

# BLAKE ENGINEERING PLLC

# BID Addendum No. 2

February 16, 2023

# Cornwall Public Library HVAC Replacement Project

NYSED Project Control Number: 44-03-01-06-6-009-006

This BID Addendum No. 2 forms part of the Contract Documents and modifies the original documents issued for bid on January 26, 2023.

## **REVISIONS TO THE PROJECT MANUAL**

NO.	SECTION	REVISION DESCRIPTION
1	000110	<b>REPLACE</b> with the attached Section 000110 – Table of Contents
2	000115	<b>REPLACE</b> with the attached Section 000115 – List of Drawing Sheets
3	001113	<b>REPLACE</b> with the attached Section 001113 – Advertisement to Bidders
4	004116.1	<b>REPLACE</b> with the attached Section 004116.1 – GC Bid Form
5	004116.3	<b>REPLACE</b> with the attached Section 004116.3 – EC Bid Form
6	004116.4	<b>REPLACE</b> with the attached Section 004116.4 – PC Bid Form
7	004116.5	<b>REMOVE</b> the Section 004116.5 – SRR Bid Form
8	005216.5	<b>REMOVE</b> the Section 005216.5 – Agreement Contract 5 SRR
9	011200	<b>REPLACE</b> with the attached Section 011200 – Multiple Contract Summary

#### **REVISIONS TO THE CONTRACT DRAWINGS**

NO.	DRAWING	REVISION DESCRIPTION
1	C.101	REPLACE with the attached sheet C.101
2	AD.100	REPLACE with the attached sheet AD.100
3	A.100	REPLACE with the attached sheet A.100
4	A.104	REPLACE with the attached sheet A.104
5	A.105	REPLACE with the attached sheet A.105

NO.	DRAWING	<b>REVISION DESCRIPTION</b>
6	P.101	REPLACE with the attached sheet P.101
7	PD.201	REPLACE with the attached sheet PD.201
8	P.201	REPLACE with the attached sheet P.201
9	P.301	REPLACE with the attached sheet P.301
10	M.102	REPLACE with the attached sheet M.102
11	E.102	REPLACE with the attached sheet E.102
10	ED.201	REPLACE with the attached sheet ED.201
10	E.301	REPLACE with the attached sheet E.301

#### **RESPONSES TO RFIs**

- 1. Who is the existing FA vendor?
  - a. RESPONSE: Existing FA panel is Fire-Lite (Honeywell). Safe & Sound currently performs maintenance and inspections for the existing FA.
- 2. What is the construction schedule?
  - a. RESPONSE: Refer to Milestone Schedule Section 011100 for information on schedule.
- 3. Is all this work during normal hours?
  - a. RESPONSE: Work is planned for normal hours but additional hours may be possible if coordinated with the Owner on an as needed basis. Refer to 1.2.E. of Section 0111100 for additional information.
- 4. Do you have pictures for the add alternate EC-01 panels we need to remove and temporarily mount?
   a. RESPONSE: See Supplemental Information in this Addendum #2.
- 5. Are we storing light fixtures on site, is there adequate space available, we are not liable for any damage done to fixtures while in storage at owners property?
  - a. RESPONSE: Light fixtures are to be stored on site. There is limited storage inside of the building so plan on providing a storage container in the parking lot to temporarily store and secure fixtures to keep them out of the way of construction activities. Contractor is responsible for the condition of the light fixtures, any damaged caused by removal and reinstallation will be the responsibility of the contractor to repair and/or replace.
- 6. Is there a possibility for another walkthrough as we could not make the first one?
  - a. RESPONSE: We will try to accommodate addition site visits if time and availability allows. Email <u>bknoell@blakeengineeringpllc.com</u> to schedule/coordinate a walkthrough.
- 7. Confirm the ceilings will be completely removed for lighting removal and reinstall, we are not responsible for any ceiling damage/repair?
  - a. RESPONSE: Ceilings are being removed and replaced in the locations indicated on the architectural drawings. GC is responsible for the ceiling work but all other contractors working in and around ceilings are responsible if they cause damage to the new ceiling after it has been installed.

- 8. How many access doors are we to provide per the specs for this job if any?
  - a. **RESPONSE:** We do not have any specifically called for in the documents. In this case it is up to the contractors if it is required based on their installation.
- 9. Specs 011200-17 4. Provide re-routing of existing power distribution, where is this shown on plans, what exactly are we re-routing. Please provide more details for us to include this scope of work.
  - a. RESPONSE: Refer to drawings for explanation of specific scope, this statement from the specification is general and does not refer to a specific item.
- 10. Are the existing to remain light fixtures outside the hashed scope of work area controlled by switches within the scope of work area?
  - a. **RESPONSE:** Possibly, contractor to field verify switching and circuitry for the existing lighting as needed.
- 11. Will the bid opening be streamed online?
  - a. RESPONSE: No, the bid opening will be held in person only. Bid tabulations with the results will be posted to REVPlans and a copy can be emailed to anyone who requests it.
- 12. Please confirm that MC is providing all disconnect for their equipment for us to install, please confirm that we do need to install and that the FCU disconnects are not integral to the unit.
  - a. RESPONSE: Refer to Multiple Contract Summary, MC to furnish all disconnects for installation by EC. Note on sheet M.102 has been revised to clarify this.
- 13. The specs state the MC is to provide heaters in the multiple contract summary 01100-19 a. top of the page
  - a. **RESPONSE:** The heaters referenced in the Multiple Contract Summary are the thermal overload heaters in a motor starter, they are not referencing the electric heaters furnished by the EC for the toilet rooms.
- 14. Are we allowed to use MC cable for branch circuiting. The pictures you provided show MC cable above the ceilings, I just want to make sure we can use MC cable for the new mechanical units. The specs do not say we can or cant?
  - a. RESPONSE: See Section 260533 for requirements related to MC cable. MC cable is allowed for lighting and receptacle branch circuits concealed in dry hollow spaces of a building. MC cable may not be used in areas where it would be subjected to physical damage, or where prohibited by code. Circuits for mechanical units shall be in rigid conduit with final connections in flexible metal conduit where appropriate.
- 15. Is the project prevailing rate?
  - a. RESPONSE: Yes, the project is prevailing wage. Refer to Section 007343 Wage Rates for additional information.
- 16. Does the project have any Minority incentives?
  - a. RESPONSE: No, there are no minority participation or threshold requirements for this project.
- 17. Drawings PD-201& P-201 show the water closet, lavatory and pantry sink as part of contract #5. On drawing P-301, it shows the demo and install of the same sink as SRR-01. Please clarify.
  - a. **RESPONSE:** Refer to revised drawings and bid forms in Addendum #2. This scope has been revised to be an alternate associated with the plumbing contract.
- 18. Drawing M-301 shows the refrigerant piping layout from the heat pumps to the FCU's, but there are no pipe sizes showing for the layout. Please clarify.
  - a. RESPONSE: Refer to drawing M.104, refrigerant piping sizes are indicated on the VRF System Piping Diagram.

#### SUPPLEMENTAL INFORMATION

The following are photos of existing conditions of the existing building and systems for reference.



Image 1 – Existing Lighting Panel L-1

1898 COUNTY ROUTE 1, WESTTOWN, NEW YORK 10998 BKNOELL@BLAKEENGINEERINGPLLC.COM | PH: 845-820-3431 | F: 845-767-5050

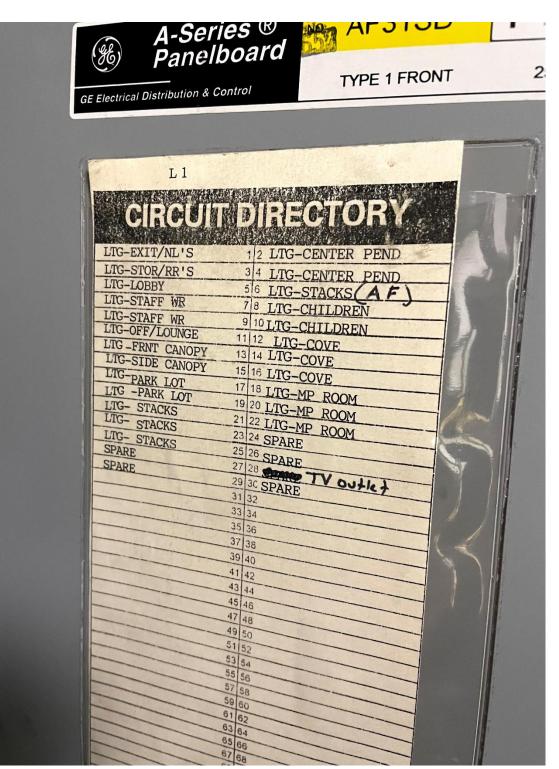


Image 2 – Panel Schedule for Existing Panel L-1

1898 COUNTY ROUTE 1, WESTTOWN, NEW YORK 10998 BKNOELL@BLAKEENGINEERINGPLLC.com | PH: 845-820-3431 | F: 845-767-5050



Image 3 – Existing Lighting Control Panel

1898 County Route 1, Westtown, New York 10998 BKnoell@BlakeEngineeringPllC.com | Ph: 845-820-3431 | F: 845-767-5050 BLAKE ENGINEERING PLLC BID Addendum No. 2 Cornwall Public Library HVAC Replacement Project



Image 4 – Existing Lighting Control Panel

# SECTION 000110 - TABLE OF CONTENTS

#### DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

	Project Manual Cover
000110	Table of Contents

- 000115 List of Drawing Sheets
- 001113 Advertisement to Bidders
- 002113 Instructions to Bidders
- 004116.1 General Construction Bid Form
- 004116.2 Mechanical Construction Bid Form
- 004116.3 Electrical Construction Bid Form
- 004116.4 Plumbing Construction Bid Form

## 004116.5 Staff Room Renovations Bid Form

- 004519 Non-Collusion Affidavit
- 004520 Iran Divestment Act Affidavit
- 004543 Corporate Resolutions
- 005216.1 Agreement Contract 1 GC
- 005216.2 Agreement Contract 2 MC
- 005216.3 Agreement Contract 3 EC
- 005216.4 Agreement Contract 4 PC

## 005216.5 Agreement Contract 5 SRR

- 006113.13 Payment Bond
- 006113.14 Performance Bond
- 007216 General Conditions
- 007343 Wage Rates

## DIVISION 01 – GENERAL REQUIREMENTS

- 011100 Milestone Schedule
- 011200 Multiple Contract Summary
- 011400 Work Restrictions
- 011410 NYSED 155.5 Uniform Safety Standards for School Construction & Maint. Projects
- 012900 Payment Procedures
- 012973 Schedule of Values
- 013150 Safety and Health
- 013516 Alteration Project Procedures
- 014000 Quality Requirements
- 017300 Execution
- 017329 Cutting and Patching
- 017700 Closeout Procedures

## DIVISION 02 – EXISTING CONDITIONS

024119 Selective Demolition

#### DIVISION 05 - METALS

054000 Cold-Formed Metal Framing

055000 Metal Fabrications

#### TABLE OF CONTENTS

#### DIVISION 06 – WOODS AND PLASTICS

061000 Rough Carpentry

#### DIVISION 07 - THERMAL AND MOISTURE PROTECTION

078413 Penetration Firestopping

#### DIVISION 08 – DOORS AND WINDOWS

087100 Door Hardware

#### **DIVISION 09 – FINISHES**

- 090190.52 Maintenance Repainting
- 092900 Gypsum Board
- 093013 Ceramic Tiling
- 095123 Acoustical Tile Ceilings
- 096723 Resinous Flooring
- 099123 Interior Painting

#### **DIVISION 10 – SPECIALTIES**

- 101423.16 Room-Identification Panel Signage
- 102113.19 Plastic Toilet Compartments
- 102800 Toilet, Bath, and Laundry Accessories

#### **DIVISION 12 – FURNISHINGS**

123661.16 Solid Surfacing Countertops

#### **DIVISION 22 - PLUMBING**

- 220500 General Plumbing Requirements
- 220502 Plumbing Demolition
- 220529 Supports and Sleeves
- 220553 Plumbing Identification
- 220719 Piping Insulation
- 221000 Plumbing Piping
- 221030 Plumbing Specialties
- 221613 Natural Gas Piping
- 223300 Electric Water Heaters
- 224200 Plumbing Fixtures

#### **DIVISION 23 - MECHANICAL**

- 230500 General Mechanical Requirements
- 230502 Mechanical Demolition
- 230529 Supports and Sleeves
- 230553 Mechanical Identification
- 230593 Testing, Adjusting, and Balancing
- 230713 Duct Insulation

TABLE OF CONTENTS

- 230719 Pipe Insulation
- 232300 Refrigerant Piping
- 233113 Metal Ductwork
- Air Duct Accessories
- 233713 Registers Grilles and Diffusers
- 237232 Packaged Energy Recovery Ventilators
- 238129 Variable-Refrigerant-Flow HVAC Systems

## **DIVISION 26 - ELECTRICAL**

- 260500 General Electrical Requirements
- 260519 Low-Voltage Electrical Power Conductors and Cables
- 260526 Grounding and Bonding for Electrical Systems
- 260529 Hangers and Supports for Electrical Systems
- 260533 Raceways and Boxes for Electrical Systems
- 260544 Sleeves and Sleeve Seals for Electrical Raceways and Cabling
- 260553 Identification for Electrical Systems
- 262726 Wiring Devices
- 262816 Enclosed Switches and Circuit Breakers

END OF SECTION 001110

# THIS PAGE INTENTIONALLY LEFT BLANK

## SECTION 000115 - LIST OF DRAWING SHEETS

#### ARCHITECTURAL DRAWINGS

- AR.100 EXISTING PLAN FIRST FLOOR
- T.01 EXISTING BUILDING EGRESS PLAN & CODE REVIEW
- AD.100 FIRST FLOOR SELECTIVE DEMOLITION PLAN
- A.100 EXISTING FLOOR PLAN WITH RESTROOM ALTERATION
- A.101 MEN'S RESTROOM ALTERATION PLAN DETAIL W/ INTERIOR ELEVATIONS
- A.102 WOMEN'S RESTROOM ALTERATION PLAN DETAIL W/ INTERIOR ELEVATIONS
- A.103 EXISTING 1<sup>ST</sup> FLOOR AND PROPOSED REFLECTED CEILING PLAN
- A.104 STAFF RESTROOM & KITCHENETTE DETAIL W/ INTERIOR ELEVATIONS
- A.105 KITCHENETTE DETAILS (CONTRACT #5)
- A.400 DOOR, WALL TYPE & FINISH SCHEDULES W/ NOTES & DETAILS
- A.500 A.D.A. DETAILS
- A.501 A.D.A. DETAILS

#### PLUMBING DRAWINGS

- P.101 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS
- PD.201 PLUMBING DEMOLITION PLAN
- P.201 PLUMBING PLAN
- P.301 STAFF RESTROOM & KITCHENETTE PLUMBING PLAN (CONTRACT #5)

#### MECHANICAL DRAWINGS

- M.101 MECHANICAL LEGENDS & NOTES
- M.102 MECHANICAL SCHEDULES
- M.103 MECHANICAL SCHEDULE & DETAILS
- M.104 VRF SYSTEM PIPING DIAGRAM
- MD.201 MECHANICAL DEMOLITION PLAN
- MD.202 HYDRONIC DEMOLITION PLAN
- M.201 MECHANICAL DUCTWORK PLAN
- M.202 ATTIC MECHANICAL PLAN
- M.301 MECHANICAL PIPING PLAN

#### ELECTRICAL DRAWINGS

- E.101 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS
- E.102 ELECTRICAL PANEL SCHEDULES
- ED.201 ELECTRICAL DEMOLITION PLAN
- ED.202 LIGHTING DEMOLITION PLAN
- E.201 ELECTRICAL PLAN
- E.202 LIGHTING PLAN
- E.301 STAFF RESTROOM & KITCHENETTE ELECTRICAL PLAN (CONTRACT #5)

# THIS PAGE INTENTIONALLY LEFT BLANK

## SECTION 001113 - ADVERTISEMENT TO BIDDERS

Engineer Blake Engineering PLLC 1898 County Route 1 Westtown, NY 10998 PH: 845-820-3431 Project Information Cornwall Public Library 395 Hudson Street Cornwall, NY 12518 PH: 845-534-8282

#### **Cornwall Public Library HVAC Replacement Project**

Cornwall Public Library

SED#44-03-01-06-6-009-006

The Owner, the Cornwall Public Library, will receive sealed bids to furnish materials and labor to complete the HVAC Replacement Project, as noted above. Each bid shall be on a stipulated sum basis for the following contract(s):

Contract No. 01 – General Construction (GC) Contract No. 02 – Mechanical Construction (MC) Contract No. 03 – Electrical Construction (EC) Contract No. 04 – Plumbing Construction (PC) Contract No. 05 – General Construction – Staff Room Renovations (SRR)

Two copies of sealed bids in an envelope on which is clearly stated the contract number and title will be received until **3:00 pm** on **February 23, 2023**, at <u>Cornwall Public Library</u>, 395 Hudson Street, Cornwall, NY 12518. Bids received after this time will not be accepted and returned to Bidder unopened. Bids will be opened publicly and read aloud after specified receipt time. All interested parties are invited to attend.

Complete digital sets of Bidding Documents, drawings and specifications, may be obtained online beginning **January 26, 2023,** as a download at the following website: <u>www.revplans.</u>com under 'public projects.'

Complete sets of Bidding Documents, Drawings and Specifications, may be obtained from REVplans, 28 Church Street, Unit 7, Warwick, NY 10990 Tel: 1-877-272-0216, upon depositing the sum of one hundred dollars (\$100.00) for each combined set of documents. Checks or money orders shall be made payable to **Cornwall Public Library.** Plan deposit is refundable in accordance with the terms in the Instructions to Bidders to all submitting bids. Any bidder requiring documents to be shipped shall make arrangements with the printer and pay for all packaging and shipping costs.

Please note REVplans (<u>www.revplans.com</u>) is the designated location and means for distributing and obtaining all bid package information. Only those Contract Documents obtained in this manner will enable a prospective bidder to be identified as an official plan holder of record. The Provider takes no responsibility for the completeness of Contract Documents obtained from other sources. Contract Documents obtained from other sources may not be accurate or may not contain addenda that may have been issued.

All bid addenda will be transmitted to registered plan holders via email and will be available at <u>www.revplans.com</u>. Plan holders who have paid for hard copies of the bid documents will need to make the determination if hard copies of the addenda are required for their use and coordinate directly with

the printer for hard copies of addenda to be issued. There will be no charge for registered plan holders to obtain hard copies of the bid addenda.

Each Bidder must deposit a Bid Security in the amount and form per the conditions provided in Instructions to Bidders. All Bids will remain subject to acceptance for forty-five (45) days after the Bid Opening. Owner may, in its sole discretion, release any Bid and return Bid Security prior to that date.

A full performance bond, together with labor and material payment bonds in form acceptable to Owner, shall be required of the successful Bidder for the full contract amount.

The award of bid pursuant to this notice is subject to appropriation of funds for this purpose in accordance with the applicable provisions of the General Municipal Law. All bids must meet the requirements of the General Municipal law of the State of New York and all other applicable statues and have attached a statement of non-collusion. All documents submitted in connection with this bid will become the property of the Cornwall Public Library, and the library will not return bids or bid documents.

A Pre-Bid Conference will be held on **Friday, February 3, 2023** at **1:00 pm**, at **Cornwall Public Library, 395 Hudson Street, Cornwall, NY.** Use this page to verify identification as a Bidder. Attendance at this meeting is requested as the Owner and Engineer will be present to discuss the Project. Attendees should anticipate a Q & A session, followed by a walk-thru of the respective spaces/buildings. The Engineer will transmit to all listed Bidders record of Addenda in response to clarifications arising from the Conference.

Bids shall not include New York State sales and compensating use taxes on materials and supplies incorporated into the Work, the Owner being exempt therefrom. The Bidders must comply with New York State Department of Labor Prevailing Wage Rate Schedule and conditions of employment.

The Cornwall Public Library reserves the right to waive any informality in submitted bids, reject any or all bids, and to award contracts on its determination of the lowest responsible bidder.

By Order of: Cornwall Public Library

END OF SECTION 001113

# SECTION 004116.1 - BID FORM CONTRACT NO. 01 - GENERAL CONSTRUCTION (GC)

BIDDE	ER INFORMA	TION				
COMP	ANY:					
ADDR	ESS:					
CONT	ACT:					
TELEF	PHONE: (	)				
FACSI	MILE: (	)				
E-MAI	L:					
BID T(	O (Owner):	Cornwall Pu	blic Library			
		395 Hudson				
			ew York 12518 harlotte Dunaief,	Director		
		raciation. Ci	hariotte Dunaier,	Director		
PROJE	ECT TITLE:	<b>a</b> 11 b 1				
			blic Library HV <i>F</i> -01-06-6-009-000	AC Replacement 1	Project	
		52011 44 05	01 00 0 009 000			
1.	Addenda: Th	e Bidder ackno	owledges receipt	of the following	Bid Addenda:	
	No	Dated				
	No	Dated				
	No	Dated				
	No	Dated				
2.				y in the form of ( percent of the wr		orm) Bid Bond, Certi- amount.
3.	derstands the ings, Project	requirements Manual, and A	and intent of the ddenda; and pro	Bidding and Con	tract Document all labor, mater	camined and fully un- ts, including Draw- ial, and equipment eement.
4.	Base Bid:			\$		
	ä	In case of discr	(Words*) epancy, written wo	ord governs.		(Figures)

5. Alternates:

ADD Alternate GC-01: Renovate the Women's Toilet Room, Men's Toilet Room and Custodial Closet as indicated on the drawings. The scope includes but is not limited to the replacement of wall and floor finishes, partitions, fixtures, accessories and wall reconstruction. The alternate does not include the ceiling replacement in these rooms which is part of the base bid.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_)

ADD Alternate GC-02: Renovate the Staff Toilet Room as indicated on the drawings. The scope includes but is not limited to the replacement of wall and floor finishes, fixtures, accessories and wall reconstruction. The alternate does not include the ceiling replacement in these rooms which is part of the base bid.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_

ADD Alternate GC-03: Replace existing kitchenette including all millwork, countertop and sink as shown on the drawings and specifications.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_)

ADD Alternate GC-04: Replace existing flooring in Staff Break Room with resinous flooring system. Refer to drawings and specifications for additional information.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_)

- 6. Allowances: The Bidder affirms that all allowances listed in the Bidding Documents have been included in the Base Bid and include related the overhead and profit for said Allowance.
- 7. Time of Commencement and Completion: The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the project schedule stipulated in specification Section 011100 Milestone Schedule, and supplemental inclusions.
- 8. Rejection of Bids: The Bidder acknowledges that the Owner reserves the right to waive any informality in submitted bids, reject any or all bids, and to award contracts on its determination of the lowest responsible bidder.
- 9. Execution of Contract: If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any

time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.

10. Signature:

(Signature)

(Date)

- 11. Attachments: As itemized in the "Instructions to Bidders" for a complete Bid include the following:
  - a. Bid Form
  - b. Non-Collusive Bid Certification
  - c. Iran Divestment Act Certification
  - d. Corporate Resolution
  - e. Bid Security
- 12. Supplementary Bid Information: If apparent lowest Bidder upon Bid Opening, submit in accordance with the "Instruction to Bidders" within 3 business days the following:
  - a. Draft Schedule of Values (cost breakdown)
  - b. Proposed Subcontractor List
  - c. Proposed Substitution List
  - d. Proposed Project Manager & Superintendent Resumes
  - e. Itemized list of Work to be self-performed
  - f. Contractor's Qualification Statement AIA Document A305, 1986 edition

END OF SECTION 004116.1

# THIS PAGE INTENTIONALLY LEFT BLANK

# SECTION 004116.3 – BID FORM CONTRACT NO. 03 – ELECTRICAL CONSTRUCTION (EC)

BIDDER INFORMATION
COMPANY:
ADDRESS:
CONTACT:
TELEPHONE: ()
FACSIMILE: ()
E-MAIL:
BID TO (Owner): Cornwall Public Library 395 Hudson Street Cornwall, New York 12518 Attention: Charlotte Dunaief, Director
PROJECT TITLE: Cornwall Public Library HVAC Replacement Project SED# 44-03-01-06-6-009-006
1. Addenda: The Bidder acknowledges receipt of the following Bid Addenda:
No Dated
No Dated
No Dated
No Dated
<ol> <li>Bid Security: Attached hereto is Bid Security in the form of (circle correct form) Bid Bond, Certified Check, Cash in the amount of five (5%) percent of the written Base Bid amount.</li> </ol>
3. Representations: By making this Bid, the Bidder represents that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manual, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement.
4. Base Bid:\$
(Words*) (Figures) *In case of discrepancy, written word governs.

5. Alternates:

ADD Alternate EC-01: Renovate the Women's Toilet Room, Men's Toilet Room and Custodial Closet as indicated on the drawings. The scope includes temporary relocation of L-1 panel and lighting controls panel as well as power to new plumbing fixtures and water heater. All other work in this area related to the replacement of the existing HVAC system and the ceilings is not part of this alternate and should be included in the base bid.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_)

ADD Alternate EC-02: Provide power to sensor faucet in Staff Toilet Room.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_)

ADD Alternate EC-03: Provide electrical modifications at the Staff Room Kitchenette to support renovations as shown on the drawings and specifications.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_)

- 6. Time of Commencement and Completion: The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the project schedule stipulated in specification Section 011100 Milestone Schedule, and supplemental inclusions.
- 7. Rejection of Bids: The Bidder acknowledges that the Owner reserves the right to waive any informality in submitted bids, reject any or all bids, and to award contracts on its determination of the lowest responsible bidder.
- 8. Execution of Contract: If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.

9. Signature:

(Signature)

(Date)

- 10. Attachments: As itemized in the "Instructions to Bidders" for a complete Bid include the following:
  - a. Bid Form
  - b. Non-Collusive Bid Certification
  - c. Iran Divestment Act Certification
  - d. Corporate Resolution
  - e. Bid Security
- 11. Supplementary Bid Information: If apparent lowest Bidder upon Bid Opening, submit in accordance with the "Instruction to Bidders" within 3 business days the following:
  - a. Draft Schedule of Values (cost breakdown)
  - b. Proposed Subcontractor List
  - c. Proposed Substitution List
  - d. Proposed Project Manager & Superintendent Resumes
  - e. Itemized list of Work to be self-performed
  - f. Contractor's Qualification Statement AIA Document A305, 1986 edition

END OF SECTION 004116.3

# THIS PAGE INTENTIONALLY LEFT BLANK

# SECTION 004116.4 - BID FORM CONTRACT NO. 04 - PLUMBING CONSTRUCTION (PC)

BIDDER INFORMATION
COMPANY:
ADDRESS:
CONTACT:
TELEPHONE: ()
FACSIMILE: ()
E-MAIL:
BID TO (Owner): Cornwall Public Library 395 Hudson Street Cornwall, New York 12518 Attention: Charlotte Dunaief, Director
PROJECT TITLE: Cornwall Public Library HVAC Replacement Project SED# 44-03-01-06-6-009-006
1. Addenda: The Bidder acknowledges receipt of the following Bid Addenda:
No Dated
No Dated
No Dated
No Dated
<ol> <li>Bid Security: Attached hereto is Bid Security in the form of (circle correct form) Bid Bond, Certified Check, Cash in the amount of five (5%) percent of the written Base Bid amount.</li> </ol>
3. Representations: By making this Bid, the Bidder represents that they have examined and fully understands the requirements and intent of the Bidding and Contract Documents, including Drawings, Project Manual, and Addenda; and proposes to provide all labor, material, and equipment necessary to complete the Work on, or before, the dates specified in the Agreement.
4. Base Bid:\$
(Words*) (Figures) *In case of discrepancy, written word governs.

5. Alternates:

ADD Alternate PC-01: Renovate the Women's Toilet Room, Men's Toilet Room and Custodial Closet as indicated on the drawings. The scope includes but is not limited to the replacement of lavatories, water closets, urinal, water heater and mop sink. All other work in this area related to the replacement of the existing HVAC system is not part of this alternate and should be included in the base bid.

ADD to the base bid, the sum of:

\_\_\_\_\_(\$\_\_\_\_\_)

ADD Alternate PC-02: Renovate the Staff Toilet Room as indicated on the drawings. The scope includes but is not limited to the replacement of a lavatory and water closet. All other work in this area related to the replacement of the existing HVAC system is not part of this alternate and should be included in the base bid.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_)

ADD Alternate PC-03: Provide plumbing modifications at the Staff Room Kitchenette to support renovations as shown on the drawings and specifications. The scope includes but is not limited to the replacement of a sink.

ADD to the base bid, the sum of:

(\$\_\_\_\_\_)

- 6. Time of Commencement and Completion: The Bidder agrees to commence Work on the stipulated starting date(s) and will substantially complete the Work in accordance with the project schedule stipulated in specification Section 011100 Milestone Schedule, and supplemental inclusions.
- 7. Rejection of Bids: The Bidder acknowledges that the Owner reserves the right to waive any informality in submitted bids, reject any or all bids, and to award contracts on its determination of the lowest responsible bidder.
- 8. Execution of Contract: If notice of the acceptance of this Bid is mailed, telegraphed, or otherwise delivered to the undersigned within forty-five (45) days after the date of the Bid Opening, or any time thereafter, the undersigned will, within ten (10) working days after the receipt of the form of Agreement, execute and deliver the Contract.
- 9. Signature:

(Signature)

(Date)

- 10. Attachments: As itemized in the "Instructions to Bidders" for a complete Bid include the following:
  - a. Bid Form
  - b. Non-Collusive Bid Certification
  - c. Iran Divestment Act Certification
  - d. Corporate Resolution
  - e. Bid Security
- 11. Supplementary Bid Information: If apparent lowest Bidder upon Bid Opening, submit in accordance with the "Instruction to Bidders" within 3 business days the following:
  - a. Draft Schedule of Values (cost breakdown)
  - b. Proposed Subcontractor List
  - c. Proposed Substitution List
  - d. Proposed Project Manager & Superintendent Resumes
  - e. Itemized list of Work to be self-performed
  - f. Contractor's Qualification Statement AIA Document A305, 1986 edition

END OF SECTION 004116.4

# THIS PAGE INTENTIONALLY LEFT BLANK

# SECTION 011200 – MULTIPLE CONTRACT SUMMARY

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. This Section includes a summary of each Prime Contract, including general requirements for Work, coordination, and specific temporary facilities and controls responsibilities. One set of Construction Documents is issued covering the Work of multiple Prime Contracts.
- B. Specific requirements of Work of each Prime Contract are also indicated in individual paragraphs of this Section and may also be indicated in individual Specification Sections and on drawings. Each Prime Contractor is responsible to review all Construction Documents of the Project for specific requirements, and for a general understanding and knowledge of the Work of other Prime Contractors.
- C. Prime Contractors are responsible for all Work of their Contract, no matter on what drawing the Work appears. Should a conflict or contradiction in assignment of Work be indicated elsewhere in the Construction Documents, this Section shall take precedence over all other assignments of Work.
  - 1. Contract No. 1 General Construction (GC)
  - 2. Contract No. 2 Mechanical Construction (MC)
  - 3. Contract No. 3 Electrical Construction (EC)
  - 4. Contract No. 4 Plumbing Construction (PC)
  - 5. Contract No. 5 General Construction Staff Room Renovations (SRR)

#### 1.3 DEFINITIONS

- A. Project Identification: Project consists of all labor, materials, equipment, appliances, services, and incidentals necessary for layout, installing, and performing the HVAC system replacement at the Cornwall Public Library as shown on the Contract Drawings and described in the Specifications.
- B. Building Site(s): The Building Site(s) shall be defined in the Construction Documents, as the building(s) footprint, and all related construction within a five-foot (5'0") distance of the building's exterior face, unless noted or assigned otherwise.
  - 1. Prime Contractors shall be aware of, and coordinate, specific exceptions to the 5'0" limit indicated within each Scope of Work outline.
- C. Permanent Enclosure: As determined by the Engineer, the condition at which roofing is installed and weather tight; exterior walls are weather tight and insulated; and all openings are closed with permanent construction or substantial temporary closures equivalent in weather protection to permanent construction.

1. All costs associated with failure to provide and maintain described installations that result in any damage or contamination to the Owner's property, shall be borne by the Prime Contract responsible for the installation.

## 1.4 GENERAL REQUIREMENTS OF PRIME CONTRACTS

- A. Prime Contracts: The context used in this Section are separate Prime Contracts that represent significant elements of Work that is to be performed concurrently and in close coordination with the Work of other Prime Contracts for the benefit of the Owner. Each Prime Contract is recognized to be a significant, integrated part of the Work.
- B. Layout and Installation: Each Prime Contractor shall schedule, layout and install their Work in such manner as not to delay or interfere with, but to compliment the execution of the Work of other Prime Contractors, utility companies and Owner's operations.
- C. Extent of Contract: The Construction Documents, comprised of drawings and specifications, contain more specific descriptions of the Work, indicating which Prime Contract shall provide specific elements of the Project Work.
  - 1. Work provided by each Prime Contract shall mean complete and operable systems and assemblies, including products, components, accessories and installations required by the Construction Documents, respective manufactured product, or indicated otherwise.
  - 2. Prime Contractors shall exercise good judgment and perform all Work according to related industry standards.
  - 3. The Owner is exempt from payment of Federal, State and local taxes, including sales and compensating use taxes on all materials and supplies incorporated in completing the Work; these taxes are not to be included in the Bid. This exemption does not apply to tools, machinery, equipment or other property leased by, or to, the Prime Contractor or subcontractor, or to supplies and materials, which even though consumed are not permanently incorporated into the completed Work.
    - a. Prime Contractors, and their subcontractors, shall be responsible for paying all applicable taxes on said tools, machinery, equipment or property, and upon all said unincorporated supplies and materials, whether purchased or leased.
  - 4. Prime Contractors shall understand that time is of the essence and will adequately staff the Project by employing the appropriate trade's people to perform the Work; these people shall be experienced in their respective trades. A shortage of labor in the industry shall not be accepted as an excuse for not properly staffing the Project; all efforts shall be made to meet or exceed the schedule, including additional staff and/or labor hours necessary. All cost associated with this item shall be included within the Prime Contract's Bid.
  - 5. Local custom and trade union jurisdictional agreements or settlements will not control the scope of the Work of each Prime Contract.
    - a. When a potential jurisdictional dispute or similar interruption of Work is first identified or threatened, the affected Prime Contractor(s) shall promptly negotiate a reasonable settlement to avoid or minimize the pending interruption and/or delays.
    - b. Contractor's trade-related issues shall not be grounds for modification or extension of scheduled completion date(s).

- 6. The Work of all Prime Contractors requires close coordination with other Prime Contractors and construction personnel. Maintain flexibility and cooperation through the Project. "Out of Sequence" and "Delay" claims will only be considered when requirements of Division 01 "Project Management and Coordination" have been adhered to.
  - a. Delay claims must be in writing and forwarded to the Engineer per the requirements of the Conditions of the Contract. Claims not submitted per these requirements will be rejected and/or denied.
- 7. The intention of the Work is to follow a logical sequence, however, a Prime Contractor may be required by the Engineer, to temporarily install, omit or leave out a section(s) of Work, out of sequence. All such out of sequence Work, and come back time, at these areas shall be performed at no additional cost to the Owner.
- D. Construction Sequencing: Prime Contractors shall understand that concurrent construction on multiple areas/sites of this Project are a requirement. Should an area of construction not be complete per incremental milestones of the schedule included in the Contract Documents, the responsible Prime Contractor shall immediately augment the labor force, whether self-preformed of subcontracted, to recover such lost time.
- E. Existing Conditions: Each Prime Contractor shall verify existing conditions in the field and per the Conditions of the Contract, immediately report conditions to the Engineer that are not represented correctly by the Construction Documents.
  - 1. Each Prime Contractor is responsible for familiarizing himself with Project Site Logistics, whether represented in the Construction Documents, or in real time.
  - 2. Each Prime Contractor has been given ample opportunity to review existing conditions related to the Project. Existing conditions not noted in the Construction Documents that could be easily recognized during pre-bid review that interfere with the respective Prime Contractor's Work, shall be the responsibility of the respective Prime Contractor, including related costs associated with removal, patching, relocation or re-fabrication of installations.
  - 3. Owner shall be responsible for removing Owner's contents of spaces for construction during unoccupied periods. Prime Contractors shall be responsible for removing and/or protecting, and re-placing Owner's contents during occupied periods, where contractor needs to perform work (ie: second-shift). The contractor shall ensure that spaces worked in are clean, and as encountered when they entered the space, prior to the next business day.
- F. Protection of Installations: Each Prime Contractor is responsible for protecting their installations at all times. All costs incurred to repair, replace or clean insufficiently protected materials/installations shall be the responsibility of the installing Prime Contractor.
  - 1. The Construction Site Representative(s) shall be notified, in writing, immediately upon material/installation being damaged. Notification shall support indication of the responsible party.
  - 2. The Owner will not be liable for damaged materials and/or installations by "others", when "others" cannot be identified.
  - 3. Repair damaged Work, clean exposed surfaces or replace construction installations that cannot be repaired.

- 4. Each Prime Contractor shall be responsible for removing all labels not required to remain, from their installations.
- 5. Installations shall be wiped clean and proper protection then installed.
- G. Daily Cleaning: All Prime Contractors are responsible for any and all debris and refuse generated by their Work, including the Work of their subcontractors. A daily clean up and disposal is required by each Prime Contractor for the periods which that Prime Contractor, or its subcontractors, are performing Work on site(s).
  - 1. Maintaining a clean Project site(s) shall be deemed a Safety & Health issue, with Prime Contractors and designated Competent Persons being held accountable for fulfilling obligations.
  - 2. Daily cleaning will be mandated to remove from the building, any debris created by day-today activities.
  - 3. Daily cleaning will not mean any one Prime Contractor is responsible for assisting another Prime Contractor with removing major quantities of debris created by a particular Prime Contractor's Work.
  - 4. Contractor working solely in an area shall be responsible for cleaning of that area.
  - 5. Assign at least one person for a daily clean and sweep of the Work area(s). Prime Contractor shall allot sufficient manpower and time for this to be completed by the end of each days' shift.
    - a. Submit name of person(s) identified for this task to the Construction Site Representative(s).
    - b. Construction Site Representative(s) shall have the authority to give direction directly to person(s) on the Project Site(s) identified by the Prime Contract, designated for cleanup task.
    - c. Any Prime Contractor not providing personnel for daily cleaning will be Back-Charged for labor provided by the Owner or others retained to complete this task.
  - 6. General Construction (GC) Contractor shall provide sweeping compound for daily cleaning. Each Prime Contractor shall provide sufficient number of brooms or other necessary tools, for use by their personnel to adequately fulfill their obligations.
  - 7. General Construction (GC) Contractor shall provide and maintain garbage cans/refuse containers with liners for each construction area as directed by the Construction Site Representative(s) and shall be responsible for disposing of these materials to a dumpster.
  - 8. General Construction (GC) Contractor shall provide the necessary equipment/containers (lull/skip-box) to move daily clean/sweep debris from the building to a dumpster daily. Skip-box shall be emptied to a dumpster by 9:00a.m. the following day.
  - 9. General Construction (GC) Contractor shall be responsible for waste management (dumpsters, off-site disposal of demolished/removed materials, construction waste, etc.), for their own respective purposes, and for use by Mechanical, Electrical, and Plumbing Prime Contracts.
  - 10. Final Cleaning: Following Substantial Completion of each area of construction, each Prime Contractor shall wipe/vacuum clean all respective installations.

#### 1.5 GENERAL TEMPORARY FACILITIES AND CONTROLS OF PRIME CONTRACTS

- A. Conditions of Use: Keep temporary services or conditions clean and neat in appearance. Operate in a safe and efficient manner. Relocate temporary facilities as required as Work progresses; do not overload facilities or permit them to interfere with progress. Take necessary fire prevention measures; do not allow hazardous, dangerous, or unsanitary conditions to develop or persist on the Project site(s).
  - 1. Installation, operation, maintenance, and removal of each temporary service or condition are considered part of the respective Prime Contractor's own construction activity, as are costs and use charges associated with each facility.
  - 2. Locate service or condition where they will serve the Project adequately and with minimum interference of the Work, coordinate with the Construction Site Representative(s) and the other Prime Contractors prior to installation.
- B. Temporary Use of Permanent Facilities: Prime Contractor, as installer of each permanent service or condition, shall assume responsibility for its operation, maintenance and protection during use as a construction facility prior to the Owner's acceptance, regardless of previously assigned temporary facilities and controls responsibility.
- C. Owner's Facilities: Contractors are not allowed to use the Owner's facilities (toilets, telephones, food service, etc.) for their own benefit or convenience. Prime Contractor Superintendents shall enforce this policy with their respective Work forces.
  - 1. Construction personnel parking will be restricted to an area(s) indicated on the Site Logistics Plans (if included), or otherwise requested by the Owner. The Owner reserves the right to remove from their property, unauthorized vehicles occupying unauthorized areas, at respective vehicle owner's expense.
- D. Storage on the Project Site: Each Prime Contractor shall provide sufficient secure weather-tight storage facilities for their materials and equipment. The Owner's facilities and the Project's building areas shall not be used for storage, unless agreed upon in advance via the Construction Site Representative(s).
  - 1. Until permanently incorporated into the Work, all materials on the Project site(s) are the Prime Contractor's responsibility for protection, security and insuring thereof.
  - 2. Prime Contractors and their subcontractors shall coordinate deliveries with the Construction Site Representative(s) to ensure that disruptions and Owner inconvenience are avoided.
- E. Tools and Equipment: Each Prime Contractor shall provide all tools and equipment necessary for its own activities and shall be responsible for secure lock-up and storage for all items on the Project Site(s).
  - 1. Each Prime Contractor shall provide all construction aids and miscellaneous services and facilities necessary, exclusively for its own construction activities including any additional supplementary power, ventilation, dehumidification, lighting requirements and weather protection.
- F. Project Site Communication: Each Prime Contractor shall provide their Project Superintendent and Competent Person with a wireless cellular telephone for the duration of the Project.

- 1. Construction Site Representative(s) shall be furnished with contact numbers associated with each wireless telephone.
- G. Safety: Prime Contractors, not the Owner, Architect, or Construction Site Representative(s), are responsible for Project Site Safety, as related to their operations and OSHA compliance (refer to Section 013150 "Special Procedures" for further requirements).
  - 1. Each Prime Contractor shall designate a Competent Person, who shall be available to the Construction Site Representative(s) throughout the Project, in representing Safety of the Project Site.
    - a. A Competent Person is defined as one who through training and/or experience, can identify existing and predictable working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authority to take prompt corrective measures to eliminate such hazards.
    - b. The Competent Person shall inspect all machinery and equipment before and during use to ensure that they are within safe working parameters. All deficiencies must be promptly repaired, and defective parts replaced before the machine or equipment can be used.
    - c. The Competent Person must have knowledge related to soil classification, protective systems, and safety standards related to excavation.
  - 2. Maintain unobstructed access to fire extinguishers, fire hydrants, ladders and other safety devices, egress paths, corridors, stairways, and exits.
- H. Fire Extinguishers: General Construction (GC) contractor shall provide and maintain "general use" fire extinguishers for each construction area at respective buildings where work is being performed; comply with applicable codes for quantities required. Comply with NFPA for recommended classes for exposure; extinguishers shall be inspected and appropriately tagged prior to being brought on site. Provide stands, painted bright orange, sturdy enough to carry the extinguisher, and built as not to create a tipping hazard.
  - 1. Each Prime Contractor shall supplement this requirement by providing additional fire extinguishers specifically related to their Work activity (e.g., welding, soldering, abrasive cutting, etc.).
  - 2. Each Prime Contractor shall provide and maintain proper fire extinguishers at/in their respective on site(s) office and storage facilities.
  - 3. Store combustible materials in approved containers in fire-safe locations.
- I. Welding: Any Prime Contractor performing welding, cutting or other activities with open flames or producing sparks shall at a minimum:
  - 1. Coordinate interruption/shutdown of detection system(s) to avoid creating false alarms.
  - 2. Protect the area and surrounding areas from fire and damage.
  - 3. Maintain fire extinguishers, compatible with activity, at the location of the activity.
  - 4. Provide a continuous Fire Watch during the activity and one-half hour beyond the completion of the activity.

- 5. Provide all necessary fans and ventilation required for the activity.
- J. Temporary Barriers: Provide new materials whenever possible; undamaged, previously used materials, in serviceable condition, may be used if approved by the Construction Site Representative(s). Refer to the respective Specification Section when selecting materials and provide similar materials suitable for intended use.
- K. Relocation of Temporary Barrier: In the event a Prime Contractor requires relocation of a temporary barrier, Prime Contractor requiring relocation shall do so and shall protect all personnel in the Work area during the relocation.
  - 1. Initial installing Prime Contractor shall coordinate the location of barriers with other Prime Contracts, prior to placement of the barrier.
  - 2. If a barrier must be located such that it will interfere with another's Work, the Contractor requiring the Work now interfered with shall relocate the barrier as required to install his Work.
  - 3. Coordinate with Construction Site Representative(s).
- L. Termination and Removal of Barriers: Remove each temporary facility when it can be replaced by the authorized permanent facility no later than Substantial Completion, or as directed by the Architect and/or Construction Site Representative(s). Complete or restore permanent facilities that may have been delayed due to interim use of a temporary barrier or condition.

#### 1.6 WORK SEQUENCE

- A. Normal "first shift" work hours are anticipated to be 7:00am to 3:30pm.
- B. "Second shift" work hours shall be anticipated to be 3:00pm to 11:00pm. Coordinate "second shift" and weekend work requirements with the Owner via the Construction Site Representative(s).
  - 1. Interruption of any utility and/or power must be coordinated with the Owner, via the Construction Site Representative(s). Shut-downs must be approved in writing.
  - 2. Each Prime Contractor shall provide multiple crews, supervision, tools, cranes, scaffold and other means necessary to perform the Work and maintain the schedule.
  - 3. Should a Contractor's progress fall behind schedule, Prime Contractor shall employ additional shifts and/or overtime and/or weekend workforce until situation is rectified to the satisfaction of the Owner, Architect, and Construction Site Representative(s), at no additional cost to the Owner.
- C. The Work shall be conducted to provide the least possible interference to the activities of the Owner's personnel and academic calendar.
  - 1. All Prime Contractors and their subcontractors shall abide by any local ordinances and shall limit excessive noise during "second shift" operations so as not to create a disturbance to neighboring properties.
- D. Construction access to the site(s) shall be limited to personnel, equipment and deliveries by suppliers relative to the Work of Prime Contractors and their subcontractors. Prime Contractors shall keep the

Construction Site Representative(s) advised of persons accessing the site(s) and shall seek assistance with coordinating parking and storage facility locations for all Prime Contractors.

- 1. General Construction (GC) Contractor shall provide temporary fence/barricades/work area protection at each respective work area on the site(s), to secure work zones from access by unauthorized persons/public while construction operations constitute an area restricted to construction personnel, and while related site construction is underway.
- 2. General Construction (GC) Contractor shall provide temporary fence/barricades/work area protection at each respective building work area, to secure work zones from access by unauthorized persons/public while building additions or renovations constitute an area restricted to construction personnel, and while related site construction is underway.

## 1.7 GENERAL CONSTRUCTION (GC) – CONTRACT NO. 1

- A. Applicable Drawings: All drawings itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. General (G-Series)
  - 2. Architectural Demolition (AD-Series) Coordination related to this Prime Contract
  - 3. Site/Civil (C-Series)
  - 4. Structural (S-Series)
  - 5. Architectural (A-Series)
  - 6. Architectural Finishes (AF-Series)
- B. Applicable Specification Sections: All specification Sections itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. Divisions 00-14 All Sections
  - 2. Divisions 22-28 Coordination related to this Prime Contract
  - 3. Divisions 30-34 All Sections
- C. Project Site Superintendent: GC shall provide a full-time on-site Project Site Superintendent while any Work related to this Contract is being performed on site(s), including the activities of their subcontractors, while other Prime Contracts are installing Work, or require the coordination of Work related to this Contract, and/or as requested by the Construction Site Representative(s).
- D. Scope of Work: The Work of this Prime Contract includes but is not limited to, the following:
  - 1. Work delineation between building and site(s) is at five feet (5') outside of the face of building, existing and new, unless noted or assigned otherwise.
  - 2. Prime Contract shall understand that renovation Work may require Work to proceed while existing systems are required to be maintained; all cost associated with this sequence shall be anticipated and incorporated into the Bid.
  - 3. Environmental Protection: Provide protection and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
    - a. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms on or near the Project Site.

- b. Provide dust control while Work of this Contract is being performed. Limit situations that may create dust contamination while Work of this Contract is idle.
- c. Refer to Section 01 "Work Restrictions" for additional information.
- 4. Provide all Control Lines and Elevations as required. GC shall transfer lines and elevations to other locations as necessary.
- 5. The Architectural Drawings are schematic in nature, and the CC will make adequate provisions to accommodate the actual field conditions without additional cost to the Owner.
- 6. Provide all demolition of General Construction Systems indicated in the Construction Documents, and/or required for Work of this Prime Contract.
  - a. Coordinate with all other Prime Contracts regarding all removals required for the Project.
  - b. Demolition of a system shall mean any and all components, removed in their entirety, to the point of origin or source.
- 7. Provide all Work associated with creating structural openings or penetrations requiring lintels, whether for GC's own Work or Work of the MC, EC or PC (i.e.: ductwork and pipe penetrations). This applies to all openings/penetrations greater than 8" through masonry or concrete walls. GC can find likely locations of such openings/penetrations by noting ductwork/piping penetrations through walls on the respective Mechanical, Electrical, or Plumbing drawings. More or less locations of openings/penetrations may be required upon coordinated installation.
  - a. MC, EC & PC shall indicate all required openings/penetrations requiring lintels on Coordination Drawings. Failure to note required openings/penetrations on the coordination drawings for the GC will require that the respective MC, EC & PC provide their own structural openings in accordance with the contract documents at no additional cost to the Owner.
  - b. Non-structural openings/penetrations, including those for convenience, shall be self-provided by the respective GC, MC, EC or PC.
  - c. Refer to Structural documents for lintel type/size requirements and Architectural drawings for wall types. Walls not specifically identified in the documents are to be assumed as masonry construction.
  - d. All scheduled exterior wall louver openings indicated on Architectural and/or Structural documents are to be created by GC. MC shall supply and install louver.
    - 1) Exact physical locations shall be laid-out by MC for coordinated sequencing with GC.
  - e. All openings/penetrations are to be additionally identified on Record Drawings, by the Prime Contract requiring the opening.
- 8. Provide all doors, frames, hardware, windows, and glazing as per the Construction Documents.
- 9. Provide all cut and patch Work related to that of this Prime Contract, and at those areas specifically identified in the Construction Documents, regardless of trade creating the area to be patched.
  - a. Each Prime Contract is responsible for all other respective cutting and patching required of their installations (refer to Section "Cutting and Patching" for further information).

- 10. Provide finishes including, but not limited to; CMU, gypsum board assemblies, plaster, suspended ceiling systems, tile, and all paint, flooring and finishing systems.
  - a. Provide all associated surface preparation for each finish included in this Prime Contract.
  - b. Prep/Paint exposed structural steel and/or concrete including related deck, as indicated in the Construction Documents.
  - c. Prep/paint all exposed, unfinished ducts and conduit in related finished areas.
- 11. Provide all new ceiling systems as indicated in the Construction Documents, complete.
  - a. Coordinate with Lighting, PA, Fire Alarm, etc. by EC.
  - b. Coordinate with Registers, Grilles, etc. by MC.
  - c. In Acoustic Panel Ceiling systems, install field tiles only upon approval by the Construction Site Representative(s) to do so. Failure to seek prior approval may require tiles to be removed for further work and/or inspections.
- 12. Provide all miscellaneous wood blocking, shimming and supports for items or equipment installed under this Prime Contract, and as coordinated with other Prime Contractors for metal strapping and/or wood blocking for installations of other Prime Contracts.
- 13. Provide all access doors/panels indicated, and those not indicated whereas inaccessible installations have been provided by this Prime Contract, located above hard ceilings or in walls.
- 14. Provide through-penetration fire stop systems at all penetrations made by this Prime Contract, maintaining listed ratings of indicated assemblies. Provide repair of existing through-penetration fire stopping damaged by Work of this Prime Contract.
  - a. Sleeves with fire stopping are to be installed in sequence with fire-rated construction. This Prime Contract shall be responsible for installing fire stopping material at intersection of sleeve and constructed materials.
- 15. Provide coordination with, and notification to, the Construction Site Representative(s) for all specified testing, training, commissioning, etc., of the Work of this Prime Contract.
- 16. Substantial Completion: Clean all GC installations and provided equipment at the time of Substantial Completion or as directed by Construction Site Representative(s).
- 17. Coordinate all the preceding requirements, accordingly, with all applicable Alternates indicated in Division 01 Section "Alternates".
- E. Supplemental Temporary Facilities and Controls by GC includes but is not limited to:
  - 1. Protection of the Facility: Provide protection of all existing finishes and furnishings within the facility including but not limited to walls, ceilings, floors, desks, tables, book shelves. The Owner will clear off all loose items from the top of surfaces, but all large furniture will remain in place. Contractor shall provide protection over the top of all furniture and flooring within the areas of work.
  - 2. Waste Disposal Facilities: Provide general debris/refuse/construction waste containers and waste management (dumpsters, off-site disposal of demolished/removed materials, etc.), for their own respective purposes, and for use by Mechanical, Electrical, and Plumbing Prime Contracts.

- 3. Misc. Temporary Fences, Gates and Barricades: Provide and maintain temporary fencing and barricading to keep unauthorized persons away from interior and exterior excavations and/or construction areas for which this Prime Contract is responsible.
  - a. Coordinate via Construction Site Representative(s), at commencement of, and completion of construction areas, including but not limited to those indicated in the Construction Documents.
- 4. Temporary Doors, Frames & Wall Assemblies: Provide, maintain and eventually remove all temporary installations per OSHA Regulations, Industry Standards, or as indicated in the Construction Documents.
  - a. Provide fire rated assemblies as required.
  - b. Provide exit (panic bar/crash bar) devices at locations of egress.
  - c. Coordinate locations with Construction Exiting Plan, Sequencing/Phasing Plans, and the Construction Site Representative.
  - d. Temporary doors shall be constructed using 1/2' plywood and 2x construction, equipped with hasps, locks, handle and latch mechanism, and spring or counter weight installed to allow door to close after opening.
  - e. Permanent doors will not be used in temporary conditions.
- 5. Temporary Window Openings: Window openings shall be enclosed using 2x construction, <sup>1</sup>/<sub>2</sub>' plywood, and reinforced polyethylene. Where window opening start at or near the floor, plywood shall be installed from finish floor to minimum of 42" AFF; reinforced poly may be installed from this point up. Should contractor choose to install plywood across the entire opening, sufficient area will be installed with reinforced poly to allow emergency escape, if required, and to allow natural light into the work area.
  - a. Installation shall be insulated if temporary heat or cooling is being employed.
- 6. Temporary Exterior Wall Enclosure: Provide and maintain temporary enclosures for weather protection and security of the construction in progress up until completion of permanent installation specified. Enclosures shall protect the building from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather tight enclosure for building exterior.
  - a. Where heating and cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with venting and material drying or curing requirements to avoid dangerous conditions and effects.
  - b. Install tarpaulins securely; install fire retardant materials only.
  - c. Where temporary wood enclosures exceed 100 sq. ft. in area, use fire retardant treated materials for framing and sheathing.
  - d. All cost incurred to repair and/or replace materials damaged, due to the failure of GC to provide and maintain weather tight enclosure shall be borne by this Prime Contract. This includes any contamination of materials that may lead to the introduction of mold and mildew.
  - e. Immediately notify the Construction Site Representative, in writing, as to damage to temporary enclosures by "others"; identify responsible party in the submission. Owner shall not be liable for damages caused by "others" if Prime Contract cannot identify responsible party.
- 7. Temporary Sanitary Facilities: Provide temporary self-contained toilets units for duration of the project for use by forces of all Prime Contracts (including abatement and demolition phases) and their subcontractors, until completion of Punch List work, and closeout of the Contracts.

- a. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
- b. Provide separate facilities (minimum of one ea.) for male and female personnel in proportion required by OSHA.
- c. Shield toilets to ensure privacy.
- d. Coordinate mobilization and demobilization of units with Construction Site Representative(s).
- e. Toilets shall be cleaned at least once per week, with additional facilities or cleanings provided if requested by Construction Site Representative(s).
- f. Provide and maintain adequate supply of toilet tissue and hand sanitizer for each facility.
- 8. Indoor air quality management at all areas of Construction, once building is enclosed.
  - a. Provide all necessary dust partitions, fans, temporary ducts, and barricades to properly contain and ventilate all work area fumes and odors, created by demolition and new construction or alterations, directly to the outside. Ventilate to an area outside the building, sufficiently away from the building, as not to contaminate other areas. There will be no additional claims honored if the Construction Site Representative requests additional ventilation or requirements.
  - b. Provide and exhaust air system for the project indoor areas that could produce fumes, VOC's, off gasses, dusts, mists, or other emissions.
  - c. System Operation:
    - 1) A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated.
    - 2) Exhaust air system shall operate for a minimum of 72 hours after work is completed or until all materials have cured sufficiently so as to stop out gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
    - 3) Maintain 25 feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.
    - 4) Refer to Division 01 Section "Work Restrictions" for further information.
- 9. Project Signage: Provide Project sign(s), and any/all construction signage indicated in the Construction Documents.
  - a. Coordinate installation via Construction Site Representative(s).
- 10. Provide all shoring required for Work of this Contract, including but not limited to.
  - a. Cutting or altering of existing construction.
  - b. Provide protection of all new and existing surfaces during the Work. Do not stand, walk, or work off of any unprotected finished surface above the floor.
- 11. Maintain temporary fencing and barricading to keep unauthorized persons away from excavations and hazardous areas for which this Prime Contract is responsible.
- 12. Traffic Controls: Provide flagman while any operations of this Prime Contract interfere with traffic flow on adjacent roadways.

#### 1.8 MECHANICAL CONSTRUCTION (MC) – CONTRACT NO. 2

A. Applicable Drawings: All drawings itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:

- 1. General (G-Series)
- 2. Mechanical General (MG-Series)
- 3. Mechanical (M-Series)
- B. Applicable Specification Sections: All specification Sections itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. Divisions 00 & 01 All Sections
  - 2. Divisions 02-22 Coordination related to this Prime Contract
  - 3. Division 23 All Sections
  - 4. Divisions 26-34 Coordination related to this Prime Contract
- C. Project Site Superintendent: MC shall provide a full-time on-site Project Site Superintendent while any Work related to this Contract is being performed on site(s), including the activities of their subcontractors, while other Prime Contracts are installing Work, or require the coordination of Work related to this Contract, and/or as requested by the Construction Site Representative(s).
- D. Scope of Work: The Work of this Prime Contract includes but is not limited to, the following:
  - 1. Work delineation between building and site(s) is at five feet (5') outside of the face of building, existing and new, unless noted or assigned otherwise.
  - 2. All new heating system components must be protected, from potential contamination. Once the building is occupied, the building shall be heated to a minimum of 65 degrees F for the heating period of September 15th May 31st.
  - 3. Environmental Protection: Provide protection and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
    - a. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms on or near the Project site(s).
    - b. Refer to Section 01 "Work Restrictions" for additional information.
  - 4. GC shall provide concrete housekeeping and structural pads for equipment provided under this Prime Contract. MC shall coordinate size, orientation and location with GC, by way of providing physical layout, and verification prior to construction thereof.
  - 5. GC shall provide all Work associated with creating structural openings or penetrations requiring lintels, whether for their own Work or Work of the MC, EC or PC (ie: ductwork and pipe penetrations). This applies to all openings/penetrations greater than 8" through masonry or concrete walls.
    - a. MC, EC & PC shall indicate all required openings/penetrations requiring lintels on Coordination Drawings. Failure to note required openings/penetrations on the coordination drawings for the GC will require that the respective MC, EC & PC provide their own structural openings in accordance with the contract documents at no additional cost.
    - b. Non-structural openings/penetrations, including those for convenience, shall be selfprovided by the respective Prime Contract. This assignment applies to new and existing construction areas.

- c. Refer to Structural documents for lintel type/size requirements and Architectural drawings for wall types. Walls not specifically identified in the documents are to be assumed as masonry construction.
- d. All scheduled exterior wall louver openings indicated on Architectural and/or Structural documents are to be created by GC. MC shall supply, install, flash and seal the louver. Exact physical locations shall be laid-out by MC for coordinated sequencing with GC.
- e. All openings/penetrations are to be additionally identified on Record Drawings, by the Prime Contract requiring the opening.
- 6. GC shall provide all cut & patch Work, related to that of their Prime Contract, and at those areas specifically identified on the Construction Documents, regardless of trade creating the area to be patched.
  - a. Each Prime Contract is responsible for all other respective Cutting & Patching required of their installations (refer to Section 017310 for further information).
- 7. Prime Contract shall understand that renovation Work may require Work to proceed while existing systems are required to be maintained; all cost associated with this sequence shall be anticipated and incorporated into the Bid.
- 8. The HVAC Drawings are schematic in nature, and the MC will make adequate provisions to accommodate the actual field conditions without additional cost to the Owner.
- 9. Document on the Record Drawings all ductwork openings and penetrations larger than 2 <sup>1</sup>/<sub>2</sub>" in diameter.
- 10. Provide all demolition of Mechanical Systems indicated in the Construction Documents, and/or required for Work of this Prime Contract.
  - a. Coordinate with all other Prime Contracts regarding all removals required for the Project.
  - b. Demolition of a system shall mean any and all components, removed in their entirety, to the point of origin or source.
- 11. Provide valves, whether permanent or temporary, to permit shutoff and/or cap systems to achieve the Work of this Prime Contract.
- 12. Provide installation of new HVAC system(s), or modifications of existing system(s) as indicated in the Construction Documents, complete and fully operational.
  - a. MC shall furnish all related electrical disconnects, variable speed drives and motor starters (including related "heaters, fuses, and phase protection relays") for all equipment provided under this Contract, for coordinated installation by EC.
  - b. Owner shall provide DDC Temperature Controls as a function of the Building Automation System, as referenced in the Construction Documents. MC shall install controls and instrumentation devices, including but not limited to control valves, control dampers, thermowells, pressure probes, flow switches, airflow metering stations, insertion flow meters, and ultrasonic flow meters, required for system operations and as indicated. Such devices will be furnished by vendor [Automated Logic] to the MC for coordinated installation in HVAC systems.
    - 1) Temperature Controls System vendor/installer shall provide line voltage power wiring to its own head-end, regionally located control panels, and line voltage valves, actuated dampers, motors, etc. that are not indicated in the E drawings.

- 2) Temperature Controls System vendor/installer shall provide all low voltage wiring of controls, transformers, actuated dampers, motors, etc., as required for a complete operational system.
- 13. Provide thermal insulation and identification of all HVAC system/components provided/installed by this Prime Contract.
- 14. Provide concrete housekeeping and structural pads for equipment provided under this Prime Contract.
- 15. MC shall hang streamers from all above-ceiling equipment that will require access. This is in addition to any specification requirements for tags, labels, etc. Coordination Drawings shall highlight these areas for Architect's and Engineer's review.
- 16. Provide all access doors/panels to access inaccessible installations (i.e. valves) provided by this Prime Contract, such as above hard ceilings or in walls. Access panel type shall be same as GC approved submittal, and in sizes adequate for easy access and or replacement of installation.
- 17. Provide sleeves required for piping penetrating walls, slabs and/or decks.
- 18. Provide through-penetration fire stop systems at all penetrations made by MC for utility penetration of this Prime Contract, maintaining listed ratings of indicated assemblies. Provide repair of existing through-penetration fire stopping damaged by Work of this Prime Contract.
  - a. Sleeves with fire stopping are to be installed in sequence with fire-rated construction. This Prime Contract shall be responsible for installing fire stopping material at intersection of sleeve and constructed materials.
- 19. Provide coordination with, and notification to, the Construction Site Representative(s) for all specified testing, training, commissioning, etc., of the Work of this Prime Contract.
- 20. Substantial Completion: Clean all MC installations and provided equipment at the time of Substantial Completion or as directed by Construction Site Representative(s).
- 21. Coordinate all the preceding requirements, accordingly, with all applicable Alternates indicated in Division 01 Section "Alternates".
- E. Supplemental Temporary Facilities and Controls by MC include, but are not limited to, the following:
  - 1. Waste Disposal Facilities:
    - a. General debris/refuse/construction waste containers (dumpsters) shall be provided by GC, for use by MC.
    - b. It shall be the responsibility of this Prime Contract to recycle metals generated by its Work, and the Work of its subcontracts.

- 1) Joint effort recycling by all Prime Contracts is encouraged.
- 2. Indoor air quality management at all areas of Work by this Prime Contract, once building is enclosed.
  - a. Provide all necessary dust partitions, fans, temporary ducts, and barricades to properly contain and ventilate all Work area fumes and odors, created by demolition and new construction or alterations, directly to the outside. Ventilate to an area outside the building, sufficiently away from the building, as not to contaminate other areas. There will be no additional claims honored if the Construction Site Representative(s) requests additional ventilation or requirements.
  - b. Provide and exhaust air system for the project indoor areas that could produce fumes, VOC's, off gasses, dusts, mists, or other emissions.
  - c. System Operation:
    - 1) Provide temporary dust/fume protection at areas of Work of this Contract to limit contamination of surrounding areas. All cost incurred, by the Owner, for added cleaning expenses, due to the failure of this contract to provide and maintain adequate dust/fume protection, for the Work of this Contract, shall be borne by this Contract.
    - 2) A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated.
    - 3) Exhaust air system shall operate for a minimum of 72 hours after Work is completed or until all materials have cured sufficiently so as to stop out gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
    - 4) Maintain 25 feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.
    - 5) Refer to Division 01 Section "Work Restrictions" for further information.
- 3. Provide all shoring required for Work of this Contract, including but not limited to.
  - a. Cutting or altering of existing construction.
  - b. Provide protection of all new and existing surfaces during the Work. Do not stand, walk or work off of any unprotected finished surface above the floor.
- 4. Maintain temporary fencing and barricading to keep unauthorized persons away from excavations and hazardous areas for which this Prime Contract is responsible.
- 5. Traffic Controls: Provide flagman while any operations of this Prime Contract interfere with traffic flow on adjacent roadways.

#### 1.9 ELECTRICAL CONSTRUCTION (EC) – CONTRACT NO. 3

- A. Applicable Drawings: All drawings itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. General (G-Series)
  - 2. Electrical General (EG-Series)

#### MULTIPLE CONTRACT SUMMARY

- 3. Electrical (E-Series)
- B. Applicable Specification Sections: All specification Sections itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. Divisions 00 & 01 All Sections
  - 2. Divisions 02-23 Coordination related to this Prime Contract
  - 3. Divisions 26-28 All Sections
  - 4. Divisions 30-34 Coordination related to this Prime Contract
- C. Project Site Superintendent: EC shall provide a full-time on-site Project Site Superintendent while any Work related to this Contract is being performed on site(s), including the activities of their subcontractors, while other Prime Contracts are installing Work, or require the coordination of Work related to this Contract, and/or as requested by the Construction Site Representative(s).
- D. Scope of Work: The Work of this Prime Contract includes but is not limited to, the following:
  - 1. Work delineation between building and site(s) is at five feet (5') outside of the face of building, existing and new, unless noted or assigned otherwise.
  - 2. Prime Contract shall understand that renovation Work may require Work to proceed while existing systems are required to be maintained; all cost associated with this sequence shall be anticipated and incorporated into the Bid.
  - 3. The Electrical Drawings are schematic in nature, and the EC will make adequate provisions to accommodate the actual field conditions without additional cost to the Owner.
    - a. EC shall install Work in accordance with the National Electrical Code requirements. No additional compensation will be made for extra offsets in conduit or retro-fit Work due to improper component location, or lack of Prime Contractor's coordination.
  - 4. Provide re-routing of existing power distribution as indicated in the Construction Documents, specifically to allow for progression of the Work sequence.
  - 5. Provide all demolition of Electrical Systems indicated in the Construction Documents, and/or required for Work of this Prime Contract.
    - a. Coordinate with all other Prime Contracts regarding all removals required for the Project.
    - b. Demolition of a system shall mean any and all components, removed in their entirety, to the point of origin or source.
  - 6. Provide all lighting, including fixtures, switching devices, circuits, etc.
    - a. Provide new fixtures as scheduled.
    - b. Provide removal and complete reinstallation of fixtures scheduled for salvage and re-use.
    - c. Contractor shall be responsible to tie-up and support existing fixtures and ceilingmounted electrical devices to structure above Acoustic Panel Ceiling systems, when ceilings are to be removed as early-work, and the space is scheduled to remain occupied during continued Work.

- 7. GC shall provide all Work associated with creating structural openings or penetrations requiring lintels whether for their own Work or Work of the MC, EC or PC (ie: ductwork and pipe penetrations). This applies to all openings/penetrations greater than 8" through masonry or concrete walls.
  - a. MC, EC & PC shall indicate all required openings/penetrations requiring lintels on Coordination Drawings. Failure to note required openings/penetrations on the coordination drawings for the GC will require that the respective MC, EC & PC provide their own structural openings in accordance with the contract documents at no additional cost to the Owner.
  - b. Non-structural openings/penetrations, including those for convenience, shall be selfprovided by the respective GC, MC, EC or PC. This assignment applies to new and existing construction areas.
  - c. Refer to Structural documents for lintel type/size requirements and Architectural drawings for wall types. Walls not specifically identified in the documents are to be assumed as masonry construction.
  - d. All openings/penetrations are to be identified on Record Drawings by the Prime Contract requiring the opening.
- 8. GC shall provide all cut & patch Work, related to that of their Prime Contract, and at those areas specifically identified on the Construction Documents, regardless of trade creating the area to be patched.
  - a. Each Prime Contract is responsible for all other respective Cutting & Patching required of their installations (refer to Section 017310 for further information).
- 9. GC shall provide concrete housekeeping and structural pads for equipment provided under this Prime Contract. EC shall coordinate size, orientation and location with GC, by way of providing physical layout, and verification prior to construction thereof.
- 10. Provide complete electrical requirements, materials and methods including but not limited to:
  - a. Service and distribution including bus-way, switchgear, panel boards, and disconnect switches.
  - b. Provide grounding protection for all circuits and outlets and as required by applicable codes and authorities having jurisdiction. Properly ground building equipment provided by this project.
  - c. Coordinate any electrical switchover as to least impact the Project Schedule, and/or as indicated in the Construction Documents.
  - d. Immediately after installation, provide and maintain temporary ID of all circuit breakers and at all shut offs/disconnects until permanent ID is in place.
  - e. Interior and exterior lighting and lighting control equipment; provide occupancy sensors and/or timing devices as indicated.
  - f. Provide raceways, boxes, cabinets and sleeves through existing and new construction.
  - g. Provide wire, cable, conduit, boxes, and wiring devices.
  - h. Provide permanent electrical identification.
    - 1) Provide type written panel board schedules.
    - 2) Clearly label all panel boards, disconnects, relays, junction boxes, and other electrical devices and equipment.
- 11. Final connection of utilities, installations or equipment by others are by MC, EC and PC, unless noted or assigned otherwise.

- a. MC shall furnish all disconnects, variable speed drives and motor starters (including related "heaters, fuses, and phase protection relays"), for all equipment provided under their respective Prime Contract, for coordinated installation by EC.
- b. Provide all line voltage circuits and connections to points of demarcation indicated and/or equipment provided by MC.
- c. Provide final connections to all scheduled equipment furnished by the Owner.
- 12. Provide Fire Alarm system as indicated in the Construction Documents.
  - a. EC shall expand existing, and integrate Fire Alarm system with all HVAC equipment, natural gas shut-downs, Fire Protection systems, AED cabinets, coiling overhead doors, fire shutters, pedestrian doors equipped with electro-magnetic hold-open devices, etc.
- 13. Provide streamers hung from all above-ceiling equipment that will require access. This is in addition to any specification requirements for tags, labels, etc. Coordination Drawings shall highlight these areas for Architect and Engineer's review.
- 14. Provide all access doors/panels to access inaccessible installations (i.e. junction boxes) provided by this Prime Contract, such as above hard ceilings or in walls.
- 15. Provide sleeves required for piping penetrating walls, slabs and/or decks.
- 16. Provide through-penetration fire stop systems at all penetrations made by this Prime Contract, maintaining listed ratings of indicated assemblies. Provide repair of existing through-penetration fire stopping damaged by Work of this Prime Contract.
  - a. Sleeves with fire stopping are to be installed in sequence with fire-rated construction. This Prime Contract shall be responsible for installing fire stopping material at intersection of sleeve and constructed materials.
- 17. Provide coordination with, and notification to, the Construction Site Representative(s) for all specified testing, training, commissioning, etc., of the Work of this Prime Contract.
- 18. Provide all testing and adjusting, instruction and guarantees for materials and equipment of this Prime Contract.
  - a. Substantial Completion: Clean all light fixtures and electrical equipment at the time of installation or at Substantial Completion, whichever is later, or as directed by Construction Site Representative(s).
- 19. Coordinate all the preceding requirements, accordingly, with all applicable Alternates indicated in Division 01 Section "Alternates".
- E. Supplemental Temporary Facilities and Controls by EC include, but are not limited to, the following:
  - 1. Waste Disposal Facilities:
    - a. General debris/refuse/construction waste containers (dumpsters) shall be provided by GC, for use by EC.
    - b. It shall be the responsibility of this Prime Contract to recycle metals generated by its Work, and the Work of its subcontracts.
      - 1) Joint effort recycling by all Prime Contracts is encouraged.

- 2. Temporary Lighting and Power.
  - a. Provide temporary power and lighting as needed to the areas of work to allow for ongoing construction activities.
  - b. While permanent light fixtures have been removed from ceilings to allow for overhead work to take place, provide temporary construction lighting throughout the impacted areas.
  - c. Provide temporary stanchion, panel and lighting control mounting at Janitor's Closet to allow for replacement of existing partition walls.
- 3. Indoor air quality management at all areas of Work by this Prime Contract, once building is enclosed.
  - a. Provide all necessary dust partitions, fans, temporary ducts, and barricades to properly contain and ventilate all Work area fumes and odors, created by demolition and new construction or alterations, directly to the outside. Ventilate to an area outside the building, sufficiently away from the building, as not to contaminate other areas. There will be no additional claims honored if the Construction Site Representative(s) requests additional ventilation or requirements.
  - b. Provide and exhaust air system for the project indoor areas that could produce fumes, VOC's, off gasses, dusts, mists, or other emissions.
  - c. System Operation:
    - 1) Provide temporary dust/fume protection at areas of Work of this Contract to limit contamination of surrounding areas. All cost incurred, by the Owner, for added cleaning expenses, due to the failure of this contract to provide and maintain adequate dust/fume protection, for the Work of this Contract, shall be borne by this Contract.
    - 2) A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated.
    - 3) Exhaust air system shall operate for a minimum of 72 hours after Work is completed or until all materials have cured sufficiently so as to stop out gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
    - 4) Maintain 25 feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.
- 4. Provide protection of all new surfaces during the Work.
- 5. Provide shoring required for Work of this Contract, including but not limited to;
  - a. Cutting or altering of existing construction.
  - b. Provide protection of all new and existing surfaces during the Work. Do not stand, walk, or Work from any unprotected finished surface above the floor.
- 6. Maintain temporary fencing and barricading to keep unauthorized persons away from excavations and hazardous areas for which this Prime Contract is responsible.
- 7. Traffic Controls: Provide flagman while any operations of this Prime Contract interfere with traffic flow on adjacent roadways.

#### 1.10 PLUMBING CONSTRUCTION (PC) – CONTRACT NO. 4

- A. Applicable Drawings: All drawings itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. General (G-Series)
  - 2. Plumbing General (PG-Series)
  - 3. Plumbing (P-Series)
- B. Applicable Specification Sections: All specification Sections itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. Divisions 00 & 01 All Sections
  - 2. Divisions 02 through 14 Coordination related to this Prime Contract
  - 3. Division 22 All Sections
  - 4. Divisions 23-34 Coordination related to this Prime Contract
- C. Project Site Superintendent: PC shall provide a full-time on-site Project Site Superintendent while any Work related to this Contract is being performed on site(s), including the activities of their subcontractors, while other Prime Contracts are installing Work, or require the coordination of Work related to this Contract, and/or as requested by the Construction Site Representative(s).
- D. Scope of Work: The Work of this Prime Contract includes but is not limited to, the following:
  - 1. Work delineation between building and site(s) is at five feet (5') outside of the face of building, existing and new, unless noted or assigned otherwise.
  - 2. Environmental Protection: Provide protection and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
    - a. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms on or near the Project site(s).
    - b. Refer to Division 01 Section "Work Restrictions" for additional information.
  - 3. Prime Contract shall understand that renovation Work may require Work to proceed while existing systems are required to be maintained; all cost associated with this sequence shall be anticipated and incorporated into the Bid.
  - 4. The plumbing Drawings are schematic in nature, and the PC will make adequate provisions to accommodate the actual field conditions without additional cost to the Owner.
  - 5. Provide all demolition of Plumbing Systems indicated in the Construction Documents, and/or required for Work of this Prime Contract.
    - a. Coordinate with all other Prime Contracts regarding all removals required for the Project.
    - b. Demolition of a system shall mean any and all components, removed in their entirety, to the point of origin or source.
  - 6. Provide valves, whether permanent or temporary, to permit shutoff and/or cap systems to achieve the Work of this Prime Contract.

- 7. Provide all typical building equipment including but not limited to, plumbing equipment and fixtures, supply, waste, drain and vent piping, as indicated in the Construction Documents.
- 8. GC shall provide concrete housekeeping and structural pads for equipment provided under this Prime Contract. PC shall coordinate size, orientation and location with GC, by way of providing physical layout, and verification prior to construction thereof.
- 9. GC shall provide all Work associated with creating structural openings or penetrations requiring lintels whether for their own Work or Work of the MC, EC or PC (i.e.: ductwork and pipe penetrations). This applies to all openings/penetrations greater than 8" through masonry or concrete walls.
  - a. MC, EC & PC shall indicate all required openings/penetrations requiring lintels on Coordination Drawings. Failure to note required openings/penetrations on the coordination drawings for the GC will require that the respective MC, EC & PC provide their own structural openings in accordance with the contract documents at no additional cost.
  - b. Non-structural openings/penetrations, including those for convenience, shall be selfprovided by the respective GC, MC, EC or PC. This assignment applies to new and existing construction areas.
  - c. Refer to Structural documents for lintel type/size requirements and Architectural drawings for wall types. Walls not specifically identified in the documents are to be assumed as masonry construction.
  - d. All openings/penetrations are to be identified on Record Drawings by the Prime Contract requiring the opening.
- 10. GC shall provide all cut & patch Work related to that of their Prime Contract, and at those areas specifically identified on the Construction Documents, regardless of trade creating the area to be patched.
  - a. Each Prime Contract is responsible for all other respective Cutting & Patching required of their installations (refer to Section 017310 for further information).
- 11. PC shall hang streamers from all above ceiling equipment that will require access. This is in addition to any specification requirements for tags, labels, etc. Coordination Drawings shall highlight these areas for Architect and Engineer's review.
- 12. Provide installation of new plumbing system(s), or modifications of existing system(s) as indicated in the Construction Documents, complete and fully operational.
  - a. PC shall furnish all related electrical wiring and transformers for all equipment provided under this Contract, for coordinated installation by EC.
- 13. Provide thermal insulation and identification of all plumbing system/components provided/installed by this Prime Contract.
- 14. Provide all access doors/panels to access inaccessible installations (i.e. valves) provided by this Prime Contract, such as above hard ceilings or in walls.
- 15. Provide sleeves required for piping penetrating walls, slabs and/or decks.

- 16. Provide through-penetration fire stop systems at all penetrations made by this Prime Contract, maintaining listed ratings of indicated assemblies. Provide repair of existing through-penetration fire stopping damaged by Work of this Prime Contract.
  - a. Sleeves with fire stopping are to be installed in sequence with fire-rated construction. This Prime Contract shall be responsible for installing fire stopping material at intersection of sleeve and constructed materials.
- 17. Provide coordination with, and notification to, the Construction Site Representative(s) for all specified testing, training, commissioning, etc., of the Work of this Prime Contract.
- 18. Substantial Completion: Clean all PC installations and provided equipment at the time of Substantial Completion or as directed by Construction Site Representative(s).
- 19. Coordinate all the preceding requirements, accordingly, with all applicable Alternates indicated in Division 01 Section "Alternates".
- E. Supplemental Temporary Facilities and Controls by PC include, but are not limited to, the following:
  - 1. Waste Disposal Facilities:
    - a. General debris/refuse/construction waste containers (dumpsters) shall be provided by GC, for use by PC.
    - b. It shall be the responsibility of this Prime Contract to recycle metals generated by its Work, and the Work of its subcontracts.
      - 1) Joint effort recycling by all Prime Contracts is encouraged.
  - 2. Indoor air quality management at all areas of Work by this Contract, once building is enclosed.
    - a. Provide all necessary dust partitions, fans, temporary ducts, and barricades to properly contain and ventilate all Work area fumes and odors, created by demolition and new construction or alterations, directly to the outside. Ventilate to an area outside the building, sufficiently away from the building, as not to contaminate other areas. There will be no additional claims honored if the Construction Site Representative(s) requests additional ventilation or requirements.
    - b. Provide and exhaust air system for the project indoor areas that could produce fumes, VOC's, off gasses, dusts, mists, or other emissions.
    - c. System Operation:
      - 1) Provide temporary dust/fume protection at areas of Work of this Contract to limit contamination of surrounding areas. All cost incurred, by the Owner, for added cleaning expenses, due to the failure of this contract to provide and maintain adequate dust/fume protection, for the Work of this Contract, shall be borne by this Contract.
      - 2) A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated.
      - 3) Exhaust air system shall operate for a minimum of 72 hours after Work is completed or until all materials have cured sufficiently so as to stop out gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
      - 4) Maintain 25 feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.
      - 5) Refer to section "Work Restrictions" for further information.

- 3. Provide all shoring required for Work of this Contract, including but not limited to;
  - a. Cutting or altering of existing construction.
  - b. Provide protection of all new and existing surfaces during the Work. Do not stand, walk, or Work from any unprotected finished surface above the floor.
- 4. Maintain temporary fencing and barricading to keep unauthorized persons away from excavations and hazardous areas for which this Prime Contract is responsible.
- 5. Water: Provide temporary cold-water service, for use by all Prime Contracts for construction purposes. PC shall procure all related permits, coordinate with utility provider, and meet the requirements of the authorities having jurisdiction, in establishing, maintaining, and removing this temporary service.

#### 1.11 GENERAL CONSTRUCTION STAFF ROOM RENOVATION (SRR) CONTRACT NO. 5

- A. Applicable Drawings: All drawings itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. General (G-Series)
  - 2. Architectural Demolition (AD-Series) Coordination related to this Prime Contract
  - 3. Site/Civil (C-Series)
  - 4. Structural (S-Series)
  - 5. Architectural (A-Series)
  - 6. Architectural Finishes (AF-Series)
  - 7. Electrical (E-Series)
  - 8. Plumbing (P-Series)
- **B.** Applicable Specification Sections: All specification Sections itemized are to be provided complete by this Prime Contract, unless noted otherwise, as follows:
  - 1. Divisions 00-14 All Sections
  - 2. Divisions 22-28 All Sections
  - 3. Divisions 30-34 All Sections
- C. Project Site Superintendent: SRR shall provide a full-time on-site Project Site Superintendent while any Work related to this Contract is being performed on site(s), including the activities of their subcontractors, while other Prime Contracts are installing Work, or require the coordination of Work related to this Contract, and/or as requested by the Construction Site Representative(s).
- D. Scope of Work: The Work of this Prime Contract includes but is not limited to, the following:
  - **1.** Work delineation between building and site(s) is at five feet (5') outside of the face of building, existing and new, unless noted or assigned otherwise.
  - 2. Prime Contract shall understand that renovation Work may require Work to proceed while existing systems are required to be maintained; all cost associated with this sequence shall be anticipated and incorporated into the Bid.

- **3.** Environmental Protection: Provide protection and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
  - a. Restrict use of noisemaking tools and equipment to hours that will minimize complaints from persons or firms on or near the Project Site.
  - b. Provide dust control while Work of this Contract is being performed. Limit situations that may create dust contamination while Work of this Contract is idle.
  - c. Refer to Section 01 "Work Restrictions" for additional information.
- 4. Provide all Control Lines and Elevations as required. SRR shall transfer lines and elevations to other locations as necessary.
- 5. The Architectural Drawings are schematic in nature, and the CC will make adequate provisions to accommodate the actual field conditions without additional cost to the Owner.
- 6. Provide all demolition of General Construction Systems indicated in the Construction Documents, and/or required for Work of this Prime Contract.
  - a. Coordinate with all other Prime Contracts regarding all removals required for the Project.
  - b. Demolition of a system shall mean any and all components, removed in their entirety, to the point of origin or source.
- 7. Provide all doors, frames, hardware, windows, and glazing as per the Construction Documents.
- 8. Provide all cut and patch Work related to that of this Prime Contract, and at those areas specifically identified in the Construction Documents, regardless of trade creating the area to be patched.
  - a. Each Prime Contract is responsible for all other respective cutting and patching required of their installations (refer to Section "Cutting and Patching" for further information).
- 9. Provide finishes including, but not limited to; CMU, gypsum board assemblies, plaster, tile, and all paint, flooring and finishing systems.
  - a. Provide all associated surface preparation for each finish included in this Prime Contract.
  - b. Prep/Paint exposed structural steel and/or concrete including related deck, as indicated in the Construction Documents.
  - c. Prep/paint all exposed, unfinished ducts and conduit in related finished areas.
- 10. Provide all miscellaneous wood blocking, shimming and supports for items or equipment installed under this Prime Contract, and as coordinated with other Prime Contractors for metal strapping and/or wood blocking for installations of other Prime Contracts.
- 11. Provide all access doors/panels indicated, and those not indicated whereas inaccessible installations have been provided by this Prime Contract, located above hard ceilings or in walls.

- 12. Provide through-penetration fire stop systems at all penetrations made by this Prime Contract, maintaining listed ratings of indicated assemblies. Provide repair of existing through-penetration fire stopping damaged by Work of this Prime Contract. a. Sleeves with fire stopping are to be installed in sequence with fire-rated construction. This Prime Contract shall be responsible for installing fire stopping material at intersection of sleeve and constructed materials.
- 13. Provide coordination with, and notification to, the Construction Site Representative(s) for all specified testing, training, commissioning, etc., of the Work of this Prime Contract.
- 14. Substantial Completion: Clean all GC installations and provided equipment at the time of Substantial Completion or as directed by Construction Site Representative(s).
- **15.** Coordinate all the preceding requirements, accordingly, with all applicable Alternates indicated in Division 01 Section "Alternates".
- 16. Provide plumbing scope as indicated on drawing sheet P.301.
- 17. Provide electrical scope as indicated on drawing sheet E.301.
- E. Supplemental Temporary Facilities and Controls by GC includes but is not limited to:
  - 1. Waste Disposal Facilities: Provide general debris/refuse/construction waste containers and waste management (dumpsters, off-site disposal of demolished/removed materials, etc.), for their own respective purposes, and for use by Mechanical, Electrical, and Plumbing Prime Contracts.
  - 2. Mise. Temporary Fences, Gates and Barricades: Provide and maintain temporary fencing and barricading to keep unauthorized persons away from interior and exterior excavations and/or construction areas for which this Prime Contract is responsible.
    - a. Coordinate via Construction Site Representative(s), at commencement of, and completion of construction areas, including but not limited to those indicated in the Construction Documents.
  - 3. Temporary Doors, Frames & Wall Assemblies: Provide, maintain and eventually remove all temporary installations per OSHA Regulations, Industry Standards, or as indicated in the Construction Documents.
    - a. Provide fire rated assemblies as required.
    - b. Provide exit (panic bar/crash bar) devices at locations of egress.
    - c. Coordinate locations with Construction Exiting Plan, Sequencing/Phasing Plans, and the Construction Site Representative.
    - d. Temporary doors shall be constructed using 1/2' plywood and 2x construction, equipped with hasps, locks, handle and latch mechanism, and spring or counter weight installed to allow door to close after opening.
    - e. Permanent doors will not be used in temporary conditions.
  - 4. Temporary Window Openings: Window openings shall be enclosed using 2x construction, ½ plywood, and reinforced polyethylene. Where window opening start at or near the floor, plywood shall be installed from finish floor to minimum of 42"

AFF; reinforced poly may be installed from this point up. Should contractor choose to install plywood across the entire opening, sufficient area will be installed with reinforced poly to allow emergency escape, if required, and to allow natural light into the work area.

a. Installation shall be insulated if temporary heat or cooling is being employed.

- 5. Temporary Exterior Wall Enclosure: Provide and maintain temporary enclosures for weather protection and security of the construction in progress up until completion of permanent installation specified. Enclosures shall protect the building from exposure, foul weather, other construction operations, and similar activities. Provide temporary weather tight enclosure for building exterior.
  - a. Where heating and cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with venting and material drying or curing requirements to avoid dangerous conditions and effects.
  - b. Install tarpaulins securely; install fire retardant materials only.
  - c. Where temporary wood enclosures exceed 100 sq. ft. in area, use fire retardant treated materials for framing and sheathing.
  - d. All cost incurred to repair and/or replace materials damaged, due to the failure of GC to provide and maintain weather tight enclosure shall be borne by this Prime Contract. This includes any contamination of materials that may lead to the introduction of mold and mildew.
  - e. Immediately notify the Construction Site Representative, in writing, as to damage to temporary enclosures by "others"; identify responsible party in the submission. Owner shall not be liable for damages caused by "others" if Prime Contract cannot identify responsible party.
- 6. Temporary Sanitary Facilities: Provide temporary self-contained toilets units for duration of the project for use by forces of all Prime Contracts (including abatement and demolition phases) and their subcontractors, until completion of Punch List work, and closeout of the Contracts.
  - a. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
  - b. Provide separate facilities (minimum of one ca.) for male and female personnel in proportion required by OSHA.
  - c. Shield toilets to ensure privacy.
  - d. Coordinate mobilization and demobilization of units with Construction Site Representative(s).
  - e. Toilets shall be cleaned at least once per week, with additional facilities or cleanings provided if requested by Construction Site Representative(s).
  - f. Provide and maintain adequate supply of toilet tissue and hand sanitizer for each facility.
- 7. Indoor air quality management at all areas of Construction, once building is enclosed. a. Provide all necessary dust partitions, fans, temporary ducts, and barricades to properly contain and ventilate all work area fumes and odors, created by demolition and new construction or alterations, directly to the outside. Ventilate to an area outside the building, sufficiently away from the building, as not to contaminate other areas. There will be no additional claims honored if the Construction Site Representative requests additional ventilation or requirements.

b. Provide and exhaust air system for the project indoor areas that could produce fumes, VOC's, off gasses, dusts, mists, or other emissions.

c. System Operation:

- 1) A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated.
- 2) Exhaust air system shall operate for a minimum of 72 hours after work is completed or until all materials have cured sufficiently so as to stop out – gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
- 3) Maintain 25 feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.
- 4) Refer to Division 01 Section "Work Restrictions" for further information.
- 8. Project Signage: Provide Project sign(s), and any/all construction signage indicated in the Construction Documents.
  - a. Coordinate installation via Construction Site Representative(s).
- 9. Provide all shoring required for Work of this Contract, including but not limited to. a. Cutting or altering of existing construction.
  - b. Provide protection of all new and existing surfaces during the Work. Do not stand, walk, or work off of any unprotected finished surface above the floor.
- **10.** Maintain temporary fencing and barricading to keep unauthorized persons away from excavations and hazardous areas for which this Prime Contract is responsible.
- 11. Traffic Controls: Provide flagman while any operations of this Prime Contract interfere with traffic flow on adjacent roadways.

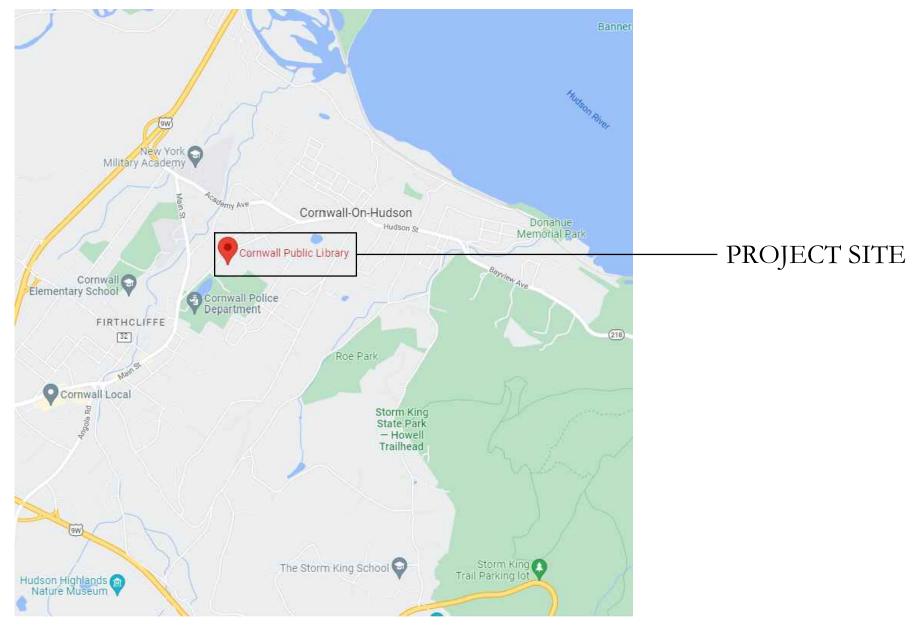
#### PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 011200

MULTIPLE CONTRACT SUMMARY





LOCATION MAP

# CORNWALL PUBLIC LIBRARY HVAC SYSTEM REPLACEMENT PROJECT

395 HUDSON STREET CORNWALL, NEW YORK 12518 SED #:44-03-01-06-6-009-006 ISSUE DATE: JANUARY 26, 2023



# LIST OF DRAWINGS:

## ARCHITECTURAL DRAWINGS

1		
Ā	R.100	EXISTING PLAN FIRST FLOOR
Т	.01	EXISTING BUILDING EGRESS PLAN & CODE REVIEW
А	D.100	FIRST FLOOR SELECTIVE DEMOLITION PLAN
А	.100	EXISTING FLOOR PLAN WITH RESTROOM ALTERATION
А	.101	MEN'S RESTROOM ALTERATION PLAN DETAIL W/ INTERIOR ELEVATIONS
А	.102	WOMEN'S RESTROOM ALTERATION PLAN DETAIL W/ INTERIOR ELEVATIONS
А	.103	EXISTING 1ST FLOOR AND PROPOSED REFLECTED CEILING PLAN
	·104~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	_STAFE RESTROOM & KITCHENETTE DETAIL W/ INTERIOR ELEVATIONS
<u>∕</u> 1 ( A	.105	KITCHENETTE DETAILS )
A	.400	DOOR, WALL TYPE & FINISH SCHEDULES W/ NOTES & DETAILS
А	.401	FINISH MATERIAL LEGEND
А	.500	A.D.A. DETAILS

A.501 A.D.A. DETAILS

## PLUMBING DRAWINGS

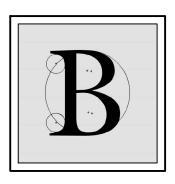
	P.101	PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS
	PD.201	PLUMBING DEMOLITION PLAN
	P201	PLUMBING PLAN
$\Lambda$	(P.301	STAFF RESTROOM & KITCHENETTE PLUMBING PLAN
<u>· `</u>	$\sim$	

#### MECHANICAL DRAWINGS

M.101	MECHANICAL LEGENDS & NOTES
M.102	MECHANICAL SCHEDULES
M.103	MECHANICAL SCHEDULE & DETAILS
M.104	VRF SYSTEM PIPING DIAGRAM
MD.201	MECHANICAL DEMOLITION PLAN
MD.202	HYDRONIC DEMOLITION PLAN
M.201	MECHANICAL DUCTWORK PLAN
M.202	ATTIC MECHANICAL PLAN
M.301	MECHANICAL PIPING PLAN

## ELECTRICAL DRAWINGS

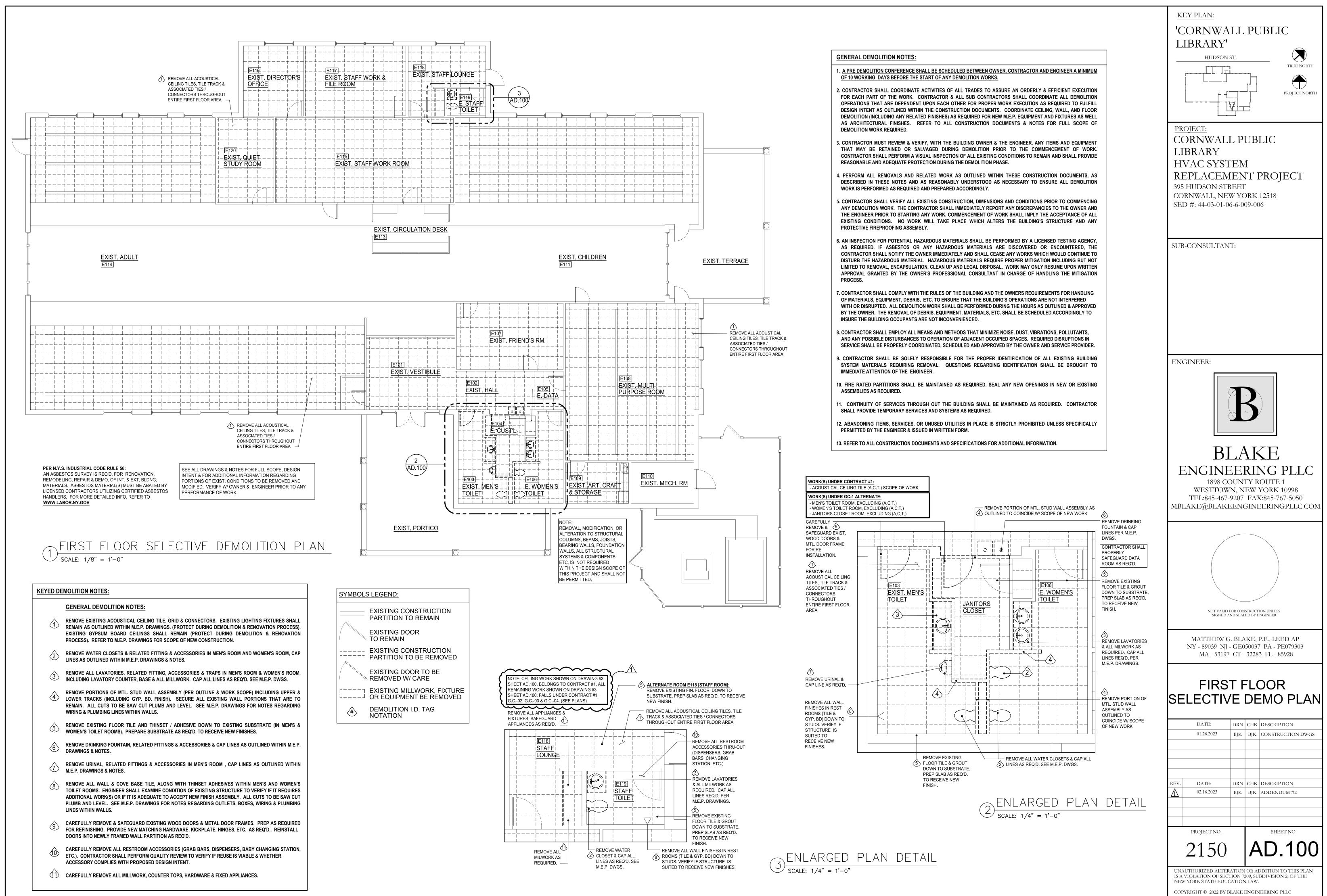
	E.101	ELECTRICAL LEGEND, NOTES, SCHEDULE & DETAILS
	E.102	ELECTRICAL PANEL SCHEDULES
	ED.201	ELECTRICAL DEMOLITION PLAN
	ED.202	LIGHTING DEMOLITION PLAN
	E.201	ELECTRICAL PLAN
•	E202	LIGHTINGPLAN
1	(E.301	LIGHTING PLAN STAFF RESTROOM & KITCHENETTE ELECTRICAL PLAN
		·······································

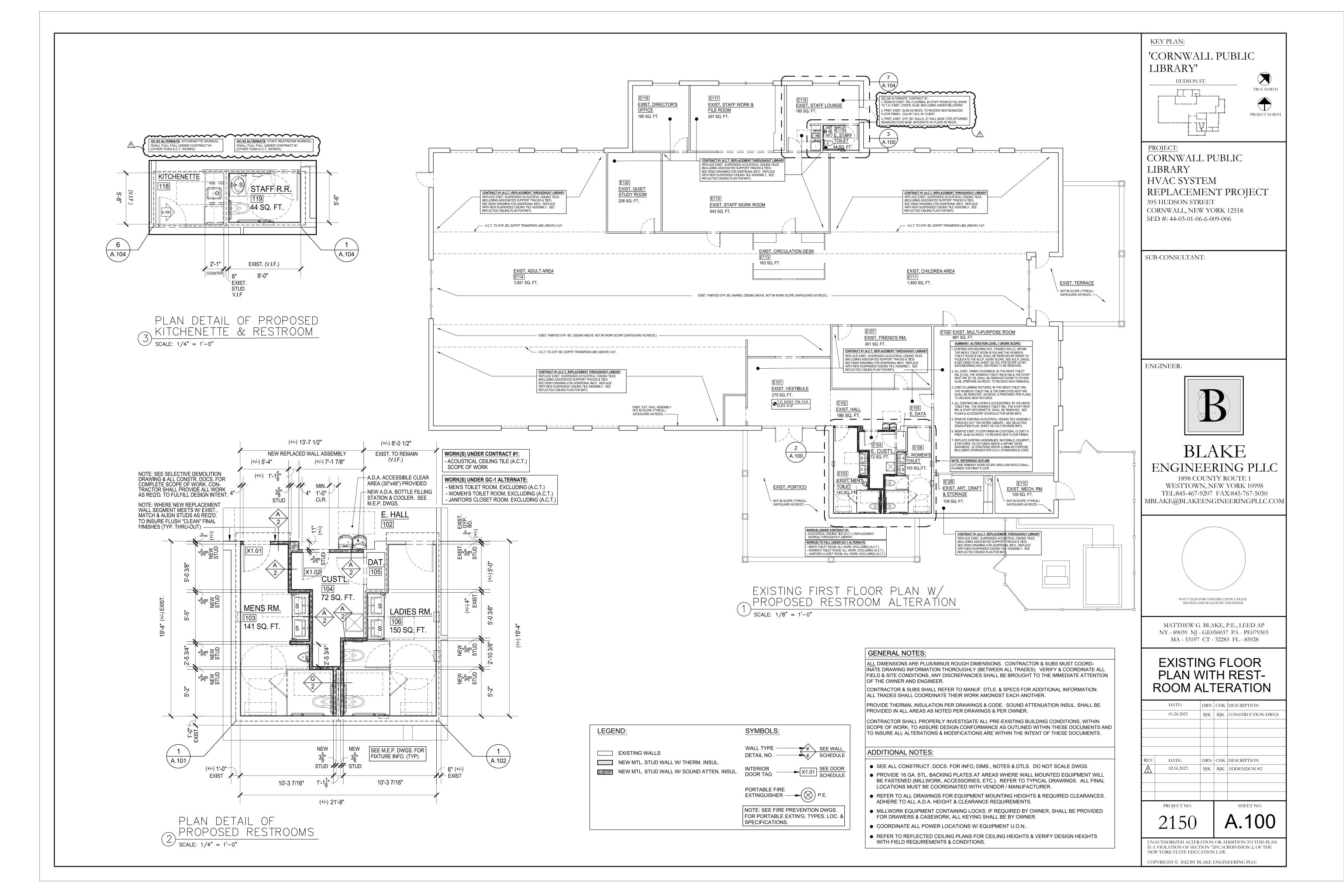


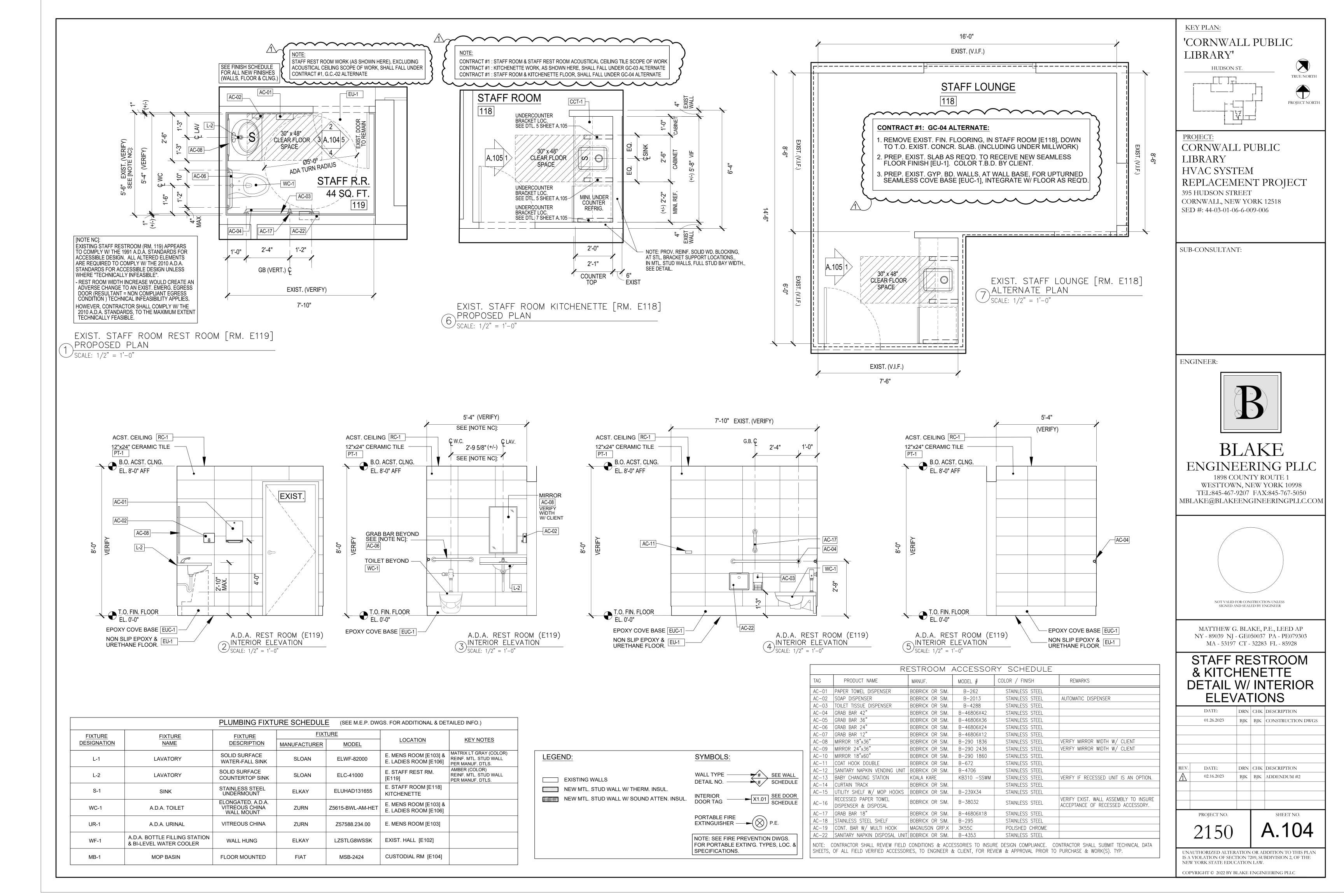
BLAKE ENGINEERING PLLC 1898 COUNTY ROUTE 1 WESTTOWN, NEW YORK 10998 TEL:845-467-9207 FAX:845-767-5050 MBLAKE@BLAKEENGINEERINGPLLC.COM

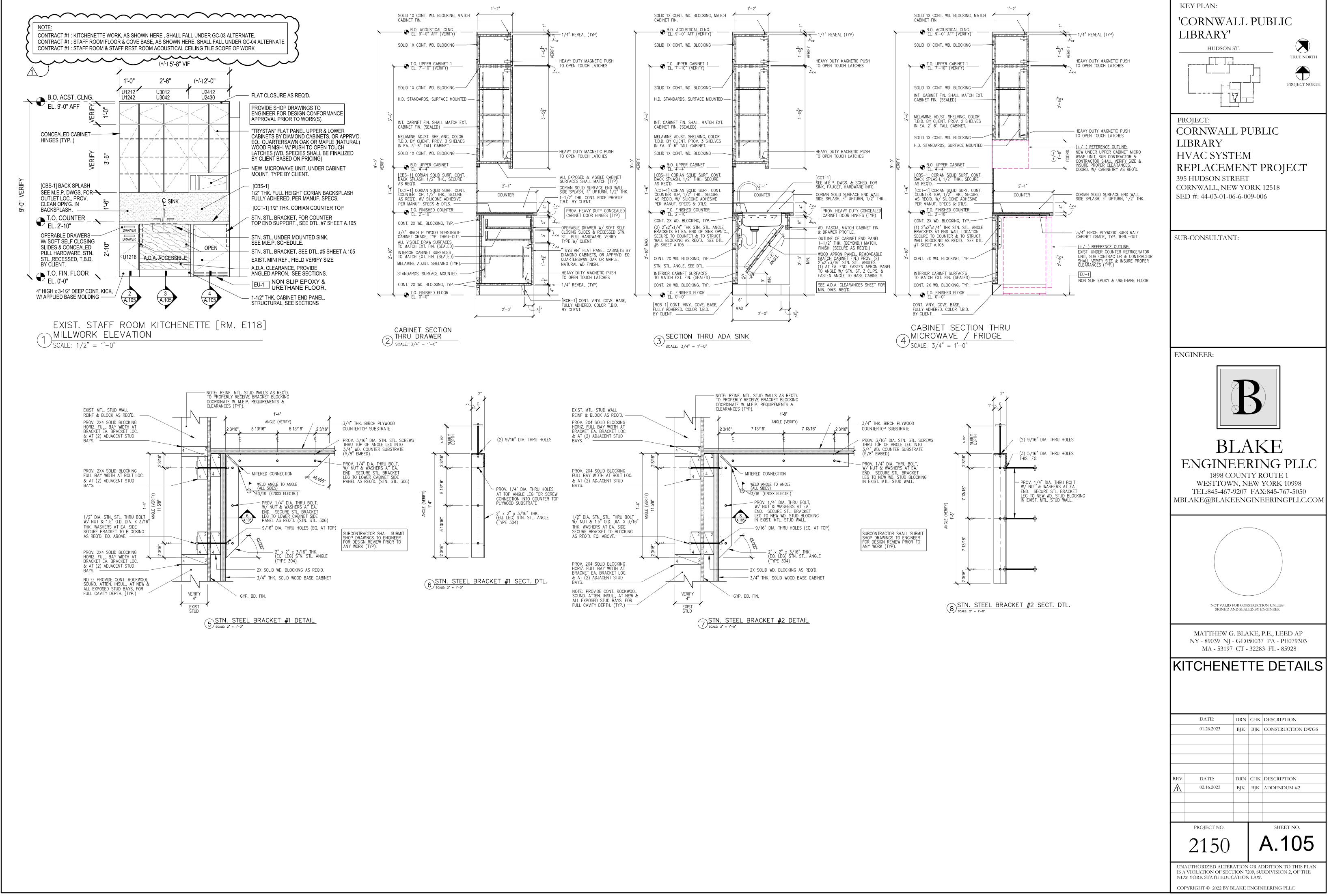


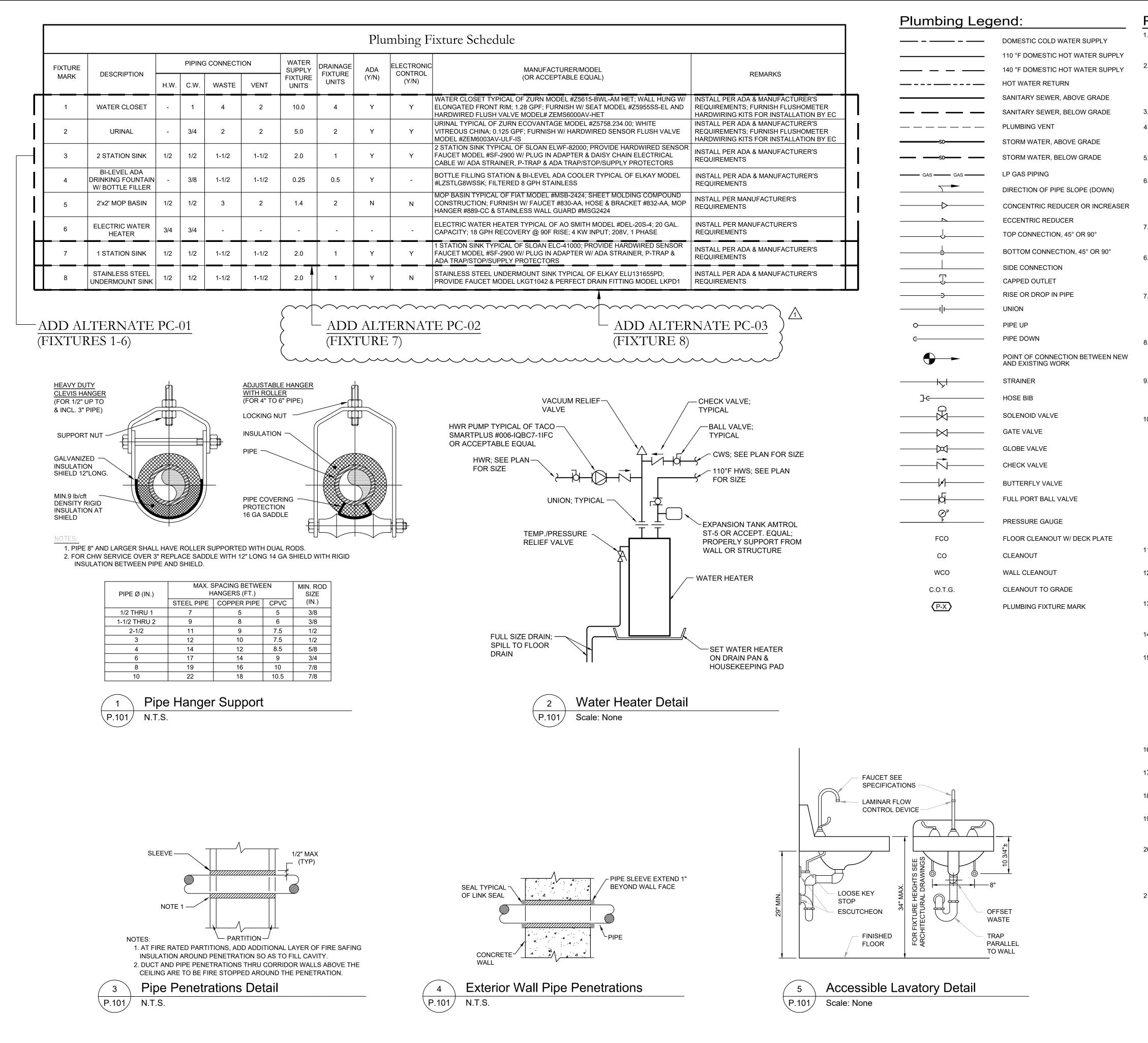
THE DESIGN OF THIS PROJECT CONFORMS TO APPLICABLE PROVISIONS OF THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE, AND THE MANUAL OF PLANNING STANDARDS OF THE NEW STATE EDUCATION DEPARTMENT











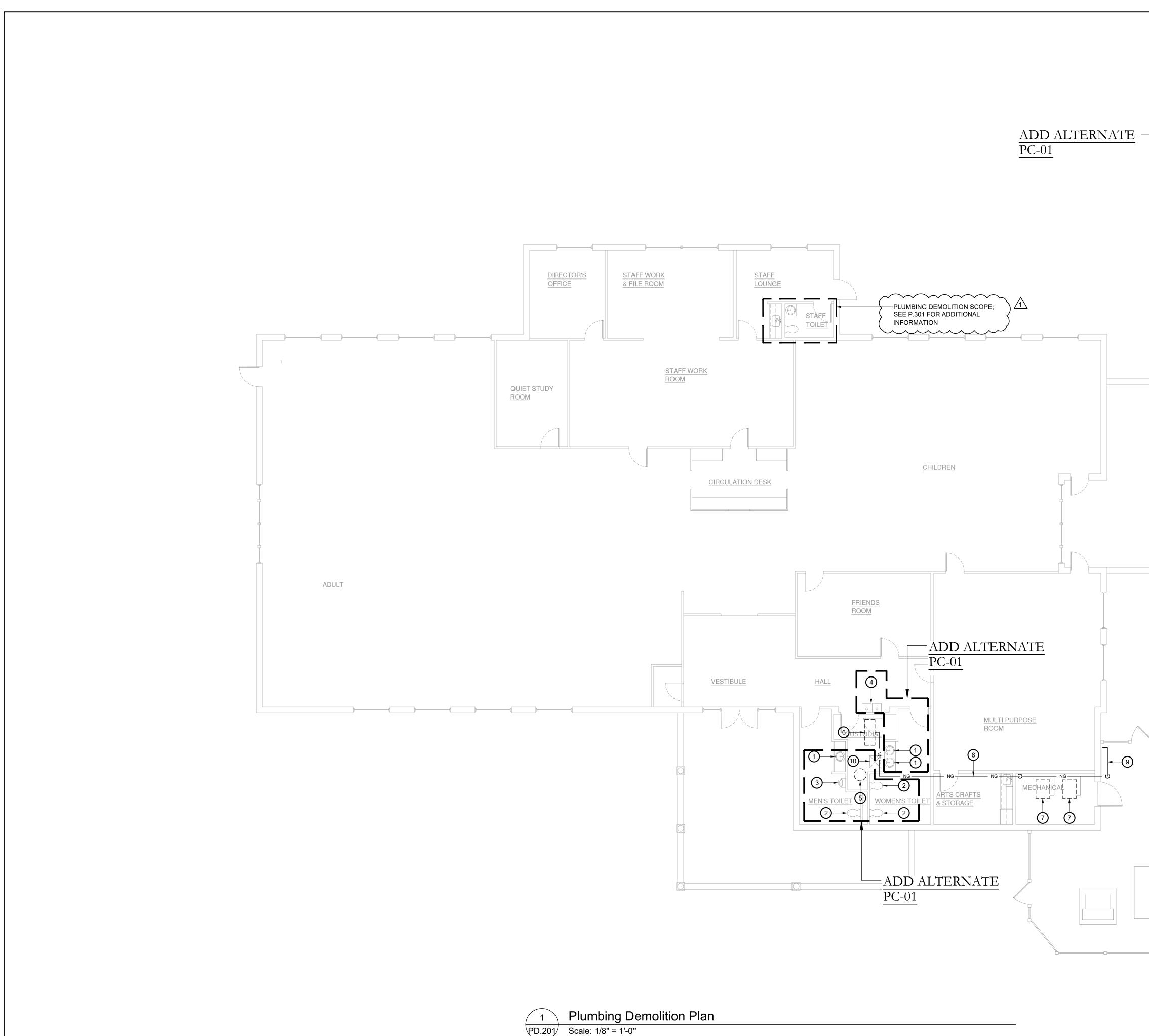
#### **Plumbing Notes:**

ALL MATERIALS AND EQUIPMENT ARE TO BE NEW, UNUSED, AND FREE FROM DEFECTS OF ANY KIND. THE BASIS OF QUALITY SHALL BE THE LATEST REVISION OF ASTM, ANSI, OR OTHER ACCEPTABLE STANDARDS.

- 2. THESE DRAWINGS ARE DIAGRAMMATIC, AND INDICATE GENERAL ARRANGEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO HAVE REVIEWED THE SITE FOR HIS WORK PRIOR TO HAVING SUBMITTED HIS PROPOSAL. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CONDITIONS FOUND DURING THE COURSE OF THE CONTRACT.
- 3. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES.
- 4. ALL WORK INCLUDING LABOR AND MATERIALS SHALL BE FULLY GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF PAYMENT AND FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 5. ALL CUTTING, PATCHING, FIRE-STOPPING, AND SURFACE RESTORATION IN CONNECTION WITH THIS TRADE SHALL BE COMPLETED BY THIS CONTRACTOR.
- 6. A MINIMUM OF FOUR (4) COPIES OF SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING AND INSTALLATION OF THE EQUIPMENT AND/OR MATERIALS. BY SUBMITTING SHOP DRAWINGS, THE CONTRACTOR REPRESENTS THAT ACTUAL FIELD CONDITIONS ARE VERIFIED BY HIM AND ARE REFLECTED ON HIS SUBMITTALS.
- 7. THIS CONTRACTOR SHALL PAY ALL FEES, GIVE ALL NOTICES, FILE ALL NECESSARY DRAWINGS, AND OBTAIN ALL PERMITS, INSPECTIONS AND CERTIFICATES OF APPROVAL REQUIRED IN CONNECTION WITH WORK UNDER THIS CONTRACT.
- 6. ALL WORK IN ASSOCIATION WITH THIS CONTRACT SHALL BE COMPLETED IN STRICT COMPLIANCE WITH THE 2020 BUILDING CODE OF NEW YORK STATE, 2020 PLUMBING CODE OF NEW YORK STATE, 2020 FUEL GAS CODE OF NEW YORK STATE & 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE.
- 7. WHERE THE PROJECT INVOLVES A GAS SERVICE, THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, APPLICATIONS AND FEES OF ALL WORK ASSOCIATED WITH THE LOCAL GAS UTILITY COMPANY. ALL WORK INVOLVING THE GAS UTILITY COMPANY SHALL BE COMPLETED IN ACCORDANCE WITH THEIR REGULATIONS AND GUIDELINES.
- 8. ALL DOMESTIC COLD AND HOT WATER PIPING AND FITTINGS ARE TO BE INSULATED WITH 1" THICK RIGID ONE-PIECE MOLDED SECTIONAL FIBERGLASS PIPE COVERING WITH UNIVERSAL JACKET. ALL JOINTS ARE TO BE COMPLETELY SEALED A MINIMUM OF 6" BEYOND JOINT ENDS.
- 9. ALL PIPING SHALL BE PROPERLY SUPPORTED AND ROUTED PARALLEL OR PERPENDICULAR TO BUILDING WALLS. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUPPORT HANGERS AND MISCELLANEOUS METALS REQUIRED FOR PROPER INSTALLATION OF WORK.
- 10. PIPING SYSTEM MATERIALS ARE TO BE AS FOLLOWS:
- 10.1. DOMESTIC WATER DISTRIBUTION CHLORINATED POLYVINYL CHLORIDE (CPVC) PLASTIC PIPE AND FITTINGS. JOINTS SHALL BE MADE IN ACCORDANCE WITH ASTM D 2846 USING A PRIMER AND SOLVENT CEMENT CONFORMING TO ASTM F 493.
- 10.2. SANITARY DRAINAGE & VENT SCHEDULE 40 POLYVINYL CHLORIDE (PVC) PLASTIC PIPE AND FITTINGS. JOINTS SHALL BE MADE IN ACCODANCE WITH ASTM D 2855 USING A PRIMER CONFORMING TO ASTM F 656 AND SOLVENT CEMENT CONFORMING TO ASTM D 2564.
- 10.3. GAS DISTRIBUTION SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE IRON THREADED FITTINGS & THREAD JOINT COMPOUND FOR PIPING UP THRU 4" DIAMETER. JOINTS MUST BE WELDED FOR PIPING OVER 4" DIAMETER. WHERE PIPING IS TO BE INSTALLED BELOW GRADE, PIPING AND FITTINGS ARE TO BE COATED WITH A CORROSION-RESISTENT MATERIAL.
- 11. ALL EXPOSED PIPING, FITTINGS, TRAPS, ESCUTCHEONS, VALVES, ETC, SHALL BE CHROME PLATED.
- 12. SLOPE SANITARY DRAINAGE PIPING 2" DIAMETER AND SMALLER NOT LESS THAN 1/4" PER FOOT. SLOPE SANITARY DRAINAGE PIPING OVER 2" DIAMETER NOT LESS THAN 1/8" PER FOOT.
- 13. INSTALL A CLEANOUT AT THE BASE OF EACH SOIL STACK, AT EACH CHANGE IN DIRECTION, AT INTERVALS NOT OVER 50 FEET AND ELSEWHERE AS SHOWN ON DRAWINGS OR REQUIRED BY CODE.
- 14. PROVIDE EXPOSED PIPING WITH CHROME PLATED CAST BRASS ESCUTCHEON WITH SET SCREW WHERE PENETRATING FLOORS, CEILINGS, WALLS OR PARTITIONS.
- 15. TEST PIPING AND PROVE TIGHT FOR AT LEAST TWO HOURS IN ACCORDANCE WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND/OR AS SPECIFIED. TEST SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER AND LOCAL INSPECTOR. TEST SHALL BE REPEATED IF NECESSARY UNTIL FINAL APPROVAL OF SYSTEM IS OBTAINED.
- 15.1. WATER & GAS PIPING TO BE AIR-PRESSURE TESTED TO 1-1/2 TIMES MAXIMUM WORKING PRESSURE.
- 15.2. DRAINAGE, WASTE & VENT PIPING TO BE TESTED BY FILLING THE SYSTEM WITH WATER TO 10-FEET ABOVE HIGHEST POINT.
- 16. SUPPORT HORIZONTAL PIPING UTILIZING A SPACING PER PIPING MANUFACTURER'S REQUIREMENTS.
- 17. INSTALL VALVES ON THE ENTIRE DISTRIBUTION SYSTEM, SO LOCATED AS TO GIVE COMPLETE CONTROL TO ALL FIXTURES AND EQUIPMENT.
- 18. INSTALL DRAIN VALVES AT BASE OF ALL RISERS AND AT LOW POINTS OF PIPING SYSTEM.
- 19. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL EQUIPMENT, PIPING, FIXTURES, AND SYSTEMS INSTALLED UNDER THIS CONTRACT TO ENSURE PROPER OPERATION PRIOR TO FINAL ACCEPTANCE BY THE OWNER AND ENGINEER.
- 20. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE WHETHER SPECIAL LICENSING IS REQUIRED IN ORDER TO PERFORM THE REQUIRED WORK IN THE MUNICIPALITY WHERE THE PROJECT IS LOCATED. IF THE CONTRACTOR CANNOT OBTAIN THE REQUIRED LICENSING TO COMPLETE THE WORK WITHIN THE PROJECT SCHEDULE, THEN THE CONTRACTOR SHALL NOT BE PERMITTED TO BID ON THIS PROJECT.
- 21. CONTRACTOR IS RESPONSIBLE TO CREATE AND SUBMIT RED-LINE "AS-BUILT" PLANS TO THE ENGINEER AT THE END OF THE PROJECT. AS-BUILT PLANS SHALL ACCURATELY REPRESENT THE SYSTEMS AS THEY WERE INSTALLED.

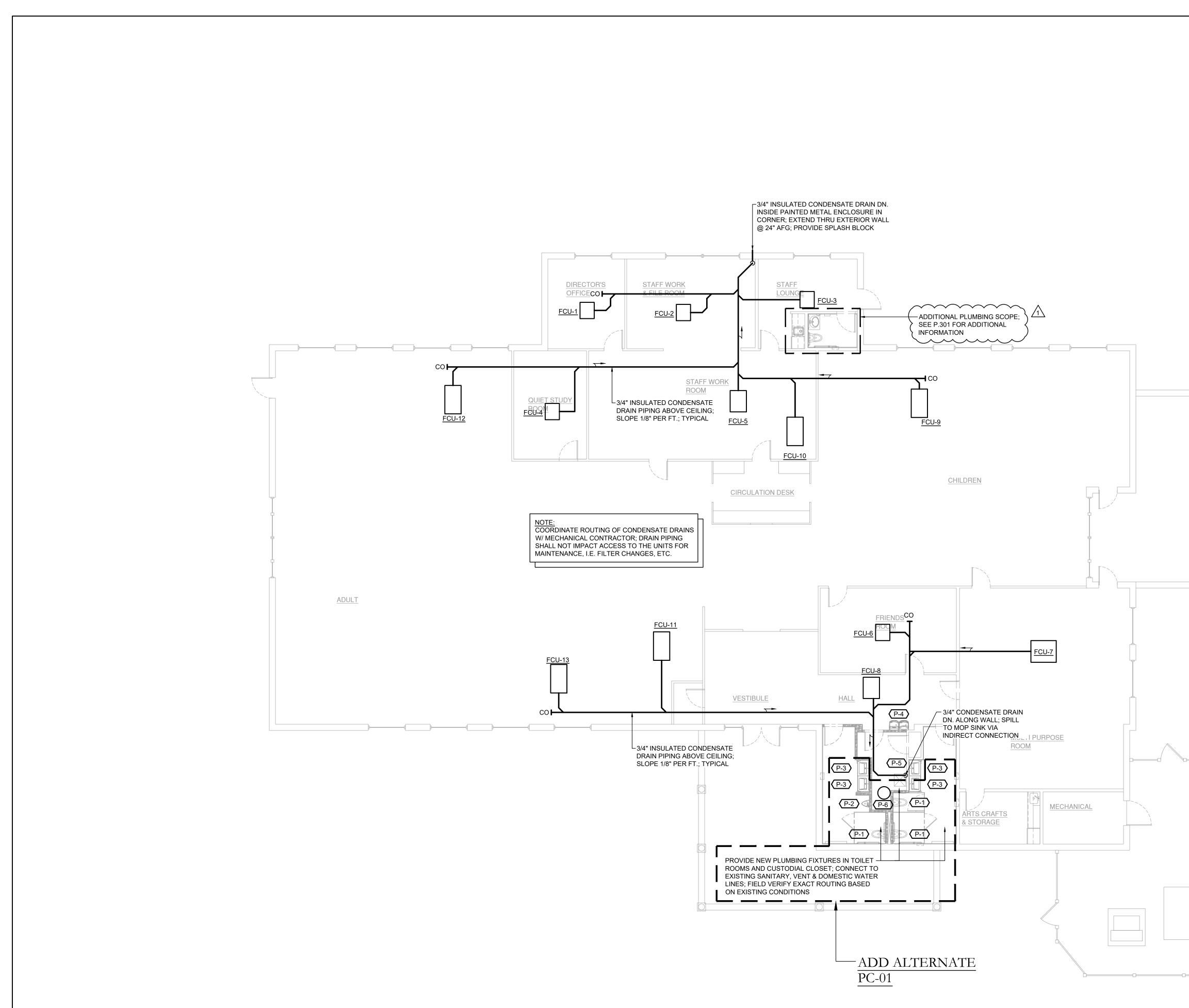
<u> </u>	EY PLAN:
'C	CORNWALL PUBLIC
	IBRARY'
	HUDSON ST.
	TRUE NORTH
-	<u>oject:</u> ORNWALL PUBLIC
	BRARY
H	VAC SYSTEM
	EPLACEMENT PROJECT
CO	RNWALL, NEW YORK 12518
SEI	D #:44-03-01-06-6-009-006
SUP	3-CONSULTANT:
ENG	GINEER:
T	BLAKE
F	ENGINEERING PLLC 1898 COUNTY ROUTE 1
	WESTTOWN, NEW YORK 10998 TEL:845-467-9207 FAX:845-767-5050
MBI	LAKE@BLAKEENGINEERINGPLLC.COM
	LATE OF NEW LOB
	LAND GEORGE ON
	FOR BAR OB9039 ENGLASSIONAL ENGLASSION PROFESSIONAL ENGLASSION PROFESSION AL ENGLASSION AL ENGLASSIO
	NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY ENGINEER
	MATTHEW G. BLAKE, P.E., LEED AP
	MATTHEW G. BLAKE, P.E., LEED AP NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928
	NY - 89039 NJ - GE050037 PA - PE079303
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND,
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE &
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND,
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS DATE: DRN CHK DESCRIPTION
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS DATE: DRN CHK DESCRIPTION
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS DATE: DRN CHK DESCRIPTION
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS DATE: DRN CHK DESCRIPTION 01.26.2023 BJK BJK CONSTRUCTION DWGS
REV. 1	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS DATE: DRN CHK DESCRIPTION
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS DATE: DRN CHK DESCRIPTION 01.26.2023 BJK BJK CONSTRUCTION DWGS 01.26.2024 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DETAILS DATE: DRN CHK DESCRIPTION 01.26.2023 BJK BJK CONSTRUCTION DWGS 01.26.2024 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DATE: DRN CHK DESCRIPTION 01.26.2023 BJK BJK CONSTRUCTION DWGS 01.26.2023 BJK BJK CONSTRUCTION DWGS 04.100 DATE: DRN CHK DESCRIPTION 02.16.2023 BJK BJK ADDENDUM #2 02.16.2023 BJK BJK ADDENDUM #2
	NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING LEGEND, NOTES, SCHEDULE & DATE: DRN CHK DESCRIPTION 01.26.2023 BJK BJK CONSTRUCTION DWGS 01.26.2023 DATE: DRN CHK DESCRIPTION DATE: DRN CHK DESCRIPTION 02.16.2023 BJK BJK ADDENDUM #2

COPYRIGHT © 2022 BY BLAKE ENGINEERING PLLC



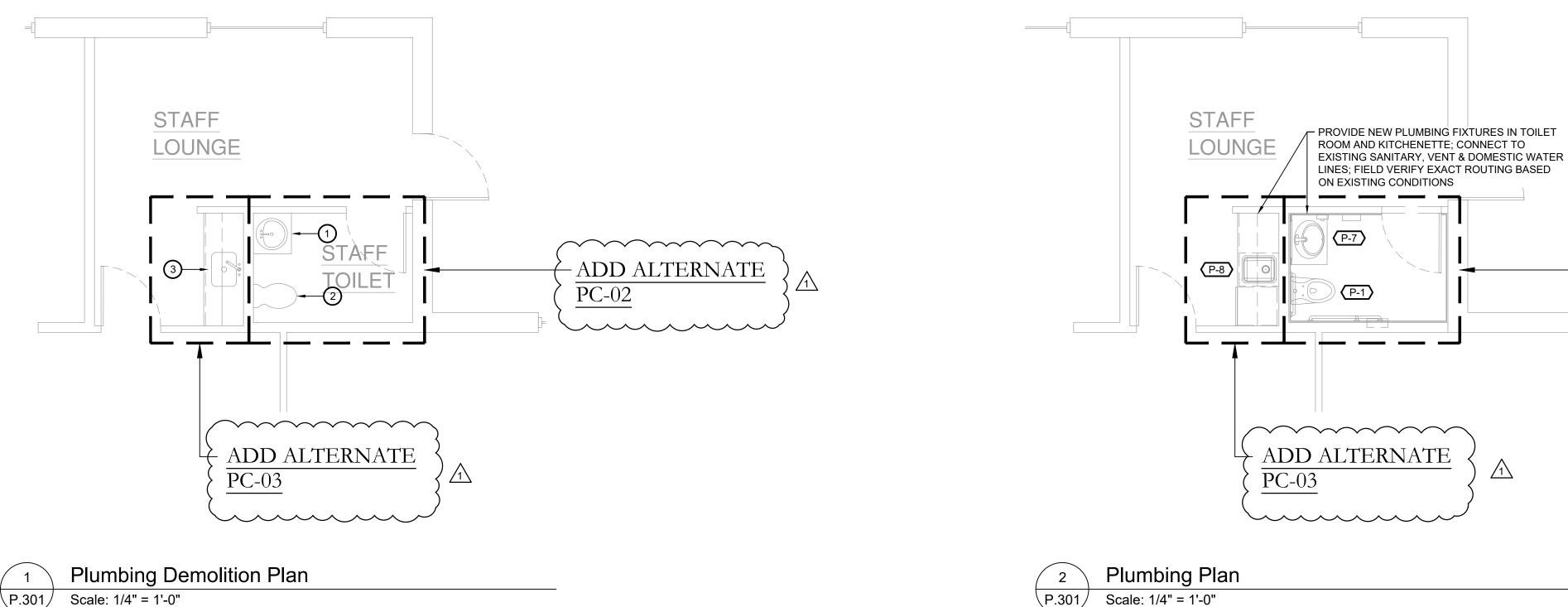
Scale: 1/8" = 1'-0"

KEY PLAN: Key Notes: 'CORNWALL PUBLIC EXISTING LAVATORY TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF. DEMOLISH SANITARY, VENT & WATER LIBRARY' PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN SERVICES FOR RECONNECTION TO NEW FIXTURE(S) HUDSON ST. EXISTING WATER CLOSET TO BE DISCONNECTED, REMOVED & TRUE NORTH PROPERLY DISPOSED OF. DEMOLISH SANITARY, VENT & WATER 2 PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN SERVICES FOR RECONNECTION TO NEW FIXTURE(S)  $\mathbf{T}$ PROJECT NORTH EXISTING URINAL TO BE DISCONNECTED, REMOVED & PROPERLY → 3 DISPOSED OF. DEMOLISH SANITARY, VENT & WATER PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN SERVICES FOR RECONNECTION TO NEW FIXTURE(S) EXISTING DRINKING FOUNTAIN TO BE DISCONNECTED, REMOVED PROJECT: & PROPERLY DISPOSED OF. DEMOLISH SANITARY, VENT & WATER PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN CORNWALL PUBLIC SERVICES FOR RECONNECTION TO NEW FIXTURE(S) LIBRARY EXISTING ELECTRIC WATER HEATER TO BE DISCONNECTED, 5 REMOVED & PROPERLY DISPOSED OF. DEMOLISH SANITARY, VENT HVAC SYSTEM & WATER PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN SERVICES FOR RECONNECTION TO NEW FIXTURE(S) **REPLACEMENT PROJECT** EXISTING GAS FIRED HUMIDIFIER TO BE REMOVED BY MC; 395 HUDSON STREET 6 PLUMBING CONTRACTOR TO DISCONNECT GAS AND WATER LINES CORNWALL, NEW YORK 12518 FROM UNIT PRIOR TO REMOVAL SED #:44-03-01-06-6-009-006 EXISTING GAS FIRED BOILER TO BE REMOVED BY MC; PLUMBING 7 CONTRACTOR TO DISCONNECT GAS AND DOMESTIC WATER LINES FROM UNIT PRIOR TO REMOVAL DISCONNECT, REMOVE & PROPERLY DISPOSE OF ALL NATURAL GAS PIPING INSIDE OF THE BUILDING SERVING THE GAS 8 HUMIDIFIER AND BOILERS; FIELD VERIFY EXACT ROUTING AND SUB-CONSULTANT: QUANTITY MODIFY EXISTING NATURAL GAS METER RISER; REMOVE ALL PIPING FROM INSIDE THE BUILDING BACK TO THE RISER; MAINTAIN 9 GAS SERVICE TO EXISTING GENERATOR; COORDINATE W/ UTILITY COMPANY FOR MODIFICATIONS TO SERVICE RISER EXISTING MOP SINK TO BE DISCONNECTED, REMOVED & 10 PROPERLY DISPOSED OF. DEMOLISH SANITARY, VENT & WATER PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN SERVICES FOR RECONNECTION TO NEW FIXTURE(S) ENGINEER: -ADD ALTERNATE PC-01 BLAKE ENGINEERING PLLC 1898 COUNTY ROUTE 1 WESTTOWN, NEW YORK 10998 TEL:845-467-9207 FAX:845-767-5050 MBLAKE@BLAKEENGINEERINGPLLC.COM NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY ENGINEER MATTHEW G. BLAKE, P.E., LEED AP NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 PLUMBING DEMOLITION PLAN DRN CHK DESCRIPTION DATE: 01.26.2023 BJK BJK CONSTRUCTION DWGS DRN CHK DESCRIPTION DATE: 02.16.2023 BJK BJK ADDENDUM #2 PROJECT NO. SHEET NO. PD.201 2150 UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. COPYRIGHT © 2022 BY BLAKE ENGINEERING PLLC





KEY PLAN:													
'CORNWALL PUBLIC LIBRARY'													
HUDSON ST.													
PROJECT NORTH													
PROJECT: CORNWALL PUBLIC													
LIBRARY													
HVAC SYSTEM REPLACEMENT PROJECT													
395 HUDSON STREET CORNWALL, NEW YORK 12518													
SED #:44-03-01-06-6-009-006													
SUB-CONSULTANT:													
ENGINEER:													
BLAKE													
ENGINEERING PLLC													
1898 COUNTY ROUTE 1 WESTTOWN, NEW YORK 10998 TEL:845-467-9207 FAX:845-767-5050													
MBLAKE@BLAKEENGINEERINGPLLC.COM													
F OF NEW													
STATE OF NEW LOB													
TERESSIONAL ENGLASSIONAL ENGLASSION AL ENGLA													
ND AROFESSIONAL ET													
NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY ENGINEER													
MATTHEW G. BLAKE, P.E., LEED AP NY - 89039 NJ - GE050037 PA - PE079303													
MA - 53197 CT - 32283 FL - 85928													
PLUMBING PLAN													
DATE: DRN CHK DESCRIPTION 01.26.2023 BJK BJK CONSTRUCTION DWGS													
01.26.2023     BJK     BJK     CONSTRUCTION DWGS       Image: Reverse of the second													
01.26.2023 BJK BJK CONSTRUCTION DWGS													
01.26.2023       BJK       BJK       CONSTRUCTION DWGS         Image: Im													





Scale: 1/4" = 1'-0"

KEY PLAN: Key Notes: 'CORNWALL PUBLIC EXISTING LAVATORY TO BE DISCONNECTED, REMOVED & (1)PROPERLY DISPOSED OF. DEMOLISH SANITARY, VENT & WATER LIBRARY' PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN SERVICES FOR RECONNECTION TO NEW FIXTURE(S) HUDSON ST. EXISTING WATER CLOSET TO BE DISCONNECTED, REMOVED & TRUE NORTH 2 PROPERLY DISPOSED OF. DEMOLISH SANITARY, VENT & WATER ╺╼╼╤┛╧└╴╛┯┸╘ PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN  $\bigcirc$ SERVICES FOR RECONNECTION TO NEW FIXTURE(S) PROJECT NORTH EXISTING KITCHENETTE SINK TO BE DISCONNECTED, REMOVED & PROPERLY DISPOSED OF. DEMOLISH SANITARY, VENT & WATER PIPING BACK TO MAINS AT FLOOR AND/OR WALL & CAP; MAINTAIN 3 SERVICES FOR RECONNECTION TO NEW FIXTURE(S) PROJECT: CORNWALL PUBLIC LIBRARY HVAC SYSTEM REPLACEMENT PROJECT 395 HUDSON STREET CORNWALL, NEW YORK 12518 SED #:44-03-01-06-6-009-006 SUB-CONSULTANT: ENGINEER: ADD ALTERNATE 1PC-02 BLAKE ENGINEERING PLLC 1898 COUNTY ROUTE 1 WESTTOWN, NEW YORK 10998 TEL:845-467-9207 FAX:845-767-5050 MBLAKE@BLAKEENGINEERINGPLLC.COM NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY ENGINEER MATTHEW G. BLAKE, P.E., LEED AP NY - 89039 NJ - GE050037 PA - PE079303 MA - 53197 CT - 32283 FL - 85928 STAFF RESTROOM & KITCHENETTE PLUMBING PLAN DATE: DRN CHK DESCRIPTION 01.26.2023 BJK BJK CONSTRUCTION DWGS DATE: DRN CHK DESCRIPTION 02.16.2023 BJK BJK ADDENDUM #2 PROJECT NO. SHEET NO. P.301 2150 UNAUTHORIZED ALTERATION OR ADDITION TO THIS PLAN IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW. COPYRIGHT © 2022 BY BLAKE ENGINEERING PLLC

	AIR-COOLED HEAT PUMP SCHEDULE																			
		ANUFACTURER (OR ACCEPT. EQUAL)	MODEL	INDOOR UNITS SERVED	COMPRESSOR TYPE	NOM. COOL CAPACITY (MBH)	CAPACITY	TOTAL COOL TOTAL HEA CAPACITY CAPACITY (MBH) (MBH) @65°F AMB. @-10°F AMB	OPERATI RANG	GE (°F)	RI EFFICIENCY RA		REFRIGERANT	SOUND PRESSURE LEVEL COOLING/ HEATING (dBA)	VOLT. F	REQ	ECTRICA POWER UIREMEN Hz.		WEIGHT (LB)	NOTES
F	P-1	HITACHI	HVAHR384B32S	SEE INDOOR UNIT SCHEDULE	INVERTER SCROLL HERMETIC	384,000	432,000	340.6 216.9	23 TO 122	-13 TO 59 9.6	19.6 3.37	2.20	R410A	69	208	3	60 1	58 & 70 & 46 x2 60 x2	776 & 774 x2	PROVIDE W/ REQUIRED PIPING ACCESSORIES; INSTALL PER MANUFACTURER REQUIREMENTS

# INDOOR MINI-SPLIT UNIT SCHEDULE

						IIN	DO	JK N	/111/1-5	PLII	UN	11 SCf	1EDULI						
EQUIPMENT	MANUFACTURER		MINI-SPLIT UNIT	AREA OF	AIRFLOW	C		1	HE	EATING		PAIRED	EXTERNAL STATIC		ELECT POV			WEIGHT	
TAG	(OR ACCEPT. EQUAL)	MODEL	TYPE	BUILDING SERVED	(CFM)	CAPACITY (MBH)	EDB (°F)	EWB (°F)	CAPACITY (MBH)	EDB (°F)	EWB (°F)	OUTDOOR UNIT	PRESSURE (IN. W.C.)	VOLT.	REQUIR PHASE		S W	(LB)	NOTES
FCU-1	HITACHI	HIDM008B23S	DUCTED MEDIUM STATIC	DIRECTOR'S OFFICE	250	7.3	80.0	67.0	4.6	70.0	60.0		0.50	208	1	60	157	57	SEE VRF SYSTEM NOTES
FCU-2	HITACHI	HIDM012B23S	DUCTED MEDIUM STATIC	FILE ROOM	450	11.0	80.0	67.0	7.0	70.0	60.0		0.50	208	1	60	157	60	SEE VRF SYSTEM NOTES
FCU-3	HITACHI	HIDM012B23S	DUCTED MEDIUM STATIC	STAFF LOUNGE	280	11.0	80.0	67.0	7.0	70.0	60.0		0.50	208	1	60	157	60	SEE VRF SYSTEM NOTES
FCU-4	HITACHI	HICM008B23S	DUCTED MEDIUM STATIC	QUIET STUDY ROOM	250	7.3	80.0	67.0	4.6	70.0	60.0		0.50	208	1	60	157	57	SEE VRF SYSTEM NOTES
FCU-5	HITACHI	HIDM018B23S	DUCTED MEDIUM STATIC	STAFF WORK ROOM	600	16.4	80.0	67.0	10.5	70.0	60.0		0.50	208	1	60	190	79	SEE VRF SYSTEM NOTES
FCU-6	HITACHI	HIDM012B23S	DUCTED MEDIUM STATIC	FRIENDS ROOM	360	11.0	80.0	67.0	7.0	70.0	60.0	HP-1	0.50	208	1	60	157	60	SEE VRF SYSTEM NOTES
FCU-7	HITACHI	HIDH072B21S	DUCTED HIGH STATIC	MULTI PURPOSE ROOM/ARTS AND CRAFTS		65.7	80.0	67.0	41.9	70.0	60.0	111 - 1	0.50	208	1	60	840	258	SEE VRF SYSTEM NOTES
FCU-8	HITACHI	HIDM027B23S	DUCTED MEDIUM STATIC	VESTIBULE/HALL	760	24.7	80.0	67.0	15.7	70.0	60.0		0.50	208	1	60	190	79	SEE VRF SYSTEM NOTES
FCU-9	HITACHI	HIDH036B22S	DUCTED HIGH STATIC	CHILDREN ZONE 1	1,200	32.9	80.0	67.0	20.9	70.0	60.0		0.50	208	1	60	259	106	SEE VRF SYSTEM NOTES
FCU-10	HITACHI	HIDH048B22S	DUCTED HIGH STATIC	CENTRAL ZONE 1	1,250	43.8	80.0	67.0	27.9	70.0	60.0		0.50	208	1	60	259	106	SEE VRF SYSTEM NOTES
FCU-11	HITACHI	HIDH036B22S	DUCTED HIGH STATIC	CENTRAL ZONE 2	800	32.9	80.0	67.0	20.9	70.0	60.0		0.50	208	1	60	259	106	SEE VRF SYSTEM NOTES
FCU-12	HITACHI	HIDH036B22S	DUCTED HIGH STATIC	ADULT ZONE 1	1,000	32.9	80.0	67.0	20.9	70.0	60.0		0.50	208	1	60	259	106	SEE VRF SYSTEM NOTES
FCU-13	HITACHI	HIDH048B22S	DUCTED HIGH STATIC	ADULT ZONE 2	1,260	43.8	80.0	67.0	27.9	70.0	60.0		0.50	208	1	60	259	106	SEE VRF SYSTEM NOTES

	ENERGY RECOVERY VENTILATOR SCHEDULE																											
		MANUFACTURER (OR ACCEPT. EQUAL)		DDEL FRESH AIR FLOW RATE (CFM)			M EXH	H. AIR (°F)	OUTSIDE AIR (°F) SUPPLY AIR (°F)					AIR (°F)	RECOVERY EFFECTIVENESS					ELECTRICAL DATA								
EQUIF			MODEL		W AIR FLOW RATE (CFM)	WINTER SUMM		SUMMER	WINTER SUMMER			WINTER SUMMER		SEN	SENSIBLE		TOTAL		MOTOR						WEIGHT	NOTES		
17						DB	WB	DB WB	DB	WB	DB	WB	DB	WB	DB WB	WINTER	SUMMER	WINTER	SUMMER	QTY.	PWR.		PHASE Hz	Hz.	FLA			
ER	V-1	RENEWAIRE	HE-4XJINV- S35VV DANTWL	2500	2500	70.0	51.4	75.0 62.5	4.6	2.6	90.2	72.9	51.8	40.0	79.2 67.6	72.1%	72.1%	70.2%	53.6%	2	2 HP	208	3	60	14.8	20	-	PROVIDE W/ MERV-13 FILTERS, ECM MOTORS, DISCONNECT SWITCH, BACKDRAFT DAMPERS, TIMER FOR OCCUPIED OPERATION & ELEC DUCT HEATER

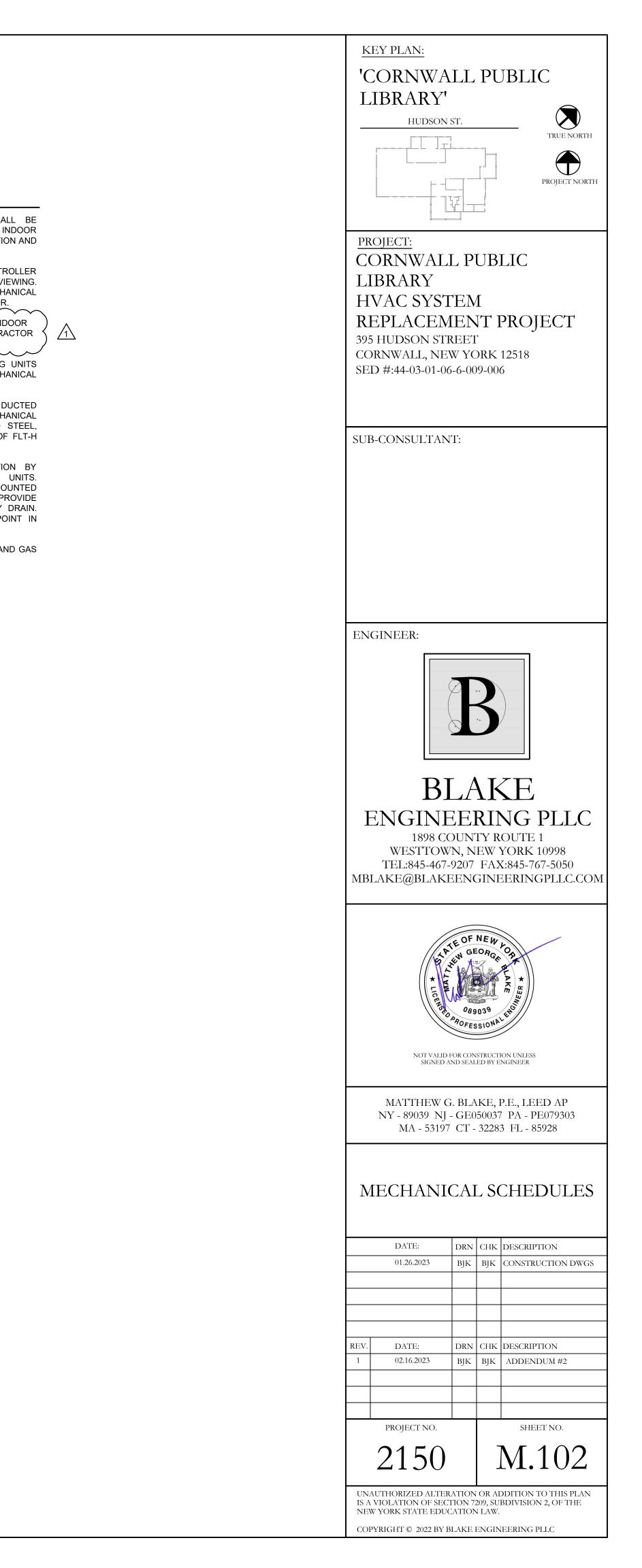
	MANUFACTURER												
EQUIPMENT	EQUIPMENT (OR ACCEPT. MODE		AIR DEVICE		W (CFM)	MAX AIR PRESS.	MOUNTING	PANEL/FRAME SIZE		MAX	DAMPER	FINISH	NOTES
TAG	EQUAL)	MODEL	TYPE	MIN.	MAX.	DROP (IN. W.C.)		(IN.)	(IN.) NC		Brain Ert		
D-1	KRUEGER	PLQ-6-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	50	175	0.10	LAY-IN	24"x24"	6"Ø	20	OBD	WHITE	-
D-2	KRUEGER	PLQ-8-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	176	300	0.10	LAY-IN	24"x24"	8"Ø	20	OBD	WHITE	-
D-3	KRUEGER	PLQ-10-F23-24x24-PR10-IB-44	SQUARE PLAQUE FACE DIFFUSER	301	435	0.10	LAY-IN	24"x24"	10"Ø	20	OBD	WHITE	-
R-1/EG-1	KRUEGER	S80P-20x20-F23-24x24-00-00-00-44	PERFORATED FACE RETURN GRILLE	0	1,600	0.10	LAY-IN	24"x24"	20"x20"	25	-	WHITE	FURNISH & INSTALL FULL-SIZE SHEET METAL PLENUM BOX ON REAR OF GRILLE, PAINT INSIDE FLAT BLACK

	VENTILATION SCHEDULE														
SYSTEM	SPACE SERVED	SPACE TYPE	SPACE AREA (SQ. FT.)	OCCUPANTS PER 1000 SQ. FT.	# OF OCCUPANTS	CFM PER PERSON	CFM PER SQ. FT.	CALCULATED VENTILATION RATE (CFM)	ZONE AIR DISTRIBUTION EFFECTIVENESS	ADJUSTED VENTILATION RATE (CFM)	PROVIDED VENTILATION RATE (CFM)				
FCU-1	DIRECTOR'S OFFICE	OFFICE	180	5	1	5	0.06	16	0.8	20	20				
FCU-2	FILE ROOM	OFFICE	300	5	2	5	0.06	28	0.8	35	35				
FCU-3	STAFF LOUNGE	BREAK ROOM	181	50	1	5	0.12	16	0.8	20	20				
FCU-4	QUIET STUDY ROOM	CONFERENCE	206	50	11	5	0.06	67	0.8	84	85				
FCU-5	STAFF WORK ROOM	OFFICE	644	5	4	5	0.06	59	0.8	73	75				
FCU-6	FRIENDS ROOM	LIBRARY	301	50	4	5	0.06	56	0.8	70	70				
FCU-7	MULTI PURPOSE ROOM	MULTI USE ASSEMBLY	881	100	89	7.5	0.06	720	0.8	900	900				
FCU-7	ARTS AND CRAFTS	STORAGE	110	0	0	0	0.12	13	0.8	17	20				
FCU-8	VESTIBULE/HALL	CORRIDOR	462	0	0	0	0.06	28	0.8	35	35				
FCU-9	CHILDREN ZONE	LIBRARY	898	10	9	5	0.12	153	0.8	191	200				
FCU-10	CENTRAL ZONE 1	LIBRARY	1,277	10	13	5	0.12	218	0.8	273	275				
FCU-11	CENTRAL ZONE 2	LIBRARY	1,027	10	11	5	0.12	178	0.8	223	225				
FCU-12	ADULT ZONE 1	LIBRARY	840	10	9	5	0.12	146	0.8	182	185				
FCU-13	ADULT ZONE 2	LIBRARY	1,637	10	17	5	0.12	281	0.8	352	355				

# EDULE

### VRF System Notes:

- 1. WIRED 7 DAY PROGRAMMABLE THERMOSTAT SHALL BE FURNISHED BY MECHANICAL CONTRACTOR FOR EACH INDOOR UNIT. THERMOSTATS SHIP LOOSE FOR FIELD INSTALLATION AND WIRING BY THE MECHANICAL CONTRACTOR.
- 2. MECHANICAL CONTRACTOR TO PROVIDE CENTRAL CONTROLLER FOR LOCAL SET POINT CONTROL AND SYSTEM VIEWING. CONTROLLER TO BE INSTALLED AND WIRING BY MECHANICAL CONTRACTOR. 24V POWER BY ELECTRICAL CONTRACTOR.
- (3. DISCONNECT SWITCHES FOR CONDENSING UNITS AND INDOOR UNITS SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR  $\langle 1 \rangle$ AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- hannen 4. EXTERNAL SUPPORTS FOR INDOOR AND CONDENSING UNITS SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR.
- 5. FILTER RACK AND 2" PLEATED MERV-13 FILTERS FOR DUCTED UNITS SHALL FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. FILTER RACK SHALL BE GALVANIZED STEEL, FULLY INSULATED & FACTORY ASSEMBLED. TYPICAL OF FLT-H SERIES OR EQUAL
- 6. CONDENSATE PUMPS SHIP FOR FIELD INSTALLATION BY MECHANICAL CONTRACTOR FOR WALL MOUNTED UNITS. DUCTED UNITS FURNISHED WITH FACTORY MOUNTED CONDENSATE PUMP. MECHANICAL CONTRACTOR TO PROVIDE CONDENSATE PIPING FROM ALL UNITS TO SANITARY DRAIN. FIELD VERIFY EXACT ROUTING AND TERMINATION POINT IN BUILDING.
- 7. PROVIDE REFRIGERANT ISOLATION VALVES ON LIQUID AND GAS LINES AT EVERY FAN COIL UNIT.



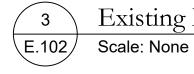
120/208V 3Ø 4W+G				BUS	RATING	: 225A				
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	
EXIST-FACP	EXISTING	20	1	·/.	1		2	20	EXISTING	
EXIST-REC-STACK AREA FLOOR	EXISTING	20	3	ſ	·/.		4	20	EXISTING	
EXIST-REC-STACK AREA	EXISTING	20	5		r –	·/.	6	20	EXISTING	ΕX
EXIST-REC-STACK AREA	EXISTING	20	7	•		r	8	20	EXISTING	ΕX
EXIST-REC-STACK AREA FLOOR	EXISTING	20	9	ſ	· /.		10	20	EXISTING	
EXIST-REC-CIRC. DESK FLOOR	EXISTING	20	11		ſ	•	12	20	EXISTING	
EXIST-REC-STAFF WR	EXISTING	20	13	•		<b></b>	14	20	EXISTING	EX
EXIST-REC-STAFF WR	EXISTING	20	15	ſ	· _		16	20	EXISTING	EX
EXIST-REC-CIRC DESK WALL	EXISTING	20	17		ſ	•	18	20	EXISTING	E
EXIST-REC-STAFF WR	EXISTING	20	19	•		ſ	20	20	(2) #12 CU & (1) #12 GND.	
EXIST-REC-STACK AREA FLOOR	EXISTING	20	21	r	· _		22	20	EXISTING	
EXIST-REC-STACK AREA FLOOR	EXISTING	20	23		ſ	•	24	20	EXISTING	
FAN COIL UNITS	(2) #12 CU & (1) #12 GND.	20	25	• /			26	20	(2) #12 CU & (1) #12 GND.	
		20	27		• /.		28	20	(2) #12 CU & (1) #12 GND.	
KITCHENETTE RECEPTACLE	(2) #12 CU & (1) #12 GND.	20	29			- /.	30	20	EXISTING	E
EXISTING GE A SERIES PANELBOA	ARD			-	-	-	-	kVA T	OTAL	
	ng Panelboard C	<u>2P-2</u>	1				( F • F (	CIRCU RATINO PANEL CONTE	DE NEW CIRCUIT BREAKERS ITS; BREAKERS SHALL MATO G SCHEDULE SHOWN BASED RACTOR SHALL VERIFY IN FI JT AS NEEDED BASED ON AV	CH E ON I ELD
E.102 Scale: N	one								$\Delta$	E

277/480V 3Ø 4W+G, 10kAIC F		1		<u>воз</u>	RATING	. 225A	<u> </u>	<b>i</b> 1		MAIN LUGS ONL
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAI
			1	•			2			
SPARE	-	20	3	ſ	•		4	100	EXISTING	PANEL CP
			5			•	6			
			7	•			8			
HEAT PUMP	(3) #4 CU & (1) #8 GND.	70	9		•		10	100	EXISTING	PANEL L
			11			• /	12			
			13	• /			14			
HEAT PUMP	(3) #6 CU & (1) #10 GND.	60	15		• /		16	100	EXISTING	PANEL P
			17			• / •	18			
			19	• / .			20	20	EXISTING	SNOW MEL
HEAT PUMP	(3) #6 CU & (1) #10 GND.	60	21		• / .		22	20	EXISTING	SNOW MEL
			23			• / •	24	20	EXISTING	SNOW MEL
			25	• / .			26	20	EXISTING	SNOW MEL
SPARE	-	15	27		• / .		28	20	EXISTING	SNOW MEL
			29			• / •	30	20	EXISTING	SNOW MEL
			31	• / .			32	20	EXISTING	SNOW MEL
SPARE	-	15	33		• / •		34	-	-	SPACE
			35			. /.	36			
EXISTING	-	20	37	• / .			38	40	EXISTING	SURGE SUPPRESSOR
EXISTING	-	20	39				40			
SPACE	-	-	41			• / •	42	-	-	SPACE

PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND

RATING

• PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

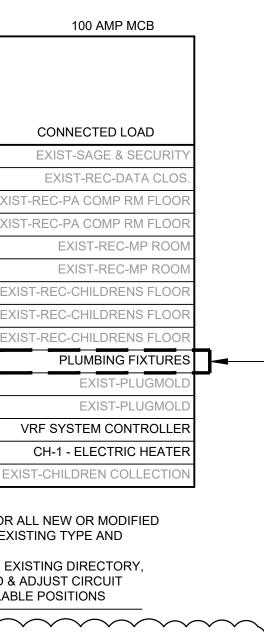


 $\frown$ ADD ALTERNATE

EC-03

1

# Existing Main Distribution Panel MDP-1 Schedule



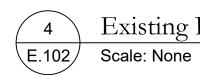
ADD ALTERNATE	)
<u>EC-02</u>	)
·······	

120/208V 3Ø 4W+G				BUS	RATING	: 125A	_			100 AMP MCB
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD
EXIST-LTG-EXIT/NL'S	EXISTING	20	1	•			2	20	EXISTING	EXIST-LTG-CENTER PEND
EXIST-LTG-STOR/RR'S	EXISTING	20	3		•		4	20	EXISTING	EXIST-LTG-CENTER PEND
EXIST-LTG-LOBBY	EXISTING	20	5			•	6	20	EXISTING	EXIST-LTG-STACKS(AF)
EXIST-LTG-STAFF WR	EXISTING	20	7	•			8	20	EXISTING	EXIST-LTG-CHILDREN
EXIST-LTG-STAFF WR	EXISTING	20	9		•		10	20	EXISTING	EXIST-LTG-CHILDREN
EXIST-LTG-OFF/LOUNGE	EXISTING	20	11			•	12	20	EXISTING	EXIST-LTG-COVE
EXIST-LTG-FRNT CANOPY	EXISTING	20	13	• /.			14	20	EXISTING	EXIST-LTG-COVE
EXIST-LTG-SIDE CANOPY	EXISTING	20	15		•		16	20	EXISTING	EXIST-LTG-COVE
EXIST-LTG-PARK LOT	EXISTING	20	17			•	18	20	EXISTING	EXIST-LTG-MP ROOM
EXIST-LTG-PARK LOT	EXISTING	20	19	• /.			20	20	EXISTING	EXIST-LTG-MP ROOM
EXIST-LTG-STACKS	EXISTING	20	21		•		22	20	EXISTING	EXIST-LTG-MP ROOM
EXIST-LTG-STACKS	EXISTING	20	23			• /.	24	20	EXISTING	EXIST-SPARE
EXIST-LTG-STACKS	EXISTING	20	25	• /.			26	20	EXISTING	EXIST-SPARE
EXIST-SPARE	EXISTING	20	27	ſ			28	20	EXISTING	EXIST-TV OUTLET
EXIST-SPARE	EXISTING	20	29		ſ		30	20	-	EXIST-SPARE



Existing Panelboard L-1 E.102 Scale: None

120/208V 3Ø 4W+G		BUS RATING: 225A								MLO	
CONNECTED LOAD	CONDUCTORS	CKT. BREAKER AMPACITY	POSITION	L1 KVA	L2 KVA	L3 KVA	POSITION	CKT. BREAKER AMPACITY	CONDUCTORS	CONNECTED LOAD	
EXIST-REC-STACKS	EXISTING	20	1	• / .			2	20	EXISTING	EXIST-REC-MP ROOM	
EXIST-REC-STACKS	EXISTING	20	3		•	1	4	20	EXISTING	EXIST-REC-MP ROOM	
EXIST-REC-COPIER	EXISTING	20	5		r	•	6	20	EXISTING	EXIST-REC-CHILDRENS	
EXIST-REC-OFFICE/FILE	EXISTING	20	7	•			8	20	EXISTING	EXIST-ART STOR-MW	
EXIST-REC-LOUNGE	EXISTING	20	9		•		10	20	EXISTING	EXIST-ART STOR-REFRIG	
EXIST-WTR HTR WH-B	EXISTING	20	11		ſ	•	12	20	EXISTING	EXIST-VAX BOXES	
EXIST-DWYER UNIT	EXISTING	30	13 15	•	· /		14 16	30	(2) #10 CU & (1) #10 GND.	WATER HEATER	
EXIST-ART STORAGE REC	EXISTING	20	17		-	·	18	20	EXISTING	EXIST-HUMIFIER	
EXIST-REC-COPIER FLOOR	EXISTING	20	19	•			20	20	EXISTING	EXIST-REC-BOILER RM	
FAN COIL UNITS	(2) #12 CU & (1) #12 GND.	20	21 23		·		22 24	20 20	EXISTING	EXIST-REC-LOBBY EXIST-REC-EWC'S	
EXIST-VAV BOXES	EXISTING	20	25	•			26	20	EXISTING	EXIST-WTR HTR WH-C	
EXIST-EF-1	EXISTING	15	27		•		28	20	(2) #12 CU & (1) #12 GND.	CH-1 - ELECTRIC HEATER	
EXIST-DISHWASHER	EXISTING	20	29			•	30	20	(2) #12 CU & (1) #12 GND.	CH-1 - ELECTRIC HEATER	
			31	•		32					
ERV-1	(3) #12 CU & (1) #12 GND.	20	33		• /		34	40	(3) #8 CU & (1) #10 GND.	ELECTRIC DUCT HEATER	
			35			• /	36				
EXIST-SPARE	EXISTING	20	37	•	1		38	20	(2) #12 CU & (1) #12 GND.	PLUMBING FIXTURES	
EXIST-HANDICAP DOOR	EXISTING	20	39		•	1	40	30	EXISTING	EXIST-STOVE TOP	
EXIST-VAX BOXES	EXISTING	20	41			•	42	50	EXISTING	EXIST-STOVE FOR	
EXISTING GE A SERIES PANELE	BOARD			-	-	-	-	kVA T	OTAL		



Existing Panelboard P-1

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING

• PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

 PROVIDE NEW CIRCUIT BREAKERS FOR ALL NEW OR MODIFIED CIRCUITS; BREAKERS SHALL MATCH EXISTING TYPE AND RATING • PANEL SCHEDULE SHOWN BASED ON EXISTING DIRECTORY, CONTRACTOR SHALL VERIFY IN FIELD & ADJUST CIRCUIT

LAYOUT AS NEEDED BASED ON AVAILABLE POSITIONS

# ADD ALTERNATE — EC-01

