

STATE OF NORTH CAROLINA/BUNCOMBE COUNTY SCHOOLS REQUEST FOR PROPOSAL

PROJECT: ENKA MIDDLE SCHOOL BATHROOM ADA RENOVATIONS (RFP# 46-16)

PROJECT DESIGNER: Mary Beth Kingston, AIA, Assistant Director of Facilities

USING AGENCY: Buncombe County Schools

ISSUE DATE: October 25, 2016

Proposals from bidders subject to the conditions made a part hereof will be received until **4:00 PM on November 18, 2016** for furnishing all labor, materials, equipment, and services incidental and implied, for completion of the project described herein.

PREBID CONFERENCE: A pre-bid conference is scheduled for **10:00 AM on November 1, 2016** at the main office of Enka Middle School, 390 Asbury Rd., Candler, NC 28715. Prebid attendees shall check in at the main office.

SEND ALL PROPOSALS DIRECTLY TO THE ADDRESS AS SHOWN BELOW:

Buncombe County Schools, Purchasing Division
175 Bingham Road
Asheville, NC 28806

Proposals may be faxed or emailed. Fax 828-251-1730. Email ron.venturella@bcsemail.org. It is the responsibility of the bidder to confirm receipt by calling 828-255-5891.

NOTE: Indicate firm name and RFP number on the front of each proposal envelope or package, along with the date for receipt of proposals specified above.

Direct inquiries concerning this RFP to: Mary Beth Kingston, Asst. Director Phone: 828-255-5916
Ron Venturella, Purchasing Officer Phone: 828-255-5891

THE PROCUREMENT PROCESS

The following is a general description of the process by which a firm will be selected to provide services.

1. Request for Proposals (RFP) is issued to prospective contractors.
2. A preproposal conference and/or deadline for written questions is five days prior to due date.
3. Proposals in one original will be received from each offeror in a sealed envelope or package. Each original shall be signed and dated by an official authorized to bind the firm. Unsigned proposals will not be considered. Bid bond should be included in a separate sealed envelope.
4. All proposals must be received by the issuing agency not later than the date and time specified on the cover sheet of this RFP.
5. At that date and time the proposals from each responding firm will be opened. Interested parties are cautioned that these costs and their components are subject to further evaluation for completeness and correctness and therefore may not be an exact indicator of an offeror's pricing position. Informal proposals (less than \$ 300,000) are confidential until such time that award has been made. Thereafter, the purchasing division will furnish bid tabs upon request.
6. At their option, the evaluators may request oral presentations or discussion with any or all offerors for the purpose of clarification or to amplify the materials presented in any part of the proposal. However, offerors are cautioned that the evaluators are not required to request clarification; therefore, all proposals should be complete and reflect the most favorable terms available from the offeror.
7. Proposals will be evaluated according to completeness, content, experience with similar projects, ability of the offeror and its staff, and cost. Award of a contract to one offeror does not mean that the other proposals lacked merit, but that, all factors considered, the selected proposal was deemed most advantageous to the State.
8. Offerors are cautioned that this is a request for offers, not a request to contract, and the State/Buncombe County Schools reserves the unqualified right to reject any and all offers when such rejection is deemed to be in the best interest of the State.

PROPOSAL FORM

**ENKA MIDDLE SCHOOL BATHROOM ADA RENOVATIONS
(RFP# 46-16)**

DUE DATE: NOVEMBER 18, 2016 by 4:00 PM

By submitting this proposal, the potential contractor certifies the following:

- ** This proposal is signed by an authorized representative of the firm.
- ** It can obtain and submit to the Owner insurance certificates as required within 5 calendar days after notice of award.
- ** The cost and availability of all equipment, materials, and supplies associated with performing the services described herein have been determined and included in the proposed cost.
- ** All labor costs, direct and indirect, have been determined and included in the proposed cost.
- ** All taxes have been determined and included in the proposed cost.
- ** The offeror has attended the conference (*if applicable*) or conducted a site visit and is aware of prevailing conditions associated with performing these services.
- ** The potential contractor has read and understands the conditions set forth in this RFP and agrees to them with no exceptions.

Therefore, in compliance with this Request for Proposals, and subject to all conditions herein, the undersigned offers and agrees, if this proposal is accepted within 45 days (normally less) from the date of the opening, to furnish the subject services for a cost not to exceed:

Base Bid: To execute the renovation of two existing restrooms to meet ADA requirements as stated in specifications and drawings.

\$ _____ dollars and ____/100 \$ _____

Addendums received and used in computing bid: YES/NO _____

Number of Addendums received: _____

OFFEROR: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

TELEPHONE NUMBER: _____ FAX: _____

FED ID No: _____ Type & License #: _____

E-MAIL: _____ MBE Status: _____

Principal Place of Business if different from above (See General Information on Submitting Proposals, Item 18.): _____

BY: (Signature) _____ TITLE: _____

DATE: _____ (Typed or printed name) _____

END OF PROPSAL FORM

GENERAL INFORMATION ON SUBMITTING PROPOSALS

1. **EXCEPTIONS:** All proposals are subject to the terms and conditions outlined herein. All responses shall be controlled by such terms and conditions and the submission of other terms and conditions, price lists, catalogs, and/or other documents as part of an offeror's response will be waived and have no effect either on this Request for Proposals or on any contract that may be awarded resulting from this solicitation. Offeror specifically agrees to the conditions set forth in the above paragraph by signature to the proposal.
2. **CERTIFICATION:** By executing the proposal, the signer certifies that this proposal is submitted competitively and without collusion (G.S. 143-54), that none of our officers, directors, or owners of an unincorporated business entity has been convicted of any violations of Chapter 78A of the General Statutes, the Securities Act of 1933, or the Securities Exchange Act of 1934 (G.S. 143-59.2), and that we are not an ineligible vendor as set forth in G.S. 143-59.1. False certification is a Class I felony.
3. **ORAL EXPLANATIONS:** The State/Buncombe County Schools shall not be bound by oral explanations or instructions given at any time during the competitive process or after award.
4. **REFERENCE TO OTHER DATA:** Only information which is received in response to this RFP will be evaluated; reference to information previously submitted shall not be evaluated.
5. **ELABORATE PROPOSALS:** Elaborate proposals in the form of brochures or other presentations beyond that necessary to present a complete and effective proposal are not desired.

In an effort to support the sustainability efforts of the State of North Carolina we solicit your cooperation in this effort.

It is desirable that all responses meet the following requirements:

- All copies are printed **double sided**.
 - All submittals and copies are printed on **recycled paper with a minimum post-consumer content of 30%** and indicate this information accordingly on the response.
 - Unless absolutely necessary, all proposals and copies should **minimize or eliminate use of non-recyclable or non re-usable materials** such as plastic report covers, plastic dividers, vinyl sleeves, and GBC binding. Three-ringed binders, glued materials, paper clips, and staples are acceptable.
 - Materials should be submitted in a format which allows for **easy removal and recycling** of paper materials.
6. **COST FOR PROPOSAL PREPARATION:** Any costs incurred by offerors in preparing or submitting offers are the offerors' sole responsibility; the State of North Carolina/Buncombe County Schools will not reimburse any offeror for any costs incurred.
 7. **TIME FOR ACCEPTANCE:** Each proposal shall state that it is a firm offer which may be accepted within a period of 45 days. Although the contract is expected to be awarded prior to that time, the 45 day period is requested to allow for unforeseen delays.
 8. **TITLES:** Titles and headings in this RFP and any subsequent contract are for convenience only and shall have no binding force or effect.
 9. **CONFIDENTIALITY OF PROPOSALS:** In submitting its proposal the offeror agrees not to discuss or otherwise reveal the contents of the proposal to any source outside of the using or issuing agency, government or private, until after the award of the contract. Offerors not in compliance with this provision may be disqualified, at the option of the State/Buncombe County Schools, from contract award. Only discussions authorized by the issuing agency are exempt from this provision.
 10. **RIGHT TO SUBMITTED MATERIAL:** All responses, inquiries, or correspondence relating to or in reference to the RFP, and all other reports, charts, displays, schedules, exhibits, and other documentation submitted by the offerors shall become the property of the State/Buncombe County Schools when received.
 11. **OFFEROR'S REPRESENTATIVE:** Each offeror shall submit with its proposal the name, address, and telephone number of the person(s) with authority to bind the firm and answer questions or provide clarification concerning the firm's proposal.
 12. **SUBCONTRACTING:** Offerors may propose to subcontract portions of the work provided that their proposals clearly indicate what work they plan to subcontract and to whom and that all information required about the prime contractor is also included for each proposed subcontractor.
 13. **PROPRIETARY INFORMATION:** Trade secrets or similar proprietary data which the offeror does not wish disclosed to other than personnel involved in the evaluation or contract administration will be kept confidential to the extent permitted by NCAC T01:05B.1501 and G.S. 132-1.3 if identified as follows: Each page shall be identified in boldface at the top and bottom as "CONFIDENTIAL". Any section of the proposal which is to remain confidential shall also be so marked in boldface on the title page of that section. Cost information may not be deemed confidential. In spite of what is labeled as confidential, the determination as to whether or not it is shall be determined by North Carolina law.
 14. **HISTORICALLY UNDERUTILIZED BUSINESSES:** Pursuant to General Statute 143-48 and Executive Order #150, Buncombe County Schools invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled.

The Contractor agrees in particular to maintain open hiring and employment practices and to receive applications for employment in compliance with all requirements of applicable federal, state and local laws and regulations issued pursuant thereto relating to nondiscriminatory hiring and employment practices. Each Prime Contractor shall undertake an affirmative action program to ensure that no person shall be excluded from participation in any employment activities because of age, sex, race, religion, color, national origin or handicap.

15. **PROTEST PROCEDURES:** If an offeror wants to protest a contract awarded pursuant to this solicitation, they must submit a written request to the Purchasing Officer, Buncombe County Schools, 175 Bingham Road, or PO Box 16771, Asheville, NC 28806. This request must be received by the Purchasing Division within thirty (30) consecutive calendar days from the date of the contract award, and must contain specific sound reasons and any supporting documentation for the protest. NOTE: Contract award notices are sent only to those actually awarded contracts, and not to every person or firm responding to this solicitation. Contract status and award notices are available through the purchasing division or the project designer with contact information as shown on the first page of this solicitation. Offeror's may call to obtain a verbal status of contract award. All protests will be handled pursuant to the North Carolina Administrative Code, Title 1, Department of Administration, Chapter 5, Purchase and Contract, Section 5B.1519.
16. **TABULATIONS:** Offeror's may call the purchasing division to obtain a verbal status of contract award.
17. **VENDOR REGISTRATION AND SOLICITATION NOTIFICATION SYSTEM:** Vendor Link NC allows vendors to electronically register free with the State to receive electronic notification of current procurement opportunities for goods and services available on the Interactive Purchasing System. Online registration and other purchasing information are available on the Internet web site: <http://www.state.nc.us/pandc/>.
18. **RECIPROCAL PREFERENCE:** G.S. 143-59 establishes a reciprocal preference law to discourage other states from applying in-state preferences against North Carolina's resident offerors. The "Principal Place of Business" is defined as the principal place from which the trade or business of the offeror is directed or managed.

NORTH CAROLINA GENERAL CONTRACT TERMS AND CONDITIONS (Contractual and Consultant Services)

1. **GOVERNING LAW:** This contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina.
2. **SITUS:** The place of this contract, its situs and forum, shall be North Carolina, where all matters, whether sounding in contract or tort, relating to its validity, construction, interpretation and enforcement shall be determined.
3. **INDEPENDENT CONTRACTOR:** The Contractor shall be considered to be an independent contractor and as such shall be wholly responsible for the work to be performed and for the supervision of its employees. The Contractor represents that it has, or will secure at its own expense, all personnel required in performing the services under this agreement. Such employees shall not be employees of, or have any individual contractual relationship with the Agency.
4. **KEY PERSONNEL:** The Contractor shall not substitute key personnel assigned to the performance of this contract without prior written approval by the Agency's Contract Administrator. The individuals designated as key personnel for purposes of this contract are those specified in the Contractor's proposal.
5. **SUBCONTRACTING:** Work proposed to be performed under this contract by the Contractor or its employees shall not be subcontracted without prior written approval of the Agency's Contract Administrator/Project Designer. Acceptance of an offeror's proposal shall include any subcontractor(s) specified therein.
6. **PERFORMANCE AND DEFAULT:** If, through any cause, the Contractor shall fail to fulfill in timely and proper manner the obligations under this agreement, the Agency shall thereupon have the right to terminate this contract by giving written notice to the Contractor and specifying the effective date thereof. In that event, all finished or unfinished deliverable items under this contract prepared by the Contractor shall, at the option of the Agency, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such materials. Notwithstanding, the Contractor shall not be relieved of liability to the Agency for damages sustained by the Agency by virtue of any breach of this agreement, and the Agency may withhold any payment due the Contractor for the purpose of setoff until such time as the exact amount of damages due the Agency from such breach can be determined. In case of default by the Contractor, the State may procure the services from other sources and hold the Contractor responsible for any excess cost occasioned thereby. The State reserves the right to require performance bond or other acceptable alternative guarantees from successful offeror without expense to the State.

Upon the entering of a judgment of bankruptcy of insolvency by or against the Contractor, the Agency may terminate this contract for cause.

Neither party shall be deemed to be in default of its obligations hereunder if and so long as it is prevented from performing such

obligations by any act of war, hostile foreign action, nuclear explosion, riot, strikes, civil insurrection, earthquake, hurricane, tornado, or other catastrophic natural event or act of God.

7. **TERMINATION:** The Agency may terminate this agreement at any time by *15 days* notice in writing from the Agency to the Contractor. In that event, all finished or unfinished deliverable items prepared by the Contractor under this contract shall, at the option of the Agency, become its property. If the contract is terminated by the Agency as provided herein, the Contractor shall be paid for services satisfactorily completed, less payment or compensation previously made.
8. **AVAILABILITY OF FUNDS:** Any and all payments to the Contractor are dependent upon and subject to the availability of funds to the Agency for the purpose set forth in this agreement.
9. **CONFIDENTIALITY:** Any information, data, instruments, documents, studies or reports given to or prepared or assembled by the Contractor under this agreement shall be kept as confidential and not divulged or made available to any individual or organization without the prior written approval of the Agency.
10. **CARE OF PROPERTY:** The Contractor agrees that it shall be responsible for the proper custody and care of any property furnished it for use in connection with the performance of this contract or purchased by it for this contract and will reimburse the State for loss of damage of such property.
11. **COPYRIGHT:** No deliverable items produced in whole or in part under this agreement shall be the subject of an application for copyright by or on behalf of the Contractor.
12. **ACCESS TO PERSONS AND RECORDS:** The State Auditor shall have access to persons and records as a result of all contracts or grants entered into by State agencies or political subdivisions in accordance with General Statute 147-64.7. The Contractor shall retain all records for a period of three years following completion of the contract.
13. **ASSIGNMENT:** No assignment of the Contractor's obligations nor the Contractor's right to receive payment hereunder shall be permitted. However, upon written request approved by the issuing purchasing authority, the State may:
 - a. Forward the contractor's payment check(s) directly to any person or entity designated by the Contractor, or
 - b. Include any person or entity designated by Contractor as a joint payee on the Contractor's payment check(s).In no event shall such approval and action obligate the State to anyone other than the Contractor and the Contractor shall remain responsible for fulfillment of all contract obligations.
14. **COMPLIANCE WITH LAWS:** The Contractor shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements (permits) that are applicable to the conduct of its business, including those of federal, state, and local agencies having jurisdiction and/or authority.
15. **AFFIRMATIVE ACTION:** The Contractor shall take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of people with disabilities, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin, or disability.
16. **INSURANCE:** During the term of the contract, the contractor at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the contract. As a minimum, the contractor shall provide and maintain the following coverage and limits:
 - a. Worker's Compensation - The contractor shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$150,000.00, covering all of Contractor's employees who are engaged in any work under the contract. If any work is subcontracted, the contractor shall require the subcontractor to provide the same coverage for any of its employees engaged in any work under the contract.
 - b. Commercial General Liability - General Liability Coverage on a Comprehensive Broad Form on an occurrence basis in the minimum amount of \$2,000,000.00 Combined Single Limit. (Defense cost shall be in excess of the limit of liability).
 - c. Automobile - Automobile Liability Insurance, to include liability coverage, covering all owned, hired and non-owned vehicles, used in connection with the contract. The minimum combined single limit shall be \$500,000.00 bodily injury and property damage; \$500,000.00 uninsured/under insured motorist; and \$100,000.00 medical payment.

Providing and maintaining adequate insurance coverage is a material obligation of the contractor and is of the essence of this contract. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The contractor shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or this contract. The limits of coverage under each insurance policy maintained by the contractor shall not be interpreted as limiting the contractor's liability and obligations under the contract.

The Contractor shall furnish a Certificate of Insurance as proof of the above coverages. Certificate will contain provision that the insurance coverages cannot be canceled, reduced in amount or coverage eliminated without 30 days written notice to the Buncombe County Board of Education. Owner's Protective insurance must list the Buncombe County Board of Education as a "Named Insured" as it's interest may appear. Owner's approval of Certificate of Insurance does not decrease or relieve the contractor's responsibility for maintaining insurance coverage as required in this Request for Proposal.

17. **ADVERTISING:** Contractor agrees not to use the existence of this contract, the name of the agency, or the name of the State of North Carolina as part of any commercial advertising.

18. **ENTIRE AGREEMENT:** This contract and any documents incorporated specifically by reference represent the entire agreement between the parties and supersede all prior oral or written statements or agreements. This Request for Proposals, any addenda thereto, and the offeror's proposal are incorporated herein by reference as though set forth verbatim.

All promises, requirements, terms, conditions, provisions, representations, guarantees, and warranties contained herein shall survive the contract expiration or termination date unless specifically provided otherwise herein, or unless superseded by applicable Federal or State statutes of limitation.

19. **AMENDMENTS:** This contract may be amended only by written amendments duly executed by the Agency and the Contractor.

20. **TAXES:** G.S. 143-59.1 bars the Secretary of Administration from entering into contracts with vendors if the vendor or its affiliates meet one of the conditions of G. S. 105-164.8(b) and refuse to collect use tax on sales of tangible personal property to purchasers in North Carolina. Conditions under G. S. 105-164.8(b) include: (1) Maintenance of a retail establishment or office, (2) Presence of representatives in the State that solicit sales or transact business on behalf of the vendor and (3) Systematic exploitation of the market by media-assisted, media-facilitated, or media-solicited means. By execution of the bid document the vendor certifies that it and all of its affiliates, (if it has affiliates), collect(s) the appropriate taxes.

21. **GENERAL INDEMNITY:** The contractor shall hold and save the State/Buncombe County Schools, its officers, agents, and employees, harmless from liability of any kind, including all claims and losses, with the exception of consequential damages, accruing or resulting to any other person, firm, or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this contract, and from any and all claims and losses accruing or resulting to any person, firm, or corporation that may be injured or damaged by the contractor in the performance of this contract and that are attributable to the negligence or intentionally tortious acts of the contractor provided that the contractor is notified in writing within 30 days that the State/Buncombe County Schools has knowledge of such claims. The contractor represents and warrants that it shall make no claim of any kind or nature against the State's agents who are involved in the delivery or processing of contractor goods to the State. The representation and warranty in the preceding sentence shall survive the termination or expiration of this contract.

CONTRACTOR'S SALES TAX REPORT
NC State and Local Sales Taxes Paid

Buncombe County Schools

CONTRACTOR: _____ PO#/RFP# _____

Address: _____ For Period: _____

Invoice Date	Invoice #	Type of Property	NC Tax 4.75%	County Tax 2.25%	Name of County
		TOTAL	\$	\$	

I certify that the above figures do not include any tax paid on supplies, tools and equipment which were used to perform this contract and only includes those building materials, supplies, fixtures and equipment which actually became a part of or annexed to the building or structure. I certify that, to the best of my knowledge, the information provided here is true, correct, and complete.

Sworn to and subscribed before me,

This the _____ day of
_____, 20____

Signed

Notary Public

My Commission
Expires: _____

Print or Type Name of Above & Title

Seal

NOTE:

This certified statement may be subject to audit.

The North Carolina General Assembly has amended the Statute to provide refunds of sales and use tax to local school units in accordance with the provisions of G.S. 105-164. 14(c) effective with tax paid on or after July 1, 1998.

These refunds are to include the “sales and use taxes paid by contractors on building materials, supplies, fixtures and equipment that become a part of or annexed to a building or structure that is owned or leased by the governmental entity and is being erected, altered or repaired for use by the governmental entity (G.S. 105-164.14).”

Sales and Use Tax Technical Bulletin Section 18-2F specifies: “To substantiate a refund claim for sales or use taxes paid on purchases of building materials, supplies, fixtures and equipment by its contractor, the claimant must secure from such contractor certified statements setting forth all of the following information:

- a. the date the property was purchased;
- b. the type of property purchased ;
- c. the project for which the property was used;
- d. if the property was purchased in this State, the county in which it was purchased;
- e. if the property was not purchased in this State, the county in which the property was used; and
- f. the amount of sales and use taxes paid.

In the event the contractor makes several purchases from the same vendor, such certified statement must indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices and the State and local sales and use taxes paid thereon. Such statement must also include the cost of any tangible personal property withdrawn from the contractor's warehouse stock and the amount of sales and use tax paid thereon by the contractor. Similar certified statements by his subcontractors must be obtained by the general contractor and furnished to the claimant. Any local sales or use taxes must be shown separately from the State sales or use taxes. The contractor's statements must not contain sales or use taxes paid on purchases of tangible personal property purchased by such contractors for use in performing the contract which does not annex to, affix to or in some manner become a part of the building or structure that is owned or leased by a governmental agency and is being erected, altered or repaired for use by a governmental entity as defined by G.S. 105-164.14(c). Examples of property on which sales or use tax has been paid by the contractor and which shall not be included in the contractor's statement are scaffolding, forms for concrete, fuel for the operation of machinery and equipment, tools, repair parts and equipment rentals.

Please read entire specification package. You will be held accountable for all information. NO payment shall be made if specifications are not followed.

Scope: Work shall consist of furnishing all labor, materials, equipment and services, incidental for the completion of work as described herein. All items not specifically mentioned in the specifications, but which obviously are required to make the job complete, shall be included automatically.

Project Description: The Work consists of renovating two adjacent existing multi fixture restrooms to meet current ADA and building code compliance. The work is interior to the building only and requires general building plumbing work with minor mechanical, electrical and low voltage alterations.

Qualifications: All bidders must furnish a list of North Carolina Contractor Licenses, which they hold.

Contractor's Responsibility: The Contractor shall be responsible for the construction site during the performance of the work. The Contractor shall be responsible for any and all damages to persons and property during the performance of the work and shall further provide all necessary safety measures and shall fully comply with all federal state and local laws, building rules, rules and regulations to prevent accidents or injury to persons or property on or about the location of the work site. This is to include OSHA 1910, General Construction, or those regulations mandated by these specifications. Special attention will be made to proper barricading of the work areas due to the work progressing within an actively operating office atmosphere.

Safety Regulations: The Contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974 Federal Register) which is hereby incorporated in these specifications.

Codes: All work shall be done in accordance with the specifications and shall comply with North Carolina Building Code, Underwriters' Rules and Regulations and Federal, State and Local Regulations covering work of this nature. Whenever drawings or specifications are in excess of such laws, codes and regulations, the specifications shall hold. All equipment shall have U. L. labels attached.

Permits: The Contractor must secure all permits required for the job completion, obtain and deliver to Owner, all certification of inspection issued by the authorities having jurisdiction, with Contractor paying cost of same. Permitting is through the Permitting Division of Buncombe County and Western North Carolina (WNC) Regional Air Quality Agency. **All final certificates must be delivered to owner prior to request for final payment.**

Work Schedule: Work may be completed during school hours as coordinated with school staff. Major demolition work to be completed and cleaned outside of school hours. Purchase order will be issued within a few days after Bids are received. Project completion by February 1, 2016.

Workers on Job: All employees of the Contractor shall, while on Buncombe County Board of Education property, act in a professional and courteous manner. All workers shall be expected to wear long pants and shirts while on Board property. Also, all employees of the Contractor must "sign in" in the main office upon entering the facility and must "sign out" upon leaving the property. Any employee of the Contractor may be told to leave the property by either the Principal or the Assistant Director, if they do not follow the above procedure. The employee shall be replaced with another at no additional cost to the Buncombe County Board of Education.

In accordance with G.S. 14-208.18, all persons who (1) are required to register under the Sex Offender and Public Protection Program AND (2) have been convicted of certain sexually violent offenses or any offense where the victim was under the age of 16 years at the time of the offense are expressly forbidden to knowingly be present on any property owned or operated by the school system, including school buildings, athletic fields, playgrounds, parking lots, school buses, activity buses or other property of any kind for any reason, including

attendance at sporting events or other school related functions, whether before, during or after school hours. It is the responsibility of the contractor or vendor that their employees and sub-contractors are in accordance with G.S. 14-208.18.

E-Verify: Contractor shall comply with E-Verify, the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law and as in accordance with N.C.G.S. §64-25 et seq. In addition, to the best of Contractor's knowledge, any subcontractor employed by Contractor as a part of this contract shall be in compliance with the requirements of E-Verify and N.C.G.S. §64-25 et seq.

Iran Divestment Act: North Carolina Local Government Units may not enter into contracts with any entity or individual found on the State Treasurer's Iran Final Divestment List N.C.G.S. 143C-6A. By bidding on this project the bidder certifies it is not listed on the Final Divestment List created by the State Treasurer.

Equipment and Tools: The Contractor shall use no equipment or tools that are owned by the Buncombe County Board of Education. Also, no employees of the Buncombe County Board of Education shall be utilized by the Contractor except for opening locked doors and giving directions.

Materials: No materials shall be stored on site and the Buncombe County Board of Education is not responsible for any materials, equipment or tools lost or stolen from the site.

Clean Up: The area of work shall be cleaned daily so that the Buncombe County Board of Education shall not incur any additional costs to make the area suitable for the work process. Also, the Contractor shall utilize no trash receptacles or dumpsters owned by the Buncombe County Board of Education. All trash and removed materials shall be properly disposed of off the property.

Performance of Work: All work shall be performed at the highest level of quality. The Owner shall be responsible for determining the quality of work, and may notify the Contractor of same. **ANY WORK COMPLETED THAT IS NOT SUITABLE TO THE OWNER SHALL BE REPEATED BY THE CONTRACTOR AT NO COST TO THE OWNER.** Any damage to existing area or utilities will be the responsibility of the Contractor. **NO EXCEPTIONS.**

Bonds: The budget for this project is below Buncombe County Schools' formal range. Bonds will not be required for this project

The Buncombe County Board of Education reserves the right to reject any or all bids
for any or no reason, and to waive informalities.

SECTION 01100 - SUMMARY

PART 1 - GENERAL

1.1 PROJECT INFORMATION

- A. Project: 17-Enka Middle School Restrooms Renovation
 - 1. Project Location: 390 Asbury Road, Candler, NC 28715
- B. Owner: Buncombe County Board of Education.
- C. Architect: Mary Beth Kingston, Assistant Director of Facilities, Buncombe Co. Schools
- D. The Work consists of renovating two existing student restrooms providing one accessible toilet and relocating 3 existing fixtures total in each restroom. Toilets and Toilet partitions are to be replaced. Re-use or replace lavatories, urinal and faucets and flush valves as noted. All new finishes will be provided.
- E. Work by Owner: none
- F. Work Under Separate Contracts: none

1.2 WORK RESTRICTIONS

- A. Contractor's Use of Premises: During construction, Contractor will have full use of the space indicated. Contractor's use of premises is limited only by Owner's right to perform work or employ other contractors on portions of Project and as follows:
 - 1. Major demolition work to be completed outside of school hours. Coordinate other work daily with the school principal to prevent disruption of instruction.
 - 2. Dust partition and containment to be provided throughout the work.
 - 3. Provide fresh walk off matt daily. Adjacent corridor to be kept clean and clear of debris at all times.
 - 4. Limits: Contractor may work outside. Coordinate area with School staff.
- B. Tobacco products and weapons: Tobacco products and weapons are not permitted within the building or on school property.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01100

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Water and Electric Power: Available from Owner's existing system without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- B. Accessible Temporary Egress if required: Comply with applicable provisions in ICC/ANSI A117.1.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

- A. Provide field offices, storage and fabrication sheds, and other support facilities as necessary for construction operations. Store combustible materials apart from building.

2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Protect Permanent HVAC System:
 - 1. Permanent HVAC System: Protect permanent HVAC system for temporary use during construction, provide filter at each return-air grille in system and remove at end of construction.

PART 3 - EXECUTION

3.1 TEMPORARY UTILITY INSTALLATION

- A. Sanitary Facilities: Contractor may use one toilet room as coordinated with the school staff. Contractor to maintain and leave clean.
- B. Cooling or de-humidification: Provide temporary cooling or de-humidification required 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.

SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

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

3.2 SUPPORT FACILITIES INSTALLATION

- A. Install project identification and other signs in locations approved by Owner if required to inform the public and persons seeking entrance to Project.
- B. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- C. Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
- D. Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner from fumes and noise.

3.4 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. 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.

END OF SECTION 01500

SECTION 01701 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 CLOSEOUT PROCEDURES

- A. Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
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. 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.
 3. Deliver tools, spare parts, extra materials, and similar items.
 4. Make final changeover of permanent locks and deliver keys to Owner.
 5. Remove temporary facilities and controls.
 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 7. Complete final cleaning requirements, including touchup painting.
 8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will proceed with inspection or advise Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.
- C. Request inspection for Final Completion, once the following are complete:
1. Submit a copy of Substantial Completion inspection list stating that each item has been completed or otherwise resolved for acceptance.
 2. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- D. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
- E. Submit a written request for final inspection for acceptance. On receipt of request, Architect will proceed with inspection or advise Contractor of unfulfilled requirements. Architect will prepare final Certificate for Payment after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

SECTION 01701 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. 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.
 - 1. Verify compatibility with and suitability of substrates.
 - 2. Examine roughing-in for mechanical and electrical systems.
 - 3. Examine walls, floors, and roofs for suitable conditions.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.
- D. Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Surface and Substrate Preparation: Comply with manufacturer's written recommendations for preparation of substrates to receive subsequent work.

3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING

- A. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks.

3.3 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated. Make vertical work plumb and make horizontal work level.
 - 1. Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections to form hairline joints.
 - 2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 - 3. Maintain minimum headroom clearance of 8'-4" in occupied spaces.
- B. Comply with manufacturer's written instructions and recommendations.
- C. 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.

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SECTION 01701 - EXECUTION AND CLOSEOUT REQUIREMENTS

- D. Use products, cleaners, and installation materials that are not considered hazardous.
- E. Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.

3.4 CUTTING AND PATCHING

- A. Provide temporary support of work to be cut. Do not cut structural members or operational elements without prior written approval of Architect.
- B. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- C. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - 2. 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.

3.5 CLEANING

- A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.
 - 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.
 - 3. Remove debris from concealed spaces before enclosing the space.
- B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:
 - 1. Remove labels that are not permanent.
 - 2. Clean transparent materials, including mirrors. Remove excess glazing compounds. Replace chipped or broken glass.
 - 3. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Sweep concrete floors broom clean.
 - 4. Vacuum carpeted surfaces and wax resilient flooring.
 - 5. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication. Clean light fixtures, lamps, globes, and reflectors.

SECTION 01701 - EXECUTION AND CLOSEOUT REQUIREMENTS

6. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits. Rake grounds to a smooth, even-textured surface.

END OF SECTION 01701

01732 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Items indicated to be removed and salvaged remain Owner's property. Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse. Include fasteners or brackets needed for reattachment elsewhere.
- B. Comply with EPA regulations and hauling and disposal regulations of authorities having jurisdiction. Comply with ANSI A10.6 and NFPA 241.
- C. Pre-demolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces. Submit before Work begins.
- D. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- E. It is not expected that hazardous materials will be encountered in the Work. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 DEMOLITION

- A. Requirements for Building Reuse:
 - 1. Maintain existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing, excluding window assemblies and nonstructural roofing material) not indicated to be demolished; do not demolish such existing construction beyond indicated limits.
 - 2. Maintain existing interior nonstructural elements (interior walls, doors, floor coverings, and ceiling systems) not indicated to be demolished; do not demolish such existing construction beyond indicated limits.
- B. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of the building.

01732 - SELECTIVE DEMOLITION

- C. Locate, identify, shut off, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
- D. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- E. 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.
- F. Provide temporary weather protection to prevent water leakage and damage to structure and interior areas.
- G. Protect walls, ceilings, floors, and other existing finish work that are to remain. Erect and maintain dustproof partitions. Cover and protect furniture, furnishings, and equipment that have not been removed.
- H. 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.
- I. Promptly remove demolition waste materials from Project site and legally dispose of them. Do not burn demolished materials.
- J. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before demolition operations began.

END OF SECTION 01732

SECTION 04200 – UNIT MASONRY

PART 1 GENERAL

1.01 SUMMARY

- A. Provide concrete unit masonry and water repellent coating where shown on the Drawings, as specified herein and as needed for a complete and proper installation.
- B. Description of work required include:
 - 1) Concrete unit masonry (standard).

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Delivery, Storage, and Handling:
 - 1) Delivery masonry materials to project in undamaged condition.
 - 2) Store and handle masonry units to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion or other causes.
 - 3) Store cementitious materials off the ground, under cover and in dry location.
 - 4) Store aggregates where grading and other required characteristics can be maintained.
 - 5) Store masonry accessories including metal items to prevent deterioration by corrosion and accumulation of dirt.
- C. Project Conditions:
 - 1) Do not apply concentrated loads for at least 3 days after building masonry walls or columns.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

General: Comply with referenced standards and other requirements indicated below applicable to each form of concrete masonry unit required.

Provide special shapes where required for lintels, corners, jambs, sash, control joints, headers, bonding and other special conditions.

Provide bullnose units for outside corners for interior masonry unless otherwise indicated.

SECTION 04200 – UNIT MASONRY

Standard Concrete Block: Provide units complying with characteristics indicated below for grade, type, face size, exposed face, and under each form of block included, for weight classifications.

Size: Manufacturer's Standard units with nominal face dimensions of 16" long x 8" high (15 5/8" x 7 5/8" actual) x thickness indicated.

Grade N, Type I: Moisture-controlled units, with unit compressive strength net area of 2,000 psi.

Color: Interior units to be standard color.

Aggregate: All aggregate used in these concrete masonry units shall conform to ASTM specifications C-331 "Lightweight Aggregates for Concrete Masonry Units", shall be expanded shale produced by rotary kiln process, equal to 100% Solite or approved substitute, and shall be graded to assure constant texture. The use of coal cinder aggregate so-called bottom ash, or similar waste products will not be allowed. The blending of screenings or any other deleterious substance which will impair the fire rating or the insulation value of the unit is prohibited. All units shall be free of organic impurities that will cause rusting, staining, or pop-outs and shall contain no combustible matter.

The air dry weights of all units shall not exceed the following:

4 x 8 x 16--16 pounds	4 x 8 x 16--75% solid--22 pounds
6 x 8 x 16--24 pounds	6 x 8 x 16--75% solid--29 pounds
8 x 8 x 16--26 pounds	8 x 8 x 16--75% solid--38 pounds
12 x 8 x 16--37 pounds	12 x 8 x 16--75% solid--58 pounds

All 8" or larger units shall meet UL requirements for two (2) hours or better rating (as required) and certification of this by a qualified independent testing laboratory shall be furnished to the Architect at the beginning of the concrete masonry work on the job.

Weight: Lightweight units using aggregate, ASTM C-331 producing dry net unit weight of not more than 95#/c.f. unless indicated.

Curing: Cure units in a moisture-controlled atmosphere or in an autoclave at normal pressure and temperature to comply with ASTM C 90, Type I. Limit moisture absorption during delivery and until time of installation to the maximum percentage specified for Type I units for the average annual relative humidity as reported by the U. S. Weather Bureau Station nearest the project site.

Exposed Faces: Manufacturer's standard color and texture, unless otherwise indicated.

Hollow Loadbearing Block: ASTM C90 and as follows:

Weight Classification: Lightweight.

For use in exterior walls above and below grades and for interior partitions and backup.

75% Solid Loadbearing Block: ASTM C145, Grade N, lightweight.

Fire Rating: U.L. 618.

SECTION 04200 – UNIT MASONRY

2.02 MORTAR AND GROUT MATERIALS:

Portland Cement: ASTM C150, Type I or II. Colored mortar will be used for all exterior masonry. All other mortar to be standard gray color.

For colored pigmented mortars use premixed colored masonry cements of formulation required to produce color as selected from manufacturer's standard formulations.

Hydrated Lime: Shall meet the requirements of the standard specification for hydrated lime for masonry purposes (ASTM C 207), Type S.

Hydraulic Hydrated Lime: Meet the requirements of the standard specification for hydraulic hydrated lime for structural purposes (ASTM C 141).

Aggregate for Mortar: Sand shall meet the requirements of standard specification for aggregate for masonry mortar (ASTM C 144 84), with the gradation to satisfy paragraph 4, grading and with the omission of sub-paragraph 4.4.

Aggregate for Grout: ASTM C 404.

Water: Clean and potable.

Admixture: Provide in job mixed and pre-packaged mix. Workability, moisture resistance and air entraining admixture per ASTM C 260. Omicron or equal.

2.03 ON THE JOB MORTAR MIX:

If job mixed mortar is to be used, it shall be Type S mortar and shall have a compressive strength of 1,800 psi minimum at 28 days. The mortar shall be proportioned within the following volumetric limits:

1 part portland cement

1/2 part hydrated lime

Not less than 2 1/4 or more than 3 times the sum of volumes of cement and lime used of sand measured in a damp, loose condition.

Plasticizer per instructions of the manufacturer, the quantity of which is not to exceed 2% by volume of the cement and lime combination.

2.05 JOINT REINFORCEMENT, TIES AND ANCHORING DEVICES:

Materials: Comply with requirements indicated below for basic materials and with requirements indicated under each form of joint reinforcement, tie and anchor for size and other characteristics:

For all types, hot-dip galvanize after fabrication with 1.5 oz. zinc coating, ASTM A-123, Class B2. Provide all corner units, T-units as required.

Continuous Wire Reinforcing and Ties for Masonry: Provide welded wire units prefabricated in straight lengths of not less than 10', with matching corner and tee units. Fabricate from cold-

SECTION 04200 – UNIT MASONRY

drawn steel wire complying with ASTM A-82, deformed continuous side rods and plain cross-rods, unit width of 1 1/2" to 2" less than thickness of wall/partition. Provide units fabricated as follows:

Interior and Exterior Single Width Partitions: Truss type fabricated with single pair 3/16 gauge side rods and 9 gauge continuous diagonal cross-rods spaced not more than 16" o.c. vertically.

Anchors and Ties: Provide straps bars, bolts, rods fabricated from not less than 16 gauge sheet metal or 3/8" diameter rod stock, unless otherwise indicated.

Flexible Anchors: Where masonry is indicated to be anchored to structural framework with flexible anchors, provide 2-piece anchors which will permit horizontal and vertical movement of masonry but will provide lateral restraint. Provide dovetail anchor for concrete structure and welded wire anchor for steel structure.

Metal Fasteners for Steel Studs: Steel drill screws, #10 diameter x length required to penetrate steel stud flange by not less than 3 exposed threads, complying with ASTM C 954 except with hex washer head and neoprene washer, cadmium-plated.

2.06 MISCELLANEOUS MASONRY ACCESSORIES:

Reinforcing Bars: Deformed steel, ASTM A 615, Grade 60.

Non-Metallic Expansion Joint Strips: Pre-molded, flexible cellular neoprene rubber filler strips complying with ASTM D 1056, Grade RE41E1, capable of compression up to 35%, of width and thickness indicated.

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

2.07 MASONRY CLEANERS:

Detergent Cleaner: Job mixed solution of trisodium phosphate (1/2 cup dry measure) and laundry detergent (1/2 cup dry measure) dissolved in one gallon water.

2.08 MORTAR AND GROUT MIXES:

General: Do not add admixtures including other admixtures, except as already identified. Do **not** use calcium chloride in mortar or grout.

Mixing: Combine by volume measurement and thoroughly mix cementitious, water and aggregates in a mechanical batch mixer; comply with referenced ASTM standards for mixing time and water content.

Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification, for types of mortar required, unless otherwise indicated.

Limit cementitious materials in mortar to portland cement-lime.

SECTION 04200 – UNIT MASONRY

The method of measuring materials shall be by volume, and shall be such that the specified proportions of the mortar materials can be controlled and accurately maintained. A measuring device to make consistent volume measurements shall be used throughout the project. Measurement of sand by shovel shall not be permitted.

Use Type S mortar for all masonry and where indicated.

Mortar mixer shall be paddle-type mechanical mixer, design and size to accommodate mix without overloading, and be adequately powered to vigorously mix the ingredients. Mixer shall be charged in the following order: Add approximately one-half the water required, one-half the sand, the cement and lime (or prepackaged mortar mix), the remaining amount of sand, and then sufficient water to bring the mix to desired consistency. Mortar shall be mixed for minimum of five minutes after materials have been charged into mixer with all batches being mixed to same consistency.

Mortars that have stiffened because of evaporation of water from the mortar may be retempered by adding water as frequently as needed to restore the required consistency. Mortars shall be used and placed in their final position within two hours after mixing. When the temperature is over 80 deg. F the mortar shall be used within 1 1/2 hours after mixing. Mortar not used within these periods shall be discarded.

Grout for Unit Masonry: Comply with ASTM C 476 for grout for use in construction of reinforced and non-reinforced unit masonry. Use grout of consistency indicated or if not otherwise indicated, of consistency (fine or coarse) at time of placement which will completely fill all spaces intended to receive grout.

Use fine grout in grout spaces less than 2" in horizontal direction, unless otherwise indicated.

Use coarse grout in grout spaces 2" or more in least horizontal dimension, unless otherwise indicated.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

Leave openings for equipment to be installed before completion of masonry work. After installation of equipment, complete masonry work to match work immediately adjacent to the opening.

Cut masonry units using motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required to provide continuous pattern and to fit adjoining work. Use full-size units without cutting where possible. Use dry cutting saws to cut concrete masonry units.

3.02 CONSTRUCTION TOLERANCES:

Variation from Plumb: For vertical lines and surfaces of columns, walls and arises do not exceed 1/4" in 10', or 3/8" in a story height not to exceed 20', nor 1/2" in 40' or more. For external corners, expansion joints, control joints and other conspicuous lines, do not exceed 1/4" in any story or 20' maximum, nor 1/2" in 40' or more. For vertical alignment of head joints, do not exceed plus or minus 1/4" in 10', 1/2" maximum.

Variation from Level: For bed joints and lines of exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines, do not exceed 1/4" in any bay or 20' maximum, nor 1/2" in 40' or

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more. For top surface of bearing walls do not exceed 1/8" between adjacent floor elements in 10' or 1/16" within width of a single unit.

Variation of Linear Building Line: For position shown in plan and related portion of columns, walls and partitions, do not exceed 1/2" in any bay or 20' maximum, nor 3/4" in 40' or more.

Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4" nor plus 1/2".

Variation in Mortar Joint Thickness: Do not exceed bed joint thickness indicated by more than plus or minus 1/8", with a maximum thickness limited to 1/2". Do not exceed head joint thickness indicated by more than plus or minus 1/8".

3.03 LAYING MASONRY WALLS:

Layout walls in advance for accurate spacing of surface bond patterns with uniform joint widths and to accurately locate openings, movement-type joints, returns and offsets. Avoid the use of less than half size units at corners, jambs and wherever possible at other locations. Keep cavity clean of mortar droppings.

Lay-up walls to comply with specified construction tolerances, with courses accurately spaced and coordinated with other work.

Pattern Bond: Lay exposed masonry in the bond pattern shown, or if not shown, lay in running bond with vertical joint in each course centered on units in courses above and below or match existing bond pattern where directed. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 2". Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4" horizontal face dimensions at corners or jambs.

Stopping and Resuming Work: Rack back 1/2-unit length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly (if required) and remove loose masonry units and mortar prior to laying fresh masonry.

Built-in Work: As the work progresses, build-in items specified under this and other sections of these specifications. Fill in solidly with masonry around built-in items.

Fill space between hollow metal frames and masonry solidly with mortar, unless otherwise indicated.

Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.

Fill cores in hollow concrete masonry units with grout 3 courses (24") under bearing plates, beams, lintels, posts and similar items, unless otherwise indicated.

3.04 MORTAR BEDDING AND JOINTING:

Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on footings and in all courses of piers, columns and pilasters, and where adjacent to cells or cavities are to be reinforced or filled with concrete

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or grout. For starting course on footings where cells are not grouted, spread out full mortar bed including areas under cells.

Maintain joint widths shown, except for minor variations required to maintain bond alignment. If not shown, lay walls with 3/8" joints.

Cut joints flush for masonry walls that are to be concealed or to be covered by other materials, unless otherwise indicated.

Tooling: All joints shall be tooled to a uniform concave, head joints first and then the bed joints. All joints shall be tooled at approximately the same degree of moisture content and firmness to achieve a uniform color and texture. Exterior brick masonry shall receive tooling joint matching the existing building. Mortar joints of concrete masonry walls scheduled to receive epoxy finish shall be struck smooth to achieve a contoured smooth depression of no more than 1/8 inch to the center of joints.

Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do not pound corners or jambs to shift adjacent stretcher units that have been set in position. If adjustments are required, remove units, clean off mortar and reset in fresh mortar.

Collar Joints: After each course is laid, fill the vertical longitudinal joint between wythes solidly and with mortar for the following masonry work:

All composite exterior walls, except cavity walls, and interior walls and partitions.

3.05 HORIZONTAL JOINT REINFORCEMENT:

General: Provide continuous horizontal joint reinforcement as indicated. Install longitudinal side rods in mortar for their entire length with a minimum cover of 5/8" on exterior side of walls, 1/2" elsewhere. Lap reinforcing a minimum of 6".

Cut or interrupt joint reinforcement at control and expansion joints, unless otherwise indicated.

Reinforce walls with continuous horizontal joint reinforcing unless specifically noted to be omitted.

Provide continuity at corners and wall intersections by use of prefabricated "L" and "T" sections. Cut and bend reinforcement units as directed by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures and other special conditions.

Space continuous horizontal reinforcement as follows:

For multi-wythe walls (solid or cavity) where continuous horizontal reinforcement acts as structural bond or tie between wythes, space reinforcement as required by code but not more than 16" o.c. vertically.

For single-wythe walls, space reinforcement at 16" o.c. vertically, unless otherwise indicated.

Reinforce masonry openings greater than 1'-0" wide, with horizontal joint reinforcement placed in 2 horizontal joints approximately 8" apart, immediately above the lintel and immediately below the sill. Extend reinforcement a minimum of 2'-0" beyond jambs of the opening except at control joints.

SECTION 04200 – UNIT MASONRY

In addition to wall reinforcement, provide additional reinforcement at openings as required to comply with the above.

3.06 GROUTING:

Use low lift or high lift grouting technique with grout mix.

1. Provide minimum clear dimension of 2" and clear area of 8 sq. in. in vertical cores to be grouted.
2. Place vertical reinforcement prior to laying of CMU. Extend above elevation of maximum pour height as required to allow for splicing. Support, in position, at vertical intervals not exceeding 192 bar diameter. Accessories for such support shall be used.
3. Lay masonry to maximum pour height. For low lift grouting, do not exceed 4'-0" height or if bond beam occurs below 4'-0" height, stop pour at course below bond beam. Except at bond beams, terminate grout pours 1 1/2" below top course of pour.
4. Pour grout using container with spout or by chute. Rod grout during placing. Place grout continuously. Do not interrupt pouring of grout for more than one hour.
5. High lift grouting is permissible for one-story, single wythe wall. Clean-out holes shall be provided at the base of each grouted call to verify that grout pour is complete.
6. Bond Beams: Place horizontal reinforcement in bond beams. Lap at corners/intersections shown. Place grout in bond beam course before filling vertical cores above bond beam.

3.07 ANCHORING MASONRY WORK:

General: Provide anchor devices of type indicated.

Anchor masonry to structural members where masonry abuts or faces structural members to comply with the following:

Provide an open space not less than 1 1/4" in width between masonry and structural member, unless otherwise indicated. Keep open space free of mortar or other rigid materials.

Anchor masonry to structural members with flexible anchors embedded in masonry joints and attached to structure.

Space anchors as indicated, but not more than 24" o.c. vertically and 36" o.c. horizontally.

3.08 LINTELS:

Install steel lintels where indicated.

Provide minimum bearing of 8" at each jamb, unless otherwise indicated.

SECTION 04200 – UNIT MASONRY

3.09 REPAIR, POINTING, AND CLEANING:

Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout, pointed to eliminate evidence of replacement.

Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point-p all joints including corners, openings and adjacent work to provide a neat, uniform appearance, prepared for application of sealants. Defective joints shall be cut out and tuckpointed solidly with pre-hydrated mortar. Control mortar so no differences in color or texture will exist with that of adjacent masonry.

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

While laying the brick, good workmanship and job housekeeping practices shall be used so as to minimize the need for cleaning the brick. Protect the base of the wall from mud splashes and mortar droppings, protect the wall by setting scaffolds so that mortar is not deflected onto the wall, and at the end of each day, set the scaffolding boards so that they do not deflect rainfall into newly laid masonry.

The bricklaying technique shall be such that mortar does not run down the face of the wall, or smear the mortar onto the brick face.

After the joints are tooled, cut off mortar tailings with the trowel, and brush excess mortar burrs and dust from the face of brick. Do not bag or sack the wall, but use a bricklayer's brush made with medium soft hair.

Remove all large mortar particles with a hardwood scraper.

If after using the above outlined techniques, additional cleaning of the walls is found necessary, allow the walls to cure one month prior to initiating further cleaning processes.

Saturate the wall with clean water. The wall shall be thoroughly saturated prior to and at the time the cleaning solution is applied.

Clean the wall only with an approved cleaning solution applied with a brush, starting at the top of the wall. Approved cleaning solutions are as follows: Sure-Klean 600, Vanatrol, Superior 800, or approved equal. Approved cleaners shall be composed primarily of detergents, wetting agents, buffering agents, and a maximum of 10% muriatic acid. The use of any of the above cleaning agents shall first be approved in writing by the manufacturer of the brick being cleaned, and the Designer. The concentration, method of application of the cleaning solution, and method of scraping shall be as outlined on the container by the manufacturer.

High pressure water and sandblasting shall not be used for cleaning except with the recommendation of the brick manufacturer, and the written approval of the Designer.

Immediately after cleaning a small area, the wall shall be rinsed thoroughly with quantities of water.

Protect adjacent surfaces and materials during brick cleaning operations.

Clean concrete unit masonry to comply with masonry manufacturer's directions and applicable NCMA "TEK" bulletins.

SECTION 04200 – UNIT MASONRY

Protection: Provide final protection and maintain conditions in a manner acceptable to Installer, which ensures unit masonry work being without damage and deterioration at time of substantial completion.

END OF SECTION 04200

SECTION 05400 - COLD-FORMED METAL FRAMING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Fabricate and erect cold-formed metal framing for interior non-load bearing walls and ceilings as shown or noted.
- B. Calculate structural characteristics of cold-formed metal framing according to AISI's "Specification for the Design of Cold-Formed Steel Structural Members." Provide seismic bracing and horizontal cold formed bracing where recommended by the manufacturer.
- C. Comply with AWS D1.1,"Structural Welding Code--Steel," and AWS D1.3, "Structural Welding Code--Sheet Steel."
- D. Protect cold-formed metal framing from corrosion and other damage during delivery, storage, and handling.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Galvanized Steel Sheet: ASTM A 653, G60 (ASTM A 653M, Z180) zinc coated; structural quality; Grade 33 (Grade 230) Class 1 of grade required by structural performance.
- B. C/H studs of gauge and depths indicated to meet NER or UL rating and for spans recommended by the manufacturer. Studs shall be 20 ga minimum except where wall heights 10'-0" or less.
- C. J runner of depth necessary to house C/H studs with double slip track, at wall to ceiling joint and roof, and gauge for spans recommended by manufacturer. Fasten J runner to roof deck and install wall framing with 1/2" gap to allow flex of roof system. Do not fasten J runner to wall framing.

2.2 ACCESSORIES

- A. Mechanical Fasteners: Corrosion-resistant coated, self-drilling, self-threading steel drill screws.

PART 3 - EXECUTION

3.1 FRAMING

SECTION 05400 - COLD-FORMED METAL FRAMING

- A. Install framing and accessories level, plumb, square, and true to line, and securely fasten. Temporarily brace framing. Comply with all UL and NER assembly details.
- B. Fasten framing members by screw fastening. All jambs and headers shall be fully boxed.
- C. Fasten reinforcement plates over web penetrations larger than standard punched openings.
- D. Studs: Install, align, and securely anchor continuous tracks to supporting structure. Squarely seat studs against webs of top and bottom tracks. Space studs as indicated; plumb, align, and fasten both flanges of studs to top and bottom track. Bottom plate shall be fastened to concrete slab w/ powder actuated fasteners on 16 centers or as recommended by the manufacturer.
 - 1. Install and fasten horizontal bridging, cold rolled steel, in stud system, spaced in rows not more than 72 inches (1829 mm) apart vertically.
 - 2. Install steel-sheet diagonal bracing straps to both stud flanges, terminate at and fasten to reinforced top and bottom track and anchor to structure. Install miscellaneous connections, accessories, and supplementary framing. Outriggers shall be constructed of studs with bent plate and attached to structure above and top plate or walls and shall avoid violation of rated assemblies.
 - 3. Install diagonal bracing from top plate of wall to structure above and with metal studs fastened to top plate and spaced at 6'-0" or max.
 - 4. Install deep flange track fastened to structure and housing wall top plate with gap for differential movement wherever structure may possibly deflect.
- E. Joists: Install, align, and securely anchor perimeter joist track. Install joists bearing on supporting framing or fastened as shown, level, straight, and plumb, adjust to final position, brace, and reinforce. Fasten joists to both flanges of joist track.
 - 1. Install bridging and fasten bridging at each joist intersection.
 - 2. Install miscellaneous joist framing and connections, including web stiffeners, closure pieces, clip angles, continuous angles, hold-down angles, anchors, and fasteners.
- F. Above ceiling framing to roof decks is required at restrooms. Install 5/8" gyp both sides and tape joints. Seal perimeter for sound isolation.

END OF SECTION 05400

SECTION 09300 – CERAMIC TILE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of 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. Glazed wall tile.
- 2. Floor tile.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data and color selection charts for: 2" x 2" matted ceramic floor tile, standard grout color selection chart and wall base selection chart.
- C. Samples for initial selection purposes in form of manufacturer's color charts consisting of actual tiles or sections of tile showing full range of colors, textures, and patterns available for each type and composition of tile indicated. Include samples of grout and accessories involving color selection.

1.4 QUALITY ASSURANCE

- A. Single-Source Responsibility for Tile: Obtain each color, grade, finish, type, composition, and variety of tile from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.
- B. Single-Source Responsibility for Setting and Grouting Materials: Obtain ingredients of a uniform quality from one manufacturer for each cementitious and admixture component and from one source or producer for each aggregate.
- C. Installer Qualifications: Engage an experienced Installer who has successfully completed tile installations similar in material, design, and extent to that indicated for Project.

1.5 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 of ANSI A137.1 for labeling sealed tile packages.

- B. Prevent damage or contamination to materials by water, freezing, foreign matter, and other causes.
- C. Handle tile with temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If despite these precautions coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.6 PROJECT CONDITIONS

- A. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
- B. Vent temporary heaters to exterior to prevent damage to tile work from carbon dioxide buildup.
- C. Maintain temperatures at 50 deg F (10 deg C) or more in tiled areas during installation and for 7 days after completion, unless higher temperatures are required by referenced installation standard or manufacturer's instructions.

1.7 EXTRA MATERIALS

- A. Deliver extra materials to Owner. Furnish extra materials that match products installed as described below, packaged with protective covering for storage and identified with labels clearly describing contents.
- 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed, for each type, composition, color, pattern, and size.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Wall base and porcelain mosaic floor tile:
 - a. American Marrazzi Tile, Inc.
 - b. American Olean Tile Co., Inc.
 - c. Buchtal Corp. USA
 - d. Dal-Tile Corp.
 - e. International American Ceramics/Laufen
 - f. Mid-State Tile Co.
 - g. Monarch Tile Manufacturing, Inc.

- h. Summitville Tiles, Inc.
- i. United States Ceramic Tile Co.
- j. Villeroy & Boch (U.S.A.) Inc.
- k. Wenczel Tile Co. of Florida

2.2 PRODUCTS, GENERAL

- A. ANSI Standard for Ceramic Tile: Comply with ANSI A137.1 "American National Standard Specifications for Ceramic Tile" for types, compositions, and grades of tile indicated.
 - 1. Furnish tile complying with "Standard Grade" requirements unless otherwise indicated.
- B. ANSI Standard for Tile Installation Materials: Comply with ANSI standard referenced with products and materials indicated for setting and grouting.
- 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 complying with the following requirements:
 - 1. Match Architect's sample.
 - 2. Match color, texture, and pattern indicated by reference to manufacturer's standard designations for these characteristics.
 - 3. Provide selections made by Architect from manufacturer's full range of standard colors, textures, and patterns for products of type indicated.
 - 4. Provide tile trim and accessories that match color and finish of adjoining flat tile.
- D. Factory Blending: For tile exhibiting color variations within the ranges selected during sample submittals, blend tile in factory and package accordingly so that tile units taken from one package show the same range in colors as those taken from other packages and match approved samples.
- E. Mounting: Where factory-mounted tile is required, provide back- or edge-mounted tile assemblies as standard with manufacturer unless another mounting method is indicated.
- F. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating them with an approved sealer. Do not coat unexposed tile surfaces.

2.3 TILE PRODUCTS AND MANUFACTURERS:

- A. Porcelain Tile: Provide flat tile complying with the following requirements:
 - 1. Nominal Facial Dimensions: 2 inches by 2 inches, on factory back-mounting.
- B. Trim Units: Provide tile trim units to match characteristics of adjoining flat tile and to comply with following requirements:
 - 1. Size: As indicated, coordinated with sizes and coursing of adjoining flat tile where applicable.
 - 2. Shapes: As follows, selected from manufacturer's standard shapes:

- a. Base for Thinset Mortar Installations: Bullnose top
- b. External Corners for Thinset Installations: Surface bullnose.
- c. Internal Corners: Field-buttet square corners.

- C. Floor tile products by the following approved manufacturers:
 - 1. Florida Tile
 - 2. Dal Tile
 - 3. American Olean

- D. Thresholds: Schluter Reno-Ramp aluminum threshold at hollow metal door frame to meet ADA requirements for slope and transition.

- E. Uncoupling Underlayment: 1/8" Schluter Ditra

- F. Backer rod complying with ASTM D 1056

- G. Elastomeric Joint Sealant: Comply with ASTM C 920
 - 1. Base polymer: Urethane
 - 2. Type: M – Multi-part component
 - 3. Grade: NS (non sag)
 - 4. Class: 25
 - 5. Use related to exposure: T (Traffic)
 - 6. Uses related to joint substrates: masonry, aluminum
 - 7. Primers: As required by sealant manufacturer for substrates indicated
 - 8. Products: Mameco "Vulkem 227", Pecora Corp. "Dynatred", Tremco "TAC-901".

2.4 2.5 SETTING MATERIALS

- A. Unmodified Thin-set Mortar: ANSI A118.1, composition as follows:
 - 1. Prepackaged dry factory-sanded Portland cement mortar mix to which only water is added at job site.

2.6 GROUTING MATERIALS

- A. Epoxy Grout: Chemical resistant and water cleanable. Supplied in two or more parts to be mixed immediately before use as a joint filling grout and that is partially emulsified by water, after mixing, in order to expedite cleaning from tile surfaces during application before the epoxy hardens. Per ANSI A108.6

- 1. To be stored at 60 to 90 degrees F for a period of 48 hours prior to use.

2.8 MIXING MORTARS AND GROUT

- A. Mix mortar and grout to comply with requirements of referenced standards and manufacturers including those for accurate proportioning of materials, water, or additive content; type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other procedures needed to produce mortars and grouts of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and areas 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, and free from oil or waxy films and curing compounds.
 - 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 before installing tile.
- B. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Blending: For tile exhibiting color variations within the ranges selected during sample submittals, verify that tile has been blended in factory and packaged accordingly so that tile units taken from one package show the same range in 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.

3.3 INSTALLATION, GENERAL

- A. ANSI Tile Installation Standard: Comply with parts of ANSI 108 series of tile installation standards included under "American National Standard Specifications for the Installation of Ceramic Tile" that apply to type of setting and grouting materials and methods indicated.
- B. TCA Installation Guidelines: TCA "Handbook for Ceramic Tile Installation"; comply with TCA installation methods indicated.
- C. Extend tile work into recesses and under or behind equipment and fixtures to form a complete covering without interruptions except as otherwise shown. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- D. 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 that plates, collars, or covers overlap tile.

- E. Jointing Pattern: Unless otherwise shown, lay tile in grid pattern. Align joints when adjoining tiles on floor, 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 shown.
1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so that extent of each sheet is not apparent in finished work.
- F. Setting Tile:
1. Apply the thin-set mortar (mixed to a fairly fluid consistency, but still able to hold a notch) using a 1/4" x 3/16" v-notched trowel.
 2. Apply uncoupling underlayment to the floor, fleece side down. Work underlayment into the mortar until fleece is fully embedded in the bonding mortar throughout its entire surface. Joining sections to abut to end and side sections of adjacent sheets.
 3. Apply thin-set mortar and solidly embed tiles in setting material.
- G. Grout tile to comply with the requirements of the following installation standards:
1. For ceramic tile epoxy grout, comply with ANSI A108.6.
 2. Allow tile to set for 48 hours prior to applying epoxy grout.
 3. At 65 minutes, 80 minutes and 95 minutes after mixing is complete, apply the material to the smooth face of a clean, dry tile.
 4. The material shall be spread in a thin layer and stick to the tile.
 5. After scraping the excess material from the tile with a putty knife, use a clean cellulose sponge and water at 70-77 degrees F to clean the remaining material from the tile. Water cleanability is indicated when the wet sponge removes the remaining epoxy leaving no lumps, color or streaks. With some epoxies the cleaning water may turn milky during the first stages of clean up.
 6. Mixed material shall be spreadable and water cleanable at 80 minutes.

3.4 CLEANING AND PROTECTION

- A. Cleaning: Upon 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 noted above.
 2. Unglazed tile may be cleaned with acid solutions only when permitted by tile and grout manufacturer's printed instructions, but no sooner than 14 days after installation. Protect metal surfaces, cast iron, and vitreous plumbing fixtures from effects of acid cleaning. Flush surface with clean water before and after cleaning.
 3. Remove temporary protective coating by method recommended by coating manufacturer that is acceptable to brick and grout manufacturer. Trap and remove coating to prevent it from clogging drains.
- B. Finished Tile Work: Leave finished installation clean and free of cracked, chipped, broken, unbonded, and otherwise defective tile work.
- C. Provide final protection and maintain conditions in a manner acceptable to manufacturer and installer that ensures that tile is without damage or deterioration at time of Substantial

Completion.

1. Apply a protective coat of neutral protective cleaner to completed tile walls and floors. Seal unglazed porcelain ceramic tile with an approved sealer. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.
 2. Prohibit foot and wheel traffic from tiled floors for at least 3 days after grouting is completed.
- D. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

END OF SECTION 09300

SECTION 09511 - ACOUSTICAL TILE CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes acoustical panel ceilings installed with exposed suspension systems. Match existing, adjacent ceiling tile and grid system pattern, size, color, fire rating, and accessories to the greatest degree possible where not specified.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
 - 1. Product data for each type of product specified.
 - 2. Grid and tile samples which match grid and tile color and pattern of existing adjacent products.
 - 3. Qualification data for firms and persons specified in "Quality Assurance" article to demonstrate their capabilities and experience. Include list of completed projects with project names, addresses, names of Architects and Owners, and other information specified.
 - 4. Product test reports from qualified independent testing laboratory that are based on its testing of current products for compliance of acoustical ceiling systems and components with requirements.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has successfully completed acoustical ceilings similar in material, design, and extent to those indicated for Project.
- B. Fire-Performance Characteristics: Provide acoustical ceilings that are identical to those tested for the following fire-performance characteristics, per ASTM test method indicated below, by UL or other testing and inspecting organizations acceptable to authorities having jurisdiction. Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.
 - 1. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 for Class A products.

SECTION 09511 - ACOUSTICAL TILE CEILINGS

- a. Flame Spread: 25 or less.
 - b. Smoke Developed: 50 or less.
- 2. Fire-Resistance Ratings: See drawings to determine extent of fire-rated ceilings, if any. As indicated by reference to design designations in UL "Fire Resistance Directory," for types of assemblies in which acoustical ceilings function as a fire- protective membrane and tested per ASTM E 119. Fire rated ceiling assembly in new toilet rooms, activity room, and existing building.
 - a. Protect lighting fixtures and air ducts to comply with requirements indicated for rated assembly. Tent fixtures to provide 1-hour rating.
- C. Single-Source Responsibility for Ceiling Units: Obtain each type of acoustical ceiling unit from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.
- D. Single-Source Responsibility for Suspension System: Obtain each type of suspension system from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.
 - 1. Obtain suspension system from same manufacturer that produces acoustical ceiling units.
- E. Coordination of Work: Coordinate layout and installation of acoustical ceiling units and suspension system components with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system components (if any), and partition system (if any).

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical ceiling units carefully to avoid chipping edges or damaging units in any way.

1.6 PROJECT CONDITIONS

- A. Space Enclosure: Do not install interior acoustical ceilings until space is enclosed

SECTION 09511 - ACOUSTICAL TILE CEILINGS

and weatherproof, wet-work in space is completed and nominally dry, work above ceilings is complete, and ambient conditions of temperature and humidity will be continuously maintained at values near those indicated for final occupancy.

1.7 EXTRA MATERIALS

- A. Deliver extra materials to Owner. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with appropriate labels.
 - 1. Acoustical Ceiling Units: Furnish quantity of full-size units equal to 2.0 percent of amount installed, minimum 4 tiles in unopened packaging.
 - 2. Exposed Suspension System Components: Furnish quantity of each exposed component equal to 2.0 percent of amount installed. Min. 2 cross braces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. 2 x 4 lay-in tile, w/ square edge, 5/8" min thickness, for 15/16" exposed "T" grid.
 - 2. High humidity, clad, "T" grid for wet locations fire rated with accessories as required for full fire rated installation.
- B. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
At vinyl coated gypsum lay in tiles with scrubbable surface for wet locations.
- C. Grid Manufacturers: Subject to compliance with requirements, provide products by one of the following, matching existing adjacent products and tile with system.
 - 1. Double-Web Steel Suspension Systems:
 - a. Armstrong World Industries, Inc.
 - b. Chicago Metallic Corporation.
 - c. National Rolling Mills, Inc.
 - d. USG Interiors, Inc.

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2. Edge Moldings:
 - a. Armstrong World Industries, Inc.
 - b. Chicago Metallic Corporation.
 - c. Fry Reglet Corp.
 - d. National Rolling Mills, Inc.
 - e. USG Interiors, Inc.

2.2 ACOUSTICAL CEILING UNITS, GENERAL

- A. Standard for Acoustical Ceiling Units: Provide manufacturers' standard units of configuration indicated that comply with ASTM E 1264 classifications as designated by reference to types, patterns, acoustical ratings, and light reflectances, unless otherwise indicated.
- B. Colors and Patterns: Provide products to match appearance characteristics indicated under each product type. Standard white where not specified.

2.3 METAL SUSPENSION SYSTEMS, GENERAL

- A. Standard for Metal Suspension Systems: Provide manufacturer's aluminum clad metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable ASTM C 635 requirements.
- B. Finishes and Colors: Provide manufacturer's standard factory-applied finish for type of system indicated. White where not specified
- C. Attachment Devices: Size for 5 times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated. Include all seismic enhancements accessories and materials necessary in the Weight Training Room (>1000 sq ft) to meet current building code requirements.
 1. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attachment of hangers of type indicated, and with capability to sustain, without failure, a load equal to 10 times that imposed by ceiling construction, as determined by testing per ASTM E 1190, conducted by a qualified testing laboratory.
- D. Wire for Hangers and Ties: ASTM A 641, Class 1 zinc coating, soft temper.
 1. Gage: Provide wire sized so that stress at 3 times hanger design load (ASTM C 635, Table 1, Direct-Hung), will be less than yield stress of wire, but provide not less than 0.106-inch diameter (12 gage).
 2. Note: All wire hangers must be twisted tightly to hanger wire. Splayed ends are

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not acceptable.

- E. Angle Hangers: Angles with legs not less than 7/8 inch wide, formed with 0.0365-inch-thick galvanized steel sheet complying with ASTM A 446, Coating Designation G90, with bolted connections and 5/16-inch-diameter bolts.
- F. Edge Moldings and Trim: Metal or extruded aluminum of types and profiles indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that fit type of edge detail and suspension system indicated.
 - 1. For lay-in panels with reveal edge details, provide stepped edge molding that forms reveal of same depth and width as that formed between edge of panel and flange at exposed suspension member. (NIC)
 - 2. For circular penetrations of ceiling, provide edge moldings fabricated to diameter required to fit penetration exactly.
- G. Hold-Down Clips for Non-Fire-Resistance-Rated Ceilings: For interior ceilings composed of lay-in panels weighing less than 1 lb per sq. ft., provide hold-down clips spaced 2'-0" o.c. on all cross-tees. Support all fixtures and equipment independently to structure and installed in the ceiling to avoid sagging of grid system and to meet seismic and applicable building codes. Firestop all penetrations of rated assemblies.
- H. Note that lay-in fixtures must be screwed to grid. Tab attachment is not acceptable.

2.4 MISCELLANEOUS MATERIALS

- A. Concealed Acoustical Sealant: Nondrying, nonhardening, nonskinning, nonstaining, nonbleeding, gunnable sealant complying with requirement specified in Division 7 Section "Joint Sealers."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and structural framing to which ceiling system attaches or abuts, with Installer present, for compliance with requirements specified in this and other sections that affect installation and anchorage of ceiling system. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.

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1. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.
- B. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less-than-half-width units at borders, and comply with reflected ceiling plans.

3.3 INSTALLATION

- A. General: Install acoustical ceiling systems to comply with installation standard referenced below, per manufacturer's instructions and CISCA "Ceiling Systems Handbook."
 1. Standard for Installation of Ceiling Suspension Systems: Comply with ASTM C 636.
 2. Standards for Installation of Ceiling Suspension Systems: Comply with ASTM C 636 and ASTM E 580.
- B. Arrange acoustical units and orient directionally patterned units in a manner shown by reflected ceiling plans. Submit shop drawings showing grid and ceiling tile layout and coordination with trades having impact or equipment in the ceiling system. Obtain written approval of shop drawings by architect prior to ordering products.
- C. Suspend ceiling hangers from building structural members and as follows:
 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
 3. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail due to age, corrosion, or elevated temperatures. Splayed wire ends are not acceptable above ceiling tiles.
 4. Secure angle hangers to structure, including intermediate framing members, by attaching to inserts, eyescrews, or other devices that are secure and

SECTION 09511 - ACOUSTICAL TILE CEILINGS

appropriate for structure to which hangers are attached as well as for type of hanger involved, and in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.

5. Do not attach hangers to steel roof deck. Attach hangers to structural members.
 6. Space hangers not more than 4'-0" o.c. along each member supported directly from hangers, unless otherwise shown, and provide hangers not more than 8 inches from ends of each member.
- D. Install edge moldings of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical units.
1. Screw-attach moldings to substrate at intervals not over 16 inches o.c. and not more than 3 inches from ends, leveling with ceiling suspension system to tolerance of 1/8 inch in 12'-0". Miter corners accurately and connect securely.
- E. Install acoustical panels in coordination with suspension system, with edges concealed by support of suspension members. Scribe and cut panels to fit accurately at borders and at penetrations.
1. Install hold-down clips in areas indicated and in areas where required by governing regulations or for fire-resistance ratings; space as recommended by panel manufacturer, unless otherwise indicated or required.
 2. Twist hanger wires tightly to avoid splayed ends above tiles.

3.4 CLEANING

- A. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch-up of minor finish damage. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 09511

SECTION 10155 – TOILET PARTITIONS

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. Provide Overhead-Braced and Floor-Anchored, Solid Phenolic Toilet Partitions and Floor Anchored Privacy Screens as indicated on Drawings and as specified herein. Grab Bars provided under Toilet and Bath Accessories.
- B. Related Sections include the following:
 - 1. Division 5 Section “Metal Fabrications” for supports that attach units to overhead structural system.
 - 2. Division 10 “Toilet and Bath Accessories” for toilet paper holders, grab bars, purse shelves, and similar accessories.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM).

1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's detailed technical data for materials, fabrication, and installation, including catalog cuts of anchors, hardware, fasteners, and accessories.
- B. Shop Drawings: For fabrication and installation of Toilet Partition and Screen assemblies. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples for Initial Selection:
 - 1. Submit manufacturer's color chart with manufacturer's full range of Standard Colors. Color shall be selected on a basis of four (4) stalls or more per color.
 - 2. Submit certification that materials furnished comply with requirements specified.
- D. Samples for Verification:
 - 1. Submit 6" square Samples of each color and finish on same substrate used in work, for color verification after selections have been made.
 - 2. Submit one (1) Sample of the following:

SECTION 10155 – TOILET PARTITIONS

- a. Hardware (Complete)
- b. Pilaster (12" X 12")
- c. Divider Panel (12" X 12")
- d. Continuous Aluminum Mounting Bracket (57.5")
- e. 11 Gauge Stainless Steel Hinge

E. Maintenance Instructions: Provide manufacturer's printed Instructions for Maintenance of installed Work.

F. Written Warranty

1.5 PROJECT CONDITIONS

A. Field Measurements: Verify dimensions in areas of installation by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

- 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating units without field measurements. Coordinate supports, adjacent construction, and fixture locations to ensure actual dimensions correspond to Established Dimensions.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store, and handle compartments as recommended by manufacturer to protect from damage.

1.7 MANUFACTURER'S WARRANTY

A. Provide manufacturer's written warranty on its Panels, Pilasters and Doors for twenty five (25) years, against breakage, corrosion and delamination; to be replaced without charge, excluding labor.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

COLUMBIA PARTITIONS SUPER HD – 8233, by PSISC, P.O. Box 181, Columbia, S.C. 29202, 803-252-3020, Fax: 803-256-7769.

2.2 MATERIALS

A. General: Provide material which has been selected for surface flatness and smoothness. Exposed surfaces which exhibit pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections on finished units are not acceptable. Solid Phenolic shall meet or exceed all requirements for Class "B" Flame Spread Rating

SECTION 10155 – TOILET PARTITIONS

calculated according to ASTM E-84-91A, and shall carry a UL Class “B” Fire Rating Certification.

- B. Material shall be Solid Phenolic with a High Pressure Melamine matte finish surface made as an integral part of the core material. Laminated surfaces are not acceptable.
 - 1. Doors – Minimum .75” (19 mm) Finished Thickness
 - 2. Divider Panels – Minimum .50” (13 mm) Finished Thickness
 - 3. Pilasters – Minimum .75” (19 mm) Finished Thickness
- C. Colors: To be selected by Project Architect from Manufacturer’s Standard Colors.
- D. Pilaster Shoes: ASTM A 167, Type 302/304 Stainless Steel, minimum 4” high, 18 gauge, finished with #3 Directional Polish, attached with Stainless Steel Through Bolts.
- E. Continuous Brackets: Full High (57.5”) Extruded 6063-T5 Aluminum with a Satin Anodized finish. The minimum weight shall be 1.685 pounds per lineal foot. Inside of opening of Bracket shall be .50” for panels, .75” for pilasters. All holes for mounting to wall and panel/pilaster shall be pre-drilled. Holes are to be spaced at 9” O.C. along the full length of the Bracket for a total of fourteen (14) holes for mounting to the wall and seven (7) holes for mounting to the panel/pilaster. Each Bracket is to have a minimum wall thickness of .125”. Each Bracket is to be packaged in a separate poly tube, and is to be labeled by stock number and manufacturer.
- F. Hinge: 11 Gauge Stainless Steel Hinge. Hinge shall be made of Type 302/304 Stainless Steel and shall have a Satin finish. Hinge shall be gravity type for self-closing action and shall be fully adjustable up to 360 degrees. Pivot pin shall be made of Type 302/304 Stainless Steel. Hinges shall provide emergency access by lifting the door. Hinges shall be pre-drilled for mounting to door and pilaster with Stainless Steel Through-Bolts. Each Hinge is to be packaged in a separate carton, and is to be labeled by stock number, manufacturer, and left or right hand.
- G. Strike and Keeper: Heavy Duty Cast Stainless Steel with a Satin finish. The Strike and Keeper shall be 2.50” high, with the mounting holes at 1.50” O.C., and the wall thickness shall be a minimum of .125”. The Strike and Keeper shall have an integral rubber bumper door stop. The stock number shall be molded into the back of the Strike and Keeper for ease in identification. Each Strike and Keeper shall be packaged in a separate poly bag, and is to be labeled by stock number and manufacturer. Furnish one per door.
- H. Slide Latch: Heavy Duty Cast Stainless Steel with a Satin finish. The Slide Latch shall be surface mounted. The slide bar shall be .150” thick, 1.020” wide and 3.720” long. Latch shall have an internal Stainless Steel buffering spring to prevent damage when door is inadvertently slammed against the Latch. Mounting holes are to be spaced at 3.50” O.C. Latch knob is to be riveted to the slide bar and then welded to insure that the knob will not come

SECTION 10155 – TOILET PARTITIONS

off. The stock number is to be molded into the back of the Slide Latch for ease in identification. Each Slide Latch shall be packaged in a separate poly bag, and is to be labeled by stock number and manufacturer. Furnish one per door.

- I. Coat Hook: Heavy Duty Cast Stainless Steel with a Satin finish. Coat Hook and Bumper shall be 2.340" high, 1.230" wide and shall protrude out from the door 3.05". The hook portion shall have a finished diameter of .250". The stock number shall be molded into the back of the Coat Hook and Bumper for ease in identification. Each Coat Hook and Bumper shall be packaged in a separate poly bag, and is to be labeled by stock number and manufacturer. Furnish one per door.
- J. Door Stop: Heavy Duty Cast Stainless Steel with a Satin finish. Plated Zamac Door Stops are unacceptable. Door Stop shall have a 2.125" base diameter and shall protrude 1.80" from the wall. The bumper at the end of the Door Stop shall be .250" thick. The diameter of the shaft shall be .6875". The stock number shall be molded into the back of the Door Stop for ease in identification. Each Door Stop shall be packaged in a separate poly bag, and is to be labeled by stock number and manufacturer. Furnish one for each Disabled Accessible door.
- K. Pull Handle: Heavy Duty Cast Stainless Steel with a Satin finish. Plated Zamac Door Pulls are unacceptable. Pull Handle shall protrude from the face of the door .940" and shall be 4.735" long. The Pull Handle shall have mounting holes drilled and tapped for 10/24 threads at 3.50" O.C. The Pull Handle shall be .655" wide and shall be mounted back to back with the Slide Latch. The stock number shall be molded into the back of the Pull Handle for ease in identification. Each Pull Handle shall be packaged in a separate poly bag, and is to be labeled by stock number and manufacturer. Furnish one for each Disabled Accessible door.
- L. Overhead Bracing (Headrail): Continuous Heavy Duty Extruded 6063-T5 Aluminum Headrail with Anti-Grip profile. Headrail shall have integral reinforcing channel and curtain track. Headrail shall have a Satin Anodized finish. Provide Headrail Corner Brackets, Wall Brackets, and Headrail End Caps as required. The Headrail and Headrail Brackets shall have a minimum wall height of 2". The minimum wall thickness of the Headrail and Headrail Brackets shall be .125". Each Headrail Bracket is to be packaged in a separate poly bag, and is to be labeled by stock number and manufacturer.
- M. Anchorages and Fasteners: All Fasteners shall be Stainless Steel with theft proof heads, Through-Bolted unless noted otherwise. Chrome plated steel or brass are not acceptable.

2.3 FABRICATION

SECTION 10155 – TOILET PARTITIONS

- A. General: Provide standard doors, panels, screens and pilasters fabricated for partition system, complete with all accessories and hardware listed above and as required for installation of fully functional system, unless otherwise noted. Provide units with cutouts and drilled holes to receive partition-mounted hardware, accessories, and grab bars as indicated.
- B. Overhead-Braced and Floor-Anchored Partitions:
 - 1. Furnish Heavy Duty Cast Stainless Steel “Z” Bars, complete with Stainless Steel threaded rods, lock washers and leveling-adjusting nuts at pilaster, to permit structural connection at floor.
 - 2. Make provision for setting and securing continuous Extruded Aluminum Anti-Grip Headrail at top of each pilaster.
 - 3. Furnish Stainless Steel Shoe at each pilaster to conceal supports and leveling mechanism.
- C. Doors: Unless otherwise indicated, provide 24” (610 mm) wide in-swinging doors for standard Toilet Partitions and 36” (914 mm) wide out-swinging doors with a minimum 32” (813 mm) wide clear opening for Partitions indicated to be Handicapped Accessible.
- D. Floor Anchored Privacy Screens: Furnish Privacy Screens consisting of a pilaster and a panel of the same construction and finish as the Toilet Partitions. Furnish in accordance with the drawings.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. General: Comply with manufacturer’s written installation instructions. Install Partitions rigid, straight, plumb, and level. Provide clearances of not more than .50” (13 mm) between pilasters and panels, and not more than 1.0” (25 mm) between panels and walls. No evidence of drilling, cutting and patching shall be visible in finished work.
- B. Attach Continuous Wall Brackets to the wall with the following:
 - 1. At solid masonry: #14 x 1.50” long Stainless Steel Torx Head with Pin Screws and Plastic #14/16 Anchors at 9” O.C. vertical spacing.
 - 2. At cavity masonry: .25” diameter x required length Stainless Steel toggle bolts at 9” O.C. vertical spacing.
- C. Overhead-Braced and Floor-Anchored Partitions: Secure pilasters to floor and level, plumb, and tighten. Secure continuous Headrail to each pilaster with not less than two (2) Through-Bolted Stainless Steel fasteners. Hang doors and adjust so tops of doors are parallel with overhead brace when doors are in closed position.
- D. Screens: Attach with anchoring devices according to manufacturer’s written instructions and to suit supporting structure. Set units level and plumb and to resist lateral impact.

SECTION 10155 – TOILET PARTITIONS

3.2 ACCESSORIES

- A. Mount accessories to Partition units in accordance with manufacturer's instructions.

3.3 ADJUSTING AND CLEANING

- A. Hardware Adjustment: Adjust and lubricate hardware according to manufacturer's written instructions for proper operation.
- B. Provide final protection and maintain conditions that ensure Toilet Partitions and Screens are without damage or deterioration at the time of Substantial Completion.

END OF SECTION 10155

SECTION 15410 - PLUMBING FIXTURES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submit Product Data for each type of plumbing fixture.
- B. Comply with requirements of Public Law 102-486, "Energy Policy Act," regarding water flow rate and water consumption of plumbing fixtures.
- C. Provide ADA compliant, vinyl coated protective pipe insulation for lavatories.

PART 2 - PRODUCTS

Reference schedule on drawings for manufacturer's products that are the basis for design.

Substitutes will be considered when submitted and must be demonstrated to meet or exceed the standards of the specified product. The Owner reserves the right to require the specified product to maintain consistency or product standards,

PART 3 - EXECUTION

3.1 INSTALLATIONS

- A. Install fitting insulation kits on handicap-accessible fixtures.
- B. Install fixtures with flanges and gasket seals.
- C. Install lever handles for accessible, flush valve water closets with lever handle mounted on wide side of compartment or room.
- D. Fasten wall-hanging plumbing fixtures securely to supports attached to building substrate when supports are specified, and to building wall construction where no support is indicated.
- E. Fasten floor-mounted fixtures to substrate. Fasten fixtures having holes for securing fixture to wall construction, to reinforcement built into walls.
- F. Fasten wall-mounted fittings to reinforcement built into walls.
- G. Secure supplies to supports or substrate within pipe space behind fixture.
- H. Install individual supply inlets, supply stops, supply risers, and tubular brass traps with cleanouts.

SECTION 15410 - PLUMBING FIXTURES

- I. Install water-supply stop valves in accessible locations.
- J. Install traps on fixture outlets. Omit traps on fixtures having integral traps. Omit traps on indirect wastes, unless otherwise indicated.
- K. Install stainless steel escutcheons at wall, floor, and ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons where required to conceal protruding pipe fittings.
- L. Seal joints between fixtures and walls, floors, and counters using sanitary-type, one-part, mildew-resistant, silicone sealant. Match sealant color to fixture color.
- M. Install piping connections between plumbing fixtures and piping systems and plumbing equipment. Install insulation on supplies and drains of handicap-accessible fixtures.
- N. Install key type hose bib on lavatory.
- O. Where cold water only is provided to lavatories, provide supply to both sides and label with "cold" symbol on both sides.
- P. Provide ADA approved insulation jackets at all supplies and drains, even if only cold water is provided.
- Q. Reference plumbing fixture schedule.

END OF SECTION 15410

SECTION 16100 – WIRING METHODS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Summary: Building wires and cables and associated splices, connectors, and terminations for wiring systems rated 600 V and less, and twisted-pair cable; and raceways and boxes.

PART 2 - PRODUCTS

2.1 WIRES AND CABLES

- A. Building Wires and Cables: Type XHWN/THWN copper conductor.
- B. Connectors and Splices: Wiring connectors of size, ampacity rating, material, and type and class for application and for service indicated.
- C. Single Conductor Plenum Coaxial: 75-ohm characteristic impedance, solid bare copper central conductor, foamed Teflon dielectric, 100 percent coverage tinned-copper, double-braid shield, Teflon jacket, suitable for installation in air-handling spaces.
- D. Twisted Pair: No. 22 AWG tinned-copper conductors; PVC insulation; overall aluminum/polyester shield and No. 22 AWG tinned-copper drain wire; PVC jacket.
- E. Twisted-Pair Plenum: No. 24 AWG, 7-strand, tinned-copper conductors; Teflon insulation; overall aluminum/polyester shield and No. 22 AWG tinned-copper drain wire; Teflon jacket; suitable for use in air-handling spaces.

2.2 RACEWAYS

- A. Conduit – $\frac{3}{4}$ " minimum size: Comply with the following:
 - 1. Rigid Steel Conduit: ANSI C80.1.
 - 2. Intermediate Metal Conduit: ANSI C80.6.
 - 3. Electrical metallic Tubing: ANSI C80.3.
 - 4. Rigid Nonmetallic Conduit: NEMA TC 2, Schedule 40.
- B. Wireways: Hinged type, with manufacturer's standard finish.
- C. Surface Metal Raceway: Galvanized steel with snap-on covers. Finish with manufacturer's standard prime coating suitable for painting.

SECTION 16100 – WIRING METHODS

- D. Surface Nonmetallic Raceway: 2-piece construction, manufactured of rigid PVC compound with matte texture and manufacturer's standard color.
- E. Outlet and Device Boxes: UL listed and labeled **sheet metal boxes** & brushed stainless steel covers.
- F. Floor Boxes: Cast metal, fully adjustable, rectangular.
- G. Pull and Junction Boxes: **Sheet metal boxes**.
- H. Computer station locations: Wiremold 4000 series shall be provided for raceways to accommodate 120v power and devices, and low voltage cables and devices.
- I. Devices, switches and receptacles shall be contract/highest grade and rated for 20 amps 120v min.

2.3 ENCLOSURES

- A. Hinged-Cover Enclosures: NEMA 250, steel enclosure with continuous hinge cover and flush latch. Finish inside and out with manufacturer's standard enamel.
- B. Cabinets: NEMA 250, Type 1, except where another Type is indicated.
- C. Panels: match manufacturer's products of existing panels where possible or match Owner's facility standards. Install flush panels wherever feasible.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install wires and cables according to the NECA's "Standard of Installation."
- B. Remove existing wire from raceway before pulling in new wire and cable.
- C. Wiring at Outlets: Install with at least 12 inches (300 mm) of slack conductor at each outlet.
- D. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid or Motor-Driven Equipment): Liquidtight flexible metal conduit.
- E. Indoors Wiring Methods: As follows:
 - 1. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid or Motor-Driven Equipment): Flexible metal conduit, except in wet or damp locations use liquid tight flexible metal conduit.

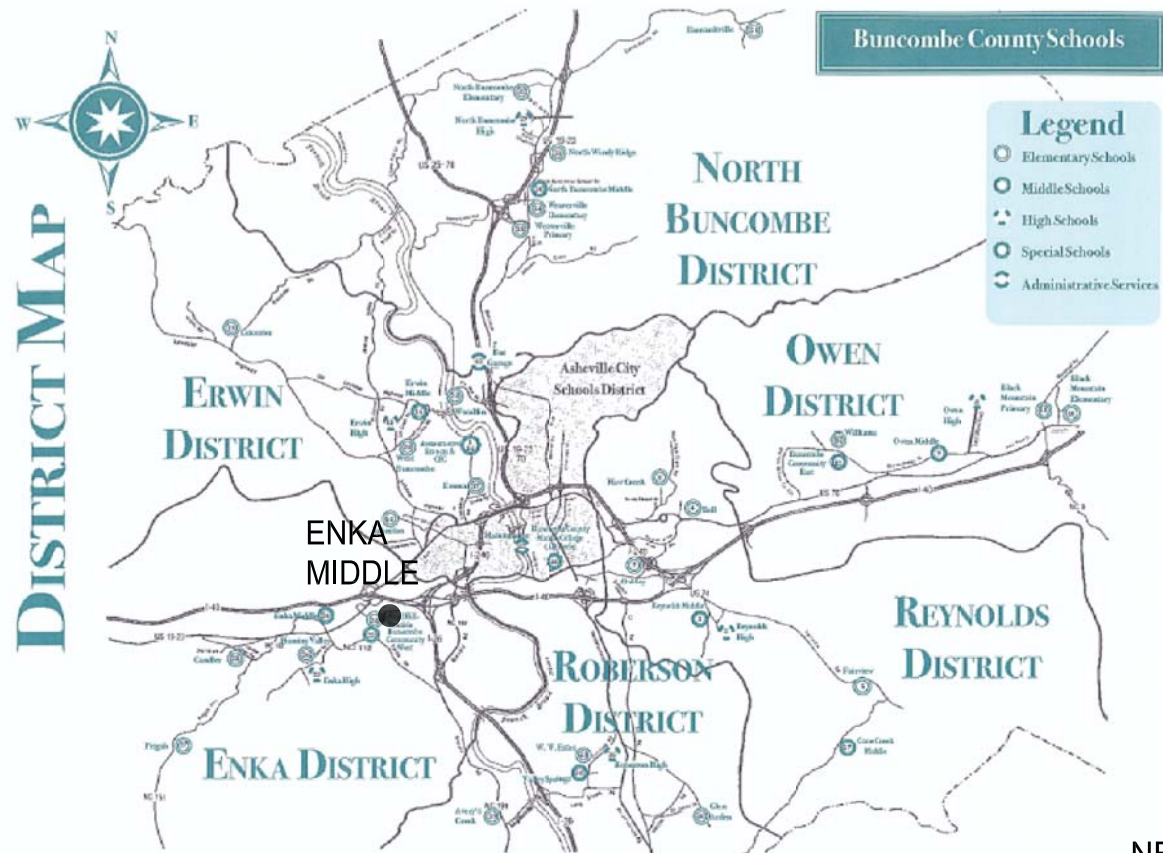
SECTION 16100 – WIRING METHODS

2. Use armored cable and nonmetallic sheathed cable in applications allowed by NFPA 70.
 3. Damp or Wet Locations: Rigid steel conduit.
 4. Exposed: Electrical metallic tubing or rigid nonmetallic conduit. Paint finish.
 5. Concealed: Electrical metallic tubing, electrical nonmetallic tubing, or rigid nonmetallic conduit.
 6. Boxes and Enclosures: NEMA 250, Type 1, except in damp or wet locations use NEMA 250, Type 4, stainless steel.
 7. Install raceways, boxes, enclosures, and cabinets as indicated, according to manufacturer's written instructions.
 8. Conceal conduit and electrical metallic tubing, unless otherwise indicated, within finished walls, ceilings, and floors.
- F. Use raceway fittings compatible with raceway and suitable for use and location. For intermediate steel conduit, use threaded rigid steel conduit fittings, unless otherwise indicated.
- G. Raceways Embedded in Slabs: Install in middle third of the slab thickness where practical, and leave at least 1-inch (25-mm) concrete cover.
- H. Install exposed raceways parallel to or at right angles to nearby surfaces or structural members, and follow the surface contours as much as practical.
- I. Join raceways with fittings designed and approved for the purpose and make joints tight. Use bonding bushings or wedges at connections subject to vibration. Use bonding jumpers where joints cannot be made tight. Use insulating bushings to protect conductors.
- J. Install pull wires in empty raceways. Use No. 14 AWG zinc-coated steel or monofilament plastic line having not less than 200-lb (90-kg) tensile strength. Leave not less than 12 inches (300 mm) of slack at each end of the pull wire.
- K. Install raceway sealing fittings and locate at suitable, approved, accessible locations and fill them with UL-listed sealing compound. For concealed raceways, install each fitting in a flush steel box with a blank cover plate having a finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings where required by the NEC.
- L. Stub-up Connections: Extend conductors to equipment with rigid steel conduit; flexible metal conduit may be used 6 inches (150 mm) above the floor.
- M. Flexible Connections: Use maximum of 72 inches (1800 mm) of flexible conduit for recessed and semirecessed lighting fixtures; for equipment subject to vibration, noise transmission, or movement; and for all motors. Use liquidtight flexible conduit in wet or damp locations. Install separate ground conductor across flexible connections.

SECTION 16100 – WIRING METHODS

- N. Install a separate green ground conductor in surface metal raceway from the junction box supplying the raceway to receptacle or fixture ground terminals.

END OF SECTION 16100



PROJECT DESCRIPTION:
RENOVATE TWO EXISTING RESTROOMS TO MEET CURRENT ADA AND BUILDING CODE REQUIREMENTS.

THE PROJECT INVOLVES GENERAL CONTRACTOR, ELECTRICAL, MECHANICAL, PLUMBING, AND LOW VOLTAGE ELECTRICAL WORK. THE LOCATION IS INTERNAL TO THE BUILDING AND DOES NOT INVOLVE AN ADDITION OR NEW BLDG. FOOTPRINT.

CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING ALL COSTS ASSOCIATED W/ BUNC. COUNTY BLDG PERMITS AND DEPLETION FEES ISSUED BY THE METROPOLITAN SEWAGE DISTRICT.

DESIGN & BID CONTACTS: DRAWING LIST

DESIGN AND TECHNICAL CONTACT:

MARY BETH KINGSTON, AIA, LEED AP
ASST. FACILITIES DIRECTOR, BUNCOMBE CO. SCHOOLS
PHONE: 828-255-5916
FAX: 828-255-5923

BIDDING & ADMINISTRATIVE CONTACT:

RON VENTURELLA
PURCHASING OFFICER
PHONE: 828-255-5891
FAX: 828-251-1730

COVER	VICINITY MAP/ OVERALL PLAN
A101.1	DEMOLITION PLAN
A102.1	FLOOR PLAN
A103.1	REFLECTED CEILING PLAN
A-501.1	DETAILS
A-501.2	DETAILS
A-603.1	SCHEDULES AND NOTES

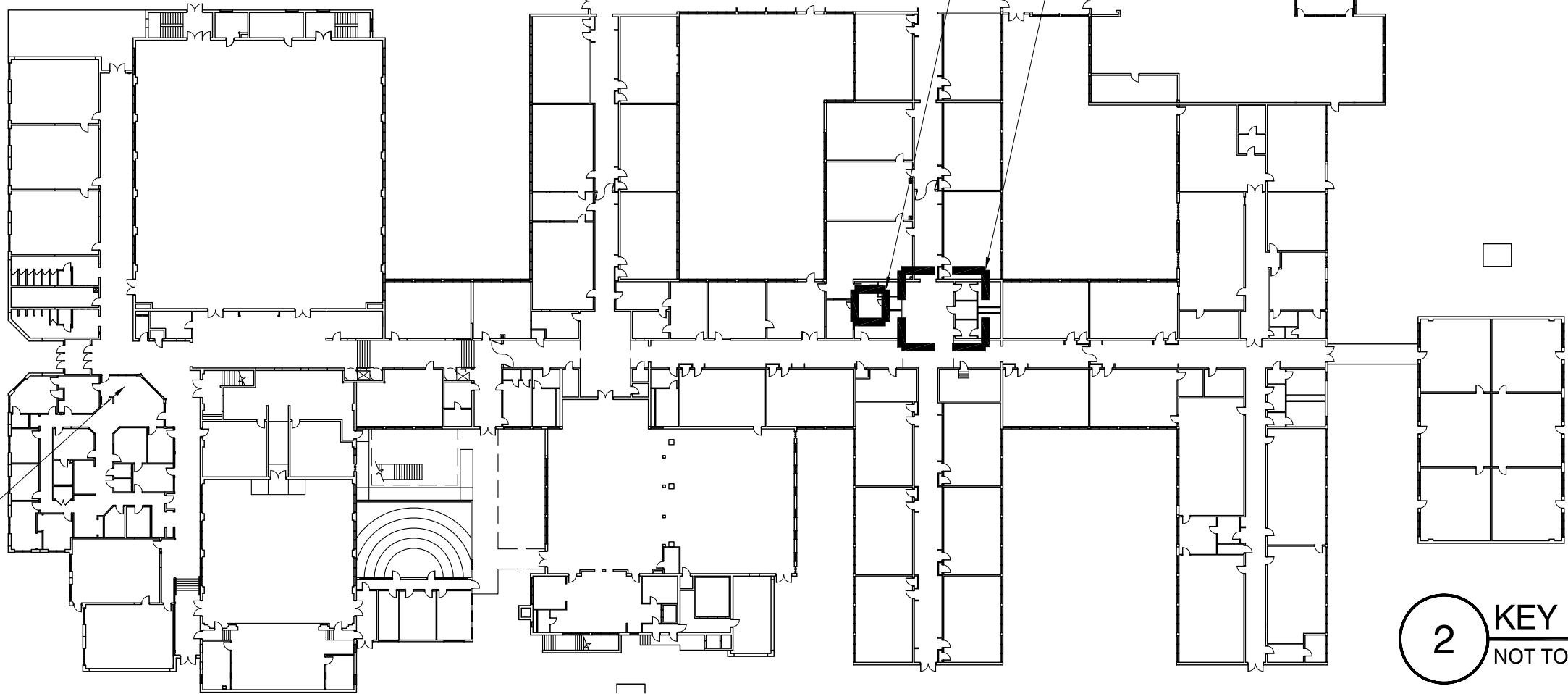
1 LOCATION MAP
NOT TO SCALE

NEW HI-LOW
DRINKING FOUNTAINS 2/A501.2

WORK AREA
RESTROOM RENOVATIONS

MAIN
ENTRANCE →

ADMIN./
CHECK IN →



2 KEY PLAN
NOT TO SCALE



COVER

DESIGNED BY: MBK
DATE: OCTOBER 20, 2016

PROJECT CODE:

KEYED DEMOLITION NOTES

- 1

REMOVE LAV. & ELECTRONIC FAUCET: STORE LAV. FOR RE-USE
- 2

REMOVE LAV. & ELECTRONIC FAUCET: STORE FAUCET FOR RE-USE
- 3

REMOVE LAV. & ELECTRONIC FAUCET: STORE LAV. & FAUCET FOR RE-USE
- 4

REMOVE TOILET/URINAL AND ELECTRONIC FLUSH VALVE: STORE BOTH FOR RE-USE
- 5

REMOVE CMU WALLS
- 6

REMOVE SHELVING, MISC.
- 7

SURFACE MOUNTED PIPING
- 8

REMOVE SURFACE MOUNTED ELECTRICAL AND DISCONNECT BACK TO PANEL
- 9

REMOVE DOOR AND FRAME
- 10

REMOVE EXISTING TOILET PARTITIONS
- 11

EXISTING FAN AND DUCTWORK TO REMAIN AND BE RE-USED. CEILING GRILLS TO BE SALVAGED AND RE-USED IN NEW ACOUSTIC CEILING IN RESTROOMS
- 12

REMOVE BULKHEAD CEILING, MISC. WOOD, TERMINATE ELECTRICAL TO NEAREST JUNCTION BOX. PROVIDE NEW ½" GYPSUM BOARD STRUCTURAL PROTECTION APPLIED TO STRUCTURE AND SEALED WITH FIRE RATED CAULK
- 13

EXISTING FLOOR DRAIN AND SLOPE TO BE RE-USED
- 14

REMOVE ACOUSTIC CEILING TILE, FRAMING, LIGHTS AND ANY OTHER CEILING PENETRATIONS. TERMINATE ELECTRICAL TO NEAREST JUNCTION BOX. RE-INSTALL EXHAUST FAN GRILLS AND RE-CONNECT DUCTWORK.
- 15

TO REMAIN: EXISTING SD: SMOKE DETECTOR, H: HORN STROBE, OR E: EMERGENCY LIGHT
- 16

SALVAGE DEVICE, RE-LOCATE PER FLOOR PLAN: EXISTING SD: SMOKE DETECTOR, H: HORN STROBE, OR E: EMERGENCY LIGHT. REMOVE OR RELOCATE ELECTRICAL PER PLANS

GENERAL DEMOLITION NOTES

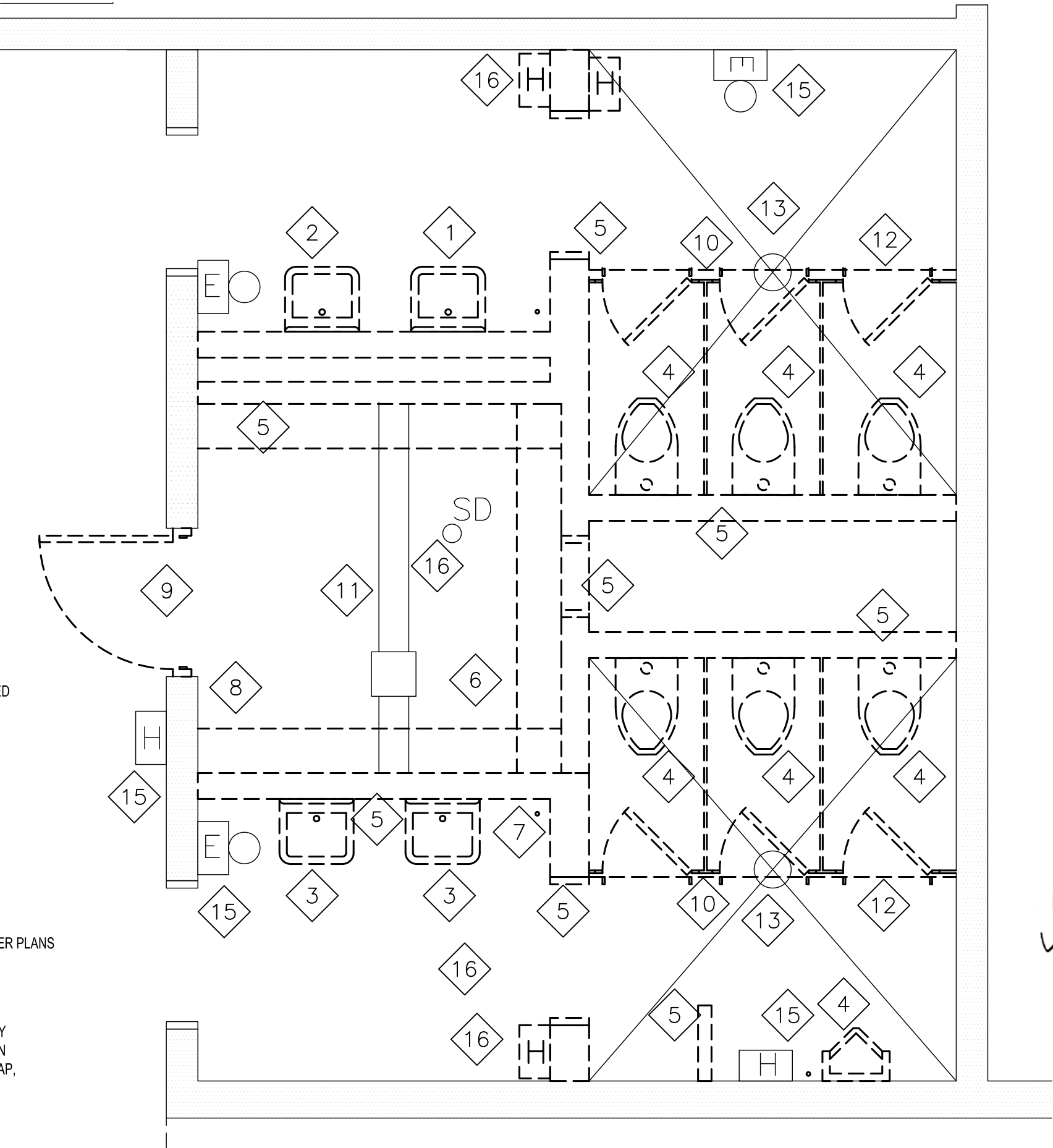
1.

REMOVE & DISPOSE OF WALLS, DOORS, FINISHES, FIXTURES & ALL ITEMS NECESSARY FOR UPFIT AS SHOWN IN DRAWINGS. PROTECT ADJACENT SPACES FROM DEMOLITION ACTIVITIES & DUST. REMOVE ALL OR PORTION OF FLOOR SLAB AS NECESSARY TO CAP, REPLACE & MODIFY IN-SLAB DWV PIPING, FLOOR DRAIN ETC.
2.

PATCH AND REPAIR WHERE DEMOLITION OCCURS TO MATCH EXISTING FINISHES.
3.

PROVIDE ½" GYPSUM BOARD PATCHES WITH FIRE RATED SEALANT TO ALL OPENINGS IN CEILING STRUCTURAL PROTECTION
4.

DEMOLITION / DISTURBANCE OF LEAD CONTAINING MATERIALS TO BE IN COMPLIANCE WITH CURRENT CODES.

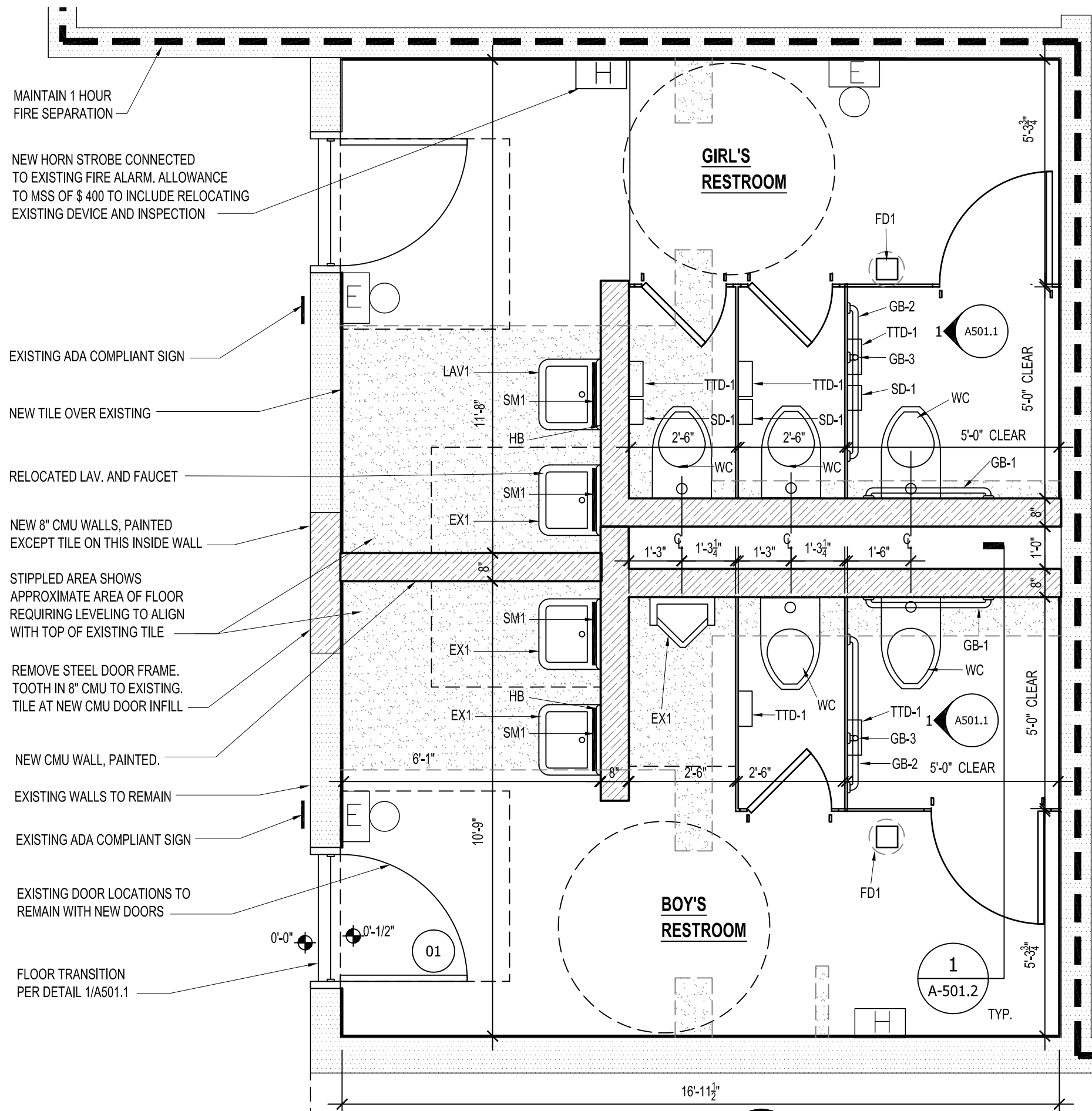


1

DEMOLITION PLAN

3/8" = 1'-0"





GENERAL NOTES

- 1) REPAIR WALLS TO REMAIN WHERE, PLUMBING FIXTURES AND OTHER UTILITIES ARE REMOVED, INCLUDING DAMAGE PRIOR TO START OF WORK
- 2) SEE SHEET A603.1 FOR FIXTURES AND ACCESSORIES SCHEDULE.
- 3) ALL EXPOSED WALL SURFACES TO BE PAINTED. PAINT WALLS WITH COMPATIBLE PRIMER AND WATER BASED CATALYZED EPOXY PAINT.
- 4) FLOOR LEVELING: PROVIDE LEVEL SUBSTRATE AT TRANSITION FROM EXISTING TILE TO EXISTING CONCRETE FOR APPLICATION OF NEW SCHLUTER DECOUPLING TILE FLOORING SYSTEM.
- 5) PROVIDE NEW DRAINS (FD1) IN EXISTING LOCATIONS. PROVIDE SPECIFIED SCHLUTER PLUMBING TRANSITION TO NEW DRAIN.
- 6) CMU OUTSIDE CORNERS: PROVIDE BULLNOSE.
- 7) PROVIDE TILE OVER TILE WAINSCOT TO 4'-6" ABOVE FINISHED FLOOR WITH COVED TILE TRIM AT TOP.
- 8) PROVIDE TILE OVER TILE FLOOR PER DETAILS ON SHEET A501.1
- 9) PROVIDE NEW 8" CMU WALLS PER SECTION 1/A501.2
- 10) REPAIR ALL PENETRATIONS TO CEILING "PROTECTED" ROOF STRUCTURE EXISTING AND NEW. WHERE ROOF STRUCTURE IS EXPOSED, PROTECT WITH 1 LAYER 5/8" TYPE X GYPSUM BOARD, TAPED AND FIRE SEALED
- 11) CONTRACTOR TO VERIFY ALL DIMENSIONS AND QUANTITIES IN FIELD.

FINISHES

FLOOR: 2" X 2" PORCELAIN TILE WITH EPOXY GROUT
WALLS: ALL WALLS: PROVIDE WATER BASED CATALYZED EPOXY PAINT, IN ADDITION:
AT NEW CONCRETE BLOCK: 2 COATS BLOCK FILLER & 2 COATS SATIN GLOSS PAINT
AT EXISTING TILE WAINSCOT: PROVIDE TILE OVER TILE INSTALLATION WITH COVED TRIM AT TOP. ALLOWANCE OF \$ 4 PER SF FOR MATERIAL IN BASE BID.
AT EXISTING WALLS: PATCH AND REPAIR AS REQUIRED AND 2 COATS SATIN GLOSS PAINT

BASE: 6" HIGH PORCELAIN TILE BASE WITH BULLNOSE TOP. SEE DETAIL 2/ A501.1
CEILING: PROVIDE PER SPECIFICATIONS
DOORS: PAINT TO MATCH EXISTING DOORS
FRAMES: PAINT TO MATCH ADJACENT FRAMES

DOOR & HARDWARE

NEW WOOD DOOR IN EXISTING FRAME AS FOLLOWS:
WDMA 1.S.1-A HEAVY DUTY PERFORMANCE GRADE: FLUSH WOOD DOOR: FACTORY FINISHED, TRANSPARENT FINISH ROTARY SAWN BIRCH, EDGES OF MATCHING SPECIES, 5-PLY PARTICLE CORE.

HARDWARE FOR EACH DOOR:

1	CONTINUOUS HINGE	224HD	ALUMINUM	IVES
1	DEADBOLT	B663 C KEYWAY	626	SCH
	CLASSROOM SECURITY W/ ADA COMPLIANT THUMBTURN			
2	PUSH / PULL PLATES	8303 6" X 16"	ST STEEL	IVES
1	1" DOOR PULL	8103EZ 10"	ST. STEEL	IVES
1	CLOSER / STOP	4111	689	LCN
1	KICKPLATE	8400 16" X 34"	ST. STEEL	IVES
3	SILENCERS	307D	GREY	

PME DESIGN IS DIAGRAMMATIC
& FOR REFERENCE BY A
LICENSED PME CONTRACTOR
FOR BIDDING PURPOSES &
TO COMMUNICATE THE INTENT
OF THE DESIGN. VERIFY ALL
CODE REQUIREMENTS PRIOR
TO BID & INFORM THE OWNER
OF ANY INCONSISTENCIES.

**REFLECTED
CEILING PLAN**

A103.1

DESIGNED BY: MBK
DATE: OCTOBER 20, 2016

PROJECT CODE:

NEW SPEAKER CONNECTED
TO EXISTING PA SYSTEM:
PROVIDE BOGEN (CSD2X2)
WITH CAT 6A LOW VOLTAGE WIRE
INCLUDE TENTING PER UL P231

NEW SPEAKER CONNECTED
TO EXISTING PA SYSTEM:
PROVIDE BOGEN (CSD2X2)
WITH CAT 6A LOW VOLTAGE WIRE
INCLUDE TENTING PER UL P231

PROVIDE EXHAUST GRILL IN
RATED CEILING TO MEET UL P231

ENERGY SOLUTIONS INTERNATIONAL
LED TROFFERS LX SERIES
PROVIDE MOTION DETECTOR LIGHT CONTROL:
CEILING MOUNT OCCUPANCY SENSOR WITH PASSIVE
INFRARED & DUAL TECHNOLOGY, LINE VOLTAGE
LEGRAND CSD1000LV, BASIS FOR DESIGN

1 HOUR RATED CEILING ASSEMBLY UL P231 TO INCLUDE
TENTING NEW LIGHT FIXTURES

PROVIDE EXHAUST GRILL IN
RATED CEILING TO MEET UL P231

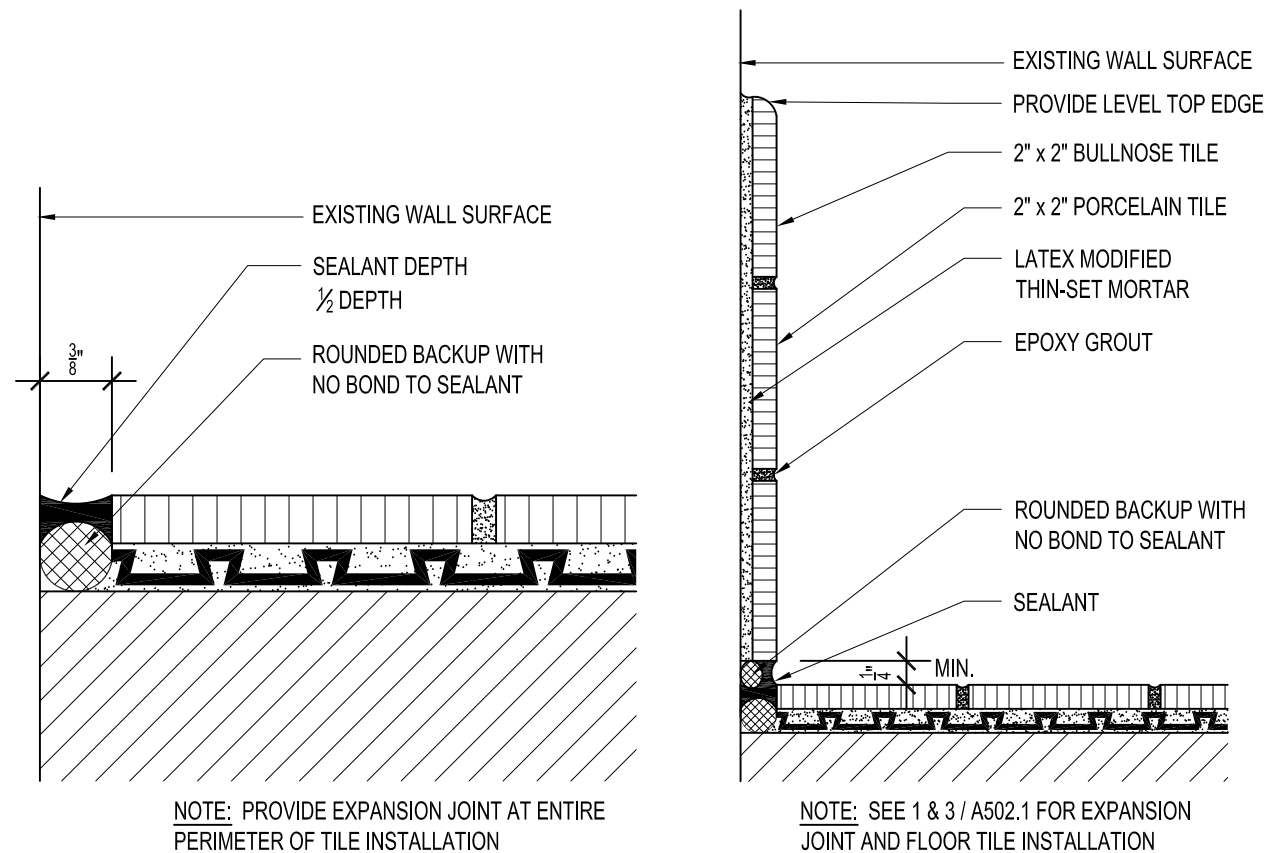


DETAILS

A501.1

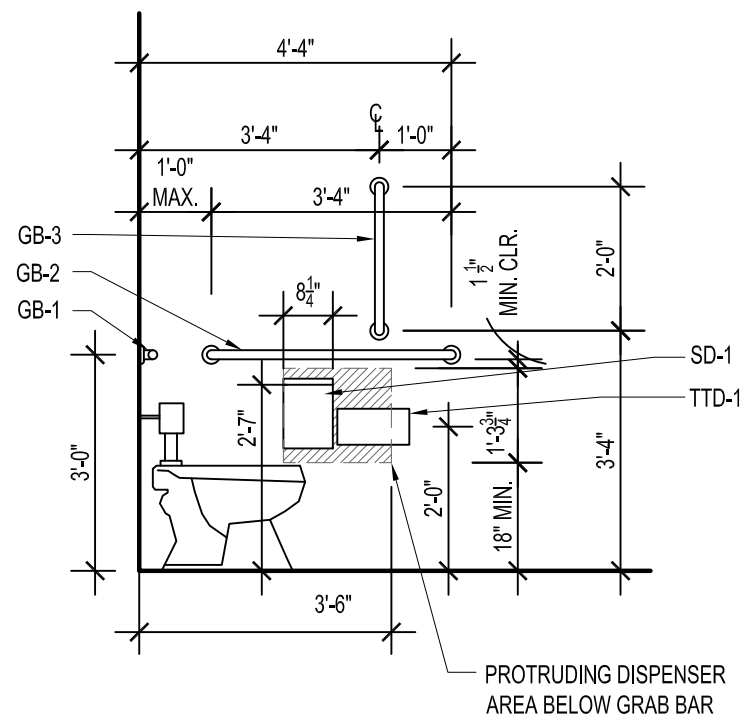
DESIGNED BY: MBK
DATE: OCTOBER 20, 2016

PROJECT CODE:

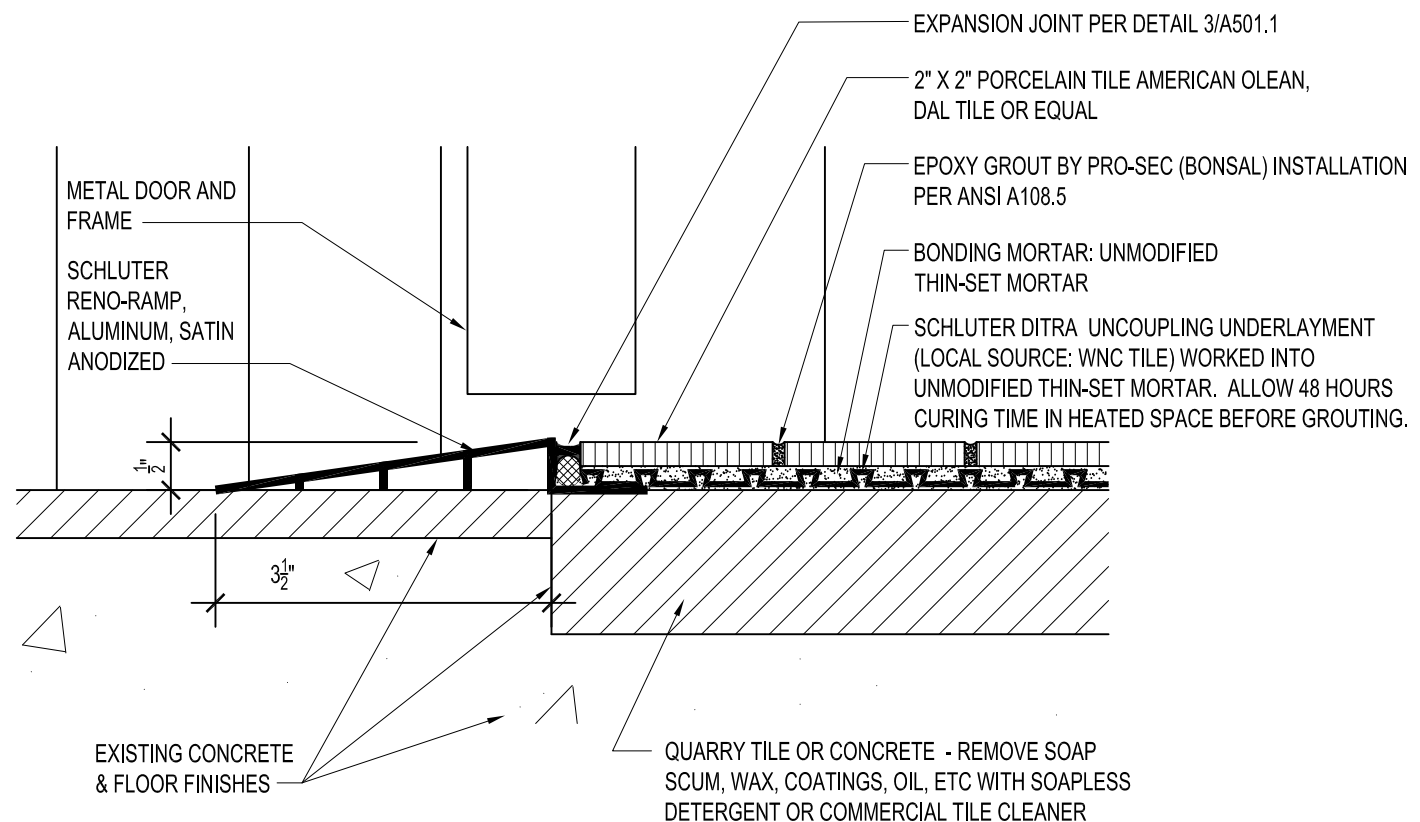


**3 EXPANSION JOINT
FULL SIZE**

**2 TILE BASE
HALF SIZE**



**4 ACCESSIBLE TOILET ELEVATION
SCALE: 3/8" = 1'-0"**



**1 TILE AND TRANSITION DETAIL
HALF SIZE**

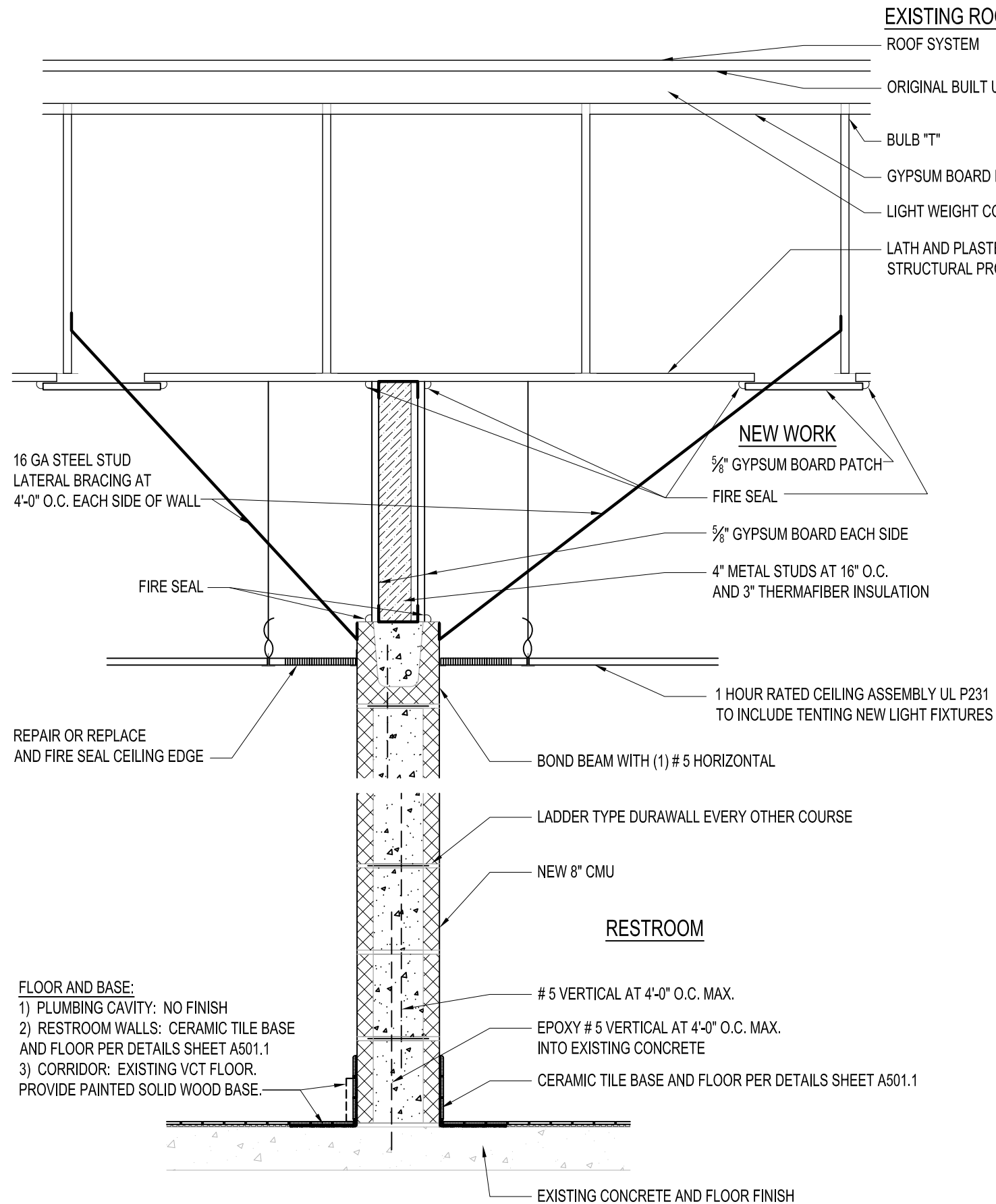


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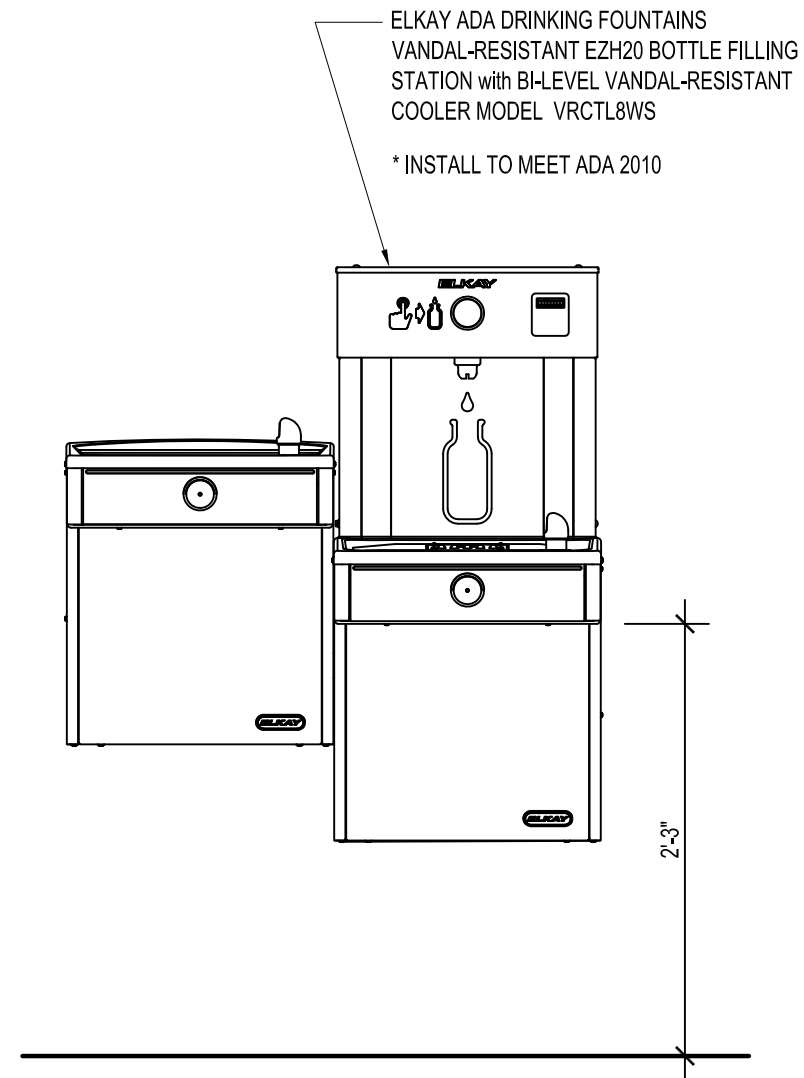
**DETAILS
A501.2**

DESIGNED BY: MBK
DATE: OCTOBER 20, 2016

PROJECT CODE:



1 CMU WALL SECTION
1" = 1'-0"



2 HI-LO DRINKING FOUNTAINS
1" = 1'-0"

PLUMBING FIXTURE CONNECTION SCHEDULE

MARK	DESCRIPTION	HW	CW	WASTE
LAV1	ADA WALL MOUNT	1/2"	1/2"	2"
WC	ADA FLOOR MOUNT WATER CLOSET W/ FLUSH VALVE	-	1 1/2"	3"

1. PROVIDE NEW HOT WATER SUPPLY FROM HEATER ABOVE CEILING IN THE CUSTODIAL CLOSET ON THE LOWER LEVEL.

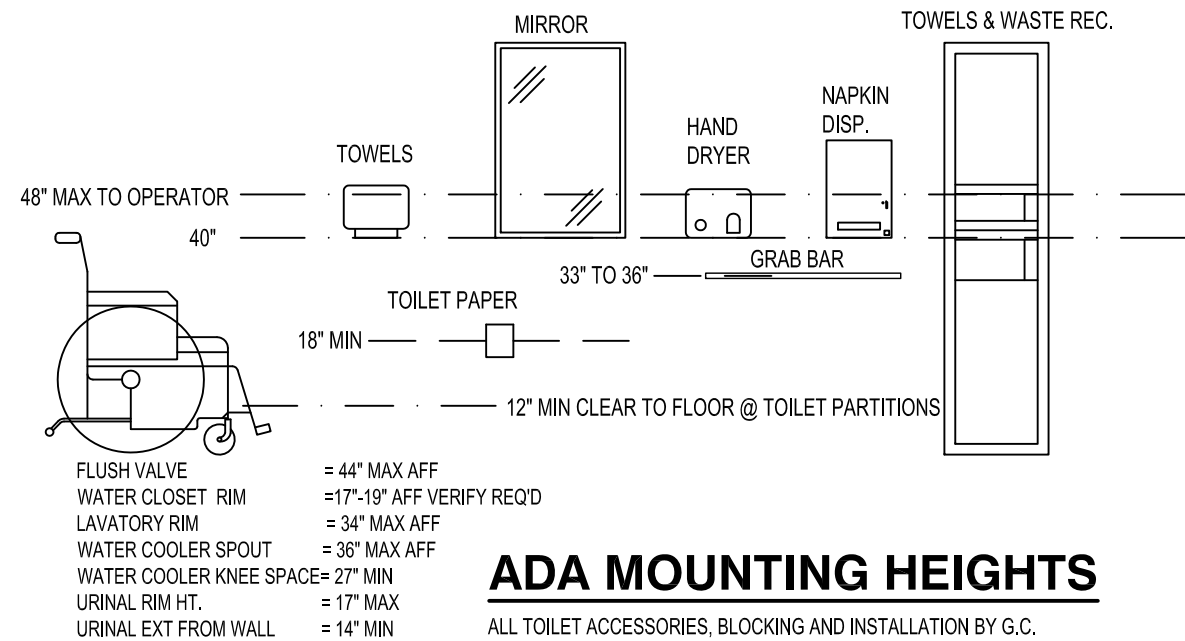
PLUMBING FIXTURE SPECIFICATIONS

MARK	DESCRIPTION	MFG/MODEL
LAVATORY: WALL MOUNTED	ADA LAVATORY	KOHLER: K-2810 "HUDSON": SINGLE HOLE W/ WALL HANGER
	FAUCET (RE-USE EXISTING AS NOTED)	CHICAGO: 116.222 "CONTEMPORARY" WITH BATTERY POWERED SENSOR, VANDAL RESISTANT, ADA COMPLIANT
	P-TRAP	KOHLER: K-8998
	CARRIER	AS REQUIRED
	ADA INSUL WRAP	BROCAR: KIT 500R TRAP WRAP
WC	WATER CLOSET	KOHLER: "HIGH CLIFF" K-4368 FLOOR-MOUNT 17½" ELONGATED BOWL, ADA COMPLIANT, 1.6 GALLON
	SEAT	KOHLER: K-4670-CA "LUSTRA" OPEN FRONT SEAT WITH ANTIMICROBIAL AGENT
	FLUSH VALVE (RE-USE EXISTING AS NOTED)	HYDROTEK: HB-800C-A; ADA COMPLIANT, VANDAL RESISTANT, MOUNT NO HIGHER THAN 36" & TO WIDE SIDE OF ROOM
FD1	FLOOR DRAIN	SCHLUTER: KERDI DRAIN-AC W/ 6"X 6"STAINLESS STEEL GRATE
HB	HOSE BIB	WOODFORD: B24, KEYED, CONCEALED UNDER LAVATORY

1. PROVIDE EQUIPMENT FOR PROPER INSTALLATION OF PLUMBING FIXTURES, FAUCETS AND SENSOR OPERATORS AS REQUIRED.

2. BATTERY POWERED FLUSH VALVES AND FAUCETS:

- A. INSTALL BATTERIES AND ADJUST EYE FOR CORRECT OPERATION
- B. PROVIDE INSTALLATION AND OPERATING INSTRUCTIONS TO OWNER.



ADA MOUNTING HEIGHTS

TOILET ACCESSORY SCHEDULE			
WHERE NOTED ON DRAWINGS			
MARK	DESCRIPTION	HEIGHT A.F.F.	REMARKS/ BOBRICK MODEL# UNO
GB-1	Horizontal Grab Bar 36" Long	Centerline 36"	B-5806.99X36
GB-2	Horizontal Grab Bar 42" Long	Centerline 36"	B-5806.99X42
GB-3	Vertical Grab Bar 24" Long	Starting at 3'-4" A.F.F.	B-5806.99x24
SD-1	Sanitary Disposal	Opening at 2'-7" A.F.F.	HOSPECO ND-1W
TTD-1	Toilet Tissue Dispenser	Centerline 24"	ROLLS ROYCE RINGER CO #TP-2
SM-1	Mirror	Bottom 40"	B-165 ST STEEL MIRROR 18"X36"

ELECTRICAL & MECHANICAL NOTES

1. SEE SHEET A-103.1 FOR RCP FOR ITEMS REQUIRING COORDINATION AND/OR ELECTRICAL CONNECTIONS.
2. ALL ABANDONED CIRCUITS MUST BE TERMINATED BACK TO THE PANEL.
3. EXISTING CIRCUITS MAY BE USED FOR NEW ELECTRICAL REQUIREMENTS WHERE CAPACITY EXISTS/ALLOWS.
4. NEW LED LIGHTING TO REPLACE FLUORESCENT = VERIFY EXISTING VOLTAGE IN FIELD. PROVIDE A LIGHT SWITCH FOR EACH RESTROOM TO COORD. WITH VACANCY SENSOR WITH DUAL TECHNOLOGY NOTED ON RCP.
5. HEAVY DUTY CONTRACT GRADE DEVICES AND COMPONENTS MUST BE USED.
6. ROUGH-INS MUST BE CONCEALED IN NEW CONSTRUCTION. SURFACE MOUNTED ROUGH-INS, BOXES ETC MAY BE USED ON EXISTING WALLS WHERE NECESSARY TO AVOID TRENCHING. ALL EXPOSED TO VIEW RACEWAYS MUST BE RUN PLUMB AND SQUARE TO BLDG STRUCTURE, BE NEATLY INSTALLED AND PAINTED TO MATCH ADJACENT SURFACES.
7. STANDARD EXHAUST FAN, COMPONENTS & WORK AS NOTED BELOW: NOT REQUIRED FOR THIS PROJECT
- 8" EF: BROAN # 505MG GRAINGER STOCK #5C053, 180 CFM, 120V 1.5AMP
- FLAT ROOF CAP W/ FLANGE: BROAN#611CM GRAINGER STOCK #4CK03

PLUMBING NOTES

1. SUPPLY PIPING SHALL BE INSTALLED OVERHEAD AND ACCESSIBLE WHEREVER POSSIBLE.
2. ALL SUPPLY PIPING SHALL BE INSULATED, WHERE EXPOSED SHALL ADDITIONALLY BE WRAPPED W/ PVC JACKET
3. PROVIDE METERED FLOW LAV FIXTURES WHERE REQUIRED BY CODE IN LAVATORIES
4. REF SHEET A603.1 FOR MOUNTING HEIGHTS OF FIXTURES & ACCESSORIES.
5. DWV PIPING BELOW SLAB SHALL BE CAST IRON, ABOVE SLAB SHALL BE SCH 40 PVC, EXTERIOR PIPING SHALL BE PVC SCH 40.
6. DOMESTIC SUPPLY PIPING SHALL BE COPPER HEAVY WALL, COMMERCIAL COMPLIANT W/ GATE VALVE CUTOFFS FOR ALL FIXTURES.
7. PROVIDE ONE FLOOR DRAIN W/O TRAP PRIMER AND ONE KEYED HOSE BIB UNDER LAVATORY IN EACH RESTROOM.