CUYAHOGA COMMUNITY COLLEGE

Office of Supplier Managed Services (SMS)
700 Carnegie Ave.
Cleveland, OH 44115

Request for Proposal
The Pantry
Western Campus
Project No. C20213120

ISSUED: July 16, 2021

PRE-BID MEETING DATE: July 23, 2021 @ 9:00 am

BID DUE DATE: August 6, 2021 @ 2:00 pm

Table of Contents

1 INTRODUCTION

Cuyahoga Community College District (Tri-C) is issuing this Request for Proposal (RFP) and inviting responses for the General Contractor (GC) services described in the accompanying specifications according to the terms, conditions, and requirements herein.

Vendors responding to this RFP shall be herein called the "Bidder."

1.1 Project Overview

This project includes new construction and renovations at the Tri-C Western Campus, 11000 West Pleasant Valley Road, Parma Ohio 44130, room G04C in lower level of the Student Services building (and adjacent areas). Please refer to the following Specifications and Drawings created by Bialosky Cleveland.

1. PROJECT MANUAL, THE PANTRY, TRI-C CONNECT, Western Campus
2. Drawing package, consisting of:
    a. T100 Title sheet
    b. D100 Demo plan
    c. A100 Plans and details
    d. A101 Interior elevations and details
    e. M100 Mechanical plans
    f. P100 Plumbing and fire plans
    g. P700 Plumbing specs
    h. E001 Electrical symbols and one line
    i. E100 Electrical plans
    j. E200 Power and systems plans
    k. E500 Electrical details and risers
    l. E501 Electrical schedules and diagrams
    m. E700 Electrical specs

Specific information about Cuyahoga Community College can be obtained at www.tri-c.edu .

2 SUBMITTING YOUR PROPOSAL

Bidders are cautioned to read the information contained in this RFP carefully. Bidders must submit complete responses to all requirements and questions, in the order listed, and in accordance with the instructions specified in this RFP.

A pre-bid review meeting will be held on July 23, 2021 at 9:00 AM. The location of the meeting will be at Tri-C's Western Campus Student Services Building lower level (by the vending machines), 11000 West Pleasant Valley Road, Parma, Ohio 44130. Park in Lot C off Pleasant Valley Road. Enter thru the entrance to the east of the theater, go thru the atrium, and take the stairs down to the lower level. We will start sharply at 9:00. There will be a sign-in sheet.

The Bid Due Date is August 6, 2021, by 2:00 PM. Proposals must be received at the location set forth below. Late proposals will not be accepted. Tri-C will confirm receipt of hard copies with a date and time stamp. No public opening is planned.

Appendix A: Proposal Form – 1 page
Appendix B: Bidder's Certification and Authorization to Execute – 3 pages
Appendix C: Delinquent Personal Property Tax Affidavit – 1 page
Appendix D: Close-out Checklist – 1 page

Two hard-copy and one electronic flash drive proposals are to be submitted to:

Cuyahoga Community College
Supplier Managed Services (SMS)
700 Carnegie Avenue, Cleveland, OH 44115
Attn: Phil Pallone/Judi Cooper
"PRICING – C20213120 Western Campus-The Pantry"

2.1 Contacts

Bidders must direct all technical questions regarding this RFP to Richard Rozewski. Procurement-related questions should be directed to Kelly Stehlin.

Buyer	Technical
Name: Kelly Stehlin Title: Procurement Manager Phone: 216-987-3131 Fax: 216-987-3495 Email: Kelly.Stehlin@tri-c.edu	Name: Richard Rozewski Title: Project Manager, Bialosky Cleveland Phone: 216-767-2067 Email: rrozewski@bialosky.com

2.2 Preparation of Proposal

In submitting a proposal or in its performance under an award by Tri-C, the successful Bidder warrants and represents that it is not suspended or debarred by the Federal Government or the State of Ohio.

- Bidders must notify Tri-C promptly of any ambiguity, inconsistency, or errors.

- Tri-C will not provide compensation for any expenses incurred by the Bidder for preparation of the proposal or for product or service demonstrations.

- Tri-C will not assume responsibility for errors or misinterpretations resulting from the use of incomplete documents.

- Tri-C may not consider proposals that require or request changes to the terms of this RFP.

- Proposals and any other information submitted in response to this proposal are the property of the Tri-C, and will not be returned.

2.3 Supplier Diversity

Tri-C is committed to diversity and to supporting Greater Cleveland's economy. All suppliers are encouraged to do business with Tri-C. Tri-C encourages all Bidders to exceed the following expectations:

a. Supplier Participation: 15% minority, 5% female, 6% SBE, and 2% veteran.
b. Workforce Diversity: 15% minority, 7% female, 2% veteran, 45% Cuyahoga County resident

3 ADMINISTRATIVE AND CONTRACTUAL INFORMATION

- Tri-C reserves the right to reject any or all proposals received as a result of this RFP, modify specifications proposed, waive any formalities or technicalities, or negotiate separately with any source and in any manner whatsoever.

- Tri-C does not discriminate in admission, access, or treatment in programs and activities, employment policies or practices based on race, creed, sex, color, national or ethnic origin, religion, marital status, age, sexual orientation, Vietnam-era or qualified disabled veteran status, or qualified disability.

3.1 Award of Contract

Tri-C, at its sole discretion, shall decide if contract award(s) will result from this RFP. **Proposals must be fully responsive to all requirements stated in the RFP to obtain consideration. Tri-C may not consider any proposal not prepared and submitted in accordance with the provisions outlined herein.**

In the event a contract is awarded, this RFP and the proposal of the successful Bidder(s) will be included as an addendum to the contractual obligations. Therefore, no information should be submitted which cannot be incorporated into that agreement.

Price alone will not be the sole determining factor in the selection process.

- Tri-C reserves the right to award based on various selection criteria.

- Tri-C is not bound to accept the lowest cost proposal, if in its judgment the lowest cost proposal does not provide the best overall value.

- Tri-C reserves the right to negotiate the final details of the Contract with the successful Bidder(s).

3.2 Pricing

- Labor Requirements:
  - The Bidder shall base its bid upon the prevailing rates of wages as ascertained by the Ohio Department of Commerce, Wage and Hour Bureau. Comply with ORC Section 4115.03 through 4115.04
- The prevailing wage rates are available at the Ohio Department of Commerce's web site; http://com.state.oh.us/.
- Any price increase granted by Tri-C will be in the form of a written addendum to the original purchase order.

3.3 Delivery of Products and Services

Delivery requirements including inside delivery, and or installation for products and services are to be in coordination with Cuyahoga Community College or its designee. Late deliveries may be assessed a late fee.

- Additionally, deliveries of products & services must also be coordinated and scheduled with Tri-C.

- Overall Project Completion – 12/31/2021.

3.4 Billing

Invoices must reflect the purchase order number and be addressed to:

Cuyahoga Community College
Capital & Construction
700 Carnegie Avenue
Cleveland, Ohio 44115
Attention: Nancy Stopp
Nancy.Stopp@tri-c.edu

**** All invoices associated with the purchase order will be reviewed and routed by Bialosky Cleveland. Pencil draft invoices as well as subsequent approved invoices should be e-mailed to Bialosky Cleveland – Attention: Richard Rozewski** at rrozewski@bialosky.com

3.5 Contract and License Agreements

Respondents must comply with all State of Ohio and Federal regulations concerning wages, liability insurance, worker's compensation, discrimination, intimidation, and any other applicable regulations.

4 TERMS AND CONDITIONS

Tri-C's Terms and Conditions are accessible on our web site at:

https://www.tri-c.edu/administrative-departments/supplier-managed-services/documents/terms.pdf

4.1 Entire Agreement

The RFP and any resulting Contract shall be the complete and exclusive statement of the agreement between Tri-C and the Bidder and supersedes all prior oral or written agreements.

The terms and conditions of any purchase order, agreements, amendments, modifications, or other documents submitted by either party which conflict with or in any way purport to amend or add to any of the terms and conditions of the Contract are specifically objected to by the other party and shall be of no force or effect; nor shall govern in any way the subject matter hereof, unless set forth in writing and signed by both parties.

4.2 Time of Performance

Bidder agrees to perform all obligations and render services set forth in the Contract, in accordance with the schedules herein and as mutually agreed upon between Tri-C and the Bidder during the term of the Contract.

4.3 Contracts Amendments

The Contract may be amended within the Contract period by mutual consent of both parties. No modification or amendment to the Contract shall become valid unless in writing and signed by both parties. All correspondence regarding modifications or amendments to the Contract must be forwarded to Tri-C's Vice President of Financial Services for prior review and approval.

4.4 Insurance

A. For any Contract which requires the Bidder to provide on-site services, prior to commencement of work, Bidder shall provide Tri-C with Certificates of Insurance in the amounts shown below as a minimum requirement and shall maintain such coverage in effect for the duration of the contract.
The insurer must be rated at least an 'A' by A. M. Best and Company.

Worker's Compensation	Statutory
Employer's Liability	$1,000,000
Comprehensive General Liability	$1,000,000 each occurrence $2,000,000 in the aggregate
Comprehensive Automobile Liability (Any auto, hired auto, non-owned auto) a) Bodily Injury b) Property Damage	 $ 500,000 each occurrence $ 500,000 each occurrence

If any part of the Contract is sublet, similar insurance shall be provided by or on behalf of the subcontractor to cover the subcontractor's operations. The Bidder shall provide evidence of such insurance. In the event a subcontractor is unable to furnish insurance in the limits required under the Contract, the Bidder shall endorse the subcontractor as an additional insured on the Bidder's policies.

The Bidder and Tri-C will include reciprocal "hold harmless" language in the contractual agreement.

B. Bidder shall deliver to Tri-C:

1. Certificates evidencing the existence of all such insurance promptly after the execution and delivery of contract and prior to the continued or additional performance of any services to be performed by the Bidder from or after the date of any agreement or purchase order; and

2. Such Certificates shall name Tri-C and its Board of Trustees as additional insured, with the exception of Workers Compensation and Employers Liability, and shall provide that the policies will not be cancelled until after 30 days unconditional written notice to Tri-C, giving Tri-C the right to pay the premium to maintain coverage.

C. The insurance policies required in this RFP shall be kept in force for the periods specified below:

1. The Bidder shall keep Commercial General Liability Insurance in force until receipt of final payment.

2. Workers' Compensation Insurance shall be kept in force until the Bidder's obligations have been fully performed and accepted by Tri-C in writing.

D. The Bidder shall provide Tri-C a full and complete copy of any insurance policy promptly upon request by Tri-C, and without charge.

4.5 Indemnification

The Bidder agrees to indemnify Tri-C, its officers, agents, employees, and/or subcontractors and hold them harmless from any and all liability (statutory or otherwise), claim, suit, demand, damage, judgment, cost, interest, and expense including but not limited to reasonable attorneys' fees and charges, which the Bidder may incur or pay out, by reason of or resulting from the performance of Bidder; or by any negligent act or omission by Bidder, its officers, agents, employees, and/or subcontractors in connection with any resulting Agreement, other than as may result from the gross negligence or willful misconduct of Tri-C. Furthermore, the indemnification contained herein may not be assigned of subrogated to any third party, whether by operation of law or otherwise.

The indemnities herein shall survive the termination of any agreement or purchase order for any reason whatsoever.

4.6 Other Benefits

It is understood and agreed that no benefits, payments or considerations received by Bidder for the performance of services associated with and pertinent to a resulting Contract shall accrue directly or indirectly to any employees, elected or appointed officers or representatives, persons identified as agents of, or who are by definition an employee of Tri-C.

4.7 Non-Disclosure

The Bidder and Tri-C acknowledge that in the performance of a resultant Contract employees of either parties may come into the possession of proprietary or confidential information owned by or in the possession of the other. Neither party shall use any such information for its own benefit or make such information available to any person, firm, corporation, or other organization regardless of whether directly or indirectly affiliated with the Bidder or Tri-C, unless: (1) required by law; (2) by order of any court or tribunal; (3) such disclosure is necessary for the assertion of a right or defense of an assertion of a right; by one party against the other party hereto; or (4) such information has been acquired from other sources.

4.8 Publicity

The Bidder agrees that it shall not publicize the Contract or disclose, confirm, or deny any details thereof to third parties; use any photographs or video recordings of Tri-C employees; or use Tri-C's name in connection with any sales promotion or publicity event without the prior express written approval of Tri-C.

4.9 Severability

In case any provision hereof, or of any resulting agreement or purchase order, shall, for any reason be held invalid or unenforceable in any respect, such invalidity or unenforceability shall not affect any other provision thereof, and this Contract shall be construed as if such invalid or unenforceable provision had not been included herein.

4.10 Assignment

This agreement is with the Bidder, and Bidder's interest in such agreement, duties hereunder, and/or fees due hereunder may not be assigned or delegated to a third party.

4.11 Observance of College Rules and Regulations

The Bidder agrees that at all times its employees will observe and comply with all regulations of Tri-C, including but not limited to smoking, parking, facility usage and security regulations. All Tri-C campuses are 100% smoke free (inside and out).

5 ADDITIONAL INFORMATION and REQUIREMENTS

A. PRICING OF PROPOSAL

Each proposal is to be submitted on the attached Bid Form. Complete all of the relevant blank spaces and requested information. Bidders may submit bids for the Base Bid. These forms must be properly signed.

Proposals are to be submitted in a sealed envelope and labeled:

"PRICING – C20213120 Western Campus-The Pantry"

Installation will be performed under direct coordination of the selected Bidder(s) and Cuyahoga Community College.

If you are not able to provide the specified product, please indicate "N/A" (for not applicable). Refer to Paragraph 5.D for Substitutions.

It is requested that Bidders who may have any questions pertaining to these documents, or any concerns that may be in doubt as to the true meaning of any part of the RFP documents, shall submit to a request for interpretation to: Bialosky Cleveland, **Richard Rozewski** (rrozewski@bialosky.com) for review and response by the project team. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made by Addendum duly issued and a copy of such Addendum will be e-mailed, delivered, or faxed to each person receiving a set of pricing documents.

Pricing for the above described work must be submitted on the blank summary sheets furnished with the pricing documents. Said pricing must be submitted in duplicates.

B. WITHDRAW OF PROPOSAL

No bidder may withdraw their proposal for a period of ninety (90) days after the date of opening.

C. REJECTION OR ACCEPTANCE OF PRICING PROPOSAL

Cuyahoga Community College reserves the right to reject any or all proposal and any part or parts of any proposal and the right to waive any informalities of any kind.

D. SUBSTITUTIONS

Proposed substitutions are to be e-mailed to **Richard Rozewski** (rrozewski@bialosky.com) for review. The substitution shall be included if and only if written approval is received via Tri-C's addendum.

- Proof of equality and a comparison to basis of specification shall be included with each proposed substitution.
- Substitution requests are to be emailed to **Richard Rozewski** (rrozewski@bialosky.com) no later than **2:00 PM on July 22, 2021**.

E. PRODUCT

Workmanship and materials will be warranted for a period of not less than one year from the date of final acceptance by Tri-C. Should defects develop within warranty period, the manufacturer and/or the Bidder, shall remedy the defects and reimburse Tri-C for all damage to other work, whether caused by the defects or the work of correcting the same. Warranties extending beyond the one-year period shall be specifically provided in the Contract and may be fulfilled by the written warranty of the manufacturer.

F. DELIVERY, STORAGE, & HANDLING

The Bidder shall be responsible for the receipt of products and supplies necessary to provide a complete installation. All deliveries shall be scheduled and coordinated with the individual campus plant managers. Materials must be promptly installed after delivery. All products shall be delivered in good condition and in its original and unopened packaging and covering.

G. DESIGN SERVICES

N.A.

H. SUBMITTALS

The following items shall be submitted at Bid Time:

1. Completed Bid Form.
2. Certificate of Insurance (ACCORD Form is acceptable)
3. Up-dated W-9 Form.
4. Registered, Legal Name of Vendor.
5. List of three past or current projects of similar size, include Owner's contact information.

The following items shall be submitted within seven (7) days of Contract:

6. Product Data / MSD sheets of all products included in Bidder's bid package.
7. List of sub-contractors of whom you would be working with on this project (i.e. General Trades, Mechanical, Electrical, Installation groups, etc).

I. INSTALLATION

The Bidder will have full-time personnel capable of completing the job requirements in the project timeframe. Installation will be in accordance with the manufacturer's installation procedures. The Bidder will be responsible for the removal of all trash and debris associated with the installation of all materials in this project.

Installation Services: The Bidder (Contractor) shall (where applicable):

1. Timing of work shall be coordinated with the College and Construction Manager.

2. Conduct an inspection of the building to identify phasing and staging or any restrictions, which might impact project installation activities.

3. Identify appropriate delivery area with Tri-C; use freight or passenger elevator permitted only with approval of the College, if applicable. Elevator may not be available for use at all times.

4. Provide all necessary equipment required to transport.

5. The site is to be left "broom-cleaned" daily.

6. Coordinate the work of all trades along with other contractors, owner, etc. as necessary for project completion. Submit a project schedule one (1) week after NTP. Two-week detailed construction/installation schedule look-aheads are required to be updated weekly with all Contractors.

7. Protect all doors, door jambs, walls, and floor finishes from construction/installation activities.

8. Repair all scratches, tears, and dents that were a result of construction/installation activities.

9. Contractor to provide on-site field supervisor during full-term of on-site work. Cost of this person shall be included in the Bidder's bid.

10. Safety
    a. Bidders are to comply with all pertinent sections of **CFR 1926 (OSHA)** and related codes. Provide required signage, temporary protection, and barricades necessary for the protection of the public. Hard hats, safety glasses, and appropriate work gloves are required to be worn by contractors' labor force at all times.
    b. The Contractor shall adhere to all of the following provisions:
        a. Scaffolding – Fall protection required at or above 6'
        b. Scissor & Boom Lift – Body Harness with self-retracting lanyard required while elevated at or above 6'
        c. Safety Monitor – No use of a safety monitor is permitted without specific approval from the Construction Manager
        d. Controlled Decking/Access Zone – No use of controlled decking/access zone without specific approval from the Construction Manager
        e. No 6' shock absorbing lanyard may be used at any elevation below 18 ½ feet and never in any lift
        f. The Onsite Safety Coordinator must have an OSHA 30 card that was issued no more than 5 years ago, or an approved 8-hour refresher card (to the OSHA 30) no more than 3 years old, and a First Aid/CPR certification no more than 2 years old.
    2. The contractor shall not be permitted to begin contract work prior to an approved Site Specific Safety Plan (3SP). This shall be submitted electronically prior to starting work. An approved 3SP is a condition of starting work.
    3. The contractor shall submit weekly safety inspection results, conduct and document tool box training weekly, conduct and document daily inspections of

all powered equipment, occupied trenches, and scaffolding, provide the Construction Manager all Safety Data Sheets (SDSs, formally called MSDSs), acknowledge the safety violation policy, generate daily huddle meeting minutes and meet all other requirements of the project safety plan.

4. All contractor employees are required to attend the Construction Manager's safety orientation the first day on the project site.
    a. Each worker must bring with them to the safety orientation a photo ID and a current (within the past year) 11 panel drug card equal to or more stringent than the Construction Industry Substance Abuse Program (CISAP) listed in Appendix A of the project safety plan.
    b. Drug cards from SCT must have the XOP on the card which indicates the 11 panel expanded opiate test.
5. All workers on this project site must remain current within the past year on all substance abuse tests.
    a. Post incident substance abuse test to the CISAP standards shall occur immediately but no later than the end of the work day should any injury require off-site medical attention, or an incident occur as defined in the CISAP.
    b. For any contractor whose employees do not carry a drug card (out of town companies), this contractor shall coordinate with the Construction Manager's Safety Ream the process by which the subcontractor will demonstrate that all employees are, and shall remain, current throughout the term of the contract and their test meets CISAP standards
6. Crystalline Silica standards
    a. Contractor shall complete the Exposure Control Plan and include a plan covering their silica dust generating tasks in the 3SP. A template is found at: plan.silica-safe.org NOTE: The new OSHA regulation requires a significant amount of air sampling data. Plan for some expense for air sampling, respiratory physical evaluations, and outfitting all employees with respirators for any silica generating tasks.
    b. Contractors who may potentially generate crystalline silica dust, or have workers exposed to the hazard also must generate this exposure control plan for their specific scope of work. This plan shall be incorporated into each contractor's 3SP.
    c. Contractors must regularly update this exposure control plan so that it accurately reflects the jobsite silica hazards and effectively addresses all mitigation efforts.

11. Installation
    a. Related Documents
        1) Scope of Work Documents
    b. Excess Materials
        1) Turn over to Tri-C upon request.
    c. Labor Requirements
        1) The Bidder shall base its bid upon the prevailing rates of wages as ascertained by the Ohio Department of Commerce, Wage and Hour Bureau. Comply with ORC Section 4115.03 through 4115.04.
            a. "New" construction threshold is $250,000.

b. "Reconstruction, enlargement, alteration, repair, remodeling, renovation, or painting" threshold is $75,000.

2) 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 in this section.

d. Examination
   1) Examine Project site 24 hours before performing work, including loading dock area, elevators, and staging area, to ensure conditions are satisfactory for proper performance of work. Existing damage to building or debris that hinders performance shall immediately be called to the attention of the campus' plant manager and Phil Pallone.
      a. Examine substrate and conditions under which work is to be performed.
   2) Examine materials or equipment immediately upon delivery and again prior to installation. Reject damaged or defective items.
   3) Do not proceed until unsatisfactory conditions have been corrected.

e. Performance of Work:
   1) Provide Scope as identified in this RFP.
   2) Comply with manufacturer's installation instructions and recommendations.
   3) Provide connection devices, hardware and accessories required for complete installation.
   4) Install components securely into place at heights and dimensions indicated.

f. Cleaning
   1) Remove material and debris from Project site at the end of each working day. The job site is to be maintained in a clean, orderly condition and kept free from the accumulation of waste materials and rubbish.

g. Finishes
   1) Factory or site finish, color, sheen, and texture shall be uniform.

h. Protection
   1) Cover, ventilate, and protect work to protect from damage caused by weather, moisture, heat, staining, dirt, abrasions, or other conditions that may adversely affect appearance or use.
   2) Protect against deterioration of finish, warpage, distortion, twisting, opening of joints and seams, delamination, or other injury.
   3) Limit exposure to the following:
      a. Excessively high or low temperatures
      b. Excessively high or low humidity
      c. Water/mold
      d. Solvents
      e. Puncture
      f. Abrasion
      g. Spoiling, staining, and corrosion
      h. Rodent and insect infestation
      i. Combustion

12. Project Closeout:
    a. See Appendix C: Close-out Checklist
    b. Final Cleaning

1) Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean surfaces to the condition expected in building cleaning and maintenance program. Comply with manufacturer's instructions.
    a) Complete the following cleaning operations before requesting inspection for Certification of Contract Completion:
        i. Remove labels that are not required to be permanent
        ii. Clean exposed hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances.
        iii. Remove temporary protection
        iv. Repair finished surfaces damaged during project to like new condition.

13. Scope of Work:
    a. Refer to the enclosed drawings and specifications for detailed scope and specifications.

Appendix A

Proposal Form

The Pantry
Western Campus
Project No. C20213120

Having read the Request for Proposal, prepared by the Office of the Capital & Construction, Cuyahoga Community College District Office, Cleveland, Ohio 44115 and having also received, read, and taken into account any Addenda and likewise having inspected the sites of, and conditions affecting and governing the construction of the said project, the undersigned hereby proposes to furnish all material and to perform all labor, as specified in this RFP for the said work, for the following sum (please round all numbers to the nearest dollar):

Time of Completion

- Overall Estimated Project Completion – 12/31/2021.

Addenda acknowledgement:

Addendum Number	Date Received
_____	_____
_____	_____

The undersigned Bidder proposes to perform all Work for the applicable Contract in accordance with the proposed Contract Documents, for the following sum(s):

Bid Package – GENERAL CONTRACT

BASE BID (Including Allowances and Subtotal of Unit Price Extensions above):

ALL LABOR AND MATERIALS, for the sum of $ _____

Sum in words: _____

_____ and _____ /100 dollars

Signature: _____

Printed Name: _____

Title: _____

Company:

Appendix B

Bidder's Certification and Authorization to Execute

The Bidder hereby acknowledges that the following representations in this bid are material and not mere recitals:

1. Bidder has read and understands the Contract Documents and agrees to comply with all requirements of the Contract Documents, regardless of whether the Bidder has actual knowledge of the requirements and regardless of any statement or omission made by the Bidder, which might indicate a contrary intention.

2. The Bidder represents that the bid is based upon the Standards specified by the Bidding Documents.

3. Bidder has become familiar with local conditions and has correlated personal observations about the requirements of the Bidding Documents. The Bidder has no outstanding questions regarding the interpretation or clarification of the Bidding Documents.

4. Bidder understands that the award of the General Contractor Contract for the Project will require sequential, coordinated and interrelated operations, which may involve interference, disruption, hindrance or delays in the progress of the Bidder's Work. The Bidder agrees that the Contract price, as amended from time to time, shall cover all amounts due from Tri-C resulting from interference, disruption, hindrance or delay caused by or between its Subcontractors or his agents and employees. The Bidder agrees that any such interference, disruption, hindrance or delay is within the contemplation of the Bidder and Tri-C and that the Bidder's sole remedy for any such interference, disruption, hindrance or delay shall be an extension of time in accordance with the Contract Documents. This provision is intended to be, and shall be construed as, consistent with, and not in conflict with, Section 4113.62, ORC.

5. During the performance of the Contract, the Bidder agrees to comply with OAC Chapters 123:2-3 through 123:2-9 and agrees to incorporate the provisions contained in the Ohio Administration Code Section 123:2-9-01 into all subcontracts on the Project, regardless of tier. The Bidder understands that the Ohio Equal Opportunity Center may conduct pre-award and post-award compliance reviews to determine if the Bidder maintains nondiscriminatory employment practices, maintains an affirmative action program and is exerting good faith efforts to accomplish the goals of the affirmative action program. For a full statement of the rules regarding Equal Employment Opportunity in the Construction Industry, see OAC Chapters 123:2-1 through 123:2-9.

6. The Bidder and each person signing on behalf of the Bidder certifies, and in the case of a joint or combined bid, each party thereto certifies as to such party's organization, under penalty of perjury, that to the best of the undersigned's knowledge and belief: (a) the Base Bid, any Unit Prices and any Alternate Bid in the bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition as to any matter relating to such Base Bid, Unit Prices or Alternate bid with any other Bidder; (b) unless otherwise required by law, the Base Bid, any Unit Prices and any Alternate bid in the bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to the bid opening, directly or indirectly, to any other Bidder who would have any interest in the Base Bid, Unit Prices or Alternate bid; (c) no attempt has been made or will be made by the Bidder to induce any other individual, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

7. Bidder understands that the Contract is subject to all the provisions, duties, obligations, remedies and penalties of Chapter 4115, ORC, "Wages and Hours on Public Works," and that the Bidder shall pay any wage increase in the locality during the term of the Contract.

8. The Bidder shall pay the prevailing wage rates of the Project locality, as issued by the Ohio Department of Commerce Wage and Hour Bureau, to laborers and mechanics performing Work on the Project.

9. If the Bidder or its Subcontractors fail to comply with O.R.C Chapter 4115, Tri-C may withhold payment. The Bidder is liable for violations committed by the Bidder and/or its Subcontractors.

10. Bidder certifies that upon the award of a Contract, the Bidder will make a good faith effort to ensure that all of the Bidder's employees, while working on Tri-C property, will not purchase, transfer, use or possess illegal drugs or alcohol or abuse prescription drugs in any way and will ensure that its employees will not carry any firearm onto Tri-C premises or job site.

11. Bidder agrees to furnish any information requested by Tri-C to evaluate the responsibility of the Bidder.

12. Bidder certifies that it is enrolled and in good standing in an Ohio Bureau of Workers' Compensation (BWC) Drug Free Workplace Program (DFWP) or an equivalent BWC approved DFWP. Bidder certifies that it will require each of its Subcontractors on the Project to also be enrolled in a BWC approved DFWP and will submit confirmation of enrollment of its Subcontractors to Tri-C with this Bidder's Certification.

13. Bidder certifies that the Personal Property Tax Certificate attached hereto is true and accurate in all respects.

14. All signatures must be original.

15. By signature hereto, Bidder offers and agrees to furnish products and / or services as proposed and comply with all terms, conditions, and requirements set forth in the RFP documents contained herein.

16. Bidder further certifies that all statements and information prepared and submitted in response to this solicitation are complete and accurate.

17. Bidder certifies that the individual signing this document and documents made part of the RFP is authorized to sign documents on behalf of the said company and to bind the company under any Contract that may result from the submission of a proposal.

18. Bidder certifies compliance with all Federal laws and regulations pertaining to Equal Employment Opportunities and Affirmative Action.

BIDDER'S NAME: _____

Authorized Signature: _____

Date Signed: _____

Print Name: _____

Title: _____

Company Name: _____

Mailing Address: _____

_____

Telephone Number: _____

Facsimile Number: _____

E-Mail Address: _____

Where Incorporated: _____

Federal Identification Number: _____

Contact person for Contract processing: _____

Date enrolled in an OBWC-approved
DFWP (month/date/year): _____/_____/_____

President or Primary Officer Name and Title: _____

_____

Acknowledge Receipt of all Addenda: _____

State of Ohio
Ohio Facilities Construction Commission

DELINQUENT PERSONAL PROPERTY TAX AFFIDAVIT

(Section 5719.042, ORC)

State of Ohio }
} SS.
County of _____ }

The undersigned individual, or duly authorized representative of the identified company, having been first duly cautioned and sworn, alleges and states that said individual or company has been advised that he has or it has received a Notice of Intent to Award a Contract(s) let by competitive bid by Cuyahoga Community College District**, on behalf of the State of Ohio under Section 3318.10, ORC, but prior to the execution of said Contract(s), and pursuant to Section 5719.042, ORC, provides this statement to the Treasurer under oath that he or it was not charged, on the date the Bid(s) was submitted, with any delinquent personal property taxes on the general tax list of personal property of _____ County, Ohio, or that he or it is so charged in the following amount:**

Delinquent Tax: _____

Penalties and interest due and unpaid: _____

Total (if none, indicate "NONE") _____

A copy of this sworn statement will be attached to and incorporated into the Contract(s) for this Project which shall enable payments to be made under said Contract(s).

By: _____ Date: _____, _____

Company:_____ _____

Project:

Sworn to and executed before me this _____ *day of* _____, _____

_____
Notary Public
My commission expires: _____

Appendix D

Contract Completion Checklist

Project Name: _____ Contractor Name: _____

Project Number: _____ Address: _____

Project Location: _____ _____

N/A	Included	Not Included	
			Closeout Forms / Certifications Required (3 original copies to Owner required):
☐	☐	☐	Payment Release Affidavit
☐	☐	☐	Final Certified Payroll Reports
☐	☐	☐	Updated Form 26
☐	☐	☐	Affidavit of Compliance to Prevailing Wages for each sub
☐	☐	☐	Certification of Equipment Demonstrations
☐	☐	☐	Partial Certification of Contract Completion
☐	☐	☐	Certification of Warranty Commencement
☐	☐	☐	Final Certification of Contract Completion
☐	☐	☐	Waiver of Lien
☐	☐	☐	Affidavit of Contractor/Subcontractor
			Closeout Action Items and Record Documents (3 original copies to Owner required):
☐	☐	☐	Final Cleaning
☐	☐	☐	Complete Punch List Work
☐	☐	☐	Certificate of Occupancy
☐	☐	☐	Inspection Certificates
☐	☐	☐	Letter of Approval - State Fire Marshal for Fire Suppression System
☐	☐	☐	Operations and Maintenance Manuals
☐	☐	☐	As-Built Drawings
☐	☐	☐	Detailed Drawings - concealed utilities, MEP systems
☐	☐	☐	Warranties and Guarantees, including the most recent address and telephone number of any Subcontractors, Material Suppliers, or manufacturers
☐	☐	☐	Extra Material, e.g. Attic Stock, keys, specialized wrenches, etc.
☐	☐	☐	Consent of Surety for Final Payment

Reviewed by:

Construction Manager (or Architect / Engineer for Stipulated Sum Contracts)

Name: _____ Signature: _____ Date: _____

Plant Manager

Name: _____ Signature: _____ Date: _____

Capital and Construction

Name: _____ Signature: _____ Date: _____

BIALOSKY
CLEVELAND

Cuyahoga Community College

PROJECT MANUAL

THE PANTRY, TRI-C CONNECT
Western Campus

11000 W Pleasant Valley Rd
Parma, OH 44130

Prepared For
Cuyahoga Community College

Project No. C20213120

Prepared By
Bialosky Cleveland
6555 Carnegie Ave, Suite 200
Cleveland, Ohio 44103

PERMIT & BID SET
07.16.2021

DOCUMENT 00 0100 - TABLE OF CONTENTS

Copyright © 2021 Bialosky + Partners Architects

DIVISION 07 - THERMAL AND MOISTURE PROTECTION

(Not Used)

DIVISION 08 - OPENINGS

DIVISION 09 - FINISHES

DIVISION 10 - SPECIALTIES

(Not Used)

DIVISION 11 - EQUIPMENT

DIVISION 12 - FURNISHINGS

DIVISION 13 - SPECIAL CONSTRUCTION

(Not Used)

DIVISION 14 - CONVEYING EQUIPMENT

(Not Used)

DIVISION 21 - FIRE SUPPRESSION

See Drawings

DIVISION 22 - PLUMBING

See Drawings

DIVISION 23 - HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

See Drawings

DIVISION 26 - ELECTRICAL

See Drawings

Copyright © 2021 Bialosky + Partners Architects

END OF TABLE OF CONTENTS

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 EXISTING CONDITIONS

A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of Contract Documents, as follows:

B. Hazardous Material Survey: Entitled Pre-Renovation Hazardous Materials Assessment, dated April 5, 2021.

1. Original copy is available for inspection and is appended to this Section.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

EA GROUP
Environmental Analysis and Management

April 5, 2021

Mr. Phillip Pallone
Cuyahoga Community College
700 Carnegie Avenue
Cleveland, Ohio 44115-2878

RE: **Pre-Renovation Hazardous Materials Assessment**
Room G40C, Student Services Building, West Campus, Cuyahoga Community College
11000 West Pleasant Valley Road, Parma, Ohio
OH43992

Description of Work

EA Group, Mentor, Ohio was contracted by Cuyahoga Community College (Tri-C) to conduct a pre-renovation hazardous materials assessment in support of a renovation project in Room G04C of the Student Services Building on the West Campus of Tri-C at 11000 West Pleasant Valley Road in Parma, Ohio. The assessment activities included a survey for asbestos-containing materials (ACMs); sampling and analysis of paints on representative surfaces to determine lead content; an inventory of non-incandescent lighting and other "universal waste"-type materials; and a preliminary mold inspection. This report provides the results of the pre-renovation hazardous materials assessment.

Asbestos Survey

EA Group's licensed Asbestos Hazard Evaluation Specialist Craig Brown, ES35176, reviewed drawings provided by Client, inspected the designated area, developed a sampling strategy, and procured bulk samples of suspect ACM on March 16, 2021. Homogeneous Groups of suspect ACM are identified on the *Asbestos Inspection Data Sheet* forms in Appendix A. Classification of any positively identified ACM has been made per National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations, with additional notations for compliance with Occupational Safety and Health Administration (OSHA) regulations, if and where applicable. Room/area designations and general sampling locations for the survey are illustrated on the schematics in Appendix A.

Objective and Limitations of the Inspection

The objective of this survey was to identify and sample suspect ACM associated with Room G04C in the Student Services Building on the West Campus of Tri-C at 11000 West Pleasant Valley Road in Parma, Ohio, pursuant to NESHAP and OSHA regulations.

Hard fittings on fiberglass lines and duct mastic were observed above the drop ceiling. Because no renovation work is to take place above the drop ceiling, these materials were not scheduled to be sampled and are considered assumed ACM.

7118 Industrial Park Boulevard • Mentor, Ohio 44060-5314
440-951-3514 • 800-875-3514 • Fax: 440-951-3774 • www.eagroupohio.com

GENERAL LIMITATIONS

1. EA Group cannot guarantee that all ACM has been identified by this assessment, as additional asbestos materials, not previously identified or quantified, are frequently encountered during renovation or demolition.
2. Actual quantities of asbestos material may vary from any estimates provided in EA Group's report due to identification of additional materials and difficulties in quantifying hidden or inaccessible materials.
3. Prior to demolition or renovation of any structure or equipment, suspect materials that were previously inaccessible or excluded from sampling should be sampled and analyzed for asbestos.

Asbestos Analysis

The bulk samples were analyzed by polarized light microscopy for asbestos content at or through the Laboratory Division of EA Group, which is accredited by the National Institute of Standards and Technology – National Voluntary Laboratory Accreditation Program. The United States Environmental Protection Agency requires all materials containing greater than one percent asbestos by weight to be considered asbestos-containing materials. Composite or layered analyses were performed, depending on the nature of a material. If an initial analysis indicated less than 3% asbestos, additional analysis (point-counting) was conducted. In all cases that at least one sample from a homogeneous group [Group] was determined to be ACM, the Group as a whole is considered ACM regardless of the results for any other samples from that Group. Similarly, in all cases that at least one sample from a Group was determined to contain a trace amount (≤1%) of asbestos, following point-counting, the Group as a whole is considered to contain trace asbestos for potential OSHA compliance purposes. Analytical results are provided in Appendix A

Results of Asbestos Analysis

The materials that were sampled as suspect are identified in Table 1.

Although the drywall system in Group A is non-ACM by EPA's definition, samples that were analyzed were determined to contain trace amounts (≤1%) of asbestos, following point-counting. Because OSHA regulates potential employee exposure to any amount of asbestos, including "trace" concentrations, renovation activities that would affect these specific materials would still be governed under OSHA regulations, requiring appropriate worker protection and procedures when handling the materials, but would not be regulated under other EPA regulations. Any waste material generated from these Groups during the planned work activities would not be considered asbestos-containing

waste. The occurrences of these Groups are identified on the *Asbestos Inspection Data Sheet* forms by the notation "0,B" under the Results column.

Any activities that involve the handling or disturbance of assumed ACM or materials containing trace asbestos should be carried out by a licensed abatement contractor or other appropriately trained personnel in accordance with all applicable regulations. All documentation associated with the samples, including this report, should be retained for future reference.

Paint Chip Sampling of Suspect Lead-Based Paint

A total of two representative painted surfaces were sampled for lead content analysis. This was not a comprehensive mapping of all painted surfaces, and was limited to sampling and analysis of representative painted components. Locations and components sampled are identified in Table 2, attached. Each sample was placed in an individual 4-mil resealable plastic bag, given a unique sample identification number, and then transported to the Laboratory Division of EA Group for analysis.

Paint Chip Sample Analysis

Each sample was analyzed in accordance with U.S. EPA SW846 Method 6010B for total lead. The results of the analysis are summarized in Table 2, attached, and detailed in the Laboratory Analytical Report in Appendix B.

Results

The U.S. EPA defines paint that contains more than 5000 milligrams per kilogram (mg/kg) [equivalent to parts per million (ppm)] of lead as *lead-based paint* (LBP). The Consumer Product Safety Act "Ban of Lead-containing Paint and Certain Consumer Products Bearing Lead-Based Paint" defines paint that contains more than 600 mg/kg as lead-containing paint. OSHA regulates potential employee exposure to lead, regardless of the concentration in paint.

As shown in Table 2, neither of the samples contained detectable (quantifiable) concentrations of lead. The information on these paints should be provided to any contractors who will be disturbing the painted surfaces so they can conform with applicable OSHA regulations.

Non-Incandescent Lighting, "Universal Waste" Materials, and Refrigerants

The renovation areas of the building were inspected for various universal waste-type materials that may need to be addressed prior to or as part of renovation activities. These consisted of non-incandescent lighting fixtures (fluorescent lamps and potential ballasts); suspect mercury-containing equipment [MCE] (e.g., thermostats, switches); emergency lighting/exit signs, which typically house

lead-containing rechargeable batteries [gel cells, sealed lead-acid]; and, refrigerant units (e.g., drinking fountains) that may contain regulated chlorofluorocarbon (CFC) refrigerants. Commercial entities that can manage or assist with managing these types of materials may be found at the new/revised Ohio EPA website "https://recyclesearch.com/profile/ohioepa-recycling-directory".

A total of 20 four-foot lamps and 18 compact fluorescent lamps, with approximately 10 ballasts which may or may not contain polychlorinated biphenyls (PCBs) were noted. If to be removed, these should all be provided for reclamation because of the mercury in the lamps and possible, although not likely, PCBs in the ballasts.

One suspect mercury-containing thermostat was observed and would need to be provided for reclamation if it is removed. A number of HVAC companies provide thermostat recycling programs. Some of the companies are listed at the Ohio EPA website. The Thermostat Recycling Corporation (TRC) is a non-profit corporation that facilitates the collection of all brands of used, wall-mounted mercury-switch thermostats so that the mercury can be re-claimed. Details are available at [www.thermostat-recycle.org/]. Typically, the thermostats are taken at no cost to the owner.

No exit signs or emergency lighting units were noted.

Primary Mold Inspection

The building was inspected for obvious signs of water damage, water intrusion and/or the presence of mold. No evidence of water damage/intrusion or presence of mold was observed.

If you have any questions or concerns regarding the above information, please contact the undersigned. Thank you for consulting EA Group.

Sincerely,

EA Group

Timothy S. Bowen,
Vice President/Technical Director

Craig Brown,
ES35176

Table 1 Summary of Results - Room G04C, Student Services Building, West Campus, Tri-C, Parma, Ohio

Group	ID # OH43992	MATERIAL DESCRIPTION	Material Type	RESULT
A	01	Drywall System; Wall	M/NF2	0,B
A	02	Drywall System; Wall	M/NF2	0,B
A	03	Drywall System; Wall	M/NF2	0
B	04	Plaster Ceiling; Rough Texture	M/NF2	0
B	05	Plaster Ceiling; Rough Texture	M/NF2	0
B	06	Plaster Ceiling; Rough Texture	M/NF2	0
C	07	Drywall Soffit	M/NF2	0
C	08	Drywall Soffit	M/NF2	0
D	09	2'x2' Ceiling Panel; Patterned, Pinhole	M	0
D	10	2'x2' Ceiling Panel; Patterned, Pinhole	M	0
E	11	Wood Paneling Mastic	M/NF2	0
E	12	Wood Paneling Mastic	M/NF2	0
F	13	Ceramic Floor Mastic	M/NF1	0
F	14	Ceramic Floor Mastic	M/NF1	0
G	15	2'x2' Ceiling Panel; Sheet Rock	M	0
G	16	2'x2' Ceiling Panel; Sheet Rock	M	0
H	17	Sink Bottom Coating; Gray	M/NF2	0
H	18	Sink Bottom Coating; Gray	M/NF2	0
I	Assumed	Hard Fittings on Fiberglass Line	T	**[+]**
J	Assumed	Duct Mastic	M/NF2	**[+]**

Group = Homogeneous Group identification

Material Type: S = Surfacing
T = Thermal System Insulation
M = Miscellaneous
NF1 = Non-Friable Category I
NF2 = Non-Friable Category II

Result: 0 = non-ACM
[+] = ACM
B = verified by layering & point-counting
0,B = trace asbestos; non-ACM by EPA but OSHA may apply

Table 2. Summary of Paint Chip Sample Analysis for Lead
Cuyahoga Community College
Room G04C, Student Services Building, West Campus, Tri-C, Parma, Ohio

March 16, 2021 Sampling

Sample ID OH43992-	Location	Component	Color	Lead Content
031621- 01 Pb	Room G40C	Wall Paper	Yellow	< 25
031621- 02 Pb		Drywall Wall	White	< 25

Results expressed in milligrams per kilogram (mg/kg).
‡ = Lead-based paint as defined by U.S. EPA (>5000 mg/kg)
† = Lead-containing paint as defined by Consumer Product Safety Act (>600 mg/kg)

[OSHA regulates potential exposure to any detectable level of lead]

EA GROUP
Environmental Analysis and Management

APPENDIX A

Asbestos Inspection Data Sheet(s)

General Sample Location Schematic(s)

ASBESTOS INSPECTION DATA SHEET KEY

Client and Project: Information provided by either Work Order or Scope of Work

Building: Name or address of building.

Functional Space: A room, group of rooms, or homogeneous area designated by the inspector to prepare management plans, design abatement projects, or conduct response actions.

Location: Location of homogeneous material being sampled or occurrence of homogeneous material.

Group:- An arbitrary designation (number or letter) assigned to each homogeneous material (material that is uniform in color and texture, serves the same function, and was installed at the same time) encountered during sampling.

ID #: A sample number assigned by the inspector which begins with the work order number (OHXXXXX) at the top of the column and then a unique sample number for each sample. May include an additional suffix (e.g., building ID, sampling date).

Material Description: Distinguishing characteristics that may include system type, function, size, color, shape etc.

Quantity: Defined as square feet (SF) [default], linear feet (LF), or individual number of fittings or miscellaneous items, each (EA)

Material Type: Abbreviations provided on the form as:

S Surfacing Material (troweled or sprayed-on)

T Thermal System Insulation (TSI)

M Miscellaneous (Friable, unless otherwise noted): **NF1** - Non-friable Category I **NF2** - Non-friable Category II

Material Condition: Typically noted only for general surveys (e.g., for O&M planning purposes).

ND No Damage. The material is in visibly good condition with no apparent/obvious damage.

D Damage. Material has damage to less than 10% of the entire homogeneous group or less than 25% of a localized section of the homogeneous group.

SD Significant Damage. Material has damage to greater than 10% of the entire homogeneous group or greater than 25% of a localized section of the homogeneous group.

Friable: When dry, an asbestos-containing material [ACM] is considered friable if it can be crumbled, pulverized, or reduced to powder by *hand pressure*

Result: 0 = material determined to be non-ACM (no asbestos); **[+]** = material determined to contain a regulated amount of asbestos (confirmed ACM)

Additional notations may be included for specific samples or materials for further clarification, which would be defined under “Comments”

ASBESTOS INSPECTION DATA SHEET

Client: Cuyahoga Community College — 11000 West Pleasant Valley Road, Parma, Ohio	Building: Student Services Building - West Campus
Project: Pre-Renovation Asbestos Survey	Functional Space: As Indicated

LOCATION	Group	ID # OH43992	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES
					Type	Cond			
Room G04C	A	01	Drywall System; Wall					0,B	
	A	02	Drywall System; Wall					0,B	
	A	03	Drywall System; Wall					0,B[0]	
	B	04	Plaster Ceiling; Rough Texture					0	
	B	05	Plaster Ceiling; Rough Texture					0	
	B	06	Plaster Ceiling; Rough Texture					0	
	C	07	Drywall Soffit					0	
	C	08	Drywall Soffit					0	
	D	09	2'x2' Ceiling Panel; Patterned, Pinhole					0	
	D	10	2'x2' Ceiling Panel; Patterned, Pinhole					0	
	E	11	Wood Paneling Mastic					0	
	E	12	Wood Paneling Mastic					0	

MATERIALS:
TYPE:
S - Surfacing
T - Thermal
M - Miscellaneous
NF1 - Non-friable Cat. I
NF2 - Non-friable Cat. II
N/S = not suspect
CONDITION: [if relevant]
ND - No Damage
D - Damage
SD - Significant Damage

QUANTITY = Square Feet unless noted
LF = Linear Feet; EA = each
NQ = not quantified
FRIABLE:
Y = Regulated ACM (RACM) by definition
N = not RACM by definition
NF1/NF2 may be friable due to condition or may become friable during reno/demo
RESULT:
0 - Non-ACM
[+] = ACM [no other assessment required]
B = Verified by layering/point counting

COMMENTS:

Sampling limited to designated material(s) in designated area(s)

0,B = trace (≤ 1%) asbestos; non-ACM by EPA but OSHA may apply
0,B[0] = Sample non-ACM but at least one other sample from Group confirmed trace; Group considered trace

EA GROUP
7118 Industrial Park Blvd.
Mentor, OH 44060-5314
(440) 951-3514

EAG Technician(s): Craig Brown ES 35176 EAG OH43992

Survey Date(s): March 16, 2021

ASBESTOS INSPECTION DATA SHEET

Client: Cuyahoga Community College — 11000 West Pleasant Valley Road, Parma, Ohio — Building: Student Services Building - West Campus

Project: Pre-Renovation Asbestos Survey — Functional Space: As Indicated

LOCATION	Group	ID # OH43992	MATERIAL DESCRIPTION	Quantity	Material		FRIABLE	RESULT	NOTES
					Type	Cond			
Room G04C	F	13	Ceramic Floor Mastic					0	
	F	14	Ceramic Floor Mastic					0	
	G	15	2'x2' Ceiling Panel; Sheet Rock					0	
	G	16	2'x2' Ceiling Panel; Sheet Rock					0	
	H	17	Sink Bottom Coating; Gray					0	
	H	18	Sink Bottom Coating; Gray					0	
	I	Assumed	Hard Fittings on Fiberglass Line	15 EA	T		Y	**[+]**	
	J	Assumed	Duct Mastic	30	M/NF2		N	**[+]**	

MATERIALS:
TYPE:
S - Surfacing
T - Thermal
M - Miscellaneous
NF1 - Non-friable Cat. I
NF2 - Non-friable Cat. II
N/S = not suspect
CONDITION: [if relevant]
ND - No Damage
D - Damage
SD - Significant Damage

QUANTITY = Square Feet unless noted
LF = Linear Feet; EA = each
NQ = not quantified
FRIABLE:
Y = Regulated ACM (RACM) by definition
N = not RACM by definition
NF1/NF2 may be friable due to condition or may become friable during reno/demo
RESULT:
0 - Non-ACM
[+] = ACM [no other assessment required]
B = Verified by layering/point counting

COMMENTS:

Sampling limited to designated area(s)

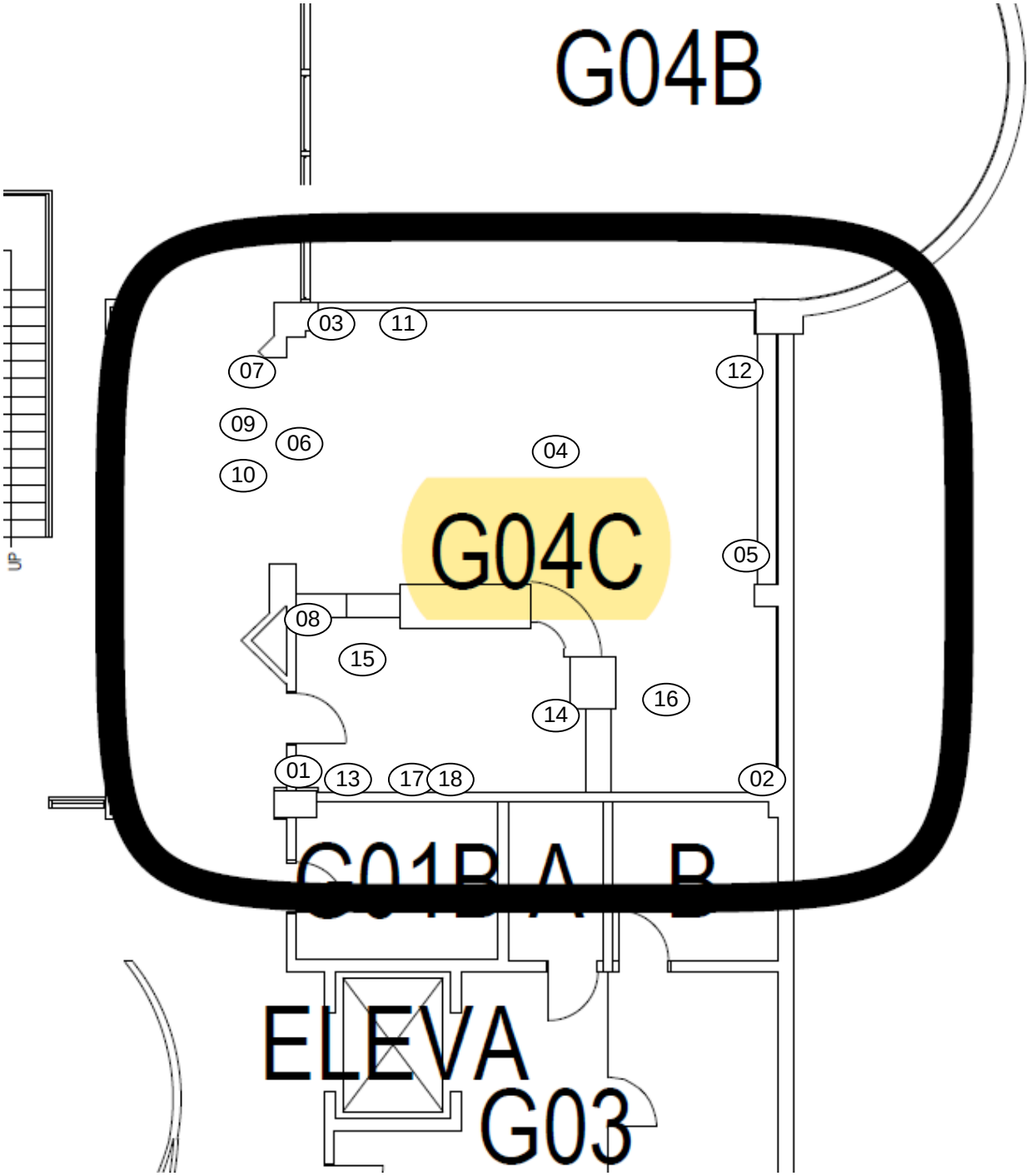
0,B = trace (≤ 1%) asbestos; non-ACM by EPA but OSHA may apply
0,B[0] = Sample non-ACM but at least one other sample from Group confirmed trace; Group considered trace

Anticipated work is not expected to affect Groups I or J

EA GROUP
7118 Industrial Park Blvd.
Mentor, OH 44060-5314
(440) 951-3514

EAG Technician(s): Craig Brown — ES 35176 — EAG OH43992

Survey Date(s): March 16, 2021



Student Services Building

KEY

01 Asbestos Sample No. & General Location

Asbestos Sampling Locations Diagram

Room G04C, West Campus, Cuyahoga Community College
11000 West Pleasant Valley Road, Parma, Ohio

EAG No. OH43992	Date: March 19, 2021	Figure 1

DRAWING FOR GENERAL REFERENCE PURPOSES ONLY. BASE PROVIDED BY CLIENT, ACTUAL ROOM CONFIGURATIONS MAY DIFFER FROM THOSE SHOWN; ANNOTATIONS BY EA GROUP. REFER TO SURVEY FOR DETAILS. NO SCALE.

F:\PROJECTS\ENV\OH43992,CUYAHOGACOMMUNITYCOLLEGE\43992,TRI-C_FIG1,DWG.VSD

EA GROUP

EA GROUP
Environmental Analysis and Management

APPENDIX B

Laboratory Analytical Report(s)

EA GROUP
Environmental Analysis and Management

Cuyahoga Community College
2900 Community College Ave.
Cleveland, OH 44115
Phillip Pallone

Client Project: Tri-C West Campus Haz Mat Assess
EA Group Workorder Number: 210300187
Received on March 17, 2021

The following analytical report contains results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data has been found to be compliant with accepted laboratory protocol, except as noted in the QC narrative. Industrial hygiene reports, air and/or surface concentrations results are based upon sampling information provided by the client. Analyst initials of REF indicate analysis performed at a subcontract facility.

If you have questions, comments or require further assistance regarding this report, please contact your client services representative or one of the individuals listed below.

Data or reporting:
Debbie Lauer - Lab Manager
dlauer@eagroupohio.com

Mike Herbert - General Manager
mherbert@eagroupohio.com

Sample tracking, supplies:
Sample Receiving
sreceiving@eagroupohio.com

Invoice Related:
Bonnie Renbarger - Office Manager
brenbarger@eagroupohio.com

Reproduction of this report is prohibited except in its entirety . Unless noted, soil, sludge and sediment results are reported on dry weight basis. The "Sample Reporting Limit" is based on the method used for analysis and does not refer to any regulatory limit. These results relate only to the items tested.

7118 Industrial Park Blvd. , Mentor, Ohio 44060-5314
(440) 951-3514 (800) 875-3514 FAX (440) 951-3774 www.eagroupohio.com

EA GROUP
Environmental Analysis and Management

Laboratory Analytical Report

Cuyahoga Community College
2900 Community College Ave.
Cleveland, OH 44115

Attention:
Phillip Pallone

Project Identification
Tri-C West Campus Haz Mat Assess

OH43992
Purchase Order:

EA Group
Order Number
2103-00187

Carl R. Eggebraaten
Microscopist

Deborah L. Lauer
Laboratory Manager

March 24, 2021

7118 Industrial Park Blvd., Mentor, Ohio 44060-5314
(440) 951-3514 (800) 875-3514 FAX (440) 951-3774 www.eagroupohio.com

EA GROUP
Environmental Analysis and Management

Project Summary

The following analytical report contains the results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data have been found to be compliant with accepted laboratory protocol. Exceptions, if any, are noted below.

Sample Summary

Sample Receive Date: 3/17/2021

EAG Sample Identification	Client Sample Identification	EAG Sample Identification	Client Sample Identification
210300187-01A	OH43992-01	210300187-01B	OH43992-01
210300187-01C	OH43992-01	210300187-02A	OH43992-02
210300187-02B	OH43992-02	210300187-02C	OH43992-02
210300187-03A	OH43992-03	210300187-03B	OH43992-03
210300187-03C	OH43992-03	210300187-04A	OH43992-04
210300187-04B	OH43992-04	210300187-05A	OH43992-05
210300187-05B	OH43992-05	210300187-06A	OH43992-06
210300187-06B	OH43992-06	210300187-07A	OH43992-07
210300187-07B	OH43992-07	210300187-07C	OH43992-07
210300187-08A	OH43992-08	210300187-08B	OH43992-08
210300187-09A	OH43992-09	210300187-10A	OH43992-10
210300187-11A	OH43992-11	210300187-12A	OH43992-12
210300187-13A	OH43992-13	210300187-14A	OH43992-14
210300187-15A	OH43992-15	210300187-15B	OH43992-15
210300187-16A	OH43992-16	210300187-16B	OH43992-16
210300187-17A	OH43992-17	210300187-18A	OH43992-18

Quality Control Narrative

Reproduction of this report is prohibited except in its entirety. Unless noted, soil, sludge, and sediment results are reported on dry weight basis. The "Sample Reporting Limit" is based on the method used for analysis and does not refer to any regulatory limit.

EA GROUP
Environmental Analysis and Management

Workorder: 2103-00187

EAG ID: 2103-00187-01A **Client ID:** OH43992-01 **Matrix:** Bulk

Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result	
Asbestos Analysis - Bulk		
% Chrysotile Asbestos	ND	
% Amosite Asbestos	ND	
% Crocidolite Asbestos	ND	
% Other Asbestos Fibers	ND	
% Other Non-Asbestos Mat'ls	100	
Analysis Comments	NA	

Sample Physical Description: White skim coat

EAG ID: 2103-00187-01B **Client ID:** OH43992-01 **Matrix:** Bulk

Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result	
Asbestos Analysis - Bulk		
% Chrysotile Asbestos	Trace (0.50)	
% Amosite Asbestos	ND	
% Crocidolite Asbestos	ND	
% Other Asbestos Fibers	ND	
% Other Non-Asbestos Mat'ls	100	
Analysis Comments	*	see note on last page

Sample Physical Description: Lt. gray joint compound/tape

EAG ID: 2103-00187-01C **Client ID:** OH43992-01 **Matrix:** Bulk

Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. gray drywall

EAG ID: 2103-00187-02A **Client ID:** OH43992-02 **Matrix:** Bulk

Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White and lt. brown skim coat

EAG ID: 2103-00187-02B **Client ID:** OH43992-02 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	Trace (0.50)
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	*

Sample Physical Description: Lt. gray joint compound/tape

EAG ID: 2103-00187-02C **Client ID:** OH43992-02 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. gray drywall

EAG ID: 2103-00187-03A **Client ID:** OH43992-03 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Yellow vinyl-type material w/white woven backing and glue

---

EAG ID: 2103-00187-03B **Client ID:** OH43992-03 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White joint compound/tape

EAG ID: 2103-00187-03C **Client ID:** OH43992-03 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. gray drywall

EAG ID: 2103-00187-04A **Client ID:** OH43992-04 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White plaster

EAG ID: 2103-00187-04B **Client ID:** OH43992-04 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Brown plaster

EAG ID: 2103-00187-05A **Client ID:** OH43992-05 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White plaster

EAG ID: 2103-00187-05B **Client ID:** OH43992-05 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Brown plaster

EAG ID: 2103-00187-06A **Client ID:** OH43992-06 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White plaster

EAG ID: 2103-00187-06B **Client ID:** OH43992-06 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Brown plaster

EAG ID: 2103-00187-07A **Client ID:** OH43992-07 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White skim coat

EAG ID: 2103-00187-07B **Client ID:** OH43992-07 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. gray skim coat

EAG ID: 2103-00187-07C **Client ID:** OH43992-07 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. gray drywall

EAG ID: 2103-00187-08A **Client ID:** OH43992-08 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White joint compound/mesh

EAG ID: 2103-00187-08B **Client ID:** OH43992-08 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. gray drywall

EAG ID: 2103-00187-09A **Client ID:** OH43992-09 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. gray fibrous panel w/textured surface

---

EAG ID: 2103-00187-10A **Client ID:** OH43992-10 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/22/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. gray fibrous panel w/textured surface

---

EAG ID: 2103-00187-11A **Client ID:** OH43992-11 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Orange mastic

EAG ID: 2103-00187-12A **Client ID:** OH43992-12 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Orange mastic

EAG ID: 2103-00187-13A **Client ID:** OH43992-13 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. brown mastic

EAG ID: 2103-00187-14A **Client ID:** OH43992-14 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Lt. brown mastic

EAG ID: 2103-00187-15A **Client ID:** OH43992-15 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White surfacing w/glue

EAG ID: 2103-00187-15B **Client ID:** OH43992-15 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White drywall

EAG ID: 2103-00187-16A **Client ID:** OH43992-16 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White surfacing w/glue

EAG ID: 2103-00187-16B **Client ID:** OH43992-16 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: White drywall

EAG ID: 2103-00187-17A **Client ID:** OH43992-17 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Gray material

EAG ID: 2103-00187-18A **Client ID:** OH43992-18 **Matrix:** Bulk
Date Sampled: 03/16/2021 **Date Received:** 03/17/2021 **Date Analyzed:** 03/23/2021 **Analyst:** CRE

Parameter	Result
Asbestos Analysis - Bulk	
% Chrysotile Asbestos	ND
% Amosite Asbestos	ND
% Crocidolite Asbestos	ND
% Other Asbestos Fibers	ND
% Other Non-Asbestos Mat'ls	100
Analysis Comments	NA

Sample Physical Description: Gray material

EA GROUP
Environmental Analysis and Management

Workorder: 210300187

These samples were analyzed as received for percentage composition of Asbestos and Non-Asbestos materials by Method(s) EPA-600/M4-82-020, December 1982 and/or EPA/600/R 93/116 July 1993, which have Detection Limits of less than 1% Asbestos.

The measurement of asbestos percentage is determined by visual estimation. Uncertainty is calculated quarterly in accordance with NISTIR 5951 by Verkouteren and Duewer. Please contact EA Group for the most recent information.

Asbestos Containing Materials (ACM) and Presumed Asbestos Containing Materials (PACM) are regulated by several different governmental regulatory agencies.

EPA NESHAP regulations cover certain buildings that are to be renovated or demolished. NESHAP regulations require that when a sample (or layer of a multi-layered sample) is analyzed and found to contain asbestos at a concentration of less than 10% by a method other than point counting by Polarized Light Microscopy (PLM), the owner/operator has the option of:

1) Assuming the amount to be greater than 1% and treating the material as regulated ACM .
OR
2) Requesting verification of the amount by point counting.

Building owners/operators covered by NESHAP should review the following for the full and specific regulations:
1) Federal Register, Vol. 55, No. 224, Tuesday, November 20, 1990
2) Clarification of NESHAP requirement to perform point counting, May 8, 1991
3) Federal Register, Vol. 59, No. 3, Wednesday, January 5, 1994
4) Federal Register, Vol. 59, No. 146, Monday, August 1, 1994
5) Federal Register, Vol. 60, No. 243, Tuesday, December 19, 1995

Building owners/operators and employers covered by OSHA regulations also have specific requirements regarding ACM and PACM.
Those who may be covered by these regulations should review 29 CFR 1910.1001 and 29 CFR 1926.1101 for specific requirements.

FLOOR TILES: PLM should only be considered a screening method for floor tile analysis. Any floor tile with a result of one percent or less asbestos by PLM should be assumed positive for asbestos until the sample is re-analyzed by Analytical Electron Microscopy.

Other difficult matrices (such as bituminous, organically bound, and cementitious materials) may obscure very small asbestos fibers.
Some samples may also contain asbestos fibers with diameters below the limit of resolution of the optical microscopes used in typical PLM analysis.
Therefore, negative results by PLM on these materials should be confirmed by Analytical Electron Microscopy.

EA Group has a sample retention policy of at least 30 days. After that time, the samples will be disposed of unless the client has requested that they be returned. The client will be charged a shipping and handling fee associated with returned samples only.

Key to analysis comments (if noted on samples):

* Asbestos content in this sample has been verified by the Chalkley point counting procedure.
** The client has the option of requesting verification of this analytical result by point counting as specified by the NESHAP standards .
*** Insufficient sample amount for quantitation and/or performing Quality Control functions.
**** Due to the nature of the sample (dust, debris, soil, or vacuum), percentages for the constituents could not be assigned.
\+ After gravimetric reduction, the residue has been visually estimated as at least 10% asbestos. Therefore, point counting is not required to satisfy NESHAP requirements.
++ Contains fibers that may be an asbestos mineral but could not be positively identified by PLM. Analysis by Transmission Electron Microscopy (TEM) is recommended.
+++ See additional comment under Quality Control Narrative.
# This sample contains vermiculite mineral. It is not vermiculite attic insulation.

ND	None Detected
Trace	Observed but less than 1%
NH	Non-Homogeneous sample, the result reflects the average.
Und. non-asb	Undetermined non-asbestos fibers

This report applies only to sample(s) analyzed and may not be used by the client to claim product certification, approval, or endorsement by NVLAP or any agency of the U.S. Government.

187

FIELD REQUEST FOR LABORATORY ANALYSIS

Company Name: Cuyahoga Community College

Address: 2900 Community College Ave.
Cleveland, OH 44115

Attention: Phillip Pallone

Results Needed By: 3-24-21

Normal: X **RUSH:** _____

Priority: _____ (confirm w/ lab)

Date: _____ Time: _____

Customer Number: 0503028

Telephone: _____ Fax No: _____

e-mail: _____

Sampled by: C. Brown

Project Name: Tri-C West Campus, Haz mat Assess Project Number OH 43992

Rush Authorized by: _____ Project Category: ASB

Special Billing/Reporting: _____

Is this a VAP project requiring VAP lab analysis? Yes _____ No X

Internal Contact: Bowen

CHAIN OF CUSTODY

Relinquished by		Received by	
Name	Date/Time	Name	Date/Time
Craig Ann	3-17-21 0715	A Rope Ann	3/17/21 8:39

EA GROUP CONSULTING DIVISION

REQUEST FOR LABORATORY ANALYSIS - ASBESTOS BULK SAMPLING LOG

Page _____ of _____

Sample No.	Homog. Group	1	2
0H43992-01	A	X	
-02	↓	↓	
-03	↓		
-04	B		
-05	↓		
-06	↓		
-07	C		
-08	↓		
-09	D *		
-10	↓ *		
-11	E *		
-12	↓ *		
-13	F *		
-14	↓ *		
-15	G *		
-16	↓ *		
-17	H *		
-18	↓ *	↓	

Sample No.	Homog. Group	1	2

Sample No.	Homog. Group	1	2

Analytes: 1 PLM (standard) 2 PLM (full) Point Count: ____ or (ALL) (enter # or circle ALL)

Hygienist: C- Brown **Sampling Date:** 3-16-21

Comments: * Stop at first postive

EA GROUP
Environmental Analysis and Management

Cuyahoga Community College
2900 Community College Ave.
Cleveland, OH 44115
Phillip Pallone

Client Project: Tri-C West Campus Haz Mat Assess
EA Group Workorder Number: 210300188
Received on March 17, 2021

The following analytical report contains results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data has been found to be compliant with accepted laboratory protocol, except as noted in the QC narrative. Industrial hygiene reports, air and/or surface concentrations results are based upon sampling information provided by the client. Analyst initials of REF indicate analysis performed at a subcontract facility.

If you have questions, comments or require further assistance regarding this report, please contact your client services representative or one of the individuals listed below.

Data or reporting:
Debbie Lauer - Lab Manager
dlauer@eagroupohio.com

Mike Herbert - General Manager
mherbert@eagroupohio.com

Sample tracking, supplies:
Sample Receiving
sreceiving@eagroupohio.com

Invoice Related:
Bonnie Renbarger - Office Manager
brenbarger@eagroupohio.com

Reproduction of this report is prohibited except in its entirety . Unless noted, soil, sludge and sediment results are reported on dry weight basis. The "Sample Reporting Limit" is based on the method used for analysis and does not refer to any regulatory limit. These results relate only to the items tested.

7118 Industrial Park Blvd. , Mentor, Ohio 44060-5314
(440) 951-3514 (800) 875-3514 FAX (440) 951-3774 www.eagroupohio.com

EA GROUP
Environmental Analysis and Management

Laboratory Analytical Report

Cuyahoga Community College

2900 Community College Ave.

Cleveland, OH 44115

Attention:
Phillip Pallone

Client Project:

Tri-C West Campus Haz Mat Assess

OH43992

EA Group Workorder:
2103-00188

Deborah L. Lauer

Laboratory Manager

March 24, 2021

7118 Industrial Park Blvd. , Mentor, Ohio 44060-5314
(440) 951-3514 (800) 875-3514 FAX (440) 951-3774 www.eagroupohio.com

Sample Receive Date 3/17/2021

Sample Listing

EAG Sample Identification	Client Sample Identification	EAG Sample Identification	Client Sample Identification
210300188 - 001	OH43992-031621-01Pb	210300188 - 002	OH43992-031621-02P

EA GROUP
Environmental Analysis and Management

Project Narrative
2103-00188

All analyses performed by EA Group were done using established laboratory SOPs. Management has reviewed the data for compliance with the laboratory QA/QC plan and data have been found to be compliant with the laboratory protocols unless otherwise noted below. All results listed for this report relate only to the samples submitted on this work order.

The temperature of the sample(s) upon receipt was 25°C.

Misc. QC Comments

Percent Moisture is used to report results on a dry weight basis.

When necessary, reporting limits of individual samples may be raised due to high concentration of interfering compounds or target analytes, or quantity of sample available for analysis.

pH method note: If this analysis was performed in the laboratory, it may not meet the "immediate analysis" requirement that applies to most wastewater monitoring samples. In such cases, analysis for pH should be done at the time of sampling.

The results listed in this report relate only to the samples submitted to EA Group per the chain of custody.

Data Flag Table

B	The method blank contained a standard laboratory contaminant (Methylene Chloride, Acetone, Hexane, Phthalates, etc.) above the standard laboratory method detection limit. If the analyte is present in the sample at a concentration up to ten times the blank level, the result is reported with a "B" indicating method blank contamination. Samples will be reported without a "B" if the analyte concentration in the sample is greater than ten times the blank level.
E	An analytical result marked with an "E" indicates the result reported is above the high end limit of the calibration curve and should be considered an estimated concentration.
DIL	Due to matrix interference or high analyte concentration, a dilution was required. The spikes and/or surrogates results could not be quantitated and therefore marked "DIL".
J	An analytical result marked with a "J" indicates the result reported was below the standard reporting limit and above the method detection limit. As the observed level approaches the MDL there is an increasing probability of a false positive response.
MI	Analytical results marked as "MI" indicate that due to inherent matrix interference, the result could not be quantitated.
#	Results flagged "#" indicate the reported result may be outside allowable permit levels as provided by the client, when applicable.
NA	A result or field marked as "NA" indicates that it was not applicable for this project.
Q	A quality control result flagged with a "Q" indicates the percent recovery was outside the acceptable range as determined by the laboratory.

** Positive results for this analyte represent a probable combination of 3-Methylphenol (m-Cresol) and 4-Methylphenol (p-Cresol).

EA GROUP
Environmental Analysis and Management

EAG Workorder: 2103-00188

Client Project: Tri-C West Campus Haz Mat Assess

Client ID: OH43992-031621-01Pb **Date/Time Sampled:** 3/16/2021 **Received:** 3/17/2021
EAG ID: 2103-00188-1

Parameter	CAS #	Result	Reporting Limit	Units	Prep Date	Analysis Date	Time	Analyst
Lead in Paint: SW846-6010B	7439-92-1	<25	25	mg/kg	3/22/2021	3/23/2021		CMB

Client ID: OH43992-031621-02P **Date/Time Sampled:** 3/16/2021 **Received:** 3/17/2021
EAG ID: 2103-00188-2

Parameter	CAS #	Result	Reporting Limit	Units	Prep Date	Analysis Date	Time	Analyst
Lead in Paint: SW846-6010B	7439-92-1	<25	25	mg/kg	3/22/2021	3/23/2021		CMB

188

FIELD REQUEST FOR LABORATORY ANALYSIS

Company Name: Cuyahoga Community College

Address: 2900 Community College Ave.
Cleveland, OH 44115

Attention: 43992

Results Needed By: 3-24-21

Normal: X **RUSH:** ____

Priority: ____ (confirm w/ lab)

Date: ____ Time: ____

Customer Number: 0503028

Telephone: ____ e-mail(s): ____

Sampled by: C. Brown

Project Name: Tri-C West Campus, Haz Mat Assess Project Number OH 43992

Rush Authorized by: ____ Project Category: ENV

Special Billing/Reporting: ____

Is this a VAP project requiring VAP lab analysis? Yes ____ No X

Is this a BUSTR project requiring BUSTR lab analysis? Yes ____ No X

Internal Contact(s): ____

CHAIN OF CUSTODY

Relinquished by		Received by	
Name	Date/Time	Name	Date/Time
Craig	3-17-21 0715	A Kaye	3/17/21 2:43

EA GROUP FIELD OPERATIONS - REQUEST FOR LABORATORY ANALYSIS

Page: _____ of _____

Sample No. OH 43992-	Split ID	Date/Time Collected	Matrix/ Media	Area/Vol. (units)	1	2	3	4	5	6	7	8	9	10	11	12	Comments	VAP? BUSTR?
031621-01Pb		3-16-21	B		X													NO
↓ -02Pb		↓	↓		X													↓

Media: A1 Air (25 mm) | A2 Air (37 mm) | A3 Air (sorbent) | A4 Air (badge) | A5 Air (bag) | A6 Air (impinger) | B Bulk | R/CC Char. Canister | R/AT Alpha track | S Soil | SL Sludge/Slurry | SW Swab | O Oil | W Water/Liquid | DW Drinking Water

Sample condition upon receipt:
Intact ____
Not Intact ____

Analytes: 1 Lead in Paint 4 _____ 7 _____ 10 _____
2 _____ 5 _____ 8 _____ 11 _____
3 _____ 6 _____ 9 _____ 12 _____

SUBSTITUTION REQUEST

(During the Bidding/Negotiating Stage)

Project: _____ Substitution Request Number: _____

_____ From: _____

To: _____ Date: _____

_____ A/E Project Number: _____

Re: _____ Contract For: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

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

The Undersigned certifies:

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

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

_____

Telephone: _____

A/E's REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: Date:

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

© Copyright 2013, CSI,
110 South Union St., Suite 100, Alexandria, VA 22314

Form Version: January 2013
CSI Form 1.5C

SUBSTITUTION REQUEST
(After the Bidding/Negotiating Phase)

Project: _____ Substitution Request Number: _____

_____ From: _____

To: _____ Date: _____

_____ A/E Project Number: _____

Re: _____ Contract For: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____

Manufacturer: _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 1-4 years old ☐ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

_____

_____

☐ Point-by-point comparative data attached — REQUIRED BY A/E

Reason for not providing specified item: _____

_____

Similar Installation:

Project: _____ Architect: _____

Address: _____ Owner: _____

_____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

_____

Savings to Owner for accepting substitution: _____ ($ _____).

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.

Supporting Data Attached: ☐Drawings ☐Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

© Copyright 2013, CSI,
110 S. Union St., Suite 100, Alexandria, VA 22314

Form Version: September 2013
CSI Form 13.1A

SUBSTITUTION REQUEST

(After the Bidding/Negotiating Phase — Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

_____

Telephone: _____

Attachments: ☐

A/E's REVIEW AND RECOMMENDATION

☐ Approve Substitution - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures.
☐ Approve Substitution as noted - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures.
☐ Reject Substitution - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

OWNER'S REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures. Prepare Change Order.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures. Prepare Change Order.
☐ Substitution rejected - Use specified materials.

Signed by: _____ Date: _____

Additional Comments: ☐Contractor ☐Subcontractor ☐Supplier ☐Manufacturer ☐A/E

© Copyright 2013, CSI,
110 S. Union St., Suite 100, Alexandria, VA 22314

PART 1 GENERAL

1.1 PROJECT

A. Project Name: The Pantry, Tri-C Connect

B. Owner's Name: Cuyahoga Community College.

C. Architect's Name: Bialosky + Partners Architects dba Bialosky Cleveland.

1.2 CONTRACT DESCRIPTION

A. Contract Type: A single prime contract based on a Stipulated Price.

B. Provide all Work except Work specifically assigned to other contractors in this Section and in the RFP.

1.3 DESCRIPTION OF ALTERATIONS WORK

A. Scope of demolition and removal work is indicated on drawings and specified in Section 02 4100.

B. Scope of alterations work is indicated on drawings.

1. Renovate the rooms and spaces indicated, complete including operational mechanical and electrical work, finishes, and foodservice equipment.

1.4 WORK BY OWNER

A. Items noted NIC (Not in Contract) will be supplied and installed by Owner before Substantial Completion.

B. Owner will supply the following for installation by Contractor:

1. Food Service Equipment.

1.5 OWNER OCCUPANCY

A. Owner intends to continue to occupy adjacent portions of the existing building during the entire construction period.

B. Owner intends to occupy the Project upon Substantial Completion.

C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

D. Schedule the Work to accommodate Owner occupancy.

1.6 CONTRACTOR USE OF SITE AND PREMISES

A. Construction Operations: Limited to areas noted on Drawings.

1. Locate and conduct construction activities in ways that will limit disturbance to site.

Copyright © 2021 Bialosky + Partners Architects

B. Provide access to and from site as required by law and by Owner:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permit.

C. Existing building spaces may not be used for storage.

D. Time Restrictions:
   1. On-Site Work Hours: Limit conduct of the Work to the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated.
   2. Weekend Hours: Contractor must seek prior approval from Owner for work to be performed over weekend hours.
   3. Early Morning Hours: Contractor must seek prior approval from Owner for work to be performed prior to 7:00 a.m. or after 5:00 p.m.
   4. Hours for Utility Shutdowns: 12:00 a.m. to 5:00 a.m., where areas outside the work area will be affected.

E. Utility Outages and Shutdown:
   1. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
   2. Limit shutdown of utility services to 4 hours at a time, arranged at least 7 days in advance with Owner.
   3. Prevent accidental disruption of utility services to other facilities.

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

G. Nonsmoking Site: Smoking is not permitted on Campus. This includes vapor-type and e-cigarette smoking.

H. COVID-19 Protocols:
   1. Contractors are not to enter the Campus if experiencing any symptoms of illness. Health self-checks are to be performed prior to entering Campus, which includes taking temperature and being aware of any symptoms such as cough, shortness of breath or difficulty breathing, fever with a temperature of 100.4 degrees F or higher, chills, muscle pain, headache, sore throat and loss of taste or smell. By entering Campus, the contractor certifies that:
      a. To the best of their knowledge, they have not had close contact with or cared for someone diagnosed with COVID-19 within the last 14 days.
      b. To the best of their knowledge, they have not had close contact with or cared for someone who has exhibited any cold or flu-like symptoms within the last 14 days.
      c. They have not experienced any cold or flu-like symptoms, or any of the symptoms identified above, in the last 14 days.
   2. Face coverings consistent with CDC recommendations must be worn while on campus unless actively eating or drinking.

Copyright © 2021 Bialosky + Partners Architects

1.7 SPECIFICATION AND DRAWING CONVENTIONS

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

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

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

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

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

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

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Procedural requirements for proposed substitutions.

1.2 RELATED REQUIREMENTS

A. Section 00 2113 - Instructions to Bidders: Restrictions on timing of substitution requests.

B. Section 00 4325 - Substitution Request Form - During Procurement: Required form for substitution requests made prior to award of contract (During procurement).

C. Section 00 6325 - Substitution Request Form - During Construction: Required form for substitution requests made after award of contract (During construction).

D. Section 01 3000 - Administrative Requirements: Submittal procedures, coordination.

E. Section 01 6000 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

1.3 DEFINITIONS

A. Substitutions: See General Conditions for definition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:

1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
2. Agrees to provide the same warranty for the substitution as for the specified product.
3. Agrees to provide same or equivalent maintenance service and source of replacement parts, as applicable.
4. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
5. Waives claims for additional costs or time extension that may subsequently become apparent.
6. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.

Copyright © 2021 Bialosky + Partners Architects

B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
   1. Note explicitly any non-compliant characteristics.

C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
   1. Forms included in the Project Manual are adequate for this purpose, and must be used.

D. Limit each request to a single proposed substitution item.
   1. Submit an electronic document, combining the request form with supporting data into single document.

3.2 SUBSTITUTION PROCEDURES DURING PROCUREMENT

A. Section 00 2113 - Instructions to Bidders specifies time restrictions for submitting requests for substitutions during the bidding period.

B. Submittal Form (before award of contract):
   1. Submit substitution requests by completing the form in Section 00 4325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.

3.3 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

A. Submittal Form (after award of contract):
   1. Submit substitution requests by completing the form in Section 00 6325; see this section for additional information and instructions. Use only this form; other forms of submission are unacceptable.

B. Submit request for Substitution for Cause immediately upon discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect, in order to stay on approved project schedule.

C. Substitutions will not be considered under one or more of the following circumstances:
   1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
   2. Without a separate written request.
   3. When acceptance will require revisions to Contract Documents.

3.4 RESOLUTION

A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.

B. Architect will notify Contractor in writing of decision to accept or reject request.
   1. Architect's decision following review of proposed substitution will be noted on the submitted form.

Copyright © 2021 Bialosky + Partners Architects

3.5 ACCEPTANCE

A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

3.6 CLOSEOUT ACTIVITIES

A. See Section 01 7800 - Closeout Submittals, for closeout submittals.

B. Include completed Substitution Request Forms as part of the Project record.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Preconstruction meeting.

B. Progress meetings.

C. Submittals for review, information, and project closeout.

D. Number of copies of submittals.

E. Requests for Interpretation (RFI) procedures.

F. Submittal procedures.

1.2 RELATED REQUIREMENTS

A. Section 01 3113 - Project Coordination: General coordination requirements and procedures, including requirements for coordination drawings.

B. Section 01 6000 - Product Requirements: General product requirements.

C. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.

D. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.3 PROJECT COORDINATOR

A. Project Coordinator: Owner.

B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for site access, traffic, and parking facilities.

C. During construction, coordinate use of site and facilities through the Project Coordinator.

D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.

E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 1000 - Summary.

F. Coordinate field engineering and layout work under instructions of the Project Coordinator.

G. Make the following types of submittals to Architect:

1. Requests for Interpretation.
2. Requests for substitution.
3. Shop drawings, product data, and samples.

Copyright © 2021 Bialosky + Partners Architects

4. Test and inspection reports.
5. Design data.
6. Manufacturer's instructions and field reports.
7. Applications for payment and change order requests.
8. Progress schedules.
9. Coordination drawings.
10. Correction Punch List and Final Correction Punch List for Substantial Completion.
11. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PROJECT MEETINGS - GENERAL

A. Schedule and conduct meetings at Project site unless otherwise indicated.
   1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times a minimum of seven (7) days prior to meeting.
   2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
   3. Minutes: Record significant discussions and agreements achieved.

3.2 PRECONSTRUCTION MEETING

A. Project Coordinator will schedule a meeting after Notice of Award.

B. Attendance Required:
   1. Owner.
   2. Architect.
   3. Prime Contractor.

C. Agenda: Discuss items of significance that could affect progress, including the following:
   1. Execution of Owner-Contractor Agreement.
   2. Submission of executed bonds and insurance certificates.
   3. Distribution of Contract Documents.
   4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
   5. Submission of initial Submittal schedule.
   6. Designation of personnel representing the parties to Contract.
   7. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
   8. Scheduling.
   9. Use of premises by Owner and Contractor.

Copyright © 2021 Bialosky + Partners Architects

10. Security and housekeeping procedures.

D. The Project Coordinator will record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.3 PROGRESS MEETINGS

A. Project Coordinator will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

B. Attendance Required:
   1. Contractor.
   2. Owner.
   3. Architect.
   4. Contractor's superintendent.
   5. Major subcontractors.

C. Agenda: Discuss items of significance that could affect progress, including the following:
   1. Review minutes of previous meetings.
   2. Review of work progress.
   3. Field observations, problems, and decisions.
   4. Identification of problems that impede, or will impede, planned progress.
   5. Review of submittals schedule and status of submittals.
   6. Review of RFIs log and status of responses.
   7. Review of off-site fabrication and delivery schedules.
   8. Maintenance of progress schedule.
   9. Corrective measures to regain projected schedules.
   10. Planned progress during succeeding work period.
   11. Coordination of projected progress.
   12. Maintenance of quality and work standards.
   13. Effect of proposed changes on progress schedule and coordination.
   14. Other business relating to work.

D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.4 COORDINATION DRAWINGS - SEE SECTION 01 3113

3.5 REQUESTS FOR INTERPRETATION (RFI)

A. Definition: A request seeking one of the following:
   1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the

Copyright © 2021 Bialosky + Partners Architects

same space (interference); or when an item of work is described differently at more than one place in Contract Documents.

2. A resolution to an issue which has arisen due to field conditions and affects design intent.

B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.

C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit an RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.

1. Prepare a separate RFI for each specific item.
    a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
    b. Do not forward requests which solely require internal coordination between subcontractors.
2. Prepare in a format and with content acceptable to Owner.
3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.

D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.

1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
    a. Approval of submittals (use procedures specified elsewhere in this section).
    b. Approval of substitutions (see Section - 01 6000 - Product Requirements)
    c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
    d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response.
4. Frivolous RFIs: Requests regarding information that is clearly indicated on, or reasonably inferable from, Contract Documents, with no additional input required to clarify the question. They will be returned without a response.

E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.

1. Official Project name and number, and any additional required identifiers established in Contract Documents.
2. Owner's, Architect's, and Contractor's names.
3. Discrete and consecutive RFI number, and descriptive subject/title.
4. Issue date, and requested reply date.
    a. Do not request Architect's reply within a shorter period than that indicated in "RFI Review Time" paragraph below.
5. Reference to particular Contract Document(s) requiring additional information or interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).

Copyright © 2021 Bialosky + Partners Architects

6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.

F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.

G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
1. Indicate current status of every RFI. Update log promptly and on a regular basis.
2. Note dates of when each request is made, and when a response is received.
3. Highlight items requiring priority or expedited response.
4. Highlight items for which a timely response has not been received to date.
5. Identify and include improper or frivolous RFIs.

H. RFI Review Time: Architect will respond and return RFIs to Contractor within seven working days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 1:00 PM will be considered as having been received on the following regular working day.
1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
2. If Architect's response includes a request for additional information, then the Architect's review time will date from time of receipt of additional information.

I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
4. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.6 SUBMITTAL SCHEDULE

A. Submit to Architect for review a schedule for submittals in tabular format.
1. Submit at the same time as the preliminary schedule specified in Section - 01 3216 - Construction Progress Schedule.
2. Coordinate with Contractor's construction schedule and schedule of values.

Copyright © 2021 Bialosky + Partners Architects

3. Format schedule to allow tracking of status of submittals throughout duration of construction.
4. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
5. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
    a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.
    b. Do not request Architect's reply within a shorter period than that indicated in "Action Submittal Review Time" paragraph below.

3.7 SUBMITTALS FOR REVIEW (ACTION SUBMITTALS)

A. When the following are specified in individual sections, submit them for review:
    1. Product data.
    2. Shop drawings.
    3. Samples for selection.
    4. Samples for verification.

B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.

C. Samples will be reviewed for aesthetic, color, or finish selection.

D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.8 SUBMITTALS FOR INFORMATION (INFORMATION SUBMITTALS)

A. When the following are specified in individual sections, submit them for information:
    1. Design data.
    2. Certificates.
    3. Test reports.
    4. Inspection reports.
    5. Manufacturer's instructions.
    6. Manufacturer's field reports.
    7. Other types indicated.

B. Submit for Architect's knowledge as contract administrator or for Owner.

3.9 SUBMITTALS FOR PROJECT CLOSEOUT (CLOSEOUT SUBMITTALS)

A. Submit Correction Punch List for Substantial Completion.

B. Submit Final Correction Punch List for Substantial Completion.

Copyright © 2021 Bialosky + Partners Architects

C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
   1. Project record documents.
   2. Operation and maintenance data.
   3. Warranties.
   4. Bonds.
   5. Other types as indicated.

D. Submit for Owner's benefit during and after project completion.

3.10 NUMBER OF COPIES OF SUBMITTALS

A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
   1. After review, produce duplicates.
   2. Retained samples will not be returned to Contractor unless specifically so stated.

3.11 SUBMITTAL PROCEDURES

A. General Requirements:
   1. Use a single transmittal for related items.
   2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
   3. Transmit using approved form.
      a. Use Contractor's form, subject to prior approval by Architect.
   4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
   5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
   6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
      a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
   7. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
      a. Send submittals in electronic format via email to Architect.
   8. Action Submittals Review Time: Schedule submittals to expedite the Project, and coordinate submission of related items.
      a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
      b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.

Copyright © 2021 Bialosky + Partners Architects

c. For sequential reviews involving approval from authorities having jurisdiction (AHJ), in addition to Architect's approval, allow an additional 30 days.
d. If Architect's response includes a request for additional information, then the Architect's review time will date from time of receipt of additional information.

9. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
10. Provide space for Contractor and Architect review stamps.
11. When revised for resubmission, identify all changes made since previous submission.
12. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
13. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
14. Submittals not requested will be recognized, and will be returned "Not Reviewed",

B. Product Data Procedures:
1. Submit only information required by individual specification sections.
2. Collect required information into a single submittal.
3. Submit concurrently with related shop drawing submittal.
4. Do not submit (Material) Safety Data Sheets for materials or products.

C. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
2. Use of reproductions of Contract Documents in digital data form to create shop drawings is only permitted as defined in Section 01 3113 - Project Coordination.
3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.

D. Samples Procedures:
1. Transmit related items together as single package.
2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
3. Include with transmittal high-resolution image files of samples to facilitate electronic review and approval. Provide separate submittal page for each item image.

3.12 SUBMITTAL REVIEW

A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.

B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.

C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.

D. Architect's and consultants' actions on items submitted for review:

Copyright © 2021 Bialosky + Partners Architects

1. Authorizing purchasing, fabrication, delivery, and installation:
   a. "Approved for Design".
   b. "Approved as Noted for Fabrication".
      1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
2. Not Authorizing fabrication, delivery, and installation:
   a. "Revise and Resubmit".
      1) Resubmit revised item, with review notations acknowledged and incorporated.
      2) Non-responsive resubmittals may be rejected.
   b. "Not Approved".
      1) Submit item complying with requirements of Contract Documents.
   c. "Additional Copies Required".

E. Architect's and consultants' actions on items submitted for information:
1. Items for which no action was taken:
   a. "Receipt Acknowledged, No Action Taken" - to notify the Contractor that the submittal has been received for record only.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. General coordination procedures.

B. Coordination drawings.

C. Coordination documents.

D. Coordination of submittals.

E. Coordination of substitutions and modifications.

F. Observation of work

1.2 RELATED REQUIREMENTS

A. Section 01 1000 - Summary: Responsibilities of separate contractors.

B. Section 01 3000 - Administrative Requirements: Additional requirements for coordination.

C. Section 01 6000 - Product Requirements: Spare parts and maintenance materials.

D. Section 01 7000 - Execution and Closeout Requirements: Starting of Systems. Systems Demonstration.

1.3 SUBMITTALS

A. Submit coordination drawings and schedules prior to submitting shop drawings, product data, and samples.

1.4 GENERAL COORDINATION PROCEDURES

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

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

B. Coordination of Multiple Contracts: Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the Work. Each contractor shall coordinate its own operations with operations included in different Sections that depend on each other for proper installation, connection, and operation.

Copyright © 2021 Bialosky + Partners Architects

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

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

D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and direction of Project coordinator to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
   1. Preparation of Contractor's construction schedule.
   2. Preparation of the schedule of values.
   3. Installation and removal of temporary facilities and controls.
   4. Delivery and processing of submittals.
   5. Progress meetings.
   6. Preinstallation conferences.
   7. Project closeout activities.
   8. Startup and adjustment of systems.

1.5 COORDINATION DRAWINGS

A. Definition: Coordination Drawings are drawings that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
   1. Provide composite drawings showing work that is exposed and/or where there are hung ceilings for integration of all the Work including work shown in detail on shop drawings or product data. Coordination Drawings are not considered shop drawings and must be definitive in nature.
   2. Refer to Mechanical, Plumbing, and Electrical Specification Sections for additional general requirements applicable to the Work.

B. Coordination: General Contractor shall coordinate preparation of Coordination Drawings with all subcontractors. Composite Coordination Drawings shall be prepared electronically for installation of products and materials which are to be fabricated off-site by separate entities and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
   1. Drawings shall show dimensional plan and elevation locations of mechanical and electrical work, as well as cross and longitudinal sections and large-scale details as required to fully delineate all conditions. Composite drawings shall be prepared by competent draftspersons, in a clear, legible manner.

Copyright © 2021 Bialosky + Partners Architects

2. HVAC subcontractor shall prepare layout drawings of HVAC ductwork and piping, at not less than 1/4-inch scale, including locations of registers, grilles, diffusers and similar features, as well as valves, dampers, and other items requiring access for service or maintenance. HVAC subcontractor shall transmit the electronic drawing files and one reproducible to the Electrical subcontractor.
3. Electrical subcontractor shall locate on the drawings his own routings of conduit as well as other items such as lighting fixtures, access panels, switch panels, etc. as required to determine inter-relationships and possible interferences with HVAC work and architectural or structural features. The electronic drawings shall then be sent to the plumbing and fire protection subcontractors.
4. Plumbing and Fire Protection subcontractors shall locate on the drawings their own routings as well as other items such as valves, access panels, etc. as required to determine inter-relationships and possible interferences with HVAC and Electrical work and architectural or structural features. The electronic drawings shall then be sent to the Construction Manager.
5. Minor changes in duct, pipe or conduit routings that do not affect the intended function may be made as required to avoid space conflicts, when mutually agreed upon, but items may not be resized, exposed or relocated without Architect's approval. Changes shall not be made in wall locations or openings, or other features affecting the function or aesthetics of the building.
6. After conflicts and/or interferences are resolved, General Contractor or Construction Manager shall develop and submit to Architect composite drawings showing the agreed upon routings, layouts, and juxtapositions of ductwork, fire protection, piping, major conduits, valves, panels, lighting fixtures and all other major mechanical and electrical items of work including sequence of installation. General Contractor or Construction Manager and each subcontractor shall sign the composite drawings and in signing certify their awareness of, and agreement with, the indicated routings, layouts, and sequencing and their inter-relationship with Work of all portions of the Contract.
7. No extra compensation will be allowed for relocating any duct, pipe, conduit or other material that has been installed without proper coordination between the General Contractor or Construction Manager and subcontractors involved. No extra cost will be incurred by the Owner based on coordination drawing requirements. Unauthorized deviations in the actual construction will not be permitted. Unauthorized work will be subject to removal and correction at no additional cost to the Owner.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 COORDINATION REQUIRED

A. Coordinate the work listed below:
   1. Foodservice: Division 11.
   2. Fire Suppression and Plumbing: P series drawings.
   3. Heating, Ventilating, and Air Conditioning: M series drawings.
   4. Electrical: E series drawings.

Copyright © 2021 Bialosky + Partners Architects

B. Coordinate progress schedules, including dates for submittals and for delivery of products.

C. Conduct meetings among subcontractors and others concerned, to establish and maintain coordination and schedules, and to resolve coordination matters in dispute.

D. Participate in progress meetings. Report on progress of work to be adjusted under coordination requirements, and any required changes in schedules. Transmit minutes of meetings and reports to concerned parties.

3.2 COORDINATION DRAWINGS

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

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    b. Coordinate the addition of trade-specific information to coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
    c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    f. Indicate required installation sequences.
    g. Indicate dimensions shown on Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternative sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

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

1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within plenums to accommodate layout of light fixtures and other components indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
3. Mechanical Rooms: Provide coordination drawings for mechanical rooms, showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.

Copyright © 2021 Bialosky + Partners Architects

4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
6. Mechanical and Plumbing Work: Show the following:
   a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
   b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
   c. Fire-rated enclosures around ductwork.
7. Electrical Work: Show the following:
   a. Runs of vertical and horizontal conduit 1-1/4 inches in diameter and larger.
   b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
   c. Panel board, switchboard, switchgear, transformer, busway, generator, and motor-control center locations.
   d. Location of pull boxes and junction boxes, dimensioned from column center lines.
8. Fire-Protection System: Show locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
9. Review: Architect will review coordination drawings to confirm that, in general, the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will so inform Contractor, who shall make suitable modifications and resubmit.

C. Coordination Drawing Process: Prepare coordination drawings in the following manner:
1. Schedule submittal and review of Fire Sprinkler, Plumbing, HVAC, and Electrical Shop Drawings to make required changes prior to preparation of coordination drawings.
2. Commence routing of coordination drawing files with HVAC Installer, who will provide drawing plan files denoting approved ductwork. HVAC Installer will locate ductwork and piping on a single layer, using orange color. Forward drawings to Plumbing Installer.
3. Plumbing Installer will locate plumbing and equipment on a single layer, using blue color.
4. Fire Sprinkler Installer will locate piping and equipment, using red color. Fire Sprinkler Installer shall forward drawing files to Electrical Installer.
5. Electrical Installer will indicate service and feeder conduit runs and equipment in green color. Electrical Installer shall forward drawing files to Communications and Electronic Safety and Security Installer.
6. Communications and Electronic Safety and Security Installer will indicate cable trays and cabling runs and equipment in purple color. Communications and Electronic Safety and Security Installer shall forward completed drawing files to Contractor.
7. Contractor shall perform the final coordination review. As each coordination drawing is completed, Contractor will meet with Architect to review and resolve conflicts on the coordination drawings.

D. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.

Copyright © 2021 Bialosky + Partners Architects

2. File Submittal Format: Submit or post coordination drawing files using PDF format.
3. Architect will furnish Contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
    a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
    b. Contractor shall execute a data licensing agreement in the form of Agreement included in this Project Manual.

3.3 COORDINATION DOCUMENTS

A. Prepare coordination drawings to organize installation of products for efficient use of available space, for proper sequence of installation, and to identify potential conflicts.

B. Prepare a master schedule identifying responsibilities for activities that directly relate to this work, including submittals and temporary utilities; organize by specification section.

C. Identify electrical power characteristics and control wiring required for each item of equipment.

D. Maintain documents for the duration of the work, recording changes due to site instructions, modifications or adjustments.

E. After Architect review of original and revised documents, reproduce and distribute copies to concerned parties.

3.4 COORDINATION OF SUBMITTALS

A. Review shop drawings, product data, and samples for compliance with Contract Documents and for coordination with related work. Transmit copies of reviewed documents to Architect.

B. Check field dimensions and clearances and relationship to available space and anchors.

C. Check compatibility with equipment and work of other sections, electrical characteristics, and operational control requirements.

D. Check motor voltages and control characteristics.

E. Coordinate controls, interlocks, wiring of switches, and relays.

F. Coordinate wiring and control diagrams.

G. When changes in the work are made, review their effect on other work.

H. Verify information and coordinate maintenance of record documents.

3.5 COORDINATION OF SUBSTITUTIONS AND MODIFICATIONS

A. Review proposals and requests for substitution prior to submission to Architect.

B. Verify compliance with Contract Documents and for compatibility with work of other sections.

C. Submit with recommendation for action.

Copyright © 2021 Bialosky + Partners Architects

3.6 OBSERVATION OF WORK

A. Observe work for compliance with Contract Documents.

B. Maintain a list of observed deficiencies and defects; promptly submit.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

BIALOSKY
CLEVELAND

6555 Carnegie Ave.
Cleveland, OH 44103

P 216 752 8750

AGREEMENT FOR TRANSFER AND USE OF ELECTRONIC FILES

BY ACTION OF ACCEPTING ONE OR MORE ELECTRONIC FILES FROM BIALOSKY + PARTNERS ARCHITECTS LLC, THIS AGREEMENT IS ACCEPTED BETWEEN BIALOSKY + PARTNERS ARCHITECTS LLC AND THE PARTY PERFORMING THE SAID ACTION. This agreement is by and between Bialosky + Partners Architects LLC, 6555 Carnegie Avenue, Cleveland, OH 44103 and the Architect's consultants (hereinafter "BPA"), and the Contractor and Contractor's agents accepting the electronic files (hereinafter "Contractor").

Whereas the Contractor has requested BPA to provide electronic files for the Contractor's convenience and use and whereas BPA is willing to accommodate this request pursuant to the following terms and conditions, the Contractor and BPA agree as follows:

BPA and Contractor fully understand that the data contained in these electronic files are part of BPA's Instruments of Service, BPA shall be deemed the author of the drawings and data, and BPA shall retain all common law, statutory law and other rights, including copyrights. These files are not a product, and shall not be used by the Contractor or anyone else receiving this data through or from the Contractor for any other purpose, other than as a convenience in the preparation of project related drawings for a specific project in which BPA is involved. BPA makes no warranties, either express or implied, of merchantability and fitness for any particular purpose.

The Contractor understands and accepts that electronic files deteriorate or can be modified inadvertently or otherwise without authorization by BPA. Therefore, BPA may remove all indication of its ownership or involvement from these electronic files. Furthermore, BPA makes no representations as to compatibility, usability or readability of the files resulting from the use of software, application packages, operating systems, or computer hardware differing from those of BPA. The Contractor understands that these electronic files are not contract documents. Significant differences may exist between these electronic files and corresponding hard copy documents due to addenda, change orders, revisions, layer visibility or other reasons. BPA makes no representations as to the accuracy or completeness of these electronic files. The printed/hard sealed copies of the construction documents are the only documents that may be relied upon, and the documents transmitted electronically are not to be construed as contract documents. Contractor understands and agrees that Contractor alone is completely responsible, without limitation, to check and otherwise confirm accuracy of all data on these electronic files.

The Contractor agrees to make no claims and hereby waives any claims or causes of action of any nature whatsoever against BPA, its officers, directors, employees, agents, clients, or sub-consultants which may arise out of or in connection with the use of the electronic files. Furthermore, Contractor shall indemnify, defend and hold harmless BPA, its officers, directors, employees, agents, clients, or sub-consultants from and against any and all claims, damages, losses and expenses, including attorney fees, arising out of or related to the use of the electronic files by the Contractor, or by anyone else receiving this data through or from the Contractor.

_____	_____	_____
Authorized Contractor Representative	Company	Date

End of Agreement

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Submittals.

B. Quality assurance.

C. References and standards.

D. Contractor's construction-related professional design services.

E. Contractor's design-related professional design services.

F. Control of installation.

G. Manufacturers' field services.

H. Defect Assessment.

1.2 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittal procedures.

B. Section 01 4216 - Definitions.

C. Section 01 6000 - Product Requirements: Requirements for material and product quality.

1.3 DEFINITIONS

A. Contractor's Professional Design Services (Delegated Design): Design of some aspect or portion of the project by party other than the design professional of record. Provide these services as part of the Contract for Construction.

1. Design Services Types Required:
    a. Construction-Related: Services Contractor needs to provide in order to carry out the Contractor’s sole responsibilities for construction means, methods, techniques, sequences, and procedures.
    b. Design-Related: Design services explicitly required to be performed by another design professional due to highly-technical and/or specialized nature of a portion of the project. Services primarily involve engineering analysis, calculations, and design, and are not intended to alter the aesthetic aspects of the design.

B. Design Data: Design-related, signed and sealed drawings, calculations, specifications, certifications, shop drawings and other submittals provided by Contractor, and prepared directly by, or under direct supervision of, appropriately licensed design professional.

C. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of five (5) previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

Copyright © 2021 Bialosky + Partners Architects

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

E. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
   1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).

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

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

H. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).

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

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

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

1.4 CONTRACTOR'S CONSTRUCTION-RELATED PROFESSIONAL DESIGN SERVICES (DELEGATED DESIGN)

A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.

B. Provide such engineering design services as may be necessary to plan and safely conduct certain construction operations, pertaining to, but not limited to the following:
   1. Temporary sheeting, shoring, or supports.
   2. Temporary scaffolding.
   3. Temporary bracing.
   4. Temporary falsework for support of spanning or arched structures.
   5. Temporary foundation underpinning.
   6. Temporary stairs or steps required for construction access only.
   7. Temporary hoist(s) and rigging.

Copyright © 2021 Bialosky + Partners Architects

8. Investigation of soil conditions to support construction equipment.

1.5 CONTRACTOR'S DESIGN-RELATED PROFESSIONAL DESIGN SERVICES (DELEGATED-DESIGN)

A. Coordination: Contractor's professional design services are subject to requirements of project's Conditions for Construction Contract.

B. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

C. Base design on performance and/or design criteria indicated in individual specification sections.
   1. Submit a Request for Interpretation to Architect if the criteria indicated are not sufficient to perform required design services.

D. Delegated-Design Services Statement: Submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

E. Scope of Contractor's Design-Related Professional Design Services: As indicated on drawings and in individual specification sections.

1.6 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Designer's Qualification Statement: Submit for Architect's knowledge as contract administrator, or for Owner's information.
   1. Include information for each individual professional responsible for producing, or supervising production of, design-related professional services provided by Contractor.
      a. Full name.
      b. Professional licensure information.
      c. Statement addressing extent and depth of experience specifically relevant to design of items assigned to Contractor.

C. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
   1. Include calculations that have been used to demonstrate compliance to performance and regulatory criteria provided, and to determine design solutions.
   2. Include required product data and shop drawings.
   3. Include a statement or certification attesting that design data complies with criteria indicated, such as building codes, loads, functional, and similar engineering requirements.
   4. Include signature and seal of design professional responsible for allocated design services on calculations and drawings.

Copyright © 2021 Bialosky + Partners Architects

D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
   1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
   2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

F. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
   1. Submit report in duplicate within 30 days of observation to Architect for information.
   2. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.

G. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for Owner.
   1. Submit for information for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents.
   2. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or Owner.

1.7 QUALITY ASSURANCE

A. Designer Qualifications (Delegated Design): Where professional engineering design services and design data submittals are specifically required of Contractor by Contract Documents, provide services of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

1.8 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Comply with reference standard of date of issue current on date of Agreement, except where a specific date is established by applicable code.

C. Obtain copies of standards where required by product specification sections.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

Copyright © 2021 Bialosky + Partners Architects

E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from Contract Documents by mention or inference otherwise in any reference document.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.2 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance equipment as applicable, and to initiate instructions when necessary.

B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

3.3 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not complying with specified requirements.

Copyright © 2021 Bialosky + Partners Architects

B. If, in the opinion of Owner, it is not practical to remove and replace the work, Owner will direct an appropriate remedy or adjust payment.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SUMMARY

A. This section supplements the definitions contained in the General Conditions.

B. Other definitions are included in individual specification sections.

1.2 GENERAL

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

1.3 DEFINITIONS

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

B. Basis-of-Design: Refer to Section 01 6000 - Product Requirements.

C. Code or Building Code: OBC-2017 edition of the Ohio Building Code.

D. Comparable: Refer to Section 01 6000 - Product Requirements.

E. Contractor's Professional Design Services: Refer to Section 01 4000 - Quality Requirements.

F. Cutting: Refer to Section 01 7000 - Execution and Closeout Requirements.

G. Delegated Design: Same as Contractor's Professional Design Services.

H. Design Data: Refer to Section 01 4000 - Quality Requirements.

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

J. Experienced: Refer to Section 01 4000 - Quality Requirements.

K. Furnish: To supply, deliver, unload, and inspect for damage.

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

M. Install: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, start up, and make ready for use.

N. Installer/Applicator/Erector: Refer to Section 01 4000 - Quality Requirements.

O. Mockups: Refer to Section 01 4000 - Quality Requirements.

P. Or Equal: Refer to Section 01 6000 - Product Requirements.

Q. Patching: Refer to Section 01 7000 - Execution and Closeout Requirements.

Copyright © 2021 Bialosky + Partners Architects

R. Product: Material, machinery, components, equipment, fixtures, and systems forming the work result. Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
   1. Not materials or equipment used for preparation, fabrication, conveying, or erection and not incorporated into the work result.
   2. Products may be new, never before used, or re-used materials or equipment.

S. Project Manual: The book-sized volume that includes the procurement requirements (if any), the contracting requirements, and the specifications.

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

U. Provide: To furnish and install, complete and ready for the intended use.

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

W. Subject to Compliance with Requirements: Refer to Section 01 6000 - Product Requirements.

X. Substitutions: Refer to Section 01 2500 - Substitution Procedures.

Y. Supply: Same as Furnish.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Temporary utilities.

B. Temporary sanitary facilities.

C. Temporary Controls: Barriers and enclosures.

D. Security requirements.

E. Vehicular access and parking.

F. Waste removal facilities and services.

G. Field offices.

1.2 TEMPORARY UTILITIES

A. Owner will provide the following:
   1. Electrical power, consisting of connection to existing facilities.
   2. Water supply, consisting of connection to existing facilities.

B. Provide and pay for all lighting and ventilation required for construction purposes.

C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.3 TEMPORARY SANITARY FACILITIES

A. General Contractor to provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Use of existing facilities is not permitted.

C. Maintain daily in clean and sanitary condition.

1.4 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.

C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

Copyright © 2021 Bialosky + Partners Architects

1.5 INTERIOR ENCLOSURES

A. Provide temporary partitions as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment. Final locations and dimensions to be coordinated and confirmed with College.

B. Construction: Framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces:

1. Construct dustproof partitions with gypsum wallboard with joints taped on occupied side, and fire-retardant-treated plywood on construction operations side.
2. Insulate partitions to control noise transmission to occupied areas.
3. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
4. Protect air-handling equipment by sealing open ducts and return air passages.
5. Provide walk-off mats at each entrance through temporary partition and at all other entrances to the construciion area.

1.6 SECURITY

A. Provide security and facilities to protect Work, and Owner's operations from unauthorized entry, vandalism, or theft.

B. Coordinate with Owner's security program.

1.7 VEHICULAR ACCESS AND PARKING

A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.

B. Coordinate access and haul routes with governing authorities and Owner.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

E. Existing parking areas may be used for construction parking. Coordinate permissible locations on Campus with the Owner.

1.8 WASTE REMOVAL

A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

B. Provide containers with lids. Remove trash from site periodically.

C. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

Copyright © 2021 Bialosky + Partners Architects

1.9 FIELD OFFICES

A. Office: The College will provide interior space for field offices. The General Contractor is responsible for providing the necessary furnishings, such as table and chairs.

B. Provide table and chairs to accommodate no fewer than eight (8) persons.

1.10 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.

B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. General product requirements.

B. Re-use of existing products.

C. Transportation, handling, storage and protection.

D. Product option requirements.

E. Substitution limitations.

F. Procedures for Owner-supplied products.

G. Maintenance materials, including extra materials, spare parts, tools, and software.

1.2 DEFINITIONS

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

B. Comparable Product: Product by a named manufacturer that is demonstrated and approved through the comparable product submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

C. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.

D. Or Equal: For products specified by name and accompanied by the term "or equal," "or approved equal," or "or approved," comply with requirements in Comparable Product Request Submittals" paragraph to obtain approval for use of an unnamed product.

E. Products: Refer to Section 01 4216 - Definitions.

F. Subject to Compliance with Requirements: In the event that a named product or product by a named manufacturer does not meet the requirements of the specifications, select another named product or product from another named manufacturer that does meet the requirements of the specifications; submit a comparable product request or substitution request, if applicable.

1.3 RELATED REQUIREMENTS

A. Section 01 2500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.

Copyright © 2021 Bialosky + Partners Architects

B. Section 01 4000 - Quality Requirements: Product quality monitoring.

1.4 SUBMITTALS

A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
   1. Submit within 15 days after date of Agreement.
   2. For products specified only by reference standards, list applicable reference standards.

B. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

C. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

D. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

E. Comparable Product Request Submittals: An action submittal requesting consideration of a comparable product, including the following information:
   1. Identification of basis-of-design product to be replaced, including Specification Section number and title and Drawing numbers and titles.
   2. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
   3. Evidence that proposed product does not require revisions to the Contract Documents, is consistent with the Contract Documents, will produce the indicated results, and is compatible with other portions of the Work.
   4. Evidence that proposed product provides specified warranty.
   5. List of similar installations for completed projects, with project names and addresses and names and addresses of architects and owners, if requested.
   6. Samples, if indicated or requested.

F. Substitution Request: Refer to Section 01 2500 "Substitution Procedures" for definition and limitations on substitutions.

PART 2 PRODUCTS

2.1 EXISTING PRODUCTS

A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by Contract Documents.

Copyright © 2021 Bialosky + Partners Architects

B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.

C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.2 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by Contract Documents.

B. See Section 01 4000 - Quality Requirements, for additional source quality control requirements.

C. Use of products having any of the following characteristics is not permitted:
   1. Made of wood from newly cut old growth timber.
   2. Containing lead, cadmium, or asbestos.

2.3 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

D. Products Specified by Basis-of-Design: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications may additionally indicate sizes, profiles, dimensions, and other characteristics that are based on the product named.

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

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

2.4 MAINTENANCE MATERIALS

A. See Section 01 7800 - Closeout Submittals.

Copyright © 2021 Bialosky + Partners Architects

PART 3 EXECUTION

3.1 SUBSTITUTION LIMITATIONS

A. See Section 01 2500 - Substitution Procedures.

3.2 COORDINATION

A. Modify or adjust affected work as necessary to integrate work of approved comparable products and approved substitutions.

3.3 OWNER-SUPPLIED PRODUCTS

A. Owner's Responsibilities:
   1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
   2. Arrange and pay for product delivery to site.
   3. On delivery, inspect products jointly with Contractor.
   4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
   5. Arrange for manufacturers' warranties, inspections, and service.

B. Contractor's Responsibilities:
   1. Review Owner reviewed shop drawings, product data, and samples.
   2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
   3. Handle, store, install and finish products.
   4. Repair or replace items damaged after receipt.

3.4 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

Copyright © 2021 Bialosky + Partners Architects

H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.5 STORAGE AND PROTECTION

A. Provide protection of stored materials and products against theft, casualty, or deterioration.

B. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 7419.

1. Structural Loading Limitations: Handle and store products and materials so as not to exceed static and dynamic load-bearing capacities of project floor and roof areas.

C. Store and protect products in accordance with manufacturers' instructions.

D. Store with seals and labels intact and legible.

E. Arrange storage of materials and products to allow for visual inspection for the purpose of determination of quantities, amounts, and unit counts.

F. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.

G. For exterior storage of fabricated products, place on sloped supports above ground.

H. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

I. Comply with manufacturer's warranty conditions, if any.

J. Do not store products directly on the ground.

K. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

L. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

M. Prevent contact with material that may cause corrosion, discoloration, or staining.

N. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

O. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.

C. Pre-installation meetings.

D. Cutting and patching.

E. Cleaning and protection.

F. Starting of systems and equipment.

G. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

1.2 RELATED REQUIREMENTS

A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.

B. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, maintenance materials, warranties, and bonds.

1.3 DEFINITIONS

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

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

1.4 REFERENCE STANDARDS

A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations 2019.

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
   1. Structural integrity of any element of Project.
   2. Integrity of weather exposed or moisture resistant element.
   3. Efficiency, maintenance, or safety of any operational element.

Copyright © 2021 Bialosky + Partners Architects

4. Visual qualities of sight exposed elements.
5. Work of Owner or separate Contractor.
6. Include in request:
    a. Identification of Project.
    b. Location and description of affected work.
    c. Necessity for cutting or alteration.
    d. Description of proposed work and products to be used.
    e. Effect on work of Owner or separate Contractor.
    f. Written permission of affected separate Contractor.
    g. Date and time work will be executed.

C. Project Record Documents: Accurately record actual locations of capped and active utilities.

1.6 PROJECT CONDITIONS

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.

1. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.

C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

1. Indoors: Limit conduct of especially noisy interior work to hours acceptable to the Owner.

1.7 COORDINATION

A. See Section 01 1000 for occupancy-related requirements.

B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.

C. Notify affected utility companies and comply with their requirements.

D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

F. In finished areas, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

G. Coordinate completion and clean-up of work of separate sections.

Copyright © 2021 Bialosky + Partners Architects

H. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.1 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

E. Verify that utility services are available, of the correct characteristics, and in the correct locations.

F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

Copyright © 2021 Bialosky + Partners Architects

3.3 PREINSTALLATION MEETINGS

A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.

B. Require attendance of parties directly affecting, or affected by, work of the specific section.

C. Notify Architect four days in advance of meeting date.

D. Prepare agenda and preside at meeting:
   1. Review conditions of examination, preparation and installation procedures.
   2. Review coordination with related work.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.4 GENERAL INSTALLATION REQUIREMENTS

A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.

B. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.

E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

F. Make neat transitions between different surfaces, maintaining texture and appearance.

3.5 ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
   1. Verify that construction and utility arrangements are as indicated.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of alterations work constitutes acceptance of existing conditions.

B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
   1. Provide, erect, and maintain temporary dustproof partitions of fire-retardant-rated, dust-proof construction as located on drawings and coordinated with Owner.

C. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.
   2. Relocate items indicated on drawings.
   3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.

Copyright © 2021 Bialosky + Partners Architects

4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, and Electrical): Remove, relocate, and extend existing systems to accommodate new construction.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
   2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
   3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
      a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
      b. See Section 01 1000 for other limitations on outages and required notifications.
      c. Provide temporary connections as required to maintain existing systems in service.
   4. Verify that abandoned services serve only abandoned facilities.
   5. Remove abandoned pipe, ducts, conduits, and equipment , including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.

E. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.

F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
   1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
   2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
   3. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.

G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.

H. Refinish existing surfaces as indicated:
   1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
   2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.

Copyright © 2021 Bialosky + Partners Architects

I. Clean existing systems and equipment.

J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.

K. Do not begin new construction in alterations areas before demolition is complete.

L. Comply with all other applicable requirements of this section.

3.6 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. See Alterations article above for additional requirements.

C. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-complying work.

D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to specified condition.

E. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

G. Restore work with new products in accordance with requirements of Contract Documents.

H. Fit work tightly to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material , to full thickness of the penetrated element.

J. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

Copyright © 2021 Bialosky + Partners Architects

3.7 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site daily and dispose off-site; do not burn or bury.

3.8 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.

G. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

H. Prohibit traffic from landscaped areas.

I. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.9 SYSTEM STARTUP

A. Coordinate schedule for start-up of various equipment and systems.

B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.

C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

D. Verify that wiring and support components for equipment are complete and tested.

E. Execute start-up under supervision of applicable Contractor personnel in accordance with manufacturers' instructions.

Copyright © 2021 Bialosky + Partners Architects

F. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

G. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.10 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.11 FINAL CLEANING

A. Use cleaning materials that are nonhazardous.

B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

E. Clean filters of operating equipment.

F. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.12 CLOSEOUT PROCEDURES

A. Make submittals that are required by governing or other authorities.
   1. Provide copies to Owner.

B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's comprehensive list of items to be completed or corrected.

C. Notify Architect when work is considered ready for Architect's Substantial Completion inspection.

D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect's Substantial Completion inspection.

E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.

Copyright © 2021 Bialosky + Partners Architects

F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

G. Accompany Project Coordinator on Contractor's preliminary final inspection.

H. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.

I. Complete items of work determined by Architect listed in executed Certificates of Substantial Completion.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Project record documents.

B. Operation and Maintenance Data.

C. Warranties and bonds.

D. Maintenance materials (attic stock).

1.2 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.

B. Section 01 7000 - Execution and Closeout Requirements: Contract closeout procedures.

C. Individual Product Sections: Specific requirements for operation and maintenance data.

D. Individual Product Sections: Warranties required for specific products or Work.

E. Individual Product Sections: Specific requirements for maintenance materials.

1.3 SUBMITTALS

A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.

B. Operation and Maintenance Data:

1. Submit one digital copy of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
4. Submit two sets of revised final documents in final hard copy form and one digital copy within 10 days after final inspection.

C. Warranties and Bonds:

1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

Copyright © 2021 Bialosky + Partners Architects

D. Maintenance Materials:
   1. Submit schedule of maintenance material items; include name and quantity of each item and name and number of related Specification Section.
   2. Submit one copy of schedule 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of schedule as required prior to final submission.
   3. Submit revised schedule with delivery of maintenance material items within 10 days after Date of Substantial Completion, prior to final Application for Payment.

E. College Required Documentation: The College will furnish blank copies of their standard close out documents for the Contractors to coordinate full execution and submission.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.1 PROJECT RECORD DOCUMENTS (AS-BUILT DOCUMENTS)

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed shop drawings, product data, and samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
   1. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   2. Field changes of dimension and detail.
   3. Details not on original Contract drawings.

Copyright © 2021 Bialosky + Partners Architects

3.2 OPERATION AND MAINTENANCE DATA

A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.

D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.3 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES

A. For Each Product, Applied Material, and Finish:
   1. Product data, with catalog number, size, composition, and color and texture designations.
   2. Information for re-ordering custom manufactured products.

B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional information as specified in individual product specification sections.

E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

3.4 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS

A. For Each Item of Equipment and Each System:
   1. Description of unit or system, and component parts.
   2. Identify function, normal operating characteristics, and limiting conditions.
   3. Include performance curves, with engineering data and tests.
   4. Complete nomenclature and model number of replaceable parts.

B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; by label machine.

D. Include color coded wiring diagrams as installed.

Copyright © 2021 Bialosky + Partners Architects

E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
   1. Include HVAC outdoor and exhaust air damper calibration strategy.
      a. Include provisions which ensure that full closure of dampers can be achieved.

G. Provide servicing and lubrication schedule, and list of lubricants required.

H. Include manufacturer's printed operation and maintenance instructions.

I. Include sequence of operation by controls manufacturer.

J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

K. Provide control diagrams by controls manufacturer as installed.

L. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.

M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

O. Include test and balancing reports.

P. Additional Requirements: As specified in individual product specification sections.

3.5 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS

A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.

B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

C. Binders: Commercial quality, 8-1/2 by 11 inch three D side ring binders with durable plastic covers; 2 inch maximum ring size. When multiple binders are used, correlate data into related consistent groupings.

D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.

E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, multiple Prime Contractors, and subcontractors, with names of responsible parties.

F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.

Copyright © 2021 Bialosky + Partners Architects

G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.

H. Text: Manufacturer's printed data, or typewritten data on 20 pound paper.

I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

J. Arrangement of Contents: Organize each volume in parts as follows:

1. Project Directory.
2. Table of Contents, of all volumes, and of this volume.
3. Operation and Maintenance Data: Arranged by system, then by product category.
    a. Source data.
    b. Product data, shop drawings, and other submittals.
    c. Operation and maintenance data.
    d. Field quality control data.
    e. Photocopies of warranties and bonds.

3.6 WARRANTIES AND BONDS

A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.

B. Verify that documents are in proper form, contain full information, and are notarized.

C. Co-execute submittals when required.

D. Retain warranties and bonds until time specified for submittal.

E. Manual: Bind in commercial quality 8-1/2 by 11 inch three D side ring binders with durable plastic covers.

F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.

G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.

H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

3.7 MAINTENANCE MATERIALS (ATTIC STOCK)

A. Furnish extra materials, spare parts, tools, software and similar items of types and in quantities specified in individual specification sections.

Copyright © 2021 Bialosky + Partners Architects

1. Label maintenance materials with manufacturers' names and items' model numbers.

B. Deliver to Project site, location designated by Owner; obtain receipt prior to final payment.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Selective demolition of building elements for alteration purposes.

1.2 RELATED REQUIREMENTS

A. Section 00 3100 - Available Project Information: Existing building survey conducted by Owner; information about known hazardous materials.

B. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.

C. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.3 DEFINITIONS

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

B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.

C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

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

1.4 REFERENCE STANDARDS

A. ANSI/ASSP A10.6 - Safety and Health Program Requirements for Demolition Operations; current edition.

B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations 2019.

1.5 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

Copyright © 2021 Bialosky + Partners Architects

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
   1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.6 ADMINISTRATIVE REQUIREMENTS

A. Predemolition Conference:
   1. Inspect and discuss condition of construction to be selectively demolished.
   2. Review structural load limitations of existing structure.
   3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
   4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
   5. Review areas where existing construction is to remain and requires protection.

1.7 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Site Plan: Showing:
   1. Areas for temporary construction and field offices.
   2. Areas for temporary and permanent placement of removed materials.

C. Demolition Plan and Schedule of Demolition Activities: Submit demolition plan as specified by OSHA and local authorities.
   1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences.
   2. Identify demolition firm and submit qualifications.
   3. Include a summary of safety procedures.
   4. Indicate a detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
   5. Indicate interruption of utility services. Indicate how long utility services will be interrupted.
   6. Indicate coordination for shutoff, capping, and continuation of utility services.
   7. Show use of elevator and stairs.
   8. Indicate coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

D. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property for dust control, for noise control, and for fire suppression. Indicate proposed locations and construction of barriers.

E. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations. Submit before Work begins.

Copyright © 2021 Bialosky + Partners Architects

F. Project Record Documents (As-Builts): Accurately record actual locations of capped and active utilities and subsurface construction.

1.8 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

C. Storage or sale of removed items or materials on-site is not permitted.

D. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
   1. Maintain fire-protection facilities in service during selective demolition operations.

1.9 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 3 EXECUTION

3.1 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
   1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
   2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
   3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
   4. Cover and protect furniture, furnishings, and equipment that have not been removed.
   5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Sections.

Copyright © 2021 Bialosky + Partners Architects

B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
   1. Strengthen or add new supports when required during progress of selective demolition.

C. Remove temporary barricades and protections where hazards no longer exist.

3.2 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with other requirements specified in Section 01 7000.

B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
   1. Obtain required permits.
   2. Comply with applicable requirements of ANSI/ASSP A10.6 and NFPA 241.
   3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
   4. Provide, erect, and maintain temporary barriers and security devices.
   5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
   6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
   7. Do not close or obstruct roadways or sidewalks without permit.
   8. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
   9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.

C. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work and as follows:
   1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
   2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
   3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
   5. Maintain fire watch during and for at least 30 minutes after flame-cutting operations.

Copyright © 2021 Bialosky + Partners Architects

6. Maintain adequate ventilation when using cutting torches.
7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
10. Dispose of demolished items and materials promptly.

D. Do not begin removal until receipt of notification to proceed from Owner.

E. Do not begin removal until built elements to be salvaged or relocated have been removed.

F. Protect existing structures and other elements that are not to be removed.
1. Provide bracing and shoring.
2. Prevent movement or settlement of adjacent structures.
3. Stop work immediately if adjacent structures appear to be in danger.

G. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

3.3 EXISTING UTILITIES

A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 7 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.4 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
1. Verify that construction and utility arrangements are as indicated.
2. Report discrepancies to Architect before disturbing existing installation.

Copyright © 2021 Bialosky + Partners Architects

3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Separate areas in which demolition is being conducted from other areas that are still occupied.
   1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 in locations indicated on drawings.

C. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.

D. Services (Including but not limited to HVAC, Plumbing, and Electrical): Remove existing systems and equipment as indicated.
   1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
   2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
   3. Verify that abandoned services serve only abandoned facilities before removal.
   4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.

E. Protect existing work to remain.
   1. Prevent movement of structure; provide shoring and bracing if necessary.
   2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   3. Repair adjacent construction and finishes damaged during removal work.
   4. Patch as specified for patching new work.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.

B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.

C. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.

D. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings."

3.6 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Do not allow demolished materials to accumulate on-site.

Copyright © 2021 Bialosky + Partners Architects

C. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

D. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

3.7 CLEANING

A. Leave site in clean condition, ready for subsequent work.

B. Clean up spillage and wind-blown debris from public and private lands.

C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations.

D. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cast-in-place concrete for patching trenches in exsting concrete slabs.

1.2 RELATED REQUIREMENTS

A. Electrical and Mechanical drawings for trenching existing cast-in-place concrete; repair is specified in this section.

1.3 REFERENCE STANDARDS

A. ACI 117 - Specifications for Tolerances for Concrete Construction and Materials 2010 (Reapproved 2015).

B. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete 1991 (Reapproved 2009).

C. ACI 301 - Specifications for Structural Concrete 2016.

D. ACI 302.1R - Guide to Concrete Floor and Slab Construction 2015.

E. ACI 304R - Guide for Measuring, Mixing, Transporting, and Placing Concrete 2000 (Reapproved 2009).

F. ACI 308R - Guide to External Curing of Concrete 2016.

G. ACI 318 - Building Code Requirements for Structural Concrete and Commentary 2014 (Errata 2018).

H. ACI 347R - Guide to Formwork for Concrete 2014, with Errata (2017).

I. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement 2020.

J. ASTM A1064/A1064M - Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete 2018a.

K. ASTM C33/C33M - Standard Specification for Concrete Aggregates 2018.

L. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens 2020.

M. ASTM C109/C109M - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or (50-mm) Cube Specimens) 2020b.

N. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete 2016.

O. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method 2016.

Copyright © 2021 Bialosky + Partners Architects

P. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete 2019.

Q. ASTM C494/C494M - Standard Specification for Chemical Admixtures for Concrete 2019.

R. ASTM C595/C595M - Standard Specification for Blended Hydraulic Cements 2020.

S. ASTM C685/C685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing 2017.

T. ASTM C845/C845M - Standard Specification for Expansive Hydraulic Cement 2018.

U. ASTM C1059/C1059M - Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete 2013.

V. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink) 2017.

W. ASTM C1602/C1602M - Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete 2012.

X. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair 2013.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.

1.5 QUALITY ASSURANCE

A. Perform work of this section in accordance with ACI 301 and ACI 117.

PART 2 PRODUCTS

2.1 FORMWORK

A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.

2.2 REINFORCEMENT MATERIALS

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).
   1. Type: Deformed billet-steel bars.

B. Steel Welded Wire Reinforcement (WWR): Plain type, ASTM A1064/A1064M.

C. Reinforcement Accessories:
   1. Tie Wire: Annealed, minimum 16 gauge, 0.0508 inch.

Copyright © 2021 Bialosky + Partners Architects

2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

2.3 CONCRETE MATERIALS

A. Cement: ASTM C150/C150M, Type I - Normal Portland type.

B. Blended Hydraulic Cement: ASTM C595/C595M or ASTM C845/C845M.

C. Fine and Coarse Aggregates: ASTM C33/C33M.

D. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to concrete.

2.4 ADMIXTURES

A. Chemical Admixtures: ASTM C494/C494M; certified by manufacturer to be compatible with other admixtures. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement. Do not use calcium chloride or admixtures containing calcium chloride.

2.5 ACCESSORY MATERIALS

A. Non-Shrink Cementitious Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
   1. Grout: Comply with ASTM C1107/C1107M.
   2. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
   3. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.

2.6 BONDING AND JOINTING PRODUCTS

A. Latex Bonding Agent: Non-redispersable acrylic latex, complying with ASTM C1059/C1059M, Type II.

2.7 CURING MATERIALS

A. Moisture-Retaining Sheet: ASTM C171.
   1. Polyethylene film, white opaque, minimum nominal thickness of 4 mil, 0.004 inch.
   2. White-burlap-polyethylene sheet, weighing not less than 3.8 ounces per square yard.

B. Water: Potable, not detrimental to concrete.

2.8 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI 211.1 recommendations.
   1. Cementitious Materials: Use fly ash, pozzolan, slag cement, and blended hydraulic cement as needed to reduce the total amount of portland cement, which would otherwise be used, by not less than 40 percent.

Copyright © 2021 Bialosky + Partners Architects

B. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI 301.

C. Admixtures: Add acceptable admixtures as recommended in ACI 211.1 and at rates recommended or required by manufacturer.

D. Normal Weight Concrete:
   1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 4,000 pounds per square inch.
   2. Water-Cement Ratio: Maximum 40 percent by weight.
   3. Total Air Content: Maintain within range permitted by ACI 301. Do not allow air content of trowel-finished floor slabs to exceed 3 percent, determined in accordance with ASTM C173/C173M.
   4. Maximum Slump: 4 inches, plus or minus 1 inch.
   5. Maximum Aggregate Size: 3/4 inch.

2.9 MIXING

A. On Project Site: Mix in drum type batch mixer, complying with ASTM C685/C685M. Mix each batch not less than 1-1/2 minutes and not more than 5 minutes.
   1. For mixer capacity of 1 cu. yd. or smaller, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released.
   2. For mixer capacity larger than 1 cu. yd., increase mixing time by 15 seconds for each additional 1 cu. yd.

PART 3 EXECUTION

3.1 PREPARATION

A. Formwork: Comply with requirements of ACI 301. Design and fabricate forms to support all applied loads until concrete is cured, and for easy removal without damage to concrete.

B. Prepare existing concrete surfaces to be repaired according to ICRI 310.2R.

C. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning and applying bonding agent in according to bonding agent manufacturer's instructions.
   1. Use latex bonding agent only for non-load-bearing applications.

3.2 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

A. Comply with requirements of ACI 301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

B. Install welded wire reinforcement in maximum possible lengths, and offset end laps in both directions. Splice laps with tie wire.

Copyright © 2021 Bialosky + Partners Architects

C. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

3.3 PLACING CONCRETE

A. Place concrete in accordance with ACI 304R.

3.4 SLAB JOINTING

A. Construct joints true to line with faces perpendicular to surface plane of concrete. Locate joints as indicated on drawings.

B. Anchor joint fillers and devices to prevent movement during concrete placement.

C. Isolation Joints: Use preformed joint filler with removable top section for joint sealant, total height equal to thickness of slab, set flush with top of slab.

1. Install wherever necessary to separate slab from other building members, including columns, walls, equipment foundations, footings, stairs, manholes, sumps, and drains.

3.5 CONCRETE FINISHING

A. Unformed Surfaces including Concrete Slabs: Finish to requirements of ACI 302.1R for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

1. Surfaces to Receive Thin Floor Coverings: "Steel trowel" as described in ACI 302.1R; thin floor coverings include carpeting, resilient flooring, seamless flooring, resinous matrix terrazzo, thin set quarry tile, and thin set ceramic tile.
2. Surfaces to Be Left Exposed: Trowel as described in ACI 302.1R, minimizing burnish marks and other appearance defects.

3.6 CURING AND PROTECTION

A. Comply with requirements of ACI 308R. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

1. Normal concrete: Not less than seven days.

C. Surfaces Not in Contact with Forms:

1. Slabs and Floors To Receive Adhesive-Applied Flooring: Curing compounds and other surface coatings are usually considered unacceptable by flooring and adhesive manufacturers. If such materials must be used, either obtain the approval of the flooring and adhesive manufacturers prior to use or remove the surface coating after curing to flooring manufacturer's satisfaction.
2. Initial Curing: Start as soon as free water has disappeared and before surface is dry. Keep continuously moist for not less than three days by water ponding, water-saturated sand, water-fog spray, or saturated burlap.

Copyright © 2021 Bialosky + Partners Architects

3. Final Curing: Begin after initial curing but before surface is dry.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Steel framing and supports for all-glass entrances.

1.2 RELATED REQUIREMENTS

A. Section 08 4226 - All-Glass Entrances: Structural performance requirements.

1.3 REFERENCE STANDARDS

A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel 2014.

B. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates 2018.

C. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing 2014.

D. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination 2012.

E. AWS D1.1/D1.1M - Structural Welding Code - Steel 2020.

F. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer 1999 (Ed. 2004).

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
2. Design data: Submit drawings and supporting calculations, signed and sealed by a qualified professional structural engineer.
    a. Include the following, as applicable:
        1) Design criteria.
        2) Engineering analysis depicting stresses and deflections.
        3) Member sizes and gauges.
        4) Details of connections.
        5) Support reactions.
        6) Bracing requirements.

C. Designer's Qualification Statement.

Copyright © 2021 Bialosky + Partners Architects

1.5 QUALITY ASSURANCE

A. Design steel framing and supports for all-glass entrances under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.

PART 2 PRODUCTS

2.1 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.

C. Plates: ASTM A283/A283M.

D. Mechanical Fasteners: Same material as or compatible with materials being fastened; type consistent with design and specified quality level.

E. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

2.2 FINISHES - STEEL

A. Prime paint steel items.

B. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

C. Prime Painting: One coat.

PART 3 EXECUTION

3.1 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

3.2 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components as indicated on shop drawings.

D. Perform field welding in accordance with AWS D1.1/D1.1M.

E. Obtain approval prior to site cutting or making adjustments not scheduled.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Specially fabricated cabinet units, millwork, and built-in furnishings.

B. Hardware.

1.2 RELATED REQUIREMENTS

A. Section 12 3600 - Countertops.

1.3 REFERENCE STANDARDS

A. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards 2014, with Errata (2018).

B. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass 2018.

C. BHMA A156.9 - American National Standard for Cabinet Hardware 2015.

D. GANA (GM) - GANA Glazing Manual 2008.

E. NEMA LD 3 - High-Pressure Decorative Laminates 2005.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting not less than one week before starting work of this section; require attendance by all affected installers.

1.5 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.

1. Scale of Drawings: 1-1/2 inch to 1 foot, minimum.
2. Provide the information required by AWI/AWMAC/WI (AWS).
3. Include certification program label.

C. Product Data: Provide data for hardware accessories.

D. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches square, illustrating each type of proposed cabinet, shelf unit, and millwork substrate and finish.

E. Samples: Submit actual sample items of proposed pulls, hinges, locksets, and casters, demonstrating hardware design, quality, and finish.

Copyright © 2021 Bialosky + Partners Architects

1.6 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum ten years of documented experience.
   1. Company with at least one project in the past 5 years with value of woodwork within 20 percent of cost of woodwork for this Project.
   2. Single Source Responsibility: Provide and install this work from single fabricator.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect units from moisture damage.

1.8 FIELD CONDITIONS

A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

PART 2 PRODUCTS

2.1 CABINETS, MILLWORK, AND FURNISHINGS

A. Quality Standard: Premium Grade, in accordance with AWI/AWMAC/WI (AWS), unless noted otherwise.

2.2 WOOD-BASED COMPONENTS

A. Composite Wood and Agrifiber Products: Provide materials that comply with requirements of the Architectural Woodwork Standards for each type of interior architectural woodwork and quality grade specified unless otherwise indicated.

2.3 LAMINATE MATERIALS

A. Manufacturers:
   1. Basis of Design - Formica Corporation: www.formica.com/#sle.
   2. Panolam Industries International, Inc: www.panolam.com/#sle.
   3. Wilsonart LLC: www.wilsonart.com/#sle.
   4. Substitutions: See Section 01 6000 - Product Requirements.

B. (PLAM-1, PLAM-2) High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as required by referenced quality; standard for specific applications.
   1. Color and Finish: As indicated in Finish Selections schedule on drawings.

2.4 COUNTERTOPS

A. Countertops are specified in Section 12 3600.

Copyright © 2021 Bialosky + Partners Architects

2.5 ACCESSORIES

A. Adhesive: Type recommended by fabricator to suit application.

B. Tempered Float Glass for Cabinet Doors: ASTM C1048, Kind FT, Condition A, Type I, Class 1 (clear), Quality-Q3, 6 mm thick.

C. Fasteners: Size and type to suit application.

D. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.

E. Concealed Joint Fasteners: Threaded steel.

2.6 HARDWARE

A. Hardware: BHMA A156.9, types as recommended by fabricator for quality grade specified.

B. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards and coordinated self rests, polished chrome finish, for nominal 1 inch spacing adjustments.

C. Drawer and Door Pulls: Back mounted, solid metal, 4 inches long, 1-1/2" projection tab pulls, Doug Mockett & Company, Inc. DP3B-17S ; satin nickel.

D. Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, steel with chrome finish.
   1. Provide locks for all doors and drawers at checkout desk only, unless otherwise indicated.

E. Catches: Magnetic.

F. Drawer Slides:
   1. Type: Full extension.
   2. Static Load Capacity: As required by drawer size to comply with performance requirements indicated.
   3. Mounting: Side mounted.
   4. Stops: Integral type.
   5. Features: Provide self closing/stay closed and soft close type.

G. Typical Cabinet Door Hinges: European style concealed self-closing type, steel with polished finish.

H. Soft Close Adapter: Concealed, frame-mounted, screw-adjustable damper; steel with polished finish.

2.7 FABRICATION

A. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through building openings.

B. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

Copyright © 2021 Bialosky + Partners Architects

C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.

D. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners.
   1. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
   2. Cap exposed plastic laminate finish edges with material of same finish and pattern.

E. Provide cutouts for fixtures and fittings. Verify locations of cutouts from on-site dimensions. Seal cut edges.

F. Shop glaze glass to comply with applicable requirements in GANA (GM) "Glazing Manual."

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify adequacy of backing and support framing.

B. Verify location and sizes of utility rough-in associated with work of this section.

3.2 INSTALLATION

A. Install work in accordance with AWI/AWMAC/WI (AWS) requirements for grade indicated.

B. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.

C. Use fixture attachments in concealed locations for wall mounted components.

D. Use concealed joint fasteners to align and secure adjoining cabinet units.

E. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

F. Secure cabinets to floor using appropriate angles and anchorages.

G. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.3 ADJUSTING

A. Adjust moving or operating parts to function smoothly and correctly.

3.4 CLEANING

A. Clean casework, counters, shelves, hardware, fittings, and fixtures.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. (WP-1) Fiberglass reinforced plastic panels.

B. Trim.

1.2 REFERENCE STANDARDS

A. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics 2010 (Reapproved 2018).

B. ASTM D2583 - Standard Test Method for Indentation Hardness of Rigid Plastics by Means of Barcol Impressor 2013a.

C. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber 2016.

D. ASTM D5319 - Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels 2017.

E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2020.

1.3 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Samples: Submit two samples 6 by 6 inch in size illustrating material and surface design of panels.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store panels flat, indoors, on a clean, dry surface. Remove packaging and allow panels to acclimate to room temperature for 48 hours prior to installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Fiberglass Reinforced Plastic Panels:

1. Crane Composites, Inc: www.cranecomposites.com/#sle.
2. Basis of design - Marlite, Inc: www.marlite.com/#sle.
3. Nudo Products, Inc: www.nudo.com/#sle.

Copyright © 2021 Bialosky + Partners Architects

4. Panolam Industries International, Inc: www.panolam.com/#sle.
5. Substitutions: See Section 01 6000 - Product Requirements.

2.2 PANEL SYSTEMS

A. Panels: Fiberglass reinforced plastic (FRP), complying with ASTM D5319.
   1. Surface Burning Characteristics: Maximum flame spread index of 25 and smoke developed index of 450; when system tested in accordance with ASTM E84.
   2. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
   3. Scratch Resistance: Barcol hardness score greater than 35, when tested in accordance with ASTM D2583.
   4. Impact Strength: Greater than 6 ft lb force per inch, when tested in accordance with ASTM D256.

B. Trim: Vinyl; color coordinating with panel.

C. Fasteners: Nylon rivets.

D. Adhesive: Type recommended by panel manufacturer.

E. Sealant: Type recommended by panel manufacturer; white.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions and substrate flatness before starting work.

B. Verify that substrate conditions are ready to receive the work of this section.

3.2 INSTALLATION - WALLS

A. Install panels in accordance with manufacturer's instructions.

B. Cut and drill panels with carbide tipped saw blades, drill bits, or snips.

C. Pre-drill fastener holes in panels, 1/8 inch greater in diameter than fastener, spaced as indicated by panel manufacturer.

D. Apply adhesive to the back side of the panel using trowel as recommended by adhesive manufacturer.

E. Apply panels to wall with seams plumb and pattern aligned with adjoining panels.

F. Install panels with manufacturer's recommended gap for panel field and corner joints.

G. Drive fasteners to provide snug fit, and do not over-tighten.

H. Place trim on panel before fastening edges, as required.

I. Fill channels in trim with sealant before attaching to panel.

J. Install trim with adhesive and screws or nails, as required.

Copyright © 2021 Bialosky + Partners Architects

K. Seal gaps at floor, ceiling, and between panels with applicable sealant to prevent moisture intrusion.

L. Remove excess sealant after paneling is installed and prior to curing.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Non-fire-rated hollow metal doors.

1.2 RELATED REQUIREMENTS

A. Section 08 7100 - Door Hardware.

1.3 REFERENCE STANDARDS

A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.

B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors 2011.

C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100) 2017.

D. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames 2011.

E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.

F. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable 2020.

G. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength 2018a.

H. BHMA A156.115 - American National Standard for Hardware Preparation in Steel Doors and Steel Frames 2016.

I. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.

J. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors and Frames 2002.

K. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors and Frames 2011.

L. NAAMM HMMA 840 - Guide Specifications For Receipt, Storage and Installation of Hollow Metal Doors and Frames 2007.

M. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames 2014.

N. SDI 117 - Manufacturing Tolerances for Standard Steel Doors and Frames 2013.

Copyright © 2021 Bialosky + Partners Architects

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.

C. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Hollow Metal Doors and Frames:
1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
2. Republic Doors, an Allegion brand: www.republicdoor.com/#sle.
3. Steelcraft, an Allegion brand: www.allegion.com/#sle.
4. Substitutions: See Section 01 6000 - Product Requirements.

2.2 PERFORMANCE REQUIREMENTS

A. Requirements for Hollow Metal Doors and Frames:
1. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
2. Accessibility: Comply with ICC A117.1 and ADA Standards.
3. Door Edge Profile: Manufacturers standard for application indicated.
4. Typical Door Face Sheets: Flush. Refer to Door Schedule for additional information.
5. Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

Copyright © 2021 Bialosky + Partners Architects

2.3 HOLLOW METAL DOORS

A. Door Finish: Factory primed and field finished.

B. Interior Doors, Non-Fire-Rated:

1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
   a. Level 2 - Heavy-duty.
   b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
   c. Model 1 - Full Flush.
   d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
2. Door Core Material: Manufacturers standard core material/construction and in compliance with requirements.
3. Door Thickness: 1-3/4 inches, nominal.

2.4 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

2.5 ACCESSORIES

A. Louvers: Roll formed steel with overlapping frame; finish same as door components ; factory-installed.

1. Style: Standard straight slat blade.
2. Fasteners: Concealed fasteners.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.

B. Coordinate frame anchor placement with wall construction.

C. Install door hardware as specified in Section 08 7100.

3.2 TOLERANCES

A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.

B. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.3 ADJUSTING

A. Adjust for smooth and balanced door movement.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SECTION INCLUDES

A. All-glass entrances.

B. Dooor hardware.

C. Glazing and decorative glass film.

1.2 RELATED REQUIREMENTS

A. Section 05 5000 - Metal Fabrications: Supplementary overhead steel support for all-glass systems.

B. Section 08 7100 - Door Hardware: Cylinders.

1.3 REFERENCE STANDARDS

A. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar 2015.

B. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes 2014.

C. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric) 2013.

D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.

E. ASTM C1036 - Standard Specification for Flat Glass 2016.

F. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass 2018.

G. BHMA A156.4 - American National Standard for Door Controls - Closers 2013.

H. BHMA A156.17 - American National Standard for Self Closing Hinges & Pivots 2014.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Drawings, bearing seal and signature of structural engineer licensed to practice in the State in which the Project is located, showing layout, dimensions, identification of components, and interface with adjacent construction.

1. Include field measurements of openings.
2. Include elevations showing:
    a. Appearance of all-glass entrance layouts.
    b. Locations and identification of manufacturer-supplied door hardware and fittings.
    c. Locations and sizes of cut-outs and drilled holes for other door hardware.

Copyright © 2021 Bialosky + Partners Architects

3. Include details of:
    a. Requirements for support and bracing at openings.
    b. Installation details.
    c. Appearance of manufacturer-supplied door hardware and fittings.

C. Verification Samples: Two samples, minimum size 2 by 3 inches, representing actual material and finish of exposed metal.

D. Design Data: Design calculations, bearing seal and signature of structural engineer licensed to practice in the State in which the Project is located, documenting compliance of exterior assemblies with wind pressure criteria.

E. Designer's Qualification Statement.

1.5 QUALITY ASSURANCE

A. Designer Qualifications: Design under direct supervision of a Professional Structyral Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until installation.

PART 2 PRODUCTS

2.1 ALL-GLASS ENTRANCES AND STOREFRONTS ASSEMBLIES

A. Entrances and Storefronts: Factory fabricated assemblies consisting of frameless glass panels fastened with metal structural fittings in configuration indicated on drawings.
    1. Operational Loads: Designed to withstand door operation under normal traffic without damage, racking, sagging, or deflection in excess of limits indicated.
        a. Deflection Limits: Deflection normal to glazing plane is limited to 1/175 of clear span or 3/4 inch, whichever is smaller.
    2. Prepared for all specified hardware whether specified in this section or not.
    3. Finished metal surfaces protected with strippable film.
    4. Factory assembled to greatest extent practicable; may be disassembled to accommodate shipping constraints.

B. Swinging Door Fittings and Hardware:
    1. Top and bottom pivots concealed in full width rails top and bottom.
    2. Overhead Closer Concealed in Frame: Single acting, with hold open.
    3. Push/pulls: Ladder pull with integrated deadbolt.
    4. Single Doors: Floor mounted door stop.

2.2 FITTINGS AND HARDWARE

A. Rail Style Fittings for Swinging Doors and Related Fixed Glazing:

Copyright © 2021 Bialosky + Partners Architects

1. Top and Bottom Rails: Height to match existing rails; with matching end caps.

B. Pivot Systems for Glass Swinging Doors:
   1. Pivots: Comply with BHMA A156.17.

C. Overhead Concealed Closers and Bottom Pivots for Glass Swinging Doors: Non-handed closer for both single and double-acting doors with mechanical backcheck, and meeting requirements of BHMA A156.4, Grade 1.
   1. Application: Center hung, with swing as indicated on drawings.
   2. Hold Open: Fixed.
   3. Opening Force: Comply with requirements of authorities having jurisdiction.
   4. Door Weight: Maximum 250 lbs for interior doors, including hardware.
   5. Closer Dimensions: Compact closer body designed to fit 1-3/4 inch by 4 inch or smaller header, with aluminum cover plate.
   6. Cover Plate Finish: Black painted; BHMA Code 693 [_____].
   7. Provide accessories as required for complete installation, including wall/floor stop.

D. Ladder Pulls for Glass Swinging Doors: Lockable with floor strike.
   1. Mounting: Vertical.
   2. Diameter: 1 inch.
   3. Length: 49 inch.
   4. Pull Material: Stainless steel.
   5. Finish: Black, satin.
   6. Door Thickness: As required to comply with performance requirements, but not less than 1/2 inch thick.
   7. Door Material: Glass.
   8. Provide accessories as required for complete installation.

2.3 BASIS OF DESIGN - FITTINGS AND HARDWARE

A. Rail Style Fittings for Swinging Doors and Related Fixed Glazing:
   1. Basis of Design: DORMA USA, Inc; DRS Rail System: www.dorma.com/#sle.
      a. Full Length Top Rails: square edge.
      b. Full Length Bottom Rails: tapered edge.
      c. Sidelite Rails: Match door rail sightlines.
      d. Aluminum Finish: Black anodized.
      e. Cladding Finish: Black anodized.

B. Head Rails for Interior Glass Doors and Transom Panels:
   1. Basis of Design: DORMA USA, Inc; RP Header System: www.dorma.com/#sle.

C. Closers for Glass Doors:
   1. Basis of Design: DORMA USA, Inc; RTS88 Concealed Overhead Closer: www.dorma.com/#sle.

D. Locking Ladder Pulls for Glass Doors:
   1. Basis of Design: DORMA USA, Inc; TG138 Locking Ladder Pull: www.dorma.com/#sle.

Copyright © 2021 Bialosky + Partners Architects

E. Glazing Accessories for Related Fixed Glazing:
   1. Basis of Design: DORMA USA, Inc; Dri-Fit Glazing System: www.dorma.com/#sle.

F. Other Manufacturers: Provide either the product identified as "Basis of Design" or an equivalent product of one of the manufacturers listed below:
   1. Avanti Systems USA, Inc: www.avantisystemsusa.com/#sle.
   2. Oldcastle BuildingEnvelope: https://obe.com.
   3. Trulite Glass & Aluminum Solutions, LLC: www.trulite.com/#sle.

G. Substitutions: See Section 01 6000 - Product Requirements.
   1. For any product not identified as "Basis of Design", submit information as specified for substitutions.

2.4 MATERIALS

A. Glass: Flat glass meeting requirements of ASTM C1036, Type I - Transparent Flat Glass, Quality Q3, and Kind FT, fully tempered, in accordance with ASTM C1048, and as follows:
   1. Thickness: As required to comply with performance requirements, but not less than 1/2 inch thick.
   2. Color: Class 1, Clear.
   3. Prepare glazing panels for indicated fittings and hardware before tempering.
   4. Polish edges that will be exposed in finished work to bright flat polish.
   5. Temper glass materials horizontally; visible tong marks or tong mark distortions are not permitted.

B. Type GF-1 - Decorative Plastic Film: Polyester type; translucent, dimensionally stable, with pressure-sensitive, clear adhesive back for adhering to glass and releasable protective backing.
   1. Application: Locations as indicated on drawings.
   2. Series Type: Custom pattern; digital data files to be supplied by Architect.
   3. Color: Custom.
   4. Thickness Without Liner: 0.002 inch.
   5. Manufacturers:
      a. 3M.
      b. Avery Dennison Graphics.
      c. Eastman Performance Films, LLC.
      d. FDC Graphic Films, Inc.
      e. Substitutions: See Section 01 6000 - Product Requirements.

C. Aluminum Components: Comply with ASTM B221 (ASTM B221M), Alloy 6063, Temper T5.

D. Stainless Steel Components: Comply with ASTM A666, Type 304.

E. Sealant: One-part silicone sealant, comply with ASTM C920, clear.

2.5 ACCESSORIES

A. Exposed Fittings and Hardware: Extruded aluminum, black anodized finish.

B. Sidelight Fittings:

Copyright © 2021 Bialosky + Partners Architects

1. Rails: Match profile, material, and finish of rails specified for doors. Include rails or rail coverings for existing all-glass entrance sidelights to remain.
2. Provide top and bottom installation track for sidelite installation.

C. Additional Door Hardware: Specified in Section 08 7100.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that openings are acceptable.

B. Do not begin installation until substrates and openings have been properly prepared.

3.2 PREPARATION

A. Clean substrates thoroughly prior to installation.

B. Prepare substrates using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Installation of miscellaneous steel framing for openings as specified in Section 05 5000.

B. Install in accordance with manufacturer's installation instructions.

C. Tolerances:

1. Horizontal Components and Sight Lines: Not more than 1/8 inch in 10 feet variation from level, non-cumulative.
2. Vertical Components and Sight Lines: Not more than 1/8 inch in 10 feet variation from plumb, non-cumulative.
3. Variation from Plane or Indicated Location: Not more than 1/16 inch.

D. Installation of door hardware not supplied by entrance/storefront manufacturer as specified in Section 08 7100.

3.4 ADJUSTING

A. Adjust doors to operate correctly, without binding to frame, sill, or adjacent doors.

B. Adjust door hardware for smooth operation.

3.5 CLEANING

A. Clean installed work to like-new condition.

3.6 PROTECTION

A. Protect installed products until Date of Substantial Completion.

Copyright © 2021 Bialosky + Partners Architects

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SUMMARY

A. Section includes commercial door hardware for the following:
   1. Swinging doors.
   2. Other doors to the extent indicated.

B. Products furnished but not installed under this section.
   1. Final replacement cores and keys: All final cores and keying to be provided by Contractor and Installed by Owner.

C. Related requirements:
   1. All related Contract Documents shall apply to this section including but not limited to:
      a. Requirements of Division 0 and Division 1 sections.
      b. Doors and Frames.
      c. Entrances, Storefronts, and Curtain Walls.
         1) Section 08 4226 All-Glass Entrances for hardware for all-glass entrances and storefronts not specified herein.

1.2 REFERENCES

A. Abbreviations and Acronyms:
   1. IC – Interchangeable (Lock) Core
   2. NRTL - Nationally Recognized Testing Laboratory (See OSHA Website)
   3. UL - Underwriter's Laboratories, Inc.

B. Definitions
   1. “Fail-Secure”: The lock requires power to be unlocked. Removing power from the lock results in it defaulting to the (secure) locked state.
   2. “Fail-Safe”: The lock requires power to be locked. Removing power from the lock results in it defaulting to the (safe) unlocked state. Maglocks and Magnetic Door Holders are Fail-Safe by nature of their operation.

C. Codes and Standards
   1. Comply with all applicable Codes including but not limited to:
      a. OBC - Ohio Building Code (Current Version)
      b. OFC - Ohio Fire Code (Current Version)
      c. NFPA 70 - National Electrical Code (Version as referenced by OBC)
      d. NFPA 72 - National Fire Alarm and Signaling Code (Version as referenced by OBC)
      e. NFPA 80 - Fire Doors and Other Opening Protectives (Version as referenced by OBC)
      f. OSHA - Occupational Safety and Health Administration
   2. Unless otherwise noted - perform all work in accordance with industry “Best Practices” and Standards such as those created by:
      a. ANSI - American National Standards Institute
      b. BHMA - Builders Hardware Manufacturers Association
      c. DHI - Door Hardware Institute
      d. HMMA – Hollow Metal Manufacturers Association

Copyright © 2021 Bialosky + Partners Architects

e. NFPA - National Fire Prevention Association
f. SDI – Steel Door Institute
g. WDMA - Window and Door Manufacturers Association

3. Contractors are encouraged to consult the publication “Intrusion Sensor Application Notebook” by GE Security for best-practices related to the installation of security Door Position Sensors.

D. Tri-C Documents
1. Fire Alarm / Mass Notification System - Design Assistance Manual
2. Physical Security Systems - Design Assistance Manual

E. Manufacturers Published Instructions.
1. Implementation and installation shall be in accordance with the Manufacturers published instructions.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Coordination - General
1. Coordinate with others as required by the Construction Manager or Owners Designee. See Section Execution/Interface with Other Work for additional requirements.

1.4 SUBMITTALS – ACTION / INFORMATIONAL

A. General
1. Provide Submittals in accordance with Conditions of Contract, Division 01 Specification Sections, and this section.
2. Provide all Submittals at the earliest possible date particularly where acceptance of the submittal must precede other work.
3. Samples: Upon request, samples of each type of hardware with options and finish indicated shall be submitted. Items will be returned to the supplier.
4. Certificates: Upon request, provide evidence that required door hardware is listed and labeled by a Nationally Recognized Testing Laboratory (NRTL) for its intended use.
5. Clearly delineate door hardware scope vs scope provided by others.

B. Product Data / Shop Drawings
1. Include manufacturer’s technical product data for each item of door hardware, product cut sheets, installation instructions, maintenance of operation parts and finish and other information necessary to show compliance with requirements.
2. Include installation details, material descriptions, dimensions of individual components and profiles, door fabrication templates, and finishes.
3. Include specific manufacturer’s literature, exploded parts views, etc., for each type of door hardware to include in the operations and maintenance manuals.
4. Electrical Hardware: Provide factory wiring diagrams, project specific interconnection diagrams, and jumper settings for all electrical hardware. Coordinate with Security System Provider to assist in the creation of a single, cohesive, installation diagram.

C. Final Door Hardware Schedule
1. General

Copyright © 2021 Bialosky + Partners Architects

a. The Door Hardware Schedule shall be prepared by a Certified AHC (Architectural Hardware Consultant.)
b. Provide final hardware schedule coordinated with doors, frames and related work to ensure proper size, thickness, hand, function and finish of door hardware.
c. Include all pertinent information essential for a coordinated review of the Door Hardware Schedule.

2. Format
   a. Schedule shall be formatted as recommended by the Door Hardware Institute (DHI.)
      1) Organize schedule into "hardware sets" indicating complete designations of every item required for each door or opening. Include the following information for each group:
         (a) Explanation of all abbreviations, symbols and codes contained in schedule. Include a list of manufacturers codes
         (b) Door number and location - use the same scheduling sequence, door / room numbers, etc., as found in the Contract Documents
         (c) Door and frame type, size, material, and swing
         (d) Description of item (i.e. Hinges, Lock, etc.) Manufacturer Name, Series Model Number and Detailed Part Number of each item. Include type, style, function, size, label, hand and finish of each item
         (e) Quantities of each item
         (f) Mounting locations, fastenings and other pertinent information
         (g) For electrical locks indicate continuous duty and the failure condition (Fail-Safe, Fail-Secure)

D. Keying Schedule / Plan
   1. The hardware Supplier shall prepare and submit a Keying Schedule / Plan for approval. The schedule / plan shall detail the College's final keying requirements for locks. Include schematic keying diagram and index each key set to unique door designations.
   2. The Keying Schedule / Plan shall be developed in coordination with the College. Required coordination meetings / keying conferences shall be scheduled by the hardware supplier.

1.5 SUBMITTALS - CLOSEOUT

A. Warranty Documentation
   1. Provide warranty information as required by Conditions of Contract and Division 01 Specification sections and this section.

1.6 MAINTENANCE MATERIALS AND TOOLS

A. Spare Parts / Extra Stock Materials
   1. Furnish extra materials, identical to the installed products, packaged with protective covering for storage and identified with labels describing contents.
   2. For each category listed provide spares for each different type / model of hardware installed.
      a. Where the calculation for percentages would result in a number less than one – provide one device.
   3. Provide spare hardware as follows:
      a. Keys / Cores
         1) Cores: 5% of the number of devices installed on the project.

B. Tools

Copyright © 2021 Bialosky + Partners Architects

1. Furnish 2 complete sets of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance and removal and replacement of door hardware.

1.7 ACCESSIBILITY REQUIREMENTS

A. Where hardware is identified as requiring compliance with accessibility standards, comply with Chapter 11 of the Ohio Building Code.

B. Operable parts of such hardware shall be 38 inches minimum and 42 inches maximum above the floor. Handles, pulls, latches, locks, and other operable parts shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate.

1.8 QUALITY ASSURANCE

A. General
   1. All hardware shall be ANSI Grade 1 unless otherwise noted.
   2. For locksets, exit devices, and closers provide documentation upon which demonstrates that the device was independently tested and is capable of exceeding the applicable ANSI standard for cycle testing.
   3. Requirements and specifications for performance, design, grade, function, finish, size and other distinctive characteristics are defined by specific requirements of this document and by the quality and characteristics of the Approved Products.

B. Methodology
   1. Meeting the minimum requirements of Code shall take precedence over all requirements.
   2. Provide the more stringent requirement of an applicable reference where it does not cause conflicts with code, quality, or the operation of the door. e.g. the manufacturer does not specifically require reinforcement for a particular piece of hardware, but the SDI standard does. The reinforcement should be provided.
   3. Specific requirements are listed throughout this specification for reference and to convey design intent. These requirements are not intended to be interpreted as being the entirety of the code or design requirements, The Contractor and Supplier shall provide all materials, listed or unlisted, to meet the design intent and comply with the requirements of Code. Where a section of this Specification lists a specific Standard it is not intended to indicate that it is the only Standard which applies to the associated work.

C. Approved Products
   1. The Approved Products are indicated in Part 2.
   2. Substitution Limitations
      a. Substitution requests shall be in accordance with the general provision sections. Refer to Instructions to Bidders for additional requirements. Incomplete substitution requests shall be returned as rejected /not approved.
      b. Data to be included shall be the following:
         1) Number of years' the proposed substitution has been produced
         2) List of ten (10) installations of similar scope to the work herein, where proposed product was used, including name, location, and date of installation
         3) Full description of proposed system for consideration as an approved substitution

Copyright © 2021 Bialosky + Partners Architects

4) Include in the substitution submittal a side by side comparison of the basis of specification and the proposed substitution that illustrates, but is not limited to, tested cycles, grades, finishes, options, warranty, references and manufacturing locations.

D. Suppliers

1. A recognized architectural door hardware supplier that has a record of successful in-service performance for supplying door hardware similar in quality, type and quality to that indicated for this Project.
2. Supplier employs an experienced Architectural Hardware Consultant (with a continuing education updated seal) who is available for consultation to the College, College's Representative, Architect, Engineer, Construction Manager and Contractor, at reasonable times during the course of the Work.

E. Installers

1. Contractor shall have a minimum of 5 years' experience in projects of similar size and scope.
2. The Contractor shall provide the names and locations of at least three projects, of similar size and scope, within the last 3 years, where devices have performed satisfactorily, in the manner intended, for a period of not less than 18 months. Submit names and phone numbers of points of contact at each site.

1.9 DELIVERY, STORAGE, AND HANDLING

A. General

1. Legibly mark and label each package, indicating item and location for which it is intended. Each marking shall correspond to the number shown on the approved hardware schedule. Each package shall contain all the required screws, bolts and fasteners necessary for installation of each hardware item.
2. Packaging of door hardware is responsibility of the Supplier. As material is received by hardware supplier from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set number to match set numbers of approved hardware schedule. Two or more identical sets may be packed in same container. Include basic installation instructions with each item or package.
3. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
4. Deliver individually packaged door hardware items promptly to place of installation (shop or Project site).
5. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.
6. Inventory hardware jointly at the jobsite with the representative of the hardware supplier and hardware installer until each is satisfied that the count is correct.

B. Permanent keys and cores

1. The Contractor shall furnish but not directly receive any permanent keys, cores, or control keys. The Contractor / Supplier shall coordinate with the College and Manufacturer so that

Copyright © 2021 Bialosky + Partners Architects

keys and cores are shipped directly to the College's Facility Manager responsible for that campus.

2. The Manufacturer shall place each core and / or set of keys into an envelope and label same with door numbers for rooms or areas. Mark boxes of keys with project name and location.

1.10 FIELD CONDITIONS

A. Existing Conditions

1. Where new hardware components are scheduled for application to existing construction or where modifications are required to reuse existing door hardware, field verify the existing conditions and coordinate the installation to suit.

1.11 WARRANTY

A. General

1. Furnish a written guarantee which shall cover the periods stated below from and after the after final acceptance by the Owner.
2. For a period of one (1) year any hardware failing to comply with warranty shall be removed and replaced with new material including labor at no cost to Owner. After 1 year the remaining Manufacturer's published warranty shall apply.

PART 2 PRODUCTS

2.1 GENERAL

A. Provide new door hardware for each door to comply with requirements in this Section, the Door Hardware Schedule at the end of this section, and required to meet the operational sequence as specified herein and/or other Contract Documents.

B. Where an opening requires hardware, which is not specifically listed in this Specification, the Contractor shall provide appropriate hardware of similar quality and rating in coordination with Architect / Owner.

C. Durability: Provide hardware that meets the following standards for durability. The Approved Products List identifies certain products for use where heavy duty hardware is required.

1. Standard duty hardware shall be used in all locations except where otherwise noted.
2. Heavy duty hardware shall be provided where indicated on the door hardware schedule / matrix and in the following locations:
   a. All exterior doors.
   b. Main entrances to large office areas/suites.
   c. Cross corridor doors.
   d. Central storage rooms.
   e. Public restroom doors.
   f. Stairwell doors.

D. Hardware finishes

1. Standards

Copyright © 2021 Bialosky + Partners Architects

a. ANSI/BHMA A156.18

2. General
   a. Base metal and finish shall comply with ANSI/BHMA A156.18. Where manufacturer does not list ANSI/BHMA numbers provide finish with equivalent appearance and base material.
   b. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
   c. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved samples and are assembled or installed to minimize contrast.
3. Environmental Compatibility
   a. In all cases provide appropriate hardware which is resistant to corrosion or other damage from the anticipated environmental conditions it is to be installed in.
   b. Provide anti-microbial coatings for doors as shown on hardware schedule.

FINISHES		
BHMA #	DESCRIPTION	WHERE REQUIRED
626	Satin Chromium Plated on brass base metal	Locksets, Bolts
628	Satin aluminum, clear, anodized finish on aluminum base metal.	Continuous Hinges
630	Satin stainless-steel finish on 300 series stainless steel base metal.	Exit Devices, Conventional hinges for exterior doors, exterior wall and floor stops.
652	Satin chromium plated finish on steel base metal.	Conventional Hinges for most interior locations
689	Aluminum Painted	Closers, Overhead Holders and Stops

2.2 HINGES

A. Approved Products
   1. See Appendix A, Table A.1 for acceptable products.

B. General
   1. Template Requirements
      a. Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
   2. Where required to clear adjacent casing, trim, and wall conditions and allow full door swing, provide wide throw (swing clear) hinges of minimum width required.

C. Conventional Hinges
   1. Standards
      a. BHMA A156.1 - Butts and Hinges
      b. BHMA A156.7 - Template Hinge Dimensions
   2. General

Copyright © 2021 Bialosky + Partners Architects

a. Provide fully mortised hinges whenever possible.
b. Conventional hinges shall be Five (5) knuckle, ball bearing, swaged hinges.

3. Quantity - Provide the following, unless otherwise indicated:

NUMBER OF CONVENTIONAL HINGES	
DOOR HEIGHT	QUANTITY
UP to 60"	2
61" to 90"	3
91"-120"	4
121"-150"	5

4. Size
   a. Hinge size, height, width, and thickness shall be as recommended by the Manufacturer for the specific opening.
5. Hinge Pins
   a. Provide matching non-rising loose pins for in-swinging doors and doors without locks.
6. Approved Products
   a. McKinney; Model MPB99.
   b. Ives; Model 5BB1HW.
   c. Hager; Model BB1168.
   d. Stanley; Model FBB168.

2.3 LOCK CYLINDERS AND KEYING

A. Temporary Cores
   1. All locks shall be provided with construction cores for use prior to installation of permanent cores.
   2. Construction keys shall be tagged and plainly marked on face of envelope with the key change number, door designation and all other required information. Coordinate requirements for tagging / marking with College.

B. Permanent Cores and Keys
   1. Lock cylinders and keys shall be an extension of the existing Best, 7 pin key system using (SFIC) Small Format Interchangeable Cores.
   2. All keys shall be nickel silver, Best, with the bow stamped with the key code and with “State of Ohio 3345.13 prohibits duplication.”
   3. Package Marking: Each hardware package shall be legibly labeled with the set number and indicate the door for which it is intended, or, hardware sets shall be packaged and marked with the door for which they are intended.

C. Quantity
   1. For pricing purposes provide 3 keys per cylinder, 6 master keys for each set, and 6 grand master keys. Actual key counts per opening will be verified during keying conference.

2.4 LOCKS AND LATCHES

A. Approved Products
   1. Corbin Russwin ML2000 NSB.

Copyright © 2021 Bialosky + Partners Architects

2. Schlage L9000 06A.
3. Best 45H 15H.
4. Sargent 8200 LNL.

B. Standards
1. ICC/ANSI A 117.1 - Accessible and Usable Buildings and Facilities, Section 404 Doors and Doorways
2. ANSI/BHMA A156.2 - Bored and Preassembled Locks and Latches
3. ANSI/BHMA A156.12 - Interconnected Locks & Latches
4. ANSI/SDI A250.8 – Recommended Specifications for Standard Steel Doors and Frames

C. General Requirements
1. Unless otherwise noted, all locksets shall be of the same manufacturer.
2. Provide devices with all applicable trim, roses, escutcheons, and other customary hardware.
3. Trim: Provide “J-Style” lever handles on all locks. Handles shall be fabricated from cast stainless steel.
4. Backset: Backset shall be 2-3/4 inches (70 mm), unless otherwise indicated.
5. Cylinders: Locks shall incorporate cylinders and tailpieces listed by Manufacturer as fully compatible with the College’s standard core.

D. Strikes
1. Unless specified to be electrified, provide manufacturer’s standard recommended strike, with strike box, for each latch or lock bolt.
2. Unless the Manufacturer recommends otherwise the Strike shall:
   a. Have a curved lip extended to protect frame.
   b. Have a finish which matches the door hardware.
3. Other configurations when required by Manufacturer or field conditions:
   a. Flat-Lip Strikes: For locks with three-piece antifriction latch bolts, as recommended by manufacturer.
   b. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.

E. Lock Functions
1. Coordinate lock functions with Owner.

F. Mortise Locksets
1. Standards
   a. ANSI/BHMA A156.13 - Mortise Locks & Latches.
2. General
   a. Trim
      1) Provide escutcheon for key-side of door.
   b. Devices shall be capable of being field configured for handing and / or one of several ANSI Functions.
   c. Where mortise locks are installed in high-humidity locations or where exposed to the exterior provide non-ferrous mortise lock case on both sides of the opening.
3. Classroom Security Locks
   a. The Classroom Security Lock (currently no assigned ANSI/BHMA Function Number) shall function similarly to the ANSI F05 Classroom Lock but shall also include (future) capability for locking / unlocking the door via an additional lock cylinder on the inside

Copyright © 2021 Bialosky + Partners Architects

of the room. Egress shall be via the inside lever and shall not be inhibited by the inside cylinder in any manner.

b. Include a College Standard cylinder for the key-side and a dummy (blank) mortise cylinder for the inside.

2.5 AUXILIARY LOCKS (DEAD LOCKS)

A. Standards
   1. ANSI/BHMA A156.36 - Auxiliary Locks

B. General
   1. Provide auxiliary locks as indicated in Specifications and on Drawings.

C. Approved Models:
   1. Bored Auxiliary locks shall be of the same manufacturer as the lockset.

2.6 DOOR CLOSERS

A. Approved Products
   1. LCN 4041 Series.
   2. Norton 7500 Series.
   3. Sargent 351 Series.

B. Standards
   1. ANSI/BHMA A156.4 (2013) Door Controls - Closers
   2. Where closers are indicated for doors required to be Accessible - provide adjustable units complying with ANSI A117.1 for door opening force and delayed action closing.

C. General
   1. Provide surface mounted door closers on all exterior exits, public corridor doors, doors specified with security devices, and elsewhere as indicated in the hardware schedule and/or as shown on the drawings.
   2. All closers shall be mounted out of the view of the public wherever possible. Unless specifically indicated otherwise, mount closers on non-public side of door, (inside of room, not in hallways).
   3. Coordinate the installation of closers with doors specified to receive hold open devices.
   4. Where closers are specified for door pairs, provide bar type coordinators to allow for the proper operation of both doors.
   5. Provide drop plates and accessories as required for the closers to work with doors with lites.

D. Size
   1. Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of closer depending on size of door, exposure to weather and anticipated frequency of use.
   2. Where parallel arms are used for closers, provide closer unit one size larger than recommended for use with standard arms.

E. Arms

Copyright © 2021 Bialosky + Partners Architects

1. Heavy duty arms shall be forged, rigid, of suitable type and handing required and/or recommended by the manufacturer.

2.7 TRIM

A. Approved Manufacturers
   1. Rockwood.
   2. Ives.
   3. Hager.

B. Door Protection
   1. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine screws or self-tapping screws.
   2. Fabricate edge trim of stainless steel to fit door thickness in standard lengths or to match height of protection plates.
   3. Fabricate kick plates not more than 2 inches less than door width on the push side by 8" tall.
   4. Metal Plates: Stainless steel, .050 (U.S. 16 gauge.)

C. Silencers
   1. Provide neoprene or rubber silencers for all doors. Silencers shall be fabricated for drilled-in application to frame.

2.8 FASTENERS

A. General
   1. Provide door hardware manufactured to comply with published templates generally prepared for machine, wood and sheet metal screws.
   2. Provide Phillips flat head screws with finished heads to match surface of door hardware, unless otherwise indicated.
   3. Provide screws according to commercially recognized industry standards for application intended. Exception - aluminum fasteners are not acceptable unless specifically approved by the A/E on a case by case basis.
   4. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.
   5. For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow metal door and frame construction, provide sleeves for each through bolt.
   6. Fasteners for Wood Doors: Comply with requirements of DHI WDHS.2 "Recommended Fasteners for Wood Doors."

B. Strike Plates: Steel Machine or Wood Screws

C. Closers: Steel Machine or Wood Screws

D. Hinges
   1. Philips head screws shall be used and shall be flush and even with the surface of the hinge.

Copyright © 2021 Bialosky + Partners Architects

2. For wood doors and frames - wood screws shall be used. For fire-rated wood doors – “threaded-to-the-head” wood screws shall be used.
3. For metal doors and frames, install machine screws into drilled and tapped holes.

2.9 ASSEMBLY [OR] FABRICATION

A. Manufacturer’s nameplate: Do not provide manufacturer’s products that have manufacturer’s name or trade name displayed in a visible location, when the door is in the closed position, except in conjunction with required fire rated labels and as otherwise approved by the Architect.

PART 3 EXECUTION

3.1 PREPARATION

A. Standards
1. Door preparation: Manufacturers recommendations, ANSI/SDI A250.8.

B. General
1. Ensure that doors and frames are prepared for devices prior to delivery.
2. Check shop drawings of other work and coordinate with Div. 28 Contractor to confirm that adequate provisions are made for locating and installing door security hardware, signs, and other hardware to comply with indicated requirements.
3. Coordinate with door and frame manufacturer/supplier and provide descriptions/details of preparations required for frames to accept hardware.
4. Ensure there is a sufficient cavity or box for wiring connections.
5. Reinforcement for all hardware for metal doors and frames shall be installed at the factory and be made to template and furnished with machine screws. The face of locks shall be beveled to match the bevel edge of metal doors.
6. Ensure mounting holes, mounting assemblies, and wire pathways are provided. Unless in conflict with Manufacturer’s or Testing Laboratory requirements provide the following:
   a. For doors with electrified handsets or panic hardware provide a minimum 3/8” pathway hole from the transfer device to the lock hardware
   b. In wooden doors, at each end of the pathway hole, provide a larger hole ¾” – 1” deep to accommodate wire splices
   c. For doors / frames with Door Position Switches (DPS) provide holes, mounting assemblies (top of door as needed), and wire pathways. The security drawings show which doors will have a DPS. The security typical drawings show the location in the frame where contacts should be mounted. Confirm DPS model and size with Security System provider. Provide mounting locations in accordance with the “Intrusion Sensor Application Notebook”

3.2 INTERFACE WITH OTHER WORK

A. Coordinate installation with all trades, millwork, finish hardware, door frames and electrical.

B. Templates

Copyright © 2021 Bialosky + Partners Architects

1. Obtain and distribute templates for doors, frames and other work specified to be factory prepared for installing door hardware.
2. For all doors supply hardware templates with machine screws where available and paper templates for all others.

3.3 PERMANENT CORES

A. The College shall install all permanent keys and cores.

3.4 ADJUSTMENTS

A. Opening Force: Adjust all hardware per manufacturer's instructions and to meet OBC requirements and where applicable, ADA requirements.

B. Overhead Holders: Set overhead holders for 110 degrees opening, unless limited by building construction or equipment.

C. Closers: Adjust per manufacturer's instructions ensuring backcheck starts at approximately 70 degrees.

3.5 HARDWARE SCHEDULE

A. SET 1: (1) Lock cylinder. (1) Maglock at head of door. Key card access control by others. Rest of hardware provided by all-glass entrance supplier.

B. SET 2: (4) Hinges, (1) ANSI 07 passage function lockset and (1) closer.

C. SET 3: (7) Hinges, (1) Electric Hinge, Inactive Door, (1) set flush bolts, (1) lockset, (1) electric strike, (2) closer, (2) protection plate, (1) adhesive seal, (1) saddle threshold, (3) gasketing. Key card access control by others

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Metal stud wall framing.

B. Acoustic insulation.

C. Gypsum wallboard.

D. Joint treatment and accessories.

1.2 REFERENCE STANDARDS

A. AISI S100-12 - North American Specification for the Design of Cold-Formed Steel Structural Members 2012.

B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.

C. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board 2017.

D. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members 2018.

E. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing 2017.

F. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products 2020.

G. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board 2019b.

H. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness 2018.

I. ASTM C1047 - Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base 2019.

J. ASTM C1396/C1396M - Standard Specification for Gypsum Board 2017.

K. GA-216 - Application and Finishing of Gypsum Panel Products 2016.

1.3 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

Copyright © 2021 Bialosky + Partners Architects

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.
   1. See PART 3 for finishing requirements.

2.2 METAL FRAMING MATERIALS

A. Non-structural Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf.
   1. Studs: C-shaped with knurled or embossed faces.
   2. Runners: U shaped, sized to match studs.

B. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using slotted holes, screws, and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition.
   1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100-12.
   2. Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot-dipped galvanized coating.

2.3 BOARD MATERIALS

A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Use for vertical surfaces, unless otherwise indicated.
   2. Thickness:
      a. Vertical Surfaces: 5/8 inch.

2.4 GYPSUM WALLBOARD ACCESSORIES

A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced. Thickness: 3 inch.

B. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
   1. Types: As detailed or required for finished appearance.

C. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.

D. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws, corrosion-resistant.

E. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.

Copyright © 2021 Bialosky + Partners Architects

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.2 FRAMING INSTALLATION

A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.

B. Studs: Space studs at 16 inches on center.
   1. Extend partition framing to structure where indicated and to ceiling in other locations.
   2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
   3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.

3.3 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

3.4 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.
   1. Exception: Tapered edges to receive joint treatment at right angles to framing.

3.5 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.
   1. Not more than 30 feet apart on walls over 50 feet long.

B. Corner Beads: Install at external corners, using longest practical lengths.

3.6 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.
   2. Level 1: Wall areas above finished ceilings, whether or not accessible in the completed construction.

Copyright © 2021 Bialosky + Partners Architects

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch.

3.7 TOLERANCES

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Suspended metal grid ceiling system.

B. Acoustical units.

1.2 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.

B. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings 2017.

C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels 2013.

D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products 2019.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.

B. Do not install acoustical units until after interior wet work is dry.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on suspension system components and acoustical units.

1.5 FIELD CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

PART 2 PRODUCTS

2.1 ACOUSTICAL UNITS

A. Acoustical Panels, Type ACT-1: Mineral fiber with membrane-faced overlay, with the following characteristics:

1. Classification: ASTM E1264 Type IV.

Copyright © 2021 Bialosky + Partners Architects

a. Form: 1 and 2.
b. Pattern: E, G.

2. Size: As indicated in Finish Selections schedule on drawings.
3. Thickness: 3/4 inch.
4. Light Reflectance: 90 percent, determined in accordance with ASTM E1264.
5. NRC Range: 0.70 to 0.80, determined in accordance with ASTM E1264.
6. Ceiling Attenuation Class (CAC): 35, determined in accordance with ASTM E1264.
7. Panel Edge and Color: As indicated.
8. Suspension System: Exposed grid; product indicated in Finish Selections schedule on drawings.
9. Products:
   a. Basis of Design - USG Corporation: www.usg.com/ceilings/#sle.
   b. Armstrong World Industries, Inc.
   c. CertainTeed Corporation.
   d. Substitutions: See Section 01 6000 - Product Requirements.

B. Acoustical Panels, Type ACT-2: Gypsum, with the following characteristics:
1. Classification: ASTM E1264 Type XX.
   a. Pattern: "G" - smooth.
2. Size: As indicated in Finish Selections schedule on drawings.
3. Thickness: 1/2 inches.
4. Light Reflectance: 77 percent, determined in accordance with ASTM E1264.
5. Ceiling Attenuation Class (CAC): 40, determined in accordance with ASTM E1264.
6. Panel Edge and Color: As indicated.
7. Suspension System: Exposed grid; product indicated in Finish Selections schedule on drawings.
8. Products:
   a. Basis of Design - USG Corporation: www.usg.com/ceilings/#sle.
   b. Armstrong World Industries, Inc.
   c. CertainTeed Corporation.
   d. Substitutions: See Section 01 6000 - Product Requirements.

2.2 SUSPENSION SYSTEM(S)

A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, clips, and splices as required.
1. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
2. Materials:
   a. Steel Grid: ASTM A653/A653M, G30 coating, unless otherwise indicated.
   b. Finish: Baked enamel.
3. Profile(s): Tee; face width as indicated in Finish Selection s schedule on drawings.

Copyright © 2021 Bialosky + Partners Architects

2.3 ACCESSORIES

A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

B. Hanger Wire: 12 gauge, 0.08 inch galvanized steel wire.

C. Perimeter Moldings: Same metal and finish as grid.
   1. Angle Molding: L-shaped, for mounting at same elevation as face of grid.

D. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

3.2 PREPARATION

A. Install after major above-ceiling work is complete.

B. Coordinate the location of hangers with other work.

C. Provide hanger clips during steel deck erection. Provide additional hangers and inserts as required.

3.3 INSTALLATION - SUSPENSION SYSTEM

A. Install suspension system in accordance with ASTM C636/C636M and manufacturer's instructions and as supplemented in this section.

B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

C. Locate system on room axis according to reflected plan.

D. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
   1. Use longest practical lengths.

E. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

Copyright © 2021 Bialosky + Partners Architects

H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

I. Do not eccentrically load system or induce rotation of runners.

3.4 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Fit border trim neatly against abutting surfaces.

D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

E. Cutting Acoustical Units:
   1. Make field cut edges of same profile as factory edges.

F. Where round obstructions occur, provide preformed closures to match perimeter molding.

G. Install hold-down clips on panels within 20 ft of an exterior door.

3.5 TOLERANCES

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Resilient tile flooring.

B. Resilient base.

C. Installation accessories.

1.2 REFERENCE STANDARDS

A. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source 2019a, with Editorial Revision (2020).

B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring 2019, with Editorial Revision (2020).

C. ASTM F1700 - Standard Specification for Solid Vinyl Floor Tile 2020.

D. ASTM F1861 - Standard Specification for Resilient Wall Base 2016.

E. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride 2016a.

F. ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes 2019a.

G. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source 2019.

1.3 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

C. Shop Drawings: Indicate floor patterns.

D. Verification Samples: Submit two samples, full size illustrating color and pattern for each resilient flooring product specified.

E. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.

F. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

1. See Section 01 6000 - Product Requirements, for additional provisions.
2. Extra Flooring Material: 10 square feet of each type and color.
3. Extra Wall Base: 10 linear feet of each type and color.

Copyright © 2021 Bialosky + Partners Architects

1.4 QUALITY ASSURANCE

A. Testing Agency Qualifications: Independent firm specializing in performing concrete slab moisture testing and inspections of the type specified in this section.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store all materials off of the floor in an acclimatized, weather-tight space.

B. Maintain temperature in storage area between 55 degrees F and 90 degrees F.

1.6 FIELD CONDITIONS

A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

PART 2 PRODUCTS

2.1 TILE FLOORING

A. Vinyl Tile - Type RES-1, RES-2: Printed film type, with transparent or translucent wear layer.
   1. Manufacturers:
      a. Basis of Design - Interface, Inc.
   2. Minimum Requirements: Comply with ASTM F1700, Class III.
   3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
   4. Plank Tile Size: As indicated.
   5. Wear Layer Thickness: 0.022 inch.
   6. Total Thickness: 0.180 inch.
   7. Product, Pattern, and Color: As indicated on drawings.

2.2 RESILIENT BASE

A. Resilient Base - Type WB-1: ASTM F1861, Type TP, rubber, thermoplastic; style as scheduled.
   1. Manufacturers:
      a. Basis of Design - Johnsonite, a Tarkett Company: www.johnsonite.com/#sle.
      b. Burke Flooring: www.burkeflooring.com/#sle.
      c. Roppe Corp: www.roppe.com/#sle.
      d. Substitutions: See Section 01 6000 - Product Requirements.
   2. Height: 4 inch.
   3. Thickness: 0.125 inch.
   4. Finish: Satin.
   5. Length: Roll.
   6. Color: As indicated on drawings.

Copyright © 2021 Bialosky + Partners Architects

2.3 ACCESSORIES

A. Primers, Adhesives, and Subfloor Filler: Waterproof; types recommended by flooring manufacturer.

B. Moldings, Transition and Edge Strips: Same material as flooring.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).

1. Test as Follows:
   a. Alkalinity (pH): ASTM F710.
   b. Internal Relative Humidity: ASTM F2170.
   c. Moisture Vapor Emission: ASTM F1869.
2. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

D. Verify that required floor-mounted utilities are in correct location.

3.2 PREPARATION

A. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

B. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.

C. Prohibit traffic until filler is fully cured.

D. Clean substrate.

3.3 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's written instructions.

C. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.

D. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.

1. Resilient Strips: Attach to substrate using adhesive.

Copyright © 2021 Bialosky + Partners Architects

E. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

F. Install flooring in recessed floor access covers, maintaining floor pattern.

3.4 INSTALLATION - TILE FLOORING

A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

B. Install plank tile to ashlar pattern with offset of at least 6 inches from adjacent rows. Allow minimum 1/2 full size tile width at room or area perimeter.

3.5 INSTALLATION - RESILIENT BASE

A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.

B. Install base on solid backing. Bond tightly to wall and floor surfaces.

C. Scribe and fit to door frames and other interruptions.

3.6 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean in accordance with manufacturer's written instructions.

3.7 PROTECTION

A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Wall covering.

1.2 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2020.

B. ASTM F793/F793M - Standard Classification of Wall Coverings by Use Characteristics 2015.

1.3 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate custom graphics, wall elevations, and seaming layout.

C. Samples: Submit two samples of wall covering, 24 by 24 inch in size illustrating color, finish, and texture.

D. Maintenance Data: Submit data on cleaning, touch-up, and repair of covered surfaces.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Inspect roll materials at arrival on site, to verify acceptability.

B. Protect packaged adhesive from temperature cycling and cold temperatures.

C. Do not store roll goods on end.

1.5 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the adhesive or wall covering product manufacturer.

B. Maintain these conditions 24 hours before, during, and after installation of adhesive and wall covering.

C. Provide lighting level of 80 ft candles measured mid-height at substrate surfaces.

PART 2 PRODUCTS

2.1 WALL COVERINGS

A. General Requirements:

1. Surface Burning Characteristics: Flame spread/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84.

Copyright © 2021 Bialosky + Partners Architects

B. Wall Covering - Type WG-1: Fabric-backed vinyl roll stock.
   1. Comply with ASTM F793/F793M, Category V, Type II.
   2. Color and Pattern: Custom design; digital data file to be provided by Architect.
   3. Overcoating: Manufacturer's standard coating for stain resistance.
   4. Manufacturers:
      a. MDC Wallcoverings: www.mdcwall.com/#sle.
      b. Surface Materials, Inc.
      c. Wolf-Gordon: www.wolfgordon.com/#sle.
      d. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that substrate surfaces are prime painted and ready to receive work, and comply with requirements of wall covering manufacturer.

3.2 PREPARATION

A. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

3.3 INSTALLATION

A. Apply adhesive and wall covering in accordance with manufacturer's instructions.

B. Apply adhesive to wall surface immediately prior to application of wall covering.

C. Apply wall covering smooth, without wrinkles, gaps or overlaps. Eliminate air pockets and ensure full bond to substrate surface.

D. Butt edges tightly.

E. Remove excess adhesive while wet from seam before proceeding to next wall covering sheet. Wipe clean with dry cloth.

3.4 CLEANING

A. Clean wall coverings of excess adhesive, dust, dirt, and other contaminants.

B. Reinstall wall plates and accessories removed prior to work of this section.

3.5 PROTECTION

A. Do not permit construction activities at or near finished wall covering areas.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.

1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
2. Prime surfaces to receive wall coverings.
3. Mechanical and Electrical:
   a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, electrical equipment, and factory-finished electrical panelboard covers, unless otherwise indicated.
   b. In finished areas, paint shop-primed items.
   c. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.

D. Do Not Paint or Finish the Following Items:

1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
2. Items indicated to receive other finishes.
3. Items indicated to remain unfinished.
4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
5. Stainless steel, anodized aluminum, bronze, terne coated stainless steel, and lead items.
6. Marble, granite, slate, and other natural stones.
7. Floors, unless specifically indicated.
8. Ceramic and other tiles.
9. Brick, architectural concrete, cast stone, integrally colored plaster and stucco.
10. Glass.
11. Acoustical materials, unless specifically indicated.
12. Concealed pipes, ducts, and conduits.

1.2 RELATED REQUIREMENTS

A. Section 09 9113 - Exterior Painting.

1.3 REFERENCE STANDARDS

A. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials 2020.

Copyright © 2021 Bialosky + Partners Architects

B. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual Current Edition.

C. SSPC-SP 1 - Solvent Cleaning 2015, with Editorial Revision (2016).

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of products to be used, with the following information for each:
   1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
   2. Cross-reference to specified paint system(s) product is to be used in; include description of each system.

C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches in size, illustrating range of colors available for each finishing product specified.
   1. Where sheen is specified, submit samples in only that sheen.
   2. Allow 30 days for approval process, after receipt of complete samples by Architect.
   3. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as masonry, have been approved.

D. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. See Section 01 6000 - Product Requirements, for additional provisions.
   2. Extra Paint and Finish Materials: 1 gallon of each color; from the same product run, store where directed.
   3. Label each container with color in addition to the manufacturer's label.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.6 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

Copyright © 2021 Bialosky + Partners Architects

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply materials when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.

D. Minimum Application Temperatures for Paints: 50 degrees F for interiors unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

B. Paints:
   1. Basis of Design Manufacturer - Sherwin-Williams Company.
   2. Other Acceptable Manufacturers:
      a. Benjamin Moore & Co.
      b. PPG Architectural Coatings.

C. Substitutions: See Section 01 6000 - Product Requirements.

2.2 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
   1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
   3. Supply each paint material in quantity required to complete entire project's work from a single production run.
   4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

C. Colors; PT and PT-E: As indicated in Finish Selections schedule on drawings.
   1. Extend colors to surface edges; colors may change at any edge as directed by Architect.
   2. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under.

Copyright © 2021 Bialosky + Partners Architects

2.3 PAINT SYSTEMS - INTERIOR

A. Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board and concrete masonry units.
   1. Two top coats and one coat primer.
   2. (PT-E) Top Coat(s): High Performance Architectural Interior Latex; Epoxy paint for vertical surfaces in public toilet rooms, janitor closets, and where indicated on drawings.
      a. Products:
         1) Sherwin-Williams Pre-Catalyzed Waterbased Epoxy, Eg-Shel.
   3. (PT) Top Coat(s): Interior Latex; Typical interior paint for vertical and overhead surfaces.
      a. Products:
         1) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Flat.
         2) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Eg-Shel.
   4. Top Coat Sheen:
      a. Flat: MPI gloss level 1; use this sheen for ceilings and other overhead surfaces.
      b. Eggshell: MPI gloss level 3; use this sheen for walls and partitions.
   5. Primer: As specified under "PRIMERS" below.

B. Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals and wood:
   1. Medium duty applications include doors, door frames, railings, and trim.
   2. Two top coats and one coat primer.
   3. (PT) Top Coat(s): Interior Light Industrial Coating, Water Based.
      a. Products:
         1) Sherwin-Williams Pro Industrial Acrylic B66-650 Series, Semi-Gloss.
   4. Top Coat Sheen:
      a. Semi-Gloss: MPI gloss level 5; use this sheen at all locations.
   5. Primer: As specified under "PRIMERS" below.
   6. One coat.

2.4 PRIMERS

A. Primers: Provide the following unless other primer is required or recommended by manufacturer of top coats.
   1. Gypsum Board: Sherwin-Williams ProMar 200 Zero VOC Latex Primer, B28W2600.
   2. Concrete (Non-Traffic Surfaces): Sherwin-Williams; Loxon Concrete and Masonry Primer Sealer, A24W8300.
   3. Concrete Masonry Units: Sherwin-Williams; PrepRite Block Filler, B25W25.
   4. Wood: Sherwin-Williams; PrepRite ProBlock Latex Primer/Sealer, B51 Series.
   5. Ferrous Metal: Sherwin-Williams; Pro Industrial Pro-Cryl Universal Primer, B66-310 Series.
   6. Non-Ferrous Metal - Galvanized and Aluminum Surfaces: Sherwin-Williams; Pro Industrial Pro-Cryl Universal Primer, B66-310 Series

Copyright © 2021 Bialosky + Partners Architects

2.5 ACCESSORY MATERIALS

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin application of paints and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

D. Test shop-applied primer for compatibility with subsequent cover materials.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:

1. Gypsum Wallboard: 12 percent.
2. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
3. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
4. Concrete Floors and Traffic Surfaces: 8 percent.

3.2 PREPARATION

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

E. Concrete:

1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
2. Prepare surface as recommended by top coat manufacturer and according to SSPC-SP13 or NACE 6.

F. Masonry:

1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.

Copyright © 2021 Bialosky + Partners Architects

2. Prepare surface as recommended by top coat manufacturer.

G. Concrete Floors and Traffic Surfaces: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.

H. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

I. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.

J. Wood Surfaces to Receive Opaque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats. Back prime concealed surfaces before installation.

K. Wood Doors to be Field-Finished: Seal wood door top and bottom edge surfaces with tinted primer.

L. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.3 APPLICATION

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

C. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.

D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

E. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

F. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.

G. Sand wood and metal surfaces lightly between coats to achieve required finish.

H. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

I. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.4 CLEANING

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

3.5 PROTECTION

A. Protect finishes until completion of project.

Copyright © 2021 Bialosky + Partners Architects

B. Touch-up damaged finishes after Substantial Completion.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

This page intentionally left blank

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Foodservice equipment furnished by the Owner and installed by the General Contractor.

1.2 RELATED REQUIREMENTS

A. Plumbing drawings for stainless steel sinks.

1.3 REFERENCE STANDARDS

A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.

B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar 2015.

C. ASTM C1036 - Standard Specification for Flat Glass 2016.

D. UL (DIR) - Online Certifications Directory Current Edition.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on appliances; indicate configuration, sizes, materials, finishes, locations, and utility service connection locations, service characteristics, and wiring diagrams.

C. Operation Data: Provide operating data for the specified equipment.

D. Maintenance Data: Provide lubrication and periodic maintenance requirement schedules.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacture of standard products of the type specified.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products clear of floor in a manner to prevent damage.

B. Coordinate size of access and route to place of installation.

Copyright © 2021 Bialosky + Partners Architects

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Merchandiser Refrigeration Units:
   1. Basis of Design - Victory Refrigeration, a division of the ALI Group North America
   2. Traulsen, a division of ITW Food Equipment Group.
   3. Continental Refrigerator, a division of National Refrigeration & Air Conditioning Products, Inc.

B. Four Post Wire Shelving Unts:
   1. Basis of Design - InterMetro Industries Corporation.
   2. Advance Tabco.
   3. Olympic Storage Company

C. Stainless Steel Work Tables:
   1. Basis of Design - Advance Tabco.
   2. Amtekco Industries, Inc.
   3. Duke Manufacturing Co.
   4. Eagle Group.
   5. John Boos & Co.

D. Receiving Scales:
   1. Basis of Design - Taylor Precision Products, L.P.
   2. Franklin Machine Products.
   3. OHAUS Corporation.

E. Analog Space Thermometers:
   1. Basis of Design - Taylor Precision Products, L.P., 5630 6" Metal Dial Thermometer.

F. Substitutions: See Section 01 6000 - Product Requirements.

2.2 EQUIPMENT

A. Equipment Cut Sheets: Refer to attachment at end of this section.
   1. Cooler and Freezer Units: Listed by UL (DIR).
   2. Electrical Wiring and Components and Self-Contained Refrigeration Systems: Comply with UL (DIR) listed product standards.

B. Installation Accessories: Provide rough-in hardware, supports and connections, attachment devices, closure trim, and accessories as required for complete installation.

2.3 MATERIALS

A. Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.

B. Stainless Steel Sheet: ASTM A666 Type 304 commercial grade, No. 4 finish.

Copyright © 2021 Bialosky + Partners Architects

C. Glass: ASTM C1036 annealed, and laminated, 4 mm thick; exposed edges ground; cut or drilled to receive hardware.

D. Finish Hardware: Manufacturer's standard.

E. Work Surfaces: Stainless steel.

2.4 FABRICATION

A. Isolate rotating or reciprocating machinery to prevent noise and vibration.

B. Provide indirect drain piping from equipment to terminate over nearest waste receptor.

2.5 FINISHES

A. Components: Shop finish.

B. Metal (Except Stainless Steel): Degrease and phosphate etch, prime and apply minimum two coats factory baked epoxy, color as indicated.

C. Stainless Steel: No. 4 finish.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify ventilation outlets, service connections, and supports are correct and in required location.

B. Verify that electric power is available and of the correct characteristics.

3.2 INSTALLATION

A. Install items in accordance with manufacturers' instructions.

B. Insulate to prevent electrolysis between dissimilar metals.

3.3 ADJUSTING

A. Adjust equipment and apparatus to ensure proper working order and conditions.

B. Remove and replace equipment creating excessive noise or vibration.

3.4 CLEANING

A. Remove masking or protective covering from stainless steel and other finished surfaces.

B. Wash and clean equipment.

C. Polish glass, plastic, hardware, accessories, fixtures, and fittings.

Copyright © 2021 Bialosky + Partners Architects

3.5 CLOSEOUT ACTIVITIES

A. At completion of work, provide qualified and trained personnel to demonstrate operation of each item of equipment and instruct Owner in operating procedures and maintenance.
   1. Test equipment prior to demonstration.

3.6 PROTECTION

A. Remove protective coverings from prefinished work.

B. Protect finished work from damage.

3.7 FOODSERVICE EQUIPMENT CUT SHEETS

A. Refer to attachment immediately following this section. A cut sheet is not included for the thermometer.

END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

VICTORY®
ULTRASPEC

ITEM 01

PROJECT: _____

ITEM # _____ QTY: _____

MODEL # _____

AIA # _____ SIS # _____

BOTTOM MOUNT GLASS DOOR DISPLAY REFRIGERATOR

LSR23HC-1

CABINET CONSTRUCTION

- Stainless Steel Exterior And Interior
- LED Lighting
- High-Performance, Balanced, Bottom-Mounted Refrigeration
- Triple-Pane Glass Doors
- Spring-Loaded Hinge With Stay-Open Door Feature For Easy Product Loading
- One-Piece, Snap-In Magnetic Door Gasket
- Door Lock Standard
- Five (5) Heavy-Duty Silver Freeze Shelves
- 6" Overall Height Casters Standard
- Field Reversible Doors (hinge kit not included)
- 8' Cord And Plug (see electrical data for details)

FEATURES

- Full Electronic Control

REFRIGERATION

- Refrigeration System Uses R-290 Refrigerant To Comply With All Environmental Concerns
- Adaptive Defrost For Reduced Energy Consumption And More Consistent Product Temperatures
- Epoxy Coated Evaporator Coil
- Refrigerator Capable Of Maintaining Product Temperature 36°F To 38°F

- **3 Year Parts & Labor Warranty Plus An Additional 4 Year Compressor Warranty**
- **Exclusive 2 Year Warranty On Magnetic Door Gaskets**
- **Lifetime Warranty On Handles & Hinges (Parts Only)**

ENERGY STAR

Please verify qualifying units by visiting:
www.energystar.gov/cfs

OPTIONS & ACCESSORIES

- ~~Secure-Temp™ Technology~~
- Black Or White Interior
- ~~Custom Color Cabinet~~
- Electronic Lock Models
- ~~Door Swing Orientation (at time of order)~~
- Additional Shelves
- ~~3", 6" Casters Or 6" Seismic Legs~~
- Remote Models* (6" legs only) (refrigerant must be specified at time of order, see note on back page)

BOTTOM MOUNT DISPLAY REFRIGERATOR

3779 Champion Blvd, Winston-Salem, NC 27105
ph: (888) 845-9800 | fax: (800) 253-5168
Sales@VictoryRefrigeration.com | VictoryRefrigeration.com

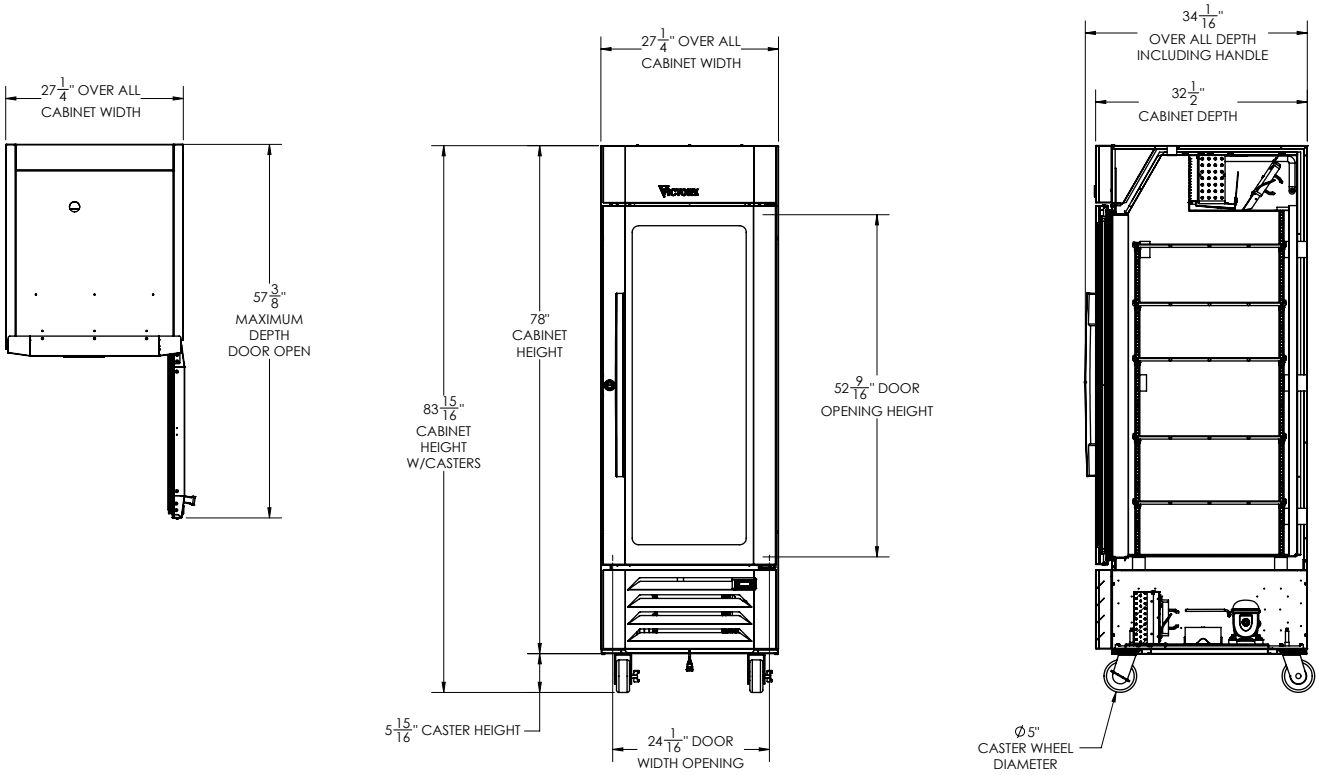
Rev. 6/1/20 Printed in the U.S.A.

APPROVAL: _____ DATE: _____

VICTORY ULTRASPEC

BOTTOM MOUNT GLASS DOOR DISPLAY REFRIGERATOR

LSR23HC-1



We reserve the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment. Dimensional tolerances +/- 1/4". Metric dimensions (MM)

CHARACTERISTICS		ELECTRICAL DATA		SHIPPING DETAILS	
Net Capacity	23.1	Cabinet Voltage	115/60/1	Height	85"
Width, Overall (in.)	27 1/4"	Total Amperes	3.0	Width	30"
Depth, Overall (with handle)	34 1/16"	NEMA Plug* (8' cord)	5-15P	Depth	36"
Height Overall (with casters)	83 15/16"	**REFRIGERATION DATA**		Crated Weight	370 lbs
Depth, Doors Open 90°	57 3/8"	Condensing Unit Size, HP*	1/4	*NOTE: Remote units are field wired and come with 6" legs. Refrigerant must be specified at time of order.	
Door Opening (in.)	24 1/16" x 52 9/16"	Refrigerant*	R-290		
No. Of Doors/Shelves	1/5	Capacity (BTU/HR) (100°F/20°F)	1479		

3779 Champion Blvd, Winston-Salem, NC 27105 | ph: (888) 845-9800 | fax: (800) 253-5168

Sales@VictoryRefrigeration.com | VictoryRefrigeration.com

Rev. 6/1/20 Printed in the U.S.A.

an Ali Group Company

The Spirit of Excellence

VICTORY®
ULTRASPEC

ITEM 02

PROJECT: _____

ITEM # _____ QTY: _____

MODEL # _____

AIA # _____ SIS # _____

BOTTOM MOUNT GLASS DOOR DISPLAY FREEZER

LSF23HC-1

CABINET CONSTRUCTION

- Stainless Steel Exterior (galvanized back)
- Aluminum Interior
- LED Lighting
- High-Performance, Balanced, Bottom-Mounted Refrigeration
- Triple-Pane Glass Doors
- Spring-Loaded Hinge With Stay-Open Door Feature For Easy Product Loading
- One-Piece, Snap-In Magnetic Door Gasket
- Door Lock Standard
- Five (5) Heavy-Duty Epoxy Coated Shelves
- 6" Overall Height Casters Standard
- Field Reversible Doors (hinge kit not included)
- 8' Cord And Plug (see electrical data for details)

FEATURES

- Full Electronic Control
- Expansion Valve Technology
- Anti-Condensate Door Perimeter Heaters

REFRIGERATION

- Refrigeration System Uses R-290 Refrigerant To Comply With All Environmental Concerns
- Hot Gas Condensate Evaporator
- Adaptive Defrost For Reduced Energy Consumption And More Consistent Product Temperatures
- Epoxy Coated Evaporator Coil
- Freezer Capable Of Maintaining Product Temperature 0°F

ENERGY STAR

Please verify qualifying units by visiting:
www.energystar.gov/cfs

- **3 Year Parts & Labor Warranty Plus An Additional 4 Year Compressor Warranty**
- **Exclusive 2 Year Warranty On Magnetic Door Gaskets**
- **Lifetime Warranty On Handles & Hinges (Parts Only)**

OPTIONS & ACCESSORIES

- ~~Secure-Temp™ Technology~~
- Black Or White Interior
- Custom Color Cabinet
- Electronic Lock Models
- ~~Door Swing Orientation (at time of order)~~
- Additional Shelves
- ~~3", 6" Casters Or 6" Seismic Legs~~
- Remote Models* (6" legs only) (refrigerant must be specified at time of order, see note on back page)

BOTTOM MOUNT DISPLAY FREEZER

3779 Champion Blvd, Winston-Salem, NC 27105
ph: (888) 845-9800 | fax: (800) 253-5168
Sales@VictoryRefrigeration.com | VictoryRefrigeration.com

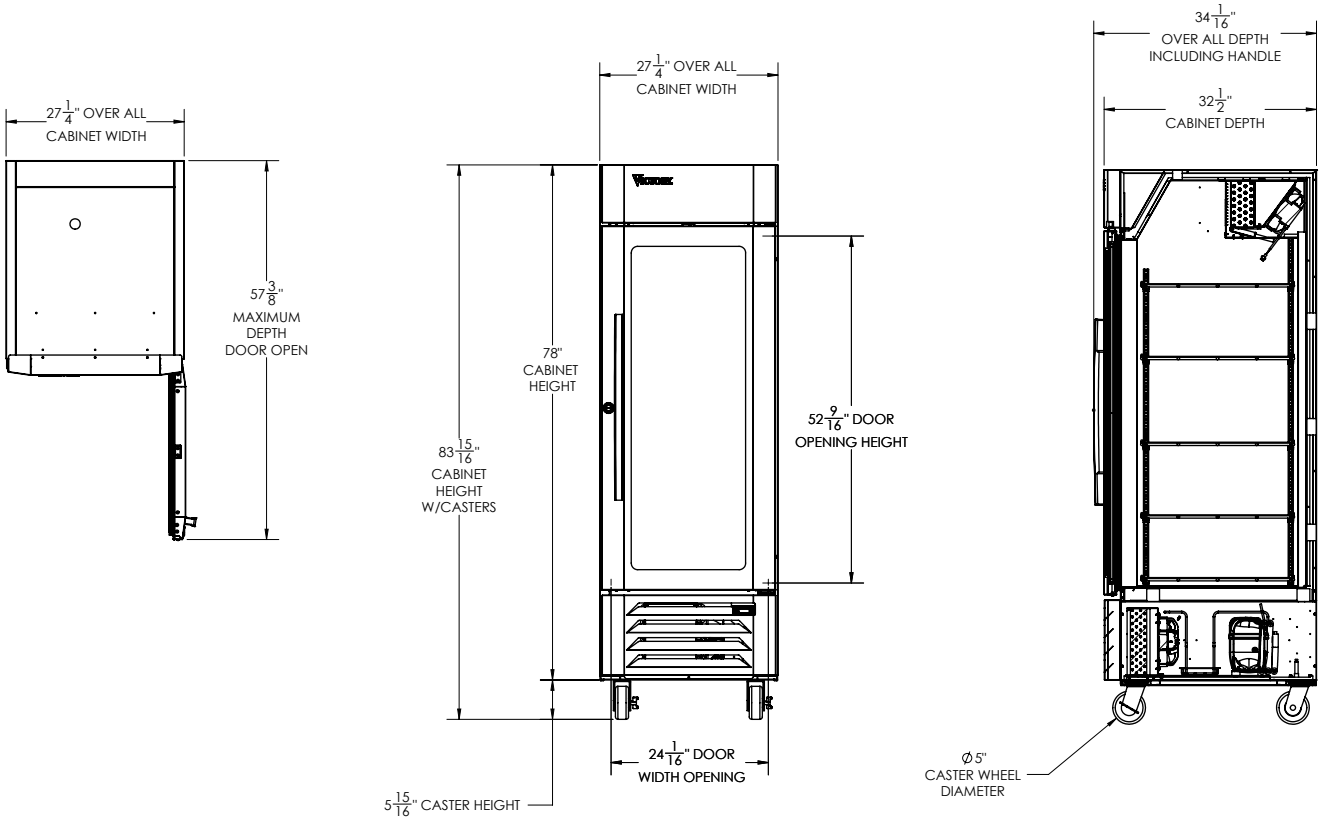
Rev. 7/7/20 Printed in the U.S.A.

APPROVAL: _____ DATE: _____

VICTORY ULTRASPEC

BOTTOM MOUNT GLASS DOOR DISPLAY FREEZER

LSF23HC-1



We reserve the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment. Dimensional tolerances +/- 1/4". Metric dimensions (MM)

CHARACTERISTICS		ELECTRICAL DATA		SHIPPING DETAILS	
Net Capacity	22.5	Cabinet Voltage	115/60/1	Height	85"
Width, Overall (in.)	27 1/4"	Total Amperes	7.5	Width	30"
Depth, Overall (with handle)	34 1/16"	NEMA Plug* (8' cord)	5-15P	Depth	36"
Height Overall (with casters)	83 15/16"	**REFRIGERATION DATA**		Crated Weight	430 lbs
Depth, Doors Open 90°	57 3/8"	Condensing Unit Size, HP*	3/4	*NOTE: Remote units are field wired and come with 6" legs. Refrigerant must be specified at time of order.	
Door Opening (in.)	24 1/16" x 52 9/16"	Refrigerant*	R-290		
No. Of Doors/Shelves	1/5	Capacity (BTU/HR) (100°F/20°F)	1927		

3779 Champion Blvd, Winston-Salem, NC 27105 | ph: (888) 845-9800 | fax: (800) 253-5168

Sales@VictoryRefrigeration.com | VictoryRefrigeration.com

Rev. 7/7/20 Printed in the U.S.A.

an Ali Group Company

ALI GROUP

The Spirit of Excellence

ITEM 03

7

COOLER SHELVING by METRO (Ten Sections of Shelving)

This "Metroseal 3" shelving with "Super Erecta Shelf Design" is to have the following features and accessories:

A - 12-year limited warranty against rust formation
B - Self-sealing hydrated chromate base layer
C - Epoxy coating with microban
D - Provide split sleeves
E - Capacity of 800 pounds for shelves under 48" in length and 600 pounds for shelves over 48" in length
F - Shelves adjustable in 1" increments

Each shelving section is to include four (4) shelves, four (4) posts, two (2) swivel casters and two (2) swivel brake casters. This shelving is to consist of the following components:

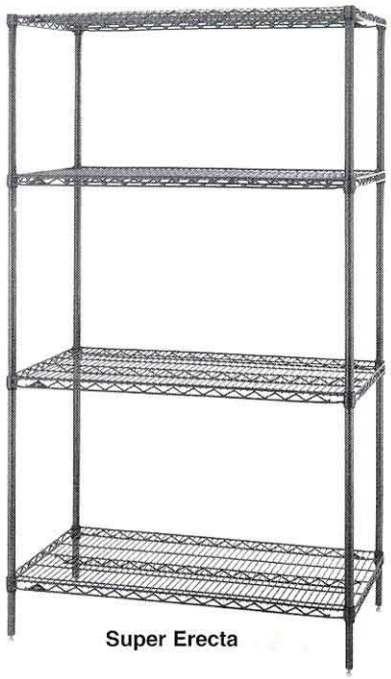
A - Eight (8) model # 2448NK3 shelves
B - Thirty Two (32) model # 2454NK3 shelves
C - Forty (40) model # 63UPK3 posts
D - Twenty (20) model # 5MP 5" non-marking polyurethane swivel casters
E - Twenty (20) model # 5MPB 5" non-marking polyurethane swivel casters with brakes

METRO® SEAL 3
with Microban® Antimicrobial Protection

Metroseal 3 is available on Super Erecta and Super Adjustable Super Erecta shelving systems. Metroseal 3 is applied using an exclusive state-of-the-art finishing and coating process that creates an attractive and corrosion-resistant finish. Metroseal 3 is enhanced with built-in Microban® antimicrobial product protection, which protects the Metroseal 3 coating from bacteria, mold, mildew and fungi that cause odors, stains and product degradation.

- **Exclusive Protection:** Metro's new proprietary epoxy coating now contains Microban® antimicrobial product protection. Microban® protects the epoxy coating from bacteria, mold, mildew and fungi that cause odors, stains and product degradation. The storage system remains cleaner between cleanings.
- **Attractive, Corrosion-Resistant Finish:** Metroseal 3 is an attractive corrosion-resistant finish that protects the shelving against corrosive conditions found in walk-in coolers.
- **Metro® Shelving Systems:** Metroseal 3 is a finish for the world's most popular shelving systems, Super Erecta and Super Adjustable Super Erecta. Both systems provide easy assembly without the use of special tools, adjustability at 1" (25mm) increments, greater air circulation and light penetration, a large selection of accessories, and the versatility to change as your storage needs change. Super Adjustable Super Erecta has the added feature of a unique patented corner release making it the easiest to adjust shelving system ever.
- **Economical:** Metroseal 3 storage shelving is an economical alternative to stainless steel, for use in environments that tend to corrode other metals.
- **12-Year Limited Warranty:** Metroseal 3 is a corrosion-resistant finish for environments which can cause other metals to corrode. Metroseal 3 has a 12-year limited warranty against rust formation.

Super Adjustable Super Erecta



Super Erecta

NSF

*MICROBAN and the MICROBAN symbol are registered trademarks of the Microban Products Company, Huntersville, NC.

InterMetro Industries Corporation
North Washington Street
Wilkes-Barre, PA 18705
www.metro.com

EMERSON
Storage Solutions

SUPER ERECTA® AND SUPER ADJUSTABLE SUPER ERECTA®

METROSEAL 3 SHELVING

Metroseal 3 Shelves

Cat. No. Super Adjustable	Cat. No. Super Erecta	Width (in.)	Width (mm)	Length (in.)	Length (mm)	Approx. Pkd Wt. (lbs.)	Approx. Pkd Wt. (kg)
A1424NK3	1424NK3	14	355	24	610	6	2.7
A1430NK3	1430NK3	14	355	30	760	7	3.2
A1436NK3	1436NK3	14	355	36	914	8	3.6
A1442NK3	1442NK3	14	355	42	1066	9 1/2	4.3
A1448NK3	1448NK3	14	355	48	1219	10 1/2	4.7
A1460NK3	1460NK3	14	355	60	1524	14	6.3
A1472NK3	1472NK3	14	355	72	1825	17	7.7
A1824NK3	1824NK3	18	457	24	610	7	3.2
A1830NK3	1830NK3	18	457	30	760	8	3.6
A1836NK3	1836NK3	18	457	36	914	9 1/2	4.3
A1842NK3	1842NK3	18	457	42	1066	11	5.0
A1848NK3	1848NK3	18	457	48	1219	12	5.4
A1854NK3	1854NK3	18	457	54	1370	14 1/2	6.6
A1860NK3	1860NK3	18	457	60	1524	17	7.7
A1872NK3	1872NK3	18	457	72	1825	20	9.1
A2124NK3	2124NK3	21	530	24	610	8	3.6
A2130NK3	2130NK3	21	530	30	760	9	4.1
A2136NK3	2136NK3	21	530	36	914	11	5.0
A2142NK3	2142NK3	21	530	42	1066	12	5.4
A2148NK3	2148NK3	21	530	48	1219	14	6.4
A2154NK3	2154NK3	21	530	54	1370	16	7.3
A2160NK3	2160NK3	21	530	60	1524	18	8.2
A2172NK3	2172NK3	21	530	72	1825	24	10.9
A2424NK3	2424NK3	24	610	24	610	9	4.1
A2430NK3	2430NK3	24	610	30	760	11	5.0
A2436NK3	2436NK3	24	610	36	914	13	5.9
A2442NK3	2442NK3	24	610	42	1066	15	6.8
A2448NK3	2448NK3	24	610	48	1219	16	7.3
A2454NK3	2454NK3	24	610	54	1370	19	8.6
A2460NK3	2460NK3	24	610	60	1524	21	9.5
A2472NK3	2472NK3	24	610	72	1825	26	11.8
A3036NK3		30	760	36	914	15	6.8
A3048NK3		30	760	48	1219	21	9.5
A3060NK3		30	760	60	1524	26 1/2	11.8
A3072NK3		30	760	72	1825	31	14.0
A3636NK3		36	914	36	914	18	8.2
A3648NK3		36	914	48	1219	23	10.4
A3660NK3		36	914	60	1524	29	13.1
A3672NK3		36	914	72	1825	34 1/2	15.4

SiteSelect™ Posts

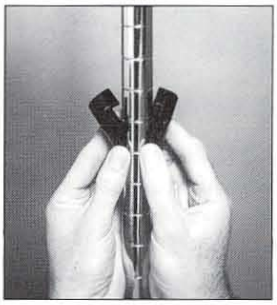
Cat. No. Metroseal 3	Height* (in.)	Height* (mm)	Approx. Pkd. Wt. (lbs.)	Approx. Pkd. Wt. (kg)
13PK3	14 1/2	368	1	0.5
33PK3	34 1/2	877	2	0.9
54PK3	54 9/16	1386	3	1.4
63PK3	62 9/16	1589	3 1/2	1.6
74PK3	74 5/8	1895	4	1.8
86PK3	86 5/8	2200	5	2.3

74UPK3

*Height includes leveling bolt and cap.

All Metro Catalog Sheets are available on our Web Site: **www.metro.com**

Every Metroseal 3 shelf and post is backed by a limited 12-year warranty against surface rust formation.



Super Erecta Split Sleeves

Super Adjustable Wedges and Corner Release System

Important: When ordering by components remember that stability decreases as the ratio of height to width increases. Units should be kept as wide and low as possible.

SiteSelect™ Posts are grooved at 1" (25mm) increments and numbered at 2" (50mm) increments. Posts are double-grooved every 8" (203mm) for easy identification.

InterMetro Industries Corporation
North Washington Street, Wilkes-Barre, PA 18705
Phone: 570-825-2741 • Fax: 570-825-2852
For Product Information Call: 1-800-433-2232

L02-010B
Printed in U.S.A. Rev. 11/02

Information and specifications are subject to change without notice. Please confirm at time of order.

Copyright © 2002 InterMetro Industries Corp.

Item # _____

Job _____

METRO®
STEM CASTERS

- **Metro Stem-Type Casters** are designed to fit Super Erecta Shelf® posts to form shelf carts and other mobile units.
- **Stainless Steel, Cart-Washable Casters** offer grease seals and zerk fittings. Can withstand high-pressure washings.
- **Polymer Horn Casters:** Innovative polymer stem casters offer corrosion resistance and enhanced durability. For all medium-duty applications.
- **Resilient Rubber Tread:** A molded, soft tread that provides good floor protection along with quiet operation. Non-marking.
- **Polyurethane Tread:** Long-wearing; resists abrasion. Non-marking, shock absorbing.
- **Wheel Brakes:** Foot-operated. Available on all caster models.
- **Caster Load Ratings:** From 125 lbs. to 300 lbs. (57 to 136kg) See chart.
- **Donut Bumpers:** Furnished standard on all Metro stem casters.
- **Additional Caster Types Available.**

Note: SPECIAL WHEELS — V-groove, Conductive, Steel and Phenolic — are available on request. For additional information, contact InterMetro Industries Corporation or your InterMetro representative.

Resilient Rubber

5MB Wheel Brake
Includes Donut Bumper (not shown)

5M Resilient
Includes Donut Bumper (not shown)

Stainless Steel, Cart Washable

5MDBGSA

5MDGSA

Polymer Horn Casters

5PCB

5PC

InterMetro Industries Corporation
North Washington Street
Wilkes-Barre, PA 18705
www.metro.com

Copyright © 2000 InterMetro Industries Corp.

Job _____

METRO®
STEM CASTERS

Dimensions
Standard Casters — Stem Type

Cat. No.	Wheel Diameter (in.)	(mm)	Face (in.)	(mm)	Load Rating (lbs.)	(kg)	Type	Wheel Tread	Approx. Pkd. Wt. (lbs.)	(kg)
4LD	4	102	1/2	12	125	56	Stem/Swivel	Resilient	1 1/2	.6
5LD	5	127	1/2	12	125	56	Stem/Swivel	Resilient	2	.9
5M	5	127	1 1/4	32	200	90	Stem/Swivel	Resilient	2 1/2	1.1
5MB	5	127	1 1/4	32	200	90	Stem/Brake	Resilient	2 3/4	1.2
5MR	5	127	1 1/4	32	200	90	Stem/Rigid	Resilient	3 1/2	1.5
5MDA	5	127	1 1/4	32	250	111	Stem/Swivel	High Modulus Donut	2 1/2	1.1
5MDBA	5	127	1 1/4	32	250	111	Stem/Brake	High Modulus Donut	2 5/8	1.17
5MDRA	5	127	1 1/4	32	250	111	Stem/Rigid	High Modulus Donut	2 3/8	1.08
5MP	5	127	1 1/4	32	300	135	Stem/Swivel	Polyurethane	2 1/8	.94
5MPB	5	127	1 1/4	32	300	135	Stem/Brake	Polyurethane	2 1/4	1
5MPR	5	127	1 1/4	32	300	135	Stem/Rigid	Polyurethane	2	.9

NOTE 1: Stem casters are shipped with donut bumper **at no additional charge.**
NOTE 2: Rigid casters are held in position by a connecting channel. When ordering rigid casters, shelf width **must be** known.
NOTE 3: Load Height for all 5M, 5MD and 5MP casters — 6 3/32" ± 1/16" (155 ± 1.5mm).
NOTE 4: Load Height for 4LD caster — 4 5/8" ± 1/16" (118 ± 1.5mm).
NOTE 5: Load Height for 5LD caster — 5 5/8" ± 1/16" (143 ± 1.5mm).
NOTE 6: Brakes are foot-operated.

2 SWIVEL & 2 BRAKE CASTERS PER SHELVING UNIT

Stainless Steel Cart-Washable Casters — Stem Type

Cat. No.	Wheel Diameter (in.)	(mm)	Face (in.)	(mm)	Load Rating (lbs.)	(kg)	Type	Wheel Tread	Approx. Pkd. Wt. (lbs.)	(kg)
5MDGSA	5	122	1 1/4	32	150	68	Swivel	High Modulus Donut	2 1/2	1.1
5MDBGSA	5	122	1 1/4	32	150	68	Brake	High Modulus Donut	2 5/8	1.17
5MDRGSA	5	122	1 1/4	32	150	68	Rigid	High Modulus Donut	2 3/8	1.08
5MPGSA	5	127	1 1/4	32	300	135	Swivel	Polyurethane	2 1/8	.94
5MPBGSA	5	127	1 1/4	32	300	135	Brake	Polyurethane	2 1/4	1
5MPRGSA	5	127	1 1/4	32	300	135	Rigid	Polyurethane	2	.9

NOTE 1: Stem casters are shipped with donut bumper **at no additional charge.**
NOTE 2: Rigid casters are held in position by a connecting channel. When ordering rigid casters, shelf width **must be** known.
NOTE 3: Load Height for all 5MD and 5MP casters — 6 3/32" ± 1/16" (155 ± 1.5mm).
NOTE 4: All casters are grease sealed with zerk fittings in swivel and axle.
NOTE 5: Brakes are foot-operated.
NOTE 6: "D" in model number designates donut wheel made of high-modulus rubber.

Polymer Casters — Stem Type

Cat. No.	Wheel Diameter (in.)	(mm)	Face (in.)	(mm)	Load Rating (lbs.)	(kg)	Type	Wheel Tread	Approx. Pkd. Wt. (lbs.)	(kg)
5PC	5	127	1 1/4	32	300	135	Swivel	Polyurethane	2	.9
5PCB	5	127	1 1/4	32	300	135	Brake	Polyurethane	2	.9
5PCR	5	127	1 1/4	32	300	135	Rigid	Polyurethane	2	.9

NOTE 1: Optional thread guards (blue) may be ordered by adding "-TG" to the desired model number (eg. 5PC-TG, 5PCB-TG, 5PCR-TG).
NOTE 2: Stem casters are shipped with donut bumper **at no additional charge.**
NOTE 3: Rigid casters are held in place by a connecting channel. When ordering, shelf depth **must be** provided.

Manufactured by:

InterMetro Industries Corporation
North Washington Street, Wilkes-Barre, PA 18705
Phone: 570-825-2741 • Fax: 570-825-2852
For Product Information Call: 1-800-433-2232
Visit Our Web Site: www.metro.com

L02-041
Rev. 9/00
Printed in U.S.A.

Information and specifications are subject to change without notice. Please confirm at time of order.

dinecompany.com

ITEM 04

TAYLOR®

PRECISION PRODUCTS *Food Service*

Digital Receiving Scales

Taylor innovation is built on 150 years of expertise in producing the most comprehensive line of quality thermometers in the industry. Now we've extended this heritage of precision measurement to scales...offering the food service professional technology-driven solutions designed to provide time/cost-effective advantages:

Product Benefits: TE150 & TE400

- ▲ Engineered for consistent accuracy
- ▲ Easy-to-read, 1" LCD remote display with 6-ft. cord and mounting bracket for efficient, versatile use
- ▲ Dual-powered for maximum flexibility: AC adapter for 120V outlet (included), 6 AA batteries (not included)
- ▲ Removable, corrosion-resistant steel platform...durable and easy to clean
- ▲ Compact, low-profile design for spacesaving efficiency
- ▲ Non-skid feet assure weighing stability
- ▲ Large buttons provide easy access to functions
- ▲ Advanced, user-friendly modes, including:
  Lb/Kg: *maximizes weighing versatility*
  Auto Tare: *assures efficient, exact portioning. Deducts container weight and allows quick zero out for multiple ingredient measuring*
  Auto Hold: *locks weight display to allow removal of oversized items. Exclusive, pre-select operation for added convenience*
  Low-Battery Indicator: *prevents unexpected power loss*
  Auto Shut Off: *conserves energy & battery power*

Models/Capacities

TE150
Stainless Steel Platform
150 lb x .2 lb—68 kg x .1 kg

TE400
Steel Tread Plate Platform
400 lb x .5 lb—180 kg x .2 kg

Digital Receiving Scales Specifications:

Models	TE150	TE400
Capacity	150 lb x 0.2 lb 68 kg x 0.1 kg	400 lb x 0.5 lb 181 kg x 0.2 kg
Overload	157.4 / 71.4 kg	420.0 lb / 190.4 kg
Dimensions	12-1/4" X 12" X 2-1/8"	same
Platform	Stainless Steel 12-1/4" x 12" Removable	Steel Tread Plate (painted) same
Control Panel	8 3/4" x 3 5/8" x 1 5/8" Table Top or Wall Mount	same
Cord	6' coiled cord	same
Accuracy	± 1% +1 division	same
Power	120V AC adapter (included) 6AA batteries (not included)	same
Low Battery Indicator	Yes	same
Operating Temp. Range	40° F to 104° F	same
Display	1" LCD	same
Tare	Up to 150 lb. capacity is reduced by amount of tare	Up to 400 lb. capacity is reduced by amount of tare
Hold	Use Tare/Hold button on front panel to activate or cancel preset automatic hold. Weight displayed until Tare/Hold button is pressed again	same
Mode	Can switch between lb & kg. Button on front panel	same
On/Off	Button on front panel	same
Auto Off	After 2 minutes of non-use	same
Foot Tare Switch	Accessory available— Taylor Model # TA1	N/A

Wall-mounting the remote display offers the advantage of eye-level readings & spacesaving operation...especially when weighing large items.

TAYLOR®

PRECISION PRODUCTS *Food Service*

Taylor Precision Products, L.P.
2311 West 22nd Street
Oak Brook, Illinois 60523

Customer Service/Ordering
Fletcher, NC 28732
800.225.4834
Fax: 828.687.1689

© Taylor Precision Products 1998
FS 007 9.98 10M

ADVANCE TABCO
SMART FABRICATION™

STAINLESS STEEL

WORK TABLES

STANDARD Series - Flat Top - UNDERSHELF Style

ITEM 05

Item #: _____ Qty #: _____

Model #: _____

Project #: _____

NEW
Rolled Rim Edges on Front & Back and Square Side Edges

Featuring as Standard:
"THE PROVEN"
ORIGINAL ADVANCE TABCO
Adjustable Undershelf with Die Cast Leg Clamp

FEATURES:

Top is furnished with 1-5/8" sanitary rolled rim edges on front & back and square side edges.

To reinforce and maintain a level working surface, 24" wide tables are supplied with TWO hat channels and 30" and 36" wide tables are supplied with THREE hat channels.

Pre-engineered welded angle adapters insure ease of future drawer installation.

Aluminum die cast "leg-to-shelf" clamp secures shelf to leg eliminating unsightly nuts & bolts. Undershelf is adjustable.

CONSTRUCTION:

All TIG welded. Exposed weld areas polished to match adjacent surfaces.

Entire top mechanically polished to a satin finish.

Top is sound deadened.

Roll formed embossed galvanized hat channels are secured to top by means of structural adhesive and weld studs.

Gussets welded to support hat sections.

MATERIAL:

MS-SERIES: Stainless Steel Legs & Undershelf

TOP: 16 gauge stainless steel type "304" series.
SHELF: 18 gauge stainless steel.
LEGS: 1 5/8" diameter tubular stainless steel.
1" adjustable **stainless steel** bullet feet.
Stainless steel gussets.

MG-SERIES: Galvanized Legs & Undershelf

TOP: 16 gauge stainless steel type "304" series.
SHELF: 18 gauge galvanized steel.
LEGS: 1 5/8" diameter tubular galvanized steel.
1" adjustable plastic feet.
Galvanized steel gussets.

MS-Series:
Stainless Steel Legs & Undershelf

L	24" Wide	30" Wide	36" Wide
30"	MS-240	MS-300	
24"	MS-242	MS-302	
36"	MS-243	MS-303	MS-363
48"	MS-244	MS-304	MS-364
60"	MS-245	MS-305	MS-365
72"	MS-246	MS-306	MS-366
84"	MS-247	MS-307	MS-367
96"	MS-248	MS-308	MS-368
108"	MS-249	MS-309	MS-369
120"	MS-2410	MS-3010	MS-3610
132"	MS-2411	MS-3011	MS-3611
144"	MS-2412	MS-3012	MS-3612

NSF

MG-Series:
Galvanized Steel Legs & Undershelf

L	24" Wide	30" Wide	36" Wide
30"	MG-240	MG-300	
24"	MG-242	MG-302	
36"	MG-243	MG-303	MG-363
48"	MG-244	MG-304	MG-364
60"	MG-245	MG-305	MG-365
72"	MG-246	MG-306	MG-366
84"	MG-247	MG-307	MG-367
96"	MG-248	MG-308	MG-368
108"	MG-249	MG-309	MG-369
120"	MG-2410	MG-3010	MG-3610
132"	MG-2411	MG-3011	MG-3611
144"	MG-2412	MG-3012	MG-3612

Create Your Own Efficient Workstation with the Available Standard Accessories (Visit Section K)

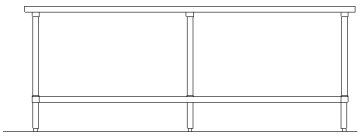
DIMENSIONS and SPECIFICATIONS

ALL DIMENSIONS ARE TYPICAL TOL ± .500”

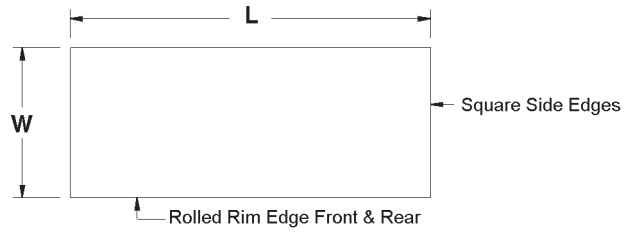
All Units Shipped Unassembled (KD) for Reduced Shipping Costs.

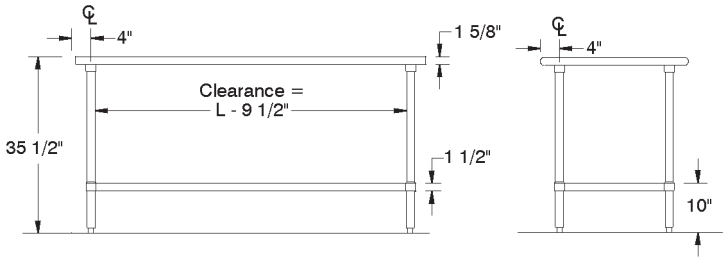
MS & MG Series
UNDERSHELF Style
FLAT TOP

Finished size of undershelf = Length minus 5 3/4”
Width minus 5 3/4”



Units 8 ft. and larger are furnished with six (6) legs





MS-Series: Stainless Steel Legs & Undershelf

L	24” Wide	Wt.	30” Wide	Wt.	36” Wide	Wt.
30”	MS-240	49 lbs.	MS-300	65 lbs.		
24”	MS-242	31 lbs.	MS-302	55 lbs.		
36”	MS-243	64 lbs.	MS-303	72 lbs.	MS-363	88 lbs.
48”	MS-244	79 lbs.	MS-304	89 lbs.	MS-364	98 lbs.
60”	MS-245	92 lbs.	MS-305	107 lbs.	MS-365	118 lbs.
72”	MS-246	109 lbs.	MS-306	125 lbs.	MS-366	138 lbs.
84”	MS-247	130 lbs.	MS-307	148 lbs.	MS-367	164 lbs.
96”	MS-248	145 lbs.	MS-308	166 lbs.	MS-368	184 lbs.
108”	MS-249	161 lbs.	MS-309	176 lbs.	MS-369	190 lbs.
120”	MS-2410	261 lbs.	MS-3010	287 lbs.	MS-3610	308 lbs.
132”	MS-2411	293 lbs.	MS-3011	324 lbs.	MS-3611	358 lbs.
144”	MS-2412	308 lbs.	MS-3012	339 lbs.	MS-3612	373 lbs.

MG-Series: Galvanized Steel Legs & Undershelf

L	24” Wide	Wt.	30” Wide	Wt.	36” Wide	Wt.
30”	MG-240	49 lbs.	MG-300	65 lbs.		
24”	MG-242	31 lbs.	MG-302	55 lbs.		
36”	MG-243	64 lbs.	MG-303	72 lbs.	MG-363	88 lbs.
48”	MG-244	79 lbs.	MG-304	89 lbs.	MG-364	98 lbs.
60”	MG-245	92 lbs.	MG-305	107 lbs.	MG-365	118 lbs.
72”	MG-246	109 lbs.	MG-306	125 lbs.	MG-366	138 lbs.
84”	MG-247	130 lbs.	MG-307	148 lbs.	MG-367	164 lbs.
96”	MG-248	145 lbs.	MG-308	166 lbs.	MG-368	184 lbs.
108”	MG-249	161 lbs.	MG-309	176 lbs.	MG-369	190 lbs.
120”	MG-2410	261 lbs.	MG-3010	287 lbs.	MG-3610	308 lbs.
132”	MG-2411	293 lbs.	MG-3011	324 lbs.	MG-3611	358 lbs.
144”	MG-2412	308 lbs.	MG-3012	339 lbs.	MG-3612	373 lbs.

ADVANCE TABCO®
SMART FABRICATION™

ADVANCE TABCO is constantly engaged in a program of improving our products. Therefore, we reserve the right to change specifications without prior notice.

325 Wireless Boulevard, Hauppauge, NY 11788

© ADVANCE TABCO, AUGUST 2019

TABLE MODIFICATIONS & ACCESSORIES

LEG MODIFICATIONS

QTY.		
____	TA-16	1 Galvanized Leg with Plastic Bullet Foot (34 1/2" Total Length)
____	TA-16-4	4 Galvanized Legs with Plastic Bullet Feet (34 1/2" Total Length)
____	TA-16-6	6 Galvanized Legs with Plastic Bullet Feet (34 1/2" Total Length)
____	TA-19	Stainless Steel Flanged Bullet Foot For Work Table
____	TA-19L	S/S Bolt-on Leg w/ Flanged Foot For Enclosed Base Table
____	TA-20	1 Stainless Steel Leg with S/S Bullet Foot (34 1/2" Total Length)
____	TA-20-4	4 Stainless Steel Leg with S/S Bullet Feet (34 1/2" Total Length)

QTY.		
____	TA-20-6	6 Stainless Steel Leg with S/S Bullet Feet (34 1/2" Total Length)
____	TA-20L	Replacement Bolt-on Leg For Enclosed Base Table
____	TA-21	Stainless Steel Bullet Foot
____	TA-68	Relocate Rear Cross Rail To Center (for Open Base Tables Only)
____	TA-72	Leg to Wall Brace (Set per table)
____	TA-95	Upgrade 16 Ga. 304 S/S Legs Only

WORK TABLE CASTERS

Standard Casters

Maintains the Standard 35-1/2" Working Height

200 lbs. Load Capacity Per Caster

When Used w/ Stainless Steel Legs

TA-25S-4 **Set of 4** (Two with Brakes)

TA-25S-6 **Set of 6** (Two with Brakes)

When Used w/ Galvanized Legs

TA-25G-4 **Set of 4** (Two with Brakes)

TA-25G-6 **Set of 6** (Two with Brakes)

Replacement Casters

For Work Tables

TA-25 **Set of 4** (Two with Brakes)

TA-25A **Set of 6** (Two with Brakes)

200 lbs. Load Capacity Per Caster

Optional Standard Caster Upgrades:

TA-25B Set For brakes on all wheels (Standard Casters) - Add price to the following models: TA-25, TA-25A, TA-25S-4, TA-25S-6, TA-25G-4, TA-25G-6

TA-25C Per Caster Upgrade Standard Caster with Heavy Duty Urethane Wheels (Per Caster)

EQUIPMENT STAND CASTERS

Standard Casters

5" Urethane Wheels.

Maintains the Standard 24" Working Height

200 lbs. Load Capacity Per Caster

w/ Stainless Steel Legs

TA-25ES **Set of 4** (Two with Brakes)

w/ Galvanized Legs

TA-25EG **Set of 4** (Two with Brakes)

HEAVY DUTY Casters

5" Urethane Wheels

400 lbs. Load Capacity Per Caster

TA-255 Super Heavy Duty Set of 4 (Two with Brakes)

TA-256 Super Heavy Duty Set of 6 (Two with Brakes)

Enclosed Base Table Casters

Easy Bolt-On Style

TA-255P **Set of 4** (Two with Brakes)

TA-255AP **Set of 6** (Two with Brakes)

300 lbs. Load Capacity Per Caster

For brakes on all wheels (Enclosed Base Casters) - Add price to models: TA-255P or TA-255AP

TA-255PB

Optional Equipment Stand Caster Upgrade:

TA-255B For brakes on all wheels (Equipment Casters) - Add price to any of the following models: TA-255, TA-256, TA-25ES, TA-25EG

Contact Our SMART FABRICATION™ Department for more information at 800-645-3166 or email in your specifications to smartfab@advancetabco.com

325 Wireless Boulevard, Hauppauge, NY 11788

ADVANCE TABCO is constantly engaged in a program of improving our products. Therefore, we reserve the right to change specifications without prior notice.

© ADVANCE TABCO, AUGUST 2019

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Countertops for architectural cabinet work.

1.2 RELATED REQUIREMENTS

A. Section 06 4100 - Architectural Wood Casework.

1.3 REFERENCE STANDARDS

A. ANSI A208.2 - American National Standard for Medium Density Fiberboard for Interior Use 2016.

B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2020.

C. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards 2014, with Errata (2018).

D. ISFA 3-01 - Classification and Standards for Quartz Surfacing Material 2013.

E. NEMA LD 3 - High-Pressure Decorative Laminates 2005.

F. NSF 51 - Food Equipment Materials 2019.

G. NSI (DSDM) - Dimensional Stone Design Manual, Version VIII 2016.

1.4 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.

C. Shop Drawings: Complete details of materials and installation ; combine with shop drawings of cabinets and casework specified in other sections.

D. Verification Samples: For each finish product specified, minimum size 6 inches square, representing actual product, color, and patterns.

E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.

F. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

Copyright © 2021 Bialosky + Partners Architects

PART 2 PRODUCTS

2.1 COUNTERTOPS

A. Natural Quartz and Resin Composite Countertops: Sheet or slab of natural quartz and plastic resin over continuous substrate.

1. Flat Sheet Thickness: 3/4 inch, minimum.
2. Natural Quartz and Resin Composite Sheets, Slabs and Castings: Complying with ISFA 3-01 and NEMA LD 3; resin, natural quartz, and pigments; homogenous, non-porous and capable of being worked and repaired using standard stone fabrication tools; no surface coating; color and pattern consistent throughout thickness.
    a. Manufacturers:
        1) Basis of Design - Corian Quartz, a DuPont brand (E. I. du Pont de Nemours and Company).
        2) Cambria Company LLC: www.cambriausa.com/#sle.
        3) LG Hausys America, Inc: www.lghausysusa.com/#sle.
        4) Wilsonart: www.wilsonart.com/#sle.
        5) Substitutions: See Section 01 6000 - Product Requirements.
    b. Factory fabricate components to the greatest extent practical in sizes and shapes indicated; comply with NSI (DSDM).
    c. Surface Burning Characteristics: Flame spread index of 25, maximum; smoke developed index of 450, maximum; when tested in accordance with ASTM E84.
    d. NSF 51 approved for food contact.
    e. Finish on Exposed Surfaces: Polished.
    f. Color and Pattern: As indicated on drawings.
3. Other Components Thickness: 3/4 inch, minimum.
4. Exposed Edge Treatment: Built up to minimum 1-3/4 inch thick; square edge.
5. Fabricate in accordance with AWI/AWMAC/WI (AWS), Section 11 - Countertops, Premium Grade.

2.2 MATERIALS

A. Medium Density Fiberboard for Supporting Substrate: ANSI A208.2.

B. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.

2.3 FABRICATION

A. Fabricate tops in the largest sections practicable, with top surface of joints flush.

1. Join lengths of tops using best method recommended by manufacturer.
2. Prepare all cutouts accurately to size; replace tops having improperly dimensioned or unnecessary cutouts or fixture holes.

Copyright © 2021 Bialosky + Partners Architects

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.

3.4 TOLERANCES

A. Variation From Horizontal: 1/8 inch in 10 feet, maximum.

B. Field Joints: None.

3.5 CLEANING

A. Clean countertops surfaces thoroughly.

3.6 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

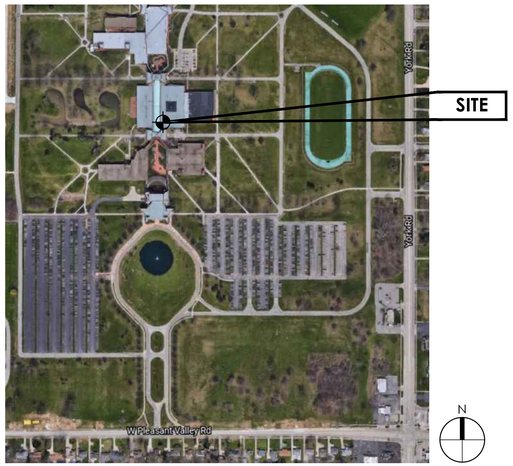
END OF SECTION

Copyright © 2021 Bialosky + Partners Architects

The Pantry, Tri-C Connect

Permit & Bid Set

LOCATION MAP



ARCHITECTURAL		Issue Date	Rev. Date
T100	Title Sheet & Life Safety Plans	07.16.2021	
D100	Demolition Plan & Demolition RCP	07.16.2021	
A100	Plans & Details	07.16.2021	
A101	Interior Elevations & Details	07.16.2021	

MECHANICAL		
M100	Mechanical Plans	07.16.2021

PLUMBING		
P100	Plumbing and Fire Protection Plans	07.16.2021
P700	Plumbing Specifications	07.16.2021

ELECTRICAL		
E001	Electrical Symbols & One Line Diagram	07.16.2021
E100	Electrical Plans	07.16.2021
E200	Power & Systems Plans	07.16.2021
E500	Electrical Details & Risers	07.16.2021
E501	Electrical Schedules & Diagrams	07.16.2021
E700	Electrical Specifications	07.16.2021

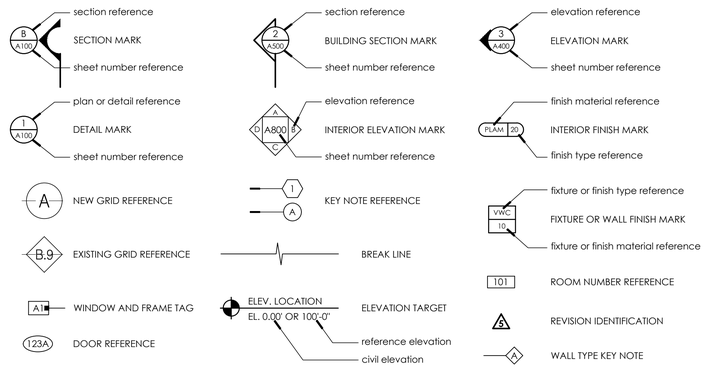
PROJECT TEAM

Architects:
BIALOSKY Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
www.bialosky.com
Contact: Paul Taylor

Mechanical Engineer:
BIALOSKY Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
www.bialosky.com
Contact: Mike Huston

Electrical Engineer:
BIALOSKY Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
www.bialosky.com
Contact: Matt Walsh

GRAPHIC LEGEND



GENERAL CONDITIONS

1. The contractor will furnish all labor, material, equipment, licenses, and insurance necessary to complete the work indicated and/or implied in the construction documents unless noted otherwise and will coordinate the work responsibilities of all subcontractors. All labor and materials to carry out fully the intentions of the plans and specifications are part of the contract, whether or not specifically documented.

2. All work will conform to the current Ohio Building, Mechanical & Plumbing Codes, as well as the current National Board of Fire Underwriters and all other applicable City Codes, local laws and authorities having jurisdiction. Codes standards and publications of private and public bodies mentioned within the specifications or on the drawings, will be considered to be those in force at the time of the contract award.

3. The Contractor shall make arrangements with the appropriate public authority for tests, inspections and approvals of portions of the Work as required by the contract documents and applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities and shall bear all related costs of tests, inspections and approvals. The Owner shall bear the costs of tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor (Special Inspections as set for in Chapter 17 of Ohio Building Code or other tests and inspections indicated to be the responsibility of the Owner).

4. All manufactured articles, materials and equipment will be new and free of defects and will be supplied, installed, connected, erected, used, cleaned and conditioned as directed by the respective manufacturers, unless specified otherwise.

5. The Contractor will notify the architect of any errors, omissions, conflicts, or ambiguities in and between the drawings and the specifications prior to proceeding with the work, if such notice is not furnished to the Architect, the Contractor will be deemed to have inspected the drawings and specifications and to have found them in proper form for execution.

6. The Contractor will fully acquaint himself with all existing conditions; will visit and inspect the work area and adjacent areas; will take all field measurements as required for the proper execution of the work; and will satisfy himself as to the nature, locations and scope of work , including all equipment and materials required for the proper execution of the work in every particular which might in anyway affect the cost and time schedule of the job. The Contractor will verify all dimensions by measurements at the job site, and will take any other measurements necessary to verify the drawings and to properly layout his work. Any discrepancies affecting the layout of the work will be called to the architect's attention by the contractor. No work will proceed until such discrepancy is rectified.

7. The Contractor represents that he has had adequate access to the job site and building area in which the work is to be performed, that he has satisfied himself as to the nature and location of work, including any obstructions, scope of work, actual levels, the equipment and facilities needed preliminary to and during the execution of the work and all other matters which can in any way affect the work or the cost thereof under this contract, and that he has studied the contract documents and all other documents pertaining to the installation of other trades which may influence his work.

8. The Contractor will assume full responsibility, including responsibility for all related costs for any and all work done without the approval of the Owner if such work is in conflict with the contract, drawings, or specifications.

9. The Owner will establish the limits of the construction site in addition to any contract limit lines shown in the drawings. The Contractor will continue his operations within these limits, unless upon written request and reply, a variance is agreed to by the Owner. The Contractor will be responsible for trespass on and/or damage to other property by any of his employees or his subcontractor's employees.

10. The Contractor will be responsible for the safe working conditions at the site, the Architect and Owner will not be deemed to have any responsibility or liability in connection herewith.

11. Construction operations will not involve interruption of heating, water, electrical or other services to any portion of the building outside the limits of the construction site unless approved by the Owner.

12. The contractor will be responsible for correcting any deficiencies caused by defective or ill timed work at no additional cost to the owner.

13. The Contractor will be responsible for cutting, fitting, or patching as required to complete the work or to make its parts fit together properly. The Contractor will not cut patch damage or alter installed work without consent of the Architect.

14. No substitutions are permitted except where the term " approved equal " appears. All substitutions must be approved in writing by the Architect & Owner. The Contractor is to submit samples or catalog cuts with all comparison data for the specified item and the proposed substituted item.

15. Contractors are responsible for obtaining all necessary permits, inspections (The College will obtain and pay for the Building Permit through the State of Ohio) approvals, and certificates of occupancy.

BUILDING CODE DATA

Applicable Codes:

Ohio Building Code 2017

Ohio Building Code:

Use Group Classification
B-Business (unchanged)

Type of Construction Classification
IIB (unchanged)

Means of Egress
850 sf/100 gsf per occupant
= 9 total occupants

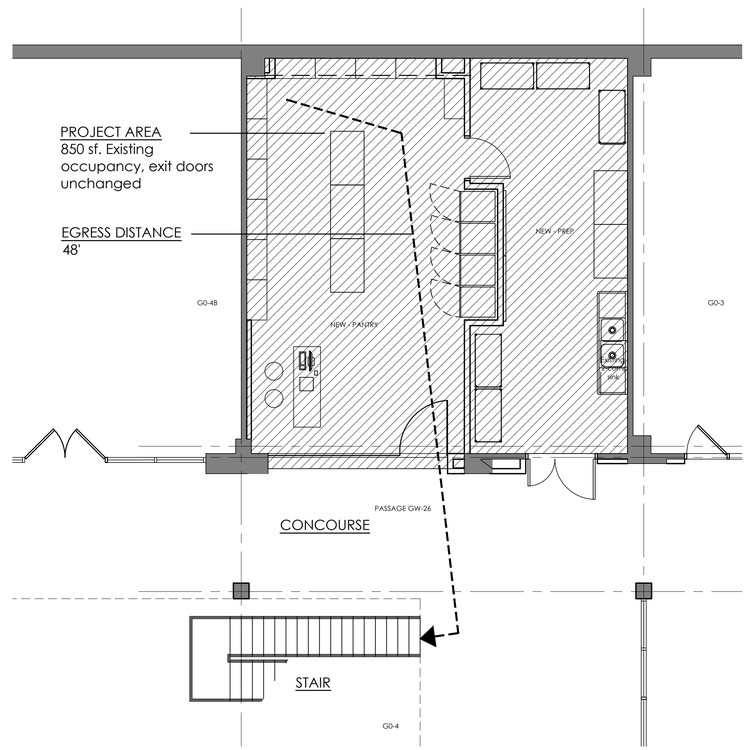
This alteration does not affect occupancy numbers or existing means of egress.

Area
Total Project Work Area: 850 s.f.

Fire Suppression
Existing project area fire suppression system will be modified to accommodate revised layout.

ABBREVIATIONS

a.b.	anchor bolt	dia	diameter	hm	hollow metal	psi	pounds per square inch
abv	above	dim	dimension	horiz	horizontal(ly)	ptd	painted
a/c	air conditioning	div	division	hr	hour; handrail	prefin	prefinished
acoust	acoustical	dn	down	ht	height	pvc	polyvinyl chloride
a.c.t.	acoustical ceiling tile	dr	door	hw	hardwood	r.	radius; riser
a.d.	area drain	d.s.	downspout	hvac	heating, ventilating & air conditioning	ra	return air
A.D.A	Americans with Disabilities Act	dtl	detail	hyd	hydrant	r.d.	roof drain
adj	adjustible; adjacent	dwg	drawing	i.d.	inside diameter	ref	refer(ence)
adh	adhesive	E	east	iic	impact insulation class	rev	revise; revision
a.f.f.	above finished floor	ea	each	insul	insulation	r.l.	roof leader
ahu	air handling unit	e.b.	expansion bolt	int	interior	rm	room
alt	alternate	e.f.	exhaust fan	inv	invert	r.o.	rough opening
alum	aluminum	elec	electric(al)	jst	joist(s)	S	south
anc	anchor; anchorage	el	elevation	jt	joint	sc	solid core
arch	architect(ural)	elev	elevator	lam	laminated	sch	schedule
asph	asphalt	eq	equal	lav	lavatory	sect	section
atten	attenuation	e.j.	expansion joint	lf	linear foot	sf	square foot
bd	board	e.w.c.	electrical water cooler	llh	long leg horizontal	sht	sheet
bldg	building	exh	exhaust	llv	long leg vertical	sim	similar
blk'g	blocking	exist	existing	lt	light	spec	specification
bm	beam	exp	exposed	lwc	lightweight concrete	sq	square
b.o.	bottom of	ext	exterior	mas	masonry	s.s.	stainless steel
bpl	bearing plate	f.d.	floor drain	matl	material	stc	sound transmission coefficent
brg	bearing	fdn	foundation	max	maximum	std	standard
btm	bottom	f.e.	fire extinguisher	mech	mechanical	stl	steel
btw	between	f.e.c.	fire extinguisher cabinet	mfr	manufacturer	struct	structural
b.w.	both ways	f.f.	finish floor	min	minimum or minute	susp	suspended
c	channel	fin	finish	misc	miscellaneous	sym	symmetrical
c.b.	catch basin	fixt	fixture	m.o.	masonry opening	sys	system
cbt	cabinet	flg	flashing	mtd	mounted	t.	tread; tempered
c-c	center to center	flr	floor	mtl	metal	t.c.	top of curb
cf	cubic feet	flur	fluorescent	N	north	tel	telephone
c.i.p.	cast in place	frm'g	framing	n.i.c.	not in contract	t&g	tongue and groove
c.j.	control joint	f.r.p.	fiberglass reinforced plastic	no.	number	thk	thick(ness)
clg	ceiling	f.r.t.	fire retardant treated	nom	nominal	t.o.	top of
clr	clear(ance)	ft	foot	n.t.s.	not to scale	typ	typical
cmu	concrete masonry unit(s)	ftg	footing	o/	over	u.h.	unit heater
c.o.	clean out; company	fur	furring; furred	o.c.	on center(s)	u.n.o.	unless noted otherwise
col	column	furn	furnace	o.d.	outside diameter; overflow drain	vert	vertical(ly)
conc	concrete	galv	galvanized	o.h.	opposite hand	vct	vinyl composition tile
cont	continuous; continue(d)	ga	gauge; gage	ohg	overhang	vwc	vinyl wall covering
corr	corrugated	g.c.	general contractor	opg	opening	vwb	vinyl wall base
cpt	carpet	g.f.r.c.	glass fiber reinforced concrete	opp	opposite	W	west
crs	course(s)	gl	glass	pcc	precast concrete	w/	with
csk	countersink	gr	grade	pfb	prefabricated	w.c.	water closet
c.t.	ceramic tile	g.r.c.	glass reinforced concrete	pl	plate; property line	wd	wood
cuh	cabinet unit heater	g.r.g.	glass reinforced gypsum	plam	plastic laminate	w.h.	wall hydrant
cy	cubic yard	gwb	gypsum wall board	plywd	plywood	wp	waterproof
dbl	double	gyp	gypsum	pnl	panel	wwf	welded wire fabric
dept	department	hc	hollow core	pr	pair		
d.f.	drinking fountain	hdw	hardware	psf	pounds per square foot		



1 T100 LIFE SAFETY PLAN
3/16" = 1'-0"

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. C20213120
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
PAUL
EDWARD
TAYLOR
0915052
REGISTERED ARCHITECT

Paul Edward Taylor, License # 0915052
Expiration Date 12/31/2021

BIALOSKY
CLEVELAND

6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No: 1511.800
Drawn / Checked: RR/RP+PT

Issue: Permit 06.30.2021
Bid 07.16.2021

Titlesheet & Life Safety Plan

T100

Copyright © 2021 Bialosky + Partners Architects

7/13/21 I:\15-11 Tri-C Metro Campus Center\1511.800 West Food Pantry\8 DWGS\Architecture\T100_Title_Sheet.dwg

DEMOLITION GENERAL NOTES:

A. Field verify all existing conditions prior to demolition.

B. Notify architect immediately upon discovery of plan discrepancies that impact demolition. Do not proceed with work until discrepancies are resolved by the architect.

C. Coordinate demolition and removal of equipment with mechanical and electrical drawings. Penetrations from equipment removal in existing walls, floors or ceilings to remain shall be patched to match existing finish.

D. Patch existing walls and column surrounds where demolished construction intersects existing construction to remain.

E. All existing construction to remain shall be protected.

F. Patch and level floors at demolished partitions. Provide level surface and prep floor for scheduled finish.

G. See specifications for the HazMat testing and report that was provided for the area of construction. Note the existence of trace ACM material within the existing drywall material. Contractor is responsible for the appropriate protection of these items and workers per applicable regulations. Where designated to be disturbed, removed and/or disposed, the contractor is responsible for the means and appropriately licensed and/or trained personnel to do so in accordance with applicable regulations, including documentation and reporting.

DEMOLITION LEGEND:

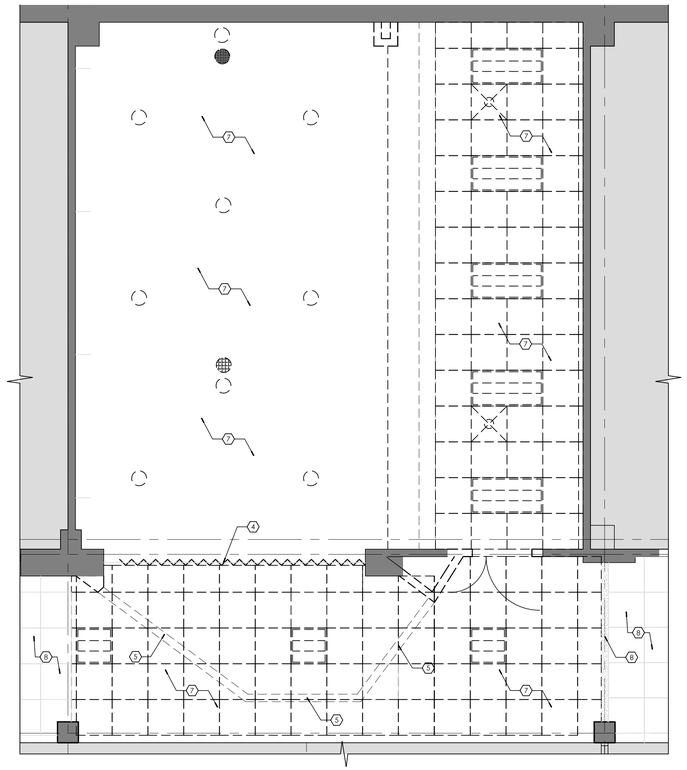
EXISTING WALL TO REMAIN

EXISTING CONSTRUCTION TO BE DEMOLISHED

WORK SCOPE LIMITED TO POSSIBLE ROUTING OF UTILITY SERVICES FOR NEW SPACES. COORDINATE WITH MEP DRAWINGS. ALL EXISTING ASSEMBLIES, MATERIALS AND FINISHES ALTERED TO ACCOMMODATE NEW CONSTRUCTION ARE TO BE PATCHED TO MATCH EXISTING.

DEMO KEY NOTES:

1. Remove existing drywall and studs.
2. Remove wall base, and adhesives. Prep floor for new finishes. Refer to plan 1/A100 for dimensions.
3. Remove wall sconces.
4. Remove gate and overhead track system.
5. Remove existing drywall soffit.
6. Remove existing millwork, wainscot, mirrors and base.
7. Remove existing light fixtures, drywall, and acoustic ceiling tile system.
8. Existing to remain ceiling.
9. Temporary construction barrier to ceiling above- coordinate final location and dimensions with college.
10. Remove existing sink and millwork base cabinet, cap plumbing for new sink.
11. Remove existing door, frame, and hardware.

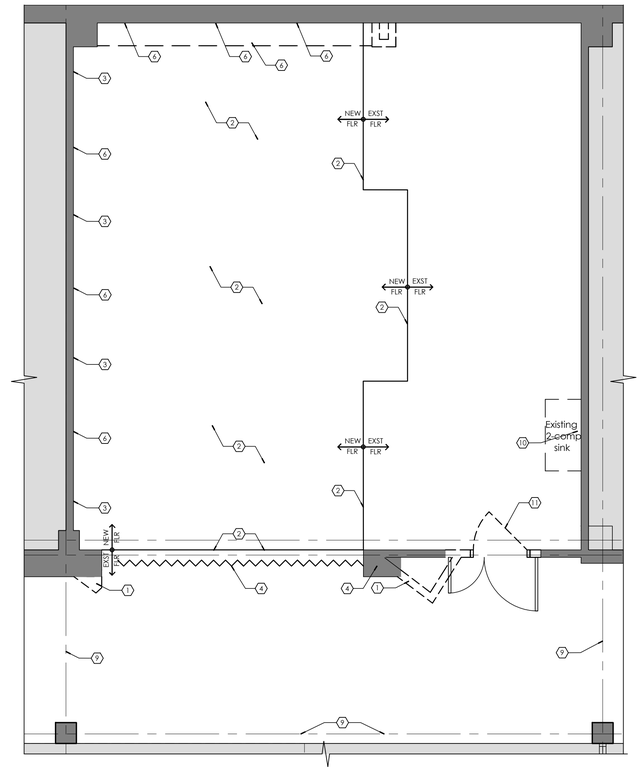


2 D100 DEMOLITION RCP

0 2' 4' 8'

1/4"=1'-0"

N



1 D100 DEMOLITION PLAN

0 2' 4' 8'

1/4"=1'-0"

N

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. C20213120

11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
PAUL
EDWARD
TAYLOR
0915052
REGISTERED ARCHITECT

Paul Edward Taylor, License # 0915052
Expiration Date 12/31/2021

BIALOSKY
CLEVELAND

6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No:		1511.800
Drawn / Checked:		RR/RP+PT
Issue:	Permit	06.30.2021
	Bid	07.16.2021

Demolition RCP & Demolition Plan

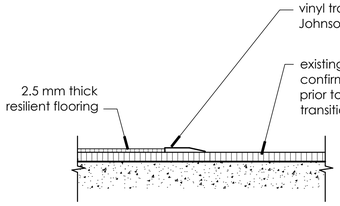
D100

Copyright © 2021 Bialosky + Partners Architects

7/13/21 F:\15-11 TriC Metro Campus Center\1511.800 West Food Pantry\8 DWGS\Architecture\D100_Demo Plan & RCP.dwg

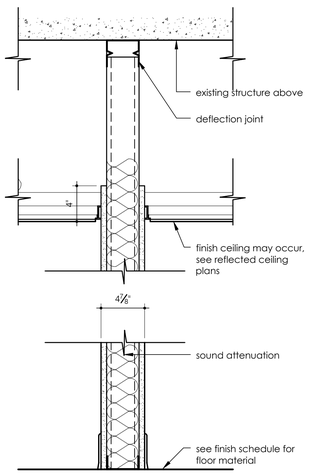
FINISH SELECTIONS

CODE	DESCRIPTION	SPECIFICATION	CODE	DESCRIPTION	SPECIFICATION
ACT-1	Acoustic Ceiling Tile	USG Mars Edge: Square #86185, Size: 2'x2' Grid : 9/16" Centricitee DXT Color: White, grid & tile	RES-2	Resilient Flooring-LVT Accent	Interface Pattern: Drawn Lines Color: A00906 Aquamarine Size: 9.8" x 39.3" Thickness: 4 mm, Install: Ashlar Note: Prepare, clean, and level floor prior to installation per manufacturer requirements.
ACT-2	Acoustic Ceiling Tile	USG Sheetrock Lay In Edge: Square #3270, Size: 2'x4' Grid : 15" x 16" Donn Brand ZXLA Color: White, grid & tile	QZ-1	Quartz	Corian Quartz Color: Bianco Pur Thickness: 3/4"
EXIST-1	Existing Quarry Tile				
EXIST-2	Existing ACT Ceiling		WB-1	Wall Base Rubber	Johnsonite Color: 50 White Length: Coils (do not use 4'-0" lengths) Content: Rubber, Type TP, Group 1
GF-1	Glass Film	Custom pattern. Refer to specifications.			
PT-1	Paint	Sherwin Williams Color: 7006 Extra White	WB-2	Wall Base Rubber	Johnsonite Color: 293 Peacock Length: Coils (do not use 4'-0" lengths) Content: Rubber, Type TP, Group 1
PLAM-1	Plastic Laminate	Formica Color: Finnish Oak 118-59 Finish: Matte			
PLAM-2	Plastic Laminate	Formica Color: Mission White 933-58 Finish: Matte	WB-3	Wall Base Rubber	Johnsonite Color: 40 Black Length: Coils (do not use 4'-0" lengths) Content: Rubber, Type TP, Group 1
RES-1	Resilient Flooring-LVT Field	Interface Pattern: Drawn Lines Color: A00908 Silver Size: 9.8" x 39.3" Thickness: 4 mm Install: Ashlar Note: Prepare, clean, and level floor prior to installation per man. requirements.	WG-1	Wall Graphic	Custom printed vinyl wallcovering. Refer to specifications.
			WP-1	Wall Protection FRP Panels	Marlite Standard FRP Texture: Pebbled, Color:P 100 White *Full height



A ETR TILE-LVT
6"=1'-0"

WALL/PARTITION TYPES



G4 A 1 layer of 5/8" gyp. bd. on both sides of 3 5/8" 20 gage metal studs at 16" O.C. max. with sound attenuation insulation from finish floor to above ceiling vertically. Gyp. bd. from finished floor to 4" above finished ceiling, tape and finish all panel joints smooth.

G4 B 1 layer of 5/8" gyp. bd. on one side of 3 5/8" 20 gage metal studs at 16" O.C. max. Gyp. bd. from finished floor to 4" above finished ceiling, tape and finish all panel joints smooth.

CONTACT INFO.

ACT USG
Morgan Mingus
mmingus@usg.com
440-479-0337

PT 1 Sherwin Williams
Roger Hall
Roger.Hall@sherwin.com
216.224.7509

RES Interface
Katie Hauser
Katie.Hauser@interface.com
330.603.0608

RB 1-2 Johnsonite
Jeff Buttitta
jeff.buttitta@tarkett.com
440.878.9396

WP Marlite
Tim Pinnow
Tpinnow@marlite.com
330.260.7631

CEILING GENERAL NOTES:

1. Follow dimensions as noted on the dwgs. Do not scale dwgs.
2. Notify architect immediately upon discovery of dimensional discrepancies within the drawings. Do not proceed with work until discrepancies are resolved by the architect.
3. Where discrepancies between architectural and engineering drawings exist, the location of all fixtures, grilles, devices, etc. on architectural drawings shall rule.
4. Coordinate all air diffusers and return air grill locations with mechanical drawings.
5. See electrical drawings for all emergency lighting and fire detection and signaling system component locations.
6. Verify all lighting layout dimensions with architect prior to install.
7. All devices to be centered in ceiling tile, u.n.o.

CEILING LEGEND

- New 4" LED downlight
- New pendant fixture
- New 2x2 Light
- New 2x4 Light
- Existing to Remain (ETR)
- +#'-#" Ceiling Height A.F.F.
- ACT-1 New 2'x2' suspended acoustical ceiling system
- ACT-2 New 2'x4' suspended acoustical ceiling system
- Gyp. Bd. Soffit. Paint PT-1.
- Mech. Return Grille
- Mech. Supply Diffuser

FOOD SERVICE EQUIPMENT LEGEND

FURNISHED BY OWNER, INSTALLED BY CONTRACTOR

01- Bottom Mount Glass Door Display Refrigerator; Qty 2

02- Bottom Mount Glass Door Display Freezer; Qty 2

03- 24 x 36 Mobile Shelving System; Qty 5

04- Digital Scale; Qty 1

05- 30 x 48 SS Mobile Work Table W/ Bottom Shelf; Qty 5

06- Dry erase / Tack-able Wall Board, Qty. TBD

PLAN GENERAL NOTES:

1. Field verify all existing conditions prior to beginning construction.
2. Notify architect immediately of any discrepancies between actual existing conditions and the construction documents.
3. Construction shall in no way interfere with the day to day operation of the remainder of the building.
4. Provide tear away 'L" bead drywall trim at all perpendicular intersections with dissimilar materials and at all exposed edges.
5. Refer to Sheet A101 for Door Schedule
6. Prepare, clean, and level existing flooring substrate for new flooring as required by the installation requirements of the new flooring manufacturer.
7. Wall finish to be PT-1 unless noted otherwise.
8. When floor finish materials transition between rooms, center seam on door, U.N.O.
9. Paint finishes U.N.O.:
   Walls: eggshell
   Ceilings: flat
   HM doors/ frames: semi-gloss
   Misc. Metal: semi-gloss
   "E": Epoxy eggshell

WALL TYPE LEGEND:

- EXISTING WALL TO REMAIN
- NEW WALL CONSTRUCTION

FINISH PLAN GRAPHIC LEGEND:

- FLOOR / BASE / WALL — Floor finish, Wall base, Wall finish
- XX / # — Denotes accent wall finish
- No finish work this area
- (X) Floor transition detail

2 A100 REFLECTED CEILING PLAN
0 2' 4' 8' N
1/4"=1'-0"

1 A100 FLOOR & FINISH PLAN
0 2' 4' 8' N
1/4"=1'-0"

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. C20213120
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
PAUL EDWARD TAYLOR
0915052
REGISTERED ARCHITECT

Paul Edward Taylor, License # 0915052
Expiration Date 12/31/2021

BIALOSKY
CLEVELAND
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No:
Drawn / Checked: RR/RP+PT

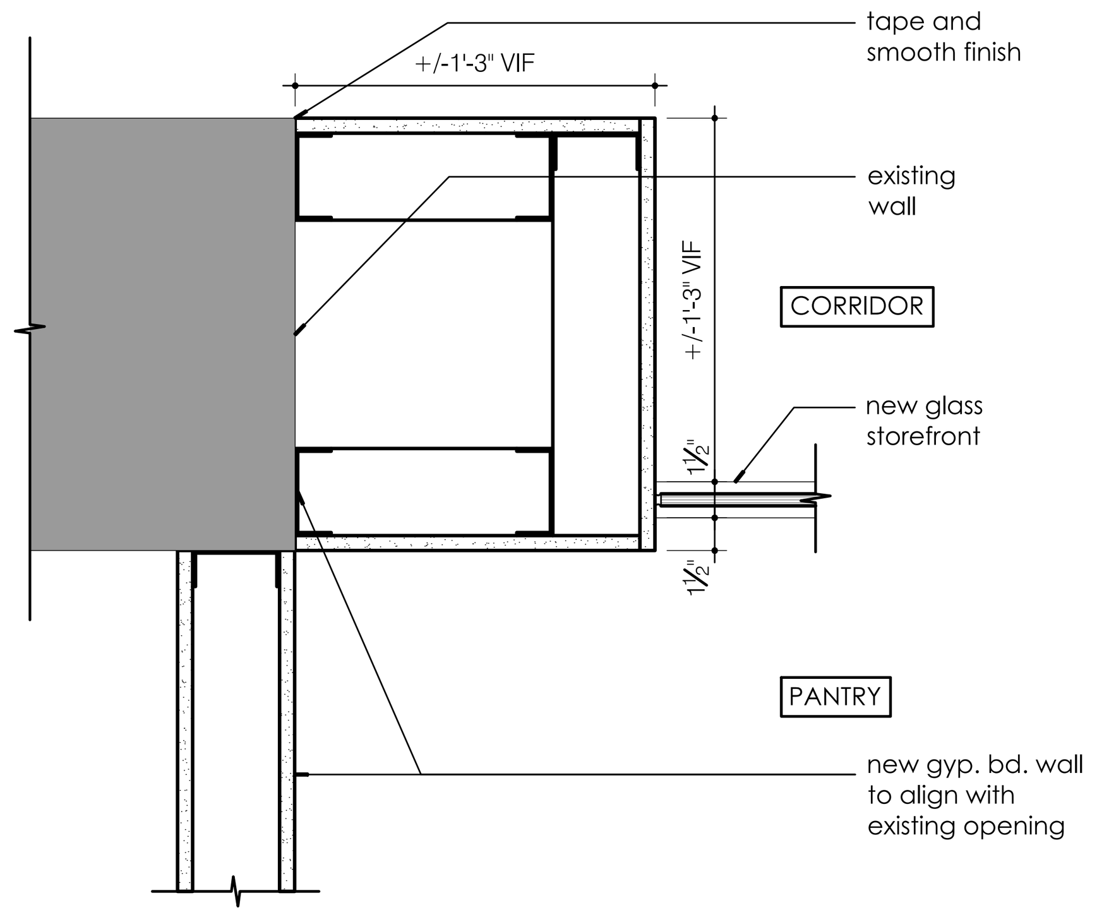
Issue: Permit 06.30.2021
Bid 07.16.2021

Plans & Details

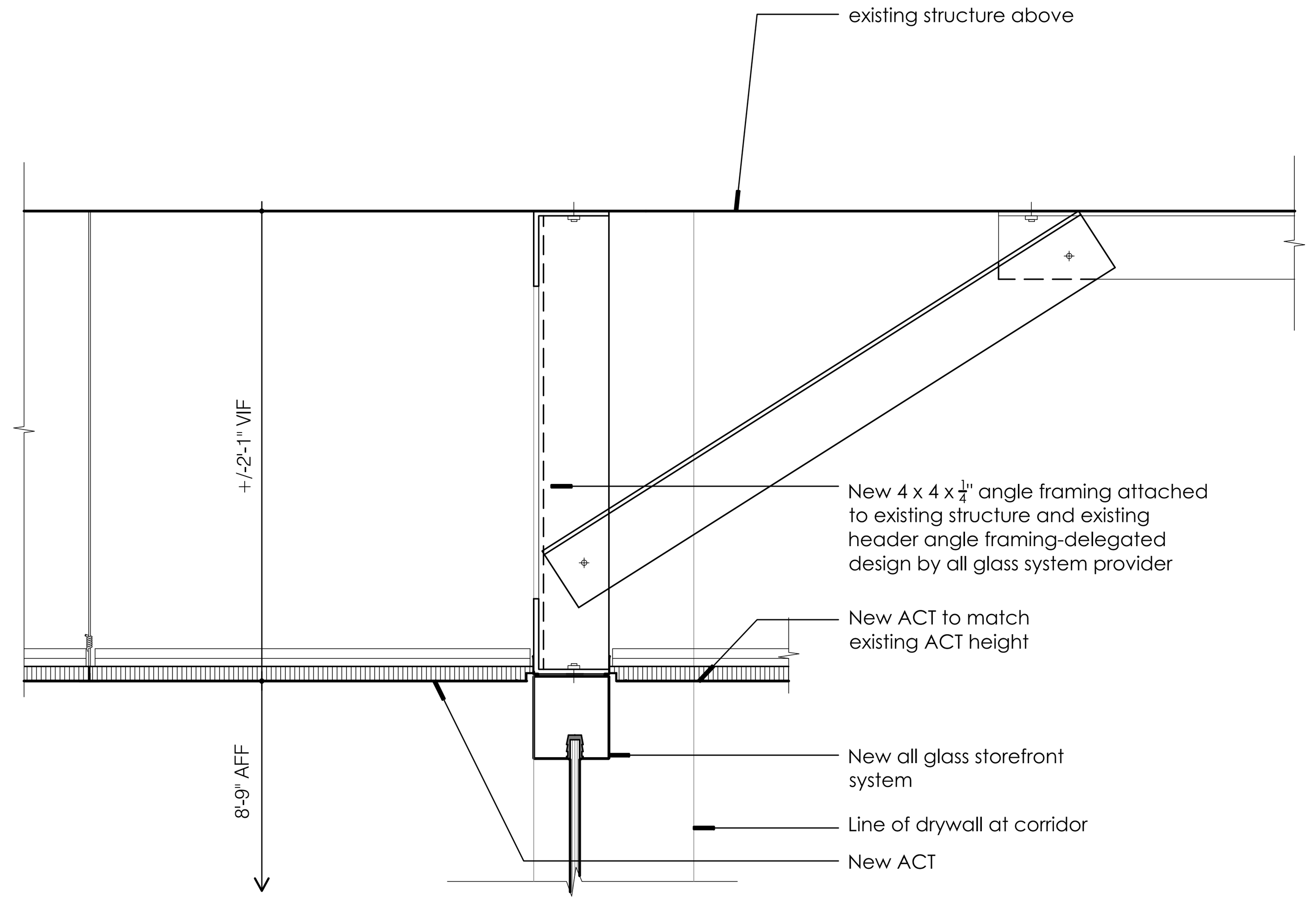
A100

Copyright © 2021 Bialosky + Partners Architects

7/13/21 11:15:11 N:\C-Metro_Campus_Center\1511.800 West Food Pantry\8 DWGS\Architectural\A100_Floor_Plan.dwg



STOREFRONT JAMB
13 PLAN DETAIL
A101
1'-1/2"=1'-0"



ALL GLASS STOREFRONT
12 SECTION HEADER
A101
1'-1/2"=1'-0"

DOOR SCHEDULE

REV	NO.	LOCATION	SIZE	DOOR TYP.	DOOR RTG.	DOOR MATERIAL	FRAME TYP.	FRAME MAT.	FRAME HEAD	FRAME JAMB	FRAME THRESH	HARDW. SET	NOTES
FIRST FLOOR													
	G4C-A	CORRIDOR TO PANTRY	3'-6" X 8'-9" X ½"	A	-	ALUM./GLASS	-	ALUM.	-	-	-	1	1, 2
	G4C-B	PANTRY TO PREP	3'-0" X 8'-0"	B	-	HM	-	HM	-	-	-	2	
	G4C-C	CORRIDOR TO PREP	5'-0" X 8'-0"	C	-	HM	-	HM	-	-	-	3	2

GENERAL DOOR & HARDWARE NOTES:

A. PAINT ALL DOORS AND FRAMES MARKED PT-1 TO MATCH ADJACENT WALL SURFACES.

B. DOOR HARDWARE FINISHES TO BE 'MATTE BLACK' 622/US019 UNLESS NOTED OTHERWISE.

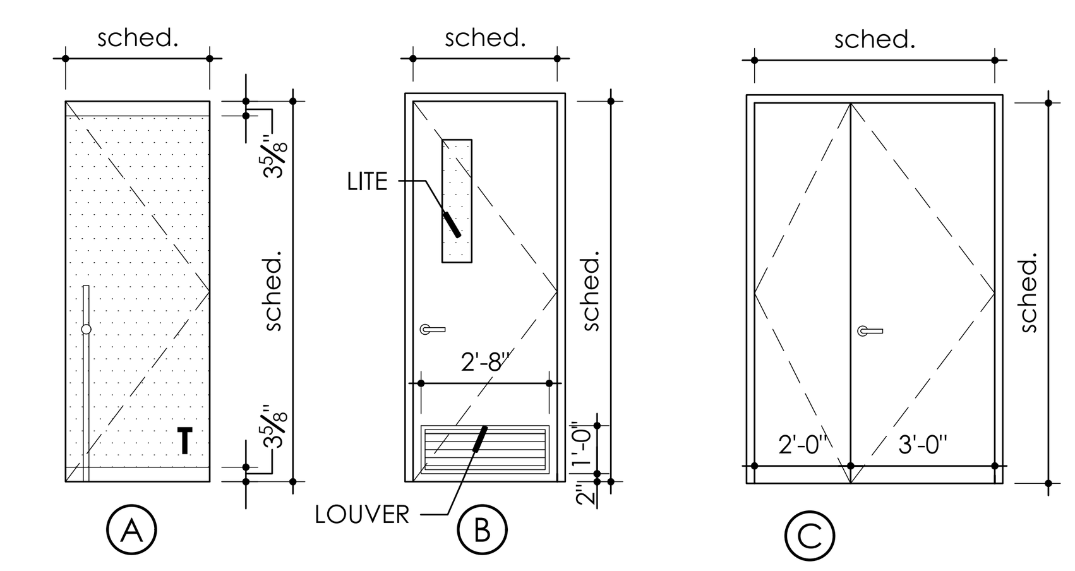
C. ALL DOOR HARDWARE TO CONFORM TO REQUIRED ADA GUIDELINES. EMERGENCY EGRESS (EXIT) DOORS SHALL BE OPERABLE WITHOUT USE OF KEYS, SPECIAL KNOWLEDGE OR EFFORT.

D. PROVIDE ALL HARDWARE NECESSARY TO COMPLETE THE INTENDED FUNCTION FOR EACH OPENING.

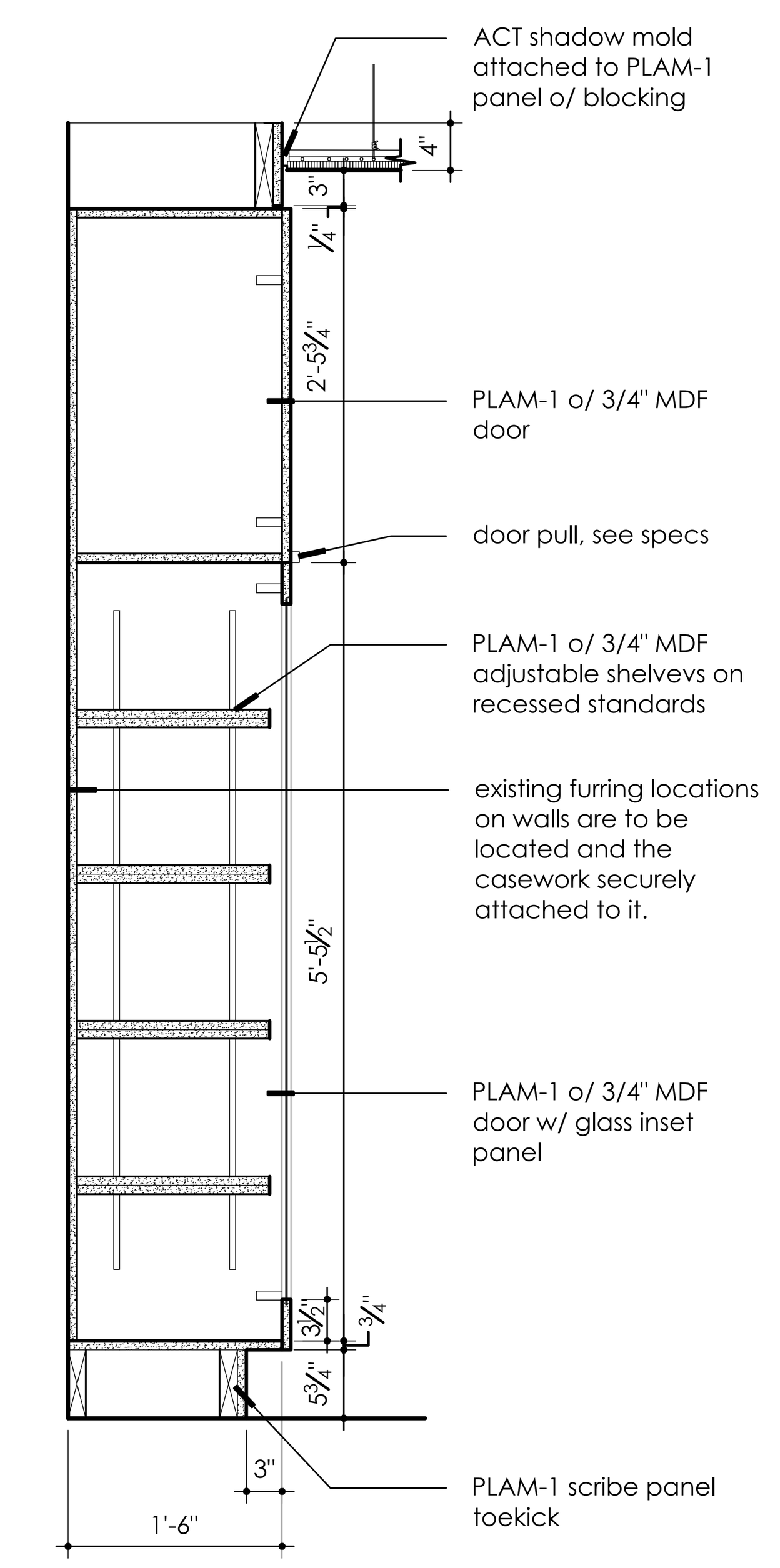
E. ALL SECURED DOORS ARE TO ALWAYS FAIL SAFE IN THE DIRECTION OF EGRESS.

DOOR & HARDWARE REMARKS

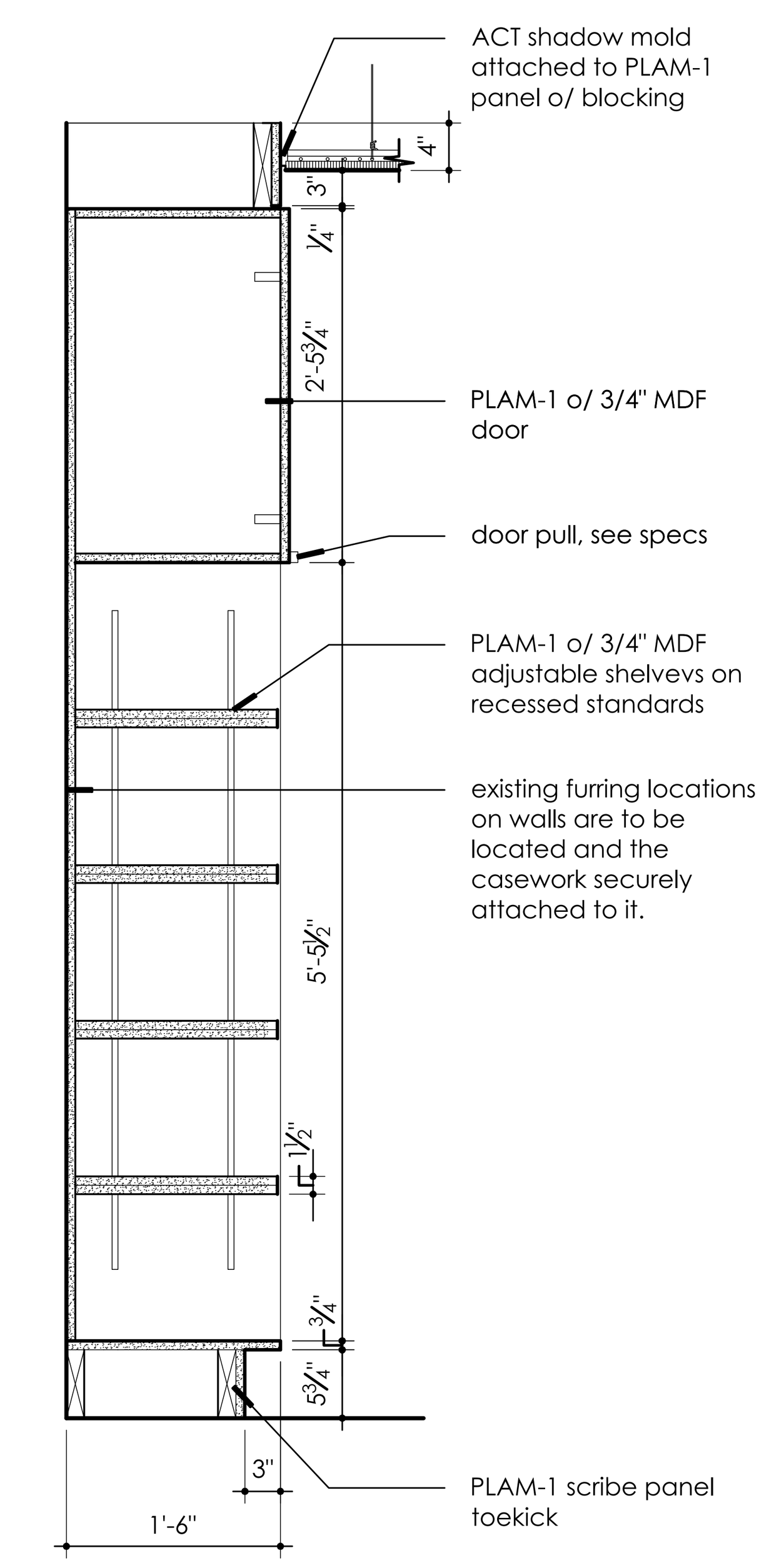
1. SEE DETAIL 12/A101 FOR HEAD CONDITION.
2. CARD READER AT DOOR, COORDINATE ACCESS WITH SECURITY VENDOR 'US COMMUNICATIONS'.



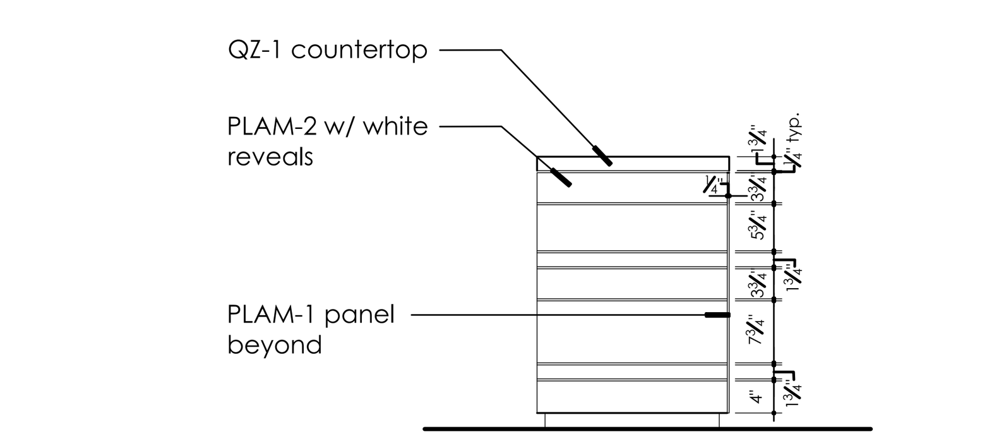
- DOOR TYPES
A101
1/4" = 1'-0"



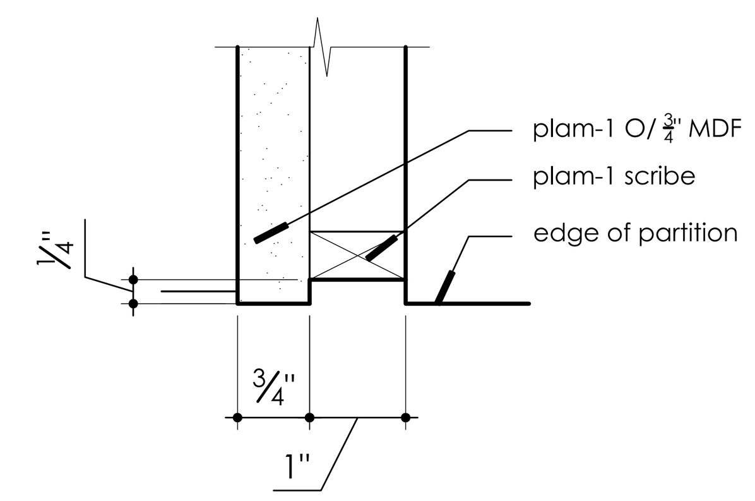
CLOSED SHELVES
9 MILLWORK SECTION
A101
3/4"=1'-0"



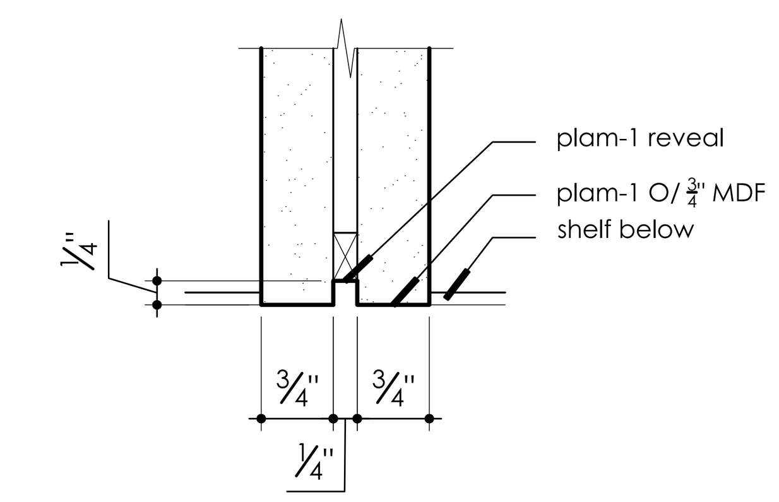
SHELVES
8 MILLWORK SECTION
A101
3/4"=1'-0"



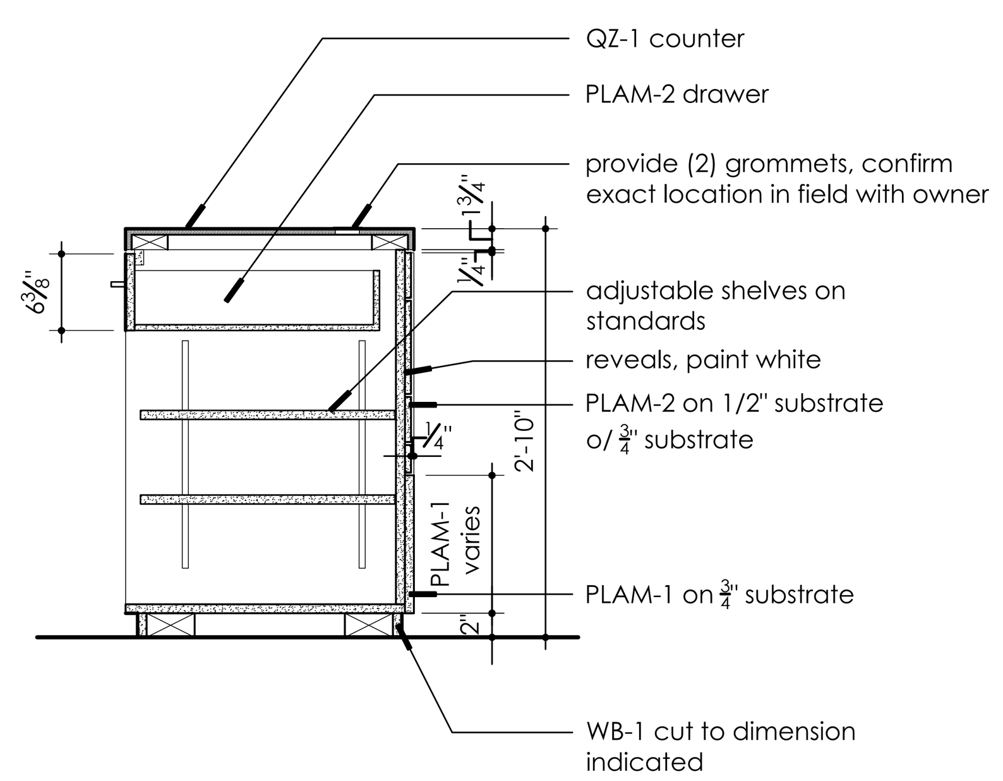
11 MILLWORK ELEVATION
A101
1/2"=1'-0"



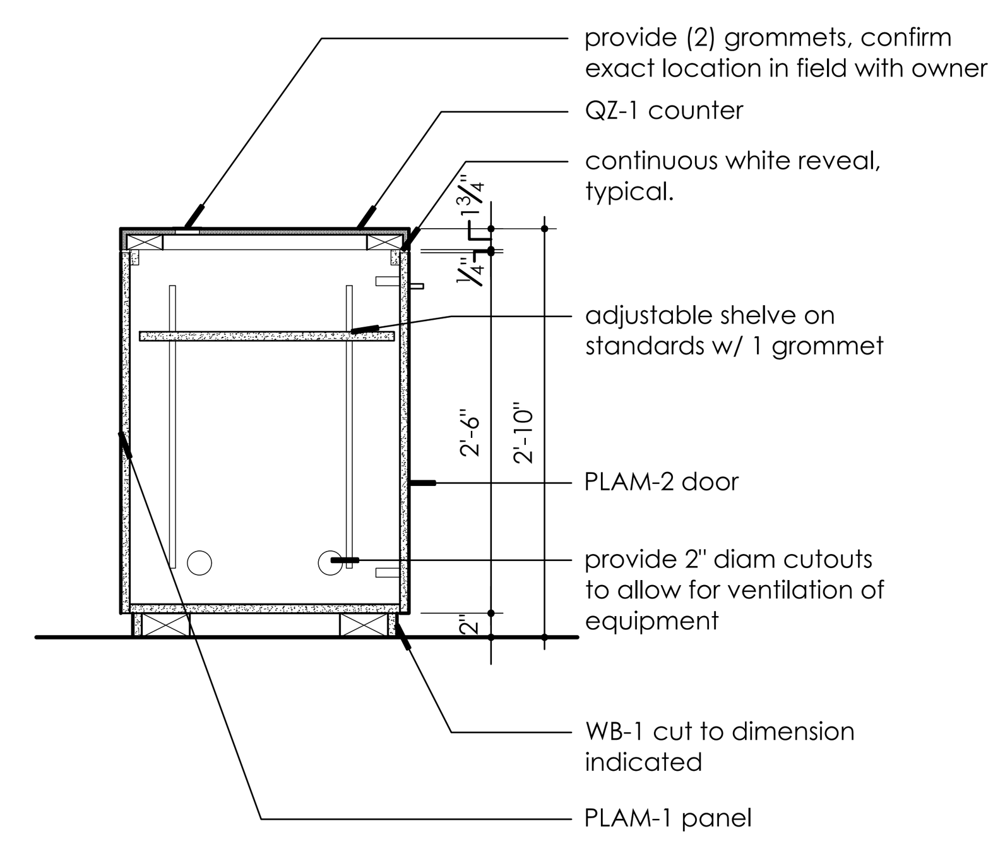
10.2 MILLWORK SECTION
A101
6"=1'-0"



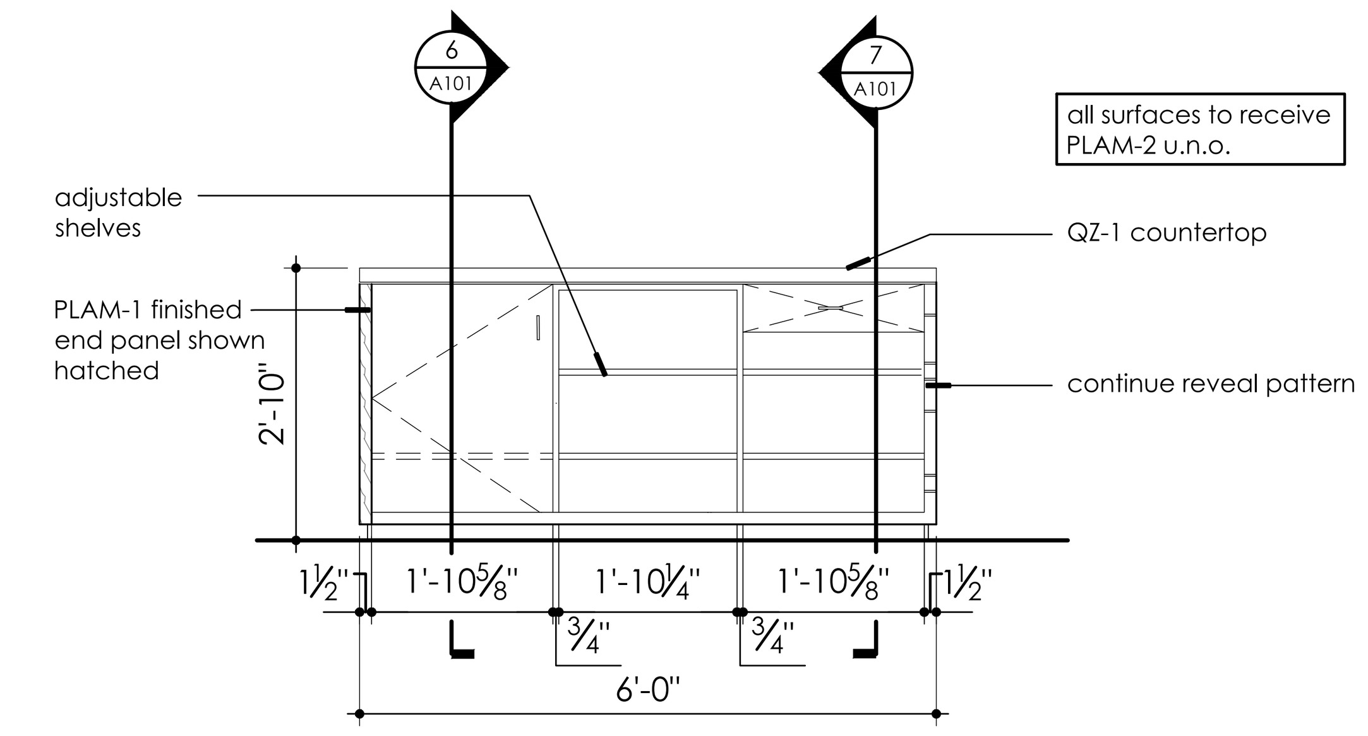
10.1 MILLWORK SECTION
A101
6"=1'-0"



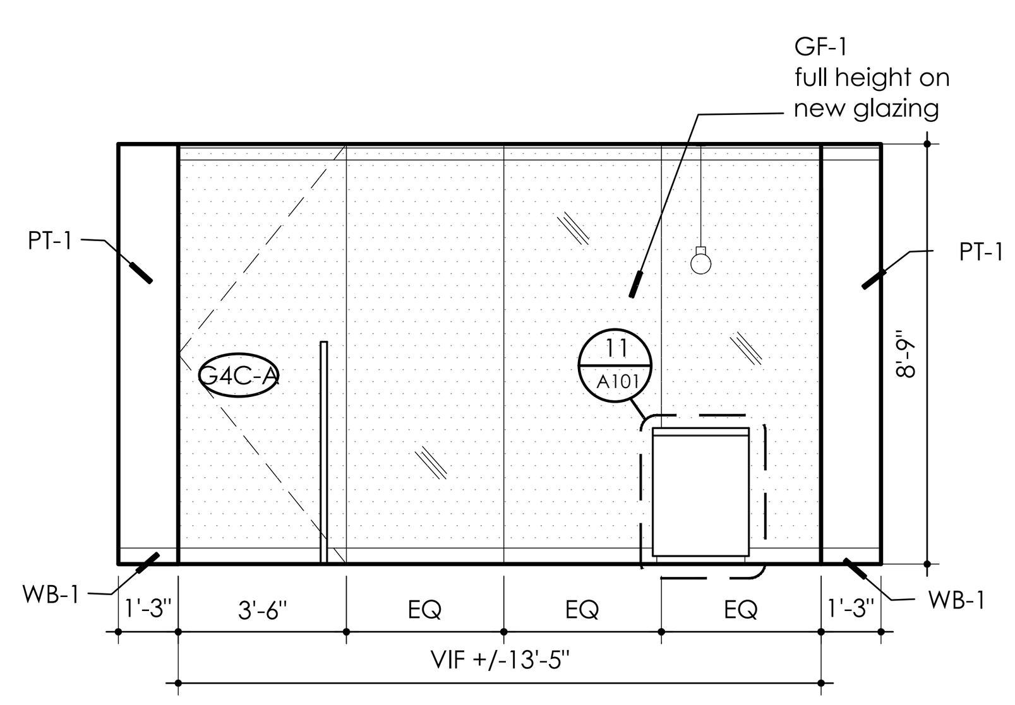
CHECKOUT
7 MILLWORK SECTION
A101
3/4"=1'-0"



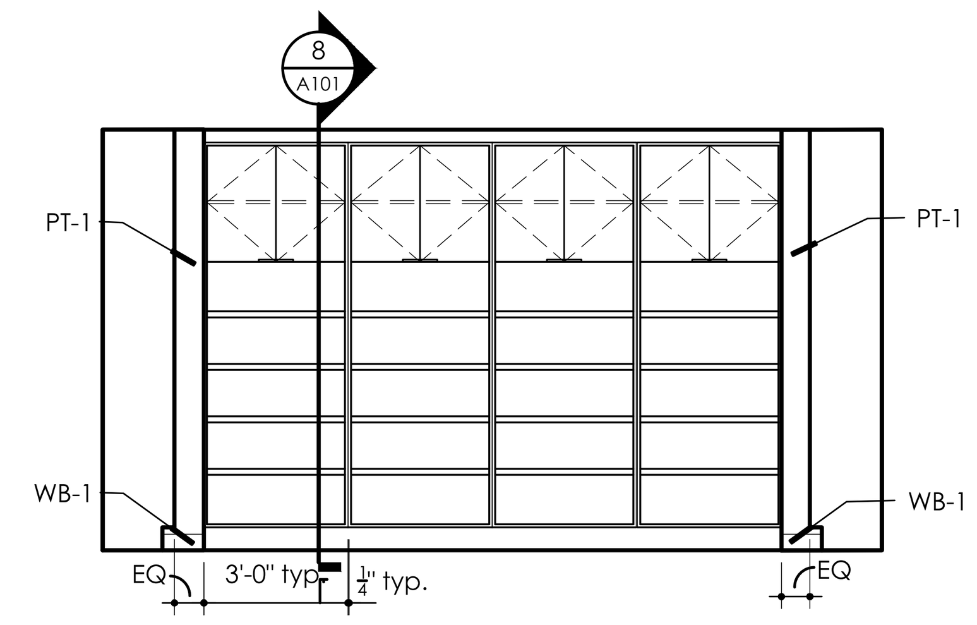
CHECKOUT
6 MILLWORK SECTION
A101
3/4"=1'-0"



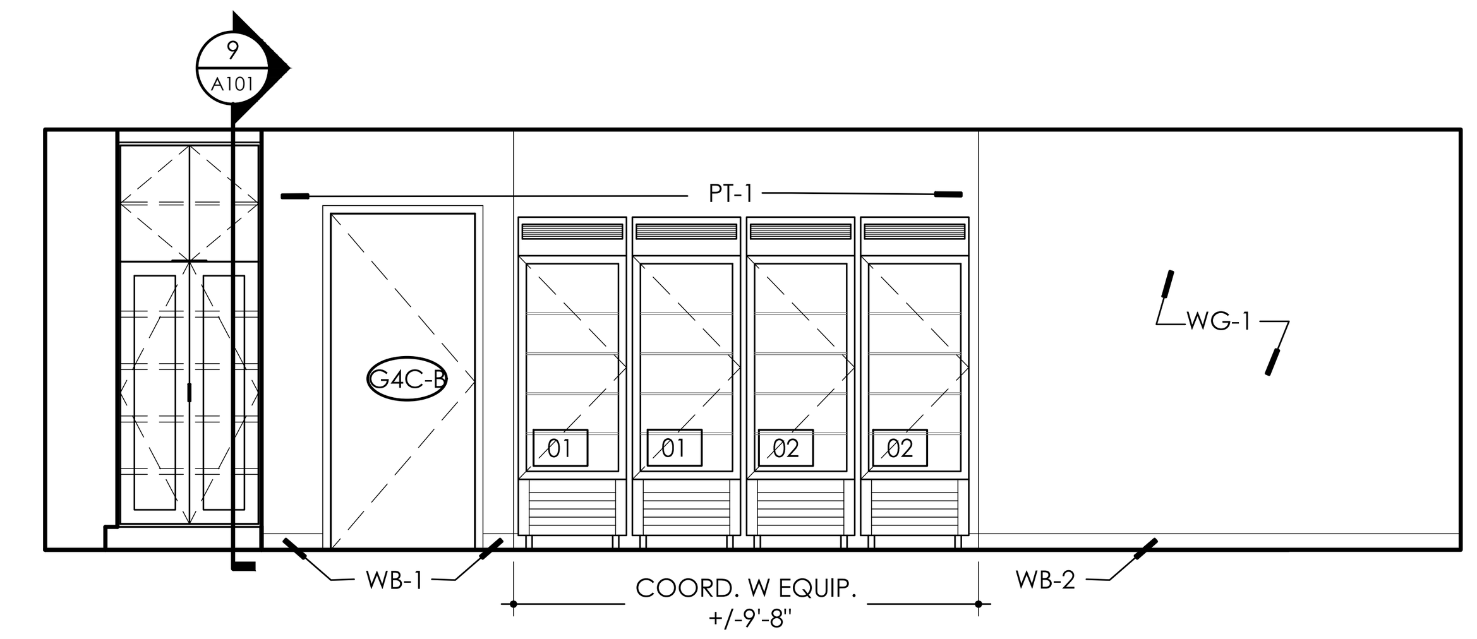
5 MILLWORK ELEVATION
A101
1/2"=1'-0"



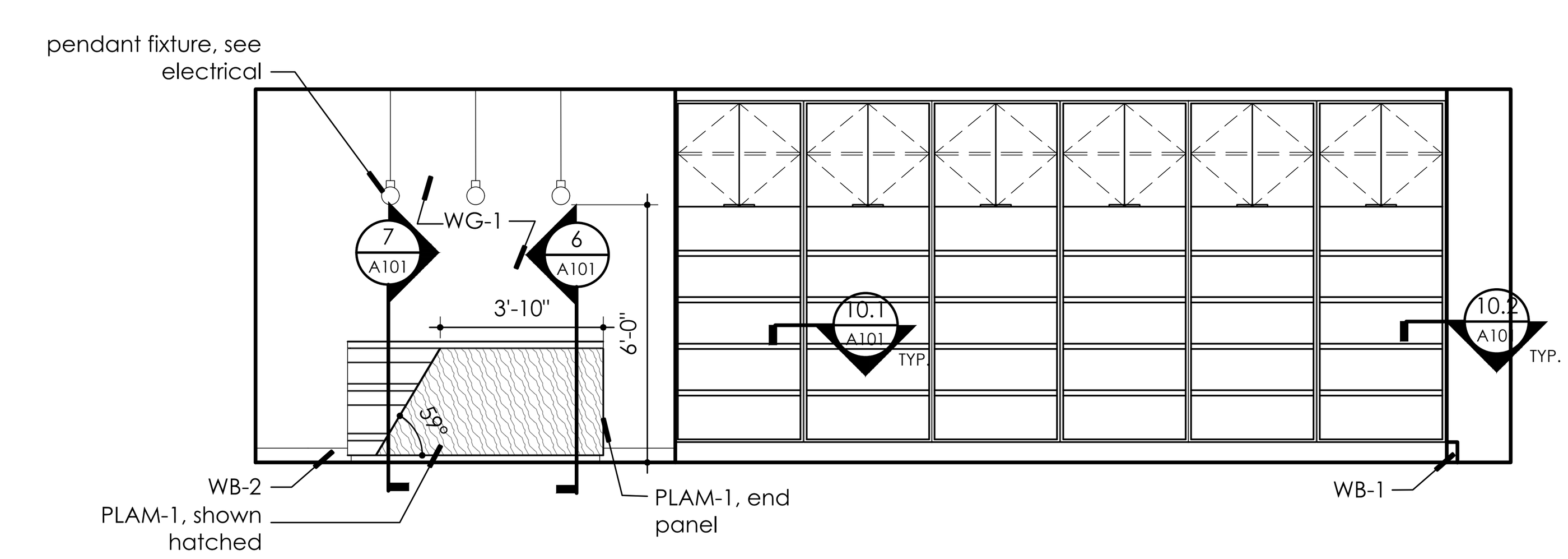
4 ELEVATION
A101
1/4"=1'-0"



3 ELEVATION
A101
1/4"=1'-0"



2 ELEVATION
A101
1/4"=1'-0"



1 ELEVATION
A101
1/4"=1'-0"

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. C20213120
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:
STATE OF OHIO
PAUL EDWARD TAYLOR
0915052
REGISTERED ARCHITECT
Paul Edward Taylor, License # 0915052
Expiration Date 12/31/2021

BIALOSKY
CLEVELAND
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No:
Drawn / Checked: RR/RP+PT

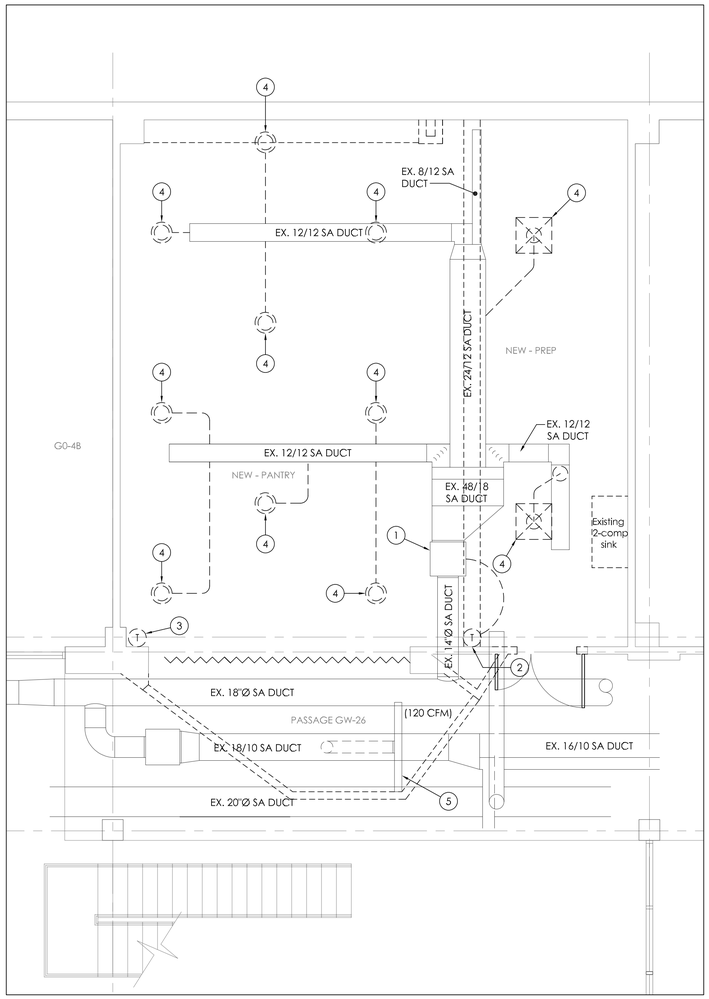
Issue:		
	Permit	06.30.2021
	Bid	07.16.2021

Interior Elevations & Details

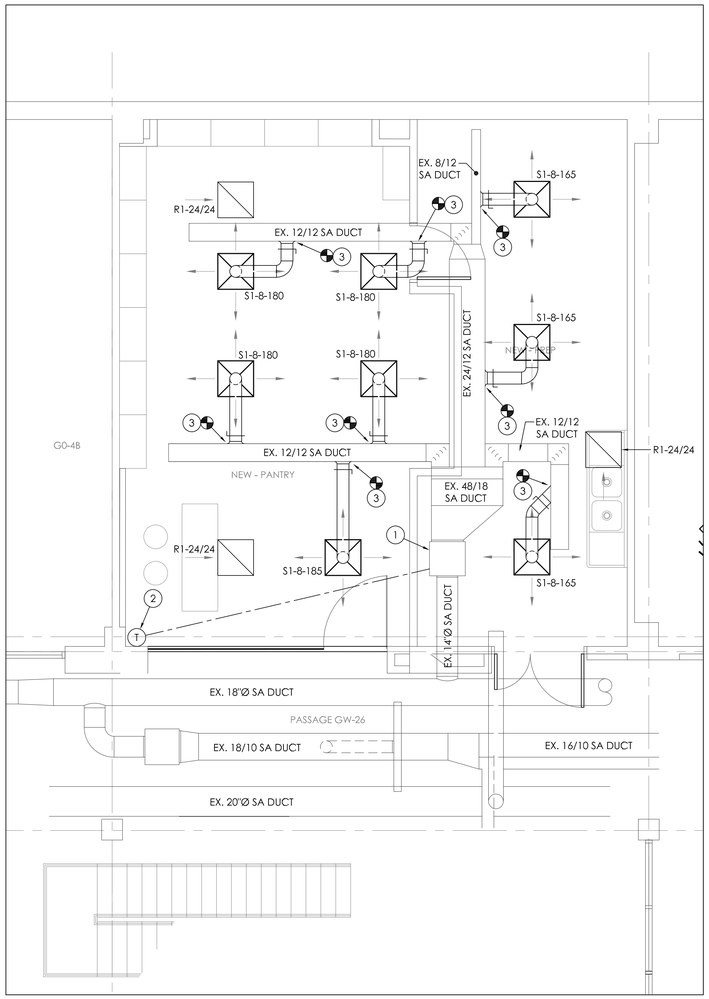
A101

Copyright © 2021 Bialosky + Partners Architects

7/13/21 F:\15-11 Tri-C Metro Campus Center\15-11-800 West Food Pantry\8 DWGS\Architecture\A101_Elevations & Details.dwg



1 M100 MECHANICAL DEMO PLAN
1/4" = 1'- 0"



2 M100 MECHANICAL PLAN
1/4" = 1'- 0"

MECHANICAL DEMO PLAN NOTES:

1. EXISTING TRANE VARITRAC MODEL VCCF-14 (1400 CFM) TO REMAIN.
2. EXISTING THERMOSTAT TO BE REPLACED BY COLLEGE UNDER A SEPARATE CONTRACT. REFER TO MECHANICAL PLAN ON THIS DRAWING FOR NEW LOCATION.
3. CONTRACTOR SHALL VERIFY IF EXISTING THERMOSTAT SHOWN SERVES EXISTING EQUIPMENT. IF THERMOSTAT IS IN OPERATION CONTRACTOR SHALL COORDINATE WITH BUILDING MAINTENANCE DEPARTMENT NEW LOCATION OF THERMOSTAT. IF FOUND TO BE ABANDONED CONTRACTOR SHALL REMOVE AND DISCARD.
4. REMOVE & DISCARD EXISTING CEILING MOUNTED DIFFUSER, CAP SUPPLY AIR BRANCH DUCT AT MAIN. REFER TO MECHANICAL PLAN ON THIS DRAWING FOR NEW AIR DISTRIBUTION THROUGHOUT SPACE.
5. REMOVE & REMOUNT EXISTING CEILING MOUNTED DIFFUSER TO NEW CEILING BEING INSTALLED. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.

MECHANICAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN FIELD PRIOR TO INSTALLATION OF NEW WORK.

MECHANICAL PLAN NOTES:

1. EXISTING TRANE VARITRAC MODEL VCCF-14 (1400 CFM) TO REMAIN.
2. THERMOSTAT CONTROLS EXISTING TRANE VARITRAC BOX.
3. CONNECT NEW 8'Ø SUPPLY AIR BRANCH DUCT TO EXISTING SUPPLY AIR DUCTWORK.

DIFFUSER, REGISTER & GRILLE SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	DESCRIPTION	MATERIAL	FINISH	FRAME TYPE	NC MAX.	REMARKS
S1	PRICE	SPD	24"X24" SQUARE PLAQUE DIFFUSER LAY-IN	STEEL	BY ARCHITECT	LAY-IN	25	1, 3, 4, 5
R1	PRICE	630	24"X24" SQUARE GRILLE LAY-IN	STEEL	BY ARCHITECT	LAY-IN	25	2, 3, 4

REMARKS:
1. TAG MARK (S1-8-180) = (MARK-INLET SIZE-AIRFLOW)
2. TAG MARK (R1-24/24) = (MARK-SIZE)
3. DIFFUSERS, REGISTERS, AND GRILLES SHALL BE TITUS, CARNES, OR EQUAL TO PRICE SPECIFIED.
4. COORDINATE FRAME TYPE WITH ARCHITECT PRIOR TO INSTALLATION.
5. BALANCE DIFFUSER TO AIRFLOW INDICATED.

MECHANICAL DEMO GENERAL NOTES:

1. SEE SPECIFICATIONS FOR THE HAZMAT TESTING AND REPORT THAT WAS PROVIDED FOR THE AREA OF CONSTRUCTION. NOTE THE EXISTENCE OF TRACE ACM MATERIAL WITHIN THE EXISTING OVERHEAD CONCRETE STRUCTURE INSULATION AND ACM PIPING INSULATION JOINTS AND VCT FLOORING AND MASTIC. CONTRACTOR IS RESPONSIBLE FOR THE APPROPRIATE PROTECTION OF THESE ITEMS AND WORKERS PER APPLICABLE REGULATIONS. WHERE DESIGNATED TO BE DISTURBED REMOVED AND/OR DISPOSED, THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND APPROPRIATELY LICENSED AND/OR TRAINED PERSONNEL TO DO SO IN ACCORDANCE WITH THE APPLICABLE REGULATIONS, INCLUDING DOCUMENTATION AND REPORTING.

HVAC SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION
	TURNING VANES
	BALANCING DAMPER
	SUPPLY DUCT
	RETURN DUCT
	MECHANICAL DEMO
	ETR DUCTWORK
	NEW DUCTWORK
	CONNECT TO EXISTING
T	THERMOSTAT
2	INDICATES PLAN NOTES

MECHANICAL SPECIFICATIONS:

SECTION 23 07 00 - HVAC INSULATION

PART 1 GENERAL

1.1 SUBMITTALS
- A. PRODUCT DATA: REQUIRED.

PART 2 PRODUCTS

2.1 DUCTWORK INSULATION
- A. FLEXIBLE GLASS FIBER: FLEXIBLE, NONCOMBUSTIBLE BLANKET WITH VAPOR BARRIER JACKET.
- B. RIGID GLASS FIBER: RIGID, NONCOMBUSTIBLE BLANKET WITH VAPOR BARRIER JACKET.
- C. JACKETS
  1. ALUMINUM JACKET: SHEET, SMOOTH FINISH.
- D. DUCT INSULATION "R" VALUES SHALL BE EQUAL TO OR GREATER THAN REQUIRED BY CODE.
- E. INSULATION SHALL NOT CONTAIN ANY PBDE (POLYBROMINATED DIPHENL ETHERS) FLAME RETARDANTS.
- F. DUCT LINER: FLEXIBLE, NONCOMBUSTIBLE BLANKET, COATED ON AIR SIDE.

PART 3 EXECUTION

3.1 INSTALLATION
- A. DUCT LINER: DUCT DIMENSIONS INDICATED ARE NET INSIDE DIMENSIONS; INCREASE DUCT SIZE TO ALLOW FOR INSULATION THICKNESS.

3.2 SCHEDULES

		INSULATION THICKNESS INCH
A.	DUCTWORK INSULATION	
1.	FLEXIBLE GLASS FIBER	
	SUPPLY DUCTS	1.5
	RETURN DUCTS	1.5
2.	RIGID GLASS FIBER	
	OUTSIDE AIR INTAKE DUCTS	1.5
3.	DUCT LINER	
	SUPPLY DUCTS	1.0
	RETURN DUCTS	0.5

SECTION 23 30 00 – HVAC AIR DISTRIBUTION

PART 1 GENERAL

1.1 SUBMITTALS
- A. PRODUCT DATA: REQUIRED.

PART 2 PRODUCTS

2.1 DUCTWORK
- A. MATERIALS
  1. STEEL DUCTS: GALVANIZED STEEL SHEET, LOCK-FORMING QUALITY.
  2. FLEXIBLE DUCTS: FABRIC SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE OR FLAT STEEL BANDS.
- B. METAL DUCTWORK
  1. FABRICATE AND SUPPORT IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
  2. CONSTRUCT T'S, BENDS, AND ELBOWS WITH RADIUS OF 1-1/2 TIMES WIDTH OF DUCT ON CENTER LINE OR PROVIDE TURNING VANES.
  3. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 30 DEGREES DIVERGENCE AND 45 DEGREES CONVERGENCE.
- C. MANUFACTURED DUCTWORK AND FITTINGS
  1. MANUFACTURE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE. FURNISH DUCT MATERIAL, GAGES, REINFORCING, AND SEALING FOR OPERATING PRESSURES AS INDICATED ON DRAWINGS.

2.2 DUCT ACCESSORIES
- A. VOLUME CONTROL DAMPERS
  1. FABRICATION: SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
  2. SINGLE BLADE DAMPERS: FABRICATE FOR DUCT SIZES TO 12 X 30 INCH.
  3. QUADRANTS: PROVIDE LOCKING, INDICATING REGULATORS ON DAMPERS.
- B. FLEXIBLE DUCT CONNECTIONS: UL LISTED FIRE-RETARDANT NEOPRENE COATED WOVEN GLASS FIBER FABRIC TO NFPA 90A, APPROXIMATELY 3 INCHES WIDE, CRIMPED INTO METAL EDGING STRIP.
- C. DUCT ACCESS DOORS
  1. FABRICATE IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE.
  2. ACCESS DOORS WITH SHEET METAL SCREW FASTENERS ARE NOT ACCEPTABLE.

2.3 GRILLES, REGISTERS, AND DIFFUSERS
- A. MANUFACTURER: TITUS OR SIMILAR BY ANEMOSTAT, KRUEGER, E. H. PRICE COMPANY OR NAILOR-HART.
- B. GENERAL: GRILLE, REGISTER, AND DIFFUSER INFORMATION MARK, MODEL NUMBER, TYPE, SIZE, FINISH, AND ACCESSORY ITEMS ARE INDICATED IN SCHEDULE. LOCATIONS, TYPE, CFM, AND DIRECTIONS OF THROW (WHERE APPLICABLE) ARE INDICATED ON DRAWINGS.
- C. DEFINITIONS: TERMS USED FOR GRILLES, REGISTERS, AND DIFFUSERS ARE AS FOLLOWS:
  1. GRILLES: SAME STYLE AS REGISTERS BUT WITHOUT DAMPER.
  2. REGISTERS: ITEMS LABELED AS REGISTERS ARE TO BE FURNISHED WITH OPPOSED BLADE DAMPERS.
- D. FINISH: FURNISH GRILLES, REGISTERS AND DIFFUSERS WITH FACTORY APPLIED OFF-WHITE FINISH UNLESS NOTED OTHERWISE.

PART 3 EXECUTION

3.1 INSTALLATION
- A. CONNECT DIFFUSERS TO LOW PRESSURE DUCTS WITH 5 FEET MAXIMUM LENGTH OF FLEXIBLE DUCT.
- B. INSTALL FLEXIBLE CONNECTIONS IMMEDIATELY ADJACENT TO EQUIPMENT IN DUCTS ASSOCIATED WITH FANS AND MOTORIZED EQUIPMENT.
- C. INSTALL DUCT ACCESS DOORS FOR INSPECTION AND CLEANING BEFORE AND AFTER FILTERS, COILS, FANS, AUTOMATIC DAMPERS, AND AT FIRE DAMPERS.
- D. CHECK LOCATION OF AIR OUTLETS AND INLETS AND MAKE NECESSARY ADJUSTMENTS IN POSITION TO CONFORM WITH ARCHITECTURAL FEATURES, SYMMETRY, AND LIGHTING ARRANGEMENT.
- E. PROVIDE BALANCING DAMPERS ON DUCT TAKE-OFF TO DIFFUSERS, AND GRILLES AND REGISTERS.
- F. PAINT DUCTWORK VISIBLE BEHIND AIR OUTLETS AND INLETS MATTE BLACK.

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
MICHAEL J. HUSTON
E-76201
REGISTERED PROFESSIONAL ENGINEER

BIALOSKY
CLEVELAND
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No: 15-11.800
Drawn / Checked: JD/MH

Issue:
Permit	06.30.2021
Bid	07.16.2021

MECHANICAL PLANS

M100

Copyright © 2020 Bialosky + Partners Architects

7/13/2021 T:\15-11 TriC Metro Campus Center\1511.800 West Food Pantry\3 DWGS\Mechanical\1511.800 West Food Pantry M100.dwg

PLUMBING SYMBOL LEGEND

SAN	SANITARY - ABOVE GROUND
SAN	SANITARY - UNDERGROUND
V	VENT LINE
CW	DOMESTIC COLD WATER
HW	DOMESTIC HOT WATER
CW	EXISTING DOMESTIC HOT WATER
HW	EXISTING DOMESTIC HOT WATER
SAN	EXISTING SANITARY - UNDERGROUND
F	FIRE PROTECTION WATER LINE
	GATE VALVE
WCO	WALL CLEANOUT
CO	FLOOR CLEANOUT
DP, DN	ELBOW DOWN OR DROP

PLUMBING ABBREVIATIONS

CO	CLEANOUT
CLG.	CEILING
DWG	DRAWING
FD	FLOOR DRAIN
FS	FLOOR SINK
PC	PLUMBING CONTRACTOR

FIRE SUPPRESSION NOTES:

1. EXISTING SPACE IS PRESENTLY SPRINKLERED. CERTIFIED SPRINKLER CONTRACTOR AND OHIO CERTIFIED SPRINKLER DESIGNER SHALL MODIFY AND ALTER EXISTING SPRINKLER SYSTEM IN AREAS THAT ARE ALTERED WITH NEW SPACE LAYOUT.
2. WORK SHALL INCLUDE ALL LABOR AND MATERIALS AND SERVICES NECESSARY TO FURNISH, INSTALL AND MODIFY EXISTING SPRINKLER SYSTEM, INCLUDING PIPING, SPRINKLER HEADS AND ALL ACCESSORIES CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF EXISTING HEAD, AND BRANCH PIPE SIZES, AND OTHER INFORMATION NECESSARY TO COMPLETE THE DELEGATED DESIGN AND WORK SCOPE.
3. THE SPRINKLER CONTRACTOR SHALL PREPARE DETAILED DRAWINGS OF COMPLETE SPRINKLER SYSTEM FOR THIS PROJECT AND SUBMIT FOR REVIEW BY THE OWNER AND ARCHITECT. THE ARCHITECT WILL SUBMIT TO THE STATE OF OHIO FOR REVIEW AFTER OTHER REVIEWS ARE COMPLETE. THE ENTIRE OF COMPLETE SPRINKLER SYSTEM FOR THIS PROJECT. THE ENTIRE SPRINKLER SYSTEM SHALL BE HYDRAULIC DESIGNED AND SHALL BE MADE IN FULL ACCORDANCE WITH LATEST RULES AND REGULATIONS OF THE STATE OF OHIO, ALL RECOMMENDATIONS OF N.F.P.A. BULLETIN #13 & BULLETIN #14, AND FM GLOBAL.
4. PLUMBING AND SPRINKLER CONTRACTORS SHALL COORDINATE ROUTING AND ELEVATIONS OF ALL PIPING AND ACCESSORIES WITH OTHER CONTRACTORS.

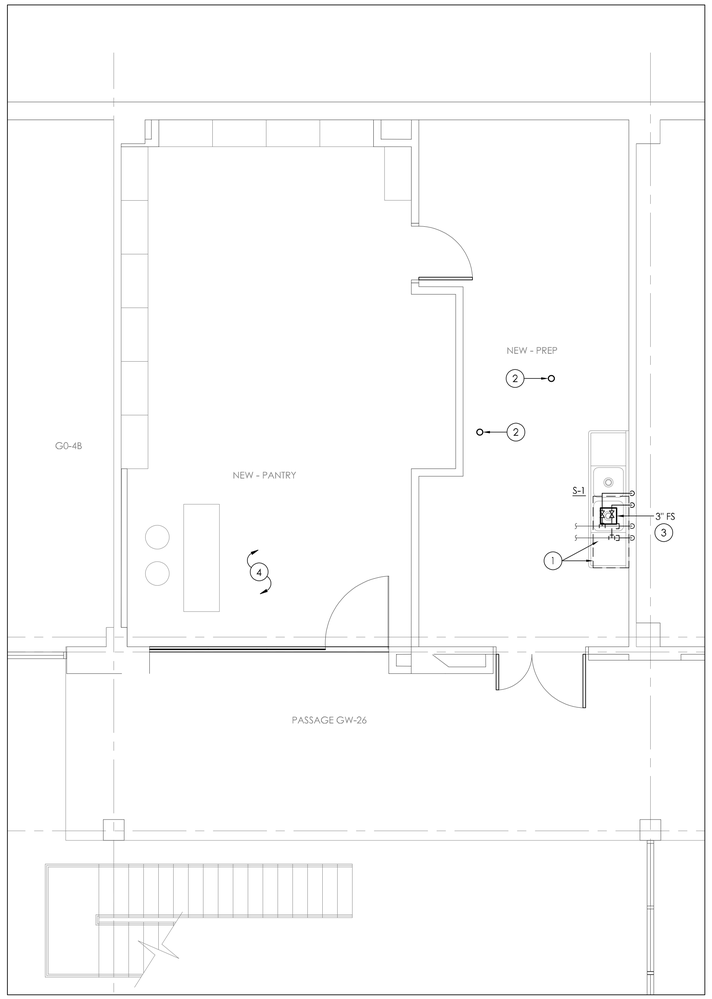
5. WORK SCOPE:

   A. NEW PANTRY AND NEW PREP: REMOVE EXISTING HEADS AND PROVIDE NEW CONCEALED HEADS DESIGN AND PLACED TO ACCOMMODATE NEW LAYOUT.

   B. THE EXISTING SYSTEM US AB EXTENSION OF THE FORMER BOOKSTORE SPACE TO THE WEST WITH THE MAIN LINE FEEDING THROUGH THE SOUTH RECEIVING 081 SPACE.

GENERAL PLUMBING NOTES:

1. PLUMBING CONTRACTOR TO FIELD VERIFY EXACT LOCATION & SIZE OF EXISTING UTILITIES INCLUDING SANITARY SEWER, DOMESTIC WATER AND VENT PIPING, FOR SANITARY AND STORM SEWER, P.C. SHALL FIELD VERIFY EXACT LOCATION, SIZE, INVERT ELEVATION & DIRECTION OF FLOW PRIOR TO MAKING ANY NEW CONNECTIONS. PRIOR TO CONSTRUCTION, ANY DEFICIENCIES FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE COLLEGE AND ARCHITECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR FAILURE TO OBTAIN THIS INFORMATION.
2. IT SHALL BE THE RESPONSIBILITY OF THIS PLUMBING CONTRACTOR TO CAREFULLY COORDINATE HIS WORK WITH THAT OF ALL AFFECTED TRADES & RELATED CONTRACTORS INCLUDING (BUT NOT LIMITED TO) ELECTRICAL, MECHANICAL (HVAC), STRUCTURAL, ARCHITECTURAL, SPRINKLER AND ANY GENERAL TRADES TO AVOID CONFLICTS WITH (BUT NOT LIMITED TO) DUCTWORK, LIGHTING, ELECTRICAL PANELS & DEVICES, SPRINKLER PIPING, STRUCTURAL BEAMS & WALLS AND ANY OTHER EQUIPMENT. REPORT ANY DISCREPANCIES BACK TO THE ARCHITECT AND COLLEGE.
3. IN AREAS OF NEW CONSTRUCTION, P.C. SHALL REMOVE & RELOCATE AND OFF-SET IF REQUIRED ANY EXISTING PIPING INCLUDING (BUT NOT LIMITED TO) DOMESTIC WATER, VENT, GAS, SPRINKLER, SPRINKLER HEADS, VALVES, SANITARY PIPING & STACKS, STORM PIPING & DOWNSPOUTS AND RE-CONNECT TO EXISTING PIPING. THIS REQUIREMENT APPLIES TO ANY SITUATION THAT MAY BE ENCOUNTERED DURING CONSTRUCTION OR DEMOLITION, EVEN THOUGH IT MAY NOT BE SHOWN ON THE DRAWINGS. P.C. SHALL FIELD VERIFY EXACT CONDITIONS PRIOR TO WORK. ALSO REFER TO GENERAL NOTE 1 ON THIS DRAWING.
4. REMOVE & CAP ANY UN-USED EXISTING PIPING (FLUSH) WITH FLOOR, ABOVE CEILING OR IN WALL INCLUDING (BUT NOT LIMITED TO) SANITARY/WASTE, STORM, GAS, COLD & HOT WATER & VENT PIPING. ALSO REFER TO GENERAL NOTE 1 ON THIS DRAWING.
5. DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL EXCEPT THAT, IN WAY OF STRUCTURAL DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
6. ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE OHIO PLUMBING CODE & ALL APPLICABLE LOCAL CODES.
7. ANY INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE OWNER'S REPRESENTATIVE, AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
8. ALL PIPING PENETRATING CEILINGS AND WALLS SHALL BE INSTALLED WITH CHROME PLATED ESCUTCHEONS AT THE PENETRATION. ALL PIPING PENETRATING EXTERIOR WALLS AND ROOFS SHALL BE FLASHED IN AN APPROVED MANNER AND SHALL BE SEALED WEATHERTIGHT. PIPING PENETRATING RATED PARTITIONS SHALL BE PROTECTED AS REQUIRED BY LOCAL CODE AUTHORITY.
9. MANUFACTURERS' MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
10. PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
11. ALL PIPING ABOVE GRADE SHALL BE PROPERLY SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE.
12. CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN HEREIN.
13. ALL PLUMBING EQUIPMENT, PIPING, INSULATION, ETC., INSTALLED IN HVAC PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY. DO NOT USE "PVC" PIPING IN AREAS WHERE CEILING SPACES ARE USED FOR RETURN-AIR PLENUM. CAST IRON PIPING & FITTINGS SHALL BE USED IN AREAS WHERE CEILING SPACES ARE USED FOR RETURN-AIR PLENUM.
14. PROVIDE SHUTOFF VALVES ON ALL BRANCH PIPING AND ON ALL SUPPLIES TO INDIVIDUAL FIXTURES AND EQUIPMENT. PROVIDE BALL VALVES ON ALL WATER MAIN BRANCHES IN CORRIDORS AND WHERE INDICATED ON DRAWINGS. (NIBCO S-595-Y)
15. ALL SLEEVES THROUGH CONCRETE FLOORS AND ALL CORE DRILLING OF CONCRETE FLOORS AND WALLS SHALL BE BY THIS CONTRACTOR.
16. WATER HAMMER PROTECTION SHALL BE PROVIDED WHERE REQUIRED PER OHIO PLUMBING CODE 604.9.
17. NEW OR REPAIRED POTABLE WATER SUPPLY SYSTEMS SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO USE. PER OHIO PLUMBING CODE 610.
18. PLUMBING SYSTEM PIPING SHALL BE TESTED AND INSPECTED PER OHIO PLUMBING CODE SECTION 312. REFERENCE APC APPENDIX B.
19. ALL PLUMBING PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH OHIO PLUMBING CODE SECTION 308.
20. WATER PIPING JOINTS BETWEEN DIFFERENT MATERIALS SHALL BE PER OHIO PLUMBING CODE SECTION 605.22.
21. FIELD VERIFY EXACT LOCATION OF ALL FIXTURES, EQUIPMENT AND DRAINS WITH ARCHITECT PRIOR TO ROUGH-IN.
22. ALL FLOOR DRAINS SHALL BE INSTALLED IN LOW POINTS OF FLOORS TO INSURE PROPER DRAINAGE.
23. GENERAL DOMESTIC WATER PRESSURE IN BUILDING SHALL NOT EXCEED 80 PSI STATIC PER OHIO PLUMBING CODE SECTION 604.8 P.C. SHALL FURNISH & INSTALL PRESSURE REDUCING VALVE WITH STRAINER JUST DOWN STREAM OF BUILDING MAIN ISOLATION VALVE FOR WATER PRESSURES EXCEEDING 80 PSI AS MANUFACTURED BY WATTS OR APPROVED EQUAL.
24. INSTALL ALL THREADED CLEANOUT PLUGS WITH PIPE DOPE TO ALLOW FOR EASY REMOVAL IN THE FUTURE.
25. PLUMBING FIXTURE LAYOUT SHALL CONFORM TO THE OHIO PLUMBING CODE CHAPTER 7. VENTING SYSTEM SHALL CONFORM TO OHIO PLUMBING CODE CHAPTER 9.
26. EQUIPMENT AND FIXTURES UTILIZED FOR THE STORAGE, PREPARATION AND HANDLING OF FOOD SHALL DISCHARGE THROUGH AN INDIRECT WASTE PIPE BY MEANS OF AN AIR GAP PER OHIO PLUMBING CODE SECTION 802.1.1
27. SEE SPECIFICATIONS FOR THE HAZMAT TESTING AND REPORT THAT WAS PROVIDED FOR THE AREA OF CONSTRUCTION. NOTE THE EXISTENCE OF TRACE ACM MATERIAL WITHIN THE EXISTING OVERHEAD CONCRETE STRUCTURE INSULATION AND ACM PIPING INSULATION AND ACM PIPING INSULATION JOINTS AND VCT FLOORING AND MASTIC. CONTRACTOR IS RESPONSIBLE FOR THE APPROPRIATE PROTECTION OF THESE ITEMS AND WORKERS PER APPLICABLE REGULATIONS. WHERE DESIGNATED TO BE DISTURBED, REMOVED AND/OR DISPOSED. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND APPROPRIATELY LICENSED AND/OR TRAINED PERSONNEL TO DO SO IN ACCORDANCE WITH APPLICABLE REGULATIONS, INCLUDING DOCUMENTATION AND REPORTING.



2 P100 PLUMBING PLAN
1/4" = 1'- 0"

N

PLUMBING PLAN NOTES:

1. REMOVE, DISCARD AND REPLACE EXISTING SINK WITH NEW. PREPARE C.W, HW, SAN. & VENT PIPING FOR FUTURE CONNECTIONS. DRAIN FROM NEW SINK SHALL DISCHARGE TO FLOOR SINK WITH AIR GAP.
2. EXISTING FLOOR DRAINS SHALL REMAIN. (VERIFY EXISTING CONDITIONS IN FIELD)
3. INSTALL NEW FLOOR SINK (FS-1). CONNECT NEW C.W, HW PIPING TO EXISTING. CONNECT NEW FLOOR SINK TO EXISTING SANITARY BELOW. EXTEND 1-1/2" VENT TO EXISTING SINK VENT IN WALL AND MAKE COMPLETE CONNECTION. (VERIFY EXISTING CONDITIONS IN FIELD)
4. NO WORK THIS AREA.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	SAN.	VENT	H.W.	C.W.	MANUFACTURER & MODEL NUMBER
S-1	2-COMP. SINK	INDIRECT CONN. TO FLOOR SINK	1-1/2"	1/2"	1/2"	2-COMPARTMENT SINK EAGLE GROUP SPEC-MASTER FN SERIES COVED CORNER TWO-COMPARTMENT SINK MODEL FN2040-2-24-14/3 OVERALL 92"x 27"x14" FAUCET TO BE T&S BRASS AND BRONZE WORKS INC. MODEL MPZ-8WLN-08, 8" WALL MOUNT MIXING FAUCET WITH ADD-ON FAUCET, 8" SWING NOZZLE, 8" RISER, 24" FLEXIBLE S.S. HOSE. ADVANCE TABCO IS AN APPROVED EQUAL.

SLOPE PIPING PER PLUMBING CODE REQUIREMENTS.
2 1/2" OR LESS 1/4"/FOOT
3" TO 6" 1/8"/FOOT
8" & UP 1/16"/FOOT

PLUMBING FIXTURE SCHEDULE NOTES:

1. FOR EXACT LOCATIONS OF PLUMBING FIXTURES ALSO REFER TO ARCHITECTURAL DRAWINGS.

PLUMBING SPECIALTIES SCHEDULE

MARK	FIXTURE	STORM	WASTE	VENT	H.W.	C.W.	T.W.	MANUFACTURER & MODEL NUMBER
FD	FLOOR DRAIN	-	3"	1-1/2"	-	-	-	JOSAM SERIES 30000-A CAST IRON FLOOR DRAIN, TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE AND 1/2" PRIMER TAP, "WEJLOC" INVERTIBLE FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET CONNECTION AND NIKOLAY ADJUSTABLE ROUND SUPER-FLO STRAINER WITH TRAP SEALER.
FS	FLOOR SINK	-	3"	1-1/2"	-	-	-	JOSAM MODEL 49350A WITH TRAP SEALER
TP	TRAP SEALER	-	-	-	-	-	-	SURE SEAL MODEL SS3000V AND SS4009V INLINE FLOOR DRAIN TRAP SEAL. COMMERCIAL GRADE UV AND OZONE RESISTANT ABS PLASTIC HOUSING WITH PROPRIETARY EPDM RUBBER DIAPHRAGM AND SOFT RUBBER SEALING GASKET. FLOOR RATING ASSE - 1072 AF-GW.
WATER HAMMER ARRESTORS		REFER TO ABOVE GROUND PLUMBING PLAN DRAWINGS FOR SIZING.						PERMANENTLY SEALED BELLOWS OR EXPANDING CHAMBER TYPE DEVICE FOR CONTROL OF WATER HAMMER, P.D.I. APPROVED. SMITH HYDROTROL OR SIMILAR BY JOSAM, MIFAB, WADE, OR ZURN.

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
MICHAEL J. HUSTON
E-76291
REGISTERED PROFESSIONAL ENGINEER

BIALOSKY
CLEVELAND

6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No: 15-11.800
Drawn / Checked: JD/MH

Issue: Permit 06.30.2021
Bid 07.16.2021

PLUMBING PLANS

P100

Copyright © 2020 Bialosky + Partners Architects

7/13/21 P:\15-11 Tri-C Metro Campus Canteen\1511.800 West Food Pantry\3 DWGS\Plumbing\2021-06-07 P100.dwg

PLUMBING SPECIFICATIONS

GENERAL SPECIFICATIONS/PLUMBING

1. PERFORM WORK, PROVIDE MATERIALS AND EQUIPMENT FOR SYSTEMS SHOWN, SPECIFIED AND DESCRIBED ON DRAWINGS. COMPLETELY COORDINATE WORK OF THIS CONTRACT WITH WORK OF OTHER CONTRACTORS AND PROVIDE COMPLETE AND FULLY FUNCTIONAL INSTALLATION. REMOVE ALL DEBRIS CAUSED BY THIS CONTRACTOR'S WORK.
2. SHEETS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT, HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFIED AS NECESSARY TO MAKE THE SYSTEMS BEING INSTALLED COMPLETE, TESTED AND OPERATIONAL. DETERMINE EXACT LOCATIONS OF UTILITIES, SYSTEMS AND COMPONENTS IN FIELD.
3. ALL MATERIALS, EQUIPMENT AND METHOD OF INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LAWFUL JURISDICTION.
4. PRIOR TO COMMENCING WORK, CONTRACTOR SHALL SUBMIT SIX COPIES OF THE SHOP DRAWINGS AND EQUIPMENT DATA FOR MATERIALS AND EQUIPMENT TO THE ARCHITECT FOR REVIEW AND APPROVAL. MATERIALS AND EQUIPMENT SHALL NOT BE INSTALLED BEFORE SHOP DRAWINGS ARE REVIEWED AND APPROVED.
5. MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL) AND APPROVED BY NFPA, ASME, AND AGA FOR INTENDED SERVICE.
6. GENERAL NOTES, SYMBOLS LIST AND DETAILS ARE APPLICABLE TO ALL PLUMBING DRAWINGS.
7. WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEADROOM AT ALL TIMES. DO NOT RUN PIPES, CONDUITS, OR DUCTS EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS.MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS, SO THAT COMPLETED INSTALLATION SHALL OPERATE SAFELY AND EFFICIENTLY. COORDINATE INSTALLATION WITH OTHER TRADES.
8. AS WORK PROGRESSES AND FOR DURATION OF CONTRACT, MAINTAIN COMPLETE SET OF PRINTS OF CONTRACT DRAWINGS AT JOB SITE AT ALL TIMES. RECORD WORK COMPLETED AND ALL CHANGES FROM ORIGINAL CONTRACT DRAWINGS CLEARLY AND ACCURATELY INCLUDING WORK INSTALLED AS A MODIFICATION OR ADDITION TO THE ORIGINAL DESIGN.
9. ALL EQUIPMENT, PIPING, WIRING AND INSULATION, ETC., INSTALLED IN HVAC AIR PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
10. ALL SLEEVES THROUGH CONCRETE FLOORS AND FIRE RATED WALLS OR PARTITIONS SHALL BE FIRESTOPPED WITH UL RATED ASSEMBLIES WITH EQUAL FIRE RATING.
11. PLUMBING FIXTURES AND TRIM:
    a. REFER TO ARCHITECTURAL AND PLUMBING SHEETS FOR QUANTITIES, LOCATIONS, AND MOUNTING HEIGHTS OF FIXTURES PROVIDED UNDER THIS SECTION.
    b. PLUMBING FIXTURES: FURNISH AND INSTALL PLUMBING FIXTURES COMPLETE WITH TRIM, TRAPS, SUPPLIES, STOP VALVES, ANCHORS AND SUPPORTS. EXPOSED TRIM SHALL BE CHROME PLATED. PROVIDE CHROME PLATED ESCUTCHEONS AT ALL PIPES PENETRATING WALLS. FAUCETS SHALL HAVE RENEWABLE SEATS AND DISCS. FIXTURES SHALL BE AMERICAN STANDARD, KOHLER, OR ELJER. PLUMBING CONTRACTOR SHALL ALSO COORDINATE WITH THE OWNER & ARCHITECT.

PLUMBING SYSTEMS & EQUIPMENT

1. DOMESTIC HOT WATER & HOT WATER RETURN (WHERE APPLICABLE) PIPE INSULATION: OWENS-CORNING FIBERGLASS 25 ASJ/SSL TWO PIECE HEAVY DENSITY PIPE COVERING, FINISHED VAPOR BARRIER JACKET. JACKET TO BE SELF-SEALING. HOT WATER PIPES 1-1/2" AND SMALLER TO HAVE 1-1/2" THICKNESS OF INSULATION. HOT WATER PIPES 1-1/2" AND GREATER TO HAVE 2" THICKNESS OF INSULATION. USE BUTT STRIPS AT JOINTS. INSULATION SHALL BE APPLIED ON ALL HOT WATER PIPING.
2. COLD WATER PIPE INSULATION: USE FIBERGLAS, TWO-PIECE, HEAVY DENSITY, PRE-MOLDED, WITH OWENS-CORNING 25 ASJ/SSL TWO PIECE HEAVY DENSITY VAPOR PROOF JACKET. PIPES 1-1/2" AND SMALLER TO HAVE 1/2" THICKNESS OF INSULATION AND PIPES 2" AND LARGER TO HAVE 1" THICKNESS OF INSULATION. USE BUTT STRIPS AT JOINTS. INSULATION SHALL BE APPLIED ON ALL COLD WATER PIPING.
3. CELLULAR FOAM INSULATION: ASTM C534, FLEXIBLE, CELLULAR ELASTOMERIC, MOLDED OR SHEET. ARMSTRONG, MODEL AP ARMAFLEX OR APPROVED EQUAL. PVC JACKET: ASTM D1784, ONE PIECE MOLDED TYPE FITTING COVERS AND SHEET MATERIAL, OFF-WHITE COLOR.
4. INSULATION SHALL BE BY OWENS CORNING, CERTAIN-TEED OR SCHULLER.
5. INSULATION, JACKETS AND ADHESIVES SHALL BE FLAME RETARDANT AND SHALL HAVE ASTM E-84 FIRE HAZARD RATINGS OF 25 FLAME SPREAD, 50 SMOKE DEVELOPED AND 50 FUEL CONTRIBUTED.
6. ALL FITTINGS, VALVES, ETC., EXCEPT UNION: FITTINGS ARE TO BE INSULATED WITH MITERED SEGMENTED FIBERGLAS, COATED WITH SC-30 INSULATING CEMENT, COVERED WITH FIBERGLAS FITTING TAPE, AND O-CF FITTING MASTIC. FINISH MUST BE VAPORPROOF.
7. HOT AND COLD WATER PIPES: HOT AND COLD WATER PIPING THROUGHOUT THE BUILDING SHALL BE TYPE "L" HARD COPPER WITH BRASS FITTINGS AND SILVER SOLDERED JOINTS, USING 95/5 SOLDER. UNDERGROUND WATER LINES: TYPE "K" SOFT COPPER WITH NO JOINTS. INSTALL AIR CHAMBER OF 3/4 PIPE 9" LONG ABOVE EACH FIXTURE.
8. VENT PIPING: VENT PIPING SHALL BE SCALE FREE ANNEALED STEEL PIPE HEAVILY GALVANIZED INSIDE AND OUT. SCHEDULE 40, AND OF STANDARD WEIGHT. FITTINGS TO BE CAST IRON DRAINAGE TYPE.
9. CAST IRON SOIL PIPE AND FITTINGS: SANITARY SEWER AND STACKS SHALL BE CAST IRON SOIL PIPE AND FITTINGS, SAME SHALL BE CLOW'S ALABAMA AND TYLER SERVICE WEIGHT TESTED, ASPHALT COATED INSIDE AND OUT, AND EACH PIECE SHALL HAVE THE MAKER'S NAME OR TRADEMARK CAST IN SAME. SOIL PIPE SHALL BE BELL AND SPIGOT TYPE FOR LEAD CAULK JOINTS, AT THE CONTRACTOR'S OPTION AND WHERE PERMITTED BY LOCAL CODE. JOINTS MAY BE NEOPRENE "O" RING OR "NO-HUB".
10. WASTE PIPING: WASTE PIPING 2" AND OVER SHALL BE SERVICE WEIGHT CAST IRON, SOIL PIPE AND FITTING. 1-1/2" AND UNDER SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE WITH BLACK CAST IRON DRAINAGE FITTINGS.
11. HANGERS, ANCHORS, CLAMPS AND INSERTS
    a. PROVIDE ADJUSTABLE CLEVIS HANGERS FOR PIPING 2" AND LARGER, AND CAST BRASS SPLIT-RING HINGED HANGERS FOR SMALLER PIPING. SUPPORT PIPING FROM BUILDING STRUCTURE TO MAINTAIN REQUIRED GRADE AND PITCH OF PIPE LINES, PREVENT VIBRATION, SECURE PIPING IN PLACE. SECURE HANGERS TO INSERTS WHERE PRACTICAL. HANGER RODS SHALL HAVE MACHINE THREADS.
    b. HANGER RODS SHALL BE CONNECTED TO BEAM CLAMP, UL-APPROVED CONCRETE INSERTS OR PHILLIPS OR APPROVED EQUAL EXPANSION SHIELDS. RAMSET OR POWER DRIVEN INSERTS WILL NOT BE ALLOWED.
    c. HANGER SPACING SHALL MEET REQUIREMENTS OF STATE AND LOCAL CODES.
12. SLEEVES AND PENETRATIONS
    a. PIPE SLEEVES THROUGH FIRE-RATED CONSTRUCTION SHALL BE SCHEDULE 40 STEEL. SLEEVES THROUGH PARTITIONS AND NON-FIRE-RATED CONSTRUCTION SHALL BE 26 GAUGE GALVANIZED STEEL WITH LOCK LONGITUDINAL SEAMS.
    b. FIRE STOP PENETRATION SEALS IN FIRE-RATED CONSTRUCTION SHALL BE CERAMIC FIBRE, MINERAL FIBRE, OR SILICONE FOAM. PROVIDE MINERAL FIBRE BOARD, MATTING OR PUTTY FOR DAMMING AND FORMING. FINISH SEALS FLUSH TO WALL SURFACE AND FILL GAPS WITH SILICONE ADHESIVE SEALANT CAULKING.
    c. PACKING FOR SLEEVES THAT DO NOT REQUIRE MAINTENANCE OF FIRE RATING SHALL BE OAKUM, SILICATE FOAM, CERAMIC FIBRE WITH APPROVED SEALANT. PACK OR FOAM TO WITHIN ONE INCH OF BOTH WALL SURFACES. SEAL PENETRATION PACKING WITH APPROVED CAULKING AND PAINTABLE WATER-PROOF MASTIC SURFACE FINISH OR SILICONE CAULKING.
13. ACCESS
    a. PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRE INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS SHALL BE A MINIMUM OF 12"x12".
14. CLEANING
    a. CLEAN SYSTEMS THOROUGHLY BEFORE TESTING. FIXTURES, EQUIPMENT, PIPE, VALVES, AND FITTINGS SHALL BE FREE OF GREASE, METAL CUTTINGS, DIRT AND OTHER FOREIGN MATERIAL.
    b. REPAIR STOPPAGE, DISCOLORATION AND DAMAGE TO PARTS OF BUILDING, FINISH AND FURNISHINGS DUE TO FAILURE TO PROPERLY CLEAN PIPING SYSTEM.
15. CAULKED JOINTS: CAULKED JOINTS IN CAST IRON PIPING SHALL BE CAULKED SOLID WITHCLEAN SPUN OAKUM, THEN RUN FULL WITH PURE LEAD AT ONE POURING. LEAD SHALL THEN BE CAULKED SOLID AND TIGHT WITH PROPER TOOLS AND FINISHED SLIGHTLY BELOW THE TOPS OF THE HUBS.
16. SCREWED JOINTS: SCREWED JOINTS SHALL BE MADE BY SCREWING THE PIPE WELL INTO THE SEAT TO GIVE THE PIPE A LONG GRIP. ALL SCREWED JOINTS SHALL BE MADE TIGHT WITHOUT THE USE OF FILLING SUBSTANCES OR BY CAULKING. A COAT OF RED LEAD OR GRAPHITE AND OIL MAY BE USED ON THE MALE THREAD ONLY.
17. UNION JOINTS: UNION JOINTS SHALL BE PROVIDED IN THE WATER CONNECTIONS TO ALL FIXTURES AND IN THE WASTE CONNECTIONS TO LAVATORIES, SINKS, ETC. WHERE UNIONS ARE NOT SUPPLIED AS A PART OF THE FIXTURE TRIMMING, CRANE ALL BRASS GROUND JOINTS UNIONS SHALL BE USED. UNIONS SHALL ALSO BE PLACED IN THE CONNECTION TO WATER, ETC., AND AT INTERVALS THROUGHOUT SO THAT ANY PORTION OF THE PIPING CAN BE REMOVED FOR REPAIRS WITHOUT CUTTING OR BREAKING THE PIPE. UNIONS MAY BE NIBCO, NATIONAL OR EQUAL.
18. CLEANOUTS: CLEANOUTS SHALL BE PROVIDED IN ALL SOIL AND WASTE PIPE LINES AT SUCH LOCATIONS AS WILL ALLOW THE ENTIRE DRAINAGE SYSTEM TO BE RODDED OUT, AND WHERE PERMITTED BY CODE.
19. VALVES:

A. BRANCH WATER LINES TO BE CRANE 1320 ALL BRONZE UP TO AND INCLUDING 2" IN SIZE. VALVES MAY BE FAIRBANKS, JENKINS BROS., OR EQUAL.

B. BALL VALVES - 2" AND SMALLER MILWAUKEE VALVE COMPANY #BA-100.

C. SHUT-OFF VALVES SHALL BE PLACED IN ALL HOT AND COLD WATER SUPPLY CONNECTIONS TO ALL FIXTURES.

D. CHECK VALVE - 2" AND SMALLER CRANE #37.

E. BALANCE VALVE - BELL & GOSSETT "CIRCUIT SETTER".

20. DISINFECTION OF WATER SYSTEMS
    a. WATER PIPING SYSTEMS SHALL BE THOROUGHLY DISINFECTED WITH A SOLUTION CONTAINING NO LESS THAN 50 PARTS PER MILLION OF AVAILABLE CHLORINE. CHLORINATING MATERIALS SHALL BE EITHER LIQUID CHLORINE OR SODIUM HYPOCHLORITE SOLUTION, SHALL BE INTRODUCED INTO THE SYSTEM AND DRAWN TO ALL POINTS IN THE SYSTEM. DISINFECTION SOLUTION SHALL BE ALLOWED TO REMAIN IN SYSTEM FOR 24 HOURS, DURING THIS TIME, VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER DISINFECTION, SOLUTION SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAR WATER UNTIL RESIDUAL CHLORINE CONTENT IS NO GREATER THAN 0.2 PARTS PER MILLION.
21. INDIRECT WASTE PIPING SHALL BE DWV COPPER PIPE AND FITTINGS WITH 50/50 SOLDERED JOINTS. PITCH PIPING TO THE DRAIN AT NO LESS THAN 1/4" PER FOOT SLOPE.
22. CONTRACTOR SHALL PROVIDE ALL ROUGH-INS FOR "OWNER FURNISHED" EQUIPMENT AND MAKE FINAL CONNECTIONS. PROVIDE ALL PIPING, VALVES AND ACCESSORIES AS REQUIRED FOR COMPLETE INSTALLATION OF SYSTEM.
23. ALL PLUMBING PIPING SHALL BE PROPERLY IDENTIFIED WITH RELATED COLOR CODED ID PIPE MARKERS AS MANUFACTURED BY SETON OR APPROVED EQUAL.
24. PLUMBING CONTRACTOR SHALL FURNISH & INSTALL ALL MATERIAL, FIXTURES & LABOR WHICH IS NEITHER DRAWN NOR SPECIFIED, BUT WHICH IS OBVIOUSLY A COMPONENT PART OF, AND NECESSARY TO COMPLETE WORK, AND WHICH IS CUSTOMARILY A PART OF WORK OF SIMILAR CHARACTER.

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
MICHAEL J. HUSTON
E-76291
PROFESSIONAL ENGINEER

BIALOSKY
CLEVELAND
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No: 15-11.800
Drawn / Checked: JD/MJH

Issue:
Permit	06.30.2021
Bid	07.16.2021

PLUMBING SPECIFICATIONS

P700

Copyright © 2020 Bialosky + Partners Architects

7/13/21 P:\15-11 TriC Metro Campus Canteen\1511.800 West Food Pantry\8 DWGS\Plumbing\2021-06-25 P700.dwg

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	HOMERUN TO A 20 AMPERE, SINGLE POLE CIRCUIT BREAKER (PANEL 'A' CIRCUIT NUMBER '1'), UON. PROVIDE QUANTITY OF CONDUCTORS TO ACCOMMODATE CIRCUITING AND CONTROL INDICATED.
	CONDUIT STUB
	CONDUIT TURNED DOWN
	CONDUIT TURNED UP
	CONDUIT INSTALLED BELOW GRADE OR BELOW FINISHED FLOOR
$	SWITCH (20A, 120/277V, SINGLE POLE) AT 48" AFF, UON ('3' = THREE-WAY)
	DIMMER SWITCH UON AT 48" AFF, UON ('3' = THREE-WAY)
(M)	LIGHTING CONTROL OCCUPANCY SENSOR - CEILING MOUNTED
	DUPLEX RECEPTACLE (20A, 125V) AT 18" AFF, UON
	DOUBLE DUPLEX RECEPTACLE AT 18" AFF, UON, TYPE AS INDICATED ON DRAWINGS
	DUPLEX RECEPTACLE (20A, 125V) GROUND FAULT CIRCUIT INTERRUPTER TYPE AT 18" AFF, UON.
	DUPLEX RECEPTACLE (20A, 125V) GROUND FAULT CIRCUIT INTERRUPTER TYPE AT 8" ABOVE COUNTER.
J	JUNCTION BOX - MOUNTING HEIGHT AND SIZE AS REQUIRED BY CODE OR AS NOTED ON DRAWINGS
F	FIRE ALARM AUDIBLE STROBE DEVICE WITH SPEAKER - WALL MOUNTED AT 80" AFF TO BOTTOM OF DEVICE, UON
F	FIRE ALARM AUDIBLE STROBE DEVICE WITH SPEAKER - CEILING MOUNTED DEVICE, UON
▽	VOICE/DATA ROUGH-IN OUTLET BOX AT 18" AFF, UON ('W' = WALL PHONE AT 56" AFF, '#'=QUANTITY OF DROPS)
	WIRELESS ACCESS POINT LOCATION - LAYOUT TO BE VERIFIED BY VENDER TO ASSURE COMPLETE COVERAGE THROUGHOUT FACILITY.
	CLOSED CIRCUIT TELEVISION CAMERA - CEILING MOUNTED
	CLOSED CIRCUIT TELEVISION CAMERA - WALL MOUNTED
	SECURITY SYSTEM CARD READER ROUGH-IN OUTLET BOX AT 48" AFF, UON. EC SHALL COORDINATE INSTALLATION REQUIREMENTS WITH SECURITY CONSULTANT/VENDOR PRIOR TO ROUGH-IN AND INSTALLATION.
	SECURITY SYSTEM ELECTRIC STRIKE WITH DOOR CONTACT IN DOOR FRAME - COORDINATE WITH DOOR SCHEDULE. EC SHALL COORDINATE INSTALLATION REQUIREMENTS WITH SECURITY CONSULTANT/VENDOR PRIOR TO ROUGH-IN AND INSTALLATION.
A	RADIO AND/OR PUBLIC ADDRESS SYSTEM SPEAKER RECESSED IN CEILING, UON.

ELECTRICAL ABBREVIATION LEGEND

ABBREVIATION	DESCRIPTION
A	AMPERES
AF	AMP FUSED
AFCI	ARC-FAULT CIRCUIT INTERRUPTER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AS	AMP SWITCH
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
AWG	AMERICAN WIRE GAUGE
C.	CONDUIT
C/B	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CT	CURRENT TRANSFORMER
DWG.	DRAWING
EC	ELECTRICAL CONTRACTOR
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING ELECTRICAL DEVICE TO REMAIN - MAINTAIN DURING DEMOLITION
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
G.	GROUND
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
KAIC	KILOAMPERES INTERRUPTING CURRENT RATING
KW	KILOWATTS
KWC	KILOWATTS CONNECTED
KWD	KILOWATTS DEMAND
LTG	LIGHTING
MC	MECHANICAL CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
OBC	OHIO BUILDING CODE
P	POLE
REC	RECEPTACLE
REX	REMOVE EXISTING ELECTRICAL DEVICE ALONG WITH RELATED CONDUIT AND WIRING, UON
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLTS
W	WIRE
WP	WEATHERPROOF
XFMR	TRANSFORMER
Ø	PHASE

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
MICHAEL J. HUSTON
E-76291
PROFESSIONAL ENGINEER

BIALOSKY
CLEVELAND

6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437
www.bialosky.com

Project No: 15-11.800
Drawn / Checked: MBW/JDC

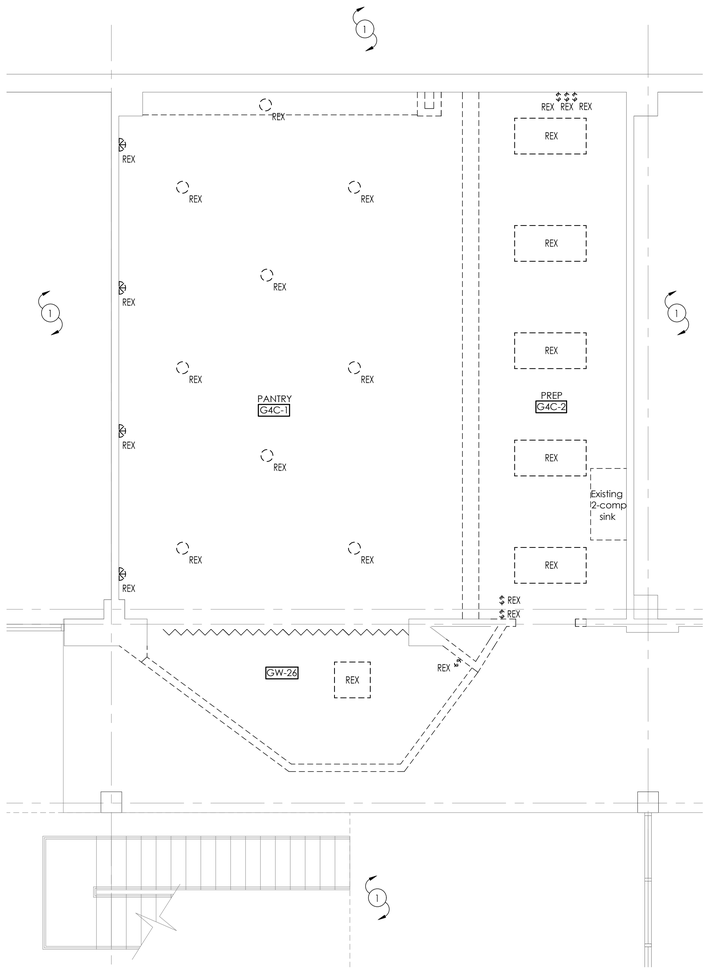
Issue:
Permit	06.30.2021
Bid	07.16.2021

ELECTRICAL ABBREV. & SYMBOL LEGENDS

E001

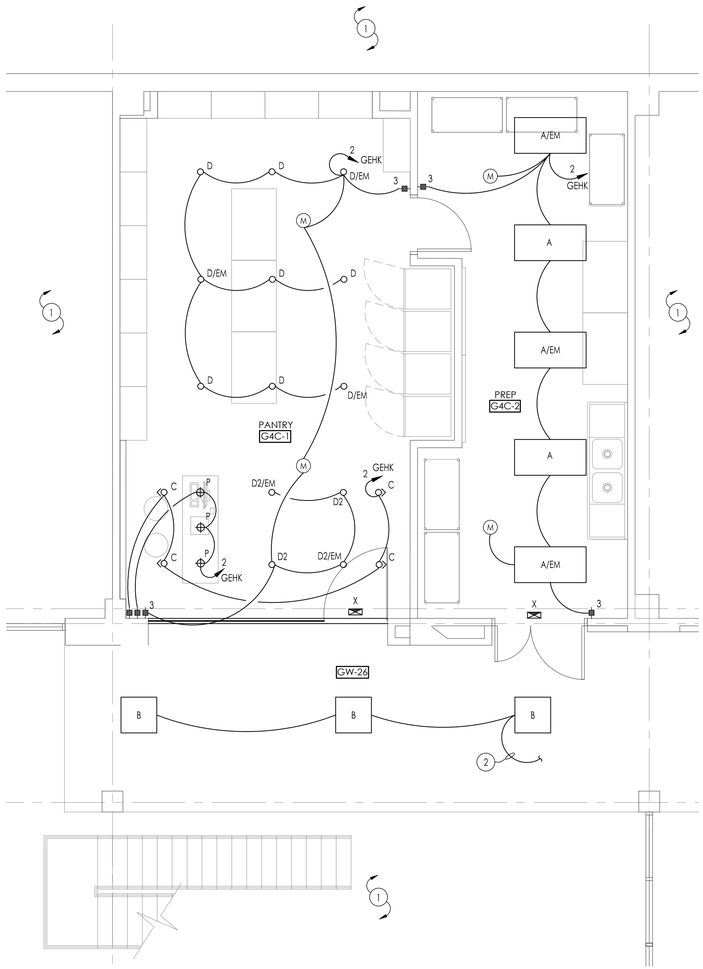
Copyright © 2020 Bialosky + Partners Architects

7/13/21 \\BPA-DATA1\Projects\15-511 Tri-C Metro Campus Center\1511.800 West Food Pantry\8 DWGS\Electrical\E001.dwg



1 LIGHTING DEMO PLAN
E100
0 2' 4' 8'
1/4" = 1'- 0"

N



2 LIGHTING PLAN
E100
0 2' 4' 8'
1/4" = 1'- 0"

N

PLAN NOTES:

1. NO WORK IN THIS AREA, UNLESS OTHERWISE NOTED.
2. NEW LIGHT FIXTURES SHALL BE CIRCUITED TO CORRIDOR LIGHTING BRANCH CIRCUIT SERVING THE AREA. LIGHT FIXTURES SHALL BE CONTROLLED THE SAME WAY AS NEARBY LIGHT FIXTURES IN THE CORRIDOR.

GENERAL ELECTRICAL DEMOLITION NOTES

A. DEMOLITION INDICATED ON THE CONTRACT DOCUMENTS IS SHOWN IN GENERAL TO INDICATE THE EXTENT OF DEMOLITION AND IS NOT TO BE CONSIDERED AS A RECORD DRAWING OF EXISTING CONDITIONS. ACCORDINGLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DEMOLITION OF THE ELECTRICAL WORK INDICATED INCLUDING ANY CONCEALED ITEMS OR ANY EXISTING ITEMS NOT SHOWN ON THE CONTRACT DOCUMENTS. BEFORE DEMOLITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR APPROPRIATE FIELD-TESTING TO DETERMINE THE NATURE OF THE EXISTING ELECTRICAL WORK TO BE DEMOLISHED TO PROTECT EXISTING WORK REMAINING IN PLACE AND TO PROTECT THE PUBLIC.

B. REPAIR AND RESTORE TO ORIGINAL SOUND CONDITION ALL ITEMS OR PORTIONS OF ELECTRICAL WORK, WHICH ARE NOT NOTED TO BE DEMOLISHED, BUT ARE DAMAGED BY WORK UNDER THIS CONTRACT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND RETAIN POWER TO ALL EXISTING EQUIPMENT THAT SHALL REMAIN. RECONNECT ANY EQUIPMENT BEING DISTURBED BY THIS RENOVATION, YET REQUIRED FOR CONTINUED SERVICE TO SAME OR NEAREST AVAILABLE PANEL.

C. WHERE WORK BY THE GENERAL CONTRACTOR (WALL REMOVAL, NEW OR RELOCATED WALL OPENING, ETC.) RESULTS IN THE REMOVAL, RELOCATION, OR REFEEDING OF ELECTRICAL DEVICES OR LUMINARIES, THE ELECTRICAL CONTRACTOR SHALL DISCONNECT OR RECONNECT ALL ACTIVE DEVICES REMAINING ON THAT CIRCUIT SYSTEM.

D. CONTRACTOR SHALL VERIFY ALL CIRCUITS IN EXISTING PANEL AFFECTED BY THIS ALTERATION. WHERE ADDITIONAL CIRCUITS ARE NEEDED, USE AVAILABLE SPARE BREAKERS IN THE PANEL AND TIGHTEN ALL CONNECTIONS.

E. DO NOT PROCEED WITH DEMOLITION WITHOUT WRITTEN AUTHORITY. PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER AND COORDINATE WITH ALL TRADES INVOLVED. COORDINATE AND SEQUENCE DEMOLITION SO AS NOT TO CAUSE A SHUTDOWN OF OPERATION OF SURROUNDING AREAS.

F. DISCONNECT OR SHUT OFF SERVICE TO AREAS WHERE ELECTRICAL WORK IS TO BE REMOVED. REMOVE ALL ELECTRICAL LUMINARIES, EQUIPMENT, AND RELATED SWITCHES, OUTLETS, CONDUIT, AND WIRING, WHICH ARE NOT A PART OF THE FINAL PROJECT IN ALL AREAS WHERE WORK OF THIS CONTRACT IS TO BE PERFORMED. ALL REMOVED EQUIPMENT SHALL BE DISPOSED OF BY THIS CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE. ABANDONED CONDUIT SHALL BE REMOVED, ALONG WITH WIRE NO LONGER IN USE FROM DEVICE LOCATION BACK TO PANEL.

G. ARRANGE TIMING OF SHUTDOWN PERIODS OF ALL IN-SERVICE PANELS WITH THE OWNER'S REPRESENTATIVE. DO NOT SHUTDOWN ANY SERVICE WITHOUT PRIOR WRITTEN APPROVAL.

H. DISPOSAL OF LAMPS, BALLASTS, TRANSFORMERS, BATTERIES, ETC., SHALL BE IN ACCORDANCE WITH APPLICABLE EPA REQUIREMENTS.

I. WHERE EXISTING CIRCUITS ARE INDICATED TO BE REUSED, THE CONTRACTOR SHALL USE SENSING MEASURING DEVICES TO VERIFY THAT CIRCUITS FEEDING OTHER LOADS NOT WITHIN PROJECT AREA ARE NOT OVERLOADED.

J. COMPLETELY REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND/OR DEVICES IN THE SPACE AS REQUIRED TO ACCOMMODATE THE NEW CONSTRUCTION.

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
MICHAEL J. HUSTON
E-76291
PROFESSIONAL ENGINEER

BIALOSKY
CLEVELAND
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437
www.bialosky.com

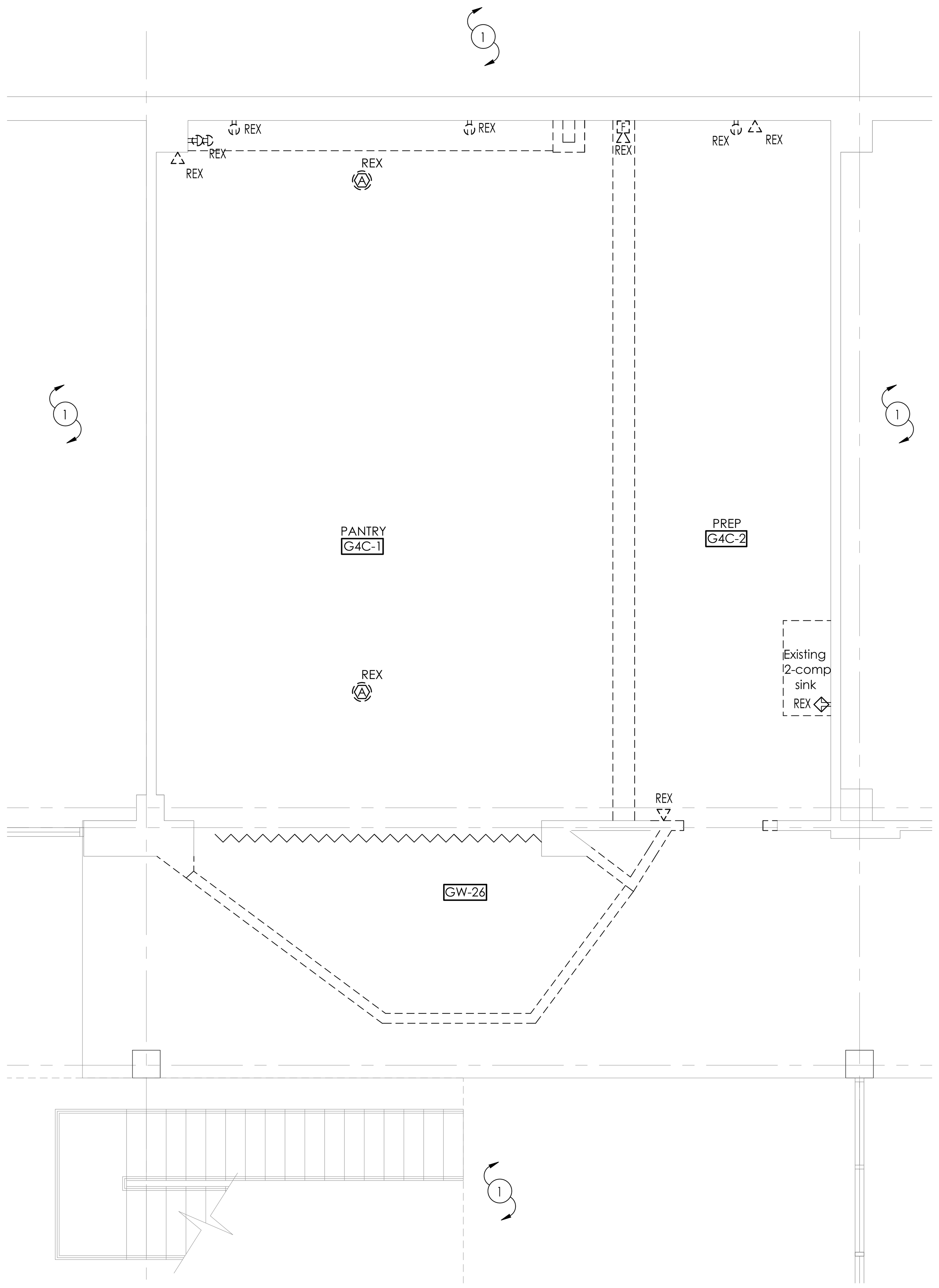
Project No:		15-11.800
Drawn / Checked:		MBW/JDC
Issue:	Permit	06.30.2021
	Bid	07.16.2021

ELECTRICAL LIGHTING PLANS

E100

Copyright © 2020 Bialosky + Partners Architects

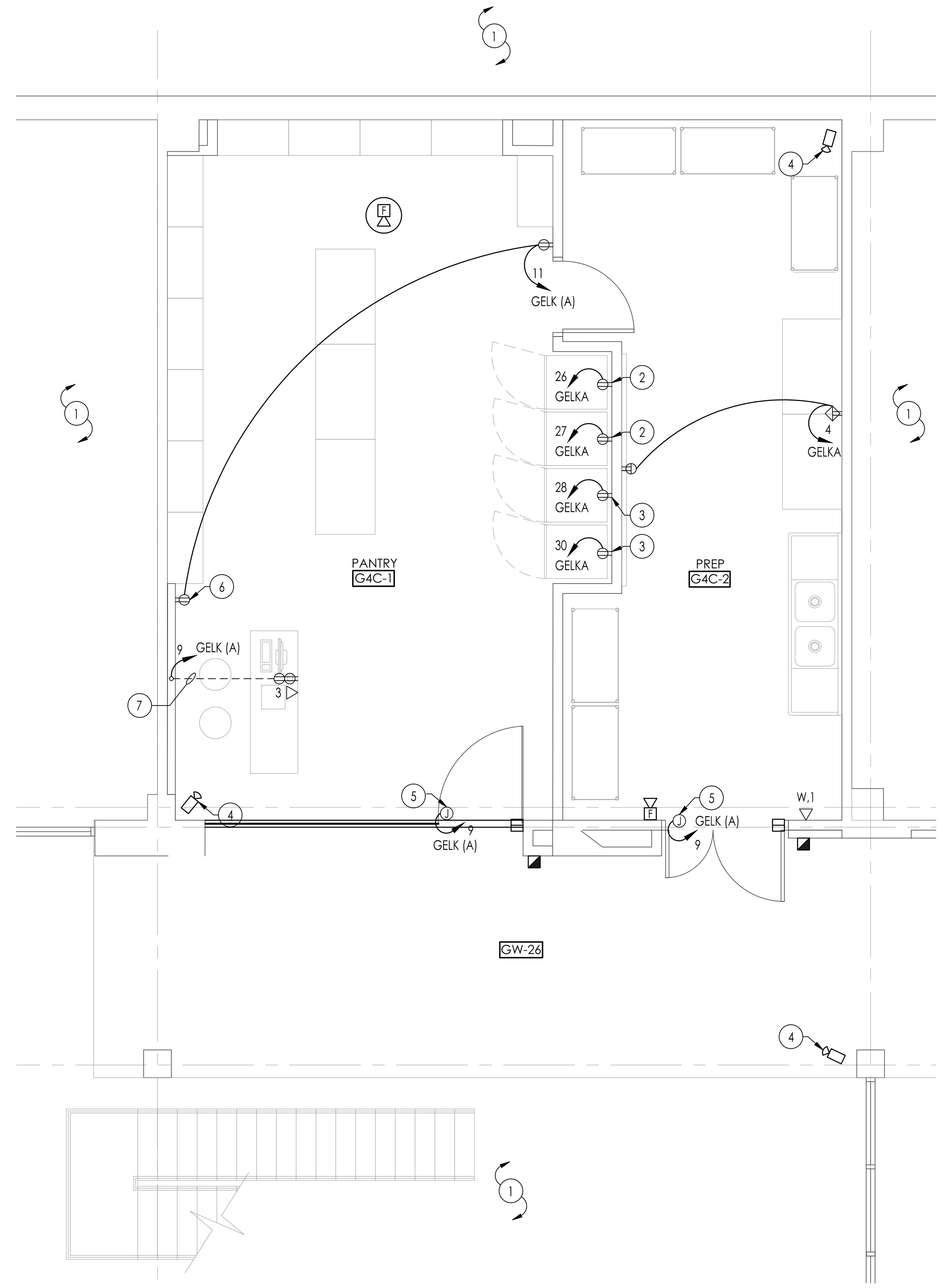
7/13/21 \\BPA-DATA1\Projects\15-11 Tri-C Metro Campus Center\1511.800 West Food Pantry\8 DWGS\Electrical\E100.dwg



1 E200 POWER & SYSTEMS DEMO PLAN

0 2' 4' 8'

1/4" = 1'- 0"



2 E200 POWER & SYSTEMS PLAN

0 2' 4' 8'

1/4" = 1'- 0"

PLAN NOTES:

1. NO WORK IN THIS AREA, UNLESS OTHERWISE NOTED.
2. REFRIGERATOR - 120V-1PH, 0.3KW ASSUMED. EC SHALL PROVIDE GFCI PROECTECTION AT PANEL.
3. FREEZER - 120V-1PH, 0.8KW ASSUMED. EC SHALL PROVIDE GFCI PROECTECTION AT PANEL.
4. EC SHALL PROVIDE TWO (2) CAT 6 NETWORK CABLES FOR SECURITY CAMERA. CAMERA LOCATION SHALL BE VERIFIED WITH OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN AND INSTALLATION. CAT 6 NETWORK CABLES PROVIDED SHALL BE MANUFACTURED BY BELDEN, PLENUM RATED AND HAVE FOUR (4) UTP. EC SHALL TERMINATE ALL CONDUCTORS IN PANDUIT MINICOM PANELS. EC SHALL CONFIRM ROUTING, LOCATION, TERMINATION AND INSTALLATION REQUIREMENTS WITH SECURITY VENDOR/CONSULTANT AND TRI-C TECHNOLOGY SUPERVISOR. INSTALLATION SHALL BE IN ACCORDANCE WITH TRI-C'S CABLING STANDARDS.
5. POWER FOR DOOR ACCESS CONTROLS (120V-1PH, 0.1 KW ASSUMED). REFER TO SECURE DOOR DETAIL FOR ADDITIONAL INFORMATION.
6. RECEPTACLE AND COVER PLATE AT THIS LOCATION SHALL BE PROVIDED WITH BLACK FINISH.
7. EC SHALL TRENCH EXISTING FLOOR TO ROUTE POWER AND DATA TO CHECKOUT CASEWORK MOUNTED RECEPTACLES. POWER AND DATA SHALL BE IN SEPARATE CONDUIT PATHWAYS.

GENERAL ELECTRICAL DEMOLITION NOTES

A. DEMOLITION INDICATED ON THE CONTRACT DOCUMENTS IS SHOWN IN GENERAL TO INDICATE THE EXTENT OF DEMOLITION AND IS NOT TO BE CONSIDERED AS A RECORD DRAWING OF EXISTING CONDITIONS. ACCORDINGLY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DEMOLITION OF THE ELECTRICAL WORK INDICATED INCLUDING ANY CONCEALED ITEMS OR ANY EXISTING ITEMS NOT SHOWN ON THE CONTRACT DOCUMENTS. BEFORE DEMOLITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR APPROPRIATE FIELD-TESTING TO DETERMINE THE NATURE OF THE EXISTING ELECTRICAL WORK TO BE DEMOLISHED TO PROTECT EXISTING WORK REMAINING IN PLACE AND TO PROTECT THE PUBLIC.

B. REPAIR AND RESTORE TO ORIGINAL SOUND CONDITION ALL ITEMS OR PORTIONS OF ELECTRICAL WORK, WHICH ARE NOT NOTED TO BE DEMOLISHED, BUT ARE DAMAGED BY WORK UNDER THIS CONTRACT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT AND RETAIN POWER TO ALL EXISTING EQUIPMENT THAT SHALL REMAIN. RECONNECT ANY EQUIPMENT BEING DISTURBED BY THIS RENOVATION, YET REQUIRED FOR CONTINUED SERVICE TO SAME OR NEAREST AVAILABLE PANEL.

C. WHERE WORK BY THE GENERAL CONTRACTOR (WALL REMOVAL, NEW OR RELOCATED WALL OPENING, ETC.) RESULTS IN THE REMOVAL, RELOCATION, OR REFEEDING OF ELECTRICAL DEVICES OR LUMINARIES, THE ELECTRICAL CONTRACTOR SHALL DISCONNECT OR RECONNECT ALL ACTIVE DEVICES REMAINING ON THAT CIRCUIT SYSTEM.

D. CONTRACTOR SHALL VERIFY ALL CIRCUITS IN EXISTING PANEL AFFECTED BY THIS ALTERATION. WHERE ADDITIONAL CIRCUITS ARE NEEDED, USE AVAILABLE SPARE BREAKERS IN THE PANEL AND TIGHTEN ALL CONNECTIONS.

E. DO NOT PROCEED WITH DEMOLITION WITHOUT WRITTEN AUTHORITY. PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER AND COORDINATE WITH ALL TRADES INVOLVED. COORDINATE AND SEQUENCE DEMOLITION SO AS NOT TO CAUSE A SHUTDOWN OF OPERATION OF SURROUNDING AREAS.

F. DISCONNECT OR SHUT OFF SERVICE TO AREAS WHERE ELECTRICAL WORK IS TO BE REMOVED. REMOVE ALL ELECTRICAL LUMINARIES, EQUIPMENT, AND RELATED SWITCHES, OUTLETS, CONDUIT, AND WIRING, WHICH ARE NOT A PART OF THE FINAL PROJECT IN ALL AREAS WHERE WORK OF THIS CONTRACT IS TO BE PERFORMED. ALL REMOVED EQUIPMENT SHALL BE DISPOSED OF BY THIS CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE. ABANDONED CONDUIT SHALL BE REMOVED, ALONG WITH WIRE NO LONGER IN USE FROM DEVICE LOCATION BACK TO PANEL.

G. ARRANGE TIMING OF SHUTDOWN PERIODS OF ALL IN-SERVICE PANELS WITH THE OWNER'S REPRESENTATIVE. DO NOT SHUTDOWN ANY SERVICE WITHOUT PRIOR WRITTEN APPROVAL.

H. DISPOSAL OF LAMPS, BALLASTS, TRANSFORMERS, BATTERIES, ETC., SHALL BE IN ACCORDANCE WITH APPLICABLE EPA REQUIREMENTS.

I. WHERE EXISTING CIRCUITS ARE INDICATED TO BE REUSED, THE CONTRACTOR SHALL USE SENSING MEASURING DEVICES TO VERIFY THAT CIRCUITS FEEDING OTHER LOADS NOT WITHIN PROJECT AREA ARE NOT OVERLOADED.

J. COMPLETELY REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND/OR DEVICES IN THE SPACE AS REQUIRED TO ACCOMMODATE THE NEW CONSTRUCTION.

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
MICHAEL J. HUSTON
E-76291
REGISTERED PROFESSIONAL ENGINEER

BIALOSKY CLEVELAND

6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

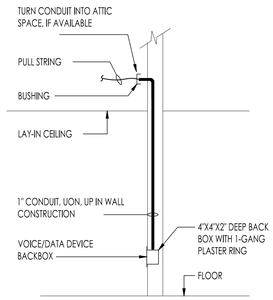
Project No: 15-11.800
Drawn / Checked: MBW/JDC

Issue: Permit 06.30.2021
Bid 07.16.2021

ELECTRICAL POWER & SYSTEMS PLANS

E200

Copyright © 2020 Bialosky + Partners Architects

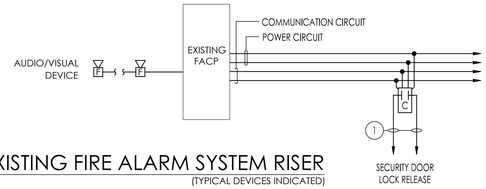


TYPICAL TECHNOLOGY DEVICE OUTLET DETAIL

SCALE: NONE

FIRE ALARM SYSTEM RISER NOTE(S):

1. SECURITY DOOR LOCKS: PROVIDE WIRING AND ONE AUXILIARY CONTACT TO EACH POWER SUPPLY LOCATION FOR UNLOCKING OF SECURITY DOORS DURING A FIRE ALARM CONDITION. COORDINATE TYPE OF CONTACT AND EXACT REQUIREMENTS WITH SECURITY SYSTEM SUPPLIER.

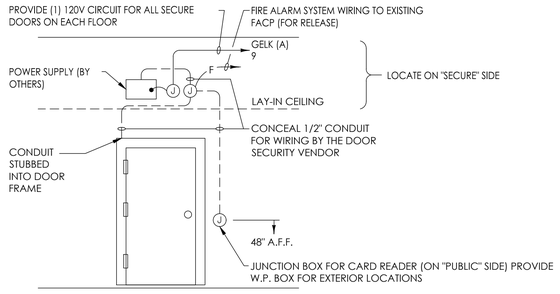


EXTENSION OF EXISTING FIRE ALARM SYSTEM RISER

SCALE: NONE (TYPICAL DEVICES INDICATED)

FIRE ALARM SYSTEM GENERAL NOTES:

1) THIS RISER REPRESENTS A TYPICAL SYSTEM. INSTALLATION DRAWINGS WITH FLOOR PLANS, WIRING DIAGRAMS, BATTERY CALCULATIONS, VOLTAGE DROP CALCULATIONS AND DESCRIPTION OF SYSTEM OPERATION SHALL BE PROVIDED BY THE SYSTEM SUPPLIER'S CERTIFIED FIRE ALARM DESIGNER. SUBMIT THESE ITEMS TO THE CITY FOR APPROVAL. EXACT SYSTEM REQUIREMENTS SHALL BE COORDINATED WITH SYSTEM SUPPLIER.
2) SYSTEM SUPPLIER SHALL SUPERVISE INSTALLATION, PROGRAM AND TEST SYSTEM, AND INSTRUCT OWNER ON SYSTEM OPERATION.
3) ALL FIRE ALARM WIRING SHALL BE IN MINIMUM 3/4" CONDUIT. ALL WIRING SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR AND VERIFIED WITH THE SYSTEM SUPPLIER PRIOR TO BID. PROVIDE WIRING TO ALL DEVICES AS INDICATED AND AS RECOMMENDED BY THE SYSTEM SUPPLIER. (IF PLENUM RATED CABLE IS SPECIFIED, PROVIDE 3/4" CONDUITS IN WALL FROM DEVICE LOCATIONS STUBBED TO ABOVE ACCESSIBLE CEILING.)
4) PROVIDE ADDRESSABLE MONITOR [M] AND CONTROL [C] MODULES AND RELAYS [R] FOR EACH SYSTEM FUNCTION LISTED OR DEVICE INDICATED ON RISER. PROVIDE ADDITIONAL ADDRESSABLE CONTROL AND MONITOR MODULES AS RECOMMENDED BY THE SYSTEM SUPPLIER FOR FUNCTIONS OR SYSTEM COMPONENTS NOT INDICATED ON RISER.
5) ALL CONTROL CABINETS SHALL BE GROUNDED PER SPECIFICATIONS AND NATIONAL ELECTRICAL CODE REQUIREMENTS.
6) COORDINATE CITY TIE-IN REQUIREMENTS WITH LOCAL AUTHORITY.
7) REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. REFER TO FLOOR PLANS FOR DEVICE QUANTITIES AND LOCATIONS.
8) THIS ADDRESSABLE FIRE ALARM SYSTEM COMPLIES WITH THE FIRE ALARM ZONING REQUIREMENTS OF THE OBC AND NFPA. ALL INITIATING DEVICES INDIVIDUALLY REPORT TO THE FIRE ALARM CONTROL PANEL FOR SEPARATE ANNUNCIATION.



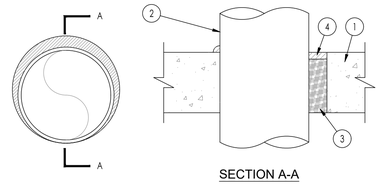
TYPICAL SECURE DOOR "◪" DETAIL

NO SCALE

NOTE: VERIFY ALL JUNCTION BOX, CONDUIT, AND POWER REQUIREMENTS WITH THE OWNER'S DOOR SECURITY VENDOR BEFORE ROUGH-IN.

ENGINEERS NOTES:

1. USE THIS DETAIL ONLY FOR "BOX AND CONDUIT" SYSTEMS, WHEN VENDOR/INSTALLER IS UNKNOWN
2. REFER TO DIV. 27 DETAILS IF SPECIFYING A COMPLETE DOOR ACCESS SYSTEM



SECTION A-A

FIRESTOP DETAIL - METAL PIPE 2 HOUR CONCRETE FLOOR/WALL SYSTEM NO C-AJ-1435

SCALE: NONE

F-RATING = 2HR.
T-RATING = 0HR.

NOTES:

1. FLOOR OR WALL ASSEMBLY - MINIMUM 4½" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS. MAXIMUM DIAMETER OF OPENING IS 8".
2. THROUGH PENETRANTS - ONE METALLIC PIPE. CONDUIT OR TUBING TO BE INSTALLED CONCENTRICALLY OR ECCENTRICALLY WITHIN FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR ASSEMBLY. THE ANNULAR SPACE BETWEEN PIPE CONDUIT OR TUBING AND THE PERIPHERY OF THE OPENING SHALL BE MINIMUM 0" (POINT OF CONTACT) TO MAXIMUM 1". THE FOLLOWING TYPES OF PIPE, CONDUIT OR TUBING MAY BE USED:

   A. STEEL PIPE - NOMINAL 30" DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.

   B. IRON PIPE - NOMINAL 30" DIAMETER (OR SMALLER) CAST OR DUCTILE IRON PIPE.

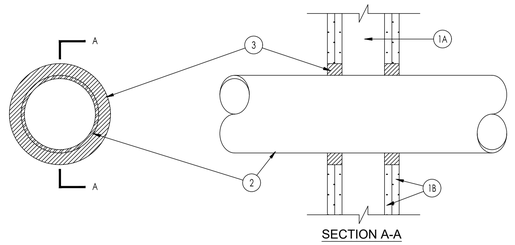
   C. CONDUIT - NOMINAL 6" DIAMETER (OR SMALLER) RIGID STEEL CONDUIT.

   D. CONDUIT - NOMINAL 4" DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC CONDUIT.

   E. COPPER TUBING - NOMINAL 6" DIAMETER (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING.

   F. COPPER PIPE - NOMINAL 6" DIAMETER (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.

3. PACKING MATERIAL - MINIMUM 2" THICKNESS OF MINIMUM 4.0 PCF MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
4. FILL, VOID OR CAVITY MATERIALS - SEALANT SHALL BE MINIMUM 1/4" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.



SECTION A-A

FIRESTOP DETAIL - METAL PIPE 1-2 HOUR GYPBOARD WALL SYSTEM NO W-L-1054

SCALE: NONE

F-RATINGS = 1HR. AND 2HR.
T-RATING = 0HR.
L-RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L-RATING AT 400° = 4 CFM/SQ. FT.

NOTES:

1. WALL ASSEMBLY - THE 1 OR 2 HOUR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS SHALL CONSIST OF NOMINAL 2"X4" LUMBER SPACED 16" O.C. STEEL STUDS SHALL BE MINIMUM 2⅝" WIDE AND SPACED MAXIMUM 24" O.C. WHEN STEEL STUDS ARE USED AND THE DIAMETER OF OPENING EXCEEDS THE WIDTH OF STUD CAVITY, THE OPENING SHALL BE FRAMED ON ALL SIDES USING LENGTHS OF STEEL STUD INSTALLED BETWEEN THE VERTICAL STUDS AND SCREW-ATTACHED TO THE STEEL STUDS AT EACH END. THE FRAMED OPENING IN THE WALL SHALL BE 4" TO 6" WIDER AND 4" TO 6" HIGHER THAN THE DIAMETER OF THE PENETRATING ITEM SUCH THAT, WHEN THE PENETRATING ITEM IS INSTALLED IN THE OPENING, A 2" TO 3" CLEARANCE IS PRESENT BETWEEN THE PENETRATING ITEM AND THE FRAMING ON ALL FOUR SIDES.

   B. GYPSUM BOARD - 2" THICK, 4' WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM BOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAXIMUM DIAMETER OF OPENING IS 32⅝" FOR STEEL STUD WALLS. MAXIMUM DIAMETER OF OPENING IS 14⅝" FOR WOOD STUD WALLS. THE F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE FIRE RATING OF THE WALL ASSEMBLY.

2. THROUGH-PENETRANTS - ONE METALLIC PIPE. CONDUIT OR TUBING SHALL BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE SHALL BE MINIMUM 0" TO MAXIMUM 2⅝". PIPE MAY BE INSTALLED WITH CONTINUOUS POINT CONTACT. PIPE, CONDUIT OR TUBING MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:

   A. STEEL PIPE - NOMINAL 30" DIAMETER OR SMALLER (SCHEDULE 10 OR HEAVIER) STEEL PIPE.

   B. IRON PIPE - NOMINAL 30" DIAMETER OR SMALLER CAST OR DUCTILE IRON PIPE.

   C. CONDUIT - NOMINAL 4" DIAMETER OR SMALLER STEEL ELECTRICAL METALLIC TUBING OR 6" DIAMETER STEEL CONDUIT.

   D. COPPER TUBING - NOMINAL 6" DIAMETER OR SMALLER (TYPE L OR HEAVIER) COPPER TUBING.

   E. COPPER PIPE - NOMINAL 6" DIAMETER OR SMALLER (REGULAR OR HEAVIER) COPPER PIPE.

3. FILL, VOID OR CAVITY MATERIAL BEARING THE UL CLASSIFICATION MARK - SEALANT TO BE MINIMUM 2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. AT THE POINT OR CONTINUOUS CONTACT LOCATIONS BETWEEN PIPE AND WALL, A MINIMUM 0" DIAMETER BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE PIPE WALL INTERFACE ON BOTH SURFACES OF WALL.

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO
MICHAEL J. HUSTON
E-76291
PROFESSIONAL ENGINEER

BIALOSKY
CLEVELAND
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No: 15-11.800
Drawn / Checked: MBW/JDC

Issue:
Permit	06.30.2021
Bid	07.16.2021

ELECTRICAL DETAILS & RISERS

E500

Copyright © 2020 Bialosky + Partners Architects

7/15/21 \\BPA-DATA1\Projects\15-11 Tri-C Metro Campus Center\15-11.800 West Food Pantry\08 DWGS\Electrical\E500.dwg

EXISTING BRANCH CIRCUIT BREAKER PANEL SCHEDULE

PANEL: GEHK | **VOLTAGE:** 480/277V, 3Ø, 4W | **MOUNTING:** SURFACE | **BRACING:** ETR
BUSSING: 100 A | **MAIN DEVICE:** MLO | **CONNECTED LOAD:** 22.5392 KW | **DEMAND LOAD:** 22.5392 KW

CKT	DESCRIPTION	LTG	REC	DATA	HVAC	MISC	C/B	Ø	C/B	MISC	HVAC	DATA	REC	LTG	DESCRIPTION	CKT
	SPACE							A							SPACE	
1	EXISTING LOAD	2.0					20/1	B	20/1					0.5	FOOD PANTRY LIGHTING	2
3	EXISTING LOAD	2.0					20/1	C	20/1					2.0	EXISTING LOAD	4
5	EXISTING LOAD	2.0					20/1	A	20/1					2.0	EXISTING LOAD	6
7	EXISTING LOAD	2.0					20/1	B	20/1					2.0	EXISTING LOAD	8
9	EXISTING LOAD	2.0					20/1	C	20/1					2.0	EXISTING LOAD	10
11	EXISTING LOAD	2.0					20/1	A	20/1					2.0	EXISTING LOAD	12
	SPACE							B							SPACE	
	SPACE							C							SPACE	
	SPACE							A							SPACE	

PANEL SCHEDULE NOTE: CIRCUIT NUMBER TAGS MAY DIFFER TO WHAT IS SHOWN ON FIELD. EC SHALL MATCH THE CIRCUIT BREAKER FILL ORDER AND RENUMBER PANEL ON FIELD AS REQUIRED. EC SHALL PROVIDE NEW UPDATED PANEL SCHEDULE WITH DESCRIPTIVE NAMES OF THE THE NEW AND EXISTING LOADS.

NEW CIRCUIT BREAKER IN EXISTING PANEL 'GEHK'.

EXISTING BRANCH CIRCUIT BREAKER PANEL SCHEDULE

PANEL: GELKA | **VOLTAGE:** 208/120V, 3Ø, 4W | **MOUNTING:** SURFACE | **BRACING:** ETR
BUSSING: 400 | **MAIN DEVICE:** MLO | **CONNECTED LOAD:** 99.04 KW | **DEMAND LOAD:** 68.7 KW

CKT	DESCRIPTION	LTG	REC	DATA	HVAC	MISC	C/B	Ø	C/B	MISC	HVAC	DATA	REC	LTG	DESCRIPTION	CKT
1	EXISTING LOAD		1.2				20/1	A	20/1				1.2		EXISTING LOAD	2
3	EXISTING LOAD		1.2				20/1	B	20/1				0.5		FOOD PANTRY PREP REC	4
5	EXISTING LOAD		1.2				20/1	C	20/1				1.2		EXISTING LOAD	6
7	EXISTING LOAD		1.2				20/1	A	20/1				1.2		EXISTING LOAD	8
9	EXISTING LOAD		1.2				20/1	B	20/1				1.2		EXISTING LOAD	10
11	EXISTING LOAD		1.2				20/1	C	20/1				1.2		EXISTING LOAD	12
13	EXISTING LOAD		1.2				20/1	A	20/1				1.2		EXISTING LOAD	14
15	EXISTING LOAD		1.2				20/1	B	20/1				1.2		EXISTING LOAD	16
17	EXISTING LOAD		1.2				20/1	C	20/1				1.2		EXISTING LOAD	18
19	EXISTING LOAD		1.2				20/1	A	20/1				1.2		EXISTING LOAD	20
21	EXISTING LOAD		1.2				20/1	B	20/1				1.2		EXISTING LOAD	22
23	SPACE							C	20/1				1.2		EXISTING LOAD	24
25	EXISTING LOAD		1.2				20/1	A	20/1	0.3					FOOD PANTRY FRIDGE	26
27	FOOD PANTRY FRIDGE					0.3	20/1	B	20/1	0.8					FOOD PANTRY FREEZER	28
29	SPACE							C	20/1	0.8					FOOD PANTRY FREEZER	30
31	EXISTING LOAD					1.9		A		4.8					EXISTING LOAD	32
33						1.9	20/3	B	50/3	4.8						34
35						1.9		C		4.8						36
37	EXISTING LOAD					6.7		A		9.5					EXISTING LOAD	38
39						6.7	70/3	B	100/3	9.5						40
41						6.7		C		9.5						42

PANEL SCHEDULE NOTE: CIRCUIT NUMBER TAGS MAY DIFFER TO WHAT IS SHOWN ON FIELD. EC SHALL MATCH THE CIRCUIT BREAKER FILL ORDER AND RENUMBER PANEL ON FIELD AS REQUIRED. EC SHALL PROVIDE NEW UPDATED PANEL SCHEDULE WITH DESCRIPTIVE NAMES OF THE THE NEW AND EXISTING LOADS.

NEW CIRCUIT BREAKER IN EXISTING PANEL 'GELKA'.

NEW GFCI CIRCUIT BREAKER IN EXISTING PANEL 'GELKA'.

EXISTING BRANCH CIRCUIT BREAKER PANEL SCHEDULE

PANEL: GELK (A) | **VOLTAGE:** 208/120V, 3Ø, 4W | **MOUNTING:** SURFACE | **BRACING:** ETR
BUSSING: 400 | **MAIN DEVICE:** MLO | **CONNECTED LOAD:** 48.21 KW | **DEMAND LOAD:** 34.065 KW

CKT	DESCRIPTION	LTG	REC	DATA	HVAC	MISC	C/B	Ø	C/B	MISC	HVAC	DATA	REC	LTG	DESCRIPTION	CKT
1	EXISTING LOAD		1.2				20/1	A	60/2	5.0					EXISTING LOAD	2
3	EXISTING LOAD		1.2				20/1	B		5.0						4
5	EXISTING LOAD		1.2				20/1	C							SPACE	6
7	EXISTING LOAD		1.2				20/1	A	40/2	3.3					EXISTING LOAD	8
9	CHECKOUT REC/SECURE DOOR		0.3			0.2	20/1	B		3.3						10
11	FOOD PANTRY CONV. REC		0.4				20/1	C	20/1				1.2		EXISTING LOAD	12
13	EXISTING LOAD		1.2				20/1	A	20/1				1.2		EXISTING LOAD	14
15	EXISTING LOAD		1.2				20/1	B	20/1				1.2		EXISTING LOAD	16
17	EXISTING LOAD		1.2				20/1	C	20/1				1.2		EXISTING LOAD	18
19	EXISTING LOAD		1.2				20/1	A	20/1				1.2		EXISTING LOAD	20
21	EXISTING LOAD		1.2				20/1	B	20/1				1.2		EXISTING LOAD	22
23	EXISTING LOAD					2.4	30/2	C	20/1				1.2		EXISTING LOAD	24
25						2.4		A	20/1				1.2		EXISTING LOAD	26
27	EXISTING LOAD					1.6	20/2	B	20/1				1.2		EXISTING LOAD	28
29						1.6		C	20/1				1.2		EXISTING LOAD	30

PANEL SCHEDULE NOTE: CIRCUIT NUMBER TAGS MAY DIFFER TO WHAT IS SHOWN ON FIELD. EC SHALL MATCH THE CIRCUIT BREAKER FILL ORDER AND RENUMBER PANEL ON FIELD AS REQUIRED. EC SHALL PROVIDE NEW UPDATED PANEL SCHEDULE WITH DESCRIPTIVE NAMES OF THE THE NEW AND EXISTING LOADS.

NEW CIRCUIT BREAKER IN EXISTING PANEL 'GELK (A)'.

LIGHTING FIXTURE SCHEDULE

BIALOSKY CLEVELAND

FIXTURE TYPE	LAMP(S)	BALLAST(S)/ CCT	FIXTURE WATTAGE	FIXTURE VOLTAGE	FIXTURE DESCRIPTION	CATALOG NUMBER	NOTES
A	41.4W LED	NA 3500K	41.4	277	RECESSED 2'X4' BACKLIT LED PANEL WITH SEAMLESS CORNERS, 0-10V DIMMING AND WHITE FINISH. ANY FIXTURE NOTED WITH "EM" SHALL BE PROVIDED WITH EMERGENCY BATTERY PACK.	COOPER LIGHTING 24FP4735C EMERGENCY BATTERY PACK: EL14W	4
B	38.3W LED	NA 3500K	38.3	277	RECESSED 2'X2' BACKLIT LED PANEL WITH SEAMLESS CORNERS AND WHITE FINISH.	COOPER LIGHTING 22FP4235C	4
C	10.9W LED	NA 3500K	10.9	277	4" ROUND LED WALL WASH FIXTURE WITH 0-10V DIMMING.	COOPER LIGHTING HC410D010-HM412835-41RWWW	3 4 5
D	10.9W LED	NA 3500K	10.9	277	4" ROUND RECESSED LED DOWNLIGHT FIXTURE WITH WIDE DISTRIBUTION AND STEEL HOUSING. ANY FIXTURE NOTED WITH "EM" SHALL BE PROVIDED WITH EMERGENCY BATTERY PACK.	COOPER LIGHTING HC4-10-D010-HM4-12-835-41-WD-W EMERGENCY BATTERY PACK: IEM14	3 4
D2	10.9W LED	NA 3500K	10.9	277	SAME AS TYPE D FIXTURE BUT WITH MEDIUM DISTRIBUTION.	COOPER LIGHTING HC4-10-D010-HM4-12-835-41-WD-W EMERGENCY BATTERY PACK: IEM14	3 4
P	8W LED	NA 3500K	8	UNV	4.5" SPHERICAL LED PENDANT FIXTURE WITH FROSTED SPHERICAL LENS, BLACK CORD, BLACK FINISH, AND 0-10V DIMMING.	OCL ARCHITECTURAL GB1-P1CF-04-FS-BKP-LED1/35K-UNV-TBD-DM8-ULD-ULD	3
X	4W LED	NA -	4	277	LED EDGE-LIT EXIT SIGN WITH ALUMINUM HOUSING, RED LETTERS, AND NICKEL-CAD BATTERY. FACES, ARROWS AND MOUNTING AS INDICATED ON DRAWINGS.	COOPER LIGHTING EU-R-7-0-R	1 2 3

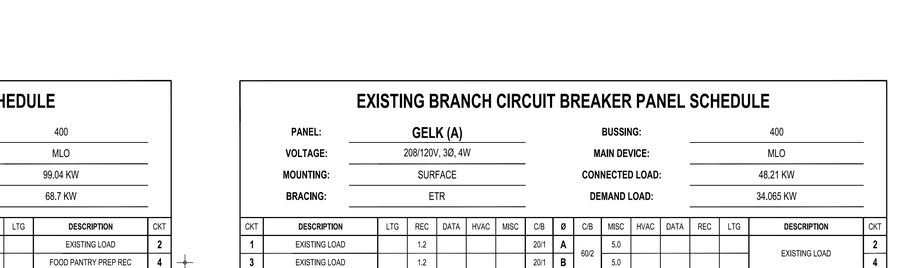
LIGHTING FIXTURE SCHEDULE NOTES:

1. WALL MOUNTED EXIT SIGNS AND EMERGENCY LIGHTING UNITS SHALL BE MOUNTED ABOVE DOORS, CENTERED BETWEEN DOOR AND CEILING WHERE PRACTICAL, OR AT A SIMILAR HEIGHT IF NOT ABOVE DOORS, UON.
2. FIXTURE SHALL BE WIRED AHEAD OF LOCAL SWITCHING.
3. VERIFY FINISH COLOR WITH ARCHITECT PRIOR TO PROCUREMENT.
4. FIXTURE SHALL BE RECESSED IN LAY-IN, DRYWALL OR OTHER TYPE OF CEILING. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLAN AND PROVIDE PROPER MOUNTING ACCESSORIES.
5. FIXTURE SHALL BE AIMED FOR OPTIMAL COVERAGE AS DIRECTED BY ARCHITECT.

LIGHTING FIXTURE SUBSTITUTION NOTE:

THE LIGHTING FIXTURE CATALOG NUMBERS INDICATED IN THE SCHEDULE ARE FOR THE BASIS OF SPECIFICATION. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER VIA EMAIL (MWALSH@BIALOSKY.COM) IN PORTABLE DOCUMENT FORMAT (PDF) AT LEAST 10 DAYS PRIOR TO BID. ANY SUBSTITUTIONS RECEIVED AFTER THIS DATE SHALL NOT BE REVIEWED AND SHALL NOT BE ACCEPTED. THE SUBSTITUTION SUBMITTAL SHALL CONTAIN, AT A MINIMUM, THE FOLLOWING INFORMATION:

1. SPECIFICATION SHEETS FOR ALL PROPOSED TYPES WITH THE TYPE NUMBER AND ANY DEVIATIONS FROM THE BASIS OF SPECIFICATION CLEARLY INDICATED.
2. THE PROPOSED COST OF THE SUBSTITUTION PACKAGE.



1 E001 PARTIAL ONE LINE DIAGRAM
NO SCALE

PARTIAL ONE LINE DIAGRAM NOTES:

1. SECTION B OF DOUBLE LUGGED PANEL 'GELK' IS NOT IN THE SCOPE OF THIS PROJECT.

ONE LINE LINEWEIGHT LEGEND

————	HEAVY LINE WEIGHT INDICATES THIS EQUIPMENT IS NEW OR RELOCATED EXISTING UNLESS NOTED OTHERWISE
————	LIGHT LINE WEIGHT INDICATES THIS EQUIPMENT IS EXISTING TO REMAIN UNLESS NOTED OTHERWISE
– – – – – – – –	HEAVY DASHED LINE WEIGHT INDICATES EXISTING EQUIPMENT IS TO BE REMOVED UNLESS NOTED OTHERWISE

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga Community College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:

STATE OF OHIO — MICHAEL J. HUSTON E-76201 — PROFESSIONAL ENGINEER

BIALOSKY CLEVELAND
6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No: 15-11.800
Drawn / Checked: MBW/JDC

Issue: Permit 06.30.2021
Bid 07.16.2021

ELECTRICAL SCHEDULES & DIAGRAMS

E501

Copyright © 2020 Bialosky + Partners Architects

7/13/2021 \\BPA-DATA1\Projects\15-11 Tri-C Metro Campus Center\15-11.800 West Food Pantry\8 Drwgs\Electrical\E501.dwg

ELECTRICAL SPECIFICATIONS

ELECTRICAL GENERAL PROVISIONS

1. THE PROVISIONS OF THE INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS, ALTERNATES, ADDENDA AND DIVISION 1 ARE A PART OF THIS SPECIFICATION. ELECTRICAL, ARCHITECTURAL, MECHANICAL AND ALL OTHER DRAWINGS AS WELL AS THE SPECIFICATIONS FOR ALL THE DIVISIONS SHALL BE DEFINED AS THE CONTRACT DOCUMENTS. CONTRACTOR SHALL REVIEW ENTIRE SET OF CONTRACT DOCUMENTS PRIOR TO BIDDING.

2. VISIT THE SITE OF THE WORK AND BECOME FAMILIAR WITH THE CONDITIONS AFFECTING THE INSTALLATION. THIS CONTRACTOR SHALL FIELD VERIFY THAT ALL ELECTRICAL WORK CAN BE INSTALLED AS SHOWN ON THE DRAWINGS. ANY DISCREPANCY SHALL BE COMMUNICATED IN WRITING TO THE ARCHITECT OR ENGINEER PRIOR TO SUBMISSION OF A PROPOSAL. SUBMISSION OF A PROPOSAL SHALL PRESUPPOSE KNOWLEDGE OF SUCH CONDITIONS AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED WHERE EXTRA LABOR OR MATERIALS ARE REQUIRED BECAUSE OF IGNORANCE OF THESE CONDITIONS.

3. "CONTRACTOR" AS USED WITHIN THE CONTEXT OF THE ELECTRICAL CONTRACT DOCUMENTS SHALL EXPLICITLY REFER TO THE "ELECTRICAL CONTRACTOR" AND THE ELECTRICAL CONTRACTOR'S "SUBCONTRACTORS". THE TERM "FURNISH" SHALL MEAN TO SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS. THE TERM "INSTALL" SHALL MEAN WORK WHICH INCLUDES THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE. THE TERM "EQUAL" SHALL MEAN TO MEET OR EXCEED THE STANDARDS OF THE SPECIFIED PRODUCTS OR LISTED MANUFACTURERS.

4. INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, SERVICES AND PERMITS NECESSARY FOR THE PROPER COMPLETION OF ALL ELECTRICAL WORK SHOWN. ITEMS OMITTED, BUT NECESSARY TO MAKE THE ELECTRICAL SYSTEM COMPLETE AND WORKABLE, SHALL BE UNDERSTOOD TO FORM PART OF THE WORK. SECURE AND PAY FOR PERMITS AND INSPECTIONS REQUIRED FOR ELECTRICAL WORK.

5. IT IS THE PURPOSE OF THE ELECTRICAL DRAWINGS TO INDICATE THE APPROXIMATE LOCATION OF ALL EQUIPMENT, DEVICES, ETC. ASCERTAIN EXACT LOCATIONS AND ARRANGE WORK ACCORDINGLY. THE RIGHT IS RESERVED TO EFFECT REASONABLE CHANGES IN THE LOCATION OF DEVICES UP TO THE TIME OF ROUGHING-IN, WITHOUT ADDITIONAL COST TO THE OWNER. CHANGES IN LOCATION OF DEVICES RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THE CONTRACT DRAWING OR SPECIFICATION REQUIREMENTS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.

6. TEMPERATURE AND INTERLOCK CONTROLS SHALL BE PROVIDED AND WIRED BY A CONTROLS CONTRACTOR UNDER DIVISION 15. DIVISION 16 CONTRACTOR SHALL PROVIDE NECESSARY 120 VOLT POWER, TERMINATED AT JUNCTION BOXES, AS DIRECTED BY DIVISION 15 CONTRACTOR. LINE VOLTAGE (120 VOLT OR HIGHER) CONTROL DEVICES, SUCH AS THERMOSTATS AND AQUASTATS, WHICH CONTROL FRACTIONAL HORSEPOWER, 120 VOLT MOTORS, SHALL BE PROVIDED BY THE DIVISION 15 CONTRACTOR, AND SHALL BE WIRED BY THE DIVISION 16 CONTRACTOR.

7. RACEWAY SYSTEMS, CONDUIT, BOXES, GROUNDING, BUSBARS, HARDWARE, CABLE TRAYS, ETC. REQUIRED FOR TECHNOLOGY SYSTEMS, CABLING AND DEVICES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE ALL REQUIREMENTS WITH THE TECHNOLOGY SYSTEMS CONTRACTOR.

8. WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF LOCAL AND STATE CODES, AS WELL AS THE NATIONAL ELECTRICAL CODE (NEC), AS INTERPRETED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

9. CONSULT THE DRAWINGS, PRODUCT DATA, WIRING DIAGRAMS AND SHOP DRAWINGS COVERING THE WORK FOR VARIOUS OTHER TRADES, THE FIELD LAYOUTS OF THE CONTRACTORS FOR THE TRADE AND MAKE ADJUSTMENTS ACCORDINGLY IN LAYING OUT THE ELECTRICAL WORK.

10. WARRANT THAT EQUIPMENT AND ALL WORK IS INSTALLED IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE AND THAT ALL EQUIPMENT WILL MEET THE REQUIREMENTS SPECIFIED. GUARANTEE AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS; REPAIR OR REPLACE ANY DEFECTIVE WORK, MATERIAL OR EQUIPMENT WITHIN ONE YEAR FROM DATE OF FORMAL WRITTEN ACCEPTANCE BY THE OWNER.

11. THE EXISTING ELECTRICAL AND TELECOMMUNICATIONS SERVICES, AND ALL EXISTING LOW VOLTAGE COMMUNICATION SYSTEMS WITHIN THE BUILDING SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. ANY SERVICE SHUTDOWNS THAT MAY BE REQUIRED SHALL BE SCHEDULED THROUGH THE OWNER AND SHALL BE DONE AT A TIME AS DIRECTED BY THE OWNER. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE SHUTDOWN PERIODS EVEN THOUGH PREMIUM TIME WORK MAY BE REQUIRED. PROVIDE TEMPORARY SERVICE TO EQUIPMENT OR SYSTEMS THAT CANNOT BE SHUT DOWN, AS DETERMINED BY OWNER, AND AS DESCRIBED ELSEWHERE IN THESE SPECIFICATIONS.

12. BIDS SHALL BE BASED UPON THE SPECIFIED PRODUCTS OR LISTED ALTERNATIVES. WHERE ONLY ONE MAKE IS NAMED, IT SHALL BE PROVIDED. VERBAL REQUESTS OR APPROVALS SHALL NOT BE BINDING ON THE ARCHITECT, ENGINEER OR OWNER.

13. EQUIPMENT AND MATERIALS USED ON THIS PROJECT SHALL BE NEW AND U.L. LABELED FOR THE APPLICATION.

14. PREPARE SHOP DRAWINGS AND PRODUCT DATA FOR LIGHTING FIXTURES, LIGHTING CONTROLS, MECHANICAL DISCONNECTS, FIRE ALARM SYSTEM DEVICES, AND ALL OTHER SPECIFIED SYSTEMS AND COMPONENTS. THE SUBMITTALS THAT ARE RETURNED SHALL BE USED FOR PROCUREMENT. WHERE ADDITIONAL INSTALLATION DRAWINGS, WIRING DIAGRAMS OR OTHER DRAWINGS ARE SPECIFIED AS A PART OF THE SUBMITTAL, THEY SHALL BE SUBMITTED AT THE SAME TIME WITH SHOP DRAWINGS AND PRODUCT DATA.

15. THE CONTRACTOR SHALL KEEP ONE COMPLETE SET OF THE CONTRACT DRAWINGS ON THE PROJECT SITE ON WHICH SHALL BE RECORDED ANY DEVIATIONS OR CHANGES FROM SUCH CONTRACT DRAWINGS MADE DURING CONSTRUCTION. THE UPDATED CONTRACT DRAWINGS SHALL BECOME "RECORD DRAWINGS" OF THE COMPLETED CONSTRUCTION. AFTER THE PROJECT IS COMPLETED, THE RECORD DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT IN GOOD CONDITION, AS A PERMANENT RECORD OF THE INSTALLATION AS CONSTRUCTED.

16. PROVIDE NAMEPLATES ON PANELBOARDS, SAFETY SWITCHES, MOTOR STARTERS, PULLBOXES, CONTROL PANELS, AND RECEPTACLE COVERPLATES. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, LETTERING SHALL INCLUDE THE NAME OR DESIGNATION OF EQUIPMENT, HORSEPOWER, VOLTAGE RATING AND SERVICE DESIGNATION. NAMEPLATES SHALL BE LAMINATED PHENOLIC WITH A BLACK SURFACE AND WHITE CORE. IDENTIFICATION WITH A DYMO TYPE INSTRUMENT IS NOT PERMISSIBLE. THE INSIDE COVER OF ALL RECEPTACLE COVERPLATES SHALL BE PERMANENTLY MARKED TO INDICATE THE PANEL AND CIRCUIT NUMBER OF THE RECEPTACLE. THE OUTSIDE OF THE COVERPLATES FOR ALL JUNCTION BOXES SHALL BE PERMANENTLY MARKED TO INDICATE THE SYSTEM. IDENTIFICATION SHALL BE ON THE INSIDE OF COVERPLATES FOR ALL JUNCTION BOXES IF THEY ARE LOCATED IN FINISHED AREAS. IDENTIFICATION OF BRANCH CIRCUITS SHALL BE TYPEWRITTEN ON DIRECTORY CARDS FURNISHED WITH ALL PANELS AND PLACED IN THE CARD HOLDER ON THE DOOR. PROVIDE NEW TYPEWRITTEN DIRECTORY CARDS WITH UPDATED SCHEDULES FOR ALL EXISTING PANELS WITH NEW OR MODIFIED CIRCUITS. PROVIDE IDENTIFICATION FOR DATA DEVICES. IDENTIFICATION FOR DATA DEVICES SHALL CONFORM WITH TRI-C STANDARDS, COORDINATE WITH OWNER'S REPRESENTATIVE.

17. IDENTIFY SPARE CONDUITS AND CONDUIT STUBS AS FOLLOWS: IDENTIFY SYSTEM AND/OR PURPOSE AT SOURCE, IF POSSIBLE, AND AT TERMINATION END. ALSO, AT TERMINATION END, INDICATE LOCATION OF CONDUIT ORIGINATION.

18. AFTER INSTALLATION, TEST FOR GROUNDS, SHORT CIRCUITS AND PROPER FUNCTION OF EACH NEW SYSTEM AND RELATED WIRING. FAULTS IN THE INSTALLATION SHALL BE CORRECTED.

19. INSULATION RESISTANCE TESTS SHALL BE MADE ON THE NEW ELECTRICAL SYSTEM WITH AN APPROVED MEGOHMMETER.

20. A GROUND CONTINUITY TEST SHALL BE MADE ON THE ENTIRE GROUNDING SYSTEM FROM THE SERVICE TO EVERY NEW OUTLET.

21. AFTER ALL TESTS AND ADJUSTMENTS HAVE BEEN COMPLETED, CLEAN ALL EQUIPMENT LEAVING EVERYTHING IN WORKING ORDER AT THE COMPLETION OF THIS WORK.

22. PROVIDE A TEMPORARY ELECTRICAL SERVICE ADEQUATE IN SIZE FOR HEATING, FOR THE USE OF ALL TRADES AND FOR THE LIGHTING OF EACH ROOM DURING CONSTRUCTION. TEMPORARY SERVICE CAN BE EXTENDED FROM THE OWNER'S EXISTING POWER DISTRIBUTION SYSTEM. THE OWNER MUST APPROVE OF THE POINT OF SUPPLY, THE METHOD OF EXTENSION AND THE ROUTING OF NECESSARY TEMPORARY FEEDERS. INSTALLATION SHALL CONFORM TO ARTICLE 590 OF THE NEC.

23. ALL CUTTING AND PATCHING IN CONSTRUCTION AS NECESSARY FOR INSTALLATION OF THIS WORK SHALL BE THE RESPONSIBILITY OF THIS DIVISION. HAVE CUTTING DONE BY SKILLED MECHANICS AS CAREFULLY AS POSSIBLE AND WITH AS LITTLE DAMAGE AS POSSIBLE. PROVIDE CUTTING AND PATCHING FOR INSTALLATION OF NEW AND/OR RELOCATED DEVICES AND ASSOCIATED CONDUITS IN EXISTING WALLS TO REMAIN.

24. DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT IS A PART OF THE ELECTRICAL WORK. ALL CUTTING, PATCHING, FINISHING, ETC., FOR REMOVED AND RELOCATED ELECTRICAL EQUIPMENT AND DEVICES SHALL BE INCLUDED AS PART OF THE ELECTRICAL WORK. REFER TO THE CONTRACT DRAWINGS FOR EXACT REQUIREMENTS. PROPERLY DISPOSE OF ALL FLUORESCENT AND HID LAMPS, BALLASTS, IONIZATION TYPE SMOKE DETECTORS, BATTERIES AND PCB CONTAMINATED MATERIALS DURING DEMOLITION WORK AS REQUIRED BY LOCAL, STATE, AND REGIONAL CODES. IF ADDITIONAL INTERPRETATION IS REQUIRED REGARDING THE SCOPE OF DEMOLITION INTENT, CONTACT THE ENGINEER PRIOR TO BID.

BASIC MATERIALS AND METHODS

1. ALL BOXES AND COVERPLATES SHALL BE SUITABLE FOR THE APPLICATIONS, RIGIDLY SUPPORTED FROM THE BUILDING STRUCTURE INDEPENDENT OF THE CONDUIT SYSTEM. ALL BOXES SHALL BE 4"x4"x2" DEEP MINIMUM WITH COVERPLATES SUITABLE FOR THEIR INTENDED USE. BOX STABILIZERS SHALL BE UTILIZED TO PROPERLY SUPPORT BOXES IN METAL STUD CONSTRUCTION. ALL JUNCTION BOXES AND COVERPLATES FOR FIRE ALARM SYSTEM WIRING SHALL BE PAINTED RED.

2. EXTERIOR UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC, ENCASED IN CONCRETE UNDER DRIVES AND ROADWAYS WITH A MINIMUM 3" ENVELOPE. CONDUITS IN CONCRETE FLOORS, DAMP OR WET LOCATIONS, OR EXPOSED HIGH TRAFFIC AREAS WHERE SUBJECT TO PHYSICAL ABUSE SHALL BE HEAVY WALL RIGID GALVANIZED STEEL. ALL OTHER INTERIOR CONDUITS SHALL BE ELECTRICAL METALLIC TUBING (EMT), UNLESS OTHERWISE NOTED ON THE DRAWINGS OR WITHIN THESE SPECIFICATIONS. CONDUITS SHALL BE 3/4" TRADE SIZE, MINIMUM, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR WITHIN THESE SPECIFICATIONS. ALL EMT CONDUITS SHALL HAVE COLD-ROLLED STEEL DOUBLE SET SCREW FITTINGS.

3. CONDUITS THAT PASS FROM THE INTERIOR TO THE EXTERIOR OF THE BUILDING, OR ARE SUBJECT TO DIFFERENT TEMPERATURES, SHALL BE SEALED WITH AN APPROVED MATERIAL SUCH AS DUCT-SEAL TO PREVENT THE CIRCULATION OF COLD AIR TO A WARMER SECTION OF THE CONDUIT.

   A. CONDUITS THAT STUB THROUGH THE ROOF SHALL BE SUPPLIED WITH PIPE SEALS AS MANUFACTURED BY THE PATE CO. AND SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. PIPE SEALS SHALL BE ONE PIECE ALUMINUM BASE TYPE WITH FIVE INCH SLOPED ROOF SURFACE FLANGES, GRADUATED STEPPED PVC BOOTS AND ADJUSTABLE STAINLESS STEEL CLAMPS. RPS CORPORATION AND THYCURB CORPORATION ARE APPROVED EQUIVALENT MANUFACTURERS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY EXACT REQUIREMENTS WITH THE ROOFING CONTRACTOR BEFORE PROCUREMENT AND INSTALLATION OF THE PIPE SEALS.

   B. CONDUITS THAT STUB THROUGH THE FOUNDATION WALLS SHALL BE SUPPLIED WITH PIPE SEALS AS MANUFACTURED BY LINK-SEAL, OR BY EQUIVALENT METHOD AS APPROVED BY THE ARCHITECT. PIPE SEALS SHALL BE EPDM (BLACK) WITH STAINLESS STEEL HARDWARE. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY EXACT REQUIREMENTS WITH THE ARCHITECT BEFORE PROCUREMENT AND INSTALLATION OF THE PIPE SEALS.

4. ALL BRANCH CIRCUIT CONDUITS SHALL BE EMT CONDUIT. METAL CLAD (TYPE MC) CABLE OR ARMORED (TYPE AC) CABLE MAY BE UTILIZED IN LIEU OF BRANCH CIRCUIT EMT CONDUIT IN CONCEALED WALL SPACES. A SECURING CLIP SHALL BE PROVIDED TO SECURE THE MC OR AC CABLE TO THE WALL CONSTRUCTION AT A MINIMUM OF 16" ON CENTER. A GREEN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL EMT CONDUIT, MC CABLE AND AC CABLE. THE CONDUIT OR METAL SHEATH SHALL ITSELF QUALIFY AS AN EQUIPMENT GROUNDING RETURN PATH IN ACCORDANCE WITH NEC 250.118. WIRING SHALL BE AS SPECIFIED ELSEWHERE IN THIS SECTION.

5. FLEXIBLE METAL CONDUIT SHALL BE USED FROM OUTLET BOXES TO RECESSED LIGHTING FIXTURES, 6 FT. IN LENGTH.

6. CONDUIT CONNECTIONS TO MOTORS, TRANSFORMERS, AND OTHER VIBRATING EQUIPMENT SHALL BE FLEXIBLE METAL "SEAL-TITE" TYPE "UA" CONDUIT AS MANUFACTURED BY THE AMERICAN BRASS COMPANY OR EQUIVALENT AND SHALL BE OF THE SAME SIZE AS THE FEEDER CONDUIT.

7. LOCAL LIGHT SWITCHES SHALL BE 20 AMPERE, 120/277 VOLTS, AC SPECIFICATION GRADE, WITH GROUNDING TERMINAL - HUBBELL #HBL-122 SERIES, PASS AND SEYMOUR #PS20AC SERIES, OR LEVITON #122 SERIES.

8. CEILING MOUNTED OCCUPANCY SENSORS SHALL BE 1000 SQUARE FOOT COVERAGE, ADAPTIVE TECHNOLOGY OCCUPANCY SENSORS - HUBBELL #ATD1000C OR EQUAL BY PASS & SEYMOUR OR LEVITON.

9. PROVIDE TYPE OF LOW VOLTAGE DIMMERS AS RECOMMENDED BY THE FIXTURE MANUFACTURER. MAGNETIC LOW VOLTAGE DIMMERS SHALL BE LUTRON #NTLV SERIES (1500 WATTS MAXIMUM). ELECTRONIC LOW VOLTAGE DIMMERS SHALL BE LUTRON #NTELV SERIES (450 WATTS MAXIMUM).

10. DIMMERS SHALL BE COMPATIBLE WITH LIGHTING LOADS SERVED. COORDINATE WITH FINAL LIGHTING SELECTIONS.

11. DUPLEX RECEPTACLES SHALL BE 20A, 125V, 2 POLE, 3 WIRE GROUNDING.

   A. GENERAL PURPOSE "COMMERCIAL GRADE" DUPLEX RECEPTACLES: HUBBELL #CR5352, LEVITON #CR20, PASS & SEYMOUR #CR20.

   B. TAMPER RESISTANT "SAFETY TYPE" DUPLEX RECEPTACLES: HUBBELL #HBLSG63H, LEVITON , PASS & SEYMOUR.

12. DUPLEX RECEPTACLES, WHERE INDICATED ON THE DRAWINGS OR WHERE REQUIRED BY CODE, SHALL HAVE INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTION AND SHALL BE 20A, 125V, 2 POLE, 3 WIRE GROUNDING: HUBBELL #GF5352, PASS & SEYMOUR #2091 OR LEVITON #8899. GFCI RECEPTACLES SHALL NOT BE THROUGH-WIRED. PROVIDE INDIVIDUAL DUPLEX GFCI RECEPTACLES AS SHOWN ON THE DRAWINGS.

13. ALL RECEPTACLES SHALL BE PROVIDED WITH A SELF-GROUNDING CLIP AT THE MOUNTING SCREW.

14. ALL SWITCHES, DIMMERS, AND RECEPTACLES SHALL BE WHITE UNLESS OTHERWISE INDICATED WITHIN THESE SPECIFICATIONS. VERIFY COLOR WITH THE ARCHITECT PRIOR TO PROCUREMENT OF THE DEVICES. ALL COVERPLATES SHALL BE SMOOTH HIGH IMPACT COMMERCIAL GRADE THERMOPLASTIC. IN UNFINISHED AREAS, USE CADMIUM PLATED, ROUND CORNER, STEEL COVERPLATES FOR SURFACE MOUNTED OUTLET BOXES. BOTH THE WIRING DEVICES AND THE COVERPLATES SHALL BE BY THE SAME MANUFACTURER.

15. MANUAL MOTOR CONTROLLERS SHALL BE WESTINGHOUSE TYPE "MS" SERIES OR EQUIVALENT, WITH PILOT LIGHT, OVERLOADS AND ON/OFF SWITCH; FLUSH MOUNTED IN FINISHED AREAS. MANUAL MOTOR CONTROLLERS SHALL BE MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS/ITE OR CUTLER HAMMER/WESTINGHOUSE. EACH MANUAL MOTOR CONTROLLER SHALL BE LISTED AS "SUITABLE AS MOTOR DISCONNECT".

16. WIRE AND CABLE FOR BRANCH CIRCUITS AND FOR FEEDERS SHALL BE 90 DEGREES C., 600VOLT, TYPE THHN/THWN, COPPER ONLY, UNLESS OTHERWISE NOTED ON THE DRAWINGS. TYPE XHHW SHALL ALSO BE ACCEPTABLE FOR FEEDERS. MINIMUM SIZE FOR POWER AND LIGHTING BRANCH CIRCUITS SHALL BE #12.

17. SAFETY SWITCHES SHALL BE HEAVY DUTY FUSIBLE OR NONFUSIBLE TYPE AS INDICATED ON THE DRAWINGS, AND SHALL BE SUITABLE FOR THE VOLTAGE AND CURRENT RATINGS AS SHOWN ON THE DRAWINGS.

18. FUSES RATED 600 AMPERES OR LESS, 600 VOLTS OR LESS, SERVING ALL LOADS SHALL BE U.L. CLASS RK-1, BUSSMANN DUAL ELEMENT, TIME DELAY "LOW PEAK", TYPE LPN-RK (250 VOLT) OR TYPE LPS-RK (600 VOLT), OR APPROVED EQUIVALENT. (TYPE J FUSES ARE ALSO ACCEPTABLE.) FUSES OF EQUIVALENT OVERLOAD AND SHORT-CIRCUIT INTERRUPTING PERFORMANCE, AS MANUFACTURED BY RELIANCE FUSE, FERRAZ-SHAWMUT, LITTELFUSE, GENERAL ELECTRIC OR S & C ARE ACCEPTABLE. EXACT FUSE TYPE REQUIRED FOR MOTOR PROTECTION SHALL BE PROVIDED AS RECOMMENDED BY THE STARTER MANUFACTURER.

19. ALL MOTOR STARTERS SHALL BE COMBINATION TYPE. VOLTAGE, PHASE, FUSE SIZE, AND HORSEPOWER SHALL BE AS INDICATED ON THE DRAWINGS. STARTERS SHALL BE SIZE 0 MINIMUM. STARTERS SHALL INCLUDE A FUSIBLE SAFETY SWITCH, A STARTER WITH THREE OVERLOAD DEVICES, AND A CONTROL CIRCUIT TRANSFORMER. EACH COMBINATION STARTER SHALL INCLUDE A CONTROL CIRCUIT TRANSFORMER WITH A 120 VOLT SECONDARY CONNECTION UNLESS OTHERWISE INDICATED ON THE DRAWINGS. STARTERS SHALL HAVE A GREEN RUNNING PILOT LIGHT, A HAND-OFF-AUTOMATIC SELECTOR SWITCH AND A MINIMUM OF TWO NORMALLY OPEN AND TWO NORMALLY CLOSED AUXILIARY CONTACTS, READY FOR CONTROL WIRING CONNECTIONS. VERIFY THE EXACT TYPE AND NUMBER OF AUXILIARY CONTACTS WITH THE DIVISION 15 CONTRACTOR. SINGLE PHASE STARTERS SHALL HAVE SIMILAR CHARACTERISTICS AS SPECIFIED FOR THREE PHASE STARTERS, AS APPLICABLE.

20. DISCONNECT SWITCHES AND MOTOR STARTERS SHALL BE MANUFACTURED BY SQUARE 'D', GENERAL ELECTRIC, SIEMENS/ITE, OR CUTLER HAMMER/WESTINGHOUSE.

21. THROUGH FLOOR FITTINGS AND FLOOR BOXES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES. ALL LOCATIONS SHALL BE FIELD VERIFIED WITH THE ARCHITECT BEFORE CORE DRILLING.

22. ANY CORE DRILLING OR CUTTING OF FIRE RATED FLOORS, SHAFTS AND WALLS SHALL BE FIRE STOPPED PRIOR TO FINISH PATCHING. ALL PENETRATIONS AND BACK BOXES SHALL BE SEALED IN ACCORDANCE WITH UL FIRE RESISTANCE HANDBOOK VOLUME II AND SHALL BE RATED TO MATCH THE FIRE RATING OF THE FLOORS, SHAFTS OR WALLS PENETRATED.

23. PENETRATIONS THROUGH FIRE RATED FLOORS SHALL NOT EXCEED AN AGGREGATE AREA OF 1 SQUARE FOOT IN ANY 100 SQUARE FEET OF FLOOR AREA, OR AS DICTATED BY LOCAL CODES.

24. CONDUITS SHALL BE CONTINUOUS AND SECURED TO ALL BOXES IN SUCH A MANNER THAT EACH CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS FROM THE POINT OF SERVICE TO ALL DEVICE BOXES. RUN CONDUITS CONCEALED UNLESS OTHERWISE INDICATED. THE ACTUAL ROUTING OF CONDUITS SHALL BE INSTALLED TO SUIT THE VARIOUS FIELD CONDITIONS.

25. IN REMODELED AREAS WHERE IT IS NOT POSSIBLE TO INSTALL CONCEALED CONDUIT, PERMISSION MUST BE OBTAINED FROM THE ARCHITECT TO RUN SURFACE MOUNTED RACEWAYS OR CONDUIT. THE ROUTING AND ELEVATION MUST BE COORDINATED WITH THE ARCHITECT BEFORE INSTALLATION. EXPOSED RACEWAYS SHALL BE PAINTED TO MATCH ADJACENT FINISHES.

26. INDIVIDUAL BRANCH CIRCUITS ARE SHOWN ON THE DRAWINGS FOR CLARITY. LIGHTING AND RECEPTACLE CIRCUITS LESS THAN OR EQUAL TO 100 AMPERES MAY BE GROUPED FOR HOMERUNS, WITH A MAXIMUM OF THREE (3) CIRCUITS PER HOMERUN. NEUTRAL CONDUCTORS SHALL NOT BE SHARED.

27. WIRING FROM LEGALLY REQUIRED EMERGENCY AND STANDBY POWER GENERATION SOURCES SHALL BE KEPT INDEPENDENT OF EACH OTHER AND INDEPENDENT OF ALL OTHER BRANCH CIRCUIT WIRING, AND SHALL NOT ENTER THE SAME RACEWAY, CABLE, BOX, OR CABINET WITH OTHER WIRING, UNLESS SPECIFICALLY ALLOWED BY THE NATIONAL ELECTRICAL CODE.

28. ALL ENCLOSURES CONTAINING EMERGENCY CIRCUITS SHALL BE PERMANENTLY MARKED WITH A RED LABEL INDICATING "CONTAINS EMERGENCY CIRCUITS".

29. FOR 120 VOLT BRANCH CIRCUITS WHERE SIZE IS NOT SHOWN, CONDUCTOR SIZE #12 MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 125 FEET, AND SIZE #10 MINIMUM SHALL BE USED FOR CIRCUITS 125 FEET OR GREATER. FOR 277 VOLT BRANCH CIRCUITS WHERE SIZE IS NOT SHOWN, CONDUCTOR SIZE #12 MINIMUM SHALL BE USED FOR CIRCUITS LESS THAN 250 FEET, AND SIZE #10 MINIMUM SHALL BE USED FOR CIRCUITS 250 FEET OR GREATER. GROUND CONDUCTORS SHALL ALSO BE INCREASED TO #10 ACCORDINGLY.

30. IDENTIFY WIRE AND CABLE FOR BRANCH CIRCUITS AS CALLED FOR IN THE NATIONAL ELECTRICAL CODE. IDENTIFICATION OF FEEDERS SHALL BE BY MEANS OF COLORED TAPE AT TERMINALS.

31. ADJACENT DEVICES OF THE SAME VOLTAGE CLASS SHALL BE MOUNTED IN GANGED BOXES.

32. MOUNTING HEIGHTS TO THE CENTER OF OUTLET BOXES SHALL BE AS INDICATED ON THE DRAWINGS.

33. VERIFY MOUNTING HEIGHTS AND LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN. REFER TO DETAILS AND INTERIOR WALL ELEVATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS.

34. OUTLETS SHALL NOT BE INSTALLED BACK TO BACK.

35. ALL RECEPTACLES SHALL BE MOUNTED WITH THE GROUND OPENING ABOVE THE PHASE AND NEUTRAL OPENINGS.

36. AN ATTEMPT HAS BEEN MADE TO INDICATE EXISTING POWER DISTRIBUTION CONDITIONS. THE EC SHALL VERIFY EXISTING CONDITIONS AND SHALL NOTIFY ENGINEER IF CONFLICTS ARE DISCOVERED IN PANEL SIZES, FEEDER SIZES, OR OVERCURRENT PROTECTION DEVICES.

37. ARRANGE EQUIPMENT IN ELECTRICAL ROOMS TO FACILITATE ADDING EQUIPMENT IN FUTURE.

38. ALL DEVICES SHALL BE SECURED WITH MORE THAN A SINGLE SCREW.

39. ALL HARDWARE, SUPPORTS, HANGERS, BRACKETS, ANGLE IRON, CHANNELS, RODS AND CLAMPS NECESSARY TO INSTALL ELECTRICAL EQUIPMENT SHALL BE PROVIDED TO SUIT THE FIELD CONDITIONS AND THE APPLICATIONS INTENDED AS SHOWN ON THE DRAWINGS. THE USE OF PERFORATED STRAPS IS NOT PERMITTED.

40. ALL EQUIPMENT MOUNTED ON INTERIOR EQUIPMENT ROOM WALLS WHERE ADDITIONAL SUPPORT IS REQUIRED SHALL BE ATTACHED TO 3/4" PAINTED PLYWOOD FIRE RATED BOARDS FURRED OUT 1" FROM WALL. BOARDS SHALL BE PAINTED TO MATCH WALL FINISHES.

POWER DISTRIBUTION

1. THE ELECTRICAL SERVICE TO THE EXISTING BUILDING SHALL REMAIN. THE BUILDING'S EXISTING POWER DISTRIBUTION SYSTEM SHALL BE EXTENDED AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. THE BUILDING'S EXISTING GROUNDING ELECTRODE SYSTEM SHALL BE MAINTAINED.

2. GROUND ALL ELECTRICAL SYSTEM CONDUITS, RACEWAYS, CABLE TRAYS, MOTORS, PANELS, CABINETS, FIXTURES, METAL BOXES, AND OTHER EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ALL PROVISIONS OF THE NEC, STATE BUILDING CODE AND LOCAL OR REGIONAL CODES.

3. GROUNDING OF THE ELECTRICAL SYSTEM SHALL BE BY MEANS OF AN INSULATED GROUNDING CONDUCTOR INSTALLED WITH FEEDER AND BRANCH CIRCUIT CONDUCTORS IN ALL CONDUITS, SIZED IN ACCORDANCE WITH NEC ARTICLE 250.122.

4. INSTALL BONDING JUMPERS ACROSS ALL BUILDING EXPANSION JOINTS, AND ACROSS ALL CONDUIT AND CABLE TRAY EXPANSION FITTINGS.

5. WHERE GROUNDING CONDUCTORS ARE SUBJECT TO MECHANICAL DAMAGE PROTECT SUCH CONDUCTORS BY ENCASEMENT IN CONCRETE OR INSTALLATION IN A RIGID METALLIC RACEWAY.

6. ALL TERMINATIONS OF THE GROUNDING CONDUCTORS SHALL BE BY MEANS OF SOLDERLESS CONNECTIONS.

7. GROUND ALL TRANSFORMERS IN ACCORDANCE WITH NEC ARTICLE 250.30. THE BONDING JUMPER SHALL BE DIRECTLY CONNECTED TO A GROUNDING ELECTRODE. THE TRANSFORMER CASE SHALL BE BONDED TO THE GROUNDING ELECTRODE CONDUCTOR, BUT SHALL NOT BE USED AS THE GROUNDING ELECTRODE. THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED WITHIN RIGID METALLIC CONDUIT. NEUTRAL CONDUCTORS SHALL NOT BE USED FOR EQUIPMENT GROUNDING. A BONDING JUMPER SHALL NOT BE PROVIDED IN PANELBOARDS.

8. FURNISH AND INSTALL BRANCH CIRCUIT BREAKER PANELBOARDS EQUIPPED WITH CIRCUIT BREAKERS, WITH FRAME AND TRIP RATINGS LISTED ON THE DRAWINGS. CIRCUIT BREAKERS SHALL BE THERMAL-MAGNETIC, MOLDED CASE BOLT-ON (PLUG ON) TYPE. PROVIDE (SWITCHING "SWD")(HIGH INTENSITY DISCHARGE "HID")(HVAC "HACR")(ARC FAULT CIRCUIT INTERRUPTING "AFCI") TYPE AS REQUIRED. ALL CURRENT CARRYING PARTS OF THE BUS STRUCTURE SHALL BE TIN-PLATED ALUMINUM. EACH PANEL SHALL CONTAIN A 100% RATED NEUTRAL BUS AND A GROUNDING BUS. PANELS SHALL HAVE "DOOR-WITHIN-DOOR" TRIM, HINGED BOX TO FRONT TYPE WITH LATCH ON OUTER DOOR. ALL LOCKS SHALL BE KEYED ALIKE.

9. EACH PANEL, AS A COMPLETE UNIT, SHALL HAVE A MINIMUM SYMMETRICAL SHORT CIRCUIT CURRENT RATING OF 10,000 AMPERES FOR 208Y/120 VOLT RATED PANELS AND 14,000 AMPERES FOR 480Y/277 VOLT RATED PANELS. CIRCUIT BREAKERS SHALL BE FULLY RATED. SERIES RATINGS ARE NOT PERMITTED.

10. EACH PANEL SERVED DIRECTLY BY A TRANSFORMER SECONDARY SHALL HAVE A MAIN CIRCUIT BREAKER OR OTHER MAIN OVERCURRENT PROTECTION.

11. NEW CIRCUIT BREAKERS OR FUSIBLE SWITCHES INSTALLED IN EXISTING PANELS SHALL MATCH THE EXISTING IN TYPE, MANUFACTURER (IF POSSIBLE), AND SHORT CIRCUIT RATINGS.

12. PANELS SHALL BE AS MANUFACTURED BY SQUARE D, SIEMENS/ITE, GENERAL ELECTRIC OR CUTLER HAMMER/WESTINGHOUSE.

13. PANELS SHALL BE MOUNTED SO THAT TOP OF THE CABINET IS AT 6'-0" ABOVE FLOOR. A GLAZED DIRECTORY FRAME SHALL BE PROVIDED INSIDE EACH PANEL DOOR AND SHALL BE OF SUFFICIENT SIZE TO GIVE A COMPLETE DESCRIPTION OF EACH CIRCUIT. TYPED DIRECTORY CARDS SHALL BE PROVIDED LISTING EACH CIRCUIT SERVED.

14. THE BRANCH CIRCUIT NUMBERS USED ON THE DRAWINGS SHALL BE APPLIED FOR THE CONSTRUCTION. HOWEVER, AT THE COMPLETION OF THE WORK, CIRCUIT NUMBER ADJUSTMENTS SHALL BE MADE AS REQUIRED TO PROVIDE BALANCED PHASE LOADING ON EACH PANEL.

15. FLUSH MOUNTED PANELS SHALL BE INSTALLED WITH A MINIMUM OF THREE EMPTY 3/4" CONDUITS STUBBED UP TO THE NEAREST ACCESSIBLE CEILING SPACE FOR CONVENIENT FUTURE EXPANSION.

16. SPARE CIRCUIT BREAKERS SHALL BE IDENTIFIED AS SUCH ON THE PANEL DIRECTORY CARDS AND SHALL BE LEFT IN THE "OFF" POSITION.

LIGHTING

1. LIGHTING FIXTURES SHALL BE PROVIDED AS SPECIFIED IN THE LIGHTING FIXTURE SCHEDULE ON THE DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER MOUNTING ACCESSORIES. CONTRACTOR SHALL REFER TO THIS SPECIFICATION FOR LAMP AND BALLAST REQUIREMENTS. SUBMITTALS SHALL INCLUDE PRODUCT INFORMATION FOR FIXTURES, LAMPS, AND BALLASTS.

2. NON-DIMMING LED DRIVERS SHALL MEET THE FOLLOWING REQUIREMENTS:, 85% MINIMUM EFFICIENCY, -40°C STARTING TEMPERATURE, ≥ 0.90 POWER FACTOR, ≤ 20% TOTAL HARMONIC DISTORTION AND CLASS A SOUND RATING. SYSTEM MUST SURVIVE 250 REPETITIVE STRIKES ON "C LOW" WAVEFORMS AT 1 MINUTE INTERVALS WITH LESS THAN 10% DEGRADATION IN CLAMPING VOLTAGE. POWER SUPPLIES CAN BE UL CLASS I OR II OUTPUT. DIMMING DRIVERS SHALL BE SIMILAR TO NON-DIMMING DRIVERS WITH THE FOLLOWING REQUIREMENTS: 0-10V DIMMING DRIVERS SHALL DIM TO A MINIMUM OF 10% AND SHALL BE TYPE AS RECOMMENDED BY MANUFACTURER UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS. DRIVERS SHALL COMPLY WITH FCC 47 CFR PART 18 NON-CONSUMER RFI/EMI STANDARDS AND BE COMPATIBLE WITH DIMMER CONTROL SPECIFIED. PROVIDE LOW TEMPERATURE DRIVERS FOR LED FIXTURES IN EXTERIOR APPLICATIONS OR IN UNHEATED AREAS.

3. LED FIXTURES SHALL BE 3500K OR AS INDICATED ON DRAWING, 85CRI OR HIGHER, 3YR MINIMUM WARRANTY. LED BULBS SHALL BE A19.

4. LEDs SHALL BE MANUFACTURED BY NICHIA, LUMILEDS, SAMSUNG, CREE, PHILIPS, OR OSRAM. ALL OTHER LAMPS SHALL BE MANUFACTURED BY GENERAL ELECTRIC, SYLVANIA, (VENTURE), OR PHILIPS.

5. ALL LEDs MUST BE BATCH SORTED FOR COLOR AND BRIGHTNESS, AND VISUAL CONSISTENCY. ALL FIXTURES SHALL BE SUPPLIED AT SAME TIME AND SHALL COME FROM SAME BATCH. SPARE FIXTURES SHALL BE PROVIDED FROM SAME BATCH. LED COMPONENTS SHALL BE MERCURY AND LEAD-FREE.

6. THERMAL MANAGEMENT SHALL BE PASSIVE BY DESIGN. THE USE OF FANS OR OTHER MECHANICAL DEVICES SHALL NOT BE ALLOWED. FIXTURE MANUFACTURER SHALL ADHERE TO DEVICE MANUFACTURER GUIDELINES, CERTIFICATION PROGRAMS, AND TEST PROCEDURES FOR THERMAL MANAGEMENT. FIXTURES SHALL HAVE MINIMUM HEAT SINK SURFACE SUCH THAT LED MANUFACTURER'S MAXIMUM JUNCTION TEMPERATURE IS NOT EXCEEDED AT MAXIMUM RATED AMBIENT TEMPERATURE.

7. ALL LAMPS SHALL BE MANUFACTURED BY GENERAL ELECTRIC, SYLVANIA, (VENTURE), OR PHILIPS.

8. SURFACE MOUNTED FIXTURES MOUNTED ON CEILINGS OTHER THAN ACCESSIBLE LAY-IN CEILING SYSTEMS, OR TO THE BUILDING STRUCTURE, SHALL BE SECURELY SUPPORTED IN A MANNER APPROVED BY THE ARCHITECT.

9. RECESSED FIXTURES SHALL BE PROVIDED WITH MOUNTING ACCESSORIES COMPATIBLE WITH THE CEILING TYPES INSTALLED. PLASTER FRAMES SHALL BE FURNISHED FOR EACH RECESSED FIXTURE INSTALLED IN PLASTER OR DRY WALL TYPE CEILINGS. VERIFY ALL CEILING TYPES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS PRIOR TO SUBMITTING SHOP DRAWINGS.

10. FOR RECESSED FIXTURES IN ACCESSIBLE LAY-IN CEILING SYSTEMS, THE GRID SYSTEM TEES SHALL BE SUPPORTED AT EACH CORNER OF EACH FIXTURE WITH A SUSPENDED CEILING SUPPORT WIRE UP TO A BUILDING STRUCTURAL MEMBER, OR UP TO THE STRUCTURAL DECK. EACH FIXTURE SHALL ALSO BE SECURELY FASTENED TO THE GRID SYSTEM TEES BY MECHANICAL MEANS, SUCH AS BOLTS, SCREWS, RIVETS OR BY CLIPS IDENTIFIED FOR USE WITH THE CEILING TYPE.

11. IF INSULATION IS INSTALLED ABOVE RECESSED LIGHTING FIXTURES, MAINTAIN 3" CLEAR AIR SPACE BETWEEN ALL RECESSED LIGHTING FIXTURES AND THE INSULATION MATERIAL. NO CEILING INSULATION SHALL BE INSTALLED ON TOP OF NON-IC RATED LIGHTING FIXTURES.

12. ALL LIGHTING FIXTURES (INCLUDING "NORMALLY-OFF" EMERGENCY FIXTURES) THAT ARE CAPABLE OF BEING AIMED SHALL BE AIMED BY THE CONTRACTOR FOR THE OPTIMUM COVERAGE OF THEIR TASK, TO THE SATISFACTION OF, AND UNDER THE DIRECTION OF THE ARCHITECT.

13. EXISTING LIGHTING FIXTURES IN REMODELED AREAS AS SHOWN ON THE DRAWINGS BEING REUSED, OR RELOCATED, SHALL BE THOROUGHLY CLEANED AND FIXTURES SHALL BE RELAMPED WITH NEW LAMPS. BROKEN LENSES SHALL BE REPLACED. IF EXISTING FIXTURES TO BE REUSED OR RELOCATED ARE DEFECTIVE OR INOPERABLE, BRING THIS CONDITION TO THE ATTENTION OF THE ARCHITECT OR ENGINEER.

14. SPARE LAMPS AMOUNTING TO 10% (MINIMUM OF 3) OF EACH TYPE AND SIZE OF EACH LAMP USED ON THE PROJECT SHALL BE SUPPLIED BY THE ELECTRICAL CONTRACTOR.

15. LIGHTING FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 410. LOW VOLTAGE LIGHTING FIXTURES AND SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 411.

COMMUNICATION

1. COMBINATION VOICE/DATA OUTLET BOXES SHALL BE 4 INCHES SQUARE WITH SINGLE GANG PLASTER RINGS. VOICE-ONLY, DATA-ONLY, FAX AND PAY TELEPHONE OUTLETS SHALL BE SIMILAR. BLANK COVERPLATES SHALL BE PROVIDED FOR ALL UNUSED OUTLETS. VERIFY EXACT REQUIREMENTS WITH THE TECHNOLOGY CONTRACTOR PRIOR TO INSTALLATION.

2. ALL CONDUITS REQUIRED FOR COMBINATION VOICE/DATA OUTLETS AS SHOWN ON THE DRAWINGS SHALL BE INSTALLED COMPLETE WITH PULLWIRES. CONDUITS SHALL BE 1" MINIMUM.

3. PROVIDE CONDUIT FROM EACH OUTLET UP TO THE NEAREST ACCESSIBLE CORRIDOR OR OPEN AREA CEILING SPACE AND PROVIDE AN INSULATED BUSHING AT EACH STUB.

4. REQUIREMENTS FOR CABLE TELEVISION OUTLET BOXES SHALL BE SIMILAR TO VOICE/DATA OUTLET BOXES.

5. FURNISH AND INSTALL DEVICES FOR A COMPLETE EXTENSION OF THE EXISTING FIRE ALARM SYSTEM. INCLUDE SUFFICIENT WIRING, CONDUIT, TERMINATIONS, ELECTRICAL BOXES, AND ALL OTHER NECESSARY MATERIAL. NEW DEVICES SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM DEVICES. THE EXISTING SYSTEM ALARM OPERATION SHALL BE MAINTAINED.

6. THE DEVICES SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE AMERICAN'S WITH DISABILITIES ACT (ADA).

7. STATE OF OHIO CERTIFICATION FOR INSTALLATION OF FIRE ALARM SYSTEMS SHALL BE PROVIDED PRIOR TO START OF INSTALLATION.

8. UPON COMPLETION OF THE PROJECT, THE OWNER SHALL BE FURNISHED BY THE CONTRACTOR REPRODUCIBLE VELLUM DRAWINGS INDICATING THE ACTUAL INSTALLATION OF THE FIRE ALARM SYSTEM EXTENSION AS CONSTRUCTED SHOWING WIRING FILL, WIRE TAG NUMBERS, JUNCTION BOXES AND CONNECTION OF DEVICES.

9. A REPRESENTATIVE OF THE SYSTEM MANUFACTURER SHALL PROVIDE ALL SYSTEM REPROGRAMMING AND TESTING.

10. SUBMITTALS SHALL INCLUDE A BOUND BROCHURE WITH DATA SHEETS FOR ALL EQUIPMENT SPECIFIED AND INSTALLATION DRAWINGS. DRAWINGS SHALL INDICATE EXACT WIRING REQUIREMENTS AND SHALL INCLUDE EQUIPMENT LOCATIONS SHOWN ON REPRODUCIBLE VELLUM FLOOR PLANS (1/16" SCALE, MINIMUM).

11. PROVIDE MISCELLANEOUS LOW VOLTAGE COMMUNICATION SYSTEM DEVICES AS SHOWN AND SPECIFIED ON THE DRAWINGS. INCLUDE SUFFICIENT WIRING, CONDUIT TERMINATIONS, ELECTRICAL BOXES, AND ALL OTHER NECESSARY MATERIAL AS RECOMMENDED BY THE SYSTEM SUPPLIERS. PROVIDE SHOP DRAWINGS, SYSTEM REPROGRAMMING, AND TESTING.

Project:
The Pantry, Tri-C Connect
West Campus - Parma
Cuyahoga Community College
Project No. 1511.800
11000 W Pleasant Valley Rd, Parma, OH 44130

Cuyahoga
Community
College

MEP Engineers
Bialosky Cleveland
6555 Carnegie Avenue
Cleveland, Ohio 44103
t: 216.752.8750
f: 216.752.9437

Seal:
MICHAEL J.
HUSTON
E-76291

BIALOSKY
CLEVELAND

6555 Carnegie Avenue
Cleveland, Ohio 44103
t. 216.752.8750
f. 216.752.9437
www.bialosky.com

Project No:	15-11.800
Drawn / Checked:	MBW/JDC

Issue:		
	Permit	06.30.2021
	Bid	07.16.2021

ELECTRICAL SPECIFICATIONS

E700

Copyright © 2020 Bialosky + Partners Architects