INSTRUCTIONS TO BIDDERS
RFP No. 23-009
BLUE BELL AQUATIC CENTER LOCKER ROOM RENOVATIONS.

PART 1 – IDENTIFICATION OF PARTIES

1.1 OWNER: City of Brenham
P. O. Box 1059
Brenham, Texas 77834-1059
Telephone: (979) 337-7250

1.2 ARCHITECT: BBA Architects, LP
213 West Main Street
Brenham, Texas 77833-3642
Telephone: (979) 836-0523

PART 2 - PROJECT DESCRIPTION

2.1 LOCATION AND DESCRIPTION

A. The project address is 1800 East Tom Green Street, Brenham, Texas 77833, in Washington County.

B. The project includes renovation of existing men's and women's showers, restrooms, and locker rooms at the Blue Bell Aquatic Center in Brenham. Work will include demolition of the existing toilet partitions and toilet accessories, lockers and benches, tile shower stalls, tile flooring, and all plumbing fixtures except water closets and urinals.

PART 3 – INSTRUCTIONS TO BIDDERS

3.1 BIDDER'S REPRESENTATIONS

A. By submitting a Bid, the Bidder represents that:

1. The Bidder has read and understands the Bidding Documents and has read the **City's Terms and Conditions for Bids** attached hereto as **Exhibit "A"**;
2. The Bid complies with the Bidding Documents;
3. The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents; and
4. The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.

3.2 BIDDING DOCUMENTS

A. Distribution

1. Bidding Documents are available through the City of Brenham's Purchasing Portal at https://www.cityofbrenham.org/purchasing
2. Bidding Documents are available for the sole purpose of obtaining bids on the work. No license or grant of use is conferred by distribution of the Bidding Documents.

B. Modification or Interpretation of Bidding Documents

1. The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation by submitting a Request for Information to the Architect's project manager, Darren Heine, AIA, telephone (979) 836-0523, email darren@bba-architects.com at least three days prior to the date for receipt of Bids.
2. Modifications and interpretations of the Bidding Documents will be made by addendum. Modifications and interpretations of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon them.

C. Substitutions or "Or Equal" Items

1. The materials, products, and equipment described in the Bidding Documents establish a standard of required type, function, dimension, appearance, and quality to be met by any proposed substitution or "or equal" item.
2. Written requests for substitutions of the design basis named herein shall be submitted on the **Substitution Request Form** marked **Exhibit "B"** found at the end of this section and must be received by the Architect at least five (5) calendar days prior to the date for receipt of Bids.
3. Each request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed item including drawings, datasheets, performance and test data, and any other information necessary for an evaluation.
4. The burden of proof of the merit of the proposed item is upon the proposer. With Architect's input, the Owner's decision of approval or disapproval of a proposed substitution shall be final.
5. If the Architect approves a proposed item prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.
6. No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

D. Addenda

1. Addenda will be transmitted to the Bidders holding Bidding Documents.
2. Addenda will be issued no later than two days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.
3. Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

3.3 BIDDING PROCEDURES

A. Pre-Bid Conference

1. There will be a non-mandatory pre-bid conference at the Blue Bell Aquatic Center, 1800 East Tom Green Street, in Brenham, Washington County, Texas, on **Wednesday September 20, 2023 at 1:00pm**.

B. Preparation of Bids

1. Bids shall be submitted on the **Proposal Form** included at the end of this Instructions to Bidders as **Exhibit "C"**.
2. All blanks on the bid form shall be legibly executed.
3. Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.
4. All requested Alternates, if any, shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.
5. Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract.

C. Bid Security: Each Bid shall be accompanied by a Bid Security in the amount of five percent (5%) of the lump sum amount of the Bid, pledging that the Bidder will enter into a Contract with the Owner on the terms stated in the Bid, and will, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the Bid Security shall be forfeited to the Owner as liquidated damages, not as a penalty.

The Bid security of all Bidders will be retained until a Contract has been awarded and the agreement between the Owner and the successful bidder is signed or at such time that all Bids are rejected.

D. Submission of Bids

1. Due Date: Bids are due on or before 1**0:00 am CDT, on Tuesday, September 26, 2023**.
2. Sealed submittals are required. Two copies of the responses are to be delivered to the Office of the City Secretary, City of Brenham, at 200 West Vulcan Street, Suite 203, Brenham, Texas 77833. Mailed proposals must be addressed to the Office of the City Secretary, City of Brenham, P. O. Box 1059, Brenham, Texas 77834-1059. Proposals must be received on or before the date and time designated for receipt of bids. The sealed envelope must contain the firm's name and address on the outside of the envelope, and be clearly marked **"RFP No. 23-009 BLUE BELL AQUATIC CENTER LOCKER ROOM RENOVATIONS"**.
3. Bidder may rely on the Owner and Architect to maintain the security and confidentiality of bid submissions and bid modifications.
4. Bidder shall assume full responsibility for timely delivery and be responsible for confirming receipt by Owner and Architect.

E. Modification or Withdrawal of Bid

1. Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the parties designated to receive the Bids.

3.4 CONSIDERATION OF BIDS

A. Opening of Bids: Bids that are properly identified and received within the specified time limits will be opened, and a summary of the Bids may be made available to the Bidders by the Architect, when directed by Owner.

B. Rejection of Bids: Unless otherwise prohibited by law, Owner shall have the right to reject any or all Bids.

C. Acceptance of Bid (Award):

1. Bids shall be awarded to the lowest responsible bidder under the method of competitive bidding pursuant to Texas Government Code, Chapter 2269, Subchapter C, Competitive Bidding Method, and accordingly the City, in determining the award of a contract under Texas Government Code, Chapter 2269, Subchapter C, Competitive Bidding Method, may consider the criteria set forth in Texas Government Code Section 2269.055, as follows:
   a. the price;
   b. the offeror's experience and reputation;
   c. the quality of the offeror's goods or services;
   d. the impact on the ability of the governmental entity to comply with rules relating to historically underutilized businesses;
   e. the offeror's safety record;
   f. the offeror's proposed personnel and subcontractors/suppliers;
   g. whether the offeror's financial capability is appropriate to the size and scope of the project; and
   h. any other relevant factor specifically listed in the request for bids, proposals, or qualifications.
2. It is the intent of the Owner to award a Contract to the Bidder whose Bid is considered most advantageous in order to obtain the best value for the City, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents.
3. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner’s judgment, is in the Owner’s best interests.

3.5 POST-BID INFORMATION

A. Submittals: After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable, submit in writing to the Owner through the Architect:

1. A designation of the Work to be performed with the Bidder's own forces;
2. Names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
3. Names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

B. Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder’s option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder.

C. Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

3.6 PERFORMANCE AND PAYMENT BONDS

A. Bond Requirements: Bidder shall furnish performance and payment bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder in accordance with Section 1.10.C of Section 011000, Summary of Work.

B. Time of Delivery: The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this paragraph.

3.7 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

A. Copies of the proposed Contract Documents may be made available to the Bidder, and will consist of the following documents:

1. AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor.
2. AIA Document A101™–2017, Exhibit A, Insurance and Bonds.
3. AIA Document A201™–2017, General Conditions of the Contract for Construction.
4. Drawings as indicated on the Index of Drawings on the cover sheet
5. Specifications as indicated on the Table of Contents of this Project Manual.
6. Previously issued Addenda as explained in the Invitation to Bid, accompanying the Project Manual, and any future Addenda as may be issued prior to the receipt of Bids.

TERMS AND CONDITIONS FOR BIDS

Definitions:

In order to simplify the language throughout this request for bids, the following definitions shall apply:

CITY – OWNER - Same as City of Brenham.

CONTRACT - An agreement between the City and a Vendor to furnish goods or services over a designated period of time during which repeated purchases may be made of the goods or services specified.

VENDOR – The successful Bidder(s) of this bid request.

Instructions:

The following instructions apply to all bids and become a part of terms and conditions of any bid submitted to the City of Brenham Purchasing Department, unless otherwise specified elsewhere in this bid request.

Form:

Bids must be submitted on this form only. **Bidders are required to submit one (1) original and one (1) copy.** All bids submitted must be itemized with prices extended when practical. BIDDER MUST RETURN THE ENTIRE ORIGINAL BID DOCUMENT WITH BID OR PROPOSAL.

Bid Return:

Bid must be sealed, and to ensure proper recognition upon its arrival, list the Bid Number, Bid Description and the Bid Opening Date on the outside of your envelope.

Late Bids:

Bids must be received by the Purchasing Department prior to the time indicated on this form. Late bids will not be opened and will be returned to the bidder only upon written request.

Acceptance:

The City of Brenham reserves the right to accept or reject any or all bids, to waive any informalities and technicalities, to accept the offer considered most advantageous **in order to obtain the best value for the City**. Causes for rejection of a bid may include but are not limited to the bidder's current violation of any City ordinance, the bidder's current inability to satisfactorily perform the work or service, or the bidder's previous failure to timely perform its obligation under a contract with the City.

Bidders may be disqualified and rejection of proposals may be recommended for any of (but not limited to) the following causes:

1. Failure to use the proposal form furnished by the Owner;
2. Lack of signature by an authorized representative on the proposal form;
3. Failure to properly complete the proposal;
4. Evidence of collusion among proposers;
5. Omission of uncertified personal or company check as a proposal guarantee **(if Bid Bond required)**; or
6. Unauthorized alteration of bid form.

Owner reserves the right to waive any informality or irregularity.

All bidders are hereby notified that the City of Brenham shall consider all factors it believes to be relevant in selecting the offer that provides the best value for the City including, but not limited to the purchase price, the proximity of the bidder as it relates to bidder's ability to perform the contract for the City, the delivery date, the reputation of the bidder and the bidder's goods or services, the quality of the bidder's goods or services, the extent to which the goods or services meet the City's needs, the impact on the ability of the City to comply with laws and rules relating to contracting with historically underutilized business and non-profit organizations employing persons with disabilities, the total long-term cost of the City to acquire the bidder's goods or services, the bidder's past performance under contracts with the City, the bidder's compliance with City ordinances, and any relevant criteria specifically listed in this request for bid.

The City is committed to obtaining its goods, products and services at the lowest price possible which benefits all citizens of Brenham. Therefore, in order to accomplish

this objective/goal, it is not the intention of the City to exclude particular vendors or manufacturers nor to create restrictive situations in its request for bids and proposals. Any manufacturer's name, trade names, brand names, catalog numbers, technical data, etc. used in the specifications are there for the sole purpose of establishing and describing general performance, quality levels, type and dimensions and such references are not intended to be restrictive. Alternate bids on similar or comparable products and/or services of any manufacturer or vendor equal to the products and/or services described in the specifications are invited and will be given careful consideration provided the alternate will accomplish the same task. The City shall be the sole judge on whether the alternate product and/or service is similar to, equal to and in compliance with that specified. The decision of the City shall be final.

Award of Contract:

The contract may be awarded either to the lowest responsible bidder or to the bidder who provides goods or services at the best value for the City. The bid award may be based on, but not necessarily limited to, the following factors:

a. the purchase price, including payment discount terms;
b. the reputation of the bidder and of the bidder's goods or services;
c. the quality of the bidder's goods or services;
d. the extent to which the goods or services meet the City's needs;
e. the bidder's past relationship with the City;
f. the impact on the ability of the City to comply with laws and rules relating to contracting with historically underutilized businesses and nonprofit organizations employing persons with disabilities;
g. the total long-term cost of the City to acquire the bidder's goods or services; and
h. any relevant criteria specifically listed in this request for bid.

The City prefers to award the entire contract to a single bidder; although, the City reserves the right to award a primary contract and a secondary contract in an effort to secure a back-up contractor to be used in emergency situations in the event the primary contractor is unable to respond as needed.

Assignment of Contract:

This contract cannot be transferred or assigned to another party without written consent of the City and may be subject to cancellation by the City if such consent is requested.

Contract Termination:

The City may terminate this Contract at any time upon thirty (30) calendar day's written notice. Upon the Vendor's receipt of such notice, the Vendor shall cease work immediately. The Vendor shall be compensated for the services satisfactorily performed prior to the termination date.

If, through any cause, the Vendor fails to fulfill its obligations under this contract, or if the Vendor violates any of the agreements of this Contract, the City has the right to terminate this Contract by giving the Vendor five (5) calendar days written notice. The Vendor will be compensated for the services satisfactorily performed before termination date. Termination of the contract for cause shall be deemed as sufficient evidence and cause to remove the Vendor's name from the bidder's list for receiving future bids.

No term or provision of this Contract shall be construed to relieve the Vendor of liability to the City for damages sustained by the City because of any breach of contract by the Vendor. The City may withhold payments to the Vendor for the purpose of setoff until the exact amount of damages due the City from the Vendor is determined and paid.

Reimbursements:

There is no expressed or implied obligation for the City to reimburse responding firms for any expenses incurred in preparing bids in response to this Request for Bids and the City will not reimburse responding firms for these expenses, nor will the City of Brenham pay any subsequent costs associated with the provision of any additional information or presentation, or to procure a contract for these services.

Minority Owned Businesses:

Minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated

against on the grounds of race, color, creed, sex, or national origin in consideration for an award.

Variations:

Any variation (deviation) from these specifications must be indicated on a separate form and be made part of the bid.

F.O.B. – Damage

Bids will not be considered unless bid F.O.B. delivered to Brenham, Texas. If shipping costs are not included in the unit bid price, bidder must give exact delivery cost, which is to be prepaid or added to the invoice. The City assumes no liability of goods delivered in a damaged or unacceptable condition.

Firm Prices:

Bidders must hold bid prices firm for 60 days after the bid opening date to allow the City sufficient time to award a contract. Once a Contract is awarded, the successful bidder must hold bid prices firm for the duration of the Contract. Sealed competitive bids may not be negotiated, amended or changed after the bid opening date.

Cooperative Agreements:

Successful bidder agrees to extend prices and terms to all governmental entities that have entered into, or will enter into, joint purchasing interlocal cooperation agreements with the City.

Authorized Signature:

Bids must show full firm name and mailing address of bidder and be manually signed by an authorized representative of the bidder. Firm name and authorized signature should appear on each page of bid where spaces are provided. Submission of a signed bid will be interpreted to mean that bidder has hereby agreed to all terms and conditions set forth in all of the sheets which make up this invitation.

Withdrawal-Alteration Of Bids:

Bids cannot be altered after receiving time or opening time. No bid may be withdrawn after opening time without acceptable reason in writing and with the approval of the City Council.

Payment Of Invoices:

Invoices must be submitted by the successful bidder to the City of Brenham, Finance Department, P.O. Box 1059, Brenham, Texas 77834-1059. All invoices to be paid in full within thirty (30) days after satisfactory delivery and billing, whichever is the latter. The City will not be liable for payment of invoices received more than sixty (60) days after delivery of order, or completion of service.

Cash Discounts:

Bidders may quote additional cash discount terms. If no discount is shown, prices are to be assumed net. Discount period to be started from the date of completion of entire order or date of receipt of invoice, whichever occurs last regardless of date of invoice.

Taxes:

The City of Brenham is exempt from Federal Excise, State Sales and Transportation Taxes. TAX MUST NOT BE INCLUDED IN BID. The City upon request will execute Tax Exemption Certificates. The City of Brenham is statutorily exempt from State and Local Sales tax and a permit number is not required.

Liability:

Vendor shall be liable for all damages incurred while in performance of the work to be performed hereunder. Vendor assumes full responsibility for the work to be performed hereunder, and hereby releases, relinquishes, and discharges the City, its officers, agents, and employees, from all claims, demands, and causes of action of every kind and character including the cost of defense thereof, for any injury to, including death of, any person whether that person be a third person, vendor, or an employee of either parties hereto, and any loss of or damage to property, whether the same be that of either of the parties hereto or of third parties, caused by or alleged to be caused by, arising out of or in connection with the issuance of this order to Vendor, whether or not said claims, demands and causes of action in whole or in part are covered by insurance. Certificate of Insurance may be required for but not limited to Commercial General Liability, Commercial Auto Liability, Workers

Compensation, and Professional Liability Insurance.

Material Safety Data Sheets (MSDS):

MSDS's must be provided prior to or with receipt of order, and when revised. Containers must be properly labeled and identified in accordance with the OSHA Hazard Communications Standard. Improperly labeled containers will result in refusal of the shipment and possible change in vendors.

Patents, Franchises, etc.:

The successful bidder agrees to protect the City from any claim involving patent right infringements, copyrights or sales franchises.

No Bids:

If bidder is unable to quote, the bid form should be returned to the purchasing agent before opening time, and reason given for not bidding if bidder desires to bid on future purchases.

Addenda:

In the event of a needed change in the published documents, it is understood that all the foregoing terms and conditions and all performance requirements will apply to any published addendum.

All published addenda shall be signed and included with your response package as acknowledgement of the addendum. Bidders are responsible for obtaining all published addenda from the City of Brenham Purchasing office. The City assumes no responsibility for the Bidders failure to obtain and/or properly submit any addendum. Failure to acknowledge and submit any addendum may be cause for the bid to be rejected. The City's decision to accept or reject any particular bid due to a failure to acknowledge and submit addenda shall be final.

Fiscal Funding:

The City operates and is funded on a fiscal year basis; accordingly, the City reserves the right to terminate, without liability, any contract for which funding is not available. Renewal of a contract will be in accordance with Local Government Code 271.903 concerning non- appropriation of funds for multi-year contracts.

The City reserves the right to rescind the contract at the end of each fiscal year if is determined that there are insufficient funds to extend the contract. The fiscal year for the City extends from October 1st of each calendar year to September 30th of the following calendar year.

H.B. 1295 Compliance:

The Vendor for the Contract shall comply with the requirements of Section 2252.908 of the Texas Government Code as adopted in 2015 as House Bill 1295. The law requires that a governmental entity may not enter in certain contracts with a business entity unless the business entity submits a Disclosure of Interested Parties to the governmental entity. The law applies only to a contract that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least $1 million.

Compliance with the law requires that the Vendor utilize the Texas Ethics Commission website to enter the required information on Form 1295 and print a copy of the complete form. The form must be signed, notarized and submitted to the contracting government entity

The City, in the case of contracts formalized by Purchase Order or by other written contract, will notify the Vendor of Award by Council and request the completed Form 1295 within five (5) working days thereafter.

No Boycott of Israel:

By acceptance of this Contract, Vendor hereby certifies that it is not a company identified on the Texas Comptroller's list of companies known to have contacts with, or provide supplies or services to, a foreign organization designated as a Foreign Terrorist Organization by the U.S. Secretary of State. Vendor further certifies and verifies that neither vendor, nor any affiliate, subsidiary, or parent company of Vendor, if any, the "Vendor Companies"), boycotts Israel, and Vendor agrees that Vendor and Vendor Companies will not boycott Israel during the term of this Agreement. For purposes of this Agreement, the term "boycott" shall mean and include terminating business activities or otherwise taking any action that is intended to penalize, inflict economic hoard

on, or limit commercial relations with Israel, or with a person or entity doing business in Israel or in an Israeli- controlled territory.

Engaged in Business with Iran, Sudan, or Foreign Terrorist Organization:

Pursuant to Texas Government Code Chapter 2252, Subchapter F, Vendor affirms that it is not identified on a list created by the Texas Comptroller of Public Accounts as a company known to have contracts with or provide supplies or services to a foreign terrorist organization.

Conflict of Interest:

By doing business or seeking to do business with the City, Vendor acknowledges that they have been notified of the requirements of Chapter 176 of the Texas Local Government Code and that they are solely responsible for compliance.

Applicable Law and Venue

This Contract shall be governed by the laws of the State of Texas. The parties agree that performance and all matters related thereto shall be in Washington County, Texas and venue for any lawsuit, claim or dispute arising out of the contract shall be in Washington County, Texas. Further, neither party will seek to remove such litigation to the federal court system by application of conflicts of laws or any other removal process.

Insurance

1. The Vendor shall procure and maintain at its sole cost and expense for the duration of the Contract insurance coverage for injuries to persons or damages to property that may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, volunteers, employees or subcontractors. The Contractor's insurance coverage shall be primary insurance with respect to the City, its officials, employees and volunteers. Any insurance or self- insurance maintained by the City, its officials, employees or volunteers shall be considered in excess of the Contractor's insurance and shall not contribute to it. Further, the Contractor shall include the City as an additional insured under its policy. All coverage for subcontractors shall be subject to all of the requirements stated herein. Certificates of Insurance and endorsements shall be furnished to the City and approved by the City before work commences.
2. Standard Insurance Policies Required:
   a) Commercial General Liability Policy
   b) Automobile Liability Policy
   c) Workers' Compensation Policy
3. General Requirements Applicable to All Policies:
   a) General Liability and Automobile Liability insurance shall be written by a carrier with an A: VIII or better rating in accordance with the current Best Key Rating Guide.
   b) Only Insurance Carriers licensed and admitted to do business in the State of Texas will be accepted.
   c) Deductibles shall be listed on the Certificate of Insurance and are acceptable only on a per occurrence basis for property damage only.
   d) "Claims Made" policies will not be accepted.
   e) The City of Brenham, its officials, employees and volunteers, are to be added as "Additional Insured" to the General Liability policy. The coverage shall contain no special limitations on the scope of protection afforded to the City, its officials, employees or volunteers.
   f) A Waiver of Subrogation in favor of the City with respect to Workers' Compensation Insurance must be included.
   g) Each insurance policy shall be endorsed to state that coverage shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice has been given to the City.
   h) Upon request, certified copies of all insurance policies shall be furnished to the City.
4. Commercial General Liability
   a) Minimum Combined Single Limit of $1,000,000.00 per occurrence for bodily injury and property damage.
   b) No coverage shall be deleted from the standard policy without notification of individual

exclusions being attached for review and acceptance.

5. Automobile Liability
   a) Minimum Combined Single limit of $500,000.00 per occurrence for bodily injury and property damage.
6. Worker's Compensation
   a) Statutory
7. Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent. And shall contain the following provisions and warranties:
   a) The company is licensed and admitted to do business in the State of Texas.
   b) The insurance policies provided by the insurance company are underwritten on forms that have been provided by the Texas Board of Insurance.
   c) All endorsements and insurance coverage according to requirements and instructions contained herein.
   d) The form of the notice of cancellation, termination, or change in coverage provisions to the City of Brenham.
   e) Original endorsements affecting coverage required by this section shall be furnished with the certificates of insurance.

Workers' Compensation Provisions
(State law requires the following language in contracts on public works projects).

DEFINITIONS:

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

Duration of the Project – includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the City.

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

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

The Contractor must provide a certificate of coverage to the City **prior** to being awarded the contract.

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

The Contractor shall obtain from each person providing services on a project, and provide to the City:

a. a certificate of coverage, prior to that person beginning work on the project, so the City will have on file certificates showing coverage for all persons providing services on the project; and
b. no later than seven calendar days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration

of the project.

The Contractor shall retain all required certificates of coverage for the duration of the project and for one (1) year thereafter.

The Contractor shall notify the City in writing by certified mail or personal delivery, within ten (10) calendar days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

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

The Contractor shall contractually require each person with whom it contracts to provide services on a project, to:

(a) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, that meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
(b) provide to the Contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on a project, for the duration of the project;
(c) provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
(d) obtain from each person with whom it contracts, and provide to the Contractor:
    1. a certificate of coverage, prior to the person beginning work on the project; and
    2. a new certificate of coverage showing the extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
(e) retain all required certificates of coverage on file for the duration of the project and for one (1) year thereafter;
(f) notify the City in writing by certified mail or personal delivery, within ten (10) calendar days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
(g) contractually require each person with whom it contracts, to perform as required by paragraphs (a) – (g), with the certificates of coverage to be provided to the person for whom they are providing services.

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

The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor that entitles the City to declare the contract void if the contractor does not remedy the breach within ten (10) calendar days after receipt of notice of breach from the City.

Exhibit “B”

SUBSTITUTION REQUEST

(During the Bidding/Negotiation Stage)

Project: Blue Bell Aquatic Center Locker Room Renovation Substitution Request #: _____

To: BBA Architects, LP From: _____

Re: _____ Date: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____ Phone: _____

Trade Name: _____ Model #: _____

Attached data includes product description, specifications, drawings, photographs, and performance/test data adequate for evaluation of the request with applicable portion of the data clearly identified.

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

The undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to the specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: _____

Firm: _____

Address: _____

Telephone: _____

A/E’s REVIEW AND ACTION

☐ Substitution approved: Make submittals in accordance with Specification Section 012500 Substitution Procedures.

☐ Substitution approved as noted: Make submittals in accordance with Specification Section 012500 Substitution Procedures.

☐ Substitution rejected: Use specified materials.

☐ Substitution Request received too late: Use specified materials.

Signed by: _____ Date: _____

Supporting Data Attached:

☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

Exhibit “C”

FORM OF PROPOSAL

Date: _____

TO: City of Brenham
200 West Vulcan Street, Suite 203
Brenham, Texas 77833

We submit herewith our Proposal for the renovation of the women’s and men’s locker rooms, showers, and restrooms at the Blue Bell Aquatic Center, located at 1800 East Tom Green Street in Brenham, Washington County, Texas.

1. BASE BID PROPOSAL. Having carefully examined all the Contract Documents, including Addenda Numbered _____, and having visited the site and examined all conditions affecting the work, the undersigned proposes to furnish all labor, materials, transportation, services, and equipment necessary and/or reasonably required to properly execute the Work included in the Bid Documents and to provide a complete and operable project, for the following amount (“Base Bid”):

   _____

   Dollars ($_____).

2. COSTS FOR GENERAL CONDITIONS ALLOWED TO THE GENERAL CONTRACTOR. The maximum cost of general conditions for change orders after the contract has been awarded is ____

   _____ percent (_____ %).

3. COMPLETION OF WORK. If the undersigned be notified of the acceptance of this Proposal within sixty (60) days after the above date, he agrees to execute a Contract for the above work for the above stated compensation, in the form of the Standard Agreement of the American Institute of Architects, and to guarantee the completion of the work in _____ (_____) calendar days after the award of the Contract.

4. ALTERNATES. The above Base Bid may be changed in accordance with any or all of the following Alternate Bid items as Owner may elect.

	ADD	DEDUCT
Alternate #1: Replace aluminum entrances	_____	_____

COMPANY NAME: _____

BY: _____ Signature: _____
printed name

Bidder's Address: _____

_____

Bidder's Telephone Number: _____

PROJECT MANUAL

FOR

BLUE BELL AQUATIC CENTER
Locker Room Renovation
Brenham, Texas

Project Architect:
BBA Architects, LP
Member American Institute of Architects
213 West Main Street
Brenham, Texas 77833-3642

MEP Engineer:
Swoboda Engineering LLC
7010 Coyote Run
Bryan, Texas 77808

PROJECT MANUAL

FOR

BLUE BELL AQUATIC CENTER
Locker Room Renovation

Brenham, Texas

BBA Architects, LP
Member of the American Institute of Architects
Brenham, Texas

TABLE OF CONTENTS
ARCHITECTURAL SECTIONS

07/12/2023

TABLE OF CONTENTS
ARCHITECTURAL SECTIONS

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Project information.
2. Work covered by the Contract Documents.
3. Owner-furnished, contractor-installed products.
4. Access to site.
5. Owner's occupancy requirements.
6. Work restrictions.
7. Specification and drawing conventions.
8. Miscellaneous provisions.

B. Related Sections include the following:

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

1.3 PROJECT INFORMATION

A. Project Identification: Architect’s Project Number 2023.03 and City of Brenham’s RFP No. 23-009.

1. Project Location: 1800 East Tom Green Street, Brenham, Texas 77833.

B. Owner: City of Brenham, P. O. Box 1059, Brenham, Texas 77834, telephone (979) 337-7246.

1. Owner’s Representative: Tammy Jaster, Aquatic and Recreation Superintendent.

C. Architect: BBA Architects, LP, 213 West Main Street, Brenham, Texas 77833-3642; telephone (979) 836-0523; website www.bba-architects.com

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

1. Mechanical, Electrical, Plumbing Engineer: Swoboda Engineering LLC, 7010 Coyote Run, Bryan, Texas 77808; telephone (979) 774-3400; website www.swoboda-engineering.com

1.4 WORK COVERED BY CONTRACT DOCUMENTS

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

1. The project includes renovation of existing men's and women's showers, restrooms, and locker rooms at the Blue Bell Aquatic Center in Brenham. Work will include demolition of the existing toilet partitions and toilet accessories, lockers and benches, tile shower stalls, tile flooring, and all plumbing fixtures except for water closets and urinals.
2. The building is designed to comply with the 2018 International Building Code, 2017 National Electrical Code, and 2018 International Energy Conservation Code.

B. Type of Contract:

1. The project will be constructed under a single prime contract.

1.5 OWNER-FURNISHED, CONTRACTOR-INSTALLED PRODUCTS

A. Owner shall furnish and Contractor shall install products as indicated below. Owner will receive delivery of said products and will store same at Owner's Central Warehouse located at 315 West Second Street in Brenham, unless other arrangements are made with the Contractor. It will be Contractor's responsibility to transport said products from Owner's site to the jobsite when conditions are ready for installation thereof.

B. Owner-Furnished, Contractor-Installed Products:

1. Plastic Lockers: Combination of multi-tier standard lockers and utility lockers, constructed of high-density polyethylene (HDPE), from the Tufftec Locker Series by Scranton Products. Sizes and quantities are indicated on the drawings. Contractor to install lockers in accordance with manufacturer's instructions.

1.6 ACCESS TO SITE

A. General: Contractor shall have limited use of Project site for construction operations as indicated by requirements of this Section.

B. Use of Site: Contractor is to access the work areas in the building by entering through the leisure pool entrance. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits: Confine construction operations on site to areas indicated on the drawings.
2. Building Material Storage: Materials may be stored in the back parking lot off of Blue Bell Road.
3. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, the public, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

1.7 COORDINATION WITH OCCUPANTS

A. Partial Owner Occupancy: Owner will occupy the premises during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's operations. Maintain existing exits unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
2. Notify the Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.8 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

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

B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, except as otherwise indicated.

1. Weekend Hours: Saturdays from 7:00 a.m. to 4:00 p.m., except when an event is scheduled. No work on Sundays.
2. Contractor to confirm with Owner the availability of work area on weekends.

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 Architect and Owner not less than two days in advance of proposed utility interruptions.

D. Sanitary Facilities: Contractor to provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Refer to Division 1 Section “Temporary Facilities and Controls” for additional information.

E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet (8 m) of entrances, operable windows, or outdoor air intakes

F. Controlled Substances: Use of controlled substances on the Project site is not permitted.

1.9 SPECIFICATIONS 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. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 1 General Requirements: Requirements of Sections in Division 1 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

1.10 MISCELLANEOUS PROVISIONS

A. Taxes: The City of Brenham is exempt from Federal Excise, State Sales, and Transportation Taxes. TAX MUST NOT BE INCLUDED IN THE BID PROPOSAL. The City upon request will execute Tax Exemption Certificates. The City of Brenham is statutorily exempt from State and Local Sales tax and a permit number is not required.

B. Insurance Requirements: Refer to “Insurance” provisions in the City’s Terms and Conditions for Bids found in Instructions to Bidders of these specifications.

C. Bonds: Performance and payment bonds shall each in the amount of one hundred percent (100%) of the total contract sum. The Contractor shall deliver the required bonds to the Owner not later than ten (10) days after the receipt by such successful Bidder of notice of acceptance of his bid by the Owner. Bonds shall remain in full force and effect for and until one year after final completion and final acceptance by the Owner of the work. Surety companies executing the bonds shall be acceptable to the Owner, authorized to do business where the work is located, and acceptable according to the latest list of companies holding Certificates of Authority from the U.S. Secretary of the Treasury.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012100 – ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements governing allowances.

1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order.

B. Types of allowances include the following:

1. Lump-sum allowances.
2. Unit-cost allowance.
3. Contingency allowances.
4. Testing and inspecting allowances.

C. Related Sections include the following:

1. Division 1 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders for allowances.
2. Division 1 Section "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.
3. Divisions 2 through 49 Sections for items of Work covered by allowances.

1.3 SELECTION AND PURCHASE

A. At the earliest practical date after award of the Contract, advise Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

B. At Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

C. Purchase products and systems selected by Architect from the designated supplier.

1.4 SUBMITTALS

A. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

B. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

C. Coordinate and process submittals for allowance items in same manner as for other portions of the Work.

1.5 COORDINATION

A. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

1.6 LUMP-SUM AND UNIT-COST ALLOWANCES

A. Allowance shall include cost to Contractor of specific products and materials ordered under the allowance and shall include taxes, freight, and delivery to Project site.

B. Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials selected by Architect under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.7 CONTINGENCY ALLOWANCES

A. Use the contingency allowance only as directed by Architect for Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

B. Contractor's related costs for products and equipment ordered by Owner under the contingency allowance are included in the allowance and are not part of the Contract Sum. These costs include delivery, installation, taxes, equipment rental, and similar costs. Not included are Contractor’s overhead, profit, and insurance.

C. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.8 UNUSED MATERIALS

A. Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

1. If requested by Architect, prepare unused material for storage by Owner when it is not economically practical to return the material for credit. If directed by Architect, deliver unused material to Owner's storage space. Otherwise, disposal of unused material is Contractor's responsibility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

3.3 SCHEDULE OF ALLOWANCES

A. Testing and Inspection Allowance: Contractor shall include the sum of Eleven Thousand Six Hundred Dollars ($11,600) to provide concrete testing services required for epoxy flooring installation.

END OF SECTION 012100

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bid Documents that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

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

D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate One: Contractor shall state the amount to be added to or deducted from Base Bid to replace the four double-door aluminum entrances with entrances of like kind and quality.

END OF SECTION 012300

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for substitutions.

B. Related Requirements:

1. Division 1 Section "Allowances" for products selected under an allowance.
2. Division 1 Section "Alternates" for products selected under an alternate.
3. Division 1 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
4. Divisions 2 through 49 Sections for specific requirements and limitations for substitutions.

1.3 DEFINITIONS

A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.4 SUBMITTALS

A. Substitution Requests: Submit one copy 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: Contractor’s standard Substitution Request Form.
2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
    b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific

features and requirements indicated. Indicate deviations, if any, from the Work specified.

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

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

1.5 QUALITY ASSURANCE

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

1.6 PROCEDURES

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

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

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

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

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

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012600 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

B. Related Requirements:

1. Division 1 Section "Substitution Procedures" for administrative procedures for handling requests for substitutions made after Contract award.

1.3 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions", or similar form.

1.4 PROPOSAL REQUESTS

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

1. Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within 10 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    c. Include costs of labor and supervision directly attributable to the change.
    d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 1 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use AIA Document G709 for Proposal Requests, or similar form acceptable to Architect.

1.5 ADMINISTRATIVE CHANGE ORDERS

A. Allowance Adjustment: See Division 1 Section "Allowances" for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.

1.6 CHANGE ORDER PROCEDURES

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

1.7 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

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

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

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

B. Related Sections include the following:

1. Division 1 Section "Allowances" for procedural requirements governing the handling and processing of allowances.
2. Division 1 Section "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.
3. Division 1 Section "Construction Progress Documentation" for administrative requirements governing preparation and submittal of Contractor's Construction Schedule.
4. Division 01 Section "Submittal Procedures" for administrative requirements governing the preparation and submittal of the submittal schedule.

1.3 DEFINITIONS

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

1.4 SCHEDULE OF VALUES

A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.

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

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

1. Identification: Include the following Project identification on the Schedule of Values:
   a. Project name and location.
   b. Name of Architect.

c. Architect's project number.
d. Contractor's name and address.
e. Date of submittal.

2. Arrange Schedule of Values consistent with format of AIA Document G703 Continuation Sheets.
3. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
   a. Related Specification Section or Division.
   b. Description of the Work.
   c. Name of subcontractor.
   d. Name of manufacturer or fabricator.
   e. Name of supplier.
   f. Change Orders (numbers) that affect value.
   g. Dollar value of labor, materials, and equipment, as a percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
4. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide multiple line items for principal subcontract amounts, in excess of five percent of the Contract Sum.
5. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
6. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
   a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance.
7. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
   a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Value or distributed as general overhead expense, at Contractor’s option.
9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.5 APPLICATIONS FOR PAYMENT

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

   1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: Progress payments shall be submitted to Architect by the 1st day of the month. The period covered by each Application for Payment is one calendar month, ending on the last day of the preceding month.

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

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

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

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for off-site stored materials.
2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
3. Provide summary documentation for stored materials indicating the following:
    a. Materials previously stored and included in previous Applications for Payment.
    b. Work completed for this Application utilizing previously stored materials.
    c. Additional materials stored with this Application.
    d. Total materials remaining stored, including materials with this Application.

F. Transmittal: Submit signed and notarized original copy of each Application for Payment to Architect by electronic format, including waivers of lien and similar attachments if required.

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

1. List of subcontractors and suppliers.
2. Schedule of Values.
3. Contractor's Construction Schedule (preliminary if not final).
4. Submittal schedule (preliminary if not final).
5. Copies of building permits.
6. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
7. Certificates of insurance and insurance policies.
8. Performance and payment bonds.

H. Application for Payment at Substantial Completion: After issuing 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 Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

I. Final Payment Application: 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, "Contractor's Affidavit of Payment of Debts and Claims."

5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
6. AIA Document G707, "Consent of Surety to Final Payment."
7. Evidence that claims have been settled.

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 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

1. General project coordination procedures.
2. Administrative and supervisory personnel.
3. Requests for Information (RFIs).
4. Project meetings.

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

C. Related Sections include the following:

1. Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
2. Division 1 Section "Closeout Procedures" for coordinating Contract closeout.

1.3 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 COORDINATION

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 with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.
4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. 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. Project closeout activities.
7. Startup and adjustment of systems.
8. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

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

1.5 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 accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

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

1.6 KEY PERSONNEL

A. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals, their duties and responsibilities, email addresses, and cellular phone numbers.

B. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

1.7 REQUESTS FOR INFORMATION (RFIs)

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

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor’s suggested resolution. If Contractor’s suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor’s signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: AIA Document G716, or software-generated form with substantially the same content as indicated above, acceptable to Architect.

1. RFI forms and attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 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 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 Division 1 Section "Contract Modification Procedures."
   a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of the RFI response.

E. On receipt of Architect's action, immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.
2. Identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Sections include the following:

1. Division 1 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
2. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.

1.3 DEFINITIONS

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

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

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

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

1.4 ACTION SUBMITTALS

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

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.

2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
    a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
4. Format: Arrange the following information in a tabular format:
    a. Scheduled date for first submittal.
    b. Specification Section number and title.
    c. Submittal category: Action; informational.
    d. Name of subcontractor.
    e. Description of the Work covered.
    f. Scheduled date for Architect's final release or approval.

1.5 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will be provided by Architect, at Architect’s sole discretion, for use in preparing submittals, under the following conditions.

1. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
2. Digital Drawing Software Program: The Contract Drawings are available in AutoCad.
3. Party requesting the files shall execute a Waiver and Release in an Agreement form acceptable to Owner and Architect.
4. Drawings files are limited to architectural drawing sheets. Drawings from Architect’s or Owner’s consultants are limited to availability.

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

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
3. Resubmittal Review: Allow 7 days for review of each resubmittal.
4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 15 days for initial review of each submittal.
5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15

days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.

D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.
   a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-06100.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-06100.01.A).
3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software or Contractor's electronic form acceptable to Architect**,** containing the following information:
   a. Project name.
   b. Date.
   c. Name and address of Architect.
   d. Name and address of Contractor.
   e. Name and address of subcontractor.
   f. Name and address of supplier.
   g. Name of manufacturer.
   h. Submittal number or other unique identifier, including revision identifier.
      1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06100.01). Re-submittals shall include an alphabetic suffix after another decimal point (e.g., 06100.01.A).
   i. Number and title of appropriate Specification Section.
   j. Drawing number and detail references, as appropriate.
   k. Location(s) where product is to be installed, as appropriate.
   l. Other necessary identification.

E. Options: Identify options requiring selection by Architect.

F. Deviations and Additional Information: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.

G. Resubmittals: Make resubmittals in same form as initial submittal.

1. Note date and content of previous submittal.
2. Note date and content of revision in label or title block and clearly indicate extent of revision.
3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.

H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.

I. 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 action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Submit electronic submittals via email as PDF electronic files, or post electronic submittals to the Project using Contractor's web-based construction project management software.
   a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

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

1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each copy of each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
   a. Manufacturer's 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 showing 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 concurrent with Samples.
6. Submit Product Data in PDF electronic file format.

C. 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.
2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches.
3. Submit Shop Drawings in PDF electronic file format.

D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.

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

E. Coordination Drawing Submittals: Comply with requirements specified in Division 1 Section "Project Management and Coordination."

F. Application for Payment and Schedule of Values: Comply with requirements specified in Division 1 Section "Payment Procedures."

G. Test and Inspection Reports and Schedule of Tests and Inspections Submittals: Comply with requirements specified in Division 1 Section "Quality Requirements."

H. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Division 1 Section "Closeout Procedures."

I. 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.

J. 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.

K. 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.

L. 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.

M. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

N. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.

O. 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.

P. 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.

Q. 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:

1. Name of evaluation organization.
2. Date of evaluation.
3. Time period when report is in effect.
4. Product and manufacturers' names.
5. Description of product.
6. Test procedures and results.
7. Limitations of use.

R. 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 primers and substrate preparation needed for adhesion.

S. 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.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action 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.

B. Project Closeout and Maintenance Material Submittals: See requirements in Division 1 Section "Closeout Procedures."

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ARCHITECT'S ACTION

A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.

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

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

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

E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

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

1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

C. Related Sections include the following:

1. Division 1 Section "Allowances" for testing and inspecting allowances.
2. Divisions 2 through 49 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.

D. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

F. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

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

H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

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

1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).

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

1.4 CONFLICTING REQUIREMENTS

A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.

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

1.5 ACTION SUBMITTALS

A. Shop Drawings: For integrated exterior or laboratory mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.

1. Indicate manufacturer and model number of individual components.
2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 INFORMATIONAL SUBMITTALS

A. 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.

B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Entity responsible for performing tests and inspections.
3. Description of test and inspection.
4. Identification of applicable standards.
5. Identification of test and inspection methods.
6. Number of tests and inspections required.
7. Time schedule or time span for tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

1.7 REPORTS AND DOCUMENTS

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

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

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

1.8 QUALITY ASSURANCE

A. General: 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.

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

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

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

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

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

H. 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 installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

1. Contractor responsibilities include the following:
    a. Provide test specimens representative of proposed products and construction.
    b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
    c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
    d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
    e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
    f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on Project.

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

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

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
2. Notify Architect three business days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
   a. Allow seven days for initial review and each re-review of each mockup.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed, unless otherwise indicated.

L. Integrated Exterior Mockups: Construct integrated exterior mockup according to approved Shop Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual Specification Sections, along with supporting materials.

M. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 2 through 49.

1.9 QUALITY CONTROL

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

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
3. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

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

1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
   a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.

5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

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

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

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

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

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

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

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

H. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Coordinate and submit concurrently with Contractor’s construction schedule. Update as the Work progresses.

1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.10 SPECIAL TESTS AND INSPECTIONS

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

1. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
2. 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.
3. Submitting a final report of special tests and inspections at Substantial Completion which includes a list of unresolved deficiencies.
4. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
5. 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 modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.2 REPAIR AND PROTECTION

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

1. Provide materials and comply with installation requirements specified in other Specification Sections 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 Division 1 Section "Cutting and Patching."

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

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

END OF SECTION 014000

SECTION 014200 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": Furnish and install, complete and ready for the intended use.

I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

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

B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.

C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names and website addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

1.	AA	Aluminum Association (The) www.aluminum.org
2.	AABC	Associated Air Balance Council www.aabc.com
3.	AAMA	American Architectural Manufacturers Association www.aamanet.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.	ABAA	Air Barrier Association of America www.airbarrier.org
7.	ABMA	American Bearing Manufacturers Association www.americanbearings.org
8.	ACI	American Concrete Institute www.concrete.org
9.	ACPA	American Concrete Pipe Association www.concrete-pipe.org
10.	AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org
11.	AF&PA	American Forest & Paper Association www.afandpa.org
12.	AGA	American Gas Association www.aga.org
13.	AHAM	Association of Home Appliance Manufacturers www.aham.org
14.	AHRI	Air-Conditioning, Heating, and Refrigeration Institute, The www.ahrinet.org
15.	AI	Asphalt Institute, The www.asphaltinstitute.org
16.	AIA	American Institute of Architects (The) www.aia.org
17.	AISC	American Institute of Steel Construction www.aisc.org
18.	AISI	American Iron and Steel Institute www.steel.org
19.	AITC	American Institute of Timber Construction www.aitc-glulam.org
20.	ALSC	American Lumber Standard Committee, Incorporated www.alsc.org
21.	AMCA	Air Movement and Control Association International, Inc. www.amca.org

22.	ANSI	American National Standards Institute www.ansi.org
23.	AOSA	Association of Official Seed Analysts, Inc. www.aosaseed.com
24.	APA	APA - The Engineered Wood Association www.apawood.org
25.	APA	Architectural Precast Association www.archprecast.org
26.	API	American Petroleum Institute www.api.org
27.	ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org
28.	ASCE	American Society of Civil Engineers www.asce.org
29.	ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org
30.	ASME	ASME International www.asme.org
31.	ASSE	American Society of Sanitary Engineering www.asse-plumbing.org
32.	ASTM	ASTM (American Society for Testing and Materials) International www.astm.org
33.	ATIS	Alliance for Telecommunications Industry Solutions www.atis.org
34.	AWCMA	American Window Covering Manufacturers Association (Now WCMA)
35.	AWCI	Association of the Wall and Ceiling Industry www.awci.org
36.	AWI	Architectural Woodwork Institute www.awinet.org
37.	AWPA	American Wood Protection Association www.awpa.com
38.	AWS	American Welding Society www.aws.org
39.	AWWA	American Water Works Association www.awwa.org
40.	BHMA	Builders Hardware Manufacturers Association www.buildershardware.com
41.	BIA	Brick Industry Association (The) www.gobrick.com
42.	BICSI	BICSI, Inc. www.bicsi.org
43.	BIFMA	Business & Institutional Furniture Manufacturer's Association International www.bifma.com
44.	BISSC	Baking Industry Sanitation Standards Committee www.bissc.org
45.	CCC	Carpet Cushion Council www.carpetcushion.org
46.	CDA	Copper Development Association www.copper.org
47.	CEA	Canadian Electricity Association www.canelect.ca
48.	CEA	Consumer Electronics Association www.ce.org
49.	CFFA	Chemical Fabrics and Film Association Inc.

www.chemicalfabricsandfilm.com

50. CGA Compressed Gas Association
www.cganet.com
51. CIMA Cellulose Insulation Manufacturers Association
www.cellulose.org
52. CISCA Ceilings & Interior Systems Construction Association
www.cisca.org
53. CISPI Cast Iron Soil Pipe Institute
www.cispi.org
54. CLFMI Chain Link Fence Manufacturers Institute
www.chainlinkinfo.org
55. CPA Composite Panel Association
www.pbmdf.com
56. CRI Carpet and Rug Institute (The)
www.carpet-rug.com
57. CRSI Concrete Reinforcing Steel Institute
www.crsi.org
58. CRRC Cool Roof Rating Council
www.coolroofs.org
59. CSA Canadian Standards Association
www.csa.ca
60. CSI Construction Specifications Institute, The
www.csinet.org
61. CSSB Cedar Shake & Shingle Bureau
www.cedarbureau.org
62. CTI Cooling Technology Institute
www.cti.org
63. DHI Door and Hardware Institute
www.dhi.org
64. ECA Electrical Components Association
www.ec-central.org
65. EIA Electronic Industries Alliance
www.eia.org
66. EIMA EIFS Industry Members Association
www.eima.com
67. EJCDC Engineers Joint Contract Documents Committee
http://content.asce.org/ejcdc/
68. EJMA Expansion Joint Manufacturers Association, Inc.
www.ejma.org
69. ESD Electrostatic Discharge Association
www.esda.org
70. ETL SEMCO Intertek
www.intertek-etlsemko.com
71. FIBA The International Basketball Federation
www.fiba.com
72. FIVB The International Volleyball Federation
www.fivb.ch
73. FM Approvals FM Global
www.fmglobal.com
74. FM Global FM Global
www.fmglobal.com
75. FSA Fluid Sealing Association
www.fluidsealing.com
76. FSC Forest Stewardship Council
www.fsc.org
77. GA Gypsum Association
www.gypsum.org

78.	GANA	Glass Association of North America www.glasswebsite.com
79.	GS	Green Seal www.greenseal.org
80.	GSI	Geosynthetic Institute www.geosynthetic-institute.org
81.	HI	Hydronics Institute www.gamanet.org
82.	HI/GAMA	Hydronics Institute/Gas Appliance Manufacturers Association www.ahrinet.org
83.	HPVA	Hardwood Plywood & Veneer Association www.hpva.org
84.	HPW	H. P. White Laboratory, Inc. www.hpwhite.com
85.	IAPSC	International Association of Professional Security Consultants www.iapsc.org
86.	ICBO	International Conference of Building Officials www.iccsafe.org
87.	ICEA	Insulated Cable Engineers Association, Inc. www.icea.net
88.	ICRI	International Concrete Repair Institute, Inc. www.icri.org
89.	ICPA	International Cast Polymer Association www.icpa-hq.org
90.	IEC	International Electrotechnical Commission www.iec.ch
91.	IEEE	Institute of Electrical and Electronics Engineers www.ieee.org
92.	IES	Illuminating Engineering Society of North America www.iesna.org
93.	IEST	Institute of Environmental Sciences and Technology www.iest.org
94.	IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org
95.	ILI	Indiana Limestone Institute of America www.iliai.com
96.	ISA	Instrumentation, Systems, and Automation Society, The www.isa.org
97.	ISO	International Organization for Standardization www.iso.ch
98.	ISSFA	International Solid Surface Fabricators Association www.issfa.net
99.	ITU	International Telecommunication Union www.itu.int
100.	KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org
101.	LGSEA	Light Gauge Steel Engineers Association www.arcat.com
102.	LPI	Lightning Protection Institute www.lightning.org
103.	MBMA	Metal Building Manufacturers Association www.mbma.com
104.	MCA	Metal Construction Association www.metalconstruction.org
105.	MFMA	Maple Flooring Manufacturers Association, Inc. www.maplefloor.org
106.	MFMA	Metal Framing Manufacturers Association, Inc.

www.metalframingmfg.org

107. MHIA Material Handling Industry of America
www.mhia.org

108. MIA Marble Institute of America
www.marble-institute.com

109. MPI Master Painters Institute
www.paintinfo.com

110. MSS Manufacturers Standardization Society of Valve and Fittings Industry Inc.
www.mss-hq.com

111. NAAMM National Association of Architectural Metal Manufacturers
www.naamm.org

112. NACE National Association of Corrosion Engineers International
www.nace.org

113. NADCA National Air Duct Cleaners Association
www.nadca.com

114. NAIMA North American Insulation Manufacturers Association
www.naima.org

115. NBGQA National Building Granite Quarries Association, Inc.
www.nbgqa.com

116. NCAA National Collegiate Athletic Association
www.ncaa.org

117. NCMA National Concrete Masonry Association
www.ncma.org

118. NCTA National Cable & Telecommunications Association
www.ncta.com

119. NEBB National Environmental Balancing Bureau
www.nebb.org

120. NECA National Electrical Contractors Association
www.necanet.org

121. NeLMA Northeastern Lumber Manufacturers' Association
www.nelma.org

121. NEMA National Electrical Manufacturers Association
www.nema.org

122. NETA InterNational Electrical Testing Association
www.netaworld.org

123. NFHS National Federation of State High School Associations
www.nfhs.org

124. NFPA National Fire Protection Association
www.nfpa.org

125. NFRC National Fenestration Rating Council
www.nfrc.org

126. NGA National Glass Association
www.glass.org

127. NHLA National Hardwood Lumber Association
www.natlhardwood.org

128. NLGA National Lumber Grades Authority
www.nlga.org

129. NOFMA The Wood Flooring Manufacturers Association
www.nofma.org

130. NOMMA National Ornamental & Miscellaneous Metals Association
www.nomma.org

131. NRCA National Roofing Contractors Association
www.nrca.net

132. NRMCA National Ready Mixed Concrete Association
www.nrmca.org

133. NSF National Sanitation Foundation International
www.nsf.org

134.	NSSGA	National Stone, Sand & Gravel Association www.nssga.org
135.	NTMA	National Terrazzo & Mosaic Association, Inc. (The) www.ntma.com
136.	NWFA	National Wood Flooring Association www.nwfa.org
137.	PCI	Precast/Prestressed Concrete Institute www.pci.org
138.	PDI	Plumbing and Drainage Institute www.pdionline.org
139.	PGI	PVC Geomembrane Institute www.pvcgeomembrane.com
140.	PTI	Post-Tensioning Institute www.post-tensioning.org
141.	RCSC	Research Council on Structural Connections www.boltcouncil.org
142.	RFCI	Resilient Floor Covering Institute www.rfci.com
143.	RIS	Redwood Inspection Service www.redwoodinspection.com
144.	SAE	SAE International www.sae.org
145.	SCAQMD	South Coast Air Quality Management District www.aqmd.com
146.	SCTE	Society of Cable Telecommunications Engineers www.scte.org
147.	SDI	Steel Deck Institute www.sdi.org
148.	SDI	Steel Door Institute www.steeldoor.org
149.	SEFA	Scientific Equipment and Furniture Association www.sefalabs.com
150.	SIA	Security Industry Association www.siaonline.org
151.	SJI	Steel Joist Institute www.steeljoist.org
152.	SMA	Screen Manufacturers Association www.smacentral.org
153.	SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org
154.	SMPTE	Society of Motion Picture and Television Engineers www.smpte.org
155.	SPFA	Spray Polyurethane Foam Alliance www.sprayfoam.org
156.	SPIB	Southern Pine Inspection Bureau (The) www.spib.org
157.	SPRI	Single Ply Roofing Industry www.spri.org
158.	SSINA	Specialty Steel Industry of North America www.ssina.com
159.	SSPC	Steel Structures Painting Council www.sspc.org
160.	STI	Steel Tank Institute www.steeltank.com
161.	SWI	Steel Window Institute www.steelwindows.com
162.	SWPA	Submersible Wastewater Pump Association

www.swpa.org

163. TCA Tilt-Up Concrete Association
www.tilt-up.org
164. TCNA Tile Council of North America, Inc.
www.tileusa.com
165. TEMA Tubular Exchanger Manufacturers Association
www.tema.org
166. TIA/EIA Telecommunications Industry Association/Electronic Industries Alliance
www.tiaonline.org
167. TMS The Masonry Society
www.masonrysociety.org
168. TPI Truss Plate Institute, Inc.
www.tpinst.org
169. TPI Turfgrass Producers International
www.turfgrasssod.org
170. TRI Tile Roofing Institute
www.tileroofing.org
171. UL Underwriters Laboratory
www.ul.com
172. UNI Uni-Bell PVC Pipe Association
www.uni-bell.org
173. USAV USA Volleyball
www.usavolleyball.org
174. USGBC U.S. Green Building Council
www.usgbc.org
175. USITT United States Institute for Theatre Technology
www.usitt.org
176. WCLIB West Coast Lumber Inspection Bureau
www.wclib.org
177. WCMA Window Covering Manufacturers Association
www.wcmanet.org
178. WDMA Window and Door Manufacturers Association
www.wdma.com
179. WI Woodwork Institute
www.wicnet.org
180. WMMPA Wood Moulding & Millwork Producers Association
www.wmmpa.com
181. WSRCA Western States Roofing Contractors Association
www.wsrca.com
182. WWPA Western Wood Products Association
www.wwpa.org

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

1. DIN German Institute for Standardization, The
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, Inc.
www.icc-es.org

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

1.	COE	Army Corps of Engineers www.usace.army.mil
2.	CPSC	Consumer Product Safety Commission www.cpsc.gov
3.	DOC	Department of Commerce www.commerce.gov
4.	DOD	Department of Defense http://dodssp.daps.dla.mil
5.	DOE	Department of Energy www.energy.gov
6.	EPA	Environmental Protection Agency www.epa.gov
7.	FAA	Federal Aviation Administration www.faa.gov
8.	FCC	Federal Communications Commission www.fcc.gov
9.	FDA	U.S. Food and Drug Administration www.fda.gov
10.	GSA	General Services Administration www.gsa.gov
11.	HUD	Department of Housing and Urban Development www.hud.gov
12.	LBL	Lawrence Berkeley National Laboratory www.lbl.gov
13.	NCHRP	National Cooperative Highway Research Program (See TRB)
14.	NIST	National Institute of Standards and Technology www.nist.gov
15.	OSHA	Occupational Safety & Health Administration www.osha.gov
16.	PBS	Public Buildings Service (See GSA)
17.	PHS	U.S. Public Health Service Corps http://www.hhs.gov/ophs/
18.	RUS	Rural Utilities Service www.usda.gov/rus/
19.	SD	State Department www.state.gov
20.	TRB	Transportation Research Board http://gulliver.trb.org
21.	USDA	United States Department of Agriculture www.usda.gov
22.	USP	U.S. Pharmacopeia www.usp.org
23.	USPS	Postal Service www.usps.com

D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names and website addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

1.	ADAAG	Americans with Disabilities Act (ADA) Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities Available from U.S. Access Board www.access-board.gov
2.	CFR	Code of Federal Regulations Available from Government Printing Office www.gpoaccess.gov/cfr/index.html
3.	DOD	Department of Defense Military Specifications and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil
4.	DSCC	Defense Supply Center Columbus (See FS)
5.	FED-STD	Federal Standard (See FS)
6.	FS	Federal Standard Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil/ www.dsp.dla.mil Available from General Services Administration Available from National Institute of Building Sciences www.wbdg.org/ccb
7.	FTMS	Federal Test Method Standard (See FS)
8.	MIL MIL-STD MILSPEC	(See MILSPEC) Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil
9.	TAS	Texas Accessibility Standards www.tdlr.texas.gov/ab/ab.htm
10.	UFAS	Available from Access Board www.access-board.gov

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

1.	CBHF	Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation www.bearhfti.ca.gov
2.	CCR	California Code of Regulations www.oal.ca.gov/CCR.htm
3.	CDHS	California Department of Health Services www.dhcs.ca.gov
4.	CDPH	California Department of Public Health, Indoor Air Quality Section www.cal-iaq.org
5.	CPUC	California Public Utilities Commission www.cpuc.ca.gov
6.	TDLR	Texas Department of Licensing and Regulation www.tdlr.texas.gov
7.	TFS	Texas Forest Service http://txforestservice.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 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

B. Related Sections include the following:

1. Division 1 Section "Summary" for limitations on utility interruptions and other work restrictions.
2. Division 31 Section "Dewatering" for disposal of ground water at Project site.
3. Division 32 Section "Cement Concrete Pavement" for construction and maintenance of pavement for temporary roads and paved areas.

1.3 USE CHARGES

A. Sewer Service: Owner will pay sewer service use charges for sewer usage by all entities for construction operations.

B. Water Service: Owner will pay water service use charges for water used by all entities for construction operations.

C. Electric Power Service: Owner will pay electric power service use charges for electricity used by all entities for construction operations.

1.4 INFORMATIONAL SUBMITTALS

A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

B. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

1.5 QUALITY ASSURANCE

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

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

1.6 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 MATERIALS

A. Pavement: Comply with Division 32 Section "Cement Concrete Pavement".

B. Chain-Link Fencing: Minimum 2-inch, 0.148-inch- thick, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch- OD line posts and 2-7/8-inch- OD corner and pull posts, with 1-5/8-inch- OD top rails.

C. Lumber and Plywood: Comply with requirements in Division 6 Section "Rough Carpentry."

D. Gypsum Board: Minimum 1/2 inch thick by 48 inches wide by maximum available lengths; regular-type panels with tapered edges. Comply with ASTM C 36/C 36M.

E. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

F. Paint: Comply with requirements in Division 9 painting Sections.

2.2 TEMPORARY FACILITIES

A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.

B. Common-Use Field Office: Of sufficient size to accommodate needs of Owner, Architect, and construction personnel office activities and to accommodate Project meetings if specified in other Division 1 Sections. Keep office clean and orderly. Furnish and equip offices as follows:

1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
2. Drinking water and private toilet.
3. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
4. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.

C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.

1. Store combustible materials apart from building.

2.3 EQUIPMENT

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

B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.

1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction and clean HVAC system as required in Division 1 Section "Closeout Procedures."

PART 3 - EXECUTION

3.1 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.

1. Locate facilities to limit site disturbance as specified in Division 1 Section "Summary."

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

3.2 TEMPORARY UTILITY INSTALLATION

A. General: Install temporary service or connect to existing service.

1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.

B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.

1. Connect temporary sewers to municipal or private system as directed by authorities having jurisdiction.

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

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

E. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.

F. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on

completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.

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

I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.

J. Telephone Service: Provide superintendent with cellular telephone.

K. Electronic Communication Service: Provide temporary electronic communication service, including electronic mail, in common-use facilities.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.

B. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.

1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
2. Prepare sub-grade and install sub-base and base for temporary roads and paved areas according to Division 31 Section "Earthwork."
3. Recondition base after temporary use, including removing contaminated material, re-grading, proof-rolling, compacting, and testing.

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

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

D. Parking: Provide temporary parking areas for construction personnel.

E. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.

1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
2. Remove snow and ice as required to minimize accumulations.

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

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

G. 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 Division 1 Section "Execution Requirements."

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.

1. Comply with work restrictions specified in Division 1 Section "Summary."

B. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to the erosion- and sedimentation-control drawings and requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.
4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

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

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

E. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence where indicated on drawings and in a manner that will prevent people and animals from easily entering site except by entrance gates.

1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.

F. 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 work day.

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

H. 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 weather-tight enclosure for building exterior.

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

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

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

3.5 MOISTURE AND MOLD CONTROL

A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.

B. Exposed Construction Phase: 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 Phase: 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, replace, or clean stored or installed material that begins to grow mold.
7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

D. Controlled Construction Phase of Construction: 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 permanent HVAC system to control humidity.
3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
    a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
    b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
    c. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

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. Remove temporary paving not intended for or acceptable for integration into permanent paving. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 1 Section "Closeout Procedures."

END OF SECTION 015000

SECTION 016000 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

B. Related Sections include the following:

1. Division 1 Section "Allowances" for products selected under an allowance.
2. Division 1 Section "Alternates" for products selected under an alternate.
3. Division 1 Section "Substitution Procedures" for requests for substitutions.
4. Division 1 Section "References" for applicable industry standards for products specified.
5. Division 1 Section "Closeout Procedures" for submitting warranties for Contract closeout.

1.3 DEFINITIONS

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

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process 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.

A. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.4 ACTION SUBMITTALS

A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
    a. Form of Approval: As specified in Division 1 Section "Submittal Procedures."
    b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.

B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

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

1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

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

B. Delivery and Handling:

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

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.

3. Store products that are subject to damage by the elements, under cover in a weather-tight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.
7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

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

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for 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 with the Specifications, prepare a written document using appropriate form properly executed.
3. Refer to Divisions 2 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Division 1 Section "Closeout Procedures."

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 not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
1. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Products:
   a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered, unless otherwise indicated.
4. Manufacturers:
   a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered, unless otherwise indicated.
5. 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 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.

C. Visual Matching Specification: Where Specifications require "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 Division 1 Section "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 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.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: 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 these requirements:

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

PART 3 - EXECUTION (Not Used)

END OF SECTION 016000

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

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

B. Related Sections include the following:

1. Division 1 Section "Submittal Procedures" for submitting surveys.
2. Division 1 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.
3. Division 07 Section "Penetration Firestopping" for patching penetrations in fire-rated construction.

1.3 DEFINITIONS

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

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

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For land surveyor or professional engineer.

B. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.

C. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.

D. Certified Surveys: Submit two copies signed by land surveyor.

1.5 QUALITY ASSURANCE

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

B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.

1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from Architect before proceeding. Shore, brace, and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

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

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: 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 requirements in Division 1 sustainable design requirements Section.

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.

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 and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; 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.
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 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 caused by differing field conditions outside the control of Contractor, submit a request for information to Architect according to requirements in Division 1 Section "Project Management and Coordination."

E. Surface and Substrate Preparation: Comply with manufacturer's written recommendations for preparation of substrates to receive subsequent work.

3.3 CONSTRUCTION LAYOUT

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

B. General: Engage a land surveyor or professional engineer to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
3. Inform installers of lines and levels to which they must comply.
4. Check the location, level and plumb, of every major element as the Work progresses.
5. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

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

3.4 FIELD ENGINEERING

A. Identification: Owner will identify existing benchmarks, control points, and property corners.

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

1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect before proceeding.

2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.

C. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.

1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

3.5 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
4. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

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

F. Tools and Equipment: Do not use tools or equipment that produces harmful 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 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.

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. Fit exposed connections together to form hairline joints.

J. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 CUTTING AND PATCHING

A. Cutting and Patching, 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. 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 Division 2 Sections where required by cutting and patching operations.
5. Proceed with patching after construction operations requiring cutting are complete.

F. 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. 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 minimize 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. 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.

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

3.7 OWNER-INSTALLED PRODUCTS

A. Site Access: Provide access to Project site for Owner's construction personnel.

B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.

1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.

3.8 PROGRESS CLEANING

A. General: 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, according to regulations.
    a. Use containers intended for holding waste materials of type to be stored.

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

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

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

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning

materials that are not hazardous to health or property and that will not damage exposed surfaces.

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

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

G. Waste Disposal: 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 Division 1 Section "Temporary Facilities and Controls."

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.9 STARTING AND ADJUSTING

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

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

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

D. Manufacturer's Field Service: Comply with qualification requirements in Division 1 Section "Quality Requirements."

3.10 PROTECTION OF INSTALLED CONSTRUCTION

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

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

END OF SECTION 017300

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

1. Substantial Completion procedures.
2. Final completion procedures.
3. Warranties.
4. Final cleaning.

B. Related Sections include the following:

1. Division 1 Section "Execution" for progress cleaning of Project site.
2. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
3. Divisions 2 through 49 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete with request.

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

12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

B. 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. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.4 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
4. Submit pest-control final inspection report and warranty.
5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

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. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

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, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, 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.
d. Name of Contractor.
e. Page number.

4. Submit list of incomplete items in PDF electronic file.

1.6 WARRANTIES

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

B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.

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

1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

D. 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. General: 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 portion of Project:
    a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    e. 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.
    f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
    g. Sweep concrete floors broom clean in unoccupied spaces.
    h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
    i. 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.
    j. Remove labels that are not permanent.
    k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
        1) Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates.
    l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
    m. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
    n. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
    o. Clean ducts, blowers, and coils if units were operated without filters during construction.
    p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency.
    q. Leave Project clean and ready for occupancy.

C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.

D. Construction Waste Disposal: Comply with waste disposal requirements in Division 1 Section "Temporary Facilities and Controls."

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

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

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.
4. Miscellaneous record submittals.

B. Related Sections include the following:

1. Division 1 Section "Closeout Procedures" for general closeout procedures.
2. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
3. Divisions 2 through 49 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.3 CLOSEOUT SUBMITTALS

A. Record Drawings: Submit one set of marked-up record prints,

B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.

C. Record Product Data: Submit one copy of each Product Data submittal.

1. Where record Product Data are required as part of operation and maintenance manuals, submit duplicate marked-up Product Data as a component of manual.

D. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit one paper copy of each submittal.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints: Maintain one set of marked-up-paper copies of the Contract Drawings and Shop Drawings.

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

B. 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. Identification: As follows:
    a. Project name.
    b. Date.
    c. Designation "PROJECT RECORD DRAWINGS."
    d. Name of Architect.
    e. Name of Contractor.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.

3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
5. Note related Change Orders and Record Drawings where applicable.

B. Format: Submit record Specifications as paper copy.

2.3 RECORD PRODUCT DATA

A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
3. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

B. Format: Submit record Product Data as paper copy.

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

2.4 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

B. Format: Submit miscellaneous record submittals as paper copy.

1. Include miscellaneous record submittals directory organized by Specification Section number and title, electronically linked to each item of miscellaneous record submittals.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

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

B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Demolition and removal of selected portions of building or structure.
2. Salvage of existing items to be reused or recycled.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction and deliver them to Owner.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 SUBMITTALS

A. Schedule of Selective Demolition Activities: Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, interruption of utility services, use of elevator and stairs, and locations of temporary partitions and means of egress.

B. Landfill Records: Indicate receipt and acceptance of hazardous wastes, if any, by a landfill facility licensed to accept hazardous wastes.

1.4 QUALITY ASSURANCE

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 A10.6 and NFPA 241.

1.5 PROJECT 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. A report dated July 10, 2023 prepared by Austin Environmental Inc. on the presence of hazardous materials is attached at the end of this Section for review and use. No asbestos content was detected in suspect building materials sampled and tested.

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.

1.6 WARRANTY

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

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.

B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Arrange to shut off indicated utilities with utility companies.

2. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

3.3 PREPARATION

A. 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.

1. Comply with requirements for access and protection specified in Division 1 Section "Temporary Facilities and Controls."

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

C. Temporary Shoring: 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.

3.4 SELECTIVE DEMOLITION

A. Demolish and Remove: 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, to minimize disturbance of adjacent surfaces. 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.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
5. Dispose of demolished items and materials promptly.

B. 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. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
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.

D. 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, and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.6 CLEANING

A. 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

Limited Building Inspection Report for Asbestos-Containing Building Materials (ACBM)

City of Brenham
Blue Bell Aquatic Center
Locker Room Remodel
1800 E. Tom Green
Brenham, Texas

Prepared for:
City of Brenham
Kelsey Toy
200 West Vulcan
Brenham, Texas

PROJECT NO:
AEA23-114

Prepared by:
Austin Environmental, Inc.
P.O. Box 143263
Austin, Texas 78714
512-587-8036

July 10, 2023

AUSTINENV.COM

TABLE OF CONTENTS

AUSTIN ENVIRONMENTAL, INC.
P.O. Box 143263
Austin, Texas 78714
(512)-587-8036

July 10, 2023

City of Brenham
Kelsey Toy
200 West Vulcan
Brenham, Texas

RE: Limited Asbestos Survey for the Blue Bell Aquatics Center-Locker Room Remodel, 1800 E. Tom Green, Brenham, TX

Kelsey Toy:

On July 3rd, 2023, at your request, Mr. Paul B Dehlinger, of Austin Environmental, Inc., Consultant license #10-5523 conducted an asbestos inspection of the Blue Bell Aquatics Center Locker Room Remodel located at the above address.

The purpose of the limited asbestos inspection was to determine the presence and location of suspect friable and non-friable asbestos-containing building materials during renovation activities. The asbestos inspection was not comprehensive and should not be considered as such.

The Federal National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 Code of Federal Regulations (CFR) Part 61, subpart M, and the Texas Asbestos Health Protection Act and Rules (TAHPA) requires that prior to any renovation or demolition of a commercial or public building that it must be inspected for the presence of suspect ACBM.

The scope of work and services provided include:

- ♦ Field investigation and visual observations
- ♦ Sample suspect asbestos-containing building materials (ACBM)
- ♦ Analysis of suspect asbestos-containing building materials (ACBM)
- ♦ Collect information on the friability of asbestos-containing building materials if present

Suspect ACBM was physically handled to determine friability and bulk samples were obtained for analysis. The inspection involved sampling of twenty-one (21) suspect asbestos-containing building materials and analyzing them under Polarized Light Microscopy with Dispersion Staining (PLM/DS), EPA Method 600/R-93/116. The PLM/DS results are attached to this report.

SURVEY

The asbestos inspection was conducted on a homogenous-area basis with the construction materials sampled and tested that are suspect to contain asbestos and that may be disturbed during future renovation activities. Suspect asbestos containing building materials that were sampled included; drywall texture, insulation, ceiling tile, pipe insulation, HVAC duct mastic, ceramic tile, insulation and caulking.

RESULTS

The suspect building materials sampled and tested were determined to be None Detected for asbestos content.

Friable asbestos-containing material refers to material, which contains more than one (>1%) percent asbestos by weight and when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. **Non-friable** asbestos-containing material is any material containing more than one (1%) percent asbestos by weight and when dry, cannot be crumbled, pulverized or reduced to powder by hand pressure.

All materials detected/uncovered during present or future renovations or demolitions that are not listed, as being sampled on the Chain of Custody Form and will be disturbed, must be sampled and analyzed prior to disturbance. All additional samples and assessments are to be conducted by properly licensed individuals.

New building materials should be addressed to ensure that they do not contain asbestos. Manufactures labels or safety data sheets (SDS) should be reviewed and documented to ensure that any asbestos containing building products are not used during future construction.

LIMITATIONS

This report only applies to the scope of work described herein. This report describes existing conditions at the time of services. Conditions of asbestos-containing materials may change as a result of damage, deterioration or other disturbance and may increase the potential for elevated fiber levels.

This report applies only to accessible areas observed during our field services. Asbestos-containing materials may exist in concealed inaccessible enclosures, such as areas enclosed by permanent partitions, chases, shafts, equipment etc. **Material locations and quantities may vary.**

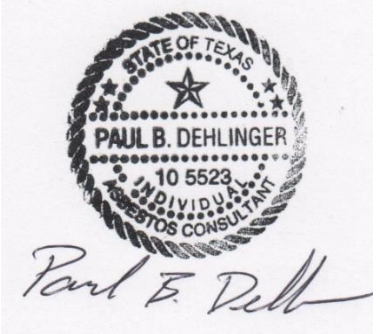
Although a good-faith effort was made to locate asbestos-containing materials in the area within the scope of work, extensive destructive inspection and/or testing was not conducted due to the expense, potential exposure hazards and/or potential regulatory violations. All surfaces, paints, wire insulation, electrical panels, fire rated doors and Panels, furnishings, Heating Ventilation and Air Conditioning (HVAC) Systems, fixtures and similar materials and equipment were not sampled and analyzed due to safety concerns and expense. Inspection and testing for lead-based paint, biological contamination, PCB containing light ballast and/or other hazardous and/or regulated materials was not included in Austin Environmental Inc.'s survey.

Per the DSHS TAHPR this document (asbestos survey report) may not be used as a design (specification) for asbestos abatement. Design and/or abatement air monitoring services were not included in Austin Environmental Inc.'s scope of work. Austin Environmental Inc. makes no warranty and assumes no liability for the inappropriate use or misuse of this document.

We appreciate the opportunity to provide you with this asbestos survey. Should you need any further asbestos related services, please don't hesitate to contact us at (512) 587-8036 or (979) 229-4385.

Sincerely,

AUSTIN ENVIRONMENTAL, INC.



Paul Dehlinger,

Individual Asbestos Consultant License No. 10-5523
Asbestos Consultant Agency License No. 10-0313

ASBESTOS BULK ANALYSIS REPORT

Date: July 7, 2023

Austin Environmental, Inc.

Report: 3423-2969
AEA23 / Blue Bell Aquatic Center / Locker Room Remodel

This document shall be considered a duly signed original report of the results obtained from the analysis(es) performed. All analyses are done within government guidelines and regulations.

Gary R. Simmons
Laboratory Manager

Lab Comments on Project: N/A

306 W. Edgewood Dr., Suite D, Friendswood, TX 77546 www.apasi.net Office (281) 648-9918 | Fax (281) 648-9595

PLM (Bulk) - Asbestos Analysis Report - Visual ID

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials and EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

Austin Environmental, Inc.
P.O. Box 143263
Austin, TX 78711
979-778-2699
Contact: Paul Dehlinger

Report Number: 3423-2969
Report Date: July 7, 2023
Samples Collected: July 3, 2023
Date Received: July 5, 2023
Turn-around time: 48 Hour

Job ID / Site: AEA23 / Blue Bell Aquatic Center / Locker Room Remodel

Client Sample Number	Lab Sample Number (by layer)	Color / Description / Fibrous / NonFibrous / Homogeneity	Asbestos Content Type & %	Non-Asbestos Fibrous Type & %	Matrix
1A	3423-2969-01	White,Grey / Ceiling Tile / Fibrous / Homogeneous	None Detected	Cellulose 45% Fibrous Glass 10%	Binder
1B	3423-2969-02	White,Grey / Ceiling Tile / Fibrous / Homogeneous	None Detected	Cellulose 45% Fibrous Glass 10%	Binder
1C	3423-2969-03	White,Grey / Ceiling Tile / Fibrous / Homogeneous	None Detected	Cellulose 45% Fibrous Glass 10%	Binder
2A	3423-2969-04A	Black / Ceramic Tile / NonFibrous / Homogeneous	None Detected	None Detected	Binder
	3423-2969-04B	Off White / Material / NonFibrous / Homogeneous	None Detected	None Detected	Binder
2B	3423-2969-05A	Black / Ceramic Tile / NonFibrous / Homogeneous	None Detected	None Detected	Binder
	3423-2969-05B	Off White / Material / NonFibrous / Homogeneous	None Detected	None Detected	Binder
2C	3423-2969-06A	Black / Ceramic Tile / NonFibrous / Homogeneous	None Detected	None Detected	Binder
	3423-2969-06B	Off White / Material / NonFibrous / Homogeneous	None Detected	None Detected	Binder
3A	3423-2969-07A	White / Texture / NonFibrous / Homogeneous	None Detected	None Detected	Binder

NVLAP Lab Code: 200633-0 PLM

TDSHS Asbestos License#: 30-0312 PLM/PCM

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EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials and EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

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Report Date: July 7, 2023
Samples Collected: July 3, 2023
Date Received: July 5, 2023
Turn-around time: 48 Hour

Job ID / Site: AEA23 / Blue Bell Aquatic Center / Locker Room Remodel

Client Sample Number	Lab Sample Number (by layer)	Color / Description / Fibrous / NonFibrous / Homogeneity	Asbestos Content Type & %	Non-Asbestos Fibrous Type & %	Matrix
3A	3423-2969-07B	Brown,White / Drywall / Fibrous / Homogeneous	None Detected	Cellulose 10%	Binder
3B	3423-2969-08A	White / Texture / NonFibrous / Homogeneous	None Detected	None Detected	Binder
	3423-2969-08B	Brown,White / Drywall / Fibrous / Homogeneous	None Detected	Cellulose 10%	Binder
3C	3423-2969-09A	White / Texture / NonFibrous / Homogeneous	None Detected	None Detected	Binder
	3423-2969-09B	Brown,White / Drywall / Fibrous / Homogeneous	None Detected	Cellulose 10%	Binder
4A	3423-2969-10A	Beige,Silver / Mastic Wrap / Fibrous / Homogeneous	None Detected	Cellulose 20% Fibrous Glass 5%	Binder
	3423-2969-10B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
4B	3423-2969-11A	Beige,Silver / Mastic Wrap / Fibrous / Homogeneous	None Detected	Cellulose 20% Fibrous Glass 5%	Binder
	3423-2969-11B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
4C	3423-2969-12A	White,Silver / Mastic Wrap / Fibrous / Homogeneous	None Detected	Cellulose 20% Fibrous Glass 5%	Binder

NVLAP Lab Code: 200633-0 PLM

TDSHS Asbestos License#: 30-0312 PLM/PCM

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Report Date: July 7, 2023
Samples Collected: July 3, 2023
Date Received: July 5, 2023
Turn-around time: 48 Hour

Job ID / Site: AEA23 / Blue Bell Aquatic Center / Locker Room Remodel

Client Sample Number	Lab Sample Number (by layer)	Color / Description / Fibrous / NonFibrous / Homogeneity	Asbestos Content Type & %	Non-Asbestos Fibrous Type & %	Matrix
4C	3423-2969-12B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
5A	3423-2969-13A	White,Silver / Mastic Wrap / Fibrous / Homogeneous	None Detected	Cellulose 20% Fibrous Glass 5%	Binder
	3423-2969-13B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
5B	3423-2969-14A	White,Silver / Mastic Wrap / Fibrous / Homogeneous	None Detected	Cellulose 20% Fibrous Glass 5%	Binder
	3423-2969-14B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
5C	3423-2969-15A	White,Silver / Mastic Wrap / Fibrous / Homogeneous	None Detected	Cellulose 20% Fibrous Glass 5%	Binder
	3423-2969-15B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
6A	3423-2969-16A	Silver,Brown / Wrap / Fibrous / Homogeneous	None Detected	Cellulose 30% Fibrous Glass 5%	Binder
	3423-2969-16B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
6B	3423-2969-17A	Silver,Brown / Wrap / Fibrous / Homogeneous	None Detected	Cellulose 30% Fibrous Glass 5%	Binder

NVLAP Lab Code: 200633-0 PLM

TDSHS Asbestos License#: 30-0312 PLM/PCM

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PLM (Bulk) - Asbestos Analysis Report - Visual ID

EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials and EPA – 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples

Austin Environmental, Inc.
P.O. Box 143263
Austin, TX 78711
979-778-2699
Contact: Paul Dehlinger

Report Number: 3423-2969
Report Date: July 7, 2023
Samples Collected: July 3, 2023
Date Received: July 5, 2023
Turn-around time: 48 Hour

Job ID / Site: AEA23 / Blue Bell Aquatic Center / Locker Room Remodel

Client Sample Number	Lab Sample Number (by layer)	Color / Description / Fibrous / NonFibrous / Homogeneity	Asbestos Content Type & %	Non-Asbestos Fibrous Type & %	Matrix
6B	3423-2969-17B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
6C	3423-2969-18A	Silver,Brown / Wrap / Fibrous / Homogeneous	None Detected	Cellulose 30% Fibrous Glass 5%	Binder
	3423-2969-18B	Yellow / Insulation / Fibrous / Homogeneous	None Detected	Fibrous Glass 95%	Binder
7A	3423-2969-19	Clear / Caulking / NonFibrous / Homogeneous	None Detected	None Detected	Binder
7B	3423-2969-20	Clear / Caulking / NonFibrous / Homogeneous	None Detected	None Detected	Binder
7C	3423-2969-21	Clear / Caulking / NonFibrous / Homogeneous	None Detected	None Detected	Binder

NVLAP Lab Code: 200633-0 PLM

TDSHS Asbestos License#: 30-0312 PLM/PCM

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Apex Precision Analytical Services, Inc.

An Independent Laboratory Providing Reliable Analysis with Professionalism and Honesty

APASI Lab

Chain of Custody

APASI#: 3423-2964 *for office use only*

Date Collected: 7/3/23	Date Sent: 7/5/23
Contact: Paul Dehlinger	Special Instructions:
Company: Austin Environmental	
Address: P.O. Box 143263	P.O. #:
Austin, TX	E-Mail: pdehlinger@austinenv.com
Phone: 512-587-8036	Fax:

Turn Around Time: *(Circle One)* Urgent/ASAP | 24 Hours | (48Hours) | 72 Hours | 5 Days

Client Job Number/Name: AEAZ3 Blue Bell Aquatic Center, Locker Room Remodel,

Mycology(Mold) Spore Trap-Air Samples
___ **Fungal/Mold spore count** by Air-O-Cell, Cyclex (d), BioCell, or other spore trap cassette/device

Mycology(Mold) Bulk ID Samples
___ **Fungal/Mold Identification** – bulk sample, tape lift, swab

Phase Contrast Microscopy(PCM)-Air Samples
___ **Fiber Concentration** by NIOSH Method 7400 Issue 2

Polarized Light Microscopy(PLM)-Bulk Samples
✓ **Asbestos Identification** (Visual Estimation) by EPA 600/R-93/116 Method
___ **Asbestos Identification** (Point Count) by EPA 600/M4-82-020 Method
___ **Asbestos Identification** (Soil/Prep) by Gravimetric Reduction

Industrial Hygiene-Air & Bulk Samples
___ **(RCF) Refractory Ceramic Fiber (Bulk) Identification** (Visual Estimation) by Polarized Light Microscopy
___ **Total Nuisance Dust (Air)** by NIOSH Method 0500
___ **Total Respirable Dust (Air)** by NIOSH Method 0600

Sample #:	Location/Description:	Volume
1A	ceiling tile- Women's Locker Room	
1B	↓ - Men's Locker Room	
1C	↓ - Concessions Women's	
2A	ceramic tile- Women's Locker Room	
2B	↓ - Men's Locker Room	
2C	↓ - Women's Locker	
3A	Drywall texture - Women's Locker Room	
3B	↓ - Men's Locker Room	
3C	↓ - Women's Locker Room	
4A	Pipe Insulation Mastic - Women's Locker	
4B	↓ - Men's Locker	
4C	↓ - Women's Locker	

Relinquished by: [signature] **Received by:** [signature]

Date: 7/5/23 **Time:** 1700 **Date:** 7/5/23 **Time:** 0920

306 W. Edgewood Dr., Suite D, Friendswood, TX 77546 www.apasi.net Office (281) 648-9918 | Fax (281) 648-9595

Apex Precison Analytical Services, Inc.

An Independent Laboratory Providing Reliable Analysis with Professionalism and Honesty

APASI Lab

Chain of Custody

Client Job Number/Name: Blue Bell Aquatics	APASI#: 3423-2964 *for office use only*

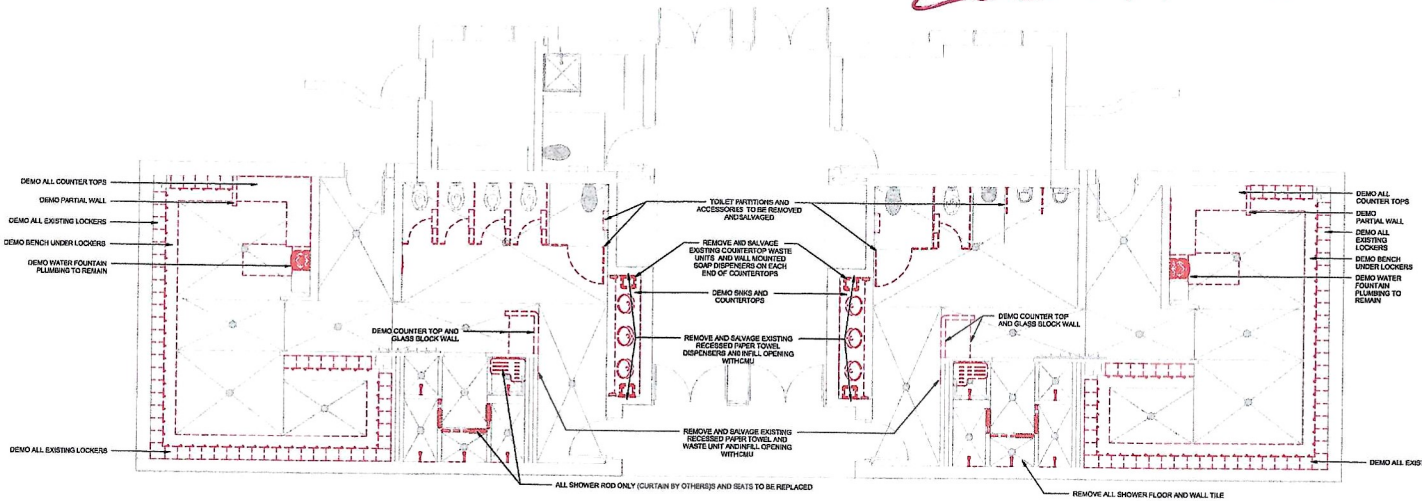
Sample #:	Location/Description:	Volume
5A	HVAC Duct Mastic - Women's Locker	
5B	↓ - Men's Locker	
5C	↓ - Women's Locker	
6A	Insulation - Roof Decking Women's	
6B	↓ - Men's Locker	
6C	↓ - Women's Locker	
7A	Caulking - Women's Vanity	
7B	↓ - Men's Locker	
7C	↓ - Men's Locker	

Relinquished by: Paul B. Dodd Received by: [illegible]

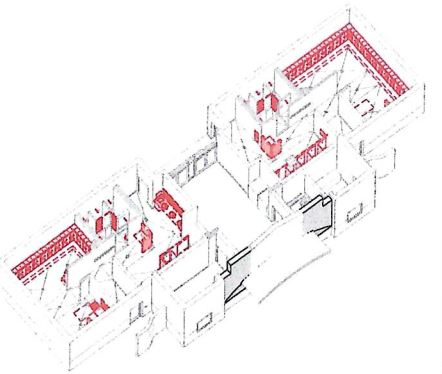
Date: 7/5/23 Time: 1700 Date: 7/5 Time:

306 W. Edgewood Dr., Suite D, Friendswood, TX 77546 www.apasi.net Office (281) 648-9918 | Fax (281) 648-9595

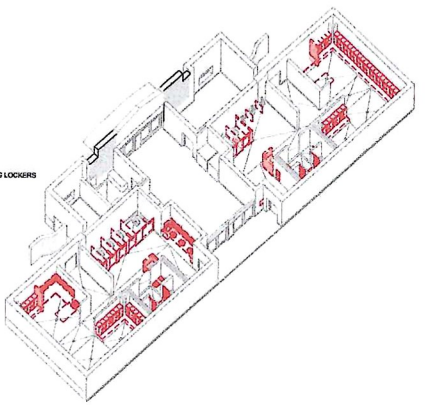
Sample Locations



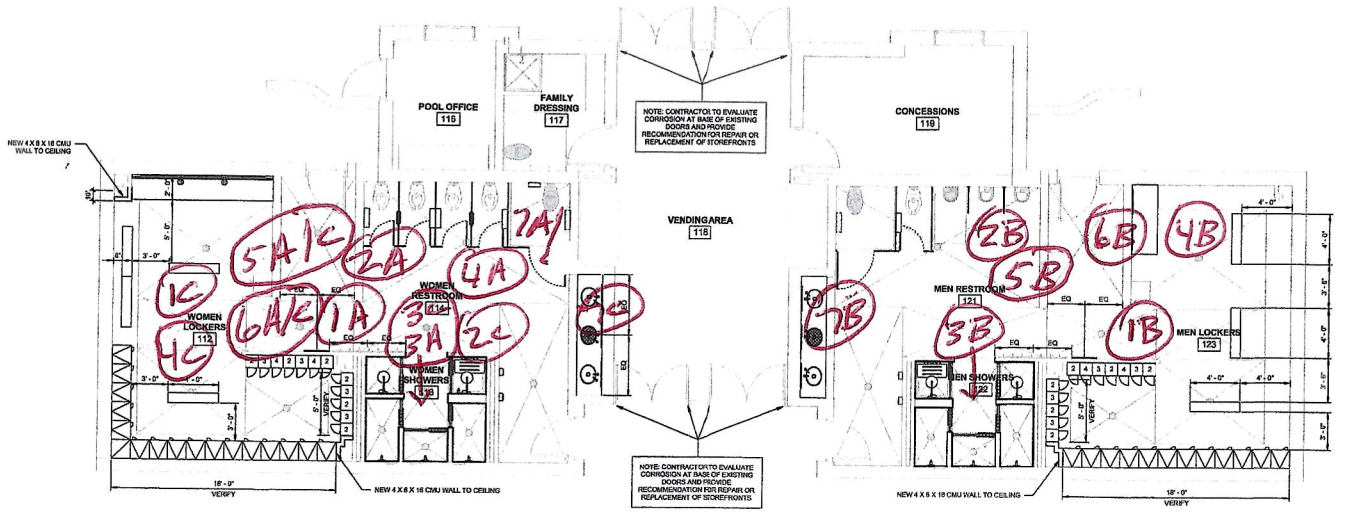
2 DEMO FLOOR PLAN
1/4" = 1'-0"



3 DEMO AERIAL FROM NORTHEAST



4 DEMO AERIAL FROM NORTHWEST



1 FLOOR PLAN
1/4" = 1'-0"

Project:	2023.03	
Release Date:	02/10/2023	For Construction
Revisions:	No.	Description / Date
	1	

Consultant:

BLUE BELL AQUATIC CENTER
LOCKER ROOM RENOVATIONS
BRENHAM, TEXAS

Architect:
BBA Architects LP
1102 South Market Street Brenham, TX 77833
Tel: (979) 830-0323
Email: mail@bbaarchitects.com

FOR REVIEW ONLY
DOCUMENT INCOMPLETE.
NOT RELEASED FOR REGULATORY APPROVAL, PERMIT, OR CONSTRUCTION.
ARCHITECT: DARREN C. HEINE
REGISTRATION NO.: 13084
DATE: 02/10/2023

Floor Plans

A2.1

8 of 14

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 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes:

1. Concrete masonry units.
2. Mortar and grout.
3. Ties and anchors.
4. Miscellaneous masonry accessories.

B. Related Sections:

1. Division 5 Section “Metal Fabrications” for furnishing steel lintels and shelf angles for brick masonry.
2. Division 7 Section “Sheet Metal Flashing and Trim” for exposed sheet metal flashing, for furnishing manufactured reglets installed in masonry joints.

1.3 SUBMITTALS

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

B. Shop Drawings: For the following:

1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
2. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.

C. Samples for Verification: For each type and color of face brick.

D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports, per ASTM C 780, for mortar mixes required to comply with property specification.
2. Include test reports, per ASTM C 1019, for grout mixes required to comply with compressive strength requirement.

E. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.4 QUALITY ASSURANCE

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.

C. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.

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

1.6 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

1. Extend cover a minimum of 24 inches (600 mm) down both sides of walls and hold cover securely in place.
2. Where one wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches (600 mm) down face next to unconstructed wythe and hold cover in place.

B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
2. Protect sills, ledges, and projections from mortar droppings.
3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.

4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.

D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 CONCRETE MASONRY UNITS (CMUs)

A. Basis-of-Design Product: Subject to compliance with requirements, provide the product named or comparable product by one of the following:

1. Boral Concrete Products
2. Echelon Masonry, a division of Oldcastle Architectural.
3. Featherlite Building Products.

B. Shapes: Provide shapes indicated and as follows:

1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
2. Provide bullnose units for outside corners, unless otherwise indicated.

C. CMUs: ASTM C 90, hollow loadbearing units.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 1900 psi (13.1 MPa).
2. Density Classification: Normal weight, Classification D2.
3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions. Units are 4” x 8” x 16” nominal.
4. Design Basis: Design is based upon Standard Gray Block by Boral Concrete Products.

2.2 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, 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.

B. Hydrated Lime: ASTM C 207, Type S.

C. Aggregate for Mortar: ASTM C 144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.

2. For joints less than 1/4 inch (6 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.

D. Aggregate for Grout: ASTM C 404.

E. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

F. Water: Potable.

2.3 REINFORCEMENT, TIES AND ANCHORS

A. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.

1. Interior Walls: Hot-dip galvanized, carbon steel.
2. Exterior Walls: Hot-dip galvanized, carbon steel.
3. Wire Size for Side Rods: 9 gauge, 0.148-inch (3.77-mm) diameter.
4. Wire Size for Cross Rods: 9 gauge, 0.148-inch (3.77-mm) diameter.
5. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches (407 mm) o.c.
6. Provide in lengths of not less than 10 feet (3 m), with prefabricated corner and tee units.

B. Masonry Joint Reinforcement for Single-Wythe Masonry: Either ladder or truss type with single pair of side rods, spaced not more than 16” o.c.

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

D. Masonry Ties and Anchors: Provide ties and anchors that are made from materials that comply with the following unless otherwise indicated:

1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
2. Galvanized Steel Sheet: ASTM A 653/A 653M, Commercial Steel, G60 (Z180) zinc coating.

E. Anchor Bolts: Headed or L-shaped steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153/A 153M, Class C; of dimensions indicated.

2.4 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 or urethane.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805, equal to RS Series by Hohmann & Barnard, and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and hold reinforcing bars in center of cells. Units are formed from 0.148-inch (3.77-mm)

steel wire, hot-dip galvanized after fabrication, equal to RB Rebar Positioners by Hohmann & Barnard in proper size for size of block. Provide units designed for number of bars indicated.

2.5 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.
2. For reinforced masonry, use portland cement-lime mortar.
3. 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. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide Type S unless another type is indicated.

C. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Proportion grout in accordance with ASTM C 476, Table 1 for specified 28-day compressive strength indicated, but not less than 2000 psi (14 MPa).
3. Provide grout with a slump of 8 to 11 inches (203 to 279 mm) as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

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

3.2 INSTALLATION, GENERAL

A. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.

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

B. Lines and Levels:

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

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness limited to 1/2 inch (12 mm); do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
2. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm).
3. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch (1.5 mm) from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond pattern; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.

C. Stopping and Resuming Work: Stop work by racking 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. Fill cores in hollow CMUs with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.

G. Build non-load-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 (13-mm) clearance between end of anchor rod and end of tube. Space anchors 48 inches (1200 mm) o.c. unless otherwise indicated.
3. Wedge non-load-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 Division 07 Section "Fire-Resistive Joint Systems."

3.5 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
3. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.6 MASONRY JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch (13 mm) elsewhere. Lap reinforcement a minimum of 6 inches (150 mm).

1. Space reinforcement not more than 16 inches (406 mm) o.c.
2. Provide reinforcement not more than 8 inches (203 mm) above and below wall openings and extending 12 inches (305 mm) beyond openings.

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.

3.7 CONTROL AND EXPANSION JOINTS

A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

B. Form control joints in concrete masonry using one of the following methods:

1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout and rake out joints in exposed faces for application of sealant.
2. Install preformed control-joint gaskets designed to fit standard sash block.

3.8 LINTELS

A. Provide concrete or masonry lintels where shown and where openings of more than 12 inches (305 mm) for brick-size units and 24 inches (610 mm) for block-size units are shown without structural steel or other supporting lintels.

B. Provide minimum bearing of 8 inches (200 mm) at each jamb unless otherwise indicated.

3.09 REINFORCED UNIT MASONRY INSTALLATION

A. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.

B. 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 ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than 60 inches (1520 mm).

3.10 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.

3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean block by bucket-and-brush hand-cleaning method described in "BIA Technical Notes 20" or with a proprietary acidic cleaner applied according to brick manufacturer's recommendations.

3.9 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. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042200

SECTION 066121 – SOLID PLASTIC VANITIES

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 high density polyethylene vanities.

1.3 SUBMITTALS

A. Product Data: For each type of product, include component dimensions and configurations, construction details, description of joinery, preparation and installation instructions, and maintenance recommendations.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show fabrication details, including types and locations of hardware. Show installation details, including field joints and filler panels.

C. Samples for Initial Selection: For each type of material exposed to view.

D. Qualification Data: For qualified manufacturer.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 5 years experience in manufacture of solid plastic vanities with products in satisfactory use under similar service conditions.

B. Installer Qualifications: Minimum 5 years experience in work of this Section.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet work is complete and dry, and temporary HVAC system is operating and maintaining temperature and humidity conditions at occupancy levels during the remainder of the construction period.

B. Field Measurements: Verify actual dimensions of adjacent construction by field measurement before fabrication. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays. Where field measurements cannot be made without delaying the work, establish dimensions and proceed with fabrication without field measurements. Coordinate construction to ensure actual dimensions correspond to established dimensions.

1.6 COORDINATION

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

B. Do not deliver or install polyethylene casework until the flooring required to be placed under polyethylene casework is complete.

PART 2 - PRODUCTS

2.1 VANITIES

A. Basis-of-Design Product: Subject to compliance with requirements, provide Commercial Bathroom Vanity Units by Scranton Products, or comparable product by one of the following:

1. ASI Global Partitions
2. Bradley Corp.
3. General Partitions Mfg. Corp.

2.2 MATERIALS

A. Solid Plastic Panels: High density polyethylene (HDPE), fabricated from polymer resins compounded under high pressure, forming single thickness panel.

1. Waterproof and nonabsorbent, with self-lubricating surface, resistant to marks by pens, pencils, markers, and other writing instruments.
2. Color: To be selected by Owner and Architect.

B. Aluminum Extrusions: ASTM B221, 6463-T5 alloy and temper.

2.3 COMPONENTS

A. Tops, Splashes, Skirts, and End and Center Supports: 1 inch thick with edges radiused to 1/4 inch.

B. Vanity Size: 24 inches deep x length indicated on drawings.

C. Shoes: 3 inches high, one piece molded HDPE.

D. Attachment Brackets: 16 inches long, heavy duty extruded aluminum with bright dip anodized finish.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install vanities in accordance with manufacturer’s instructions and approved Shop Drawings.

B. Set plumb, level, rigid, and aligned.

C. Attach vanities to supporting construction with anchors best sujited to substrate conditions.

END OF SECTION 123530

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes cementitious board for shower ceilings.

1.3 SUBMITTALS

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

B. Shop Drawings: Show locations, fabrication, and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other units of Work.

C. Samples: For the following products:

1. Trim Accessories: Full-size sample in 12-inch- (300-mm-) long length for each trim accessory indicated.
2. Textured Finishes: Manufacturer's standard size for each textured finish indicated and on same backing indicated for Work.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide the named product in Part 2 paragraph or a comparable product by one of the following:

1. American Gypsum.
2. CertainTeed Corp.
3. National Gypsum Company.
4. Temple-Inland.
5. USG Corporation.

2.2 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.

2.3 SHOWER CEILING PANELS

A. Cementitious Backer Units: ANSI A118.9 and ASTM C 1288 or 1325, with manufacturer's standard edges.

1. Thickness: 1/2 inch (12.7 mm). Provide 1/4 inch (6.35 mm) at base of shower walls to apply epoxy flooring cove base.
2. Board Length: 5 feet (1524 mm) or 8 feet (2438 mm), contractor’s option.
3. Board Width: 36 inches (914 mm) or 48 inches (1219 mm), contractor’s option
4. Mold Resistance: ASTM D 3273, score of 10.
5. Minimum Bending Radius: 6 feet (1830 mm).
6. Location: Ceiling at Women’s Showers 113 and Men’s Showers 122.
7. Design Basis: Design is based upon Durock by USG.

2.4 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
2. Shapes: As required.

2.5 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475.

B. Joint Tape: 10x10 glass mesh, or as recommended by panel manufacturer.

C. Joint Compound: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints, 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 4 finish, use setting-type, sandable topping compound.

2.6 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

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

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.

F. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

3.3 APPLYING CEMENT BOARD PANELS

A. Cementitious Panels: ANSI A108.11 at shower ceilings.

3.4 INSTALLING TRIM ACCESSORIES

A. General: 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.

B. Control Joints: Install control joints at locations indicated on Drawings.

C. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners.
2. L-Bead: Use where indicated.
3. U-Bead: Use at exposed panel edges.

3.5 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints or beveled edges and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.
3. Level 4: At panel surfaces that will be exposed to view, unless otherwise indicated.

3.6 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

C. Remove and replace panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 093000 - CERAMIC TILE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Porcelain tile.
2. Metal edge strips.

B. Related Sections include the following:

1. Division 3 Section "Cast-in-Place Concrete" for monolithic slab finishes specified for tile substrates.
2. Division 7 Section "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
3. Division 9 Section "Gypsum Board Assemblies" for water-resistant backer board.

1.3 DEFINITIONS

A. Module Size: Actual tile size (minor facial dimension as measured per ASTM C 499) plus joint width indicated.

B. Facial Dimension: Nominal tile size as defined in ANSI A137.1.

1.4 PERFORMANCE REQUIREMENTS

A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:

1. Level Surfaces: Minimum 0.6.

1.5 SUBMITTALS

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

B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces.

C. Samples for Initial Selection: For each type of tile and grout indicated. Include Samples of accessories involving color selection.

D. Product Certificates: For each type of product, signed by product manufacturer.

E. Qualification Data: For Installer.

F. Material Test Reports: For each tile-setting and -grouting product.

1.6 QUALITY ASSURANCE

A. Source Limitations for Tile: Obtain all tile of same type and color or finish from one source or producer.

1. Obtain tile from same production run and of consistent quality in appearance and physical properties for each contiguous area.

B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from a single manufacturer and each aggregate from one source or producer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirement in ANSI A137.1 for labeling sealed tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Store liquid latexes and emulsion adhesives in unopened containers and protected from freezing.

E. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.8 PROJECT CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:

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

2.2 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1, "Specifications for Ceramic Tile," for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements, unless otherwise indicated.
2. For facial dimensions of tile, comply with requirements relating to tile sizes specified in Part 1 "Definitions" Article.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI standards referenced in "Setting and Grouting Materials" Article.

C. Colors, Textures, and Patterns: Where manufacturer's standard products are indicated for tile, grout, and other products requiring selection of colors, surface textures, patterns, and other appearance characteristics, provide specific products or materials from manufacturer's full range for selection by Architect.

D. Factory Blending: For tile exhibiting color variations within ranges selected during Sample submittals, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

E. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer, unless otherwise indicated.

1. Where tile is indicated for installation in wet areas, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

F. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating with continuous film of petroleum paraffin wax, applied hot. Do not coat unexposed tile surfaces.

2.3 TILE PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide comparable product by one of the following:

1. American Olean; Div. of Dal-Tile International Corp.
2. Arizona Tile, LLC.
3. Concept Surfaces.
4. Crossville Ceramics Company, L.P.
5. Daltile; Div. of Dal-Tile International Inc.
6. Summitville Tiles, Inc.

B. Porcelain Wall Tile: Flat tile as follows:

1. Composition: Porcelain.
2. Facial Dimensions: Nominal 12 by 24 inches tile, installed horizontal in stacked bond pattern.
3. Edges: Rectified.
4. Thickness: 5/16 inch.
5. Finish: Matte.
6. Location: Tile shower walls.
7. Design Basis: Design is based upon Fabrique Colorbody Porcelain Tile, color Blanc Linen P685, by DalTile.

C. Porcelain Mosaic Wall Tile: Flat tile as follows:

1. Composition: Porcelain.
2. Facial Dimensions: Nominal 2” x 2” square, mounted on 12”x12” mesh.
3. Thickness: 5/16 inch.
4. Finish: Matte.
5. Location: Shower niches.
6. Design Basis: Design is based upon Fabrique Colorbody Porcelain Tile, color Blanc Linen P685 by DalTile.

2.4 SETTING AND GROUTING MATERIALS

A. Available Manufacturers:

1. Bostik.
2. C-Cure.
3. DAP, Inc.
4. LATICRETE International Inc.
5. MAPEI Corporation.

B. Dry-Set Portland Cement Mortar (Thin Set): ANSI A118.1. For wall applications, provide mortar that complies with requirements for nonsagging mortar in addition to the other requirements in ANSI A118.1.

C. Water-Cleanable, Epoxy Grout: ANSI A118.3. Provide product capable of withstanding continuous and intermittent exposure to temperatures of up to 140 deg. F. and 212 deg. F., respectively, and certified by manufacturer for intended use.

1. Design Basis: Design is based upon SpectraLOCK by Laticrete.
2. Color: Iron 97.

2.5 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

B Shower Curb: Provide prefabricated, rigid extruded polystyrene foam panel, with reinforcement material and polypropylene fleece webbing laminated on both sides, and shaped for shower curb, equal to Schluter KERDI-BOARD-SC.

C. Wall Waterproofing: Provide 8-mil thick sheet-applied polyethylene waterproofing membrane and vapor retarder, equal to Schluter KERDI. Tape seam joints and floor/wall connections with 4-mil thick waterproofing strips, equal to Schluter KERDI-BAND. Schluter’s preformed seamless corner units may be used at Contractor’s option

D. Pipe Seals: Provide prefabricated waterproofing seals with over-molded rubber gaskets designed for pipe protrusions through KERDI, equal to Schluter KERDI-SEAL-PS or KERDI-SEAL-MV.

E. Temporary Protective Coating: Grout release in form of manufacturer's standard proprietary liquid coating that is specially formulated and recommended 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.

F. 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.

G. Metal Edge/Transition Strips: Stainless steel of profile and width shown, of height required to protect exposed edge of carpet, and of maximum lengths to minimize running joints. Finish to be selected by Architect.

1. Tile Edge Protection at Outside Corners of Tiled Walls: Trapezoid-perforated anchoring leg secured in mortar bond coat beneath tile with a 135° sloped vertical wall section, equal to FINEC by Schluter Systems.

2.6 MIXING MORTARS AND GROUT

A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.

B. Add materials, water, and additives in accurate proportions.

C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

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 installed tile.

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 installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
3. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

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

3.2 PREPARATION

A. 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.

B. 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, GENERAL

A. Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

B. 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.

C. 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.

D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

E. Jointing Pattern: Lay tile vertically, in stacked bond grid pattern, unless otherwise indicated. Align joints when adjoining tiles on base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.

F. Metal Strips: Install at locations indicated.

G. Expansion Joints: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.
2. Prepare joints and apply sealants to comply with requirements in Division 7 Section "Joint Sealants."

3.4 CLEANING AND PROTECTING

A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

1. Remove epoxy grout residue from tile as soon as possible.
2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions, but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

3. Remove temporary protective coating by method recommended by coating manufacturer that is acceptable to tile and grout manufacturer. Trap and remove coating to prevent it from clogging drains.

B. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls.

C. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

END OF SECTION 093000

SECTION 096723 - RESINOUS FLOORING (DECORATIVE QUARTZ AGGREGATE)

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This section includes resinous flooring system with decorative quartz aggregate as shown on the drawings and in schedules.

1.3 SYSTEM DESCRIPTION

A. The work shall consist of preparation of the substrate, the furnishing and application of a cementitious urethane based self-leveling seamless flooring system with decorative quartz aggregate broadcast and Epoxy broadcast and topcoats.

B. The system shall have the color and texture as specified by the Owner with a nominal thickness of 1/4 inch. It shall be applied to the prepared areas as defined in the plans strictly in accordance with the manufacturer's recommendations.

C. Cove base to be applied where noted on plans and per manufacturers standard details unless otherwise noted

1.4 SUBMITTALS

A. Product Data: Latest edition of manufacturer's literature including performance data and installation procedures.

B. Manufacturer’s Safety Data Sheet (SDS) for each product being used.

C. Samples: A 3 x 3 inch square sample of the proposed system. Color, texture, and thickness shall be representative of overall appearance of finished system subject to normal tolerances.

1.5 QUALITY ASSURANCE

A. The manufacturer shall have a minimum of 10 years experience in the production, sales, and technical support of epoxy and urethane industrial flooring and related materials.

B. The applicator shall have experience in installation of the flooring system as confirmed by the manufacturer in all phases of surface preparation and application of the product specified.

C. No requests for substitutions shall be considered that would change the generic type of the specified system.

D. System shall be in compliance with requirements of United States Department of Agriculture (USDA), Food, Drug Administration (FDA), and local Health Department.

E. A pre-installation conference shall be held between applicator, General Contractor and the Owner to review and clarification of this specification, application procedure, quality control, inspection and acceptance criteria and production schedule.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: All components of the system shall be delivered to the site in the manufacturer's packaging, clearly identified with the product type and batch number.

B. Storage and Protection

1. The applicator shall be provided with a dry storage area for all components. The area shall be between 60°F and 85°F, dry, out of direct sunlight and in accordance with the manufacturer's recommendations and relevant health and safety regulations.
2. Copies of Safety Data Sheets (SDS) for all components shall be kept on site for review by the Architect or other personnel.

C. Waste Disposal: The applicator shall be provided with adequate disposal facilities for non-hazardous waste generated during installation of the system.

1.7 PROJECT CONDITIONS

A. Site Requirements

1. Application may proceed while air, material and substrate temperatures are between 60°F and 85°F providing the substrate temperature is above the dew point. Outside of this range, the manufacturer shall be consulted.
2. The relative humidity in the specific location of the application shall be less than 85% and the surface temperature shall be at least 5°F above the dew point.
3. The applicator shall ensure that adequate ventilation is available for the work area. This shall include the use of manufacturer’s approved fans, smooth bore tubing and closure of the work area.
4. The applicator shall be supplied with adequate lighting equal to the final lighting level during the preparation and installation of the system.

B. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for maximum moisture content, installation tolerances and other conditions affecting flooring performance, including that existing tile substrate is well bonded, clean and dry prior to installing coating system.

1. Verify that substrates and conditions are satisfactory for flooring installation and comply with requirements specified.
2. A site investigation along with cores through the entire slab will help identify the type of setting bed, the existence of any waterproofing membranes, additional toppings, or other unusual existing conditions. Water trapped within the floor will create long-term sanitation and performance problems.
3. Contractor is responsible for inspecting the floor to identify hollow or loose areas.
4. Any loose or hollow areas to be cut out and removed to sound substrate. Fill in areas that are removed with Dur-A-Tex UM mortar.

D. Safety Requirements

1. All open flames and spark-producing equipment shall be removed from the work area prior to commencement of application.
2. "No Smoking" signs shall be posted at the entrances to the work area.

3. The Owner shall be responsible for the removal of foodstuffs from the work area.
4. Non-related personnel in the work area shall be kept to a minimum.

1.8 WARRANTY

A. Dur-A-Flex, Inc. warrants that material shipped to buyers at the time of shipment substantially free from material defects and will perform substantially to Dur-A-Flex, Inc. published literature if used in accordance with the latest prescribed procedures and prior to the expiration date.

B. Dur-A-Flex, Inc. liability with respect to this warranty is strictly limited to the value of the material purchase.

PART 2 – PRODUCTS

2.1 FLOORING

A. Design Basis for “EPOXY-1” where shown on the Finish Schedule: Epoxy/aliphatic urethane topcoat seamless flooring system equal to Hybri-Flex EQ (self leveling broadcast quartz) by Dur-A-Flex, Inc.

1. System Materials:
   a. Skim Coat: Dur-A-Flex, Inc, Poly-Crete SL resin, hardener, and SL aggregate
   b. Topping: Dur-A-Flex, Inc, Poly-Crete SL resin, hardener and SL aggregate.
   b. The broadcast aggregate shall be Dur-A-Flex, Inc. Q28 quartz aggregate.
   c. Broadcast: Dur-A-Flex, Inc. Dur-A-Glaze #4, epoxy-based two-component resin.
   d. Grout Coat: Dur-A-Flex, Inc Dur-A-Glaze #4 Water Clear, epoxy-based, resin and Hardener
   e. Topcoat: Dur-A-Flex, Inc. Armor Top aliphatic urethane two-component resin.
2. Patch Materials
   a. Shallow Fill and Patching: Use Dur-A-Flex, Inc. Poly-Crete MD (up to ¼ inch).
   b. Deep Fill and Sloping Material (over ¼ inch): Use Dur-A-Flex, Inc. Poly-Crete WR or Dur-A-Tex UM.
3. Slip Resistance: Shall meet or exceed dynamic coefficient of friction for shower floors, per ANSI A326.3.
4. Color: Q-28 Blends, color Q28-21 with 35% black. (Custom sample provided by manufacturer references Case #00039458.)

2.2 PRODUCT REQUIREMENTS

A. Topping: Poly-Crete SL

1.	Percent Reactive	100 %
2.	VOC	0 g/L
3.	Bond Strength to Concrete ASTM D 4541	400 psi, substrates fails
4.	Compressive Strength, ASTM C 579	9,000 psi
5.	Tensile Strength, ASTM D 638	2,175 psi
6.	Flexural Strength, ASTM D 790	5,076 psi
7.	Impact Resistance @ 125 mils, MIL D-3134, No visible damage or deterioration	160 inch lbs

B. Broadcast Coat : Dur-A-Glaze #4 Resin

1.	Percent Reactive,	100 %
2.	VOC	<4 g/L
3.	Water Absorption, ASTM D 570	0.04%
4.	Tensile Strength, ASTM D 638	4000psi
5.	Coefficient of thermal expansion ASTM D 696,	2 x 10^{-5} in/in/F
6.	Flammability ASTM D-635	Self-Extinguishing
7.	Flame Spread/ NFPA 101 ASTM E-84	Class A

C. Grout Coat: Dur-A-Glaze # 4 Water Clear Resin

1.	Percent Reactive,	100 %
2.	VOC	<4 g/L
3.	Water Absorption, ASTM D 570	0.04%
4.	Tensile Strength, ASTM D 638	4000psi
5.	Coefficient of thermal expansion ASTM D 696,	2 x 10^{-5} in/in/F
6.	Flammability ASTM D-635	Self-Extinguishing
7.	Flame Spread/ NFPA 101 ASTM E-84	Class A

D. Topcoat: Armor Top

1.	VOC	0 g/L
2.	60 Degree Gloss ASTM D523	75+/-5
3.	Mixed Viscosity, (Brookfield 25^{o}C)	500 cps
4.	Tensile strength, ASTM D 638	7,000 psi
5.	Abrasion Resistance, ASTM D4060 CS 17 wheel (1,000 g load) 1,000 cycles	Satin, 8 mg loss with grit
6.	Pot life @ 70˚F 50% RH	2 hours
7.	Full Chemical resistance	7 days

2.3 MISCELLANEOUS MATERIALS

A. Cementitious Backer Unit: ANSI A118.9 and ASTM C 1288 or 1325, with manufacturer's standard edges, 1/4 inch (6.35 mm), achieving score of 10 per ASTM D3273 for mold resistance, equal to Durock by USG.

PART 3 - EXECUTION

3.1 PREPARATION

A. General

1. New and existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products.
2. Moisture Testing: Perform tests recommended by manufacturer and as follows.
   a. Perform relative humidity test using is situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 99% relative humidity level measurement.
   b. If the vapor drive exceeds 99% relative humidity or 20 lbs/1,000 sf/24 hrs then the Owner and/or Architect shall be notified and advised of additional cost for the possible installation of a vapor mitigation system that has been approved by the manufacturer or other means to lower the value to the acceptable limit.
3. Mechanical surface preparation if existing tiles are left in place:
   a. Shot blast or diamond grind all surfaces to receive flooring system using appropriate machines, tooling, and dust collection. All surface and embedded accumulations of

paint, toppings hardened concrete layers, laitance, power trowel finishes and other similar surface characteristics shall be completely removed leaving a tile surface that is completely de-glossed and all grout joints are clean.

b. Floor areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment.

c. Where the perimeter of the substrate to be coated is not adjacent to a wall or curb, a minimum 1/4 inch key cut shall be made to properly seat the system, providing a smooth transition between areas. The detail cut shall also apply to drain perimeters and expansion joint edges.

d. Cracks and joints (non-moving) greater than 1/8 inch wide are to be chiseled or chipped-out and repaired per manufacturer's recommendations.

4. At spalled or worn areas, mechanically remove loose or delaminated concrete to a sound concrete and patch per manufactures recommendations.

3.2 APPLICATION

A. General

1. The system shall be applied in six distinct steps as listed below:
   a. Substrate preparation
   b. Skim coat
   c. Topping/overlay application with quartz aggregate broadcast.
   d. Resin application with quartz aggregate broadcast.
   e. Grout coat application
   f. Topcoat application.
2. Immediately prior to the application of any component of the system, the surface shall be dry and any remaining dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.
3. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.
4. The system shall follow the contour of the substrate unless pitching or other leveling work has been specified by the Architect.
5. Cove Base: Install 4" cove base according to manufacturer's instructions.
6. A neat finish with well-defined boundaries and straight edges shall be provided by the Applicator.

B. Skim Coat

1. The skim coat shall be to fill in the existing grout joints flush with the surface of the tile.
2. The skim coat shall be comprised of three components, a resin, hardener, and aggregate as supplied by the Manufacturer.
3. The hardener shall be added to the resin and thoroughly dispersed by suitably approved mechanical means. SL Aggregate shall then be added to the catalyzed mixture and mixed in a manner to achieve a homogenous blend.
4. The topping shall be applied over the existing tile using flat trowel or other systems approved by the Manufacturer

C. Topping

1. The topping shall be applied as a self-leveling system as specified by the Architect. The topping shall be applied in one lift with a nominal thickness of 1/8 inch.
2. The topping shall be comprised of three components, a resin, hardener and aggregate as supplied by the Manufacturer.

3. The hardener shall be added to the resin and thoroughly dispersed by suitably approved mechanical means. SL Aggregate shall then be added to the catalyzed mixture and mixed in a manner to achieve a homogenous blend.
4. The topping shall be applied over horizontal surfaces using ½ inch "v" notched squeegee, trowels or other systems approved by the Manufacturer.
5. Immediately upon placing, the topping shall be degassed with a loop roller.
6. Q28 Quartz aggregate shall be broadcast to excess into the wet material at the rate of 0.8 lbs/sf.
7. Allow material to fully cure. Sweep and vacuum to remove all loose aggregate.

D. Broadcast

1. The broadcast coat resin shall be applied at the rate of 90 sf/gal.
2. The broadcast coat shall be comprised of liquid components, combined at a ratio of 2 parts resin to 1 part hardener by volume and shall be thoroughly blended by mechanical means such as a high speed paddle mixer.
3. Q 28 Quartz aggregate shall be broadcast into the wet resin at the rate of 0.5 lbs/sf.
4. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose aggregate.

E. Grout coat

1. The grout coat shall be squeegee applied with a coverage rate of 90 sf/gal.
2. The grout coat shall be comprised of liquid components, combined at a ratio of 2 parts resin to 1 part hardener by volume and shall be thoroughly blended by mechanical means such as a high speed paddle mixer.
3. The grout coat will be back rolled and cross rolled to provide a uniform texture and finish

F. Topcoat

1. The topcoat shall be roller applier with a coverage rate of 500 sf/gal.
2. The finished floor system will have a nominal thickness of 1/4 inch.

3.4 FIELD QUALITY CONTROL

A. Tests, Inspection

1. The following tests shall be conducted by the Applicator:
   a. Temperature: Air, substrate temperatures and, if applicable, dew point.
   b. Coverage Rates: Rates for all layers shall be monitored by checking quantity of material used against the area covered.

3.5 CLEANING AND PROTECTION

A. Cure flooring material in compliance with manufacturer's directions, taking care to prevent their contamination during stages of application and prior to completion of the curing process.

B. Remove masking. Perform detail cleaning at floor termination, to leave cleanable surface for subsequent work of other sections.

END OF SECTION 096723

SECTION 096725 - RESINOUS FLOORING (DECORATIVE CHIP AGGREGATE)

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This section includes resinous flooring system with decorative chip aggregate as shown on the drawings and in schedules.

1.3 SYSTEM DESCRIPTION

A. The work shall consist of preparation of the substrate, the furnishing and application of a cementitious urethane based self-leveling seamless flooring system with decorative chip broadcast and Epoxy broadcast and topcoats.

B. The system shall have the color and texture as specified by the Owner with a nominal thickness of 3/16 inch. It shall be applied to the prepared areas as defined in the plans strictly in accordance with the manufacturer's recommendations.

C. Cove base to be applied where noted on plans and per manufacturers standard details unless otherwise noted

1.4 SUBMITTALS

A. Product Data: Latest edition of manufacturer's literature including performance data and installation procedures.

B. Manufacturer’s Material Safety Data Sheet (SDS) for each product being used.

C. Samples: A 3 x 3 inch square sample of the proposed system. Color, texture, and thickness shall be representative of overall appearance of finished system subject to normal tolerances.

1.5 QUALITY ASSURANCE

A. The manufacturer shall have a minimum of 10 years experience in the production, sales, and technical support of epoxy and urethane industrial flooring and related materials.

B. The applicator shall have experience in installation of the flooring system as confirmed by the manufacturer in all phases of surface preparation and application of the product specified.

C. No requests for substitutions shall be considered that would change the generic type of the specified system.

D. System shall be in compliance with requirements of United States Department of Agriculture (USDA), Food and Drug Administration (FDA), and local Health Department.

E. A pre-installation conference shall be held between applicator, General Contractor and the Owner to review and clarification of this specification, application procedure, quality control, inspection and acceptance criteria and production schedule.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: All components of the system shall be delivered to the site in the manufacturer's packaging, clearly identified with the product type and batch number.

B. Storage and Protection

1. The applicator shall be provided with a dry storage area for all components. The area shall be between 60°F and 85°F, dry, out of direct sunlight and in accordance with the manufacturer's recommendations and relevant health and safety regulations.
2. Copies of Material Safety Data Sheets (SDS) for all components shall be kept on site for review by the Architect or other personnel.

C. Waste Disposal: The applicator shall be provided with adequate disposal facilities for non-hazardous waste generated during installation of the system.

1.7 PROJECT CONDITIONS

A. Site Requirements

1. Application may proceed while air, material and substrate temperatures are between 60°F and 85°F providing the substrate temperature is above the dew point. Outside of this range, the manufacturer shall be consulted.
2. The relative humidity in the specific location of the application shall be less than 85% and the surface temperature shall be at least 5°F above the dew point.
3. The applicator shall ensure that adequate ventilation is available for the work area. This shall include the use of manufacturer’s approved fans, smooth bore tubing and closure of the work area.
4. The applicator shall be supplied with adequate lighting equal to the final lighting level during the preparation and installation of the system.

B. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for maximum moisture content, installation tolerances and other conditions affecting flooring performance, including that existing tile substrate is well bonded, clean and dry prior to installing coating system.

1. Verify that substrates and conditions are satisfactory for flooring installation and comply with requirements specified.
2. A site investigation along with cores through the entire slab will help identify the type of setting bed, the existence of any waterproofing membranes, additional toppings, or other unusual existing conditions. Water trapped within the floor will create long-term sanitation and performance problems.
3. Contractor is responsible for inspecting the floor to identify hollow or loose areas.
4. Any loose or hollow areas to be cut out and removed to sound substrate. Fill in areas that are removed with Dur-A-Tex UM mortar.

D. Safety Requirements

1. All open flames and spark-producing equipment shall be removed from the work area prior to commencement of application.
2. "No Smoking" signs shall be posted at the entrances to the work area.

3. The Owner shall be responsible for the removal of foodstuffs from the work area.
4. Non-related personnel in the work area shall be kept to a minimum.

1.8 WARRANTY

A. Dur-A-Flex, Inc. warrants that material shipped to buyers at the time of shipment substantially free from material defects and will perform substantially to Dur-A-Flex, Inc. published literature if used in accordance with the latest prescribed procedures and prior to the expiration date.

B. Dur-A-Flex, Inc. liability with respect to this warranty is strictly limited to the value of the material purchase.

PART 2 – PRODUCTS

2.1 FLOORING

A. Design Basis for “EPOXY-2” where shown on the Finish Schedule: Epoxy/aliphatic urethane topcoat seamless flooring system equal to Hybri-Flex EQ (self leveling chip broadcast) by Dur-A-Flex, Inc.

1. System Materials:
   a. Skim Coat: Dur-A-Flex, Inc, Poly-Crete SL resin, hardener, and SL aggregate
   b. Topping: Dur-A-Flex, Inc, Poly-Crete SL resin, hardener and SL aggregate.
   b. The broadcast aggregate shall be Dur-A-Flex, Inc. Macro Chip.
   c. Broadcast: Dur-A-Flex, Inc. Dur-A-Glaze #4, epoxy-based, two-component resin.
   d. Grout Coat: Dur-A-Flex, Inc Dur-A-Glaze #4, epoxy-based, two-component resin.
   e. Topcoat: Dur-A-Flex, Inc. Armor Top aliphatic urethane two-component resin with grit.
2. Patch Materials
   a. Shallow Fill and Patching: Use Dur-A-Flex, Inc. Poly-Crete MD (up to ¼ inch).
   b. Deep Fill and Sloping Material (over ¼ inch): Use Dur-A-Flex, Inc. Poly-Crete WR or Dur-A-Tex UM.
3. Slip Resistance: Shall meet or exceed dynamic coefficient of friction for wet areas, per ANSI A326.3.
4. Color: Claystone Blends, color Goodwin substituting Navy chip for the Teal chip. (Custom sample provided by manufacturer references Case #00039458.)

2.2 PRODUCT REQUIREMENTS

A. Topping: Poly-Crete SL

1.	Percent Reactive	100 %
2.	VOC	0 g/L
3.	Bond Strength to Concrete ASTM D 4541	400 psi, substrates fails
4.	Compressive Strength, ASTM C 579	9,000 psi
5.	Tensile Strength, ASTM D 638	2,175 psi
6.	Flexural Strength, ASTM D 790	5,076 psi
7.	Impact Resistance @ 125 mils, MIL D-3134, No visible damage or deterioration	160 inch lbs

B. Broadcast Coat : Dur-A-Glaze #4 Resin

1.	Percent Reactive,	100 %
2.	VOC	<4 g/L
3.	Water Absorption, ASTM D 570	0.04%
4.	Tensile Strength, ASTM D 638	4000psi
5.	Coefficient of thermal expansion ASTM D 696,	2 x 10^{-5} in/in/F
6.	Flammability ASTM D-635	Self-Extinguishing
7.	Flame Spread/ NFPA 101, ASTM E-84	Class A

C. Grout Coat: Dur-A-Glaze # 4 Water Clear Resin

1.	Percent Reactive,	100 %
2.	VOC	<4 g/L
3.	Water Absorption, ASTM D 570	0.04%
4.	Tensile Strength, ASTM D 638	4000psi
5.	Coefficient of thermal expansion ASTM D 696,	2 x 10^{-5} in/in/F
6.	Flammability ASTM D-635	Self-Extinguishing
7.	Flame Spread/ NFPA 101 ASTM E-84	Class A

D. Topcoat: Armor Top

1.	VOC	0 g/L
2.	60 Degree Gloss ASTM D523	75+/-5
3.	Mixed Viscosity, (Brookfield 25°C)	500 cps
4.	Tensile strength, ASTM D 638	7,000 psi
5.	Abrasion Resistance, ASTM D4060 CS 17 wheel (1,000 g load) 1,000 cycles	Satin, 8 mg loss with grit
6.	Pot life @ 70˚F 50% RH	2 hours
7.	Dry properties, 70˚F, 50% R.H.	8 hours tack free, 12 hours dry
	60˚F, 30% RH	12 hours tack free, 18 hours dry
	80˚F, 70%RH	4 hours tack free, 6 hours dry
8.	Flash Point PMCC	186˚F
9.	Full Chemical resistance	7 days

2.3 MISCELLANEOUS MATERIALS

A. Metal Edge Strips: Extruded stainless steel, L-shape profile, brushed finish exposed-edge material, installed according to manufacturer's directions. Design is based upon Schiene-2MM by Schluter Systems.

1. Location: Floor transition strips where noted as "FT-1" and "FT-2" on the drawings.

PART 3 - EXECUTION

3.1 PREPARATION

A. General

1. New and existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products.
2. Moisture Testing: Perform tests recommended by manufacturer and as follows.

a. Perform relative humidity test using is situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 99% relative humidity level measurement.
b. If the vapor drive exceeds 99% relative humidity or 20 lbs/1,000 sf/24 hrs then the Owner and/or Architect shall be notified and advised of additional cost for the possible installation of a vapor mitigation system that has been approved by the manufacturer or other means to lower the value to the acceptable limit.

3. Mechanical surface preparation if existing tiles are left in place:
   a. Shot blast or diamond grind all surfaces to receive flooring system using appropriate machines, tooling, and dust collection. All surface and embedded accumulations of paint, toppings hardened concrete layers, laitance, power trowel finishes and other similar surface characteristics shall be completely removed leaving a tile surface that is completely de-glossed and all grout joints are clean.
   b. Floor areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment.
   c. Where the perimeter of the substrate to be coated is not adjacent to a wall or curb, a minimum 1/4 inch key cut shall be made to properly seat the system, providing a smooth transition between areas. The detail cut shall also apply to drain perimeters and expansion joint edges.
   d. Cracks and joints (non-moving) greater than 1/8 inch wide are to be chiseled or chipped-out and repaired per manufacturer's recommendations.
4. At spalled or worn areas, mechanically remove loose or delaminated concrete to a sound concrete and patch per manufactures recommendations.

3.2 APPLICATION

A. General

1. The system shall be applied in six distinct steps as listed below:
   a. Substrate preparation
   b. Skim coat
   c. Topping/overlay application with chip broadcast.
   d. Resin application with chip broadcast.
   e. Grout coat application
   f. Topcoat application.
2. Immediately prior to the application of any component of the system, the surface shall be dry and any remaining dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.
3. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.
4. The system shall follow the contour of the substrate unless pitching or other leveling work has been specified by the Architect.
5. Cove Base: Install 4" cove base according to manufacturer's instructions.
6. A neat finish with well-defined boundaries and straight edges shall be provided by the Applicator.

B. Skim Coat

1. The skim coat shall be to fill in the existing grout joints flush with the surface of the tile.
2. The skim coat shall be comprised of three components, a resin, hardener, and aggregate as supplied by the Manufacturer.
3. The hardener shall be added to the resin and thoroughly dispersed by suitably approved mechanical means. SL Aggregate shall then be added to the catalyzed mixture and mixed in a manner to achieve a homogenous blend.

4. The topping shall be applied over the existing tile using flat trowel or other systems approved by the Manufacturer

C. Topping

1. The topping shall be applied as a self-leveling system as specified by the Architect. The topping shall be applied in one lift with a nominal thickness of 1/8 inch.
2. The topping shall be comprised of three components, a resin, hardener and filler as supplied by the Manufacturer.
3. The hardener shall be added to the resin and thoroughly dispersed by suitably approved mechanical means. SL Aggregate shall then be added to the catalyzed mixture and mixed in a manner to achieve a homogenous blend.
4. The topping shall be applied over horizontal surfaces using 1/2 inch “v” notched squeegee, trowels or other systems approved by the Manufacturer.
5. Immediately upon placing, the topping shall be degassed with a loop roller.
6. Chip aggregate shall be broadcast to excess into the wet material at the rate of 0.15 lbs/sf.
7. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose chips.

D. Broadcast

1. The broadcast coat resin shall be applied at the rate of 100 sf/gal.
2. The broadcast coat shall be comprised of liquid components, combined at a ratio of 2 parts resin to 1 part hardener by volume and shall be thoroughly blended by mechanical means such as a high speed paddle mixer.
3. Chip aggregate shall be broadcast into the wet resin at the rate of 0.15 lbs/sf.
4. Allow material to fully cure. Vacuum, sweep and/or blow to remove all loose chips.

E. Grout coat

1. The grout coat shall be squeegee applied with a coverage rate of 100 sf/gal.
2. The topcoat shall be comprised of liquid components, combined at a ratio of 2 parts resin to 1 part hardener by volume and shall be thoroughly blended by mechanical means such as a high speed paddle mixer.
3. The grout coat will be back rolled and cross rolled to provide a uniform texture and finish

F. Topcoat

1. The topcoat with grit shall be roller applier with a coverage rate of 500 sf/gal.
2. The finished floor system will have a nominal thickness of 3/16 inch.

3.4 FIELD QUALITY CONTROL

A. Tests, Inspection

1. The following tests shall be conducted by the Applicator:
   a. Temperature: Air, substrate temperatures and, if applicable, dew point.
   b. Coverage Rates: Rates for all layers shall be monitored by checking quantity of material used against the area covered.

3.5 CLEANING AND PROTECTION

A. Cure flooring material in compliance with manufacturer’s directions, taking care to prevent their contamination during stages of application and prior to completion of the curing process.

B. Remove masking. Perform detail cleaning at floor termination, to leave cleanable surface for subsequent work of other sections.

END OF SECTION 096725

SECTION 099100 - PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes surface preparation and field painting of exposed exterior and interior items and surfaces.

1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.

1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.

D. Related Sections include the following:

1. Refer to Civil Drawings and Specifications for traffic-marking paint.
2. Division 9 Section "Gypsum Board" for surface preparation of gypsum board.

1.3 DEFINITIONS

A. General: Standard coating terms defined in ASTM D 16 apply to this Section.

1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
2. Eggshell refers to low-sheen finish with a gloss range between 20 and 35 when measured at a 60-degree meter.
3. Semigloss refers to medium-sheen finish with a gloss range between 35 and 70 when measured at a 60-degree meter.
4. Full gloss refers to high-sheen finish with a gloss range more than 70 when measured at a 60-degree meter.

1.4 SUBMITTALS

A. Product Data: For each paint system indicated. Include block fillers and primers.

1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
2. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.

B. Samples for Verification: For each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.

1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
2. Provide a list of materials and applications for each coat of each Sample. Label each Sample for location and application.
3. Submit two samples on the following substrates for Architect's review of color and texture only:
   a. Stained or Natural Wood: 4-by-8-inch (100-by-200-mm) samples of natural- or stained-wood finish on representative surfaces.
   b. Ferrous Metal: 4-inch- (100-mm-) square samples of flat metal and 6-inch- (150-mm-) long samples of solid metal for each color and finish.

1.5 QUALITY ASSURANCE

A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Source Limitations: Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:

1. Product name or title of material.
2. Product description (generic classification or binder type).
3. Manufacturer's stock number and date of manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Application instructions.
7. Color name and number.
8. VOC content.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain storage containers in a clean condition, free of foreign materials and residue. Remove rags and waste from storage areas daily.

1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

1.7 PROJECT CONDITIONS

A. Apply stains, transparent finishes, and waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F.

B. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F.

C. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:

1. Benjamin Moore & Co. (Benjamin Moore).
2. ICI Dulux Paint Centers (ICI Dulux Paints).
3. Kelly-Moore Paint Co. (Kelly-Moore).
4. PPG Industries, Inc. (Pittsburgh Paints).
5. Sherwin-Williams Co. (Sherwin-Williams).
6. Tnemec Company, Inc. (Tnemec)

2.2 PAINT MATERIALS, GENERAL

A. Material Compatibility: Provide primers and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

2.3 CMU SUBSTRATES (INTERIOR AND EXTERIOR)

A. Block Filler: Commercial strength block filler for interior and exterior locations.

1. Sherwin Williams; Pro Industrial Heavy Duty Block Filler, B42W00150: Applied at dry film thickness of 8.0 to 10.5 mils.

B. Topcoat: Two coats of water-based two-component polyamine epoxy.

1. Sherwin Williams; Pro Industrial Water Based Catalyzed Epoxy, B73-300 Series: Applied at dry film thickness of 2.0 to 4.9 mils per coat.

2.4 EXTERIOR PRIMERS

A. Concrete Substrates, Nontraffic Surfaces: Factory-formulated alkali-resistant, acylic primer for exterior application.

1. Benjamin Moore; Super Spec Acrylic High Build Masonry Primer N068: Applied at a dry film thickness of 1.0 mils per coat.
2. Sherwin Williams; Loxon Concrete & Masonry Primer/Sealer: Applied at a dry film thickness of 2.1 to 3.2 mils.
3. Tnemec; W.B. Tneme-Crete Series 180: Applied at a dry film thickness of 4.0 to 8.0 mils.

B. Exterior Ferrous-Metal or Galvanized Metal Zinc-Rich Primer for Painted Finish: Factory-formulated rust-inhibitive metal primer for exterior application.

1. Benjamin Moore; Corotech V170 Primer: Applied at a dry film thickness of 1.7 to 2.3 mils per coat.
2. Sherwin Williams; Zinc Clad 5: Applied at a dry film thickness of 3.0 to 4.0 mils.
3. Tnemec; Series 94-H2O Hydro-Zinc: Applied at a dry film thickness of 2.5 to 3.5 mils.

C. Exterior Urethane for Galvanized Metals to Retain Natural Finish: Factory-formulated, single-component, primer and finish coat, with micaceous iron oxide filler.

1. Sherwin Williams; Corothane I Mio-Aluminum B65S14: Applied at a dry film thickness of 2.0 to 3.0 mils per coat.

D. Exterior Latex System for Fiber-cement Board Primer: Factory-applied primer for waterborne 100% acrylic exterior paint.

1. Sherwin Williams; Loxon Concrete and Masonry Primer Sealer, LX02W50: Applied at a dry film thickness of 2.1 to 3.2 mils.

E. Exterior Latex System for Wood for Opaque Finish: Factory-applied primer for waterborne 100% acrylic exterior paint.

1. Sherwin Williams; Exterior Latex Wood Primer, B42W8041: Applied at a dry film thickness of 1.4 mils.

2.5 WOOD FILLERS

A. Wood Filler Paste: Stainable and paintable latex formula.

1. Sherwin-Williams; MinWax Stainable Wood Filler.

2.6 INTERIOR PRIMERS

A. Interior Wood Primer (for painted finishes): Factory-formulated latex-based primer for interior application.

1. Sherwin-Williams; Premium Wall & Wood Latex Primer B28W08111: Applied at a dry film thickness of not less than 1.6 mils

B. Interior Gypsum Board Primer: Factory-formulated latex-based primer for interior application.

1. Benjamin Moore; Moorcraft Super Spec Latex Enamel Undercoater & Primer Sealer No. 253: Applied at a dry film thickness of not less than 1.2 mils.
2. Kelly-Moore; 971 Acry-Prime Interior Latex Primer/Sealer: Applied at a dry film thickness of not less than 1.6 mils.
3. Pittsburgh Paints; 6-2 SpeedHide Interior Quick-Drying Latex Sealer: Applied at a dry film thickness of not less than 1.0 mil.
4. Sherwin-Williams; ProMar 200 Zero VOC Interior Latex Primer B28W02600: Applied at a dry film thickness of not less than 1.0 mil

C. Interior Ferrous-Metal Primer: Factory-formulated quick-drying rust-inhibitive alkyd-based metal primer.

1. Benjamin Moore; Moore's IMC Alkyd Metal Primer No. M06: Applied at a dry film thickness of not less than 2.0 mils.
2. Kelly-Moore; 1711 Kel-Guard Alkyd White Rust Inhibitive Primer: Applied at a dry film thickness of not less than 2.0 mils.
3. Pittsburgh Paints; 90-709 Pitt-Tech One Pack Interior/Exterior Primer/Finish DTM Industrial Enamel: Applied at a dry film thickness of not less than 1.5 mils.
4. Sherwin-Williams; Kem Kromik Universal Metal Primer B50NZ6/B50WZ1: Applied at a dry film thickness of not less than 3.0 mils.
5. Tnemec; Series 10 Tnemec Primer: Applied at a dry film thickness of 2 to 3.5 mils.

D. Interior Zinc-Coated Metal Primer: Factory-formulated galvanized metal primer.

1. Benjamin Moore; Moore's IMC Acrylic Metal Primer No. M04: Applied at a dry film thickness of not less than 2.0 mils.
2. Kelly-Moore; 1722 Kel-Guard Acrylic Galvanized Iron Primer: Applied at a dry film thickness of not less than 1.8 mils.
3. Pittsburgh Paints; 90-709 Pitt-Tech One Pack Interior/Exterior Primer/Finish DTM Industrial Enamel: Applied at a dry film thickness of not less than 3.0 mils.
4. Sherwin-Williams; Galvite HS B50WZ30: Applied at a dry film thickness of not less than 3.0 mils.
5. Tnemec; Series 115 Uni-Bond DF: Applied at a dry film thickness of 2 to 4 mils per coat

2.7 EXTERIOR FINISH COATS

A. Concrete Substrates, Nontraffic Surfaces: Factory-formulated self-cleaning acrylic coating, flat, for exterior application.

1. Benjamin Moore; Regal Select MoorLife Flat : Applied at a dry film thickness of 1.9 mils per coat.
2. Sherwin Williams; Loxon Self-Cleaning Acrylic Coating: Applied at a dry film thickness of 2.1 to 2.9 mils.
3. Tnemec; W.B. Tneme-Crete Series 180: Applied at a dry film thickness of 4.0 to 8.0 mils.

B. Exterior Full-Gloss Acrylic Enamel for Ferrous and Galvanized Metals for Painted Finish: Factory-formulated full-gloss waterborne acrylic polymer for exterior application.

1. Benjamin Moore; Ultra Spec HP D.T.M. Acrylic FP28: Applied at a dry film thickness of not less than 2.3 mils per coat.

2. Sherwin Williams; Pro Industrial Acrylic B66-600 Series: Applied at a dry film thickness of 2.5 to 4.0 mils per coat.
3. Tnemec: Series 1080 Endura-Shield: Applied at a dry film thickness of 2 to 3 mils per coat.

C. Exterior Urethane for Galvanized Metals to Retain Natural Finish: Factory-formulated, single-component, primer and finish coat, with micaceous iron oxide filler.

1. Sherwin Williams; Corothane I Mio-Aluminum B65S14: Applied at a dry film thickness of 2.0 to 3.0 mils per coat.

D. Exterior Latex System for Fiber-Cement Board and Wood (including plywood soffit): Factory-formulated satin latex system for exterior application.

1. Sherwin Williams; A-100 Exterior Latex Satin, A82 Series: Applied at a dry film thickness of 1.5 mils per coat.

E. Drive-In Stripes and Handicapped Parking Symbols: Painted with 4" striping machine.

1. Two Coats: Alkyd-resin paint, ready-mixed complying with AASHTO M 248, Type I. Striping to be white.

2.8 INTERIOR FINISH COATS

A. Interior Semi-Transparent Stains on Wood:

1. Sherwin-Williams; Wood Classics Stain (color to be selected by Architect): Applied at a wet film thickness of not less than 3.0-3.5 mils per coat. Apply minimum two topcoats of Wood Classics Polyurethane Varnish by Sherwin-Williams for a satin finish.

B. Interior Flat Latex-Emulsion Size: Factory-formulated flat latex-based interior paint with “dry fall” characteristics. All final colors to be selected by Architect.

1. Coronado; 110-1 Latex Dry Fall Flat: Applied at a dry film thickness of not less than 1.5 mils.
2. Sherwin-Williams; Waterborne Acrylic Dry Fall B42BW3 Series (for black finish), B42W1 Series (for white finish), or B42T1 (clear tint base): Applied at a dry film thickness of not less than 3.0 mils per coat.
3. Tnemec; Uni-Bond DF Series 115: Applied at a dry film thickness of not less than 2.0 mils per coat.

C. Interior Low-Luster Acrylic Enamel over Gypsum Board: Factory-formulated eggshell acrylic-latex interior enamel.

1. Benjamin Moore; Moorcraft Super Spec Latex Eggshell Enamel No. 274: Applied at a dry film thickness of not less than 1.3 mils.
2. Kelly-Moore; 1610 Sat-N-Sheen Interior Latex Low Sheen Wall and Trim Finish: Applied at a dry film thickness of not less than 1.6 mils.
3. Pittsburgh Paints; 6-400 Series SpeedHide Eggshell Acrylic Latex Enamel: Applied at a dry film thickness of not less than 1.25 mils.
4. Sherwin-Williams; ProMar 200 Zero VOC Interior Latex Eg-Shel B20-2600 Series: Applied at a dry film thickness of not less than 1.7 mils per coat.

D. Interior Semigloss Acrylic Enamel over Ferrous and Zinc-Coated Metal: Factory-formulated semigloss acrylic-latex enamel for interior application.

1. Benjamin Moore; Moorcraft Super Spec Latex Semi-Gloss Enamel No. 276: Applied at a dry film thickness of not less than 1.2 mils.
2. Kelly-Moore; 1685 Dura-Poxy Semi-Gloss Acrylic Enamel: Applied at a dry film thickness of not less than 1.5 mils.
3. Pittsburgh Paints; 6-500 Series SpeedHide Interior Semi-Gloss Latex: Applied at a dry film thickness of not less than 1.0 mil.
4. Sherwin-Williams; Pro Industrial Acrylic Semi-Gloss B66-650 Series: Applied at a dry film thickness of 2.1 to 4.2 mils per coat.
5. Tnemec: Series 1029 Enduratone: Applied at a dry film thickness of 2 to 3 mils per coat.

E. Interior Semigloss Acrylic Enamel on Wood (scheduled for paint) or Fiberboard Substrates: Factory-formulated semigloss acrylic-latex enamel for interior application.

1. Benjamin Moore; Moorcraft Super Spec Latex Semi-Gloss Enamel No. 276: Applied at a dry film thickness of not less than 1.2 mils (0.031 mm).
2. Kelly-Moore; 1649 Acrylic-Latex Semi-Gloss Enamel: Applied at a dry film thickness of not less than 1.7 mils (0.043 mm).
3. Pittsburgh Paints; 6-500 Series SpeedHide Interior Semi-Gloss Latex: Applied at a dry film thickness of not less than 1.0 mil (0.025 mm).
4. Sherwin-Williams; ProClassic Waterborne Acrylic Semi-Gloss, B31 Series: Applied at a dry film thickness of not less than 1.3 mils per coat.
5. Tnemec: Series 1081 Endura-Shield: Applied at a dry film thickness of 2 to 3 mils per coat.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Applicator present, for compliance with requirements for paint application.

1. Proceed with paint application only after unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

3.2 PREPARATION

A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.

1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers or remove and reprime.
2. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC's recommendations.
    a. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with same primer as the shop coat.
3. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
4. Wood Substrates: Scrape and clean knots, and apply coat of knot sealer before applying primer. Sand surfaces that will be exposed to view, and dust off. Prime edges, ends, faces, undersides, and backsides of wood. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

D. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
3. Use only thinners approved by paint manufacturer and only within recommended limits.

E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

A. General: Apply finishes according to manufacturer's written instructions and recommendations in “MPI Architectural Painting Specifications Manual.”

1. Use applicators and techniques best suited for substrate and type of material being applied.
2. Paint colors, surface treatments, and finishes are indicated in the paint schedules.
3. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
4. Provide finish coats that are compatible with primers used.
5. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, grilles, convector covers, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
6. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.

7. Paint interior surfaces of ducts with a flat, nonspecular black paint where visible through registers or grilles.
8. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
9. Apply finishes to produce surface films without cloudiness, holidays, lap marks, brush marks, runs, ropiness, or other surface imperfections.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. The number of coats and film thickness required are the same regardless of application method. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
2. Omit primer over metal surfaces that have been shop primed and touchup painted.
3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure that edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure, and until application of another coat of paint does not cause undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

1. Brushes: Use brushes best suited for type of material applied. Use brush of appropriate size for surface or item being painted.
2. Rollers: Use rollers of carpet, velvet-back, or high-pile sheep's wool as recommended by manufacturer for material and texture required.
3. Spray Equipment: Use airless spray equipment with orifice size as recommended by manufacturer for material and texture required.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate to achieve dry film thickness indicated. Provide total dry film thickness of the entire system as recommended by manufacturer.

E. Mechanical and Electrical Work: Painting of mechanical and electrical work is limited to items exposed in equipment rooms and occupied spaces.

F. Mechanical items to be painted include, but are not limited to, the following:

1. Tank that do not have factory-applied final finishes.
2. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
3. Exposed ductwork.

G. Electrical items to be painted include, but are not limited to, the following:

1. Switchgear.
2. Panelboards.
3. Electrical equipment that is indicated to have a factory-primed finish for field painting.

H. Prime Coats: Before applying finish coats, apply a prime coat, as recommended by manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat factory-primed coat if not compatible with finish coat. Recoat primed

and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.

I. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

J. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling, such as laps, irregularity in texture, skid marks, or other surface imperfections.

K. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 CLEANING

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from Project site.

1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.5 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by Architect.

B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

1. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

END OF SECTION 099100

SECTION 102113 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

1. Solid-polymer toilet compartments configured as toilet enclosures and urinal screens.

B. Related Sections include the following:

1. Division 6 Section "Rough Carpentry" for blocking.
2. Division 10 "Toilet and Bath Accessories" for toilet tissue dispensers, grab bars, and similar accessories.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1. Show locations of cutouts for compartment-mounted toilet accessories.
2. Show locations of reinforcements for compartment-mounted grab bars.
3. Show locations of centerlines of toilet fixtures.

C. Samples for Initial Selection: or each type of unit indicated. Include Samples of hardware and accessories involving material and color selection.

1.4 QUALITY ASSURANCE

A. Comply with requirements in GSA’s CID-A-A-60003, "Partitions, Toilets, Complete."

B. Regulatory Requirements: Comply with applicable provisions in the Texas Accessibility Standards for toilet compartments designated as accessible.

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication and indicate measurements on Shop Drawings.

1.6 WARRANTY

A. Special Manufacturer’s Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship during the following period after substantial completion:

1. Phenolic Core Toilet Partitions: Against delamination, 3 years.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Plastic Panels: High density polyethylene (HDPE) suitable for exposed applications, waterproof, non-absorbent, and graffiti-resistant textured surface;

B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M).

C. Aluminum Die Castings: ASTM B85, A380 alloy.

D. Stainless Steel Castings: ASTM A167, Type 304.

E. Rubber: Abrasion resistant Styrene Butadiene Rubber, 65 to 80 Shore A durometer, black.

2.2 SOLID-POLYMER UNITS

A. Basis-of-Design Product: Subject to compliance with requirements, provide Eclipse Partitions and Urinal Screens by Scranton Products or comparable product by one of the following:

1. Accurate Partitions Corporation.
2. Ampco, Inc.
3. Bradley Corporation; Mills Partitions.
4. General Partitions Mfg. Corp.
5. Hadrian Manufacturing Inc.

B. Toilet-Enclosure Style: Floor anchored, overhead braced.

C. Urinal-Screen Style: Wall hung.

D. Door, Panel, Screen, and Pilaster Construction: Solid, high-density polyethylene (HDPE)] panel material, not less than 1 inch (25 mm) thick, seamless, with eased edges, no-sightline system, and with homogenous color and pattern throughout thickness of material.

1. Integral Hinges: Configure doors and pilasters to receive integral hinges.
2. Height: Standard privacy height, 55 inches (1397 mm) high and mounted at 14 inches (356 mm) above the finished floor.
3. Color and Pattern: Black, with orange peel texture, by Scranton Products.

E. Metal Posts: 82.75 inches (2102 mm) high, heavy duty extruded aluminum, clear anodized finish, fastened to foot with stainless steel tamper resistant screw.

F. Hidden Shoe (Foot): One-piece molded polyethylene invisible shoe inserted into metal post and secured to metal post with stainless steel tamper resistant screw.

G. Headrail Cap and Corner Cap: One-piece molded polyethylene secured to metal post with stainless steel tamper resistant screw; adjustable to level headrail to finished floor.

H. Wall Brackets: Continuous heavy duty extruded aluminum, clear anodized finish, inserted into slotted panel and fastened to panels with stainless steel tamper resistant screws.

1. Type: Single Ear bracket aluminum.
2. Length: 54 inches (1372 mm).

I. Headrail: Heavy duty extruded aluminum, designer anti-grip design, clear anodized finish, fastened to headrail bracket with stainless steel tamper resistant screw and to headrail cap or corner cap with stainless steel tamper resistant screw.

1. Headrail Brackets: Heavy duty extruded aluminum, clear anodized finish, secured to wall with stainless steel tamper screws.

J. Door Hardware:

1. Hinges: Edge-mounted helix style stainless steel continuous hinge.
   a. Closing degree: 5 degrees.
   b. Comes to a full close on its own weight
2. Occupancy Indicator Latch and Housing:
   a. Material: Satin stainless steel.
   b. Occupancy indicators: Green for occupied and red not occupied.
   c. Slide bolt and button.
3. Coat Hook and Door Bumper Combination:
   a. Material: Chrome plated Zamak
   b. Handicap Door: Equip with second door pull and door stop.
4. Door Pulls: Chrome plated Zamak

2.3 FABRICATION

A. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, fasteners, and anchors at pilasters to suit floor conditions. Make provisions for setting and securing continuous head rail at top of each pilaster. Provide shoes at pilasters to conceal supports and leveling mechanism.

B. Urinal-Screen Posts: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at bottoms of posts. Provide shoes at posts to conceal anchorage.

C. 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. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Examine areas to receive toilet partitions, screens, and shower compartments for correct height and spacing of anchorage/blocking and plumbing fixtures that affect installation of partitions. Report discrepancies to the architect.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and approved Shop Drawings.

B. Install partitions rigid, straight, plumb, and level.

C. Locate bottom edge of doors and panels 14 inches (356 mm) above finished floor.

D. Clearance at vertical edges of doors shall be uniform top to bottom and shall not exceed 3/8 inch (9.5 mm).

E. No evidence of cutting, drilling, and/or patching shall be visible on the finished work.

F. Finished surfaces shall be cleaned after installation and be left free of imperfections.

3.4 ADJUSTING

A. Adjust doors and latches to operate correctly.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 102113

SECTION 102800 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes public use washroom accessories and public use shower room accessories.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include the following:

1. Construction details and dimensions.
2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
3. Material and finish descriptions.
4. Features that will be included for Project.
5. Manufacturer's warranty.

B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

1. Identify locations using room designations indicated on Drawings.
2. Identify products using designations indicated.

C. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. Source Limitations: For products listed together in the same articles in Part 2, provide products of same manufacturer unless otherwise approved by Architect.

B. 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.

1.5 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

PART 2 - PRODUCTS

2.1 PUBLIC-USE WASHROOM ACCESSORIES

A. Toilet Paper Holder with Shelf

1. Basis-of-Design Product: Model 0697-GAL by American Specialties Inc..
2. Description: Double-roll holder with stainless steel shelf.
3. Mounting: Surface mounted.
4. Operation: Non-control delivery with standard spindle.
5. Capacity: Designed for 4-1/2- or 5-inch- diameter tissue rolls.
6. Material and Finish: Brushed 18/8 stainless steel.
7. Drawing Designation: “TA1”.

B. Stainless Steel Mirror Unit

1. Basis-of-Design Product: Series 0600-41 by American Specialties Inc.
2. Frame: Matte black, powder-coated 18 gauge stainless-steel, with mitered corners welded and ground smooth, and radiused edges.
3. Hangers: Produce rigid, tamper- and theft-resistant installation, using one-piece, galvanized steel, wall-hanger device with spring-action locking mechanism to hold mirror unit in position with no exposed screws or bolts.
4. Size: 24” wide x 36” tall.
5. Drawing Designation: “TA2”

C. Stainless Steel Mirror Unit

1. Basis-of-Design Product: Series 0600-41 by American Specialties Inc.
2. Frame: 18 gauge stainless-steel, with mitered corners welded and ground smooth, and radiused edges.
3. Hangers: Produce rigid, tamper- and theft-resistant installation, using one-piece, galvanized steel, wall-hanger device with spring-action locking mechanism to hold mirror unit in position with no exposed screws or bolts.
4. Size: 24” wide x 72” tall.
5. Drawing Designation: “TA3”

D. Lighted Mirror

1. Basis-of-Design Product: Luna Series, by Modern Mirrors.
2. Description: Backlit round mirror with 1.2” wide LED frosted band on face, CRI 90+.
3. Color Temperature: 6000k.
4. Size: 36” round x 1.6” deep.
5. Drawing Designation: “TA4”.

E. Soap Dispenser, Deck Mounted

1. Basis-of-Design Product: Model 0339 by American Specialties.
2. Description: Designed for automatic dispensing soap in foam form.
3. Mounting: Deck mounted on vanity, designed for top-filling.
4. Capacity: 50.7 fl. oz.
5. Materials: Piston, 4” long spout, and top cover fabricated of Type 316 stainless steel, bright polish finish, and translucent, shatter-resistant polyethylene soap container.
6. Drawing Designation: “TA5”

F. Warm-Air Dryer

1. Basis-of-Design Product: Model 0192-1-93 by American Specialties Inc.
2. Mounting: Surface mounted.
3. Operation: Electronic-sensor activated with timed power cut-off switch. Operation time set at 60 seconds.
4. Cover Material and Finish: Stainless steel, No. 4 finish (satin).
5. Drawing Designation: “TA6”.

G. Folding Shower Seat

1. Basis-of-Design Product: Model HDP-SEAT-LEFT and HDP-SEAT-RIGHT by Grab Bar Specialists.
2. Configuration: L-shaped seat, designed for wheelchair access designed to fold up and out of the way.
3. Size: 28” x 21” x 16”.
4. Seat: 1/2 inch (13 mm) thick, HDPE shower seat.
5. Color: White.
6. Mounting Mechanism: 1-1/4 inch diameter 18 gauge stainless steel tubing frame, with 16 gauge stainless steel backets.
7. Drawing Designation: “TA7”.

H. Sanitary-Napkin Disposal Unit

1. Basis-of-Design Product: Model 0472 by American Specialties Inc.
2. Mounting: Partition mounted, dual access.
3. Door or Cover: Self-closing, disposal-opening cover and hinged face panel.
4. Material: 22 gauge, Type 304 stainless steel, satin finish.
5. Drawing Designation: “TA8”.

I. Sanitary-Napkin Disposal Unit

1. Basis-of-Design Product: Model 0472 by American Specialties Inc.
2. Mounting: Surface mounted.
3. Door or Cover: Self-closing, disposal-opening cover and hinged face panel.
4. Material: 22 gauge, Type 304 stainless steel, satin finish.
5. Drawing Designation: “TA9”.

2.2 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of three keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to 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.

B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to method in ASTM F 446.

3.2 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items. Remove temporary labels and protective coatings. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 102800

SECTION 105126 – PLASTIC LOCKERS AND BENCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Installation of plastic lockers.
   a. Emergency Response (utility) and Recreational Lockers: Owner will purchase and Contractor will install lockers in quantity and location indicated on drawings.
2. Furnish and install locker benches.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of locker and bench.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Samples for Verification: For each finish product specified, two samples, minimum size 3 inches square, representing actual product, color, and patterns.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For adjusting, repairing, and replacing bench components to include in maintenance manuals.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A company regularly engaged in manufacture of products specified in this section, and whose products have been in satisfactory use under similar service conditions for not less than 5 years.

B. Installer Qualifications: A company regularly engaged in installation of products specified in this Section, with a minimum of 5 years experience.

C. Regulatory Requirements: Where lockers and benches are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities".

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver metal lockers until spaces to receive them are clean, dry, and ready for their installation.

B. Store products in manufacturer's unopened packaging until ready for installation**.**

C. Locker components shall be stored flat until assembly. All finishes shall be protected from soiling and damage during handling.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of recessed openings by field measurements before fabrication.

B. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.8 COORDINATION

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

1.9 WARRANTY

A. Manufacturer guarantees its plastic against breakage, corrosion, and delamination under normal conditions for 20 years from the date of receipt by the customer. If materials are found to be defective during that period for reasons listed above, the materials will be replaced free of charge.

PART 2 - PRODUCTS

2.1 MATERIALS

A. High Density Polyethylene (HDPE) Resins: Resins compounded under high pressure, forming a single component which is waterproof, nonabsorbent and has a self-lubricating surface that resists marks from pens, pencils, markers and other writing instruments.

B. Fasteners: Zinc- or nickel-plated steel, slotless-type, exposed bolt heads; with self-locking nuts or lock washers for nuts on moving parts.

C. 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, and elsewhere as indicated, for corrosion resistance.
2. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.2 STANDARD PLASTIC LOCKERS TO BE INSTALLED

A. Basis-of-Design Product: Owner is providing and Contractor will install the following:

1. Recreational Tufftec Lockers by Scranton Products: Multi-tier lockers, made from high impact, high density polyethylene (HDPE) formed under high pressure into solid components:
   a. Height: Nominal 72” (1829 mm).
   b. Width: 12” (305 mm).
   c. Depth: 12” (305 mm).

B. Basis-of-Design Product: Owner is providing and Contractor will install the following:

1. Emergency Response (Utility) Tufftec Lockers by Scranton Products: Extra-wide, open fronts with lockable storage compartment at the top, made from high impact, high density polyethylene (HDPE) formed under high pressure into solid components:
   a. Height: Nominal 72” (1829 mm).
   b. Width: 18” (457 mm).
   c. Depth: 18” (457 mm).

2.3 PEDESTAL BENCH

A. Basis-of-Design Product: Subject to compliance with requirements, provide Tufftec Benches by Scranton Products, or comparable product by one of the following:

1. ASI Storage Solutions
2. Bradley Corp.
3. General Partitions Mfg. Corp.

B. Pedestal Bench Dimensions:

1. Length: 48 inches (1219 mm).
2. Width: 24 inches (610 mm) and 9-1/2 inches (241 mm), where indicated.
3. Pedestal Height: 16 inches (406 mm).

C. Materials:

1. Bench Top: 1-1/4 inch (32 mm) thick HDPE plastic, 30 percent recycled material, with matte texture finish.
2. Pedestal: Black anodized aluminum with welded aluminum flanges top and bottom.

D. Color: Black.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine walls, floors, and 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 OF LOCKERS

A. General: Install 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.
2. Anchor single rows of metal lockers to walls near top and bottom of lockers.

B. Anchor the units to the wall studs through the locker back and to the floor using 1-1/2 inches (38 mm) tapcon screws.

C. Lockers shall be floor-mounted as scheduled or indicated. Floor shall be level for proper installation.

D. Lockers shall be installed on a 4 inch (102 mm) high base as scheduled or indicated. Base shall be level for proper installation.

3.3 INSTALLATION OF BENCHES

A. General: Install level, plumb, and true; shim as required, using concealed shims.

B. Fixed Locker Benches: Provide no fewer than two pedestals for each bench, spaced as indicated. Securely fasten tops of pedestals to undersides of bench tops, and anchor bases to floor.

3.4 ADJUSTING, CLEANING, AND PROTECTION

A. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding.

B. Touch up marred finishes, or replace lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by locker manufacturer.

END OF SECTION 105126

BLUE BELL AQUATIC CENTER

LOCKER ROOM RENOVATIONS

BRENHAM, TEXAS

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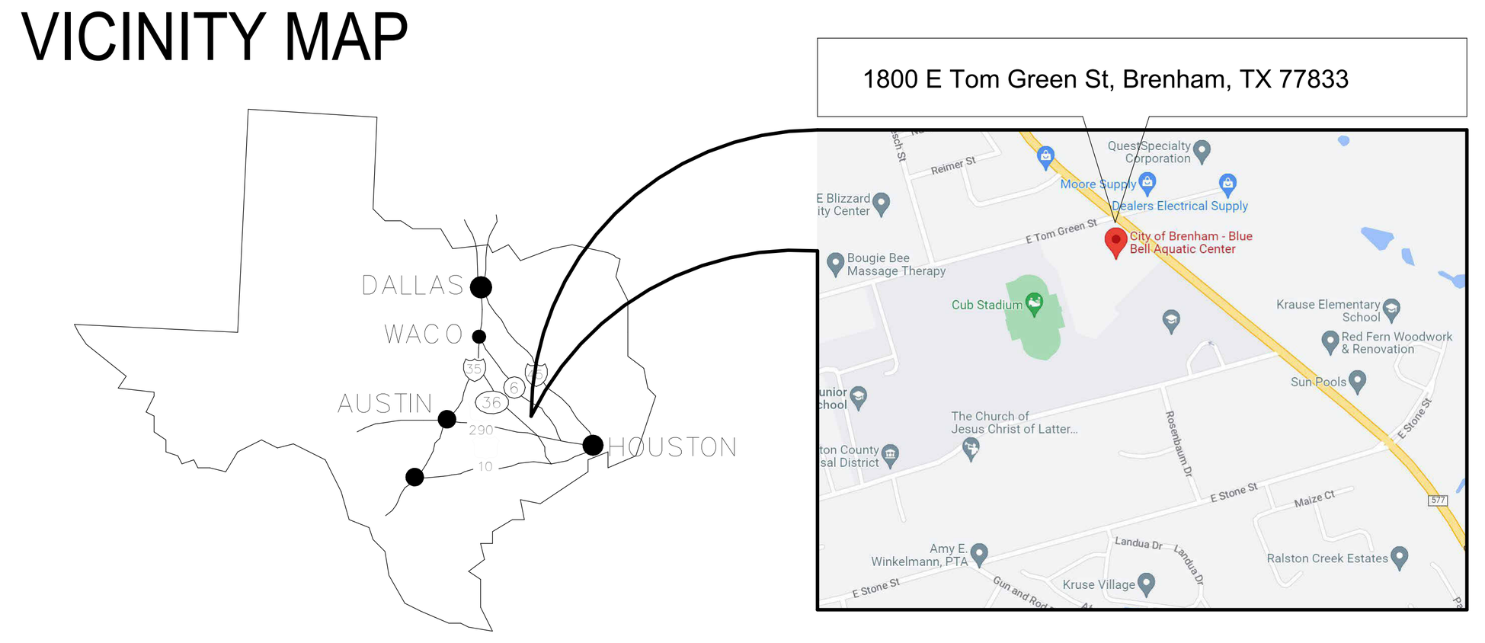
VICINITY MAP



INDEX OF DRAWINGS

1

The Project includes renovation of flooring, wall tile, countertops, toilet partitions and accessories and Locker Room Showers

TYPE OF CONSTRUCTION: TYPE IV UNPROTECTED (Sprinklered)
OCCUPANCY: SMALL ASSEMBLY A-2
Type of Construction and Occupancy remain unchanged with renovation

PROJECT SUMMARY

FOR BIDDING ONLY

ABBREVIATIONS

A

@	AT
A, AMP	AMPERES
AB	ANCHOR BOLT
ABV	ABOVE
A/C	AIR CONDITIONING
ACOU	ACOUSTICAL
ADJ.	ADJUSTABLE
ADMIN	ADMINISTRATIVE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AGG	AGGREGATE
AHU	AIR HANDLING UNIT
AL.ST.	ALUMINUM STOREFRONT
ALUM	ALUMINUM
ALT	ALTERNATE
∠	ANGLE
ANOD	ANODIZED
AP	ACCESS PANEL
APC	ACOUSTICAL PANEL CEILING
APPROX	APPROXIMATELY
ARCH, ARCHL	ARCHITECTURAL
ASS'Y	ASSEMBLY
AUX	AUXILIARY
AWI	ARCHITECTURAL WOODWORK INSTITUTE

B

BD	BOARD
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLKHD	BULKHEAD
BM	BEAM
BOS	BOTTOM OF STEEL
B, BOTT	BOTTOM
BRZ	BRONZE
BTU	BRITISH THERMAL UNIT
BUR	BUILT-UP ROOF

C

C	CENTIGRADE
CAB	CABINET
CBB	CEMENTITIOUS BACKER BOARD
CFMF	COLD-FORMED METAL FRAMING
CH	COAT HOOK
CHBD	CHALK BOARD
CI	CAST IRON
CJ	CONTROL JOINT
CL, ℄	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONNX	CONNECTION
CONST.	CONSTRUCTION
CONT	CONTINUOUS
CRDR	CORRIDOR
CRS	COURSE
CT	CERAMIC TILE
CTK	CURTAIN TRACK
CU	CUBIC
CUST	CUSTODIAN
CWFP	CEMENTITIOUS WOOD FIBER PLANK

D

DBL	DOUBLE
DEF	DEFORMED
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGRAM
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DN	DOWN
DP	DAMPPROOFING
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWLS	DOWELS
DWR	DRAWER

E

E, ELEC	ELECTRICAL
EA	EACH
EF	EXHAUST FLUE
EGSB	EXTERIOR GYPSUM SOFFIT BOARD
EIFS	EXTERIOR INSULATED FINISH SYSTEM
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION
EQ	EQUAL
EWC	ELECTRIC WATER COOLER
EQUIP	EQUIPMENT
ETC	ET CETERA
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXGR	EXISTING GRADE
EXH	EXHAUST
EXIST, EXG	EXISTING
EXP	EXPANSION
EXPD	EXPOSED
EXT	EXTERIOR

F

F	FAHRENHEIT
FA	FIRE ALARM
FC	FIRE CODE
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FGD	FINISH GRADE
FHC	FIRE HOSE CABINET
FIN	FINISH
FLASH	FLASHING
FLR	FLOOR
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOLD PART	FOLDING PARTITION
FRP	FIBER REINFORCED PLASTIC
FR-WD	FIRE-RETARDANT TREATED WOOD
FS	FOOT SCRAPER
FT	FEET
Fy	YIELD STRESS
FUR	FURRING

G

G	GAS
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GD	GRADE
GDW,	GYPSUM DRYWALL
GYP.BD.	GYPSUM BOARD
GEN	GENERAL
GL	GLASS
GMMU	GLASS MESH MORTAR UNITS
GND	GROUND
GSFT	GLAZED STRUCTURAL FACING TILE
GYP	GYPSUM

H

H-CONC	HARDENED CONCRETE
HB	HOSE BIBB
HC	HANDICAPPED, HOLLOW CORE
HCFV	HOLLOW CORE FINISH VENEER
HD	HEAD, HEADED, HEAVY DUTY
HDF	HANDICAP DRINKING FOUNTAIN
HDG	HOT-DIPPED GALVANIZED
HDWR	HARDWARE
HEWC	HANDICAP ELECTRIC WATER COOLER
HLB	HORIZONTAL LOUVER BLINDS
HM	HOLLOW METAL
HORIZ, H	HORIZONTAL
HR, HRS	HOUR, HOURS
HT	HEIGHT
HWD	HARD WOOD

I

IAW	IN ACCORDANCE WITH
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER, DIMENSION
IG	INSULATING GLASS
IN	INCH, INCHES
INC	INCANDESCENT
INCL	INCLUDING
INSUL	INSULATION
INT	INTERIOR
IRWC	IMPACT-RESISTANT WALL COVERING

J

JAN	JANITOR
JST	JOIST
JT	JOINT

L

L	ANGLE SHAPE
LAM	LAMINATE
LAV	LAVATORY
LB	POUND
LF	LINEAR FOOT
LG	LENGTH
LIB	LIBRARY
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSD	LIQUID SOAP DISPENSER
LVR	LOUVER
LW	LIGHTWEIGHT

M

MAS	MASONRY
MAINT	MAINTENANCE
MAX	MAXIMUM
MB	MOP BASIN
MC	MEDICINE CABINET
MECH, MECH'L	MECHANICAL
MFCS	MINERAL FIBER CEMENT SHINGLES
MFR	MANUFACTURER
MGR	MANAGER
MH	MANHOLE
MIC	MULTICOLORED INTERIOR COATING
MID	MIDDLE
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MJ	MASONRY EXPANSION JOINT
MKBD	MARKER BOARD
MM	MILLIMETER
MMB	MEMBRANE
MO	MASONRY OPENING
MPH	MILES PER HOUR
MTL,MET	METAL
MULL	MULLION

N

NA	NOT APPLICABLE
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE

O

OC	ON CENTER
OCC	OCCUPANT LOAD
OCD	OVERHEAD COILING DOOR
OCG	OVERHEAD COILING GRILL
OD	OUTSIDE DIAMETER/DIMENSION
OFF	OFFICE
OH	OVERHEAD
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORD	OVERFLOW ROOF DRAIN

P

PA	PUBLIC ADDRESS
PAR	PARALLEL
PCP	PORTLAND CEMENT PLASTER
PEN	PENETRATION
PERP	PERPENDICULAR
PG	PLATE GLASS
PL, P	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLCP	PREMANUFACTURED LAMINATE CLAD PANELWORK
PLT	PLASTIC
PLYWD	PLYWOOD
PNL	PANEL
PNT	PAINT, PAINTED
PNTGR	PAINT GRADE
POS	POSITIVE
PR	PAIR
PREFAB	PREFABRICATED
PREFIN, PF	PREFINISHED
PT	PRESSURE TREATED
PTD	PAPER TOWEL DISPENSER
PTN	PARTITION
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT

Q

QA	QUALITY ASSURANCE
QT	QUARRY TILE

R

R	RADIUS
RAF	RESILIENT ATHLETIC FLOORING
RBR	RUBBER
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REINF	REINFORCED, REINFORCEMENT
REF	REFER, REFERENCE
REP	REPRESENTATIVE
REQD	REQUIRED
RO	ROUGH OPENING
RM	ROOM
RV	ROOF VENT
RWAF	RESILIENT WOOD ATHLETIC FLOORING

S

SACB	SOUND ABSORBING CONCRETE BLOCK
SB	SPLASH BLOCK
SC	SOLID CORE
SCFV	SOLID CORE FLUSH VENEER
SCHED	SCHEDULE
SD	SMOKE DETECTOR
SEC	SECONDARY
SF	SQUARE FEET
SGFT	STRUCTURAL GLAZED FACING TILE
SGL	SINGLE
SH, SHT	SHEET
SHR	SHOWER
SIM	SIMILAR
SJ	SAWN CONTROL JOINT
SLD	SEALED
SND	SANITARY NAPKIN DISPOSAL UNIT
SNT	SEALANT
SNV	SANITARY NAPKIN VENDOR
SPA	SPACES
SQ	SQUARE
SR	SHOWER ROD
SS	STAINLESS STEEL
SSK	SERVICE SINK
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT, STRCT	STRUCTURE, STRUCTURAL
SUS	SUSPENDED
SSM	SOLID SURFACING MATERIAL

T

T, TEL	TELEPHONE
T	TOP
TC	TEACHER CABINET
TECH	TECHNICAL
TEMP	TEMPERATURE
TKBD	TACKBOARD
TKS	TACK STRIP
TKSF	TACK SURFACE
TLT	TOILET
TOB	TOP OF BEAM
TOC	TOP OF CURB
TOD	TOP OF DRAIN
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOW	TOP OF WALL
TP	TOILET PARTITION
TTD	TOILET TISSUE DISPENSER
TWC	TEXTILE WALL COVERING
TYP	TYPICAL

U

UBC	UNIFORM BUILDING CODE
UON	UNLESS OTHERWISE NOTED
URS	URINAL SCREEN
UTIL	UTILITY

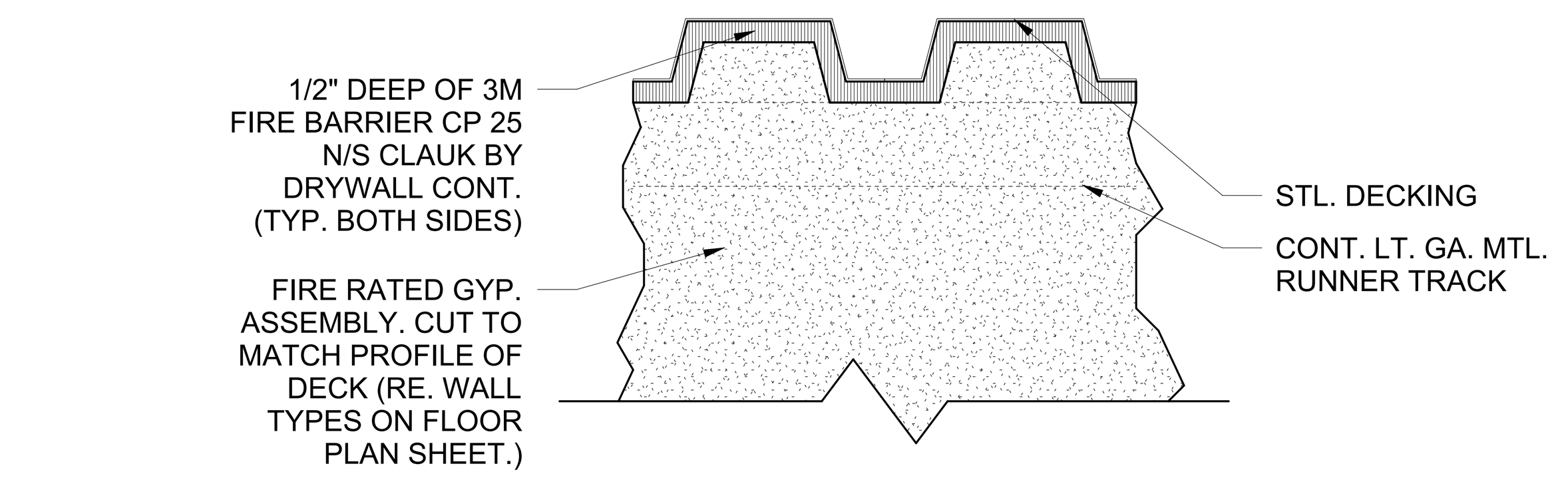
V

V	VOLTS
V, VERT	VERTICAL
VCT	VINYL COMPOSITION TILE
VEND	VENDING
VEST	VESTIBULE
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING

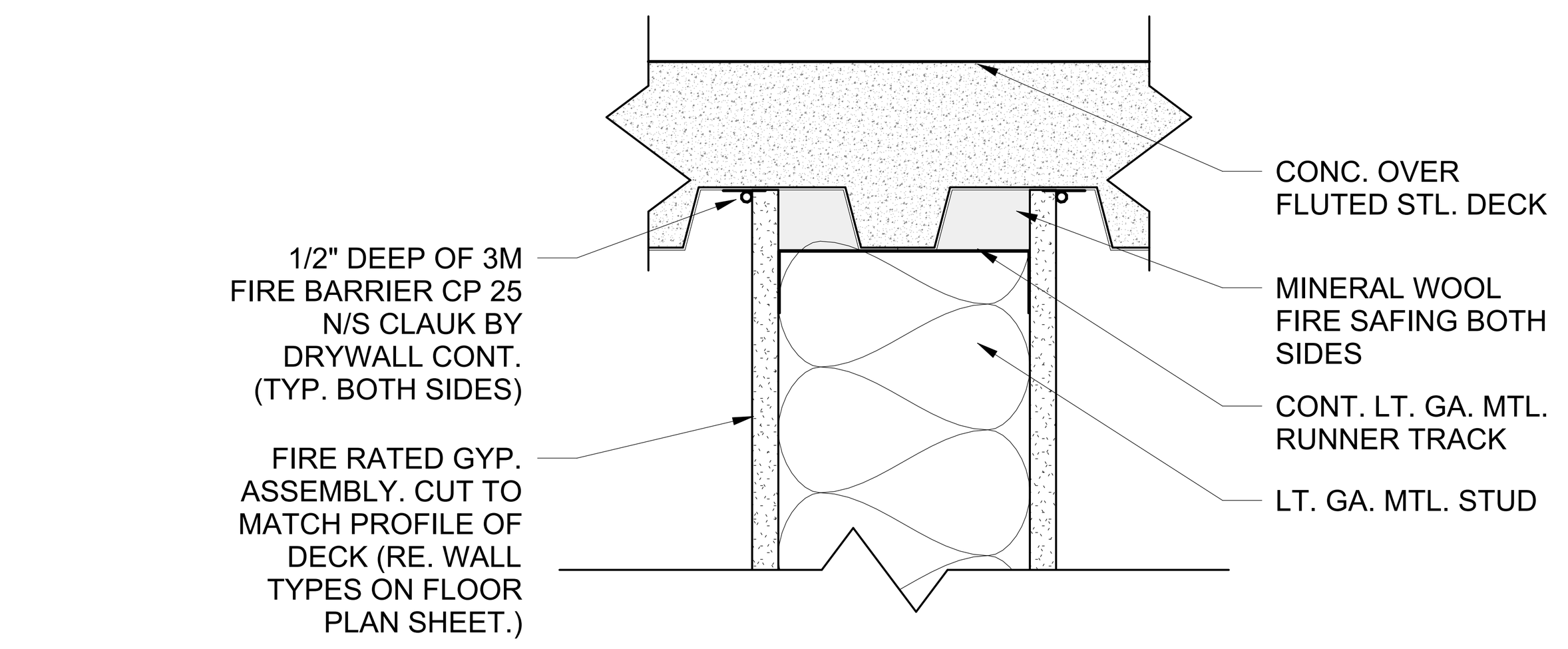
W

W	WATTS
W/	WITH
WB	WIND BRACE
WBBP	WIND BRACE BASEPLATE
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER
WNDW	WINDOW
WO	WITHOUT
WOM	WOMEN
WP	WEATHERPROOF
WPG	WATERPROOFING
WR	WASTE RECEPTACLE

WALL HEADS AT RATED PARTITIONS

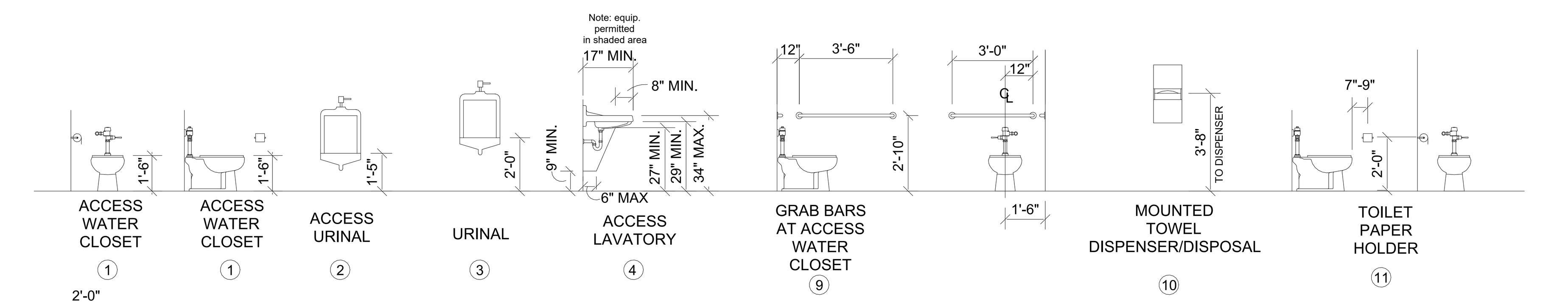


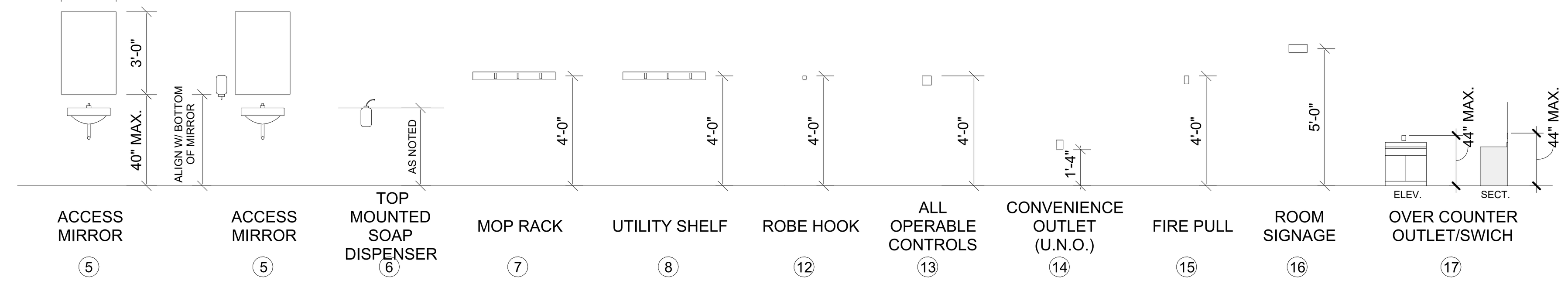
WALL TO DECK FIRE STOP DETAIL



WALL TO DECK FIRE STOP DETAIL

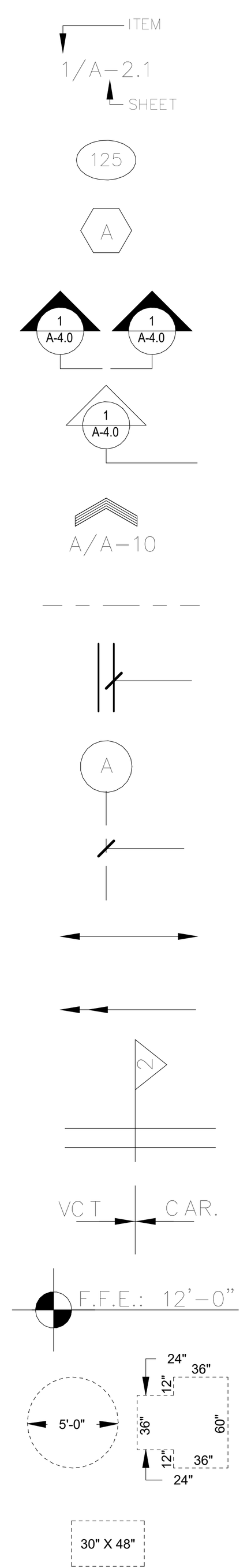
MOUNTING HEIGHTS





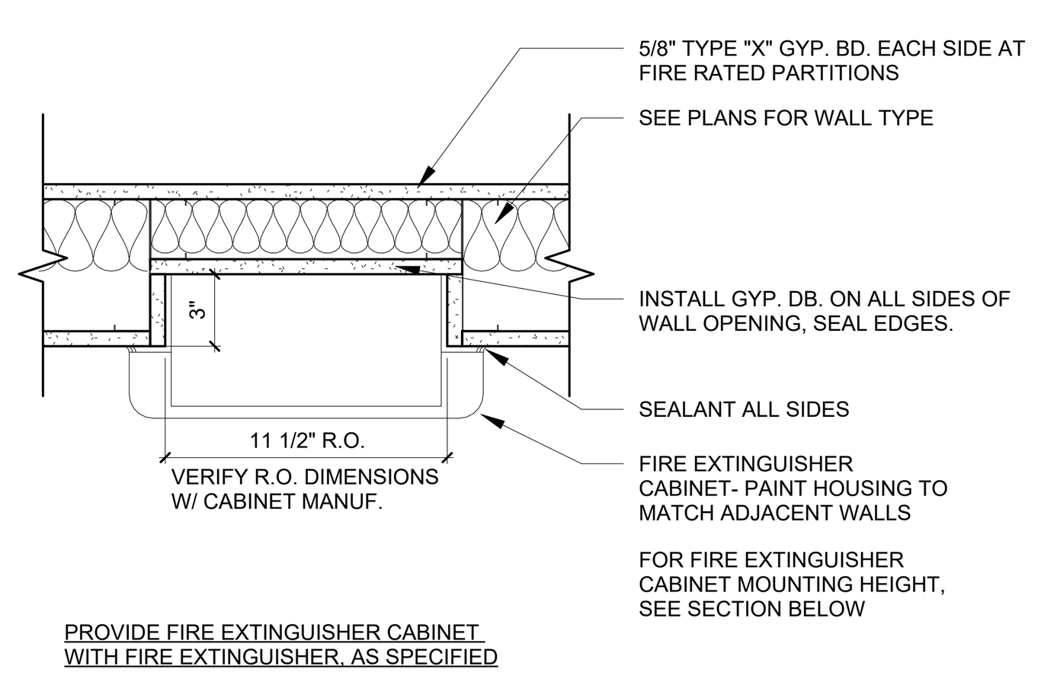
NOTE:
1. PROVIDE BLOCKING AS REQUIRED FOR MOUNTING ACCESSORIES.
2. MOUNTING DIMENSIONS FOR FIXTURES ARE SHOWN AT ADULT HEIGHTS, U.N.O.
3. FLUSH VALVE MOUNTS ON WIDE SIDE OF STALL.

PLAN LEGEND SYMBOLS

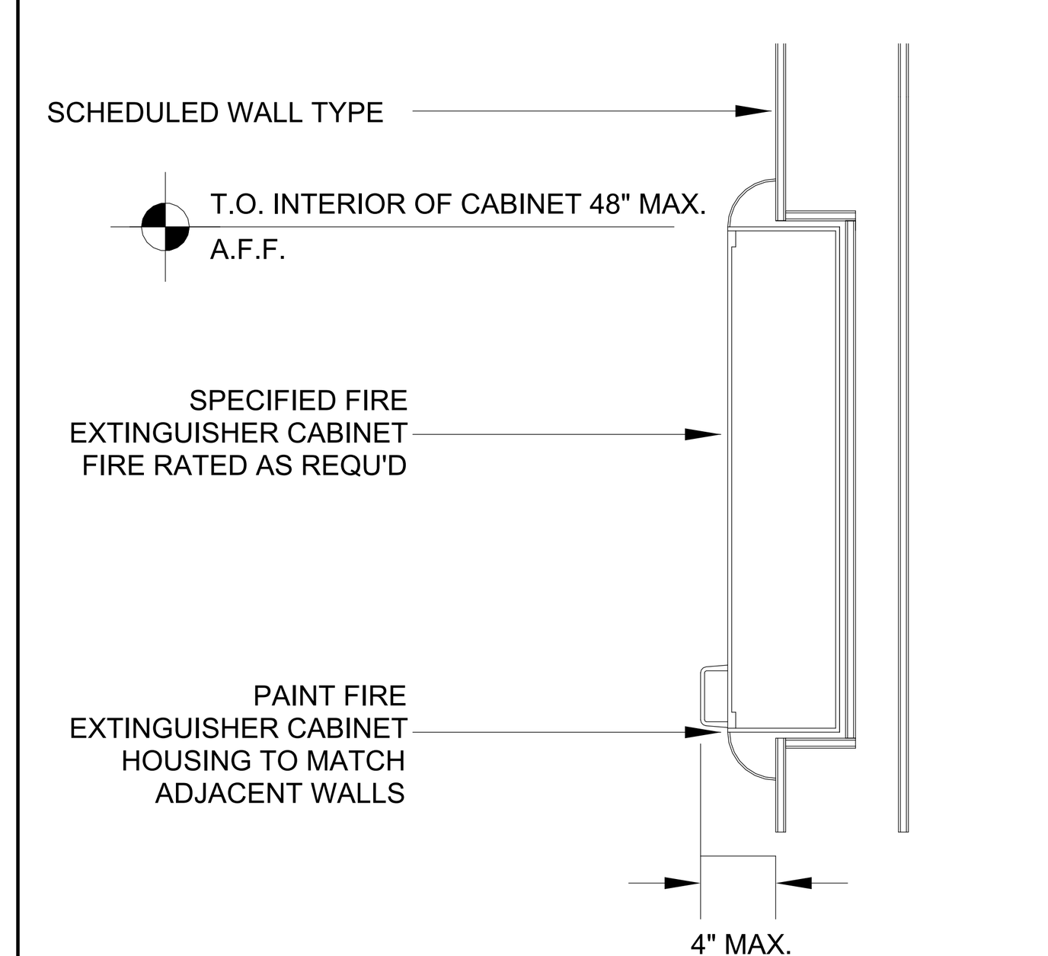


- DRAWINGS ARE DESIGNATED BY A NUMBER FOLLOWED BY THE SHEET ON WHICH THEY APPEAR
- DOOR REFERENCE
- WINDOW FRAME REFERENCE
- BUILDING SECTION
- WALL SECTION
- ELEVATION MARKER
- COLUMN LINE OR CENTERLINE
- DIMENSION GIVEN TO FACE OF STUD
- COLUMN LINE OR CENTER LINE DIMENSION
- DIMENSION TO FACE
- CONTINUATION OF DIMENSION
- PARTITION TYPE
- CHANGE IN FLOOR MATERIALS
- ELEVATION REFERENCE (A.F.F. = ABOVE FINISHED FLR) (F.F.E. = FINISHED FLOOR ELEV.)
- TURNING RADIUS, or T SHOWING MIN. CLEARANCE REQUIREMENTS FOR ACCESSIBILITY
- CLEAR FLOOR SPACE SHOWING MIN. CLEARANCE REQUIREMENTS FOR ACCESSIBILITY

FIRE EXTINGUISHER CABINET



PLAN VIEW

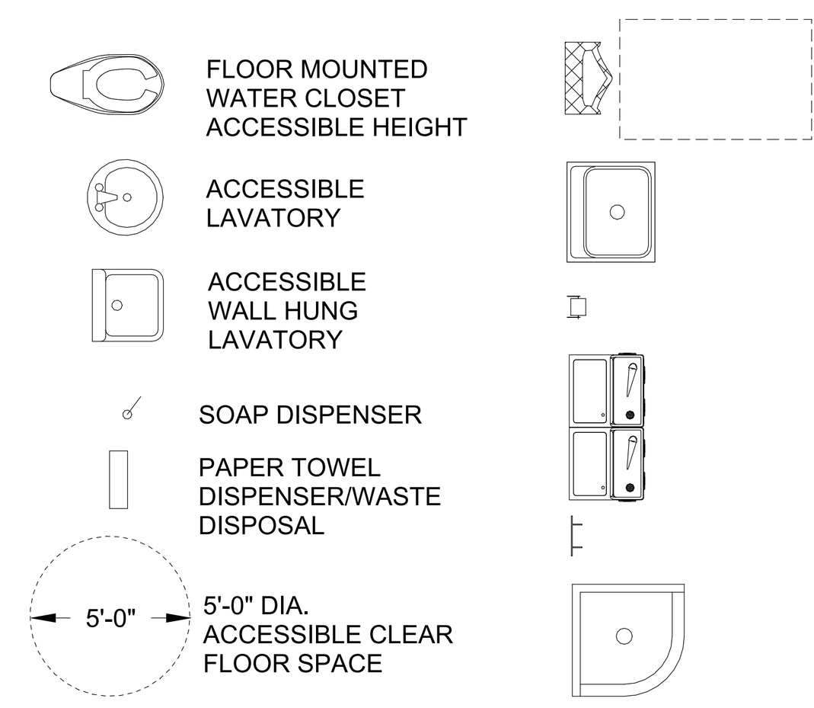


N.T.S.

SECTION VIEW

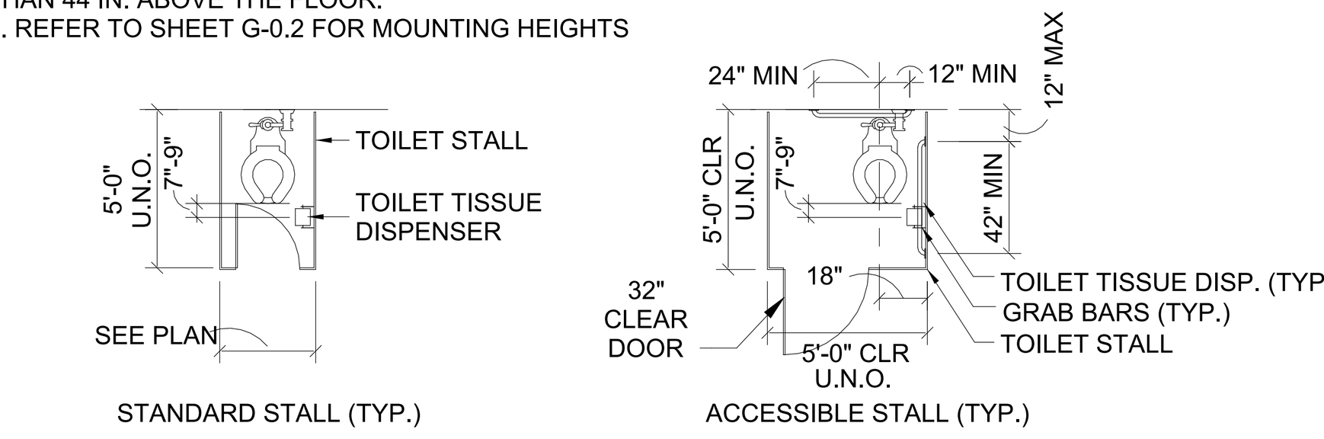
TOILET LEGEND

SYMBOLS



- FLOOR MOUNTED WATER CLOSET ACCESSIBLE HEIGHT
- ACCESSIBLE LAVATORY
- ACCESSIBLE WALL HUNG LAVATORY
- SOAP DISPENSER
- PAPER TOWEL DISPENSER/WASTE DISPOSAL
- 5'-0" DIA. ACCESSIBLE CLEAR FLOOR SPACE
- ACCESSIBLE URINAL AND FIXTURE CLEAR FLOOR SPACE
- ACCESSIBLE SINK
- TOILET TISSUE DISPENSER PROVIDE ONE AT ALL W.C.'s
- BI-LEVEL ELECTRIC WATER COOLER
- MOP RACK
- MOP SINK

GENERAL NOTES
1. PROVIDE BLOCKING AS REQUIRED TO STABILIZE FIXTURES. REF. FIXTURE MOUNTING HEIGHT SCHEDULE FOR SPECIFIC MOUNTING HEIGHTS.
2. FIXTURES MARKED AS ACCESSIBLE SHALL BE MOUNTED AT REQUIRED ADULT HANDICAP HEIGHTS AT PUBLIC RESTROOMS AND AT OFFICE AREAS.
3. METAL STUD CONTRACTOR TO PROVIDE FIRE RETARDANT WOOD BLOCKING FOR TOILET PARTITIONS AND ACCESSORIES
4. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC AND SHALL COMPLY WITH 4.27.4. CONTROLS FOR FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF TOILET AREAS NO MORE THAN 44 IN. ABOVE THE FLOOR.
6. REFER TO SHEET G-0.2 FOR MOUNTING HEIGHTS



STANDARD STALL (TYP.)   ACCESSIBLE STALL (TYP.)

Project: 2023.03
Release Date: 07/12/2023 For Construction
Revisions: No. Description Date

Consultant:

BLUE BELL AQUATIC CENTER

LOCKER ROOM RENOVATIONS

BRENHAM, TEXAS

Architect:
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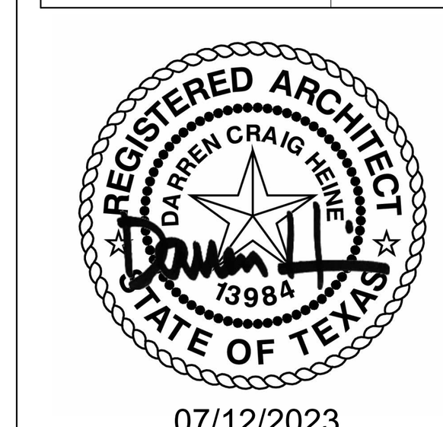


07/12/2023

Legends and Details

A0.1

TEXAS ACCESSIBILITY STANDARDS

CHAPTER 3 BUILDING BLOCKS

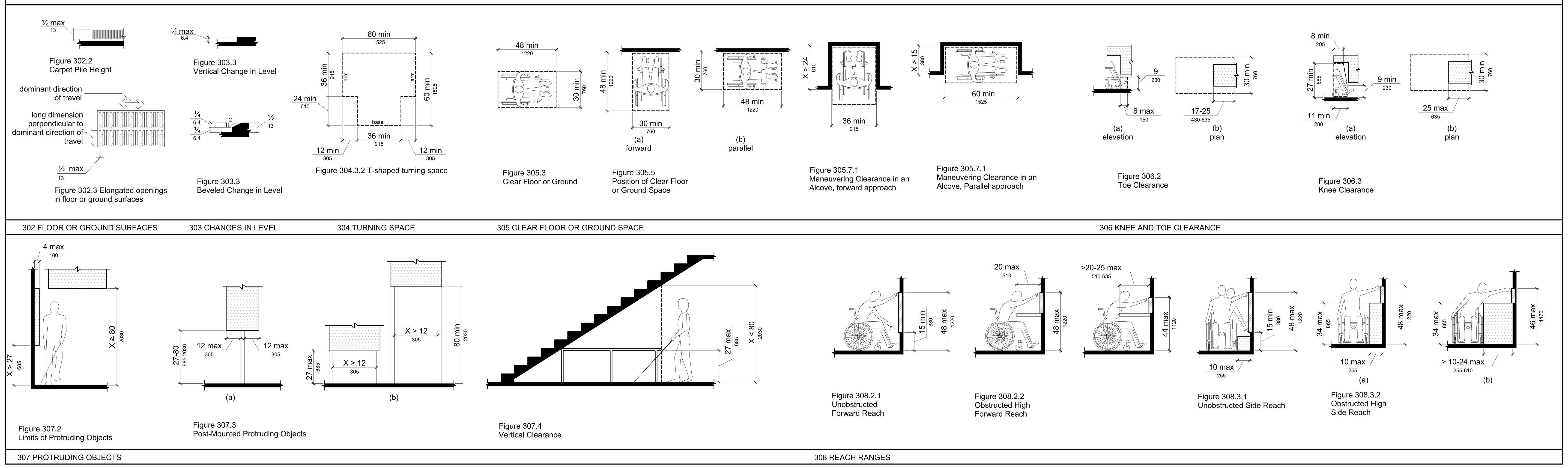


Figure 302.2 Carpet Pile Height
Figure 302.3 Elongated openings in floor or ground surfaces
dominant direction of travel
long dimension perpendicular to dominant direction of travel
Figure 303.3 Vertical Change in Level
Figure 303.3 Beveled Change in Level
Figure 304.3.2 T-shaped turning space
Figure 305.3 Clear Floor or Ground
Figure 305.5 Position of Clear Floor or Ground Space
(a) forward
(b) parallel
Figure 305.7.1 Maneuvering Clearance in an Alcove, forward approach
Figure 305.7.1 Maneuvering Clearance in an Alcove, Parallel approach
Figure 306.2 Toe Clearance
Figure 306.3 Knee Clearance
(a) elevation
(b) plan
302 FLOOR OR GROUND SURFACES
303 CHANGES IN LEVEL
304 TURNING SPACE
305 CLEAR FLOOR OR GROUND SPACE
306 KNEE AND TOE CLEARANCE
Figure 307.2 Limits of Protruding Objects
Figure 307.3 Post-Mounted Protruding Objects
Figure 307.4 Vertical Clearance
Figure 308.2.1 Unobstructed Forward Reach
Figure 308.2.2 Obstructed High Forward Reach
Figure 308.3.1 Unobstructed Side Reach
Figure 308.3.2 Obstructed High Side Reach
307 PROTRUDING OBJECTS
308 REACH RANGES

LEGEND

Convention	Description
36 / 915	dimension showing English units (in inches unless otherwise specified) above the line and SI units (in millimeters unless otherwise specified) below the line
6 / 150	dimension for small measurements
33-36 / 840-915	dimension showing a range with minimum - maximum
min	minimum
max	maximum
>	greater than
≥	greater than or equal to
<	less than
≤	less than or equal to
	boundary of clear floor space or maneuvering clearance
	centerline
	a permitted element or its extension
	direction of travel or approach
	a wall, floor, ceiling or other element cut in section or plan
	a highlighted element in elevation or plan
	location zone of element, control or feature

CHAPTER 4 ACCESSIBLE ROUTES

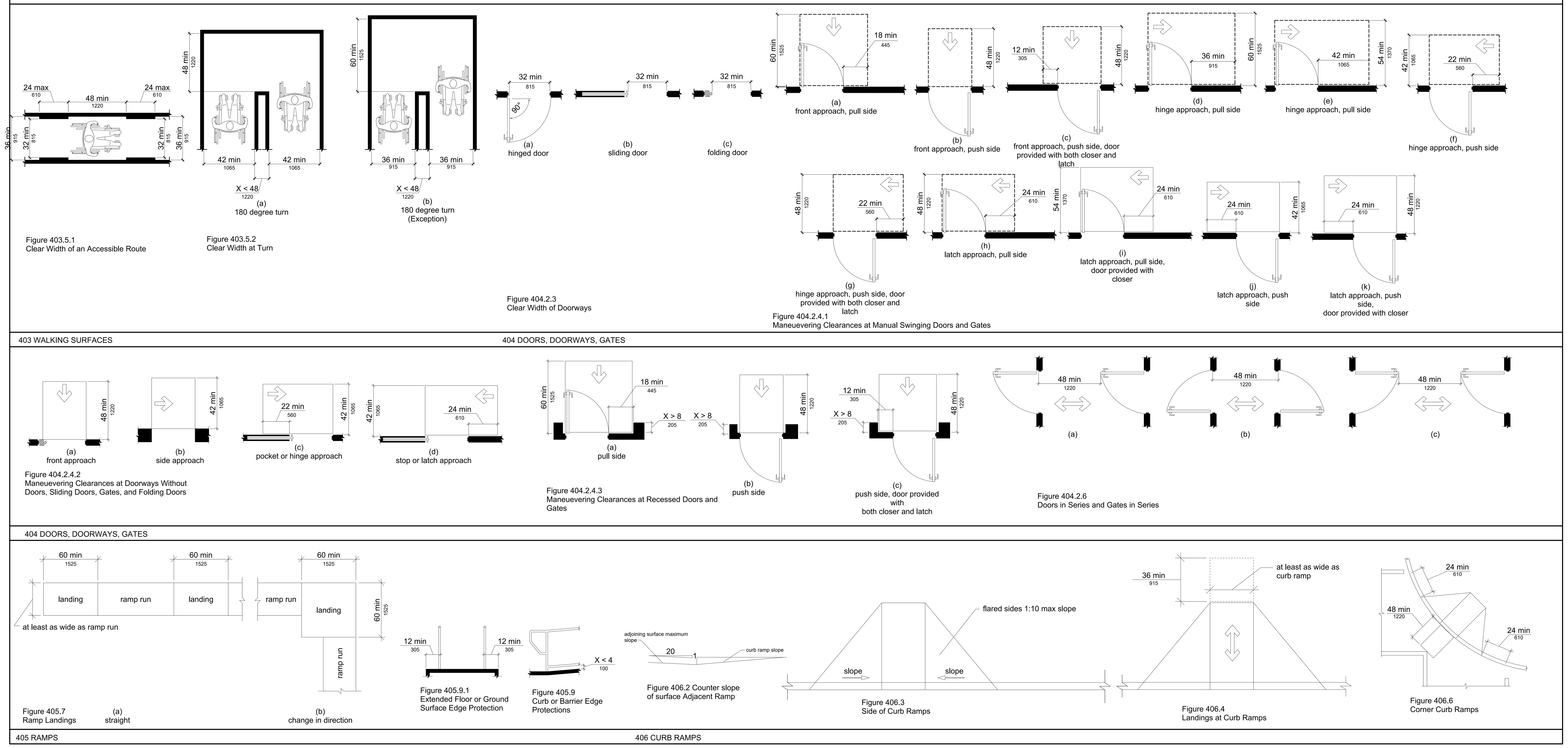
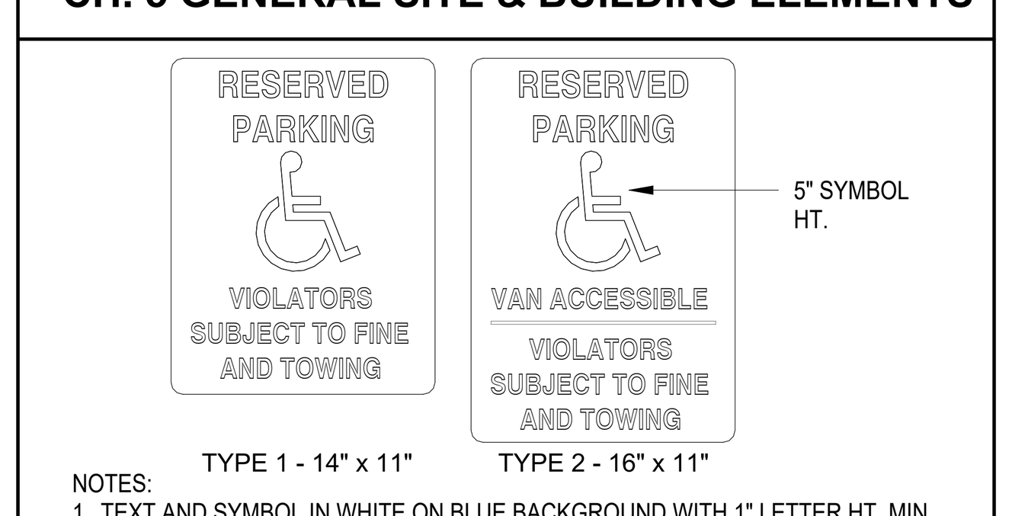


Figure 403.5.1 Clear Width of an Accessible Route
Figure 403.5.2 Clear Width at Turn
(a) 180 degree turn
(b) 180 degree turn (Exception)
Figure 404.2.3 Clear Width of Doorways
(a) hinged door
(b) sliding door
(c) folding door
Figure 404.2.4.1 Maneuvering Clearances at Manual Swinging Doors and Gates
(a) front approach, pull side
(b) front approach, push side
(c) front approach, push side, door provided with both closer and latch
(d) hinge approach, pull side
(e) hinge approach, pull side
(f) hinge approach, push side
(g) hinge approach, push side, door provided with both closer and latch
(h) latch approach, pull side
(i) latch approach, pull side, door provided with closer
(j) latch approach, push side
(k) latch approach, push side, door provided with closer
403 WALKING SURFACES
404 DOORS, DOORWAYS, GATES
Figure 404.2.4.2 Maneuvering Clearances at Doorways Without Doors, Sliding Doors, Gates, and Folding Doors
(a) front approach
(b) side approach
(c) pocket or hinge approach
(d) stop or latch approach
Figure 404.2.4.3 Maneuvering Clearances at Recessed Doors and Gates
(a) pull side
(b) push side
(c) push side, door provided with both closer and latch
Figure 404.2.6 Doors in Series and Gates in Series
404 DOORS, DOORWAYS, GATES
Figure 405.7 Ramp Landings
(a) straight
(b) change in direction
landing
ramp run
at least as wide as ramp run
Figure 405.9.1 Extended Floor or Ground Surface Edge Protection
Figure 405.9 Curb or Barrier Edge Protections
Figure 406.2 Counter slope of surface Adjacent Ramp
Figure 406.3 Side of Curb Ramps
flared sides 1:10 max slope
Figure 406.4 Landings at Curb Ramps
at least as wide as curb ramp
Figure 406.6 Corner Curb Ramps
405 RAMPS
406 CURB RAMPS

NOTES

1. DRAWINGS ON THIS SHEET REPRESENT THE REQUIREMENTS SET BY THE TEXAS ACCESSIBILITY STANDARDS (TAS) OF THE ARCHITECTURAL BARRIERS ACT ARTICLE 9102, TEXAS CIVIL STATUTES EFFECTIVE MARCH 15, 2012. THE CONTRACTOR IS TO COMPLY WITH THESE STANDARDS.
2. THESE REQUIREMENTS ARE MINIMUMS SET FORTH BY THE TEXAS ACCESSIBILITY STANDARDS AND MAY NOT REFLECT THE ACTUAL SCOPE OF WORK. THE CONSTRUCTION DOCUMENTS SHALL GOVERN OVER THESE STANDARDS EXCEPT WHERE THE DOCUMENTS DO NOT MEET THE MINIMUM REQUIREMENTS SHOWN ON THIS SHEET. CONTRACTOR TO NOTIFY THE ARCHITECT IMMEDIATELY IF ANY CONDITIONS ARISE THAT DO NOT MEET THESE STANDARDS.

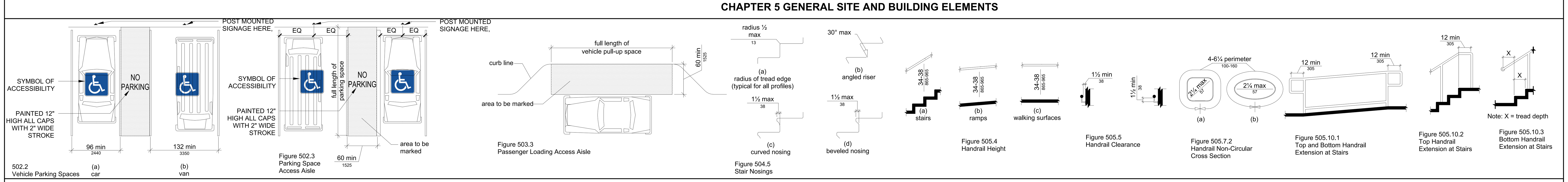
CH. 5 GENERAL SITE & BUILDING ELEMENTS



NOTES:
1. TEXT AND SYMBOL IN WHITE ON BLUE BACKGROUND WITH 1" LETTER HT. MIN.
2. FURNISH POST-MOUNTED SIGNAGE AT EACH ACCESSIBLE PARKING SPACE.
3. MOUNT BOTTOM OF SIGN 5' ABOVE PAVEMENT.
4. TYPE 1 AT ALL CAR LOCATIONS, TYPE 2 AT VAN LOCATIONS.

504 PARKING SPACES

CHAPTER 5 GENERAL SITE AND BUILDING ELEMENTS



POST MOUNTED SIGNAGE HERE,
SYMBOL OF ACCESSIBILITY
NO PARKING
PAINTED 12" HIGH ALL CAPS WITH 2" WIDE STROKE
96 min 2440
132 min 3350
502.2 Vehicle Parking Spaces
(a) car
(b) van
full length of parking space
area to be marked
Figure 502.3 Parking Space Access Aisle
curb line
full length of vehicle pull-up space
area to be marked
Figure 503.3 Passenger Loading Access Aisle
(a) radius of tread edge (typical for all profiles)
(b) angled riser
(c) curved nosing
(d) beveled nosing
Figure 504.5 Stair Nosings
(a) stairs
(b) ramps
(c) walking surfaces
Figure 505.4 Handrail Height
Figure 505.5 Handrail Clearance
Figure 505.7.2 Handrail Non-Circular Cross Section
Figure 505.10.1 Top and Bottom Handrail Extension at Ramps
Figure 505.10.2 Top Handrail Extension at Stairs
Figure 505.10.3 Bottom Handrail Extension at Stairs
Note: X = tread depth
504 PARKING SPACES
503 PASSENGER LOADING ZONES
504 STAIRWAYS
505 HANDRAILS

Project:	2023.03	
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Consultant:

BLUE BELL AQUATIC CENTER

LOCKER ROOM RENOVATIONS

BRENHAM, TEXAS

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07/12/2023

TX Accessibility Standards

A0.2

CHAPTER 6 PLUMBING ELEMENTS AND FACILITIES

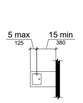
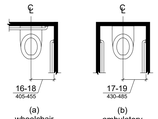


Figure 602.5
Drink Fountain
Spout Location



(a)
wheelchair
accessible
water closets

(b)
ambulatory
accessible
water
closets

Figure 604.2
Water Closet
Location

Figure 604.3.1
Size of Clearance at
Water Closets

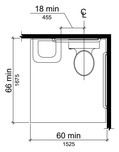


Figure 604.3.2
Overlap of Water Closet
Clearance in Residential
Dwelling Units

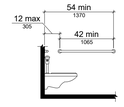


Figure 604.5.1
Side Wall Grab Bar
at Water Closets

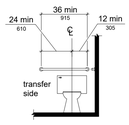


Figure 604.5.2
Rear Wall Grab Bar
at Water closets

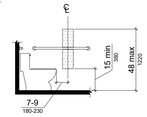
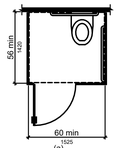
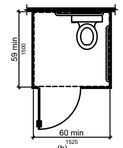


Figure 604.7
Dispenser Outlet
Location



(a)
adult wall hung
water closet



(b)
adult floor mounted water
closet
and children's water closet

Figure 604.8.1.1
Size of Wheelchair Accessible
Toilet Compartment

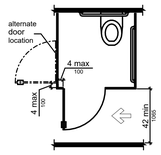
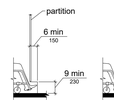
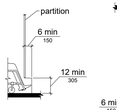


Figure 604.8.1.2
Wheelchair
Accessible Toilet
Compartment Doors

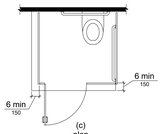


(a)
elevation
adult



(b)
elevation
children

Figure 604.8.1.4
Wheelchair Accessible Toilet
Compartment Toe Clearance



(c)
plan

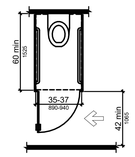


Figure 604.8.2
Ambulatory Accessible
Toilet Compartment

602 DRINKING FOUNDTAINS 604 WATER CLOSETS AND TOILET COMPARTMENTS

(a)
wall hung type

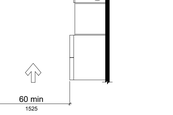
(b)
stall type

Figure 604.8.2
Height and Depth of
Urinals

(a)
removable in-tub seat

(b)
permanent seat

Figure 607.2
Clearance for Bathtubs



(a)
elevation

(b)
plan

Figure 607.4.1
Grab Bars for Bathtubs
with Permanent Seats

(a)
elevation

(b)
plan

Figure 607.4.2
Grab Bars for Bathtubs
with Removable In-Tub Seats

Figure 607.5
Bathtub Control
Location

Note: inside finished dimensions measured at the center points of opposing sides

Note: inside finished dimensions measured at the center points of opposing sides

Figure 608.2.2
Standard Roll-In Type
Shower Compartment
Size and Clearance

Note: inside finished dimensions measured at the center points of opposing sides

Figure 608.2.3
Alternate Roll-In Type
Shower Compartment
Size and Clearance

Figure 608.2.2
Standard Roll-In
Type Shower
Compartment Size
and Clearance

604 WATER CLOSETS 607 BATHTUBS 608 SHOWER COMPARTMENTS

(a)
without seat

(b)
with seat

Figure 608.3.2
Grab Bars for Standard
Roll-In Type Showers

Figure 608.3.3
Grab Bars for Alternate
Roll-in Type Showers

Figure 608.5.1
Transfer Type Shower
Compartment Control
Location

(a)
without seat

(b)
with seat

Figure 608.5.2
Standard Roll-In Type
Shower Compartmnet
Control Location

Figure 609.2.2
Grab Bar Non-Circular
Cross Section

(a)
projecting
objects

(b)
recessed
objects

Figure 609.3
Spacing of Grab Bars

(a)
Removable
In-Tub Seat

(b)
Permanent Seat

Figure 610.2
Bathtub Seats

(a)
rectangular

(b)
L-shaped

Figure 610.3
Extent of Seat

Figure 610.3.1
Rectangular
Shower Seat

(a)
size

(b)
distance from
wall

Figure 610.3.2
L-Shaped Shower
Seat

608 SHOWER COMPARTMENTS 609 GRAB BARS 610 SEATS 611 WASHING MACHINES AND DRYERS

(a)
top loading

(b)
front loading

Figure 611.4
Height of Laundry
Compartment Opening

CHAPTER 7 COMMUNICATION ELEMENTS AND FEATURES

Figure 703.2.5
Height of Raised
Characters

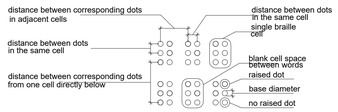


Figure 703.3.1
Braille Measurement

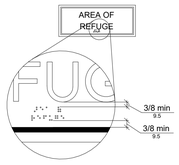


Figure 703.3.2
Position of Braille

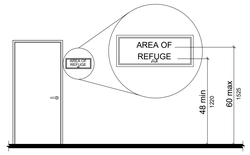


Figure 703.4.1
Height of Tactile Characters Above
Finish Floor or Ground

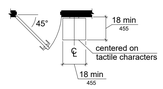


Figure 703.4.2
Location of Tactile
Signs at Doors

Figure 703.6.1
Pictogram Field

1 International Symbol of Accessibility
2 International Symbol of TTY
3 Volume Control Telephone
4 International Symbol of Access for Hearing Loss

Figure 703.7.2. 1-4
Pictogram Field

703 SIGNS

CHAPTER 8 SPECIAL ROOMS SPACES AND ELEMENTS

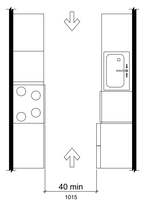
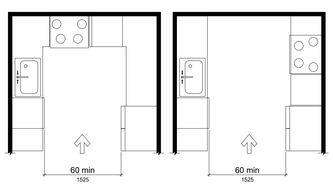


Figure 804.2.1
Pass Through Kitchens



(a)

(b)

Figure 804.2.2
U-Shaped Kitchens

804 KITCHENS AND KITCHENETTES

NOTES

1. DRAWINGS ON THIS SHEET REPRESENT THE REQUIREMENTS SET BY THE TEXAS ACCESSIBILITY STANDARDS (TAS) OF THE ARCHITECTURAL BARRIERS ACT ARTICLE 9102, TEXAS CIVIL STATUTES EFFECTIVE MARCH 15, 2012. THE CONTRACTOR IS TO COMPLY WITH THESE STANDARDS.
2. THESE REQUIREMENTS ARE MINIMUMS SET FORTH BY THE TEXAS ACCESSIBILITY STANDARDS AND MAY NOT REFLECT THE ACTUAL SCOPE OF WORK. THE CONSTRUCTION DOCUMENTS SHALL GOVERN OVER THESE STANDARDS EXCEPT WHERE THE DOCUMENTS DO NOT MEET THE MINIMUM REQUIREMENTS SHOWN ON THIS SHEET. CONTRACTOR TO NOTIFY THE ARCHITECT IMMEDIATELY IF ANY CONDITIONS ARISE THAT DO NOT MEET THESE STANDARDS.

No.	Description	Date
2023.03	For Construction	07/12/2023

Project:
Release Date:
Revisions:

Consultant:

BLUE BELL AQUATIC CENTER
LOCKER ROOM RENOVATIONS
BRENHAM, TEXAS

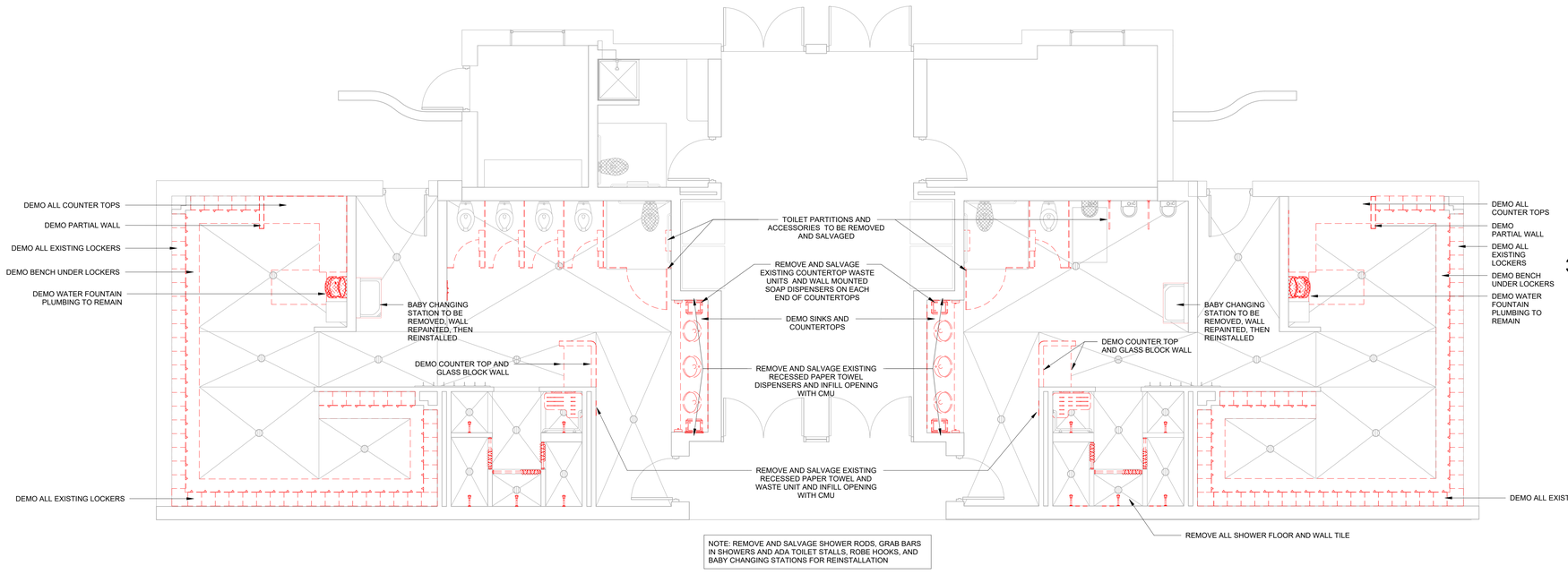
Architect:
BBA Architects LP
213 West Main Street Brenham, TX 77833
Tel: (979) 836-0523
Email: mailbox@bba-architects.com

REGISTERED ARCHITECT
DARREN CRAIG KERNE
10984
STATE OF TEXAS

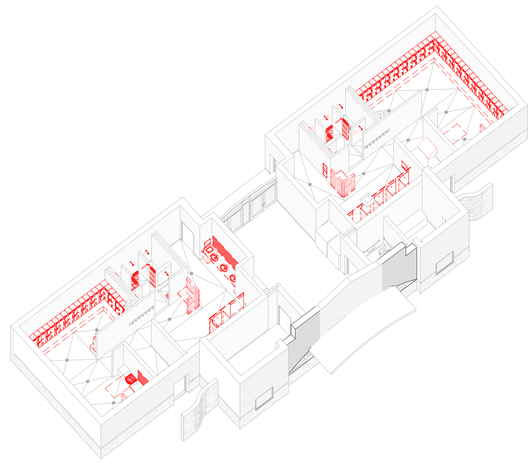
07/12/2023

TX Accessibility Standards

A0.3

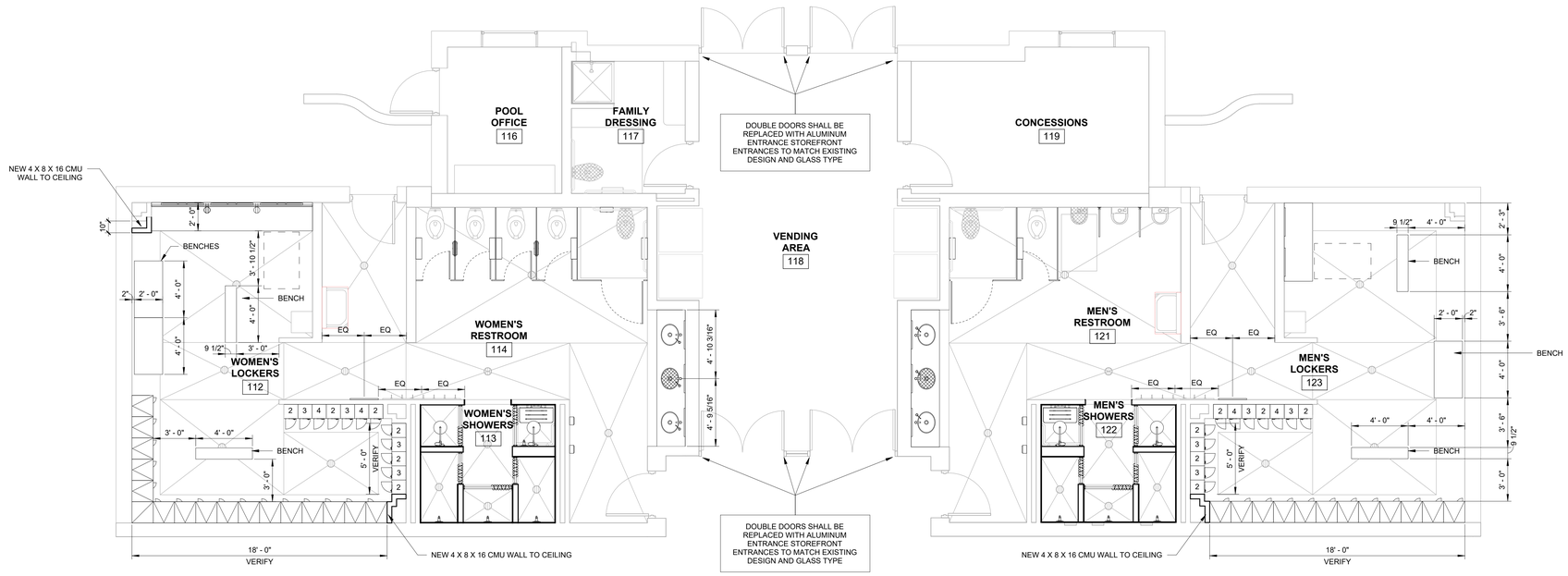


2 DEMO FLOOR PLAN
1/4" = 1'-0"



3 DEMO AERIAL FROM NORTHEAST

4 DEMO AERIAL FROM NORTHWEST



1 FLOOR PLAN
1/4" = 1'-0"

Project:	2023.03
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BLUE BELL AQUATIC CENTER

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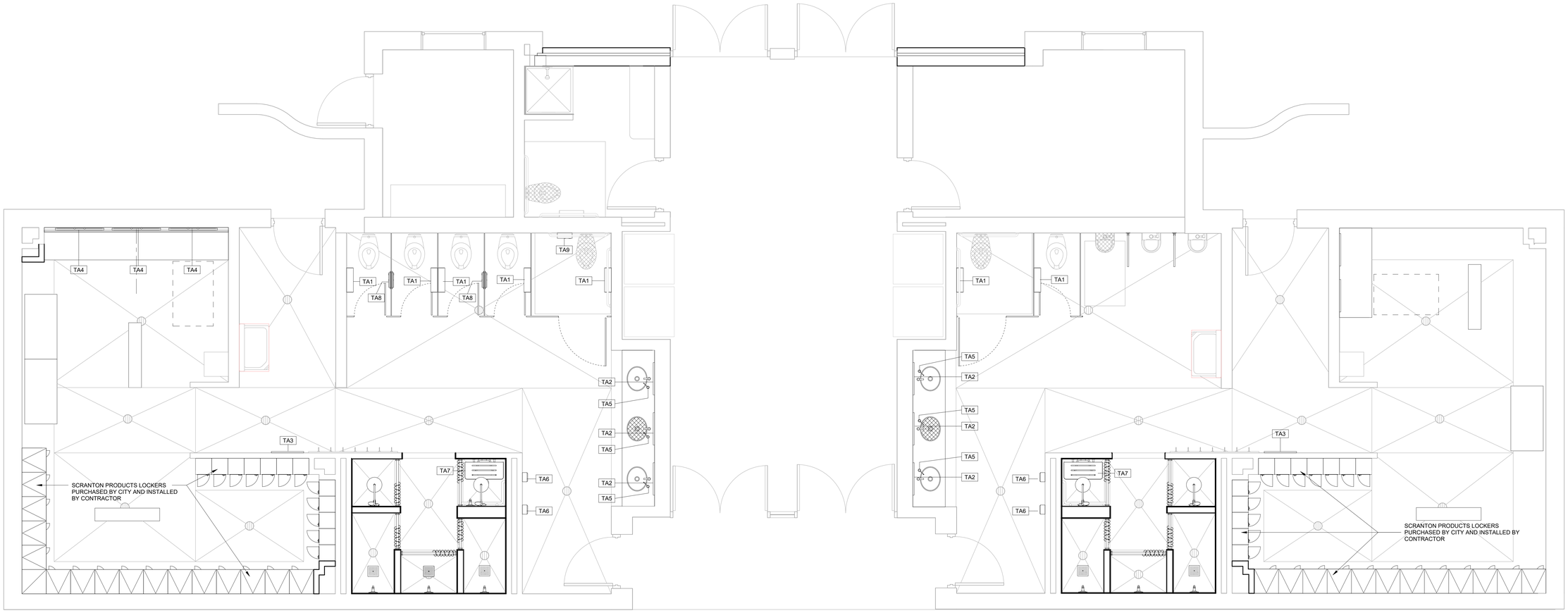
REGISTERED ARCHITECT DARWEN CRAIG BENE 1998 STATE OF TEXAS

07/12/2023

Floor Plans

A2.1

5 OF 14



1 ENLARGED PLAN
3/8" = 1'-0"

Bathroom Accessories

Type Mark	Description	Model #	MFR.	Remarks
TA1	TOILET TISSUE DISPENSER	0697-GAL	American Specialties Inc.	
TA2	24" X 36" MIRROR	0600-2436-41	American Specialties Inc.	Matte black frame
TA3	24" X 72" MIRROR	0600-2472	American Specialties Inc.	Stainless steel frame
TA4	LIGHTED CIRCLE MIRROR	MM10-3636	Modern Mirrors	
TA5	AUTO FOAM SOAP DISPENSER	0339	American Specialties Inc.	
TA6	FORCED AIR HAND DRYER	0192-1-93	American Specialties Inc.	
TA7	ADA SHOWER SEAT	HDP-SEAT - Left or Right	Grab Bar Specialists	28"x21"x16" "L" Shape Right and Left Hand Seats
TA8	SANITARY NAPKIN DISPOSAL - DUAL ACCESS	0472	American Specialties Inc.	
TA9	SANITARY NAPKIN DISPOSAL - SURFACE MOUNTED	0473-A	American Specialties Inc.	

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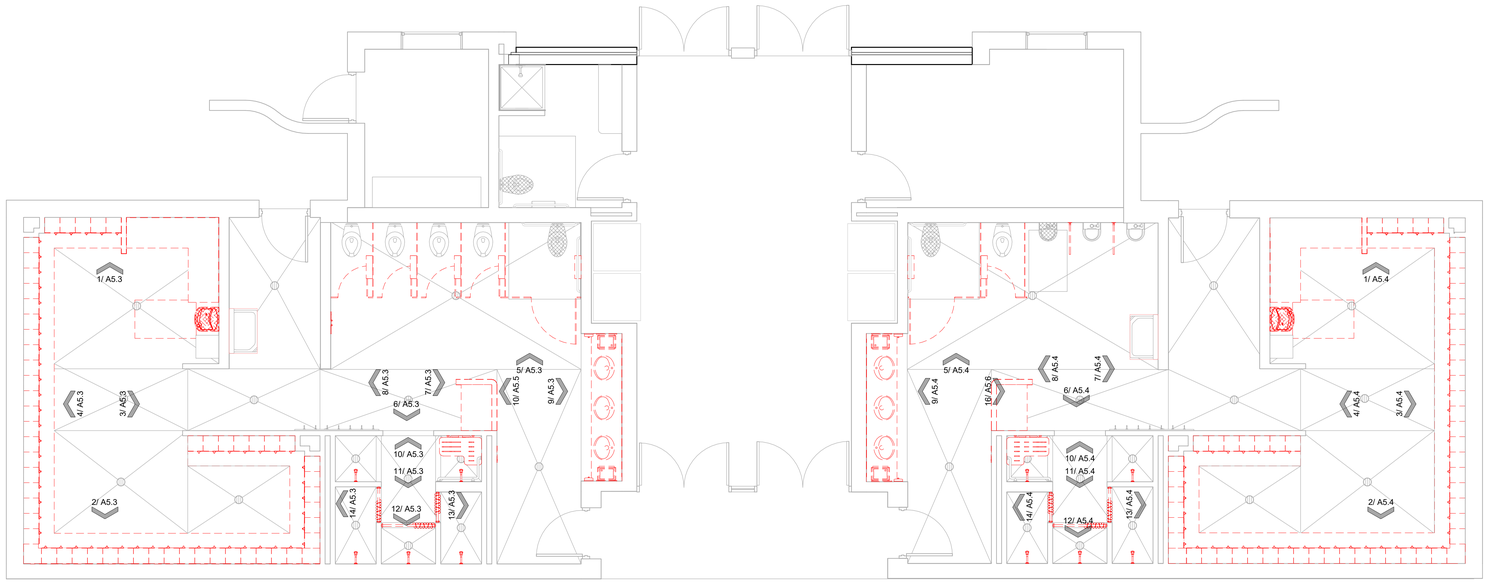
REGISTERED ARCHITECT
DARREN CRAIG REINE
10984
STATE OF TEXAS

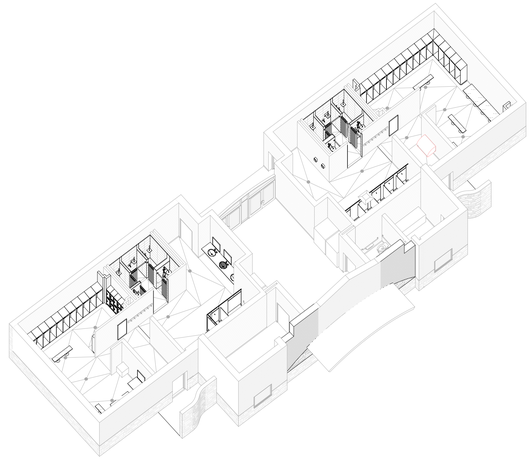
07/12/2023

Enlarged Floor Plan

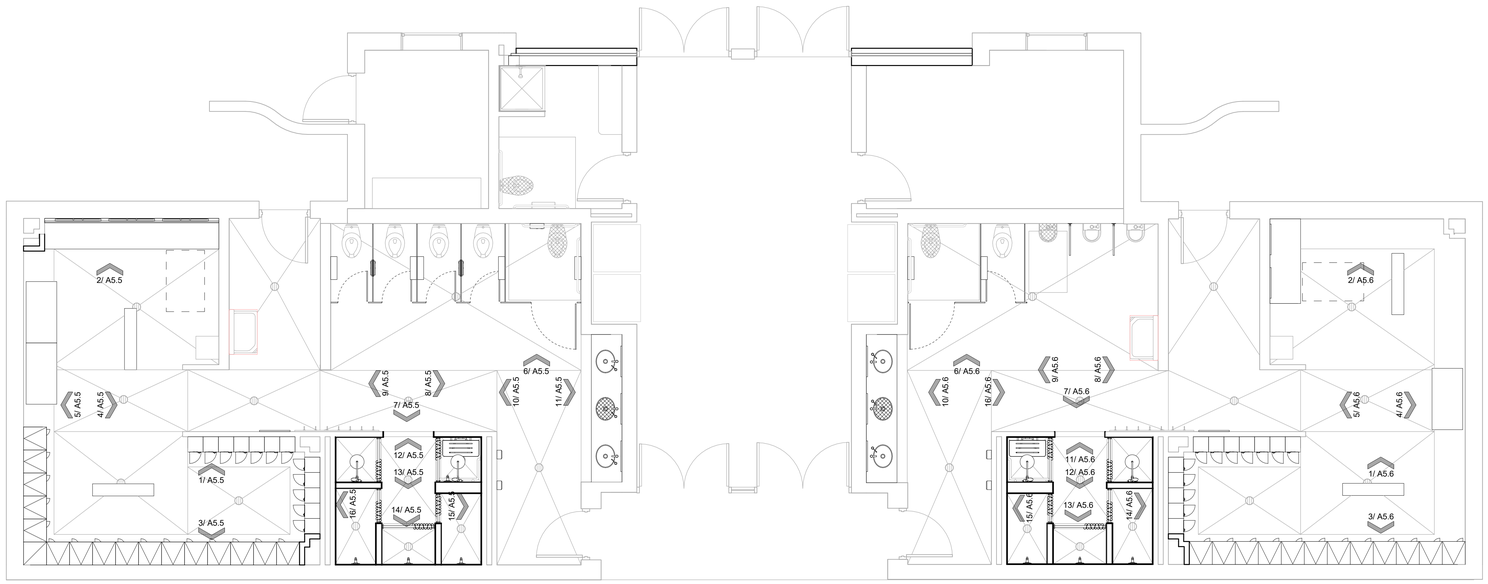
A5.1



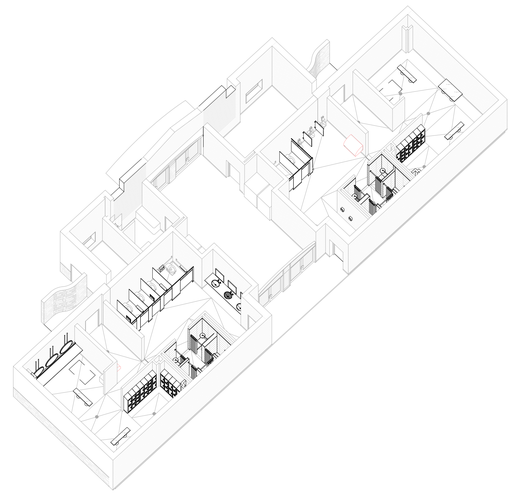
1 EXISTING INTERIOR ELEVATION REFERENCE PLAN
1/4" = 1'-0"



3 AERIAL FROM NORTHEAST



2 INTERIOR ELEVATION REFERENCE PLAN
1/4" = 1'-0"



4 AERIAL FROM NORTHWEST

Project: 2023.03
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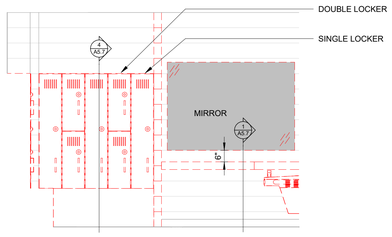
REGISTERED ARCHITECT
DARREN CRAIG HARRIS
7988
STATE OF TEXAS

07/12/2023

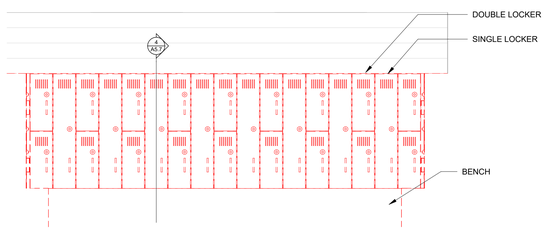
Interior Elevation Reference Plan

A5.2

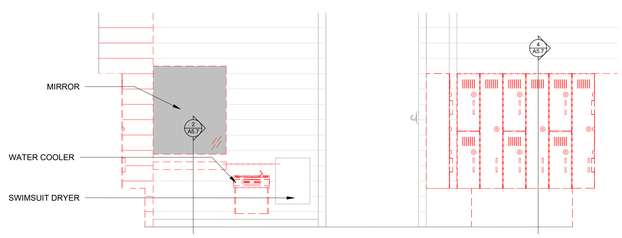
7 OF 14



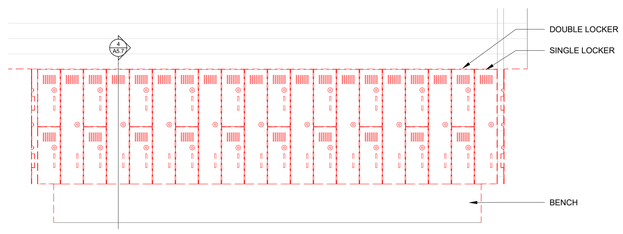
1 DEMO WOMEN LOCKERS- NORTH
3/8" = 1'-0"



2 DEMO WOMEN LOCKERS - SOUTH
3/8" = 1'-0"



3 DEMO WOMEN LOCKERS - EAST
3/8" = 1'-0"



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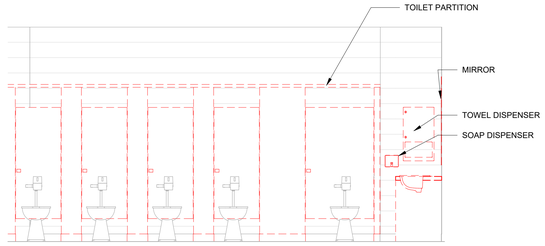
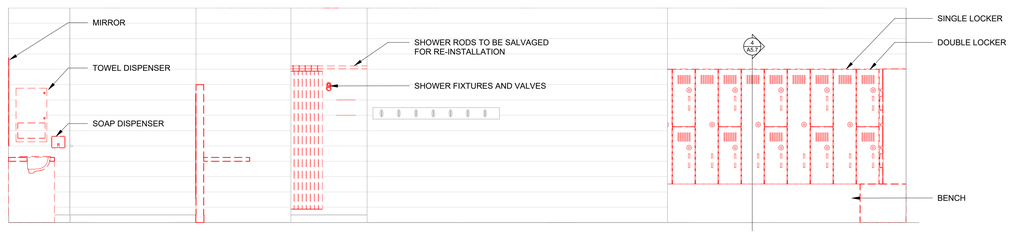
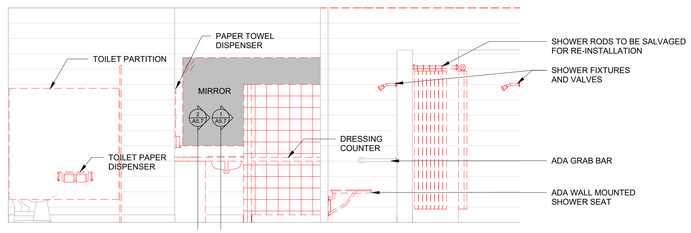


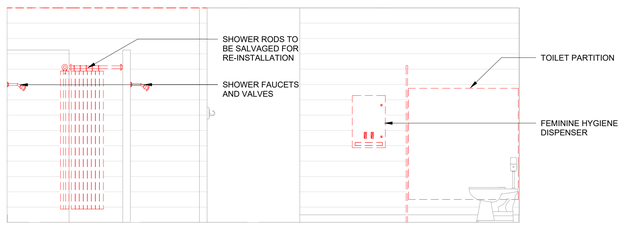
5 DEMO WOMEN RESTROOM - NORTH
3/8" = 1'-0"



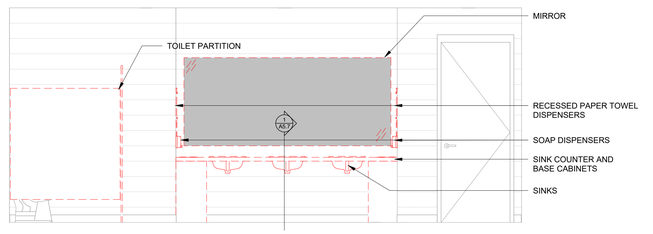
6 DEMO WOMEN RESTROOM SHOWER -SOUTH
3/8" = 1'-0"



7 DEMO WOMEN RESTROOM SHOWER - EAST
3/8" = 1'-0"



8 DEMO WOMEN RESTROOM - WEST
3/8" = 1'-0"



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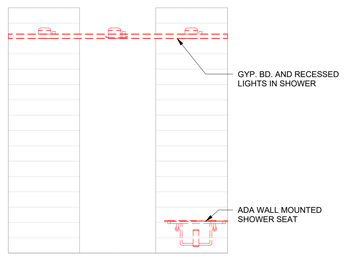
3/8" = 1'-0"



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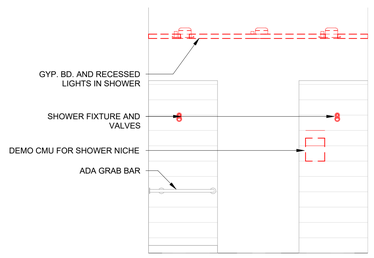

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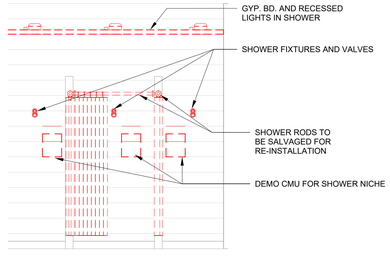

12 DEMO WOMEN SHOWER - SOUTH 2
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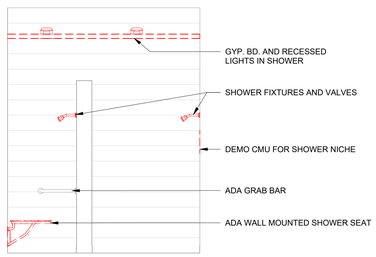

13 DEMO WOMEN SHOWER - EAST
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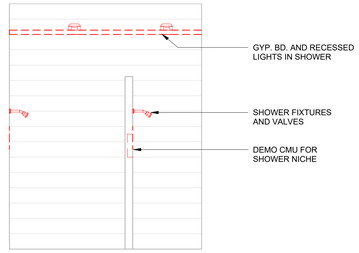

14 DEMO WOMEN SHOWER - WEST
3/8" = 1'-0"

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BRENHAM, TEXAS

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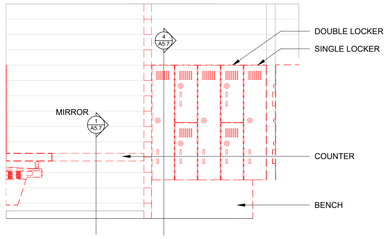
REGISTERED ARCHITECT
DARREN CRAIG HEINE
13984
STATE OF TEXAS
07/12/2023

Demo Interior Elevations

A5.3

8 OF 14



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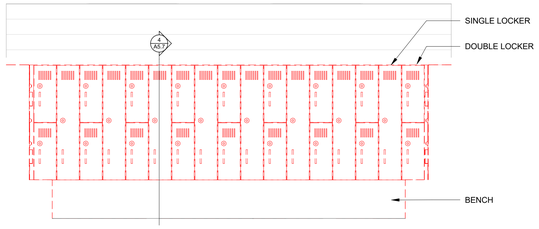
3/8" = 1'-0"



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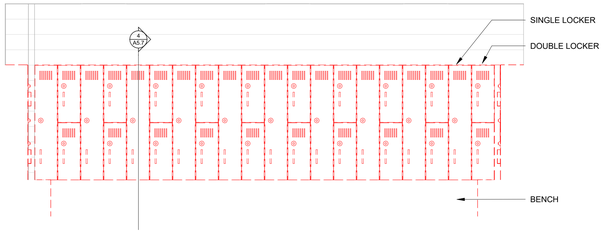

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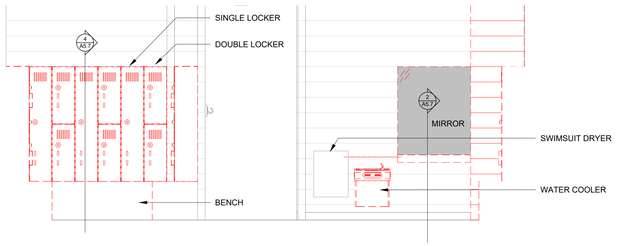
3/8" = 1'-0"



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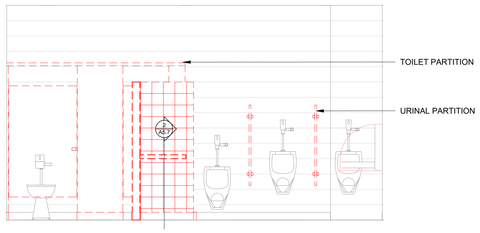
3/8" = 1'-0"



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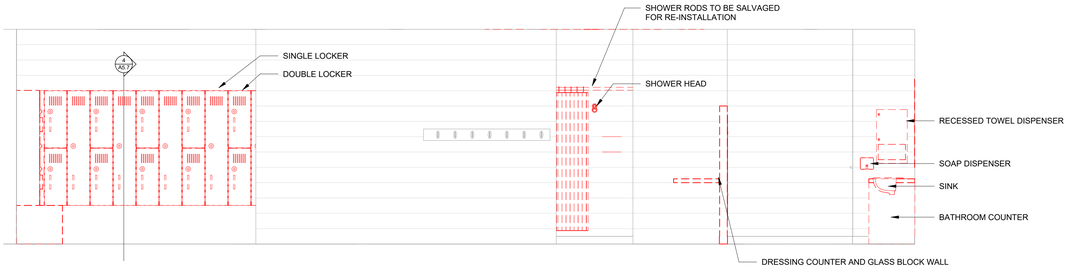
3/8" = 1'-0"



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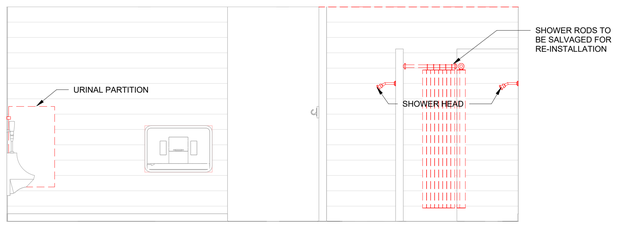
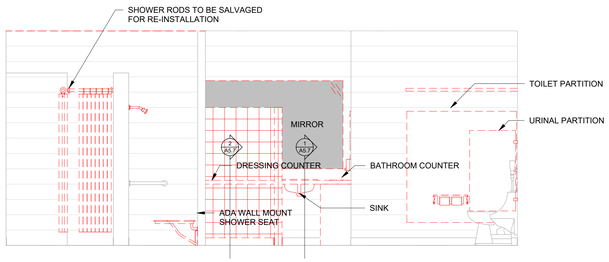
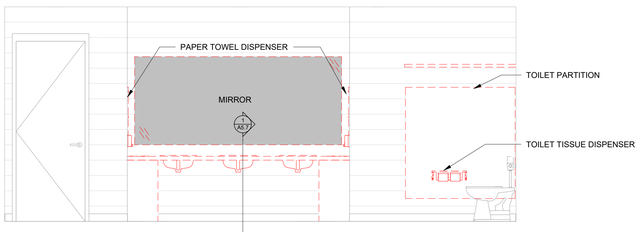
3/8" = 1'-0"



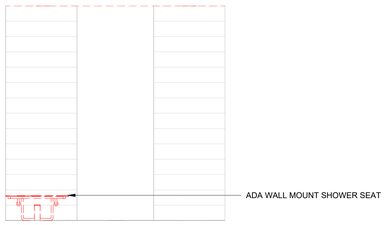
7 DEMO MEN RESTROOM SHOWER - EAST
3/8" = 1'-0"



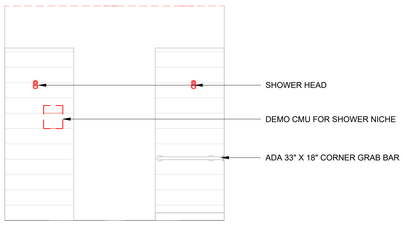
8 DEMO MEN RESTROOM SHOWER - WEST
3/8" = 1'-0"



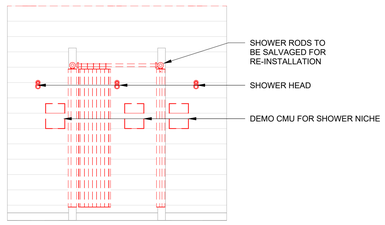
9 DEMO MEN RESTROOM SINK - WEST
3/8" = 1'-0"



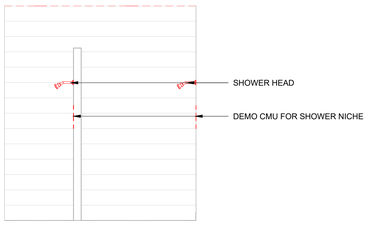
10 DEMO MEN SHOWER - NORTH
3/8" = 1'-0"



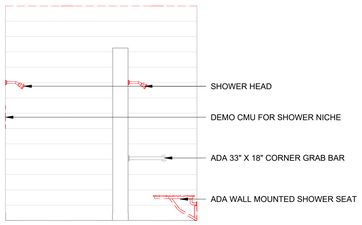
11 DEMO MEN SHOWER - SOUTH 1
3/8" = 1'-0"



12 DEMO MEN SHOWER - SOUTH 2
3/8" = 1'-0"



13 DEMO MEN SHOWER - EAST
3/8" = 1'-0"



14 DEMO MEN SHOWER - WEST
3/8" = 1'-0"

Project:	2023.03
Release Date:	07/12/2023 For Construction
Revisions:	No. Description Date

Consultant:

BLUE BELL AQUATIC CENTER

LOCKER ROOM RENOVATIONS

BRENHAM, TEXAS

Architect:
BBA Architects LP
213 West Main Street Brenham, TX 77833
Tel: (979) 836-0523
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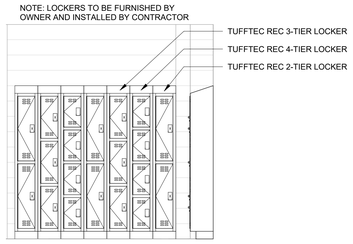
REGISTERED ARCHITECT
DARREN CRAIG HEINE
13984
STATE OF TEXAS

07/12/2023

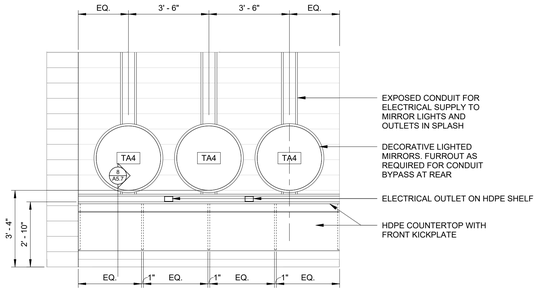
Demo Interior Elevations

A5.4

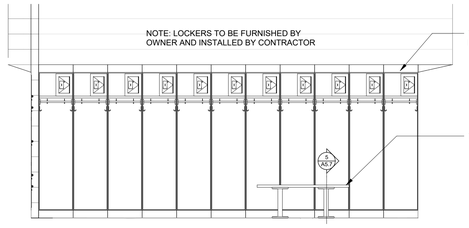
9 OF 14



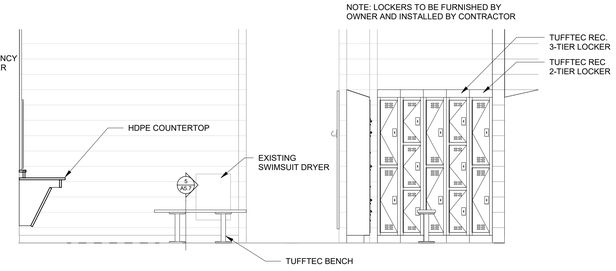
1 WOMEN LOCKER - NORTH 1
3/8" = 1'-0"



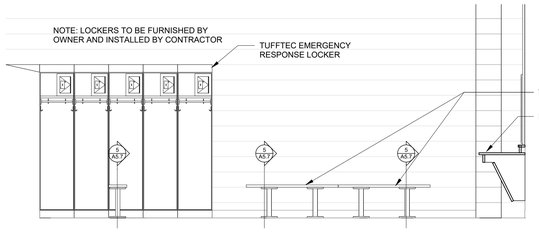
2 WOMEN LOCKERS- NORTH 2
3/8" = 1'-0"



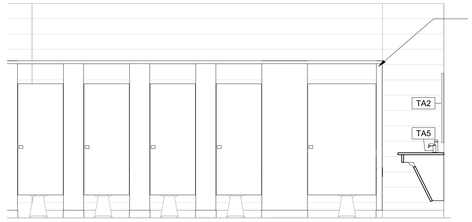
3 WOMEN LOCKERS - SOUTH
3/8" = 1'-0"



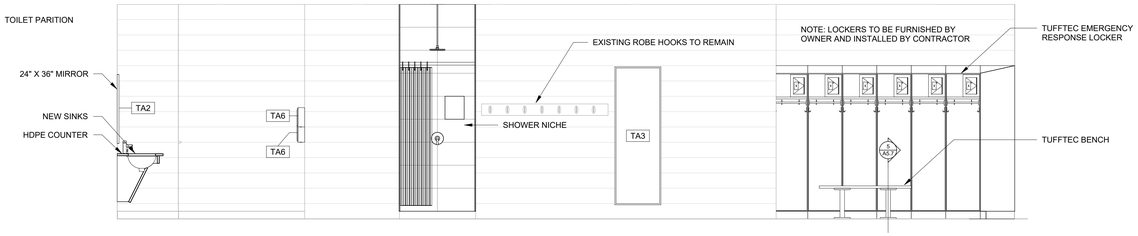
4 WOMEN LOCKERS - EAST
3/8" = 1'-0"



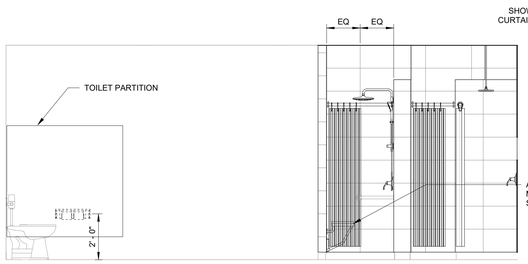
5 WOMEN LOCKERS - WEST
3/8" = 1'-0"



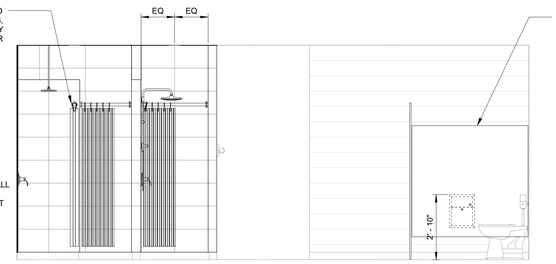
6 WOMEN RESTROOM - NORTH
3/8" = 1'-0"



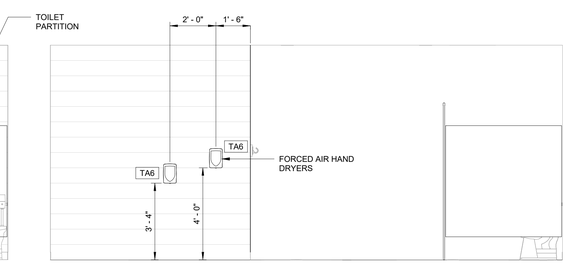
7 WOMEN RESTROOM SHOWER -SOUTH
3/8" = 1'-0"



8 WOMEN RESTROOM SHOWER - EAST
3/8" = 1'-0"

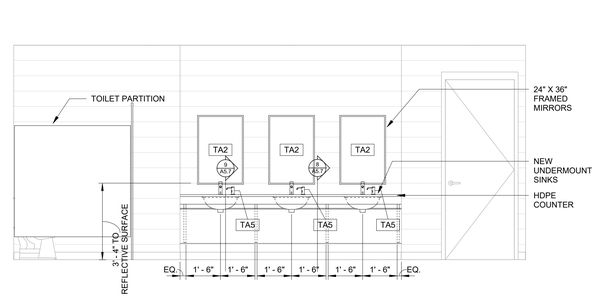


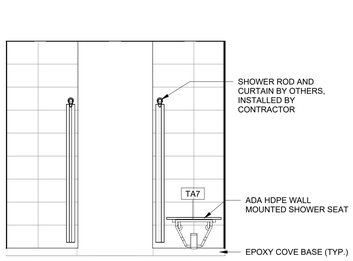
9 WOMEN RESTROOM - WEST
3/8" = 1'-0"



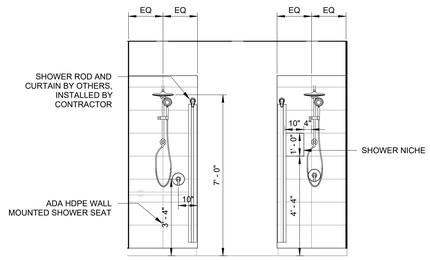
10 WOMEN RESTROOM SINK - WEST
3/8" = 1'-0"

11 WOMEN RESTROOM SINK - EAST
3/8" = 1'-0"

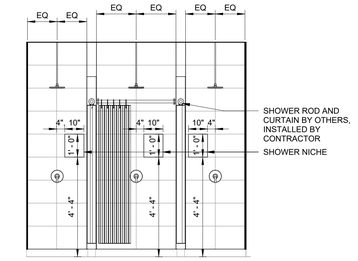




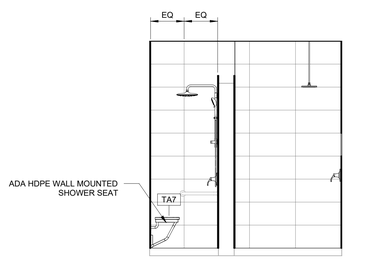
12 WOMEN SHOWER - NORTH
3/8" = 1'-0"



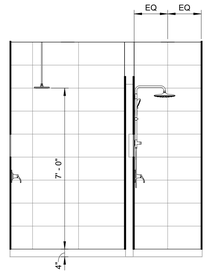
13 WOMEN SHOWER - SOUTH 1
3/8" = 1'-0"



14 WOMEN SHOWER - SOUTH 2
3/8" = 1'-0"



15 WOMEN SHOWER - EAST
3/8" = 1'-0"



16 WOMEN SHOWER - WEST
3/8" = 1'-0"

Project:	No.	Description	Date
Release Date: 07/12/2023	2023.03	For Construction	
Revisions:			

Consultant:

BLUE BELL AQUATIC CENTER

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REGISTERED ARCHITECT
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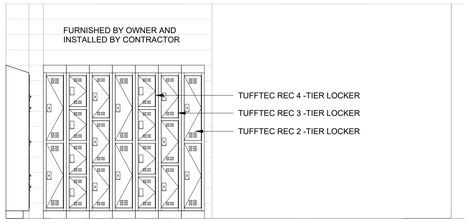
13984
STATE OF TEXAS

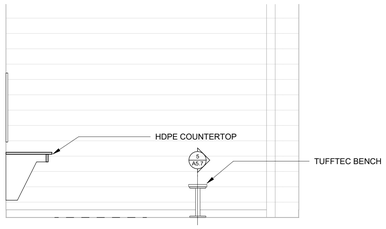
07/12/2023

Interior Elevations

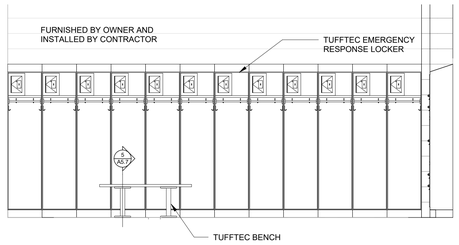
A5.5



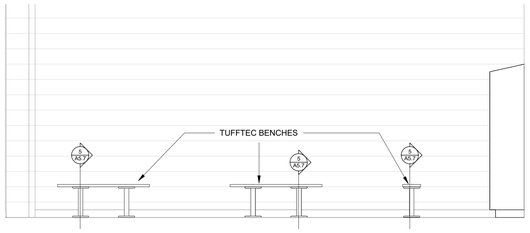
1 MEN LOCKERS - NORTH 1
3/8" = 1'-0"



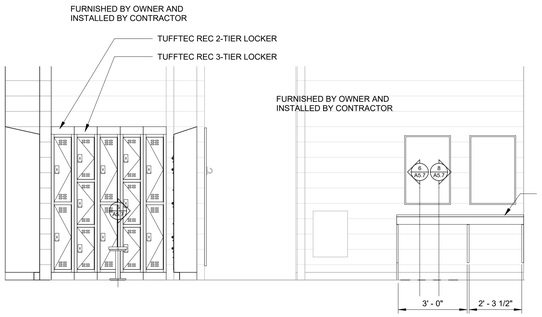
2 MEN LOCKERS - NORTH 2
3/8" = 1'-0"



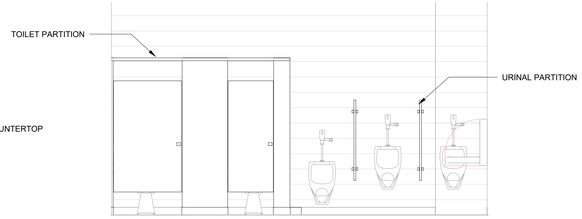
3 MEN LOCKERS - SOUTH
3/8" = 1'-0"



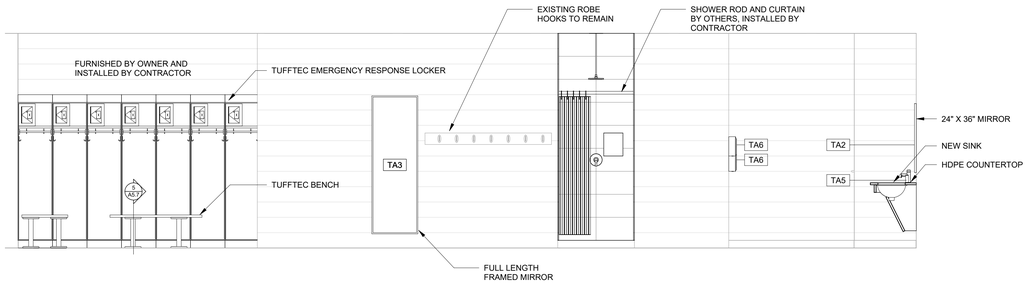
4 MEN LOCKERS - EAST
3/8" = 1'-0"



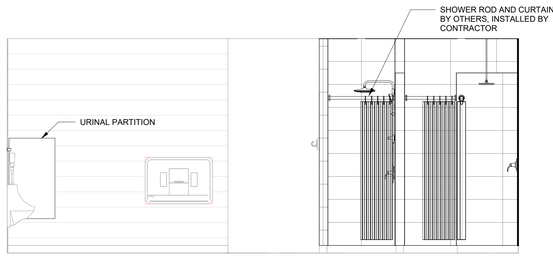
5 MEN LOCKERS - WEST
3/8" = 1'-0"



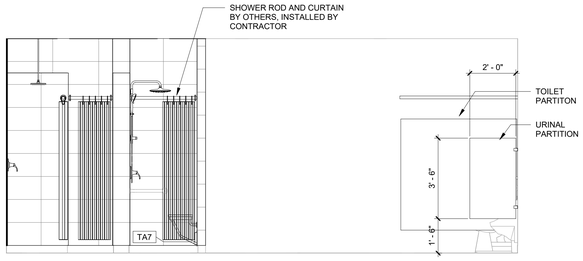
6 MEN RESTROOM - NORTH
3/8" = 1'-0"



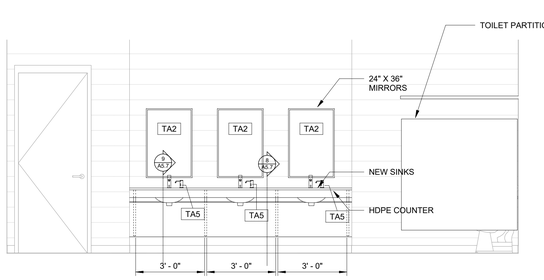
7 MEN RESTROOM SHOWER - SOUTH
3/8" = 1'-0"



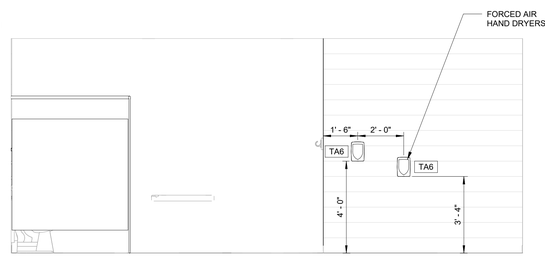
8 MEN RESTROOM SHOWER - EAST
3/8" = 1'-0"



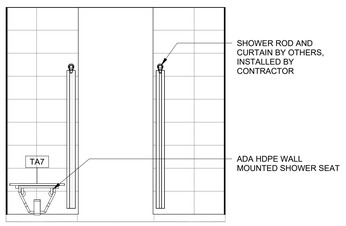
9 MEN RESTROOM SHOWER - WEST
3/8" = 1'-0"



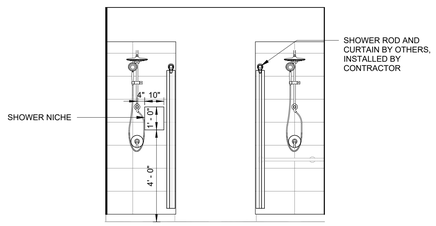
10 MEN RESTROOM SINK - WEST
3/8" = 1'-0"



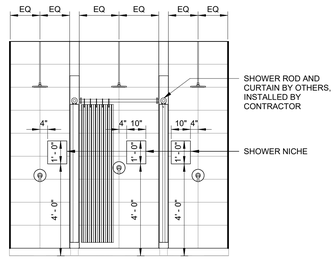
16 MEN RESTROOM SINK - EAST
3/8" = 1'-0"



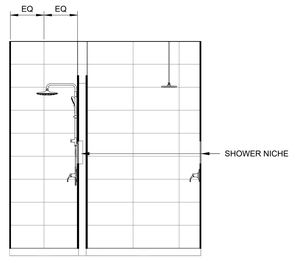
11 MEN SHOWER - NORTH
3/8" = 1'-0"



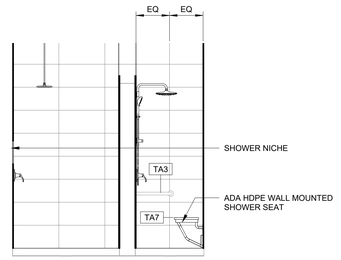
12 MEN SHOWER - SOUTH 1
3/8" = 1'-0"



13 MEN SHOWER - SOUTH 2
3/8" = 1'-0"



14 MEN SHOWER - EAST
3/8" = 1'-0"



15 MEN SHOWER - WEST
3/8" = 1'-0"

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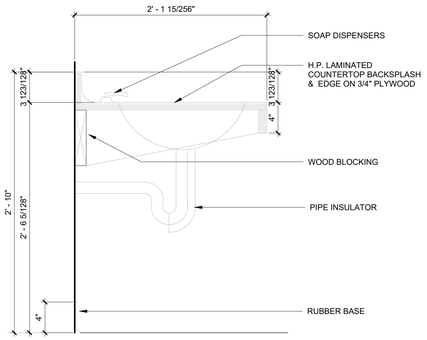
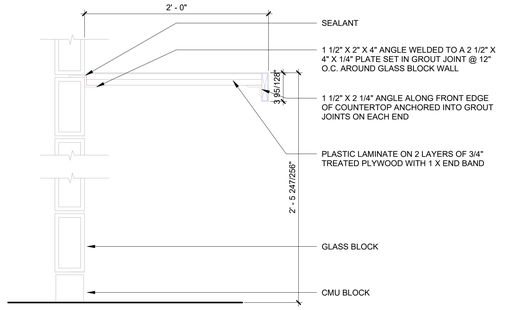
Interior Elevations

A5.6

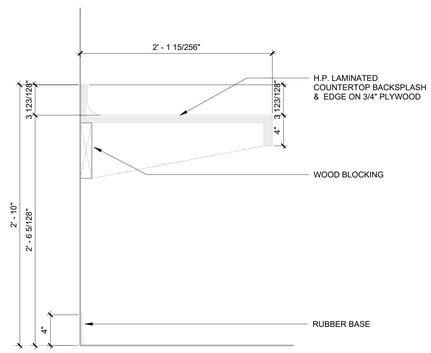
11 of 14



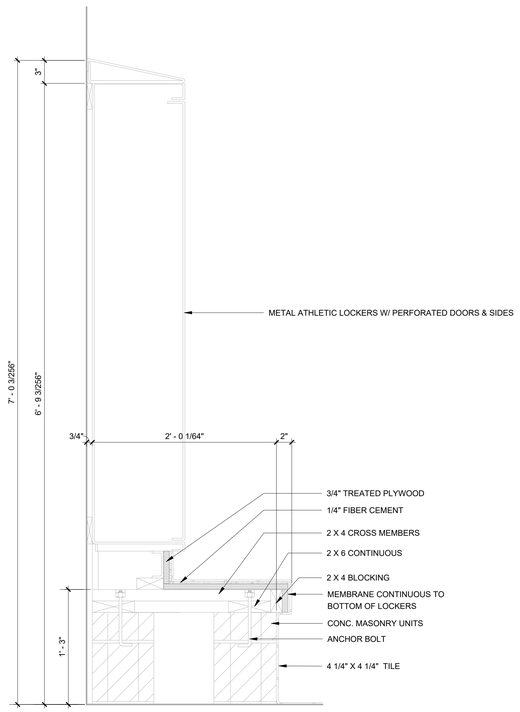
1 EXISTING SINK COUNTER
1 1/2" = 1'-0"



3 EXISTING DRESSING COUNTER
1 1/2" = 1'-0"

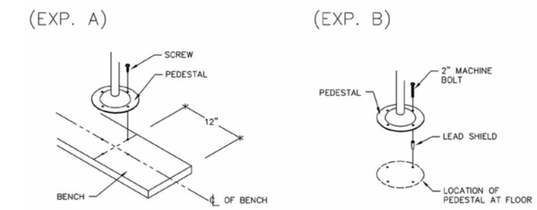


2 EXISTING LOCKER COUNTER
1 1/2" = 1'-0"

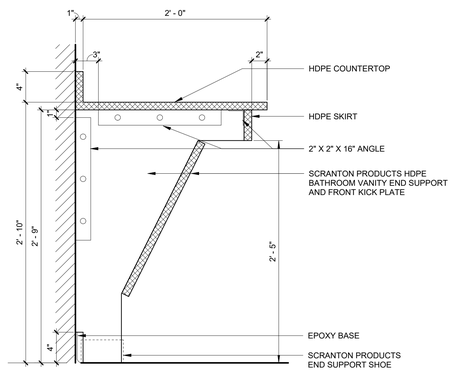


4 EXISTING LOCKER BASE
1 1/2" = 1'-0"

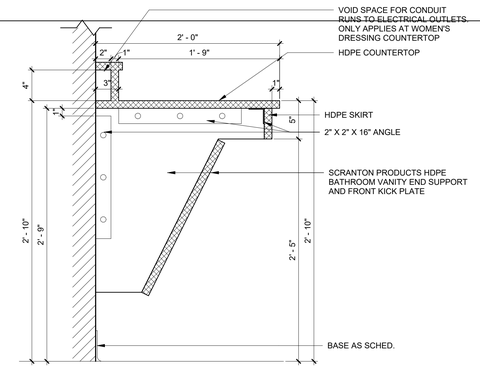
EXISTING CONDITIONS TO BE DEMOLISHED - DETAILS ARE FOR REFERENCE ONLY



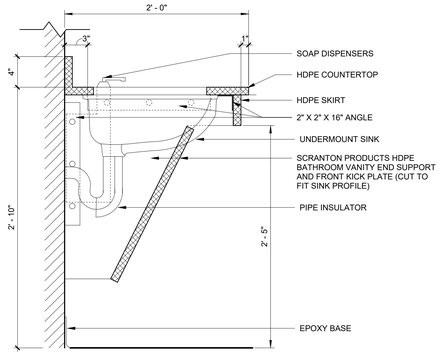
5 TUFFTEC BENCH DETAIL
1 1/2" = 1'-0"



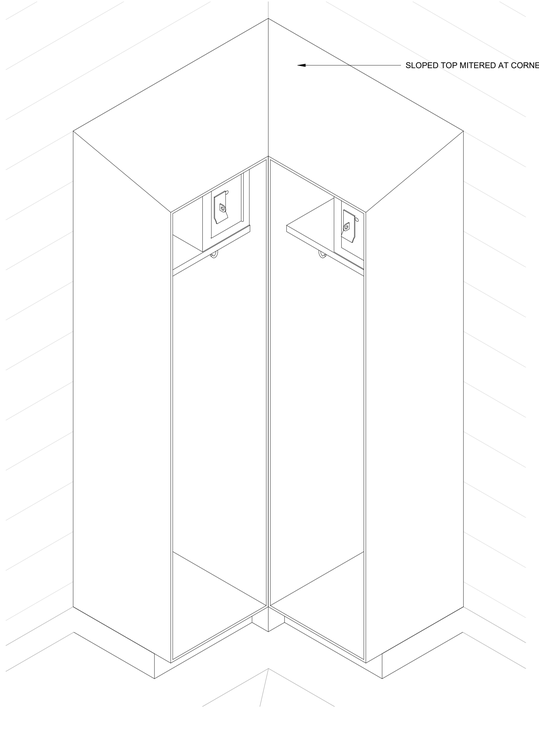
6 NEW COUNTER END SUPPORT
1 1/2" = 1'-0"



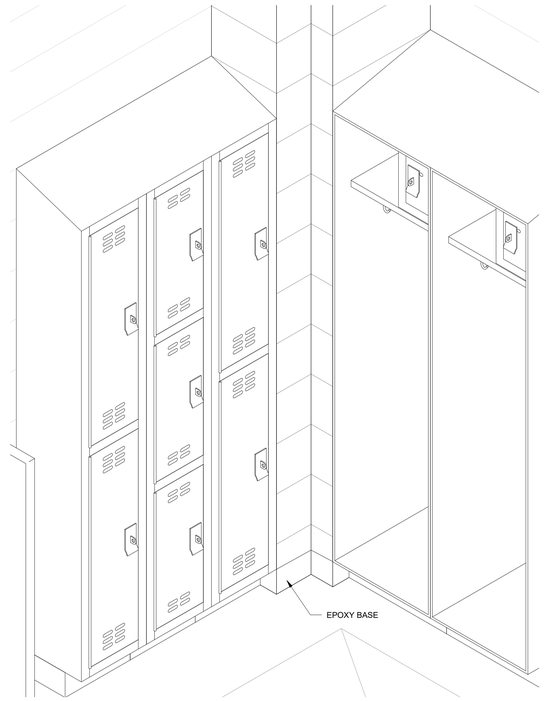
8 NEW COUNTER MID SUPPORT
1 1/2" = 1'-0"



9 NEW COUNTER MID SUPPORT AT SINK
1 1/2" = 1'-0"



7 TUFFTEC EMERGENCY RESPONSE LOCKER DETAIL



10 TUFFTEC RECREATIONAL LOCKER DETAIL

NEW CONSTRUCTION

Project:	2023.03
Release Date:	07/12/2023 For Construction
Revisions:	No. Description Date

Consultant:

BLUE BELL AQUATIC CENTER
LOCKER ROOM RENOVATIONS
BRENHAM, TEXAS

Architect:
BBA Architects LP
213 West Main Street Brenham, TX 77833
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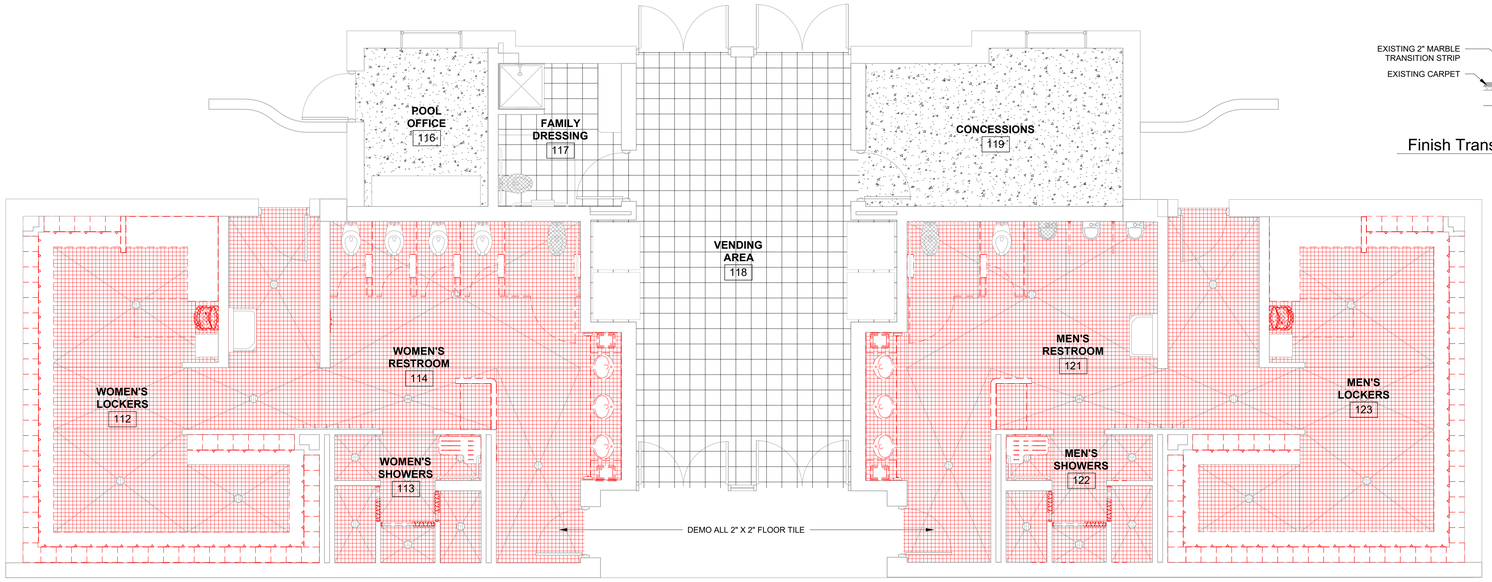
REGISTERED ARCHITECT DARREN CRAIG HENKE 19984 STATE OF TEXAS

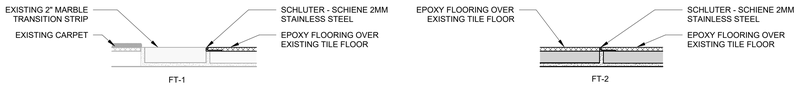
07/12/2023

Millwork/Locker Details

A5.7



1 EXISTING FINISH FLOOR PLAN
1/4" = 1'-0"



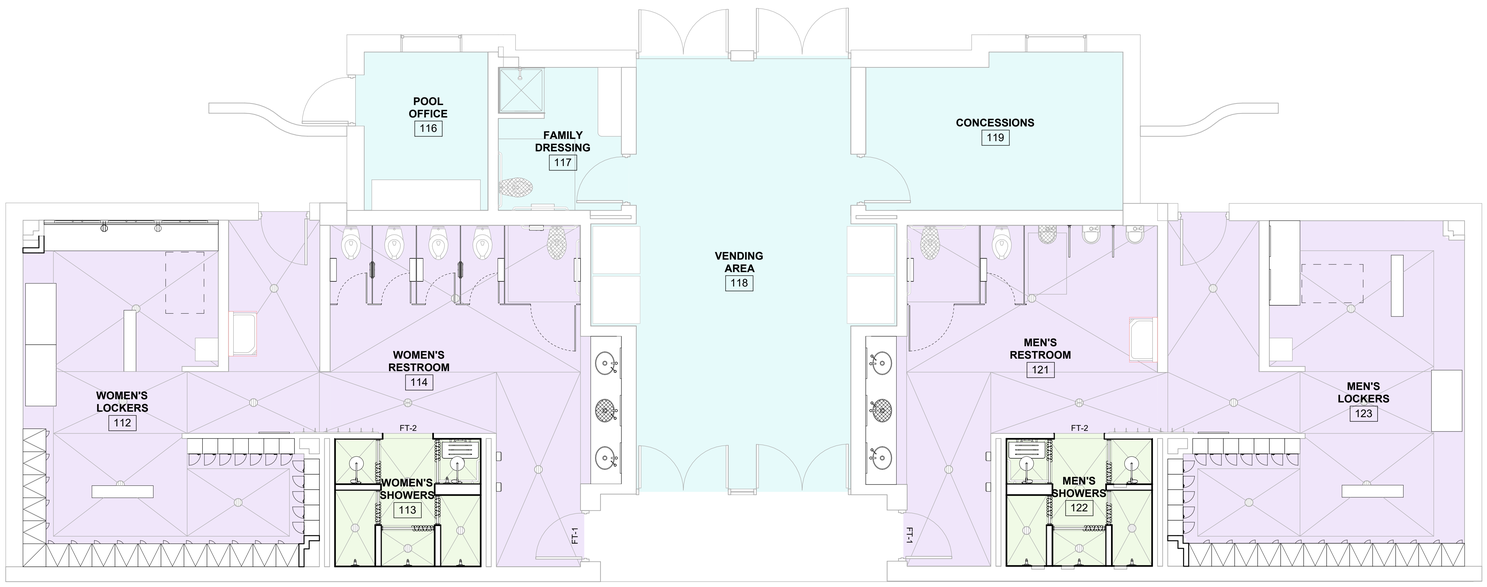
Finish Transitions

Floor Finish Plan

- CONC.
- TILE 1'
- TILE 2"

Finish Schedule

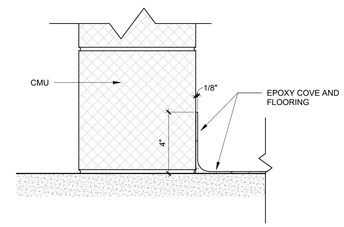
Name	Number	Floor Finish - Existing	Base Finish - Existing	Wall Finish - Existing	Ceiling Finish - Existing	Floor Finish - Final	Base Finish - Final	Wall Finish - Final	Ceiling Finish - Final
WOMEN'S LOCKERS	112	TILE 2"	RUBBER	PTD. CMU	SAC.	EPOXY-2	EPOXY-2	EXISTING CMU PAINT	EXISTING SAC. TO REMAIN
WOMEN'S SHOWERS	113	TILE 2"	CT	TILE	GYP. BD.	EPOXY - 1	EPOXY-1	NEW TILE	NEW CEMENT BD. PAINT
WOMEN'S RESTROOM	114	TILE 2"	RUBBER	PTD. CMU	SAC.	EPOXY-2	EPOXY-2	EXISTING CMU PAINT	EXISTING SAC. TO REMAIN
POOL OFFICE	116	CONC.	RUBBER	PTD. CMU	SAC.	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN
FAMILY DRESSING	117	TILE 1'	RUBBER	PTD. CMU	SAC.	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN
VENDING AREA	118	TILE 1'	RUBBER	SF/B-CMU	GGB/EXPOSED	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN
CONCESSIONS	119	CONC.	RUBBER	PTD. CMU	SAC.	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN
MEN'S RESTROOM	121	TILE 2"	RUBBER	PTD. CMU	SAC.	EPOXY-2	EPOXY-2	EXISTING CMU PAINT	EXISTING SAC. TO REMAIN
MEN'S SHOWERS	122	TILE 2"	CT	TILE	GYP. BD.	EPOXY - 1	EPOXY-1	NEW TILE	NEW CEMENT BD. PAINT
MEN'S LOCKERS	123	TILE 2"	RUBBER	PTD. CMU	SAC.	EPOXY-2	EPOXY-2	EXISTING CMU PAINT	EXISTING SAC. TO REMAIN



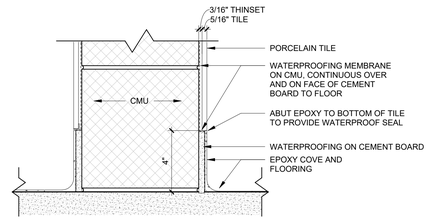
2 FINAL FINISH FLOOR PLAN
1/4" = 1'-0"

Floor Finish Plan

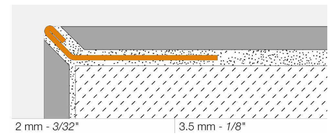
- EPOXY - 1
- EPOXY-2
- EXISTING TO REMAIN



3 EPOXY COVE BASE DETAIL - TYP. EXCEPT SHOWERS
3" = 1'-0"



4 EPOXY COVE BASE DETAIL - AT SHOWERS
3" = 1'-0"



5 SCHLUTER CORNER TRIM - FINE C

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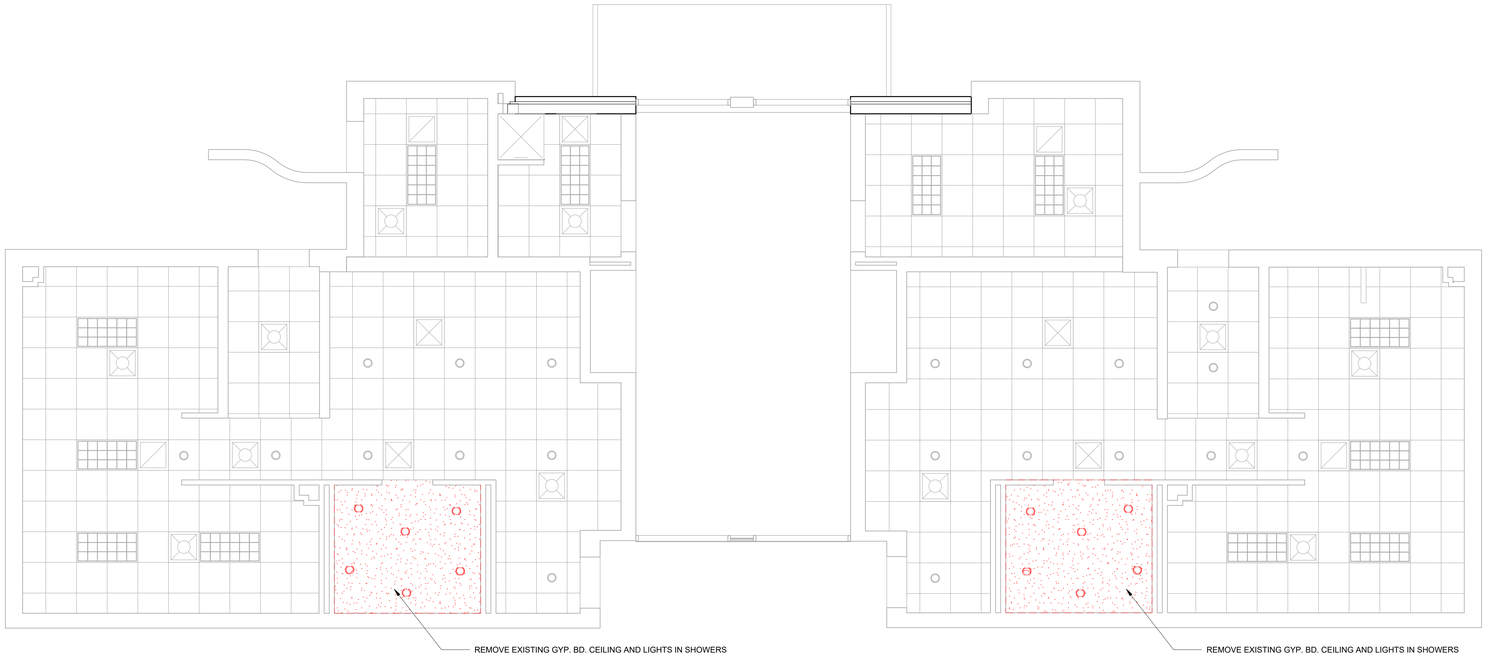
REGISTERED ARCHITECT DOWNEN CRAIG HEINE 19984 STATE OF TEXAS

07/12/2023

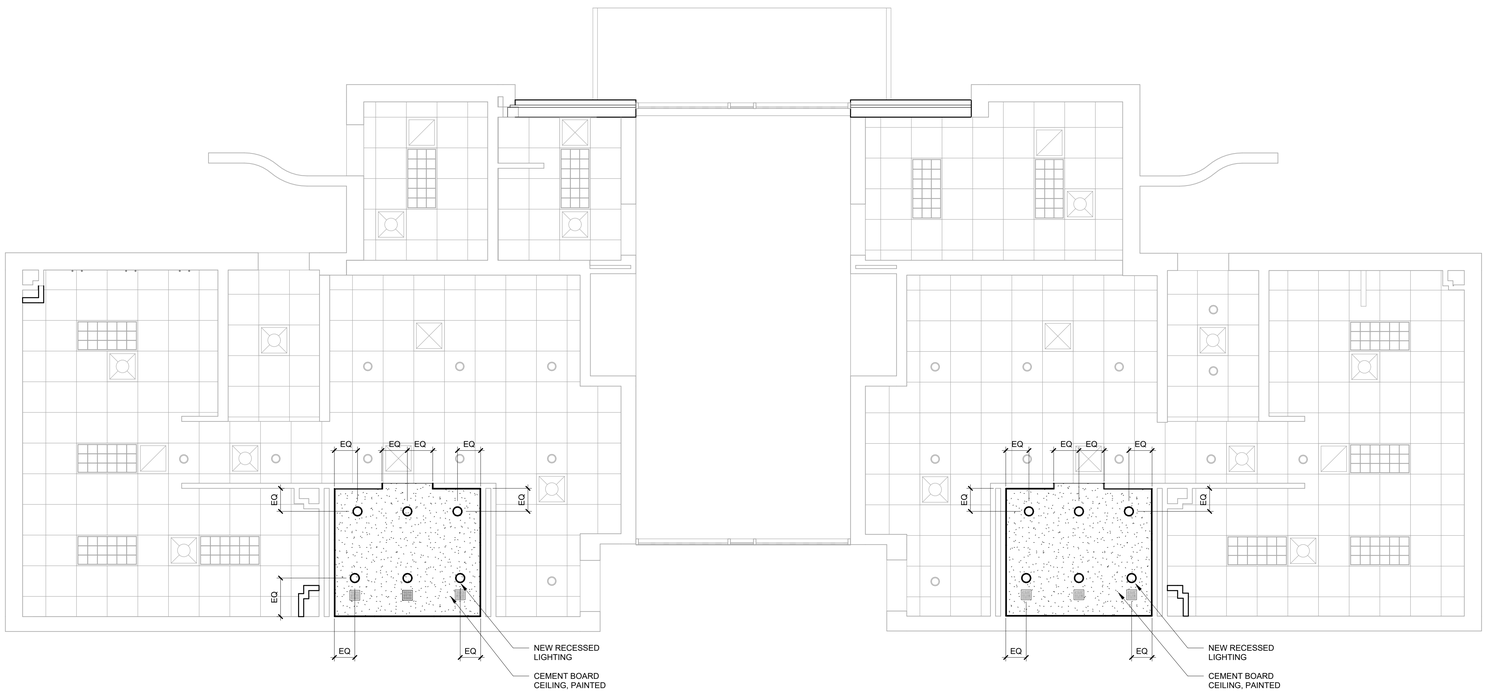
Finish Floor Plans

A7.1

13 OF 14



1 DEMO REFLECTED CEILING PLAN
1/4" = 1'-0"



2 FINAL REFLECTED CEILING PLAN
1/4" = 1'-0"

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REGISTERED ARCHITECT
DAWSON CRAIG HEINE
13984
STATE OF TEXAS

07/12/2023

Reflected Ceiling Plans

A8.1

14 OF 14

SECTION 22.0 AND 23.0

GENERAL PLUMBING AND MECHANICAL REQUIREMENTS

GENERAL
THE WORK COVERED BY THIS SECTION INCLUDES THE FURNISHING OF EACH ITEM LISTED HEREIN AND OR SHOWN ON THE DRAWINGS; OF QUALITY OR SUBJECT TO QUALIFICATION NOTED HEREIN. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED ACCORDING TO CONDITION STATED, AND SHALL PROVIDE THEREFORE ALL NECESSARY LABOR, MATERIALS EQUIPMENT AND INCIDENTALS.

CODES AND PERMITS
CONFORM TO ALL APPLICABLE CODES: 2018 INTERNATIONAL CODES; 2017 NEC (NFPA 70); 2012 TAS (TEXAS ACCESSIBILITY STANDARDS); 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AND ALL AMENDMENTS TO THE ADOPTED CODES BY THE LOCAL AHJ (AUTHORITY HAVING JURISDICTION. WHERE THE DRAWINGS AND SPECIFICATIONS EXCEED THE REQUIREMENTS OF THE CODE, COMPLY WITH THE DRAWINGS AND SPECIFICATIONS.

OBTAIN AND PAY ALL COSTS FOR REQUIRED PERMITS AND INSPECTION FOR ALL WORK INCLUDED HEREIN.

ALL EQUIPMENT PROVIDED SHALL BE U.L. LISTED FOR THE USE INTENDED AND THE METHOD OF INSTALLATION.

INTENT
THE SPECIFICATIONS AND SCHEDULES ON THE DRAWINGS ARE INTENDED TO DESCRIBE MATERIALS AND EQUIPMENT WHICH ARE TO BE "FURNISHED" BY THE CONTRACTOR. THE DRAWINGS ARE INTENDED TO SHOW WHERE SUCH MATERIALS AND EQUIPMENT ARE TO BE "INSTALLED"; THEREFORE, IT SHALL BE UNDERSTOOD THAT SUCH PRODUCTS ARE TO BE "FURNISHED AND INSTALLED" UNLESS IT IS SPECIFICALLY STATED OTHERWISE.

IN ALL CASES THE SPECIFICATIONS AND DRAWINGS ARE INTENDED TO COMPLIMENT EACH OTHER TO DEFINE COMPLETE WORKABLE SYSTEMS. THE SCALE OF THE DRAWINGS DOES NOT PERMIT THE SHOWING OF THE EXACT LOCATION OF ALL MATERIALS AND EQUIPMENT OR ALL OFFSETS OR FITTINGS WHICH MAY BE REQUIRED. QUESTIONS CONCERNING INTENT, AS IT MAY AFFECT THE CONTRACT PRICE, ARE TO BE RESOLVED IN WRITING PRIOR TO BIDDING. NO CLAIM FOR ADDITIONAL COMPENSATION WILL BE CONSIDERED BECAUSE OF THE CONTRACTOR'S FAILURE TO ANTICIPATE ALL WORK NECESSARY TO PROVIDE COMPLETE WORKABLE SYSTEMS.

WORK INDICATED IN THE SPECIFICATIONS BUT NOT SHOWN ON THE DRAWINGS, AND VICE VERSA, IS AS BINDING AS THOUGH INDICATED BY BOTH. WHERE THE SPECIFICATIONS AND DRAWINGS CONFLICT THE ENGINEER WILL DETERMINE WHICH IS TO BE PROVIDED.

MATERIAL AND EQUIPMENT - GENERAL
UNLESS SPECIFICALLY NOTED ALL MATERIALS AND EQUIPMENT INSTALLED IN THIS PROJECT SHALL BE NEW AND IN GOOD CONDITION.

WORKMANSHIP
ALL WORKMANSHIP SHALL BE DONE IN A PROFESSIONAL MANNER AND IN ACCORDANCE WITH THE BEST MODERN PRACTICE. WHENEVER THE CONTRACT DRAWINGS OR SPECIFICATIONS OMIT OR CAUSE A REASONABLE DOUBT ABOUT WHAT IS PERMISSIBLE, AND WHEN THEY FAIL TO STATE THE QUALITY OF WORK, THE INTERPRETATION TO BE FOLLOWED IS THAT WHICH REQUIRES THE BEST QUALITY WORK.

COORDINATION
ALL WORK UNDER THESE DIVISIONS HAS BEEN DESIGNED IN AN ATTEMPT TO AVOID CONFLICTS FOR SPACE DURING INSTALLATION. THE SCALE OF THE DRAWING DOES NOT PERMIT THE SHOWING OF THE EXACT LOCATION OF ALL MATERIALS AND EQUIPMENT OR ALL OFFSETS OR FITTINGS WHICH MAY BE REQUIRED. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR CONCERNED TO COORDINATE WITH ALL CRAFTS TO UTILIZE THE SPACE AVAILABLE IN THE MOST EFFICIENT MANNER.

AS-BUILT DRAWINGS
MAINTAIN AT THE JOB SITE A SET OF PRINTS USED FOR NO OTHER PURPOSE BUT TO RECORD, WITH COLORED PENCIL, "AS BUILT" CHANGES AND DIAGRAMS NOTING THOSE PORTIONS OF THE WORK IN WHICH THE ACTUAL INSTALLATION VARIES SIGNIFICANTLY FROM THE CONTRACT DRAWINGS. THESE "AS BUILT" DRAWINGS SHALL INCLUDE EXACT DIMENSIONED LOCATIONS OF ALL UNDERGROUND UTILITIES, REFERENCED TO PERMANENT ABOVEGROUND FEATURES OR STRUCTURES.

AT THE CONCLUSION OF THE PROJECT, THE JOB RECORDED "AS BUILT" DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AS A CONDITION OF FINAL ACCEPTANCE.

SHOP DRAWINGS AND SUBMITTALS
SUBMITTALS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT. SUBMITTALS SHALL INCLUDE ALL ITEMS WITH A TABLE OF CONTENTS AS A SINGLE SUBMITTAL, (MECHANICAL, ELECTRICAL OR PLUMBING) PIECE MEAL AND OR PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. EACH COMPLETE PDF FILE SHALL CONTAIN A TABLE OF CONTENTS SHOWING THE ORDER IN WHICH ITEMS ARE ARRANGED. COMPLETE DESCRIPTIVE LITERATURE, AND SHOP DRAWINGS WHERE APPROPRIATE, SHALL BE SUBMITTED FOR APPROVAL.

AFTER REVIEW BY THE ENGINEER THE SUBMITTAL WILL BE RETURNED WITH A COVER LETTER STATING REVIEW COMMENTS AND APPROVAL. SUBMITTALS NOT COMPLYING WITH THE ABOVE REQUIREMENTS ARE SUBJECT TO BEING RETURNED WITHOUT ACTION.

EQUAL PRODUCTS
THE NAMING OF A MANUFACTURER AND MODEL NUMBER, OR OTHER IDENTIFYING DESIGNATION, OF A PRODUCT HEREIN IS INTENDED TO ESTABLISH CONSTRUCTION, PHYSICAL SIZE, ELECTRICAL CHARACTERISTICS, CAPACITIES, AND/OR OTHER FEATURES AFFECTING THE UTILIZATION OF THE PRODUCT IN THIS PARTICULAR PROJECT, UNLESS OTHERWISE NOTED. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE CONSIDERED AND WILL BE ACCEPTED IF THEY ARE EQUAL IN ALL RESPECTS TO THE SPECIFIED PRODUCTS, AND THE CONTRACTOR HAS SUBMITTED A LETTER STATING THAT HE HAS INVESTIGATED THE SUBSTITUTION AND STATES IN WRITING THAT THE PROPOSED SUBSTITUTION IS EQUAL OR BETTER IN EVERY RESPECT TO THAT SHOWN ON THE PRINTS AND SPECIFICATIONS. THE DECISION AS TO THE EQUALITY SHALL REST WITH THE ENGINEER, AND SUCH DECISION SHALL BE FINAL. SHOULD THE PRODUCT OF AN ALTERNATE MANUFACTURER BE "APPROVED", THE CONTRACTOR PROPOSING SUCH PRODUCT SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS TO OTHER CONTRACTORS FOR CHANGES ON THEIR WORK NECESSITATED BY THE SUBSTITUTE. SUBSTITUTION PROPOSALS SHALL CONFORM TO THE REQUIREMENTS OF THE GENERAL AND SUPPLEMENTAL GENERAL CONDITIONS AND SPECIAL PROVISIONS.

EXCAVATION AND BACKFILL
ALL EXCAVATION FOR UNDERGROUND UTILITIES SHALL BE MADE TRUE TO GRADE SO THAT PIPING RESTS ON UNDISTURBED EARTH. F THE ABOVE IS NOT FEASIBLE, OR AT THE CONTRACTOR'S OPTION, EXCAVATION SHALL BE MADE A MINIMUM OF SIX INCHES BELOW THE REQUIRED GRADE TO PROVIDE A SAND BED FOR THE PIPING. BACKFILL OVER PIPING SHALL BE MADE WITH EARTH OR FILL SAND FREE OF DEBRIS AND SHALL BE TAMPED BY HAND OR MECHANICAL MEANS TO THE DENSITY OF THE ADJACENT UNDISTURBED EARTH. BACK FILL UNDER SLABS ON GRADE SHALL BE MADE IN ACCORDANCE WITH THE ARCHITECT'S SPECIFICATIONS OF SUCH AREAS. WHEN EXCAVATION IS TO BE MADE WHERE THE SURFACE MATERIAL IS CONCRETE, THE CONTRACTOR REQUIRING THE EXCAVATION SHALL LAYOUT THE LIMITS. CONTRACTOR REQUIRING THE EXCAVATION SHALL PERFORM ALL OTHER EXCAVATION AND BACKFILL IN ACCORDANCE WITH THE ABOVE.

ALL TRENCHING AND EXCAVATION SHALL BE DONE IN STRICT ACCORDANCE WITH CURRENT OSHA REQUIREMENTS AND ALL OTHER APPLICABLE SAFETY CODES AND STANDARDS.

GUARANTEE
BEFORE FINAL PAYMENT IS MADE; EACH CONTRACTOR OR SUB- CONTRACTOR PERFORMING WORK COVERED BY THESE DIVISIONS SHALL GUARANTEE, IN WRITING, THAT THE WORK PERFORMED IS FREE OF DEFECTIVE MATERIALS, EQUIPMENT AND FAULTY WORKMANSHIP AND SHALL REMAIN SO FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OF ACCEPTANCE BY THE OWNER. THE GUARANTEE SHALL COVER THE REPLACEMENT OF ANY DEFECTIVE MATERIALS OR EQUIPMENT AND CORRECTION OF ANY FAULTY WORKMANSHIP WITHOUT ADDITIONAL COST TO THE OWNER.

****

END OF SECTION

SECTION 22.1

PLUMBING

GENERAL
THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITION, AND APPLICABLE PORTIONS OF SECTION 22.0 OF THE SPECIFICATIONS ARE A PART OF THE SECTION.

THE WORK COVERED BY THIS SECTION INCLUDES THE FURNISHING OF EACH ITEM LISTED HEREIN AND/OR SHOWN ON THE DRAWINGS; OF QUALITY OR SUBJECT TO QUALIFICATION NOTED HEREIN. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED ACCORDING TO CONDITIONS STATED, AND SHALL PROVIDE THEREFORE ALL NECESSARY LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS.

ALL WORK PERFORMED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL COMPLY WITH THE CURRENT APPROVED BUILDING CODE, UNLESS THE SPECIFICATIONS OR DRAWINGS INDICATE MORE RIGID REQUIREMENTS, IN WHICH CASE THE SPECIFICATIONS OR DRAWINGS SHALL GOVERN.

SCOPE OF WORK
WORK COVERED UNDER THIS SECTION OF THE SPECIFICATIONS INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, THE FOLLOWING:
FURNISH AND INSTALL INTERIOR WATER, SANITARY SEWER AND VENT PIPING AS NEEDED FROM FIXTURES IN THIS CONTRACT.

FURNISH AND INSTALL HOT AND COLD WATER COPPER PIPING AS NEEDED.

FURNISH AND INSTALL LAVATORIES, WATER CLOSETS, AND ALL FITTINGS REQUIRED FOR EACH, TO MAKE THE FIXTURE COMPLETELY OPERATIONAL.

FURNISH AND INSTALL INSULATION ON ALL WATER LINES WHERE REQUIRED

PIPE AND FITTINGS
THE PIPE AND FITTINGS INDICATED BELOW SHALL BE USED FOR THE INDICATED SYSTEMS. THE ACCEPTED STANDARD JOINING PROCEDURES SHALL BE USED FOR THE PARTICULAR MATERIALS INVOLVED. ALL PIPE SHALL BE REAMED, OR OTHERWISE CLEANED, AFTER CUTTING TO REMOVE BURRS AND TO RESTORE TO FULL BORE.

WATER SERVICE HOT AND COLD
COPPER WATER TUBE, TYPE “L” RIGID, CONFORMING TO ASTM B88, WITH WROUGHT COPPER FITTINGS CONFORMING TO ANSI B16.22, AND 95.5 SOLDER JOINTS JOINED WITH HIGH TEMPERATURE SOLDER (SILFOS, SILBRAZ, PHOSCOPPER, ETC.)
OR
PEX TYPE A PIPING:
PEX PIPE AND FITTINGS
1. PEX-A (ENGLE-METHOD CROSSLINKED POLYETHYLENE) PIPING: ASTM F 876/877
2. PEX-A FITTINGS: ELBOWS, ADAPTERS, COUPLINGS, PLUGS, TEES AND MULTI-PORT TEES (1/2 INCH THROUGH 2 INCH NOMINAL PIPE SIZE): ASTM F1960 COLD-EXPANSION FITTING MANUFACTURED FROM THE FOLLOWING MATERIAL TYPES:
   - 2.1. UNS NO. C69300 LEAD-FREE (LF) BRASS.
   - 2.2. 20% GLASS-FILLED POLYSULFONE AS SPECIFIED IN ASTM D 6394.
   - 2.3. UNREINFORCED POLYSULFONE (GROUP 01, CLASS 1, GRADE 2) AS SPECIFIED IN ASTM D 6394.
   - 2.4. POLYPHENYLSULFONE (GROUP 03, CLASS 1, GRADE 2) AS SPECIFIED IN ASTM D 6394.
   - 2.5. BLEND OF POLYPHENYLSULFONE (55-80%) AND UNREINFORCED POLYSULFONE (REM.) AS SPECIFIED IN ASTM D 6394.
   - 2.6. REINFORCING COLD-EXPANSION RINGS SHALL BE MANUFACTURED FROM THE SAME SOURCE AS PEX-A PIPING MANUFACTURER AND MARKED "F1960".
   - 2.7. PROVIDE FITTINGS FROM THE SAME MANUFACTURER OF THE PIPING

THERE SHALL BE NO JOINTS ALLOWED UNDER SLABS.

SANITARY SEWER DRAIN WASTE AND VENT LINES BELOW GRADE, NOT EXPOSED OR EXPOSED IN AREAS NOT USED AS RETURN AIR PLENUM:
EITHER CAST IRON OR SEWER GRADE SCHEDULE 40 PVC PIPE (ASTM D-1785, D-2665) AND FITTINGS WITH SOLVENT WELD JOINTS.

SANITARY SEWER DRAIN WASTE AND VENT LINES ABOVE GRADE, EXPOSED IN AREAS USED AS RETURN AIR PLENUMS:
NO-HUB OR HUB AND SPIGOT CAST IRON SOIL PIPE

NO-HUB CAST IRON SOIL PIPE AND FITTINGS SHALL CONFORM TO ASTM A 888 AND/OR STANDARD SPECIFICATIONS 301 OF THE CAST IRON SOIL PIPE INSTITUTE. NO-HUB JOINTS SHALL CONFORM TO SPECIFICATION 310 OF THE CAST IRON SOIL PIPE INSTITUTE AND/OR ASTM C 1277. JOINTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS

HUB AND SPIGOT PIPE, SERVICE WEIGHT (SV) CAST IRON SV CAST IRON PIPE AND FITTINGS SHALL CONFORM TO ASTM A 74. PIPING SHALL BE JOINED WITH NEOPRENE GASKETS WHICH CONFORM TO ASTM C 564.

PIPING INSTALLATION
ALL HORIZONTAL PIPING SHALL BE PLUMB, EXCEPT FOR WASTE AND VENT PIPING. WASTE AND VENT PIPING SHALL HAVE A MINIMUM OF 1/8" AND A MAXIMUM OF 1/4" PER FOOT FALL, EXCEPT WHERE NOTED OTHERWISE ON THE DRAWINGS.

ALL PIPING SHALL BE RUN PARALLEL TO THE VERTICAL WALL LINE EXCEPT WHERE OFFSETS REQUIRE OTHERWISE TO AVOID OBSTRUCTIONS.

ALL PIPING IN WALLS AND CHASES SHALL BE SECURELY ANCHORED TO PREVENT UNDUE MOTION OF PIPE AND FIXTURE SUPPLIES WHERE OPERATING VALVES.

PROVIDE WATER HAMMER ARRESTORS IN PIPING SYSTEM AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY CODE

VALVES
A CHROME PLATED STOP VALVE SHALL BE INSTALLED IN THE WATER SUPPLY TO EACH ITEM OF PLUMBING EQUIPMENT. SUITABLE ADAPTERS SHALL BE PROVIDED FOR INSTALLATION OF VALVES IN COPPER LINES.

HOSE BIBBS AND FAUCETS WITH HOSE CONNECTIONS SHALL BE PROVIDED WITH VACUUM BREAKERS.

HANGERS AND SUPPORTS
ALL PIPES MUST BE ADEQUATELY SUPPORTED THROUGHOUT. HANGERS SHALL BE MALLEABLE SPLIT RING, EXCEPT HANGERS 1-1/2" AND LARGER MAY BE CLEVIS TYPE AT THE CONTRACTOR'S OPTION.

TRAPEZE HANGERS MAY BE USED TO SUPPORT TWO OR MORE PIPES AT THE SAME LOCATION; SUCH TRAPEZES SHALL BE ANGLE OR CHANNEL IRON OR METAL FRAMING EQUAL TO UNISTRUT OR ELEC. TRAPEZE HANGERS SHALL BE OF SUCH SIZE OR SERIES THAT THERE WILL BE NO VISIBLE DEFLECTION BETWEEN SUPPORTING RODS.

MAXIMUM HANGER SPACING SHALL BE AS FOLLOWS, WITH THE SMALLEST PIPE ON TRAPEZE HANGERS DETERMINING THE HANGER SPACING UNLESS INTERMEDIATE INDIVIDUAL HANGERS ARE USED ON THE SMALL PIPING TO SATISFY THE SPACING REQUIREMENTS.

THREADED STEEL PIPE	12'
COPPER TUBING 1-1/2" AND LESS	6'
COPPER TUBING GREATER THAN 1-1/2"	10'
PLASTIC PIPING	4'

PROVIDE A HANGER WITHIN 24" ON EITHER SIDE OF ANY ELBOW REGARDLESS OF MATERIAL TYPE OR SIZE.

ALL PEX PIPING SHALL BE SUPPORTED ACCORDING TO MANUFACTURER'S RECOMMENDATION AND USING PIPING MFG. SUPPORT SYSTEM COMPONENTS

ESCUTCHEONS
CHROME PLATED ESCUTCHEONS SIZED TO FIT SNUGLY AROUND THE PIPE SHALL BE USED AT ALL EXPOSED LOCATIONS OF PIPES WHICH PENETRATE WALLS AND CEILINGS. THIS DOES NOT INCLUDE THOSE PENETRATIONS IN EQUIPMENT ROOM OR ACCESSIBLE CHASES.

TESTING
DOMESTIC WATER - DOMESTIC WATER PIPING SHALL BE HYDRO- STATICALLY TESTED AT 125 PSI AND PROVEN TIGHT BY EXHIBITING NO DISCERNIBLE PRESSURE LOSS INDICATED ON A 0-300 PSI PRESSURE GAUGE OVER A FOUR HOUR PERIOD. THE SOURCE OF THE PRESSURE SHALL BE ISOLATED FROM THE SYSTEM DURING THE TEST. ANY LEAKS SHALL BE CORRECTED BY TIGHTENING THE JOINT, REPLACING THE FITTING AND/OR REPLACING THE PIPE AS NECESSARY TO STOP THE LEAK. TEST SHALL BE REPEATED AFTER REPAIR(S) UNTIL SYSTEM IS PROVEN TIGHT.

SANITARY AND WASTE SYSTEMS - ALL PIPING SHOULD BE TESTED WITH NOT LESS THAN 10 FEET HYDROSTATIC HEAD AND MAINTAINED FOR A PERIOD OF TWO HOURS.

INSULATION
THE FOLLOWING PIPING SHALL BE INSULATED WITH PREFORMED 1" OWENS CORNING FIBERGLASS WITH WHITE VAPOR BARRIER:
- ALL PVC DRAIN AND VENT LINES EXPOSED IN RETURN AIR PLENUMS
- ANY PEX PIPING LOCATED WITHIN RETURN AIR PLENUM AREA ABOVE THE CEILING
- ALL DOMESTIC HOT WATER PIPING
- ALL DOMESTIC WATER PIPING LOCATED WITHIN UNCONDITIONED WAREHOUSE OR WITHIN ANY EXTERIOR WALL ASSEMBLY

EXPOSED P-TRAPS, AND COLD AND HOT WATER SUPPLIES UNDER HANDICAP ACCESSIBLE LAVATORIES - PROVIDE FOAM INSULATING COVERS WITH EXTERNAL VINYL, RE-CLOSEABLE SEALING STRIPS, TAMPER PROOF LOCKING DEVICE, AND WEEP SEAM TO PREVENT LEAKAGE BUILD UP, AS MANUFACTURED BY PLUMBEREX SPECIALTY PRODUCTS OR EQUAL.

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END OF SECTION

SECTION 22.1

PLUMBING FIXTURES AND TRIM

GENERAL
THE REQUIREMENTS OF SECTION 22.0 APPLY TO ALL WORK DESCRIBED IN THIS SECTION. INCLUDES PLUMBING FIXTURES AND TRIM AND FLOOR DRAINS.

SUBMITTALS SHALL INCLUDE MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR ALL PLUMBING FIXTURES. ALL WATER CLOSETS, LAVATORIES, URINALS, SHOWER HEADS, ETC.. SHALL CONFORM TO THE CURRENT STATE OF TEXAS WATERSAVING PERFORMANCE STANDARDS.

PRODUCTS
EACH PLUMBING FIXTURE, FLUSH VALVE, TOILET SEAT, SUPPLIES, FAUCETS, ETC., WILL HAVE A MINIMUM OF ONE MANUFACTURERS LISTED. ANY SUBMITTALS BESIDES THOSE LISTED MUST BE EQUAL AND ARE SUBJECT TO APPROVAL FROM ARCHITECT/ENGINEER.

EXECUTION
CHECK MILLWORK SHOP DRAWINGS. CONFIRM LOCATION AND SIZE OF FIXTURES AND OPENINGS BEFORE ROUGH-IN AND INSTALLATION.

INSTALL FIXTURE WITH TRAP EASILY REMOVABLE FOR SERVICING AND CLEANING. AT COMPLETION THOROUGHLY CLEAN PLUMBING FIXTURES AND EQUIPMENT.

PROVIDE REDUCERS AND ESCUTCHEONS AS REQUIRED FOR COMPLETE INSTALLATION.

HOSE BIBBS AND FAUCETS WITH HOSE CONNECTIONS SHALL BE PROVIDED WITH VACUUM BREAKERS.

SOLIDLY ATTACH CLOSET AND LAVATORY CARRIERS TO FLOOR WITH ANCHOR BOLTS. EACH FOOT OR MOUNTING POINT SHALL BE BOLTED, INCLUDING ANCHORING LUGS ON BACK SIDE OF CLOSET CARRIERS.

ALL CHINA FIXTURES AND ALL TOILET SEATS SHALL BE WHITE IN COLOR UNLESS OTHERWISE CALLED OUT ON DRAWINGS.

ALL LAVATORIES WHICH ARE ADA ACCESSIBLE ARE TO BE FURNISHED WITH P-TRAP COVERS AND VALVE/SUPPLY COVERS AS MANUFACTURED BY PLUMBEREX OR EQUAL.

MOUNTING HEIGHTS
MOUNT FIXTURES THE FOLLOWING HEIGHTS ABOVE FINISHED FLOOR:
A. WATER CLOSET:
  (1) STANDARD: 15 INCHES TO TOP OF BOWL RIM
  (2) ADA:18 INCHES TO TOP OF SEAT
B. URINAL: 17 INCHES TO TOP OF BOWL RIM
C. LAVATORY:
  (1) STANDARD: 31 INCHES TO TOP OF BASIN RIM
  (2) ADA: 34 INCHES TO TOP OF BASIN RIM
D. DRINKING FOUNTAIN:
  (1) STANDARD: 40 INCHES TO TOP OF SPOUT OUTLET.
  (2) ADA: 36 INCHES TO TOP OF SPOUT OUTLET.

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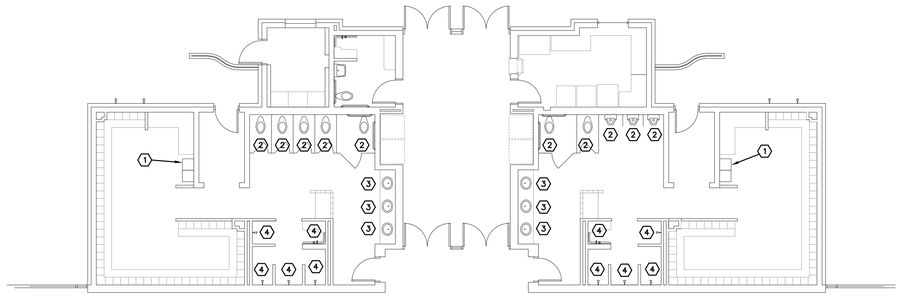
END OF SECTION

GENERAL DEMOLITION NOTES

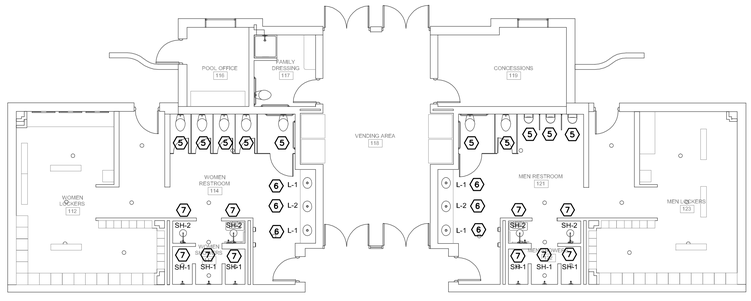
1. PRIOR TO BIDDING, THE CONTRACTORS SHALL VISIT THE SITE TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, AND TO VERIFY LOCATION, SIZE AND QUANTITY OF ITEMS TO BE REMOVED. SUBMITTAL OF HIS BID SHALL SIGNIFY HIS WILLINGNESS TO COMPLY WITH THE DESIGN AND HIS ACCEPTANCE OF ON-SITE CONDITIONS AS THEY EXIST.
2. SALVAGE ITEMS AND MATERIALS (REMOVED AND/OR DEMOLISHED) SHALL REMAIN THE PROPERTY OF THE OWNER AND AS A PART OF THIS CONTRACT THE CONTRACTOR SHALL DELIVER THESE TO A DESTINATION AS DIRECTED BY THE OWNER.
3. EACH ITEM OF EQUIPMENT, PLUMBING, RECEPTACLES, LIGHT FIXTURES, MOTORS, ETC., SHOWN TO BE DEMOLISHED SHALL HAVE ITS' ASSOCIATED CIRCUITRY PIPING AND TRIM REMOVED BACK TO AN ACTIVE POINT FOR PLUMBING OR MECHANICAL AND BACK TO THE PROTECTIVE DEVICE IN THE PANEL, SWITCHBOARD, ETC., FOR ELECTRICAL EXCEPT AS OTHERWISE MENTIONED BY NOTES 4 AND 5 BELOW.
   - 3.A. ASSOCIATED CIRCUITRY SHALL BE DEFINED TO INCLUDE ALL CONDUIT, CONDUCTORS, BOXES, WIRING DEVICES, COVER PLATES, LAMPS, FIXTURES, WIREWAYS, RACEWAYS, SWITCHES, STARTERS, ETC., WHICH ARE ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED.
   - 3.B. ASSOCIATED PLUMBING SHALL BE DEFINED TO INCLUDE ALL PIPING, VENTS, VALVES, ESCUTCHEONS, ETC. ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED. WHERE AN ITEM TO BE REMOVED TIES INTO AN ACTIVE PIPE THE CONTRACTOR SHALL CAP THE EXISTING SERVICE AT THE POINT CLOSEST TO THE EXISTING PIPE TO REMAIN AND REMOVE ALL ABANDONED PIPING AND EQUIPMENT. WHERE A ROOF VENT IS SHOWN TO BE REMOVED THE PIPING IS TO BE REMOVED AND THE EXISTING VENT IS TO BE CAPPED SUCH THAT IT WILL BECOME AN INTEGRAL PART OF THE ROOFING SYSTEM.
   - 3.C. ASSOCIATED MECHANICAL SHALL BE DEFINED TO INCLUDE ALL DUCT, EQUIPMENT, CONTROLS ETC. ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED. WHERE AN ITEM IS AN INTEGRAL PART OF AN EXISTING SYSTEM THE EXISTING SYSTEM SHALL BE CAPPED AND OR REPAIRED AS REQUIRED TO ASSURE THE REMAINING EQUIPMENT SHALL BE OPERABLE.
   - 3.D. THE ELECTRICAL PROTECTIVE DEVICE SHALL REMAIN AS AN INTEGRAL PART OF THE EXISTING PANEL, SWITCHBOARD, ETC., AND SHALL BE LABELED AS A SPARE OR BE USED FOR NEW CIRCUITRY AS SHOWN.
   - 3.E. WHERE CONDUIT ASSOCIATED WITH AN ITEM SHOWN TO BE REMOVED IS IN AN INACCESSIBLE AREA, SUCH AS ENCASED IN CONCRETE, THIS INACCESSIBLE CONDUIT ONLY SHALL BE ABANDONED IN PLACE. ALL CONDUCTORS SHALL BE REMOVED, THEN CONDUIT SHALL BE SEALED, CAPPED OR OTHERWISE TERMINATED IN A SAFE MANNER ACCEPTABLE TO THE OWNER, OR AS OTHERWISE STATED IN ITEM 3F.
   - 3.F. WHERE INACCESSIBLE CONDUIT OR PIPING ENDS OR MUST BE TERMINATED IN FINISHED SPACE, THE CONDUIT, PIPE, OR J-BOX SHALL BE REMOVED TO BELOW THE FINISHED SURFACE OF WALL, CEILING OR FLOOR, THEN VOID SHALL BE FILLED WITH NON-SHRINKING GROUT THEN RESURFACED AND REFINISHED TO MATCH SURROUNDING SURFACES.
4. WHERE ONLY A PORTION OF A CIRCUITS LOAD IS SCHEDULED TO BE REMOVED, ONLY THAT PORTION ASSOCIATED WITH DEMOLISHED DEVICE SHALL BE REMOVED TO A POINT WHERE THE REMAINING LOAD IS ACTIVE AND IN A GOOD OPERATING CONDITION.
5. WHERE EXTENSION OF AN EXISTING CIRCUIT IS REQUIRED, CONDUIT AND WIRE SHALL BE RUN (CONCEALED WHERE POSSIBLE) FROM THE ITEMS EXISTING LOCATION TO ITS NEW LOCATION. CONDUIT SHALL BE ROUTED SO AS NOT TO INTERFERE WITH THE USE, OR MAR THE AESTHETICS OF THE AREA. WHERE NECESSARY THE CONTRACTOR SHALL RELOCATE AND RECONNECT CIRCUITRY ASSOCIATED WITH THE RELOCATION OF THE ITEM.
6. WHERE AN ITEM OR EQUIPMENT IS SCHEDULED TO BE REMOVED AND RELOCATED, ITS ASSOCIATED CIRCUITRY SHALL ALSO BE REMOVED AS PER NOTE 3 ABOVE ALONG WITH ITS ASSOCIATED SWITCHGEAR AND DEVICES, ETC. TO BE RELOCATED TO THE NEW LOCATION. PROVIDE CONNECTION OF SUCH RELOCATED ITEMS TO NEW OR EXTENDED CIRCUITRY AS SHOWN ON THE DRAWINGS.

PLUMBING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	MINIMUM CONNECTION SIZES					SPECIFICATIONS
		TRAP	WASTE	VENT	CW	HW	
L-1	UNDER COUNTER MOUNTED LAVATORY	1 1/4"	2"	2"	1/2"	1/2"	19" x 16" VITREOUS CHINA UNDER COUNTER MOUNTED OVAL LAVATORY. P-TRAP TO BE 1-1/4" x 1-1/4" ADJUSTABLE CHROME PLATED CAST BRASS WITH CLEAN-OUT PLUG, 17 GAUGE SEAMLESS TUBULAR WALL BEND AND BRASS BOX WALL FLANGE AND SET SCREW. FAUCET TO BE SINGLE HOLE MOUNT, 1.2, GPM SINGLE LEVER HANDLE LAVATORY FAUCET WITH POP-UP WATERSENSE PROJECT PACK (DRAIN INCLUDED). SUPPLIES TO BE 3/8" I.P.S. WALL SUPPLY WITH LOOSE KEY STOP AND CHROME PLATED FLEXIBLE RISERS. LAVATORY: VORTENS HOLIDAY II MODEL # 3729-V; WHITE FAUCET AND DRAIN: DELTA 581LF-PP POLISHED CHROME; SINGLE HOLE, SINGLE LEVER HANDLE FAUCET WITH DRAIN DRAIN: MCGUIRE # 155AECO P-TRAP: MCGUIRE # 8872CBECO SUPPLIES: KOHLER, MCGUIRE
L-2	UNDER COUNTER MOUNTED LAVATORY	1 1/4"	2"	2"	1/2"	1/2"	SAME AS LAVATORY L-1; INSTALLATION IS TO BE ACCESSIBLE AND FURNISHED WITH P-TRAP COVERS AND VALVE/SUPPLY COVERS AS MANUFACTURED BY PLUMBEREX OR EQUAL. LAV-COVER: PLUMBEREX MODEL # X4333 NOTE LAVATORY, FAUCET, ETC. INSTALLATION MUST MEET ACCESSIBILITY REQUIREMENTS.
SH-1	SHOWER				1/2"	1/2"	MULTICHOICE UNIVERSAL ROUGH VALVE BODY; SINGLE HANDLE SHOWER TRIM; 1/2" - 14 NPT, 10" LONG CEILING MOUNT SHOWER ARM WITH FLANGE; 10" ROUND SINGLE FUNCTION 1.75 GPM SPRAY HEAD ROUGH IN VALVE: DELTA R10000-IP BATHTUB AND SHOWER ROUGH-IN VALVE VALVE TRIM: DELTA T140339-PP MONITOR 14 SERIES VALVE ONLY TRIM SHOWER ARM: LUXART LCM10SA-CP POLISHED CHROME 10" SHOWER ARM AND FLANGE SHOWER HEAD: LUXART LE1F10RD18-CP POLISHED CHROME EDGE 10" ROUND
SH-2	SHOWER	2"	2"	2"	1/2"	1/2"	MULTICHOICE UNIVERSAL ROUGH VALVE BODY; SINGLE HANDLE SHOWER TRIM; 18" SHOWER COLUMN KIT LESS HAND SHOWER AND SHOWER HEAD WITH 1/2" - 14 NPT CONNECTIONS, 3-FUNCTION DIVERTER FOR SINGLE OR SHARED OPERATION OF THE SHOWER HEAD AND HAND SHOWER, STRETCHABLE METAL HOSE; 10" ROUND SINGLE FUNCTION 1.75 GPM SPRAY HEAD; SINGLE FUNCTION 2.5 GPM HANDSHOWER ROUGH IN VALVE: DELTA R10000-IP BATHTUB AND SHOWER ROUGH-IN VALVE VALVE TRIM: DELTA T140339-PP MONITOR 14 SERIES VALVE ONLY TRIM SHOWER COLUMN KIT: DELTA 58810-PR EMERGE 18" TALL, 15" ARM, ROUND SHOWER COLUMN AND HOSE SHOWER HEAD: LUXART LE1F10RD18-CP POLISHED CHROME EDGE 10" ROUND HANDHELD SHOWER HEAD: DELTA 59462-B-PK POLISHED CHROME SINGLE FUNCTION 2.5 GPM HANDSHOWER NOTE INSTALLATION MUST MEET ACCESSIBILITY REQUIREMENTS.



A PLUMBING DEMO PLAN
SCALE: 1/8"=1'-0"



B PLUMBING REMODEL PLAN
SCALE: 1/8"=1'-0"

NOTES:

① EXISTING DRINKING FOUNTAIN TO BE REMOVED. CAP EXISTING UTILITIES

② EXISTING FIXTURE AND FLUSH VALVE THIS LOCATION IS TO BE REMOVED AND PROTECTED FOR RE- INSTALLATION AT SAME LOCATION. EXISTING UTILITIES TO BE PROTECTED DURING DEMO WORK FOR FIXTURE RE-INSTALLATION.

③ EXISTING LAVATORY AND FAUCET IS TO BE REMOVED. PROTECT EXISTING UTILITIES FOR CONNECTION TO NEW LAVATORY AND FAUCET

④ EXISTING SHOWER VALVE AND ACCESSORIES TO BE REMOVED. PROTECT EXISTING UTILITIES FOR CONNECTION TO NEW SHOWER VALVE. SHOWER DRAIN COVER TO BE REMOVED AND DRAIN PIPING PROTECTED FOR DEMO WORK

⑤ INSTALL EXISTING FIXTURE AND FLUSH VALVE THIS LOCATION

⑥ CONNECT NEW LAVATORY AND FAUCET TO EXISTING UTILITIES. PROVIDE NEW P-TRAP AND RISERS

⑦ INSTALL NEW SHOWER VALVES AND ACCESSORIES THIS LOCATION. COORDINATE INSTALLATION WITH OWNER PRIOR TO INSTALLATION. MODIFY EXISTING PIPING AS NEEDED TO MATCH NEW CONTROLS AND SHOWER HEADS. PROVIDE NEW STAINLESS STEEL STRAINER

1/2"
2"
0"
1"

Project:	ARCH: 2023.03 SWOBODA: A10-2302
Release Date:	JULY 2023 FOR CONSTRUCTION
Revisions:	No. Description Date

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P. M. SWOBODA
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07/12/2023

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY PAUL M. SWOBODA, P.E. 51309, ON JULY 12, 2023. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

PLUMBING
PLANS

P1.1
......OF......

A10-2302 P11.dwg
WEDNESDAY, JULY 12, 2023 - 5:25PM

PLOT DATE: WEDNESDAY, JULY 12, 2023

SECTION 26.0

GENERAL ELECTRICAL

GENERAL
THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, AND APPLICABLE PORTIONS OF SECTION 22.0/23.0 OF THE SPECIFICATIONS ARE HEREBY MADE A PART OF THE SECTION.

PROVIDE ALL SUPERVISION, LABOR EQUIPMENT, TOOLS, TRANSPORTATION SERVICES AND MATERIALS REQUIRED FOR THE INSTALLATION OF COMPLETE AND OPERATING ELECTRICAL SYSTEMS IN AND FOR THE BUILDING. MAKE THE INSTALLATION IN ACCORDANCE WITH RECOGNIZED GOOD PRACTICE FOR THIS TYPE OF WORK. USE THE PROPER MATERIALS AND THE PROPER METHODS, WHETHER OR NOT THESE ARE DESCRIBED IN DETAIL HEREIN. ALL EMPLOYEES MUST BE SKILLED IN THE WORK TO WHICH THEY ARE ASSIGNED ALL MATERIALS MUST BE NEW AND UNDAMAGED AND OF GOOD QUALITY.

CODES AND PERMITS
CONFORM TO ALL APPLICABLE CODES: 2018 INTERNATIONAL CODES; 2017 NEC (NFPA 70); 2012 TAS (TEXAS ACCESSIBILITY STANDARDS); 2018 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AND ALL AMENDMENTS TO THE ADOPTED CODES BY THE LOCAL AHJ (AUTHORITY HAVING JURISDICTION. WHERE THE DRAWINGS AND SPECIFICATIONS EXCEED THE REQUIREMENTS OF THE CODE, COMPLY WITH THE DRAWINGS AND SPECIFICATIONS.

OBTAIN AND PAY ALL COSTS FOR REQUIRED PERMITS AND INSPECTION FOR ALL WORK INCLUDED HEREIN.

ALL EQUIPMENT PROVIDED SHALL BE U.L. LISTED FOR THE USE INTENDED AND THE METHOD OF INSTALLATION.

COORDINATION
COORDINATE WORK OF THIS SECTION WITH THAT OF OTHER TRADES IN ORDER THAT THE VARIOUS COMPONENTS OF THE WORK WILL BE INSTALLED AT THE PROPER TIME, WILL FIT THE AVAILABLE SPACE AND WILL ALLOW PROPER SERVICE ACCESS TO ALL EQUIPMENT, NOT JUST THAT INSTALLED IN THIS SECTION.

ANY COMPONENTS OF THE ELECTRICAL SYSTEMS WHICH ARE INSTALLED WITHOUT REGARD TO THE ABOVE, MUST BE REMOVED AND RELOCATED AS DIRECTED, AT NO ADDITIONAL COST TO THE OWNER.

WHERE VARIOUS ITEMS OF EQUIPMENT AND MATERIALS ARE SPECIFIED AS SCHEDULED (SUCH AS BY CATALOG NUMBERS), THE PURPOSE IS TO DEFINE THE TYPE AND QUALITY, NOT TO SET FORTH THE EXACT TRIM REQUIRED. THE ELECTRICAL CONTRACTOR WILL VERIFY THE ACTUAL TRIM NEEDED WITH THE MATERIAL IT IS TO BE MOUNTED ON OR IN.

SHOP DRAWINGS AND SUBMITTALS
SUBMITTALS SHALL BE SUBMITTED ELECTRONICALLY IN PDF FORMAT. SUBMITTALS SHALL INCLUDE ALL ITEMS WITH A TABLE OF CONTENTS AS A SINGLE SUBMITTAL, (MECHANICAL, ELECTRICAL OR PLUMBING) PIECE MEAL AND OR PARTIAL SUBMITTALS WILL NOT BE ACCEPTED. EACH COMPLETE PDF FILE SHALL CONTAIN A TABLE OF CONTENTS SHOWING THE ORDER IN WHICH ITEMS ARE ARRANGED. COMPLETE DESCRIPTIVE LITERATURE, AND SHOP DRAWINGS WHERE APPROPRIATE, SHALL BE SUBMITTED FOR APPROVAL.

AFTER REVIEW BY THE ENGINEER THE SUBMITTAL WILL BE RETURNED WITH A COVER LETTER STATING REVIEW COMMENTS AND APPROVAL. SUBMITTALS NOT COMPLYING WITH THE ABOVE REQUIREMENTS ARE SUBJECT TO BEING RETURNED WITHOUT ACTION.

DRAWINGS
DRAWINGS INDICATE APPROXIMATE LOCATIONS OF THE VARIOUS ITEMS OF ELECTRICAL SYSTEMS. THESE ITEMS ARE SHOWN APPROXIMATELY TO SCALE AND ATTEMPT TO SHOW HOW THESE ITEMS SHOULD BE INTEGRATED. LOCATE ALL THE VARIOUS ITEMS BY ON-THE-JOB MEASUREMENTS, CONFORMANCE WITH ARCHITECTURAL REQUIREMENTS AND COOPERATION WITH OTHER TRADES AND THE OWNER IN LOCATING EQUIPMENT.

AS-BUILT DRAWINGS
MAINTAIN AT THE JOB SITE A SET OF PRINTS USED FOR NO OTHER PURPOSE BUT TO RECORD, WITH COLORED PENCIL, "AS BUILT" CHANGES AND DIAGRAMS NOTING THOSE PORTIONS OF THE WORK IN WHICH THE ACTUAL INSTALLATION VARIES SIGNIFICANTLY FROM THE CONTRACT DRAWINGS. THESE "AS BUILT" DRAWINGS SHALL INCLUDE EXACT DIMENSIONED LOCATIONS OF ALL UNDERGROUND UTILITIES, REFERENCED TO PERMANENT ABOVEGROUND FEATURES OR STRUCTURES.

AT THE CONCLUSION OF THE PROJECT, THE JOB RECORDED "AS BUILT" DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AS A CONDITION OF FINAL ACCEPTANCE.

EQUAL PRODUCTS
THE NAMING OF A MANUFACTURER AND MODEL NUMBER, OR OTHER IDENTIFYING DESIGNATION, OF A PRODUCT HEREIN IS INTENDED TO ESTABLISH CONSTRUCTION, PHYSICAL SIZE, ELECTRICAL CHARACTERISTICS, CAPACITIES, AND/OR OTHER FEATURES AFFECTING THE UTILIZATION OF THE PRODUCT IN THIS PARTICULAR PROJECT, UNLESS OTHERWISE NOTED. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE CONSIDERED AND WILL BE ACCEPTED IF THEY ARE EQUAL IN ALL RESPECTS TO THE SPECIFIED PRODUCTS, AND THE CONTRACTOR HAS SUBMITTED A LETTER STATING THAT HE HAS INVESTIGATED THE SUBSTITUTION AND STATES IN WRITING THAT THE PROPOSED SUBSTITUTION IS EQUAL OR BETTER IN EVERY RESPECT TO THAT SHOWN ON THE PRINTS AND SPECIFICATIONS. THE DECISION AS TO THE EQUALITY SHALL REST WITH THE ENGINEER, AND SUCH DECISION SHALL BE FINAL. SHOULD THE PRODUCT OF AN ALTERNATE MANUFACTURER BE "APPROVED", THE CONTRACTOR PROPOSING SUCH PRODUCT SHALL BE RESPONSIBLE FOR ANY ADDITIONAL COSTS TO OTHER CONTRACTORS FOR CHANGES ON THEIR WORK NECESSITATED BY THE SUBSTITUTE. SUBSTITUTION PROPOSALS SHALL CONFORM TO THE REQUIREMENTS OF THE GENERAL AND SUPPLEMENTAL GENERAL CONDITIONS AND SPECIAL PROVISIONS.

SWITCHBOARDS AND PANELBOARDS
THIS SPECIFICATION APPLIES TO PANEL BOARDS DESIGNATED ON THE PLANS. PANEL BOARD SHALL BE SQUARE D OR EQUAL. MAIN RATINGS AND BRANCH CIRCUIT BREAKER RATINGS SHALL BE OF SIZE AND NUMBER REQUIRED. ALL CURRENT CARRYING PARTS OF THE BUS ASSEMBLY SHALL BE PLATED COPPER. TERMINALS FOR FEEDER CONDUCTORS TO MAINS AND BRANCH NEUTRAL SHALL BE UL LISTED AS SUITABLE FOR THE TYPE CONDUCTOR SPECIFIED. THE LOAD CENTER BUS ASSEMBLY SHALL BE ENCLOSED IN A STEEL CABINET. ALL PANELBOARDS SHALL HAVE GROUND BUS KITS INSTALLED. THE SIZE OF THE WIRING GUTTERS AND GAUGE STEEL SHALL BE IN ACCORDANCE WITH UL STANDARDS. FRONT SHALL INCLUDE DOOR AND LATCH AND BE PROVIDED WITH A DIRECTORY FOR CIRCUIT IDENTIFICATION

BRANCH CIRCUIT BREAKERS
BRANCH CIRCUIT BREAKERS SHALL BE SQUARE D OR EQUAL. ALL BREAKERS SHALL BE QUICK-BREAK MECHANISM TRIP INDICATION SHALL BE CLEARLY SHOWN BY THE BEAKER HANDLE TAKING A POSITION BETWEEN "ON" AND "OFF" WHEN THE BREAKER IS TRIPPED. ALL MULTI-POLE BREAKERS SHALL BE SINGLE OPERATING HANDLE, COMMON TRIP VARIETY.

LIGHT FIXTURES
FURNISH AND INSTALL LIGHT FIXTURES AS SCHEDULED ON THE DRAWINGS. ALL BALLASTS FOR FLUORESCENT FIXTURES SHALL BE ELECTRONIC RATED FOR LESS THAN 10% THD. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FIXTURES WITH TRIM WHICH WILL PROPERLY FIT THE TYPES OF CEILING OR WALL FINISHES ACTUALLY INSTALLED. MODEL NUMBER IN THE SPECIFICATION OR ON THE DRAWINGS SHALL BE VERIFIED TO INSURE THE REQUIRED TRIM IS PROVIDED.

SAFETY SWITCHES
SAFETY SWITCHES SHALL BE HEAVY DUTY, FUSIBLE OR UNFUSED AS REQUIRED BY THE CODE.

RACEWAYS
BELOW GROUND - RIGID NON-METALLIC CONDUIT (PVC). IN ADDITION TO CIRCUIT CONDUCTORS, PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH TABLE 250-122. NEC IN ALL NON-METALLIC RACEWAYS. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE SECURELY ATTACHED TO EACH ENCLOSURE TO WHICH THE RACEWAY IS CONNECTED.

FINAL CONNECTIONS TO EXTERIOR SPACE CONDITIONING EQUIPMENT - LIQUID-TIGHT FLEXIBLE METAL CONDUIT.

IN ALL AREAS WHERE ALLOWED BY CODE EMT AND OR UL LISTED MC CABLE ASSEMBLIES SHALL BE PERMISSIBLE. MC CABLE ASSEMBLIES MAY BE USED FOR BRANCH CIRCUITS AFTER THE FIRST BOX CONNECTED TO THE PANEL. HOME RUNS BETWEEN THE FIRST BOX AND THE PANEL SHALL BE IN EMT OR OTHER APPROVED CONDUIT.

WIRE
ALL WIRE USED ON THIS PROJECT SHALL BE 600 VOLT COPPER, TYPE THHN. NO WIRE SHALL BE SMALLER THAN #12, EXCEPT LOW VOLTAGE CONTROL WIRING. ALL WIRING SHALL BE SIZED AS PER NATIONAL ELECTRICAL CODE REQUIREMENTS AND IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY SIZING AND BRING TO THE ATTENTION OF THE ENGINEER ANY CHANGES WHICH HE MAKES BEFORE INSTALLATION.

OUTLET BOXES
ALL OUTLET BOXES RECESSED IN CONSTRUCTION SHALL BE 14 GAUGE STEEL GALVANIZED AFTER FABRICATION WITH EXTENSION RINGS. THEY SHALL BE OF THE TYPE AND DESIGN BEST SUITED FOR THE APPLICATION. RECESSED BOXES FOR LIGHTING FIXTURES SHALL BE MINIMUM 4" SQUARE AND SHALL BE PROVIDED WITH PROPER RINGS FOR THE NUMBER OF DEVICES MOUNTED.

EXPOSED BOXES SHALL BE GALVANIZED STEEL CONFORMING TO THE SPECIFICATIONS FOR CONCEALED BOXES. THOSE OCCURRING ON WALLS FOR USE WITH SWITCHES OR OUTLET SHALL BE OF THE ONE-PIECE TYPE. SINGLE GANG BOXES SHALL BE "HANDY" OR "UTILITY " BOXES.

WIRING DEVICES
(DIMENSIONS ARE TO CENTER OF DEVICE UNLESS NOTED DIFFERENTLY ON THE DRAWINGS)
SWITCHES (MOUNTED AT 47" AFF)
A. SINGLE POLE - HUBBELL NO. 1221-I
B. 3-WAY - HUBBLE NO. 1223-I
C. OCCUPANCY/VACANCY SWITCH SENSORS AS SPECIFIED AND NOTED ON DRAWINGS AND PLANS
D. OCCUPANCY/VACANCY SENSORS AND REQUIRED RELAYS AS SPECIFIED AND NOTED ON DRAWINGS AND PLANS

RECEPTACLES (MOUNTED AT 18" AFF)
A. DUPLEX - (20 AMP) HUBBLE NO. 5362

DEVICE PLATES SHALL BE BRUSHED STAINLESS

****

END OF SECTION

GENERAL DEMOLITION NOTES

1. PRIOR TO BIDDING, THE CONTRACTORS SHALL VISIT THE SITE TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS, AND TO VERIFY LOCATION, SIZE AND QUANTITY OF ITEMS TO BE REMOVED. SUBMITTAL OF HIS BID SHALL SIGNIFY HIS WILLINGNESS TO COMPLY WITH THE DESIGN AND HIS ACCEPTANCE OF ON-SITE CONDITIONS AS THEY EXIST.
2. SALVAGE ITEMS AND MATERIALS (REMOVED AND/OR DEMOLISHED) SHALL REMAIN THE PROPERTY OF THE OWNER AND AS A PART OF THIS CONTRACT THE CONTRACTOR SHALL DELIVER THESE TO A DESTINATION AS DIRECTED BY THE OWNER.
3. EACH ITEM OF EQUIPMENT, PLUMBING, RECEPTACLES, LIGHT FIXTURES, MOTORS, ETC., SHOWN TO BE DEMOLISHED SHALL HAVE ITS' ASSOCIATED CIRCUITRY PIPING AND TRIM REMOVED BACK TO AN ACTIVE POINT FOR PLUMBING OR MECHANICAL AND BACK TO THE PROTECTIVE DEVICE IN THE PANEL, SWITCHBOARD, ETC., FOR ELECTRICAL EXCEPT AS OTHERWISE MENTIONED BY NOTES 4 AND 5 BELOW.

3.A. ASSOCIATED CIRCUITRY SHALL BE DEFINED TO INCLUDE ALL CONDUIT, CONDUCTORS, BOXES, WIRING DEVICES, COVER PLATES, LAMPS, FIXTURES, WIREWAYS, RACEWAYS, SWITCHES, STARTERS, ETC., WHICH ARE ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED.

3.B. ASSOCIATED PLUMBING SHALL BE DEFINED TO INCLUDE ALL PIPING, VENTS, VALVES, ESCUTCHEONS, ETC. ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED. WHERE AN ITEM TO BE REMOVED TIES INTO AN ACTIVE PIPE THE CONTRACTOR SHALL CAP THE EXISTING SERVICE AT THE POINT CLOSEST TO THE EXISTING PIPE TO REMAIN AND REMOVE ALL ABANDONED PIPING AND EQUIPMENT. WHERE A ROOF VENT IS SHOWN TO BE REMOVED THE PIPING IS TO BE REMOVED AND THE EXISTING VENT IS TO BE CAPPED SUCH THAT IT WILL BECOME AN INTEGRAL PART OF THE ROOFING SYSTEM.

3.C. ASSOCIATED MECHANICAL SHALL BE DEFINED TO INCLUDE ALL DUCT, EQUIPMENT, CONTROLS ETC. ASSOCIATED WITH THE ITEM SHOWN TO BE REMOVED. WHERE AN ITEM IS AN INTEGRAL PART OF AN EXISTING SYSTEM THE EXISTING SYSTEM SHALL BE CAPPED AND OR REPAIRED AS REQUIRED TO ASSURE THE REMAINING EQUIPMENT SHALL BE OPERABLE.

3.D. THE ELECTRICAL PROTECTIVE DEVICE SHALL REMAIN AS AN INTEGRAL PART OF THE EXISTING PANEL, SWITCHBOARD, ETC., AND SHALL BE LABELED AS A SPARE OR BE USED FOR NEW CIRCUITRY AS SHOWN.

3.E. WHERE CONDUIT ASSOCIATED WITH AN ITEM SHOWN TO BE REMOVED IS IN AN INACCESSIBLE AREA, SUCH AS ENCASED IN CONCRETE, THIS INACCESSIBLE CONDUIT ONLY SHALL BE ABANDONED IN PLACE. ALL CONDUCTORS SHALL BE REMOVED, THEN CONDUIT SHALL BE SEALED, CAPPED OR OTHERWISE TERMINATED IN A SAFE MANNER ACCEPTABLE TO THE OWNER, OR AS OTHERWISE STATED IN ITEM 3F.

3.F. WHERE INACCESSIBLE CONDUIT OR PIPING ENDS OR MUST BE TERMINATED IN FINISHED SPACE, THE CONDUIT, PIPE, OR J-BOX SHALL BE REMOVED TO BELOW THE FINISHED SURFACE OF WALL, CEILING OR FLOOR, THEN VOID SHALL BE FILLED WITH NON-SHRINKING GROUT THEN RESURFACED AND REFINISHED TO MATCH SURROUNDING SURFACES.

4. WHERE ONLY A PORTION OF A CIRCUIT'S LOAD IS SCHEDULED TO BE REMOVED, ONLY THAT PORTION ASSOCIATED WITH DEMOLISHED DEVICE SHALL BE REMOVED TO A POINT WHERE THE REMAINING LOAD IS ACTIVE AND IN A GOOD OPERATING CONDITION.
5. WHERE EXTENSION OF AN EXISTING CIRCUIT IS REQUIRED, CONDUIT AND WIRE SHALL BE RUN (CONCEALED WHERE POSSIBLE) FROM THE ITEMS EXISTING LOCATION TO ITS NEW LOCATION. CONDUIT SHALL BE ROUTED SO AS NOT TO INTERFERE WITH THE USE, OR MAR THE AESTHETICS OF THE AREA. WHERE NECESSARY THE CONTRACTOR SHALL RELOCATE AND RECONNECT CIRCUITRY ASSOCIATED WITH THE RELOCATION OF THE ITEM.
6. WHERE AN ITEM OR EQUIPMENT IS SCHEDULED TO BE REMOVED AND RELOCATED, ITS ASSOCIATED CIRCUITRY SHALL ALSO BE REMOVED AS PER NOTE 3 ABOVE ALONG WITH ITS ASSOCIATED SWITCHGEAR AND DEVICES, ETC. TO BE RELOCATED TO THE NEW LOCATION. PROVIDE CONNECTION OF SUCH RELOCATED ITEMS TO NEW OR EXTENDED CIRCUITRY AS SHOWN ON THE DRAWINGS.

LIGHT FIXTURE SCHEDULE

TYPE	MFG.	DESCRIPTION	LAMPS
A	HALO	6" ROUND LED LENS DOWNLIGHT (CANLESS) WITH REMOTE DRIVER / JUNCTION BOX; FIELD SELECTABLE COLOR (KELVIN); 900 LUMENS MODEL # HLBPH6099FS1EMV TEMPERATURE SETTING FOR NEW LIGHT FIXTURES TO BE SET TO MATCH EXISTING FIXTURES; FIELD VERIFY COLOR TEMP OF EXISTING FIXTURES	14 W LED
B	EVENLITE	TELESIS LED LOW PROFILE ARCHITECTURAL EMERGENCY LIGHT # TCL2-W	

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
"X"	DOWNLIGHT FIXTURE TYPE "X"		DUPLEX RECEPTACLE
"X"	LAY-IN FIXTURE TYPE "X"	GFI	DUPLEX RECEPTACLE W/GROUND FAULT INTERRUPTION
"X"	WALL MOUNTED LIGHT FIXTURE TYPE "X"	WP	DUPLEX RECEPTACLE WEATHER PROOF
"X"	EXIT LIGHT TYPE "X" DIRECTIONAL AS NOTED	TP	DUPLEX RECEPTACLE TAMPER PROOF
"X"	BRACKET MTD. FXT. TYPE "X"		2-115V DUPLEX RECEPTACLES GANGED TOGETHER IN ONE BOX
	UNSWITCHED FIXTURE		SINGLE 115V RECEPTACLE
"X"	EMERGENCY FIXTURE TYPE "X"		SINGLE 240V RECEPTACLE
"X"	POLE MTD. FXT. TYPE "X"		SPECIAL POWER RECEPTACLE AS NOTED
$	SINGLE POLE SWITCH		TELEPHONE/DATA OUTLET IN WALL
$	THREE WAY SWITCH		TELEPHONE/DATA OUTLET IN FLOOR BOX
$	DIMMER SWITCH		COMM OUTLET (AS NOTED) IN WALL
	CONTACTOR		COMM OUTLET (AS NOTED) IN FLOOR
	"HOME RUN" CIRCUIT (120/277V)	J	J-BOX FOR 120/208V OR 277/480V AS NOTED
	"HOME RUN" CIRCUIT (208/480V)	S	SPEAKER
XP/XXX/XXX/XXA	DISCONNECT # OF POLES/NEMA RATING/ F OR NF/CURRENT RATING	V	VISUAL ALARM
	120V PANEL	AV	AUDIO VISUAL ALARM
	480V PANEL	MP	FIRE ALARM MANUAL PULL
		MEP	MAIN FIRE ALARM PAN.
		FS	SPRINKLER SYSTEM FLOW SW.

NOTE: ALL SYMBOLS MAY NOT BE USED

COMMON ABBREVIATIONS

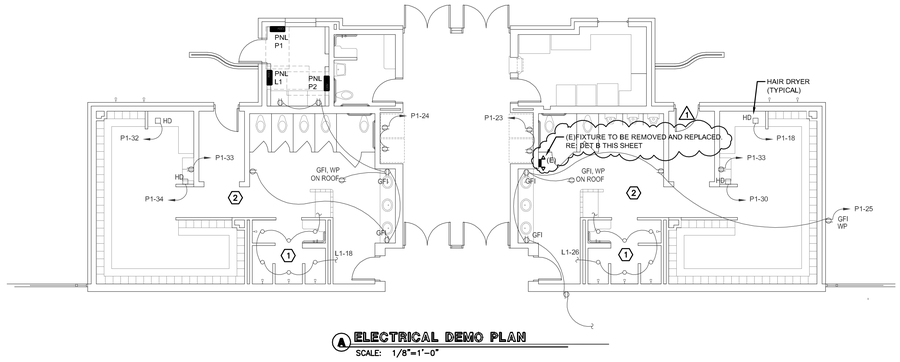
A	AMPS	NF	NON-FUSED
C	CONDUIT	OE	OVERHEAD ELECTRIC
CB	CALL BUTTON	P	POLE
COND	CONDENSER	PB	PULL BOX OR PUSH BUTTON
DET	DETAIL	PH	PHASE
DISC	DISCONNECT	UG	UNDER GROUND
DWG	DRAWING	V	VOLTS, VOLTAGE
(E)	EXISTING	W	WATTS, WATTAGE
F	FUSED	WP	WEATHER PROOF
G, GND	GROUND	XFMR	TRANSFORMER
GFI	GROUND FAULT INTERRUPT	X.X.A	DRAWING NUMBER.DETAIL NUMBER
HP	HORSE POWER		

EXISTING PANEL P2

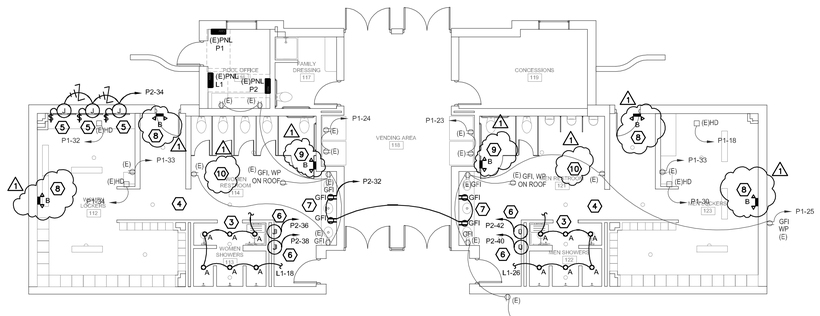
120/208 VOLT, 3 PHASE, 4 WIRE
400 AMP ~~MLO~~ (XXX AMP MCB)
SURFACE MOUNTED

CKT	SERVES	WIRE	CB	V.A ØA	V.A ØB	V.A ØC	CB	WIRE	SERVES	CKT
1	ICE MAKER-CONCESSION	12	20				60	3	RTU-4A (EAST)	2
3	DEEP FREEZE-CONCESSION	12	20							4
5	REFRIGERATOR-SODA	12	20							6
7	REFRIGERATOR-SODA	12	20				60	3	RTU-4B (WEST)	8
9	FOOD WARMER	12	20							10
11	FOOD WARMER	12	20							12
13	MICROWAVE	12	20				20	12	RECEPT - CONCESSIONS	14
15	REFRIGERATOR	12	20				20	8	LGTS-OUTDOOR POOL	16
17	LGTS-OUTDOOR POOL	8	20				20	8	LGTS-OUTDOOR POOL	18
19	LGTS-OUTDOOR POOL	8	20				20	8	LGTS-OUTDOOR POOL	20
21	LGTS-OUTDOOR POOL	8	20				25	10	PUMP DP-2	22
23										24
25	EXIT SIGNS	12	20				20	12	CA-1	26
27										28
29										30
31							20	12	SOAP DISPENSER RECEPT	32
33							20	12	LIGHTED MIRRORS	34
35							20	12	HAND DRYER	36
37							20	12	HAND DRYER	38
39							20	12	HAND DRYER	40
41							20	12	HAND DRYER	42

EXISTING LOADS / EXISTING LOADS / NEW BREAKERS



A ELECTRICAL DEMO PLAN
SCALE: 1/8"=1'-0"



B ELECTRICAL REMODEL PLAN
SCALE: 1/8"=1'-0"

NOTES:

1. REMOVE EXISTING LIGHT FIXTURES FROM SHOWER AREA. CIRCUIT AND SWITCHING TO REMAIN AND BE USED FOR NEW FIXTURES
2. REMOVE FACEPLATES AS NEEDED FROM ALL EXISTING DEVICES WITHIN LOCKER ROOM AREAS AND COVER EXISTING DEVICES FOR PROTECTION DURING DEMO AND NEW WALL TREATMENT
3. INSTALL NEW LIGHT FIXTURES IN NEW GYP BOARD CEILING. REFER TO ARCH REFLECTED CEILING PLAN FOR EXACT LOCATIONS. CONNECT TO EXISTING CIRCUIT AND SWITCHING
4. PROVIDE NEW FACEPLATES FOR ALL DEVICES IN LOCKER ROOM AREAS
5. PROVIDE J-BOX (SWITCHED) FOR LIGHTED MIRROR THIS LOCATION. COORDINATE EXACT LOCATION OF J-BOX WITH MIRROR AND ARCH DRAWINGS PRIOR TO INSTALLATION. COORDINATE EXACT LOCATION OF SWITCH WITH OWNER PRIOR TO INSTALLATION
6. PROVIDE J-BOX IN WALL THIS LOCATION FOR HAND DRYER POWER (120V, 8.3-9.1A, 1000W)
7. PROVIDE GFI PROTECTED RECEPTACLES BELOW COUNTER FOR SOAP DISPENSER POWER
8. PROVIDE NEW EMERGENCY FIXTURE (TYPE 'B') AND CIRCUIT TO NEAREST LOCKER ROOM LIGHTING CIRCUIT HOMERUN
9. REPLACE EXISTING EMERGENCY FIXTURE WITH NEW EMERGENCY FIXTURE (TYPE 'B'). CONNECT NEW FIXTURE TO EXISTING CIRCUIT
10. ALL 125 VOLT, SINGLE PHASE, 15 AND 20 AMP RECEPTACLES IN RESTROOM AREA MUST BE GFI TYPE

1/2" 0" 1" 2"

PLOT DATE: MONDAY, JULY 31, 2023

M:\0-2302_E1.dwg
MONDAY, JULY 31, 2023 - 10:07AM

ARCH: 2023.03 SWOBODA: A10-2302

No.	Description	Date
1	CITY COMMENTS	07/28/23

Project:
Release Date: JULY 2023 FOR CONSTRUCTION
Revisions:

BLUE BELL AQUATIC CENTER
LOCKER ROOM RENOVATIONS
BRENHAM TEXAS

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STATE OF TEXAS
PAUL M. SWOBODA
51309
REGISTERED
PROFESSIONAL ENGINEER
07/12/2023

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ELECTRICAL PLANS

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