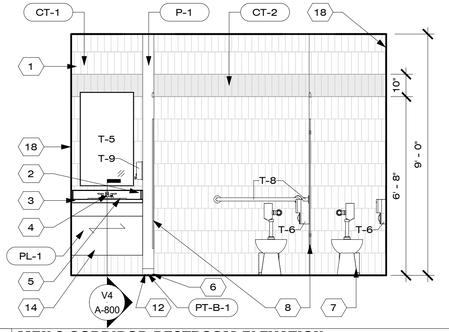

## V9 BREAKROOM ELEVATION
3/8" = 1'-0"



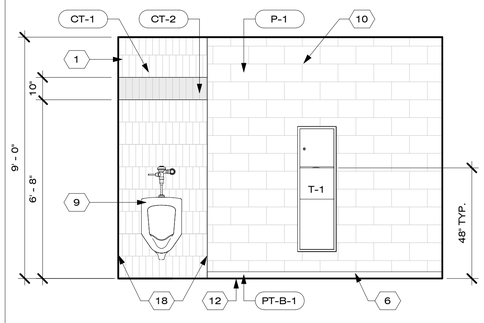

## V5 BREAKROOM ELEVATION
3/8" = 1'-0"



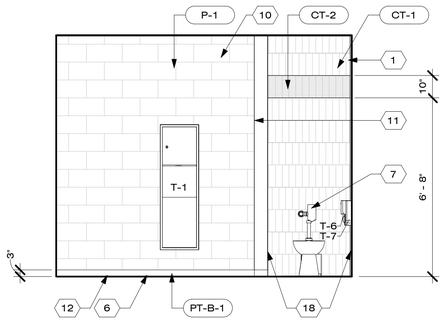

## V1 BREAKROOM ELEVATION
3/8" = 1'-0"



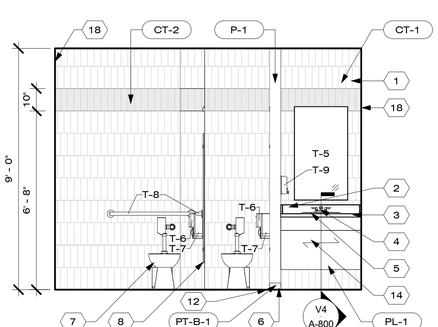

## H13 MEN'S CORRIDOR RESTROOM ELEVATION
3/8" = 1'-0"




## H9 MEN'S CORRIDOR RESTROOM ELEVATION
3/8" = 1'-0"




## H5 WOMEN'S CORRIDOR RESTROOM ELEVATION
3/8" = 1'-0"




## H1 WOMEN'S CORRIDOR RESTROOM ELEVATION
3/8" = 1'-0"

## GENERAL NOTES

A. VERIFY ALL FINISH MATERIALS AND COLORS WITH ARCHITECT PRIOR TO COMMENCING WORK.
B. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL,ELECTRICAL DRAWINGS AND SPECIFICATIONS.
C. FIELD VERIFICATION IS REQUIRED FOR QUANTITIES OF ALL MATERIALS PRIOR TO ORDERING AND INSTALLATION. DO NOT SCALE DRAWINGS.
D. ENSURE THAT FLOOR SURFACES ARE PROPERLY PREPARED FOR INSTALLATION OF SPECIFIC FLOOR FINISH
E. ALL MATERIALS ARE TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS, RECOMMENDATIONS AND SPECIFICATIONS FOR THE APPLICATION AND INTENDED USAGE
F. FLOORING TO EXTEND UNDER ALL FIXTURES AND CABINETRY U.N.O.
G. WHEN FLOOR FINISH CHANGE OCCURS AT A DOORWAY, THE SEAM IS TO BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION, U.N.O.
H. ALL FLOOR FINISHES TO BE PROTECTED FROM DAMAGE AFTER INSTALLATION. ALL DAMAGE TO BE REPAIRED AT NO COST TO THE OWNER
I. ALL DOOR FRAMES AND BASE TO BE PROTECTED TO AVOID DAMAGE DURING INSTALLATION OF FLOORING MATERIAL. ANY DAMAGE TO FRAMES, BASE & FINISHES TO BE REPAIRED AT NO COST TO OWNER
J. ALL WALLS P-1, UNLESS NOTED OTHERWISE.
K. SEE G-SERIES FOR MOUNTING HEIGHTS AND TOILET ACCESSORY DIMENSIONS.
L. SEE A-800 FOR EQUIPMENT, TOILET ACCESSORIES AND FINISH SPECIFICATIONS.
M. G.C. TO PROVIDE BLOCKING FOR GRAB BARS.
N. REFER TO FINISH SCHEDULE FOR FINISH LOCATIONS
O. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.

## X INTERIOR ELEVATION KEYNOTES

1 NEW PORCELAIN WALL TILE OVER BACKER BOARD/EXISTING CMU. REFER TO FINISH SCHEDULE ON SHEET A-800 FOR MORE INFORMATION.
2 4" BACKSPLASH TO MATCH SOLID SURFACE COUNTERTOP AT ALL ADJACENT WALLS.
3 NEW WALL MOUNTED SOLID SURFACE COUNTERTOP.
4 NEW SENSOR FAUCET. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
5 NEW UNDERMOUNT SINK. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
6 NEW 3" PORCELAIN TILE BASE.
7 NEW SENSOR FLOOR MOUNTED TOILET. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
8 NEW COLOR-THRU PHENOLIC TOILET PARTITIONS. FLOOR ANCHORED/OVERHEAD BRACED. BASIS OF DESIGN: ASI GLOBAL PARTITIONS. FINISH: SAHARA BEIGE 4816.
9 NEW SENSOR WALL MOUNTED URINAL. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
10 EXISTING INTERIOR PARTITION. PATCH AND REPAIR TO ACCEPT NEW FINISH.
11 NEW INTERIOR FURRING WALL.
12 COVE SHAPE PROFILE TRANSITION STRIP. BASIS OF DESIGN: SCHLUTER DILEX.
13 EXISTING DOOR AND FRAME TO REMAIN. PROVIDE NEW PAINT.
14 NEW WALL MOUNTED ADA SKIRT W/ FINISHED END PANELS.
15 VINYL COVE BASE.
16 VINYL CHAIR RAIL. 36" A.F.F. MIN.
17 FUR OUT EXISTING BLOCK WALL.
18 TRANSITION STRIP. BASIS OF DESIGN: SCHLUTER JOLLY.
19 EXISTING WALL MOUNTED TV REINSTALLED IN NEW LOCATION. PROVIDE MOVABLE HINGED WALL TV MOUNT. COORDINATE LOCATION WITH OWNER. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
20 WOOD CAP, PAINT P-1.
21 FINISHED END PANEL. PL-1.

GREATER COLUMBUS CONVENTION CENTER
BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
INTERIOR ELEVATIONS

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

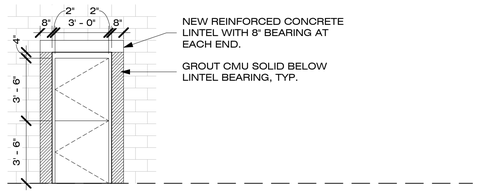
SEAL


BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

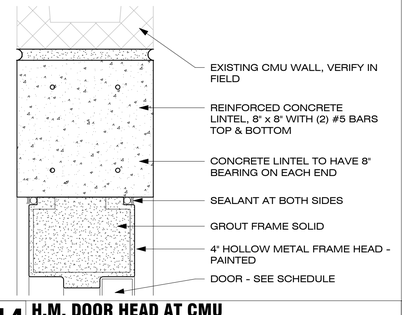
BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
A-401

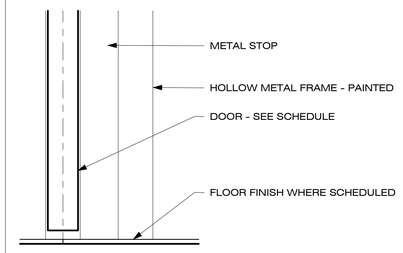
## DOOR TYPES



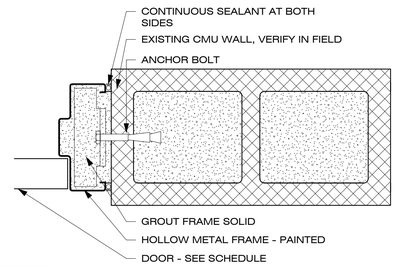

D-1




**Q14** H.M. DOOR HEAD AT CMU
3" = 1'-0"




**L14** DOOR SILL DETAIL
3" = 1'-0"




**G14** H.M. DOOR JAMB AT CMU
3" = 1'-0"

## GENERAL NOTES

A. VERIFY ALL FINISH MATERIALS AND COLORS WITH ARCHITECT PRIOR TO COMMENCING WORK.
B. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL,ELECTRICAL DRAWINGS AND SPECIFICATIONS.
C. FIELD VERIFICATION IS REQUIRED FOR QUANTITIES OF ALL MATERIALS PRIOR TO ORDERING AND INSTALLATION. DO NOT SCALE DRAWINGS.
D. ENSURE THAT FLOOR SURFACES ARE PROPERLY PREPARED FOR INSTALLATION OF SPECIFIC FLOOR FINISH
E. ALL MATERIALS ARE TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS, RECOMMENDATIONS AND SPECIFICATIONS FOR THE APPLICATION AND INTENDED USAGE
F. FLOORING TO EXTEND UNDER ALL FIXTURES AND CABINETRY U.N.O.
G. WHEN FLOOR FINISH CHANGE OCCURS AT A DOORWAY, THE SEAM IS TO BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION, U.N.O.
H. ALL FLOOR FINISHES TO BE PROTECTED FROM DAMAGE AFTER INSTALLATION. ALL DAMAGE TO BE REPAIRED AT NO COST TO THE OWNER
I. ALL DOOR FRAMES AND BASE TO BE PROTECTED TO AVOID DAMAGE DURING INSTALLATION OF FLOORING MATERIAL. ANY DAMAGE TO FRAMES, BASE & FINISHES TO BE REPAIRED AT NO COST TO OWNER
J. ALL WALLS P-1, UNLESS NOTED OTHERWISE.
K. SEE G-SERIES FOR MOUNTING HEIGHTS AND TOILET ACCESSORY DIMENSIONS.
L. SEE A-800 FOR EQUIPMENT, TOILET ACCESSORIES AND FINISH SPECIFICATIONS.
M. G.C. TO PROVIDE BLOCKING FOR GRAB BARS.
N. REFER TO FINISH SCHEDULE FOR FINISH LOCATIONS
O. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.

## DOOR SCHEDULE

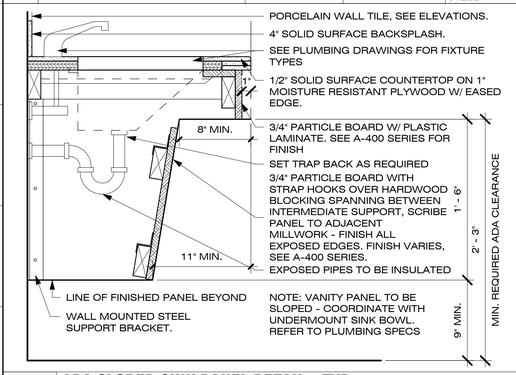
| DOOR NUMBER | ROOM NAME | HW SET | DOOR / FRAME TYPE | DOOR / FRAME RATING | DOOR SIZE | DOOR MATERIAL | DOOR FINISH | DETAILS HEAD | DETAILS SILL | DETAILS JAMB | FRAME MATERIAL | FRAME FINISH | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 104a | STORAGE | 01 | D-1 | 0 MIN. | 3' - 0"x7' - 0"x1 3/4" | HM | PF PNT: P-2 | Q14/A-800 | L14/A-800 | G14/A-800 | HM | PF PNT: P-2 | 1 |

## REMARKS

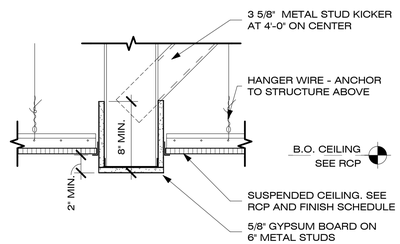
1. DUTCH STYLE DOOR

## TOILET ACCESSORY AND EQUIPMENT SCHEDULE

| TYPE MARK | DESCRIPTION | MANUFACTURER | MODEL | FINISH | COMMENTS |
|---|---|---|---|---|---|
| E-1 | DOUBLE TIER STEEL LOCKER | LYON | - | CD MINUTE MAN BLUE | 12" x 15" x 78", 6" HIGH LEGS W/ CLOSE FRONT BASE, SLOPED TOP, STAINLESS STEEL RECESSED HANDLE |
| E-2 | DOUBLE TIER STEEL LOCKER | LYON | - | 1N COSMOS | 12" x 15" x 78", 6" HIGH LEGS W/ CLOSE FRONT BASE, SLOPED TOP, STAINLESS STEEL RECESSED HANDLE |
| E-3 | DOUBLE TIER STEEL LOCKER | LYON | - | BB WEDGEWOOD BLUE | 12" x 15" x 78", 6" HIGH LEGS W/ CLOSE FRONT BASE, SLOPED TOP, STAINLESS STEEL RECESSED HANDLE |
| E-4 | MOVEABLE ROOM DIVIDER | MERGEWORKS | UW-61-78-3C-BK-4-FRO-FRO-L102 | FROSTED ACRYLIC, NEW AGE OAK | URBAN WALL, 61" x 78", 4 WHEELS |
| T-1 | PAPER TOWEL DISPENSER & WASTE RECEPTACLE | AMERICAN SPECIALTIES, INC. | 0469-2 | STAINLESS STEEL | SEMI-RECESSED |
| T-2 | SURFACE-MOUNTED ROBE HOOK | BOBRICK | B-76717 | STAINLESS STEEL | |
| T-3 | PHENOLIC FLOOR ANCHORED BENCH | ASI STORAGE | | SAHARA BEIGE | COLOR-THRU PHENOLIC, 12" DEEP, TRAPEZOID PEDESTAL LEGS |
| T-4 | PHENOLIC WALL MOUNTED BENCH | ASI STORAGE | | SAHARA BEIGE | COLOR-THRU PHENOLIC, 24" DEEP |
| T-5 | LED BACKLIT MIRROR | BOBRICK | B-164 2442 | - | INTEGRATED LIGHTING, PROVIDE POWER AS NECESSARY. SEE ELECTRICAL FOR ADD. INFO. |
| T-6 | TOILET TISSUE DISPENSER | - | - | STAINLESS STEEL | OWNER PROVIDED |
| T-7 | SANITARY NAPKIN DISPOSAL | - | - | STAINLESS STEEL | OWNER PROVIDED |
| T-8 | GRAB BARS | BOBRICK | B-6806 SERIES | STAINLESS STEEL | PROVIDE IN-WALL BLOCKING |
| T-9 | SOAP DISPENSER | - | - | STAINLESS STEEL | OWNER PROVIDED |




**V4** ADA SLOPED SINK PANEL DETAIL - TYP.
1 1/2" = 1'-0"




**V1** TYP. CEILING HEADER
1 1/2" = 1'-0"

## FINISH LEGEND

| CODE | MANUFACTURER | STYLE MATERIAL TYPE | MODEL NUMBER COLOR | DIMENSIONS FINISH | COMMENTS |
|---|---|---|---|---|---|
| Floors | | | | | |
| EPOXY | SHERWIN WILLIAMS | EPOXY | RESUFLOR 3580, CHARCOAL 53 | - | WATER-BASED, LOW VOC |
| LVT-1 | INTERFACE | LUXURY VINYL TILE | NORTHERN GRAIN, OAK STAIN A026 | 9.845" x 39.38" | ASHLAR INSTALLATION |
| PT-1 | TILEBAR | PORCELAIN FLOOR TILE | NASHVILLE WHITE TRAVERTINE LOOK MATTE | 12" x 24" | W/ LATICRETE GROUT 35 MOCHA |
| Walls | | | | | |
| CT-1 | CREATIVE MATERIALS CORP. | WALL TILE | URBAN SUBWAY - WHITE GLOSSY | 3" x 10" | W/ LATICRETE GROUT 90 LIGHT PEWTER, VERTICAL STAGGERED INSTALLATION |
| CT-2 | CREATIVE MATERIALS CORP. | WALL TILE | URBAN SUBWAY - WHITE LINEAR MATTE | 3" x 10" | W/ LATICRETE GROUT 90 LIGHT PEWTER, ACCENT |
| P-1 | SHERWIN WILLIAMS | PAINT | SW 7004 SNOWBOUND | - | TYP. WALLS AND CEILING, SEMI-GLOSS |
| P-2 | SHERWIN WILLIAMS | PAINT | SW 7023 REQUISITE GRAY | - | TYP. DOORS AND FRAMES, SEMI-GLOSS |
| P-3 | SHERWIN WILLIAMS | PAINT | SW 7014 EIDER WHITE | - | SEMI-GLOSS |
| P-4 | SHERWIN WILLIAMS | PAINT | SW 7668 MARCH WIND | - | SEMI-GLOSS |
| PW-1 | CARNEGIE | PROTECTIVE WALLCOVERING | XOREL SLEET EMBROIDER 6299\|817 | - | - |
| PW-2 | MOMENTUM | PROTECTIVE WALLCOVERING | MATSU | - | DIGITAL MURAL, TYPE II, CUSTOM GRAPHIC |
| Ceilings | | | | | |
| ACT-1 | ARMSTRONG | ACOUSTIC CEILING TILE | 870 CLEAN ROOM VL, WHITE | 24" x 48" x 5/8" | WET AREAS |
| ACT-2 | ARMSTRONG | ACOUSTIC CEILING TILE | 1773 DUNE TEGULAR, WHITE | 24" x 48" x 5/8" | - |
| Misc | | | | | |
| PL-1 | FORMICA | PLASTIC LAMINATE | 8844A AGED ASH | - | ANTI-MICROBIAL COLLECTION, WOODBRUSH TEXTURE |
| PT-B-1 | TILEBAR | PORCELAIN TILE BASE | NASHVILLE WHITE TRAVERTINE LOOK MATTE | 3" x 24" | W/ LATICRETE GROUT 35 MOCHA |
| RB-1 | TARKETT | VINYL COVE BASE | TRADITIONAL, TA5 COLONIAL GREY CG | 4" | - |
| SS-1 | CORIAN | SOLID SURFACE | WEATHERED CONCRETE | - | COUNTERTOP |

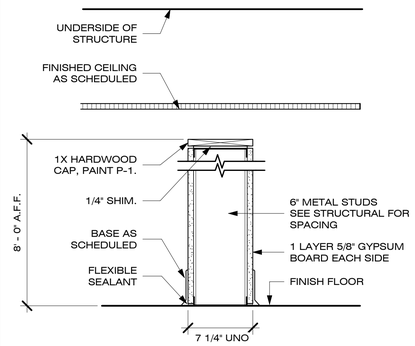
## ROOM FINISH SCHEDULE

| NAME | NUMBER | WALL FINISH | FLOOR FINISH | BASE FINISH | CEILING FINISH | CASEWORK FINISH | COMMENTS |
|---|---|---|---|---|---|---|---|
| SERVICE CORRIDOR | 100 | P-1 | EPOXY | - | ACT-2 | - | |
| EMPLOYEE BREAKROOM | 101 | P-3, PW-1 | LVT-1 | RB-1 | ACT-2 | - | |
| WOMEN'S LOCKER/RESTROOM | 102 | CT-1, CT-2, P-1, P-2 | PT-1 | PT-B-1 | ACT-1 | PL-1, SS-1 | |
| MEN'S LOCKER/RESTROOM | 103 | CT-1, CT-2, P-1, P-2 | PT-1 | PT-B-1 | ACT-1 | PL-1, SS-1 | |
| STORAGE | 104 | P-1 | EPOXY | - | ACT-2 | - | |
| STORAGE | 105 | - | - | - | ACT-2 | - | |
| STORAGE | 106 | - | - | - | ACT-2 | - | |
| MEN'S CORRIDOR RESTROOM | 107 | CT-1, CT-2, P-1, P-2 | PT-1 | PT-B-1 | ACT-1 | PL-1, SS-1 | |
| WOMEN'S CORRIDOR RESTROOM | 108 | CT-1, CT-2, P-1, P-2 | PT-1 | PT-B-1 | ACT-1 | PL-1, SS-1 | |

## PARTITION DETAILS

**NOTES**
INTERIOR METAL STUD PARTITION WALL

| FIRE RATING INFORMATION | SOUND TRANSMISSION INFORMATION |
|---|---|
| N/A | N/A |

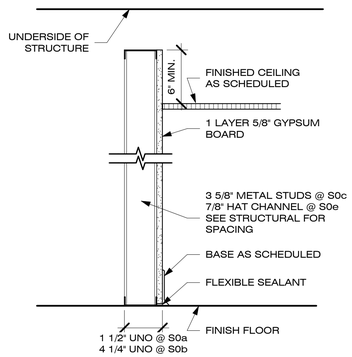



SECTION

PARTITION TYPE S0c

**NOTES**
INTERIOR METAL STUD FURRING WALL

| FIRE RATING INFORMATION | SOUND TRANSMISSION INFORMATION |
|---|---|
| N/A | N/A |

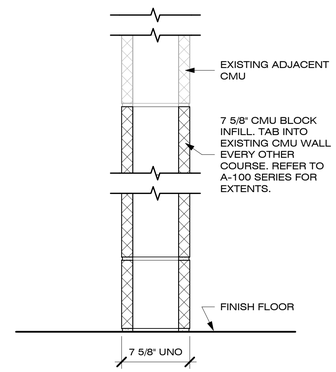



SECTION

PARTITION TYPE S0b S0a

**NOTES**
INTERIOR CMU PARTITION WALL

| FIRE RATING INFORMATION | SOUND TRANSMISSION INFORMATION |
|---|---|
| N/A | N/A |




SECTION

PARTITION TYPE M0a

## DOOR GENERAL NOTES

A. INSTALL CONSTRUCTION CORES IN CYLINDER LOCKS. REPLACE WITH PERMANENT UNITS AT TURN OVER.
B. CO-ORDINATE KEYING AND MASTERS WITH TENANT.
C. ALL LOCKSETS TO BE COMPLIANT WITH CURRENT ADA GUIDELINES AND CURRENT OBC REQUIREMENTS.
D. INSTALL WALL AND FLOOR STOPS AS REQUIRED.

## OBC DOOR RELATED NOTES

1. ALL DOORS SHALL SWING IN THE DIRECTION OF EGRESS AS REQUIRED BY CODE (SEE PLAN) AND SHALL BE OF A SIDE SWINGING TYPE.
2. ALL MEANS OF EGRESS DOORS SHALL BE READILY OPERABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
3. MANUALLY OPERATED EDGE TO SURFACE BOLTS ARE PROHIBITED.
4. ALL EGRESS DOORS TO HAVE PANIC HARDWARE WHEN SERVING AN OCCUPANCY OF 50 OR MORE OCCUPANTS.

## HARDWARE NOTES

1. PANIC HARDWARE SHALL HAVE THE ACTIVATING MEMBER MOUNTED AT A HEIGHT NOT LESS THAN 30 INCHES NOR MORE THAN 44 INCHES ABOVE FINISHED FLOOR. ALL HARDWARE SHALL BE CENTERED BETWEEN 30 AND 44 INCHES ABOVE FINISHED FLOOR FOR HAND ACTIVATED HARDWARE. THERE SHALL BE NO GRASP TYPE KNOBS.
2. CLOSET DOORS SHALL BE INSTALLED WITH HARDWARE THAT CAN BE OPERATED FROM THE INSIDE (CLASSROOM LOCK).
3. ALL HARDWARE FINISH TO BE A SATIN NICKEL.
4. ALL DOORS TO HAVE FLOR DOOR STOPS OR WALL STOPS AS NEEDED PER HARDWARE SETS.
5. PROVIDE DOOR CLOSER AT ALL EXTERIOR DOORS. EXTERIOR OUTSWING DOORS TO HAVE CLOSERS THAT LOCK TO PREVENT FULL OPENING OF DOOR.
6. PROVIDE KICK PLATES ON BOTH SIDES OF DOORS, AS INDICATED ON THE SCHEDULE.

## ADA DOOR RELATED NOTES

**4.13.4 DOUBLE-LEAF DOORWAYS.** IF DOORWAYS HAVE TWO INDEPENDENTLY OPERATED DOOR LEAVES, THEN AT LEAST ONE LEAF SHALL MEET THE SPECIFICATIONS IN 4.13.5 AND 4.13.6. THAT LEAF SHALL BE AN ACTIVE LEAF.

**4.13.5 CLEAR WIDTH.** DOORWAYS SHALL HAVE A MINIMUM CLEAR OPENING OF 32 IN (815 MM) WITH THE DOOR OPEN 90 DEGREES, MEASURED BETWEEN THE FACE OF THE DOOR AND THE OPPOSITE STOP. OPENINGS MORE THAN 24 IN (610 MM) IN DEPTH SHALL COMPLY WITH 4.2.1 AND 4.3.3. EXCEPTION: DOORS NOT REQUIRING FULL USER PASSAGE, SUCH AS SHALLOW CLOSETS, MAY HAVE THE CLEAR OPENING REDUCED TO 20 IN (510 MM) MINIMUM.

**4.13.6 MANEUVERING CLEARANCES AT DOORS.** MINIMUM MANEUVERING CLEARANCES AT DOORS THAT ARE NOT AUTOMATIC OR POWER-ASSISTED SHALL BE AS SHOWN IN FIG. 25. THE FLOOR OR GROUND AREA WITHIN THE REQUIRED CLEARANCES SHALL BE LEVEL AND CLEAR. EXCEPTION: ENTRY DOORS TO ACUTE CARE HOSPITAL BEDROOMS FOR IN-PATIENTS SHALL BE EXEMPTED FROM THE REQUIREMENT FOR SPACE AT THE LATCH SIDE OF THE DOOR IF THE DOOR IS AT LEAST 44 IN (1120 MM) WIDE.

**4.13.9 DOOR HARDWARE.** HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING, OR TWISTING OF THE WRIST TO OPERATE. LEAVER-OPERATED MECHANISMS, PUSH-TYPE MECHANISMS, AND U-SHAPED HANDLES ARE ACCEPTABLE DESIGNS. WHEN SLIDING DOORS ARE FULLY OPEN, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. HARDWARE REQUIRED FOR ACCESSIBLE DOOR PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48 IN (1200 MM) ABOVE FINISHED FLOOR.

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
SCHEDULES & LEGENDS

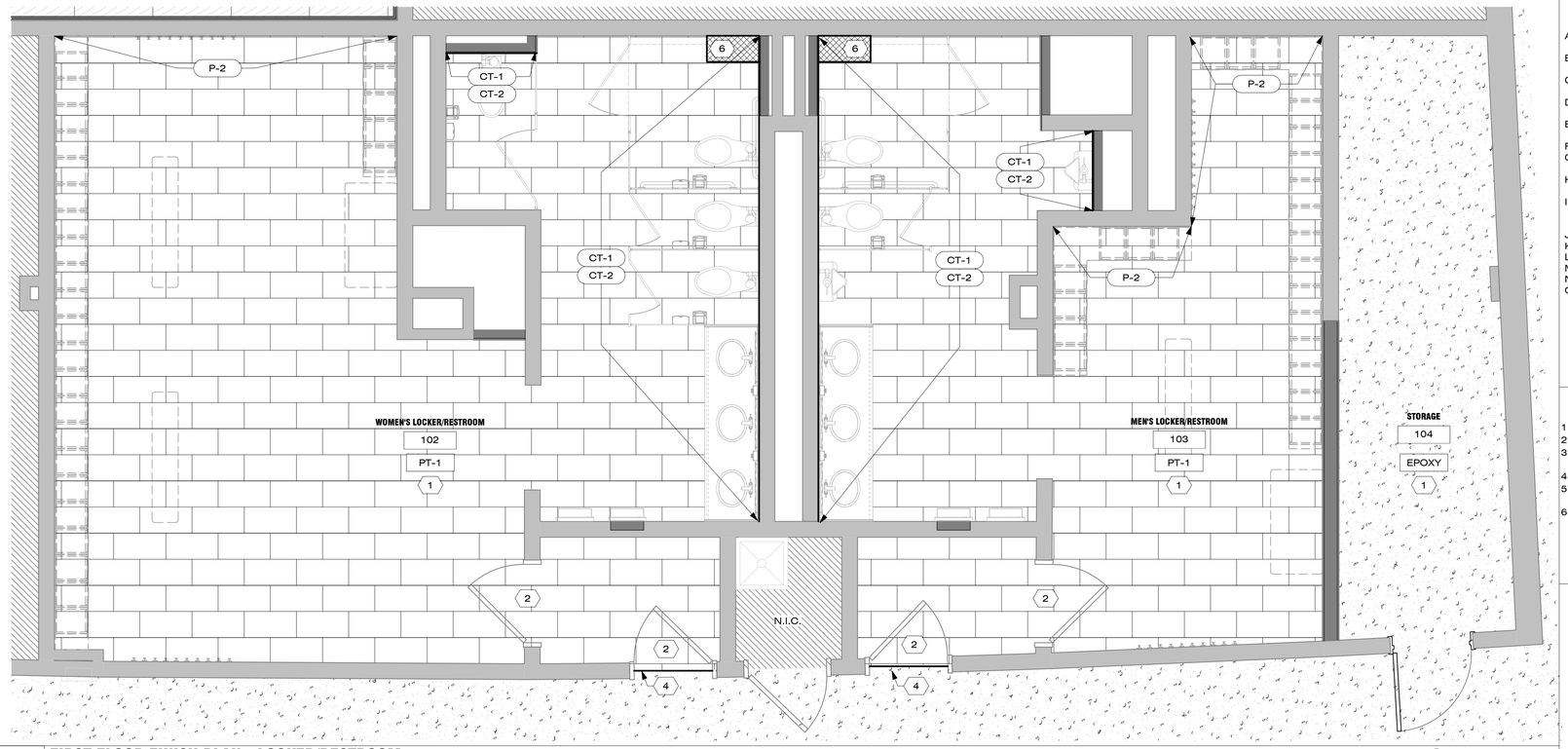
PROJECT TITLE
GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL


BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

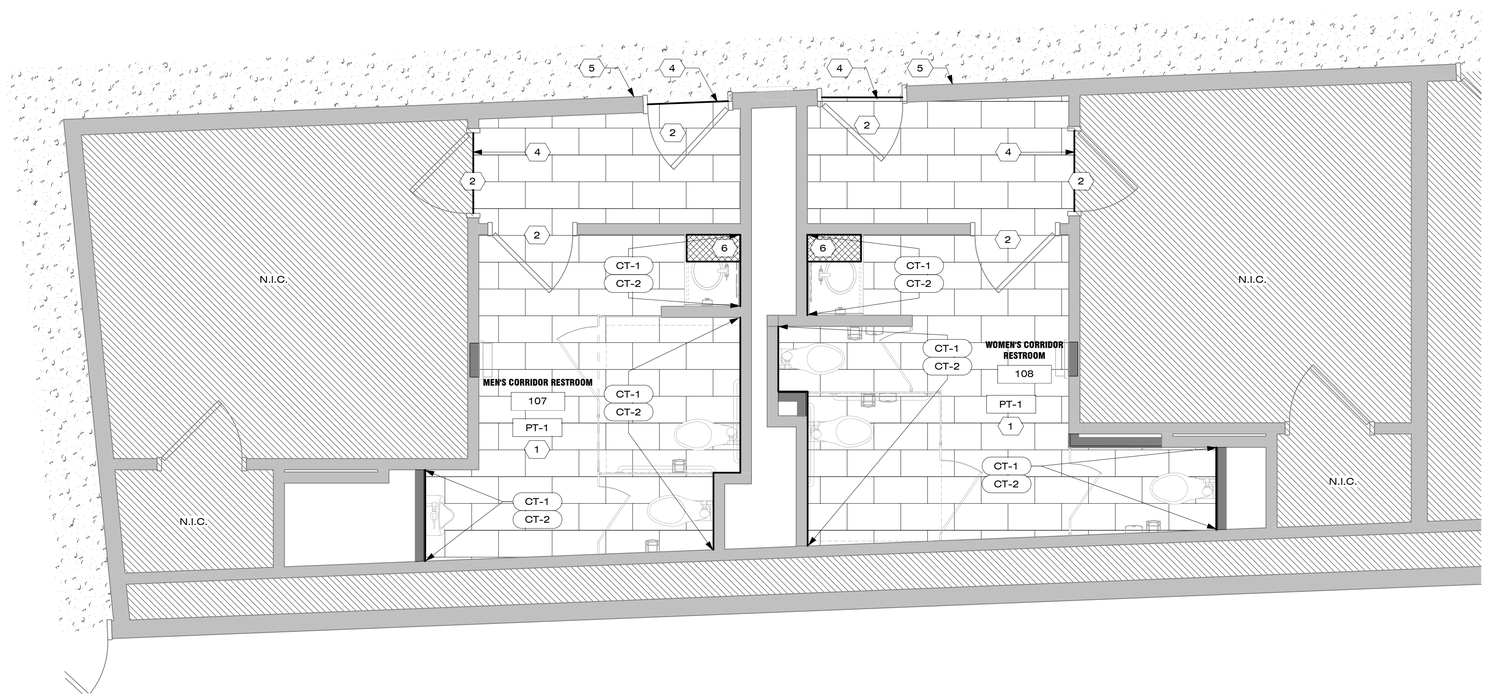
BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
A-800




**V9** FIRST FLOOR FINISH PLAN - LOCKER/RESTROOM
3/8" = 1'-0"

0 6" 1' 2'




**V1** FIRST FLOOR FINISH PLAN - RESTROOM
3/8" = 1'-0"

0 6" 1' 2'

## GENERAL NOTES

A. VERIFY ALL FINISH MATERIALS AND COLORS WITH ARCHITECT PRIOR TO COMMENCING WORK.
B. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL,ELECTRICAL, FOUNDATION DRAWINGS AND SPECIFICATIONS.
C. FIELD VERIFICATION IS REQUIRED FOR QUANTITIES OF ALL MATERIALS PRIOR TO ORDERING AND INSTALLATION. DO NOT SCALE DRAWINGS.
D. ENSURE THAT FLOOR SURFACES ARE PROPERLY PREPARED FOR INSTALLATION OF SPECIFIC FLOOR FINISH
E. ALL MATERIALS ARE TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS, RECOMMENDATIONS AND SPECIFICATIONS FOR THE APPLICATION AND INTENDED USAGE
F. FLOORING TO EXTEND UNDER ALL FIXTURES AND CABINETRY U.N.O.
G. WHEN FLOOR FINISH CHANGE OCCURS AT A DOORWAY, THE SEAM IS TO BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION, U.N.O.
H. ALL FLOOR FINISHES TO BE PROTECTED FROM DAMAGE AFTER INSTALLATION. ALL DAMAGE TO BE REPAIRED AT NO COST TO THE OWNER
I. ALL DOOR FRAMES AND BASE TO BE PROTECTED TO AVOID DAMAGE DURING INSTALLATION OF FLOORING MATERIAL. ANY DAMAGE TO FRAMES, BASE & FINISHES TO BE REPAIRED AT NO COST TO OWNER
J. ALL WALLS P-1, UNLESS NOTED OTHERWISE.
K. SEE G-SERIES FOR MOUNTING HEIGHTS AND TOILET ACCESSORY DIMENSIONS.
L. SEE A-800 FOR EQUIPMENT, TOILET ACCESSORIES AND FINISH SPECIFICATIONS.
M. G.C. TO PROVIDE BLOCKING FOR GRAB BARS.
N. REFER TO FINISH SCHEDULE FOR FINISH LOCATIONS
O. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.

## (X) FINISH PLAN KEYNOTES

1 CLEAN AND PREP INTERIOR WALLS TO RECEIVE PAINT, PT-1 UNLESS NOTED OTHERWISE
2 EXISTING DOORS AND FRAMES TO BE CLEANED AND PREPPED TO RECEIVE NEW PAINT, P-2
3 NEW VINYL CHAIR RAIL TO BE INSTALL AT 36 A.F.F. FINISH TO MATCH PAINT AND PROTECTIVE WALLCOVERING. REFER TO A-401 INTERIOR ELEVATIONS FOR MORE INFORMATION
4 NEW FLOORING TRANSITION TO BE INSTALLED
5 NEW CODE COMPLIANT RESTROOM IDENTIFICATION SIGNAGE. SEE G-200 SERIES FOR ADDITIONAL INFORMATION.
6 START FULL TILE HERE.

## FINISH NOTES LEGEND

XX FLOOR FINISH TAG
XX WALL FINISH TAG
DIRECTION/GRAIN TAG
XX-X FURNITURE TAG
E-XX EQUIPMENT TAG

## FINISH LEGEND

PT-1 PORCELAIN FLOOR TILE
LVT-1 WOOD-LOOK LVT
EPOXY EPOXY
NOT IN CONTRACT

## FLOOR TRANSITIONS

1. TILE TO SCON : SCHLUTER RENO-U
2. LVT TO SCON : SCHLUTER RENO-U
3. TILT TO TILE : SCHLUTER DILEX

TYP: COLOR TO BE ANODIZED ALUMINUM

**NOTE:**
DIMENSIONS ARE WITNESSED TO FACE OF INTERIOR FINISH & FACE OF EXTERIOR SHEATHING & EXTERIOR FACE OF MASONRY UNLESS OTHERWISE NOTED.

GREATER COLUMBUS CONVENTION CENTER
BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
ENLARGED FINISH PLANS

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL
STATE OF OHIO
BHAKTI BANIA
0814783
REGISTERED ARCHITECT

BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
A-901

**V1** FIRST FLOOR FINISH PLAN - BREAK ROOM
3/8" = 1'-0"

0 6" 1' 2'

## GENERAL NOTES

A. VERIFY ALL FINISH MATERIALS AND COLORS WITH ARCHITECT PRIOR TO COMMENCING WORK.
B. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL,ELECTRICAL, FOUNDATION DRAWINGS AND SPECIFICATIONS.
C. FIELD VERIFICATION IS REQUIRED FOR QUANTITIES OF ALL MATERIALS PRIOR TO ORDERING AND INSTALLATION. DO NOT SCALE DRAWINGS.
D. ENSURE THAT FLOOR SURFACES ARE PROPERLY PREPARED FOR INSTALLATION OF SPECIFIC FLOOR FINISH
E. ALL MATERIALS ARE TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS, RECOMMENDATIONS AND SPECIFICATIONS FOR THE APPLICATION AND INTENDED USAGE
F. FLOORING TO EXTEND UNDER ALL FIXTURES AND CABINETRY U.N.O.
G. WHEN FLOOR FINISH CHANGE OCCURS AT A DOORWAY, THE SEAM IS TO BE CENTERED UNDER THE DOOR IN THE CLOSED POSITION, U.N.O.
H. ALL FLOOR FINISHES TO BE PROTECTED FROM DAMAGE AFTER INSTALLATION. ALL DAMAGE TO BE REPAIRED AT NO COST TO THE OWNER
I. ALL DOOR FRAMES AND BASE TO BE PROTECTED TO AVOID DAMAGE DURING INSTALLATION OF FLOORING MATERIAL. ANY DAMAGE TO FRAMES, BASE & FINISHES TO BE REPAIRED AT NO COST TO OWNER
J. ALL WALLS P-1, UNLESS NOTED OTHERWISE.
K. SEE G-SERIES FOR MOUNTING HEIGHTS AND TOILET ACCESSORY DIMENSIONS.
L. SEE A-800 FOR EQUIPMENT, TOILET ACCESSORIES AND FINISH SPECIFICATIONS.
M. G.C. TO PROVIDE BLOCKING FOR GRAB BARS.
N. REFER TO FINISH SCHEDULE FOR FINISH LOCATIONS
O. (XXXx) INDICATES DOOR NUMBER, REFER TO SHEET A-800.

## (X) FINISH PLAN KEYNOTES

1 CLEAN AND PREP INTERIOR WALLS TO RECEIVE PAINT, PT-1 UNLESS NOTED OTHERWISE
2 EXISTING DOORS AND FRAMES TO BE CLEANED AND PREPPED TO RECEIVE NEW PAINT, P-2
3 NEW VINYL CHAIR RAIL TO BE INSTALL AT 36 A.F.F. FINISH TO MATCH PAINT AND PROTECTIVE WALLCOVERING. REFER TO A-401 INTERIOR ELEVATIONS FOR MORE INFORMATION
4 NEW FLOORING TRANSITION TO BE INSTALLED
5 NEW CODE COMPLIANT RESTROOM IDENTIFICATION SIGNAGE. SEE G-200 SERIES FOR ADDITIONAL INFORMATION.
6 START FULL TILE HERE.

## FINISH NOTES LEGEND

XX FLOOR FINISH TAG
XX WALL FINISH TAG
DIRECTION/GRAIN TAG
XX-X FURNITURE TAG
E-XX EQUIPMENT TAG

## FINISH LEGEND

PT-1 PORCELAIN FLOOR TILE
LVT-1 WOOD-LOOK LVT
EPOXY EPOXY
NOT IN CONTRACT

## FLOOR TRANSITIONS

1. TILE TO SCON : SCHLUTER RENO-U
2. LVT TO SCON : SCHLUTER RENO-U
3. TILT TO TILE : SCHLUTER DILEX

TYP: COLOR TO BE ANODIZED ALUMINUM

**NOTE:**
DIMENSIONS ARE WITNESSED TO FACE OF INTERIOR FINISH & FACE OF EXTERIOR SHEATHING & EXTERIOR FACE OF MASONRY UNLESS OTHERWISE NOTED.

GREATER COLUMBUS CONVENTION CENTER

BBCO
329 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P + 614 443 2624
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
ENLARGED FINISH PLANS

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL

STATE OF OHIO
BHAKTI BANIA
0814783
REGISTERED ARCHITECT

BHAKTI BANIA, LICENSE #0814783
EXPIRATION DATE 12/31/2025

BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
A-902

## GENERAL PLUMBING DEMOLITION NOTES:

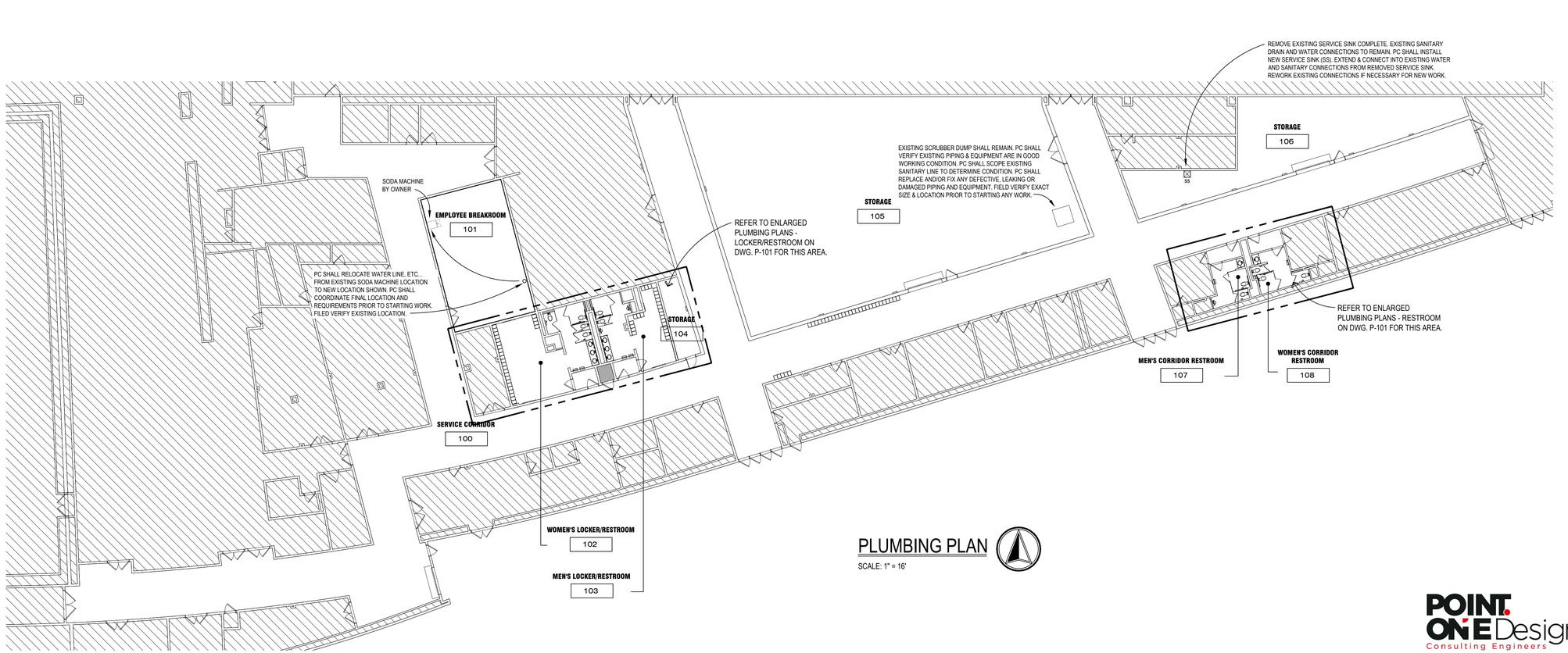
1. THE PLUMBING CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING PIPING, EQUIPMENT AND FIXTURES REQUIRING DEMOLITION. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK WITH THE ARCHITECT, GENERAL CONTRACTOR, AND WITH THE OWNER.
2. THE PLUMBING CONTRACTOR SHALL ABANDON ALL EXISTING PIPING UNDERFLOOR THAT IS NOT TO BE REUSED FOR NEW WORK.
3. THE PLUMBING CONTRACTOR SHALL REMOVE ALL EXISTING SANITARY SEWERS THAT ARE NOT BEING REUSED AND IN THE WAY OF NEW WORK.
4. THE PLUMBING CONTRACTOR SHALL CUT EXISTING SANITARY AND WASTE PIPING 3" BELOW FLOOR AND PLUG WITH PERMANENT STOPPER.
5. THE PLUMBING DEMOLITION WORK SHALL BE PERFORMED EXCLUSIVELY BY THE PLUMBING CONTRACTOR UNLESS OTHERWISE INDICATED.
6. ALL UNUSED WASTE, VENT, AND WATER LINES SHALL BE REMOVED COMPLETE. CAP VENT AND WATER LINES NEAR MAINS ABOVE CEILING.
7. THE PLUMBING DEMOLITION WORK SHALL INCLUDE THE DISCONNECT, REMOVE AND DISPOSAL OF THE FOLLOWING PIPING AND ASSOCIATED VALVES, FITTINGS, ACCESSORIES AND SUPPORTS: 1) DOMESTIC COLD WATER, 2) DOMESTIC HOT WATER, 3) SANITARY VENT, 4) SANITARY DRAIN.
8. EXISTING PIPING AND EQUIPMENT LOCATIONS ARE SCHEMATIC. VERIFY EXACT LOCATION AND ELEVATIONS IN FIELD.
9. ALL PATCHING AND SEALING OF WALLS, FLOORS, CEILINGS, ETC... TO BE DONE BY GENERAL CONTRACTOR.
10. PLUMBING CONTRACTOR SHALL CAP ALL UNUSED SANITARY BRANCH LINES NEAR MAIN WITHIN 2'-0" WHERE POSSIBLE. NO DEAD END RUNS ARE ALLOWED PER CODE.

## GENERAL NOTE:

THE PLUMBING CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION, DIRECTION OF FLOW AND EXISTING INVERT ELEVATIONS OF ALL EXISTING SEWERS PRIOR TO STARTING ANY WORK. THE PLUMBING CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES.

## GENERAL NOTES:

1. THE LOCATIONS OF PIPING AND EQUIPMENT AS SHOWN ON THE DRAWING ARE GENERAL ONLY. THE PLUMBING CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL PIPING AND EQUIPMENT IN THE FIELD PRIOR TO EXECUTING HIS WORK.
2. PLUMBING CONTRACTOR SHALL COORDINATE EXACT LOCATION OF SERVICES IN BUILDING PRIOR TO STARTING ANY WORK.
3. ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED A MINIMUM OF 12" ABOVE THE ROOF. ALL VENTS SHALL BE A MINIMUM OF 10'-0" FROM ANY OUTSIDE AIR INTAKE.
4. ALL WATER PIPING TO RUN ON WARM SIDE OF THE BUILDING INSULATION. PLUMBING CONTRACTOR TO COORDINATE WITH GENERAL CONTRACTOR.
5. THE PLUMBING CONTRACTOR TO COORDINATE ALL CUTTING OF ROOF, WALLS AND FLOORS WITH GENERAL CONTRACTOR PRIOR TO EXECUTING HIS WORK.
6. SEAL PENETRATIONS THRU FIRE-RATED WALLS WITH THE PROPER FIRE STOPPING MATERIAL TO MAINTAIN FIRE RATING.
7. PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES (MECHANICAL, FIRE PROTECTION, ELECTRICAL, ETC.).




## PLUMBING PLAN

SCALE: 1" = 16'

POINT ONE Design LTD.
Consulting Engineers


GREATER COLUMBUS CONVENTION CENTER

BBCO

326 SOUTH HIGH STREET
SUITE 500
COLUMBUS, OH 43215
P + 614.443.2924
INFO@BBCODESIGN.COM
BBCODESIGN.COM


| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE: PLUMBING PLAN

PROJECT TITLE: GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION

400 N. HIGH STREET COLUMBUS, OH 43215

SEAL

STATE OF OHIO
NATHANIEL A. MODLICH
E-82908
PROFESSIONAL ENGINEER

BBCO DESIGN PROJECT NUMBER: 2024-023

SHEET NUMBER: P-100

## PLUMBING EQUIPMENT SCHEDULE:

THERMOSTATIC TEMPERING VALVE (TTV):
SYMMONS "MAXLINE" MODEL 7-210-CK WITH A MINIMUM FLOW OF .5 GPM AND 2 GPM @ 10 PSI PRESSURE DIFFERENTIAL. NOTE: TEMPERING VALVE SHALL BE LISTED TO ASSE 1070 STANDARD. TYPICAL FOR ALL HAND SINKS.

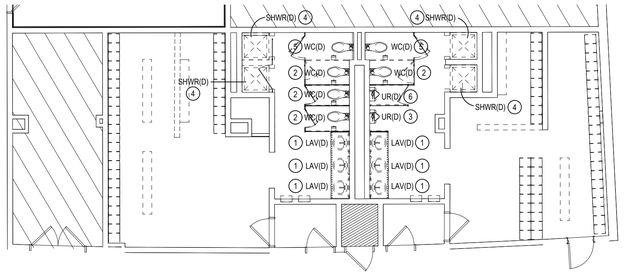
## PLUMBING FIXTURE SCHEDULE

| MARK | ITEM | FIXTURE | FAUCET/VALVE | MTG. HT. | CW | HW | TRAP | ACCESSORIES |
|---|---|---|---|---|---|---|---|---|
| WC | WATER CLOSET | AM. STD. 3451.528 | AM. STD. 6065.12 | 15" | 1" | -- | INTEG. | NOTE-1 |
| WC-A | WATER CLOSET (HANDICAP) | AM. STD. 3461.528 | AM. STD. 6065.121 | 16-1/2" | 1" | -- | INTEG. | NOTE-1 |
| LAV | LAVATORY | AM. STD. 0496.300 | AM. STD. 775B.105 | REFER TO ARCH. DWGS. | (2)1/2" | (2)1/2" | 1-1/2" | NOTE-2 |
| UR | URINAL | AM. STD. 6042.001EC | AM. STD. 6063.013 | REFER TO ARCH. DWGS. | 3/4" | -- | - | NOTE-4 |
| | | | | | | | | |

NOTE-1
FLOOR MOUNTED, VITREOUS CHINA, ELONGATED BOWL, SIPHON-JET FLUSHING ACTION, 1.28 GPF, SELECTRONIC FLUSH VALVE (BATTERY) "HANDS FREE" OPERATION. FURNISH WITH CHURCH #5500C OPEN FRONT SEAT LESS COVER, SUPPLY AND STOP. MOUNT LEVER ON WC OPPOSITE OF WALL.

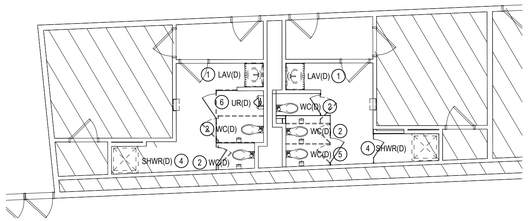
NOTE-2
VITREOUS CHINA UNDERMOUNT LAVATORY WITH FRONT OVERFLOW. FURNISH WITH GRID DRAIN, ELECTRONIC HAND WASHING FAUCET, PWRX 10-YEAR BATTERY PACK, SENSOR ACTIVATED, 0.5 GPM. PROVIDE COMPLETE WITH THERMOSTATIC TEMPERING VALVE (TTV), CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND CHROME SUPPLIES WITH WHEEL STOPS. INSULATE WASTE AND WATER LINES WITH TRUEBRO "HANDI-LAV-GUARD" INSULATION KIT WITH WHITE FINISH TO CONFORM TO ADA REQUIREMENTS.

NOTE-3
WALL MOUNTED, VITREOUS CHINA, ELONGATED 14" RIM FROM FINISHED WALL, 3/4" TOP SPUD, 0.5 GPF, SELECTRONIC FLUSH VALVE (BATTERY) "HANDS FREE" OPERATION, WASHOUT FLUSH ACTION AND THREADED 2" INSIDE OUTLET CONNECTION. FURNISH WITH WALL HANGER, WASTE DRAIN AND TRAP. VERIFY EXACT MOUNTING HEIGHT OF FIXTURE WITH ARCHITECTURAL DRAWINGS.




## ENLARGED PLUMBING DEMOLITION PLAN - LOCKER/RESTROOM

SCALE: 1/8" = 1'-0"

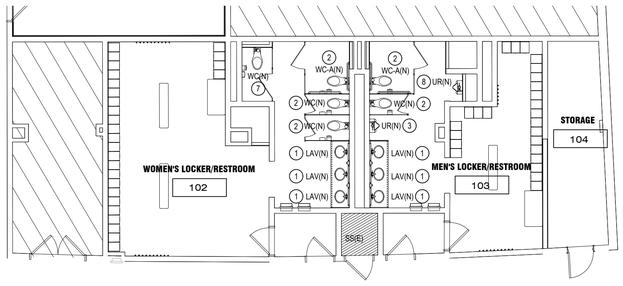



## ENLARGED PLUMBING DEMOLITION PLAN - RESTROOM

SCALE: 1/8" = 1'-0"

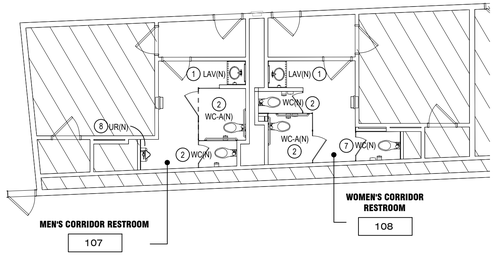
## PLUMBING CODED NOTES:

1. REMOVE EXISTING LAVATORY (LAV) COMPLETE. EXISTING SANITARY DRAIN AND WATER CONNECTIONS TO REMAIN. PC SHALL INSTALL NEW LAVATORY COMPLETE WITH TTV. EXTEND & CONNECT INTO EXISTING WATER AND SANITARY CONNECTIONS FROM REMOVED LAVATORY. REWORK EXISTING CONNECTIONS IF NECESSARY FOR NEW WORK. PC SHALL SALVAGE & RETURN TO OWNER.
2. REMOVE EXISTING WATER CLOSET (WC) COMPLETE. EXISTING SANITARY DRAIN AND WATER CONNECTIONS TO REMAIN. PC SHALL INSTALL NEW WATER CLOSET. EXTEND & CONNECT INTO EXISTING WATER AND SANITARY CONNECTIONS FROM REMOVED WATER CLOSET. REWORK EXISTING CONNECTIONS IF NECESSARY FOR NEW WORK. PC SHALL SALVAGE & RETURN TO OWNER.
3. REMOVE EXISTING URINAL (UR) COMPLETE. EXISTING SANITARY DRAIN AND WATER CONNECTIONS TO REMAIN. PC SHALL INSTALL NEW UR. EXTEND & CONNECT INTO EXISTING WATER AND SANITARY CONNECTIONS FROM REMOVED UR. REWORK EXISTING CONNECTIONS IF NECESSARY FOR NEW WORK. PC SHALL SALVAGE & RETURN TO OWNER.
4. REMOVE EXISTING SHOWER (SHWR) COMPLETE. REMOVE ALL EXPOSED PIPING COMPLETE. CAP WATER AND VENT LINES NEAR MAINS ABOVE CEILING. PLUG SANITARY SEWER WITH PERMANENT STOPPER. PC SHALL SALVAGE & RETURN TO OWNER.
5. REMOVE EXISTING WATER CLOSET (WC) COMPLETE. REMOVE ALL EXPOSED PIPING COMPLETE. CAP WATER AND VENT LINES NEAR MAIN ABOVE CEILING. CHIP FLOOR AROUND EXISTING WATER CLOSET FLANGE AND REMOVE. PLUG SANITARY SEWER WITH PERMANENT STOPPER. PC SHALL SALVAGE & RETURN TO OWNER.
6. REMOVE EXISTING URINAL (UR) COMPLETE. REMOVE ALL EXPOSED PIPING COMPLETE. CAP WATER AND VENT LINES NEAR MAINS ABOVE CEILING. PLUG SANITARY SEWER WITH PERMANENT STOPPER. PC SHALL SALVAGE & RETURN TO OWNER.
7. PC SHALL INSTALL NEW WATER CLOSET (WC). EXTEND & CONNECT INTO EXISTING WATER AND SANITARY CONNECTIONS FROM REMOVED SHOWER. REWORK EXISTING CONNECTIONS AS NECESSARY FOR NEW WORK. NOTE: REWORK OF EXISTING CONNECTIONS MAY REQUIRE UPSIZING THE SANITARY LINE TO ACCOMMODATE THE WATER CLOSET.
8. PC SHALL INSTALL NEW URINAL (UR). EXTEND & CONNECT INTO EXISTING WATER AND SANITARY CONNECTIONS FROM REMOVED SHOWER. REWORK EXISTING CONNECTIONS AS NECESSARY FOR NEW WORK. REWORK OF EXISTING CONNECTIONS MAY REQUIRE MODIFYING THE SANITARY LINE BELOW THE FLOOR TO ACCOMMODATE THE URINAL.




## ENLARGED PLUMBING PLAN - LOCKER/RESTROOM

SCALE: 1/8" = 1'-0"




## ENLARGED PLUMBING PLAN - RESTROOM

SCALE: 1/8" = 1'-0"

POINT ONE Design LTD.
Consulting Engineers


BBCO
326 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P = 614.443.2824
INFO@BBCODESIGN.COM
BBCODESIGN.COM


| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
ENLARGED PLUMBING PLANS

PROJECT TITLE
GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL


BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
P-101

## PLUMBING GENERAL

A. THE CONTRACTOR FOR THIS WORK IS REFERRED TO "INSTRUCTIONS TO BIDDERS" AND "GENERAL CONDITIONS" AND "SPECIAL CONDITIONS" AS PART OF THIS CONTRACT.

B. CONTRACTOR ALSO REFERRED TO ALL ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER OWNER DRAWINGS PERTAINING TO PROJECT. ALL OF ABOVE MENTIONED DRAWINGS, AS WELL AS THEIR RESPECTIVE SPECIFICATIONS, ARE A PART OF CONTRACT DOCUMENTS.

C. MECHANICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER, FURNISH ANY MATERIAL OR LABOR CALLED FOR IN ONE EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH.

D. INSTALL AND CONNECT EQUIPMENT, SERVICES AND MATERIALS IN ACCORDANCE WITH BEST ENGINEERING PRACTICE AND ACCORDANCE WITH VARIOUS MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS. FURNISH AND INSTALL COMPLETE AUXILIARY PIPING, VALVES, WATER SEALS, ELECTRICAL CONNECTIONS, ETC., RECOMMENDED BY MANUFACTURER OR REQUIRED FOR PROPER OPERATION.

E. FURNISH MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON DRAWINGS OR CALLED FOR IN SPECIFICATIONS BUT WHICH IS OBVIOUSLY A COMPONENT PART OF AND NECESSARY TO COMPLETE WORK OF SIMILAR CHARACTER.

F. THIS CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS OR LICENSES REQUIRED TO CARRY OUT THIS WORK. HE SHALL PAY FOR ALL CHARGES MADE BY INSPECTION. NOTE: ALL CONTRACTORS SHALL BE LICENSED IN THE COUNTY, CITY, ETC. TO PERFORM ALL NEW WORK.

G. THIS CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES AND ALL LOCAL LEGAL REQUIREMENTS. ALL LAWS, RULES AND REGULATIONS OF STATE AND LOCAL GOVERNING AGENCIES SHALL BE CONSIDERED A PART OF THESE SPECIFICATIONS AS FULLY AS IF WRITTEN HEREIN. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY CHANGES NECESSARY FOR CODE COMPLIANCE REGARDLESS OF THE METHOD OF INSTALLATION SHOWN ON THE DRAWINGS OR SPECIFIED.

H. THIS CONTRACTOR SHALL TAKE OUT PERMIT WITH PROVISIONS OF INSPECTION BEFORE STARTING ANY WORK. FEE FOR SAME SHALL BE PART OF THIS CONTRACT.

I. WHEN WORK IS COMPLETED, THIS CONTRACTOR SHALL FURNISH TO THE ARCHITECT CERTIFICATES OF APPROVAL FROM THE RESPONSIBLE INSPECTION AGENCIES BEFORE FINAL PAYMENT OF CONTRACT WILL BE ALLOWED.

J. TESTING OF ALL WORK UNDER THIS CONTRACT SHALL BE DONE BY THE CONTRACTOR IN THE PRESENCE OF THE OWNER OR HIS REPRESENTATIVE. ALL APPARATUS, EQUIPMENT, FIXTURES, ETC., SHALL FULLY MEET THE REQUIREMENTS OF THESE SPECIFICATIONS AND DRAWINGS.

K. THE BID SHALL CONTEMPLATE THE FURNISHING AND INSTALLING OF MATERIAL AND EQUIPMENT, EXACTLY AS SPECIFIED OR SHOWN AS SIMILAR BY THE CONTRACT DOCUMENTS. THE CONTRACTOR SUBMITTING ON SIMILAR EQUIPMENT WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH CHANGES IN ARCHITECTURAL, STRUCTURAL, MECHANICAL AND/OR ELECTRICAL TRADES DUE TO THE SIMILAR EQUIPMENT CHARACTERISTICS SUBMITTED. BIDS SUBMITTED SHALL LIST ANY ITEMS OF MATERIAL OR EQUIPMENT OTHER THAN SPECIFIED OR SIMILAR TO THE ONES CALLED FOR. SUBSTITUTIONS SHALL BE APPROVED SEVEN WORKING DAYS BEFORE BIDS ARE SUBMITTED; OTHERWISE, THIS CONTRACTOR SHALL COMPLY WITH SPECIFICATION REQUIREMENTS.

L. INSTALL FINAL APPLICATION OF LUBRICATION OIL, REFRIGERANT CHARGE, AND ALL OTHER SUPPLIES NECESSARY TO PLACE THE EQUIPMENT IN OPERATION.

M. CONTRACTOR SHALL GUARANTEE HIS WORK TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE.

N. ALL POWER WIRING OF MECHANICAL EQUIPMENT SHALL BE DONE BY THE ELECTRICAL CONTRACTOR. FURNISH THE ELECTRICAL CONTRACTOR WIRING DIAGRAMS FOR ALL ELECTRICALLY POWERED EQUIPMENT PROVIDED WITH THE CONTRACT WHICH SHALL INDICATE THE SERVICE REQUIRED AND ELECTRIC LOAD INVOLVED.

O. THIS CONTRACTOR SHALL VISIT SITE BEFORE SUBMITTING BID AND MAKE ALL NECESSARY OBSERVATIONS, MEASUREMENTS, AND NOTE CONDITIONS UNDER WHICH HIS WORK IS TO BE PERFORMED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR FAILURE TO DO SO. THIS CONTRACT INVOLVES REMODELING OF EXISTING BUILDING AND THEREFORE SHALL FIELD LOCATE EXISTING DUCTWORK, PIPING AND SEWERS BEFORE STARTING WORK.

P. SUBMIT SHOP DRAWINGS, CATALOG SHEETS FOR EQUIPMENT, FIXTURES, DUCTWORK LAYOUT, WIRING DIAGRAMS, ETC., IN PDF FORMAT TO THE ARCHITECT FOR REVIEW. EACH CONTRACTOR IS RESPONSIBLE TO DISTRIBUTE APPROVED SHOP DRAWINGS TO ALL OTHER TRADES AFFECTED BY HIS WORK, EQUIPMENT, ETC., FOR COORDINATION.

Q. ASSEMBLE AND SUBMIT TO THE ARCHITECT FOR SUBSEQUENT SUBMISSION TO THE OWNER, THREE (3) COMPLETE SETS OF OPERATIONS MANUALS AND MAINTENANCE REQUIREMENTS, COPY OF FIXTURE CUTS WITH MANUFACTURER'S NAME AND MODEL NUMBER, EQUIPMENT WARRANTIES, ETC., FOR EACH ITEM FURNISHED.

R. ALL CONTRACTORS MUST COORDINATE EACH PIECE OF EQUIPMENT WITH ALL OTHER TRADES (GENERAL CONTRACTOR, PLUMBING CONTRACTOR, MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR, ETC.) AFFECTED BY THAT PIECE OF EQUIPMENT (ROOF OPENINGS, WEIGHTS, POWER REQUIREMENTS, VOLTAGES, ETC.) PRIOR TO ORDERING EQUIPMENT AND AGAIN PRIOR TO INSTALLATION (ROOFTOP EQUIPMENT PRIOR TO LIFTING ONTO ROOF). NO EXTRA COMPENSATION WILL BE APPROVED IF COORDINATION IS NOT PERFORMED BY EACH RESPECTIVE CONTRACTOR AND SUBCONTRACTOR.

S. CONTRACTOR HAS EXAMINED THE CONTRACT DOCUMENTS AND REPRESENTS TO OWNER THAT THE CONTRACT DOCUMENTS ARE COMPLETE AND SUFFICIENT AND INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK FOR THE CONTRACT SUM. CONTRACTOR FURTHER REPRESENTS THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS BECOME FAMILIAR WITH THE ACCESS REQUIREMENTS AND OTHER CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND HAS RECEIVED ALL CLARIFICATIONS NEEDED BY CONTRACTOR TO ASSURE ITSELF THAT THE WORK CAN BE PERFORMED FOR THE CONTRACT SUM. IF THERE IS ANY INCONSISTENCY IN THE QUALITY OR QUANTITY OF WORK REQUIRED UNDER THE CONTRACT DOCUMENTS, OR SHOULD THE DRAWINGS AND SPECIFICATIONS APPEAR TO BE IN DISAGREEMENT WITH EACH OTHER RELATIVE TO THE QUALITY OR QUANTITY OF WORK REQUIRED, THE CONTRACTOR SHALL PROVIDE THE BETTER QUALITY AND/OR GREATER QUANTITY UNLESS WRITTEN INSTRUCTIONS ARE OTHERWISE FURNISHED TO CONTRACTOR BY OWNER.

T. DEVIATIONS FROM THESE CONSTRUCTION DOCUMENTS WITHOUT WRITTEN OWNER OR ARCHITECT CONSENT WILL BE AT RISK TO THE G.C. ANY EFFORT MADE BY THE ARCHITECT AND/OR ENGINEER TO MODIFY THE CONSTRUCTION DOCUMENTS OR LETTERS OF RESPONSIBILITY FOR APPROVAL BY INSPECTORS DUE TO WORK PERFORMED BY CONTRACTOR OTHER THAN THE ORIGINAL DESIGN WILL BE BILLED TO CLIENT WHO WILL BACK CHARGE TO G.C. AS A DEDUCT FROM THEIR PAYMENTS.

U. NOTE: THE MECHANICAL AND PLUMBING CADD FILES OF THE CONSTRUCTION DOCUMENTS ARE THE INTELLECTUAL PROPERTY OF POINT ONE DESIGN, LLC, AND WILL NOT BE AVAILABLE FOR THE CONSTRUCTION PHASE UNLESS MET WITH A REDUCTION IN COST TO THE OWNER AND/OR PURCHASED AT A NOMINAL RATE PER DRAWING (TO BE NEGOTIATED).

V. FIRESTOPPING
1. MANUFACTURERS: DOW CORNING CORP., HILTI CORP., 3M FIRE PROTECTION PRODUCTS, SPECIFIED TECHNOLOGY INC., OR METRAFLEX.
2. PRODUCT DESCRIPTION: DIFFERENT TYPES OF PRODUCTS BY MULTIPLE MANUFACTURERS ARE ACCEPTABLE AS REQUIRED TO MEET SPECIFIED SYSTEM DESCRIPTION AND PERFORMANCE REQUIREMENTS; PROVIDE ONLY ONE TYPE FOR EACH SIMILAR APPLICATION.
   A) SILICONE FIRESTOPPING ELASTOMERIC FIRESTOPPING: SINGLE OR MULTIPLE COMPONENT SILICONE
   B) ELASTOMERIC COMPOUND AND COMPATIBLE SILICONE SEALANT.
   C) FOAM FIRESTOPPING COMPOUNDS: SINGLE OR MULTIPLE COMPONENT FOAM COMPOUND.
   D) FORMULATED FIRESTOPPING COMPOUND OF INCOMBUSTIBLE FIBERS: FORMULATED COMPOUND MIXED WITH INCOMBUSTIBLE NON-ASBESTOS FIBERS.
   E) FIBER STUFFING AND SEALANT FIRESTOPPING: COMPOSITE OF MINERAL FIBER STUFFING INSULATION WITH SILICONE ELASTOMER FOR SMOKE STOPPING.
   F) MECHANICAL FIRESTOPPING DEVICE WITH FILLERS: MECHANICAL DEVICE WITH INCOMBUSTIBLE FILLERS AND SILICONE ELASTOMER, COVERED WITH SHEET STAINLESS STEEL JACKET, JOINED WITH COLLARS. PENETRATION SEALED WITH FLANGED STOPS.
   G) INTUMESCENT FIRESTOPPING: INTUMESCENT PUTTY COMPOUND WHICH EXPANDS ON EXPOSURE TO SURFACE HEAT GAIN.
   H) FIRESTOP PILLOWS: FORMED MINERAL FIBER PILLOWS.

## PLUMBING SPECIFICATIONS

A. CONNECT SEWER, STORM, GAS, VENTS AND WATER LINES AS INDICATED ON THE PLUMBING PLANS. DETERMINE THE EXACT LOCATION OF ALL EXISTING SERVICE CONNECTIONS BEFORE STARTING THE INSTALLATION OF ANY WORK. COORDINATE ALL WORK WITH OTHER TRADES, THE GENERAL CONTRACTOR AND THE OWNER'S FIELD REPRESENTATIVE.

B. PLUMBING WORK SHALL CONFORM TO GOOD ENGINEERING PRACTICE AND BE IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES AND OWNER'S REQUIREMENTS. PLUMBING CONTRACTOR SHALL BE LICENSED IN THIS AREA TO PERFORM THE NEW WORK.

C. SANITARY SEWERS, VENTS AND STORM INSIDE OF THE BUILDING SHALL BE SERVICE WEIGHT, CAST IRON, NO HUB WITH COMPRESSION TYPE NEOPRENE JOINTS. ABS OR PVC SCHEDULE 40 PIPING SHALL BE AS APPROVED BY THE LOCAL AUTHORITY AND OWNER IN CONCEALED (UNDERFLOOR) LOCATIONS.

D. ALL COLD AND HOT WATER LINES SHALL BE TYPE 'L" COPPER WITH 98-2 TIN ANTIMONY (NO LEAD) SOLDER.

E. GAS PIPING ABOVE GROUND SHALL BE SCHEDULE 40 BLACK STEEL WITH 125 POUND BLACK MALLEABLE IRON SCREWED FITTINGS. GAS PIPING COMPOUND AT JOINTS SHALL BE PER NFPA BULLETIN #54 AND LOCAL CODES. GAS VALVES SHALL BE UL LISTED FOR GAS SERVICE SUCH AS DEZURICK MODEL S-425 FOR 2" AND LESS.

F. INSULATE ALL HOT, RETURN HOT AND COLD WATER PIPING (BELOW OR ABOVE FLOOR SLAB) WITH NONCOMBUSTIBLE ARMSTRONG "ARMAFLEX" TYPE II FOAM INSULATION WITH SEALED JOINTS. PIPING LOCATED ABOVE FLOOR SLAB CAN ALSO BE INSULATED WITH OWENS CORNING FIBERGLASS ASJ/SSL-II HEAVY DENSITY PIPE INSULATION WITH VAPOR BARRIER AND SEALED JOINTS (NOTE: FIBERGLASS INSULATION IS NOT ACCEPTABLE FOR BELOW FLOOR SLAB). INSULATION THICKNESS SHALL BE AS FOLLOWS:

| | |
|---|---|
| • COLD WATER PIPING UP TO 1-1/4" | 1/2" THICKNESS |
| • COLD WATER PIPING 1-1/2" AND OVER | 1" THICKNESS |
| • HOT WATER PIPING UP TO 1-1/4" | 1" THICKNESS |
| • HOT WATER PIPING 1-1/2" AND OVER | 1-1/2" THICKNESS |
| • RETURN HOT WATER PIPING UP TO 1-1/4" | 1" THICKNESS |
| • RETURN HOT WATER PIPING 1-1/2" AND OVER | 1-1/2" THICKNESS |

ALL PIPING DIRECTLY BELOW ROOF DECK IN CEILING SPACE TO BE INSULATED WITH NEXT SIZE PIPE THICKNESS.

G. PLUMBING CONTRACTOR SHALL INSTALL SHOCK ABSORBERS IN PIPING SYSTEM TO PREVENT NOISE AND DAMAGE DUE TO WATER HAMMER, WHERE NECESSARY. BRANCH PIPING SHALL HAVE ACCESSIBLE SERVICE VALVES. PROVIDE SHUT-OFF VALVES IN THE SUPPLY PIPING TO EVERY FIXTURE.

H. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL HERSEY MODEL FDC-2" BRONZE BACKFLOW PREVENTER COMPLETE WITH DUAL CHECK VALVE DEVICE WITH REPLACEABLE CORROSION FREE CHECKS, MAXIMUM FLOW 60 GPM, MAXIMUM PRESSURE 175 PSI, TEMPERATURE RANGE FROM 35 DEGREES TO 145 DEGREES F AND THE PRESSURE DROP SHALL NOT EXCEED 6 PSI. WATER METER SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL WATER COMPANY REQUIREMENTS. REMOTE READOUT SHALL BE INSTALLED IN A LOCATION AS DIRECTED BY WATER COMPANY.

I. PLUMBING CONTRACTOR SHALL PROVIDE 1 SET OF 'AS-BUILT' DRAWINGS TO THE OWNER.

J. CHLORINATION OF WATER PIPING: THE DOMESTIC WATER PIPING SYSTEM SHALL BE FLUSHED WITH CLEAN POTABLE WATER UNTIL CONTAMINATED WATER DOES NOT APPEAR AT THE OUTLET AND SHALL BE FILLED WITH A SOLUTION CONTAINING 50 PARTS PER MILLION OF CHLORINE AND ALLOWED TO STAND FOR A PERIOD (AS PRESCRIBED BY THE CODE) BEFORE FLUSHING. THE SYSTEM SHALL BE FLUSHED COMPLETELY WITH CLEAR WATER UNTIL ALL RESIDUAL CHLORINE CONTENT IS REMOVED. CHLORINATION SHALL BE PERFORMED AFTER ALL PIPING AND FINAL CONNECTIONS AND PRESSURE TESTING HAS BEEN COMPLETED. IF, AFTER THE PIPES HAVE BEEN CHLORINATED, THE PIPES HAVE TO BE DISMANTLED, THE CHLORINATION PROCESS MUST BE REPEATED.

K. LABOR SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY MECHANICS SKILLED IN THEIR PARTICULAR TRADE. PIPE AND EQUIPMENT SHALL BE INSTALLED SQUARE AND PLUMB AND ACCESSIBLE FOR PROPER OPERATION AND SERVICE.

L. CUTTING OR PATCHING NECESSARY TO PERMIT THE INSTALLATION OF ANY WORK UNDER THIS CONTRACT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.

M. PROVIDE ANY NECESSARY EXCAVATING AND BACKFILLING FOR THE INSTALLATION OF WORK SPECIFIED IN THIS DIVISION. AFTER THE PIPE HAS BEEN INSTALLED, TESTED AND APPROVED, THE TRENCHES SHALL BE BACKFILLED AND WELL TAMPED TO GRADE WITH APPROVED MATERIAL.

N. PIPING

1. ALL PIPING SHALL BE RUN CONCEALED EXCEPT WHERE SHOWN OTHERWISE ON DRAWINGS.
2. VALVES, TRAPS, CLEANOUTS AND OTHER APPARATUS SHALL BE INSTALLED IN AN EASILY ACCESSIBLE LOCATION.
3. SOIL WASTE, STORM, VENT, OFFSETS AND HOUSE DRAINS SHALL BE INSTALLED WITH A MINIMUM UNIFORM GRADE OF 1/8" TO THE FOOT FOR 3" THRU 6" PIPE AND 1/4" TO THE FOOT FOR 2-1/2" AND LESS.
4. HOT AND COLD WATER LINES SHALL BE AT LEAST 12" APART WHERE PIPING IS PARALLEL.
5. ESCUTCHEON PLATES SHALL BE PROVIDED WHERE ALL PIPE PASSES THROUGH A FINISHED WALL.
6. CONNECTIONS FROM STEEL TO COPPER PIPING SHALL BE MADE WITH DIELECTRIC TYPE UNIONS, EPCO OR OTHER APPROVED TYPE.

O. COPPER PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 7'-0" AND AT EACH CHANGE IN HORIZONTALS OF VERTICAL. HANGERS SHALL SUPPORT PIPING AT PIPE WITH INSULATION OVER TOP OR WITH METAL SLEEVE TO PROTECT INSULATION FROM BEING CRUSHED.

1. HANGER SHIELD: HANGERS FOR PIPING SHALL BE PLACED AROUND THE OUTSIDE OF THE INSULATION AND PROTECTIVE SHIELDS SHALL BE INSTALLED AT EVERY HANGER LOCATION. SHIELD SHALL NOT BE LESS THAN 2/3 THE CIRCUMFERENCE OF THE INSULATION AND WHERE SPEED CLIPS ARE USED, THE METAL SHIELD SHALL BE CONTINUOUS AROUND THE CIRCUMFERENCE OF THE PIPE INSULATION. SHIELDS SHALL BE FABRICATED OF THE FOLLOWING GAUGES:

| NOMINAL PIPE SIZE | METAL GAUGE |
|---|---|
| 0" - 1-1/2" | 20 |
| 2" - 3" | 16 |
| 3-1/2" AND UP | 14 |

P. CLEAN OUT ALL LINES, ADJUST ALL VALVES AND CLEAN ALL PLUMBING FIXTURES AND EQUIPMENT. ROUT OUT ALL EXISTING SANITARY SEWERS BEING TIED INTO TO INSURE THE PROPER FLOW. PLUMBING CONTRACTOR TO FURNISH AND INSTALL CLEAR SILICONE CAULK AROUND PERIMETER OF PLUMBING FIXTURES.

Q. AFTER THE PLUMBING PIPING HAS BEEN INSTALLED, INSPECTED AND APPROVED, THE PIPING SYSTEM SHALL BE FLUSHED TO REMOVE ANY FOREIGN MATTER FROM THE PIPES.

R. ALL PARTS OF THE PLUMBING FIXTURES AND ASSOCIATED EQUIPMENT SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE GUARANTEE PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE BUILDING.

S. NOTE: ALL PIPE INSULATION (HOT AND COLD PIPE INSULATION, ROOF DRAIN SUMPS, STORM LEADERS AND DOWNSPOUTS) SHALL CONFORM TO THE FIRE AND SMOKE RATES BELOW:

FLAME SPREAD - 25 OR LESS
SMOKE DEVELOPED - 50 OR LESS

T. GENERAL REQUIREMENTS OF PLUMBING FIXTURES AND TRIM:

1. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL STOPS, TRAPS, ESCUTCHEONS, CONNECTIONS, ETC., AS NECESSARY FOR A COMPLETE INSTALLATION.
2. TERMINATE ALL WATER ROUGH-INS WITH SHUT-OFF VALVES BEFORE CONNECTING EQUIPMENT AND FIXTURES.
3. PURGE ALL WATER LINES BEFORE MAKING FINAL CONNECTIONS.
4. FLASH AND COUNTERFLASH ALL OPENINGS THRU ROOFS WITH APPROVED ROOFING MATERIALS BUILT A MINIMUM OF 10" INTO THE ROOFING IN ALL DIRECTIONS FROM THE OUTSIDE OF THE PIPE.
5. WATER AND WASTE LINES TO BE ROUGHED INSIDE WALLS: EXTEND WATER AND WASTE LINES OUT OF WALLS TO EQUIPMENT AND FIXTURES.
6. WHERE THE WORD "FURNISH" OR "INSTALL" APPEARS FOR THE PLUMBING CONTRACT, IT SHALL BE INTERPRETED TO MEAN THE PLUMBING CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SUPPLIES NECESSARY TO INSTALL AND PLACE IN OPERATION CONDITION.
7. GENERAL WATER PRESSURE SHALL NOT EXCEED 60 PSI. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL PRESSURE REDUCING VALVES FOR WATER AS REQUIRED.

U. PLUMBING FIXTURES SHALL BE AS INDICATED ON THE DRAWINGS.

## PLUMBING SPECIFICATIONS

V. EXCAVATION AND BACKFILL

1. PERFORM ALL EXCAVATION AND BACKFILL NECESSARY FOR INSTALLATION OF WORK.
2. REFER TO DIVISION 2 - SITEWORK FOR ADDITIONAL SPECIFIC ITEMS OF EXCAVATION AND BACKFILL REQUIRED UNDER THE DIVISION.
3. ALL EXCAVATED MATERIALS IN BUILDING INTERIORS, SHALL BE LOADED ON TRUCKS IMMEDIATELY UPON DIGGING AND REMOVED FROM THE BUILDING. THE MATERIAL MAY BE DEPOSITED ON SITE IF AGREED TO BY THE GENERAL CONTRACTOR FOR HIS USE. IF NOT REQUIRED FOR SITE FILL, THEN EXCAVATED MATERIALS MUST BE REMOVED FROM THE SITE IMMEDIATELY.
4. EXISTING SUB-GRADE, BOTH INTERIOR AND EXTERIOR SHALL BE RESTORED AS A PART OF THIS WORK, UPON INSTALLATION OF UNDERGROUND WORK.
5. EXCAVATION FOR TRENCHES WITHIN 3 FT. OF THE EDGE OF ANY FOOTING AND BELOW THE ELEVATION OF BOTTOM OF FOOTING, SHALL BE BACKFILLED WITH 3000 LB. CONCRETE MIX TO THE LEVEL OF FOOTING.
6. SHORE OR SHEET PILE TRENCHES AS NECESSARY TO PREVENT CAVING. DO NOT ENDANGER WORK OF OTHER CONTRACTORS OR EXISTING STRUCTURES.
7. TRENCHES FOR UNDERGROUND SEWERS, INTERIOR AND EXTERIOR, SHALL BE EXCAVATED 4" BELOW GRADE AND DEPTH REQUIRED. PLACE 4" LAYER OF PEA GRAVEL (OR BANK RUN SAND) AND INSTALL PIPE. BACKFILL WITH PEA GRAVEL TO 12" ABOVE PIPE.
8. BACKFILL TO FINISH SUB-GRADE ON THE INTERIOR OF BUILDING, UNDER ALL PAVED AREAS AND SIDEWALKS WITH BANK-RUN GRAVEL. MECHANICALLY COMPACT IN LAYERS NOT TO EXCEED 8".
9. BACKFILL TO FINISH SUB-GRADE FOR EXTERIOR TRENCHES NOT UNDER PAVED AREAS OR SIDEWALK WITH SAND OR SELECT MATERIAL EXCAVATED TO 6" ABOVE FINISH SUB-GRADE.
10. PROVIDE, OPERATE PUMPING EQUIPMENT AS NECESSARY TO KEEP TRENCHES, OTHER EXCAVATIONS FREE OF WATER.
11. WHEN EXCAVATION IS NECESSARY IN AN EXISTING LAWN, RESOD TO MATCH EXISTING LAWN, AS APPROVED.
12. WHERE TRENCHES CROSS ROADS, WALKS OR PUBLIC THOROUGHFARES, PROVIDE SUITABLE BARRICADES AND BRIDGES ADEQUATELY PROTECTED BY SIGNS OR RED FLAGS DURING DAY AND LIGHTS AT NIGHT.
13. REPAVE ALL STREETS OR SIDEWALKS DISTURBED AT CONTRACTOR'S EXPENSE, TO SATISFACTION OF ARCHITECT AND AUTHORITIES HAVING JURISDICTION.
14. WHERE BUILDING SERVICE LINES ENTER OR LEAVE BUILDING SUCH AS WATER, SEWER, AND ARE INSTALLED ON FILLED EARTH, PROVIDE CONTINUOUS SUPPORT ON A REINFORCED CONCRETE BEAM FURNISHED AND INSTALLED AS A PART OF THIS WORK. SUPPORT BEAM ON BUILDING END WITH VERTICAL SUPPORT DOWN TO FOUNDATION FOOTING AND ON UNDISTURBED EARTH AT OTHER END.

W. DEWATERING:

1. PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.
2. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. PROVIDE AND MAINTAIN PUMPS, WELL POINTS, SUMPS, SUCTION AND DISCHARGE LINES, AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS.
3. ESTABLISH AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS TO CONVEY RAIN WATER AND WATER REMOVED FROM EXCAVATIONS TO COLLECTING OR RUNOFF AREAS. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

X. KITCHEN EQUIPMENT

1. IN GENERAL, KITCHEN SINKS AND KITCHEN EQUIPMENT, ETC., ARE TO BE PROVIDED UNDER ANOTHER DIVISION OF THE SPECIFICATIONS OR BY THE OWNER. INCLUDED WITH THESE FIXTURES ARE THE SUPPLY FITTINGS AND TAILPIECES.
   A) THE PLUMBING CONTRACTOR SHALL PROVIDE TRAPS, STOPS, SUPPLY AND WASTE FITTINGS AND SHALL CONNECT SUCH FIXTURES TO THE PLUMBING SYSTEM.
   B) THE PLUMBING CONTRACTOR SHALL CAREFULLY COORDINATE HIS WORK WITH THE OTHER CONTRACTORS FURNISHING SUCH FIXTURES AND EQUIPMENT AND SHALL ROUGH-IN IN ACCORDANCE WITH THEIR WRITTEN INSTRUCTIONS. NO ROUGHING- IN SHALL PROCEED WITHOUT SUCH WRITTEN DIRECTION.
   C) PROVIDE SUPPLIES AND STOPS FOR EACH FIXTURE AND EQUIPMENT ITEM. STOPS SHALL BE KOHLER K-7664-OR K-7670, SIZE AND TYPE TO BEST SUIT THE APPLICATION. SUPPLIES TO BE FLEXIBLE CHROME PLATED, GENERALLY. PROVIDE KOHLER K-9022 CAST BRASS CHROME PLATED WITH PLUG WHEREVER POSSIBLE, EXCEPT FOR LARGER SIZES AND WHERE SPECIAL TRAPS ARE REQUIRED OR HEREINAFTER SPECIFIED. MULTIPLE COMPARTMENT SINKS SHALL BE INDIVIDUALLY TRAPPED.
   D) ALL ROUGH-IN SHOULD BE STUBBED IN WALLS WHEREVER POSSIBLE.
   E) ALL UNINSULATED WATER PIPING, VALVES AND FITTINGS FOR EQUIPMENT WHICH IS FREESTANDING OF OPEN TUBULAR CONSTRUCTION OR EXPOSED TO PUBLIC VIEW, SHALL BE CHROME PLATED. ALL OTHER UNINSULATED PIPING AND FITTINGS SHALL BE FINISHED WITH HIGH TEMPERATURE ALUMINUM PAINT.
   F) PROVIDE SERVICE VALVES SIX INCHES ABOVE FINISHED FLOOR OR OUT OF WALL ON WATER CONNECTIONS TO EACH PIECE OF EQUIPMENT, WITH C.P. WALL ESCUTCHEON ON ALL SERVICE LINES, INCLUDING RESTROOMS (WATER AND WASTE).
   H) PROVIDE VACUUM BREAKERS ON WATER CONNECTIONS TO EQUIPMENT WHERE REQUIRED BY CODE AND NOT FURNISHED AS PART OF THE EQUIPMENT.
   I) INSTALL SINK TRIM AS SPECIFIED.
   J) THE CONTRACTOR SHOULD RUN ALL WASTE, VENT AND WATER PIPING CONCEALED WHEREVER POSSIBLE. ALL HORIZONTAL PIPING LINES AS EXTENDED AND CONNECTED TO EQUIPMENT SHOULD BE RUN LESS THAN SIX INCHES ABOVE FLOOR.

DEMOLITION NOTES:

1. PLUMBING CONTRACTOR SHALL REMOVE ALL EXPOSED SANITARY, VENT, WATER PIPING, ETC., NOT REUSED FOR THE NEW SPACE LAYOUT.
2. PLUMBING CONTRACTOR SHALL PLUG AND ABANDON ALL EXISTING FLOOR DRAINS, TRENCH DRAINS, ETC., NOT REUSED FOR THE NEW SPACE LAYOUT.
3. PLUMBING CONTRACTOR SHALL REMOVE ANY AND ALL EXISTING PLUMBING FIXTURES COMPLETE WITH WASTE, VENTS AND WATER LINES NOT REUSED FOR THE NEW SPACE LAYOUT.
4. PLUMBING CONTRACTOR SHALL DISCONNECT AND REMOVE ANY AND ALL GAS PIPING FROM MECHANICAL EQUIPMENT TO EXISTING GAS METER, NOT REUSED FOR THE NEW SPACE LAYOUT.
5. SEE ARCHITECTURAL DEMOLITION DRAWINGS FOR ADDITIONAL DETAILS AND INFORMATION.

POINT ONE Design LTD.
Consulting Engineers

GREATER COLUMBUS CONVENTION CENTER

BBCO
326 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P = 614.643.2824
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
PLUMBING SPECIFICATIONS

PROJECT TITLE
GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

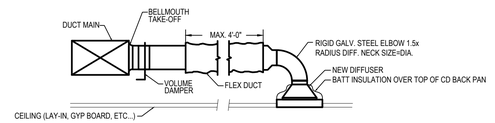
SEAL


BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
P-201

## GRILLE, REGISTER AND DIFFUSER SCHEDULE

| TAG | MANUFACTURER & MODEL NUMBER | CFM | AIR PATTERN | NECK SIZE | FRAME STYLE | DAMPER | PANEL SIZE | MAXIMUM NC LEVEL | FINISH | MATERIAL | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CD A | PRICE SPD | AS NOTED | AS SHOWN | AS NOTED | LAY-IN CEILING | OPPOSED BLADE | 24x24 | 30 | WHITE | STEEL | |
| RG A | PRICE 80 | AS NOTED | RETURN | AS NOTED | LAY-IN CEILING | - | 24x12 | 30 | WHITE | ALUMINUM | |
| EG A | PRICE 535 | AS NOTED | EXHAUST | AS NOTED | SURFACE MOUNTED | - | NECK SIZE + 1-3/4" | 30 | WHITE | STEEL | |
| ALTERNATE MANUFACTURERS: TITUS, KRUEGER | | | | | | | | | | | |







SUPPLY DUCT DETAIL
NO SCALE

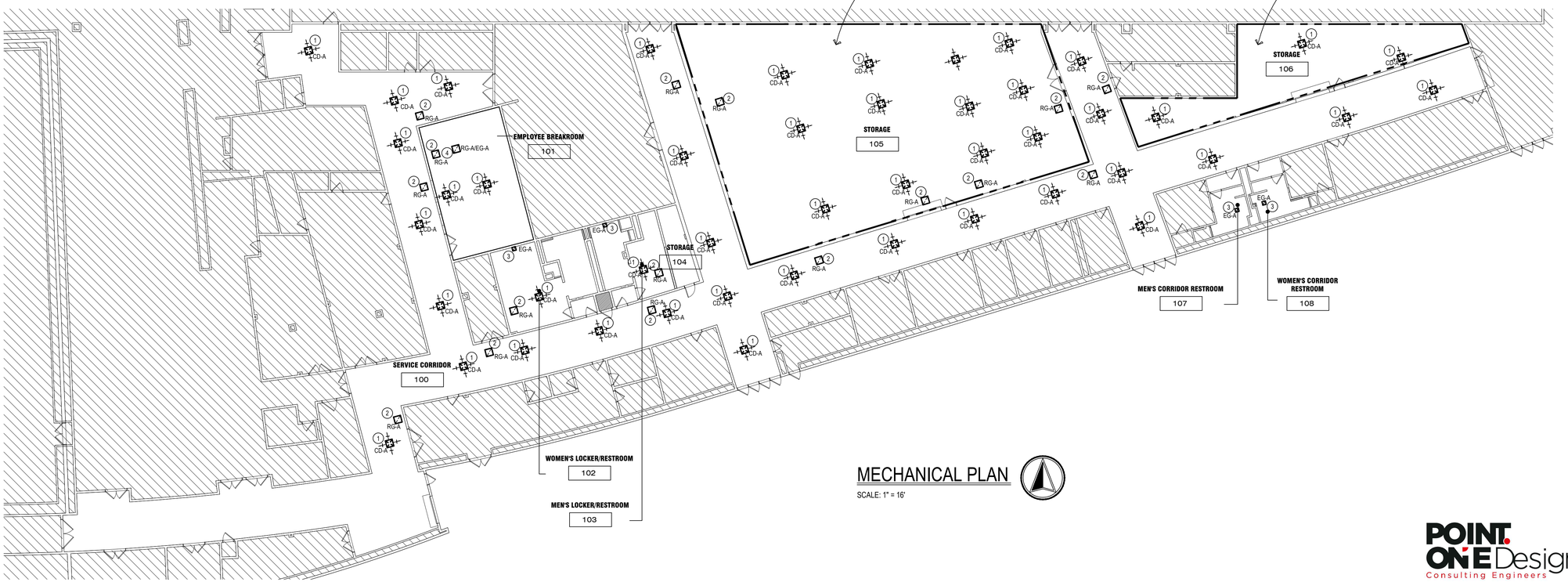
### MECHANICAL CODED NOTES:

1. EXISTING CEILING SUPPLY DIFFUSER IS TO BE REMOVED AND REPLACED "ONE - FOR - ONE" IN SAME LOCATION. FIELD VERIFY EXISTING DIFFUSER NECK SIZE AND REPLACE WITH EQUAL SIZE. EXISTING AIRFLOW BALANCE IS TO BE MAINTAINED. EXTEND/REWORK BRANCH DUCT AS NECESSARY TO CONNECT TO REPLACEMENT DIFFUSER.
2. EXISTING CEILING RETURN DIFFUSER IS TO BE REMOVED AND REPLACED "ONE - FOR - ONE" IN SAME LOCATION. FIELD VERIFY EXISTING DIFFUSER NECK SIZE AND REPLACE WITH EQUAL SIZE. EXISTING AIRFLOW BALANCE IS TO BE MAINTAINED. EXTEND/REWORK BRANCH DUCT AS NECESSARY TO CONNECT TO REPLACEMENT DIFFUSER.
3. EXISTING CEILING EXHAUST GRILL IS TO BE REMOVED AND REPLACED "ONE - FOR - ONE" IN SAME LOCATION. FIELD VERIFY EXISTING DIFFUSER NECK SIZE AND REPLACE WITH EQUAL SIZE. EXISTING AIRFLOW BALANCE IS TO BE MAINTAINED. EXTEND/REWORK BRANCH DUCT AS NECESSARY TO CONNECT TO REPLACEMENT DIFFUSER.
4. EXISTING CEILING EXHAUST/RETURN GRILL IS TO BE REMOVED AND REPLACED "ONE - FOR - ONE" IN SAME LOCATION. FIELD VERIFY EXISTING DIFFUSER NECK SIZE AND REPLACE WITH EQUAL SIZE. EXISTING AIRFLOW BALANCE IS TO BE MAINTAINED. EXTEND/REWORK BRANCH DUCT AS NECESSARY TO CONNECT TO REPLACEMENT DIFFUSER.

NOTE:
DIFFUSER LOCATIONS ARE BASED FROM EXISTING DRAWINGS AND LIMITED FIELD OBSERVATIONS. FIELD OBSERVATIONS HAVE DETERMINED THE RESTROOM AND CORRIDOR CEILINGS HAVE BEEN MODERATELY REWORKED SINCE THE ORIGINAL DRAWINGS, AND SOME RETURN/EXHAUST/SUPPLY AIR DEVICES MAY NOT BE IN EXACT LOCATION AS SHOWN ON THESE PLANS. CONTRACTOR IS TO FIELD VERIFY EXACT LOCATIONS TO DETERMINE FINAL SIZES AND QUANTITIES.

ALTERNATE 01:
ALL MECHANICAL WORK SHOWN IN STORAGE 105 AND STORAGE 106 IS TO BE BID UNDER THE SCOPE OF WORK FOR ALTERNATE 01.

ALTERNATE 01:
ALL MECHANICAL WORK SHOWN IN STORAGE 105 AND STORAGE 106 IS TO BE BID UNDER THE SCOPE OF WORK FOR ALTERNATE 01.




MECHANICAL PLAN
SCALE: 1" = 16'

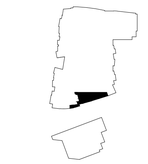
POINT ONE Design LTD.
Consulting Engineers

GREATER COLUMBUS CONVENTION CENTER


BBCO
326 SOUTH HIGH STREET
SUITE 300
COLUMBUS, OH 43215
P = 614.443.2924
INFO@BBCODESIGN.COM
BBCODESIGN.COM


| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

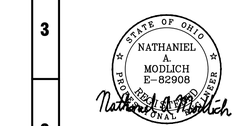
KEY PLAN



SHEET TITLE
MECHANICAL PLAN

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL




BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
M-100

## MECHANICAL GENERAL

A. THE CONTRACTOR FOR THIS WORK IS REFERRED TO "INSTRUCTIONS TO BIDDERS" AND "GENERAL CONDITIONS" AND "SPECIAL CONDITIONS" AS PART OF THIS CONTRACT.

B. CONTRACTOR ALSO REFERRED TO ALL ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER OWNER DRAWINGS PERTAINING TO PROJECT. ALL OF ABOVE MENTIONED DRAWINGS, AS WELL AS THEIR RESPECTIVE SPECIFICATIONS, ARE A PART OF CONTRACT DOCUMENTS.

C. MECHANICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER, FURNISH ANY MATERIAL OR LABOR CALLED FOR IN ONE EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH.

D. INSTALL AND CONNECT EQUIPMENT, SERVICES AND MATERIALS IN ACCORDANCE WITH BEST ENGINEERING PRACTICE AND ACCORDANCE WITH VARIOUS MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS. FURNISH AND INSTALL COMPLETE AUXILIARY PIPING, VALVES, WATER SEALS, ELECTRICAL CONNECTIONS, ETC., RECOMMENDED BY MANUFACTURER OR REQUIRED FOR PROPER OPERATION.

E. FURNISH MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON DRAWINGS OR CALLED FOR IN SPECIFICATIONS BUT WHICH IS OBVIOUSLY A COMPONENT PART OF AND NECESSARY TO COMPLETE WORK OF SIMILAR CHARACTER.

F. THIS CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS OR LICENSES REQUIRED TO CARRY OUT THIS WORK. HE SHALL PAY FOR ALL CHARGES MADE BY INSPECTION. NOTE: ALL CONTRACTORS SHALL BE LICENSED IN THE COUNTY, CITY, ETC. TO PERFORM ALL NEW WORK.

G. THIS CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES AND ALL LOCAL LEGAL REQUIREMENTS. ALL LAWS, RULES AND REGULATIONS OF STATE AND LOCAL GOVERNING AGENCIES SHALL BE CONSIDERED A PART OF THESE SPECIFICATIONS AS FULLY AS IF WRITTEN HEREIN. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY CHANGES NECESSARY FOR CODE COMPLIANCE REGARDLESS OF THE METHOD OF INSTALLATION SHOWN ON THE DRAWINGS OR SPECIFIED.

H. THIS CONTRACTOR SHALL TAKE OUT PERMIT WITH PROVISIONS OF INSPECTION BEFORE STARTING ANY WORK. FEE FOR SAME SHALL BE PART OF THIS CONTRACT.

I. WHEN WORK IS COMPLETED, THIS CONTRACTOR SHALL FURNISH TO THE ARCHITECT CERTIFICATES OF APPROVAL FROM THE RESPONSIBLE INSPECTION AGENCIES BEFORE FINAL PAYMENT OF CONTRACT WILL BE ALLOWED.

J. TESTING OF ALL WORK UNDER THIS CONTRACT SHALL BE DONE BY THE CONTRACTOR IN THE PRESENCE OF THE OWNER OR HIS REPRESENTATIVE. ALL APPARATUS, EQUIPMENT, FIXTURES, ETC., SHALL FULLY MEET THE REQUIREMENTS OF THESE SPECIFICATIONS AND DRAWINGS.

K. THE BID SHALL CONTEMPLATE THE FURNISHING AND INSTALLING OF MATERIAL AND EQUIPMENT, EXACTLY AS SPECIFIED OR SHOWN AS SIMILAR BY THE CONTRACT DOCUMENTS. THE CONTRACTOR SUBMITTING ON SIMILAR EQUIPMENT WILL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH CHANGES IN ARCHITECTURAL, STRUCTURAL, MECHANICAL AND/OR ELECTRICAL TRADES DUE TO THE SIMILAR EQUIPMENT CHARACTERISTICS SUBMITTED. BIDS SUBMITTED SHALL LIST ANY ITEMS OF MATERIAL OR EQUIPMENT OTHER THAN SPECIFIED OR SIMILAR TO THE ONES CALLED FOR. SUBSTITUTIONS SHALL BE APPROVED SEVEN WORKING DAYS BEFORE BIDS ARE SUBMITTED; OTHERWISE, THIS CONTRACTOR SHALL COMPLY WITH SPECIFICATION REQUIREMENTS.

L. INSTALL FINAL APPLICATION OF LUBRICATION OIL, REFRIGERANT CHARGE, AND ALL OTHER SUPPLIES NECESSARY TO PLACE THE EQUIPMENT IN OPERATION.

M. CONTRACTOR SHALL GUARANTEE HIS WORK TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE.

N. ALL POWER WIRING OF MECHANICAL EQUIPMENT SHALL BE DONE BY THE ELECTRICAL CONTRACTOR. FURNISH THE ELECTRICAL CONTRACTOR WIRING DIAGRAMS FOR ALL ELECTRICALLY POWERED EQUIPMENT PROVIDED WITH THE CONTRACT WHICH SHALL INDICATE THE SERVICE REQUIRED AND ELECTRIC LOAD INVOLVED.

O. THIS CONTRACTOR SHALL VISIT SITE BEFORE SUBMITTING BID AND MAKE ALL NECESSARY OBSERVATIONS, MEASUREMENTS, AND NOTE CONDITIONS UNDER WHICH HIS WORK IS TO BE PERFORMED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR FAILURE TO DO SO.

P. SUBMIT SHOP DRAWINGS, CATALOG SHEETS FOR EQUIPMENT, FIXTURES, DUCTWORK LAYOUT, WIRING DIAGRAMS, ETC., IN PDF FORMAT TO THE ARCHITECT FOR REVIEW. EACH CONTRACTOR IS RESPONSIBLE TO DISTRIBUTE APPROVED SHOP DRAWINGS TO ALL OTHER TRADES AFFECTED BY HIS WORK, EQUIPMENT, ETC., FOR COORDINATION.

Q. ASSEMBLE AND SUBMIT TO THE ARCHITECT FOR SUBSEQUENT SUBMISSION TO THE OWNER, THREE (3) COMPLETE SETS OF OPERATIONS MANUALS AND MAINTENANCE REQUIREMENTS, COPY OF FIXTURE CUTS WITH MANUFACTURER'S NAME AND MODEL NUMBER, EQUIPMENT WARRANTIES, ETC., FOR EACH ITEM FURNISHED.

R. ALL CONTRACTORS MUST COORDINATE EACH PIECE OF EQUIPMENT WITH ALL OTHER TRADES (GENERAL CONTRACTOR, PLUMBING CONTRACTOR, MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR, ETC.) AFFECTED BY THAT PIECE OF EQUIPMENT (ROOF OPENINGS, WEIGHTS, POWER REQUIREMENTS, VOLTAGES, ETC.) PRIOR TO ORDERING EQUIPMENT AND AGAIN PRIOR TO INSTALLATION (ROOFTOP EQUIPMENT PRIOR TO LIFTING ONTO ROOF). NO EXTRA COMPENSATION WILL BE APPROVED IF COORDINATION IS NOT PERFORMED BY EACH RESPECTIVE CONTRACTOR AND SUBCONTRACTOR.

S. CONTRACTOR HAS EXAMINED THE CONTRACT DOCUMENTS AND REPRESENTS TO OWNER THAT THE CONTRACT DOCUMENTS ARE COMPLETE AND SUFFICIENT AND INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK FOR THE CONTRACT SUM. CONTRACTOR FURTHER REPRESENTS THAT THE CONTRACTOR HAS VISITED THE SITE AND HAS BECOME FAMILIAR WITH THE ACCESS REQUIREMENTS AND OTHER CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND HAS RECEIVED ALL CLARIFICATIONS NEEDED BY CONTRACTOR TO ASSURE ITSELF THAT THE WORK CAN BE PERFORMED FOR THE CONTRACT SUM. IF THERE IS ANY INCONSISTENCY IN THE QUALITY OR QUANTITY OF WORK REQUIRED UNDER THE CONTRACT DOCUMENTS, OR SHOULD THE DRAWINGS AND SPECIFICATIONS APPEAR TO BE IN DISAGREEMENT WITH EACH OTHER RELATIVE TO THE QUALITY OR QUANTITY OF WORK REQUIRED, THE CONTRACTOR SHALL PROVIDE THE BETTER QUALITY AND/OR GREATER QUANTITY UNLESS WRITTEN INSTRUCTIONS ARE OTHERWISE FURNISHED TO CONTRACTOR BY OWNER.

T. DEVIATIONS FROM THESE CONSTRUCTION DOCUMENTS WITHOUT WRITTEN OWNER OR ARCHITECT CONSENT WILL BE AT RISK TO THE G.C. ANY EFFORT MADE BY THE ARCHITECT AND/OR ENGINEER TO MODIFY THE CONSTRUCTION DOCUMENTS OR LETTERS OF RESPONSIBILITY FOR APPROVAL BY INSPECTORS DUE TO WORK PERFORMED BY CONTRACTOR OTHER THAN THE ORIGINAL DESIGN WILL BE BILLED TO CLIENT WHO WILL BACK CHARGE TO G.C. AS A DEDUCT FROM THEIR PAYMENTS.

U. NOTE: THE MECHANICAL AND PLUMBING CADD FILES OF THE CONSTRUCTION DOCUMENTS ARE THE INTELLECTUAL PROPERTY OF POINT ONE DESIGN, LLC, AND WILL NOT BE AVAILABLE FOR THE CONSTRUCTION PHASE UNLESS MET WITH A REDUCTION IN COST TO THE OWNER AND/OR PURCHASED AT A NOMINAL RATE PER DRAWING (TO BE NEGOTIATED).

## HEATING, VENTILATING & AIR CONDITIONING SPECIFICATIONS

A. IN RESPECT TO ALL MATERIALS REQUIRED, THE CONTRACTOR SHALL FURNISH MATERIALS MEETING AIEE, NEMA, NELA, ASME AND ASTM SPECIFICATIONS. THE INSTALLATION OF ALL WORK SHALL CONFORM TO ASHRAE GUIDE AND SHEET METAL PROMOTION PLAN STANDARDS. THE MECHANICAL CONTRACTOR IS RESPONSIBLE TO PAY ALL FEES FOR PERMITS PRIOR TO STARTING WORK.

B. MATERIALS SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED, AND SHALL BE PROTECTED FROM ALL INJURY UNTIL FINAL ACCEPTANCE OF THE SYSTEM. MECHANICAL CONTRACTOR SHALL BE LICENSED IN THIS AREA TO PERFORM THE NEW WORK.

C. THIS CONTRACTOR SHALL REMOVE ALL TOOLS, SURPLUS MATERIALS AND DEBRIS OF ALL KINDS FROM HIS WORK AND LEAVE ALL IN A CLEAN, PERFECT CONDITION, FULLY SATISFACTORY TO THE ARCHITECT.

D. CONTRACTOR SHALL PROVIDE OWNER WITH ONE (1) SET OF "AS-BUILT" DRAWINGS.

E. FURNISH ALL MATERIALS, TRANSPORTATION, RIGGING, HOISTING, ETC. TO PROVIDE A COMPLETE AND OPERABLE HEATING, AIR CONDITIONING AND VENTILATING SYSTEM.

F. ALL EQUIPMENT IS TO BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, ACCORDING TO MANUFACTURERS RECOMMENDATIONS AND GOOD PRACTICES. COORDINATE ALL WORK WITH OTHER TRADES AND WITH THE GENERAL CONTRACTOR.

G. ALL TEMPERATURE CONTROL WIRING SHALL BE DONE BY THE MECHANICAL CONTRACTOR. THIS CONTRACTOR SHALL FURNISH ALL REQUIRED CONTROLS AND WIRING DIAGRAMS AND SHALL SUPERVISE INSTALLATION.

H. SYSTEM IS TO BE AIR BALANCED BY AN INDEPENDENT BALANCE COMPANY, TO INCLUDE DIFFUSER CFM, RETURN CFM AND EXHAUST CFM WITH THREE (3) REPORTS SUBMITTED TO THE OWNER AND THREE (3) MAINTENANCE MANUALS TURNED OVER TO OWNER BEFORE FINAL ACCEPTANCE. ALL SYSTEMS AND EQUIPMENT ARE TO BE GUARANTEED FOR PARTS AND LABOR FOR ONE YEAR (EXCEPT AIR CONDITIONING COMPRESSOR SHALL HAVE FIVE (5) YEAR WARRANTY).

I. DUCTWORK AND PLENUMS SHALL BE AS SCHEDULED ON THE DRAWINGS PER SMACNA "DUCT CONSTRUCTION" CLASSIFICATION.

J. SHEET METAL FABRICATION AND INSTALLATION SHALL BE AS FOLLOWS:

1. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH STANDARDS SET FORTH IN LATEST EDITION OF THE ASHRAE GUIDE AND SMACNA STANDARDS UNLESS MODIFIED HEREIN.
2. DUCT DIMENSIONS ARE GROSS EXCEPT FOR LINED DUCTS WHERE DIMENSIONS ARE NET FREE AREA.
3. DUCT SIZES SHOWN ON THE PLANS ARE ACTUAL SHEET METAL INSIDE DIMENSIONS AND SHALL BE ADHERED TO UNLESS JOB CONDITIONS REQUIRE ALTERATIONS. REVISIONS TO DUCT SIZES SHALL BE BASED ON THE "EQUAL FRICTION" METHOD.
4. ALL ELBOWS IN THE DUCT SYSTEM SHALL BE MADE WITH CENTERLINE RADIUS OF ONE AND ONE-HALF (1 1/2) TIMES THE TURNING WIDTH OF THE DUCT. WHERE SPACE PROHIBITS THE SPECIFIED MINIMUM RADIUS, SQUARE ELBOWS WITH DOUBLE RADIUS TURNING VANES SHALL BE INSTALLED. CHANGES IN DUCT SIZES SHALL BE 15 DEG. DIVERGING AND 60 DEG. CONTRACTING, FLOW MAXIMUM ANGLES.
5. THE GENERAL ROUTE OF THE DUCTS IS SHOWN ON THE PLANS. THE EXACT ROUTE SHALL BE DETERMINED BY JOB CONDITIONS AND SHALL BE COORDINATED WITH ALL OTHER TRADES. ALL GRILLES, REGISTERS, DIFFUSERS, ETC., SHALL BE LOCATED SYMMETRICALLY WITH ELECTRIC LIGHT ARCHITECTURAL TREATMENT, ETC.
6. HANGERS TO BE 8 FT. CENTERS MAXIMUM WITH STRAPS FOR DUCTS (BENT UNDER BOTTOM OF DUCT AND ATTACHED). DUCTWORK SHALL BE SEALED.
7. INSTALL DUCTWORK TIGHT TO BOTTOM OF STRUCTURAL STEEL.
8. NO FIBERGLASS DUCTBOARD WILL BE PERMITTED.

L. FURNISH AND INSTALL ALL MANUAL SPLITTER DAMPERS AND DEFLECTORS INDICATED ON DRAWINGS OR NECESSARY TO PROPERLY DISTRIBUTE AND BALANCE AIR.

M. HVAC EQUIPMENT SHALL BE AS SCHEDULED ON DRAWING.

N. INSULATION SHALL BE AS FOLLOWS:

1. ALL INSULATION, VAPOR BARRIER, JACKETS AND ADHESIVE USED FOR APPLYING INSULATION SHALL HAVE FIRE AND SMOKE HAZARD RATINGS AS TESTED UNDER ASTM-84, NFPA-255, AND U.L. 723 NOT EXCEEDING A FLAME SPREAD 25 AND SMOKE DEVELOPED OF 50.
2. ALL NEW CONCEALED SUPPLY AIR DUCTWORK SHALL BE WRAPPED WITH OWENS-CORNING TYPE 150, 1-1/2" DUCT WRAP (6.0 R-VALUE). TAPE ALL SEAMS WITH MINIMUM 2" WIDE TAPE. RETURN AIR DUCTWORK SHALL BE LINED WITH 1" ACOUSTIC LINING, OWENS-CORNING TYPE 300.
3. DUCTS PASSING THRU ROOF SHALL BE PROVIDED WITH INSULATED ROOF CURB AND COUNTERFLASHING.
4. OTHER APPROVED MANUFACTURERS: MANSVILLE, KNAUF, CERTAINTEED.

O. PROVIDE WITH SPIN-IN TRUNK CONNECTIONS WITH AIR SCOOP AND VOLUME DAMPER.

P. FLEXIBLE CONNECTION AT THE INLET AND OUTLET OF THE AIR MOVING UNIT, EXHAUST FANS AND HVAC UNIT CONNECTED TO DUCTWORK. MATERIALS SHALL BE NON-COMBUSTIBLE TWELVE (12) OUNCES PER SQUARE YARD, NFPA-90A APPROVED.

Q. FLEXIBLE INSULATED DUCT SHALL BE THERMAFLEX TYPE M-KE FACTORY ASSEMBLED DUCT CONSISTING OF COLD ROLLED FLAT STEEL SPRING, CONTINUOUS NON-PERFORATED INNER AIR SEAL LINER, 0.23 THERMAL CONDUCTANCE FIBERGLASS INSULATION, AND FIBERGLASS REINFORCED METALIZED FILM VAPOR BARRIER. DUCTS SHALL BE LISTED BY UL, CONFORM TO NFPA CLASS I WITH FLAME SPREAD RATING OF 25 OR LESS AND SMOKE DEVELOPMENT OF 50 OR LESS.

GENERAL NOTES:

1. THE MECHANICAL CONTRACTOR SHALL ALSO ARRANGE THE FINAL INSPECTIONS BY THE BUILDING AUTHORITIES.


GREATER COLUMBUS CONVENTION CENTER

BBCO
326 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P = 614.443.2824
INFO@BBCODESIGN.COM
BBCODESIGN.COM


| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
**MECHANICAL SPECIFICATIONS**

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL


POINT ONE Design LTD.
Consulting Engineers

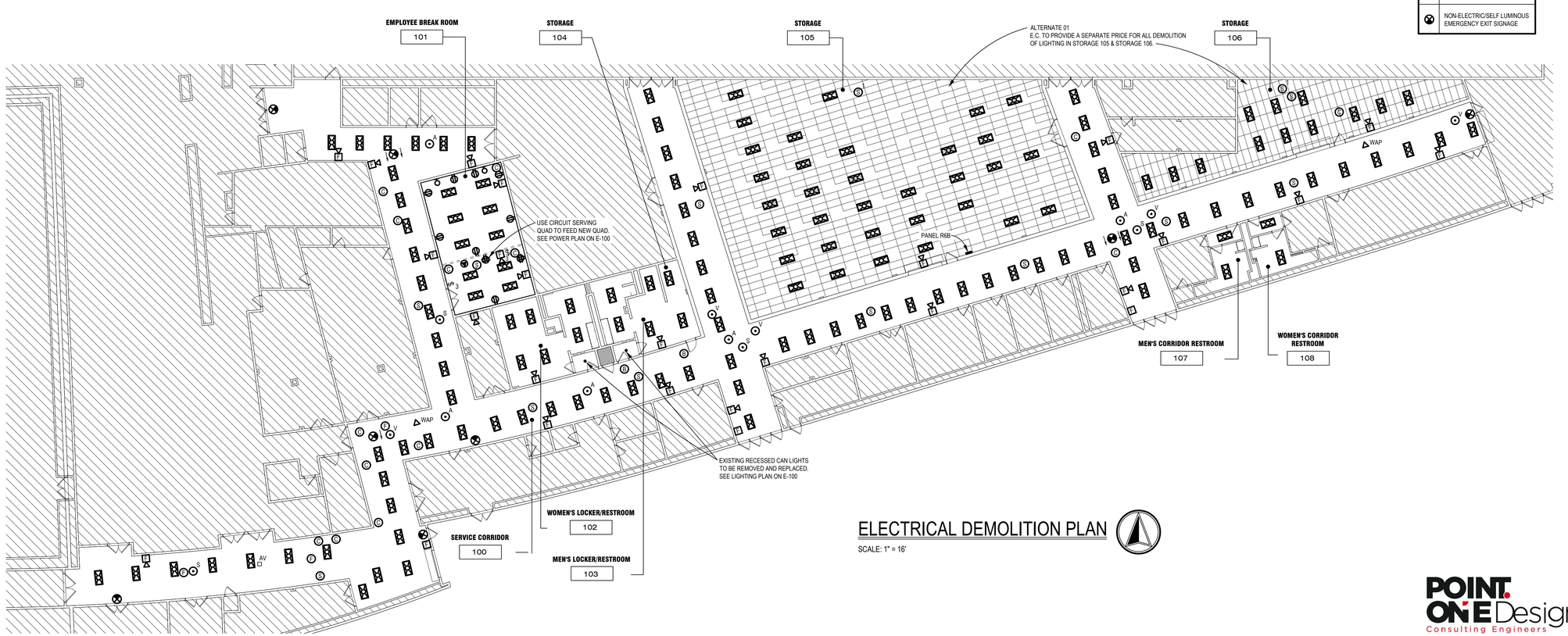
BBCO DESIGN PROJECT NUMBER:
**2024-023**

SHEET NUMBER
# M-201

ELECTRICAL DEMOLITION NOTES.

1. ALL LIGHTING SHOWN IS TO BE REMOVED. MAINTAIN EXISTING CIRCUITING FOR UTILITY AND EMERGENCY CIRCUITS. EXISTING CEILINGS WILL BE REMOVED AND REPLACED.
2. CEILING MOUNTED DEVICES FOR THE VARIOUS EXISTING LOW VOLTAGE SYSTEMS WILL BE DEMOUNTED FROM THE CEILING AND REMOUNTED AFTER THE NEW CEILING IS INSTALLED. SYSTEMS WILL REMAIN IN OPERATION DURING/THROUGHOUT CONSTRUCTION. REFER TO THE DEVICE LEGEND FOR CEILING MOUNTED ITEMS. COORDINATED THIS WORK WITH THE OWNER OR OWNERS VENDOR TO AVOID INTERRUPTIONS OR SHUTDOWN TO CRITICAL BUILDING SYSTEMS.
3. EXISTING CEILING MOUNTED SELF-LUMINOUS EXIT LIGHTING IS TO BE DEMOUNTED FROM THE EXISTING CEILING AND REMOUNTED IN THE SAME LOCATION AFTER THE NEW CEILING IS INSTALLED. PROVIDE TEMPORARY MOUNTING TO MAINTAIN LIFE SAFETY EGRESS PATHWAY DURING CONSTRUCTION.
4. WALL DEVICES IN EMPLOYEE BREAK ROOM PERIMETER WALL WILL BE REMOVED TO ACCOMMODATE FURRED OUT WALLS. RE-INSTALL DEVICES WITH APPROPRIATED FLUSH BOXES AND COVERPLATES. VERIFY DEVICE/COVERPLATE COLORS.
5. REMOVE DEVICES ON WALLS THAT ARE DEMOLISHED. REMOVE BOX, CONDUIT & WIRING BACK TO SOURCE IF POSSIBLE OR TO LAST ACCESSIBLE JUNCTION BOX..

| DEVICE LEGEND | |
|---|---|
| S1 | SMOKE DETECTOR |
| AV | AVATA (TELEPHONE) |
| A | AT&T ANTENNA |
| V | VERIZON ANTENNA |
| S | SPRINT ANTENNA |
| S | SPEAKER |
| C | CAMERA |
| F | FIRE/ ALARM SIGNAL (CLG) |
| | FIRE/ALARM SIGNAL (WALL) |
| WAP | WIRELESS ACCESS POINT |
| B | BLANK - VERIFY |
| | NON-ELECTRIC/SELF LUMINOUS EMERGENCY EXIT SIGNAGE |




## ELECTRICAL DEMOLITION PLAN

SCALE: 1" = 16'

POINT ONE Design LTD.
Consulting Engineers

GREATER COLUMBUS CONVENTION CENTER


BBCO
326 SOUTH HIGH STREET
SUITE 500
COLUMBUS OH 43215
P = 614.443.2924
INFO@BBCODESIGN.COM
BBCODESIGN.COM


| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN

SHEET TITLE
ELECTRICAL DEMOLITION PLAN

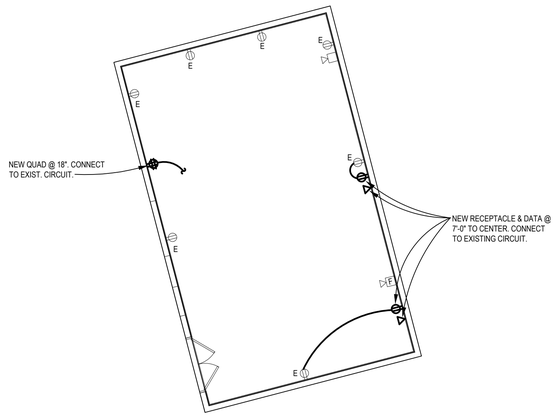
PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL




BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
ED-100




## POWER PLAN

SCALE: 1/8" = 1'-0"

## ELECTRICAL LEGEND

ELECTRICAL LEGEND NOTES:
1. MOUNTING HEIGHTS INDICATED ARE TO THE TOP OF THE DEVICE OR FIXTURE.
2. MOUNTING HEIGHTS ARE TYPICAL UNLESS NOTED OTHERWISE ON THE FLOOR PLANS.
3. REFER TO ARCHITECTURAL ELEVATIONS FOR ADDITIONAL INFORMATION ON EXACT DEVICE AND FIXTURE LOCATIONS, MOUNTING HEIGHTS AND COORDINATION WITH ARCHITECTURAL HARDWARE AND FIXTURES.
4. NOT ALL SYMBOLS APPLY.

| LIGHTING | | POWER | |
|---|---|---|---|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
| $ | WALL SWITCH @48" A.F.F., 20A, 120V | | DUPLEX RECEPTACLE @20" A.F.F, 20A, 125V |
| $3 | THREE-WAY SWITCH @48" A.F.F., 20A, 120V | | DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER @20" A.F.F.; 20A, 125V |
| $D | WALL SWITCH @48" A.F.F. 20A, 120V | WP | DUPLEX RECEPTACLE WITH WEATHERPROOF WHILE-IN-USE COVER @18" A.F.F. OR A.F.G. 20A, 125V |
| OS | OCCUPANCY SENSOR WALL MOUNTED @48" A.F.F. | | DOUBLE DUPLEX RECEPTACLE @ 20" A.F.F. 20A, 125V |
| OS | OCCUPANCY SENSOR CEILING MOUNTED | | SPECIAL RECEPTACLE AMPERAGE, @20" A.F.F COORDINATE NEMA CONFIG. WITH EQUIPMENT FED. |
| | LIGHTING OUTLET, RECESSED OR SURFACE MOUNTED PER FIXTURE SCHEDULE. | | JUNCTION BOX MOUNTED AS NOTED. |
| NL | LIGHT FIXTURE ON NIGHT LIGHT | | SAFETY DISCONNECT SWITCH @60" A.F.F. TO TOP |
| | CEILING LIGHTING OUTLET, RECESSED OR SURFACE MOUNTED PER FIXTURE SCHEDULE | | PANELBOARD, SURFACE MOUNTED @6'-0" A.F.F. TO TOP |
| | WALL LIGHTING OUTLET @ HEIGHT PER FIXTURE SCHEDULE OF ARCHITECTURAL ELEVATIONS. | | PANELBOARD, FLUSH MOUNTED @6'-0" A.F.F. TO TOP |
| | EMERGENCY EXIT LIGHT, SINGLE FACE, CLG. MOUNTED. | EF | CEILING EXHAUST FAN BY M.C. WIRED BY (FURN E.C.) MAKE ALL CONNECTIONS AS INDICATED ON DRAWING. |
| | EMERGENCY EXIT LIGHT, SINGLE FACE, WALL MOUNTED | | 4" SQ. BOX W/G PLASTER RING @20" A.F.F FOR DATA OUTLET. COVERPLATE WIRING & TERMINATION BY OWNER RUN 3/4"C. FROM BOX UP IN WALL TO ABOVE ACCESSIBLE CEILING |
| | COMBINATION EMERGENCY EXIT/EGRESS LIGHT, SINGLE FACE, CEILING MOUNTED | | |
| | EMERGENCY EGRESS LIGHT @90" A.F.F WALL MOUNTED | OSD | COMBINATION OCCUPANCY DIMMER(ON)/SENSOR(OFF) @48" AFF |
| EMR | EMERGENCY REMOTE HEAD FOR EXIT DISCHARGE | | |

## LIGHTING FIXTURE SCHEDULE

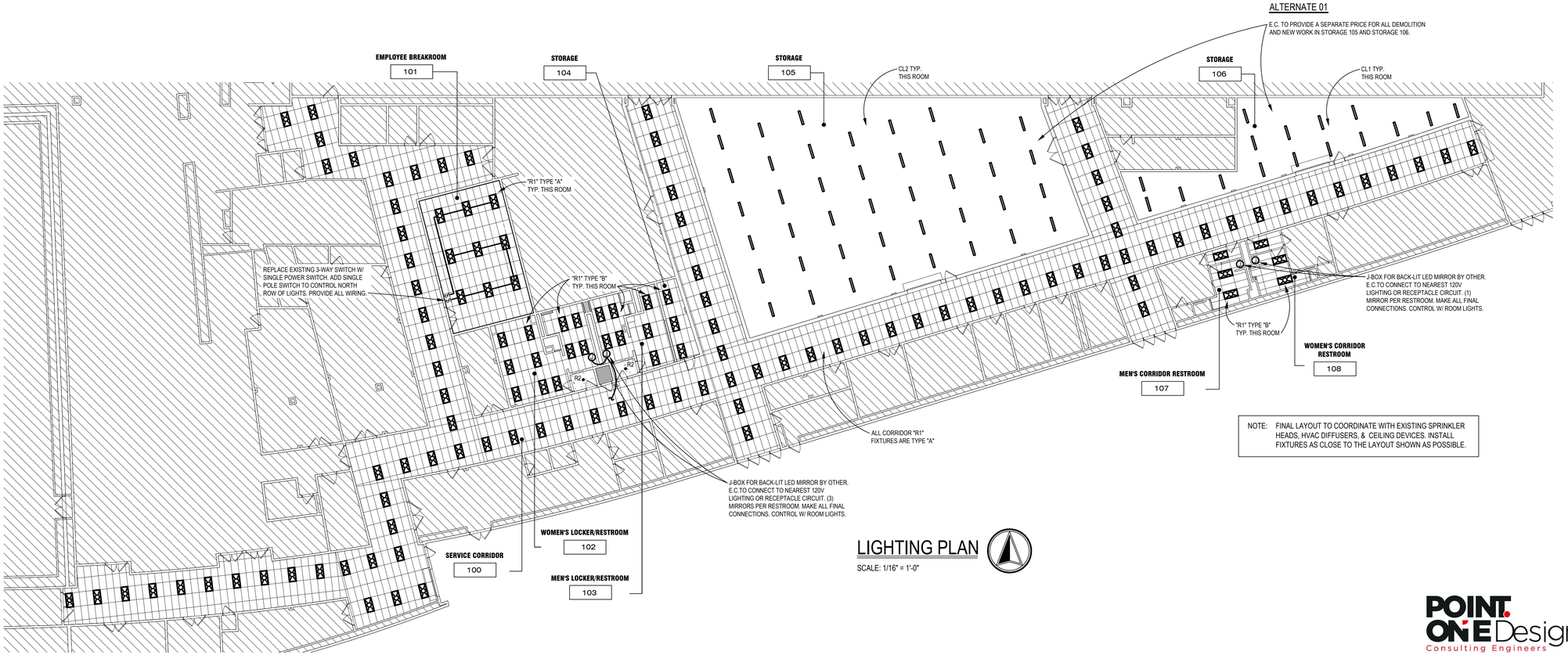
| MARK | DESCRIPTION | OPTION | VOLT | LAMP | MOUNT | LUMEN SELECTION | MANUFACTURER |
|---|---|---|---|---|---|---|---|
| R1 | 2X4 LED PANEL | | MVOLT | | RECESSED LAY-IN | | LITHONIA CPX-2X4-AL08-80CRI-SWW7-SWL-MVOLT |
| | | TYPE "A" | | 34.4 W LED 4982 LUM 4000 K | | MEDIUM LUMEN | |
| | | TYPE "B" | | 24.9 W LED 3672 LUM 4000 K | | LOW LUMEN | |
| R2 | 6" REC. LED DOWNLIGHT | | MVOLT | 19 W LED 1500 LUM 4000 K | RECESSED DRYWALL | | LITHONIA LRB6-MCM-AL02-SWW1-AR-LSS-MVD-MVOLT |
| CL1 | 4' LED STRIP | | MVOLT | 31.8 W LED 4000 K | CHAIN HANG @ 14'-0" | 5292 LUMEN | LITHONIA CLX-L48-5000LM-SEF-FDL-MVOLT-GZ10-40K-80CRI-WH-HC36M12 |
| CL2 | 4' LED STRIP | | MVOLT | 46.6 W LED 4000 K | CHAIN HANG @ 9'-0" | 7665 LUMEN | LITHONIA CLX-L48-7000LM-SEF-FDL-MVOLT-GZ10-40K-80CRI-WH-HC36M12 |

NOTES:
1. CONNECT ALL EXIT & EMERGENCY LIGHTS TO LOCAL AREA LIGHTING CIRCUIT AHEAD OF ANY SWITCHING AND AUTOMATIC CONTROLS.
2. EQUAL FIXTURES BY COOPER, HUBBELL, LSI, PHILLIPS OR LITHONIA.

GENERAL ELECTRICAL NOTES

1 RECONNECT NEW LIGHTING IN EACH AREA TO EXISTING LOCAL CIRCUITS AND CONTROLS. CONNECT NIGHT LIGHT / EMERGENCY LIGHTS TO APPROPRIATE CIRCUITS.

2 VERIFY EXISTING NL/EM FIXTURES AND CONNECT NEW LIGHTING IN THE SAME PATTERN / FREQUENCY AS EXISTING.




NOTE: FINAL LAYOUT TO COORDINATE WITH EXISTING SPRINKLER HEADS, HVAC DIFFUSERS, & CEILING DEVICES. INSTALL FIXTURES AS CLOSE TO THE LAYOUT SHOWN AS POSSIBLE.

## LIGHTING PLAN

SCALE: 1/16" = 1'-0"

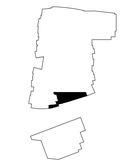
POINT ONE Design LTD.
Consulting Engineers

GREATER COLUMBUS CONVENTION CENTER

BBCO
326 SOUTH HIGH STREET
SUITE 300
COLUMBUS, OH 43215
P = 614.443.2924
INFO@BBCODESIGN.COM
BBCODESIGN.COM

| DESCRIPTION | DATE |
|---|---|
| PERMIT SET | 08.09.2024 |
| BID SET | 09.09.2024 |

KEY PLAN



SHEET TITLE
LIGHTING & POWER PLANS

PROJECT TITLE
# GCCC EMPLOYEE LOCKER & RESTROOM RENOVATION
400 N. HIGH STREET COLUMBUS, OH 43215

SEAL


BBCO DESIGN PROJECT NUMBER:
2024-023

SHEET NUMBER
E-100

# DRAFT AIA® Document A104™ – 2017

## *Standard Abbreviated Form of Agreement Between Owner and Contractor*

**AGREEMENT** made as of the «  » day of «  October  » in the year «  2024  »
*(In words, indicate day, month and year.)*

**BETWEEN** the Owner:
*(Name, legal status, address and other information)*

«Franklin County Convention Facilities Authority»
«400 North High Street, 4th Floor»
«Columbus, Ohio 43215»
«»

and the Contractor:
*(Name, legal status, address and other information)*

«»
«»
«»
«»

for the following Project:
*(Name, location and detailed description)*

«Greater Columbus Convention Center Employee Locker Room, Restroom, and Back of House Renovation Project»
«Franklin County Convention Facilities Authority»
«400 North High Street»
«Columbus, Ohio 43215»

The Architect:
*(Name, legal status, address and other information)*

«BBCO Design, LLC.»
«326 South High Street, Suite 500»
«Columbus, Ohio 43215»
«»

The Owner and Contractor agree as follows.

**ADDITIONS AND DELETIONS:**
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

**ELECTRONIC COPYING** of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

Formatted: Superscript

TABLE OF ARTICLES





## ARTICLE 1 THE WORK OF THIS CONTRACT

The Contractor shall execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

## ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

**§ 2.1** The date of commencement of the Work shall be:
*(Check one of the following boxes.)*

[ « » ] The date of this Agreement.

[ « X » ] A date set forth in a notice to proceed issued by the Owner.

[ « » ] Established as follows:
*(Insert a date or a means to determine the date of commencement of the Work.)*

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

The Contractor shall not commence any Work until after receipt of the Notice to Proceed.

**§ 2.2** The Contract Time shall be measured from the date of commencement.

**§ 2.3 Substantial Completion**

**§ 2.3.1** Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
*(Check the appropriate box and complete the necessary information.)*

[ « » ] Not later than « » ( « » ) calendar days from the date of commencement of the Work.

[ « X » ] By the following date: «February 15, 2025»

**§ 2.3.2** Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

| Portion of Work | Substantial Completion Date |
|---|---|
| « » | |

**§ 2.3.3** If the Contractor fails to achieve Substantial Completion as provided in this Section 2.3, liquidated damages, if any, shall be assessed as set forth in Section 3.5.

**ARTICLE 3 CONTRACT SUM**

**§ 3.1** The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be one of the following:
*(Check the appropriate box.)*

[ « X » ] Stipulated Sum, in accordance with Section 3.2 below

[ « » ] Cost of the Work plus the Contractor's Fee, in accordance with Section 3.3 below

[ « » ] Cost of the Work plus the Contractor's Fee with a Guaranteed Maximum Price, in accordance with Section 3.4 below

*(Based on the selection above, complete Section 3.2, 3.3 or 3.4 below.)*

**§ 3.2** The Stipulated Sum shall be «————» ($ «————»), subject to additions and deductions as provided in the Contract Documents.

Formatted: Highlight

**§ 3.2.1** The Stipulated Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:
*(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)*

«—»

Formatted: Highlight

**§ 3.2.2** Unit prices, if any:
*(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)*

| Item | Units and Limitations | Price per Unit ($0.00) |
|---|---|---|
| « » | | |

**§ 3.2.3** Allowances, if any, included in the stipulated sum:
*(Identify each allowance.)*

| Item | Price |
|---|---|
| « » | |

**§ 3.3 Cost of the Work Plus Contractor's Fee**
**§ 3.3.1** The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

**§ 3.3.2** The Contractor's Fee:
*(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)*

« »

**§ 3.4 Cost of the Work Plus Contractor's Fee With a Guaranteed Maximum Price**
**§ 3.4.1** The Cost of the Work is as defined in Exhibit A, Determination of the Cost of the Work.

**§ 3.4.2** The Contractor's Fee:
*(State a lump sum, percentage of Cost of the Work or other provision for determining the Contractor's Fee and the method of adjustment to the Fee for changes in the Work.)*

« »

**§ 3.4.3 Guaranteed Maximum Price**
**§ 3.4.3.1** The sum of the Cost of the Work and the Contractor's Fee is guaranteed by the Contractor not to exceed «» ($ «» ), subject to additions and deductions by changes in the Work as provided in the Contract Documents. This maximum sum is referred to in the Contract Documents as the Guaranteed Maximum Price. Costs which would cause the Guaranteed Maximum Price to be exceeded shall be paid by the Contractor without reimbursement or additional compensation by the Owner. The Contractor shall include in the Guaranteed Maximum Price all sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted, whether or not yet effective. Further, Contractor shall provide Owner with a detailed line item breakdown of the costs comprising the Guaranteed Maximum Price and denote which line items Contractor intends to self-perform, if any. Contractor's proposed Guaranteed Maximum Price as well as verification of costs incurred during construction shall be subject to ~~be~~ an open book pricing method.
*(Insert specific provisions if the Contractor is to participate in any savings.)*

« »

**§ 3.4.3.2** The Guaranteed Maximum Price is based on the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:
*(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)*

« »

**§ 3.4.3.3** Unit Prices, if any:
*(Identify the item and state the unit price and the quantity limitations, if any, to which the unit price will be applicable.)*

| Item | Units and Limitations | Price per Unit ($0.00) |
|---|---|---|
| « » | | |

**§ 3.4.3.4** Allowances, if any, included in the Guaranteed Maximum Price:
*(Identify each allowance.)*

| Item | Price |
|---|---|
| « » | |

**§ 3.4.3.5** Assumptions, if any, on which the Guaranteed Maximum Price is based:

« »

**§ 3.4.3.6** To the extent that the Contract Documents are anticipated to require further development, the Guaranteed Maximum Price includes the costs attributable to such further development consistent with the Contract Documents and reasonably inferable therefrom. Such further development does not include changes in scope, systems, kinds and quality of materials, finishes or equipment, all of which, if required, shall be incorporated by Change Order.

**§ 3.4.3.7** The Owner shall authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in Section 3.4.3.5. The Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the agreed-upon assumptions contained in Section 3.4.3.5 and the revised Contract Documents.

**§ 3.5** Liquidated damages, if any:
*(Insert terms and conditions for liquidated damages, if any.)*

« See **§ 21.11.2 Liquidated Damages**»

**ARTICLE 4 PAYMENT**

**§ 4.1 Progress Payments**

**§ 4.1.1** Based upon Applications for Payment submitted to the ~~Architect~~ Owner by the Contractor and Certificates for Payment issued by the ~~Architect~~Owner, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

**§ 4.1.2** The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

**§ 4.1.3** Provided that an Application for Payment is ~~received~~ certified by the ~~Architect~~ Owner not later than the « 1st » day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the «15th» day of the «following» month. If an Application for Payment is ~~received~~ certified by the ~~Architect~~ Owner after the date fixed above, payment shall be made by the Owner not later than «~~forty-five~~Thirty» ( «4530» ) days after the ~~Architect~~ Owner receives the Application for Payment.
*(Federal, state or local laws may require payment within a certain period of time.)*

**§ 4.1.4** For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold retainage from the payment otherwise due as follows:
*(Insert a percentage or amount to be withheld as retainage from each Application for Payment and any terms for reduction of retainage during the course of the Work. The amount of retainage may be limited by governing law.)*

«Retainage shall be withheld from each payment in the amount of 8% of the Application for Payment until the Work is 50% complete, after which no further retainage will be withheld.»

**§ 4.1.5** Payments due and unpaid (except disputed payments) under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
*(Insert rate of interest agreed upon, if any.)*

« 4 » % « per annum »

**§ 4.2 Final Payment**
**§ 4.2.1** Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

**.1** the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 18.2, and to satisfy other requirements, if any, which extend beyond final payment;

**.2** the Contractor has submitted a final accounting for the Cost of the Work, where payment is on the basis of the Cost of the Work with or without a Guaranteed Maximum Price; and

**.3** a final Certificate for Payment has been issued by the Architect in accordance with Section 15.7.1.

**§ 4.2.2** The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's Owner's final Certificate for Payment, or as follows:

« »

**ARTICLE 5 DISPUTE RESOLUTION**
**§ 5.1 Binding Dispute Resolution**
For any claim subject to, but not resolved by, mediation pursuant to Section 21.5, the method of binding dispute resolution shall be as follows:
*(Check the appropriate box.)*

[ « » ] Arbitration pursuant to Section 21.6 of this Agreement

[ « X » ] Litigation in a court of competent jurisdiction

[ « » ] Other *(Specify)*

« »

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, claims will be resolved in a court of competent jurisdiction.

**ARTICLE 6 ENUMERATION OF CONTRACT DOCUMENTS**
**§ 6.1** The Contract Documents are defined in Article 7 and, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

**§ 6.1.1** The Agreement is this executed AIA Document A104™–2017, Standard Abbreviated Form of Agreement Between Owner and Contractor.

**§ 6.1.2** AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:
*(Insert the date of the E203–2013 incorporated into this Agreement.)*

« »

**§ 6.1.3** The Supplementary and other Conditions of the Contract:

| Document | Title | Date | Pages |
|---|---|---|---|
| « » | | | |

**§ 6.1.4** The Specifications:
*(Either list the Specifications here or refer to an exhibit attached to this Agreement.)*

« »

| Section | Title | Date | Pages |
|---|---|---|---|
| «» | | | |

**§ 6.1.5** The Drawings:
*(Either list the Drawings here or refer to an exhibit attached to this Agreement.)*

« »

| Number | Title | Date |
|---|---|---|
| «» | | |

**§ 6.1.6** The Addenda, if any:

| Number | Date | Pages |
|---|---|---|
| « » | | |

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are enumerated in this Article 6.

**§ 6.1.7** Additional documents, if any, forming part of the Contract Documents:

**.1** Other Exhibits:
*(Check all boxes that apply.)*

[ « » ] Exhibit A, Determination of the Cost of the Work.

[ « » ] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[ « » ] The Sustainability Plan:

| Title | Date | Pages |
|---|---|---|
| « » | | |

[ « » ] Supplementary and other Conditions of the Contract:

| Document | Title | Date | Pages |
|---|---|---|---|
| « » | | | |

**.2** Other documents, if any, listed below:
*(List here any additional documents that are intended to form part of the Contract Documents.)*

« .3 Written orders for changes in the Work, pursuant to Article 13, issued after execution of this Agreement; and
.4 The Request for Bids issued by the Owner on September 10, 2024. »

Formatted: Indent: Left: 0", Hanging: 0.5"

Formatted: Pattern: Clear (Light Gray)

## ARTICLE 7 GENERAL PROVISIONS

### § 7.1 The Contract Documents

The Contract Documents are enumerated in Article 6 and consist of this Agreement (including, if applicable, Supplementary and other Conditions of the Contract), Drawings, Specifications, Addenda issued prior to the execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Owner or Architect. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results. If inconsistencies exist within or between parts of the Contract Documents, or between the Contract Documents and applicable standards, codes, or ordinances, the Contractor shall, in accordance with the Owner's or Architect's interpretation, either (i) provide the better quality or greater quantity of Work, or (ii) comply with the more stringent requirement. This section 7.1, however, does not relieve the Contractor of any of the obligations set forth in Section 9.1 and 9.6.

### § 7.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between any persons or entities other than the Owner and the Contractor.

**§ 7.3 The Work**
The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

**§ 7.4 Instruments of Service**
Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

**§ 7.5 Ownership and use of Drawings, Specifications and Other Instruments of Service**
**§ 7.5.1** The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

**§ 7.5.2** The Contractor, Subcontractors, Sub-subcontractors and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to the protocols established pursuant to Sections 7.6 and 7.7, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect's consultants. This Section 7.5.2 is subject to any different terms concerning ownership of Instruments of Service that may be set forth in the Owner-Architect Agreement.

**§ 7.6 Digital Data Use and Transmission**
The Owner or Architect may furnish the Contractor and Subcontractors portions of the Architect's Instruments of Service in digital data format for their convenience and use solely for their Work on the Project. Due to the nature of digital data files, the neither the Owner nor the Architect does not warrant the accuracy of data contained in those files, nor the compatibility of digital data files with the hardware or software utilized by the Contractor or Subcontractors. Also, differences between documents in digital data format and those in hard-copy may occur, in which case the sealed hard-copy Instruments of Service shall always govern. Because the Architect and Owner have no control over and no involvement in how the digital data files will be used nor how they may be modified, the Contractor agrees that use of digital data files by the Contractor or its Subcontractors will be at the Contractor's sole risk without liability to the Architect or Owner. The Contractor further agrees to defend, indemnify and hold the Architect and Owner harmless from all claims, liabilities, damages, and costs, including reasonable attorney's fees and defense costs, arising from any reuse or modification of the digital data files by the Contractor or its Subcontractors and authorized recipients. ~~The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data~~.

~~**§ 7.7 Building Information Models Use and Reliance**~~
~~Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees and shall be subject to the requirements and obligations set forth in Section 7.6 of this Agreement.~~

**§ 7.~~7~~8 Severability**
The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and

enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

**§ 7.89 Notice**

**§ 7.89.1** Except as otherwise provided in Section 7.89.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier~~, or by electronic transmission in accordance with AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, if completed~~, by email to the addresses provided in this Agreement, or as otherwise set forth below:

*(If other than in accordance with AIA Document E203–2013, insert requirements for delivering Notice in electronic format such as name, title and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)*

« »

**§ 7.89.2** Notice of Claims shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

**§ 7.910 Relationship of the Parties**

Where the Contract is based on the Cost of the Work plus the Contractor's Fee, with or without a Guaranteed Maximum Price, the Contractor accepts the relationship of trust and confidence established by this Agreement and covenants with the Owner to cooperate with the Architect and exercise the Contractor's skill and judgment in furthering the interests of the Owner; to furnish efficient business administration and supervision; to furnish at all times an adequate supply of workers and materials; and to perform the Work in an expeditious and economical manner consistent with the Owner's interests. The Owner agrees to furnish and approve, in a timely manner, information required by the Contractor and to make payments to the Contractor in accordance with the requirements of the Contract Documents.

**ARTICLE 8 OWNER**

**§ 8.1 Information and Services Required of the Owner**

**§ 8.1.1** The Owner shall prepare and provide to the Construction Manager a Notice of Commencement pursuant to Ohio Revised Code Section 1311.252. ~~Prior to commencement of the Work, at the written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 8.1.1, the Contract Time shall be extended appropriately.~~

**§ 8.1.2** If requested in writing by the Contractor, t~~T~~he Owner shall furnish all necessary surveys and a legal description of the site.

**§ 8.1.3** The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 8.1.4** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 9.6.1, the Owner shall secure and pay for other necessary approvals, easements, assessments, and charges required for the construction, use, or occupancy of permanent structures or for permanent changes in existing facilities.

**§ 8.2 Owner's Right to Stop the Work**

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or repeatedly fails to carry out the Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order is eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. If the Owner's exercise of its rights pursuant to this Section 8.2 is determined to have been unjustified, such exercise shall be deemed to have been a suspension of the Work pursuant to Section 20.4.

### § 8.3 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails within a ten-day period (or a one-day period in the case of a threat to the safety of persons or property, as determined by the Owner) after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to any other remedies the Owner may have, correct such default or neglect. ~~Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and~~ In that event, the Owner or Architect may, pursuant to Section 15.4.3, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including the Owner's expenses and compensation for the Architect's additional services, as well as charges of engineers, attorneys, and other professionals, made necessary by such default, neglect, or failure. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 21.

## ARTICLE 9 CONTRACTOR

### § 9.1 Review of Contract Documents and Field Conditions by Contractor

**§ 9.1.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents. Before executing the Agreement, the Contractor and each Subcontractor and Sub-subcontractor have evaluated and satisfied themselves as to the conditions and limitations under which the Work is to be performed, including, without limitation, (i) the location, condition, layout, and nature of the Project site and surrounding areas, (ii) generally prevailing climatic conditions, (iii) anticipated labor supply and costs, (iv) availability and cost of materials, tools, and equipment, and (v) other similar issues. The Owner assumes no responsibility or liability for the physical condition or safety of the Project site or any improvements located on the Project site, except as set forth in Section 16.2. Except as set forth in Section 16.2, the Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make any adjustment in either the Contract Sum or the Contract Time in connection with any failure by the Contractor or any Subcontractor or Sub-subcontractor to have complied with the requirements of this Section 9.1.1.

**§ 9.1.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 8.1.2, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the design information contained in the Contract Documents; however, the Contractor shall promptly report to the Owner and Architect any errors, inconsistencies, or omissions discovered by or made known to the Contractor as a request for information in such form as the Owner or Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents.

**§ 9.1.2.1** The exactness of grades, elevations, dimensions, and/or locations given on any Drawings issued by the Architect, or the work installed by other contractors, is not guaranteed by the Architect or the Owner. The Contractor shall, therefore, satisfy itself as to the accuracy of all grades, elevations, dimensions, and/or locations. In all cases of interconnection of its Work with existing or other work, it shall verify at the site all dimensions relating to such existing or other work prior to undertaking its Work and promptly notify Owner and Architect of all discrepancies. Any errors due to the Contractor's failure to so verify all such grades, elevations, dimensions, and/or locations shall be promptly rectified by the Contractor without any additional cost to the Owner.

**§ 9.1.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Owner and Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Owner or Architect may require.

### § 9.2 Supervision and Construction Procedures

**§ 9.2.1** The Contractor shall supervise and direct the Work consistent with the standard of care exercised by other professional contractors in the Contractor's trade and in the region where the Project is located, using the

Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters.

**§ 9.2.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors.

**§ 9.2.3** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

**§ 9.3 Labor and Materials**

**§ 9.3.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**§ 9.3.2** The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

**§ 9.3.3** Except in the case of minor changes in the Work, authorized by the Owner or Architect, t~~T~~he Contractor may make a substitution only with the written consent of the Owner, after evaluation by the Owner or Architect and in accordance with a ~~Modification~~Change Order.

**§ 9.3.4** ~~If~~ T~~t~~he Project is a public improvement and~~it~~ shall be subject to "prevailing wage" requirements. The Contractor shall pay the required prevailing wages applicable to the Project and shall comply with all restrictions, requirements, and agreements with respect to the laborers and mechanics employed by it for the performance of the Work. The Contractor shall require all of its Subcontractors to (1) pay prevailing wages, (2) comply with all restrictions, requirements, and agreements with respect to their laborers and mechanics employed for the performance of their work, and (3) include in any sub-subcontract the same requirements set forth in this Section 9.3.4.

**§ 9.3.5 NONDISCRIMINATION AND INTIMIDATION**

Formatted: Font: Arial Narrow, Bold

**§ 9.3.5.1** In the hiring of employees for the performance of the Work, including without limitation Work to be performed by a Subcontractor, no Contractor or Subcontractor, and no person acting on behalf of a Contractor or Subcontractor, shall discriminate against or intimidate any person by reason of race, color, creed, age, religion, national origin, ancestry, sex, gender identity or expression, disability, sexual orientation, familial status, military status, or any other basis prohibited by law. 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, sexual orientation, gender identity or expression, familial status, or national origin. Contractor or any Subcontractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, sex, sexual orientation, gender identity or expression, color, religion, ancestry, national origin, age, disability, familial status, or military status. Such action shall include, but not be limited to, the following: employment up-grading, demotion, or termination; rates of pay or other forms of compensation; and selection for training. Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

**§ 9.3.5.2** Neither the Contractor nor any of its Subcontractors, nor any person acting on behalf of the Contractor or any of its Subcontractors, shall, in any manner, discriminate against or intimidate any employee hired for the performance of the Work on account of race, color, creed, age, religion, national origin, ancestry, sex, gender identity or expression, disability, sexual orientation, familial status, military status, or any other basis prohibited by law.~~race, color, creed, religion, national origin, ancestry, sex, disability, sexual orientation, military status, or any other basis prohibited by law.~~

**§ 9.3.5.3** The Contractor and its Subcontractors shall, throughout the Project, comply with Ohio Revised Code Sections 153.59 and 153.591, and with the Owner's Non-Discrimination Policy. For any violation of this Section

9.3.5 or Ohio law, the Contractor shall suffer such penalties as provided for in Ohio Revised Code Section 153.60 and the Owner's Non-Discrimination Policy. In addition to any remedies the Owner has under Ohio law for a violation of this Section 9.3.5, the Owner may also exercise any of the remedies set forth in the Contract Documents.

**§ 9.3.5.4** The Contractor and its Subcontractors shall fully cooperate with any official or agency of the Owner, the city, state, or federal government seeking to eliminate unlawful employment discrimination, and with all other Owner, city, state, and federal efforts to assure equal employment practices under this Contract.

**§ 9.3.5.5** The Contractor shall comply with the State of Ohio's Equal Employment Opportunity in the Construction Industry rules set forth in Ohio Administrative Code Chapters 123:2-3 through 123:2-9 and Columbus City Code Section 3906.02. The Contractor also shall provide monthly reporting of its workforce by the ~~tenth dD~~day of each month for the preceding month to the Equal Opportunity Division of the Department of Administrative Services, using Input Form 29 (available at http://das.ohio.gov/Divisions/EqualOpportunity/InputForm29.aspx).

**§9.3.5.6** Contractor shall comply with all requirements of 41 CFR Part 60-1.4, including the equal opportunity clause, which is hereby incorporated by reference.

**§ 9.3.6 MINORITY, FEMALE, AND DISADVANTAGED BUSINESS PARTICIPATION**

**§ 9.3.6.1** The Owner ~~to~~ intends to have minority, female, and disadvantaged businesses used throughout the Project. To this end, the Contractor is encouraged to include participation in the Project by certified minority, female, and disadvantaged business enterprise Subcontractors that have received appropriate certification from the federal or Ohio government.

**§ 9.4 Warranty**

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation or normal wear and tear under normal usage. All other warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 15.6.3.

**§ 9.5 Taxes**

**§ 9.5.1** The Contractor shall pay sales, consumer, use, and other similar taxes that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect. The Contractor shall withhold and pay, and require its Subcontractors and Sub-subcontractors to withhold and pay, all federal, state, and local taxes due or payable with respect to wages, salaries, commissions, and any other income subject to provisions of federal, state, and local law.

**§ 9.5.2** Materials purchased for use or consumption in connection with the Work may be exempt from the State of Ohio Sales Tax as provided in Ohio Revised Code Section 5739.02, and from the State of Ohio Use Tax as provided in Ohio Revised Code Section 5741.01. Purchases by the Contractor of expendable items such as form lumber, tools, oils, greases, fuel, and equipment rentals are subject to the application of the Ohio Sales or Use Tax.

**§ 9.6 Permits, Fees, Notices, and Compliance with Laws**

**§ 9.6.1** Except as set forth in Section 8.1.3~~Unless otherwise provided in the Contract Documents~~, the Contractor shall secure~~, and~~ pay, and as soon as practicable, furnish the Owner with copies or certificates of all ~~permits~~, fees, licenses and inspections ~~for the building permit as well as other permits, fees, licenses, and inspections by government agencies necessary~~ for proper execution and completion of the Work including, without limitation, all building permits, unless otherwise provided in the Contract Documents. All connection charges, assessments, and inspection fees imposed by any governmental agency or utility company are included in the Contract Sum and shall be the Contractor's responsibility~~that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded~~.

**§ 9.6.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders and all other requirements of public authorities applicable to performance of

the Work. If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

**§ 9.7 Allowances**

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. The Owner shall select materials and equipment under allowances with reasonable promptness. Allowance amounts shall include the costs to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Contractor's costs for unloading and handling at the site, labor, installation, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowance.

**§ 9.8 Contractor's Construction Schedules**

**§ 9.8.1** The Contractor, promptly after being awarded the Contract and throughout the Work, shall prepare, keep current, and submit each time it is updated for the Owner's ~~and Architect's~~ information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

**§ 9.8.2** The construction schedule shall be in a detailed precedence-style critical path management ("CPM") or primavera-type format satisfactory to the Owner that shall also (i) provide a graphic representation of all activities and events that will occur during performance of the Work;(ii) identify each phase of construction and occupancy; and (iii) set forth dates (the "Milestone Dates") that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents. Upon review and acceptance by the Owner of the Milestone Dates, the construction schedule shall be deemed part of the Contract Documents. If not accepted, the Contractor shall promptly revise the construction schedule in accordance with the recommendations of the Owner and resubmit it for acceptance. The Contractor shall monitor the progress of the Work for conformance with the requirements of the construction schedule and shall promptly advise the Owner of any delays or potential delays. The accepted construction schedule shall be updated in progress reports to reflect actual conditions as set forth in Section 9.8.1 or if requested by the Owner. If any progress report indicates any delays, the Contractor shall propose an affirmative plan to correct the delay, including overtime, additional labor, or both, if necessary. In no event shall any progress report constitute an adjustment in the Contract Time, any Milestone Date, or the Contract Sum unless any such adjustment is agreed to by the Owner and authorized pursuant to a Change Order. Contractor agrees that Owner shall have the right to access, review, utilize and share native format construction schedules related to the Project.

**§ 9.8.3** If the Owner determines that the performance of the Work, as of a Milestone Date, has not progressed or reached the level of completion required by the Contract Documents, the Owner may order the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, (i) working additional shifts or overtime, (ii) supplying additional manpower, equipment, and facilities, and (iii) other similar measures (collectively, "Extraordinary Measures"). Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents. The Owner's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the construction schedule.

**.1** The Contractor shall not be entitled to an adjustment in the Contract Sum in connection with Extraordinary Measures required by the Owner under this Section.

**.2** The Owner may exercise the rights furnished the Owner in this Section as frequently as the Owner deems necessary to ensure that the Contractor's performance of the Work will comply with any Milestone Date or completion date set forth in the Contract Documents.

**§ 9.8.4** In no event shall the Owner's review or approval of any schedule (1) impose on the Owner any responsibility for the progress, scheduling, sequencing, or timing of the Work, or (2) relieve the Contractor from full responsibility therefor, as the Contractor is solely responsible for the preparation, accuracy, revision, and maintenance of its schedules.

**§ 9.8.2** ~~2~~ 5 The Contractor shall perform the Work in general accordance with the most recent schedule submitted to the Owner ~~and Architect~~.

**§9.8.6** In developing the construction schedule for the Work, Contractor shall take into consideration the schedule of events and daily operations of the Greater Columbus Convention Center. Contractor shall schedule work at the Project site so as to minimize the impact of the Work on the daily operations of the Greater Columbus Convention Center.

Formatted: Font: Bold

**§ 9.9 Submittals**

**§ 9.9.1** The Contractor shall review for compliance with the Contract Documents and submit to the ~~Architect~~ Owner Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents in coordination with the Contractor's construction schedule and in such sequence as to allow the ~~Architect~~ Owner reasonable time for review. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner ~~and Architect~~ that the Contractor has (1) reviewed and approved them; (2) determined and verified materials, field measurements, and field construction criteria related thereto, or will do so; and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Work shall be in accordance with approved submittals.

**§ 9.9.2** Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents.

**§ 9.9.3** The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents or unless the Contractor needs to provide such services in order to carry out the Contractor's own responsibilities. If professional design services or certifications by a design professional are specifically required, the Owner and the Architect will specify the performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional. If no criteria are specified, the design shall comply with applicable codes and ordinances. Except as otherwise provided for in this Agreement, e~~E~~ach Party shall be entitled to rely upon the information provided by the other Party. The Owner or Architect will review and approve or take other appropriate action on submittals for the limited purpose of checking for conformance with information provided and the design concept expressed in the Contract Documents. The Owner's or Architect's review of Shop Drawings, Product Data, Samples, and similar submittals shall be for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. In performing such review, the Owner or Architect will approve, or take other appropriate action upon, the Contractor's Shop Drawings, Product Data, Samples, and similar submittals. Any such review or approval by the Architect or Owner shall not relieve the Contractor of its responsibility for the preparation, completeness, and accuracy of such documents or information.

**§ 9.10 Use of Site**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

**§ 9.10.1** Only materials and equipment that are to be used directly in the Work shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it shall be promptly removed from the Project site. Protection of construction materials and equipment stored at the Project site from weather, theft, damage, and all other adversity is solely the responsibility of the Contractor. The Contractor shall ensure that the Work, at all times, is performed in a manner that affords reasonable access, both vehicular and pedestrian, to the site of the Work and all adjacent areas. The Work shall be performed, to the fullest extent reasonably possible, in such a manner that public areas adjacent to the site of the Work shall be free from all debris, building materials, and equipment likely to cause hazardous conditions.

**§ 9.10.2** The Contractor shall use best efforts to minimize any interference with the occupancy or beneficial use of (i) any areas and buildings adjacent to the site of the Work and (ii) the building in which the Work is being performed. Without prior approval of the Owner, the Contractor shall not permit any workers to use any existing facilities at the Project site, including, without limitation, lavatories, toilets, entrances, and parking areas other than those designated by the Owner.

.1 The Contractor shall use its best efforts to comply with all rules and regulations promulgated by the Owner in connection with the use and occupancy of the Project site and the building in which the Work is being performed, as amended from time to time. The Contractor shall immediately notify the Owner in writing if during the performance of the Work, the Contractor finds compliance of any portion of such rules and regulations to be impracticable, setting forth the problems of such compliance and suggesting alternatives through which the same results intended by such portions of the rules and regulations can be achieved. The Owner may, in the Owner's sole discretion, adopt such suggestions, develop new alternatives, or require compliance with the existing requirements of the rules and regulations.

.2 The Contractor also shall comply with all insurance requirements and collective bargaining agreements applicable to the use and occupancy of the Project site and the Building.

**§ 9.11 Cutting and Patching**

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

**§ 9.12 Cleaning Up**

The Contractor shall keep the ~~premises~~ Project site and surrounding areas free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus material from and about the Project site.

**§ 9.13 Access to Work**

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

**§ 9.14 Royalties, Patents and Copyrights**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

**§ 9.15 Indemnification**

**§ 9.15.1** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and officers, trustees, agents, lawyers, and employees of any of them from and against claims, liability, actions, causes of actions, complaints, costs, damages, losses and expenses, including but not limited to prejudgment interest and attorneys' fees, and demands whatsoever, in law or in equity, arising out of, or alleged to arise out of, or resulting from, or alleged to be the result of the performance of the Work, ~~provided that such claim, damage, loss, or expense is~~ including, but not limited to those attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent, intentional or other wrongful acts or omissions of the Contractor, a Subcontractor, Sub-subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 9.15.1. Owner shall have the undeniable right to participate in the defense of any claims asserted against it, approve the selection of counsel and approve the terms of any settlements made in its name or on its behalf. Such right cannot be waived by any contractual agreement, affirmative action, or lack of affirmative action and may be exercised at any time and at the sole discretion of Owner.

**§ 9.15.2** The Project is located in close proximity of other buildings and property, and the Contractor must use all care and diligence to avoid damage to any such buildings and property. As a result and consistent with that obligation, in addition to the indemnification required by Section 9.15.1, the Contractor shall indemnify and hold harmless the Owner and the Owner's agents and employees from and against claims, damages, losses and expenses,

including but not limited to attorney's fees, arising out of or resulting from performance of the Work that impacts, injures or destroys any building or property beyond the Project's physical limits.

**§ 9.15.2** In claims against any person or entity indemnified under this Section 9.15 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 9.15.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts. The Contractor hereby specifically and expressly waives any immunity afforded it by virtue of any applicable state constitutional or statutory protections, including but not limited to Section 35, Article II of the Ohio Constitution and Ohio Revised Code Section 4123.73, but only to the extent required to honor the indemnity obligations set forth in this Section 9.15.

**§ 9.15.3** The Contractor shall indemnify and hold harmless all of the parties indemnified under this Section 9.15 from and against any costs and expenses (including reasonable attorneys' fees) they incur in enforcing any of the Contractor's defenses, indemnity, and hold harmless obligations under this Contract.

## ARTICLE 10 ARCHITECT

**§ 10.1** The Architect, upon request of the Owner and as an additional service, will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction, until the date the ~~Architect~~ Owner issues the final Certificate for Payment (or for such longer period of time if so provided in the Owner's agreement with the Architect). The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract. As of the Commencement Date, the Architect is not engaged to provide constriction administration services, which will instead be performed by the Owner. Owner may engage Architect to provide such construction administration services as an additional service and shall so notify Contractor in writing of Owner's intent to do so.

**§ 10.2** Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner~~, Contractor,~~ and Architect. ~~Consent shall not be unreasonably withheld.~~

**§ 10.3** The ~~Architect~~ Owner, or Architect if so engaged by the Owner, will visit the site at intervals appropriate to the stage of the construction to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Owner and Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner and Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

**§ 10.4** ~~On the basis of T~~the site visits~~, the Architect~~ will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and Owner will promptly report to the ~~Owner~~ Contractor (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Owner and Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Owner and Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, Sub-subcontractors or their agents or employees, or any other persons or entities performing portions of the Work.

**§ 10.5** Based on the Owner's or Architect's evaluations of the Work and of the Contractor's Applications for Payment, the ~~Architect~~ Owner will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

**§ 10.6** The Architect and the Owner ha~~ve~~s the authority to reject Work that does not conform to the Contract Documents and to require inspection or testing of the Work.

**§ 10.7** The Owner or Architect will review and approve or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

**§ 10.8** The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. ~~The Architect will make initial decisions on all claims, disputes, and other matters in question between the Owner and Contractor but will not be liable for results of any interpretations or decisions rendered in good faith.~~

**§ 10.9** The Owner's or Architect's decisions on matters relating to aesthetic effect in connection with the administration of the Contract will be final if consistent with the intent expressed in the Contract Documents.

## ARTICLE 11 SUBCONTRACTORS

**§ 11.1** A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site.

**§ 11.2** Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner ~~and Architect~~ of the Subcontractors or suppliers proposed for each of the principal portions of the Work. The Contractor shall not contract with any Subcontractor or supplier to whom the ~~Owner or Architect~~ has made reasonable written objection within ten days after receipt of the Contractor's list of Subcontractors and suppliers. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**§ 11.3** Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by the Contract Documents, assumes toward the Owner and Architect, and (2) allow the Subcontractor the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Contract Documents, has against the Owner.

**§ 11.4** Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. The Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

**§ 11.5** All subcontracts and sub-subcontracts shall be in writing and shall specifically provide that the Owner is an intended third-party beneficiary of such subcontract and sub-subcontract.

### § 11.6 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

**§ 11.6.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- **.1** assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- **.2** assignment is subject to the prior rights of the surety, if any, obligated under ~~the~~ bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

**§ 11.6.2** Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension in excess of those costs incurred during the initial 30 days of the suspension.

**§ 11.6.3** Upon such assignment to the Owner under this Section 11.6~~5~~.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

**§ 11.6.4** Each subcontract shall specifically provide that the Owner shall be responsible to the Subcontractor only for those obligations that accrue after the Owner's exercise of any rights under this conditional assignment.

## ARTICLE 12 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

**§ 12.1** The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

**§ 12.2** The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's activities with theirs as required by the Contract Documents.

**§ 12.3** The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a Separate Contractor because of delays, improperly timed activities, or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of delays, improperly timed activities, damage to the Work, or defective construction of a Separate Contractor.

## ARTICLE 13 CHANGES IN THE WORK

**§ 13.1** By appropriate Modification, changes in the Work may be accomplished after execution of the Contract. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, with the Contract Sum ~~and~~ or Contract Time or both being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Owner ~~,~~ ~~Contractor~~and Contractor~~, and Architect~~, or by written Construction Change Directive signed by the Owner ~~and Architect~~. Upon issuance of the executed Change Order or Construction Change Directive, the Contractor shall proceed promptly with such changes in the Work, unless otherwise provided in the Change Order or Construction Change Directive.

**§ 13.2** Adjustments in the Contract Sum or ~~and~~ Contract Time or both resulting from a change in the Work shall be determined by mutual agreement of the parties or, in the case of a Construction Change Directive signed only by the Owner ~~and Architect~~, by the Contractor's cost of labor, material, equipment, and reasonable overhead and profit, unless the parties agree on another method for determining the cost or credit. The Contractor shall not be entitled to an increase in the Contract Sum or to an extension of the Contract Time, or both on account of any change in the Work that is not the subject of a fully~~n~~ executed Change Order or Construction Change Directive prior to the commencement of such Work. Pending final determination of the total cost of a Construction Change Directive, the Contractor may request payment for Work completed pursuant to the Construction Change Directive. The Owner ~~Architect~~ will make an interim determination of the amount of payment due for purposes of certifying the Contractor's monthly Application for Payment. When the Owner and Contractor agree on adjustments to the Contract Sum and Contract Time arising from a Construction Change Directive, the Owner or Architect will prepare a Change Order. No course of conduct or dealings between the parties, nor express or implied acceptance of alterations or additions to the Work, and no claim that the Owner has been unjustly enriched by any alteration of or addition to the Work, whether or not there is, in fact, any unjust enrichment to the Work, shall be the basis of any claim to an increase in any amounts due under the Contract Documents or a change in any time period provided for in the Contract Documents.

**§ 13.3** The Owner and Architect ~~will~~ have the authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Owner~~Architect~~ and shall not proceed to implement the change in the Work.

**§ 13.4** If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time ~~shall~~ may be equitably adjusted as mutually agreed between the Owner and Contractor; provided that the Contractor provides notice to the Owner ~~and Architect~~ promptly and Owner provides ~~written~~ approval before conditions are disturbed.

## ARTICLE 14 TIME

**§ 14.1** Time limits stated in the Contract Documents are of the essence of the Contract. By executing this Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

**§ 14.2** Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

**§ 14.3** The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

**§ 14.4** The date of Substantial Completion is the date certified by the Owner or Architect in accordance with Section 15.6.3.

**§ 14.5** If the Contractor is delayed at any time in the commencement or progress of the Work by (1) changes ordered in the Work; (2) by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties, or any other causes beyond the Contractor's control; or (3) by other causes that the Contractor asserts, and the Owner or Architect determine~~s~~, may justify delay, then the Contract Time may~~shall~~ be extended by Change Order to the extent such delay will prevent the Contractor from achieving Substantial Completion within the Contract Time and if the performance of the Work is not, was not, or would not have been delayed by any other cause for which the Contractor is not entitled to an extension in the Contract Time under the Contract Documents. ~~for such reasonable time as the Architect may determine and the Owner may agree, subject to the provisions of Article 21.~~ The Contractor, however, will not be entitled to an extension of the Contract Time to the extent that such delay occurs concurrently with a delay or delays attributable to the Contractor.

## ARTICLE 15 PAYMENTS AND COMPLETION

### § 15.1 Schedule of Values

**§ 15.1.1** Where the Contract is based on a Stipulated Sum or the Cost of the Work with a Guaranteed Maximum Price pursuant to Section 3.2 or 3.4, the Contractor shall submit a schedule of values to the ~~Architect~~ Owner before the first Application for Payment, allocating the entire Stipulated Sum or Guaranteed Maximum Price to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy as required by the Owner~~Architect~~. This schedule of values, unless objected to by the ~~Architect or~~ Owner, shall be used as a basis for reviewing the Contractor's Applications for Payment.

**§ 15.1.2** The allocation of the Stipulated Sum or Guaranteed Maximum Price under this Section 15.1 shall not constitute a separate stipulated sum or guaranteed maximum price for each individual line item in the schedule of values.

~~**§ 15.2 Control Estimate**~~

~~**§ 15.2.1** Where the Contract Sum is the Cost of the Work, plus the Contractor's Fee without a Guaranteed Maximum Price pursuant to Section 3.3, the Contractor shall prepare and submit to the Owner a Control Estimate within 14 days of executing this Agreement. The Control Estimate shall include the estimated Cost of the Work plus the Contractor's Fee.~~

~~**§ 15.2.2** The Control Estimate shall include:~~

~~.1 the documents enumerated in Article 6, including all Modifications thereto;~~

.2 a list of the assumptions made by the Contractor in the preparation of the Control Estimate to supplement the information provided by the Owner and contained in the Contract Documents;

.3 a statement of the estimated Cost of the Work organized by trade categories or systems and the Contractor's Fee;

.4 a project schedule upon which the Control Estimate is based, indicating proposed Subcontractors, activity sequences and durations, milestone dates for receipt and approval of pertinent information, schedule of shop drawings and samples, procurement and delivery of materials or equipment, the Owner's occupancy requirements, and the date of Substantial Completion; and

.5 a list of any contingency amounts included in the Control Estimate for further development of design and construction.

**§ 15.2.3** When the Control Estimate is acceptable to the Owner and Architect, the Owner shall acknowledge it in writing. The Owner's acceptance of the Control Estimate does not imply that the Control Estimate constitutes a Guaranteed Maximum Price.

**§ 15.2.4** The Contractor shall develop and implement a detailed system of cost control that will provide the Owner and Architect with timely information as to the anticipated total Cost of the Work. The cost control system shall compare the Control Estimate with the actual cost for activities in progress and estimates for uncompleted tasks and proposed changes. This information shall be reported to the Owner, in writing, no later than the Contractor's first Application for Payment and shall be revised and submitted with each Application for Payment.

**§ 15.2.5** The Owner shall may authorize preparation of revisions to the Contract Documents that incorporate the agreed-upon assumptions contained in the Control Estimate. Where assumptions in the Control Estimate are not agreed to by the Owner, Contractor shall modify its Control Estimate accordingly. If revisions to the Contract Documents are authorized by the Owner, tThe Owner shall promptly furnish such revised Contract Documents to the Contractor. The Contractor shall notify the Owner and Architect of any inconsistencies between the Control Estimate and the revised Contract Documents.

**§ 15.3 Applications for Payment**

**§ 15.3.1** At least ten days before the date established for each progress payment, the Contractor shall submit to the ~~Architect~~ Owner an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 15.1, for completed portions of the Work. The application shall be notarized, if required; be supported by all data substantiating the Contractor's right to payment that the Owner ~~or Architect~~ requires; shall reflect retainage if provided for in the Contract Documents; and include any revised cost control information required by Section 15.2.4. Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

**§ 15.3.2** With each Application for Payment where the Contract Sum is based upon the Cost of the Work, or the Cost of the Work with a Guaranteed Maximum Price, the Contractor shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Owner to demonstrate that cash disbursements already made by the Contractor on account of the Cost of the Work equal or exceed progress payments already received by the Contractor plus payrolls for the period covered by the present Application for Payment, less that portion of the progress payments attributable to the Contractor's Fee.

**§ 15.3.3** Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

**§ 15.3.4** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests.

**§ 15.3.5**. As a condition precedent to the Contractor's entitlement to payment on account of an Application for Payment, the Contractor shall submit with each Application for Payment:

.1 a partial conditional lien waiver from the Contractor for the total payment requested in the Application for Payment;

.2 a partial conditional lien waiver from all Subcontractors and Sub-subcontractors on whose account the Contractor is seeking payment in the Application for Payment for the total amount of such payment requested;

.3 a partial unconditional lien waiver from the Contractor for the sum of all previously paid progress payments (not applicable to the Contractor's first Application for Payment) and not applicable to retainage;

.4 unless previously provided, a partial or final unconditional lien waiver from each Subcontractor and Sub-subcontractor on whose account the Contractor previously sought and received payment for the sum of all such previously paid payments;

.5 a notarized statement from the Contractor certifying that: (1) the Application for Payment is correct; (2) the Contractor is entitled to payment of the amounts requested; and (3) all due and payable bills with respect to the Work have been paid in full or will be paid in full from the proceeds of the Application for Payment;

.6 an application for payment on AIA Document G702/G703 to the Contractor from every Subcontractor on whose account the Contractor is seeking payment in the Application for Payment;

.7 any other information required by the Contract Documents to be submitted with an Application for Payment; and

.8 such other information substantiating the Contractor's right to payment as the Owner, Architect or Owner's lender may reasonably require.

**§ 15.4 Certificates for Payment**

**§ 15.4.1** The ~~Architect~~ Owner will, within seven days after receipt of the Contractor's Application for Payment, either issue ~~to~~ the ~~Owner a~~ Certificate for Payment, with a copy to the Contractor, for such amount as the ~~Architect~~ Owner determines is properly due, or notify the Contractor ~~and Owner of the Architect~~of the Owner's reasons for withholding certification in whole or in part as provided in Section 15.4.3.

**§ 15.4.2** The issuance of a Certificate for Payment will constitute a representation by the ~~Architect to the~~ Owner, based on the ~~Architect's~~ Owner's evaluations of the Work and the data in the Application for Payment, that, to the best of the ~~Architect's~~ Owner's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the ~~Architect.~~Owner. However, the issuance of a Certificate for Payment will not be a representation that the ~~Architect~~ Owner has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

**§ 15.4.3** The ~~Architect~~ Owner may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the ~~Architect's~~ Owner's opinion the representations to the Owner required by Section 15.4.2 cannot be made. If the ~~Architect~~ Owner is unable to certify payment in the amount of the Application, the ~~Architect~~ Owner will notify the Contractor ~~and Owner~~ as provided in Section 15.4.1. If the Contractor and the ~~Architect~~ Owner cannot agree on a revised amount, the ~~Architect~~ Owner will promptly issue a Certificate for Payment for the amount for which the ~~Architect~~ Owner is able to make such representations ~~to the Owner~~required under Section 15.4.2. The ~~Architect~~ Owner may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as

may be necessary in the ~~Architect's~~ Owner's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 9.2.2, because of

.1 defective Work not remedied;
.2 liens or third-party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
.3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
.4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
.5 damage to the Owner or a Separate Contractor;
.6 reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; ~~or~~
.7 repeated failure to carry out the Work in accordance with the Contract Documents; or
.8 representations made by the Contractor that are not true.

**§ 15.4.4** ~~When either~~If the Contractor ~~party~~ disputes the Owner~~Architect~~'s decision regarding a Certificate for Payment under Section 15.4.3, in whole or in part, ~~that party~~the Contractor may submit a Claim in accordance with Article 21.

**§ 15.5 Progress Payments**

**§ 15.5.1** After the ~~Architect~~Owner has issued a Certificate for Payment, but subject to the Owner's decision to approve payment in whole or in part, or if the Owner approves payment in the absence of a Certificate for Payment, the Owner shall make payments in the manner and within the time provided in the Contract Documents., ~~and shall so notify the Architect.~~ The Owner may decline to approve payments in whole or in part to such extent as may be necessary in the Owner's opinion to protect the Owner from loss for which the Contractor is or may be liable. The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to sub-subcontractors in a similar manner.

**§ 15.5.2** Neither the Owner nor Architect shall have an obligation to pay or see to the payment of money to a Subcontractor or supplier except as may otherwise be required by law.

**§ 15.5.3** A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

**§ 15.5.4** Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

**§ 15.5.4** Notwithstanding any other provision of the Contract Documents to the contrary, if any claim or lien for which the Contractor is responsible is filed or asserted or there is any reason to believe that such a claim or lien may be filed or asserted at any time during the performance of the Work or the duration of the Contract, the Owner may withhold from any payment otherwise due to the Contractor a sum sufficient, in the Owner's reasonable opinion or as required by law, to pay all obligations and expenses necessary to satisfy such claim or lien until the Contractor furnishes such evidence satisfactory to the Owner that the indebtedness and the claim or lien in respect thereof, if any, has been satisfied, discharged, and released of record if and as provided by law pending the resolution of any such dispute between the Contractor and the entity asserting the claim or lien. The Owner may withhold final payment from the Contractor until the Work and the site are free and clear of any and all claims, liens, or rights thereto arising out of Work performed or materials furnished in furtherance of the Work. In the event that the unpaid balance of the Contract Sum is insufficient to cover such losses, costs, damages, and fees, or if the lien claim arises from Contractor's failure to properly pass through any payment received from the Owner, the Contractor shall immediately pay the difference to the Owner. The Contractor shall have no responsibility under this Section for any lien or claim caused by Owner's failure to make payment to Contractor when due.

**§ 15.6 Substantial Completion**

**§ 15.6.1** Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents and when all government inspections have been successfully completed and all required permits and authorizations have been issued (unless inability to obtain any such permits is due to design errors by the Architect or other causes not the fault of the Contractor) so that the Owner can occupy or utilize the Work for its intended use.

**§ 15.6.2** When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the ~~Architect~~ Owner a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**§ 15.6.3** Upon receipt of the Contractor's list, the Owner or Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. When the Owner or Architect determine~~s~~ that the Work or designated portion thereof is substantially complete, the Owner or Architect will issue a Certificate of Substantial Completion which shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

**§ 15.6.4** The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

**§ 15.6.5** A Certificate of Substantial Completion may be withdrawn by the Architect or Owner based on subsequently discovered information that would have otherwise permitted the Architect or Owner to determine that the Work was not Substantially Complete if known at the time of the issuance of the Certificate of Substantial Completion.

**§ 15.7 Final Completion and Final Payment**

**§ 15.7.1** Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Owner or Architect will promptly make such inspection and, when the Owner or Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Owner or Architect will promptly issue a final Certificate for Payment stating that to the best of the Owner's or Architect's knowledge, information and belief, and on the basis of the Owner's or Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Owner's or Architect's final Certificate for Payment will constitute a further representation that conditions stated in Section 15.7.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 15.7.2** Final payment shall not become due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

**§ 15.7.3** The making of final payment shall constitute a waiver of claims by the Owner except those arising from

- **.1** liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
- **.2** failure of the Work to comply with the requirements of the Contract Documents;
- **.3** terms of special warranties required by the Contract Documents; or
- **.4** audits performed by the Owner, if permitted by the Contract Documents, after final payment.

**§ 15.7.4** Acceptance of final payment by the Contractor, a Subcontractor, Sub-subcontractor or supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of the final Application for Payment.

**§ 15.7.5** Notwithstanding any other provision of the Contract Documents to the contrary, the date of final completion of the Work is the date determined by the Owner when all Work is complete, accessible, operable, and usable by the Owner and all parts and systems are 100% complete and cleaned for the Owner's full use and all drawings, certificates, bonds, guarantees, and documents required by the Contract Documents have been provided to the Owner by the Contractor.

**§ 15.7.6** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the ~~Architect and~~ Owner (1) an affidavit in form and substance reasonably acceptable to the Owner that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied and that all Work is complete in accordance with the requirements of the Contract Documents, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) ,a final lien waiver from the Contractor and each Subcontractor; (6) all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, record documents, and other documents required by the Contract Documents; (7) all warranties, guarantees, and other documents required by the Contract Documents, (8) "as built" drawings for utilities and the Project in such format as the Owner specifies, and (9) all of the documents and information required under Article 15 to be included with Applications for Payment. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor shall furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall immediately refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

**§15.5.7** The Contractor shall assign to the Owner at the time of final completion of the Work all manufacturers' warranties relating to materials and labor used in the Work, and shall perform the Work in such manner as to preserve all such manufactures' warranties.

## ARTICLE 16 PROTECTION OF PERSONS AND PROPERTY

### § 16.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

**.1** employees on the Work and other persons who may be affected thereby;

**.2** the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and

**.3** other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation, or replacement in the course of construction.

The 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 and property and their protection from damage, injury, or loss. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, a Subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 16.1.2 and 16.1.3. The Contractor may make a claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 9.15. The Contractor also shall be responsible, at the Contractor's sole cost and expense, for all measures necessary to protect property adjacent to the Project and improvements within that adjacent property. The Contractor shall promptly repair any damage to such property or improvements.

### § 16.2 Hazardous Materials and Substances

**§ 16.2.1** The Contractor is responsible for compliance with the requirements of the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in

the Contract Documents, and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

**§ 16.2.2** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Sub-subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area, if in fact, the material or substance presents the risk of bodily injury or death as described in Section 16.2.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

**§ 16.2.3** If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

## ARTICLE 17 INSURANCE AND BONDS

### § 17.1 Contractor's Insurance

**§ 17.1.1** The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in this Section 17.1 or elsewhere in the Contract Documents for protection from claims under workers' compensation acts and other employee benefit acts which are applicable, claims for damages because of bodily injury, including death, and claims for damages, other than to the Work itself, to property which may arise out of or result from the Contractor's operations and completed operations under the Contract, whether such operations be by the Contractor or by a Subcontractor or anyone directly or indirectly employed by any of them. This insurance shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater, and shall include contractual liability insurance applicable to the Contractor's obligations under Section 9.15. The Contractor shall purchase and maintain the insurance required by this Agreement from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. If Contractor fails to obtain and keep in full force and effect any of the insurance required of it under the Contract, Owner may purchase the coverage and Contractor shall repay any sums so advanced by Owner upon demand. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 18.4, unless a different duration is stated below:

« »

**§ 17.1.2** Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than ««One Million» ($ «1,000,000» ) each occurrence, «Two Million» ($ «2,000,000» ) general aggregate, and ««Two Million» ($ «2,000,000» ) aggregate for products-completed operations hazard, providing coverage for claims including

.1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;
.2 personal and advertising injury;
.3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
.4 bodily injury or property damage arising out of completed operations; and
.5 the Contractor's indemnity obligations under Section 9.15.

**§ 17.1.3** Automobile Liability covering vehicles owned by the Contractor and non-owned vehicles used by the Contractor, with policy limits of not less than « One Million» ($ « 1,000,000» ) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles along with any other statutorily required automobile coverage.

**§ 17.1.4** The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as those required under Section 17.1.2 and 17.1.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

**§ 17.1.5** Workers' Compensation at statutory limits.

**§ 17.1.6** Employers' Liability with policy limits not less than «One Million» ($ «1,000,000» ) each accident, «One Million» ($ «1,000,000» ) each employee, and «Two Million» ($ «2,000,000» ) policy limit.

~~**§ 17.1.7** If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than «Five Million» ($ «5,000,000» ) per claim and «Five Million» ($ «5,000,000» ) in the aggregate.~~

~~**§ 17.1.8** If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than Five Million» ($ «5,000,000» ) per claim and «Five Million» ($ «5,000,000» ) in the aggregate« » ($ « » ) per claim and « » ($ « » ) in the aggregate.~~

~~**§ 17.1.9** Coverage under Sections 17.1.7 and 17.1.8 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than « » ($ « » ) per claim and « » ($ « » ) in the aggregate.~~

**§ 17.1.7~~10~~** The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Section 17.1 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the period required by Section 17.1.1. The certificates for ~~will show the Owner as an additional insured on~~ the Contractor's Commercial General Liability and excess or umbrella liability policy shall show: (1) the Owner, Architect and the Architect's Consultants as additional named insureds for claims arising during the Contractor's operations; and (2) the Owner as an additional named insured for claims arising during the Contractor's completed operations.

**§ 17.1.8~~11~~** The Contractor shall disclose to the Owner any deductible or self- insured retentions applicable to any insurance required to be provided by the Contractor.

**§ 17.1.9~~12~~** To the fullest extent permitted by law, the Contractor shall cause the commercial liability coverage required by this Section 17.1 to include (1) the Owner, the Architect, and the Architect's Consultants as additional named insureds for claims ~~caused in whole or in part by the Contractor's negligent acts or omissions~~arising during the Contractor's operations; and (2) the Owner as an additional named insured for claims ~~caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs~~arising during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's Consultants, CG 20 32 07 04.

**§ 17.1.1~~03~~** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.1, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. Contractor shall indemnify and defend the Owner, pursuant to its obligations in Section 9.15, for any stop to the Work due to the Contractor's lapse in coverage. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

**§ 17.1.114 Other Insurance Provided by the Contractor**

*(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)*

| Coverage | Limits |
|---|---|
| « » | |

**§ 17.2 Owner's Insurance**

**§ 17.2.1 Owner's Liability Insurance**

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

**§ 17.2.2 Property Insurance**

**§ 17.2.2.1** The Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed or materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section 17.2.2.2, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

**§ 17.2.2.2** Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section 17.2.2.1 or, if necessary, replace the insurance policy required under Section 17.2.2.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 18.4.

**§ 17.2.2.3** If the insurance required by this Section 17.2.2 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

**§ 17.2.2.4** If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 18.4, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

**§ 17.2.2.5** Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Section 17.2.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by this Section 17.2.2. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

**§ 17.2.2.6** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any insurance required by this Section 17.2.2, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

**§ 17.2.2.7 Waiver of Subrogation**

**§ 17.2.2.7.1** The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required

by this Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, Ssubcontractors, and Ssub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 17.2.2.7 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

**§ 17.2.2.7.2** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 17.2.2.7.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

**§ 17.2.2.8** A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements, written where legally required for validity, the Architect and Contractor shall make payments to their consultants and Subcontractors and Sub-subcontractors in similar manner.

**§ 17.2.3 Other Insurance Provided by the Owner**

*(List below any other insurance coverage to be provided by the Owner and any applicable limits.)*

| Coverage | Limits |
|---|---|
| « » | |

**§ 17.3 Performance Bond and Payment Bond**

**§ 17.3.1** The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in the Contract Documents on the date of execution of the Contract.

**§ 17.3.2** Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

## ARTICLE 18 CORRECTION OF WORK

**§ 18.1** The Contractor shall promptly correct Work rejected by the Owner or Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed, or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense, unless compensable under Section A.1.7.3 in Exhibit A, Determination of the Cost of the Work.

**§ 18.2** In addition to the Contractor's obligations under Section 9.4, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 15.6.3, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. ~~During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty.~~

**§ 18.3** If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 8.3.

**§ 18.4** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

**§ 18.5** Upon completion of any work under this Article 18, the one-year correction period in connection with the Work requiring correction shall be renewed and recommence. The obligations under Article 18 shall cover any repairs and replacement to any part of the Work or other property that is damaged by the defective Work. ~~The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Article 18.~~

**§ 18.6** Nothing contained in this Article 18 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period of correction of the Work as described in Article 18 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

## ARTICLE 19 MISCELLANEOUS PROVISIONS

### § 19.1 Assignment of Contract

Neither party to the Contract shall assign the Contract without written consent of the other, except that the Owner may, without consent of the Contractor, assign the Contract to a lender or other entity providing construction financing or credit enhancement for the Project ~~if the lender assumes the Owner's rights and obligations under the Contract Documents~~. The Contractor shall execute all consents reasonably required to facilitate such assignment.

### § 19.2 Governing Law

The Contract shall be governed by the law of the place where the Project is located.~~, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 21.6~~.

### § 19.3 Tests and Inspections

Tests, inspections, and approvals of portions of the Work required by the Contract Documents or by applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities shall be made at an appropriate time. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

**§ 19.4** The Owner's representative:
*(Name, address, email address and other information)*

«Kenneth Paul, Executive Director»
«Franklin County Convention Facilities Authority»
«400 N. High Street, 4th Floor»
«Columbus, Ohio 43215»
«kpaul@fccfa.org»
«(614)827-2807»

**§ 19.5** The Contractor's representative:
*(Name, address, email address and other information)*

« »

Formatted: Superscript

Formatted: Highlight

« »
« »
« »
« »
« »

**§ 19.6** Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior written notice to the other party.

## ARTICLE 20 TERMINATION OF THE CONTRACT

### § 20.1 Termination by the Contractor

If the ~~Architect~~ Owner fails to certify payment as provided in Section 15.4.1 for a period of ~~30~~ 60 days through no fault of the Contractor, or if the Owner fails to make payment as provided in Section 4.1.3 for a period of 30 days, the Contractor may, upon seven additional days' notice to the Owner ~~and the Architect~~, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit~~, costs incurred by reason of such termination, and damages~~.

### § 20.2 Termination by the Owner for Cause

**§ 20.2.1** The Owner may terminate the Contract if the Contractor

- **.1** ~~repeatedly~~ refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- **.3** ~~repeatedly~~ disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- **.4** otherwise ~~is guilty of substantial breach of~~fails to perform any of its duties or obligations under a provision of the Contract Documents.

**§ 20.2.2** When any of the reasons described in Section 20.2.1 exists, the Owner~~, upon certification by the Architect that sufficient cause exists to justify such action,~~ may, without prejudice to any other remedy the Owner may have and after giving the Contractor seven days' notice, terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever reasonable method the Owner may deem expedient. Upon request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 20.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 20.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 20.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Architect, upon application, and this obligation for payment shall survive termination of the Contract.

**§ 20.2.5** After termination pursuant to this Section 20.2, the Contractor shall, unless the notice of termination directs otherwise, (1) immediately discontinue the Work on that date, place no further orders or Subcontracts for materials, equipment, services, facilities, or otherwise, except as may be necessary for completion of such portion of the Work as is not discontinued; (2) promptly make every effort to procure cancellation upon terms satisfactory to the Owner of all orders and Subcontracts to the extent they relate to the performance of a discontinued portion of the Work; and (3) thereafter do only such Work as may be necessary to protect the Work already in progress and to protect materials and equipment on the Project site or in transit thereto.

**§ 20.2.6** If the Owner's termination for cause pursuant to this Section 20.2 is determined by binding dispute resolution to have been unjustified, such termination shall be deemed to have been a termination pursuant to Section 20.3.

**§ 20.3 Termination by the Owner for Convenience**

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Owner shall pay the Contractor for Work ~~executed~~properly performed prior to the termination date; and for items properly and timely fabricated offsite that have been delivered and stored in accordance with the Owner's instructions. However, if the Owner terminates the Contract pursuant to this Section 20.3, but the Contractor is in default, the Contractor will be entitled to receive only such sums as it would be entitled to receive following the occurrence of an event of default as provided in Section 20.2.~~costs incurred by reason of such termination, including costs attributable to termination of Subcontracts; and a termination fee, if any, as follows:~~

~~(Insert the amount of or method for determining the fee payable to the Contractor by the Owner following a termination for the Owner's convenience, if any.)~~

~~« »~~

**§ 20.4 SUSPENSION BY THE OWNER FOR CONVENIENCE**

**§ 20.4.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine. The Contract Sum or Contract Time, or both, may be adjusted for increases in the cost and time caused by suspension, delay, or interruption, but no such adjustment will be made to the extent:

.1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or

.2 that an equitable adjustment is made or denied under another provision of the Contract.

**ARTICLE 21 CLAIMS AND DISPUTES**

**§ 21.1** Claims, disputes, and other matters in question arising out of or relating to this Contract, including those alleging an error or omission by the Architect ~~but excluding those arising under Section 16.2, shall be referred initially to the Architect for decision. Such matters,~~ except those waived as provided for in Section 21.11 and Sections 15.7.3 and 15.7.4, shall~~, after initial decision by the Architect or 30 days after submission of the matter to the Architect~~, be subject to mediation as a condition precedent to binding dispute resolution.

**§ 21.1.1 DEFINITION**

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

**§ 21.2 Notice of Claims**

**§ 21.2.1** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the ~~Architect~~ other party within ~~21~~ 10 days after occurrence of the event giving rise to such Claim or within ~~21~~ 10 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. The Contractor's failure to initiate and substantiate a Claim shall constitute an irrevocable waiver of the Claim.

**§ 21.2.2** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 18.2, shall be initiated by notice to the other party.

**§ 21.2.3** Unless otherwise agreed in writing by the Owner, within 45 days after the initiation of a Claim, the Contractor shall submit in writing to the Owner ~~and Architect~~ all information that the Contractor believes substantiates the Claim and all information and statements required to substantiate a Claim as provided in this Section 21.2. The failure to comply with the requirements of this Section 21.2.3 shall constitute an irrevocable waiver of any related Claim.

**§ 21.3 Time Limits on Claims**

The Owner and Contractor shall commence all claims and causes of action against the other and arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in this Agreement whether in contract, tort, breach of warranty, or otherwise, within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 21.3.

**§ 21.4** If a claim, dispute or other matter in question relates to or is the subject of a mechanic's lien, the party asserting such matter may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

**§ 21.5** The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction Industry Mediation Procedures in effect on the date of this Agreement. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

**§ 21.6** If the parties have selected arbitration as the method for binding dispute resolution in this Agreement, any claim, subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association, in accordance with the Construction Industry Arbitration Rules in effect on the date of this Agreement. Demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

**§ 21.7** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation; (2) the arbitrations to be consolidated substantially involve common questions of law or fact; and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

**§ 21.8** Subject to the rules of the American Arbitration Association or other applicable arbitration rules, any party to an arbitration may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described in the written Consent.

**§ 21.9** The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to this Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

**§ 21.10 Continuing Contract Performance**

Pending final resolution of a Claim, except as otherwise agreed in writing, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

**§ 21.11.1 Waiver of Claims for Consequential Damages**

~~The Contractor and Owner waive claims~~ Except to the extent covered by the valid and collectible insurance carried by the Contractor or Owner under Article 17, the Contractor and Owner waive all claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver, however, does not preclude (i) an award of liquidated damages recoverable under the Agreement; or (ii) the obligation of the Contractor to reimburse the Owner for any fines from governmental entities or additional costs and expenses for the Architect or other consultants, or separate contractors, arising out of any act or omission of the Contractor ~~includes~~

~~.1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and~~

~~.2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.~~

~~This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 20. Nothing contained in this Section 21.11 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.~~

**§ 21.11.2 Liquidated Damages.**

~~If the~~The parties have agreed to the payment of liquidated damages on account of the Contractor's delay, and if the Contractor fails to achieve Substantial Completion within the Contract Time or fails to complete the punch-list work within 30 days of the Contract Time, the Owner and Contractor acknowledge that it would be difficult, if not impossible, to determine the actual damages to the Owner. Consequently, the Owner and the Contractor agree that as liquidated damages, and not as a penalty, the Contractor shall, at the Owner's option, pay to or credit the Owner the associated liquidated-damages per-diem sum~~s set forth in the Agreement~~of $600.00 for ~~each day that~~ the Contractor fails to achieve Substantial Completion or complete the punch-list work in a timely manner and in accordance with the requirements of the Contract Documents.

.1 Notwithstanding any other provision of the Contract Documents to the contrary, if an arbitration panel or a court determines that the liquidated-damages per-diem sums or their application are void and unenforceable, the Owner may recover the actual damages (even if excluded in Section 21.11.1) that it incurs on account of the Contractor's failure to achieve Substantial Completion within the Contract Time, but not in excess of the amount per day that the parties attempted to specify as liquidated damages.

2 Nothing contained in this Section 21.11.2 shall be deemed to preclude the Owner's recovery from the Contractor of actual damages on account of delay-based claims attributable to the Contractor that are brought by separate contractors.

.3 In addition to other rights that the Owner may have relative to liquidated damages, the Owner may deduct liquidated damages from the Contract Sum as such damages accrue. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall immediately pay the difference to the Owner.

**§ 21.12 CLAIMS FOR ADDITIONAL COST**

**§ 21.12.1** Except in the event of a Claim relating to an emergency endangering life or property, the Contractor shall obtain the Owner's specific written authorization prior to proceeding with any change in the Work that may entitle the Contractor to an increase in the Contract Sum. The Contractor's failure to obtain such prior written authorization shall constitute an irrevocable waiver of any related Claim. If the Contractor wishes to make a Claim for an increase in the Contract Sum for any reason other than a change in the Work ordered by the Owner, written notice as provided in this Article shall be given before proceeding to execute the affected Work.

**§ 21.12.2** The Contractor shall substantiate each Claim for an increase in the Contract Sum with (1) written documentation of the actual additional direct costs to the Contractor due to the event giving rise to the Claim; and (2) a written statement from the Contractor that the increase requested is the entire increase in the Contract Sum associated with the Claim.

**§ 21.13 CLAIMS FOR ADDITIONAL TIME**

**§21.13.1** Except in the event of a Claim relating to an emergency endangering life or property, the Contractor shall obtain the Owner's specific written authorization prior to proceeding with any change in the Work that may entitle the Contractor to an increase in the Contract Time. The Contractor's failure to obtain such prior written authorization shall constitute an irrevocable waiver of any related Claim. If the Contractor wishes to make a Claim for an increase in the Contract Time for any reason other than a change in the Work ordered by the Owner, written notice as provided in this Article shall be given before proceeding to execute the affected Work.

**§ 21.13.2~~1~~** The Contractor shall substantiate each Claim for an extension of the Contract Time with (1) a written description of the effect of the delay on the progress of the Work; (2) a detailed schedule which identifies the critical portions of the Work impacted by the delaying event and the dates of such impact; (3) a detailed written proposal for an increase in the Contract Sum which would fully compensate the Contractor for all costs of acceleration of the Work needed to completely overcome the associated delay together with a statement consistent

**Formatted:** AIA Agreement Body Text

with Section 21.12.2; and (4) a written statement from the Contractor that the extension requested is the entire extension of the Contract Time associated with the Claim.

.1 In the case of a continuing delay occurring on consecutive days, only one Claim is necessary. However, within ten days after the cessation of the cause of the continuing delay, the Contractor shall notify the Owner ~~and Architect~~ in writing that the cause of the delay has ceased. The failure to give timely notice of the cessation of the cause of the continuing delay will constitute an irrevocable waiver of any Claim based on the continuing delay.

**§ 21.13.~~2~~2** In addition to the requirements of Section 21.13.1, if adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on a critical element of the scheduled construction. Notwithstanding any other provision of the Contract Documents to the contrary, the Contract Time will not be adjusted on account of the impact of any normal adverse weather on any of the Work or on account of the impact of any abnormal adverse weather on non-critical elements of the Work. The support for and evaluation of all adverse-weather Claims shall be based upon average weather conditions during the 10 years immediately preceding the dates at issue in the Claim as such weather conditions were recorded at the government-controlled weather-recording facility nearest to the site.

**§ 21.13.~~4~~3** Notwithstanding any other provision of the Contract Documents to the contrary, an extension of the Contract Time will be the Contractor's exclusive remedy in the event of any delay not the proximate result of the act or failure to act of the Owner or anyone for whom the Owner is directly responsible. The Contractor specifically waives any right it may otherwise have to an increase in the Contract Sum or to any type of damages because of such delay or disruption to all or any part of the Work, whether such delay was foreseen or unforeseen and whether caused by the active interference of any party for whom the Owner is not directly responsible.

.1 Notwithstanding the provisions of Section 21.13.3 to the contrary, the Contractor will not be entitled to an extension of the Contract Time to the extent that such delay occurs concurrently with a delay attributable to the Contractor.

**§ 21.13.~~5~~4** Notwithstanding any other provision of the Contract Documents to the contrary, in no event shall the Contractor be entitled to an increase in the Contract Time on account of any delaying impact on a non-critical element of the Work.

This Agreement entered into as of the day and year first written above.

| | |
|---|---|
| « » | « » |
| ***OWNER*** *(Signature)* | ***CONTRACTOR*** *(Signature)* |
| «Kenneth C. Paul» «Executive Director» | « »« » |
| *(Printed name and title)* | *(Printed name and title)* |